



51 UNIT PLANTER



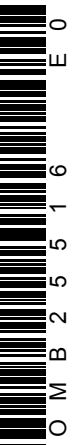
JOHN DEERE

OPERATORS MANUAL 51 UNIT PLANTER

OMB25516 E0 English

JOHN DEERE PLOW & PLANTER WORKS
OMB25516 E0

LITHO IN THE U.S.A.
ENGLISH





To the Purchaser


This new planter 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 operation, lubrication, or adjustments and service. Read the Table of Contents to learn where each section is located. Use the alphabetical index for fast reference.

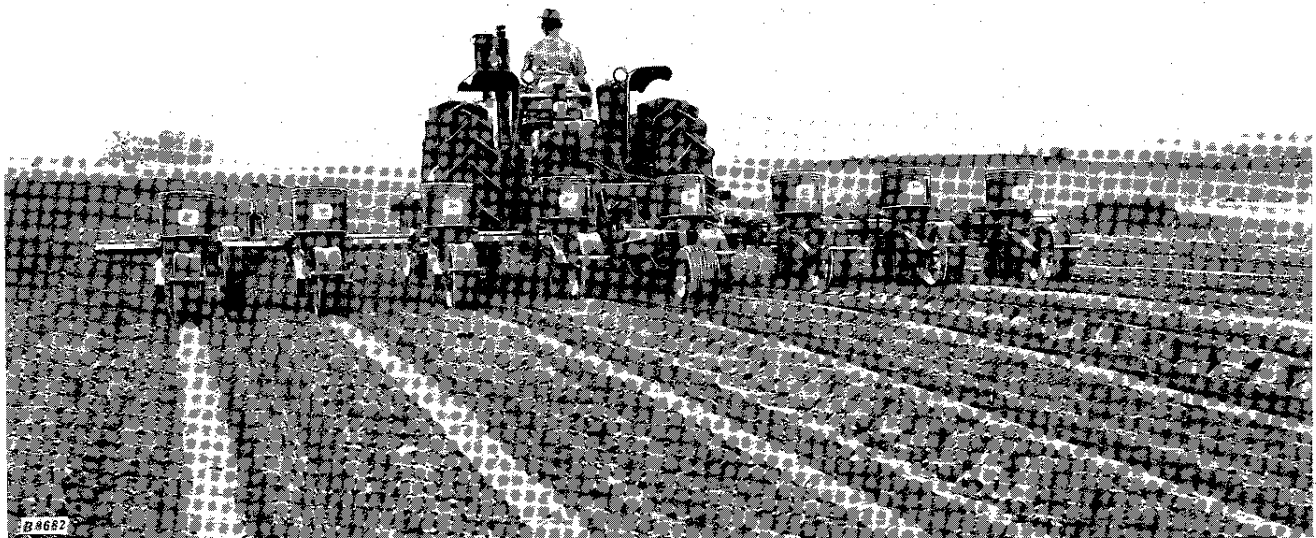
In addition to the equipment furnished with your planter, attachments are available to help you do a better job in special crop conditions. These are described in the special equipment section of this manual and can be purchased from your John Deere dealer.

"Right-hand" and "left-hand" sides are determined by facing in the direction the planter will travel when in use.

Record your planter serial numbers in the space provided on page 61. Your dealer needs this information to give you prompt, efficient service when you order parts or attachments. If your planter requires replacement parts, go to your John Deere dealer where you can obtain genuine John Deere parts - accept no substitute.

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

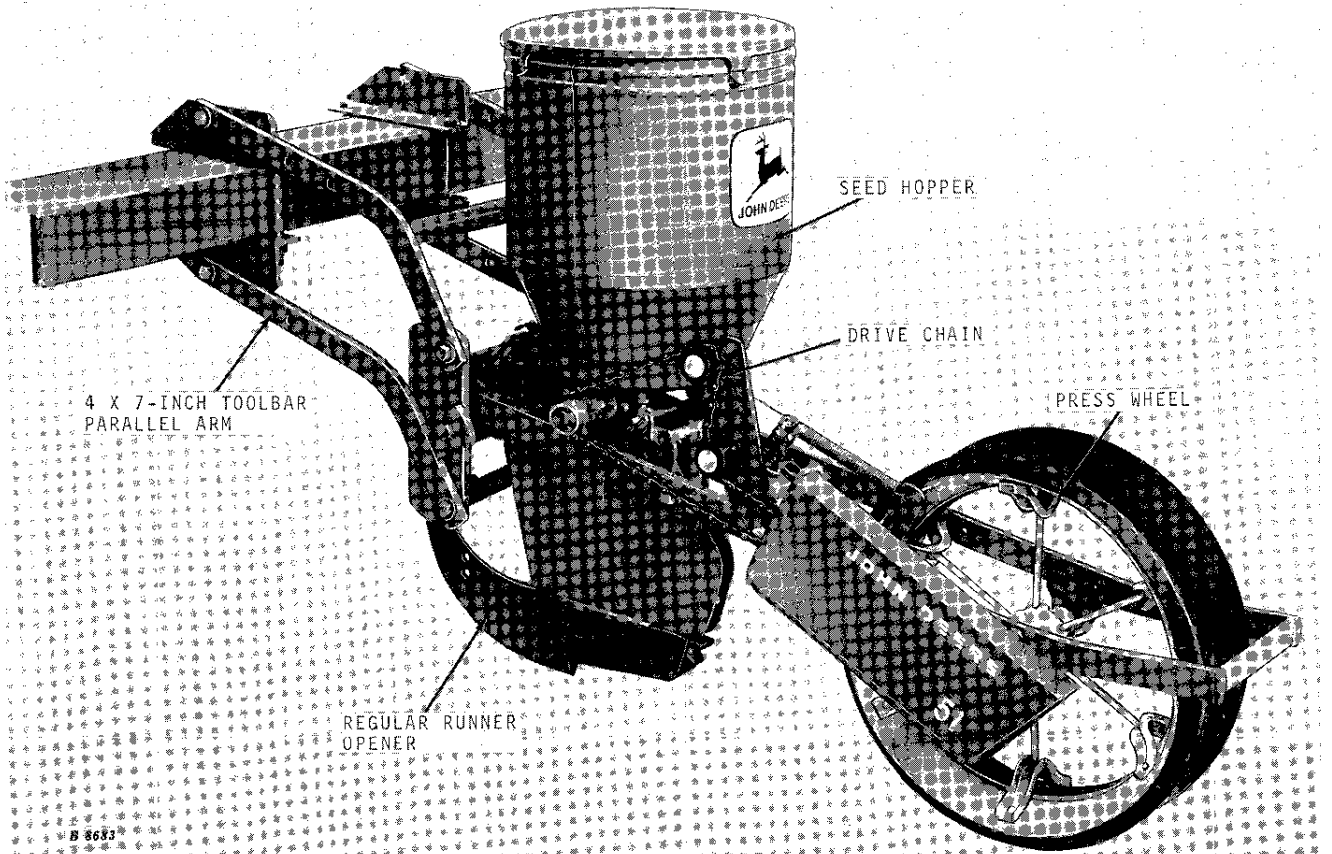
 This safety alert symbol identifies important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.



