

John Deere 330 Wing-Fold Power-Flex Disk

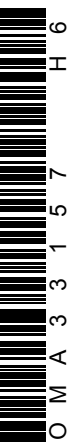


OPERATORS MANUAL John Deere 330 Wing-Fold Power-Flex Disk

OMA33157 Issue H6 English

John Deere Harvester Works
OMA33157 Issue H6

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

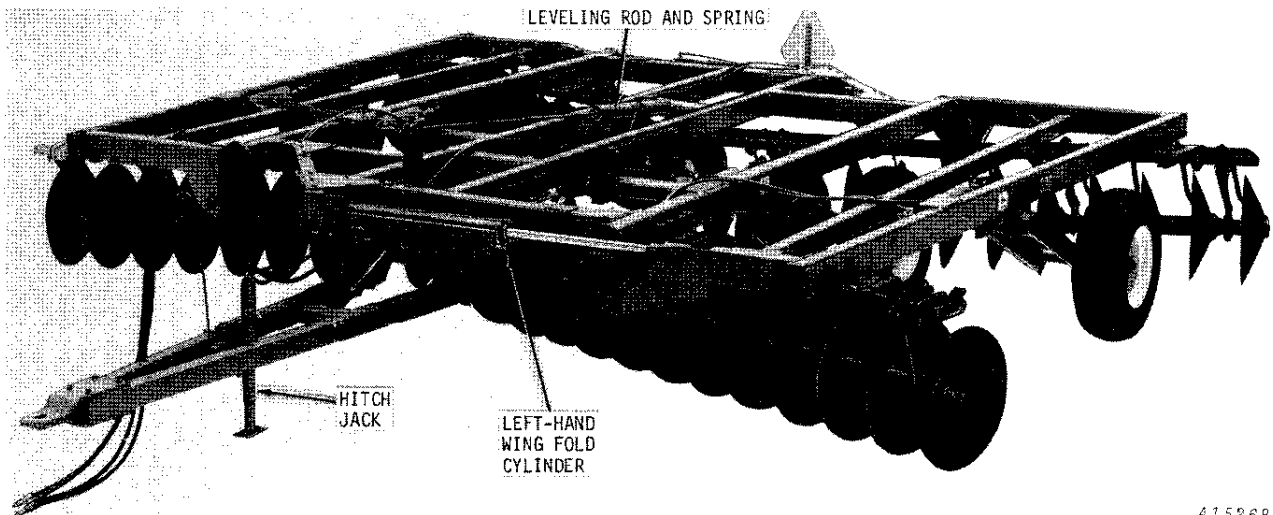
Record your disk serial number in the space provided on page 39. Your dealer needs this infor-

mation 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 worldwide, 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.



John Deere Model 330 Wing-Fold Power-Flex Disk—20-Foot, 10-Inch (6.4 m) Width (Front View)

A15268



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Safety Suggestions

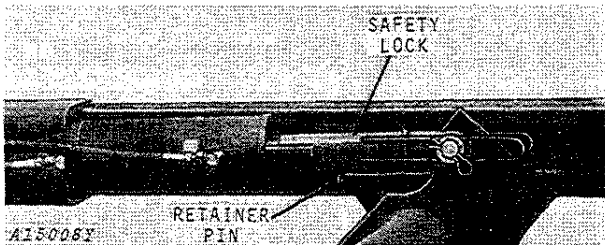
GENERAL

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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.

TRANSPORTING



Before transporting the disk, fold the extension gangs and fully extend the wheel frame hydraulic cylinders. Position safety locks as shown, then relax cylinder to prevent damage to cylinder. Install spring locking pins.

When transporting the disk on a smooth surface road, do not exceed maximum tractor transport speed. 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.

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.

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.

When removing self-adjusting scrapers for any reason, always remove scraper which has spring attached to upper portion of tension lever first. See page 15. When installing scrapers, always install this scraper last. Wear protective gloves to prevent injury from cutting edges of disk blades or scraper blades.

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

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

When leaving the tractor and disk, connect safety locks or lower the disk to the ground.

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.



Preparing for Use

PREPARING THE DISK

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

Lubricate the disk as instructed on page 18.

Be certain all bolts are tightened securely. See torque chart on page 20.

PREPARING THE TRACTOR

General

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.

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 ballast, refer to your tractor operator's manual.

