

Four-Bottom Tractor Plows Nos. 55B and 55H Special



OPERATORS MANUAL Four-Bottom Tractor Plows Nos. 55B and 55H Special

OMA38651 (01JUN51) English

OMA38651 (01JUN51)

LITHO IN U.S.A.
ENGLISH



YOUR NEW PLOW

Behind your new plow is an organization that has specialized in designing and building plows for over one hundred and ten years. This plow was built in the world's largest plow factory by experienced men, many who have worked in this large plant for from ten to forty-five years, thus assuring the utmost in design, high-grade workmanship, and thorough inspection, so essential to the production of good plows.

High-quality materials, precision production methods, and accurately-controlled heat-treating assures maximum strength and long life for every part.

This manual has been carefully prepared and profusely illustrated so that you may make the necessary adjustments for adapting your plow to work properly in all types of soil and field conditions. These adjustments such as proper hitching and adjusting for width and depth of cut, are fully covered in this manual. **Study the manual carefully and make it your guide.**

Occasionally, your plow may need new parts to replace worn parts or emergency service may be required that is not covered in this manual. If so, we suggest that you take advantage of the facilities offered by your John Deere dealer, which assures you of genuine John Deere Parts and prompt "know-how" service in the field or shop.

If you will furnish your dealer the part number, description, and the information which should be recorded at the bottom of this page, when the plow is delivered, he can give you prompt and efficient service.

John Deere Nos. 55B or 55H Special 4-Bottom Tractor Plows

No. of Plow

Date Purchased 19.....

(To be filled in by Purchaser)

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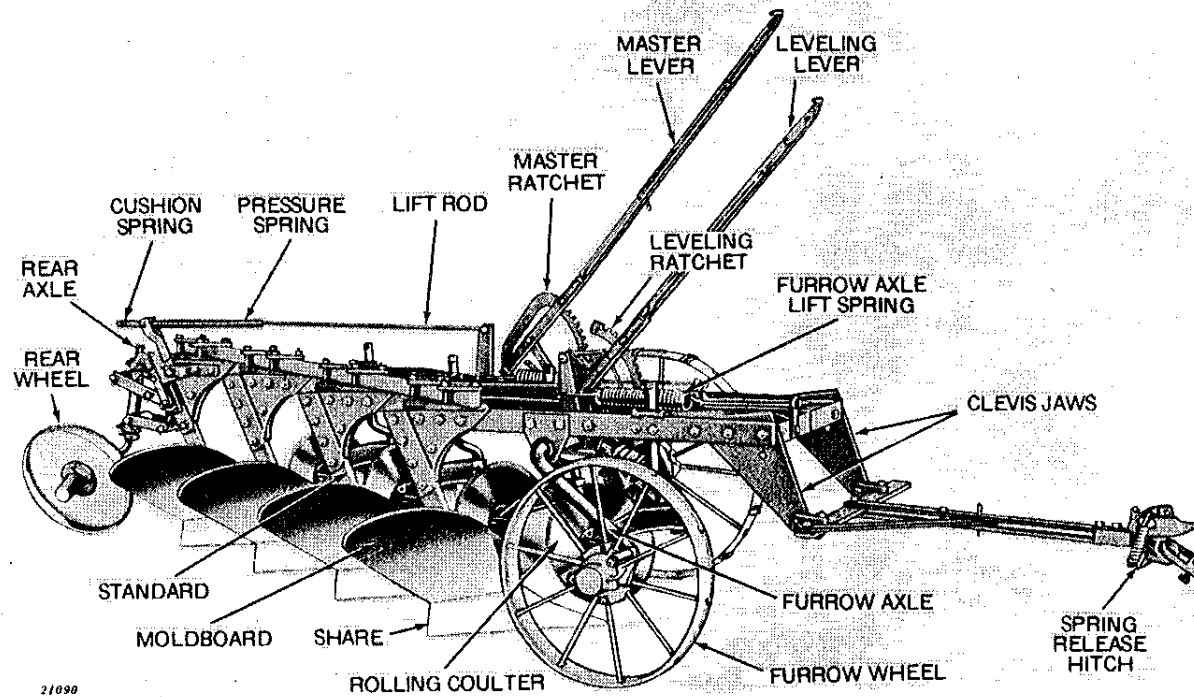


