

# FORD

SERIES 101  
**PLOW**

## OPERATOR'S MANUAL



FORD TRACTOR DIVISION  
FORD MOTOR COMPANY

## **FOREWORD**

**THIS MANUAL PROVIDES INFORMATION ON PREPARING THE FORD SERIES 101 PLOW AND THE TRACTOR FOR PLOWING. ALSO CONTAINED IN THIS MANUAL IS INFORMATION ON OPERATION, TROUBLE SHOOTING, LUBRICATION, SAFETY PRECAUTIONS, SHIPPING INFORMATION, AND ASSEMBLY INSTRUCTIONS.**

**READ THIS MANUAL CAREFULLY BEFORE USING YOUR PLOW. KEEP IT HANDY FOR FUTURE REFERENCE. IF, AT ANY TIME, YOU HAVE ANY QUESTIONS ABOUT YOUR PLOW, REMEMBER YOUR FORD TRACTOR-EQUIPMENT DEALER IS BEST QUALIFIED TO HELP YOU. HE HAS FACTORY-TRAINED SERVICE TECHNICIANS, GENUINE FORD PARTS, AND THE CORRECT TOOLS AND EQUIPMENT TO DO THE JOB RIGHT IN THE SHORTEST POSSIBLE TIME.**

**SERVICE DEPARTMENT  
TRACTOR AND IMPLEMENT OPERATIONS (U.S.)  
FORD TRACTOR DIVISION  
FORD MOTOR COMPANY**

# PRE-FIELD ADJUSTMENTS

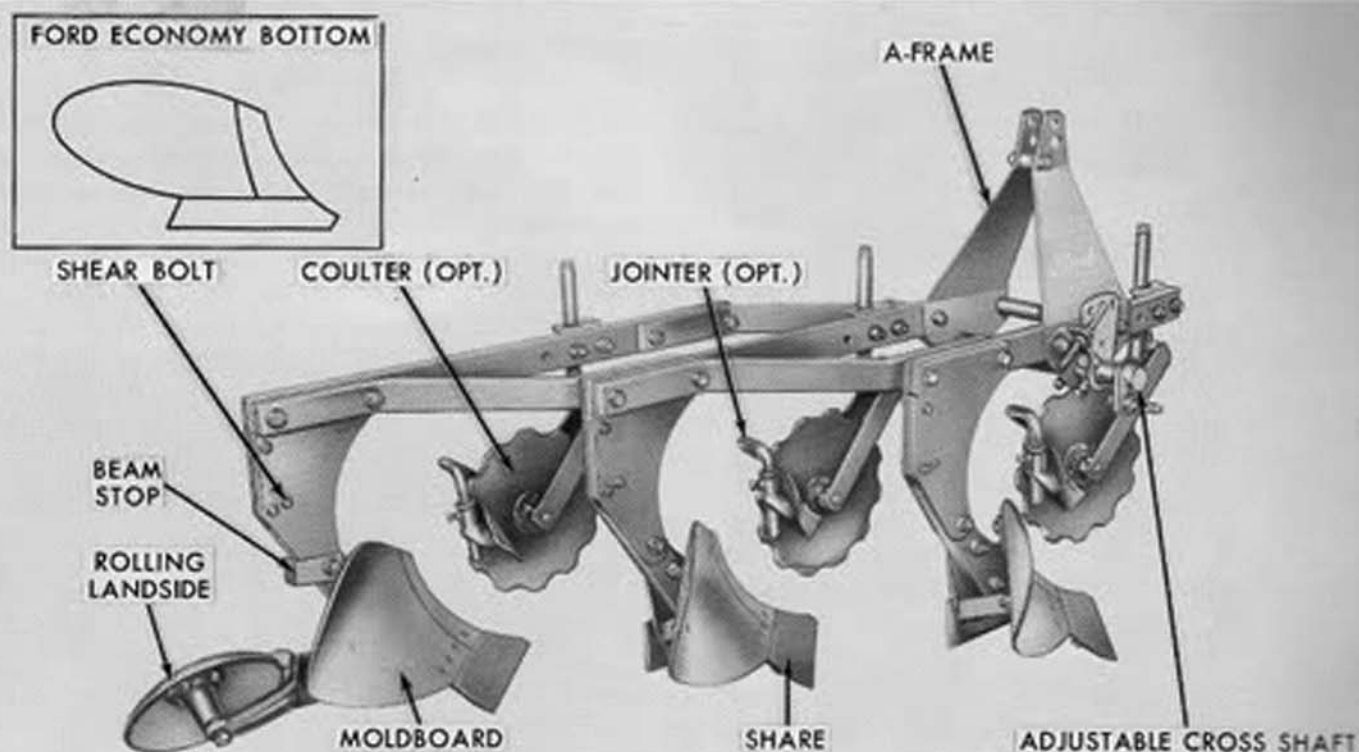


Figure 1  
Ford Three Bottom Mounted Moldboard Plow

## PRE-FIELD ADJUSTMENTS

The Ford 101 Plow, Figure 1, features a rigid truss frame, high beam clearance, shear bolt or spring trip bottoms, flexibility, and simplicity of adjustment.

The plow is available with one, two, or three bottoms, but can be converted to four bottoms with a conversion kit. The plow can be adapted to Category I or II hitches by changing the plow cross shaft.

A variety of economy bottoms with replaceable shins and shares are available.

Before entering the field, the following initial adjustments should be made. Final adjustments may vary, and should be completed in the field.

## TRACTOR WHEEL SPACING

To obtain the proper width of cut on the front bottom, the tractor wheels must be set in relation to the size of the plow. Refer to the Wheel Spacing Guide below for recommended inside and center-to-center measurements.

