JOHN DEERE
45
COMBINE

JOHN DEERE

OPERATORS MANUAL

JOHN DEERE 45
COMBINE

OMH63137 I8 English

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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 proved 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 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.

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.

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

The combine serial number is on a plate located on the support bracket at the rear of the fuel tank.

The engine serial number is on the side of the block above the starter.

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.

Record these Serial Numbers in the space provided below.

Combine serial no. _____

Engine serial no. _____

Axle serial no. _____

Cutting platform serial no. _____

Date purchased _____

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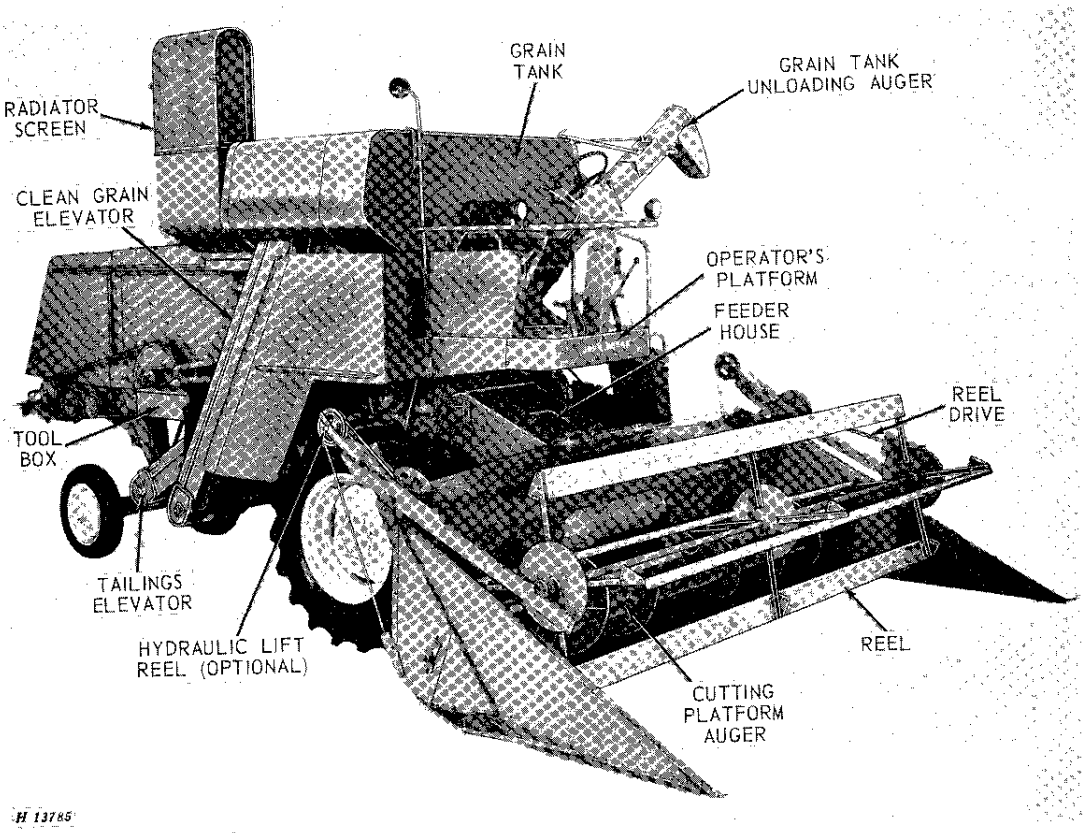
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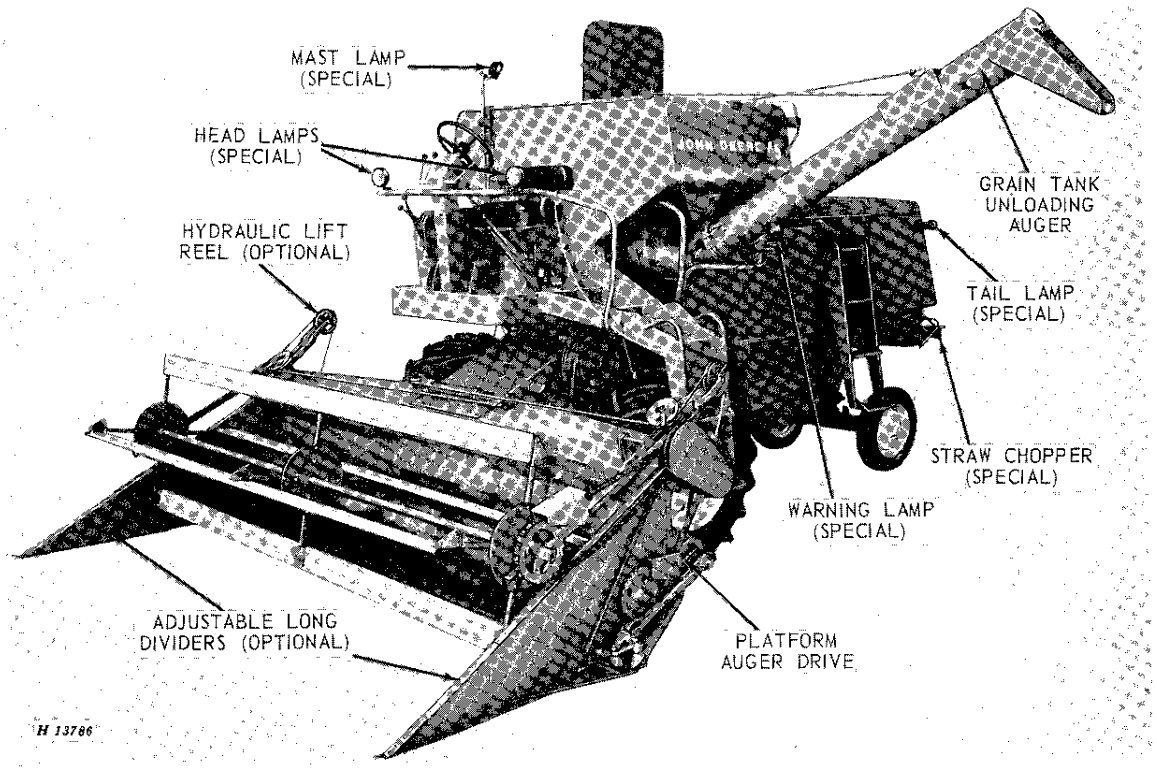
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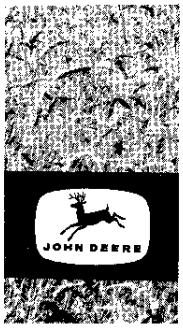


