

# 200F Series Chisel Plow



#### **OPERATORS MANUAL**

200F Series Chisel Plow

OMN159035 K5 English

OMN159035 K5

LITHO IN U.S.A. ENGLISH



#### TO THE PURCHASER

This operator's manual has been carefully prepared to provide the necessary information regarding assembly, operation, and adjustments so that you may obtain maximum service and satisfaction from your new Chisel Plow.



Study this manual carefully and keep it handy in a safe place for future reference.

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

If you should find that you require information not covered in this manual, consult your John Deere dealer. He will be glad to answer any question that may arise regarding the operation of your machine. Your John Deere dealer has trained mechanics who are kept informed on the best service methods and will render you prompt service if needed.

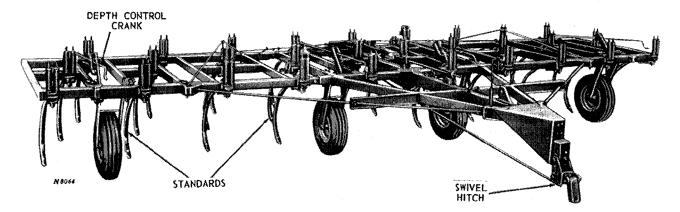
Occasionally, your chisel plow may need new parts to replace worn parts. If you will furnish your dealer the description and the information which should be recorded below when the chisel plow is delivered, he can give you prompt and efficient parts service.

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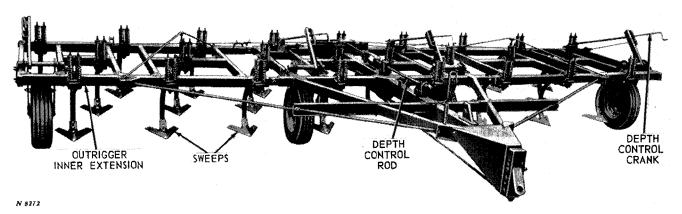


# **CONTENTS**

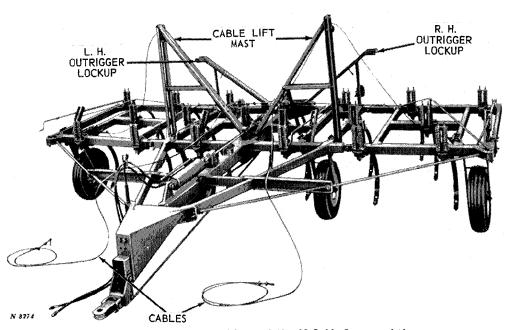
	Page
SPECIFICATIONS	3
OPERATION	4-13
Attaching to tractor	4-5
Tractor drawbar	4
Bleeding hydraulic cylinder	4
Attaching hydraulic cylinder	4
Adjusting hitch	4-5
Turning chisel plow in the field	<del>4-</del> 5
	5
Raising and lowering the chisel plow	อ 5
Wheels	_
Depth of operation and transport clearance	6
Leveling the chisel plow from side to side	6
Adjusting cables	6-7
Adjusting flat cushion-spring standards	7
Regular clearance standards	7
High clearance standards	7
All flat cushion-spring standards	7
Adjusting rolling coulters	7
Drawbar	7
Hitch clevis	- 7
Transporting the chisel plow	8
No. 21 Cable Outrigger Lift	9
Raising outriggers with wheel-type tractor	9
Raising outriggers with crawler tractor	9
	9
Lowering the outriggers	10
No. 22 Hydraulic Outrigger Lift	10
Raising the outriggers	10
Lowering the outriggers	
Tooth patterns	11
Diagonal pattern	11
Split pattern	11
Care of rubber tires	11
Safety suggestions	11
1000 Series Rod Weeder Attachment	11
Standards	12
	12 - 13
LUBRICATION	14
SHIPPING BUNDLES	15-17
ASSEMBLY	18-47



