



John Deere

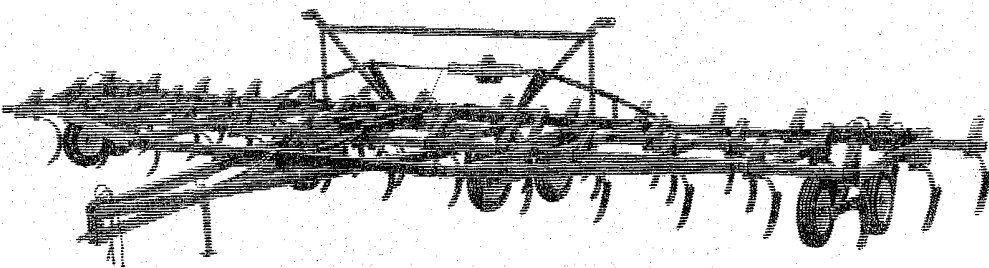
1600 Series Drawn

Chisel Plow

Operator's Manual

OMN159265

Issue H1





To the Purchaser


This new chisel plow 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 assembly. Read the Table of Contents to learn where each section is located.

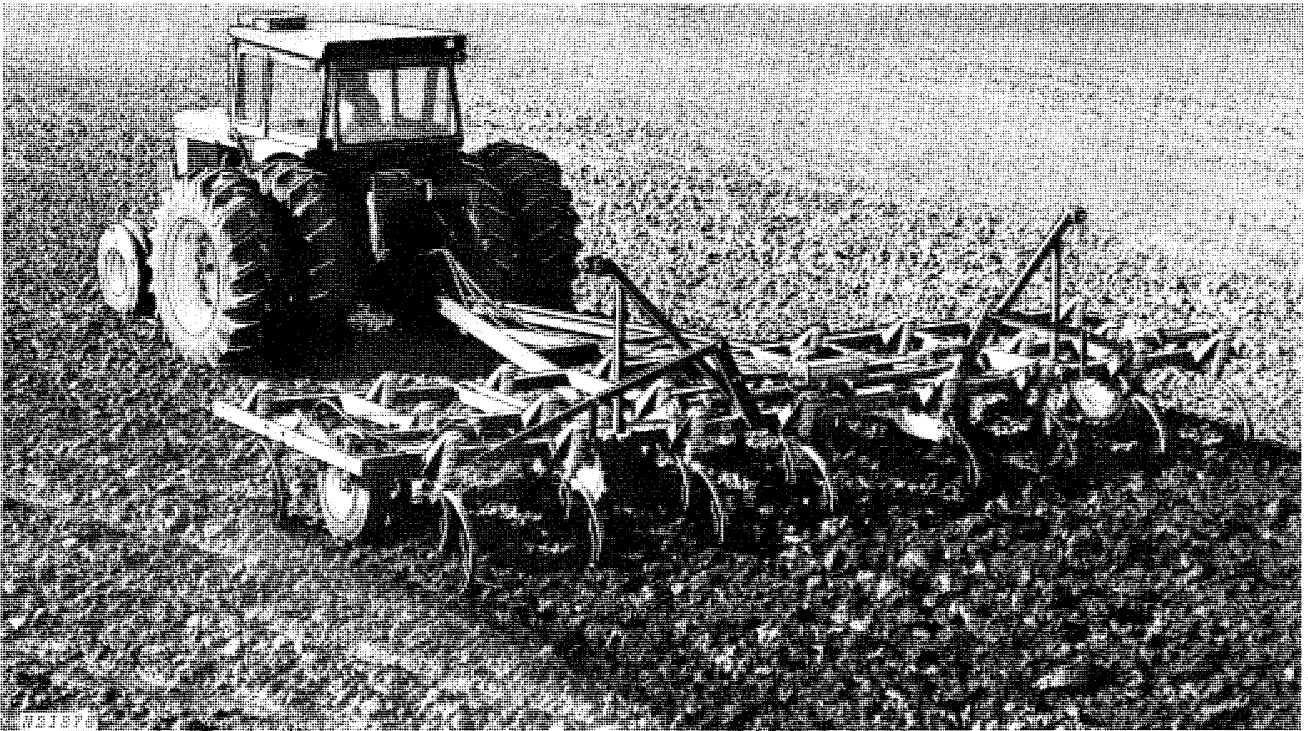
In addition to the equipment furnished with your chisel plow, attachments are available to help you do a better job in special crop conditions. These are described in the attachments sections of this manual and can be purchased from your John Deere dealer.

