

JOHN DEERE 135A AND 145A SERIES SEMI-INTEGRAL MOLDBOARD PLOWS



OPERATORS MANUAL JOHN DEERE 135A AND 145A SERIES SEMI-INTEGRAL MOLDBOARD PLOWS

OMA33858 A7 English

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ENGLISH





To the Purchaser

This new plow was carefully designed and manufactured to give years of dependable service. To keep it operating 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 "Contents" to learn where each section is located.

! 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.

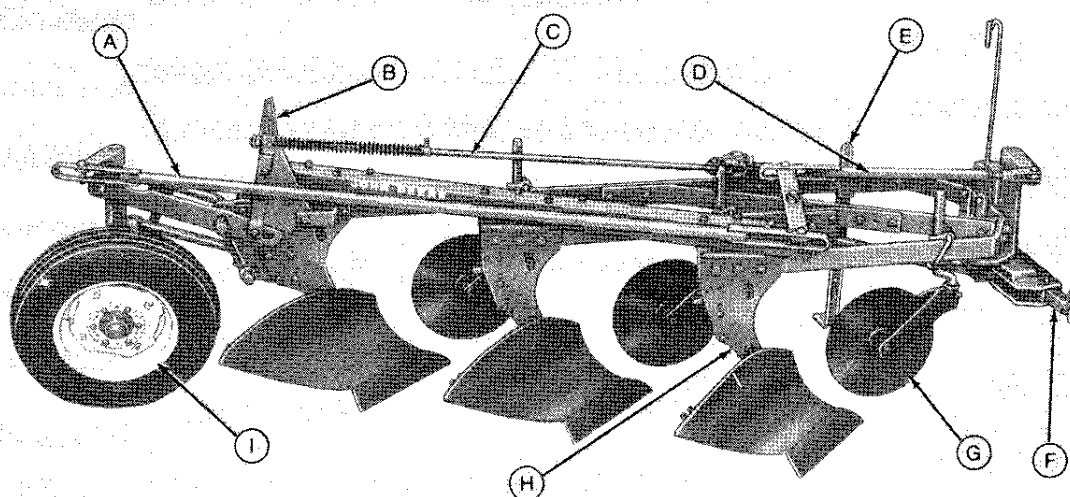
Because John Deere sells its products world-wide, U.S. units of measure are shown with their respective Metric equivalents throughout this operator's manual. These equivalents are the SI (International System) Units of Measure.

In addition to the equipment furnished with your plow, attachments are available to help you do a better job in special conditions. These are described in the attachments 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 plow will travel when in use.

Record your plow serial number in the space provided on page 35. Your dealer needs this information to give you prompt, efficient service when you order parts or attachments. If your plow requires replacement parts go to your John Deere dealer where you can obtain Genuine John Deere parts—accept no substitutes.

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



A15537

A—Rear Steering Rod
B—SMV Emblem
C—Rear Wheel Lift Rod

D—Front Steering Rod
E—Support Stand
F—Hydraulic Landing Hitch

G—Rolling Coulter
H—Safety-Trip Standard
I—Rear Wheel

*John Deere 145A 3-Bottom Semi-Integral Moldboard Plow
with Hydraulic Landing Hitch (Optional Equipment)*



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Safety Suggestions

GENERAL

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The safety of the operator was one of the prime considerations in the minds of John Deere engineers when this plow was designed.

You can make your farm a safer place to live and work if you observe the safety suggestions given. Study these suggestions carefully and insist that they be followed by those working with you and for you.

Remember! An accident is usually caused by someone's carelessness, neglect, or oversight.

HYDRAULIC OIL

Escaping hydraulic oil under pressure can have sufficient force to penetrate the skin, causing serious personal injury. Before disconnecting lines, be sure to relieve all pressure. Before applying pressure to the system, be sure all connections are tight and that lines, pipes and hoses are not damaged. Hydraulic oil escaping from a very small hole can be almost invisible. Use a piece of cardboard or wood, rather than hands, to search for suspected leaks.

If injured by escaping hydraulic oil, see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.

Always relieve pressure in the hydraulic system before working with hydraulic system components.