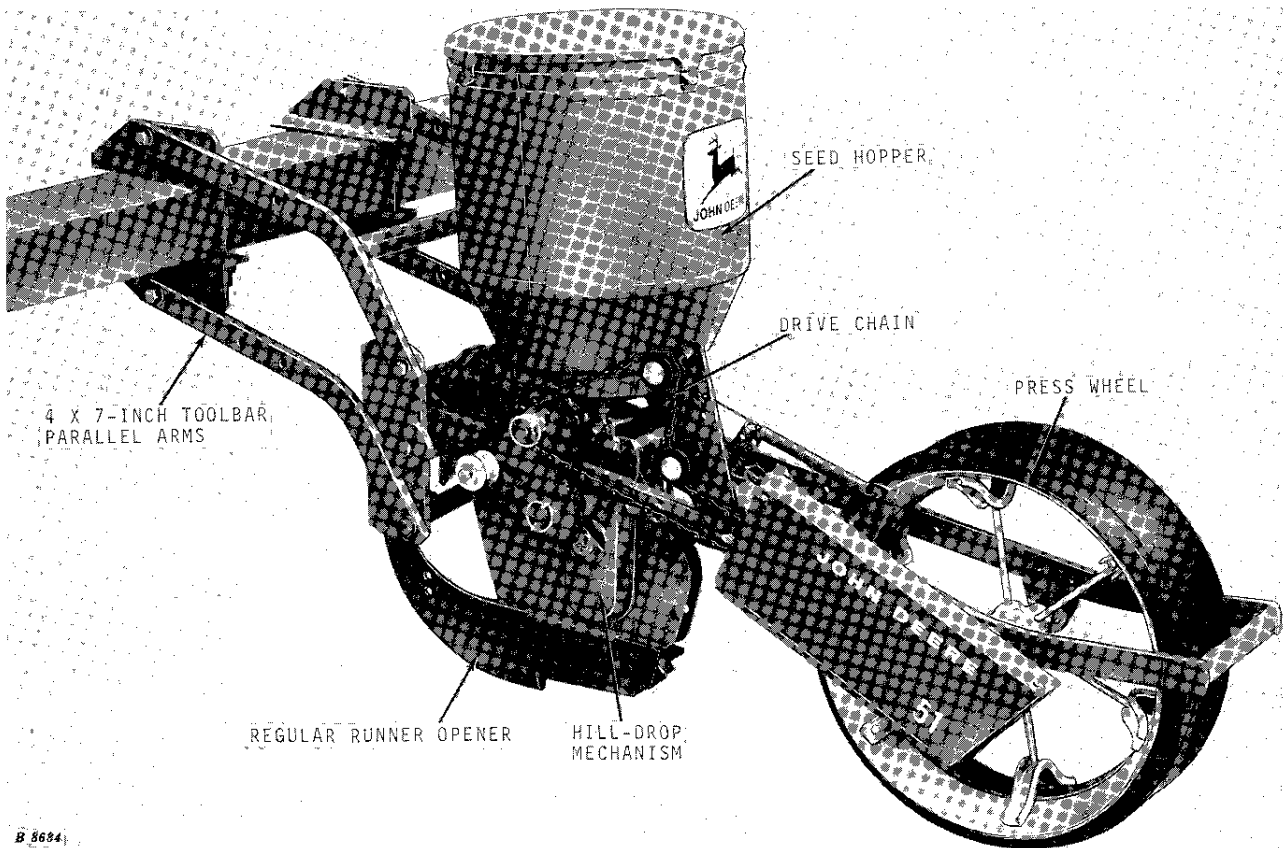


Contents

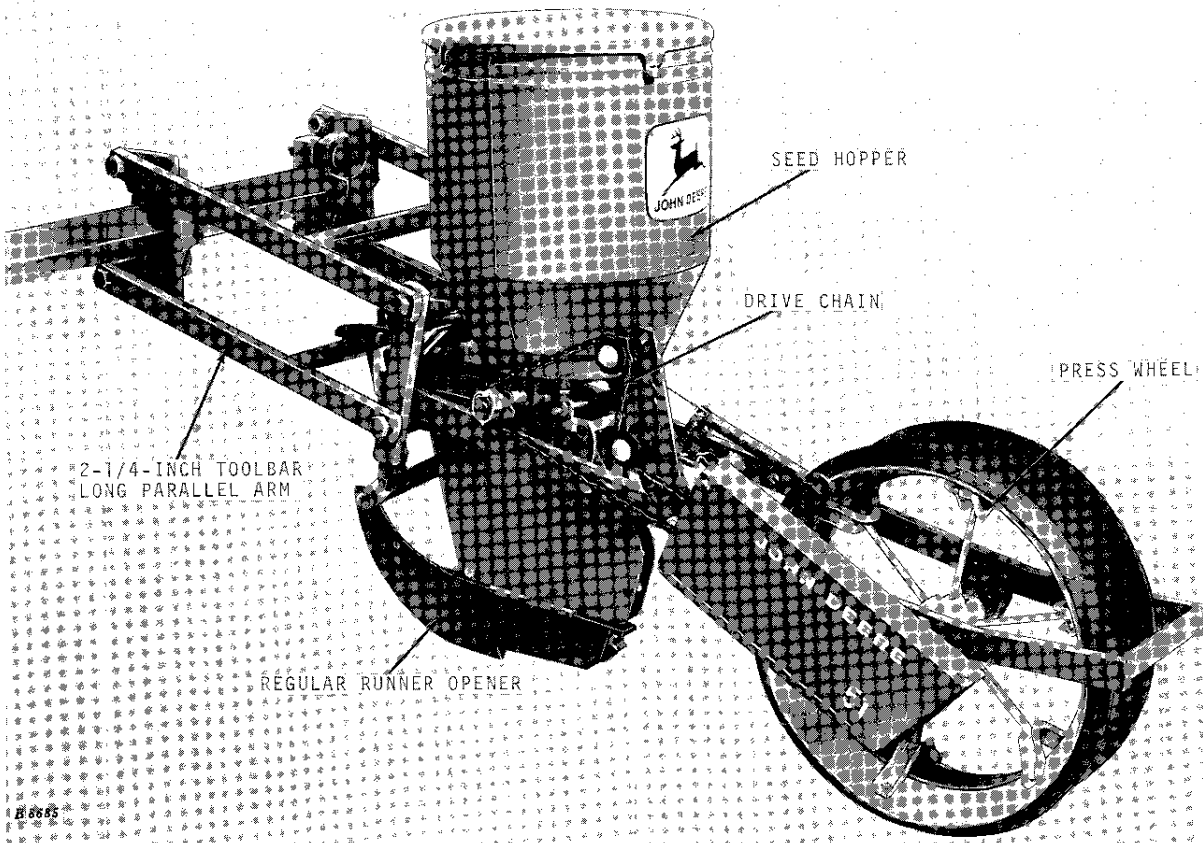
| | Page |
|---------------------------|-------|
| IDENTIFICATION VIEW | 1-3 |
| OPERATION | 4-23 |
| LUBRICATION | 24-25 |
| TROUBLE SHOOTING | 26-27 |
| SERVICE | 28 |
