

# 106 COMBINE



## OPERATORS MANUAL

### 106 COMBINE

OMH63971 L6 English

**HARVESTER WORKS**  
**OMH63971 L6**

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. \_\_\_\_\_

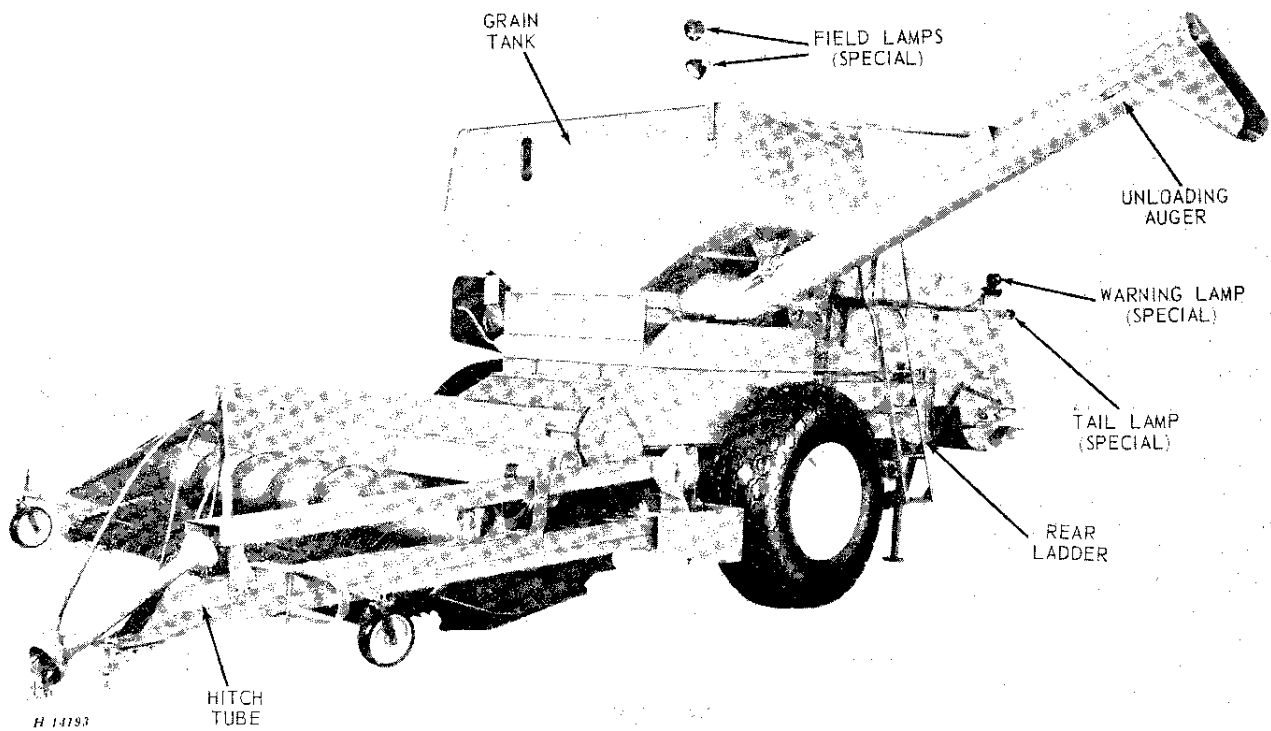
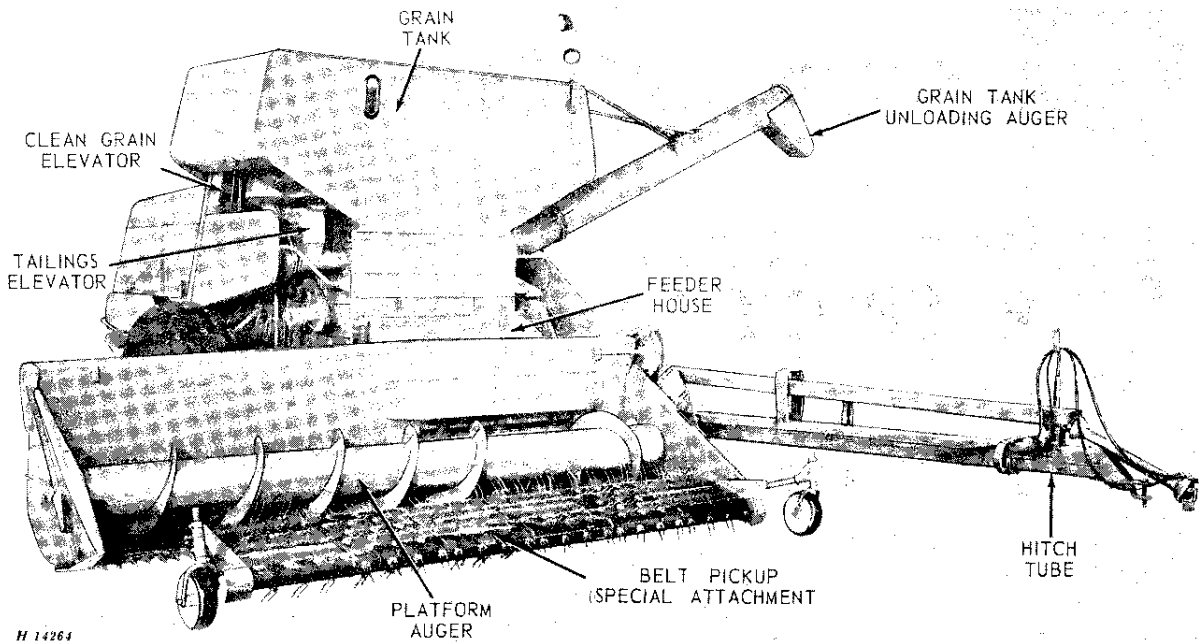
Platform Serial No. \_\_\_\_\_

