

12 One-Row Cotton Picker (Serial No. 12-101)



OPERATORS MANUAL **12 One-Row Cotton Picker** **(Serial No. 12-101)**

OMN97598 (01APR62) English

OMN97598 (01APR62)

LITHO IN U.S.A.
ENGLISH





TO THE PURCHASER

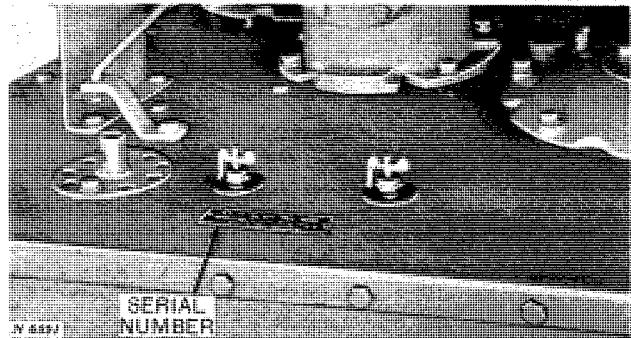
Your new cotton picker was built to rigid manufacturing standards. Material and workmanship are the best. However, the machine will serve you only in direct proportion to the care you give it. How long it will last and continue its good work is a matter entirely in your hands.

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 this manual 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.

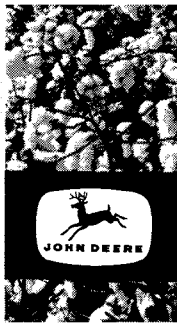
SERIAL NUMBER



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.

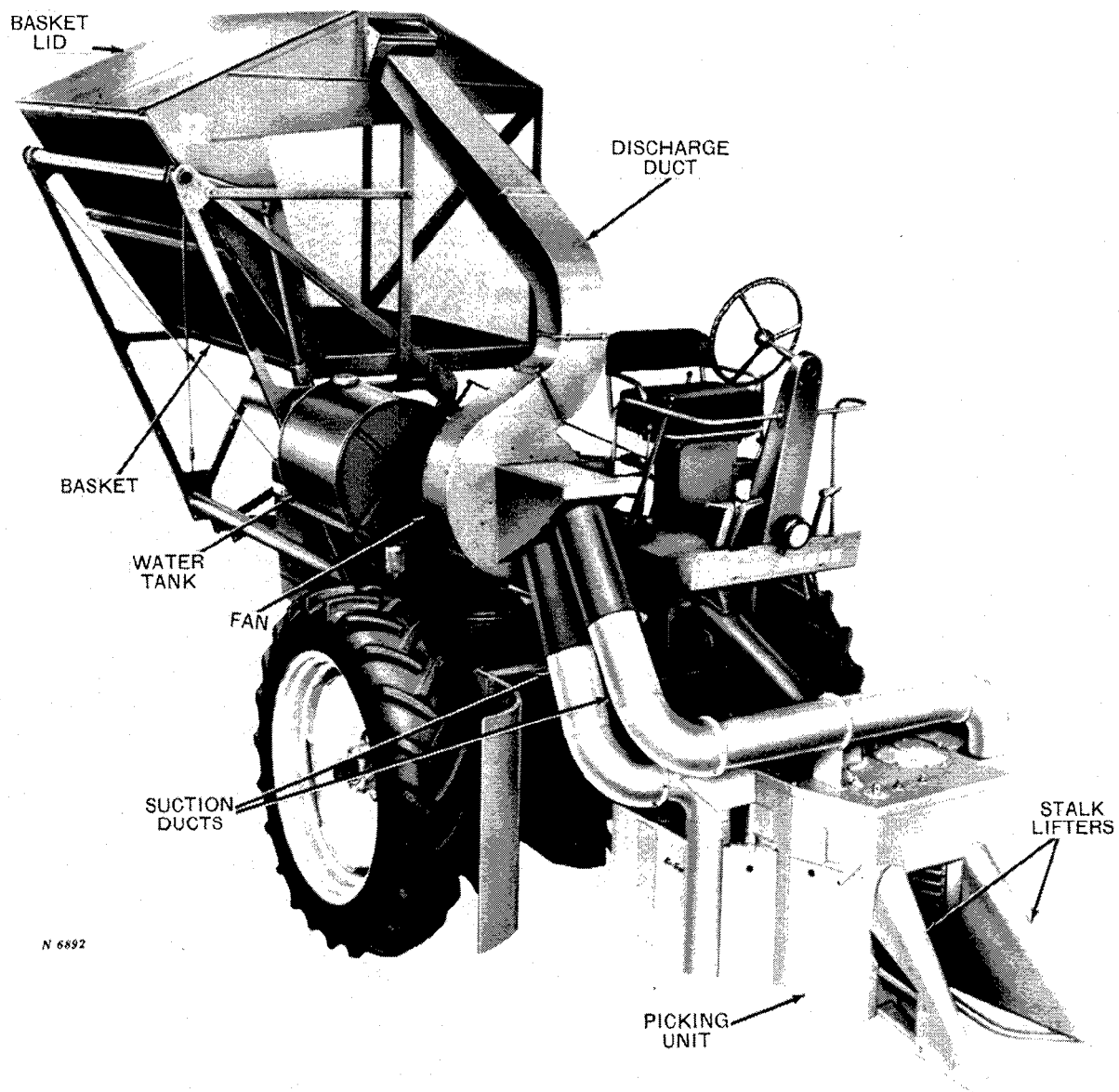
PICKER SERIAL No.