## WHEEL SPACING GUIDE

| Plow Size | Center-to-Center Measurements |             | Inside Rear Wheel Dimensions * |          |          |          |
|-----------|-------------------------------|-------------|--------------------------------|----------|----------|----------|
|           | Front Wheels                  | Rear Wheels | 12.4 -28                       | 13.6 -28 | 13.6 -38 | 15.5 -38 |
| 12"       | 52"                           | 56"         | 43"                            | 41"      | 41"      | 40"      |
| 14"       | 56"                           | 60"         | 47"                            | 45"      | 45"      | 44"      |
| 16"       | 60"                           | 64"         | 51"                            | 49"      | 49"      | 48"      |

\* The inside front wheel measurements should approximate the inside rear wheel dimensions.



Figure 2  
Draft Spring Adjustment

## DRAWBAR

To avoid interference with the coulter, the drawbar must be set to the side or removed.

## TRACTOR WEIGHT RECOMMENDATIONS

Use calcium chloride solution in both front and rear tires. For maximum traction and efficiency, use rear wheel weights and a front weight box. Refer to the Tractor Owner's Manual for complete weighting information.

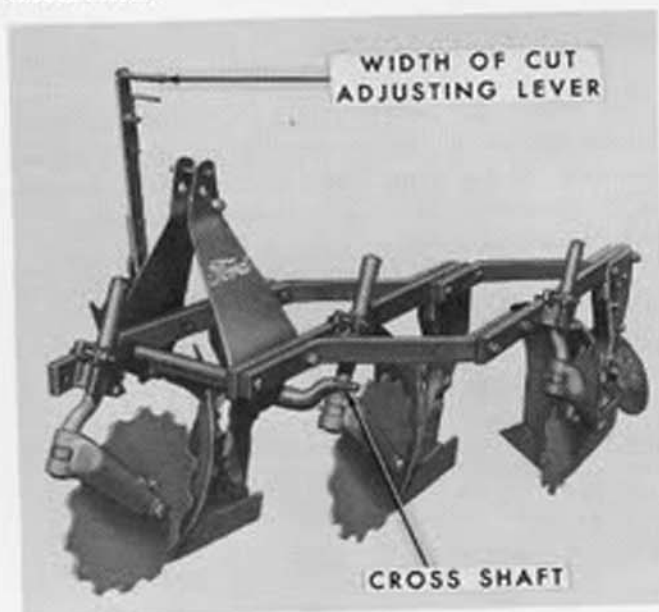


Figure 3  
Cross Shaft in Up Position

## TRACTOR HYDRAULIC SYSTEM DRAFT SPRING

Initially, tighten the draft spring yoke on Ford 2000 and prior model tractors as shown in Figure 2, until the draft spring becomes difficult to turn. Loosening the spring increases draft sensitivity. The correct setting must be determined for each plowing job. It is usually best to operate the hydraulic system in the constant draft position.

