

## John Deere BWF Disk Harrow



### **OPERATORS MANUAL**

John Deere BWF Disk Harrow

OMB25475 F2 English



John Deere Harvester Works OMB25475 F2

> LITHO IN U.S.A. (REVISED) ENGLISH



### To the Purchaser

This new disk harrow was carefully designed and manufactured to give years of dependable service. To keep it running 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 the Table of Contents to learn where each section is located. Use the alphabetical index for fast reference.

In addition to the equipment furnished with your harrow, attachments are available to help you do a better job in special conditions. These are described in the special equipment 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 harrow will travel when in use. Record your harrow serial number in the space provided on page 31. Your dealer needs this information to give you prompt, efficient service when you order parts or attachments. If your harrow requires replacement parts, go to your John Deere dealer where you can obtain genuine John Deere parts accept no substitutes.

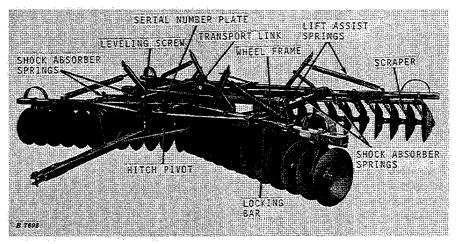
The warranty on this harrow appears on your copy of the purchase order which you should have received from your dealer when you purchased the harrow.

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.



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John Deere 16-Foot, 6-Inch BWF Disk Harrow



### Operation

#### PREPARING DISK HARROW

#### Attaching Remote Hydraulic Cylinder

The BWF Disk Harrow can be used with any tractor equipped with an 8-inch stroke remote hydraulic cylinder that conforms to ASAE-SAE standards.

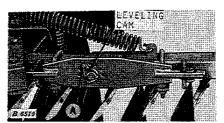
Install the remote hydraulic cylinder on the disk harrow and disconnect the transport link, see page 5.

#### Tires

Inflate the tires to 30 psi of air pressure.

#### **Extension Gangs**

Fold the extension down and lock in working position on the 16-foot 6-inch, 17-foot 10-inch, 19-foot 2-inch, or 20-foot 6-inch BWF Disk Harrow.



**CAUTION: Extension gangs in lowered position** are under spring tension. 1. Before working on extension gangs in lowered position, always secure them with locking bar.

- 2. Stand clear when raising or lowering gangs.
- 3. Always lock gangs in transport or field position.

The extension gangs may be adjusted up or down. To adjust each gang, remove the locking bar and bolt "A." Rotate the leveling cam clockwise to lower lefthand extension gangs or counterclockwise to raise the left-hand extension gangs. Rotate the leveling cam clockwise to raise the right-hand extension gangs or counterclockwise to lower the right-hand extension gangs. Replace bolt "A," and the locking har

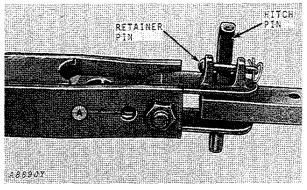
Check the gang bolt nuts occasionally, to be sure they are tight.

#### PREPARING TRACTOR

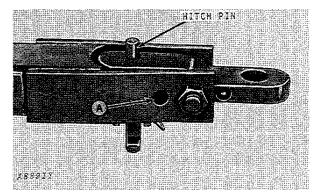
Refer to your tractor operator's manual for wheel weighting instructions and tire inflation pressures.

It is recommended that a minimum of eight front weights be used with the power weight-transfer hitch. On tractors equipped with rear rockshaft, set the rockshaft selector lever in the "D" position.

#### ATTACHING TO AND DETACHING FROM THE TRACTOR



Position of Disk Harrow Hitch when Tractor is Equipped with a Straight Drawbar



Position of Disk Harrow Hitch when Tractor Drawbar is Equipped with Hammerstrap

Recommended tractor drawbar height with any BWF Disk Harrow is 15 inches.

The BWF Disk Harrow hitch can be positioned for tractors with straight drawbars or for tractor drawbars equipped with hammerstraps. Remove the hitch pin from the hitch clevis and place it in hole at "A" to hold the hitch straight out.

The disk harrow must be in the raised position before attaching to, or detaching from, the tractor drawbar. Back the tractor up to the disk harrow, install the remote hydraulic cylinder on the disk harrow, and place the hoses in the hose holder. If the disk harrow is not in the transport position, raise it with the cylinder and attach the disk harrow hitch to the tractor drawbar.

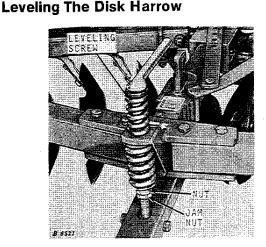
When detaching the disk harrow from the tractor, be sure the disk harrow is in the raised position and the remote hydraulic cylinder hoses are disconnected before pulling the hitch pin and driving the tractor away from the disk harrow.