Figure 1—John Deere No. 55B Special Four-Bottom Tractor Plow

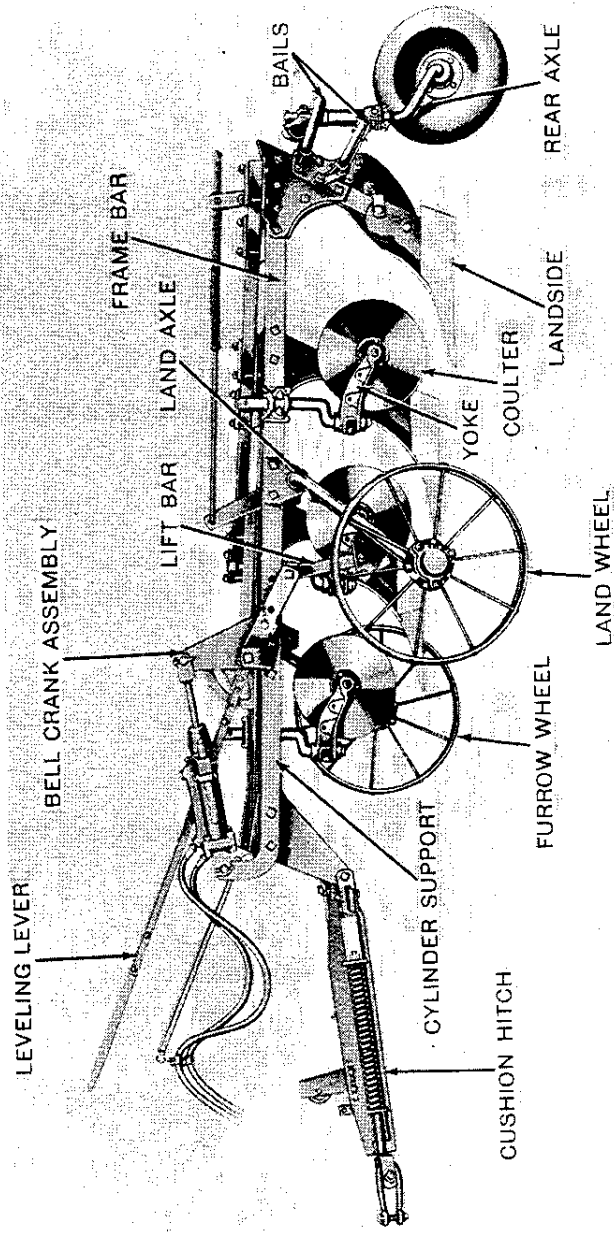


Figure 2—John Deere No. 55H Power-Trol Tractor Plow

SPECIFICATIONS AND DATA

Types—No. 55B Special Four-Bottom Plow, 12-inch Frame

No. 55H Special Four-Bottom Powr-Trol Plow, 12-inch Frame

Depth Range—3 to 10 inches, depending on type of bottom

Bottoms—As ordered. Various types of 12-inch bottoms available

Wheels—Furrow:

No. 55B Special—26 x 4 Steel, Regular

26 x 6 Steel, Special

Wheel with or without 5.50 x 16 Tire and Tube,
Special

No. 55H Special—26 x 4 Steel, Regular

26 x 6 Steel, Special

Wheel with or without 5.50 x 16 Tire and Tube,
Special

Land:

No. 55B Special—32 x 4 Steel, Regular

32 x 6 Steel, Special

Wheel with or without 5.00 x 21 Tire and Tube,
Special

No. 55H Special—26 x 4 Steel, Regular

26 x 6 Steel, Special

Wheel with or without 5.50 x 16 Tire and Tube,
Special

Rear:

Nos. 55B and 55H Special—19-inch x 3-1/2-inch Steel Convex Disk,

Regular

Wheel with or without 4.00 x 12 Tire and Tube,
Special

SPECIFICATIONS AND DATA—Continued

Hitch—No. 55B Special—Safety Release, Regular
Safety Release for Track-Type Tractor, Special
Cushion Spring Release, Special
Plain Hitch, Special

No. 55H Special—Cushion Hitch, Regular
Plain Hitch, Special

Lift—Enclosed-Type Clutch for No. 55B Special
Hydraulic Remote Cylinder for No. 55H Special

Levers—Adjustable for length. Extension available, when ordered

Coulters—Nos. 55B and 55H Special—15-inch Plain, Regular; 17-inch
Plain, Special; 17-inch Notched, Special; 18-inch Plain,
Special

Jointers—Steel or Cast Independent—Available when ordered

*NOTE: When terms "right" or "left" are used, it means from a position
behind the plow and looking toward the front.*

*(It is John Deere policy to improve our machines at every opportunity.
Consequently, it may be necessary to change design without notice.)*

OPERATING AND ADJUSTING INSTRUCTIONS

Good Plowing.