“Right-hand” and “left-hand” sides are determined by facing in the direction the chisel plow will travel when in use.

Record your chisel plow serial number in the space provided on page 59. Your dealer needs this information to give you prompt, efficient service when you order parts or attachments. If your chisel plow requires replacement parts, go to your John Deere dealer where you can obtain genuine John Deere parts—accept no substitutes.

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

 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.



JOHN DEERE 1600 SERIES DRAWN CHISEL PLOW

PREDELIVERY CHECK LIST

After the chisel plow has been completely assembled and lubricated, inspect to be sure it is in good running order before delivering to the customer. The following check list is a reminder of points to inspect. Check off each item as it is found satisfactory or after proper adjustment is made.

1. Check nuts on all bolts to be sure they are tightened to the torque specifications on page 4 of this manual. All bolts used in the 1600 Chisel Plow are "High-Strength" bolts. "High-Strength" bolts are identified by three radial dashes on the bolt head.
2. Make sure all grease fittings are lubricated as shown on page 18.
3. Check to be sure standards are spaced correctly as shown on pages 50, 51, 52, 53, and 54.
4. Completely check the tractor hydraulic system and make sure it is operating at optimum pressure rating and is synchronizing in the full raised position.
5. Check to be sure hydraulic hoses are tightly connected.
6. Check to be sure outriggers are level with center frame and center frame rockshaft wheels are level. See page 7.
7. Check to be sure hydraulic circuit is connected to the chisel plow and tractor correctly. See pages 5, 40, 41, and 42.
8. Check to be sure lift and drop time of outriggers is correct. See page 11.

(Date Set-Up)

(Signature of Set-Up Man)

OWNER REGISTER

Name _____

Post Office _____

County _____ State _____

Model Number _____

Serial Number _____

Date Sold _____

DELIVERY CHECK LIST

At the time the chisel plow is delivered, the following check list is a reminder of very important information which should be conveyed directly to the customer. Check off each item as it is fully explained to customer.

1. Advise the customer the importance of using the proper shovels.
2. Explain to the customer that the life expectancy of this or any other machine depends on regular lubrication as directed in the operator's manual.
3. Give the operator's manual to the customer and explain all operating adjustments to him, using the manual as a guide.
4. Advise the customer of all the safety precautions he must exercise while using this chisel plow.
5. When the chisel plow is transported on a road or highway at night or during the day, accessory lights and devices should be used for adequate warning to operators of other vehicles. In this regard, tell customer to check local governmental regulations.
6. To the best of my knowledge this machine has been delivered ready for field use and the customer has been fully informed as to proper care and operation.

(Date Delivered)

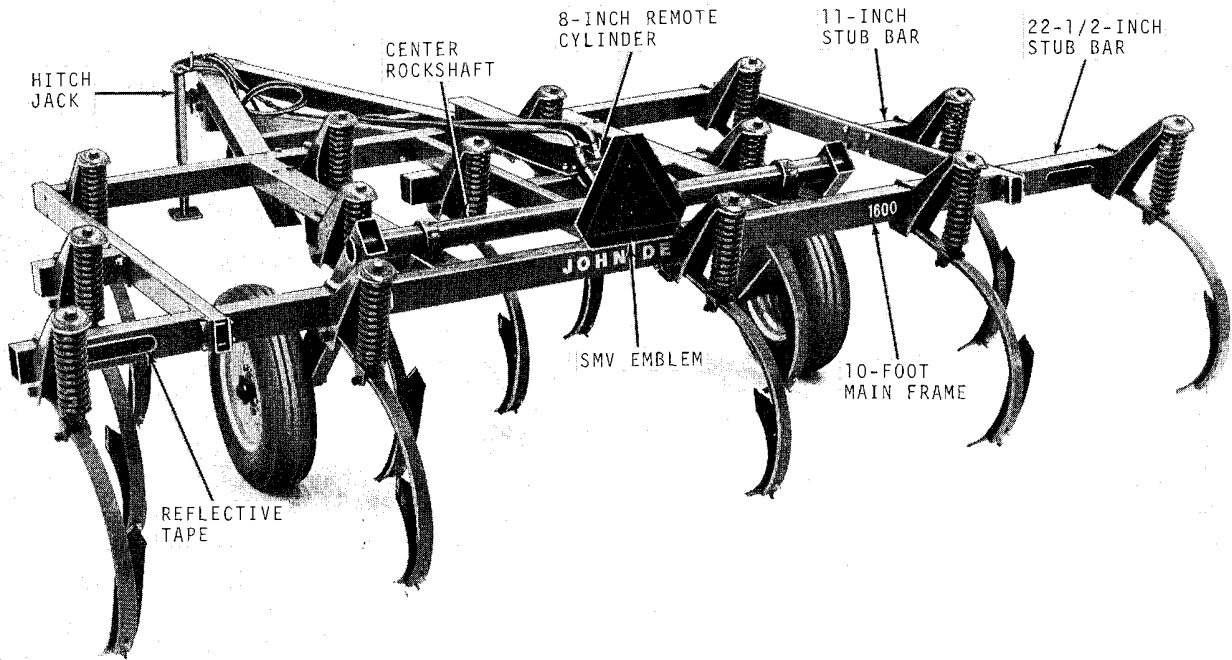
(Signature)



