



A W Disk Harrow



JOHN DEERE

OPERATORS MANUAL

A W Disk
Harrow

OMB25036 H9 English

OMB25036 H9

LITHO IN U.S.A.
ENGLISH





to the purchaser

Your new disk harrow is sturdy and dependable. It will give long and efficient service if given proper care and operation.

This operator's manual is provided to furnish information on the proper operation, adjustment, maintenance, and lubrication of your new disk harrow.

When in need of parts, see your John Deere dealer. He will furnish genuine John Deere Parts and prompt and efficient service in the field or in the shop.

Right-hand and left-hand reference is determined by standing at the rear of the disk harrow and facing the direction of travel.

Study this manual carefully. Keep it handy, in a safe place, for future reference.

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

Serial Number

When ordering parts, refer to the model and serial number. By doing so, you will assist your John Deere dealer in giving you prompt, efficient service.

The serial number plate is located on the front gang frame tie plate.

Record the serial number and purchase date in the spaces provided below.

Serial No.

Date Purchased

John Deere AW Disk Harrow

Check off size of your disk harrow and disk blade. This information will be valuable when ordering parts.

Size

8-Ft., 6-In. ☐

9-Ft., 10-In. ☐

11-Ft., 2-In. ☐

12-Ft., 6-In. ☐

13-Ft., 10-In. ☐

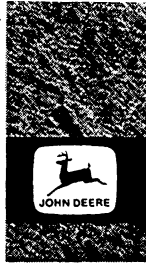
15-Ft., 2-In. ☐

Blade Size

18-In. ☐

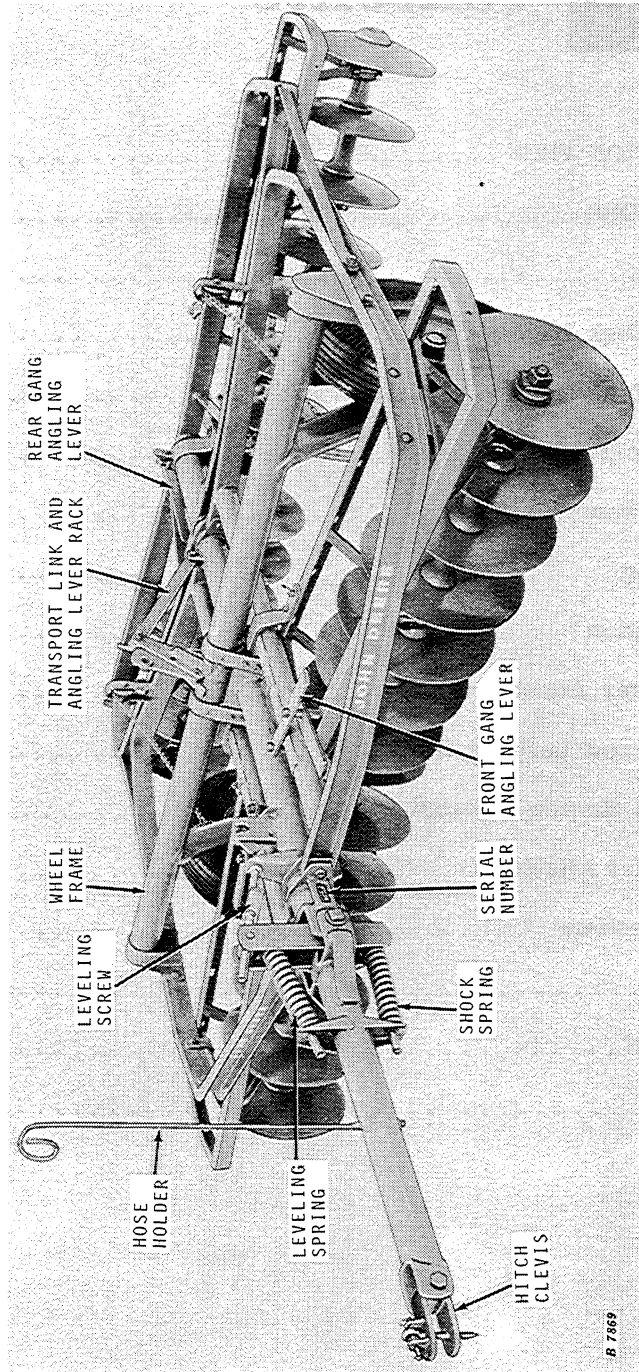
20-In. ☐

22-In. ☐



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AW 9-Foot, 10-Inch Disk Harrow in Transport Position



specifications

The AW Disk Harrow is a double-action, flexible, wheel-carried disk harrow. It can be used with any John Deere tractor equipped with an 8 inch stroke remote hydraulic cylinder, or any other tractor using an 8 inch stroke remote hydraulic cylinder that conforms to ASAE-SAE standards.

The front gangs are free to flex independently and the complete rear section can swivel on the main frame pipe, allowing flexibility between the front and rear gangs.

The front and rear gangs can be angled independently of each other.

There are two heavy cushion springs on the drawbar and main frame hinge joint. The top spring is for automatic leveling of the disk harrow when in the working position. The bottom spring absorbs shock loads when transporting.

There is a hitch on the rear of the disk harrow for pulling such tools as a spike tooth harrow.

Operating Speed

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

Disking depth - Controlled by raising or lowering the wheels with the remote hydraulic cylinder and the angle of the gangs.

Leveling - Adjust the hand screw on the disk harrow drawbar to level the disk harrow for various tractor drawbar heights.

Carrying wheels - 14-inch wheels with automotive type adjustable tapered roller bearings.

Wheel tread - 80-inch wheel frame regular for 8-foot, 6-inch; 9-foot, 10-inch; or 11-foot, 2-inch sizes. 106-inch wheel frame regular or 80-inch optional for the 12-foot, 6-inch; 13-foot, 10-inch; or 15-foot, 2-inch sizes.

Disk gang bearings - Antifriction.

