

220 Center-Fold Power-Flex Disk



JOHN DEERE

OPERATORS MANUAL 220 Center-Fold Power-Flex Disk

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ENGLISH





To the Purchaser

This new disk 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 service. Read the table of contents to learn where each section is located.


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

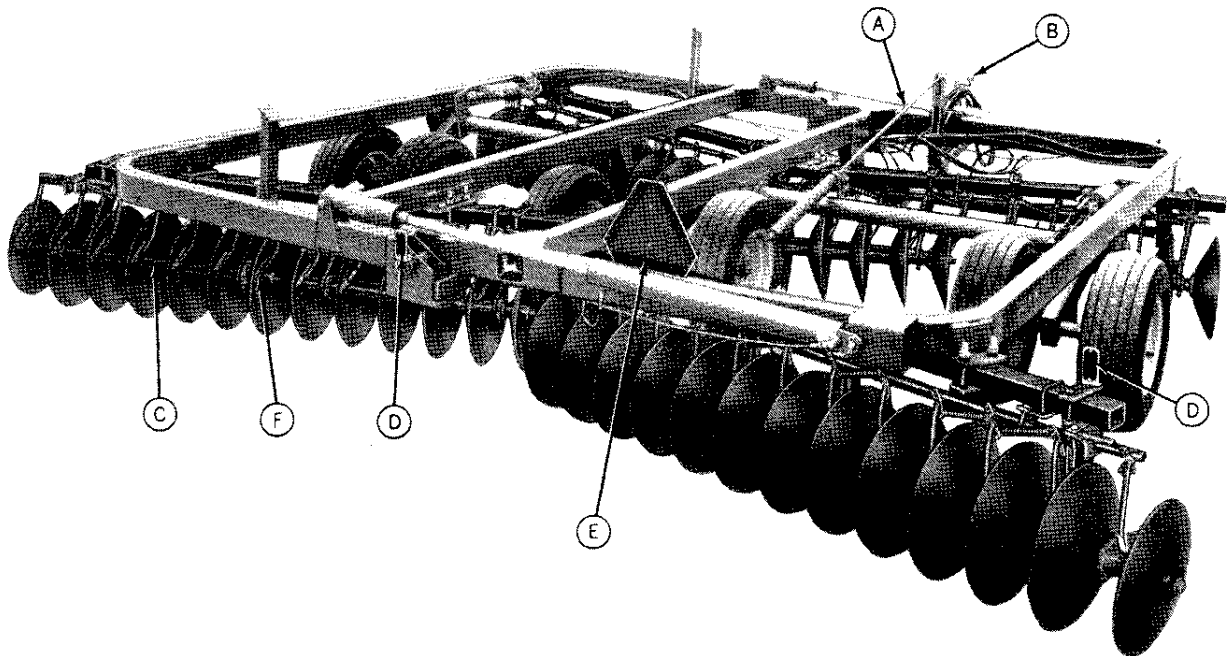
Record your disk serial numbers in the space provided on page 40. Your dealer needs this information

to give you prompt, efficient service when you order parts or attachments. If your disk requires replacement parts, go to your John Deere dealer where you can obtain genuine John Deere parts—accept no substitutes.

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

 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.



A—Leveling Rod
B—Jack
C—Spool

D—Reflector
E—SMV Emblem
F—Self-Adjusting Scrapers

John Deere 220 Disk



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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 disk 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.

Finally, remember this: An accident is usually caused by someone's carelessness, neglect, or oversight.

OPERATION

Be careful when operating the disk to avoid injury.

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

Only one person - the operator - should be permitted on the tractor platform while tractor and disk are in operation.

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

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

When removing self-adjusting scrapers for any reason, always remove scraper which has spring attached to upper portion of tension lever first. See pages 17-18. When installing scrapers always install this scraper last. Wear protective gloves to help prevent injury from cutting edges of disk blades or scraper blades.

Do not leave the disk in the raised position when it is not in use. Always lower it to the ground.