If power weight-transfer hitch is used, disconnect at point "A." Refer to pages 14 and 15.

#### TRACTOR DRAWBAR

For best results when disking, the tractor drawbar should be free to swing.

#### **OPERATING ADJUSTMENTS**



Adjust the leveling screw on the drawbar to level the disk harrow and to obtain uniform penetration of the front and rear gangs.

Shortening the leveling screw (turning clockwise) will raise the rear section. Lengthening the leveling screw (turning counterclockwise) will lower the rear section.

NOTE: Be sure nut and jam nut on leveling screw are both snug against the bottom of the spring to prevent play in the spring.

#### **Adjusting Disking Depth**

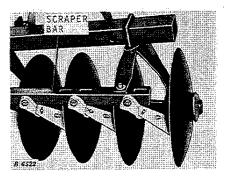
The depth of disking is controlled by the remote hydraulic cylinder control lever of the tractor and the angle of the disking gangs. The carrying wheels will act as gauge wheels to regulate the working depth of the disk harrow. After determining the correct disking depth as regulated by the carrying wheels, position stop on remote hydraulic cylinder so carrying wheels raise to same position each time. See tractor operator's manual.

For maximum penetration, set the gangs at a full cutting angle and raise carrying wheels completely off the ground.

For less than maximum penetration lower the carrying wheels to raise the gangs, or reduce the cutting angle of the gangs.

#### **Adjusting Scrapers**

Two-piece, spring-loaded scrapers are regular equipment. All other scrapers are optional and the adjusting story for them may be found under "Special Equipment."



The holes in the top of each scraper bar are slotted so that by adjusting the scraper bar you can move all the scrapers on the bar in or out at one time. Also, each scraper blade can be adjusted individually.

When scrapers are required, adjust blades so the scraping edge of each scraper blade is flush against the disk blade but not tight enough to prevent the gang from revolving freely.

When scrapers are not required, adjust the scraper bars to move scrapers away from the disk blades.

4 Operation

#### **Angling Gangs**

#### Front Gangs

The disk harrow must be in the raised position to angle the gangs.



To change the angle of the front gangs, remove the retaining pin and pull the angling lever forward to decrease the angle, and push the angling lever to the rear to increase the angle.

When the desired angle has been obtained, replace the retaining pin.

#### **Rear Gangs**

To angle the rear gangs, remove the angling device from the front gangs and attach it to the rear gangs.



Remove the retaining pin and pull the angling lever to the rear to decrease the angle, and push the angling lever forward to increase the angle.

When the desired angle has been obtained, replace the retaining pin.

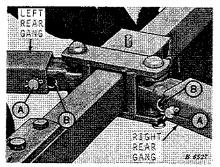
#### Adjusting Rear Gangs Laterally

The variations in soil from one field to another, and sometimes in the same field, can have an effect on the way the rear gangs level the soil.

The rear gangs can be set in a wide or narrow lateral position.

Certain field conditions, blade sizes, or tractor speeds may make it necessary to change this lateral position to eliminate a ridge or furrow between the rear gangs.

For 18-inch blades, holes "B" will usually be most satisfactory. For 20- and 22-inch blades it may be necessary to use holes "A" if the disk harrow is run full angle.



Rear Gangs in Wide Lateral Position

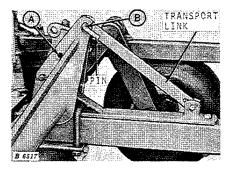
To place the rear gangs in the narrow position, pull pins "A," move the gangs inward to hole "B." Replace the pin.

#### **OPERATING SPEED**

Never exceed field speed of 5 mph. Reduce speed where rocks or stumps are present.

#### TRANSPORTING

Use the transport link to hold disk harrow in a raised position for transporting or storage.



To connect the transport link: (1) Fully extend the remote hydraulic cylinder. (2) Remove the pin from hole "A." Line up the hole in the end of the transport link with hole "B," and install the pin.

NOTE: If desired, the remote hydraulic cylinder can now be removed and the disk harrow will stay in the raised position.

Lock the tractor swinging drawbar in a fixed position.

CAUTION: When transporting the disk harrow on a smooth surface road, do not exceed 12 mph. Reduce speed considerably when traveling over rough ground.

When transporting the disk harrow 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. Various safety lights and devices are available from your John Deere dealer.

