



**LIFT
TYPE**

DEARBORN
TWO-WAY PLOW
(Model 10-14)



ASSEMBLY and OPERATING
Instructions

DEARBORN MOTORS CORPORATION — DETROIT 3, MICHIGAN

TABLE OF CONTENTS

	Page
DESCRIPTION	1
EXPLODED VIEW OF TWO-WAY PLOW.....	2
EXPLODED VIEW OF PLOW BOTTOM.....	3
ASSEMBLY OF TWO-WAY PLOW	4
ATTACHING TWO-WAY PLOW TO TRACTOR	8
DETACHING TWO-WAY PLOW FROM TRACTOR	9
OPERATION OF TWO-WAY PLOW	9
Lubrication	10
Tractor Wheel Spacing.....	10
Coulter Setting	10
Adjusting Width of Cut.....	11
Adjusting Depth of Cut.....	11
Leveling Furrow Bottom	12
Plow Penetration	12
Adjustments for Ditching.....	13
Care of Plow Shares	14
LOCKOUT ATTACHMENT	15
MAINTENANCE SUGGESTIONS	17
SAFETY	17

Dearborn Motors Corporation reserves the right to make changes in design, materials, and/or specifications, without notice and without liability therefor.

DESCRIPTION

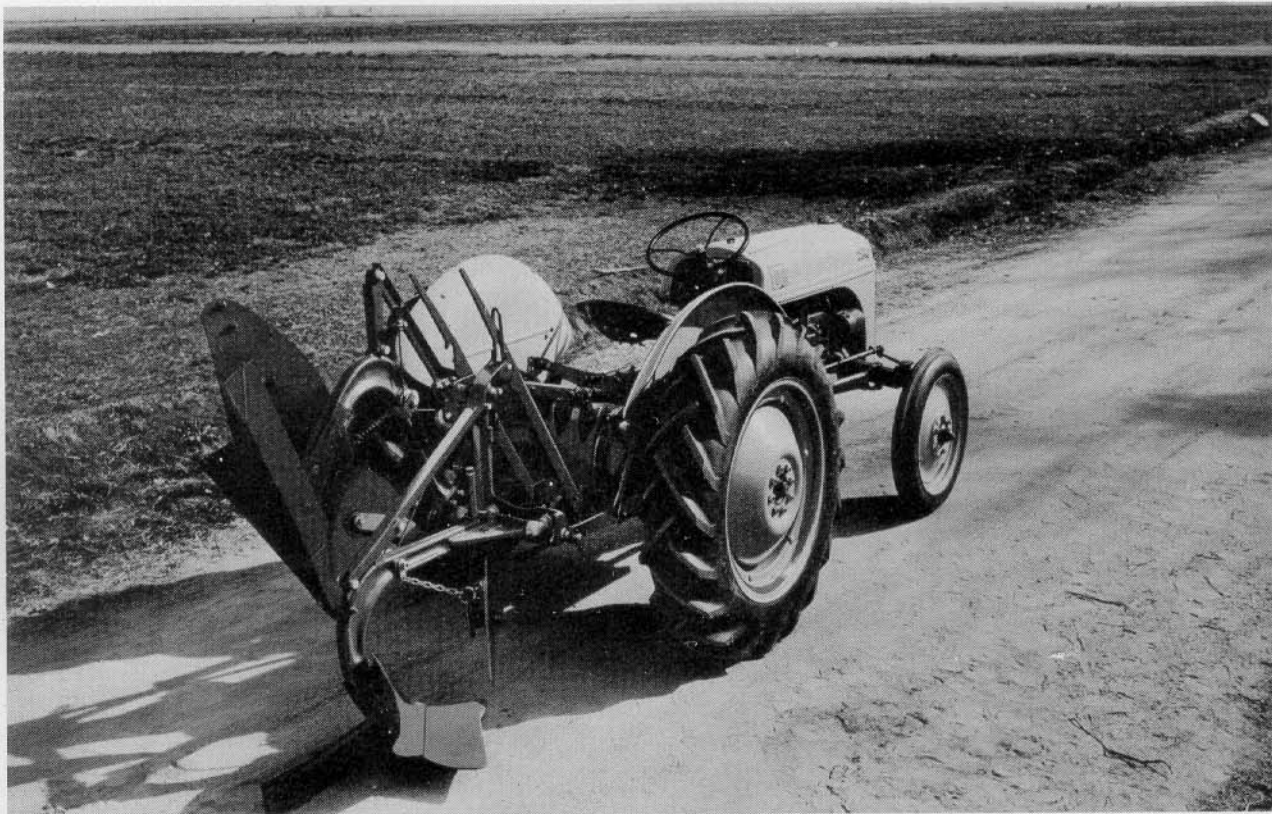


Figure 1

The Dearborn two-way plow

The Dearborn Two-Way Plow, pictured above, is a Lift Type implement and, like all Dearborn Equipment, is built to high quality standards and specifications.

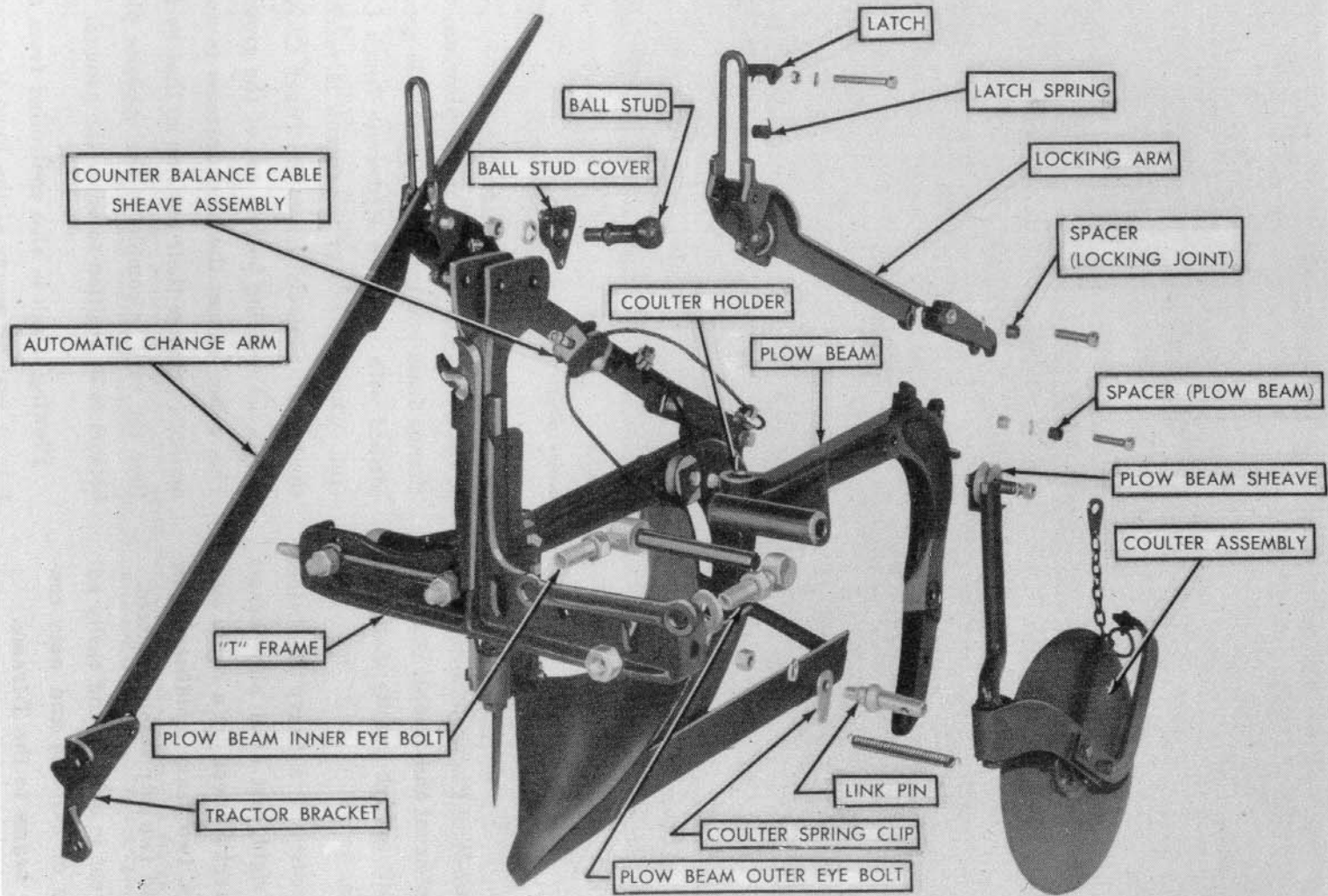
The Plow consists of a heavy cast steel T-frame, heavy rigid cast steel plow beams which are counterbalanced by a cable supported by sheaves, two heavy moldboard type plow bottoms, and two adjustable coulters.

