

John Deere 499 Cotton Picker



OPERATORS MANUAL

John Deere 499
Cotton Picker

OMN159320 C3 English

**John Deere Des Moines Works
OMN159320 C3**

LITHO IN U.S.A.
ENGLISH





To the Purchaser

This new cotton picker was carefully designed and manufactured to give years of dependable service. To keep it running efficiently, read the instructions in this operator's manual. Each section is clearly identified so you can easily find the information you need—whether it is description, controls and instruments, operation, operating adjustments, fuels and lubricants, lubrication and periodic service, trouble shooting, service, attachments or specifications. Read the Table of Contents to learn where each is located. Use the alphabetical index for fast reference.

"Right-hand" and "left-hand" side are determined by facing the direction the cotton picker will travel when in use.

Record the serial numbers in the space provided on page 109. Your dealer needs this information to give you prompt, efficient service when you order parts or attachments. If your cotton picker requires replacement parts, go to your John Deere dealer where you can obtain Genuine John Deere parts—accept no substitutes.

The warranty on this cotton picker appears on your copy of the purchase order which you should have received from your dealer when you purchased the cotton picker.



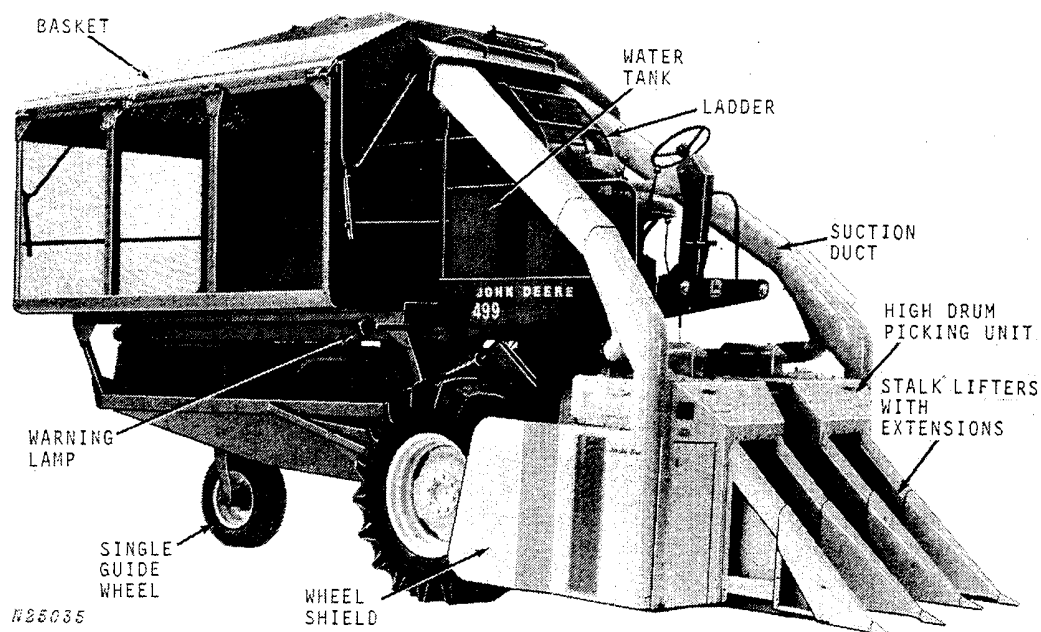
This safety alert symbol identifies important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.





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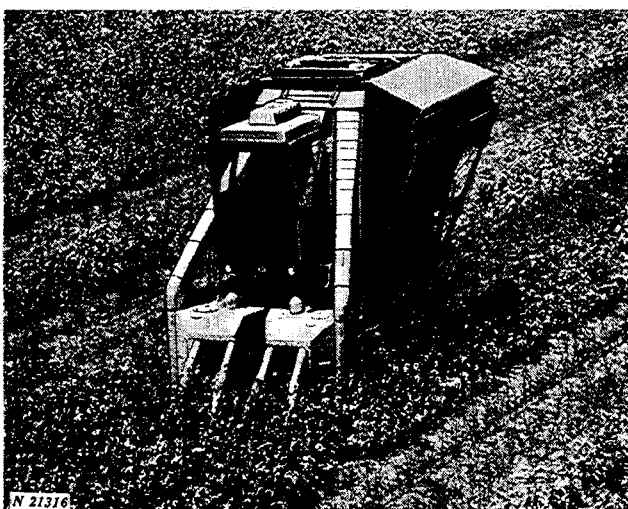
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John Deere 499 High Drum Cotton Picker with Stalklifter Extensions



