

22 One-Row Cotton Picker (Effective Serial Nos. 22L511 and 22H-579)



JOHN DEERE

OPERATORS MANUAL

22 One-Row Cotton Picker (Effective Serial
Nos. 22L511 and 22H-579)

OMN97519N (01AUG60) English

OMN97519N (01AUG60)

LITHO IN U.S.A.
ENGLISH



To the purchaser

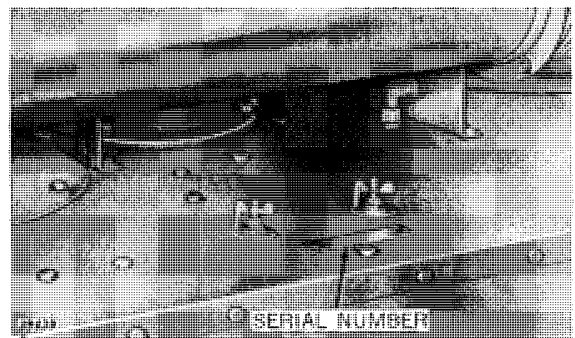
Your new cotton picker was built to rigid manufacturing standards. Material and workmanship are the best. However, the machine will serve you in only direct proportion to the care you give it. How long it will last and continue its good work is a matter entirely in your hands.

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.

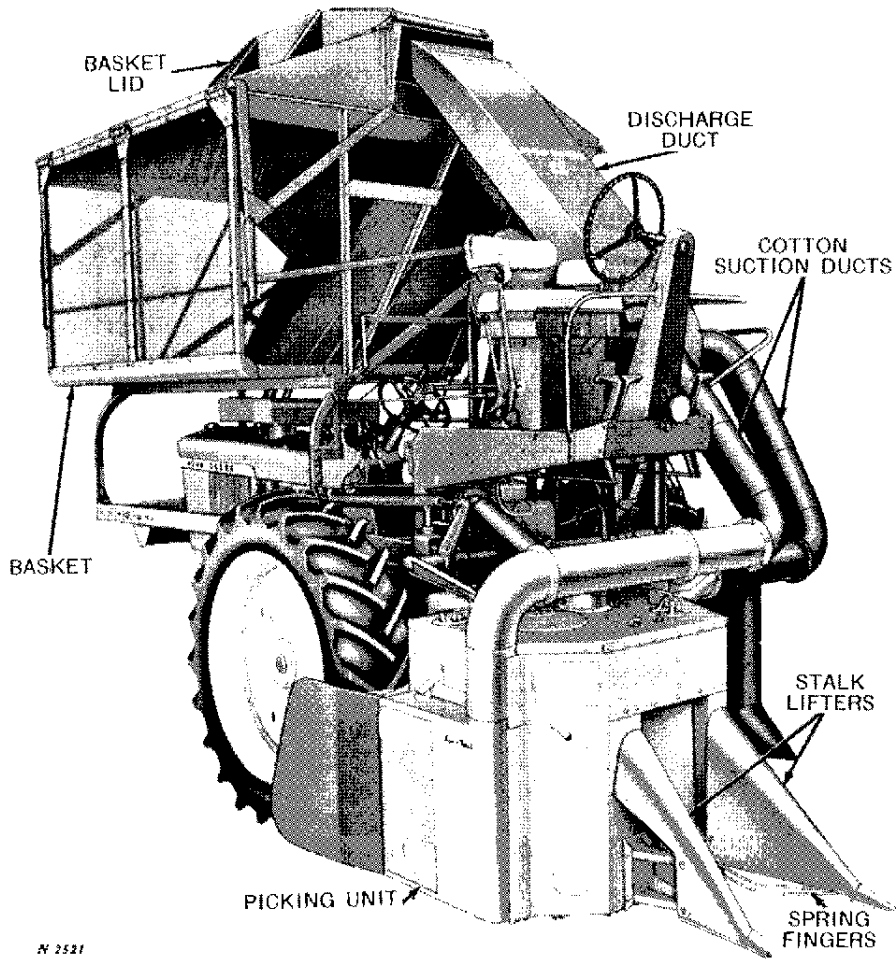
PICKER SERIAL No.