The width of cut is quickly and easily adjusted by means of eyebolts and nuts connecting the plow beams to the T-frame.

The Dearborn Two-Way Plow is operated

from the tractor seat. When plowing, the change from one bottom to another is accomplished with the Ford Hydraulic Touch Control. When the end of the furrow is reached, the operator merely moves the Touch Control to lift the working bottom out of the ground. This action causes the plow bottoms to automatically change their position so that by the time the turn is completed the opposite plow bottom is in position to enter the ground.

Plowing depth is also controlled from the tractor seat by means of the Ford Hydraulic Touch Control lever.



DESCRIPTION

Figure 2
Exploded view of two-way plow

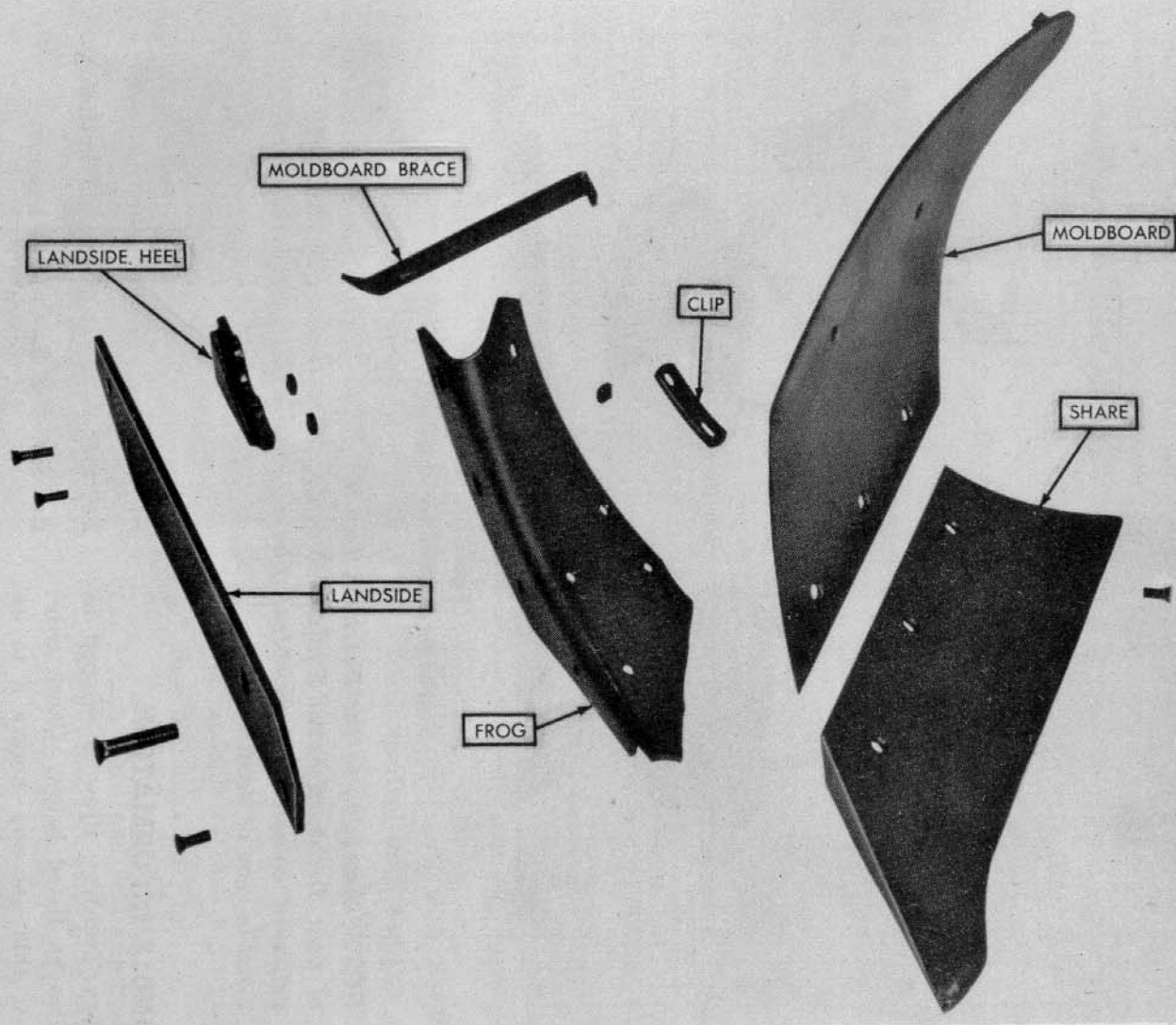


Figure 3
Exploded view of plow bottom
www.ntractorclub.com

ASSEMBLY

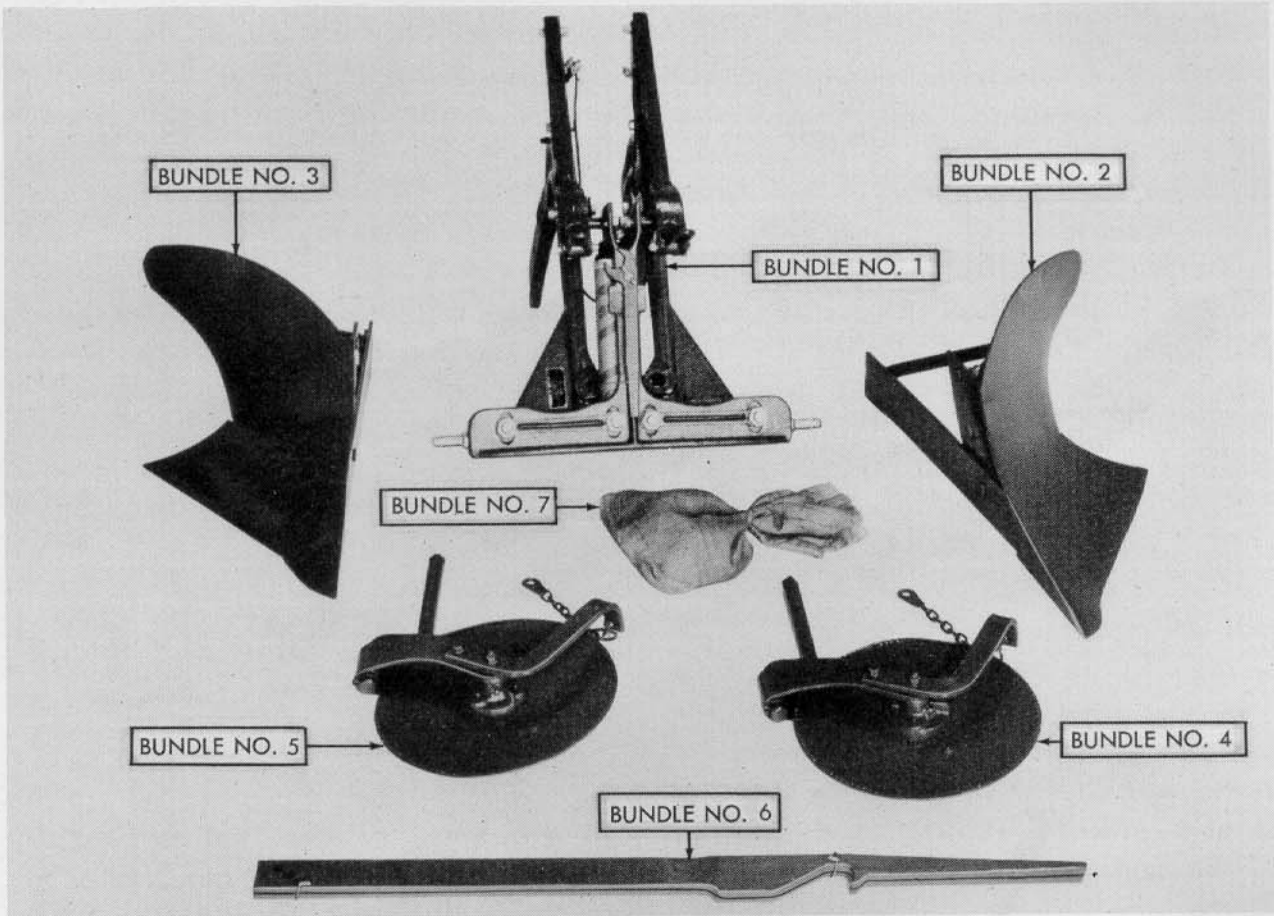


Figure 4
Implement bundled for shipment

NOTE: *Assembly of the Dearborn Two-Way Plow is the responsibility of your Dearborn Farm Equipment dealer. The equipment should be delivered completely assembled. The following instructions are provided in case of need.*

BUNDLE INFORMATION

The Dearborn Two-Way Plow is shipped in seven bundles as listed below. Check shipment against this list and Figure 2 to be sure all parts are received.

Bundle 1—Plow frame assembly with plow wrench attached, and tube containing instruction manual.

Bundle 2—Left hand plow bottom.

Bundle 3—Right hand plow bottom.

Bundle 4 & 5—Coulters assembly.

Bundle 6—Two automatic changing arms.

