

# 216 TWO-ROW 416 FOUR-ROW POTATO PLANTERS



JOHN DEERE

## OPERATORS MANUAL 216 TWO-ROW 416 FOUR-ROW POTATO PLANTERS

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ENGLISH



## TO THE PURCHASER

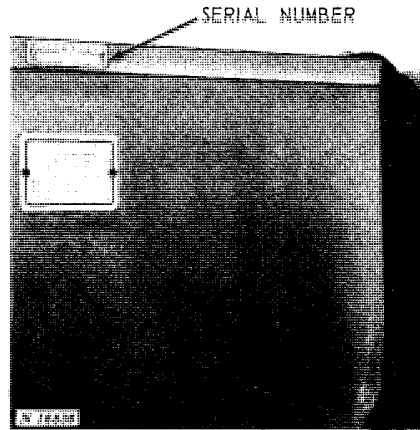
Your new potato planter was built to rigid manufacturing standards. Material and workmanship are the best. However, the way you operate your potato planter and the care you give it have much to do with the service and satisfaction you will get from it.

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.

If you find you need information not covered in this manual or if your potato planter 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 as "right," "left," "front," or "rear" are determined when facing the same direction the potato planter travels in the field.

### SERIAL NUMBER



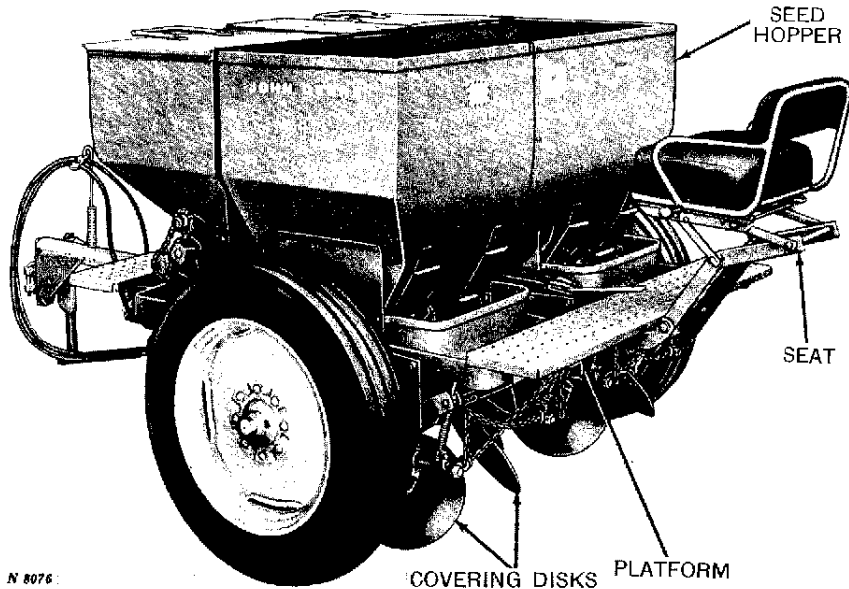
You will find the serial number on a plate located on the top of the right-hand seed hopper just above the seed spacing plate. Write this serial number in the space provided below for a handy reference. It is important that you know the serial number of your machine when ordering parts.

Serial No. . . . .

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

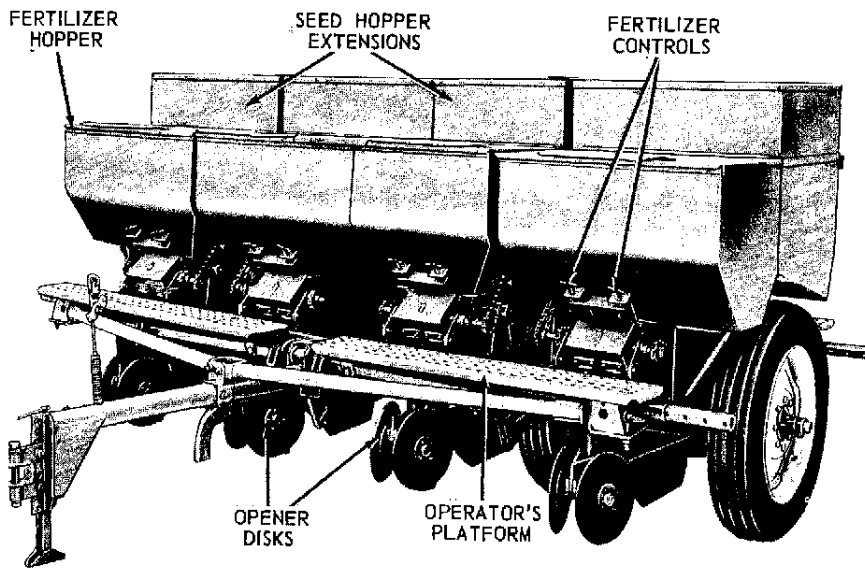
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N 8076

