

# **JOHN DEERE 90 SERIES SUBSOIL CHISEL PLOWS**



## **OPERATORS MANUAL JOHN DEERE 90 SERIES SUBSOIL CHISEL PLOWS**

OMA25194 G3    English

**OMA25194 G3**


LITHO IN THE U.S.A.  
ENGLISH





## To the Purchaser

This chisel plow was carefully designed and manufactured to give years of dependable service. To keep it operating 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 or service. Read "Contents" to learn where each section is located.

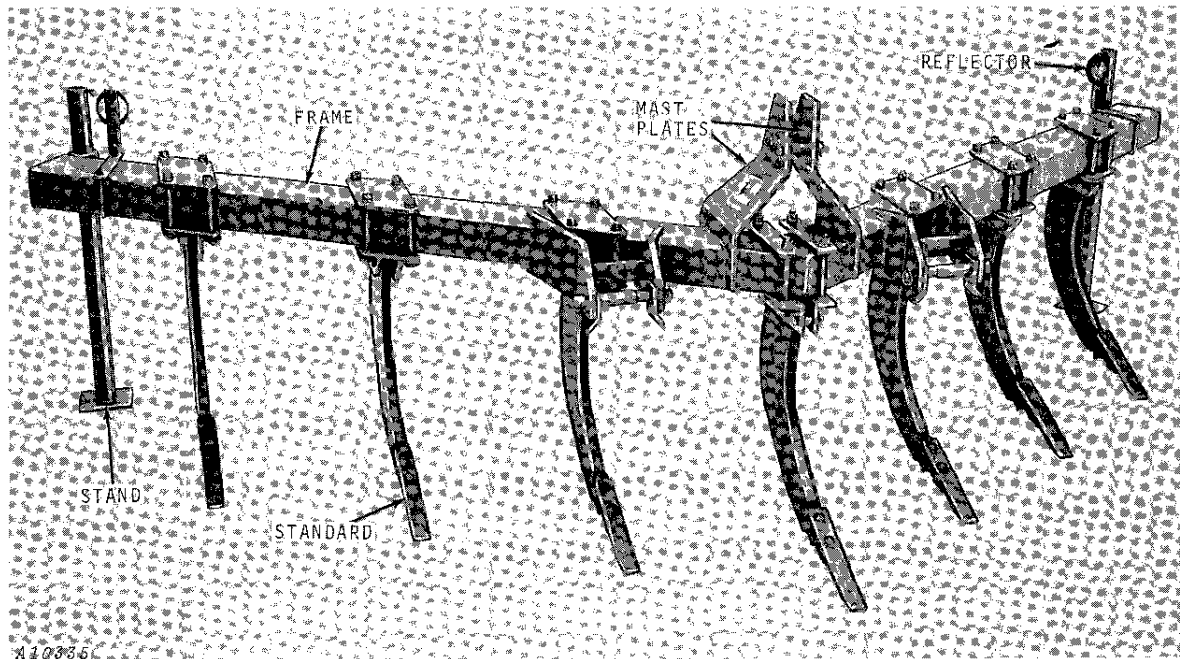
 This safety alert symbol identifies important safety messages in this manual. When you see this symbol, be alert to the possibility of personal injury and carefully read the message that follows.

"Right-hand" and "left-hand" sides are determined

by facing in the direction the plow will travel when in use.

Record your chisel plow serial number in the space provided on page 18. 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.