Date Purchased \_\_\_\_\_

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# SPECIFICATIONS

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

## CUTTER BAR

Width of cut . . . . . 14 Ft.  
Length of cutter bar . . . . . 6 in. less than width of cut  
Type of knife sections . . . . . Heavy-duty, overserrated

## REEL

Drive . . . . . V-belt  
Number of slats . . . . . 4 Reg.; 3, 6, 8 Special  
Speed range . . . . . 35.7, 43.0, 59.0, 67.5 rpm

## CUTTING PLATFORM

Type of feed . . . . . Auger  
Range of cutting height . . . . . 2 in. above ground to 36 in. above ground  
Height control . . . . . 2 hydraulic cylinders  
Belt pickup platform width . . . . . 14 Ft.

## CUTTING 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 rpm

## SEPARATOR

Type . . . . . Grain conveyor-straw walker  
Width . . . . . 50 In.  
Length of separating surface . . . . . 140 In. with walker pans extended  
Area of separating surface . . . . . 6930 Sq. In.

## GRAIN CONVEYOR

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

**CLEANING FAN**

Type . . . . . Five-bladed undershot  
 Drive . . . . . V-belt  
 Speed range . . . . . 550-1050 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 . . . . . 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.

**STRAW WALKERS**

Number . . . . . 5  
 Width . . . . . 9-1/2 In.  
 Length with pans extended . . . . . 123 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.)

**WEIGHTS**

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

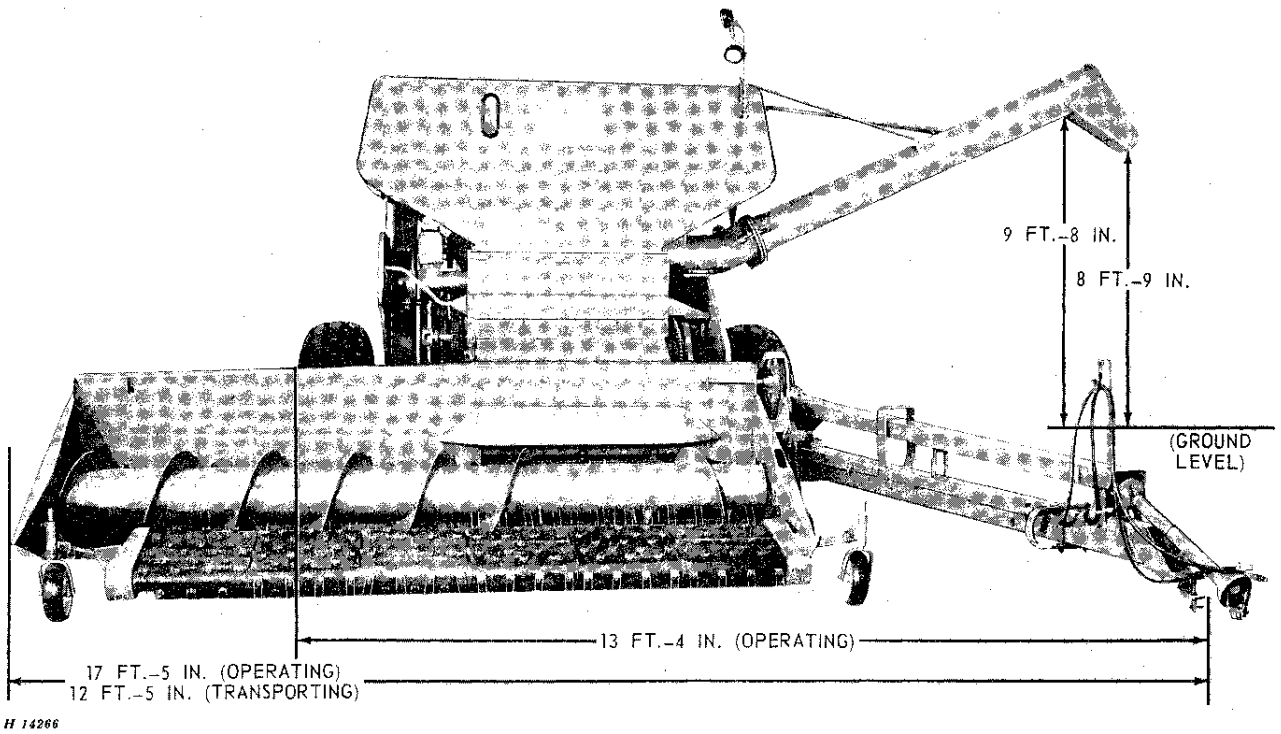
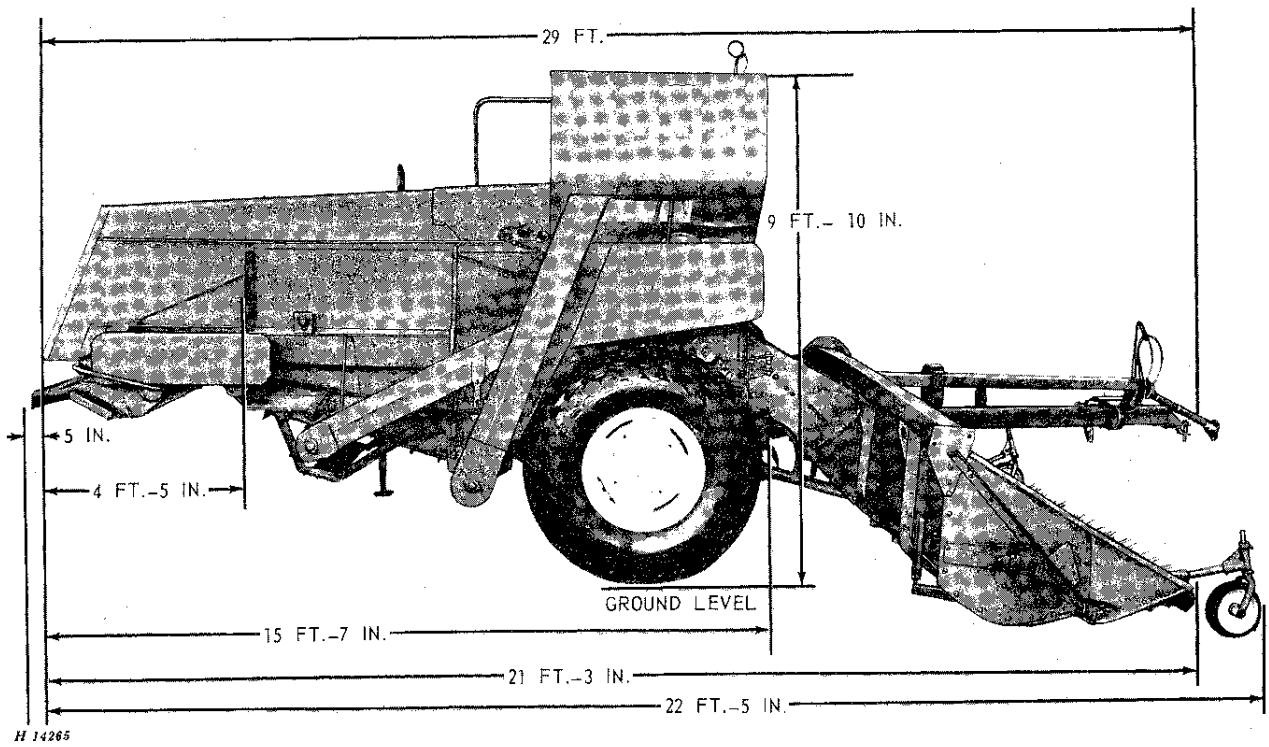
**COMBINE DIMENSIONS**

