

# 4600 INTEGRAL TWO-WAY MOLDBOARD PLOWS



## OPERATORS MANUAL 4600 INTEGRAL TWO-WAY MOLDBOARD PLOWS

OMA43433 I1 English

**PLOW & PLANTER WORKS  
OMA43433 I1**

LITHO IN THE U.S.A.  
ENGLISH






# To the Purchaser

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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 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.

Your operator's manual contains SI Metric equivalents which follow immediately after the U.S. customary 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

attachment 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 essential plow information in the space provided on page 40. 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 when you should have received from your dealer when you purchased the plow.



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# Safety

## TRANSPORT SAFELY

2-3

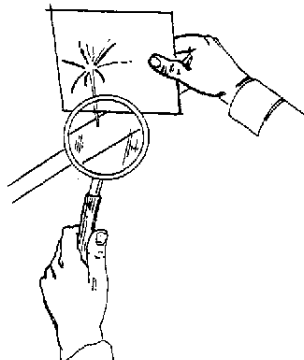
Use required tractor front end weights for optimum tractor stability. See pages 7-8 under "FRONT BAL- LAST."

Transport the plow at a maximum speed of 10 mph (16 km/h). Do not exceed. Reduce speed when traveling over rough ground.

Never travel at any speed which does not permit adequate control of steering and stopping.

When transporting the plow on a road or highway at night or during the day, use accessory lights and devices for adequate warning to operators of other vehicles. In this regard, check local governmental regulations for proper use. Various safety lights and devices are available from your John Deere dealer.

## AVOID HIGH PRESSURE LEAKS



H35336

H35336

Escaping fluid under pressure can have sufficient force to penetrate the skin, causing serious injury. Before disconnecting lines, be sure to relieve pressure. Before applying pressure, be sure connections are tight and lines, pipes and hoses are not damaged. Use a piece of cardboard or wood, rather than hands, to search for leaks.

If injured by escaping fluid, 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.

## MOUNTING TIRES

Failure to follow proper procedures when mounting a tire on a wheel or rim can produce an explosion which may result in serious injury or death. Do not attempt to mount a tire unless you have the proper equipment and experience to perform the job. Have it done by your John Deere dealer or a qualified tire repair service.

When sealing tire beads on rims, never exceed 35 psi or maximum inflation pressures specified by tire manufacturers for mounting tires. Inflation beyond this maximum pressure may break the bead, or even the rim, with dangerous explosive force. If both beads are not seated when the maximum recommended pressure is reached, deflate, reposition tire, relubricate bead, and reinflate.

Detailed agricultural tire mounting instructions, including necessary safety precautions, are contained in John Deere Fundamentals of Service (FOS) Manual 55, Tires and Tracks, available through your John Deere dealer. Such information is also available from the Rubber Manufacturers Association and from tire manufacturers.

## OPERATE SAFELY

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

Never ride or permit others to ride on the plow.

When indexing plow be sure no one is in the plow indexing path.

When the plow is in a raised position, be sure rockshaft and remote cylinder operating levers are not bumped or touched by anyone.

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

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

Always lower the plow to the ground when not in use.

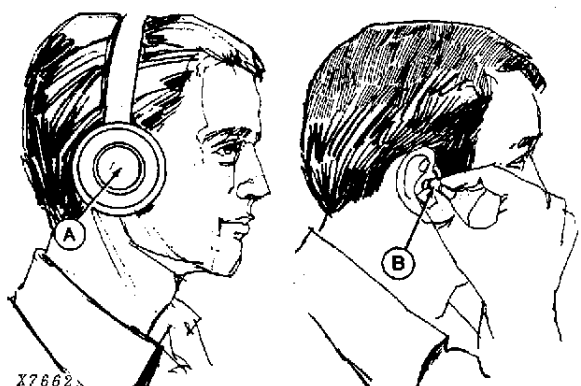
### LUBRICATE THE PLOW SAFELY

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

### DISPOSE OF SPRAY CANS SAFELY

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.