TRANSPORTING

While transporting the plow on a public road, follow safety instructions outlined under "Transporting," on page 9.

Use care when transporting across rough ground.

OPERATION

To avoid injury, always be careful while operating a tractor and plow.

Never permit any person other than the operator on the tractor.

Never ride or permit others to ride on the plow.

Do not grease, oil, or adjust the plow while it is in motion.

Always lower the support stand to support the plow before unhitching from the tractor.

Lower plow to within 2 inches (50 mm) of ground before releasing Quik-Coupler latch handles.

Always lower the plow to the ground when not in use. With tractor engine shut off, move the remote cylinder operating lever back and forth to relieve pressure in cylinder and hoses.

Raise the tractor 3-point hitch only high enough to level the plow fore and aft for transporting or turning at field ends.

Always raise the rear of the plow when turning at field ends.

Allow the rear wheel to clear the furrow before making sharp turns at field ends.

If spray can paint is used for protecting plow bottoms to be put in storage, be careful when discarding empty can. Do not incinerate or puncture can.



Preparing For Use

IMPORTANCE OF PROPER ADJUSTMENT

A well adjusted plow pulls lighter, has furrow slices which are uniform in width and depth, covers trash and leaves the soil in proper condition to be worked down into the best type seed bed.

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 diesel fuel.

If the plow is not to be used immediately, protect polished surfaces by applying a coat of cup or gun grease. If the plow is to be put in storage for a considerable length of time, see page 27.

Bolts And Set Screws

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

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 damage to the plow. See page 27 for torque specifications.

Tire Inflation

Make certain the plow tires are inflated to pressures shown below:

Wheel	Recommended New Implement or New or Used Auto Tires	Inflation Pressure
Rear	7.60-15, 4-ply rating	36 psi (2.5 bar) (2.5 kg/cm ²)
Gauge (When equipped)	5.90-15, 4-ply rating	36 psi (2.5 bar) (2.5 kg/cm ²)

3-5

Lubrication

Be sure plow has been properly lubricated. See Lubrication Charts on pages 25-26.

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.

4 Preparing For Use

Rear Wheel Setting

Adjust rear wheels of the tractor equidistant from the center line of the tractor to inside edge of tire. Set according to the chart on page 11.

Front Wheel Setting

On wide-front-end tractors, to get proper field maneuverability when working with tractor wheel in the furrow, set the front wheels to conform to rear-wheel setting, center-to-center of tread, or set at least 2 inches (50 mm) wider than rear tires, measured from center of tractor to inside edge of tire.

3-5

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.

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

Front End Weighting

Tractor front-end weighting is necessary for maximum field performance.

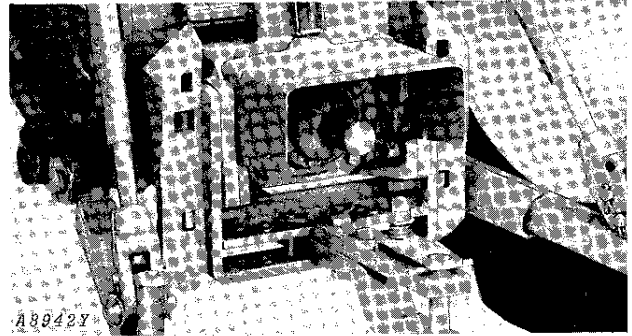
The amount of front weight required will have to be determined by field operating conditions and the gear in which the tractor is operated.

CAUTION: In this regard it is important to note that when the tractor is operated in lower gears, under 4 mph (6.5 km/h) maximum permissible front-end weighting is necessary to avoid front-end tip-up. If more front-end stability is required, see "Vertical Hitching" on page 13.