Shipping length . . . . . 24 Ft.-10 In.  
 Shipping width . . . . . 11 Ft.  
 For other dimensions  
 (Ground to bottom of unloading auger) . . . . . 9 Ft.-8 In.

**TIRE**

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

4 Specifications

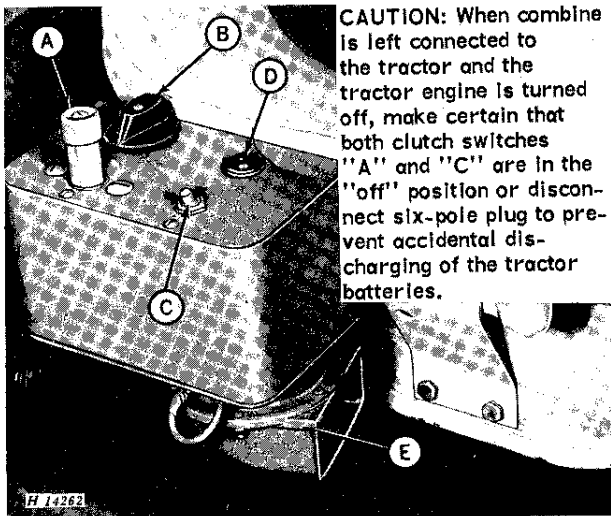




# CONTROLS AND INSTRUMENTS

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

## SWITCH BOX



- 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 should rise.



# 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. If the crop 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 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.

**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 TRACTOR 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 tractor PTO 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:

Lubricate the combine completely. See lubrication section, page 18.

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

Be certain all shafts turn freely.

**STARTING THE COMBINE**

**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 up, engage PTO slowly to engage the separator. Always 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.

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

Disengage separator, then close doors at bottom of elevators.

## 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 Range* (rpm)	Cylinder to Concave Clearance		Type of Cleaning Sieve	Setting of Adjustable Cleaning Sieve	Setting of Adjustable Chaffer	Setting of Adjustable Cleaning Fan Sheave (rpm)	Fan Side Shutter Opening
		Front	Rear					
Alfalfa	793 to 1190	3/16"	1/8"	Adjustable or 1/10" round hole	Slightly open	1/8 open	600-640	Closed
Barley— Feed and Malting	765 to 1190	1/2"	1/4"	Adjustable	1/3 to 1/2 open	1/2 to 1/3 open	780-850	Open
Beans— Baby Lima	277 to 425	3/4"	1/2"	Adjustable	Slightly over 1/2 open	2/3 to nearly wide open	840-850	Open
Beans— Soy	466 to 656	1/2"	1/4"	Adjustable or 3/8" round hole	1/2 open	2/3 open	810-850	Open
Beans— White Pea	466 to 656	1/2"	1/4"	Adjustable	1/2 open	2/3 open	810-850	Open
Buck Wheat	656 to 793	1/2"	3/16"	Adjustable	1/4 to 1/3 open	2/3 open	630-690	2/3 open
Clover— Most Varieties	893 to 1190	3/16"	1/8"	Adjustable or 1/10" round hole	Slightly open	1/4 open	600-640	Closed
Crotalaria	765 to 1190	5/32"	1/16"	Adjustable or 5/32" round hole	1/3 open	2/3 open	600-640	1/3 open
Flax	765 to 1190	1/4"	1/8"	Adjustable or 5/32" round hole	1/3 open	1/3 to 1/2 open	600-640	1/3 open
Grass— Blue	893 to 1190	3/16"	1/8"	Adjustable or 5/32" round hole	1/4 to 1/3 open	1/2 to 2/3 open	600-640	Closed
Lespedeza	656 to 952	3/16"	1/8"	Adjustable or 5/32" round hole	1/3 open	1/2 to 2/3 open	620-660	1/3 open
Lupine	500 to 574	3/8"	1/4"	Adjustable	1/2 open	2/3 open	700-740	1/2 open
Maize	765 to 893	5/16"	3/16"	Adjustable	1/4 to 1/2 open	2/3 open	790-850	Open

\*See page 36 for various sprocket combinations.