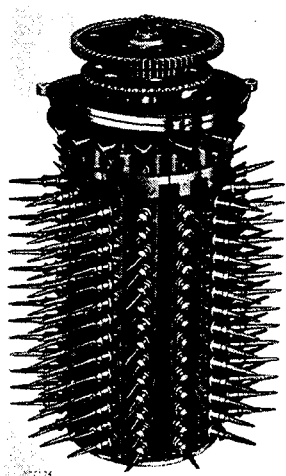
Description



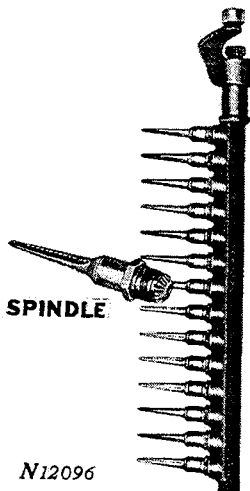
The 499 is a two-row self-propelled cotton picker. The machine has four basic components:

- 1 - Picking units.
- 2 - Suction jet conveying system and basket.
- 3 - Operator's platform and controls.
- 4 - Propelling mechanism.

PICKING UNITS

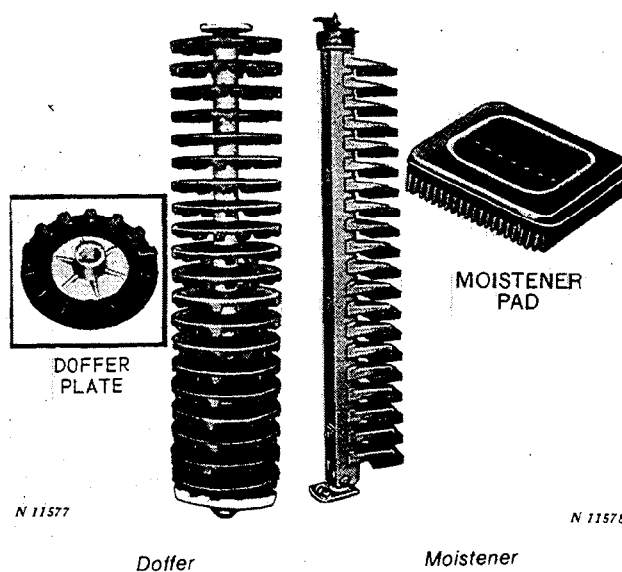


Low-Drum Front Picking Drum



Picker Bar

The heart of the picker is the two spindle-type picking units. There are two drums of spindles per picking unit. The front drum consists of 16 cam-controlled picker bars, and the rear drum consists of 12 cam-controlled picker bars. Each picker bar, has 14 spindles (low drum unit) or 20 spindles (high drum unit). Thus the low drum unit has 784 and the high drum unit has 1120 individual barbed spindles that pick cotton from the plants.



Doffer

Moistener

A doffer assembly on each picking drum, unwinds the cotton from the spindles and delivers it to the chute in the door. Each assembly consists of a shaft with 14 (low drum unit) or 20 (high drum unit) aluminum alloy doffer plates with rubber doffers molded to each plate.

A moistener column for each picking drum wipes each spindle with water, to keep it clean.

Stalk lifters guide the cotton plant into the picking zone where grid bars and pressure plates hold the plant in position for picking.

How the Picking Units Work

Knowing what is going on inside the picking units 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.