SPECIFICATIONS

COMBINE

CUTTER BAR
- Width of cut . . . . . 8-ft. 6-in., 10-ft. 6-in., or 12-ft. 6-in.
- Length of cutter bar . 8-ft., 10-ft., or 12-ft.
- 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 . . . . . 13 rpm to 45 rpm

CUTTING PLATFORM
- Type of feed . . . . . Auger
- Range of cutting height:
  - Grain . . . . . 2-in. below wheel level to 31-3/8-in. above
  - Rice . . . . . 3-in. below wheel level to 30-3/8-in. above
- Height control . . . . . 2 hydraulic cylinders

CUTTING PLATFORM AUGER
- Diameter . . . . . 18-in.
- Diameter of auger tube . . . . . 10-in.
- Type of auger fingers . . . Round retracting

CYLINDER
- Type . . . . . Rasp-bar or spike-tooth
- Width . . . . . 26-in.
- Diameter . . . . . 22-in.
- Number of bars . 8 Rasp-bars or 10 spike-tooth bars (five 12-tooth bars and five 13-tooth bars)
- Drive . . . . . Roller chain
- Speed range . . . . . 175 rpm to 1095 rpm

CONCAVE
- Type . . 12-bar open type or spike-tooth type
- Width . . . . . 26-in.

BEATER (Behind the cylinder)
- Type . . . . . Wing
- Width . . . . . 26-in.
- Diameter . . . . . 12-in.
- Speed . . . . . 650 rpm

SEPARATOR
- Type . . . . . Grain conveyor, straw walker
- Width . . . . . 26-in.
- Length of separating surface . . . . . 130-in. (Straw walker pans extended)
- Area of separating surface . . . 3380 sq. in.

GRAIN CONVEYOR
- Type . . . . . Slat
- Drive . . . . . Chain

CLEANING FAN
- Type . . . . . 4-bladed undershot
- Drive . . . . . V-belt
- Speed range - regular . . 540 rpm to 750 rpm
  special . . 398 rpm to 812 rpm

CHAFFER
- Type . . . . . Adjustable
- Width . . . . . 22-3/4-in.
- Length—with tailings finger bar . 54-3/4-in.
- Area . . . . . 1246 sq. in.

SIEVE
- Type . . . . . Adjustable
- Width . . . . . 22-3/4-in.
- Length . . . . . 43-7/8-in.
- Area . . . . . 1000 sq. in.

TOTAL CLEANING AREA . . . . . 2246 sq. in.

STRAW WALKERS
- Number . . . . . Three
- Width . . . . . 7-7/8-in.
- Length—with pans extended . . . . . 109 in.
- Area . . . . . 2938 sq. in.
- Number of steps . . . . . Five
- Drive . . . . . V-belt
- Bearings . . . . . Oil-soaked maple
- Extension pans . . . . . One on each walker

GRAIN TANK
- Capacity . . . . 50-bushel, approx. (Type and condition of crop will determine actual volume)

BRAKES
- Type . . . . Individual, mechanical disk-type

TRANSMISSION . . Automotive—3 speeds forward, 1 reverse

STEERING . . . . . Power

WEIGHTS AND DIMENSIONS
- Shipping length . . . . . 17 ft. 6 in.
- Shipping width . . . . . 8 ft. (approx.)
- Grain combine with 10-foot cutting platform . . . . . 7050 lbs. (approx.)
- Rice combine with 10-foot cutting platform . . . . . 7350 lbs. (approx.)

TIRE SIZES AND WHEEL TREAD DIMENSIONS

Main Wheel Tire Sizes	Center-to-Center Wheel Tread		Guide Wheel Tire Sizes	Regular Axle	Center-to-Center Wheel Tread OPTIONAL	
	Rim Dished In	Rim Dished Out			60 In. Wide Axle	74 In. Wide Axle
13.6-26 (6-ply)	77 in.	89 in.	5.50-16 (4-ply)	42 in.	59 in.	73 in.
14.9-26 (6-ply)	78 in.	88 in.	6.00-16 (4-ply)	44 in.	61 in.	75 in.
16.9-26 (6-ply)	80 in.	86 in.	6.50-16 (4-ply)	44 in.	61 in.	75 in.
18.4-26 (6-ply)	81 in.	. . . .	7.50-16 (4-ply)	44 in.	61 in.	75 in.
			7.50-18 (4-ply)	43 in.	60-1/4 in.	74-1/4 in.

NOTE: Guide wheels may be interchanged on the various rear axles.

GROUND SPEED RANGE

GRAIN DRIVE

13.6-26 Tires—Standard	(Min.) (Max.)
1st Gear	.7 to 1.8 mph
2nd Gear	1.5 to 3.9 mph
3rd Gear	3.5 to 9.2 mph
Reverse	1.6 to 4.0 mph

14.9-26 Tires—Optional	(Min.) (Max.)
1st Gear	.7 to 1.8 mph
2nd Gear	1.5 to 4.0 mph
3rd Gear	3.7 to 9.5 mph
Reverse	1.6 to 4.2 mph

RICE DRIVE

18.4-26 Tires—Standard	(Min.) (Max.)
1st Gear	.6 to 1.7 mph
2nd Gear	1.4 to 3.7 mph
3rd Gear	3.4 to 8.7 mph
Reverse	1.5 to 3.8 mph

16.9-26 Tires Optional	(Min.) (Max.)
1st Gear	.7 to 1.9 mph
2nd Gear	1.6 to 4.1 mph
3rd Gear	3.7 to 9.7 mph
Reverse	1.7 to 4.3 mph

CAPACITIES (APPROX.)