| SPECIAL EQUIPMENT | 29-55 |
| ASSEMBLY | 56-58 |
| SPECIFICATIONS | 59-61 |
| INDEX | 62-63 |



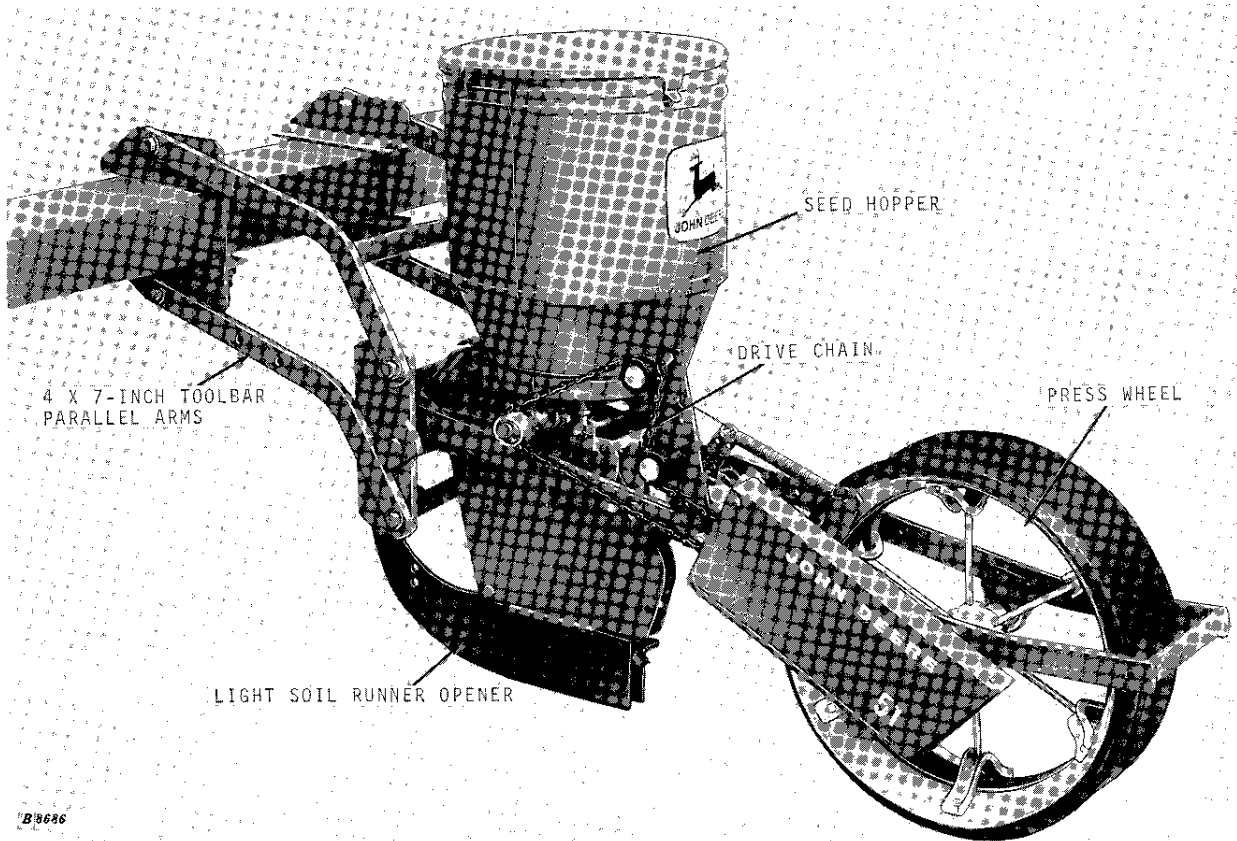
51 Drill Unit Planter with Runner Seed Openers and 4 x 7-Inch Parallel Arms Mounted on 4 x 7-Inch Toolbar



