

11, 12, 22, 99, AND 122 COTTON PICKERS



SERVICE MANUAL 11, 12, 22, 99, AND 122 COTTON PICKERS

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SERVICE MANUAL

JOHN DEERE

11, 12, 22, 99 and 122

COTTON PICKERS

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TO THE JOHN DEERE SERVICEMAN

This service manual contains service information for John Deere 11, 12, 22, 99, and 122 Cotton Pickers. Included are complete instructions for removal, inspection, repair, assembly, and installation of the major components and assemblies of the cotton pickers.

This manual also contains brief description of the more complicated systems of the picker and tells how they operate. Dimensions of many new parts are given as an aid in determining when parts replacement is necessary. Tests and adjustments required to keep the picker operating efficiently are explained in detail.

This manual was planned and written for the service department; its place is in the shop. Use the manual whenever in doubt about correct maintenance procedures. Use it as a test book for training service department personnel, who are unfamiliar with John Deere Cotton Pickers.

Daily use of the Service Manual as a guide will reduce error and costly delay to a minimum and assure you the best in finished service work. In many instances your customer will have more confidence in your work when he sees you using the Service Manual. He will know you are following approved maintenance procedures and making the proper adjustments.

For complete service information for the 99 Cotton Picker the service manuals listed below are also required.

SM-2026	John Deere 92, 145, and 217 Power Units
SM-2053	John Deere 115, 165, and 248 Power Units
SM-2029	John Deere Electrical Systems
SM-2025	John Deere 720 Tractor
SM-2050	Power Steering for John Deere 2-Cylinder Tractors



Section 10

DESCRIPTION AND SPECIFICATIONS

10-5-1

Group 5

11 COTTON PICKER

DESCRIPTION

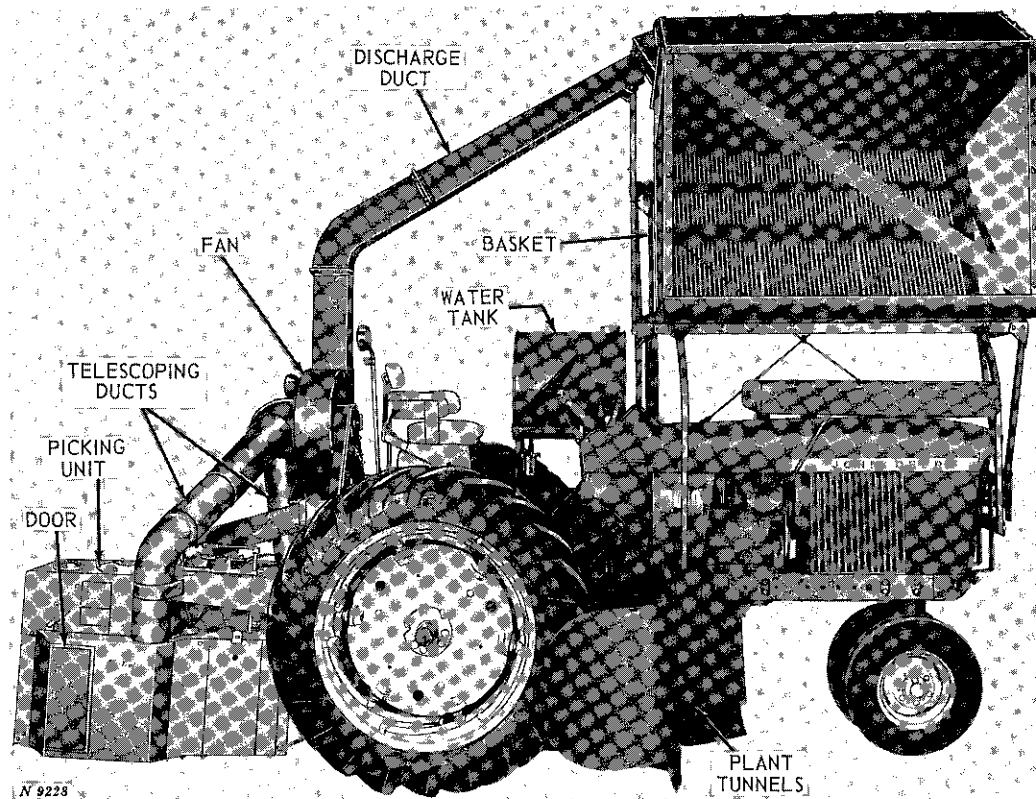


Fig. 10-5-1-11 Cotton Picker on 3010 Tractor

The 11 Cotton Picker is a one-row mounted machine designed for low acreage cotton growers. The picker mounts on the tractor so that the tractor's normal forward gears are used for picking operation.

The attaching and detaching of the picker can be done easily and quickly without any tractor conversions.