Tractor Drawbar

Place tractor drawbar with offset in lower position. Secure drawbar with retainer bolts when disk-ing and transporting.

Rockshaft Selector Lever

Set the rockshaft selector lever in "Zero," "Min" or "D" position depending upon your model tractor. This will lock out the tractor rockshaft hydraulic sensing system.

Rockshaft Height Stop (4630, 8430 and 8630 Tractors)

If the tractor rockshaft is accidentally lowered with a Quik-Coupler hitch on the tractor, damage can occur to the 330 Disk hitch when turning the tractor.

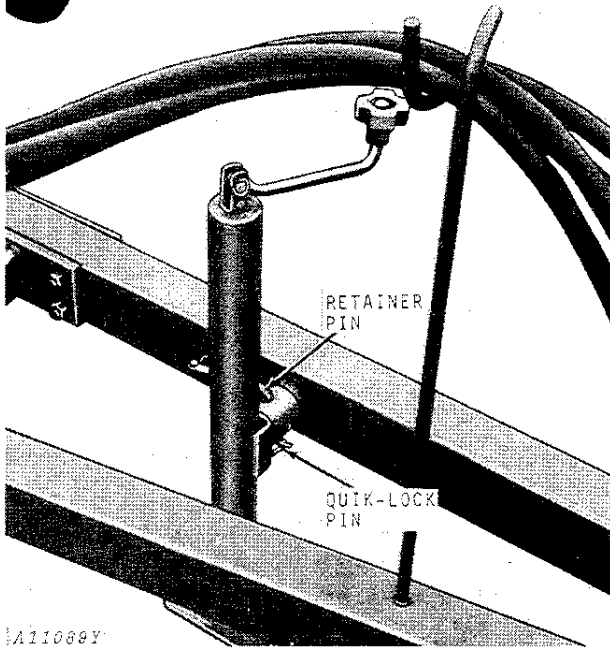
To prevent accidentally lowering the rockshaft while operating the disk, install AR60331 rockshaft height stop. Installation instructions are provided with the stop.



Attaching and Detaching

ATTACHING TO TRACTOR

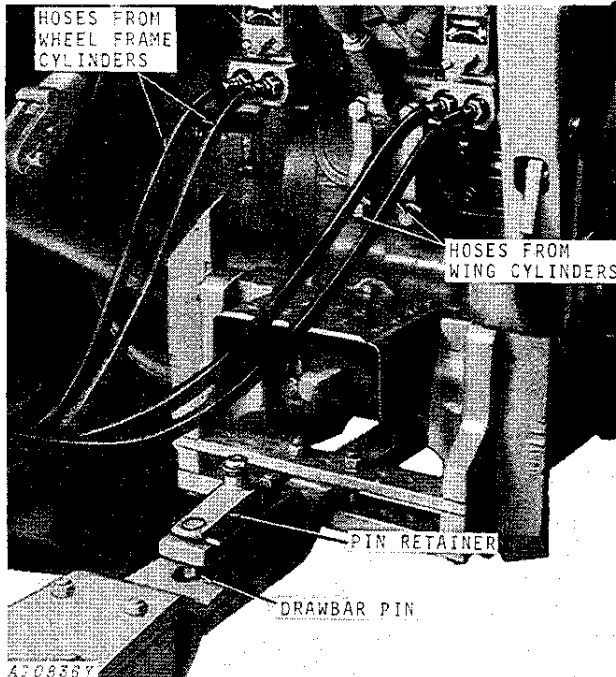
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Jack Positioned for Attaching

Back the tractor up to the disk. Secure jack in vertical position with retainer pin and Quik-Lock pin. Raise hitch to drawbar height with jack.

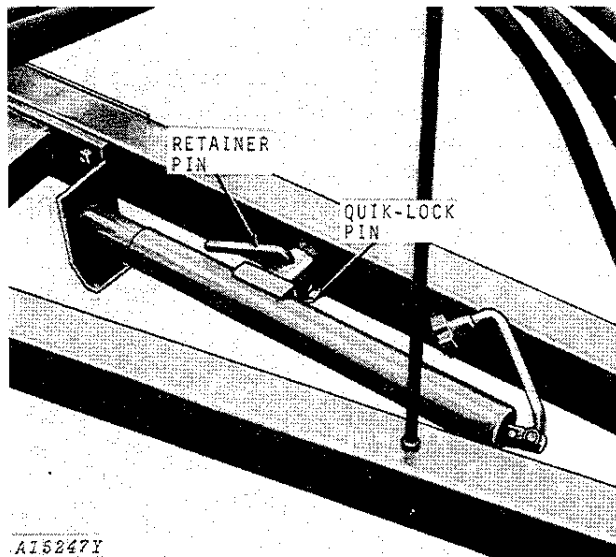


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Back tractor into position and attach to disk with drawbar pin. Secure drawbar pin with pin retainer.