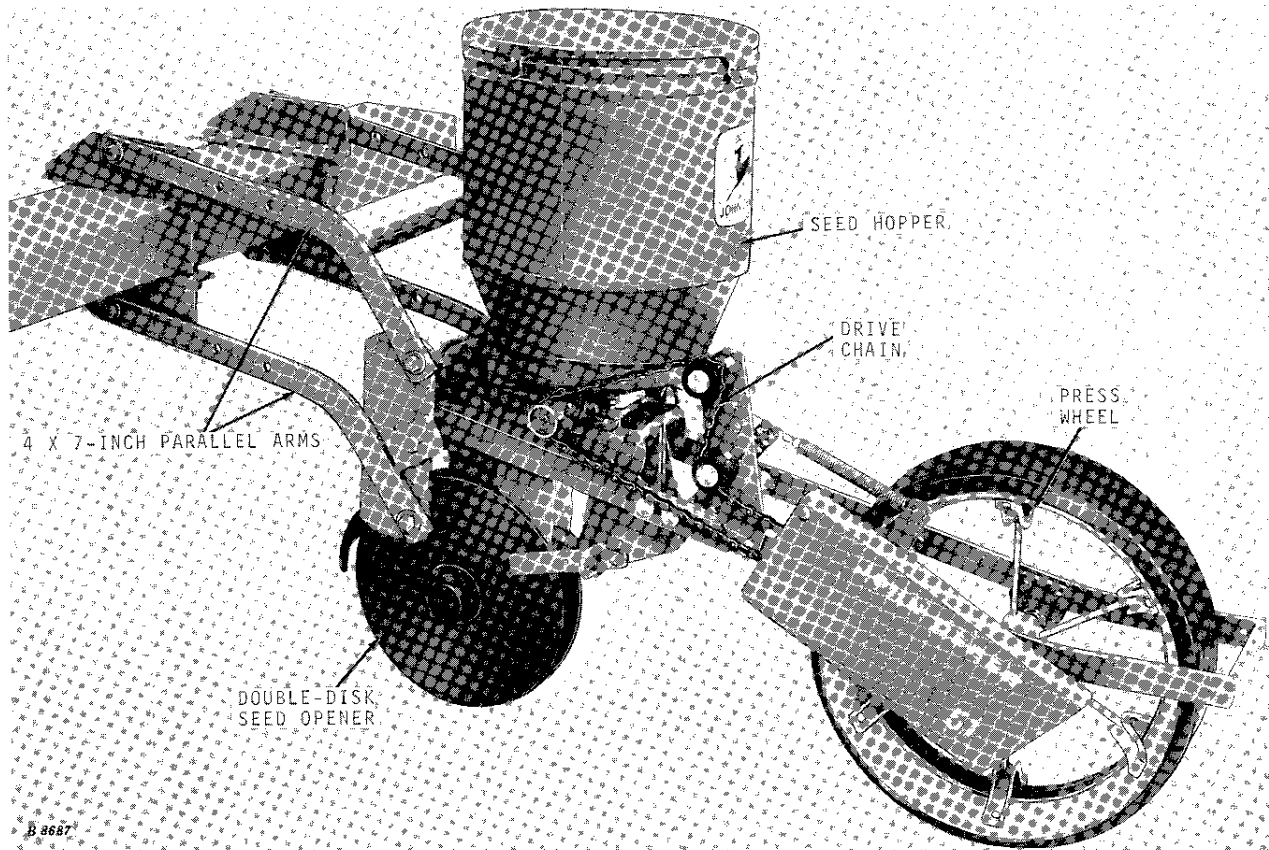
51 Hill-Drop Unit Planter with Runner Seed Openers and 4 x 7-Inch Parallel Arms Mounted on 4 x 7-Inch Toolbar



51 Drill Unit Planter with Runner Seed Openers and 2-1/4-Inch Long Parallel Arms Mounted on 2-1/4-Inch Toolbar



51 Drill Unit Planter with Light Soil Runner Seed Openers and 4 x 7-Inch Toolbar Parallel Arms Mounted on 4 x 7-Inch Toolbar



51 Drill Unit Planter with Double-Disk Seed Opener and 4 x 7-Inch Parallel Arms Mounted on 4 x 7-Inch Toolbar



Operation

PREPARING THE TRACTOR

All Tractors

For complete operating instructions concerning the tractor, refer to the tractor operator's manual.

