

NO. 1 COTTON PICKER ONE-ROW MOUNTED (EFFECTIVE SERIAL NO. 1865)



OPERATORS MANUAL NO. 1 COTTON PICKER ONE-ROW MOUNTED (EFFECTIVE SERIAL NO. 1865)

OMN28856 (01AUG56) English

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LITHO IN THE U.S.A.
ENGLISH



TO THE PURCHASER

Your new cotton picker was built to rigid manufacturing standards. Material and workmanship are the best. It will serve you in direct proportion to the care you give it. Depreciation, in a machine of this kind, is an item of expense that must be considered. How long it will last and continue its good work is a matter entirely in your hands.

The way you operate your cotton picker and the care you give it have much to do with the service and satisfaction you will get from it. This manual has been carefully prepared and illustrated to show you what to do and when to do it. It explains the adjustments that are built into the machine and gives instructions on when and how to make these adjustments. The information given in these Manuals will afford a clear understanding of the fundamentals of cotton picker harvesting. The best use of these fundamentals to suit the conditions in which the machine is operating is a responsibility that is completely up to the operator.

If you find you need information not covered in this manual or if your cotton picker requires special servicing, take advantage of the facilities offered by your John Deere dealer. He has trained mechanics, who are kept informed on the best methods of servicing and can give you prompt, "know-how" service in the field or in his shop.

Location References. "Right" and "Left," "Front" and "Rear" refer to the operator's "Right" or "Left" and "Front" or "Rear" when facing the same direction machine is headed or traveling.

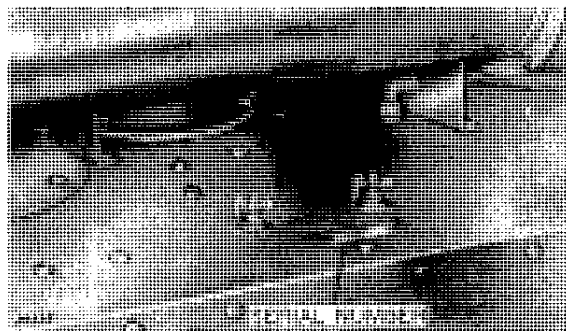
"Clockwise" refers to a shaft, screw, or similar part turning to the operator's "Right," or like the hands of a clock. "Counter-clockwise" refers to the operator's "Left."

SERIAL NUMBER

You will find the serial number of your cotton picker stamped on a plate located on the picking unit just in front of water control valves. Write this serial number in the place provided below for handy reference later.

PICKER SERIAL No.....

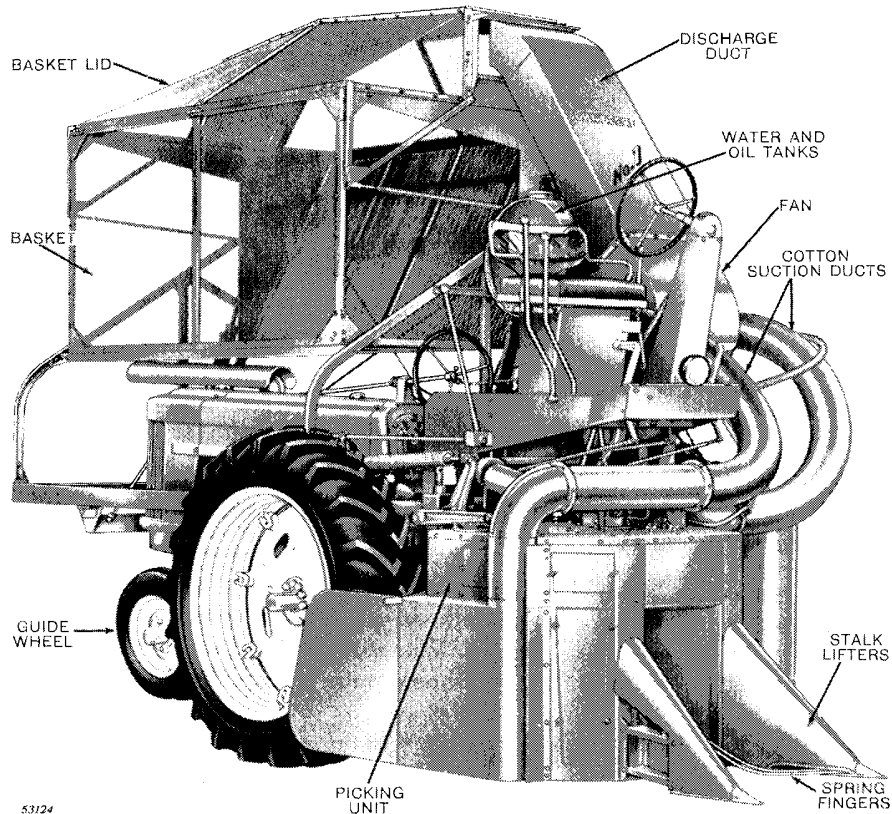
Date Purchased....., 19.....