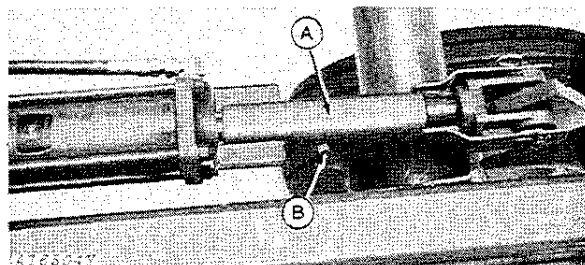
Park or block the disk so it will not roll when disconnected from the tractor drawbar.

Springs in the spring cushion tubes are under pressure, do not disassemble.

TRANSPORTING

When transporting the disk on a smooth surface road, do not exceed maximum tractor transport speed of 20 mph (32 km/h). Reduce speed considerably when traveling over rough ground.

When transporting disk 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.



A—Transport Lock

B—Spring Locking Pin

Transport Lock

Before transporting the disk, fully extend the hydraulic cylinder and install transport lock (A) on cylinder rod as shown. Secure transport lock (A) and spring locking pin (B). Relax cylinder to prevent damage to cylinder.

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.



Preparing For Use

GENERAL

Your new disk is fully adjustable and will do a good job of disking at a minimum of expense when properly adjusted. A well-adjusted disk levels the soil uniformly and leaves it in proper condition for the best type of seedbed.

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

PREPARING THE DISK

Lubricate the disk as instructed on page 25.

Be certain all bolts are tightened securely. See torque chart on page 26.

Inflate the disk tires to 30 psi (2.1 bar) (2.1 kg/cm²) of air pressure.

PREPARING THE TRACTOR

General

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

Rockshaft Selector Lever

Set the tractor rockshaft selector lever in the "ZERO," "D," or "Min" position, depending upon your model tractor.

Tire Inflation

Inflate the tractor tires as recommended in the tractor operator's manual.

Rockshaft Height Stop Lock (4230, 4240, 4430, 4440, 4630, and 4640 Tractors)

If the tractor rockshaft is accidentally lowered with a Quik-Coupler hitch on the tractor, damage can occur to the 220 Disk hitch when turning the tractor.

To prevent accidentally lowering the rockshaft while operating the disk, install AR60331 rockshaft height stop. Installation instructions are provided with the stop.

Tractor Drawbar

The tractor drawbar can be placed in either the low or high position. Place the drawbar in the low position for hard ground conditions (disking stalks or primary disking) or when maximum weight is needed for penetration.

Place the drawbar in the high position for light soil, depth gauging or when using the cushion gang attachment.

Secure drawbar in the center of the drawbar support with retainer bolts.

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.

For maximum recommended rear wheel ballast see your tractor operator's manual.

INITIAL SETTINGS

CHECKPOINT	CORRECT SETTING OR LOCATION	ADJUSTMENT
TRACTOR DRAWBAR	Place offset in down position and pin to prevent swinging. (With cushion gang attachment, place offset in up position.)	
3-5 TRANSPORT POSITION	Level frame front to rear.	Adjust turnbuckle. To raise front, lengthen. To lower front, shorten. See page 9.
FRONT GANG ANGLE	Maximum front gang angle for most soil conditions. Loose or sandy soils may require minimum front gang angle. See pages 16-18.	
REAR GANG ANGLE	Rear gangs should be one setting less than front. See pages 16-18. Set gang angle the same from side to side. See pages 16-18.	
BLADE PROFILE	Most soil conditions: 50-50. Extremely hard ground: 70-30. Set rear gangs for same blade profile. See page 15.	