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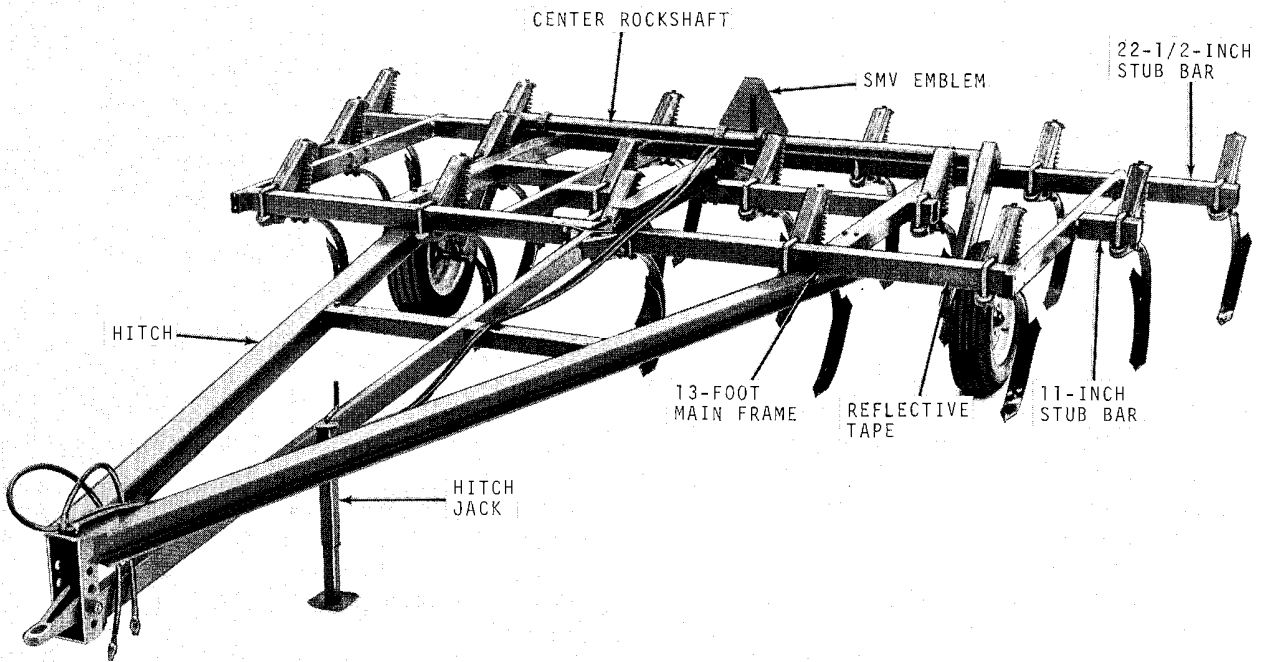
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2 Identification Views