Fuel tank. . . . .gasoline	25 U.S. gallons
Cooling system	17 U.S. quarts
Engine crankcase	9 U.S. quarts
Hydraulic unit (including hydraulic oil lines and cylinders) . . .	11-1/2 U.S. quarts
Transmission	10 U.S. pints
Final drives (2).	4-1/2 U.S. pints (In each)

ENGINE

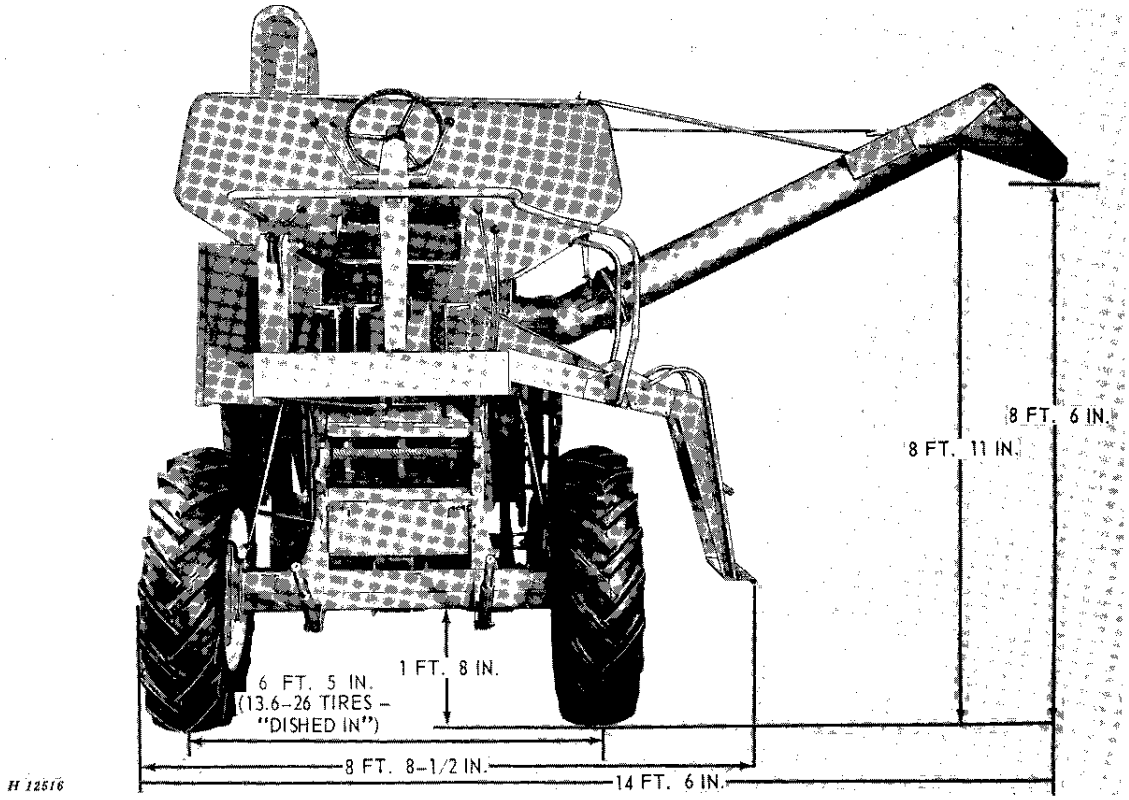
Make and Model	John Deere HA 180-G
Bore	3.86 in.
Stroke	3.86 in.
Brake horsepower	59*
Number of cylinders	4
Piston displacement	180 cu. in.
Compression ratio	7.5 to 1
Maximum load speed	2500 rpm
Firing order	1-3-4-2
Crankcase	Cast, integral with block
Type of lubrication	Force-feed by gear pump
Valve arrangement	Valve-in-head
Valve clearance:	
Intake	0.014 in.
Exhaust	0.022 in.
Make of governor	John Deere
Make of carburetor	Marvel-Schebler
Air cleaner	Dry type
Spark plug:	
Size	14 mm-gap 0.025 in.
Electrical system	12-volt (Negative Ground)
Cooling system	Water pressure
Type of fuel	Gasoline (regular grade)
Oil filter	Full flow

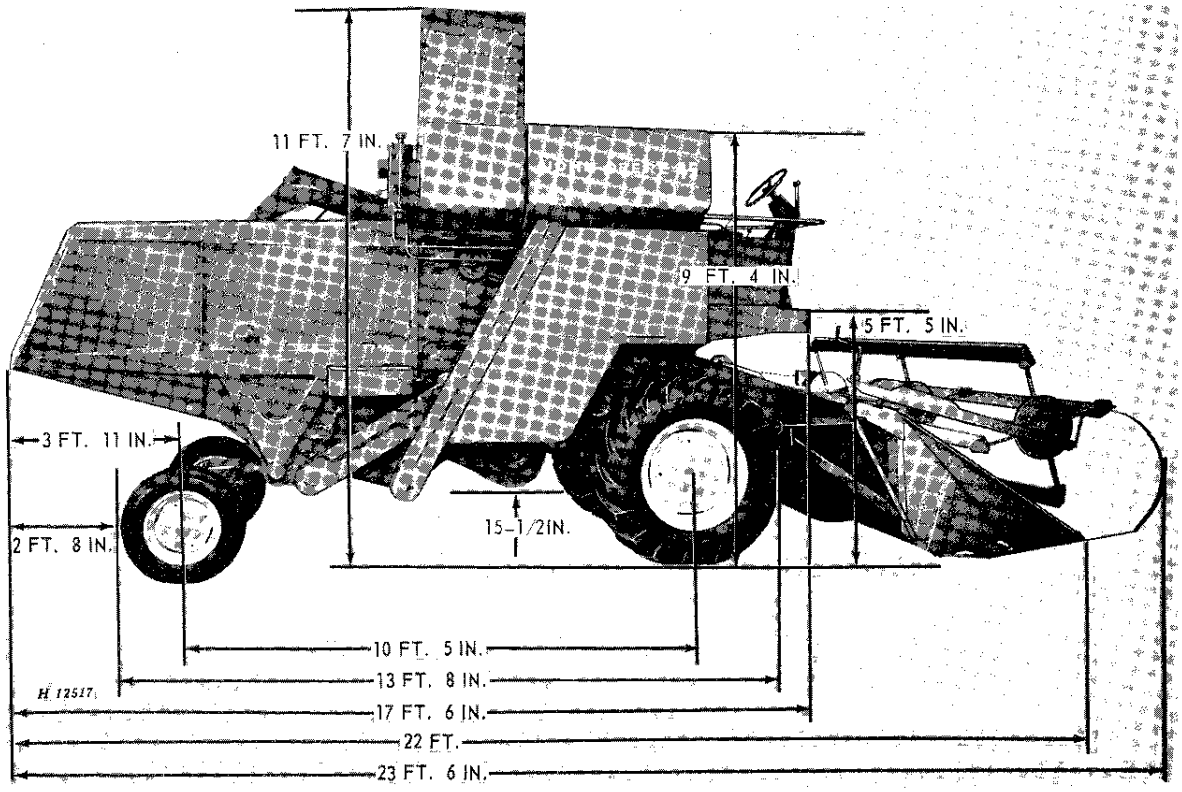
*Factory observed at 85° F. and 29.38 inches Hg. at 500 ft. above sea level.