Rear Wheel Tread

When two, four, six, or eight units are being used, set tractor wheel tread (center to center of tires) as nearly as possible twice the distance of the row width. For example: For 40-inch row widths, set the tractor wheel tread at 80 inches.

Tire Pressure

Consult your tractor operator's manual for front and rear tire pressure.

Attaching Toolbar To Tractor

Attach the toolbar mounting brackets to the hitch draft links and secure each side with a quik-lock pin. When using the 500 Toolbar, position the toolbar mast and secure it to the hitch center link. Gauge wheels are recommended for toolbar stability.

Row Spacing

Set the tractor wheel tread (center to center of tires) twice the planter row spacing.

When two or more units are mounted on the same toolbar, the maximum row spacing will be limited only by the length of the toolbar and the position of the attaching parts. Minimum row spacing is dependent upon combinations found on page 59.

Adjusting Speed of Rockshaft Drop

Set the speed of the rockshaft drop on tractor on which the rockshaft and implement drop can be regulated. Adjust the throttle valve to give a smooth, slow drop of the planter.

2510, 2520, 3010, 3020, 4000, 4010, 4020, 4520, 5010, AND 5020 SERIES TRACTORS

Front End Weights

In order to determine the recommended front end weights, it is necessary to first find your planting combination in the RECOMMENDED PLANTER AND ATTACHMENT COMBINATION chart. For example, assume you have six units, equipped with herbicide attachments. You have one 651 Fertilizer Attachment mounted on a 20-foot double toolbar with two 17 Lift Assist Wheels. By checking these elements in the chart you will find this is under combination "V."

RECOMMENDED PLANTER AND ATTACHMENT COMBINATIONS

| Components | Planting Combinations | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|---|-----|-----|
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | |
| F880 Series 4" x 7" Toolbar | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22' | 22' |
| Length of Double Toolbar with 5D or 9B Carrier | 14' | 14' | 14' | 14' | 14' | 14' | 14' | 14' | 14' | 14' | 14' | 20' | 20' | 20' | 20' | 20' | 20' | 20' | 20' | 20' | 20' | 20' | 20' | 20' | 0 | 0 | |
| Number of Units | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 8 | 8 | |
| Number of 17 Lift Assist Wheels | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 1 | 1 | 2 | 2 | 2 | 2 | 1 | 2 | 1 | 2 | 2 | 2 | 2 | 2 | |
| Max. No. of Attachments* | 0 | 0 | 1 | 2 | 3 | 0 | 1 | 0 | 1 | 2 | 3 | 0 | 1 | 2 | 0 | 1 | 2 | 3 | 0 | 0 | 1 | 1 | 2 | 3 | 2 | 3 | |
| Fert. Attach. | - | - | - | - | - | 451 | 451 | 451 | 451 | 451 | 451 | - | - | - | - | - | - | - | 651 | 651 | 651 | 651 | 651 | 651 | - | - | |

NOTE: All combinations include Hyd-Row Markers and rubber-tired press wheels and are compatible with or without Quik-Coupler.

* Individual attachments are: double-disk furrowing attachments, 30-lb. capacity herbicide and insecticide attachments, and V-wings. Since the double-disk furrowing attachment is not used with the V-wings, the largest number of attachments on any combination is three.

Now assume you have a 4020 Row-Crop Tractor with adjustable tread and you also have a 9B Tool Carrier. Refer to the RECOMMENDED FRONT END WEIGHTS chart and read downward in the first col-

umn until you find your tractor listed. Now follow across until you come to Planting Combination "V" and you will find the recommended weight is 1,000 pounds.