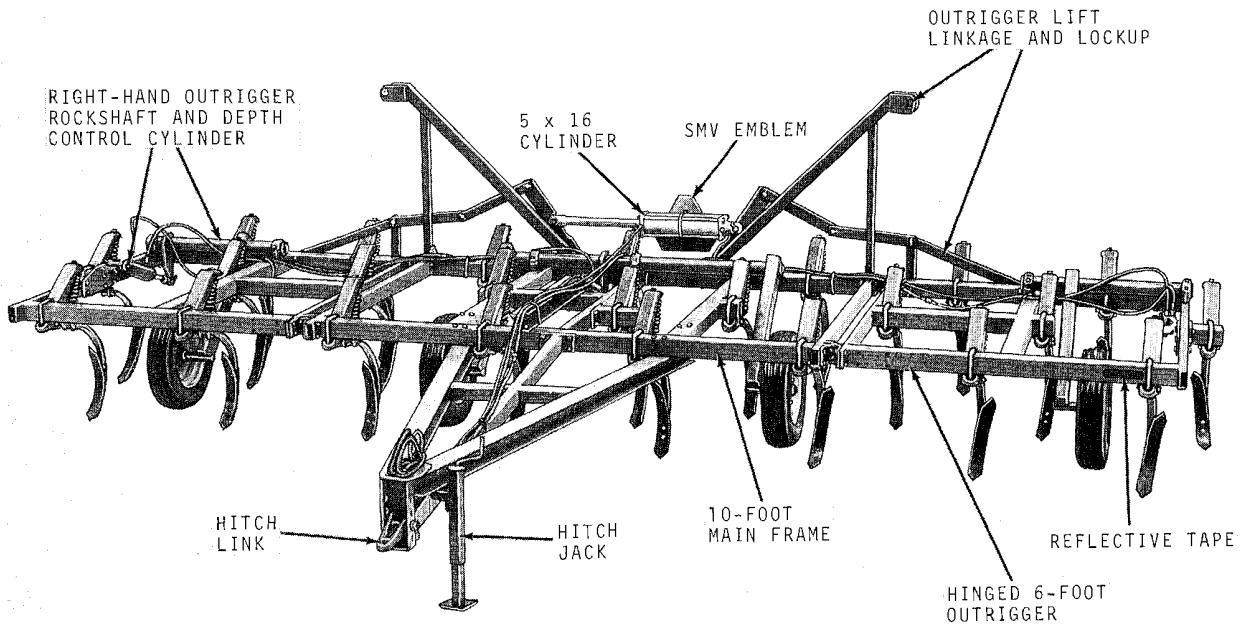
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Model 1614R Rigid Chisel Plow with Twisted Shovels, Spring-Trip Standards and Single Wheel Center Rockshaft



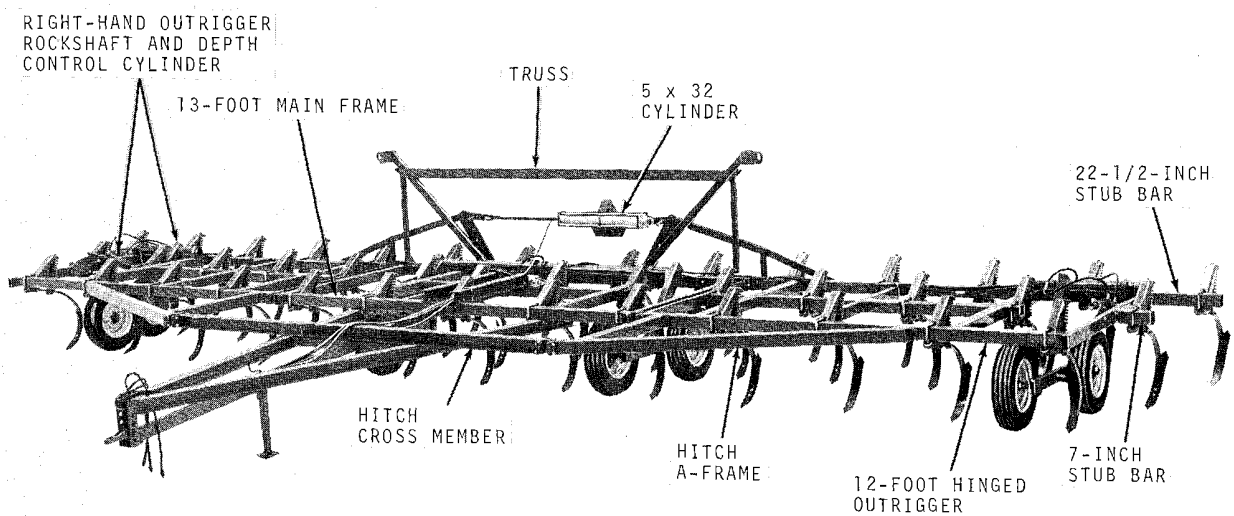
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Model 1617R Rigid Chisel Plow with Twisted Shovels, Spring-Trip Standards and Single Wheel Center Rockshaft



N22452

Model 1624 Flexible Chisel Plow with Twisted Shovels, Spring-Trip Standards and Single Wheel Rockshafts



N22453

Model 1641 Flexible Chisel Plow with Twisted Shovels, Spring-Trip Standards and Tandem Wheel Rockshafts



Operation

GENERAL

The 1600 Series Drawn Chisel Plow is ideally suited for seed-bed preparation, stubble-mulch and deep fallow tillage, roughing fields to reduce erosion and increase moisture absorption. The chisel plow can also be used for killing persistent weeds, heavy-duty field cultivating, and renovating pastures.