The picker consists of two basic elements:

1. One-row picking unit.
2. Fan delivery system and cotton basket.

PICKING UNIT

The picking unit is a ten-spindle-high picking unit with two 12-picker-bar drums, one for each side of the cotton row. The picker bars are cam controlled to position the spindles in the proper relationship to the cotton row and to the components in the picking unit.

The picking unit is gear-driven in such a manner that the speed of the picker drums is synchronized with the speed of picker forward travel. In other words the spindles have no forward or backward motion in relation to the cotton plant.

The unit contains two doffer assemblies to remove cotton from the spindles and two moistener column assemblies for cleaning the spindles prior to the spindle entry into the cotton row.

The picking unit is raised and lowered by the tractor rockshaft.

FAN DELIVERY SYSTEM AND BASKET

A powerful fan provides individual suction from each picker drum. The cotton is sucked out of the suction doors through pipes to the fan. Then the cotton is blown against 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 basket holds 600 pounds of seed cotton. A double-acting hydraulic cylinder raises and lowers the basket for dumping. The lid opens and closes automatically as the basket is raised and lowered.

SPECIFICATIONS

PICKING UNIT

No. of Picker Drums	2
No. of Picker Bars:	
Front Drum (R.H.)	12
Rear Drum (L.H.)	12
No. of Spindles:	
Per Picker Bar	10
Total (Unit)	240

PICKING UNIT SPEEDS

Speeds given for 530 tractor equipped with 12.4-38 tires at 2.25 mph. Speeds for other tractors vary slightly.

Picker Drums	103 rpm
Doffers	1193 rpm
Spindles	2334 rpm
Fan	2429 rpm

GROUND SPEEDS

2010, 3010, and 4010 Tractors . . .	2.5 mph
430, and 420 Tractors	2.0 mph
530, 630, 730, 520, 620, and 720	
Tractors	2.25 mph
50 and 60 Tractors	2.25 mph

TRACTOR MOUNTINGS

For John Deere 2010, 3010, 4010, 430, 530, 630, 730, 420, 520, 620, 720, 50, and 60 Tractors equipped for remote hydraulic cylinder operation and with rear rockshaft and either single or dual front wheels, 540 or 1000 rpm PTO. External speed changer cannot be used on PTO.

CONTROLS

Picking Unit Lift	Tractor Rockshaft
Basket Lift	One double acting Hydraulic Cylinder operated by Tractor Remote Cylinder Control Lever.

CAPACITIES

Cotton Basket	600 lbs. of Seed Cotton
Water Supply Tank	25 or 40 U.S. gals.

DIMENSIONS (As mounted on 530 Tractor)

Over-all Length	16 ft.
Over-all Width	9 ft. 2 in.

HEIGHT

Basket Lowered	12 ft. 4 in.
Basket Raised	16 ft. 4 in.
Basket Dumping Pivot Height . . .	9 ft. 11 in.

WEIGHT

Cotton Picker only (Does not include tractor)
3100 lbs. approx.

