

# 100 BEET HARVESTER



## OPERATORS MANUAL 100 BEET HARVESTER

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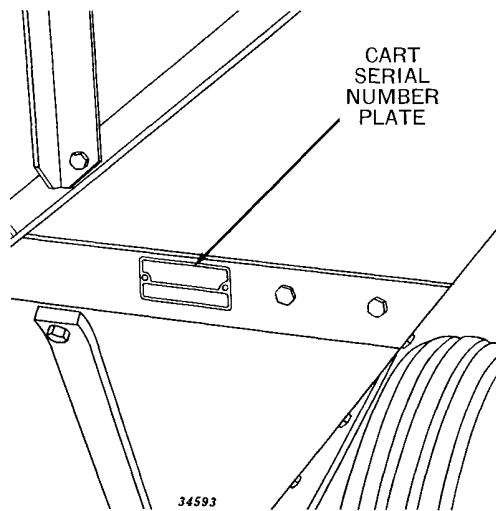
## TO THE PURCHASER

The purpose of this manual is to furnish valuable information about your new 100 Beet Harvester. In it you will find instructions and helpful suggestions for operating, hitching, transporting, adjusting, lubricating, attaching, detaching, and servicing your new beet harvester.

Keep this manual in a convenient place for quick and easy reference. Use it as a guide whenever questions arise. You have purchased a dependable, sturdy machine, but only by proper care and operation can you expect to receive the service and long life designed and built into it.

If you need additional information, or if your beet harvester requires special servicing, see your John Deere dealer—he has all the facilities required to keep your beet harvester in A-1 condition. He will be glad to serve you.

Sometime in the future your beet harvester may need new parts to replace worn or broken parts or for emergency repair. If so, go to your John Deere dealer. He will see that you get high-quality, genuine John Deere parts. Provide your dealer with the serial number of your beet harvester, its type, and year purchased. This information will help him to identify the part you need. We suggest that this information be recorded immediately in the space provided below, thereby making it available for future reference.