(Specifications and design subject to change without notice.)

COMBINE DIMENSIONS—OVER-ALL

NOTE: Dimensions given for combine equipped with 13.6-26 main wheel tires and 5.50-16 guide wheel tires.

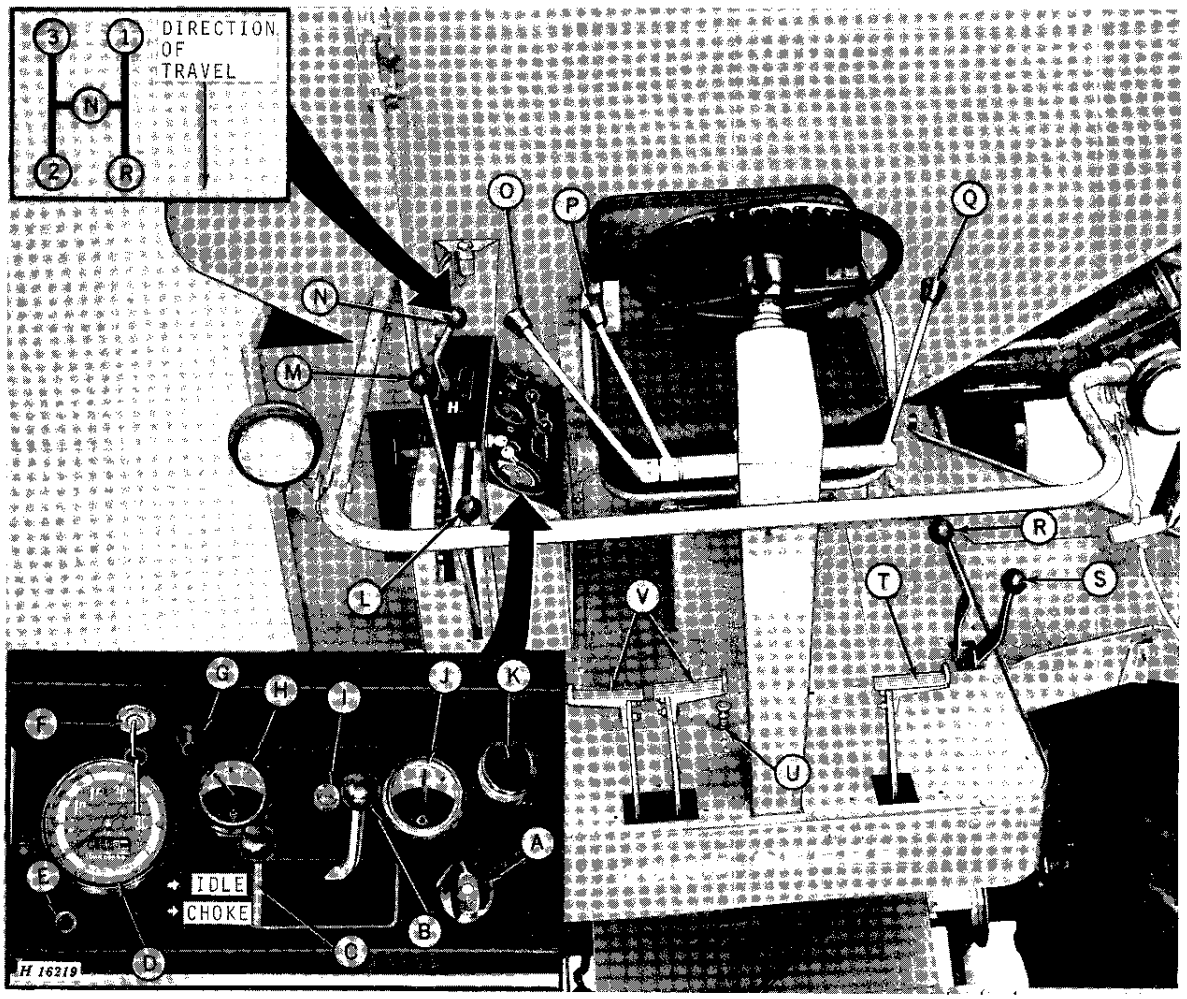




NOTE: When combine is equipped with cab, storage height above grain tank is increased approximately 16 inches.

CONTROLS AND INSTRUMENTS

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



A Light Switch
B Throttle Control
C Choke Control
D Engine Tachometer (Special)
E Signal Horn (Special)
F Key Switch
G Starter Button
H Water Temperature Gauge
I Alternator Indicator Light
J Oil Pressure Gauge
K Instrument Lamp
L Grain Tank Unloading Auger Lever
M Concave Front Adjusting Lever
N Transmission Gearshift Lever
O Selective Ground Speed Control
P Cutting Platform Height Control
Q Hydraulic Reel Lift Control (Optional)
R Cutting Platform Throw-Out Lever
S Separator Throw-Out Lever
T Clutch Pedal
U Parking Brake Lock Button
V Brake Pedals

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

LIGHT SWITCH

The three positions on the light switch are:

Vertical — All lights off.
First Stop — Head lamps, mast lamp, and panel lamp on.
Second Stop — Head lamps, mast lamp, warning lamp, tail lamp, and panel lamp on.