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



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John Deere 12 Cotton Picker and 2010 Tractor



SPECIFICATIONS

ROW WIDTH

Will Pick . . . 36-, 38-, 40-, or 42-Inch Rows

PICKING UNIT

No. of Picker Drums 2
No. of Picker Bars:
 Front Drum (Right-Hand Side) 12
 Rear Drum (Left-Hand Side) 12
No. of Spindles per Picker Bar 10
Total 240

GROUND SPEEDS, MPH BASED ON 2010 TRACTOR

Picking Speed 2.23
Transport Speed 8.97
Reverse Speed 2.00

**SPEEDS GIVEN FOR 2010 TRACTOR EQUIPPED
WITH 12.4-36 TIRES AT 2.23 MPH. SPEEDS FOR
OTHER TRACTORS VARY SLIGHTLY.**

Picker Drum 100 rpm
Doffer 1225 rpm
Spindles 2575 rpm
Fan 2443 rpm

CAPACITIES

Cotton Basket 600 Lbs. Seed Cotton
Water Supply Tank 40 U.S. Gal.

DIMENSIONS AS MOUNTED ON 2010 TRACTOR

Length 17 Ft., 4 In.
Width 9 Ft., 4 In.
Height:
 Basket Lowered 12 Ft., 0 In.
 Basket Raised 16 Ft., 0 In.
Basket Dumping Pivot Height . . 9 Ft., 7 In.

(Specifications and design subject to change without notice.)

SHIPPING WEIGHT

Total Weight 3,175 Lbs.

TRACTORS

John Deere 2010 Tractor with single or dual hydraulic system, single remote cylinder control with breakaway coupler, single or dual front wheels, power take-off, and power steering. Tire sizes as recommended on page 18.

John Deere 3010 and 4010 Tractors with rear rockshaft, single or dual remote cylinder control with breakaway coupler. Single or dual front wheels and power take-off. Tire sizes as recommended on page 18.

John Deere 430 and 420 Tractors with single or dual hydraulic system, single remote cylinder control, single or dual front wheels, and power take-off. Tire sizes as recommended on page 18.

John Deere 530, 630, 730, 520, 620, 720, 50, and 60 Tractors with rear rockshaft, single or dual remote cylinder control, single or dual front wheels, 540 or 1000 rpm transmission or engine driven power take-off. Tire sizes as recommended on page 18. External speed changer cannot be used on PTO.



DESCRIPTION

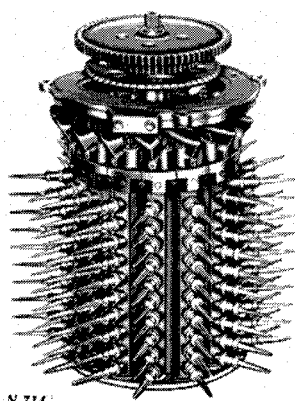
The No. 12 is a practical one-row cotton picker. The operating costs are low. It is easy to handle and transports fast. Attaching and detaching can be done quickly—without tractor conversion.

The picker consists of three basic elements.

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

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. However, on 2010, 3010, or 4010 Tractor, the picker may be transported from the operator's platform at transport speeds.