Bundle 7—Bag containing two tractor brackets marked: "L" (left) and "R" (right), two coulters springs, and two linch pins.

ASSEMBLY PROCEDURE

1. Cut and remove wires from all bundles. Remove contents from bag.
2. Remove both right and left hand tractor lower link check chains from anchors on either side of tractor power take-off.
3. Remove the chain anchors from tractor.
4. Attach tractor brackets marked R (right) and L (left) as shown in Figure 5, with cap screws removed from tractor lower link check chain anchors. Attach check chains and clevises to tractor brackets as shown.
5. Pull forward on top of plow T-frame until locking arms lock in position.
6. Support T-frame approximately 12 inches above ground level with the lower ends of the right and left plow beams resting on the ground.

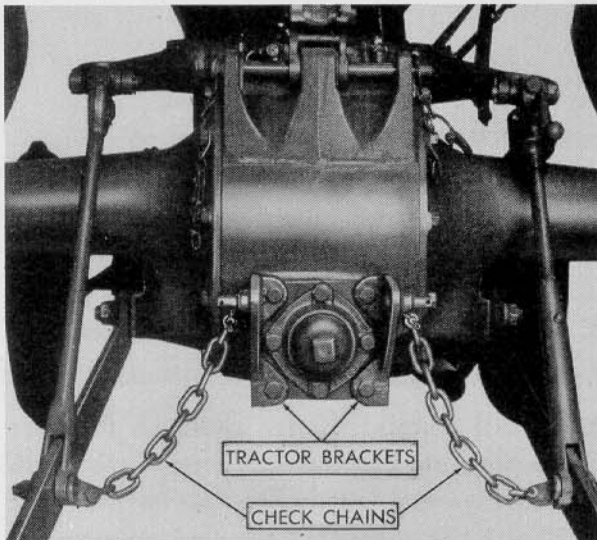


Figure 5

Tractor brackets attached

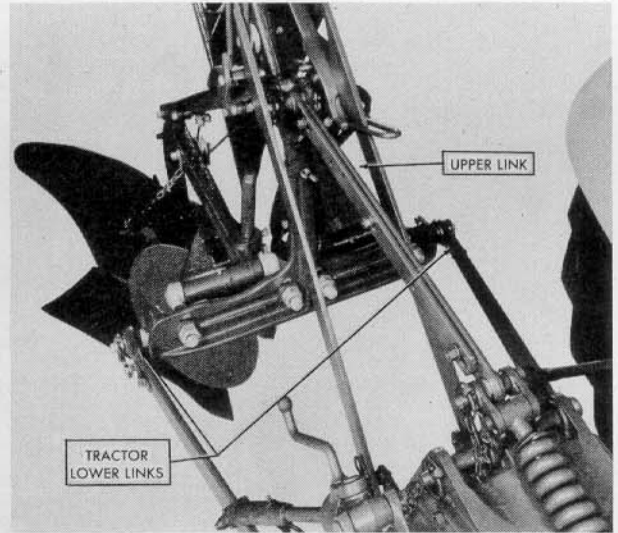


Figure 6

Tractor links attached

7. Back tractor into position and attach the right and left lower tractor links as shown in Figure 6. Secure with lynch pins.
8. Attach tractor upper link to plow and then to tractor control spring yoke. See Figure 6. Secure with lynch pins.
9. Raise plow frame with Ford Hydraulic Touch Control until the tips of the plow beams are approximately three inches above the ground.
10. Remove the three plow bolts from the frog and landside of both right and left hand plow bottoms. See Figure 7.
11. Attach right and left hand plow bottom to right and left hand plow beams respectively by inserting one of the removed plow bolts in the center bolt hole. Tighten nut finger tight.
12. Raise the plow to maximum height with the Ford Hydraulic Touch Control.

