45
Combines

JOHN DEERE

OPERATORS MANUAL

45
Combines

OMH91055 K4 English

John Deere Harvester Works
OMH91055 K4

LITHO IN 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, there are attachments 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.

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 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.

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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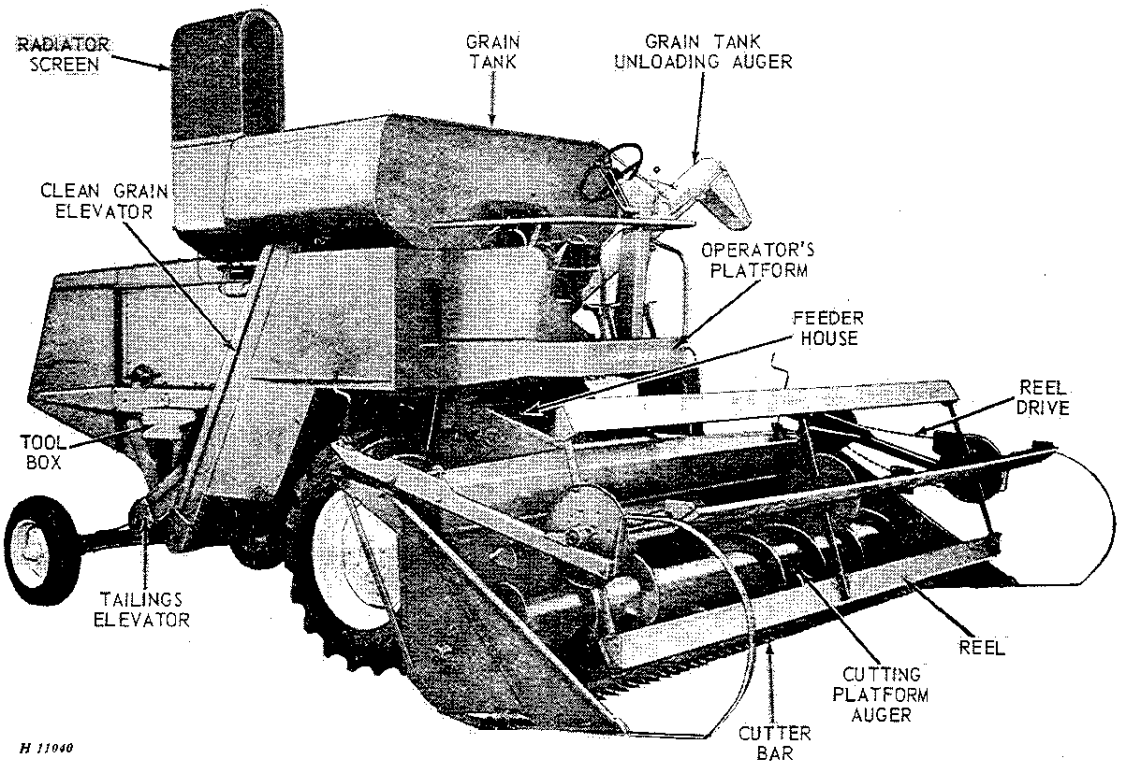
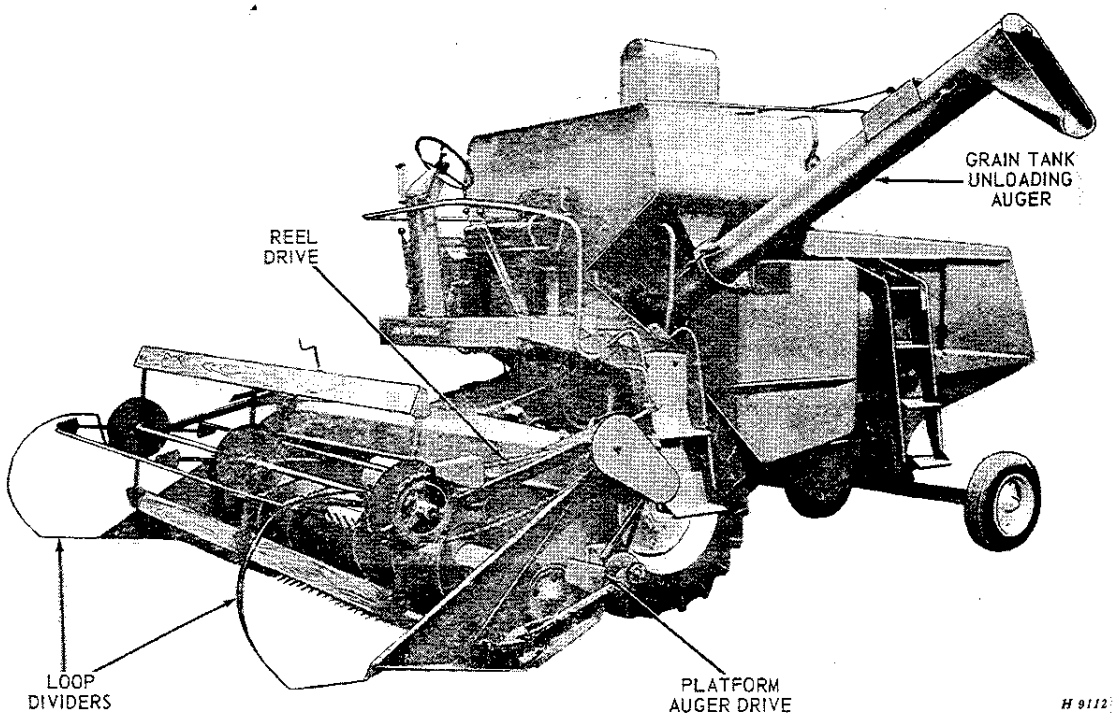