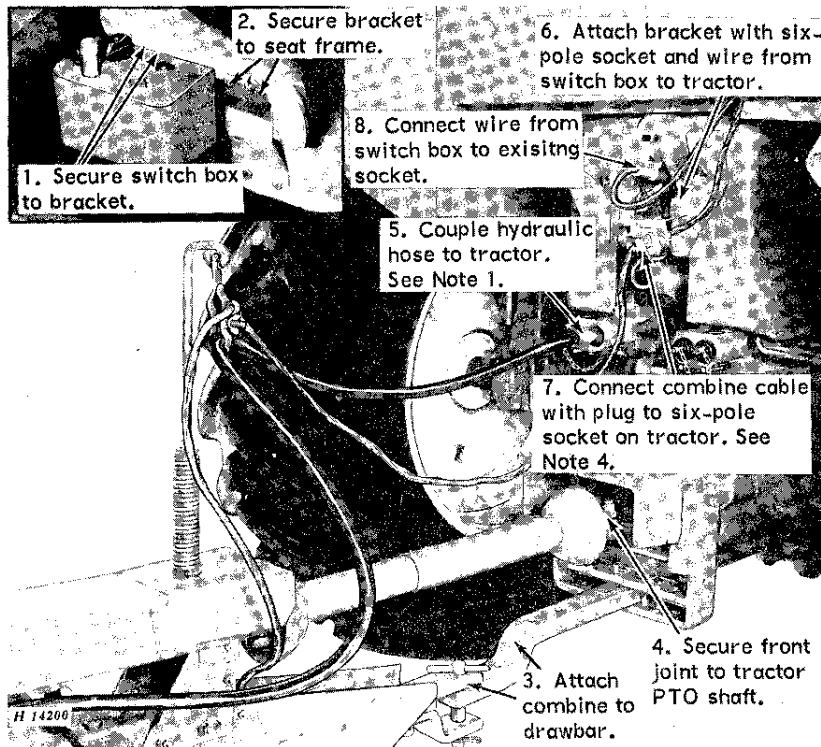
Crop	Cylinder Range* (rpm)	Cylinder to Concave Clearance		Type of Cleaning Sieve	Setting of Adjustable Cleaning Sieve	Setting of Adjustable Chaffer	Setting of Adjustable Cleaning Fan Sheave (rpm)	Fan Side Shutter Opening
		Front	Rear					
Mustard	765 to 1190	3/8"	1/4"	Adjustable	1/4 to 1/3 open	2/3 open	710-760	Closed
Oats	765 to 1190	5/16"	3/16"	Adjustable	1/3 to 1/2 open	3/4 open	760-810	Open
Peas—Field	388 to 540	1"	3/4"	Adjustable	1/3 open	2/3 open	790-840	Open
Proso or Hog Millet	793 to 952	3/16"	1/8"	Adjustable or 5/32" round hole	Slightly open	1/2 open	740-800	Open
Radish Seed	656 to 893	3/16"	1/8"	Adjustable or 5/32" round hole	Closed to 1/4 open	1/3 to 1/2 open	610-640	Closed
Rye	893 to 1190	5/16"	1/4"	Adjustable	1/3 open	2/3 open	790-820	Open
Safflower	756 to 793	1/2"	3/16"	Adjustable	1/2 open	3/4 open	760-830	Open
Sorghums	793 to 952	1/2"	1/8"	Adjustable	1/4 to 1/2 open	2/3 to 3/4 open	785-840	Open
Timothy	952 to 1190	5/32"	1/16"	Adjustable or 1/10" round hole	Slightly open	1/2 open	610-700	Closed
Trefoil, Bird's—Foot	952 to 1190	5/32"	1/16"	Adjustable or 1/10" round hole	Slightly open	1/4 open	600-655	Closed
Wheat	952 to 1190	5/16"	3/16"	Adjustable	1/3 to 1/2 open	2/3 open	790-845	Open

**SPEED OF VARIOUS UNITS**  
(Rated PTO Speed)

<b>AUGER</b>		<b>FEEDER HOUSE CONVEYOR</b>	
Platform . . . . .	194 rpm	DRIVE SHAFT . . . . .	255 rpm
<b>BEATER (behind cylinder). . . . .</b>	680 rpm	<b>GRAIN CONVEYOR UNDER CYLINDER</b>	
<b>CYLINDER</b>		With regular 15-tooth sprocket . . . . .	170 rpm
Regular . . . . .	1057 rpm	<b>REEL</b>	
Extreme low . . . . .	277 rpm	Regular . . . . .	67.5 rpm
Extreme high . . . . .	1190 rpm	Special . . . . .	59.0, 43.0, 35.7 rpm
<b>ELEVATORS. . . . .</b>	313 rpm	<b>SHOE CRANK . . . . .</b>	286 rpm
<b>FAN</b>		<b>STRAW WALKER. . . . .</b>	213 rpm
Normal operating speed . . . . .	750 rpm		
Extreme low . . . . .	550 rpm		
Extreme high . . . . .	1050 rpm		