THROTTLE LEVER

Move lever one quarter forward when starting engine. Move lever all the way forward for normal operation; move lever all the way rearward for slow idle.

CHOKE CONTROL

Move choke control all the way rearward when starting engine. After engine is started, and for normal operation, move choke control all the way forward.

KEY SWITCH AND STARTER BUTTON

The key switch serves as a combination accessory switch and ignition lock.

Turn key clockwise and push starter button to engage starter. Release button when engine starts.

Turn key counterclockwise for accessories only, and turn to vertical position to turn off. Remove key to lock ignition.

WATER TEMPERATURE GAUGE

This gauge indicates the water temperature in the cooling system. Normal operating temperature is 180° to 219°F. If 219°F. or above (indicated by red band on dial), stop engine and determine cause.

ALTERNATOR INDICATOR LIGHT

This light indicates the operation of the alternator. When the engine is being started, the light will go on (this is normal). If the engine is running and the light goes on, the alternator is not charging. In this case, shut off the engine, check electrical system and make necessary repairs or adjustments.

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 needle registers in red band on dial, stop engine and determine cause.

GRAIN TANK UNLOADING AUGER LEVER

Move lever forward to disengage auger, rearward to engage auger. Grain tank unloading drive and separator drive are independent. If engine is running, separator can be stopped without affecting unloading of grain tank.

CONCAVE FRONT ADJUSTING LEVER

Move lever forward to lower front of concave and rearward to raise front of concave.

TRANSMISSION GEARSHIFT LEVER

The transmission has three speed ranges forward and one reverse. Positions of gearshift lever for different transmission speed ranges are shown by diagram.

CAUTION: Be certain the gearshift lever is in neutral position and clutch pedal is depressed before starting engine.

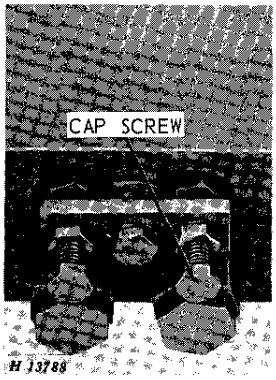
SELECTIVE GROUND SPEED CONTROL

To increase ground travel speed within a selected transmission range, move lever forward.

To decrease ground travel speed, move lever rearward. Ground travel speeds from 0.7 to 9.2 mph (13.6-26 tires) are available at governed engine speed. Separator speed remains constant.

CUTTING PLATFORM HEIGHT CONTROL

This lever controls the height of the platform. Platform height range is from 2 inches below ground level to 31-3/8 inches above ground level on grain combines equipped with 13.6-26 tires and 3 inches below ground level to 30-3/8 inches above ground level on rice combines equipped with 18.4-26 tires. Move lever forward to lower platform and rearward to raise platform. When released, the lever automatically returns to neutral position and the cutting platform remains at selected position. As a safety measure, cutting platform height cannot be changed unless the engine is running.



The platform control valve located under the operator's platform, has an adjustment to control speed of platform lowering. By turning in cap screw, located on the rear of valve, the rate of lowering is decreased; by turning cap screw out, the rate of lowering is increased.

CUTTING PLATFORM THROW-OUT LEVER

To engage, pull lever rearward; to disengage, push lever forward.

SEPARATOR THROW-OUT LEVER

To disengage separator, push lever forward; to engage, pull lever rearward.

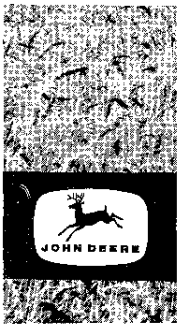
PARKING BRAKE LOCK BUTTON

The parking brake lock button locks the brake so the combine cannot move if left unattended.

To engage, step on brake pedals and step on brake lock button.

To disengage, push brake pedals down; parking brake lock releases automatically.

Never attempt to move combine with parking brake lock engaged.



OPERATION

FUNDAMENTALS OF COMBINE HARVESTING

The 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 grain heads without breaking up the straw excessively.

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.

Open adjustable chaffer as far as possible without admitting too much coarse material into the tailings auger.

Open shoe sieve as far as possible to prevent clean grain being recirculated.

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 grain in tailings as low as possible.

OPERATING SUGGESTIONS

Don't start combining until the crop is ripe.

Unless crop drying equipment is available, 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 may be purchased from your John Deere dealer, or arrangements may usually be made at the local grain elevator for necessary moisture tests and drying if necessary.

OPERATING IN WEEDY CONDITIONS

Combining in fields where weeds are numerous is particularly troublesome as they tend to plug 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 grain as high as possible to avoid weeds and undergrowth.

Be certain the cylinder is operating at proper speed.

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

HEIGHT AND WIDTH OF CUT

Note very carefully the condition of the crop and adjust the cutting platform height so just enough of the straw is cut to get all the grain. If the crop is extremely heavy and badly down, it may be necessary to cut less than a full swath or to 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 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 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 breakdowns in the field. Make the following checks and adjustments:

Fill fuel tank with a good regular grade of gasoline.

CAUTION: Do not fill tank while engine is running or when near an open flame.

Check coolant level in radiator. It is recommended that Summer Engine Coolant Conditioner be used during warm weather. Refer to HOT WEATHER OPERATION, page 71. If combine is being operated at temperature below 32° F., refer to COLD WEATHER OPERATION, page 17.

Add coolant slowly until the level is approximately 1 inch below the bottom of the filler neck.