### PROTECT AGAINST NOISE



A—Earmuffs

B—Earplugs

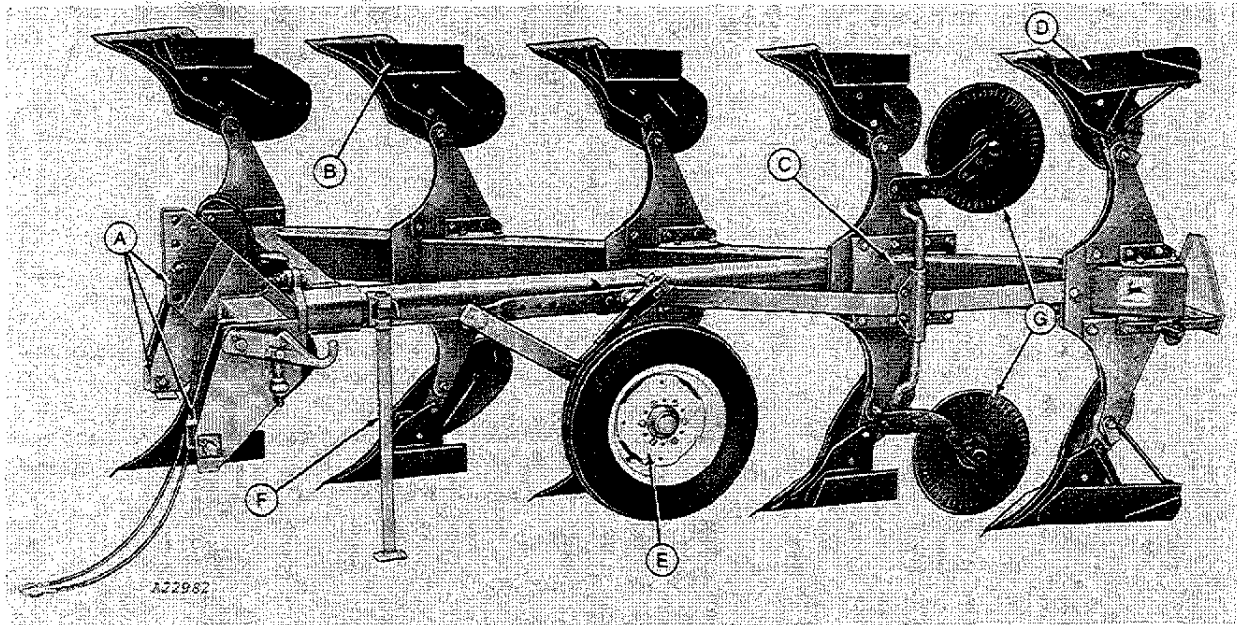
Prolonged exposure to loud noise can cause impairment or loss of hearing.

Wear a suitable hearing protective device such as earmuffs (A) or earplugs (B) to protect against objectionable or uncomfortable loud noises.



# Identification View

4



A—Category 3 Hitch  
B—No. 15 Landside

C—Fifth Bottom Extension  
D—No. 12 Rear Landside

E—Gauge Wheel Attachment  
F—Support Stand  
G—Anti-Friction Bearing Rolling Coulters

A22982

*John Deere 4600 Integral Two-Way Moldboard Plow with Fifth Bottom Extension  
(Rolling Coulters and Gauge Wheel—Attachments)*



# Preparing For Use

## PREPARING THE PLOW

### Plow Bottoms

The polished surfaces of the plow bottoms have been painted with protective black paint. In most cases, the black paint will wear off quickly upon contact with the soil. In soils where the black paint will not wear off, remove with diesel fuel.

If the plow is not to be used immediately, protect the polished surfaces by applying John Deere Plow Bottom Black Paint.

### Tire Inflation

Check tire on gauge wheel to be sure it is inflated to 248 kPa (2.5 bar) (36 psi) of air pressure.

### Lubrication

Be sure plow has been properly lubricated. See lubrication on pages 30-31.

### Bolts and Set Screws

Be sure all bolts and set screws are tight and all cotter pins are spread. Check the bolts that hold the plow bottoms to be sure they are tight.

