

F670A, F670AH, F680A, AND F680AH DRAWN MOLDBOARD PLOW



JOHN DEERE

OPERATORS MANUAL F670A, F670AH, F680A, AND F680AH DRAWN MOLDBOARD PLOW

OMA15894 F7 English

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ENGLISH



YOUR NEW PLOW

Behind your new plow is an organization that has specialized in designing and building plows for over 125 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 10 to 45 years. Their experience assures the utmost in good 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 assure maximum strength and long life for every part.

This manual has been carefully prepared and illustrated, so that you may make the necessary adjustments for adapting your plow to work properly in practically 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 this manual carefully. Keep it handy, in a safe place, for future reference.



Occasionally your plow may need new parts, or require service not covered in this manual. If so, we suggest that you take advantage of the facilities offered by your John Deere dealer, which assure you of genuine JOHN DEERE Parts and prompt "know-how" service in the field or shop.

If you will furnish your dealer with 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 F670A F670AH
 F680A F680AH

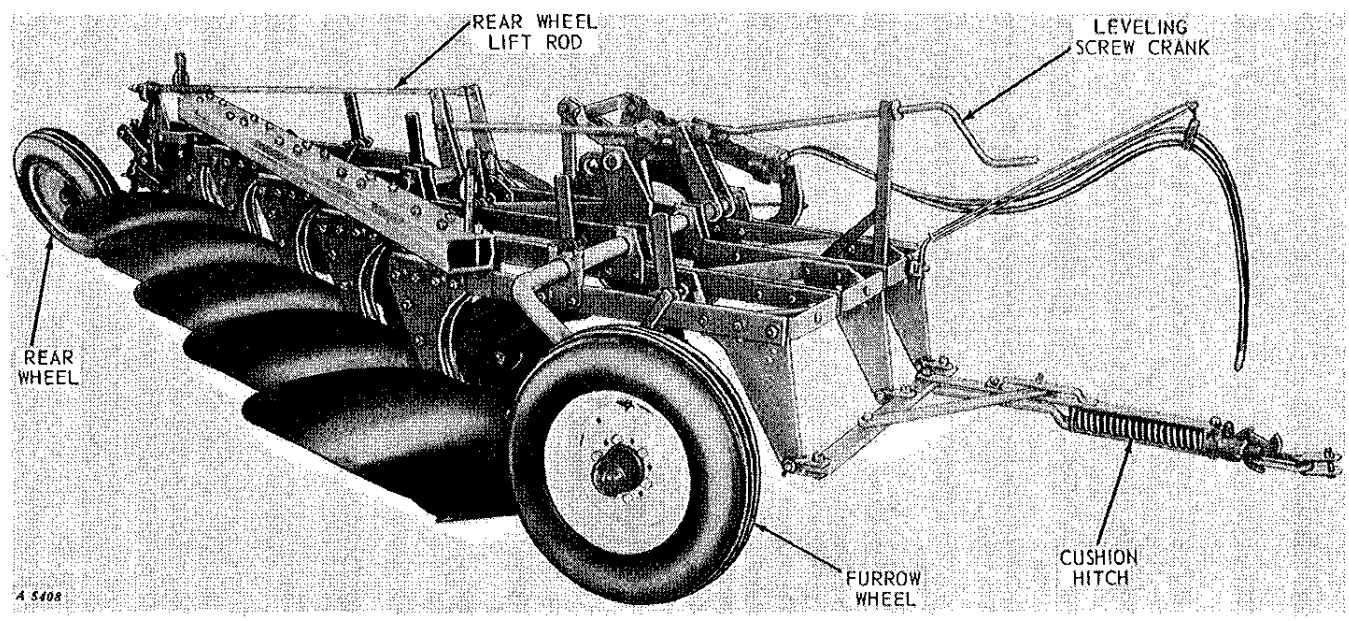
4-, 5-, and 6-Bottom Moldboard Plows

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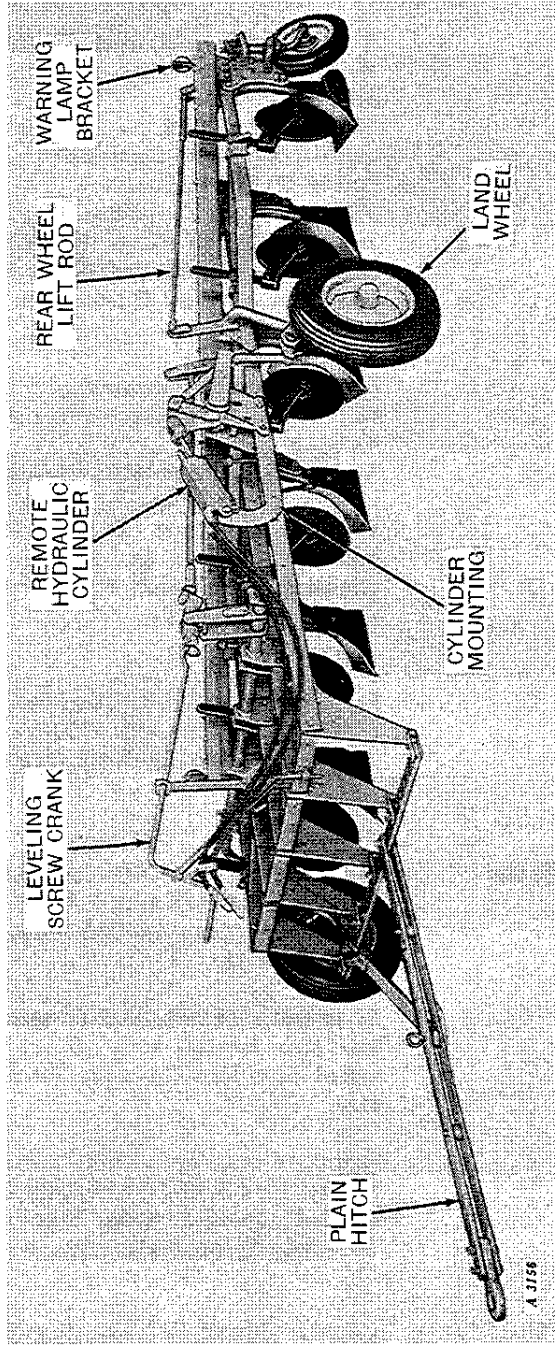
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John Deere F670AH 5-Bottom Moldboard Plow