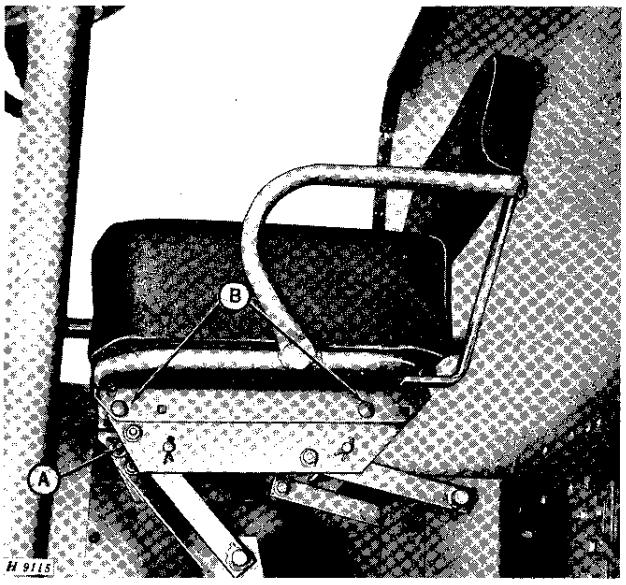
Lubricate the combine, final drive, and engine completely and check oil level of hydraulic unit and transmission. See LUBRICATION section, page 23.

Check tire inflation. See tire inflation chart, page 60.

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

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

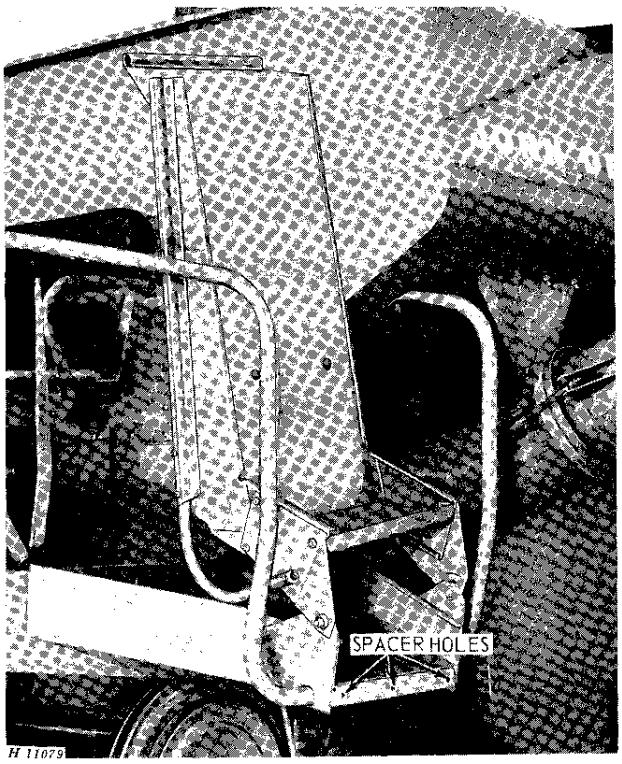
OPERATOR'S SEAT



The operator's seat may be moved forward and rearward and may also be folded back into a vertical position against the grain tank should the operator desire to work in a standing position.

Remove four wing nuts "A" from bolts "B" and remove bolts from frame. Move seat forward until holes match up and replace bolts and nuts. Reverse the procedure to move seat rearward.

OPERATOR'S PLATFORM HINGED LADDER



Hinged Ladder in Retracted Position

CAUTION: When lowering the hinged ladder always be certain that no one is standing where he might be struck by the ladder.

When combine is equipped with 14.9-26 or 16.9-26 tires with rims dished out, add three 1/2 x 1-inch machine bolts to spacer holes with enough 1/8-inch washers under bolt heads to provide a minimum 5/8-inch spacing. This allows ladder to clear tires.

COMBINE AND ENGINE BREAK-IN

COMBINE

Check all V-belt drives carefully for proper alignment and tension - see pages 61 and 69. 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. Keep belts tight enough to prevent slippage. New belts will stretch slightly after the first runoff. 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 53 for adjustments. Check the chain tension every day of operation.

Be certain all shafts turn freely.

After 50 hours of operation, drain oil from the transmission. Fill with oil as specified in LUBRICATION section of this manual. Follow other lubrication instructions and charts closely.

ENGINE

The engine was shipped from the factory with SAE 10W-30 oil in the crankcase. (Service DS for gasoline engines.)

Do not allow the engine to operate at slow idle for any prolonged period as part of break-in procedure. Doing this prevents the piston rings from seating and may promote future oil consumption.

After the first 100 hours of operation, drain the oil from the crankcase. Replace the engine oil filter and clean the hydraulic reservoir oil filter. Fill crankcase with the proper viscosity of oil as specified in the LUBRICATION section of this manual.

STARTING THE ENGINE

Before starting the engine, make certain the separator, cutting platform, and grain tank unloading auger throw-out levers are disengaged and transmission is in neutral.

If the engine has not been operated for a period of time, or the fuel tank has run dry, prime fuel pump lever up or 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.

Move throttle lever one-quarter forward. Move choke lever all the way rearward. Depress clutch pedal, turn key clockwise and push starter button. After engine starts, release button and push choke control forward. Check oil pressure gauge to make certain it is registering pressure; if not, stop engine and determine cause. Make certain alternator light goes out.

Release clutch and warm engine and transmission for five minutes at fast idle—no load. Do not operate combine during warm-up.

STOPPING THE ENGINE

Set throttle control at slow idle speed and allow engine to run at this speed for a few minutes to cool off; then set control at medium idle speed before truning key switch off.

STARTING THE COMBINE

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

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

Check the speed of beater behind the cylinder (page 49) with a speed indicator. Beater should operate at 650 rpm with separator empty and not under load. If beater speed is not correct, adjust governor setting (see page 63).

Test operation of hydraulic control for cutting platform height.

Test operation of grain tank unloading auger.

Test operation of hydraulic selective ground speed control.

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

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

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 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.

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.

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

Over-all dimensions are given on page 5.

If the cutting platform and feeder house are removed, the hydraulic cylinders must be wired or supported by support chains (special attachment) no closer to separator support channel than 14 inches. Damage may result to hoses if carried too close.

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.

CAUTION: When driving 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 local governmental regulations.