### TRACTOR HOOKUP

*Diesel Tractor without Lighting Attachment and Gasoline Tractor*



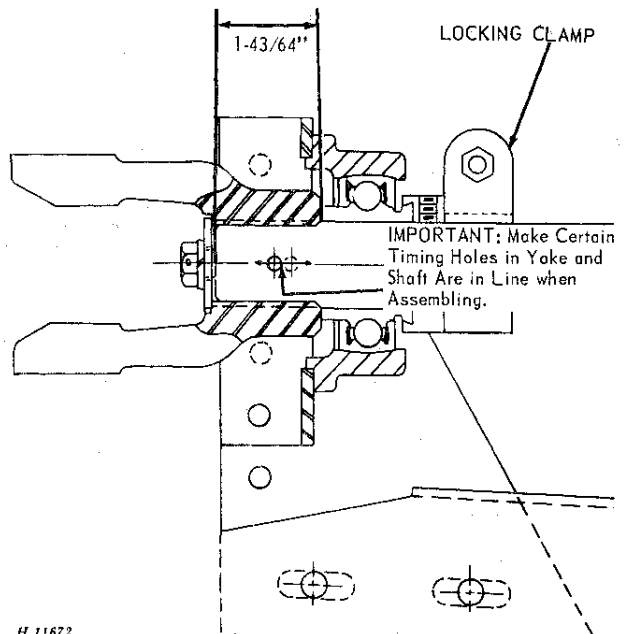
**NOTE 1:** Adapt the tractor remote hydraulic cylinder valve housing for single-action cylinder operation. See tractor operator's manual. Couple hydraulic hose to tractor No. 1 hydraulic circuit breakaway coupler.

**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.

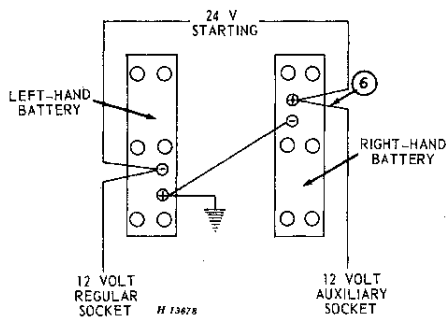
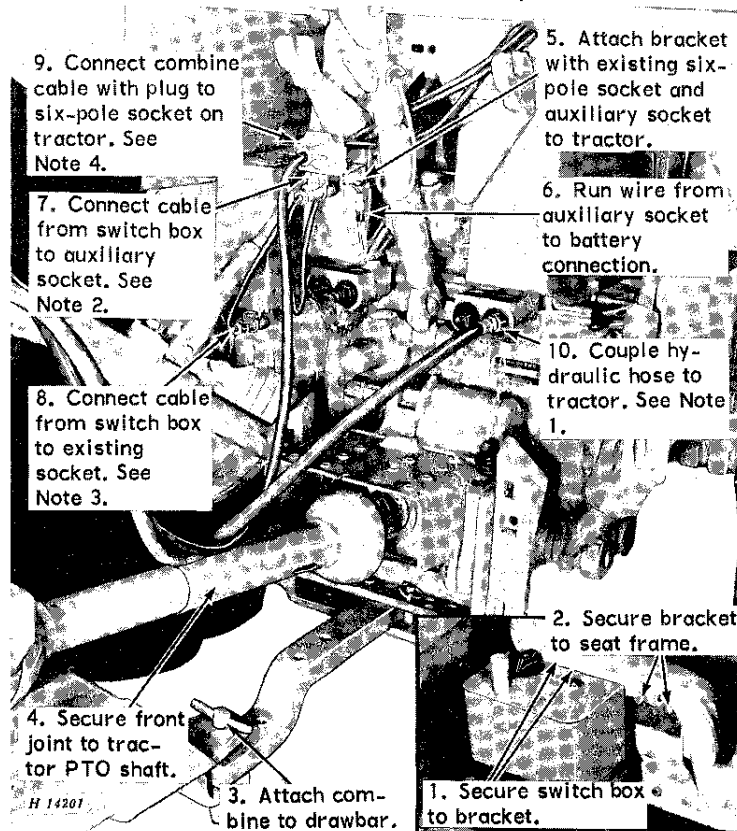
**IMPORTANT:** Under normal circumstances, locking clamp should not be moved unless it becomes necessary to replace parts.



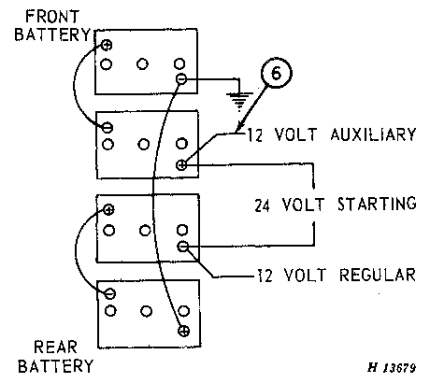
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### TRACTOR HOOKUP