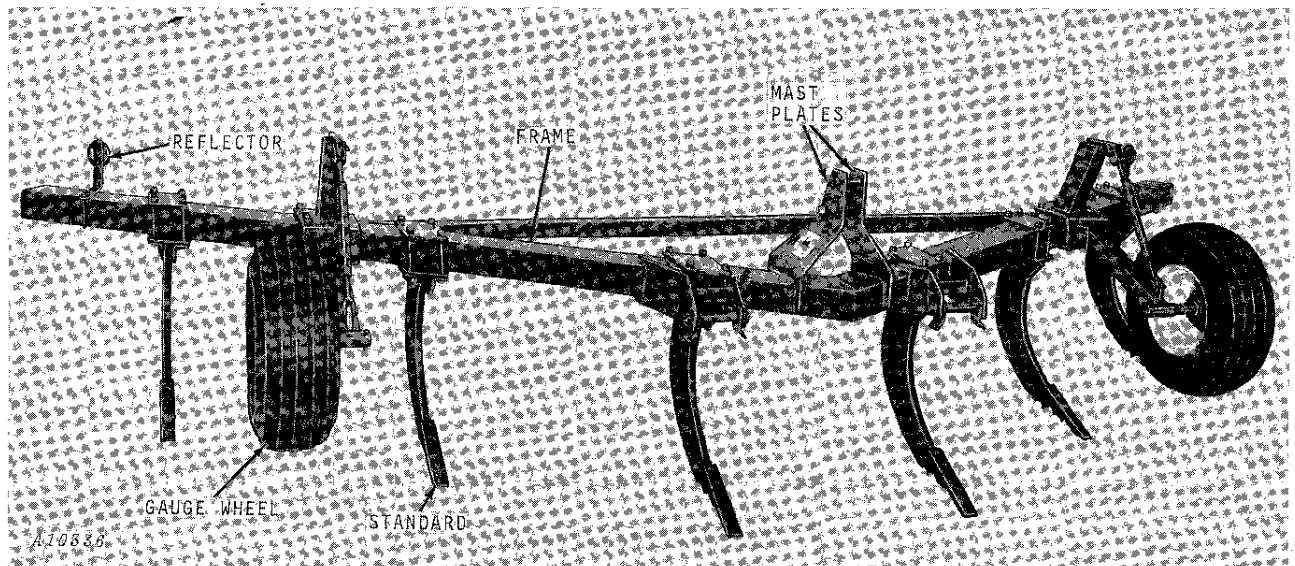


*John Deere 90 Series 7-Standard Subsoil Chisel Plow*



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*John Deere 90 Series 6-Standard Subsoil Chisel Plow*



# Operation

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## GENERAL

The John Deere 90 Series Subsoil Chisel Plow is a heavy-duty toolbar-type subsoiler. The length of life and maximum operating efficiency depend largely on proper care and good use of simple adjustments.

The standards on this plow, due to their sloping design, not only fracture the subsoil, but lift the top soil and cover crops, leaving the field rough and loose on top.

The following instructions will help you obtain the best possible performance from your new subsoil chisel plow. Read them carefully.

## PREPARING THE CHISEL PLOW

### Bolts, Set Screws, and Cotter Pins

Before starting to work with a new chisel plow or one which has been stored, check to see that all bolts are tight and all cotter pins spread to keep them from falling out.

A good practice is to check for loose bolts, screws, or parts. Loose bolts are easily lost or cause excessive wear on parts, resulting in possible serious damage to the plow. See page 12 for bolt torque information.

### Tire Inflation

Check tires on gauge wheels to be sure they are inflated to 30 psi.

### Lubrication

Be sure gauge wheel bearings have been lubricated. See page 11.

## PREPARING AND ADJUSTING THE TRACTOR

For complete tractor operating instructions, and use of rear-mounted integral implements, refer to your tractor operator's manual.

### Tire Inflation

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

### Tractor Drawbar

Remove the tractor drawbar or place it in the short high position and set to the extreme right or left side of the support.

### Rear Wheel Setting

Set the rear wheels so they are equidistant from the center line of the tractor.

**IMPORTANT:** It may be possible in certain tractor and plow combinations to encounter interference between the point of the subsoiler and the tractor tires. Be sure to set rear wheels to avoid interference.

### Front Wheel Setting

On wide-front-axle tractors set front wheels to conform to rear wheel setting.

## 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.

The ideal amount of added weight can be determined by observing the tracks of the rear wheels. When the tractor is pulling its rated load, the soil between the tire lugs should be broken or shifted. If too much weight has been added, the tread marks will be clear and distinct. If too little weight has been added, the tread marks will be entirely obliterated.