Scrapers - Disk harrow is available with or without straight scrapers. End (bent) scrapers are available for sticky soil. Heavy duty scrapers are also available.

Middlebreaker attachment - A spring-tooth middlebreaker that cuts out the center strip left by the front disk gangs.

Furrow leveling blade or furrow filler attachment - Either one of these attachments will fill and level the furrow left by the outer gang disk blades when disking in plowed or loose ground.

Spike tooth harrow attachment - This attachment permits disking and harrowing in the same operation.

(Specifications and design subject to change without notice.)



operation

Preparing disk harrow

Lubricate the disk harrow as instructed on page 11.

Inflate the disk harrow tires as follows:

Disk harrow size	Recommended tire pressure
8'6" or 9'10"	22 psi
11'2"	24 psi
12'6", 13'10", or 15'2"	28 psi

Either 7.50 x 14-inch or 8.00 x 14-inch tires can be used.

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

Preparing tractor

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

On John Deere 3010 or 4010 Tractor equipped with rear rockshaft, set the selector lever in the "D" position.

If the tractor has an adjustable swinging drawbar, position it in the long, low position.

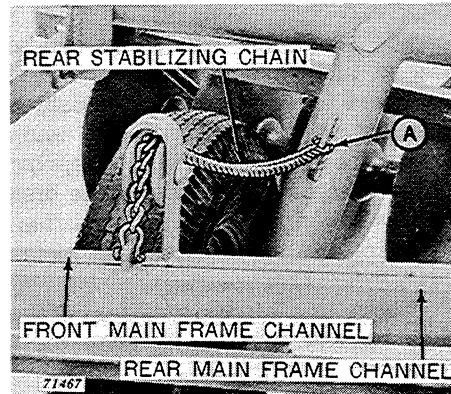
Attaching to tractor

The disk harrow must be in the raised position before attaching it to the tractor drawbar because of the

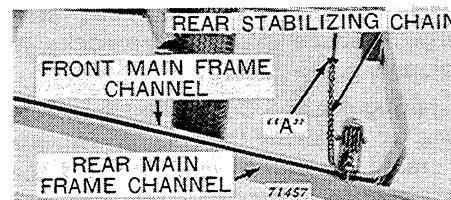
tension in the upper spring of the disk harrow hitch.

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.

Rear stabilizing chains



Rear stabilizing chain for 8-foot, 6-inch; 9-foot, 10-inch; or 11-foot, 2-inch sizes



Rear stabilizing chain for 12-foot, 6-inch; 13-foot, 10-inch; or 15-foot, 2-inch sizes

The rear main frame channel must be level with the front main frame channel when the disk harrow is in the raised position.

The rear stabilizing chains control the position of the rear main frame channel. When the end links of the stabilizing chains are pinned through the center holes "A" in the wheel frame arms, the front and rear channels should be level with each other. If the channels are not level, move the ends of the stabilizing chains up one or two holes in the wheel frame arms to raise the rear channel, or down one or two holes to lower the rear channel.

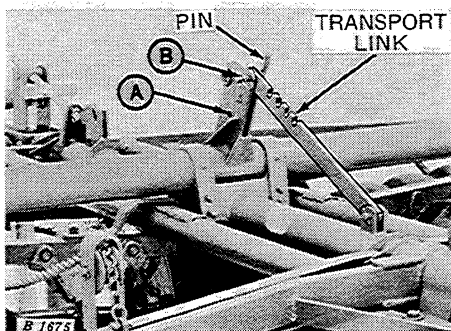
When the harrow is lowered into the working position, the stabilizing chains will be loose enough to allow the harrow to work properly.

Detaching from tractor

Place the disk harrow in the raised position and connect transport link. Disconnect remote hydraulic cylinder hoses at tractor or remove cylinder from disk harrow before pulling hitch pin and driving tractor away from the disk harrow.

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 slotted 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.

Do not transport the disk harrow over 12 miles per hour on a smooth surface road, and reduce the 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.

Field operation

Remote hydraulic cylinder

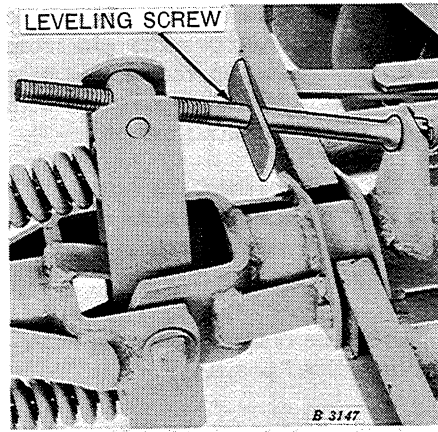
Install the remote hydraulic cylinder on the disk harrow and disconnect the transport link.

Tractor swinging drawbar

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

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Leveling the disk harrow



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

Turning the leveling screw clockwise will lower the rear section. Turning the leveling screw counter-clockwise will raise the rear section.

Adjusting disking depth

The depth of disking is controlled by the remote cylinder control lever of the tractor and the angle of the disk gangs. The transport 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 transport wheels, position stop on remote cylinder so transport 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 transport wheels completely off the ground.

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

Adjusting scrapers

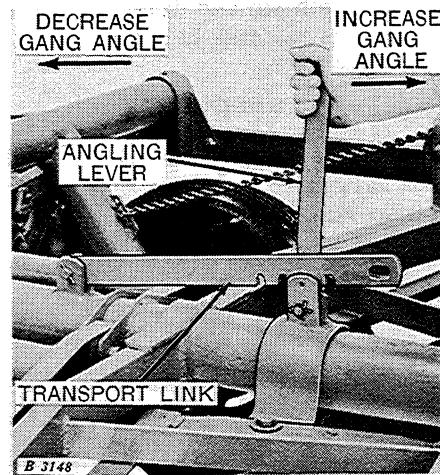
Adjust the scraper blades so the scraping edge of the blade is flush against the disk and makes good contact along its entire width.