The 1600 Series Drawn Chisel Plow can be used with John Deere Tractors (see specifications page 58) and competitive tractors with equivalent horsepower rating.

Flexible Model Chisel Plows

Three hydraulic cylinders are used to control the depth of penetration. The three hydraulic depth control cylinders are connected in series which requires only one set of hydraulic outlets on the tractor.

A hydraulically operated outrigger lift can be installed on the chisel plow providing full lift (near vertical position) for highway transporting. See page 9 and 10 for illustration of the chisel plow with outriggers raised for transporting.

Rigid Model Chisel Plows




One 8-inch stroke remote hydraulic cylinder is used to control the depth of penetration.

PREPARING THE CHISEL PLOW

Before taking the chisel plow to the field, be sure the machine is in good field working condition. The following preventive maintenance checks will save you time from possible field failures.

Bolts and Nuts

Before starting to work with your new chisel plow or one which has been stored, check to see that all nuts on bolts are tight. After the chisel plow has been operated for a short period of time, check to be sure that bolts are tight.

Recommended Torque in Foot-Pounds Coarse and Fine Threads			
			
Bolt Diameter	Plain Head	Three Radial Dashes	Six Radial Dashes
1/4	Not Used	10	14
5/16	Not Used	20	30
3/8	Not Used	35	50
7/16	35	55	80
1/2	55	85	130
9/16	75	130	185
5/8	105	170	250
3/4	185	300	420
7/8	160	445	670
1	250	670	1000

U 6316

Torque Chart

Tighten all bolts to the torques specified in the chart above. It is important that bolts be kept tight at all times. Loose bolts can cause breakage of parts. Check the tightness of bolts periodically and keep them tightened to the torques specified above. All bolts used in the 1600 Series Drawn Chisel Plow are "high-strength" bolts, and when replaced, bolts of equal or higher strength should be used. "High-strength" bolts are identified by three radial dashes on the bolt head.

Tire Inflation

Check tires for proper inflation pressure. See page 12 for recommended tire inflation pressure.

Lubrication

Lubricate the chisel plow at recommended intervals given on page 18.

PREPARING THE TRACTOR

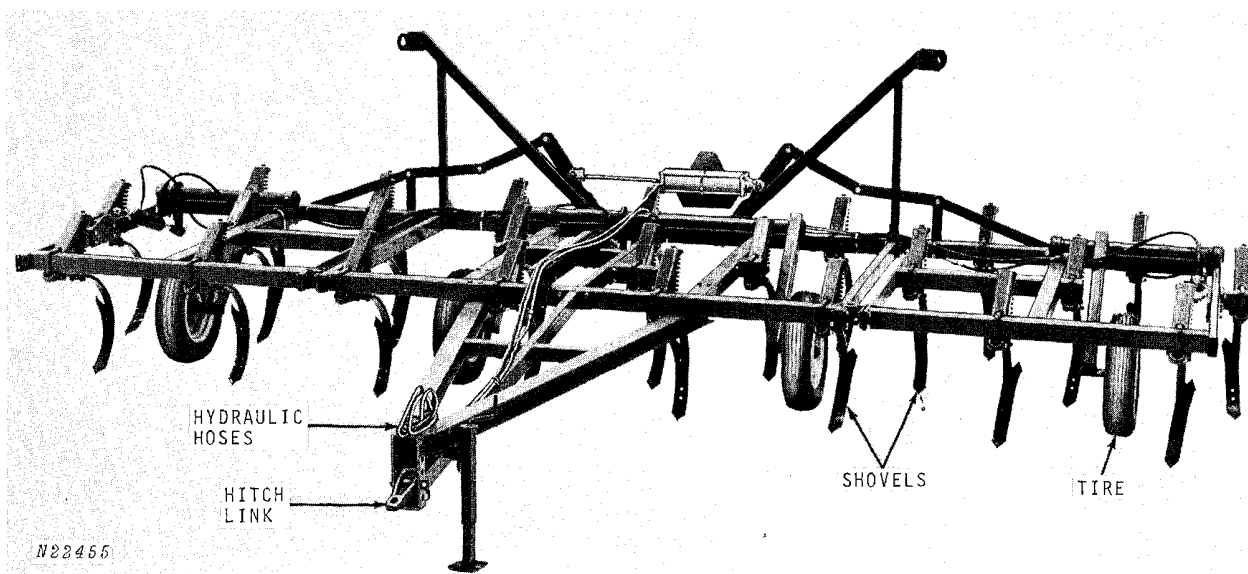
Before hitching the chisel plow to the tractor, pin the tractor drawbar in a fixed, centered position. Although a swinging drawbar aids turning when pulling a large implement, a fixed drawbar will provide greater stability.