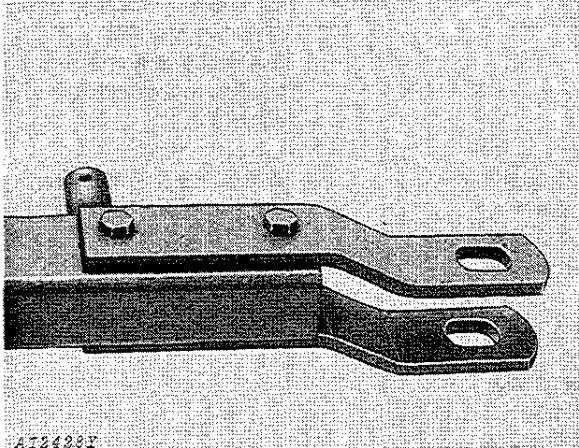
CHECK POINT	CORRECT SETTING OR LOCATION	ADJUSTMENT
POSITION OF FOLDING LEFT FRAME	Level side-to-side.	Adjust cylinder mount and/or add leveling shim(s). See pages 12-13.
DISKING DEPTH	Operator preference	Use same quantity and thickness of depth stops on each cylinder. Set adjustable stop on tractor remote cylinder. See page 14.
FRONT TO REAR LEVELING	Rear gangs should touch one to two inches before front gangs when disk is lowered on level ground.	Adjust spring adjusting nut. To raise front, tighten nut. To lower front, loosen nut. See page 11.
REPHASE LIFT CYLINDERS	Each time after disk is fully raised, continue holding remote cylinder operating lever briefly to rephase lift cylinders and relevel disk.	
OPERATING SPEED	Between 4 and 6 mph. (Reduce speed in rocky conditions.)	



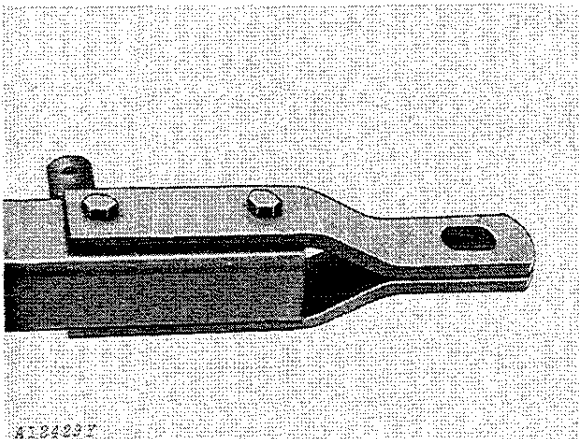
Attaching and Detaching

ATTACHING TO TRACTOR

6-7

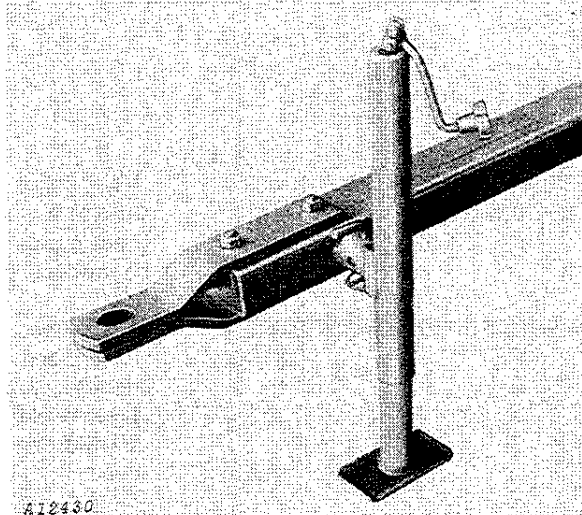


Position of Disk Hitch when Tractor Is Equipped With a Straight Drawbar

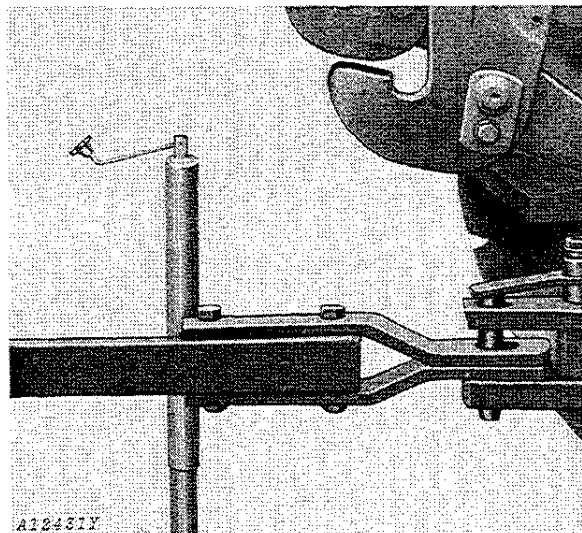


Position of Disk Hitch When Tractor Is Equipped With a Clevis Drawbar

Position hitch as illustrated above for tractors equipped with straight drawbars or for tractor equipped with a clevis drawbar.