SPEED OF VARIOUS UNITS
(Full Governed Speed—No Load)

Auger, Platform. . . .	163 rpm	(regular)
Auger, Platform. . . .	179 rpm	(special)
Beater Behind Cylinder	650 rpm	
Cylinder (As Shipped From Factory) . . .	1095 rpm	Regular
	1095 rpm	Edible Bean
. . .	904 rpm	Rice
Cylinder (Extreme Low) (1" Pitch Drive Chain-with Special 59-Tooth Sprocket)	176 rpm	
Cylinder (Extreme High) (1" Pitch Drive Chain).	1095 rpm	
Elevator, Tailings. . .	325 rpm	
Elevator, Clean Grain	325 rpm	
Engine	2650 rpm	
. . . . .	2500 rpm	(Full Load)
Fan (Regular):		
(Normal).	696 rpm	
(Extreme Low). .	540 rpm	
(Extreme High). .	750 rpm	
Feeder House Conveyor Drive Shaft. . . .	231 rpm	
Ground Travel Speeds	(See page 3)	
Knife Speed	440 strokes per min.	
Reel.	13 to 45 rpm	
Shoe Crank	288 rpm	
Straw Walker.	208 rpm	

CUTTING PLATFORM HEIGHT

The cutting platform has a cutting height range from 2 inches below ground level to 31-3/8 inches above ground level on grain combines (13.6-26 tires), and from 3 inches below ground level to 30-3/8 inches above ground level on rice combines.

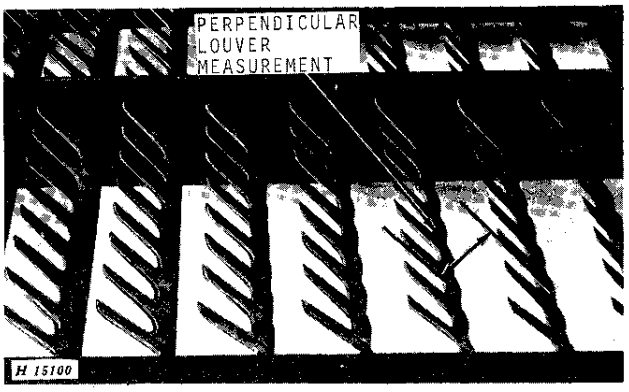
Cut just low enough to get all grain heads. Watch the height and condition of crop and continually raise and lower the cutting platform to meet conditions. If the crop is extremely heavy and badly down, listen for the warning of clutches slipping and for any evidence of the engine slowing down caused by the cylinder starting to slug. If these conditions are evident, it may be necessary to cut less than a full swath or reduce travel speed.

SUGGESTED SETTINGS FOR COMBINING VARIOUS CROPS

(The suggested settings in the following chart are for average conditions. Different field conditions may make it necessary to change these settings.)

ADJUSTABLE SIEVE AND CHAFFER SETTING

When setting the adjustable sieve and chaffer, measure the perpendicular distance between the louvers and adjust to dimension given in the chart.



SUGGESTED SETTINGS FOR COMBINING VARIOUS CROPS, *Continued*

Crop	Cylinder rpm*	Rasp-Bar Cylinder to Concave Clearance		Setting of Adjustable Cleaning Sieve	Setting of Regular Adjustable Chaffer	Setting of Reg. Wide Space Adjustable Chaffer	Setting of Deep Tooth Wide Space Adjustable Chaffer	Cleaning Fan rpm
		Front	Rear					
Alfalfa	780 or 1075	5/16"	1/8"	1/8" - 1/4"	1/2"	.....	.....	400 to 440
Barley Feed and Malting	780 or 1075	1/2"	1/4"	3/8" - 1/2"	1/2" - 5/8"	3/8" - 1/2"	3/16" - 3/8"	620 to 680
Beans—Edible	Rasp-Bar 542	1/2" to 3/4"	1/4" to 1/2"	1/2"	7/8" - 1"	3/4" - 1"	1/2" - 3/4"	660 to 700
	Spike-Tooth 325 or 445							
Beans—Soy	473 or 542	1/2"	1/4"	1/2"	5/8" - 3/4"	1/2" - 3/4"	1/2" - 5/8"	620 to 680
Beans—White Pea	473 or 542	1/2"	1/4"	1/2"	5/8" - 3/4"	1/2" - 3/4"	.....	660 to 700
Buckwheat	542 or 780	1/2"	3/16"	1/4" - 3/8"	5/8" - 3/4"	.....	.....	540 to 640
Clover—Most Varieties	894 or 1075	3/16" to 5/32"	1/8" to 1/16"	1/8" - 1/4"	1/4" - 5/8"	.....	.....	400 to 440**
Corn—Field Shelled	394 or 542	1 1/4" or Max.	5/8"	1/2"	1/2" - 5/8"	1/2" - 3/4"	1/4" - 1/2"	660 to 750
Corn Cob Mix Cracked Kernel	780 or 894	3/8"	1/4"	Remove Sieve	3/4"	1/2" - 3/4"	3/8" - 1/2"	660 to 720
Corn Cob Mix Whole Kernel	473 or 780	3/8"	1/4"	Remove Sieve	3/4"	1/2" - 3/4"	3/8" - 1/2"	660 to 750
Flax	780 or 1075	1/4"	1/8"	3/8"	1/2" - 5/8"	.....	.....	480 to 560**
Grass—Most Varieties	894 or 1075	3/16"	1/8"	1/8" - 1/4"	1/2" - 5/8"	.....	.....	400 to 440**
Lespedeza	780 or 894	3/16"	1/8"	3/8"	1/2" - 5/8"	.....	.....	400 to 440**
Lupine	473 or 542	3/8"	1/4"	1/2"	5/8"	.....	.....	590 to 650
Maize	780 or 894	5/16"	3/16"	1/4" - 1/2"	5/8"	1/2" - 3/4"	1/2"	620 to 680
Mustard	780 or 1075	3/8"	1/4"	1/4" - 3/8"	5/8"	1/2" - 3/4"	.....	510 to 560**
Oats	780 or 1075	5/16"	3/16"	3/8" - 1/2"	3/4"	1/2" - 3/4"	.....	480 to 560**
Peas—Field	386 or 528	1"	3/4"	3/8"	5/8"	1/2"	.....	660 to 700
Peas—Scotch Green	386 or 528	1"	3/4"	3/8"	5/8"	1/2"	.....	660 to 700
Peas—Willet's Wonder	386 or 528	1"	3/4"	3/8"	5/8"	1/2"	.....	660 to 700
Proso or Hog Millet	780 or 894	3/16"	1/8"	1/8" - 1/4"	1/2"	3/8" - 1/2"	.....	620 to 680
Radish Seed	780	3/16"	1/8"	1/8" - 1/4"	1/2"	.....	.....	400 to 500**
Rice	Rasp-Bar 894	7/16"	1/4"	3/8"	5/8" - 3/4"	3/4" - 1"	3/8" - 1/2"	660 to 700
	Spike-Tooth 780							
Rye	894 or 1075	5/16"	1/4"	3/8"	5/8"	1/2" - 3/4"	1/4" - 3/8"	620 to 660
Safflower	780	1/2"	3/16"	1/2"	3/4"	1/2" - 3/4"	.....	650 to 700
Sorghums	780 or 894	1/2"	1/8"	1/4" - 1/2"	5/8" - 3/4"	1/2" - 3/4"	.....	650 to 700
Timothy	1075	5/32"	1/16"	1/8" - 1/4"	1/2"	.....	.....	400 to 550**
Trefoil—Bird's-Foot	894 or 1075	5/32"	1/16"	1/8" - 1/4"	1/4"	.....	.....	400 to 550**
Wheat	894 or 1075	3/8"	1/4"	3/8" - 1/2"	5/8" - 3/4"	1/2" - 3/4"	1/4" - 3/8"	600 to 750

