

F325 SERIES POWER-RESET INTEGRAL MOLDBOARD PLOWS



OPERATORS MANUAL F325 SERIES POWER-RESET INTEGRAL MOLDBOARD PLOWS

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ENGLISH





TO THE PURCHASER

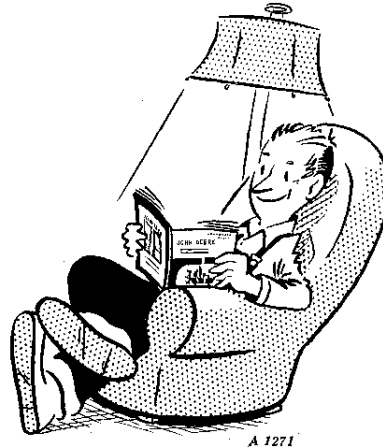
Behind your new plow is an organization that has specialized in designing and building plows for over 125 years. This plow was built in the world's largest plow factory by experienced men, many who have worked in this large plant for from 10 to 45 years, thus assuring the utmost in good design, high-grade 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 JOHNDEERE parts and prompt "know-how" service in the field or shop.



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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.

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

Information concerning warranty on this plow appears on your copy of the Delivery Receipt which you should have received from your dealer when the plow was delivered to you.

**JOHN DEERE F325 SERIES
POWER-RESET INTEGRAL
MOLDBOARD PLOWS**

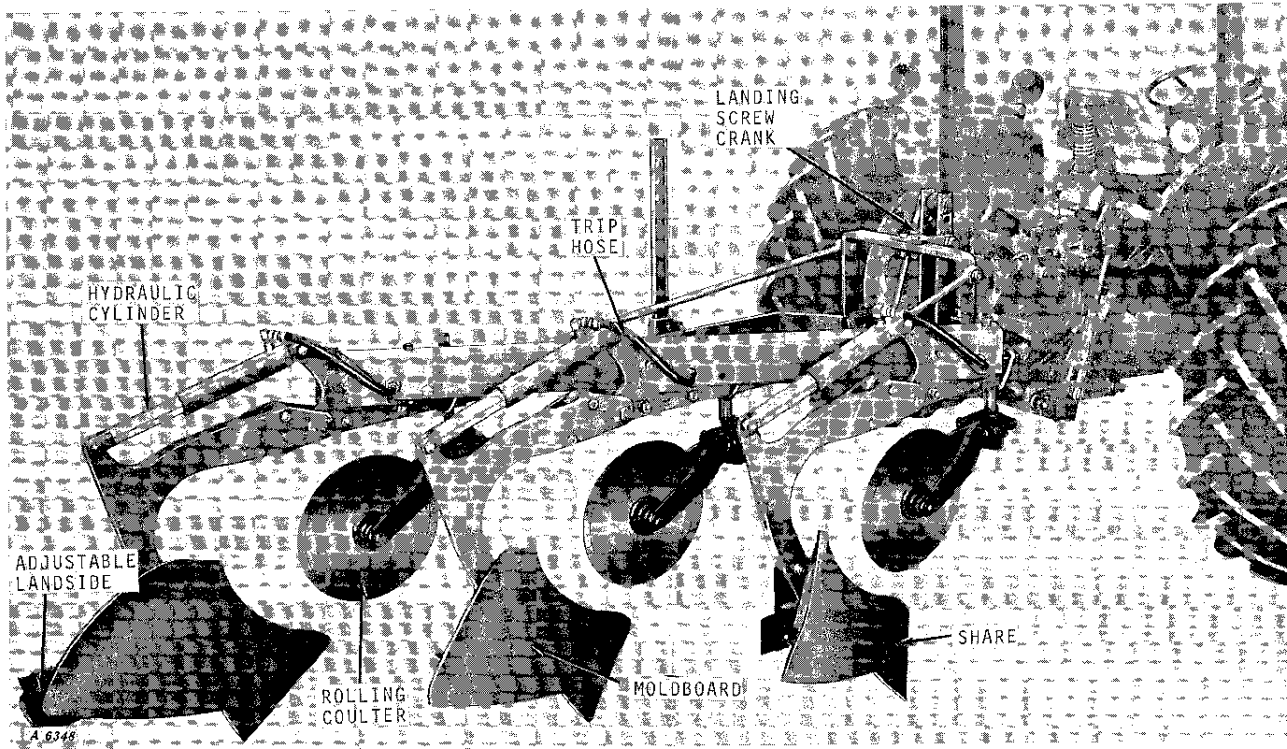
No. of Bottoms Serial No.
Date Purchased 19.....