Right-Hand Front View - John Deere 45 Grain Tank Combine



Left-Hand Front View - John Deere 45 Grain Tank Combine

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. to 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 ..... 5-bladed undershot
- Drive ..... V-belt
- Speed range ..... 593 rpm to 810 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 ..... 113 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
- 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	Center-to-Center Wheel Tread		
	Regular Axle	Wide Axle		Regular Axle	Wide Axle	Wide Axle
13.6-26 (6-ply)	72 in.	84 in.	5.50-16 (4 ply)	42 in.	59 in.	73 in.
14.9-26 (6-ply)	73 in.	83 in.	6.00-16 (4 ply)	44 in.	61 in.	75 in.
16.9-26 (6-ply)	75 in.	81 in.	6.50-16 (4 ply)	44 in.	61 in.	75 in.
18.4-26 (6-ply)	76-1/2 in.	79-1/2 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.

SELECTIVE GROUND SPEED CONTROL RANGE

13.6-26 (12-26) Tires—Grain Drive		18.4-26 (15-26) Tires—Rice Drive	
	(Min.) (Max.)		(Min.) (Max.)
1st Gear	0.69 to 1.78 mph	1st Gear	0.65 to 1.69 mph
2nd Gear	1.50 to 3.88 mph	2nd Gear	1.42 to 3.69 mph
3rd Gear	3.54 to 9.16 mph	3rd Gear	3.36 to 8.71 mph
Reverse	1.56 to 4.04 mph	Reverse	1.48 to 3.84 mph
14.9-26 (13-26) Tires—Optional		**16.9-26 (14-26) Tires—Optional**	
	(Min.) (Max.)		(Min.) (Max.)
1st Gear	0.71 to 1.85 mph	1st Gear	0.73 to 1.89 mph
2nd Gear	1.55 to 4.02 mph	2nd Gear	1.59 to 4.12 mph
3rd Gear	3.66 to 9.48 mph	3rd Gear	3.75 to 9.72 mph
Reverse	1.62 to 4.18 mph	Reverse	1.66 to 4.29 mph

ENGINE

NOTE: For LP-gas or diesel engine specifications, see operator's manual furnished with LP-gas or diesel combine.

Make of engine ..... John Deere HA-165 G
Bore ..... 3-7/8 in.
Stroke ..... 3-1/2-in.
Brake horsepower 58*
Number of cylinders 4
Piston displacement ..... 165 cu. in.
Maximum load speed ..... 2500 rpm
Firing order 1-3-4-2
Crankcase ..... Cast integral with block
Type of lubrication . Force-feed by gear pump to all connecting rods, main bearings, governor, oil pump drive. Oil strainer in bottom of pan

Valve arrangement ..... Valve-in-head
Valve clearance:
Intake ..... 0.12-in. (cold)
Exhaust ..... 0.18-in. (cold)
Make of governor ..... Pierce
Make of carburetor ..... Marvel-Schebler
Air cleaner ..... Dry type

Spark plug:
Type .. Champion H-10, Auto-Lite AL-7, or AC-45L
Gap ..... 0.025-in.
Heat range ..... 1200° to 1500° F.
Electrical system 12-volt
Cooling system ..... Water pressure type
Type of fuel ..... Gasoline (regular grade)