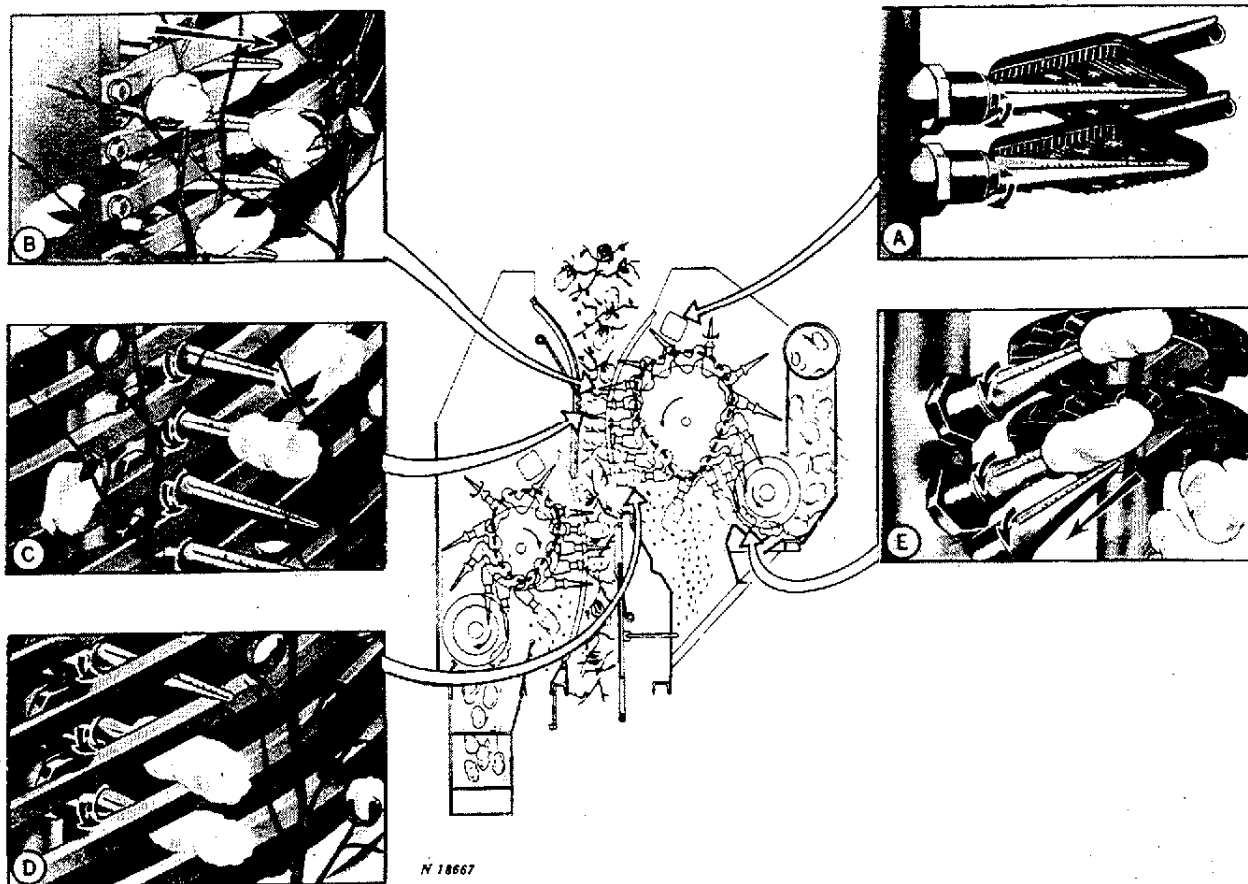
The illustration below shows what happens during the picking cycle. At "A," the spindles go under the moisteners and are cleaned of lint, plant sap, and stain.

The cleaned spindles start through the grid bars at "B." The speed of the spindle drums is synchronized with the picker ground speed or 2.06 miles per hour with engine running 2500 rpm under field load so the

spindles will not have forward or backward motion in relation to the cotton plant. The rotating spindles poke straight into the cotton plant and pull straight back. Because of this, the spindles can brush past unopened bolls and stalks, leaving them undamaged.