John Deere 229F Chisel Plow with High Clearance Flat Cushion-Spring Standards



John Deere 225F Chisel Plow with Regular Clearance Flat Cushion-Spring Standards



John Deere 219F Chisel Plow with No. 21 Cable Outrigger Lift



# **SPECIFICATIONS**

#### MODELS

219F - 19-Foot Flexible Chisel Plow 221F - 21-Foot Flexible Chisel Plow 223F - 23-Foot Flexible Chisel Plow 225F - 25-Foot Flexible Chisel Plow 227F - 27-Foot Flexible Chisel Plow 229F - 29-Foot Flexible Chisel Plow

#### STANDARDS

High Clearance Flat-Cushion-Spring Standards

Regular Clearance Flat Cushion-Spring Standards Flat Spring Standards

Sub-Surface Standards for 30- and 36-inch sweeps on 219F, 223F, 225F, and 227F Chisel Plows.

#### TOOTH PATTERNS

Diagonal or Split Tooth Patterns can be used with flat spring or flat cushion-spring standards.

#### WHEELS

15-inch disk wheels (7.60 x 15, 8-ply tires recommended).

Heavy-duty anti-friction wheel bearings used in each wheel.

#### FRAME

4 x 4-inch square tube tool bars - welded construction.

One basic center frame and hitch section is used with two outriggers for all models. Frame extensions and stub bars create the various size chisel plows.

#### HYDRAULIC CYLINDER

16-inch stroke hydraulic cylinder.

#### SPECIAL EQUIPMENT

No. 21 Cable Outrigger Lift No. 22 Hydraulic Outrigger Lift Swivel Hitch Adjustable Hitch Drawbar Clevis (for 2" drawbar pins) Hydraulic Cylinder, 5- x 16-inch Hydraulic Hose (for use with hydraulic cylinder) Drawbar

1000 Series Rod Weeder Attachment

1219 - For 219F and 221F Chisel Plows

1223 - For 223F Chisel Plow

1225 - For 225F Chisel Plow

1227 - For 227F and 229F Chisel Plows

#### TOOLS

Various types and sizes as illustrated on pages 12 and 13 and listed on pages 16 and 17.

#### SPECIAL TOOL EQUIPMENT

17-inch Notched Rolling Coulter 18-inch Plain Rolling Coulter Frame Spacers

(Specifications and design subject to change without notice.)



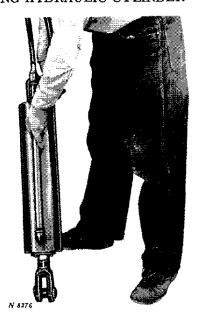
# **OPERATION**

#### ATTACHING TO TRACTOR

#### TRACTOR DRAWBAR

Pin the tractor drawbar in a fixed centered position. A swinging drawbar can be used when necessary to facilitate turning the chisel plow; however, a fixed drawbar will provide greater stability and more efficient operation.

#### BLEEDING HYDRAULIC CYLINDER



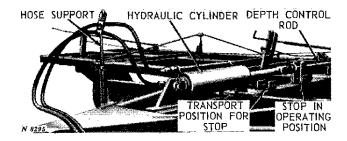
If the hydraulic cylinder is being used for the first time, bleed all air from the cylinder and hoses before attaching the cylinder to the chisel wolg.

To bleed the air from the cylinder and hoses, hold the cylinder with the piston rod end down as illustrated. Extend and retract the piston several times using the tractor hydraulic system, until the cylinder is filled with oil.

Oil must be added to the tractor hydraulic system to replace the oil used to fill the cylinder and oil lines. See tractor operator's manual.

NOTE: If BN60470N hydraulic cylinder is used, be sure the relief valves are installed on the hoses as instructed on page 25.

#### ATTACHING HYDRAULIC CYLINDER

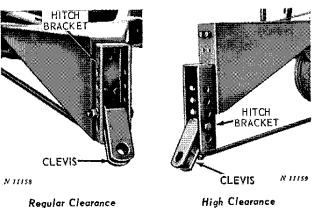


Attach hydraulic cylinder to front anchor and to the depth control rod. Clamp the hoses to the hose support.