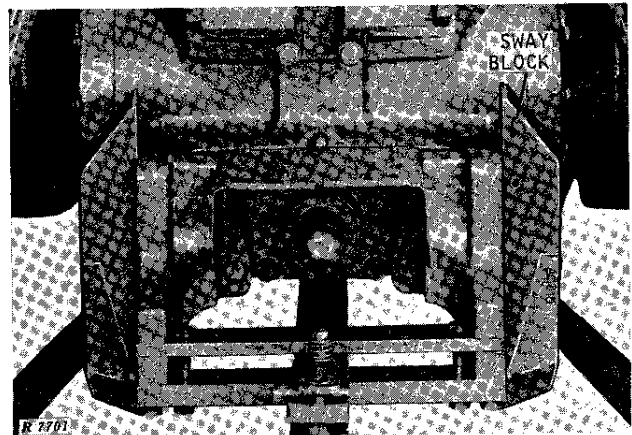
3-Point Hitch and Hydraulic System

Once the plow is attached, the depth or the load is maintained by the tractor hydraulic system according to the setting of the selector lever. See your tractor operator's manual for complete explanation of the hydraulic system.

Sway Blocks



*Sway Blocks Installed to Eliminate Side Sway
(4230 Tractor Illustrated)*



*Sway Blocks Installed to Eliminate Side Sway
(4630 Tractor Illustrated)*

The sway blocks must be set in the *down* and *wide* position. This setting permits the plow to hold the proper width of cut and eliminates sway when working in the field. Since the plow rear wheel is steerable, the tractor draft links should be maintained rigidly behind the tractor for quick and positive maneuverability, both in the field and in transport.

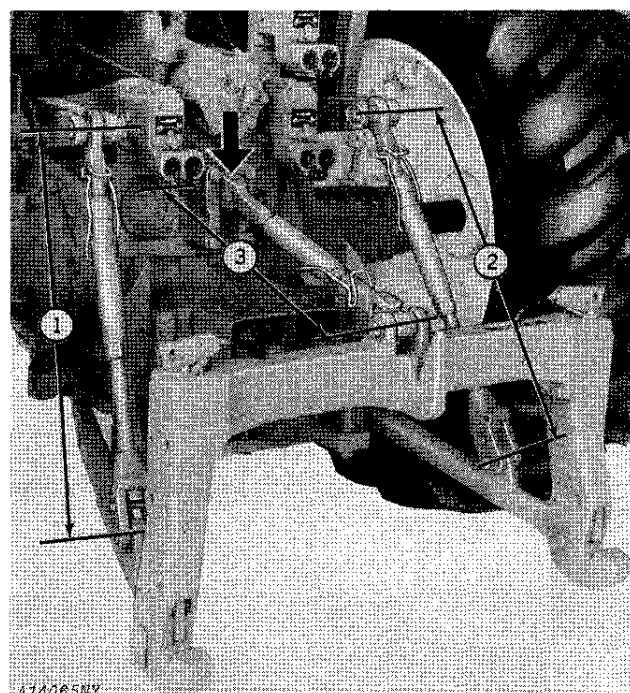
Link Lengths

It is important that the length of the lift link and center link (when used) be adjusted properly. Measure from center to center of pins as indicated in illustration.

The chart below shows the recommended starting lengths of the links for various tractors used with these plows.

NOTE: A slight increase or decrease in the recommended length may be necessary in other than normal conditions and in very deep or very shallow plowing. Final adjustment should be made in the field.

The center link must be in the top hole of the center link bracket.



4630 Tractor Illustrated

STARTING LINK LENGTHS

Tractor	Left Lift Link (Dimension "1")		Right Lift Link (Dimension "2")		Center Link (Dimension "3")			
					With Quik Coupler		Without Quik Coupler	
	Inches	(mm)	Inches	(mm)	Inches	(mm)	Inches	(mm)
2240	24"	(610 mm)	23"	(585 mm)	24"	(610 mm)	Not Used	
2440	26"	(660 mm)	25"	(615 mm)	24"	(610 mm)	Not Used	
2640	26"	(660 mm)	25"	(615 mm)	24"	(610 mm)	Not Used	
2840	29"	(735 mm)	28"	(710 mm)	24"	(610 mm)	Not Used	
4030*	30-3/4"	(780 mm)	29-3/4"	(755 mm)	23"	(585 mm)	Not Used	
4230*	33-1/4"	(845 mm)	32-1/4"	(820 mm)	25-5/8"	(650 mm)	Not Used	
4430*	33-1/4"	(845 mm)	32-1/4"	(820 mm)	25-5/8"	(650 mm)	Not Used	
4630	36"	(915 mm)	35"	(890 mm)	29-1/4"	(745 mm)	Not Used	

*On 4030, 4230, and 4430 Tractors equipped with 18.4-38 or 20.8-34 tires, use the following link length dimensions: Left lift link, 32-1/4 inches (820 mm); right lift link, 33-1/4 inches (845 mm); center link, 25-5/8 inches (650 mm).