#### *Diesel Tractor (Split Electrical System) with Lighting Attachment*



4020 Tractors



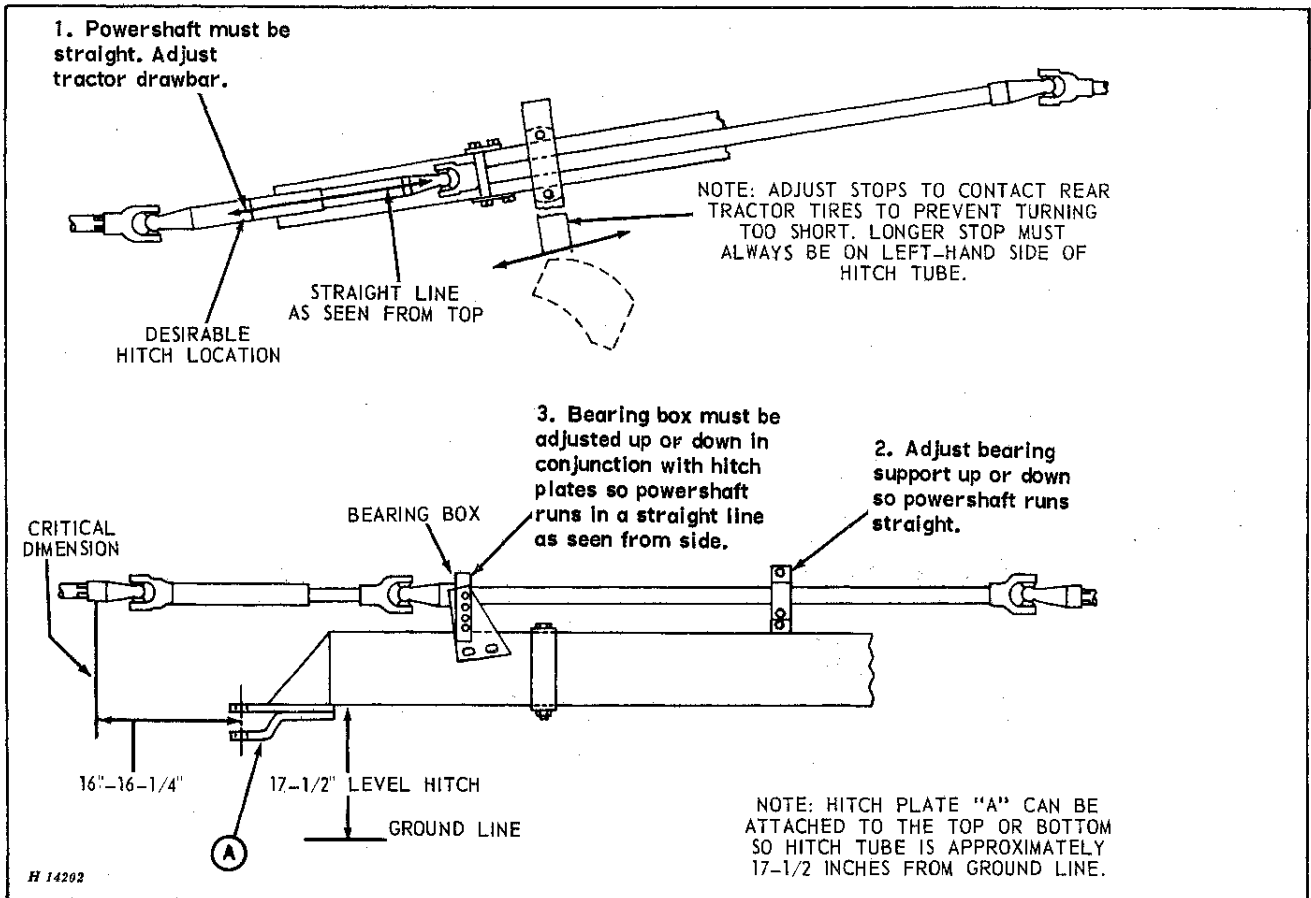
5010 and 5020 Tractors

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