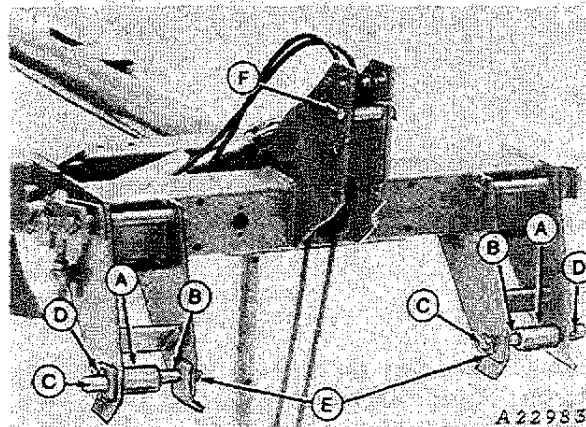
See torque chart on page 32.

### Hitch Extension

**IMPORTANT:** The hitch extension attachment is required when using a 4640 or 4840 Tractor equipped with 20.8 x 38 or 18.4 x 42 tires.

Refer to page 29 for hitch extension assembly.

### Hitch and Mast Pins for Category 3N/2 Without Quik-Coupler (4440 Tractors Only)



A—3-5/8" (92 mm) Bushings  
(Part No. A36380)  
B—1-5/8" (40 mm) Bushings  
(Part No. A13907)  
C—Hitch Pins

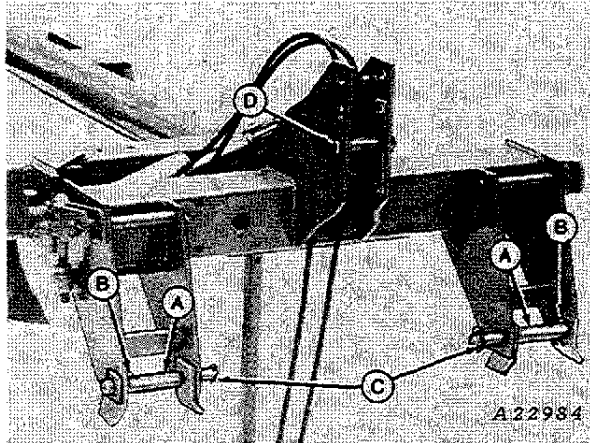
D—Outer Holes  
E—Quik-Lock Pins  
F—Mast Pin

Position bushings (A) and (B) between hitch plates as shown. Insert hitch pins (C) through hitch plates and bushings. Secure hitch pins by inserting cotter pins in outer holes (D).

Secure machined end of hitch pin with Quik-Lock pins (E).

Secure mast pin (F) in the second hole from the top of the mast.

**Hitch and Mast Pins For Category 3N/2 Quik-Coupler Hitch Setting (4440 Tractor Only)**



**A—Hitch Pins**  
**B—Outer Holes**

**C—Quik-Lock Pins**  
**D—Mast Pin**

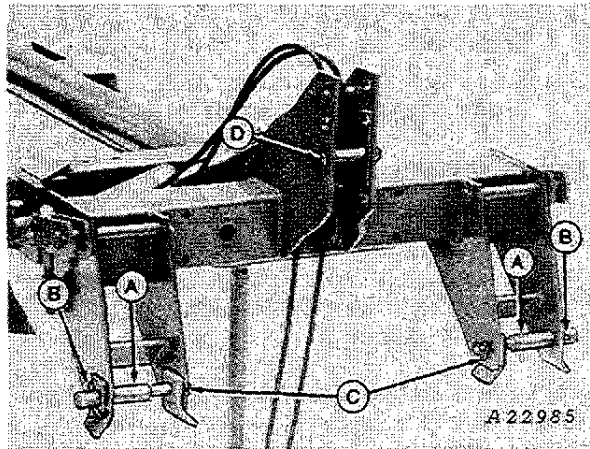
A22984

Insert hitch pins (A) through hitch plates until shoulder of the hitch pin is against the inside hitch plate. Insert cotter pin in outer hole (B) in the hitch pin.

Secure machined end of hitch pin with Quik-Lock pin (C) provided.

Secure mast pin (D) in the third hole from the top of the mast.