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

Install hydraulic hoses from wheel frame cylinders in tractor breakaway coupler No. 1 and hoses from wing cylinders in breakaway coupler No. 2. Position hoses in each outlet so wheel frame cylinders will extend to lift the disk and wing cylinders will retract to fold gangs when hydraulic control levers are moved rearward.



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Jack Positioned For Field Use

Raise jack, remove jack retainer pin and swing jack into horizontal position as shown for field operation.

Replace retainer pin 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.

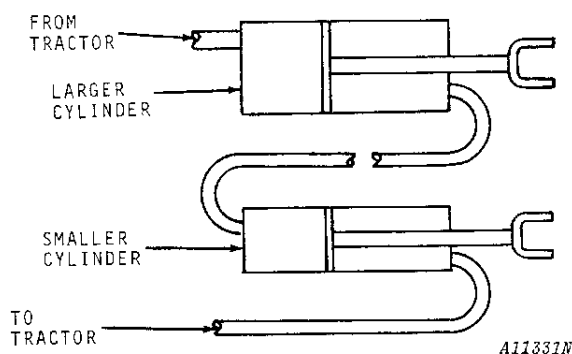
If injured by escaping hydraulic oil, see a doctor at once. Serious infection or reaction can develop if proper medical treatment is not administered immediately.

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.

Rephasing Wheel Frame Lift Cylinders

The wheel frame cylinders on the 330 Disk use master and slave cylinders with a rephasing design. These cylinders, connected in series, are used to maintain level wings when using the hydraulic system to regulate disking depth and to maintain level lift when raising the disk.



The larger 4-1/4-inch (110 mm) master cylinders are used on the center main frame section. The smaller 4-inch (100 mm) cylinders are used on the wing frames. When a certain amount of oil is forced into the master cylinders, a proportionate amount of oil enters the slave cylinders extending the master and slave cylinders the same distance.

Extending the cylinders completely, forces any excess oil from the system, thus "rephasing" the cylinders to maintain level action of the wings.

If wings do not raise level with main frame, rephase the cylinders by extending them all the way to the lifted position. Hold the lever to allow excess oil to pass through the cylinders until wings be come level with the main frame.

DETACHING FROM TRACTOR

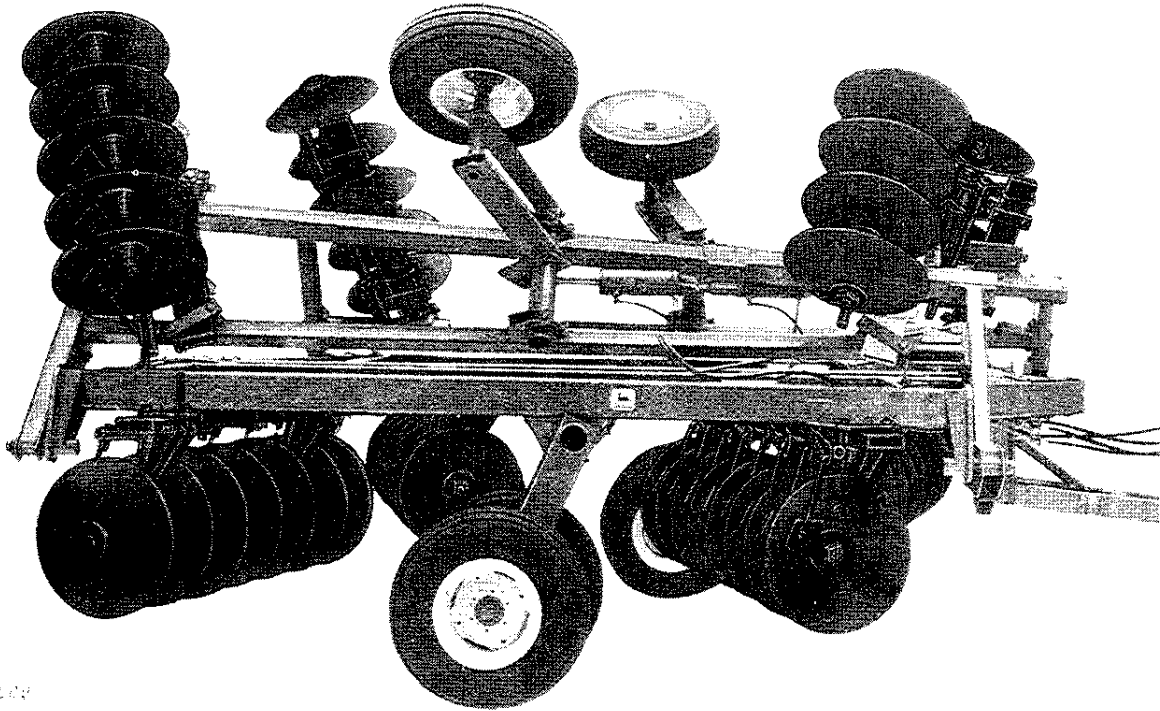
When detaching disk from tractor, lower disk to ground with hydraulic control lever. Relieve hydraulic pressure from system by shutting off tractor engine and moving hydraulic lever in both directions.