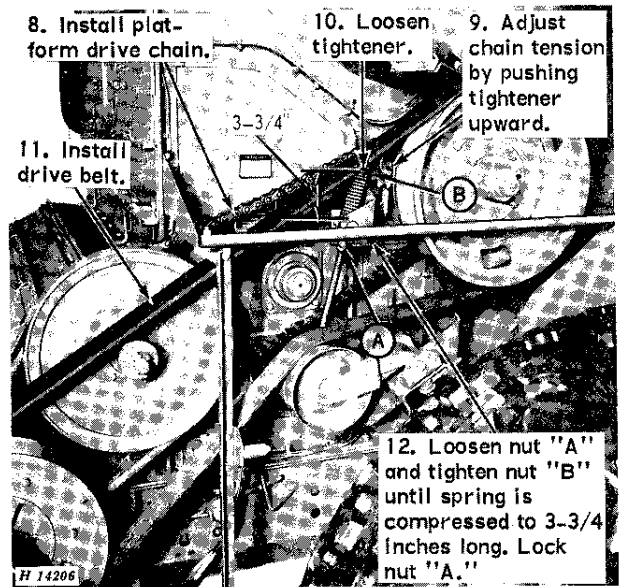
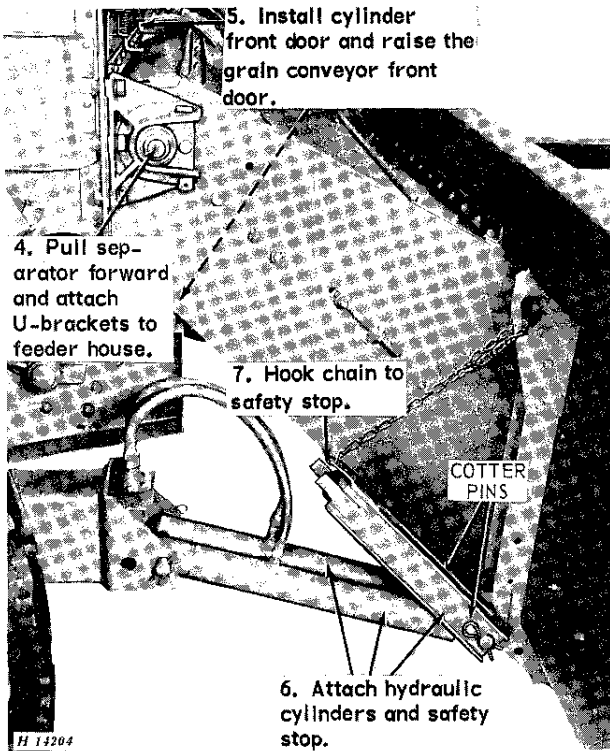
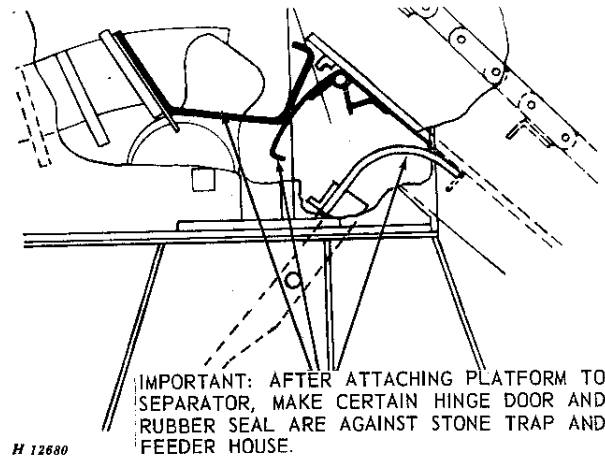
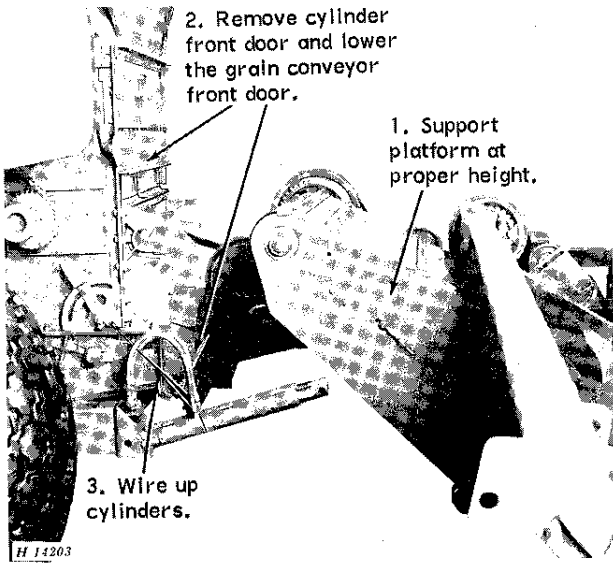
**NOTE 3:** Connect cable that supplies current to the lights to the existing outlet.