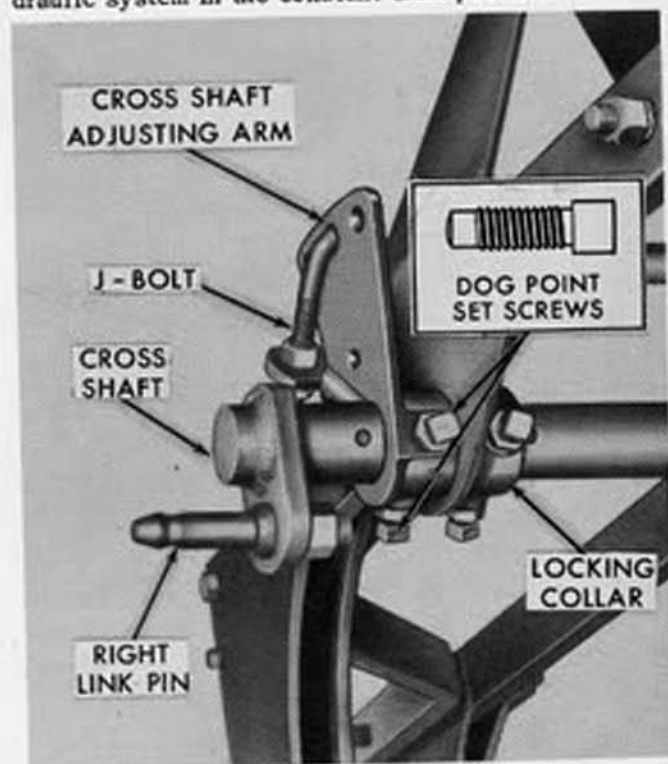


Figure 4  
Cross Shaft Adjustments

## ATTACHING PLOW TO TRACTOR

Adjust the plow width of cut adjusting lever so the cross shaft offset on the left side is in the up position, as shown in Figure 3.

Adjust the J-bolt so the right link pin is directly below the cross shaft, as shown in Figure 4.

Lower the tractor hydraulic lift control lever to allow the cross shaft to be inserted through the ball of first the left lower link and then the right. Pin the cross shaft in place.

With the tractor hydraulic lift control lever in the down position, secure the upper link to the plow.

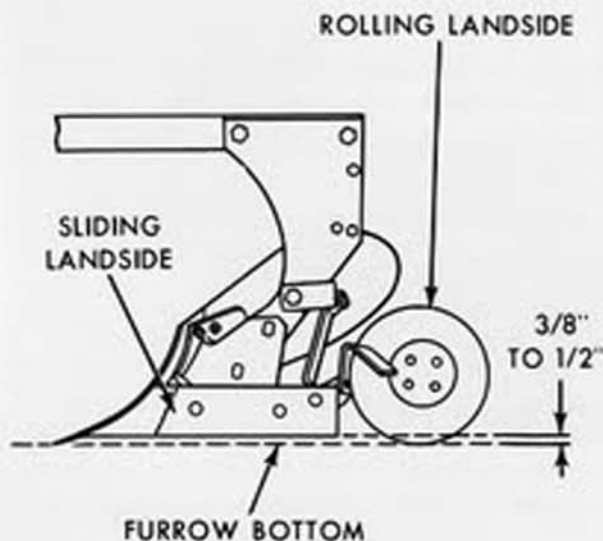


Figure 5  
Adjusting Rolling Landside

## ROLLING LANDSIDE

The rolling landside, used on mounted plows only, should be set from 3/8" to 1/2" below the sliding landside, as shown in Figure 5. To reposition the landside, loosen the two landside arm retaining