Remove hoses from breakaway couplers. Remove jack retainer pin, swing jack into vertical position and replace retainer pin. Raise hitch with jack until weight of hitch is transferred from tractor drawbar to jack.

Remove drawbar pin and drive tractor forward away from hitch.



Transporting



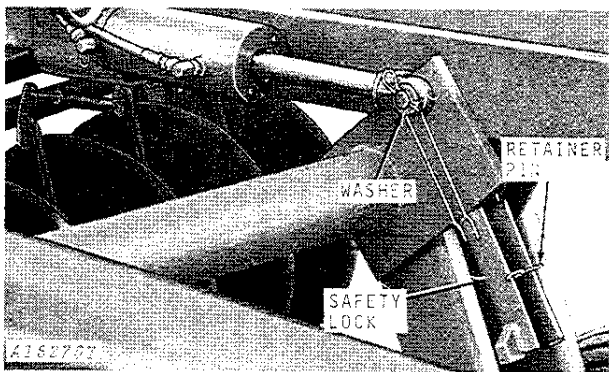
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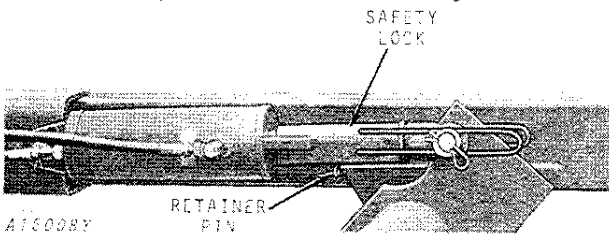
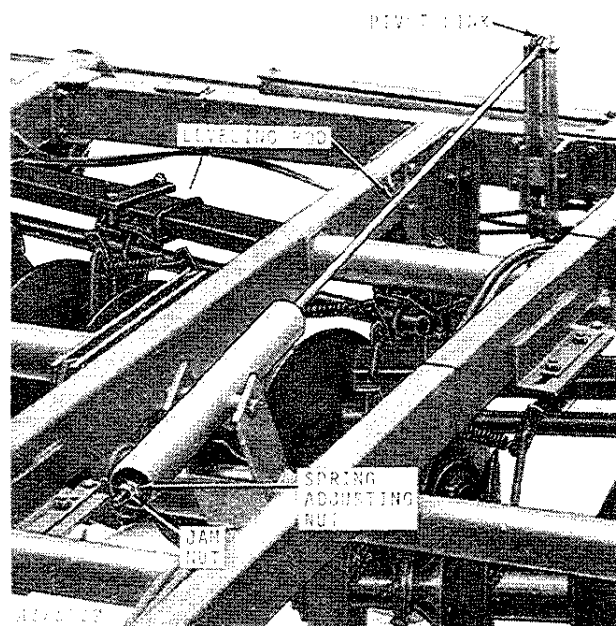
To transport the disk on a road or highway, fully extend the wheel frame cylinders to raise the disk.

Retract wing cylinders to fold outer gangs as shown above.

Position safety locks over both wheel frame cylinder rods as shown. Install retainer pins and secure with spring locking pins.