## Liquid Weights

Water and calcium chloride solution is an economical means of adding weight to rear wheels. Calcium chloride is recommended rather than water as it will not freeze. See your tractor operator's manual or your John Deere dealer.


## Cast Iron Weights

Where weight in addition to or in place of liquid weight is required, cast iron weights can be bolted to the rear wheels. This type of weight can be secured from your John Deere dealer.

For maximum ballast, refer to your tractor operator's manual.

## Front Ballast Information

Tractor front end stability is necessary for safe and efficient operation. Therefore, it is important that the proper amount of weight be installed on the front of the tractor as recommended in your tractor operator's manual.

 **CAUTION:** Ballast recommendations provide for adequate transport stability. Additional front ballast may be required for satisfactory field operation. See tractor operator's manual.

## Instructions

Step 1 - Find your plow model in the IMPLEMENT CODE TABLE and enter its code on line 1 below.

Step 2 - Enter an Implement Code for each attachment on line 2.

Step 3 - Add these codes to obtain Total Implement Code.

Step 4 - Select additions or subtractions from tractor operator's manual.

Step 5 - Refer to tractor operator's manual to determine required tractor front ballast.

### IMPLEMENT CODE TABLES

Implement or Attachment	Standards			
	5	7	9	11
Basic Plow	68	88	159	192
Gauge Wheel	26	26	—	—
Knife Attachment	3	5	7	9

### EXAMPLE

Step 1 159  
 Step 2 7  
 Step 3 166 (sub.)  
 Step 4 \_\_\_\_\_  
 Step 5 (total)


### YOUR CODE

Step 1 \_\_\_\_\_  
 Step 2 \_\_\_\_\_  
 Step 3 \_\_\_\_\_  
 Step 4 \_\_\_\_\_  
 Step 5 \_\_\_\_\_

Our example is a 9-standard chisel plow (159) with knife attachment (7) = 166 for your implement code. Refer to your tractor operator's manual for steps 4 and 5 for your recommended front end ballast.

### IMPORTANT: Refer to tractor operator's manual:

1. If the total implement code exceeds the maximum implement code listed for a particular tractor model, the implement-attachment combination is not recommended for that tractor. 2. The total load on any tractor wheel due to the weight of the implement-attachment combination and tractor equipment, should not exceed the carrying capacity of the tractor tires.

 **CAUTION:** When operating the tractor in third or lower gears, front end weights up to the maximum permissible, regardless of size and equipment of plow, are recommended to avoid possible front end tip-up.

For maximum permissible ballast, see your tractor operator's manual.

## 4 Operation

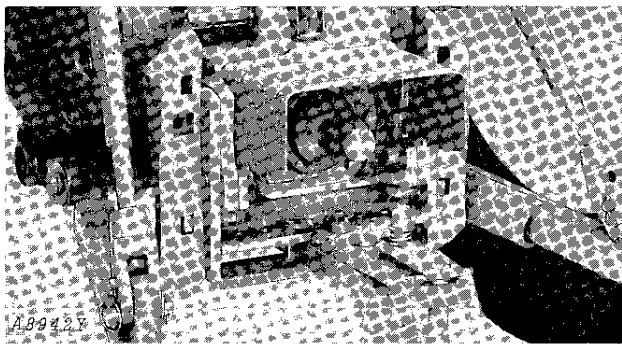
### Hitch and Hydraulic System

Once the plow is attached to the tractor, the depth or load is maintained by the tractor hydraulic system according to the setting of the rockshaft selector lever. See your tractor operator's manual for complete explanation of the hydraulic system.