The depth control rod stop must be located in the operating (rear) position before operating the cylinder. If the John Deere (Killefer) cylinder, 4427K, is used, attach the stop in the front hole in the rear bracket. If BN60470N cylinder  $(or\ other\ cylinder\ with\ ASAE\ dimensions)\ is\ used,$ pin the stop to the rear hole in the bracket.

Move the depth control rod stop to the forward or transport position before removing the cylinder. See page 8.

#### ADJUSTING HITCH



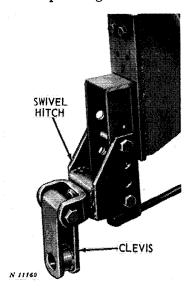
The frame of the chisel plow should be level from front to rear when operating in the field. This will allow all tools to penetrate the soil to the same depth.

Both the drawbar clevis and the hitch bracket can be adjusted to level the chisel plow frame.

Normally, when using regular clearance standards, the hitch bracket should be attached to the hitch frame in the upper position with six bolts. With high clearance standards, the bracket can be bolted in the lower position with four bolts as shown.

The hitch bracket can be raised or lowered from these positions, as required, to level the machine.

Bolt the hitch clevis to that set of holes in the bracket that will set the frame of the chisel plow level when operating in the field.



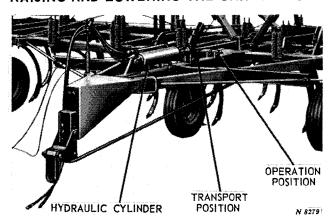
The swivel hitch is useful in extremely rolling terrain. Mount it upside down on the hitch bracket if necessary to level the chisel plow. Adjust the slotted nut at rear of hitch so swivel can be turned but not moved from side to side.

If using the adjustable hitch (illustration, page 26) turn the adjusting screw to raise or lower the clevis. If necessary, turn hitch upside down to position the clevis. Always tighten adjusting screw lock nut and hitch bolt nuts after making adjustments.

#### TURNING THE CHISEL PLOW IN THE FIELD

The chisel plow may be turned at the end of the field with the tool equipment in the ground or raised, as desired. When turning, be sure all chisel plow wheels are turning forward to prevent damage to the machine.

#### RAISING AND LOWERING THE CHISEL PLOW



The tool equipment is raised for transporting and lowered for operation by the hydraulic cylinder. Extend the cylinder to lower the chisel plow to operating position. Retracting the cylinder raises the plow to transport position.

CAUTION: Be sure the depth control rod stop is in the operation position (rear bracket) before extending the cylinder.

WHEELS

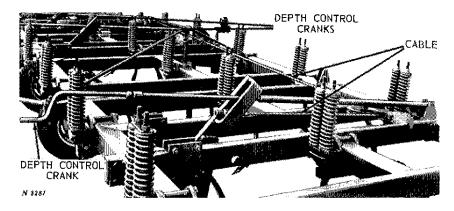


Check and adjust the wheel bearings periodically, especially during the first week of operation. Also check the tightness of all wheel bolts.

To check the bearing adjustment, raise wheel off ground and remove the cotter pin. Tighten the slotted nut until you can feel a considerable drag on the bearings while turning the wheel. Loosen the nut one slot and insert the cotter pin.

There should be some drag on the bearings after adjustment.

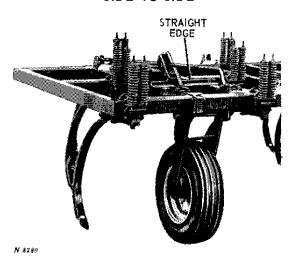
#### DEPTH OF OPERATION AND TRANSPORT CLEARANCE



The depth of operation is determined by the position of the depth control cranks on each wheel frame arm. Turning the crank counter-clockwise increases the depth of operation. Turning it clockwise decreases the depth of operation.

The transport clearance is controlled by the length of the cables extending to the wheel frame arms. Shortening the cables increases the transport clearance; lengthening decreases clearance. Adjust the length of the cables until the wheel frames slant about 10 degrees toward the rear.