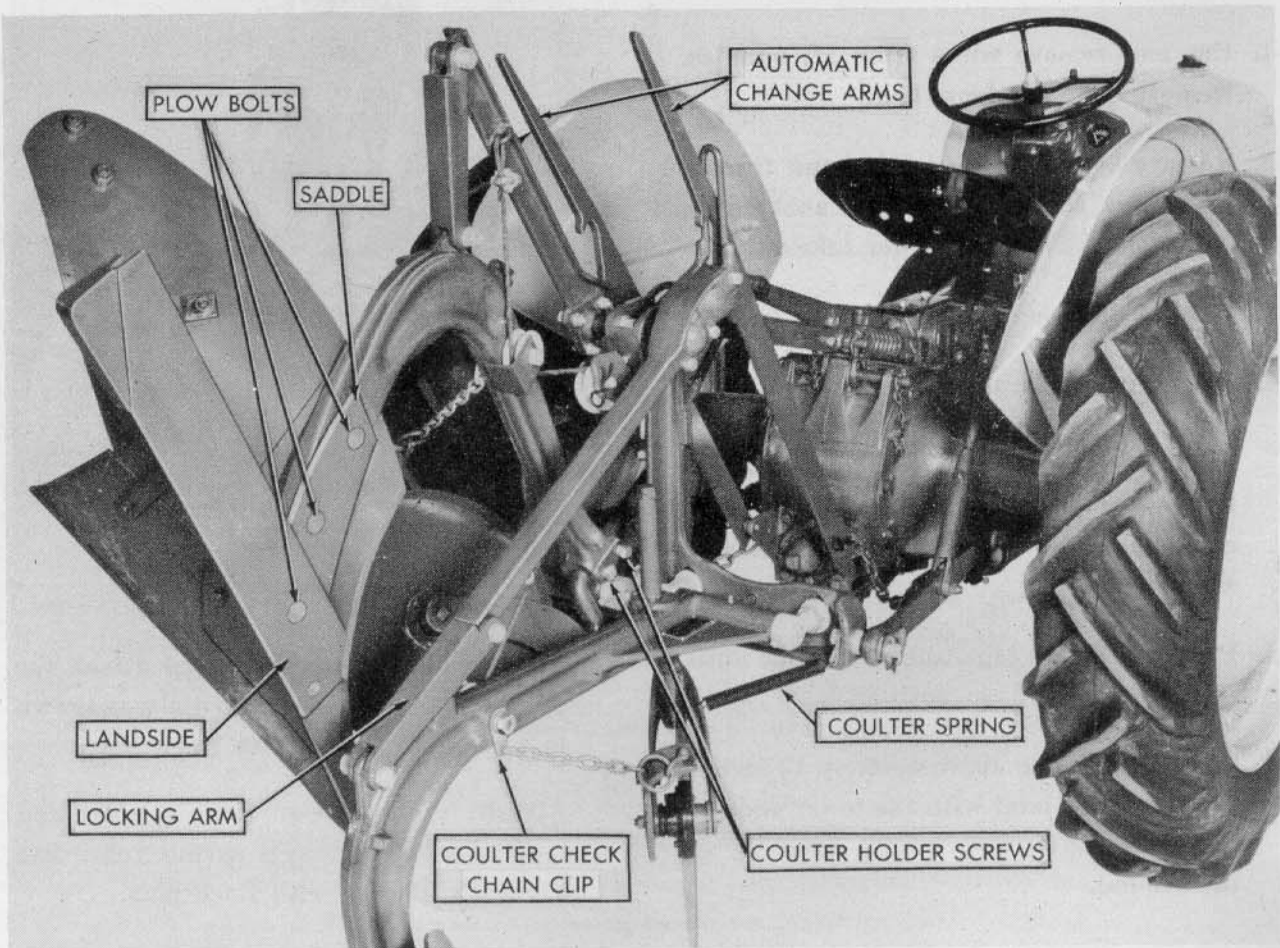


Figure 7

Plow bottoms and coulters attached

13. Align the other two bolt holes in each bottom with the holes in their respective plow beam, put in the plow bolts and secure with nuts. Tighten all of the nuts securely.
14. Attach coulters to each plow beam as follows: Loosen the two coulters holder screws in each beam. See Figure 7. Insert coulters shank in coulters holder and tighten the screws.
15. Bolt coulters check chain clip to each plow beam as shown in Figure 7.
16. Attach both coulters springs as shown in Figure 7.
17. Lower plow until both bottoms are resting on the ground.
18. Install counterbalance cable as follows: Remove sheave wheel from sheave shell. See Figure 8. Sit in the tractor seat and "break" the joints of the locking arms by grasping the welded loops and pulling forward.

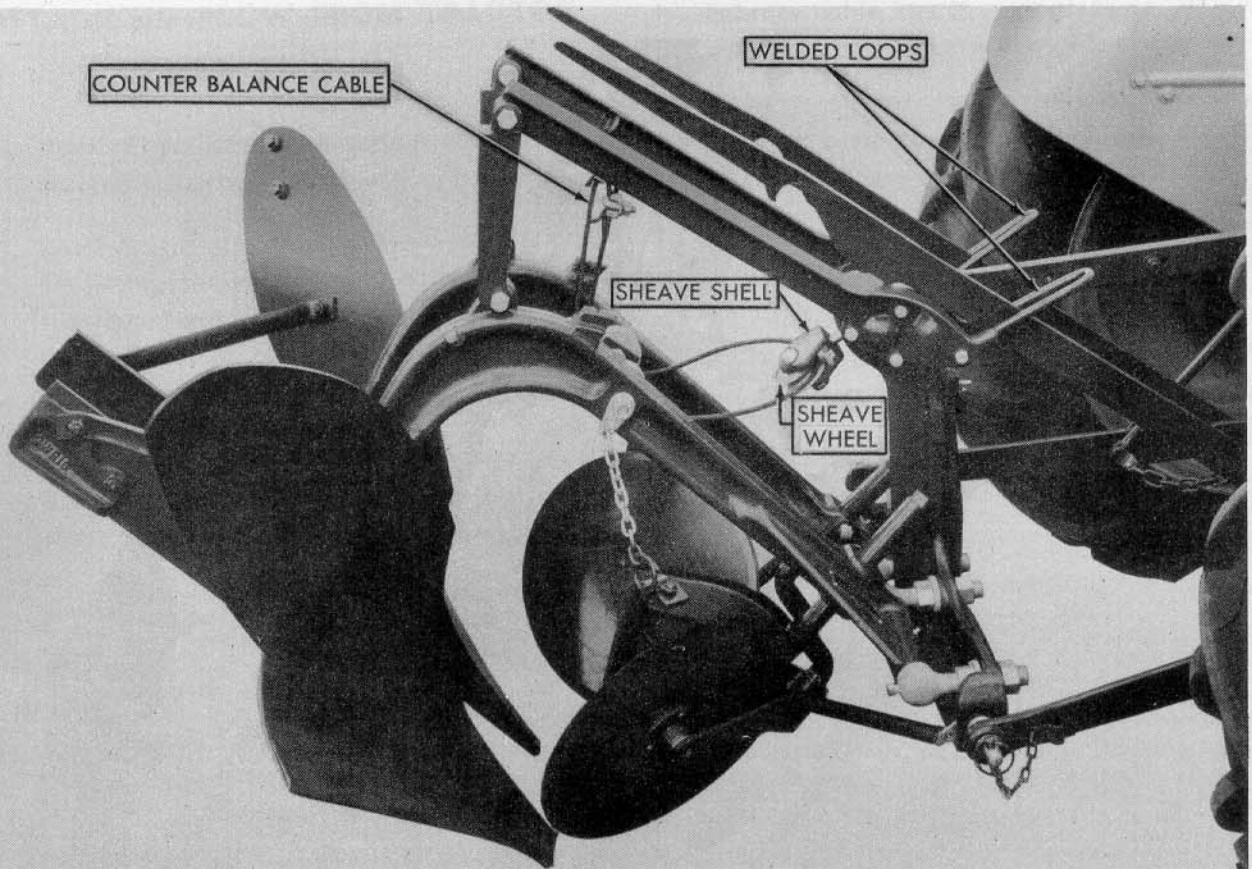


Figure 8

Plow position for attachment of counterbalance cable

Move tractor forward slowly causing the share points to dig securely into the ground. Both plow beams will then pivot forward and upward towards the T-frame allowing slack enough in the cable for it to be placed in the sheave wheel shell. Replace sheave wheel, pin and quick release pin.

19. Lift plow to maximum height with Ford Hydraulic Touch Control.
20. Push down on moldboard of right hand plow bottom until right hand locking arm is locked in position as shown in Figure 7.
21. Lower plow to ground and install automatic changing arms as shown in Figure 7.

Use the center hole of three holes on forward end of arm. Secure with quick release pin.

CAUTION: Make sure automatic changing arms are in position as shown in Figure 7, with hook opening facing downward.

22. The Dearborn Two-Way Plow ground engaging surfaces are protected against rusting and pitting with paint. Remove paint from these surfaces with a good grade of paint remover before using plow. If the paint is not removed, the plow will not scour properly.

CAUTION: Do not use abrasives such as sand, emery or scouring powders.