If the scrapers are set too tightly against the disk blades they will prevent the gangs from revolving freely.

Angling gangs

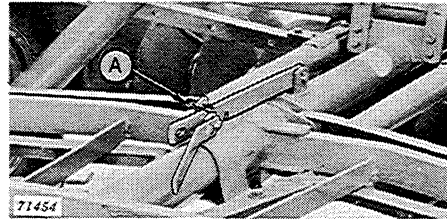
The hydraulic cylinder must be installed and the disk harrow must be raised when angling the gangs, because the transport link is also used as the lever rack for the rear gang angling lever.

Rear gangs

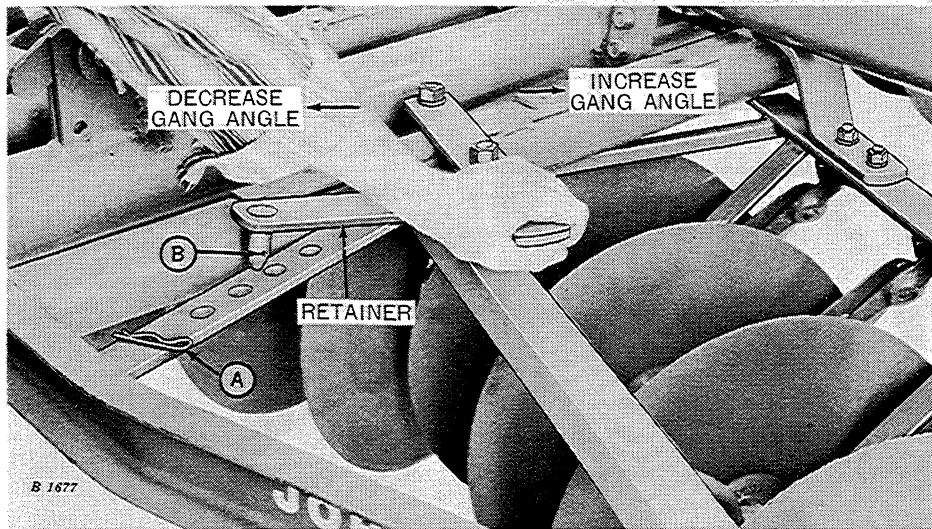


Pushing forward on the angling lever will decrease the angle of the gangs, and pulling back will increase it.

When the desired gang angle is reached, pull the angling lever down to a horizontal position and install the spring locking pin in hole "A." This will hold the gangs securely in position.



Front gangs



Changing angle of left-front gang

To change the angle of the front gangs, pull pin "A" from hole "B" and raise the retainer. Push the gang back to increase the angle or pull it forward to decrease the angle.

When the desired gang angle is reached, drop the retainer into the nearest hole and reinstall pin "A" in hole "B."

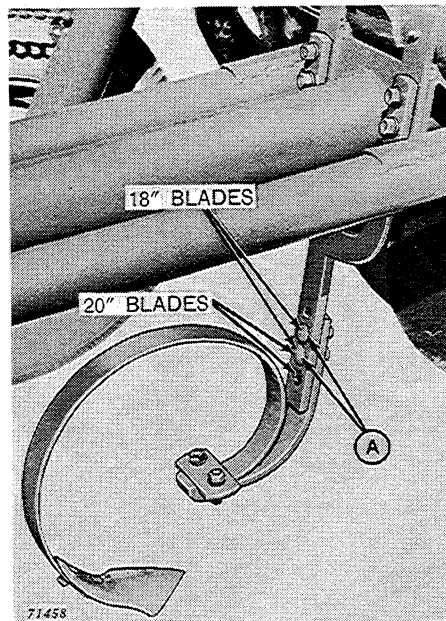
Occasionally check the gang bolt nuts and tighten, if necessary.

8 operation

Operating Speed

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

Middlebreaker attachment



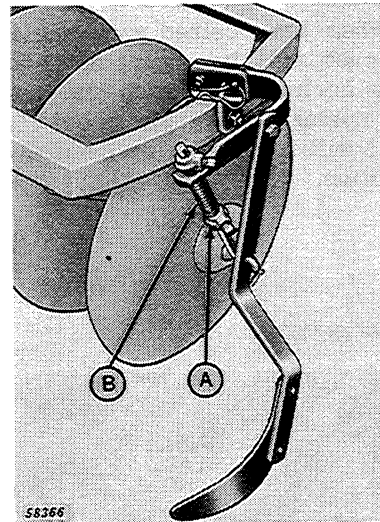
The middlebreaker attachment is available as special equipment.

Adjust the shovel up or down at "A" to remove the center strip left by the front gangs.

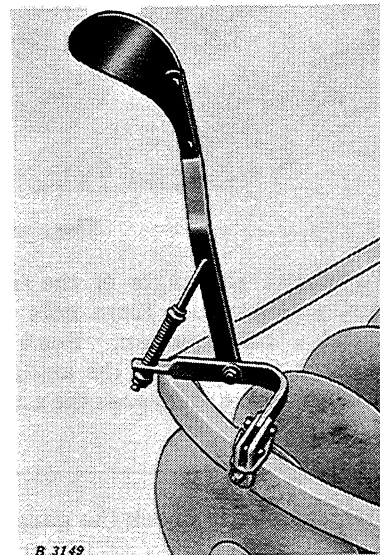
Position shown is for 18-inch blade size.

Furrow leveling blade

This attachment will fill and level the furrow left by the outer rear gang disk blades when disking in plowed or loose ground.



Adjust collar "A" against spring "B" after disk harrow is in the field, so that the shovel is pulling enough dirt to fill in the furrows left by the outside disks.

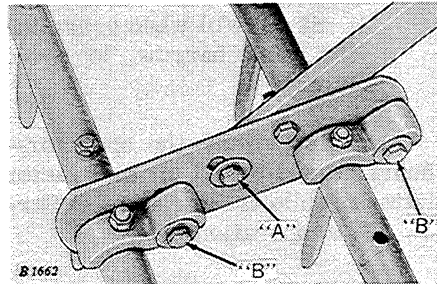


The attachment can be raised up over the gang frame for transporting, passing through gates, or disking close to fences.