(To be filled in by Purchaser)

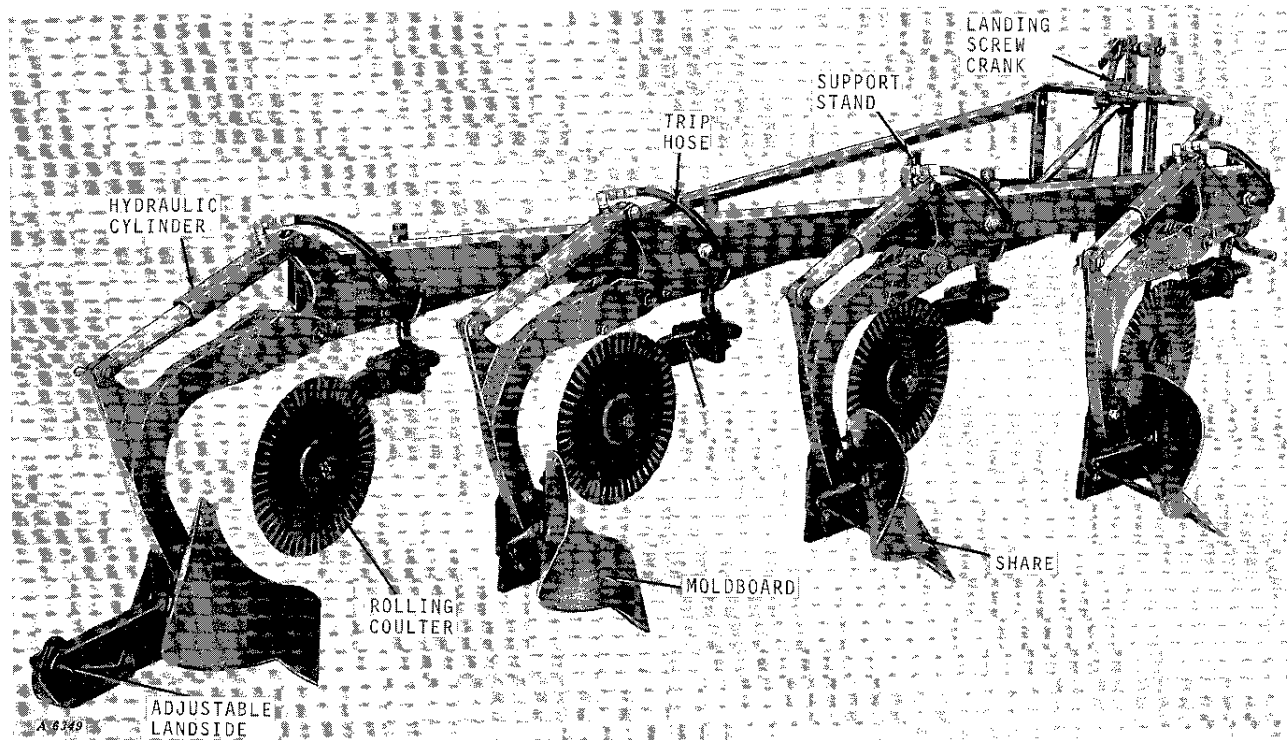


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John Deere F325 3-Bottom Power-Reset Integral Moldboard Plow



*John Deere F325 4-Bottom Power-Reset Integral Moldboard Plow
Cushion Rippled-Edge Anti-Friction Bearing Rolling Coulters (Optional Equipment)*