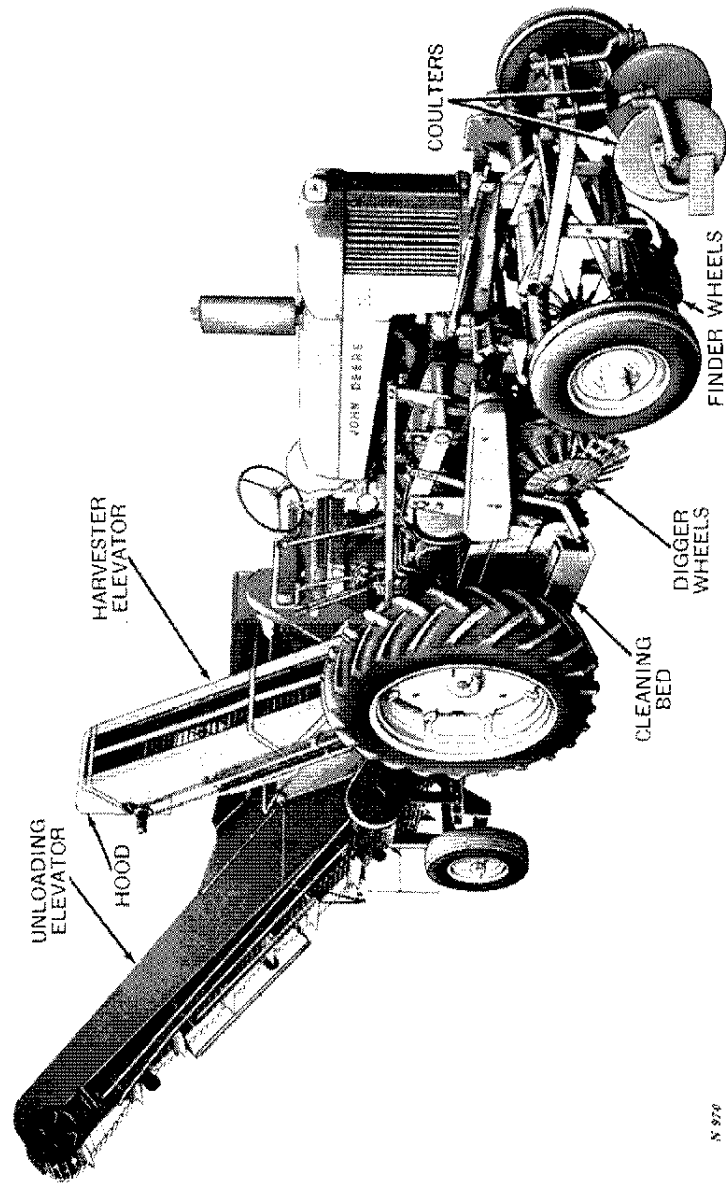
*Seen from Rear of Cart*

Cart Serial No. \_\_\_\_\_

Date Purchased \_\_\_\_\_

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N 970

*John Deere 100 One-Row Beet Harvester*

## SPECIFICATIONS

Model.....	100, consisting of an integral harvesting unit and a drawn cart
Capacity.....	One-row
Row Width.....	Adjustable for 20- to 42-inch rows
Operating Personnel.....	Maximum includes three operators, tractor operator and two sorters. (Exclusive of truck operators)
Operating Speed.....	Up to 3-1/2 miles per hour
Power Requirements.....	John Deere "530," "630," "730," "520," "620," "720," "50," "60," or "70" Series Tractors
Digger Wheel Teeth.....	Heat-treated, spring steel, 44 used
Digger Wheels.....	Two per row, ground driven. Depth of operation controlled hydraulically by tractor remote cylinder
Power Lift.....	Entire unit is lifted with power lift lever on tractor
Over-All Length with Cart...	25 ft. 9 in.
Height in Transport.....	11 ft.
Width of Cart.....	15 ft. 2 in.
Height of Cart.....	10 ft. 11 in.
Length of Cart.....	10 ft. 9 in.

*(Specifications and design subject to change without notice.)*

## OPERATING INSTRUCTIONS

### GENERAL

The John Deere 100 Beet Harvester consists of two units, an integrally mounted topping and harvesting unit and a cart with unloading elevator and sorting table.

The John Deere 100 Beet Harvester can be mounted on John Deere "530," "630," "730," "520," "620," "720," "50," "60," and "70" Series Tractors.

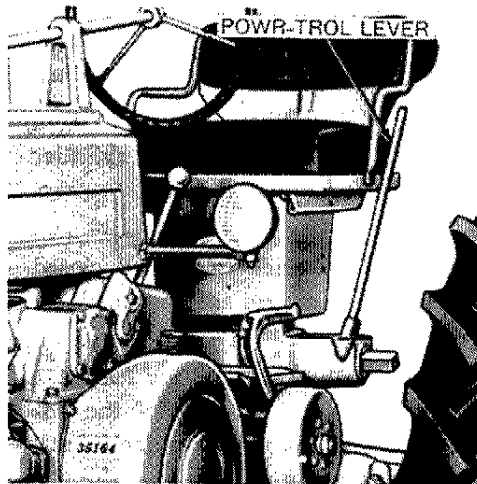
From one to three operators are required depending on field conditions. In some fields where the ground is friable and has no tendency to be cloddy, it is sometimes possible for one man—the tractor operator—to operate the entire harvester. When this is done it is necessary to install the beet stop preventing beets from entering the clod chute. See adjustments on page 17. Then the only other persons needed in the field are the drivers of the trucks. Where ground conditions warrant, provision is made for two sorters to stand.

Digger wheels are ground-driven and are designed to raise the beets with a minimum of dirt. Run digger wheels as shallow as possible while still getting all the beets. If all the beets are not being lifted or if beet tails are breaking, set the digger wheels a little deeper so that all beets are recovered.

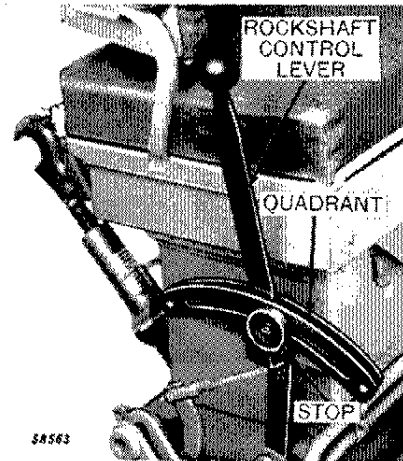
The operating depth of the digger wheels is controlled by the control lever on the tractor.



*NOTE: Right- and left-hand sides referred to in this manual are determined from a position at the rear of the machine facing in the direction of travel.*