Spike tooth harrow attachment

The spike tooth harrow attachment permits disking and harrowing in one operation, and eliminates drag harrow transporting problems.

This attachment is connected to the disk harrow mainframe with two quik-lock pins so it can be easily attached or detached. It consists of two rows of spike teeth properly spaced.



The tooth bars may be adjusted up or down by loosening bolt "A," set the bars to the desired height and tighten bolt "A".

The angle of the teeth may be changed by loosening bolts "B", set the teeth to the desired angle and tighten the bolts.

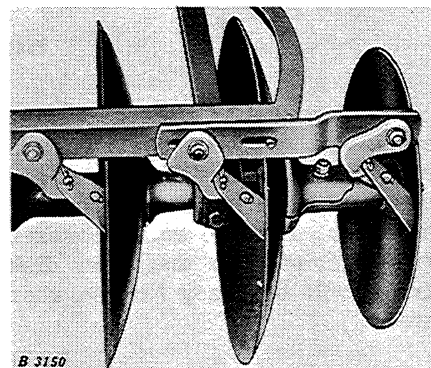
Furrow filler attachment

The furrow filler attachment will fill and level the furrow left by the outer rear gang disk blades when disking in plowed or loose ground. The attachment must be used less scrapers on the 8-ft. 6-in. size disk harrow.

The disk blades are not furnished with the attachment. The following blade sizes are recommended for the furrow filler:

For disk harrows equipped with 22-inch disk blades, use 18-inch disk blades on the furrow filler.

For disk harrows equipped with 20-inch disk blades, use 16-inch disk blades on the furrow filler.



For disk harrows equipped with 18-inch disk blades, use 14-inch disk blades on the furrow filler.

Safety suggestions

Be careful when operating the disk harrow, to avoid injury.

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.

Refuel the tractor only when the engine has been shut off. Do not smoke or use an oil lantern when working around inflammable fuel, especially when refueling the tractor.

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

When transporting the disk harrow on 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.

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

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

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

Storage

Inspect your disk 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.

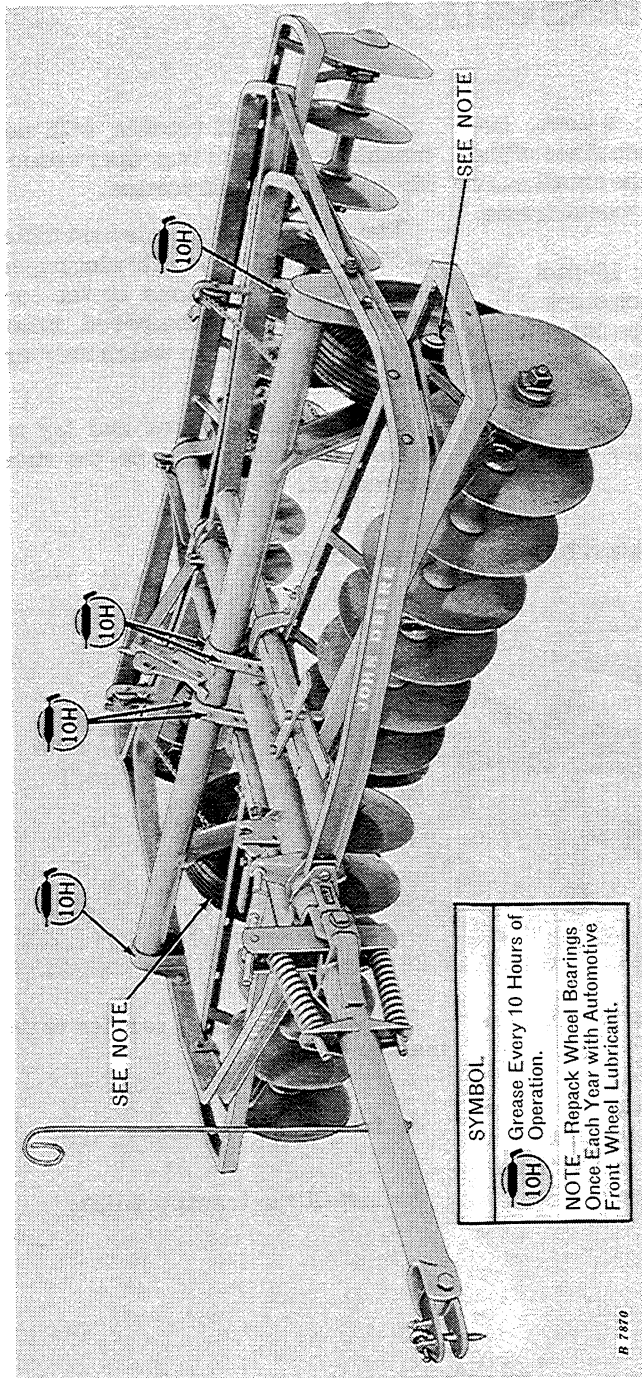
Repaint all parts necessary and protect all unpainted surfaces with a good rust-preventive grease or oil.

Keep all bolts tightened securely.

NOTE: 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.

Lubrication

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The initial lubrication is of 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, with SAE multipurpose-type grease, but avoid excessive lubrication. Excess lubricant gathers dust.

The anti-friction bearings are packed and sealed at the factory.

Oil all pivot points of power control parts and drawbar.

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



assembly

The 8-foot, 6-inch; 9-foot, 10-inch; and 11-foot, 2-inch sizes of the AW Disk Harrow use the small main frame and the narrow wheel frame.

The 12-foot, 6-inch; 13-foot, 10-inch; and 15-foot, 2-inch sizes of the AW Disk Harrow use the large main frame and the wide wheel frame.