Date Purchased, 19 . . .



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N 2521

John Deere 22 Cotton Picker and 3010 Tractor



specifications

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 1,200 Lbs. Seed Cotton
Water Supply Tank 40 U.S. Gallons

Shipping Weight

Low-Drum, Picker Alone,
Approx. 4,330 Lbs.
High-Drum, Picker Alone,
Approx. 4,970 Lbs.

Dimensions

Length, Over-All 18 Ft., 8 In.
Width, Over-All 9 Ft., 7 In.

Height:

Low-Drum:
Basket Lowered 13 Ft., 10 In.
Basket Raised 17 Ft., 7 In.

High-Drum:

Basket Lowered 14 Ft., 10 In.
Basket Raised 18 Ft., 7 In.

Picking Unit

No. of Picker Drums 2
No. of Picker Bars:
Front Drum 16
Rear Drum 12
No. of Spindles:
Low-Drum:
Per Picker Bar 14
Total 392
High-Drum:
Per Picker Bar 20
Total 560

Speeds (Approx.)

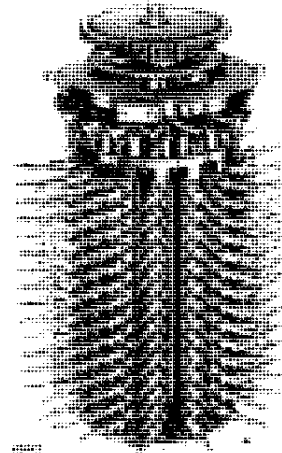
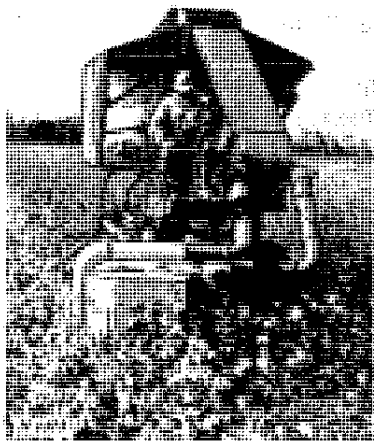
Front Drum 86 rpm
Rear Drum 115 rpm
Spindles 2650 rpm

Tractors John Deere 3010, 4010, 530, 630,
730, 520, 620, 720, 50, 60, 70, A
and G equipped for remote hy-
draulic cylinder operation.

(Specifications and design subject to change without notice.)



description



Low-drum front picking drum

The No. 22 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 costly tractor conversion.

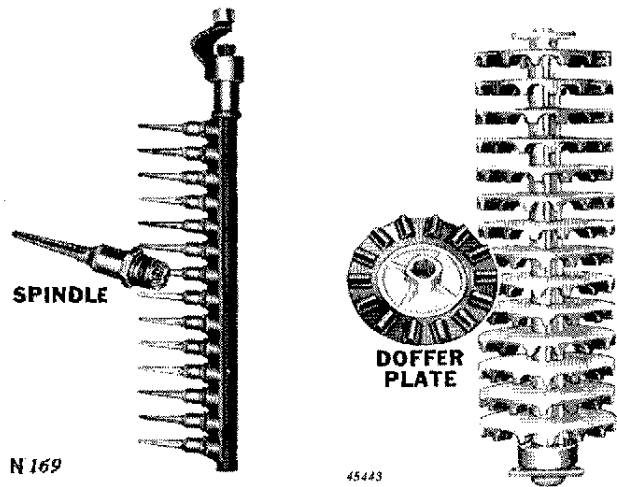
The picker consists of three basic elements.