See your tractor operator's manual for proper ballast and tire inflation pressure when tractor is used to tow heavy implements.

If your tractor is equipped with a Power Weight-Transfer Hitch, see your tractor operator's manual for rockshaft selector lever setting for use with or without Power Weight-Transfer Hitch.

Check to be sure that the tractor hydraulic system is functioning properly and that the hydraulic oil reservoir has an adequate supply of oil.

ATTACHING CHISEL PLOW TO TRACTOR



Model 1624 Flexible Chisel Plow Illustrated

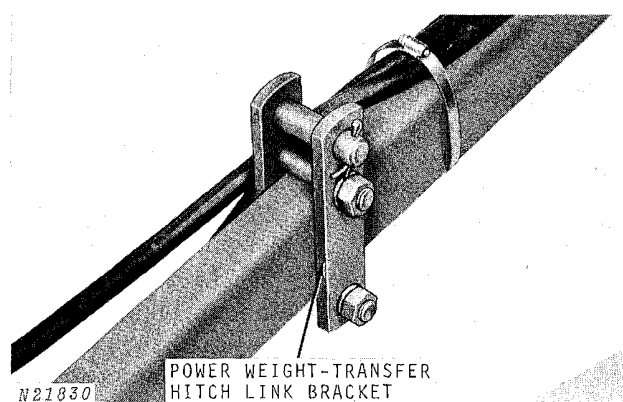
The 1600 Series Flexible Chisel Plow must have the hydraulic cylinders and hoses installed as shown above and outlined on pages 40, 41, or 42.

Back the tractor into position and attach the hitch link or clevis to the tractor drawbar.

Connect the hydraulic hoses to couplers on the tractor. Raise and lower the chisel plow several times to be sure the cylinders are working properly and that hoses are attached correctly and tightly to cylinders. The chisel plow should raise when the tractor remote cylinder lever is moved forward and lower when the remote cylinder lever is pulled back.

IMPORTANT: If hydraulic hoses are not attached to cylinders as outlined on pages 40, 41, or 42 the hydraulic cylinders will not function properly. Check to be sure tractor hydraulic oil reservoir has an adequate supply of oil.