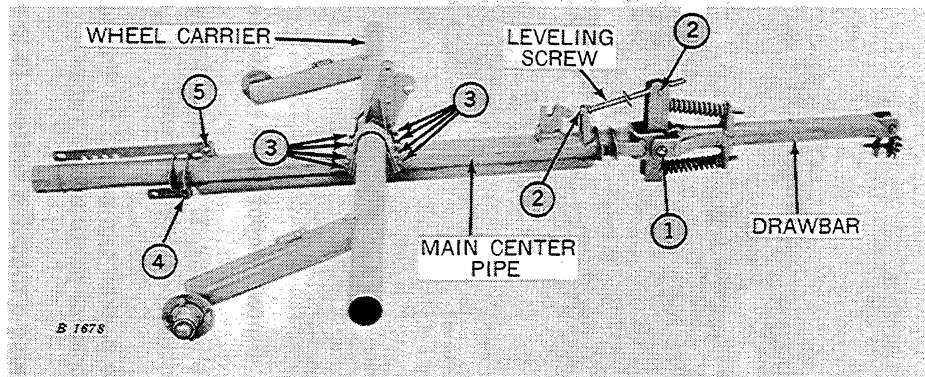
However, the assembly procedure is the same for all sizes of the AW Disk Harrow.

Practically all trouble with new machines is due to improper assembly and lack of lubrication.

The AW Disk Harrow is assembled as illustrated in the following pages. Where the instructions or the connecting points are numbered, follow closely the order in which they are numbered.

Cut all bundle wires and lay out parts where they will be the most convenient.

Drawbar and wheel carrier



1. Attach the drawbar to the main center pipe.

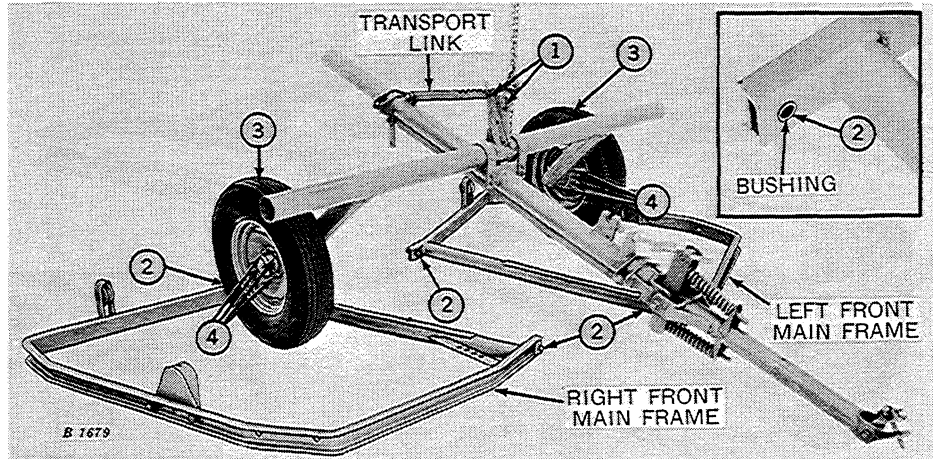
2. Install the leveling screw by screwing one end into the trunnion and securing the other end with the castellated nut and cotter pin.

3. Attach the wheel carrier to the main center pipe.

4. Install the connecting link.

5. Install the transport link.

Wheels and front main frames

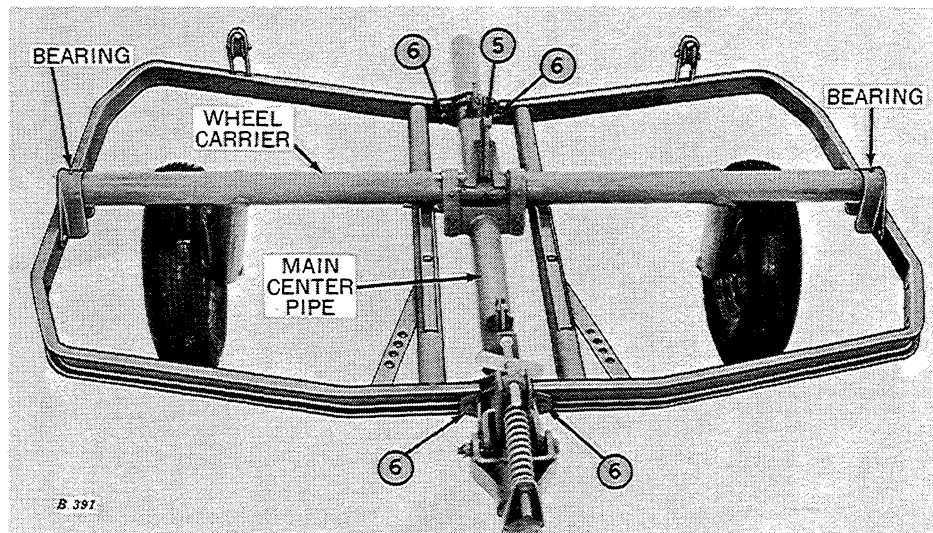


1. Attach a chain hoist to the upper cylinder mount, raise the frame up and pin the transport link in transport position.