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. However, on 3010 or 4010 tractor, the picker may be transported from the operator's platform at transport 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 of the low-drum and 20 spindles on each column of the high-drum.

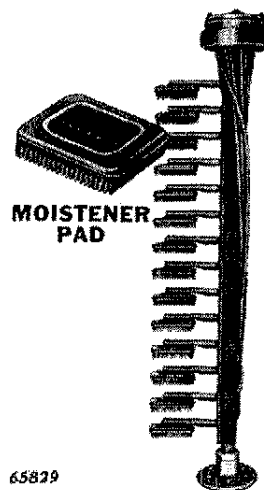


Spindle column

Doffer

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 a series of aluminum alloy doffer plates that have rubber doffers molded to the plates. The low-drum unit has 14 doffers per shaft; the high-drum unit has 20.

How the picking unit works



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Moistener

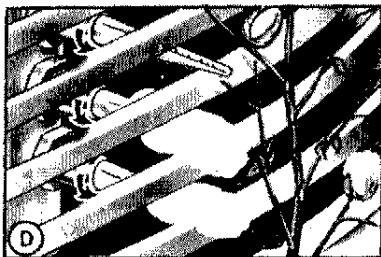
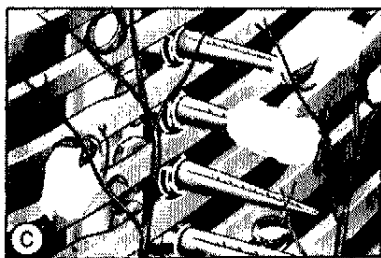
There is also a spindle moistener column for each spindle drum. The moistener pads wipe each spindle with water to keep it clean, for a better job of picking cotton.

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.

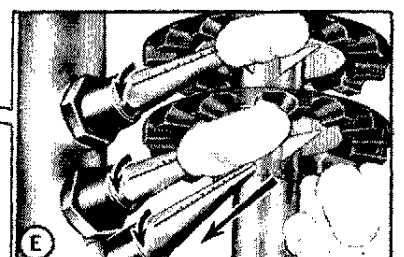
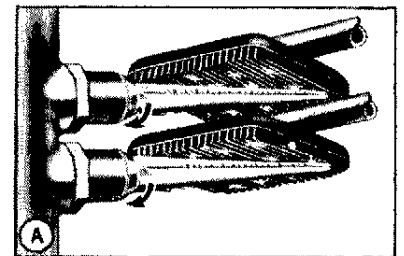
Knowing what is going on inside the picking unit will be a great help to you. It will give you a better understanding of the capabilities and limitations of a mechanical cotton picker. You will also know why certain adjustments are necessary and when to make the adjustments.

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 (2-1/2 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.



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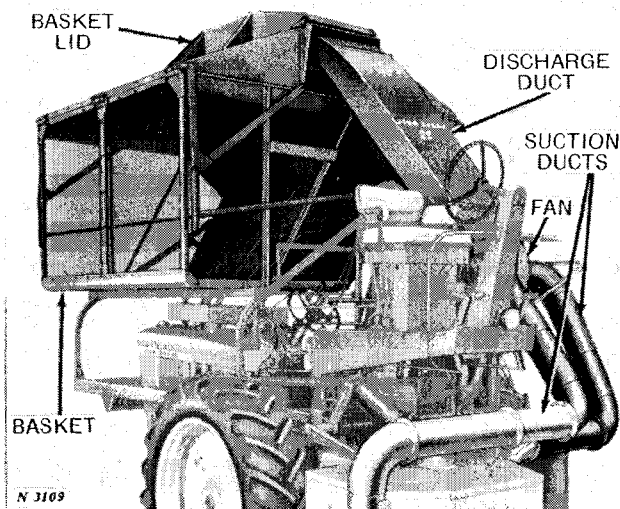


6 description

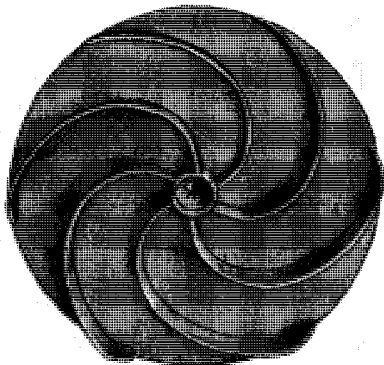
At "C" the spindles are all the way out and wrap the cotton fibre onto the spindle barbs. Then the spindles move back through the grid bars, pulling the cotton out of the open bolls and through the grid bars as shown at "D."