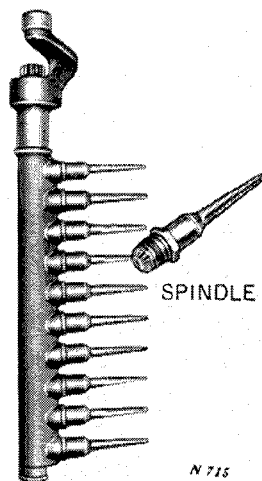
PICKING UNIT



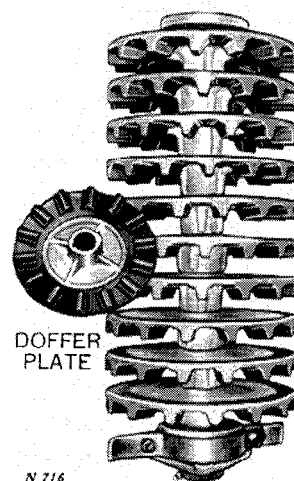
Spindle Drum

The heart of the picker is the highly efficient spindle-type picking unit. There are two drums of spindles. Both the drums consist of 12 cam-controlled spindle columns with 10 spindles on each column.

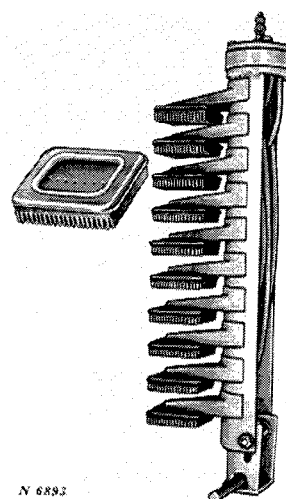
A doffer assembly for each spindle drum unwinds the cotton from the spindle and delivers it to a chute in the side door. Each doffer assembly consists of a shaft with a series of aluminum alloy doffer plates that have rubber doffers molded to the plates. Each unit has 10 doffers per shaft.



Spindle Column



Doffer



Moistener

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.

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.

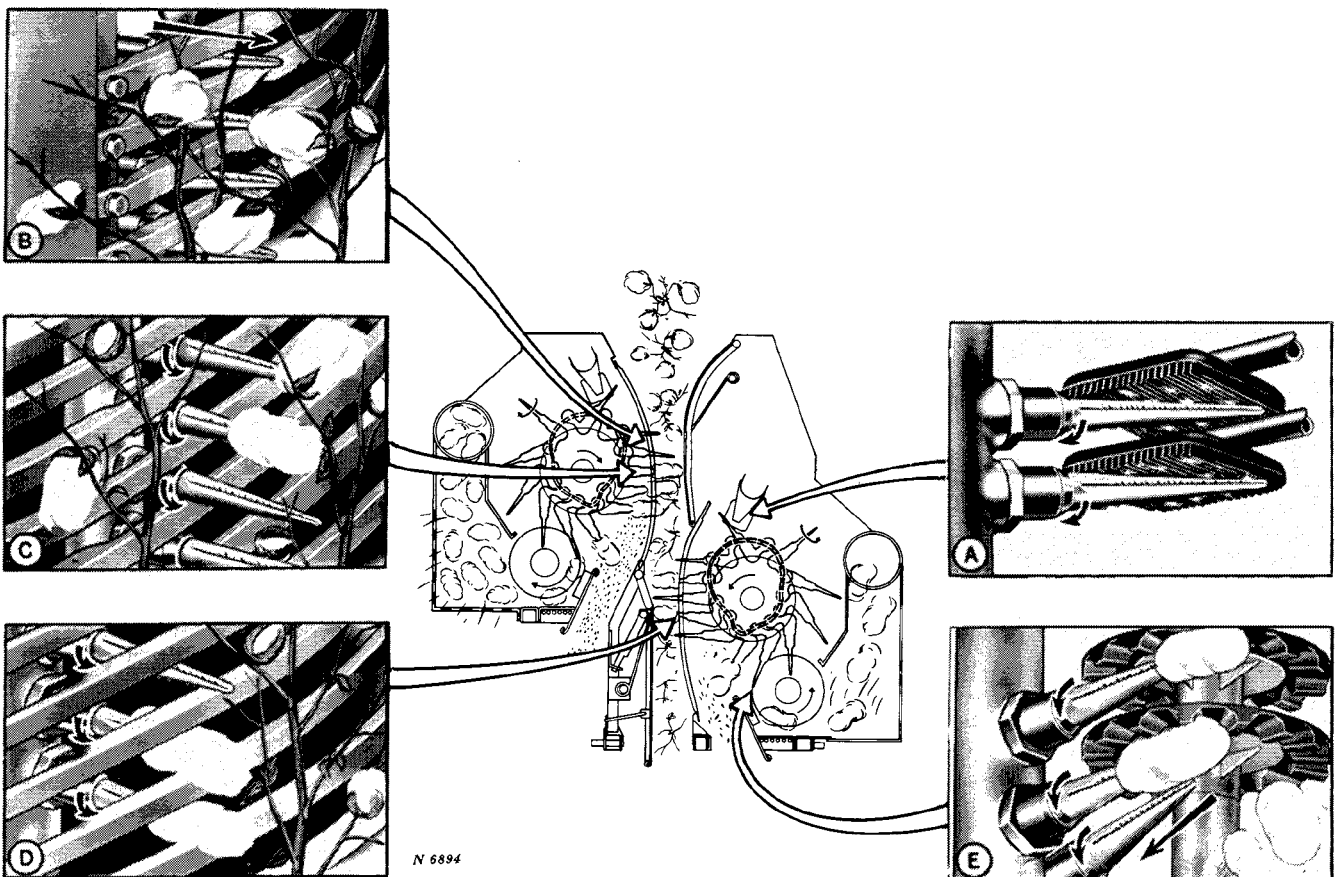
The illustration below shows what happens during the picking cycle. At "A" the spindles go under the moisteners and are cleaned of lint, plant sap, and stain, by a film of water.