Group 10

12 COTTON PICKER

DESCRIPTION

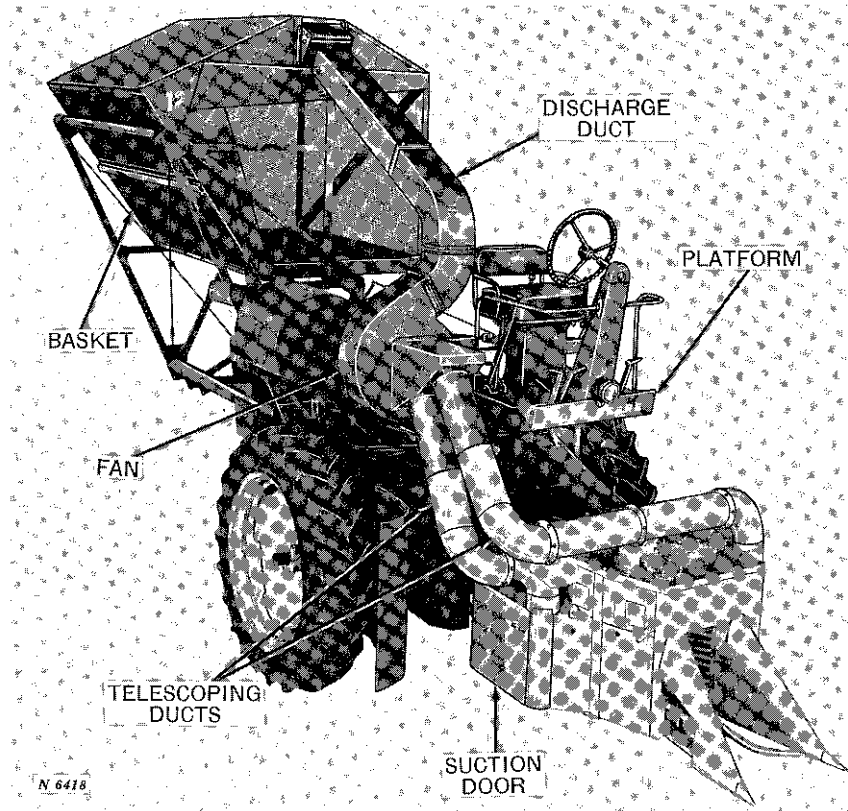


Fig. 10-10-1-12 Cotton Picker on 2010 Tractor

The 12 Cotton Picker is a one-row tractor mounted machine designed for low acreage cotton growers. The picker mounts on John Deere Tractors so that the tractor operates in reverse gear during picking operation. Transporting the picker can be done from either the tractor seat or operator's platform seat.

The cotton picker consists of three basic elements:

1. One-row picking unit.
2. Fan delivery system and basket.
3. Operator's platform and controls.

PICKING UNIT

The picking unit is a ten-spindle-high picking unit with two, 12-picker-bar drums, one for each side of the cotton row. The picker bars are cam controlled to position the spindles in the proper relation to the cotton row and to the components in the picking unit.

The picking unit is gear driven (power is transmitted from tractor PTO) in such a manner that the speed of the picker drums is synchronized with the speed of picker forward travel. In other words, the spindles have no forward or backward motion in relation to the cotton plant.

The picking unit is gear-driven in such a manner that the speed of the picker drums is synchronized with the speed of picker forward travel. In other words the spindles have no forward or backward motion in relation to the cotton plant.

The unit contains two doffer assemblies to remove cotton from the spindles and two moistener column assemblies for cleaning the spindles prior to the spindle entry into the cotton row.

The picking unit is raised and lowered by the tractor rockshaft.

FAN DELIVERY SYSTEM AND BASKET

A powerful fan provides individual suction from each picker drum. The cotton is sucked out of the suction doors through pipes to the fan. Then the cotton is blown against 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 basket holds 600 pounds of seed cotton. A double-acting hydraulic cylinder raises and lowers the basket for dumping. The lid opens and closes automatically as the basket is raised and lowered.

SPECIFICATIONS

PICKING UNIT

No. of Picker Drums	2
No. of Picker Bars:	
Front Drum (R.H.)	12
Rear Drum (L.H.)	12
No. of Spindles:	
Per Picker Bar	10
Total (Unit)	240

PICKING UNIT SPEEDS

Speeds given for 530 tractor equipped with 12.4-38 tires at 2.25 mph. Speeds for other tractors vary slightly.

Picker Drums	103 rpm
Doffers	1193 rpm
Spindles	2334 rpm
Fan	2429 rpm

GROUND SPEEDS

2010, 3010, and 4010 Tractors . . .	2.5 mph
430, and 420 Tractors	2.0 mph
530, 630, 730, 520, 620, and 720 Tractors	2.25 mph
50 and 60 Tractors	2.25 mph

TRACTOR MOUNTINGS

For John Deere 2010, 3010, 4010, 430, 530, 630, 730, 420, 520, 620, 720, 50, and 60 Tractors equipped for remote hydraulic cylinder operation and with rear rockshaft and either single or dual front wheels, 540 or 1000 rpm PTO. External speed changer cannot be used on PTO.

CONTROLS

Picking Unit Lift	Tractor Rockshaft
Basket Lift	One double acting Hydraulic Cylinder operated by Tractor Remote Cylinder Control Lever.

CAPACITIES

Cotton Basket	600 lbs. of Seed Cotton
Water Supply Tank	25 or 40 U.S. gals.

DIMENSIONS (As mounted on 530 Tractor)

Over-all Length	16 ft.
Over-all Width	9 ft. 2 in.

HEIGHT

Basket Lowered	12 ft. 4 in.
Basket Raised	16 ft. 4 in.
Basket Dumping Pivot Height . . .	9 ft. 11 in.

WEIGHT

Cotton Picker only (Does not include tractor)
3100 lbs. approx.