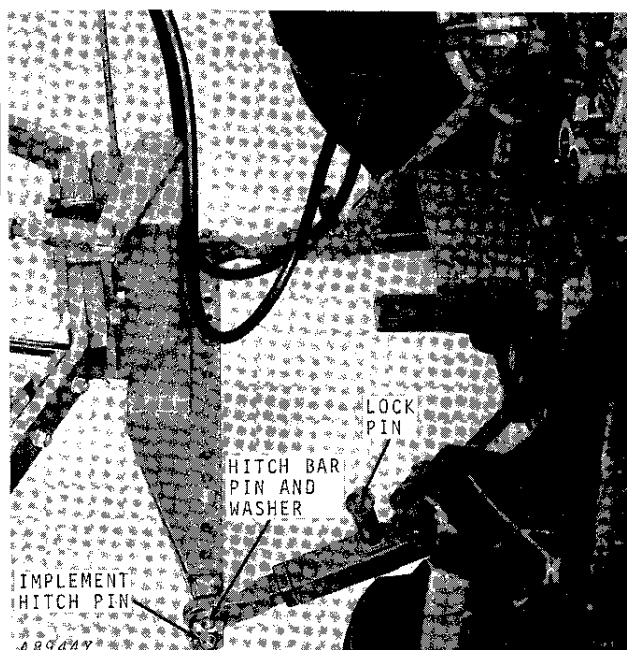


Attaching and Detaching

ATTACHING PLOW TO TRACTOR

2240, 2440, 2640, 2840, 4030, 4230,
and 4430 Tractor With 3-Point Hitch

6-8



Attaching Draft Links and Hoses

Place rockshaft selector lever in "D", zero, or "min" position.

Slip draft link ball sockets over hitch crossbar pins and lock in place with hitch bar pins and washers provided.

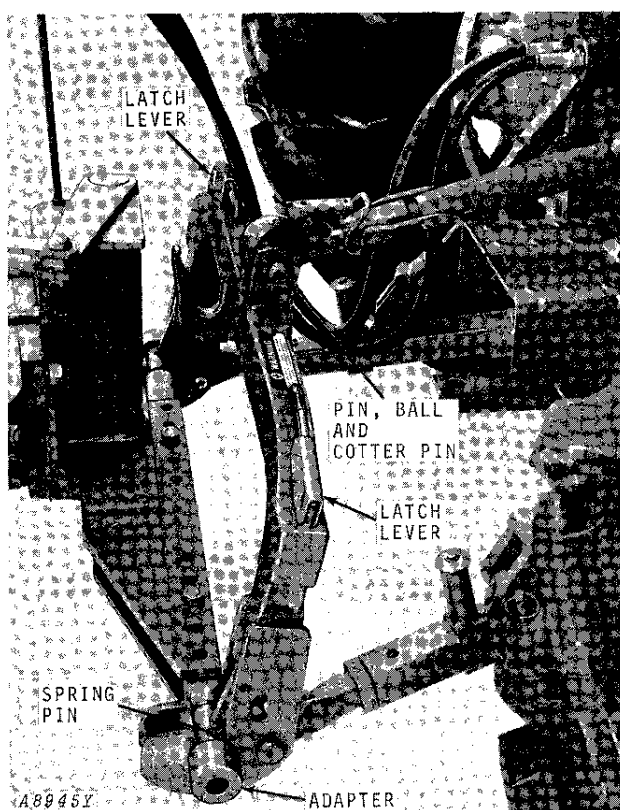
If tractor is equipped with telescoping draft links, close the draft links either by raising and lowering the plow with the rockshaft control lever or by backing up the tractor.

Be sure lock pins snap into place.

NOTE: The center link is not used.

2240, 2440, 2640, 2840, 4030, 4230,
4430 and 4630 Tractor with Quik-Coupler

Before attaching the plow to the tractor Quik-Coupler, back the tractor next to the plow hitch.