**See page 46 for sprockets.* **Special fan sheave.*

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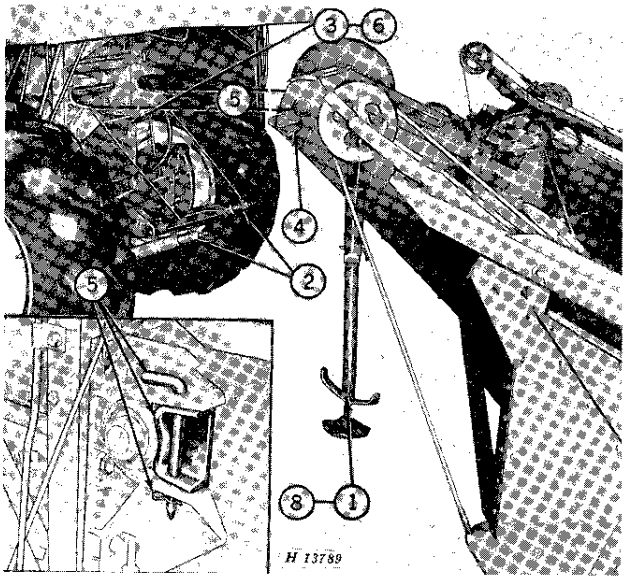
ATTACHING CUTTING PLATFORM



1. Block the cutting platform under cylinder brackets or install support stand (special attachment).

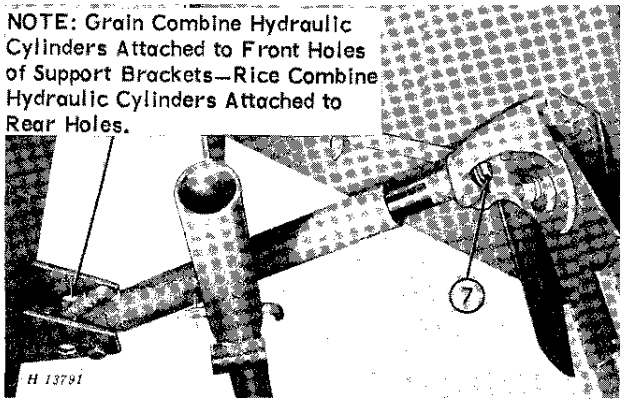
2. Wire up hydraulic cylinders or install support chain (special attachment).

3. Lower the grain conveyor front door.

4. Raise feeder house hinged plate.

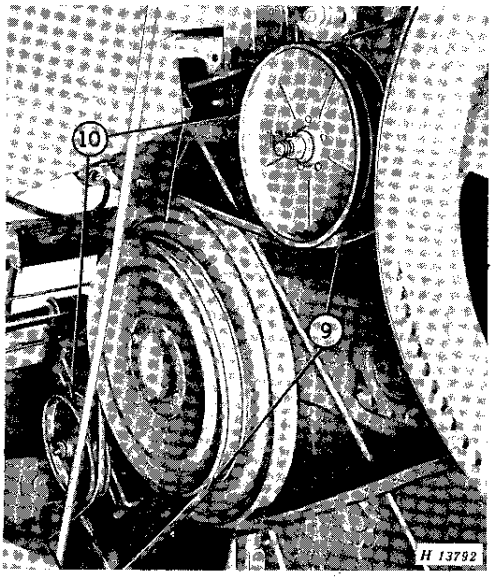
5. Drive separator forward and attach U-bracket to feeder house.

6. Raise grain conveyor front door.



7. Attach hydraulic cylinders, with safety stop on left-hand cylinder, to brackets.

8. Remove blocking or place support stand in transport position.



9. Install platform drive belts.

10. Adjust belt tension (see page 44).

REMOVING CUTTING PLATFORM

To remove cutting platform, block under cylinder brackets, or place support stand in position. Lower the grain conveyor front door. Remove platform drive belts, hydraulic cylinders, and pins and retainers from U-brackets on separator. Drive separator rearward slowly until front of separator clears rear of feeder house. Wire up hydraulic cylinders, and raise grain conveyor front door.

CUTTING PLATFORM LEVELING ADJUSTMENT

To ensure satisfactory performance, the cutting platform and the front axle tube must be parallel.

Inspect platform and tube periodically, using the following method:

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.

If necessary, level platform according to the instructions on page 16.

NOTE: Main wheel tires must be inflated to equal pressure, otherwise an accurate platform leveling adjustment cannot be accomplished.