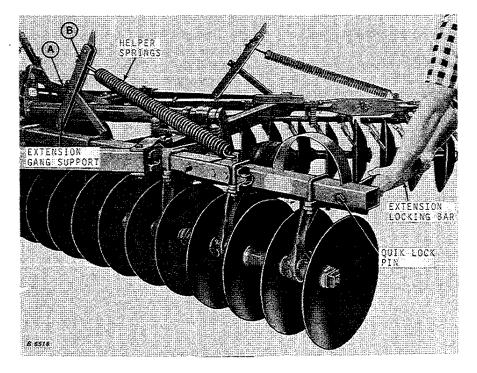
#### Extension Gangs

CAUTION: Extension gangs in lowered position are under spring tension.

- 1. Before working on extension gangs in lowered position, always secure them with locking bar.
- 2. Stand clear when raising or lowering gangs.
- 3. Always lock gangs in transport or field position.

Install the extension gang locking bar in the hole in the end of the extension gang, and secure it in place with a Quik-Lock pin. Raise the extension gang and fold it over against the extension gang support.

Remove drilled rivet from extension gang support at "A" and install at "B."





### Safety Suggestions

The safety of the operator was one of the prime considerations in the minds of John Deere engineers when this planter was designed. Shielding, simple adjustments, and other safety features were built into the planter wherever possible.

However, investigation of thousands of farm accidents show that careless use of farm machinery causes nearly one-third of all farm accidents. 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.

Extension gangs in lowered position are under spring tension.

1. Before working on extension gangs in lowered position always secure them with locking bar.

- 2. Stand clear when raising or lowering gangs.
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Only one person - the operator - should be permitted on the tractor platform while tractor and disk harrow are in operation.

Never clean, lubricate, or adjust a machine that is in motion.

Park or block the disk harrow so it will not roll when disconnected from tractor drawbar.

When leaving the tractor and disk harrow, connect transport link or lower the disk harrow to the ground.

Connect transport link when transporting disk harrow long distances.

Never ride or permit others to ride on the drawbar of the tractor or on the disk harrow.

When transporting disk harrow 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. Lights and devices may be obtained from your John Deere dealer.

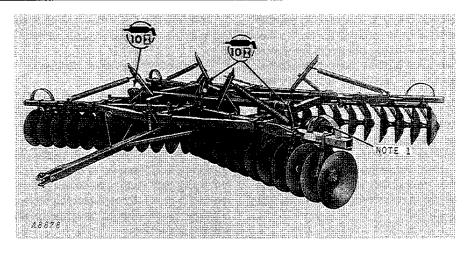
Be careful when operating on hillsides because the tractor may tip sideways if it strikes a hole, ditch, or other irregularity.

Escaping fluid 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. Fluid 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 fluid, see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.



### Lubrication



**CAUTION:** Do not oil or grease a machine while it is in motion.

The initial lubrication is of the utmost importance to assure long life and satisfactory performance of the disk harrow.

Wipe dirt from fittings before greasing. If a grease fitting is lost, replace it immediately. Lubricate all parts thoroughly, but avoid excessive lubrication. Excessive lubricant gathers dust.

	SYMBOL
10日	Lubricate with John Deere Multi-Purpose Lu- bricant or an equivalent SAE multipurpose- type grease at hourly intervals indicated on the symbol.

NOTE: Repack wheel bearings once each year with wheel bearing grease.

Oil all pivot points of remote hydraulic cylinder control parts and drawbar.

#### ANTIFRICTION BEARINGS

NOTE: The antifriction gang bearings are packed and sealed at the factory. Grease these bearings only once or twice a season depending on the amount the disk harrow is used.

Fill bearing with hand gun until grease emerges from seal lips.

IMPORTANT: Excessive pressure will blow out the seals.



### Service

Inspect your disk harrow after the disking season and note excessively worn or broken parts, so that repairs and replacements can be made during the off season. Replace worn or broken parts promptly so that your disk harrow will be ready for use when needed.

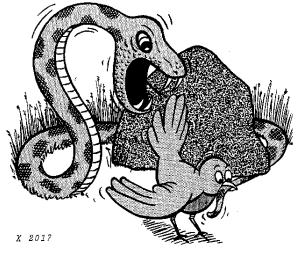
To insure maximum penetration and satisfactory performance, keep the cutting edge of the disks sharp. Dull disks will not cut properly, making it impossible to secure sufficient penetration, and they will not do a good job of mixing the trash in the soil. Be sure disks are free from rust before operating disk harrow in the field. Repaint all parts necessary and protect all unpainted surfaces with a good rust-preventive grease or oil.

Keep all bolts tightened securely.

Remember—practically all trouble with new machines is due to improper setting-up and lack of lubrication.

IMPORTANT: After any replacement of disk or bearing parts, be sure to draw up nut on end of gang bolt very tight. Failure to do this will result in breakage or loss of parts. When attaching the gang frame standards to the bearings, be sure to draw up bolts as tightly as possible.

# Accidents don't always happen to the <u>other</u> guy



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