2. Position the main frames as shown and install bushings (See inset).

3. Mount the tires on the wheels. Any size tire from 7.50 x 14-inch to 8.00 x 14-inch can be used.

4. Mount the wheels with tires on the wheel hubs.

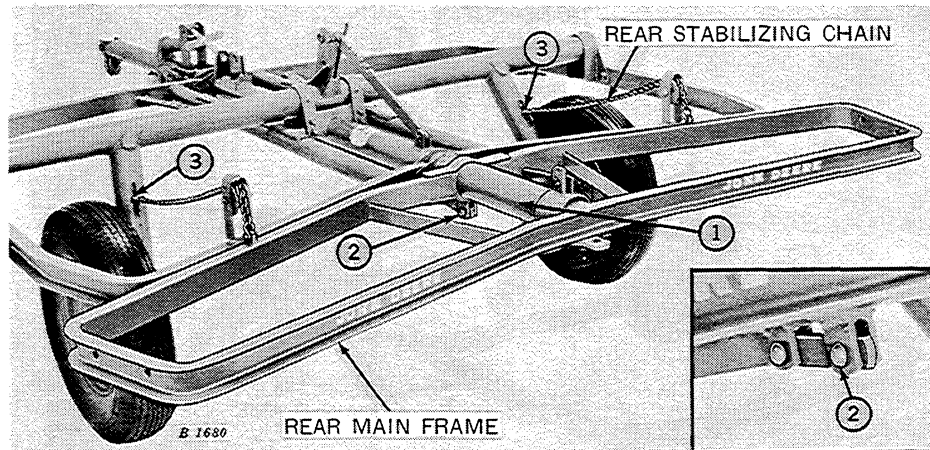


5. Remove the chain hoist.

6. Install the front main frames by first slipping the bearings over the

ends of the wheel carrier pipe. Then attach the main frames to the main center pipe with two bolts.

Rear main frame



1. Install the rear main frame by sliding it over the rear end of the main center pipe.

2. Attach the connecting link.

3. Attach the rear stabilizing chains to the wheel frame.

NOTE: Cover the main center pipe with grease before installing the rear main frame.

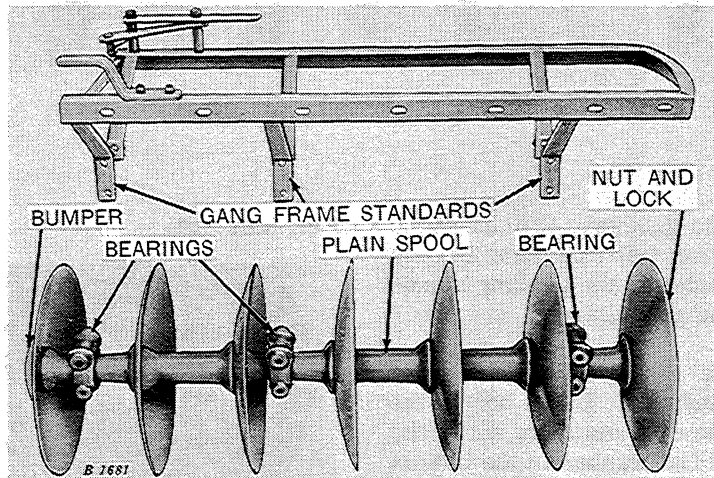
Gangs

The four gang frames with gang bolts, bearings, spools, and hardware are shipped in one bundle. The gang frames are stenciled right front, left front, right rear, and left rear. Arrange the gang frames on the floor or ground in this order, and place each gang frame on its side. Remember, the disks on the front gangs must be assembled to throw the dirt out, and the rear gangs must be assembled to throw the dirt in.

When assembling the gangs, always place the small spool or bearing ends next to the concave side of the disk blades.

Always use the gang frame standards as a guide for placing the bearings on the gangs.

Remove the bearings, cardboard washers, and plain spools from the gang bolts. Discard the cardboard washers.



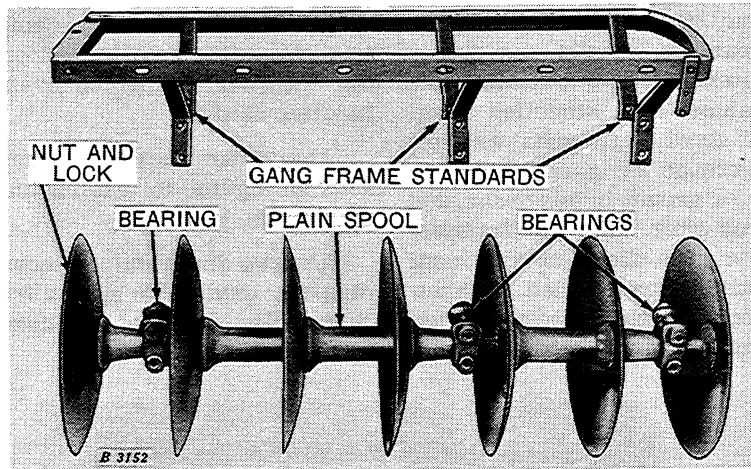
Right front gang for the 9-foot, 10-inch size

Install a disk blade next to the bumper on each gang bolt. Next, install a small spool end, a bearing, and a large spool end. Place the bearing so a cap screw can be threaded into the bottom hole in the bearing standard. Then install another blade and then a plain spool. Proceed in this manner, making sure

that a bearing is installed in the proper place to line up with the bearing standard on the gangframe.

Install a nut lock and nut on the gang bolt with the flat side of the nut to the outside. Do not tighten the nut until the gang frame is installed on the gang.

Gangs—continued



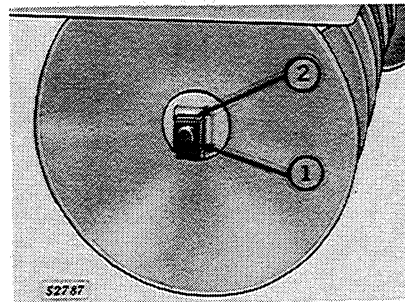
Right rear gang for the 9-foot, 10-inch size

Roll each disk gang in place so the holes in the disk bearings line up with the holes in the bearing standards on the gang frame.

Bolt the disk gangs to the gang frame standards. Use a bolt in the top hole in each standard and a cap screw and flat washer in the bottom hole.

Tighten all nuts securely.