**Hitch and Mast Pins For Category 3 Quik-Coupler Hitch Setting**



**A—Hitch Pins**  
**B—Outer Holes**

**C—Quik-Lock Pins**  
**D—Mast Pin**

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Insert hitch pins (A) through hitch plates until the outer hole (B) in the wide end of the hitch pin is flush with the outside hitch plate. Insert cotter pin in the outer hole in the hitch pin.

Secure machined end of hitch pin with Quik-Lock pin (C) provided.

Secure mast pin (D) in the third hole from the top of the mast.



## PREPARING THE TRACTOR

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

### Tractor Drawbar

Set the tractor drawbar in the short high position and pin it with the retainer bolts one hole from the extreme left side of the drawbar support.

### Tire Inflation

Inflate the tractor tires as recommended in the tractor operator's manual. Be certain total tractor-plow load does not exceed tire carrying capacity.

### Rear Wheel Setting

Set single rear wheels equidistant from the center line of the tractor to insure maximum performance and leave at least four inches between the furrow wall and the outside edge of the tractor tire.

*NOTE: If your tractor is equipped with 18.4 dual rear tires, position outside edge of outside tire 62-in. (1 575 mm) from center of tractor.*

*If your tractor is equipped with 20.8 dual rear tires, position outside edge of outside tire 67-in. (1 700 mm) from center of tractor. The outside edge of the dual tire will be flush with the furrow wall at this setting.*

### Front Wheel Setting

To get proper field maneuverability, set the front wheels to conform to rear-wheel setting, center-to-center of tread.

### Front Ballast

#### Two Wheel Drive Tractors

Tractor front end stability is necessary for safe and efficient operation. It is important that the proper amount of weight be installed on the front of the tractor as recommended in your tractor operator's manual.

**CAUTION:** Ballast recommendations provide for adequate transport stability. Additional front ballast may be required for satisfactory field operation. See tractor operator's manual.

#### Instructions:

Step 1 - Find your plow model in the IMPLEMENT CODE TABLE and enter its code in space provided on page 8.

Step 2 - Enter an Implement Code for each attachment.

Step 3 - Add these codes to obtain Total Implement Code.

Step 4 - Select additions or subtractions from tractor operator's manual.

Step 5 - Refer to tractor operator's manual to determine required tractor front ballast.

#### IMPLEMENT CODES

##### 4-Bottom Plow

Implement or Attachment	Basic Code	With Hitch Extension
(*) Basic Shear-Bolt Plow	207	219
(*) Basic Safety-Trip Plow	6	7
Gauge Wheel	10	11
Trash Boards	9	9
Coulters - Rear Only	11	12

##### 5-Bottom Plow

Implement or Attachment	Basic Code	With Hitch Extension
(*) Basic Shear-Bolt Plow	284	300
(*) Basic Safety-Trip Plow	8	9
Gauge Wheel	10	11
Trash Boards	12	13
Coulters - Rear Only	20	21

(\*) Basic Implement Code for the 4- and 5-bottom plows includes either the No. 12 rear landside or rear furrow wheel.

##### 6-Bottom Plow

Implement or Attachment	Basic Code	With Hitch Extension
Basic Shear-Bolt Plow	374	392
Basic Safety-Trip Plow	12	13
Gauge Wheel	10	11
Trash Boards	17	18
Coulters - Rear Only	24	25

*NOTE: The rear furrow wheel is not recommended for use with the 6-bottom plow.*

**Front Ballast—Continued**

Example		Your Code	
Step 1	207	Step 1	
Step 2	10	Step 2	
	11		
Step 3	228 (sub)	Step 3	
Step 4		Step 4	
Step 5	(total)	Step 5	

Our example is a 4-bottom shear-bolt plow (207) with gauge wheel (10) and rear coulter (11). This gives a total implement code of 228. Refer to your tractor operator's manual for steps 4 and 5 and for your recommended front end ballast.

5-9

**IMPORTANT:** Refer to tractor operator's manual: 1. If the total implement code exceeds the maximum implement code listed for a particular tractor model, the implement-attachment combination is not recommended for that tractor. 2. The total load on any tractor wheel due to the weight of the implement-attachment combination and tractor equipment, should not exceed the carrying capacity of the tractor tires.