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

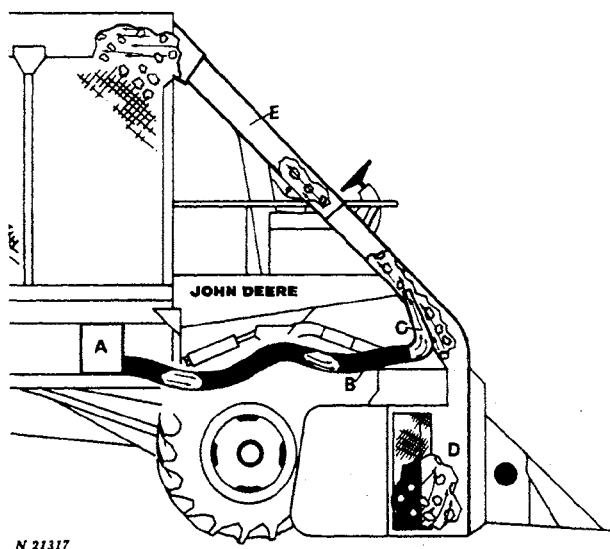
At "E," the cotton is being removed from the spindles by the doffer. The spindles move under the doffer so the doffer pads can unwind the cotton from the spindles.



Automatic Height Control (Optional)

A dual-rate hydraulic height control unit is used with the cotton picker. The primary circuit provides precise gauging of picking unit ground clearance; the secondary circuit provides a rapid and positive rate of response for severe changes in ground contour. This combination results in fast and accurate height control with minimum ground clearance.

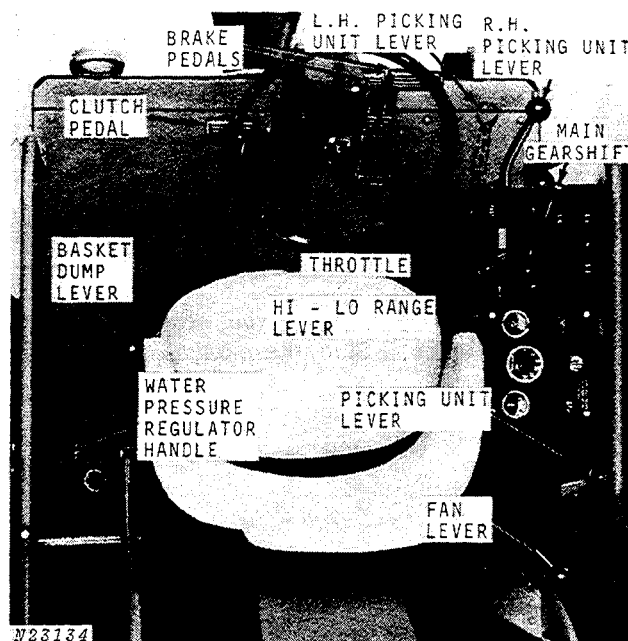
JET-AIR-TROL CONVEYING SYSTEM AND BASKET



The jet air cotton conveying system consists of a single centrifugal fan "A," located in the engine area. This fan has a single rotor with radial blades on each side. It blows air through hose "B," to cotton conveyor ducts "C," creating suction which lifts the cotton out of the suction doors "D," and is blown through the ducts "E," into the basket. Thus from the field to the gin, cotton comes into contact with only two moving parts - spindles and doffers. Seed cotton and lint damage is kept at a minimum.

The cotton picker basket will hold 2300 lbs. of cotton. Two double-acting hydraulic cylinders, activated by a lever to the left of the operator, raise and lower 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 of the cotton picker. He is high out of the working area.