RECOMMENDED FRONT END WEIGHTS IN POUNDS

| Tractor | Tool Carrier or Bedder | Planting Combinations* | | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------------|------------------------|------------------------|------|------|------|------|-----|-----|------|------|------|------|------|------|------|-----|-----|-----|------|------|------|---|------|------|---|---|-----|
| | | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z |
| 2510 RC Single Front Wheel | 5D | † | 700 | 800 | 1000 | 1200 | † | † | † | † | † | † | † | † | † | 0 | 300 | † | † | † | † | † | † | † | † | † | † |
| | 9B | † | 800 | 1000 | 1200 | 1200 | † | † | † | † | † | † | † | † | † | 100 | 500 | † | † | † | † | † | † | † | † | † | † |
| 2510 RC Adj. Tread | 5D | † | 300 | 500 | 700 | 900 | † | † | † | † | † | † | † | † | 0 | 0 | † | † | † | † | † | † | † | † | † | † | † |
| | 9B | † | 400 | 600 | 800 | 1000 | † | † | † | † | † | † | † | † | 0 | 100 | † | † | † | † | † | † | † | † | † | † | † |
| 2520 RC Adj. Tread | 5D | † | 600 | 800 | 1000 | 1200 | † | † | † | † | † | † | † | † | 0 | 300 | † | † | † | † | † | † | † | † | † | † | † |
| 2520 RC Single Front Wheel | 5D | † | 1000 | 1200 | 1300 | 1600 | † | † | † | † | † | † | † | † | 400 | 700 | † | † | † | † | † | † | † | † | † | † | † |
| 3020 U Short Wheelbase | 5D | † | 200 | 400 | 600 | 900 | † | † | † | † | † | † | † | † | 0 | 0 | † | † | † | † | † | † | † | † | † | † | † |
| | 9B | † | 400 | 600 | 800 | 1100 | † | † | † | † | † | † | † | † | 0 | 0 | † | † | † | † | † | † | † | † | † | † | † |
| 3020 RC Single Front Wheel | 5D | † | 700 | 900 | 1100 | 1300 | † | † | 1600 | 1800 | † | † | 1100 | † | † | 0 | 200 | 500 | 1000 | † | † | † | † | † | † | † | † |
| | 9B | † | 600 | 800 | 1000 | 1200 | † | † | † | † | † | † | 1200 | † | † | 0 | 300 | 700 | 1200 | † | † | † | † | † | † | † | † |
| 3020 RC Adj. Tread | 5D | † | 400 | 500 | 700 | 900 | † | † | 1200 | 1400 | 1600 | † | 800 | † | † | 0 | 0 | 200 | 600 | † | † | † | † | † | † | † | † |
| | 9B | † | 300 | 500 | 700 | 900 | † | † | † | † | † | † | 900 | † | † | 0 | 0 | 300 | 800 | † | † | † | † | † | † | † | † |
| 3020 S Short Wheelbase | 5D | † | 200 | 400 | 600 | 900 | † | † | † | † | † | † | 900 | † | † | 0 | 0 | 200 | 700 | † | † | † | † | † | † | † | † |
| | 9B | † | 400 | 500 | 800 | 1000 | † | † | † | † | † | † | 1000 | † | † | 0 | 0 | 400 | 900 | † | † | † | † | † | † | † | † |
| 3020 RC PFWD | 5D | † | 0 | 0 | 0 | 0 | † | † | 600 | 400 | 800 | † | † | † | † | 0 | 0 | 0 | 0 | † | † | † | † | † | † | † | † |
| 3020 S | 5D | † | 400 | 600 | 810 | 1100 | † | † | 1400 | 1600 | 1800 | † | † | † | † | 0 | 100 | 500 | 1000 | † | † | † | † | † | † | † | † |
| 4020 RC Single Front Wheel | 5D | 1200 | 100 | 300 | 500 | 700 | † | † | 900 | 1100 | 1300 | † | 700 | 1000 | 1300 | 0 | 0 | 200 | 600 | 1200 | 900 | † | 1200 | 1300 | † | † | † |
| | 9B | 1200 | 100 | 300 | 500 | 700 | † | † | 900 | 1100 | 1200 | † | 700 | 1000 | 1200 | 0 | 0 | 100 | 600 | 1200 | 1000 | † | 1200 | † | † | † | † |
| 4020 RC | 5D | 900 | 0 | 0 | 100 | 300 | † | † | 500 | 700 | 1000 | † | 400 | 700 | 1000 | 0 | 0 | 0 | 200 | 800 | 600 | † | 800 | 1000 | † | † | † |
| | 9B | 1000 | 0 | 0 | 100 | 300 | † | † | 600 | 800 | 1000 | † | 400 | 700 | 1000 | 0 | 0 | 0 | 300 | 800 | 600 | † | 1000 | † | † | † | † |
| Adj. Tread | F880 Series | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † |
| 4020 S Short Wheelbase | 5D | 1000 | 0 | 0 | 100 | 400 | † | † | 600 | 800 | 1100 | † | 400 | 700 | 1100 | 0 | 0 | 0 | 200 | 900 | 600 | † | 900 | 1100 | † | † | † |
| | 9B | 1000 | 0 | 0 | 100 | 400 | † | † | 600 | 900 | 1100 | † | 400 | 800 | 1100 | 0 | 0 | 0 | 300 | 900 | 700 | † | 1200 | † | † | † | † |
| 4020 RC PFWD | 5D | † | 0 | 0 | 0 | 0 | † | † | 0 | 0 | 0 | † | 0 | 0 | 300 | 0 | 0 | 0 | 0 | 200 | 0 | † | † | † | † | † | † |
| 4020 RC Adj. Tread | 5D | † | † | † | † | † | 500 | 600 | † | † | 900 | 1300 | † | † | † | † | † | † | 200 | † | 400 | 0 | 0 | 0 | † | † | † |
| 5020 RC | F880 Series | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | 200 |
| 5020 S | F880 Series | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | † | 500 |

* See the preceding table for planting combinations.

† Combinations not recommended.

Belt Pulley

The belt pulley must be removed from the tractor if the tractor is so equipped.

Sway Blocks

Sway blocks must be attached to eliminate all side sway except for contour planting.

Setting The Rockshaft Selector Lever

Set the selector lever in "D" position.

Lift Links

Adjust the lift links for transport clearance and lateral float. See tractor operator's manual.

520, 530, 620, 630, 720, OR 730 SERIES TRACTORS

Sway Locks

Install the sway locks to eliminate side sway except for contour planting.

Load Control Yoke

Install the upper link in hole No. 3 of the load control yoke.