CONTENTS

DESCRIPTION AND SPECIFICATIONS.....	<i>Pages</i> 2-5
Get acquainted with your new cotton picker on these pages. The inner workings of the picker are described and some interesting facts and figures are given.	
CONTROLS.....	6-7
All the controls for the picker are illustrated, together with an explanation of what they do and how they work.	
OPERATION.....	8-16
A complete step-by-step description of how to inspect, start, and operate the picker is given. Special information about transporting and cold weather operation is included. Here the fundamentals of mechanical cotton picking are discussed. Valuable tips about actual field operation are given.	
LUBRICATION.....	17-24
Proper periodic lubrication is vital to long and satisfactory service. Be particularly careful to lubricate your picker exactly as instructed in this section.	
ADJUSTMENTS AND SERVICE.....	25-50
The many convenient adjustments on your cotton picker are described in detail in this section. Valuable service information is also given to help you get the maximum service from your picker.	
TROUBLE SHOOTING.....	51-61
This is a quick-reference list of the picking difficulties you may encounter and what to do about them.	
MAINTENANCE.....	62-67
There are a number of things you can do between seasons so your picker will be ready to go when the next picking season starts.	
REMOVING PICKER FROM TRACTOR.....	68-79
This is a safe, quick and easy way to take the picker off the tractor, so the tractor can be used for other work between picking seasons.	
ATTACHING PICKER TO TRACTOR.....	80-88
This is the recommended method of attaching the picker to the tractor after it has been removed the first time.	
INDEX.....	89-90
A complete alphabetical listing of everything covered in this manual.	

DESCRIPTION AND SPECIFICATIONS



Facts And Figures

Performance

Will Pick..... 36-, 38-, 40-, or
42-inch rows

Ground Speeds

Picking Speed..... 2-1/2 mph
Transport Speed..... 9 to 12 mph
Reverse Speed..... 1-1/2 to 2 mph

Capacities

Cotton Basket. 800 Lbs. Seed Cotton
Water Supply Tank. 25 U. S. Gallons
Oil Supply Tank.. 8-1/2 U. S. Gallons

Shipping Weight

Picker Alone, Approx..... 4100 Lbs.

Dimensions

Length, Over-All..... 18 Ft. 8 In.

Width, Over-All..... 9 Ft. 1 In.

Height:

Basket Lowered..... 12 Ft. 3 In.
Basket Raised..... 14 Ft. 6 In.

Picking Unit

No. of Picker Drums..... 2
No. of Picker Bars:
Front Drum..... 16
Rear Drum..... 12
No. of Spindles:
Per Picker Bar..... 14
Total..... 392

Speeds (Approx.)

Front Drum..... 74 rpm
Rear Drum..... 99 rpm
Spindles..... 2500 rpm

It is John Deere policy to improve our machines at every opportunity. Consequently, it may be necessary to change design without notice.