Gang bolt nuts

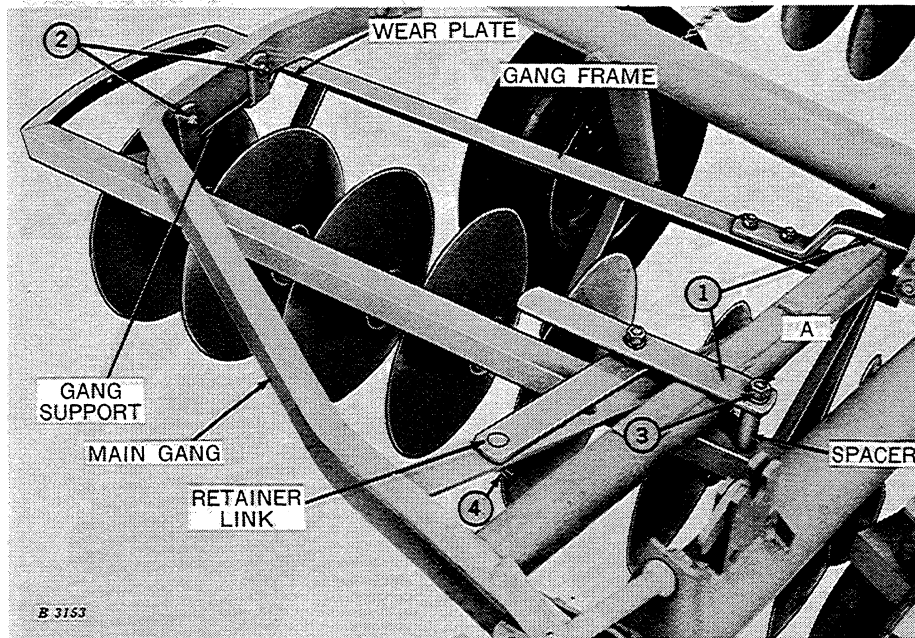


1. Tighten the gang bolt nut very tight. After the nut is tightened, tap the bumper end of the gang bolt with a hammer, and again tighten the gang bolt nut to 800 ft-lbs torque. This is equivalent to a 175-pound force applied to the end of a 4-1/2-foot wrench.

2. Bend the nut lock down over the gang bolt nut.

Installing gangs on harrow

Front gangs



Installing right front gang for the 9-foot, 10-inch size

1. Remove bolt "A" and spacer and slide the gang onto the main frame pipe.

2. Slip the ends of the support under the wear plates on the gang frame, and install as shown.

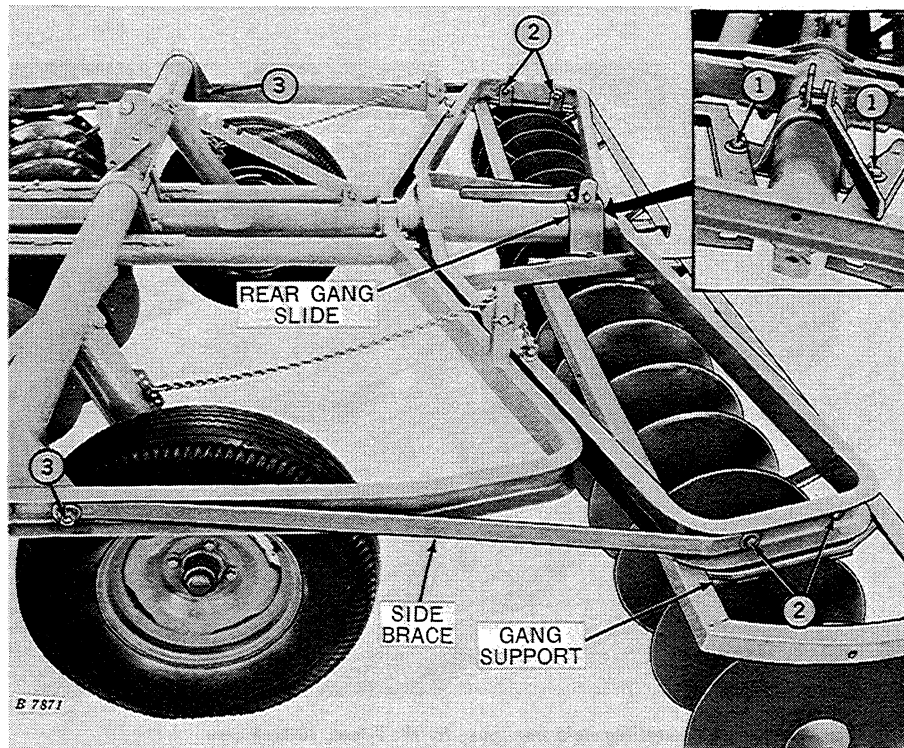
NOTE: The gang supports must be installed as shown, so there will be adequate clearance for all blade sizes.

3. Reinstall bolt "A" and spacer.

4. Position the gang for the desired angle, drop the retainer link into the nearest hole, and install the spring locking pin in the retainer link.

18 assembly

Rear gangs



Installing rear gangs for the 9-foot, 10-inch size

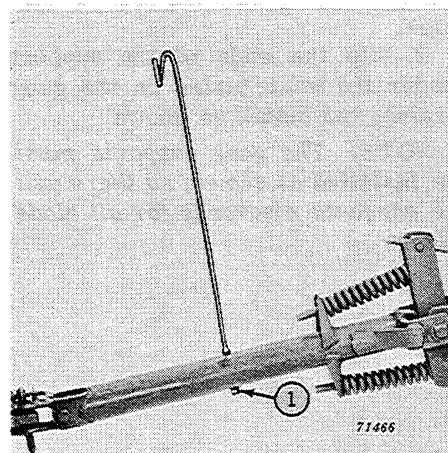
1. Attach the gang frames to the rear gang slide. (See inset.)

2. Slip the ends of the supports under the wear plates on the gang frames, and install as shown.

NOTE: Install the rear ends of the side braces at the same time the gang supports are installed. Make sure the bushing is installed in the brace, so it will be free to pivot.