Your new plow is fully adjustable and, when properly adjusted to operate in the type of soil and field conditions on your farm, it will do a good job of plowing at a minimum of expense. A well-adjusted plow pulls lighter; its furrow slices are uniform in width and depth; it covers trash; it leaves the soil in proper condition to be worked down into the best type seedbed.

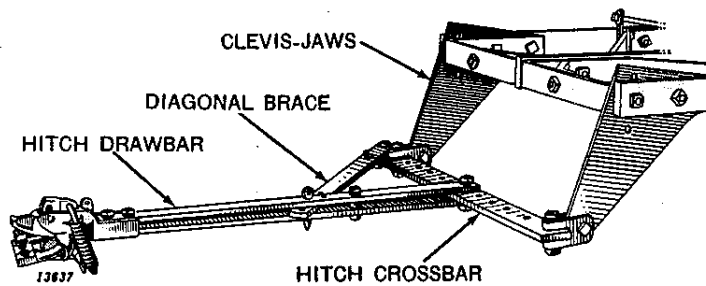


Figure 3—Spring Release Hitch (SD1556A) for No. 55B Plow

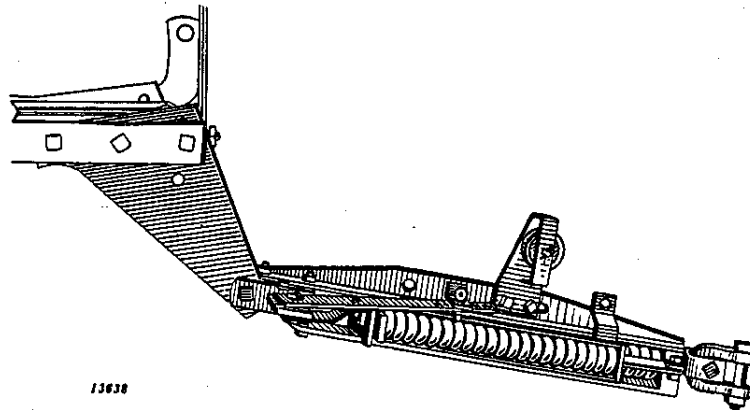


Figure 4—Cushion Hitch (SD1553A) for No. 55H Plow

Cushion Hitch for No. 55H Plow Only.

The Cushion Hitch (SD1553A) acts as a cushion between the tractor and the plow. The springs carry the load at all times, and when an obstruction is encountered the springs compress enough to engage the tractor clutch release and stop the tractor. Adjustment is provided for load variations.

The Tractor.

Before making any adjustments on the plow, the tractor wheels and hitch must be set properly. On general-purpose tractors which operate with one wheel in the furrow, set the rear wheels for the Nos. 55B and 55H Special Four-Bottom Plows 54 inches from inside to inside of tires.

The swinging drawbar on wheel tractors must be in short-high setting and pinned in the center of the tractor hitch. On crawler-type tractors that work with both tracks on the land, the swinging drawbar should ordinarily be free to swing and not pinned to the hitch.

The Hitch.

The adjustments that are built into the hitch are of the greatest importance. There are two types of hitch adjustments, namely: 1. Horizontal Adjustments—the several holes in the hitch crossbar and in the diagonal hitch brace; 2. Vertical Adjustments—the extra holes in the top of the clevis jaws for raising or lowering the hitch crossbar. When plow is properly hitched, the hitch drawbar will be approximately parallel to the furrow wall and as near to center of draft line as possible. The clevis jaws should be adjusted so that the hitch drawbar will form a part of an imaginary line drawn between tractor drawbar and center of draft point of the plow as in Figures 5 and 6.

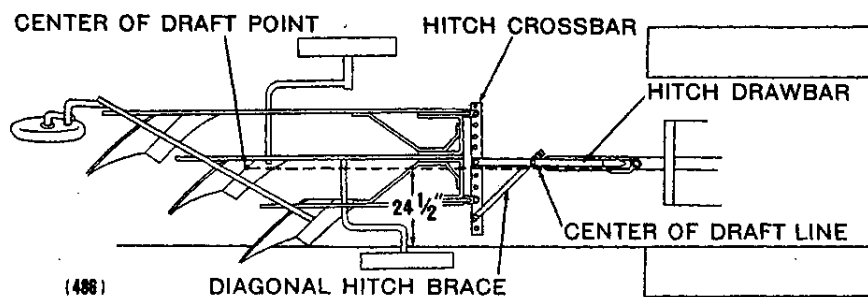


Figure 5—Horizontal Hitch Adjustments

Center of Draft.