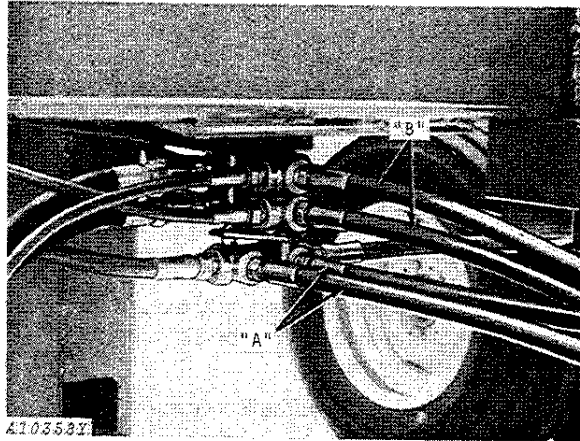


Back the tractor up to the disk.
Raise hitch to drawbar height with jack.



Back tractor into position and attach to disk with drawbar pin. Secure drawbar pin with pin retainer.

CAUTION: To avoid injury from escaping hydraulic oil under pressure, turn engine off and relieve the pressure in the system by moving remote cylinder operating levers in both directions before attaching hoses to breakaway couplers.

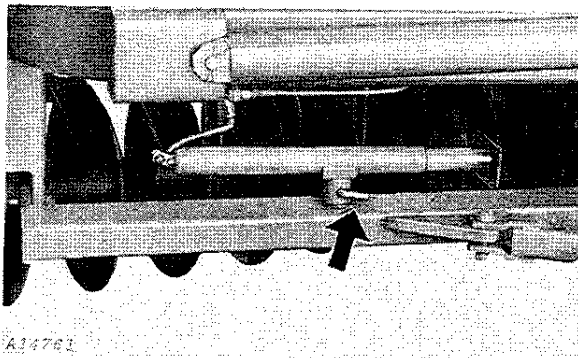


A—Wheel Frame Hydraulic Hoses
B—Folding Left Frame Hydraulic Hoses

Right-Front View

IMPORTANT: Wipe hose ends to remove any dirt before inserting in the breakaway couplers.

Install wheel frame hydraulic hoses "A" into breakaway coupler No. 1 and folding frame hydraulic hoses "B" into breakaway coupler No. 2. Install hydraulic hoses in the tractor breakaway couplers so cylinders will extend, lifting disk and folding left frame when remote cylinder operating lever is moved rearward.



Raise jack and remove jack retaining pin. Remove jack from hitch and install on cross tube as above.

Replace retaining pin (indicated by bold arrow) and secure with Quik-Lock pin.

CHECKING HYDRAULIC SYSTEM

After attaching disk to tractor for the first time, check all hydraulic connections, lines and hoses for leaks.

CAUTION: 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.

NOTE: If the hoses have been disconnected from the hydraulic cylinder or if the cylinder has not been used before, all trapped air must be removed from the cylinder.

To bleed air from the hydraulic cylinders and hoses it may be necessary to raise and lower the disk several times until all air is removed from the hydraulic hoses.

IMPORTANT: Be certain to check tractor hydraulic oil level after filling cylinders with oil for the first time.

DETACHING FROM TRACTOR

When detaching disk from tractor, lower disk to ground with remote cylinder operating lever. Relieve hydraulic pressure from system by shutting off tractor and moving remote cylinder operating lever in both directions.

Remove Quik-Lock Pin, retaining pin and jack from storage position. Install jack on hitch tube and secure with retaining pin and Quik-Lock pin, as illustrated on page 6. Remove hoses from tractor breakaway couplers.

Remove drawbar pin and drive tractor forward, away from hitch.

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