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

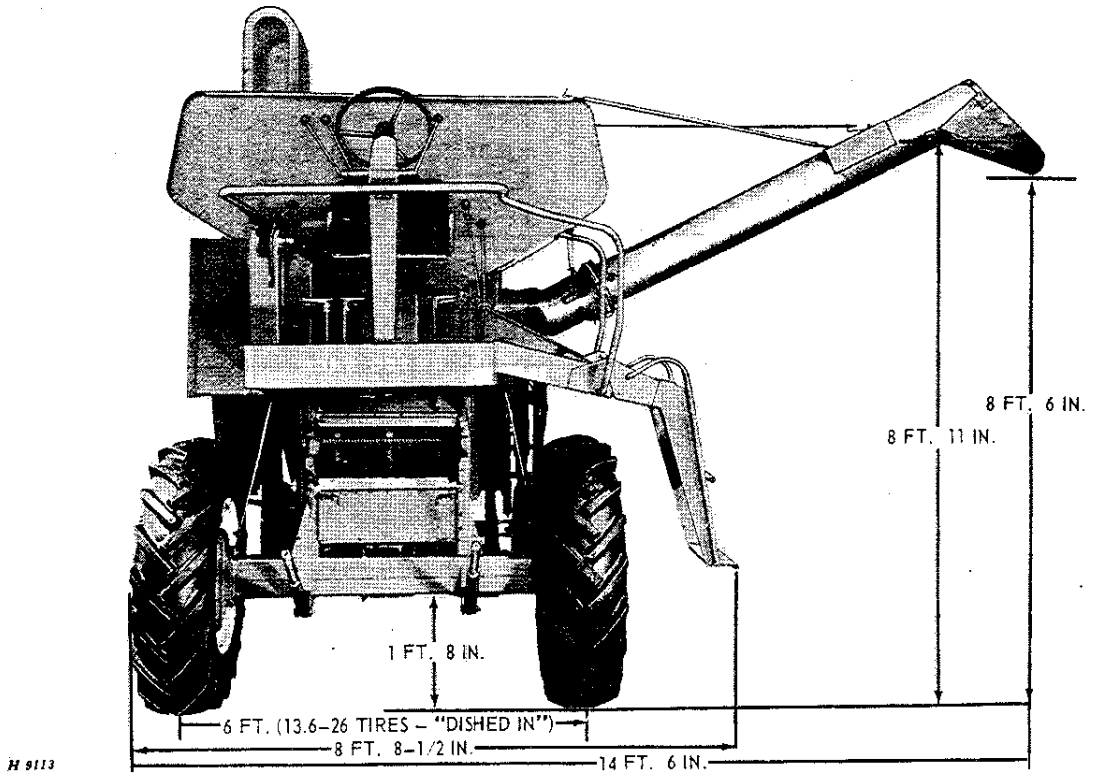
CAPACITIES (Approx.)

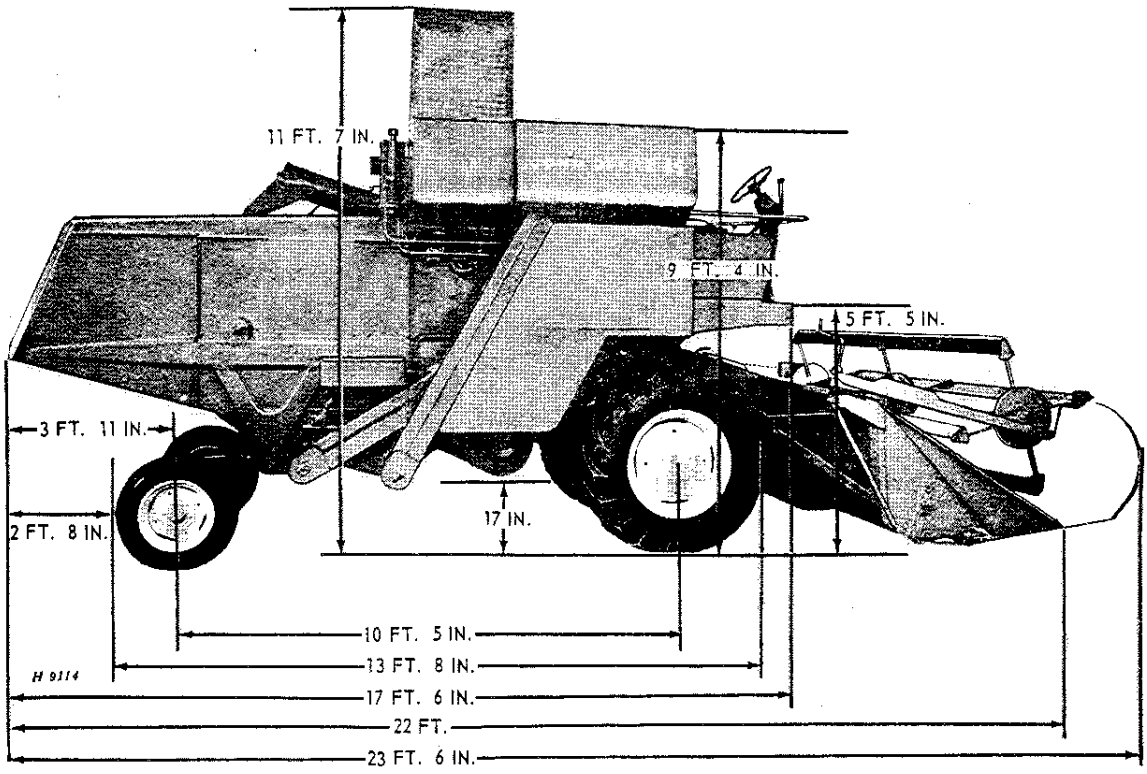
Fuel tank ..... 25 U.S. gallons
Cooling system (Radiator) .... 14 U.S. quarts
Engine crankcase (with filter) . 7 U.S. quarts
Hydraulic unit (including hydraulic oil lines and cylinders) .... 11-1/2 U.S. quarts

(Specifications and design subject to change without notice.)