Get Acquainted With Your New Picker

The No. 1 is a practical one-row cotton picker. The operating costs are low. It is easy to handle and transports fast. Attaching and detaching are quick—without costly tractor conversion.

The picker consists of three basic elements.

1. One-Row Picking Unit
2. Platform and Controls
3. Fan Delivery System and Basket

These three basic components are mounted in such a way that the tractor operates in reverse gear during the picking operation. For transporting, the picker is driven from the tractor seat, using the regular tractor forward speeds.

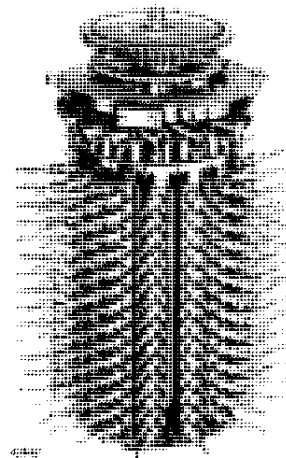
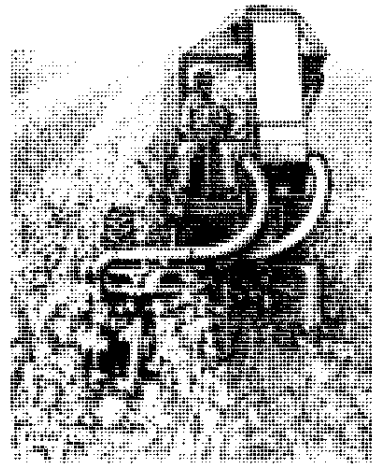
PICKING UNIT.

The heart of the picker is the highly-efficient spindle-type picking unit. There are two drums of spindles. The front drum consists of 16 cam-controlled spindle columns with 14 spindles on each column. In all there are 392 barbed spindles picking cotton from the plants.

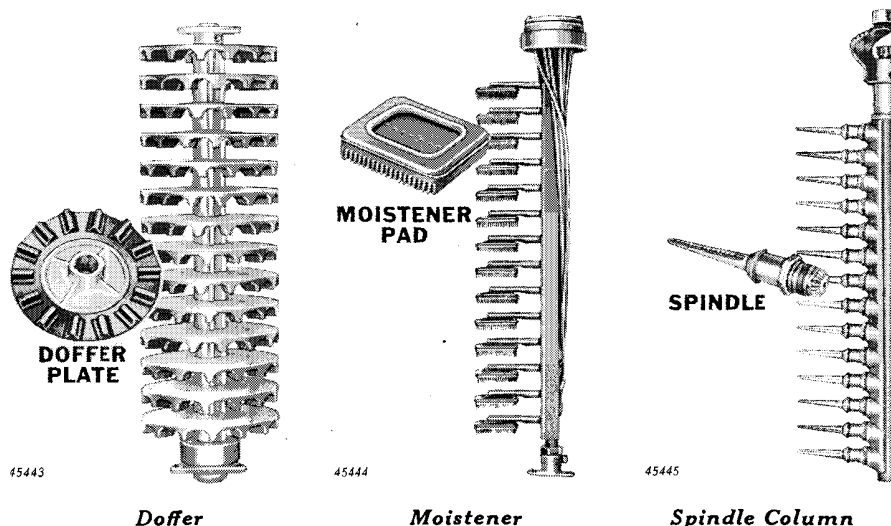
There is a doffer assembly for each spindle drum to unwind the cotton from the spindles and deliver it to a chute in the side door. Each assembly consists of a shaft with 14 aluminum alloy doffer plates that have the rubber doffers molded to the plate.

There is also a spindle moistener column for each spindle drum that wipes each spindle with water to keep it clean for a better job of picking cotton.

The stalk lifters guide the cotton plant into the picking zone of the unit where the grid bars and pressure plates take over to hold the plant in position for picking.



*Front Picking
Drum*



HOW THE PICKING UNIT WORKS.

Knowing what is going on inside the picking unit will be a great help to you. It will give you a better understanding of the capabilities and limitations of a mechanical cotton picker. You will also know why certain adjustments are necessary and when to make the adjustments.