*John Deere 216 Two-Row Potato Planter*



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*John Deere 416 Four-Row Potato Planter*

## SPECIFICATIONS

<p><b>MODEL NUMBER</b>            216 — Two-Row Potato Planter            416 — Four-Row Potato Planter</p> <p><b>MINIMUM POWER REQUIREMENT</b>            John Deere 2010 or equivalent for 216 Planter.            John Deere 3010, 3020, or equivalent for 416 Planter.</p> <p><b>PICKING MECHANISM</b>            Automatic pick-type, 16 picks per wheel.</p> <p><b>ROW SPACING</b>            216 Planter—32 to 42 inches            416 Planter—34 to 42 inches            (36-inch minimum with 9.00 x 24 tires)</p> <p><b>WHEELS</b>            7.50 x 24, 4-ply or 9.00 x 24, 6-ply rib implement tires on disk wheels, adjustable for row spacing; adjustable 3-1/4 inches vertically for ridge planting.</p> <p><b>LIFT</b>            Remote hydraulic cylinder; hose extensions not required</p> <p><b>THROWOUT CONTROL</b>            Automatic, cam operated.</p> <p><b>SEED SPACING WITH 7.50 x 24 TIRES</b>            5 to 25-1/2 inches; shipped with sprockets for 9-inch spacing; will plant 10-1/2-inch and 12-inch spacing without additional sprockets.</p> <p><b>SEED SPACING WITH 9.00 x 24 TIRES</b>            5-1/2 to 27-1/2 inches; shipped with sprockets for 9-1/2-inch spacing; will plant 11-1/2-inch</p>	<p>and 13-inch spacing without additional sprockets.</p> <p><b>SEED HOPPER</b>            Single hopper for both units on 216 Planter, telescopes for changing row spacing; capacity, 20 bushels or 30 bushels with extensions. Capacity doubled on 416 Planter.</p> <p><b>COVERING DISKS</b>            14- or 16-inch diameter.</p> <p><b>OPENER SHOE</b>            Makes V-type furrow.</p> <p><b>FERTILIZER ATTACHMENT (Optional)</b>  <b>Fertilizer Hopper</b>—Single hopper for both units on 216 Planter, telescopes for changing row spacing; 1200 pound capacity. Capacity doubled on 416 Planter.  <b>Fertilizer Opener Disks</b>—14- or 16-inch diameter.  <b>Fertilizer Rate</b>—100 to 3,000 pounds per acre.  <b>Fertilizer Feed</b>—9-inch wide endless type belt with no lacings; 4-ply duck, rubberized.</p> <p style="text-align: center;"><b>SPECIAL EQUIPMENT</b></p> <p>Double Covering Disk Attachment            Scratch Marker            Disk Marker            Operator's Seat            Hitch Jack            Hose Support for 216 Planter without marker            Seed Hopper Extensions            Cleated Fertilizer Belt            Foot Operated Throwout            Fertilizer Hopper Cover            Fertilizer Tube Chutes            Stone and Trash Deflector            16-Tooth Fertilizer Drive Sprocket            Seed Spacing Sprockets            12, 14, and 16-inch Anti-Friction Covering Disks</p>
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*(Specifications and design subject to change without notice)*

## OPERATION

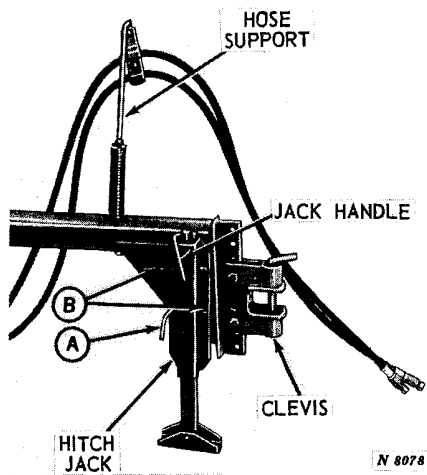
### PREPARING THE PLANTER FOR USE

Careful inspection of the planter before starting work each day will prevent needless delays and break-downs in the field. Make the following checks and adjustments.

1. Perform the lubrication services (pages 22 through 24).
2. Inspect all drive chains for proper tension. Tighten chains only enough to prevent links from climbing sprocket teeth.
3. Check for loose bolts and connections.
4. Check tire inflation. The correct air pressure is: 20 psi for 7.50 x 24, 4-ply tires.  
24 psi for 9.00 x 24, 4-ply tires.

### ATTACHING TO THE TRACTOR

Tractor must be equipped to operate a remote hydraulic cylinder.