COMBINE DIMENSIONS—OVER-ALL

NOTE: Combine equipped with 13.6-26 main wheel tires and 5.50-16 guide wheel tires for dimensions.



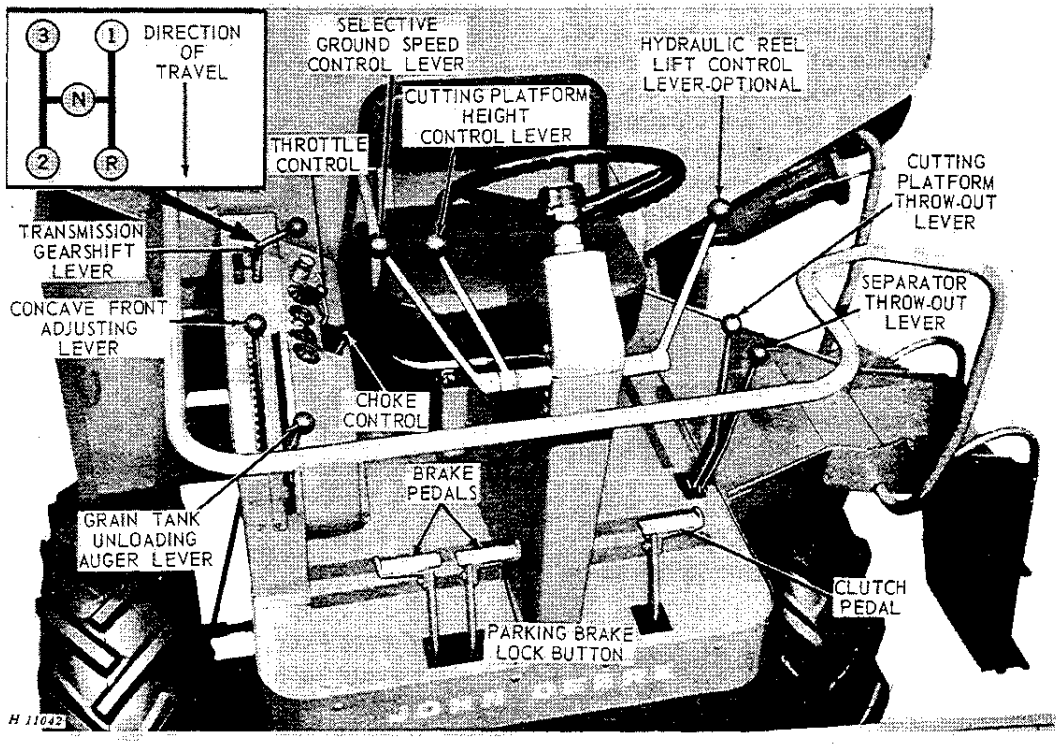


NOTE: When combine is equipped with cab, storage height above grain tank is increased approximately 16 inches.

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.

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 will not be explained.

TRANSMISSION GEARSHIFT LEVER

There are 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 before starting engine.

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.

SEPARATOR THROW-OUT LEVER

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

SELECTIVE GROUND SPEED CONTROL LEVER

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

SELECTIVE GROUND SPEED CONTROL LEVER — Continued

To decrease ground travel speed, move lever rearward. Ground travel speeds from 0.69 to 9.16 mph (13.6-26 tires) are available at governed engine speed. Separator speed remains constant.

CUTTING PLATFORM HEIGHT CONTROL LEVER

This lever controls the height of the platform through a hydraulic mechanism. Platform height range is from 2 inches below wheel level to 31-3/8 inches above wheel level on grain combines and 3 inches below wheel level to 30-3/8 inches above wheel level on rice combines. Move lever forward to lower platform, 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.

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.

CUTTING PLATFORM THROW-OUT LEVER

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

CONCAVE FRONT ADJUSTING LEVER

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

THROTTLE LEVER

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

CHOKE CONTROL

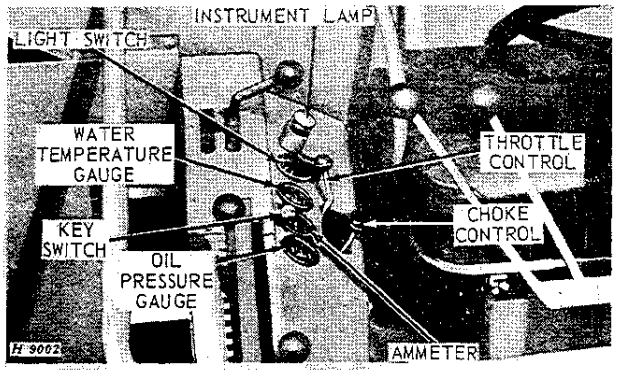
Move choke control all the way rearward when starting engine. After engine is started, and for normal operation, move choke control all the way forward.

INSTRUMENTS

KEY SWITCH

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

Turn key clockwise to start engine, counter-clockwise for accessories only. Turn key to vertical position to turn off; remove key to lock ignition.