ATTACHING AND DETACHING

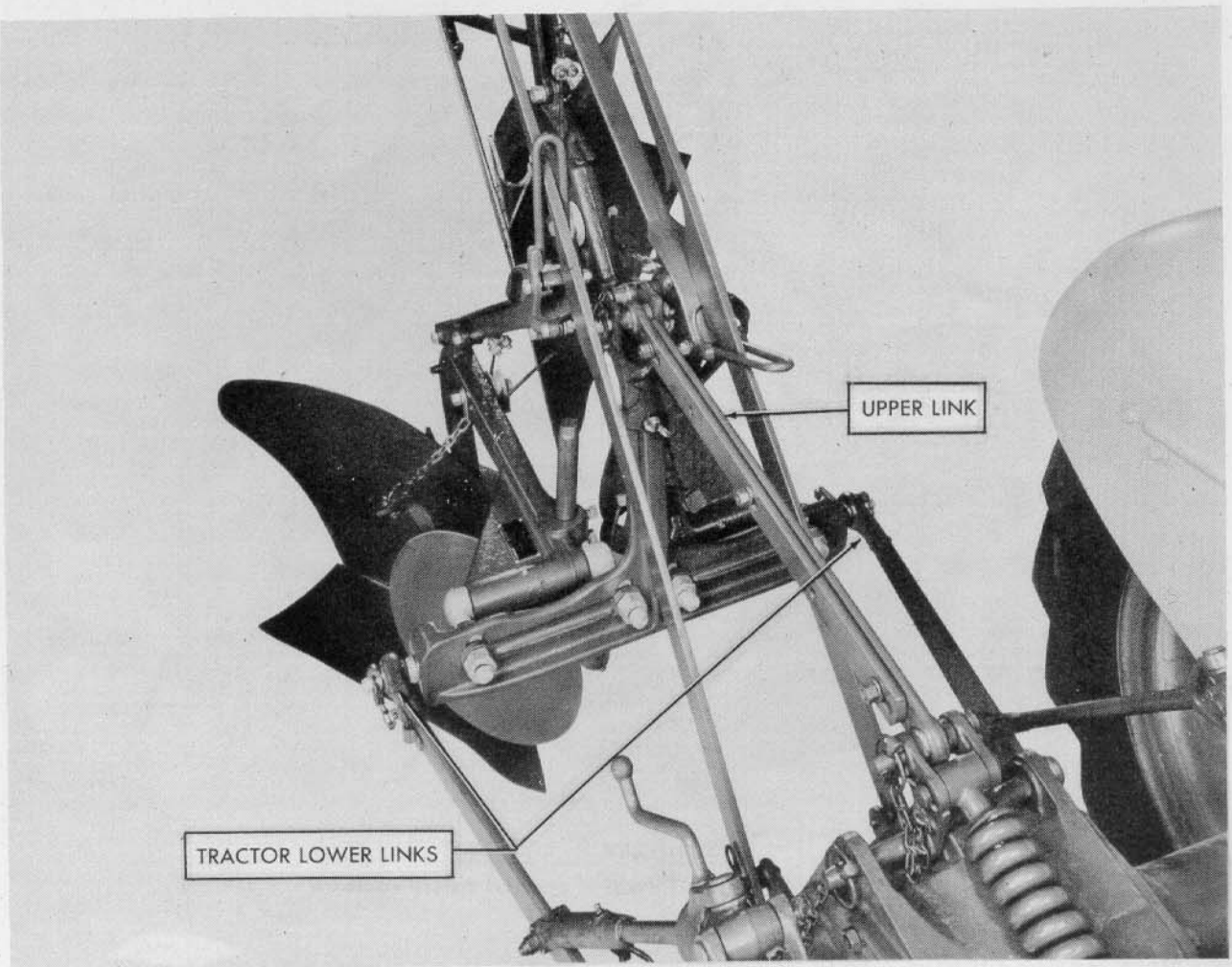


Figure 9
Plow attached to tractor

ATTACHING PLOW TO TRACTOR

1. Install tractor brackets if they have been removed from tractor. See steps 1 through 4 in Assembly Procedure.
2. Place the Dearborn Two-Way Plow on level ground.
3. Back tractor into position and attach the left and right lower tractor links. See Figure 9. Secure with linch pins.
4. Attach tractor upper link to plow and then to tractor control spring yoke. Secure with linch pins.
5. Attach counterbalance cable and automatic changing arms as explained in Steps 18 through 21 in the Assembly Procedure.

DETACHING PLOW FROM TRACTOR

1. Lower plow to ground.
2. Remove automatic changing arms from tractor brackets and plow.
3. Remove tension from counterbalance cable by lifting the raised plow bottom and at the same time open the locked joint of the locking arm on the other bottom, by lifting upward on the arm.
4. Drive tractor slowly forward until share points dig securely in the ground. Continue forward travel until plow counter-

balance cable has enough slack to permit removal from sheave. See Figure 8.

5. Remove counterbalance cable from sheave shell by removing spring lock pin, sheave pin, and sheave from sheave shell.
6. Back tractor up until both plow bottoms rest firmly on the ground.
7. Disconnect tractor upper link and both tractor right and left links from the plow.

CAUTION: Be sure that the Dearborn Two-Way Plow is completely disconnected from the tractor before attempting to move the tractor.



Figure 10

Plowing with the two-way plow

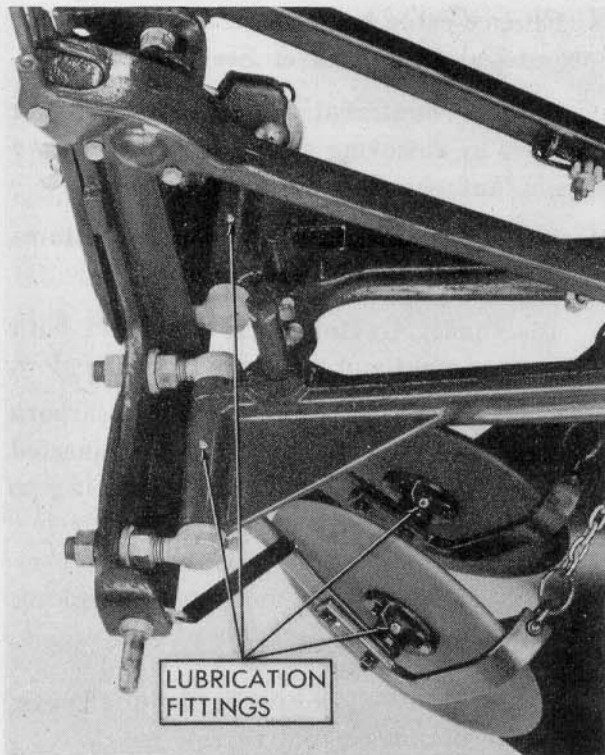


Figure 11
Location of lubrication fittings

LUBRICATION

There are four lubrication fittings on the Dearborn Two-Way Plow. See Figure 11. These fittings are located as follows:

1. Hub of right hand coulters wheel.
2. Hub of left hand coulters wheel.
3. Top front of right hand plow beam.
4. Top front of left hand plow beam.

Lubricate these points with a good grade of grease gun lubricant.

CAUTION: Do not lubricate ball joints,

locking arm latches, sheaves. Oil will collect dirt and cause excessive wear.

The Dearborn Two-Way Plow is so designed that it can be used for ditching as well as plowing. A few simple adjustments are necessary to set up the plow for either operation.

ADJUSTMENTS FOR PLOWING

Wheel Spacing: The front wheels of the tractor should be spaced 48 inches apart; the rear wheels should be spaced 52 inches apart. This is the normal wheel spacing as set at the factory.

Coulters Setting: Before starting to plow, adjust the coulters disc assemblies so that they are from $\frac{3}{4}$ " to $1\frac{1}{2}$ " away from the landsides, depending on soil conditions. See Figure 12. The bottom edge of the coulters should be approximately $1\frac{1}{4}$ " above the nearest point of the plow share. This setting will vary somewhat depending upon the desired depth of the furrow.