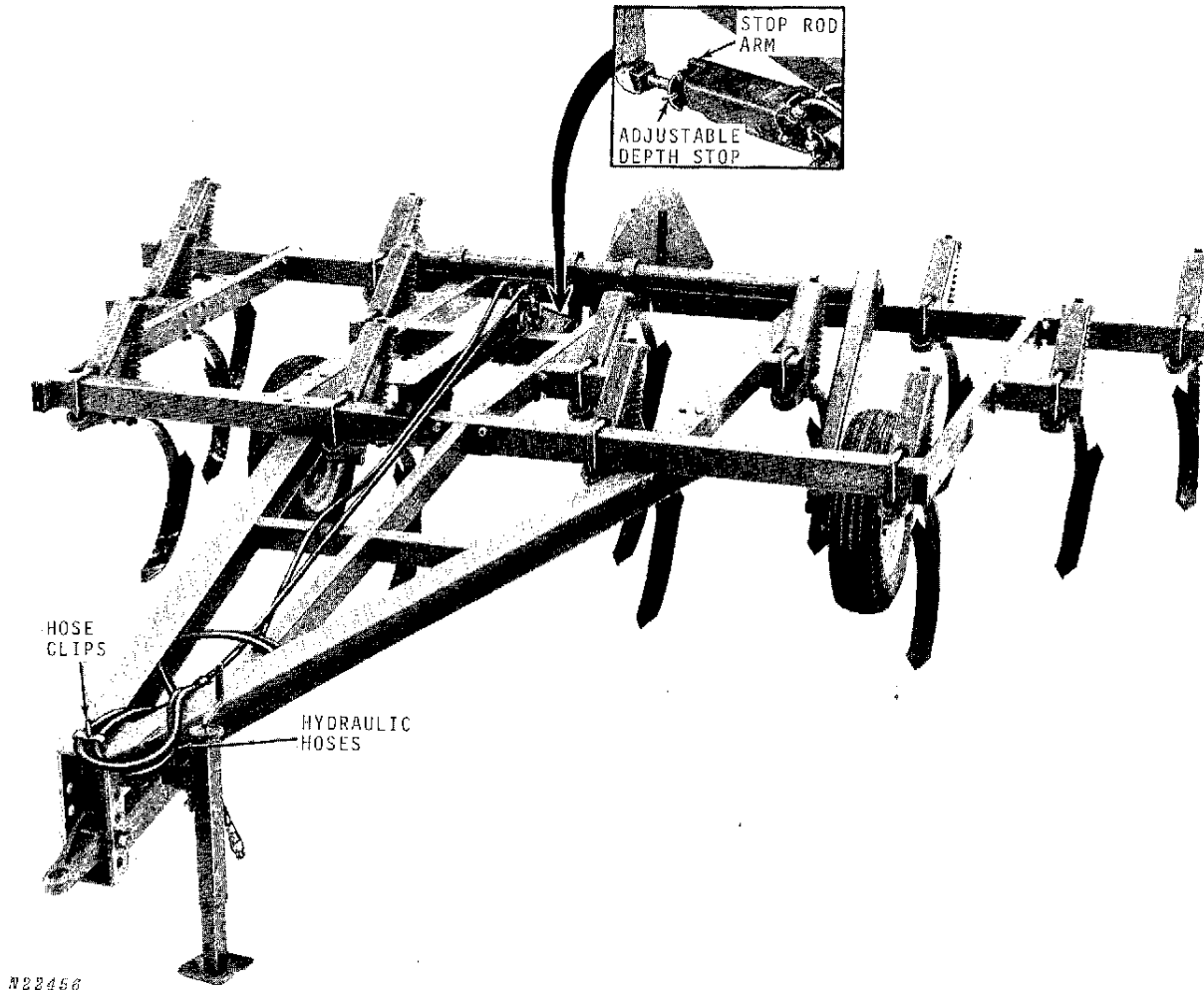
Power Weight-Transfer Hitch Link Bracket



If Power Weight-Transfer Hitch is used, locate the bracket on center hitch frame member. Allow adequate distance for the adjustable link to be pinned into bracket. The distance from the attaching point on hitch to bracket may be from 47 to 62 inches.

DEPTH CONTROL

Rigid Model Chisel Plows



N22456

Model 1614 Rigid Chisel Plow Illustrated

The remote hydraulic cylinder raises the chisel plow for transport and lowers it for operation.

Position the hydraulic hoses in the hose clips to keep the hoses clear of the corners of the hitch frame.

Hose extensions are required to reach the hydraulic couplers on the tractor. The hoses should be no longer than is necessary to allow the tractor to turn with the chisel plow.

Two 190-inch hydraulic hoses are required to reach the tractor hydraulic outlets on 1608R Series Chisel Plows. Two 240-inch hydraulic hoses are re-

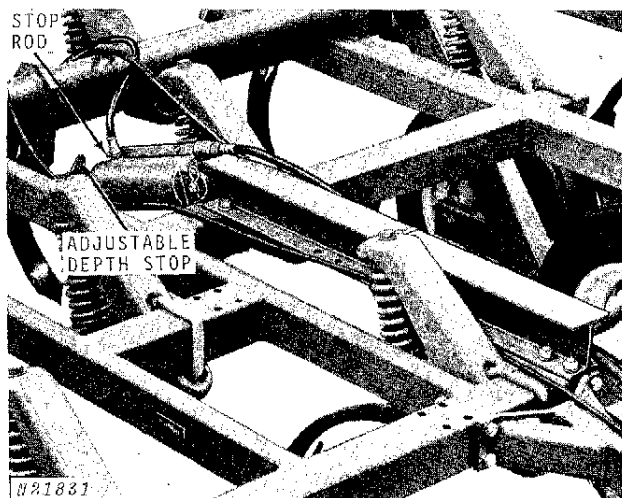
quired to reach the tractor hydraulic outlets on the 1611R Series Chisel Plow. Obtain hoses from your John Deere dealer.