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

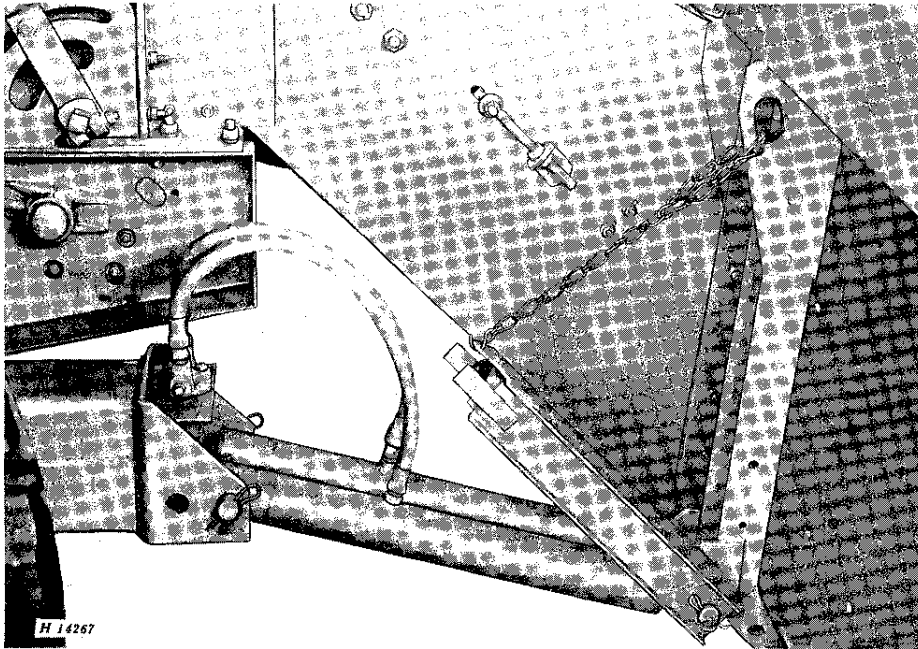
TRACTOR HOOKUP—Continued



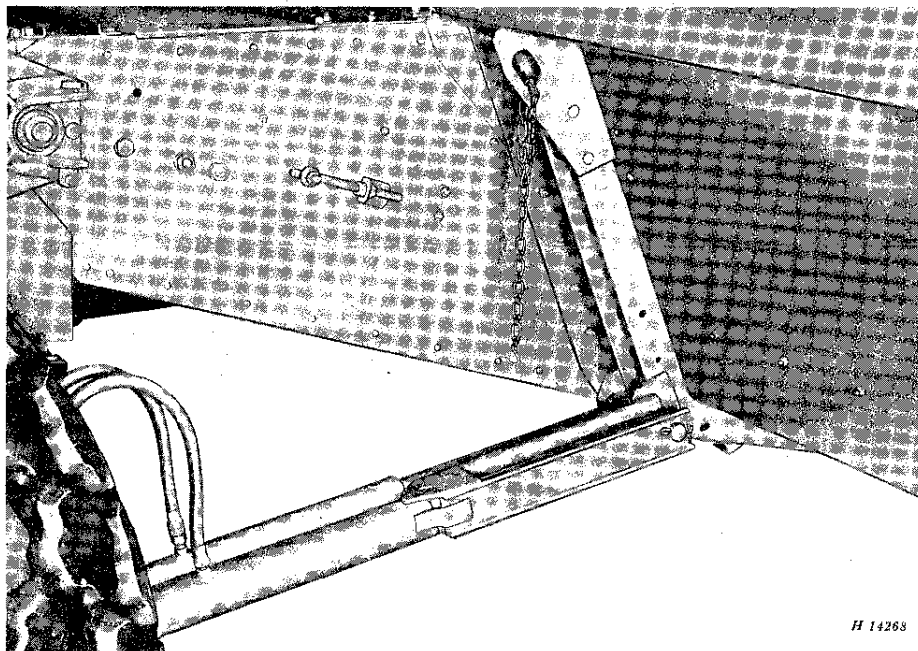
### ATTACHING CUTTING PLATFORM



### HYDRAULIC CYLINDER SAFETY STOP



*Storage Position*



*Safety Position*

The hydraulic cylinder safety stop must always be used when working on the platform. Extend hydraulic cylinders. Disconnect support chain from safety stop and position safety stop on piston rod. After completing the work on the platform, attach safety stop to support chain for storage.

**IMPORTANT:** Always use the safety stop when transporting the combine in the field or on the highway.



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## 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 cutting platform, and moving the hitch.

To fold unloading auger back along separator, unfasten over-center lock and swing outer half of 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-

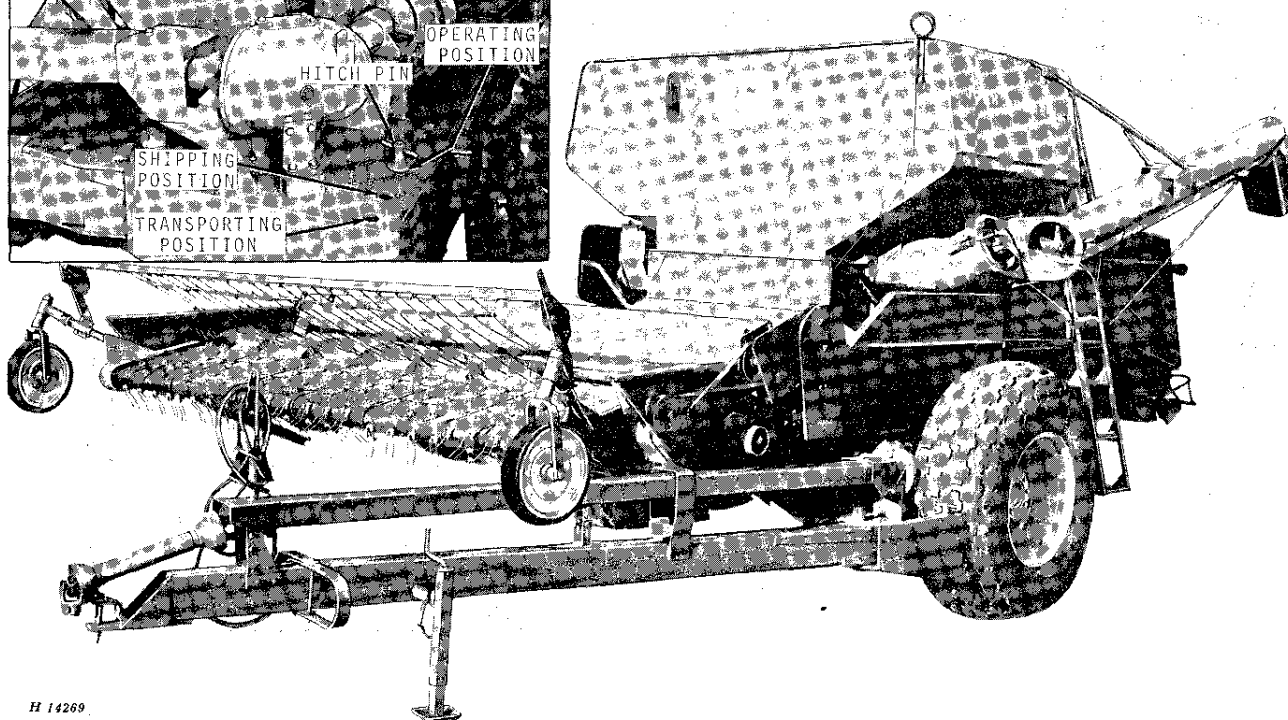
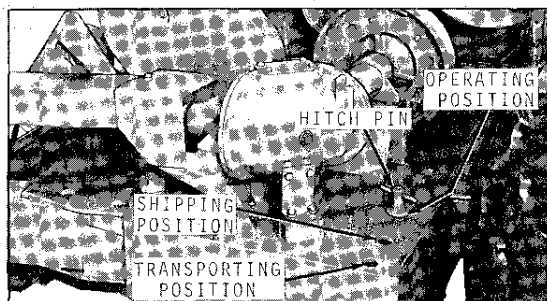
est position. Remove hitch pin from operating position and swing hitch tube inward as far as possible. Install hitch pin in transporting position.

*IMPORTANT: Always use the safety stop when transporting the combine.*

The combine is equipped with 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.



H 14269

Combine in Transport Position

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