The illustration on the next page shows what happens during the picking cycle. At "A" the spindles go under the moisteners and are cleaned of lint, plant sap and stain by a film of water.

Next the cleaned spindles start through the grid bars at "B." The speed of the spindle drums is synchronized with the picking speed of the tractor (2-1/2 miles per hour) so the spindles have no forward or backward motion in relation to the cotton plant. The rotating spindles simply poke straight into the cotton plant and then pull straight back. Because of this, the spindles can brush past unopened bolls and the stalks, leaving them undamaged.

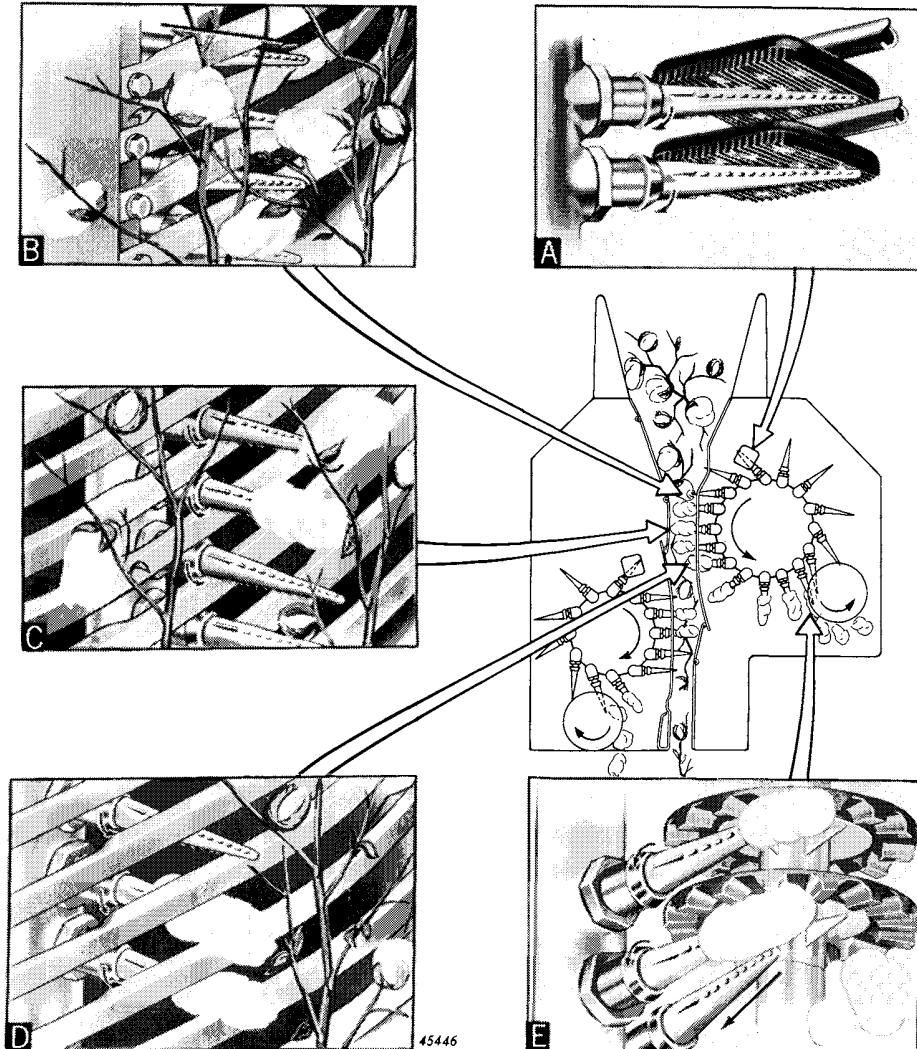
At "C" the spindles are all the way out and wrap the cotton fibre onto the spindle barbs. Then the spindles move back through the grid bars, pulling the cotton out of the open bolls and through the grid bars as shown at "D."