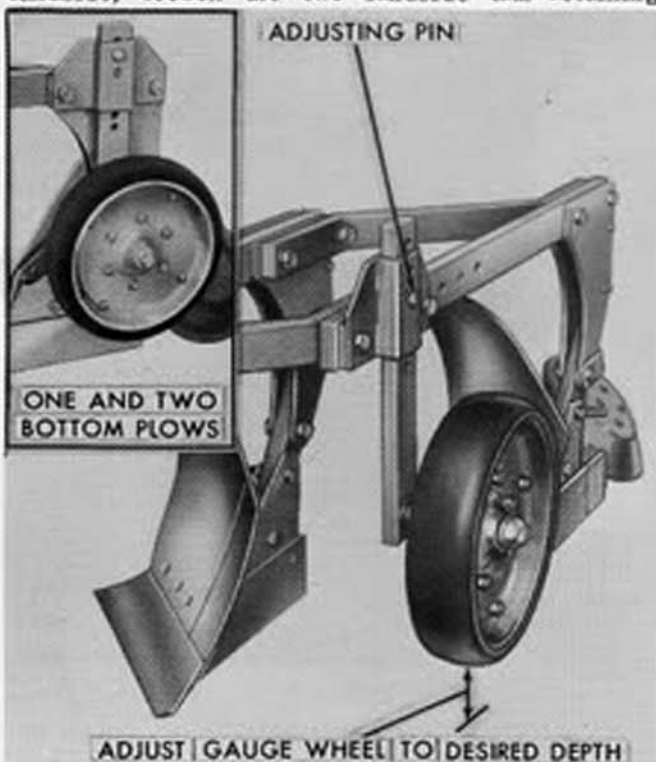


Figure 6  
Location and Adjustment of Gauge Wheel

bolts, and adjust the set screw located under the arm.

## SETTING LIFT LINKAGE

Position the Ford 4000 rocker pivot pin in the upper hole; place the upper link in the bottom rocker hole on the Ford 2000 and 3000 Tractors, and in the middle or lower rocker hole on the Ford 5000 Tractor.

Adjust the upper link length to: 23 inches on the the Ford Series 2000 and 4000 Row Crop Tractors; 25 inches on the Ford Series 2000 and 4000 All Purpose Tractors; and 27 inches on the Ford 2000, 3000, 4000, 5000, and Commander 6000 Tractors. This is a starting point for further adjustment in the field.

Adjust the left lift rod length, on tractors equipped with adjustable left lift rod, to the normal operating length described in the Tractor Operator's Manual. This length will be:

|           |                   |
|-----------|-------------------|
| Ford 3000 | - 23 inches       |
| Ford 4000 | - 29-13/16 inches |
| Ford 5000 | - 28-1/2 inches   |
| Ford 6000 | - 24-1/8 inches   |

## CROSS SHAFT SETTING

Category I hitches are equipped with laterally adjustable cross shafts. Check to be sure the dog point set screws are located in the second holes from the right end of the cross shaft, Figure 4. If adjustments are necessary, refer to Width of Cut, page 7.

Category II hitches are not adjustable laterally.

## WIDTH OF CUT

The width of cut can be changed by adjusting the J-bolt, Figure 4, or by using the optional Adjusting Lever (described in the Accessory Section).

Initially, set the right link pin, Figure 4, directly below the center of the cross shaft. Additional information is available under Width of Cut, Operation Section.

## OPERATION

Because all field adjustments are interdependent, follow the sequence listed below. If any one correction is made, be sure to recheck all other previous adjustments.

### DEPTH CONTROL

On Ford Tractors, plowing depth is determined by the position of the hydraulic lift control lever on the quadrant. It is usually best to operate the hydraulic system in the constant draft position, although the position control setting may be better under certain conditions (see Hydraulic Adjustments, below).

Always check depth at the rear bottom, Figure 8. When the desired depth is reached, set the stop on the quadrant, Figure 8, so the hydraulic lift control lever can always be returned to the same position.

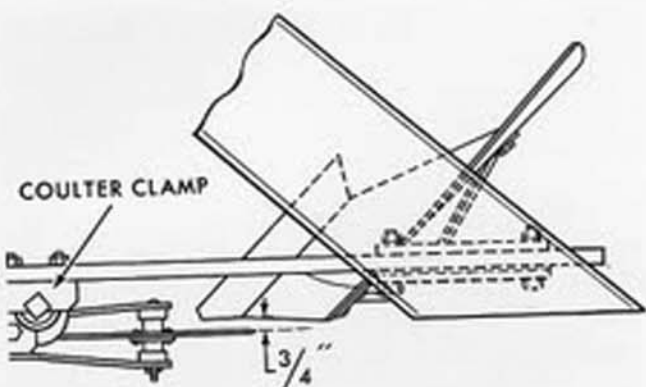


Figure 7  
Rolling Coultter Adjustment

### DEPTH CONTROL - GAUGE WHEEL

Gauge wheels are recommended when operating tractors not equipped with draft control. Refer to Figure 6.