After starting to plow, further adjustments of the coulters may be necessary depending upon soil conditions. If the coulters are set too low, they will cause the plow to ride on the coulters hubs. Setting the coulters too far to the right or left of the landside will result in uneven furrow walls and increase draft. Loosen the two set screws, shown in Figure 7, to make necessary coulters adjustments.

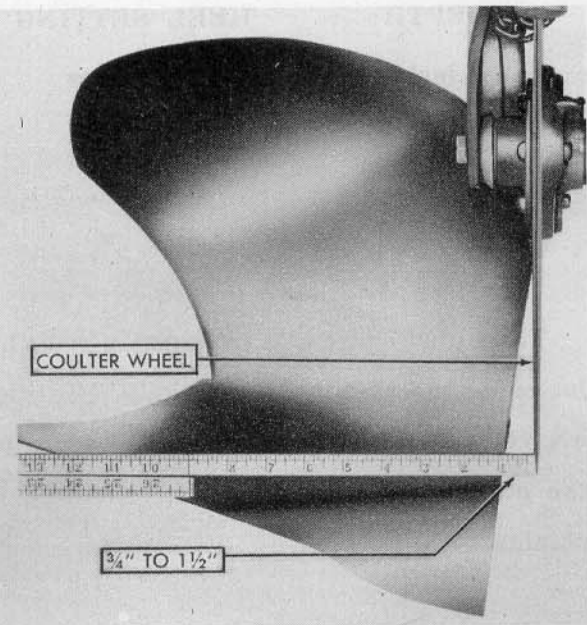


Figure 12
Lateral coulters setting-

Width of Cut: The Dearborn Two-Way Plow turns a 16-inch furrow. It is important that the plow be properly adjusted to give full width of cut.

Determine width of cut after first furrow has been turned. See Figure 13. Check to make certain that the tractor's front wheel has been kept close to the furrow wall; that the coulters are properly adjusted; and that the plow share is properly sharpened, before making adjustments.

If width of cut is under 16 inches, loosen inner eyebolt locking nut and tighten spacing nut. See Figure 14. If width of cut is over 16 inches, loosen the spacing nut and tighten the locking nut.

Depth of Cut: Use Ford Hydraulic Touch Control to obtain desired furrow depth.

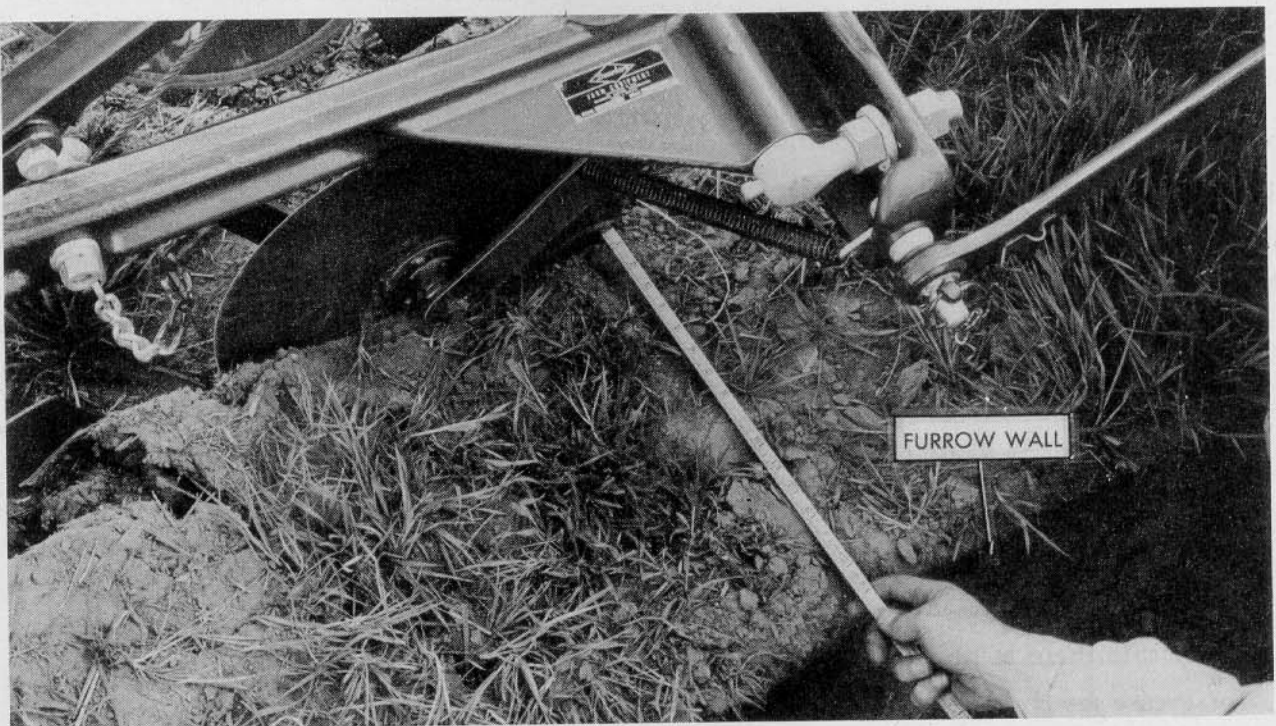


Figure 13
Measuring width of cut

OPERATION

Adjustment for Leveling Furrow Bottom: The plow bottoms should be set so that the bottom of the furrow is level.

This adjustment is made by loosening the plow beam inner and outer eyebolt spacing nut and locking nut and tilting the plow beam to correct position.

Adjustment for Proper Plow Penetration: The height of the plow share heel above the ground (See Figure 15) determines to a great extent, the penetration of the plow bottom.

The recommended plow share heel setting for different furrow depths are as follows: (See Figure 15.)

DEPTH

HEEL SETTING

6 inches	1 7/8 inches
8 "	2 1/2 "
10 "	3 1/8 "
12 "	3 3/4 "

These plow share heel settings are made by loosening the eyebolt locking nuts (See Figure 14) and raising or lowering the front of the plow beam until desired heel setting is obtained.

Eyebolt locking nuts and spacing nuts should be drawn up as tight as possible after desired setting is made.