When attaching Quik-Coupler to tractor 3-point hitch make sure center link is set according to the dimensions given in chart on page 5.

Slide adapters over the plow hitch pins.

Drive spring pins through adapters and hitch pins until they are flush with the surface of the adapters.

Place the rockshaft selector lever in the "D", zero, or "min" position.

Make sure latch levers are in the released position.

Raise the coupler with the tractor rockshaft control lever until the hitch crossbar pins are resting in the coupler lower hooks. Raise the plow approximately 2 inches (50 mm) off the ground and lock Quik-Coupler latch handles.

CAUTION: Never release Quik-Coupler latch handles when plow is more than 2 inches (50 mm) above the ground to prevent plow from tipping.

To latch the Quik-Coupler with the latch handles, push down on the handles after the coupler receives the weight of the plow.

NOTE: When the latches are properly locked, the latch handles will be horizontal and against the coupler frame.

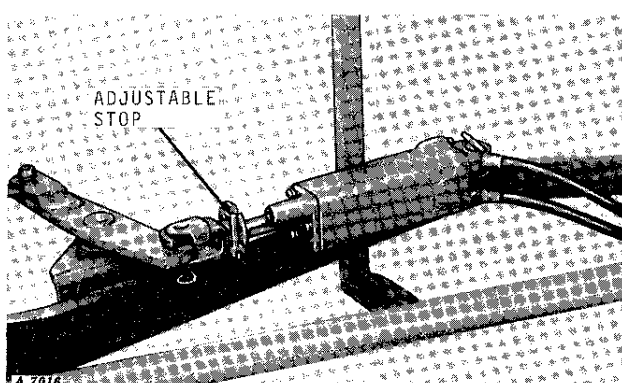
Installing Hydraulic Cylinders and Hoses

These plows require the use of a hydraulic lift cylinder. An additional hydraulic cylinder is necessary if the plow is equipped with a hydraulic landing hitch (optional).

If the cylinders have not been used before, it may be necessary to bleed them as explained in the tractor operator's manual.

Set adjustable stop so the full stroke of the cylinders may be used.

Hydraulic Lift Cylinder



Installing Hydraulic Lift Cylinder

With all trapped air removed from cylinder, install the cylinder on the plow as shown above.

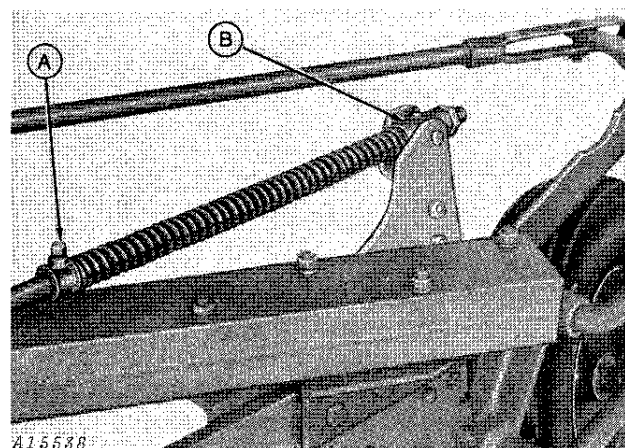
The plow requires hoses for an 84-inch (2135 mm) minimum spherical radius from the tractor drawbar to the hose end of the cylinder.

The spherical radius is the distance from the tractor drawbar hitch point to the hose end of the cylinder.

To determine the additional hose required, attach the remote cylinder hoses to the tractor breakaway couplers. Lay the cylinder on the ground directly behind the drawbar with hoses stretched out full length. Pull hoses down to the tractor drawbar. Measure the distance from the end of the drawbar to the hose end of the cylinder. The difference between this measurement and 84 inches (2135 mm) is the amount of the additional hose required.

Attach hoses to hose support.

NOTE: If difficulty is encountered when attaching or detaching remote cylinder, loosen set screw collar (A), on pressure spring to relieve spring pressure. See illustration below. To reset spring, raise plow to full transport position and slide spring and collar against pivot (B) and secure with set screw.



A—Set Screw Collar

B—Pivot

Pressure Spring

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