LIGHT SWITCH

Only three of the four positions are used on the light switch - the "D" position is not used. Positions used are:

"OFF" - To turn off all lights.
"L" - To turn on field lights and panel light.
"B" - To turn on field lights, warning lights, and panel light.

WATER TEMPERATURE GAUGE

This gauge indicates the water temperature in the cooling system. 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 battery. 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 battery, 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 (indicated by green band on dial) at full governed speed. If needle registers in red band on dial, stop engine and determine cause.

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 water level in radiator. Fill with clean rain water if available. Do not use water containing alkali. It is recommended that Summer Engine Coolant Conditioner be used during warm weather. Refer to HOT WEATHER OPERATION, page 68. If combine is being operated at temperature below 32°F., refer to COLD WEATHER OPERATION, page 14.

Add water or antifreeze slowly until the water level is approximately 1 inch below the bottom of the filler neck.

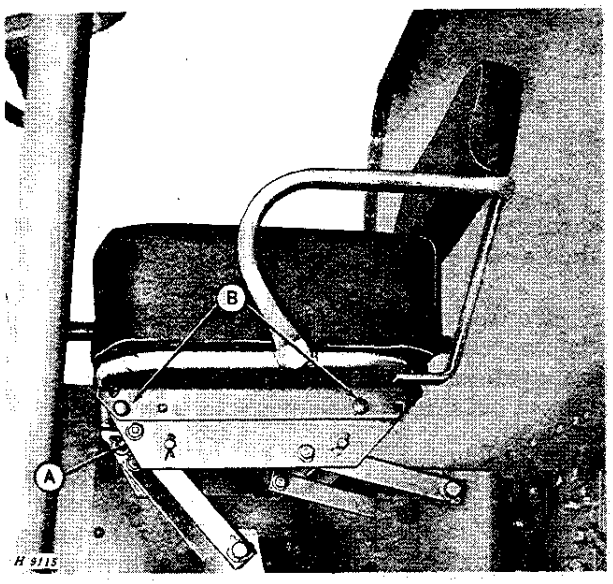
Lubricate the combine completely and check oil level of hydraulic unit and transmission. See LUBRICATION section, page 18.

Check tire inflation. See tire inflation chart, page 53.

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.

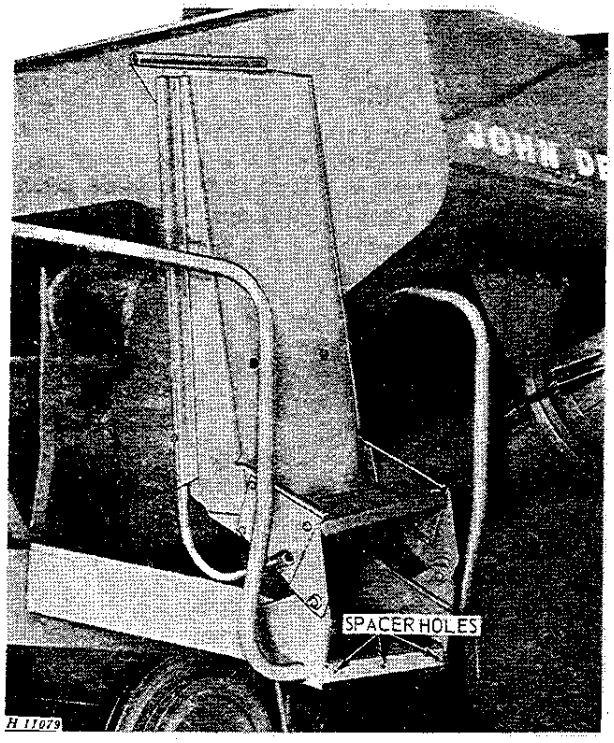
OPERATOR'S SEAT



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 with enough 1/8-inch washers under bolt heads to provide a minimum 5/8-inch spacing, thus allowing ladder to clear tires.

COMBINE AND ENGINE BREAK-IN

COMBINE

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 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 47 for adjustments. 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. Fill with oil as specified in the LUBRICATION section of this manual.

Follow the lubrication instructions and charts closely.

ENGINE

The engine 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 break-in procedure. Doing this prevents the piston rings from seating and thus may promote future oil consumption.

After the 20-hour break-in period, drain the special "break-in" oil from the crankcase. 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

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

If engine has not been operated for a period of time, or if the fuel 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.

Move throttle lever one quarter forward. Move choke control all the way rearward and turn key switch to start engine. After engine runs a few revolutions, move choke control slowly back to forward position. Set engine at slow idle by moving throttle lever all the way rearward.

Be certain oil pressure gauge is registering pressure.

Do not place engine under load until properly warmed up.

STOPPING THE ENGINE

Set engine at slow idle speed and allow engine to run at this speed for a few minutes before stopping. This permits cooling of valves and pistons. Turn off ignition.

STARTING THE COMBINE

CAUTION: Be 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 throttle lever forward and pull separator throwout lever rearward to engage separator.