To hitch the plow as above, it is necessary to locate the center of draft line, shown in Figures 5 and 6.

Rule. The center of draft line of a moldboard plow is located 1/4 of the cutting width of one bottom (12-inch, 14-inch, or 16-inch) to the left of center of total cut of the plow.

The center of draft point is located where the center of draft line contacts the plow bottom at the junction of the share and the mold-

board, Figures 5 and 6. (This rule applies to average depth of plowing. For deeper plowing, the center of draft point will be somewhat higher on the moldboard; for shallower plowing, somewhat lower on the share.)

Example for finding center of draft, using a 3-bottom 14-inch plow:

Total cut of plow = 42 inches.

1/2 of 42 inches = 21 inches, or center of cut.

1/4 of the cutting width of one bottom = 1/4 of 14 inches = 3-1/2 inches.

3-1/2 inches added to the center of cut = 21 inches + 3-1/2 inches = 24-1/2 inches.

Therefore, the center of draft of a 3-bottom 14-inch plow is 24-1/2 inches—measured at right angles from the furrow wall. The center of draft point is on the center of draft line at the junction of the moldboard and share. Figures 5 and 6.

All the above information is applicable to any moldboard plow—1-, 2-, 3-, 4-, or 5-bottom.

Horizontal Hitch Adjustments.

Horizontal hitch adjustments are provided so that the plow will pull straight behind the tractor with the wheels of the plow running parallel to line of travel and so that the front bottom will cut a furrow slice of correct width. On a 14-inch Plow the front bottom must cut a furrow slice 14 inches wide—not 13 inches or 15 inches. To measure the width of the furrow slice, start from the rolling coulter blade and measure to the furrow wall.

After the hitch drawbar has been properly located on the hitch crossbar, and, if it is found that the front bottom is under-cutting or over-cutting, the finer adjustment that is provided in the forward end of the diagonal hitch brace can be used to adjust the plow as much as 2 inches to the right or to the left.

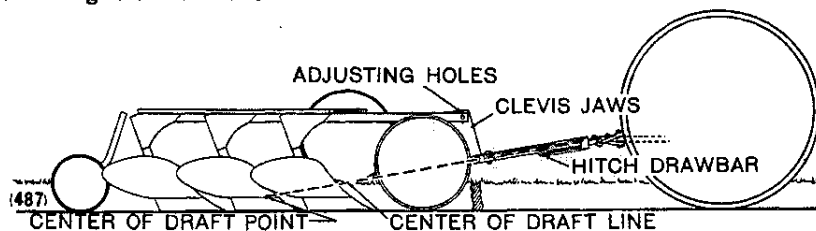


Figure 6—Vertical Hitch Adjustment

Vertical Hitch Adjustments.

Vertical hitch adjustments are provided so that the weight of the plow will be properly distributed on all three wheels. Vertical adjustments are made by raising or lowering the clevis jaws. If the hitch crossbar is too high, too much weight will be imposed on the front furrow and land wheels and the plow will have a tendency to raise up in the rear.

The bottoms will bounce along on the points of the shares, resulting in poor penetration, poor covering, heavy draft, excessive wear on shares, and a poor job of plowing. If the hitch crossbar is too low, there will be insufficient weight on the front furrow and land wheels and too much weight on the rear wheel. With the hitch too low the plow will be slow in penetrating the ground. The land wheel may slide when an attempt is made to lift the plow, due to insufficient weight on the wheel. The rear wheel assembly will wear excessively and the landsides will wear out on the heel.

The clevis jaws on all John Deere Plows are provided with extra holes for raising or lowering the hitch crossbar. By adjusting the clevis jaws to the proper height, a straight line of draft can be maintained between the tractor drawbar and the center of draft point in the plow as shown in Figure 6.

Safety Release Hitch.

The hitch releases automatically when the plow strikes an obstruction. Adjustable spring tension provides for load variations. The sturdy lap ring is held in place by the friction-free, roller release mechanism.

The lap ring with the spring-release hitch is grooved to fit different size drawbars. When this lap ring is used with John Deere Tractors, the smallest side with the groove is placed over the drawbar.

Landing Lever Attachment.