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.

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 suction ducts to the fan and then is blown into the basket.

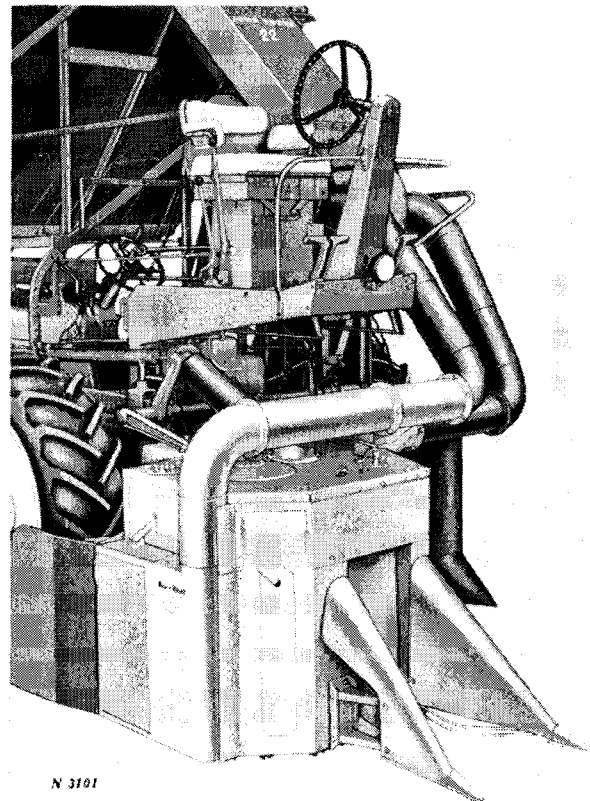


Fan rotor

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

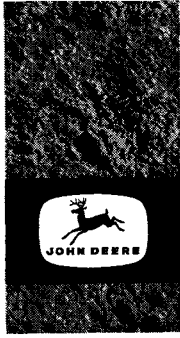
The big-capacity basket will hold 1,200 pounds of seed cotton so you will have to dump it fewer times during a day. Two powerful double-acting hydraulic cylinders raise and lower the basket for dumping. The lid opens and closes automatically as the basket is raised and lowered.

Platform and controls



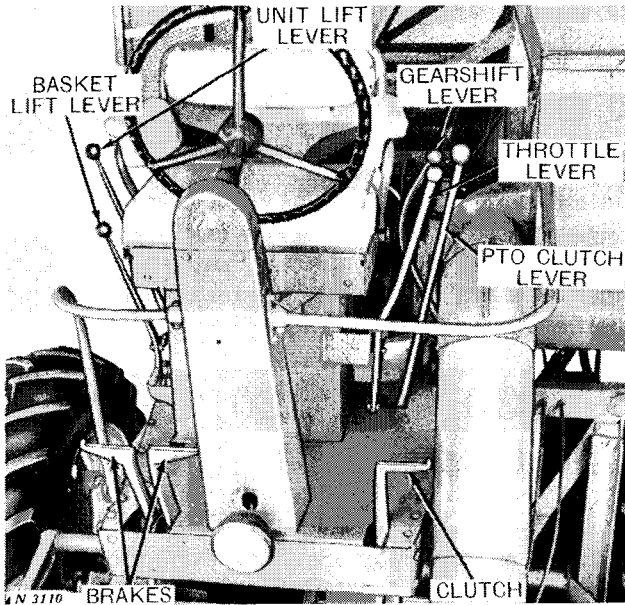
You are right on top of the picking operation when at the controls of the 22 Cotton Picker. You are up high out of the dust and dirt and have maximum visibility of everything that is going on.