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

Test operation of hydraulic control for adjusting 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 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
(Full Governed Speed—No Load)

Auger, Platform. . . .	163 rpm	(regular)
Auger, Platform. . . .	179 rpm	(special)
Beater Behind Cylinder.	650 rpm	
Cylinder (Normal Operating Speed at Fast Idle—No Load)	1095 rpm 1095 rpm 904 rpm	Regular Edible Bean 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	2590 rpm	
Fan (Normal Operating Speed)	620 rpm	
Fan (Extreme Low). .	593 rpm	
Fan (Extreme High) .	810 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 wheel level to 31-3/8 inches above wheel level on grain combines 13.6-26 tires), and from 3 inches below wheel level to 30-3/8 inches above wheel 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, it may be necessary to cut less than a full swath or reduce travel speed.

Listen for the warning of the clutches slipping. Also, listen to the engine for any evidence of slowing down caused by cylinder starting to slug. Immediately stop the forward travel of the combine and disengage the platform drive. This will permit the separator to clear.

SUGGESTED SETTINGS FOR COMBINING VARIOUS CROPS

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

Crop	Cylinder RPM	Rasp-Bar Cylinder to Concave Clearance		Spike-Tooth Concave Arrangement T - Teeth OG - Open Grate			Snap-On Rasp-Bar Concave Covers	Cleaning Sieve	Setting of Adjustable Cleaning Sieve	Setting of Chaffer
		Front	Rear	Front	Center	Rear				
Alfalfa	1095	1/4"	3/16"	T	T	T	4 to 8	Adjustable or Rd. Hole	Slightly Open	About 1/4 Open
Barley—Feed and Malting	904 or 1095	1/2"	1/4"	T	T	OG	If Necessary	Adjustable	1/3 to 1/2 Open	3/4 Open
Beans—Edible	386	1/2" to 3/4"	1/4" to 1/2"	T	OG	OG	Not Required	Adjustable (preferred) or Rd. Hole	Slightly Over 1/2 Open	2/3 to Nearly Wide Open
Beans—Soy	536	1/2"	1/4"	T	T	OG	Not Required	Adjustable or Rd. Hole	About 1/2 Open	About 2/3 Open
Beans—White Pea	467 or 536	1/2"	1/4"	T	T	OG	Not Required	Adjustable	1/2 Open	2/3 Open
Buck Wheat	786	1/2"	3/16"	T	T	OG	If Necessary	Adjustable	1/4 to 1/3 Open	About 2/3 Open
Clover—Most Varieties	1095	5/32" to 3/16"	1/16" to 1/8"	T	T	T	4 to 8	Adjustable (preferred) or Rd. Hole	Slightly Open	About 1/4 Open
Corn—Field Shelled	467	1"	5/8"	T	T	OG	None	Adjustable or Rd. Hole	About 1/2 Open	About 2/3 Open
Corncob Mix—Cracked Kern.	904	3/8"	1/4"				5	None	None	3/4 Open
Corncob Mix—Whole Kernel	467	3/8"	1/4"				5	None	None	3/4 Open
Flax	786	1/4"	1/8"	T	T	T	4	Adjustable or Rd. Hole	About 1/3 Open	3/4 Open
Grass—Most Varieties	1095 or 904	3/16" to 1/2"	1/8" to 5/8"	T	T	T	None to 8	Adjustable or Rd. Hole	1/4 to 1/3 Open	1/2 to 2/3 Open
Lespedeza	786	3/16"	1/8"	T	T	T	If Necessary	Adjustable or Rd. Hole	1/3 Open	1/2 to 2/3 Open
Lettuce	904	1/4"	3/8"	T	T	OG	4	Adjustable	Slightly Open	1/4 Open
Lupine	536	3/8"	1/4"	T	T	OG	Not Required	Adjustable	About 1/2 Open	About 2/3 Open
Mustard	786	3/8"	1/4"	T	T	OG	4	Adjustable	1/4 to 1/3 Open	About 2/3 Open
Oats	1095 or 904	5/16"	3/16"	T	T	OG	If Necessary	Adjustable	1/3 to 1/2 Open	3/4 Open
Peas—Field	386	5/8"	1/4"	T	OG	OG	Not Required	Adjustable (preferred) or Rd. Hole	About 1/3 Open	About 2/3 Open