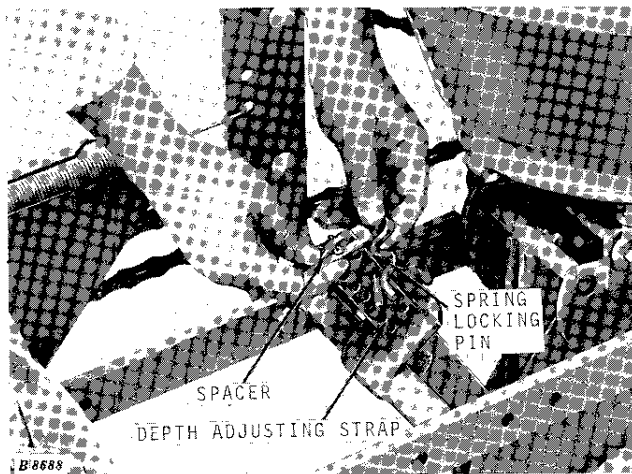
Front End Weights

Add the necessary front end weights for efficient operation and safety. See tractor operator's manual.

PREPARING THE PLANTER

Depth of Planting

The planting depth is gauged by the planter press wheel except when using a gauge shoe, gauge wheel, or V-wing.



When the press wheel is used for gauging depth, the planting depth of each unit is determined by the setting of the spring locking pin in the depth adjusting strap. To change the planting depth move the pin up to increase the depth or down to decrease the depth.

Each hole in the depth adjustment strap represents a change of approximately 1/2 inch in the planting depth. To change the planting depth by 1/4 inch remove the spacer from under the locking pin.

Adjust all units to plant at the same depth.

When V-wings, gauge shoes, or gauge wheels are used, the depth of planting depends upon the position of each V-wing, gauge shoe or gauge wheel in relation to the planter runner.

Leveling Planter

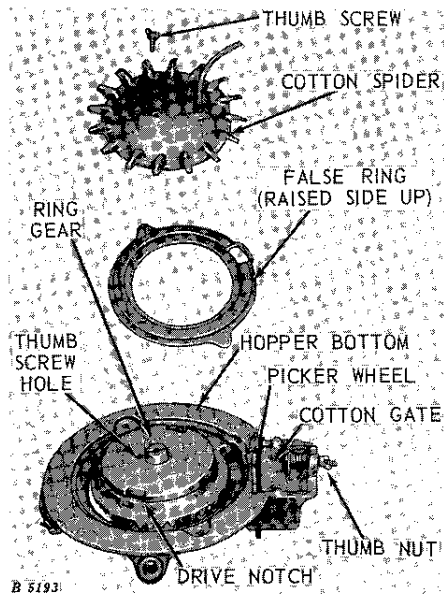
The 51 Unit Planter is leveled by adjusting the center link of the 3-point hitch of the tractor.

THE TOP EDGE OF RUNNER OF THE PLANTING UNITS MUST BE PARALLEL TO THE GROUND WHEN THE TOOLBAR IS LOWERED TO THE OPERATING POSITION.

Raising and Lowering Planter

The planting unit is raised or lowered with the rear-mounted toolbar by the tractor hydraulic system.

PLANTING LINT COTTON SEED



When planting lint cotton, remove the corn cutoff from the hopper by unscrewing the thumb screw which holds it in place.

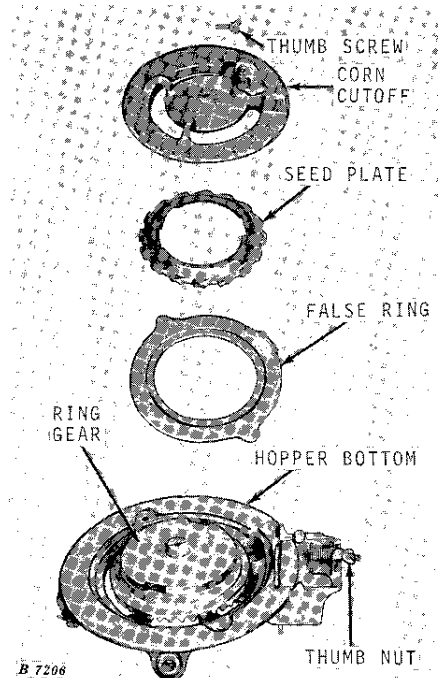
Place the false ring in hopper with RAISED SIDE up.

Install the cotton spider and hold it in place with the thumb screw. The hole in the cotton spider is off to one side of center and lines up with the thumb screw hole in the ring gear. The drive lugs on the cotton spider must engage the drive notches on the ring gear.

NOTE: Be sure cotton spider is seated on the ring gear when thumb screw is tightened. Rotate shaft in hopper bottom to be sure it turns freely.

The quantity of cotton planted is regulated by the cotton gate. To increase the quantity of seed planted, turn the thumb nut to the right which will open the cotton gate. To decrease the quantity of seed planted, turn the thumb nut to the left.

PLANTING ACID DELINTED COTTON SEED, CORN, AND ALL OTHER SEED EXCEPT LINT COTTON SEED



Remove the cotton spider. Install false ring with RAISED SIDE UP when planting such small seeds as: feterita, sorghum, etc. If corn, acid delinted cotton, or other large seeds are to be planted, install the false ring with FLAT SIDE UP.

NOTE: Some seed plates require special false rings. See seed plate charts on pages 8 and 9.

Install seed plate.

Install corn cutoff and fasten in place with the thumb screw. The cutoff must fit tightly against the false ring.

NOTE: Be sure corn cutoff is seated on the ring gear when thumb screw is tightened. Rotate shaft in hopper bottom to be sure it turns freely.

SELECTING SEED PLATES

Seed Plates

The selection of the seed plates is one of the most important steps in preparing the planter for the field.

There is a great variety of John Deere seed plates available in various cell sizes and number of cells.

Growing conditions change from year to year, and the size of the seed will also vary. Therefore, it is quite likely that different seed plates are required to plant the same variety of seed from year to year.