### Sway Blocks

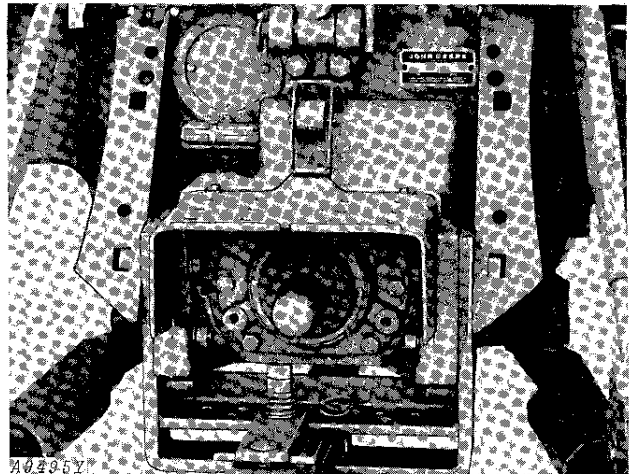
The tractor sway blocks may be used to permit or prevent implement side sway while the plow is working. They are used to eliminate side sway when the plow is being transported.

The sway blocks must be installed with the narrow flat edge facing the drawbar support. See illustrations.



*Sway Blocks Installed to Eliminate All Side Sway*

When they are installed downward, along the sides of the drawbar support, they will eliminate all implement side sway, whether the implement is in working position or in transport position. See illustration above.



*Sway Blocks Installed to Permit Side Sway*

When the sway blocks are pivoted upward, they eliminate side sway when the implement is raised for transport but permit it to sway when the implement is working. See illustration above.

### Adjusting Lift Links

On plows equipped with gauge wheels, the lift links should be adjusted for lateral float so either side of the plow can follow ground contours without affecting the opposite side.

On plows not equipped with gauge wheels, the lift links should be adjusted to prevent float.

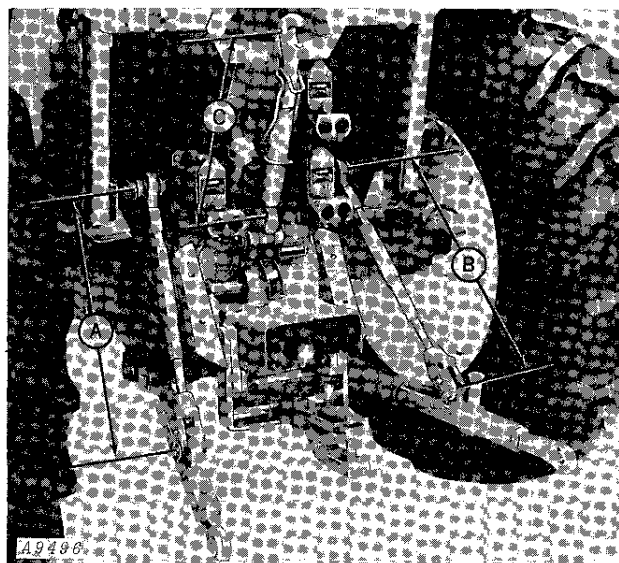
### Link Lengths

It is important that the length of the lift links and center link be adjusted properly. Measure from center-to-center of pins as indicated in illustration at right.

The chart shows the recommended starting lengths of the links for various tractors used with these plows.

**NOTE:** A slight increase or decrease in the recommended length may be necessary in other than normal conditions and in very deep or very shallow plowing. Final adjustment should be made in the field.

When using a 4520, 4620, 4630, 5010 or 5020 Tractor, the center link must be in the top hole of the center link bracket.



Link Length Check Points

### STARTING LINK LENGTHS

Tractor	Left Lift Link (Dimension "A")	Right Lift Link (Dimension "B")	Center Link (Dimension "C")
4010 through 4230	29-3/4"	29-3/4"	27-1/4"
4320	29-1/2"	29-1/2"	27-1/4"
4430	32"	32"	30-3/8"
4520 through 4630	35"	35"	30"
5010 and 5020	39"	39"	31"

On 4020 and 4320 Tractors factory-equipped with 18.4-38 or 20.8-34 tires, use the following link length dimensions:

Right- and left-hand lift links, 32 inches,  
Center link, 30-3/8 inches.

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