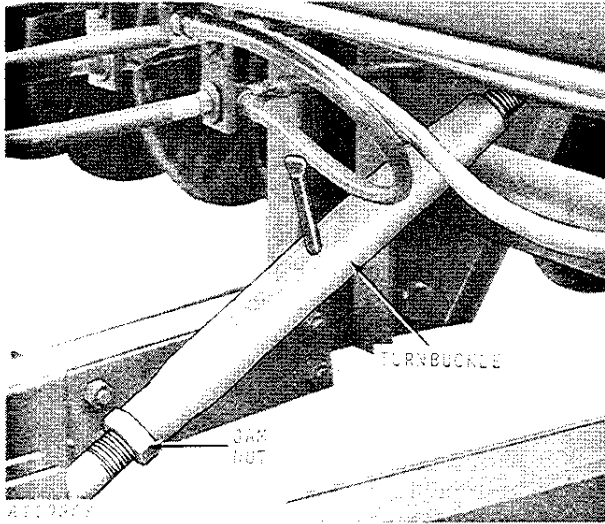
Safety Lock Positioned for Lowering Disk



Safety Lock Positioned for Road Transport

Make certain pivot link is resting against main frame. If link is not against frame, lower disk to ground and raise carrying wheels. Tighten spring adjusting nut, then raise disk to be sure link rests solidly against frame. Secure spring adjusting nut with jam nut.

Raise the disk, install transport safety locks, then level the disk for transport as follows:



Loosen jam nut on turnbuckle and adjust turnbuckle until main frame is level.

NOTE: Use turnbuckle to level disk for transport only. Do not level with turnbuckle when machine is in disking position. See page 9 for instructions on leveling the disk for field operation.

CAUTION: Never expose more than 2-1/4 inches (55 mm) of turnbuckle eyebolt thread.

When frame is level, tighten jam nut against turnbuckle.

Lock tractor drawbar in a fixed position.

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

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

NOTE: Use of a safety chain is recommended when towing this implement on public roads. Tensile strength of the safety chain should be at least equal to the gross weight of the towed load. Safety chains are available from your John Deere dealer.

SAFETY FIRST

THE COMPLETE OBSERVANCE of one simple rule would prevent many thousand serious injuries each year. THAT RULE IS: "NEVER ATTEMPT TO CLEAN, OIL, OR ADJUST A MACHINE WHILE IT IS IN MOTION."



Operating Adjustments

PRE-OPERATION ADJUSTMENT SUMMARY

Be certain that the following procedures have been performed before the disk is taken to the field.

1. Preparing the Disk

- A. Lubricate the disk as shown on page 19.
- B. Tighten all bolts to the specified torque. See page 20.
- C. Tighten gang bolts to 850 ft-lbs (1 153 Nm) of torque. See page 28.
- D. Inflate all disk tires to 30 psi (2.1 bar) (2.1 kg/cm²).

2. Preparing the Tractor

- A. Set the rockshaft selector lever at D, Zero or "Min" position. Keep the three point hitch in the up position. Use a rockshaft height stop on 4630, 8430 or 8630 Tractors.
- B. Inflate tractor tires as specified in tractor operator's manual.
- C. Place tractor drawbar with offset in lower position. Secure drawbar with retainer bolts when disking and transporting.
- D. Check tractor oil reservoir supply.

3. Attaching and Detaching

- A. Raise hitch to drawbar height with jack.
- B. Attach disk with drawbar pin and secure with drawbar pin retainer.
- C. Install disk hydraulic hoses in tractor break-away couplers. (The disk should rise when the hydraulic control lever is moved rearward.)
- D. Bleed hydraulic cylinders if hoses have been detached from the cylinder or if the cylinder has not been used before. See page 5.
- E. After attaching to the tractor for the first time, check for leaks in the hydraulic system. See page 5.

4. Transporting

- A. Install cylinder stops. See pages 6 and 7.
- B. Level the disk for transport by loosening jam nut on turnbuckle and adjusting turnbuckle until main frame is level.

OPERATING ADJUSTMENT CHECKLIST

The following adjustments must be performed each time the disk is used if it is to do an efficient job of disking. Each step should be completed in this sequence.

1. Leveling the Disk

- A. Front and rear — The front and rear gangs should disk the soil evenly. Front and rear leveling is accomplished by adjusting the spring adjusting nut.
- B. Side-to-Side — Equal gang penetration is attained by tightening or loosening the nuts on the wheel frame hydraulic cylinders. See page 8.