SPECIFICATIONS

TYPES	The F325 Series Power-Reset Integral Moldboard Plows are furnished in the following sizes: <u>3-Bottom</u> -- 16-inch frame for John Deere 1520, 2010, 2020, 2510, 2520, 3010, and 3020 Tractors. <u>4-Bottom</u> -- 16-inch frame for John Deere 3020, 4010, and 4020 Tractors.
	<i>NOTES: When using a 1520 or a 2020 Tractor, the tractor must be equipped with a category 2, 3-point hitch. 2020 Tractors equipped with 12.4 - 36, 4-ply or 13.6 - 28, 4-ply rear tires are not recommended for use with these plows.</i>
DEPTH RANGE.	Up to 12 inches, depending on soil conditions and type of bottoms.
CLEARANCE	Fore-and-aft, 28 inches; under frame bar, 29-1/2 inches; under truss tube, 27-1/2 inches.
LEVELING.	Lateral (side to side) leveling controlled by right-hand leveling crank on the tractor 3-point hitch. Fore-and-aft leveling controlled by center link on tractor hitch.
LANDING.	Screw type.
STANDARDS.	Power-reset, single-pivot action.
BOTTOMS	NU bottoms, high-speed slat bottoms, SDT 446 slat bottoms, and SDT 546 FC semi-deep tillage bottoms.
LANDSIDES	No. 13 for all bottoms except rear bottom, which requires a No. 12 adjustable rear landside.
GAUGE WHEEL	Special equipment. Wheel for 4.00 x 12-inch tire and tube with or without tire and tube.
COULTERS	Cushioned by two rows of cupped washers. 17-inch plain with chilled-cone bearing, regular. 17-inch rippled edge with chilled-cone bearing, optional. 17-inch or 20-inch plain or rippled edge with anti-friction bearing, optional.
HYDRAULIC SYSTEM	John Deere System for John Deere Tractors with closed-center constant pressure system, regular. Accumulator System for other tractors that do not have adequate hydraulic capacity and closed-center hydraulic systems, optional.
TRASH BOARDS	Available as special equipment.
MOLDBOARD EXTENSIONS	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 direction of travel.

DESCRIPTION

GENERAL

The John Deere F325 Series Power-Reset Plows are designed for non-stop plowing in rocky or stumpy fields.

The F325 Series Plows are fully integral and are available in 3- and 4-bottom sizes.

HYDRAULIC SYSTEMS

On these plows, controlled hydraulic pressure holds the standards in plowing position, allows them to rise to clear an obstruction, and returns the standards to plowing position.

Two systems are available for providing the hydraulic pressure required to control the plow standards: John Deere Hydraulic System and Accumulator System.

JOHN DEERE HYDRAULIC SYSTEM

The John Deere Hydraulic System uses the 1520, 2020, 2510, 2520, 3010, 3020, 4010, or 4020 Tractor closed-center hydraulic system rated at 2250 psi. With this tractor-controlled system, a special lever stop attached to the tractor lever quadrant holds the remote cylinder operating lever in operating position during plowing. This allows the tractor hydraulic system to maintain full pressure to the plow manifold, which holds the standards in working position.

A cartridge-type, non-adjustable relief valve is part of the plow hydraulic system. This valve starts opening when oil pressure reaches a predetermined level.

When a plow bottom strikes an obstruction, and the pressure in a standard cylinder and the manifold is increased above the relief valve setting, the relief valve opens, allowing the oil to flow directly into the tractor reservoir. This allows the piston in the plow cylinder to retract, and the plow bottom to rise up and over the obstruction.

As soon as the bottom has cleared the obstruction, and the pressure in the cylinder drops below the standby pressure of the tractor hydraulic system, the pump goes back into stroke. This pumps oil back into the cylinders and raises the manifold pressure back to normal, thus placing and holding the standard in plowing position.

A pressure reducing valve in the John Deere Hydraulic System reduces the manifold working pressure from 2250 psi of the tractor hydraulic system to 1750 psi. A 2000 pound relief valve maintains this pressure until an obstruction is encountered.

For light soil conditions a pressure reducing valve may be used which reduces the manifold working pressure to 1350 pounds. This relief valve opens at 1625 psi.

ACCUMULATOR SYSTEM

The accumulator system is available as special equipment and is for use with tractors which do not have 2250 psi oil pressure available in a closed-center hydraulic system. The accumulator also can be used with John Deere Tractors with closed-center hydraulic systems if desired.

This system uses a bladder-type, 1-gallon-capacity accumulator, which is charged with nitrogen gas, to maintain pressure, instead of using only the hydraulic pressure from the tractor hydraulic system. Since oil cannot be compressed, the compressible bladder of nitrogen in the accumulator maintains the desired pressure on the plow hydraulic manifold.

When using the accumulator system, a plow bottom striking an obstruction causes pressures in excess of the nitrogen pressure, which forces oil into the accumulator. The nitrogen is compressed as the bottom rides up and over the obstruction.