Group 10

12 COTTON PICKER

DESCRIPTION

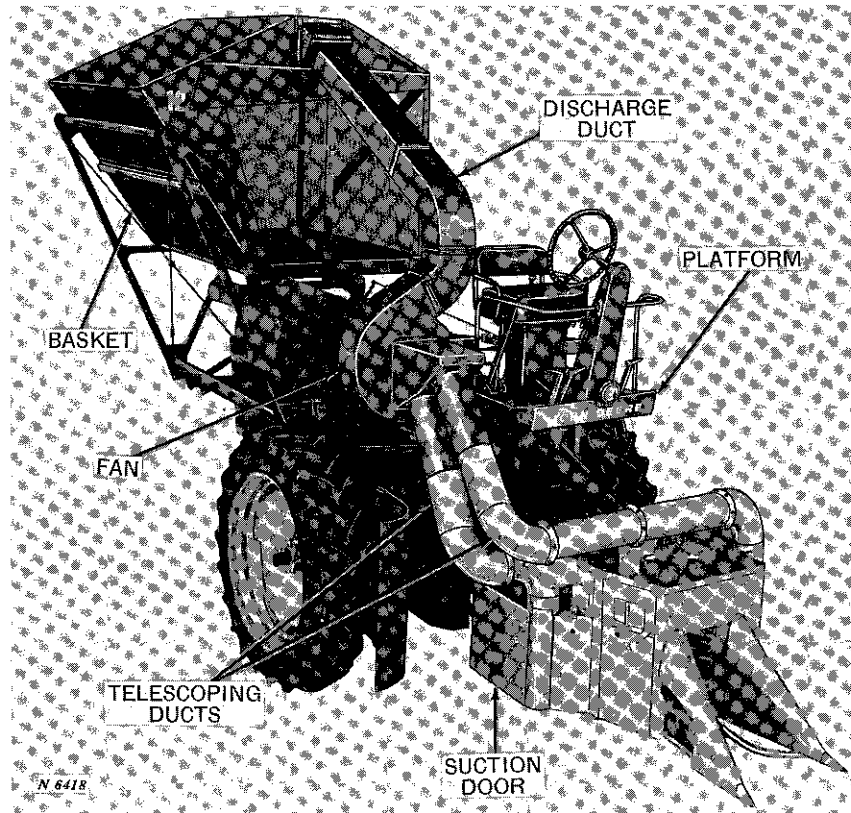


Fig. 10-10-1-12 Cotton Picker on 2010 Tractor

The 12 Cotton Picker is a one-row tractor mounted machine designed for low acreage cotton growers. The picker mounts on John Deere Tractors so that the tractor operates in reverse gear during picking operation. Transporting the picker can be done from either the tractor seat or operator's platform seat.

The cotton picker consists of three basic elements:

1. One-row picking unit.
2. Fan delivery system and basket.
3. Operator's platform and controls.

PICKING UNIT

The picking unit is a ten-spindle-high picking unit with two, 12-picker-bar drums, one for each side of the cotton row. The picker bars are cam controlled to position the spindles in the proper relation to the cotton row and to the components in the picking unit.

The picking unit is gear driven (power is transmitted from tractor PTO) in such a manner that the speed of the picker drums is synchronized with the speed of picker forward travel. In other words, the spindles have no forward or backward motion in relation to the cotton plant.

The unit contains two doffer assemblies to remove the cotton from spindles and two moistener column assemblies for cleaning the spindles prior to the spindle entry into the cotton row.

The picking unit is raised and lowered by the tractor rockshaft.

FAN DELIVERY SYSTEM AND BASKET

A powerful fan provides individual suction from each picker drum. The cotton is sucked out of the suction doors, through pipes to the fan. Then the cotton is blown against cleaning grates in the basket.

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

The basket holds 600 pounds of seed cotton. A 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 platform is located above the picking unit so the operator has maximum visibility of the picking operation.

All controls necessary for picking operation are located within easy reach from the operator's seat. The controls are connected by linkages to the tractor controls. The tractor engine is started and stopped from the tractor seat.

SPECIFICATIONS

PICKING UNIT

No. of Picker Drums	2
No. of Picker Bars:	
Front Drum (R.H.)	12
Rear Drum (L.H.)	12
No. of Spindles:	
Per Picker Bar	10
Total (Unit)	240
Doffer Assemblies (Unit)	2
No. of Doffer Plates (per Assembly) . .	10
Moistener Column Assemblies (Unit) . .	2
No. of Moistener Pads (per Assembly) .	10

PICKING UNIT SPEEDS

Speeds given for 2010 Tractor equipped with 12.4-36 tires at 2.23 mph. Speeds for other tractors vary slightly

Picker Drums	100 rpm
Doffers	1225 rpm
Spindles	2575 rpm
Fan	2443 rpm

GROUND SPEEDS (Based on 2010 Tractor)

Picking Speed	2.23 mph
Transport Speed	8.97 mph
Reverse Speed	2.00 mph

CAPACITIES

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

DIMENSIONS (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.

WEIGHT

Cotton Picker only (Does Not Include Tractor) 3175 lbs. approx.

TRACTOR MOUNTINGS

2010, 430, and 420, tractor with single or dual hydraulic system, single remote cylinder control with breakaway coupler. Single or dual front wheels, and 540, or 1000 rpm PTO. External speed changers cannot be used on PTO. Tire sizes recommended are shown on page 10-10-3.

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 recommended are shown on page 10-10-3.

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. External speed changers cannot be used on PTO. Tire sizes recommended are shown on page 10-10-3.

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