2. Angling Gangs

Three gang angle settings are available for both front and rear gangs. Right-hand and left-hand gangs as well as the front and rear gangs should be angled exactly alike for the disk to function properly. See pages 10-12.

3. Adjusting Disking Depth

Disking depth is controlled by: The tractor hydraulic cylinder control lever, the angle of the gangs or by use of the optional depth stops. See page 8.

4. Scraper Adjustments

(Self-Adjusting Scrapers) Located self-adjusting scrapers close to the spool. Spring tension may be changed by moving spring to the desired hole in the scraper arm. See page 14.

(Rigid Type Scrapers) Adjust scrapers 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. See page 14.

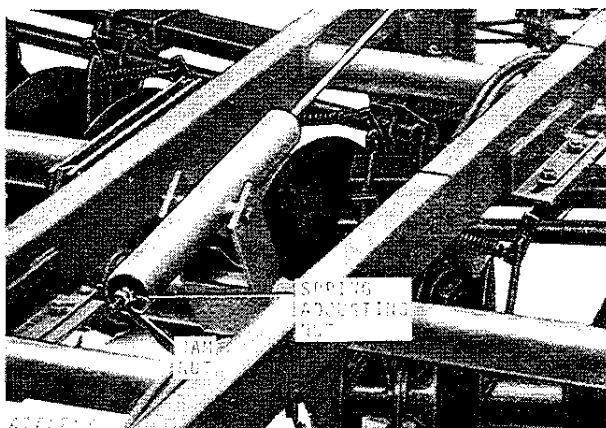
NOTE: See the Trouble Shooting section on pages 38 and 39 for information concerning operation problem solving.

LEVELING THE DISK

To level the disk for field operation, proceed as follows:

Front to Back

After the disk has been leveled in transport position as described on pages 6 and 7 slowly lower the disk to the ground until the blades just touch the ground.



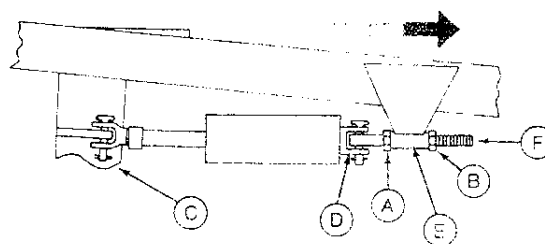
If the front blades touch first, lower disk completely to ground and tighten spring adjusting nut; if rear blades touch first, loosen spring adjusting nut.

Raise disk until blades just touch the ground to check leveling adjustment. Repeat above leveling procedure if necessary until disk is level. Lock spring adjusting nut with jam nut.

CAUTION: Do not attempt to adjust leveling rod spring until disk is lowered completely to ground.

In some conditions, the spring-adjusting nut may be completely tightened and the disk appears to be operating with the spring loose. This is a normal condition. However, if the rear gangs do not bring in enough dirt to fill the center depression, the carrying wheels may be lowered slightly (but not enough to touch the ground). This adds compression to the spring and will force the rear of the disk into the ground. This adjustment may be made on the go.

Side to Side



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A - Nut "A"
B - Nut "B"
C - Wheel Frame

D - Cylinder Yoke
E - Bracket
F - Eyebolt

Drive the disk onto a level surface, place the wings in working position and raise the disk. Determine if disk is level from side to side by measuring from the ground to the disk blades. Check inner and outer ends of gangs.

If the wings are too low, back nut "B" off and retract the cylinder until nut "B" is against the bracket. Tighten nut "A" against the bracket and raise the disk. If the wings are too high, retract the cylinder, move nut "A" back toward the cylinder, extend the cylinder until nut "A" is against the bracket (E), then tighten nut "B" against the bracket.

IMPORTANT: Be sure eyebolt (F) is positioned so cylinder can be secured to the eyebolt with the cylinder yoke (D) opening as shown in illustration.

NOTE: Moving the eyebolt (F) toward the wheel frame (C) will raise the wing and moving the eyebolt away from the wheel frame will lower the wing.

This is only a starting point and final adjustment must be made in the field.

ADJUSTING DISKING DEPTH

The depth of disking is controlled by the tractor hydraulic cylinder control lever, by the angle of the disking gangs, or by the use of depth stops on the hydraulic cylinder rods. (See attachment section, page 18). The carrying wheels act as gauge wheels to regulate the working depth of the disk.

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