The accumulator has a one-way, spring-loaded orifice that allows a free flow of oil into the accumulator and a restricted flow back out. As the bottom clears the obstruction, the pressure drops, and the orifice meters the flow of oil out of the accumulator, into the manifold and cylinder, to return the plow bottom to working position at a controlled speed.

POWER-RESET STANDARDS

Each standard has a single pivot point located directly above the point of the share. This pivot allows the plow bottom to ride over obstructions with the share point moving up to 11 inches above the furrow bottom if necessary.

The hydraulic system cushions shocks and returns the bottom to plowing position when the obstruction is cleared.



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 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.

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

PREPARING THE PLOW

PLOW 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, remove with gasoline, kerosene, or diesel fuel.

CAUTION: Be careful when using any of these fuels so they do not ignite. The 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 21 and 22.

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 tight.

A good practice is to check for loose bolts, screws, or parts when lubricating the plow. Loose bolts are easily lost or cause excessive wear on parts, resulting in possible serious damage to the plow.

TIRE INFLATION

If plow is equipped with rubber-tired gauge wheel, inflate to 36 psi air pressure.

LUBRICATION

Be sure plow has been properly lubricated. See Lubrication Charts on pages 23 and 24.

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.

TRACTOR DRAWBAR

Set the tractor drawbar in the short high position, and pin it to the extreme left side of the support.

REAR WHEEL SETTING

The plow has an adjustable hitch and mast, permitting the plow to be used with tractor rear wheel settings of 29 to 34 inches, measuring from the center line of the tractor to the inside of rear tires.

For most plowing conditions, when using a 3-bottom plow, the tractor rear wheel setting should be 29 inches; when using a 4-bottom plow, it should be 32 inches.

FRONT WHEEL SETTING

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

BELT PULLEY

If tractor is equipped with a belt pulley, remove pulley.

6 Operation

FRONT END WEIGHTING

For those plow and tractor combinations which require additional front end weighting for transport stability, add front end weights to tractors as shown in the following chart. Cast-iron front end weights may be secured from your John Deere dealer.

"N.R." in the following chart means that size plow is not recommended for that tractor.

Total Front Weight Required for Transport Stability

Tractor	3- Bottom	4- Bottom	Tractor	3- Bottom	4- Bottom
1520 Series	400 lbs.	N.R.	3010 Standard:		
			Adjustable Front Axle		
2010 Row-Crop:			Long Wheel Base	100 lbs.	N.R.
Single Front Wheel	200 lbs.	N.R.	Short Wheel Base	100 lbs.	N.R.
Double Knuckle	200 lbs.	N.R.			
Roll-O-Matic	200 lbs.	N.R.	3020 Standard:		
Adjustable Front Axle	200 lbs.	N.R.	Adjustable Front Axle		
			Long Wheel Base	100 lbs.	1000 lbs.
2020 Row-Crop Utility:			Short Wheel Base	100 lbs.	1000 lbs.
Straight Front Axle	200 lbs.	N.R.			
Sweptback Front Axle	200 lbs.	N.R.	4010 Row-Crop:		
			Single Front Wheel	N.R.	600 lbs.
2510 Row-Crop:			Roll-O-Matic	N.R.	600 lbs.
Single Front Wheel	500 lbs.	N.R.	Adjustable Front Axle	N.R.	300 lbs.
Double Front Wheel	500 lbs.	N.R.			
Roll-O-Matic	500 lbs.	N.R.	4020 Row-Crop:		
Adjustable Front Axle	100 lbs.	N.R.	Single Front Wheel	N.R.	600 lbs.
			Roll-O-Matic	N.R.	600 lbs.
2520 Row-Crop:			Adjustable Front Axle	N.R.	300 lbs.
Tricycle	500 lbs.	N.R.			
Adjustable Tread	100 lbs.	N.R.	4020 Standard:		
			Adjustable Front Axle		
3010 Row-Crop:			Long Wheel Base	N.R.	300 lbs.
Single Front Wheel	200 lbs.	N.R.	Short Wheel Base	N.R.	300 lbs.
Double Front Wheel	200 lbs.	N.R.			
Roll-O-Matic	200 lbs.	N.R.			
Adjustable Front Axle	100 lbs.	N.R.			
3020 Row-Crop:					
Single Front Wheel	200 lbs.	1200 lbs.			
Double Front Wheel	200 lbs.	1200 lbs.			
Roll-O-Matic	200 lbs.	1200 lbs.			
Adjustable Front Axle	100 lbs.	800 lbs.			

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