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

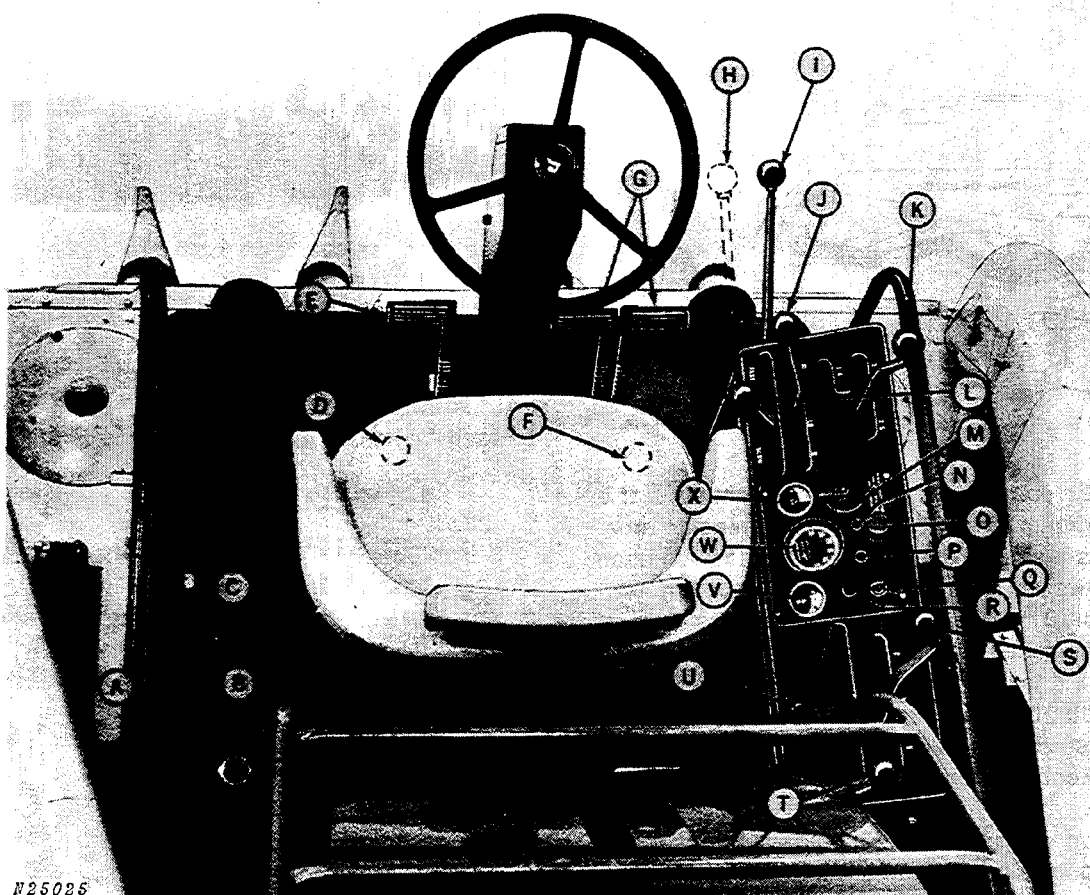
PROPELLING MECHANISM

The cotton picker is powered by a 6-cylinder gasoline, LP-Gas or diesel engine or 4-cylinder gasoline engine. Power is transmitted through a drive shaft to the transmission, then to the final drives and drive wheels.



Controls and Instruments

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



N25025

A—Water Pressure Regulator Handle
 B—Water Pressure Gauge
 C—Basket Lift Lever
 D—L.H. Picking Unit Stop Control
 (Pickers Without Automatic
 Height Control)
 E—Clutch Pedal
 F—R.H. Picking Unit Stop
 (Pickers Without Automatic
 Height Control)

G—Brake Pedals
 H—L.H. Picking Unit Lever
 (Pickers Without Automatic
 Height Control)
 I—R.H. Picking Unit Lever
 J—Hi-Lo Range Lever
 K—Main Gearshift Lever
 L—Throttle Lever
 M—Light Switch
 N—Oil Pressure Light

O—Panel Light
 P—Alternator Warning Light
 Q—Master Switch
 R—Starter Button
 S—Picking Unit Gearshift Lever
 T—Fan Clutch Lever
 U—Choke
 V—Fuel Gauge
 W—Engine Tach-Hour Meter
 X—Engine Water Temperature Gauge

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