John Deere F680AH 6-Bottom Moldboard Plow

SPECIFICATIONS

YPES	F670A Clutch-Lift, 4- and 5-Bottom 14-Inch and 4-, 5-, and 6-Bottom 16-Inch Plows with Stiff Standards. F680A Clutch-Lift, 4- and 5-Bottom 14-Inch and 4-, 5-, and 6-Bottom 16-Inch Plows with Safety-Trip Standards. F670AH Hydraulic-Lift 4-, 5-, and 6-Bottom 14- and 16-Inch Plows with Stiff Standards. F680AH Hydraulic-Lift 4-, 5-, and 6-Bottom 14- and 16-Inch Plows with Safety-Trip Standards.
EPH RANGE	Up to 14 inches, depending on type and size of bottoms and ground conditions.
OTTOMS	Various types available as ordered.
ANDSIDES	Bottoms with short landsides (No. 4 for conventional bottoms and No. 9 for high-speed bottoms, except rear bottom which requires a No. 10 landside).
HEELS:	
FURROW	Equipped with anti-friction bearing. Regular less tire. Special with 7.60-15 tire. Special wheel less tire, 14-inch. Steel wheel, special.
LAND:	
F670A and F680A	Equipped with anti-friction bearing. Regular less tire. Special with 7.60-15 tire. Special wheel less tire, 14-inch. Steel wheel with lugs, special.
F670AH and F680AH	Equipped with anti-friction bearing. Regular less tire. Special with 7.60-15 tire. Special wheel less tire, 14-inch. Steel wheel, special.
REAR	Equipped with anti-friction bearing. Wheel for but less 5.90-15 tire, regular; with tire, special. 14-inch wheel less tire, special. Cast wheel, special.
ITCH:	
F670A and F670AH	Cushion Spring Release, Regular.
F680A and F680AH	Plain, Regular.