SUGGESTED SETTINGS FOR COMBINING VARIOUS CROPS—Continued

Crop	Cylinder RPM	Rasp-Bar Cylinder to Concave Clearance		Spike-Tooth Concave Arrangement T - Teeth OG - Open Grate			Snap-On Rasp-Bar Concave Covers	Cleaning Sieve	Setting of Adjustable Cleaning Sieve	Setting of Chaffer
		Front	Rear	Front	Center	Rear				
Proso or Hog Millet	786	3/16"	1/8"	T	T	OG	4	Adjustable or Rd. Hole	Slightly Open	About 1/2 Open
Radish Seed	536 or 786	3/16"	1/8"	T	T	T	4 to 8	Adjustable or Rd. Hole	Closed to 1/4 Open	1/3 to 1/2 Open
Safflower	536	1/2"	3/16"	T	T	OG	None	Adjustable	1/2 Open	3/4 Open
Rye	1095	5/16"	1/4"	T	T	OG	If Necessary	Adjustable	1/3 Open	3/4 Open
Sorghums	786	1/2"	1/8"	T	T	OG	If Necessary	Adjustable	1/4 to 1/2 Open	2/3 to 3/4 Open
Timothy	1095	5/32"	1/16"	T	T	T	4 to 8	Adjustable or Rd. Hole	Slightly Open	About 1/2
Vetch	786	3/8"	1/2"	T	T	OG	None	Adjustable	Slightly Open	1/2 Open
Wheat	1095	5/16"	3/16"	T	T	OG	If Necessary	Adjustable	1/3 to 1/2 Open	3/4 Open

PLATFORM AUGER SPEED ADJUSTMENTS

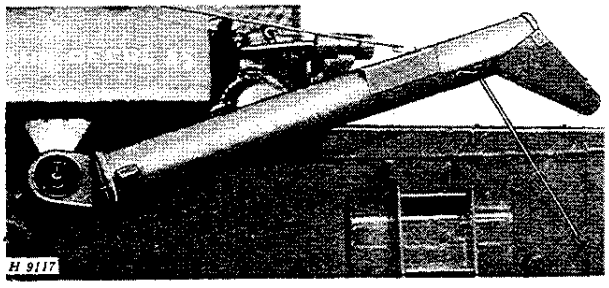
If straw is extremely heavy and standard 163 rpm auger speed will not carry it properly, increase auger speed to 179 rpm by using special 22-tooth drive sprocket.

TRANSPORTING

When transporting, drive combine under its own power or load it on a truck. Combine may be towed with caution. If mired down in soft conditions, run chains under the rear axle, attach to the front axle and pull combine out backward.

This combine is designed for easier and safer transporting. The width of the combine may be reduced by folding the unloading auger back along the separator and removing the cutting platform. The width may be further reduced by folding the hinged ladder. Height may be reduced by folding down radiator screen.

Over-all dimensions are given on page 4.



If the cutting platform is removed, support the hydraulic cylinders with wires or chains, no closer to separator than 14 inches, as damage may result to hoses if carried too close. Special chains are available with Platform Support Stand (see ATTACHMENT SECTION).

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

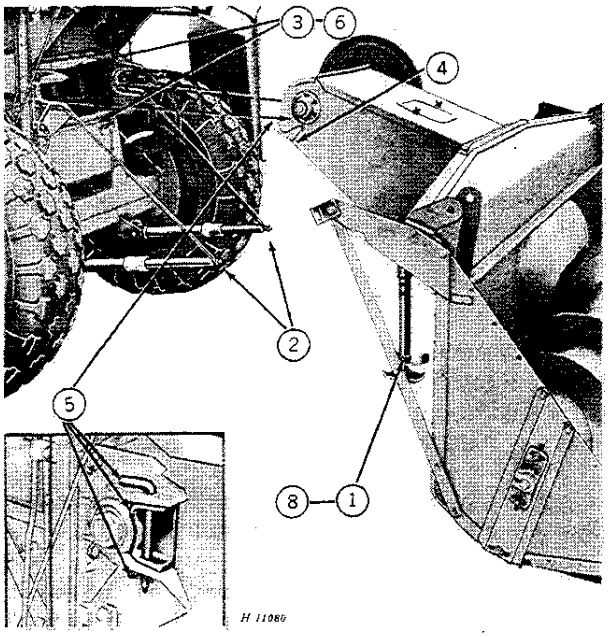
Clean out combine thoroughly before leaving one field and going to the next in order to reduce the spread of noxious weed seeds.

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.

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. Various safety lights and devices are available from your John Deere dealer.

See ATTACHMENTS SECTION for Field Lighting Attachment and Safety Lighting Attachment.

ATTACHING CUTTING PLATFORM



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

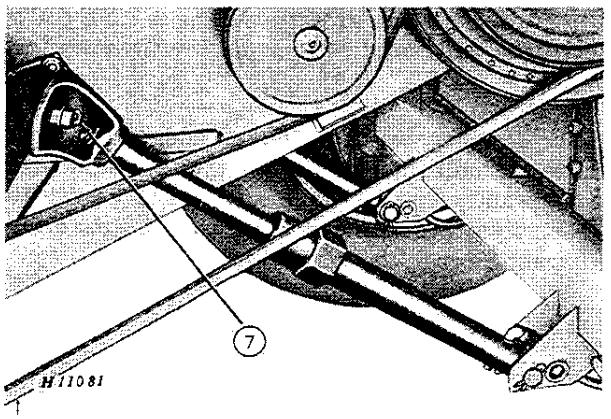
2. Wire up hydraulic cylinders or install support chains (special attachment).