## LEVELING THE CHISEL PLOW FROM SIDE TO SIDE

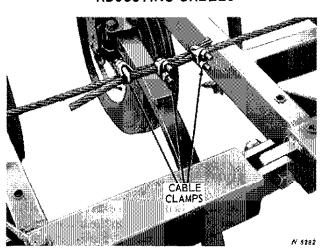


To check to see if the chisel plow is level from side to side, place a straight edge across the frame above each wheel and measure the distance from the top of the wheel to the straight edge. The distance will be the same for all wheels when the plow is level.

During operation, adjust the position of the wheel by turning the depth control cranks until the wheels run at the desired height.

To adjust the wheels for transport, lengthen or shorten the cables attached to the wheel frame arm as instructed at right.

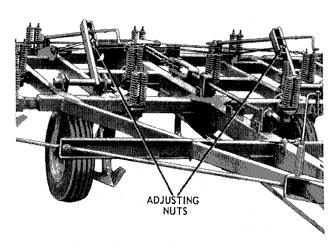
#### ADJUSTING CABLES



Rough adjustments for leveling and changing amount of transport clearance can be made by changing the length of the cables with the clamps on the outrigger cables. Make fine adjustments on the outrigger cables with the adjusting nuts in front of the wheel frame arms. Adjust the center frame cables with the adjusting nuts.

Position the two outer clamps on each cable with the curved portion of the U-bolt on the dead end of the cable. Space the clamps at least three inches apart.

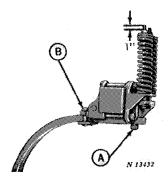
During the first few days of operation the cables will stretch as they become seated in the various attaching points.



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When the machine is first adjusted, the adjusting nut on the end of each cable should have a maximum length of thread at the rear of the nuts so the cables can be tightened and adjusted after the initial stretch is out of them.

# ADJUSTING FLAT CUSHION-SPRING STANDARDS



Regular Clearance Standard

#### REGULAR CLEARANCE STANDARDS

The tension on the springs on regular clearance flat cushion-spring standards can be adjusted to give the desired amount of standard movement during operation.

Tighten the nuts to compress the springs for less standard movement. Loosen the nuts to extend the springs for more standard movement. An average setting is to have 1 inch of threads protruding past the top of the nut.

#### HIGH CLEARANCE STANDARDS

The springs on the high clearance flat cushion-spring standards should be adjusted for the maximum possible compression.

To obtain this compression, tighten the nuts to the end of the threads on the bolt.

#### ALL FLAT CUSHION-SPRING STANDARDS

The set screw, which holds the hinge pin on the rear of the clamp in place, should be kept tight. The bolts in the plate which hold the standard in place should also be kept tight.

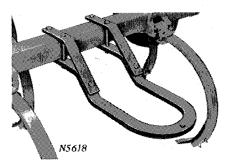
Tighten the 3/4-inch front standard bolt at ''A'' to 300 ft-lbs torque. Tighten the rear clamp bolts at ''B'' to 105 ft-lbs torque.

IMPORTANT: To give the chisel plow stability, all springs must be adjusted with the same amount of compression.

#### ADJUSTING ROLLING COULTERS

Align each coulter blade with the point of the sweep. Set the coulter deep enough to penetrate the soil adequately, but do not set it so deep that trash builds up around the hub. To adjust the coulter vertically, loosen the clamp bolts on the coulter shank and move the coulter to the desired position. Tighten the clamp bolts to hold the setting. See illustration on page 12.

#### DRAWBAR



A drawbar (BN60058N) is available as special equipment for attaching rod weeders, grain drills, etc., to the rear of the chisel plow.

NOTE: This drawbar cannot be mounted on the centerline of the 200F Chisel Plow.

#### HITCH CLEVIS

A heavy-duty hitch clevis is available for attaching the chisel plowtotractors with hitch pins up to 2 inches in diameter. This clevis may also be used with the swivel hitch.

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