### HITCH JACK

Use the adjustable hitch jack (special equipment) to raise the hitch to the proper height for attaching to the tractor drawbar. Turn the jack handle to raise or lower the hitch.

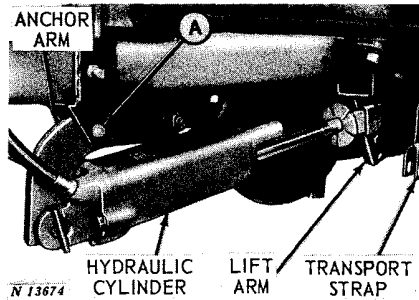
### HITCH CLEVIS

Adjust the hitch clevis so the machine will be level during operation.

After the planter is attached to the tractor, remove threaded rod "A" from the jack, and swing the jack up so rod can be inserted through holes "B" while planting.

*NOTE: The hydraulic cylinder hose support is available as special equipment for 216 Planters without markers.*

### HYDRAULIC CYLINDER

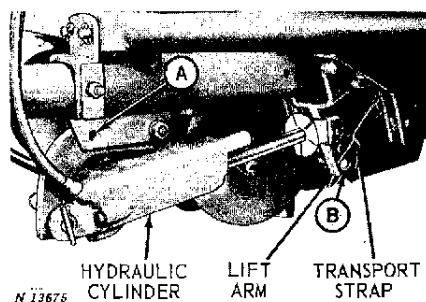


Attach the rear of the hydraulic cylinder to the anchor arm on the planter hitch. Let the arm swing free, and attach the cylinder to the planter lift arm.

After both ends of the cylinder have been attached, extend the cylinder by operating the tractor

hydraulic system, until the pin holding the transport strap can be removed. Retract the cylinder until the planter units are resting on the ground. Lift the cylinder and anchor arm by hand until the pin can be inserted at "A" to secure the anchor arm in position.

**TRANSPORT OR STORAGE STRAP**



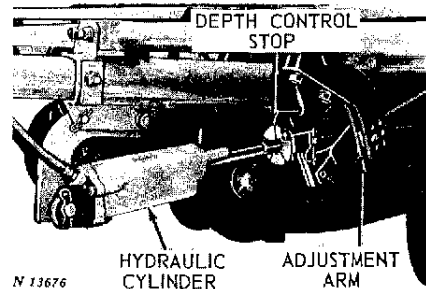
A transport strap to the rear of the lift arm is used to lock the planter in the raised position so the hydraulic cylinder can be removed.

Lower the planter using the hydraulic system. Relieve all pressure from the hydraulic cylinder. Remove the pin from "A." Use the tractor hydraulic system to extend the cylinder, raising the planter to transport position, and attach the transport strap to the lift arm with the pin at "B." Relieve the pressure from the hydraulic cylinder and remove the cylinder.

**CONTROLS**

The remote hydraulic cylinder, operated from the tractor, is used to raise or lower the planter at row ends and to control the planting depth.

**HEIGHT OF LIFT AND DEPTH CONTROL**



The depth of operation is controlled by the depth control stop on the hydraulic cylinder. Adjust the stop so the planter is operating at the desired depth.

Additional height of lift and depth of operation can be obtained by repositioning the lift straps in the adjustment arms. The front row of three holes allows the planter to operate deeper in the ground. The rear row of three holes gives more height of lift.

The bottom hole in each row gives the greatest operating depth. The middle and upper holes in each row give shallower operating depths.

**MAIN DRIVE CLUTCH**

Operation of the picker wheels and fertilizer belts is controlled automatically by the main drive clutch. The clutch is engaged when the planter is lowered into the ground and disengaged when the planter is raised. See pages 14 and 15.

## 6 Operation

### THROWOUT LEVERS

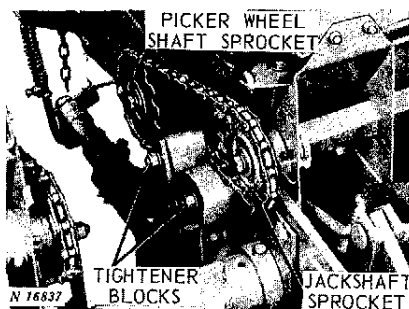


Foot operated throwout levers, for use by an operator on the rear of the machine, are available as special equipment. They permit the planter operator to disengage the planting and fertilizing mechanisms before the planter is raised, making sure all seed and fertilizer is covered at the end of the field.

### PLANTING SPEED

The planter can be operated at speeds up to six miles per hour, however, greater accuracy will be obtained by planting at slower speeds.

### SEED SPACING



Seed can be spaced from 5 to 27-1/2 inches apart in the row.