LIFT	Reduction Gear Lift Clutch for the F670A and F680A. Remote Hydraulic Cylinder for the F670AH and F680AH.
LEVELING	Easy to adjust screw crank.
COULTERS	17-inch plain, regular. 17-inch rippled-edge, optional. 17-inch cushion coulters, plain or rippled edge, chilled-cone bearing, for round shank; optional. 18-inch plain, optional. 20-inch plain or rippled-edge, optional. Flat shank regular. Round shank optional. Chilled-cone bearing, regular. Anti-friction bearing, optional.
JOINTERS	Independent cast or steel available as Special Equipment.
LANDING LEVER	Special Equipment.
WEED HOOKS	Special Equipment.
ROOT CUTTERS	Special Equipment.
MOLDBOARD EXTENSIONS	Special equipment. Two types - For conventional bottoms or HS400 Series High-Speed Bottoms.
MOLDBOARD PADS	Special Equipment for HS400 Series High-Speed Bottoms Only.
TRASH BOARDS	Special Equipment for high-speed bottoms, high-speed slat bottoms, and SDT546FC Semi-Deep Tillage Bottoms.
SHARE-FROG BRACE	Special equipment. To attach 16-inch high-speed shares to 14-inch high-speed bottoms.
GAUGE WHEEL	Available as Special Equipment either less tire or with 5.90-15 tire. 14-inch wheel less tire available as special equipment.

(Specifications and design subject to change without notice.)

NOTE: When the term "right" or "left" is used, it means from a position behind the plow and facing the front.

OPERATION

IMPORTANCE OF PROPER ADJUSTMENT

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 better; its furrow slices are uniform in width and depth; it covers trash; leaves the soil in proper condition to be worked down into the best type of seedbed.

Improper adjustment results in rapid wear and possible breakage of parts, and inefficient operation.

PREPARING THE PLOW

LOW BOTTOMS

The polished surfaces of the plow bottoms have been painted with protective black paint.

In most cases it is not necessary to remove the black paint because it will wear off quickly upon contact with the soil. In those soils where the black paint will not wear off, move with gasoline, kerosene, or diesel fuel.

Be careful when using any of these fuels so they do not ignite. Plow should be in a well-ventilated area and away from any sparks or flames.

If the plow is not to be used immediately, protect the polished surfaces by applying a coat of cup or gun grease. If plow is to be put in storage for a considerable length of time, see pages 31 through 34.

BOLTS AND SET SCREWS

Before starting to work with a new plow or one which has been stored, check to see that all bolts and set screws are tight and all cotter pins spread to keep them from falling out. Check the bolts that hold the plow bottoms to see that they are drawn up very tight.

TIRE INFLATION

Check plow tires to be sure they are inflated properly as shown below:

<i>Recommended Implement Tires</i>	<i>Inflation Pressures</i>
5.90-15 — 4-Ply	28 psi
7.60-15 — 4-Ply	24 psi

LUBRICATION

Be sure plow has been properly lubricated. See Lubrication Chart on pages 35 and 36.

PREPARING AND ADJUSTING THE TRACTOR

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

TIRE INFLATION

Inflate the tractor tires as recommended in the tractor operator's manual. For plowing, best results are generally obtained by taking one weight from the furrow wheel and adding it to the land wheel. Tilting of the tractor places more weight than normal on the furrow wheel. Addition of weight to the land wheel provides more uniform weight distribution over the rear wheels.

ROCKSHAFT SELECTOR LEVER

On John Deere Tractors equipped with a 3-Point Hitch and Load-and-Depth Control, set the selector lever in the "D" position. Keep the selector lever in this position while operating.

TRACTOR DRAWBAR

On wheel-type tractors set the tractor drawbar in the **short high position** and, except where off-hitching is required, bolt it exactly in the center of the tractor, midway between rear wheels.