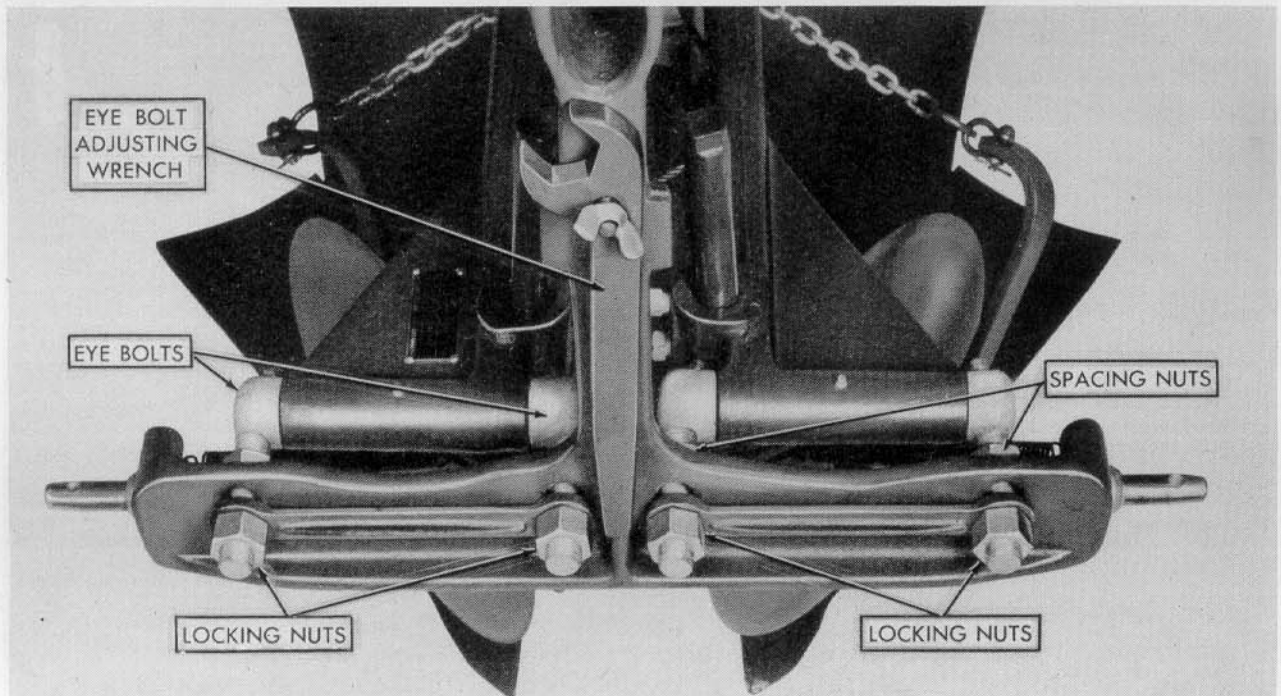


Figure 14

Location of eyebolts and spacing nuts

www.ntractorclub.com

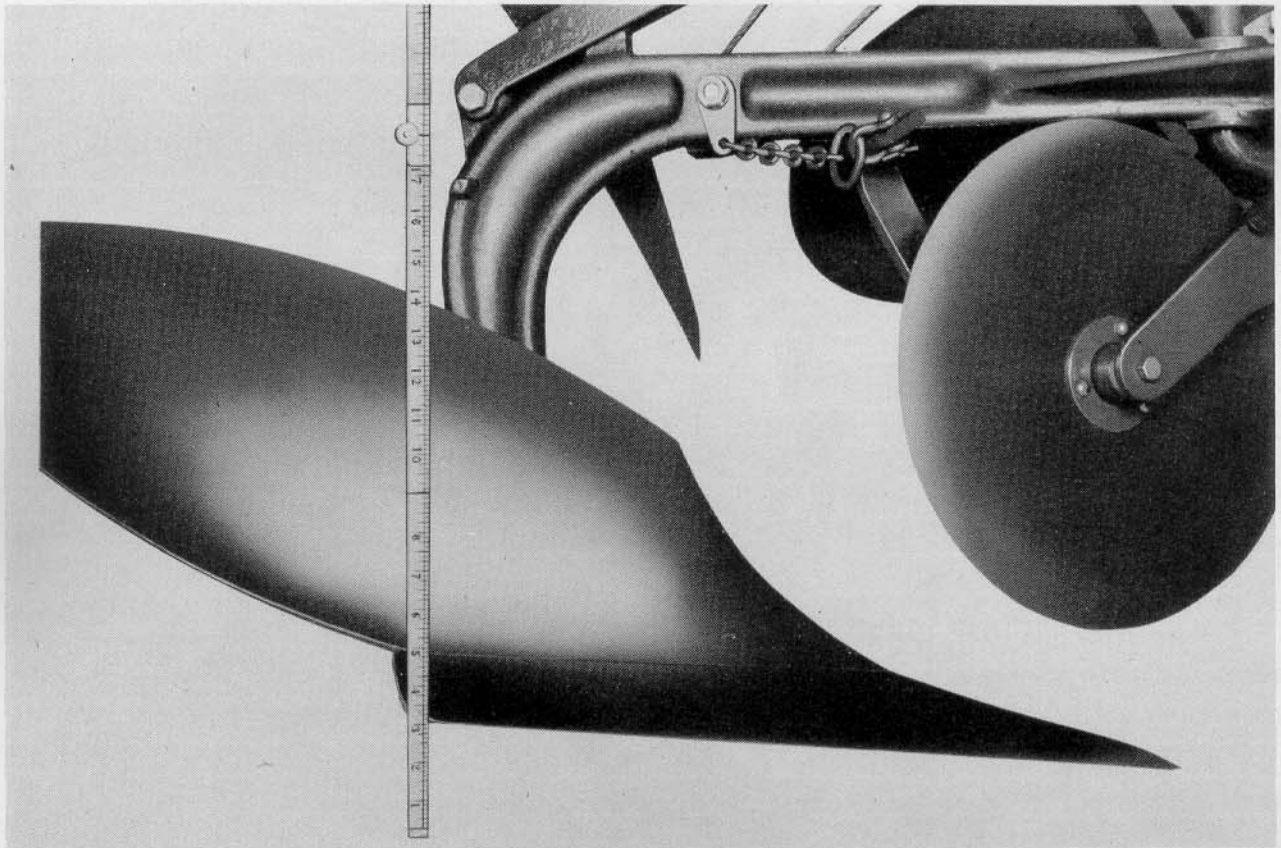


Figure 15

Measuring for proper plow penetration

ADJUSTMENTS FOR DITCHING

Position of Plow Bottoms: When the Two-Way Plow is to be used for ditching, both bottoms must be in working position. This adjustment is made as follows:

1. Remove both automatic changing arms from tractor and remove plow counterbalance cable from sheave shell as explained in Steps 1 through 5 in Removal of Plow from Tractor procedure.
2. Back tractor up until both the plow bot-

toms rest on the ground in a level position.

Adjustment of Bottoms: Raise plow bottoms just clear the ground. Loosen both outer eyebolt locking nuts and tighten both eyebolt spacing nuts, as shown in Figure 14, until heels of landsides are in extreme closed position. Secure outer eyebolt spacing nuts and inner eyebolt locking nuts.

Depth of Cut: Use Ford Hydraulic Touch Control to obtain desired ditching depth.



Figure 16
Ditching with the two-way plow

CARE OF PLOW SHARES

Dull or improperly sharpened plow shares are one of the chief causes of plowing difficulties. The purchase of an extra set of plow shares will help assure having one set of properly conditioned shares available for use at all times and thus help eliminate loss of plowing time due to waiting for shares to be re-conditioned.

Shares are easily detached from the mold-

board by removing three bolts. Before attaching new shares, clean dirt away and position share against bottom edge of moldboard and front edge of landside. Replace bolts and tighten securely.

CAUTION: Mark plow share bolts as they are removed to insure returning them to the same hole. This is necessary because, after use, each bolt head becomes polished and fits the curve of the share.