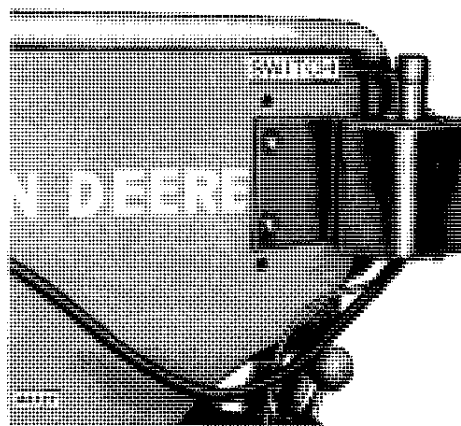
**CONTROLS**

*"50," "60," and "70" Series  
Tractors*



*"520," "620," and "720" Series  
Tractors*

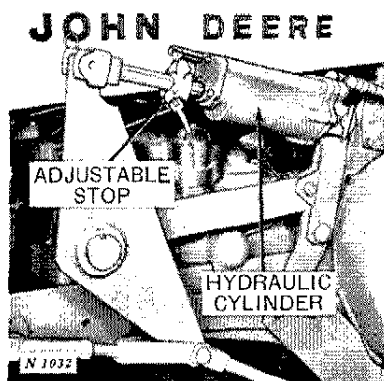
The only control necessary to raise or lower the harvesting unit is the control lever on tractor. When the unit is raised, the harvester is automatically disengaged.



*Figure 3*

To operate the cart for unloading, engage the cart clutch by pressing the switch on the back of the tractor seat.

## HYDRAULIC CYLINDER



The harvesting unit is equipped for hydraulic operation with the remote hydraulic cylinder.

The depth of digger wheel penetration is controlled by the hydraulic cylinder through the lever mounted on the tractor.

When the cylinder is in the closed position, the maximum amount of digger wheel penetration is available.

Operate the harvester a few feet at a time, changing the position of the adjustable stop to reduce the operating depth of the digger wheels until beets are being lost. Then close the cylinder slightly and tighten the adjustable stop.

For complete information regarding the Powr-Trol system, see your Tractor Operator's Manual.

## TRANSPORTING

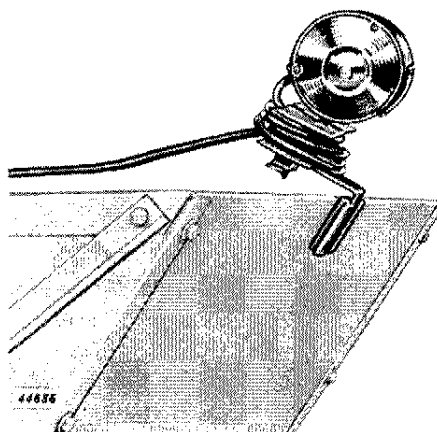
The transport height of the harvester is 11 feet and its maximum width is 15 feet 2 inches.

To prepare the harvester for transport it is only necessary to extend hydraulic cylinder, so the harvester is raised. When this is done the elevator will be raised to its highest position and all working parts will be raised for transporting.



When transporting the machine on a public road at night or during other periods of poor visibility, use a warning lamp in socket provided on the extreme left-hand side of the cart.

A warning lamp, that may be used with other implements, can be purchased from your John Deere dealer.



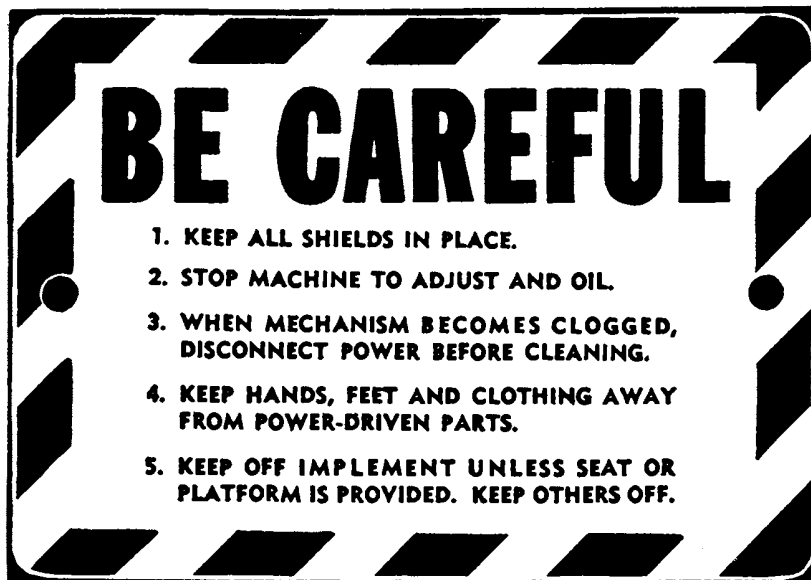


## PREPARING HARVESTER FOR OPERATION

Before taking the beet harvester into the field, whether it is for the first use of the machine, the first entry into a new field, or the beginning of daily operation, there are several things that should be done to insure efficient results throughout the harvesting season.

By following the check list below, many field delays resulting from improper operation, can be avoided.