On crawler tractors that work with both tracks on the land the tractor drawbar should ordinarily be free to swing.

REAR WHEEL SETTING

Tractor rear wheel settings are determined by the location of the center line of draft in the plow. Therefore, it is necessary to first read "Hitching Plow to Tractor" on the following pages. Then adjust the wheels as explained on page 9.

FRONT WHEEL SETTINGS

On wide-front-end tractors set front wheels to conform to rear wheel setting, center-to-center of tread.

REAR WHEEL WEIGHTING

Rear wheel weights may be necessary to eliminate excessive wheel slippage or for stability in rough or hillside fields. However, weights should not be added to the point where all slippage is eliminated. To do so would hinder maximum performance of the tractor.

The ideal amount of added weight can be determined by observing the tracks of the rear wheels. When the tractor is pulling its rated load, the soil between the tire lugs should be broken or shifted. If too much weight has been added, the tread marks will be clear and distinct. If too little weight has been added, the tread marks will be entirely obliterated.

Liquid Weights

Water and calcium chloride solution is an economical means of adding weight to rear wheels. Calcium chloride is recommended rather than water as it will not freeze. See your tractor operator's manual or your John Deere dealer.

Cast-Iron Weights

Where weight in addition to or in place of liquid weight is required, cast-iron weights can be bolted to the rear wheels. This type of weight can be secured from your John Deere dealer.

For maximum ballast, refer to your tractor operator's manual.

HITCHING PLOW TO TRACTOR

The ideal hitch is a straight line from the center point of pull on the tractor to the center point of resistance on the plow, both horizontally and vertically.

The center point of pull on the tractor is located approximately 3 inches ahead of the rear axle housing and midway between the rear wheels.

To find the center point of resistance on the plow, first find the center line of draft as explained below.

CENTER LINE OF DRAFT

The center line of draft is simply an imaginary line drawn from the point of pull on the tractor to the point of resistance on the plow.

The center line of draft of the plow can be located by using the following rule:

Rule: The center line of draft of a moldboard plow is located at a point one-fourth of the cutting width of one bottom measured to the left of the center of total cut of the plow. (This rule applies to all plows whether 4-, 5-, or 6-bottom.)

Example: Finding center line of draft of a 5-bottom 14-inch plow.

Total cut of plow = 70 inches.

Center of cut or one-half of 70 inches = 35 inches.

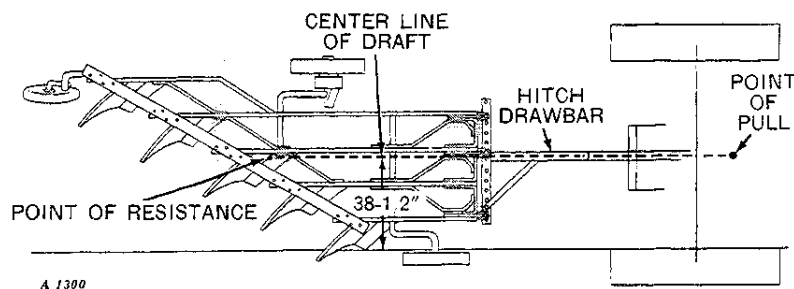
One-fourth the cutting width of one-bottom = $3\frac{1}{2}$ inches.

$3\frac{1}{2}$ inches added to center of cut, which is 35 inches = $38\frac{1}{2}$ inches.

Therefore, the center line of draft of a 5 bottom 14-inch plow is $38\frac{1}{2}$ inches measured to the left and at right angles from the furrow wall. See illustration below.

CENTER POINT OF RESISTANCE

The center point of resistance on a plow is located on the bottom intersected by the line of draft, at a point approximately one-half of the plowing depth from the bottom of the furrow. When plowing 6 inches deep, the point of resistance will be 3 inches up from the furrow bottom, or approximately at the junction of the share and moldboard. If plowing deeper than 6 inches, this point will be located farther up on the moldboard. If plowing shallower than 6 inches, the point of resistance will be farther down on the share.



A 1300

Horizontal Hitch Adjustments on 5-Bottom, 14-Inch Plow

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