The drive sprocket on the jackshaft and the driven sprocket on the picker wheel shaft are interchangeable. When shipped from the factory, each unit of the planter is equipped with a 14-tooth drive sprocket and a 12-tooth driven sprocket, providing for 9-inch spacing with 7.50 x 24 tires or 9-1/2-inch spacing with 9.00 x 24 tires. Interchanging these sprockets provides for 12-inch (7.50 tires) or 13-inch spacing (9.00 tires). A 10-1/2-inch (7.50 tires) or 11-1/2-inch spacing (9.00 tires) can be obtained by using a pair of 12-tooth sprockets on one unit and a pair of 14-tooth sprockets on the other unit.

Four other sprockets are available to secure the additional spacings as outlined in the chart below.

### PLANTER WITH 7.50 x 24 TIRES

#### Seed Spacing in Inches

		Picker Wheel Shaft Sprocket (Driven Sprocket)					
		8T	10T	12T	14T	16T	20T
Jackshaft Sprocket	8T	10.5	13	15.5	18	20.5	25.5
	10T	8	10.5	12.5	14.5	16.5	20.5
	12T	7	8.5	10.5	12	13.5	17
	14T	6	7.5	9	10.5	12	14.5
	16T	5	6.5	7.5	9	10.5	13

### PLANTER WITH 9.00 x 24 TIRES

#### Seed Spacing in Inches

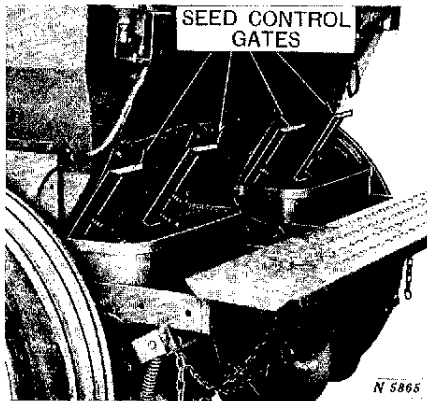
		Picker Wheel Shaft Sprocket (Driven Sprocket)					
		8T	10T	12T	14T	16T	20T
Jackshaft Sprocket	8T	11.5	14	16.5	19.5	22	27.5
	10T	8.5	11.5	13.5	15.5	18	22
	12T	7.5	9	11.5	13	14.5	18.5
	14T	6.5	8	9.5	11.5	13	15.5
	16T	5.5	7	8	9.5	11.5	14

#### Sprockets

8T (N71320N) 14T (N71323N)  
 10T (N71321N) 16T (N71324N)  
 12T (N71322N) 20T (N71325N)



**SEED CONTROL GATES**



The seed control gates are adjustable to govern the flow of seed pieces from the seed hopper into the picker bowl.

The flow of seed from the hopper should be controlled to keep the bottom of the bowl full so each picker arm can "pick" a seed piece. However, the level of seed should not be so high that unpicked seed pieces are "carried over" by the picker wheel.

**COVERING DISKS**

The covering disks at the rear of the planter are provided with both horizontal and vertical adjustments.

They should be set equidistant from the center of the row to cover all seed and fertilizer.

**SPRINGS AND CHAINS**

The down pressure springs are equipped with adjustable collars that will give the desired down pressure. The springs help keep the disks in the ground, but allow them to raise when rocks or obstructions are encountered in the row. Be sure the springs are never compressed solid when in operating position.

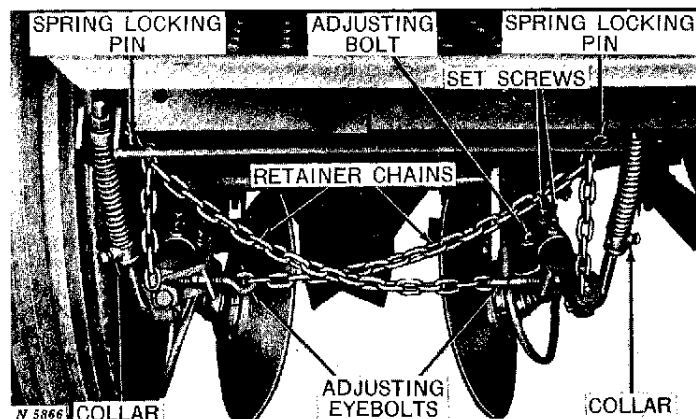
Retainer chains are provided to limit the distance between the disks when operating. Rough adjustment is made by changing the position of the spring-locking pin in the chain. Fine adjustment is obtained by adjusting the eyebolts at the ends of the chains. Be sure chains are kept tight.

**ADJUSTING ANGLE AND TILT**

To adjust the tilt of the covering disks, loosen the two set screws and move the disk to the desired position.

To adjust the angle of the disk, loosen the nut on the adjusting bolt, and turn the disk to the desired angle.

Be sure to tighten the nut and set screws to maintain the adjustments.



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