Depth of operation is controlled by the location of the adjustable depth stop on the hydraulic cylinder. See your tractor operator's manual.

The cylinder is retracted in the operating position and is extended in the transport position.

When operating the chisel plow, the adjustable depth stop should be against the stop rod arm on the cylinder, as shown.

Flexible Model Chisel Plows



Depth of operation is controlled by the location of the adjustable depth stop on the center main lift cylinder. The cylinder is retracted in the operating position and extended in the raised position.

When operating the chisel plow, the adjustable depth stop should be against the stop rod on the main lift cylinder.

To increase the depth of penetration, move the depth stop toward the shoulder of the yoke that connects the cylinder to the center rockshaft lift arm.

To decrease the depth of penetration, move the depth stop toward the cylinder.

When positioning the depth stop make sure it lines up with the stop rod on the main lift cylinder.

LEVELING CHISEL PLOW FROM SIDE TO SIDE

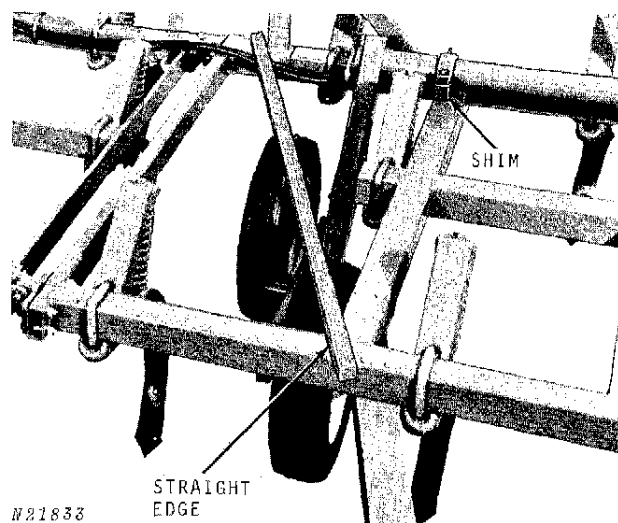
Leveling the Center Frame

Place a straight edge across at least two center frame members and over the right-hand wheels as shown.

Use the hydraulic system to raise the wheels until the right-hand wheels just touch the bottom of the straight edge.

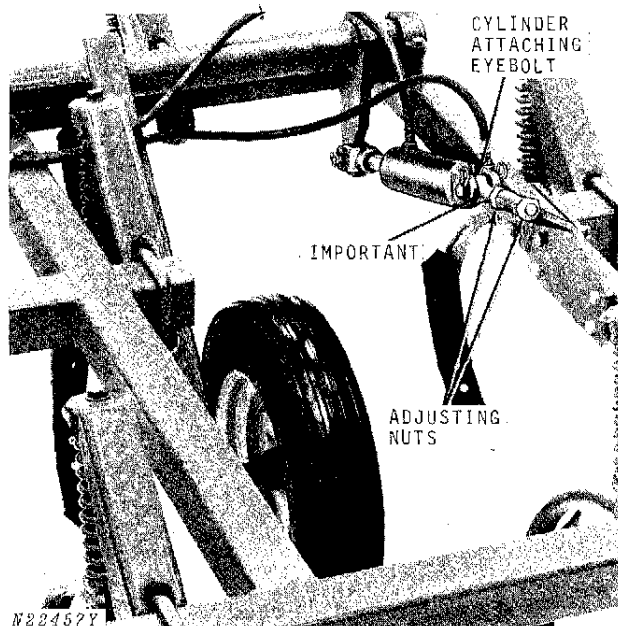
Keep the right-hand wheels in this position and use the straight edge to check the left-hand wheels.

If both right and left-hand wheels touch the bottom of the straight edge simultaneously, the center frame is level.



If both right and left-hand wheels do not touch the bottom of the straight edge simultaneously, locate the shims provided between right and left-hand outer bearings and frame, from one side to the other, until rockshaft is level with center frame.

Leveling Outriggers with Center Frame on Flexible Chisel Plows



Adjust each cylinder attaching eyebolt to raise or lower the outrigger wheels so the outriggers are level with the center frame.

Turn the adjusting nuts on the cylinder attaching eyebolt clockwise to lower the outrigger and counter-clockwise to raise the outrigger.

IMPORTANT: Never extend the eyebolt to maximum position without checking cylinder clevis clearance.

The depth of operation of both the center frame and the outriggers is controlled by the location of the adjustable depth stop on the center main lift cylinder.

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