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 to 2-1/2 miles per hour, depending on the tractor used) so the spindles have no

forward or backward motion in relation to the cotton plant. The rotating spindles 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.

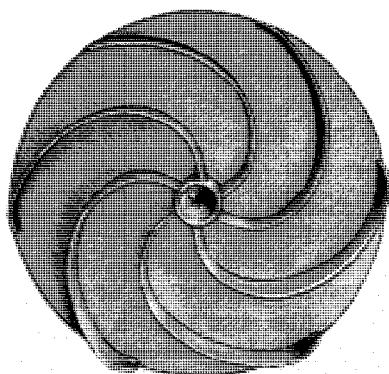
At "C" the spindles are all the way out and wrap the cotton fibre onto the spindle barbs. Then the spindles move back through the grid bars, pulling the cotton out of the open bolls and through the grid bars as shown at "D."

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



6 Description

FAN DELIVERY SYSTEM AND BASKET



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Fan Rotor

A powerful rotor fan provides individual suction for each picking drum. The cotton is sucked out of the picking unit suction doors, through telescoping tubes to the fan and then is blown against the cleaning grates in the basket.

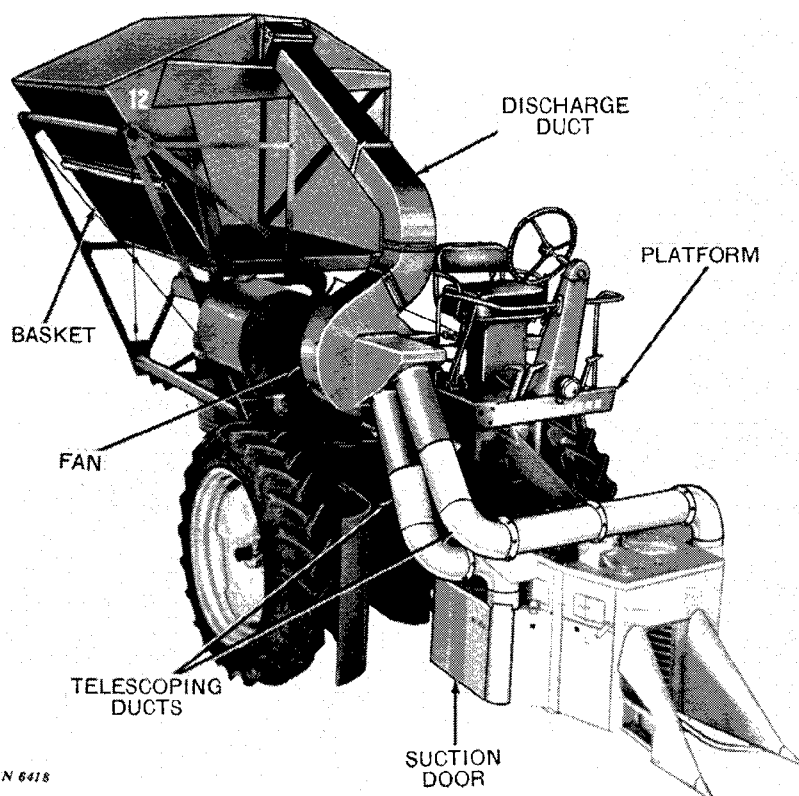
The fan has spiral-shaped blades so the cotton is handled with the least amount of damage to the seed.