At "E" the cotton is being removed from the spindles by the doffer. The spindles move backwards under the doffer so the doffer pads can unwind the cotton from the spindles.

PLATFORM AND CONTROLS.

You are right on top of the picking operation when at the controls of the No. 1 Cotton Picker. You are up high out of the dust and dirt. The platform is centered above and between the rows for maximum visibility of everything that is going on.

All controls are within easy reach. Just make a couple of trips up and down a field and you will be perfectly at home on this cotton picker.



What Happens Inside the Picking Unit

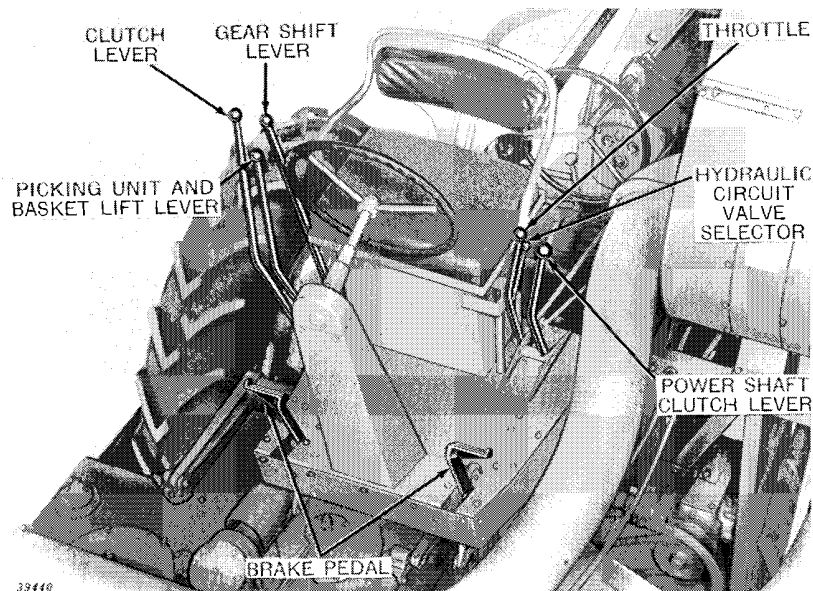
FAN DELIVERY SYSTEM AND BASKET.

A powerful double-rotor fan provides individual suction for each picking drum. The cotton is sucked out of the picking unit through flexible carrier tubes to the fan and then is blown into the basket.

The fan has spiral-shaped blades so the cotton is handled with the least amount of damage to the seed.

The big-capacity basket will hold 800 pounds of seed cotton so you will have to dump it fewer times during a day. Two powerful double-acting hydraulic cylinders raise and lower the basket for dumping. The lid opens and closes automatically as the basket is raised and lowered.

CONTROLS



The controls for operating the cotton picker in the field are located on the operator's platform. The high, roomy platform provides a good view of the picking unit.

GENERAL INFORMATION.

The regular tractor controls are used for starting and transporting the cotton picker. These controls are described in your tractor Operator's Manual. The controls that are peculiar to the No. 1 Cotton Picker are described here.

THROTTLE LEVER.

The throttle lever is located on the left of operator's platform and is connected directly to the tractor speed control lever. Pushing the lever forward increases the engine speed, pulling it back decreases the speed.

When the cotton picker is mounted on a tractor with a transmission-driven power shaft, another linkage is hooked up to this lever to turn on the supply of water and oil to the picking unit when the throttle is opened.

GEAR SHIFT LEVER.

The gear shift lever controls the tractor transmission speeds. One speed forward and one speed in reverse is available on the cotton picker operator's platform. When transporting, this lever is disconnected and the normal tractor speeds are available.

MAIN CLUTCH LEVER.

The main clutch lever is located on the right of operator's platform. It is operated in the same manner as the regular tractor clutch lever to connect and disconnect the engine with the transmission.

On tractors with transmission-driven power take-off, the main clutch lever also controls the tractor power take-off, which operates the picking unit. The power shaft shift lever on the tractor must be engaged first.