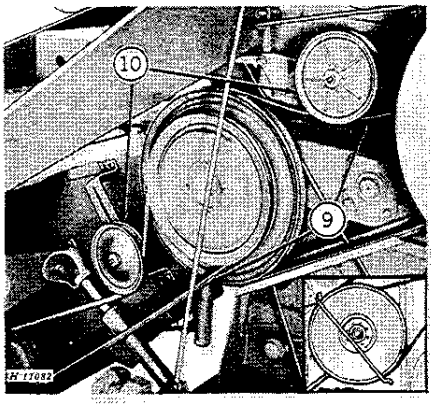
3. (Not Illustrated) Remove cylinder front door and lower grain conveyor front door.

4. Raise feeder house hinged plate.

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

6. (Not Illustrated) 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 belts.

10. Adjust belt tension.

To remove cutting platform, block under hinge brackets, or place support stand in upright position. Remove cylinder front door and lower the grain conveyor front door. Remove platform drive belts, pins from 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, install cylinder front door, and raise grain conveyor front door.

CUTTING PLATFORM LEVELING ADJUSTMENT

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

This should be inspected periodically, using the following method:

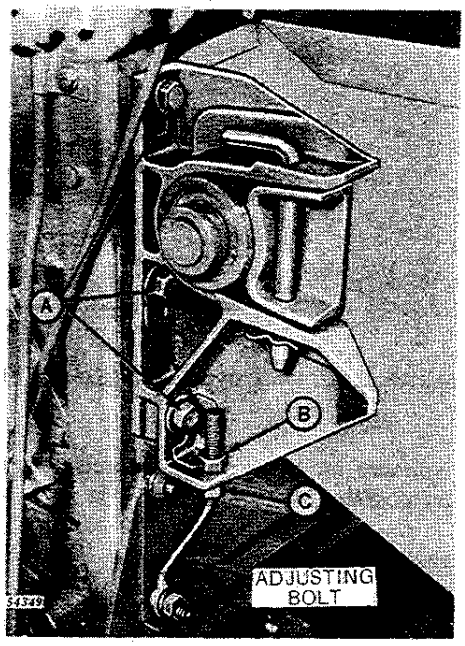
Raise the cutting platform to maximum height.

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.

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

CUTTING PLATFORM LEVELING ADJUSTMENT—Continued



To adjust:

Loosen the three bolts "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 cutting platform.

When bottom of cutting platform is parallel with front axle tube, tighten the three bolts "A."

CAUTION: These bolts must be tight.

COLD WEATHER OPERATION

Operating a combine in cold weather requires special preparation.

HYDRAULIC UNIT AND ENGINE CRANKCASE

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

TRANSMISSION CASE AND FINAL DRIVES

Be certain that SAE 90 regular type gear lubricant is being used.

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

To prevent freezing when temperature is 32°F or lower, either drain the cooling system at the end of each day's run or use an antifreeze solution. The use of antifreeze is recommended.

CAUTION: Never use calcium chloride solution in the radiator. It is harmful to metal.

Add water or antifreeze slowly until the water level is approximately 1 inch below the bottom of the filler neck.

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

BATTERY

When the temperature drops below 32° F , take precautions to avoid damaging the battery cells by freezing. A badly discharged battery freezes quicker than one that is well charged. For example, a battery with a specific gravity reading of 1.175 (discharged) will freeze at 4° F., and a battery with a specific gravity reading of 1.300 (fully charged) will not freeze until the temperature reaches -65° F.

In freezing weather, do not add water to the 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.

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

BEGINNING OF THE SEASON SERVICE

The combine must be carefully checked before starting the harvest season.

Replace wheels and remove blocking.

Clean the combine thoroughly inside and out.

Clean and adjust spark plugs. Replace worn or oil-soaked wiring. Install the battery. Check electrolyte level and recharge.

Flush radiator, install drain plugs in radiator and engine block and fill with clean water—rain water if available. Do not use water containing alkali. It is recommended that Summer Engine Coolant Conditioner be used (see page 68). Pour water in slowly until the water level is approximately 1 inch below the bottom of the filler neck.

Remove sealing tape from all engine openings.

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

Install belts, and adjust to proper tension. Adjust chains to proper tension. Be certain to check chains in clean grain and tailings elevators. Check the grain conveyor chain.

Remove block from clutch pedal and connect clutch lever return spring.

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 unloading auger clean-out door.

Fill fuel tank.

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

Check tire inflation.

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 the hydraulic system with clean oil. Do not leave hydraulic system dry while combine is stored.

Clean inside of air cleaner, remove loose dirt from filter and install filter in air cleaner.

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

Drain all gasoline and leave drain valve open.

NOTE: If gasoline is allowed to stand in tank, fuel lines, fuel pump, and carburetor, a gummy substance will form in carburetor jets and passages. This gum is difficult to remove and will cause future trouble.

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

Use a nationally known brand of oil to condition the combustion chambers of the engine for storage. Either flood the engine with this oil or introduce the oil through spark plug openings, depending upon the oil manufacturer's recommendations.

NOTE: Only regular crankcase oil is required in crankcase (see page 18).

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