**CAUTION:** When operating the tractor in lower gears, which have a maximum speed of 4 mph (6.4 km/h) or less, maximum permissible front end weight is recommended regardless of size and equipment of plow, to maintain front end stability.

For maximum permissible ballast, see your tractor operator's manual.

**Four Wheel Drive Tractors**

Four-wheel drive tractors do not require any front end ballast for stability. Add front wheel weights as required in the same manner as described in "Rear Wheel Weighting".

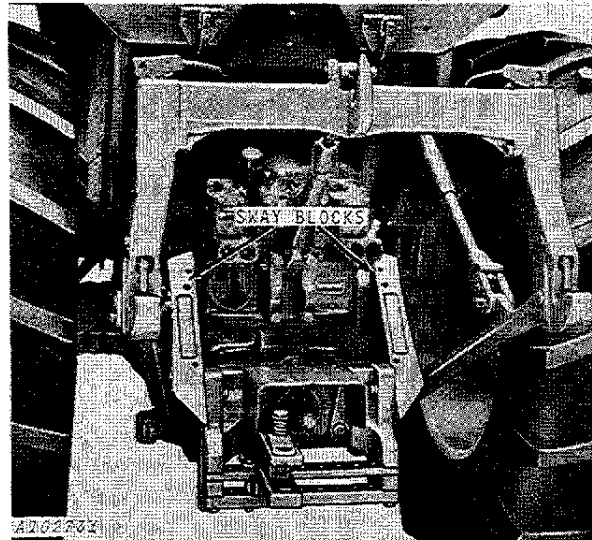
**Rear Wheel Weighting**

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.

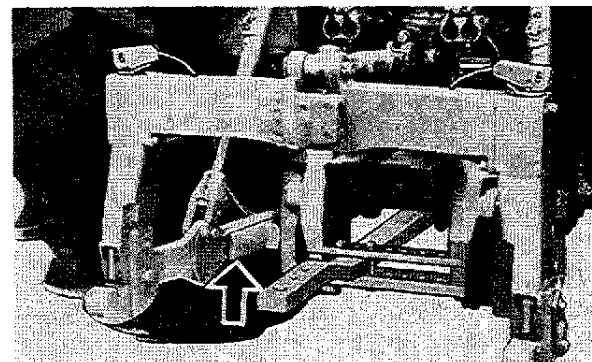
**3-Point Hitch and Hydraulic System**

Once the plow is attached to the tractor 3-point hitch, the depth or load is maintained by the tractor hydraulic system according to the setting of the rock-shaft selector lever. See your tractor operator's manual for complete explanation of the hydraulic system.

**Sway Blocks**

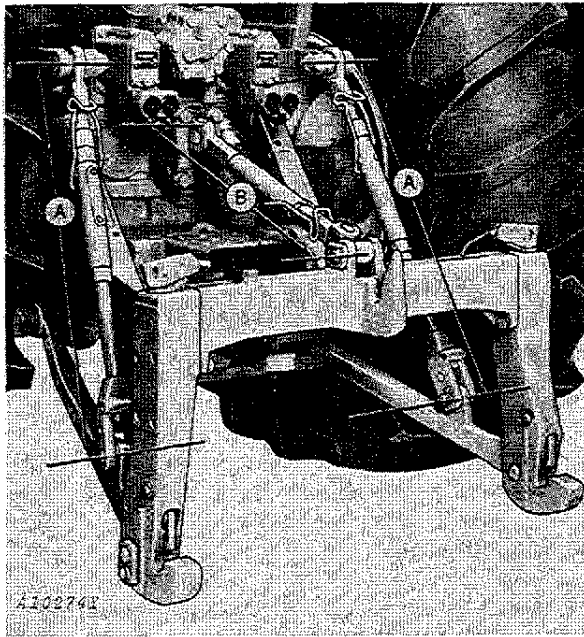


Sway blocks must be attached in upper position. This will eliminate side sway when the plow is raised for transport, but will permit lateral flexibility when working.