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.



operation

Controls on John Deere 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 22 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 back 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 1500 rpm.

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. The gearshift lever is designed so all tractor gears can be obtained from the platform. When operating in the field, use the tractor's third reverse gear for forward travel of 2-1/2 mph. To back the cotton picker in the field use either first or third gear.

When transporting, the picker may be operated from the operator's platform using either fifth reverse or seventh reverse. However, if desired the picker may be transported from the tractor's seat using the tractor's regular forward gears.

Clutch

The clutch pedal is connected directly to the tractor clutch pedal.

PTO clutch lever

The PTO clutch lever, located to the left of the operator's seat, is used to engage or disengage the power to the picking unit. Pushing the lever forward engages the PTO or pulling the lever rearward disengages the PTO. The PTO clutch lever is also used to turn on and off the water supply through a direct linkage to the water control valve.

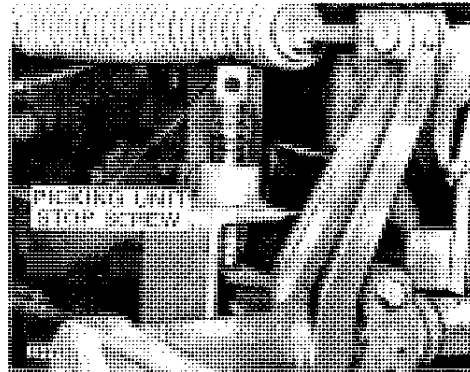
Picking unit lift lever

This lever, located on the right of the operator's seat, is used to raise and lower the picking unit. By means of this lever the tractor hydraulic system is used to set the picking unit "on the go" at any desired height, within the range of the lifting mechanism.

Basket lift lever

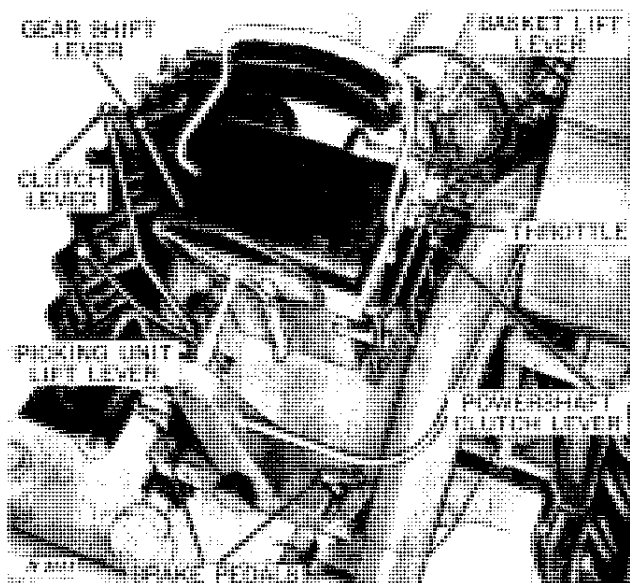
The basket lift lever, the outer lever on the right side of the operator's seat, controls dumping and lowering the basket. To dump the basket push the lever forward and to lower the basket push the lever rearward.

Picking unit stop screw



The picking unit stop screw determines the minimum height at which the picking unit can be lowered. Once the stop screw is adjusted for the cotton being picked, the unit can be returned to the same picking position upon re-entering the cotton row.

Controls on John Deere 530, 630, 730, 520, 620, 720, 50, 60, 70, A and G tractors



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 22 Cotton Picker are described here.

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.

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 powershaft, another linkage is hooked up to this lever to turn on the supply of water to the picking unit when the throttle is opened.

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.

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