The big-capacity basket will hold 600 pounds of seed cotton so you will have to dump it fewer times during a day. A powerful double-acting hydraulic cylinder raises and lowers the basket for dumping. The lid opens and closes automatically as the basket is raised and lowered.

PLATFORM AND CONTROLS

The operator is right on top of the picking operation when at the controls. He is up high out of the dust and dirt, with maximum visibility of the working area.

All controls are within easy reach. After a couple of trips up and down a field, the operator will feel perfectly at home on this cottonpicker.

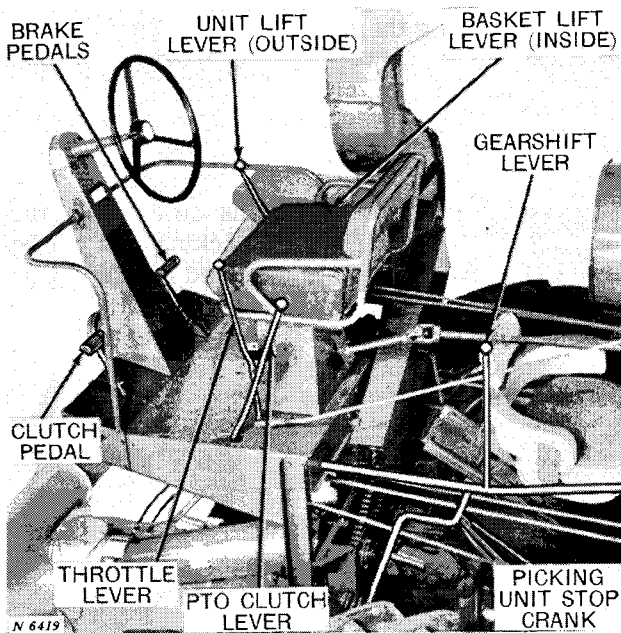


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OPERATION

CONTROLS ON JOHN DEERE 2010, 3010, AND 4010 TRACTORS



The regular tractor controls are used for starting the tractor engine. These controls are described in your tractor operator's manual. The controls that are peculiar to the operation of the cotton picker are described here.

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

THROTTLE LEVER

The throttle lever is located to the left of the operator's seat. Pushing the lever forward increases the engine speed, and pulling it rearward decreases the engine speed.

A throttle stop immediately behind the lever determines the maximum engine speed. When operating in the field this stop must be set so the tractor engine is operating at the proper speed. See page 39 for setting engine speed.

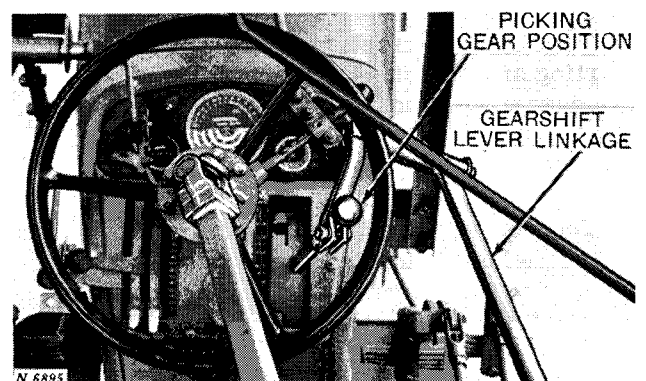
BRAKES

Individual foot-operated brakes make possible short turns either to the right or left. If the cotton picker is transported from the operator's platform, apply the brakes evenly to avoid pulling the picker to one side.

GEARSHIFT LEVER

The gearshift lever is located at the left-rear of the operator's seat. It is connected directly to the tractor gearshift lever and is designed so that all tractor gears can be obtained from the platform. The gear position for picking, reversing and transporting are as follows:

Tractor	Tractor Gear Used		
	Picking	Reversing	Transporting
2010	$\frac{2}{R}$ -Low Reverse	1st or 2nd Gear	$\frac{4}{R}$ -Middle Reverse or $\frac{6}{R}$ -High Reverse
3010 or 4010	$\frac{3}{R}$ -Low Reverse	1st or 3rd Gear	$\frac{5}{R}$ -Middle Reverse or $\frac{7}{R}$ -High Reverse



Illustrated on 2010 Tractor

If desired the picker may be transported from the tractor seat using the tractor regular forward gears.

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