On 4640, 4840, 8440 and 8640 Tractors, set the draft link bumpers (bold arrow) with the thick side forward.

## Lift Link Lengths



Lift Link Dimensions

**IMPORTANT:** When using 4440 Tractor, attach center link in top hole of tractor bracket.

The chart below shows the recommended starting lengths. Measure from center-to-center of pins as indicated in the illustration.

### STARTING LINK LENGTHS

Tractor	Lift Links Dimension "A"	Center Link Dimension "B" With Quik-Coupler
4440	33" (840 mm)	27-1/4" (690 mm)
4640	35" (890 mm)	28-1/2" (725 mm)
4840	37" (940 mm)	29-1/2" (750 mm)
8440	37" (940 mm)	28-3/4" (730 mm)
8640		

5-9

Set lift links in "no float" position - See tractor operator's manual.

**IMPORTANT:** For two-way plow operation, it is best to set the lift links exactly equal and make plow leveling adjustments only with the plow leveling screws.

**CAUTION:** Lift links and center link must be set as shown in the chart to provide adequate clearance between plow and tractor when indexing plow.

### Adjusting Speed of Rockshaft Drop

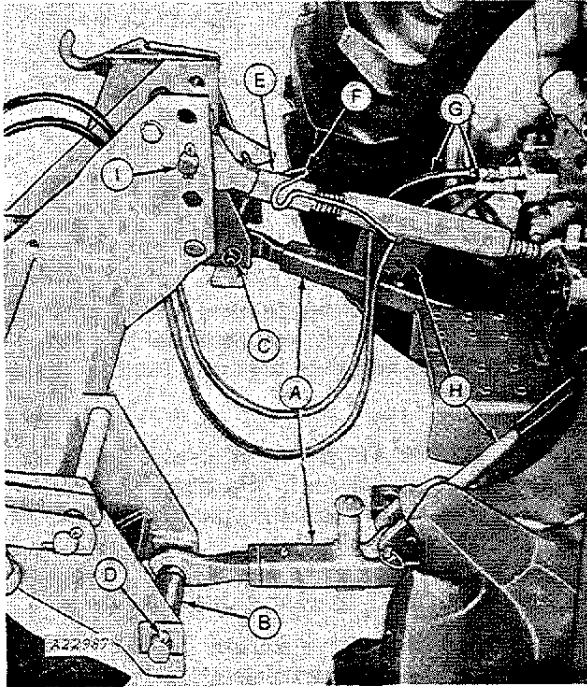
Adjust the valve to give a smooth, slow drop of the plow. A drop time of approximately three seconds is recommended to prevent damage to rear landside. See your tractor operator's manual for instructions on adjusting the valve.



# Attaching and Detaching

## ATTACHING PLOW TO TRACTOR

### Category 3N/2 Hitch Without Quik-Coupler (4440 Tractors Only)



- A—Draft Links  
B—Hitch Pins with Bushings  
C—Quik-Lock Pins  
D—Cotter Pins  
E—Center Link  
F—Adjusting Handle  
G—Hydraulic Hoses  
H—Lift Links  
I—Mast Pin

**CAUTION:** To prevent the plow from tipping over when initially raising plow to transport position, DO NOT raise plow until the indexing cylinder hoses have been inserted in the tractor breakaway couplers and the cylinder has been pressurized. See "Attaching Hydraulic Hoses" on page 11.

Check to be sure that lift links (H) are set to the dimensions given in the chart on page 9.

Be sure mast pin (I) is secured in the second hole from the top. Be sure bushings are positioned on hitch pins as shown on page 5.

Place rockshaft selector lever in the "Min" position.

Raise draft links (A) between hitch plates and line up holes. Insert hitch pins and bushings (B) into hitch plates and draft links. Secure with Quik-Lock pins (C) and cotter pins (D).

Connect tractor center link (E) to plow mast. Turn adjusting handle (F) if needed.

Insert hydraulic hoses (G) into tractor breakaway coupler. See "Attaching Hydraulic Hoses" on page 11. Close telescoping draft links by backing up tractor.

**IMPORTANT:** Be sure lock pins on telescoping draft links snap into place.

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