The landing lever, when used, is attached to the tractor drawbar as in Figure 35. The lever provides a quick adjustment to hold the plow in the proper position when plowing steep hillsides.

Master and Leveling Levers.

The master lever and leveling lever are provided for controlling the depth and leveling the bottoms when in working position. The levers can be adjusted for length. **Note:** If the levers are too long, when crossing deep furrows or ditches, they may interfere with the operator or damage the seat of the tractor.

Rolling Coulters.

The coulters blade must be sharp and should ordinarily be set with the center of the coulters over point of plow share. In hard ground the center of the coulters should be set well back of the point of the share and not too deep. If center of coulters is set over point of share and too deep, it

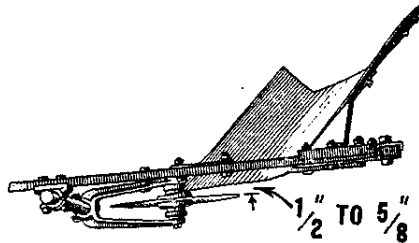


Figure 7—Overhead

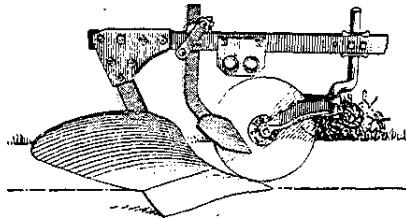


Figure 8—Set Too Deep

will act as a wheel, take the weight off the wheels and ride the plow out of the ground. For land having considerable trash or in bad scouring conditions the coulter should be set ahead of the share point. In both cases the coulter should be set about 1/2-inch to 5/8-inch to the left of and parallel to the landside. See Figures 7, 8, and 9.

Excessive End Play: To remove end play in coulter hubs loosen nut "A," turn bolt head "B," to right until end play is removed. Adjust so that coulter blade will turn freely and tighten nut, Figure 10.

Jointers.

Jointers assist the plow bottom in turning under and covering trash, leaving the plowed land clean. They are of special benefit in turning the furrow slice properly when plowing at high speed.

To Adjust Jointer: To move jointer forward turn set screw down in the jointer clamp, "A," Figure 9. Reverse operation to move it to the rear. To move the jointer toward the coulter, loosen the bottom bolt and tighten the top bolt on the clamp "B." To move the jointer away from coulter reverse the operation.

Rear Axle and Wheel.

The heel of the landside on the rear bottom should run lightly on the bottom of the furrow and not carry the weight of the rear end of plow. When the rear wheel is set correctly, the impression in the bottom of the furrow left by the heel of the landside will be difficult to see. The weight should be carried by the wheel.

The rear wheel should be set so the heel of the landside will run

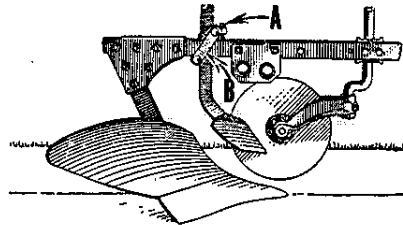


Figure 9—Correct Setting of Coulter and Jointer

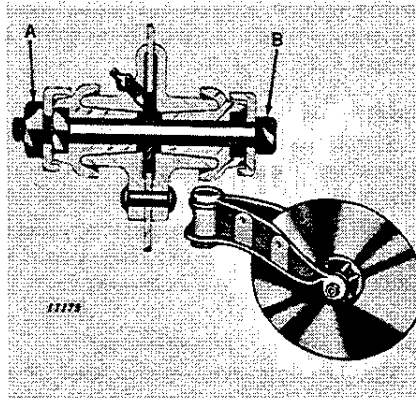


Figure 10—Cross-Sectional View of Coulter Bearing

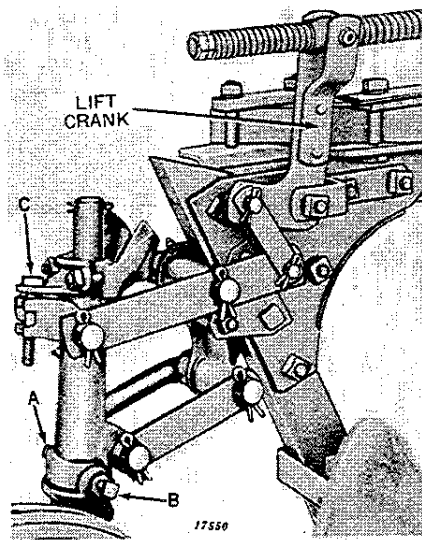


Figure 11—Rear Axle

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