POWER SHAFT CLUTCH LEVER.

This lever, on the left-hand side of the seat, is used only when the tractor has an engine-driven power shaft.

The lever engages the tractor power take-off clutch to operate the picking unit, and also turns on the water and oil supply to the picking unit.

BRAKES.

Individual foot-operated brakes make possible short turns to the right or left. To assure safe stops at high transport speeds, apply the brakes evenly to avoid pulling the picker to one side.

PICKING UNIT AND BASKET LIFT LEVER.

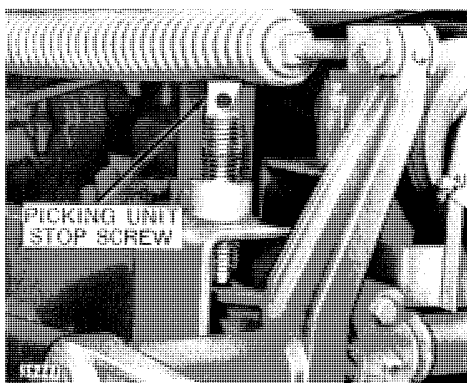
This lever, located on the right of the operator's platform, is used to raise and lower the picking units and dump the cotton basket. By means of this lever the tractor hydraulic system is used to set the picking units at any desired height within the range of the lifting mechanism and also empty the cotton basket.

HYDRAULIC CIRCUIT SELECTOR LEVER.

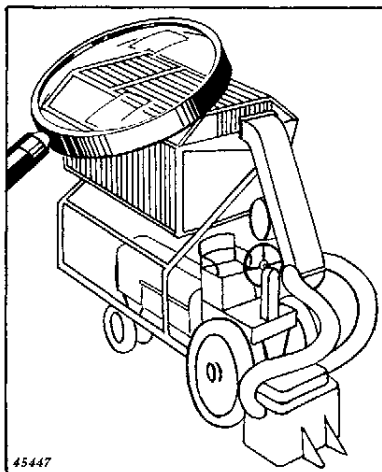
This lever, on the left-hand side of the operator's seat, determines the path of oil flow in the hydraulic system. When the lever is up, only the tractor rockshaft can operate to raise and lower the picking unit. When the lever is down, the basket is raised as the picking unit is raised, and the basket lowered as the picking unit is lowered. When lowering the basket, hold the picking unit and basket lift lever down until the relief valve opens (the valve will "chatter" when open). Then pull the selector lever up and return the lift lever to neutral position. Never let the relief valve operate for more than a few seconds. The picking unit has to be raised before transporting.

PICKING UNIT STOP SCREW.

The picking unit stop screw determines the height at which the picking units will operate. Once the stop screw is adjusted for the cotton being picked, the unit can be returned to exactly the same picking height after being raised without any guesswork by the operator.



OPERATION



KNOW YOUR COTTON PICKER.

Before starting to pick cotton, read this manual. The information in it is the result of years of experience in the design and operation of mechanical cotton pickers. We want you to be happy with your new John Deere No. 1 Cotton Picker. We know it will do good work for a long time if operated and adjusted properly. This manual tells you how to get the splendid performance and long life out of the picker that has been designed and built into it.

BREAKING IN THE NEW COTTON PICKER.

Lubricate the entire picker before starting for the first time. See pages 17 through 24.

Check all drive belts 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. Excessive heating of a sheave is a sign of belt slippage. New belts will stretch slightly after the final run-off. Check tension frequently.

Be sure all shafts turn freely.

Run the picker for three hours with the engine throttle open just enough so picker will run smoothly. This will allow the moving parts to work in gradually. After a short run at slow speed, stop the picker and inspect it completely for loose bolts, heating bearings, binding parts, loose belts, etc. Start the picker again and complete the three-hour slow-speed run. Then bring the picker up to a full throttle speed and run it at this speed for at least 15 minutes. After the full speed run-off, again inspect the picker for loose bolts, heating bearings, etc.

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