1. Check lubrication. Lubricate according to instructions on pages 24 through 28.
2. Check chains. Proper tension should be maintained on all roller chains, as well as all elevator chain.
3. Check operation. Operate all moving parts for a short time to see that all parts work freely and that all slip clutches work properly. See page 21.
4. Check row width. Be sure the row width setting of the harvester coincides with the row spacing of the beets to be harvested. See row spacing adjustments on pages 18 and 19.



## ADJUSTING INSTRUCTIONS

### TOPPING UNIT

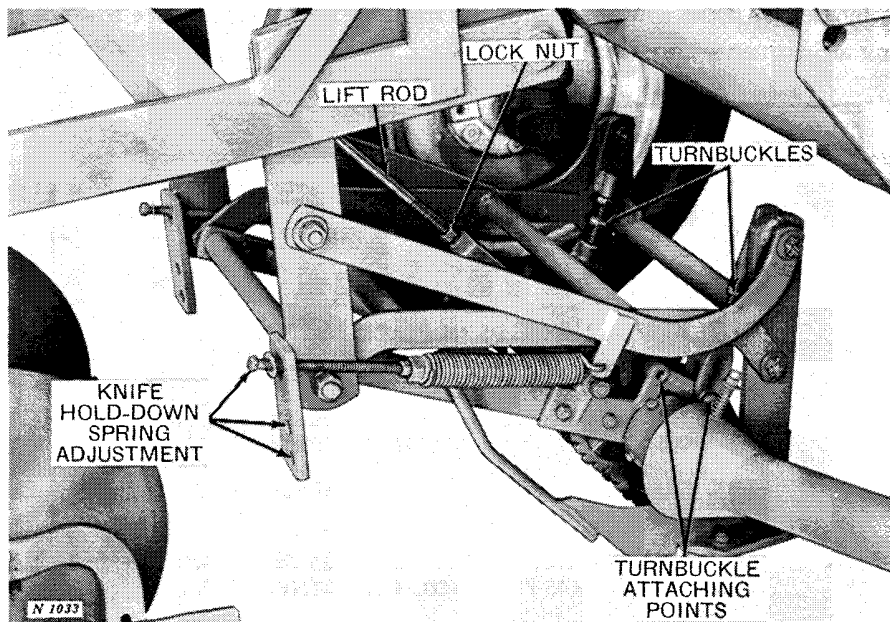
#### LIFT ROD

Loosen lock nut and adjust finder wheel lift rod so when in the operating position there is approximately 1-1/2 inches clearance between the top of lift rod and the swivel. This will allow finder wheels to work up and down over uneven ground. Untopped low beets indicate that the lift rod should be lengthened.

#### TURNBUCKLES

Lengthening the turnbuckles raises the knife taking less top off the beets. Shortening, of course, will take more top off. Adjust both turnbuckles the same and lock in place with lock nut.

For average conditions, and for a constant cut, set the turnbuckle in the rear attaching point. Use the front attaching point when it is necessary to take more top off the high beets.



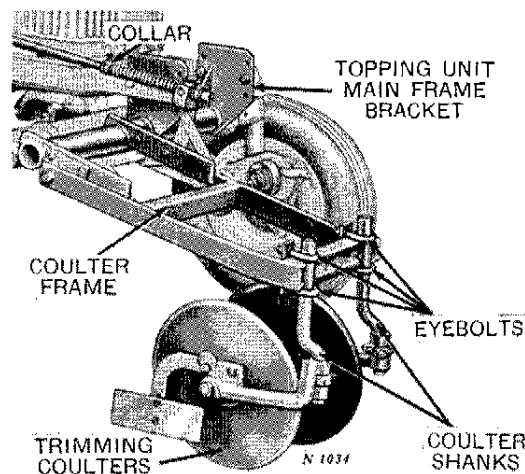
### KNIFE HOLD-DOWN SPRINGS

For average conditions and maximum downward pressure, place the knife hold-down spring bolts in the bottom holes in the brackets on the topping unit frame. Three holes are provided in each frame bracket for controlling downward pressure on the knife and downward pressure decreases as the spring pressure is moved up.

When topping high loose beets, or when finger wheels are pushing beets over, use center or top hole.

### FRAME

When harvesting 28-inch rows, or where deep water furrows exist, or when beets are high and/or loose, it is necessary to use the center or bottom holes in the topping unit main frame brackets. This will raise the unit to proper operating height.



### COULTERS

Trimming coulters can be adjusted up or down simply by loosening the nuts on the eyes and sliding the shanks. Lateral adjustment is available by setting the offset in the shank to one side or the other.

The setting of the left-hand coulters is the most critical and should be on a line with the knife shoe. These coulters should run approximately 2 inches deep.

Spring pressure can be applied by moving the set collar forward.

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