There are two ways to select seed plates. One way is to follow the recommendations of the seed supplier, if available. The other way is to take a sample of the seed to be planted to a John Deere dealer and let him run the seed through his John Deere seed plate selector stand.

In either case the accuracy of the seed plate selected should be checked when installed in your planter and operated at the planting speed you intend to travel. The best check is to plant a short distance, at the desired planting speed, and then stop and dig

up the seeds to determine the actual planting rate.

The planting speed is very important in determining which seed plate to use. The planting rate is determined by the cell fill of the seed plate. The faster the planter is operated the faster the seed plate revolves. Therefore at faster planting speeds it may be necessary to use seed plates with slightly longer cell length to obtain the proper cell fill for the planting rate that is desired.

A 24-cell seed plate revolves at a slower rpm than a 16-cell seed plate, the result being better cell fill at the same planting speed. It is therefore recommended that a 24-cell seed plate be used in all cases when available for hill-drop or drill planting.

NOTE: Due to the fact that a 24-cell seed plate revolves at a slower rpm than a 16-cell seed plate, a 24-cell seed plate will plant at a heavier rate than a 16-cell seed plate with the same cell size at a given drilling or hill-dropping distance and planting speed.

The following is a list of the most popular corn plates available with 12, 16, and 24 cells:

| PLATES FOR FLAT KERNELS OF CORN | | | |
|---------------------------------|---------|---------|--------------------------------------|
| 12-Cell | 16-Cell | 24-Cell | Kind of Corn |
| ..... | H697B | H2571B | Extra small corn |
| H966B | H694B | H1302B | Small corn |
| ..... | H1572B | H2711B | Small slender corn |
| H948B | H695B | H950B | Medium corn |
| ..... | H2156B | H2594B | Long thick corn |
| ..... | H696B | H2836B | Large corn |
| ..... | H2504B | H2848B | Medium flat slurry treated corn |
| ..... | H2503B | H2847B | Large flat slurry treated corn |
| ..... | B12498 | ..... | Extra large flat slurry treated corn |

| PLATES FOR ROUND KERNELS OF CORN | | | |
|----------------------------------|---------|---------|------------------------|
| 12-Cell | 16-Cell | 24-Cell | Kind of Corn |
| ..... | H2295B | ..... | Extra small round corn |
| ..... | H2043B | H2824B | Small round corn |
| H2560B | H1933B | B10853 | Medium round corn |
| ..... | H2044B | H2712B | Large round corn |
| ..... | H2820B | ..... | Extra large round corn |

The following is a list of the soybean plates and the edible bean plates:

| PLATES FOR SOYBEANS | |
|---------------------|------------------------------|
| 20-Cell | |
| H 1255 B | |
| H 2527 B | (Use with P2386B False Ring) |

| PLATES FOR EDIBLE BEANS | | |
|-------------------------|----------|----------|
| 16-Cell | 20-Cell | 24-Cell |
| H 1324 B | H 1300 B | H 1301 B |
| H 1071 B | H 954 B | H 983 B |
| H 956 B | H 1315 B | ..... |
| ..... | H 1258 B | ..... |
| ..... | H 1254 B | ..... |
| ..... | H 1255 B | ..... |
| ..... | H 1084 B | ..... |

It pays to be careful for your
own sake!
Accidents can . . .
Pain
Lame
Maim
and cost you money!

The following is a partial list of seed plates which require a special false ring or floor plate, or the regular floor plate turned over:

| Seed Plate No. | No. of Cells | Kind of Seed |
|----------------|--------------|--|
| jH 779B | 16 | Popcorn |
| jH 780B | 16 | Medium country gentleman sweet corn |
| jH 961B | 16 | Spanish corn and small popcorn |
| jH 963B | 16 | Large country gentleman sweet corn |
| jH 964B | 16 | Small sweet corn, small sunflower seed |
| jH1238B | 16 | Medium shoe peg corn |
| jH1239B | 16 | Medium sweet corn, large sunflower seed |
| jH1240B | 16 | Extra small country gentleman tapered sweet corn |
| kH1262B | 16 | Cantaloupes and cucumbers |
| sH1322B | 16 | Extra, extra small corn |
| sH1345B | 16 | Small round corn |
| sH1352B | 16 | Extra small narrow corn |
| nH1353B | 16 | Tomato seed (machined plate) |
| jH2505B | 16 | Popcorn |
| jH2671B | 16 | Popcorn |
| jH2709B | 16 | Popcorn |
| nB27768 | 16 | Maize, higeria and grain sorghum |
| jH 781B | 20 | Popcorn |
| pH2527B | 20 | Soybeans—heavy planting |
| H1302B | 24 | Small corn and safflower |
| sH2672B | 24 | Maize, higeria and grain sorghum |
| nH1256B | 25 | Onion seed (machined) |
| nB27769 | 32 | Maize, higeria and grain sorghum |
| H 695B | 16 | Acid delinted cotton seed |
| H1315B | 20 | Acid delinted cotton seed |
| jB27783 | 24 | Acid delinted cotton seed |
| H1300B | 20 | Acid delinted cotton seed |
| H1301B | 48 | Acid delinted cotton seed |
| jH3160B | 48 | Acid delinted cotton seed |

- j Turn P2386B False Ring raised side up
- k Use with P509B False Ring
- n Use with P671B False Ring
- p Use with P2386B False Ring
- s Use with P2498B False Ring

Thank you so much for reading.
Please click the “Buy Now!”
button below to download the
complete manual.



After you pay.

You can download the most
perfect and complete manual in
the world immediately.

Our support email:

ebooklibonline@outlook.com