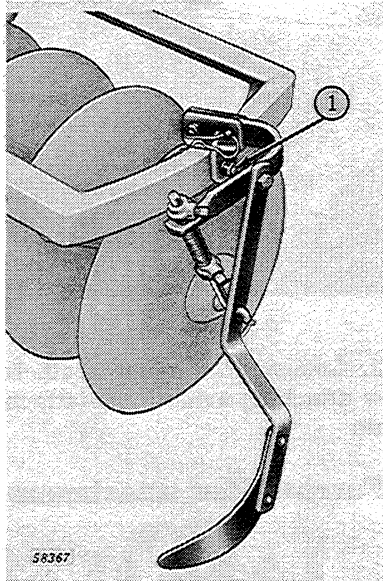
3. Attach the front ends of the side braces to the front main frame.

Hose holder



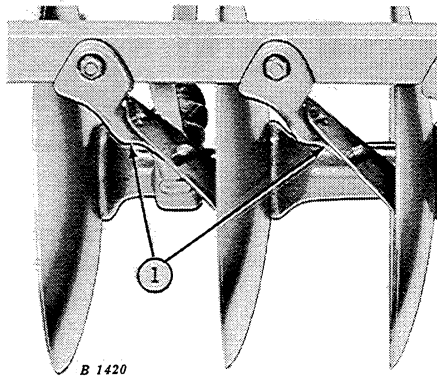
1. Attach the hose holder to the harrow drawbar.

Furrow leveling blade



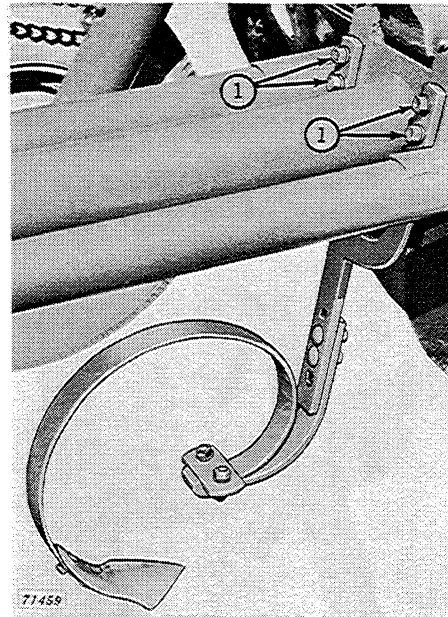
1. Install the furrow leveling attachment on the outside ends of the rear gangs.

Scrapers



1. If the harrow is to be equipped with scrapers, attach them to the gang frames after the gang frames and gang bolts are assembled and tightened. Adjust the scraper blades so the scraping edge of the blade is flush against the disk. Do not set the scrapers too tightly against the disk blades, or they will interfere with the revolving action of the disk gangs.

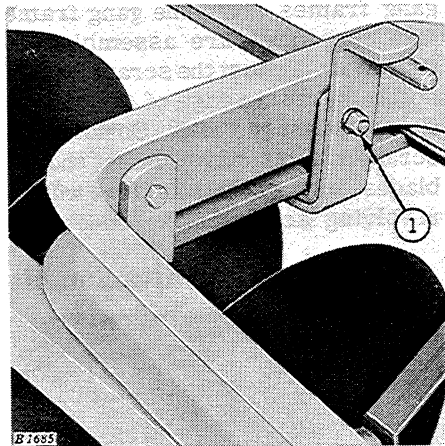
Middlebreaker attachment



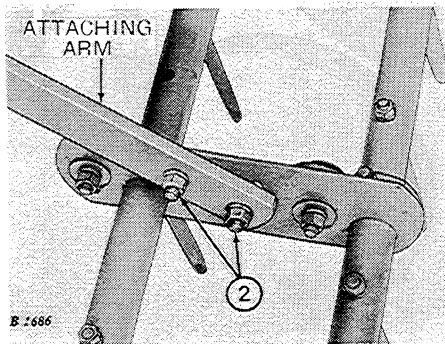
1. Attach the middlebreaker with four bolts.

NOTE: If the harrow is equipped with 18-inch blades, mount the middlebreaker in the two middle holes. If the harrow is equipped with 20-inch blades, mount the middlebreaker in the two lower holes.

Spike tooth attachment

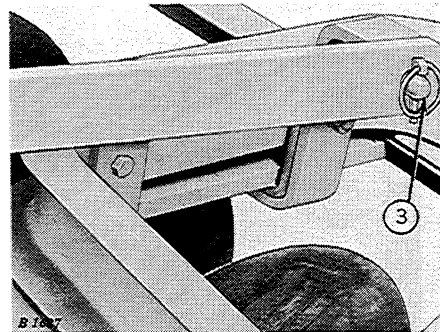


1. Remove the front bolt from the gang support and install the attaching plate.



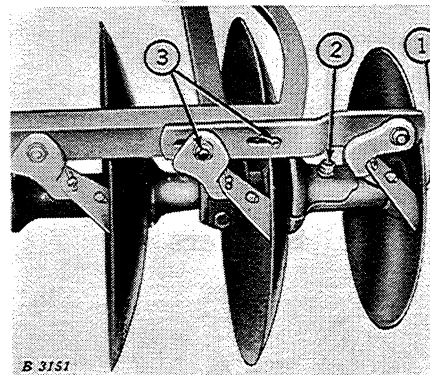
2. Bolt the attaching arms to the spike tooth harrow.

To change the angle of the teeth see page 9.



3. Connect the spike tooth harrow attaching arms to the attaching plate.

Furrow filler attachment



1. Assemble the disk blade on the furrow filler attachment.

2. Attach the furrow filler attachment to the head washer on the rear gangs.

3. Attach the scraper bar and scrapers as shown.



nobody can fill them like you can!

That's what the owner of this pair of work shoes is finding out—the hard way. Through a careless action, he has become the victim of an accident. It's a mighty tough way to find out that nobody else can wear your shoes or practice safety for you. And a needless, costly lesson to learn that safety is an everyday need.

Put safety into each of your workdays; read the operator's manual thoroughly; know how to operate each machine properly and safely; take the safety precautions specified; think before you act.

Make sure you wear your "shoes" everyday. Outfit yourself with a safety program now.