LOCKOUT ATTACHMENT

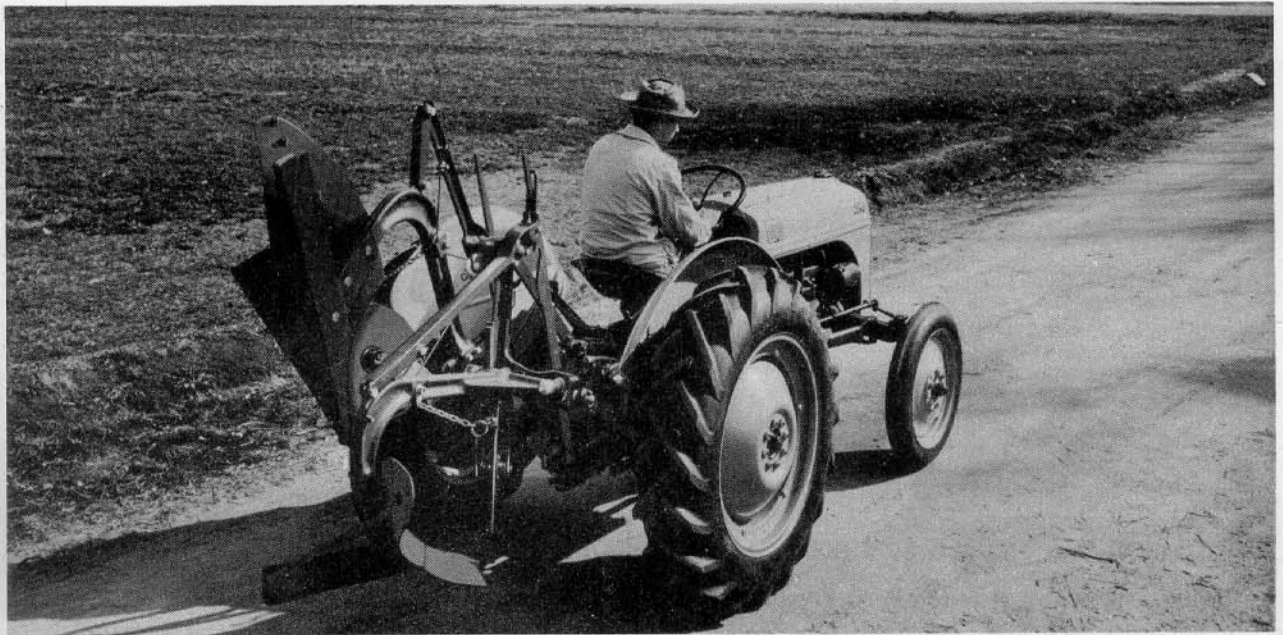


Figure 17

Plow in transport position

The lockout attachment enables the operator to disengage the latches of the automatic changing arms to prevent the automatic changing of the bottoms in the middle of a furrow when the plowing bottom is raised to clear an obstruction, or when the tractor wheels drop into a hole.

LOCKOUT ATTACHMENT

The lockout attachment is sold as extra equipment for use with the Dearborn Two-Way Plow at extra cost. Its assembly and operation is explained below.

ASSEMBLY PROCEDURE

1. Bolt left hand tractor bracket on power takeoff housing on tractor.
2. Place shaft end of lever handle into top hole of L.H. tractor bracket with forks pointing rearward and handle on right hand side of power takeoff housing. Place shortest shaft end of locking lever into elongated slot of L.H. tractor bracket, placing middle part of shaft into forks of lever handle.
3. Place right hand tractor bracket in position and insert shaft ends of lever handle and locking lever into holes. Bolt right hand tractor bracket to power takeoff housing on tractor.
4. Remove linch pins from lower shaft of locking lever and place automatic changing arms of plow on shaft (using center hole). Replace linch pins.

LOCKOUT ATTACHMENT

ADJUSTMENTS

To keep spring tension on lockout lever so that lockout lever will remain in a locked position, loosen set screw in set collar on left hand side of shaft of lever handle. Push lever into a locked position and place set collar against left hand tractor bracket. Tighten set screw.

OPERATION

When plowing in a rough field after the furrow has been started, reach back from tractor seat with the right hand, push lockout lever

to the left until it is released, then push all the way back until automatic changing arms are in unlocked position. (See Figure 19.) This allows the tractor to drop into old furrows and deep holes without causing the automatic changing arms to engage and change the plow bottoms in the middle of a furrow.

At the end of a furrow the lockout lever should be pulled forward into a locked position as shown in Figure 18. This will lock the automatic changing arms into position so that when the plow is raised from the ground with the hydraulic touch control lever, the plow bottoms will automatically change.

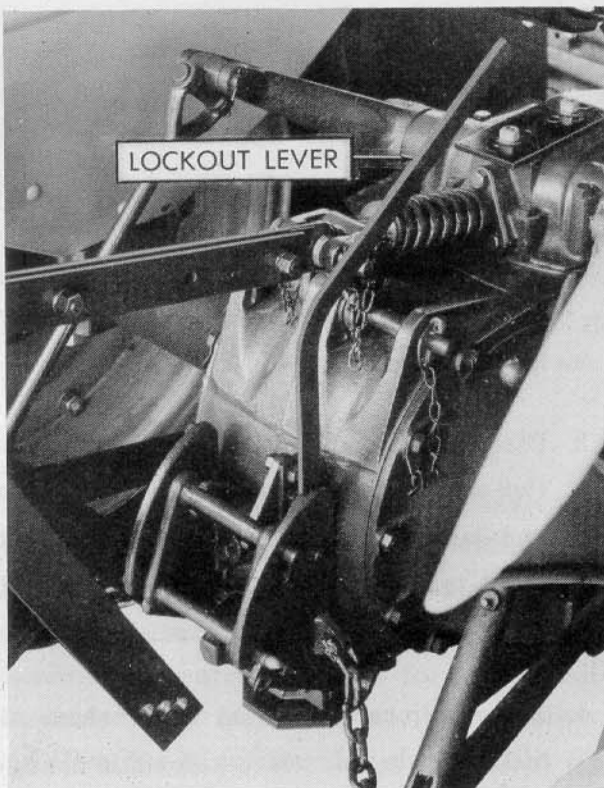


Figure 18

Lockout attachment—LOCKED

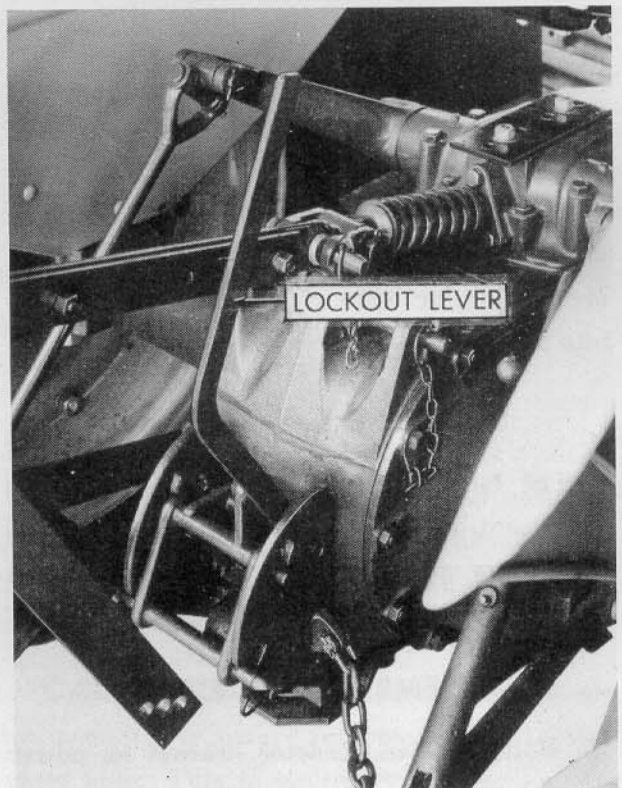


Figure 19

Lockout attachment—UNLOCKED

OPERATION

MAINTENANCE SUGGESTIONS

1. Keep all bolts, nuts and set screws tight.
2. Clean and apply a coating of rust preventive to all ground engaging surfaces when plow is not in use or when it is being prepared for storage. This will prevent ground engaging surfaces from rusting and pitting.
3. Lubricate at points specified daily, and always before storage, to remove any dirt or moisture from interior of bearings.
4. Use genuine Dearborn replacement parts in the servicing of all Dearborn Farm Equipment for most satisfactory results.

SAFETY PRECAUTIONS

Most farm implement accidents can be avoided by these simple safety precautions:

1. Do not permit anyone but the operator to ride the tractor at any time.
2. Always lower the implement to the ground with the Ford Hydraulic Touch Control before leaving the tractor. This will prevent injury to anyone tampering with the control while the operator is absent.
3. Operator should never leave seat of tractor while tractor is in motion.
4. Never attempt to make adjustments on tractor or implement while tractor is in motion.
5. Always shut off engine before leaving tractor.
6. Do not attempt to remove trash from moldboards or coulters while plow is in motion.