If desired, the wheel may be turned toward the inside.

### COULTERS

Normally, the coulters should be set 2-1/2" above and 3/4" to the left of the nearest shin surface. See Figure 7 (fork arm coulter shown). Set all coulters evenly.

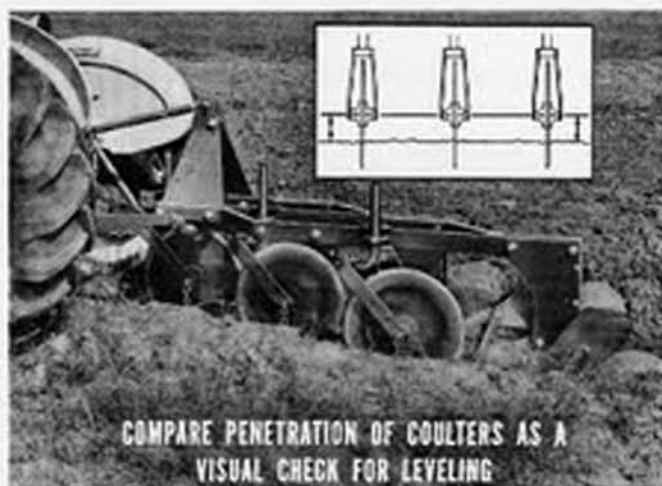


Figure 8  
Checking Depth



Figure 9  
Fore-and-Aft Leveling

When operating the plow with tractors without draft control, depth is gauged by a gauge wheel, Figure 6. Lower the plow to the desired depth, then raise the hydraulic control lever to be sure the tractor is carrying most of the weight. Return the hydraulic control lever to the "hold" or neutral position. The tractor should carry the bulk of the weight of the plow for maximum traction.



*Figure 10*  
*Side-to-Side Leveling*

## PITCH CONTROL

With the rear bottom at the desired plowing depth, adjust the upper link so the rolling landside leaves a light but definite mark in the furrow bottom and the plow frame is level fore and aft, Figure 9. (Sliding landsides should run approximately 1/2" above the bottom of the furrow.)

The amount of pitch or suction required, varies in different types of soil. In hard soil, the upper link can be shortened to increase penetration; however,



*Figure 11*  
*Measuring for Correct Width of Cut*

the landside must also be lowered so it rides at the bottom of the furrow. Avoid plowing with the upper link too short. This causes excessive draft and premature wear on the plow points. Lubricate rolling landsides every four hours with a multi-purpose grease.

## LEVELING THE PLOW - SIDE-TO-SIDE

Whenever the front-to-rear pitch is changed, the side tilt must be readjusted with the leveling crank so all the bottoms operate at the same depth.

Determine the side tilt as follows:

1. Check to see if all coulter blades are cutting equally, Figure 10.
2. Stand at a distance behind the plow and sight along the frame to see if it is parallel with the ground.
3. Observe the furrow slices to see if each moldboard is throwing a uniform amount of soil.

**NOTE:** *The furrow slice of the front moldboard is affected by the width of cut, described below.*

## WIDTH OF CUT

Check the width of cut in one of the following two ways:

1. Check the dimension from the coulter blade to the furrow wall, as shown in Figure 11. This dimension should be the same as the size of the plow bottom. For example, when using a 14" bottom, the coulter-to-furrow measurement should be 14".
2. Drive a stake an arbitrary distance from the furrow wall at any given point in the field. Measure the distance from the furrow wall to the stake. Plow past the point of measurement and remeasure the distance from the furrow wall to the stake. The difference is the width of cut. For example, with three 14" bottoms (42" total) measure 10 feet from the furrow wall. After plowing past the point of measurement, the new measured distance should equal 78" (120" minus 42").



Figure 12  
Changing Width of Cut

Necessary adjustments can be made with the J-bolt as shown in Figure 12, or, if installed, with the optional Width of Cut Adjusting Lever. Rotating the adjusting arm rearward decreases the width of cut; moving the arm forward increases the cut. Adjustments beyond the limit of the J-bolt or adjusting lever, can be made by using a different adjusting arm hole, Figure 4.

**NOTE:** If a substantial change is made in the width of cut, relevel the plow as directed above.

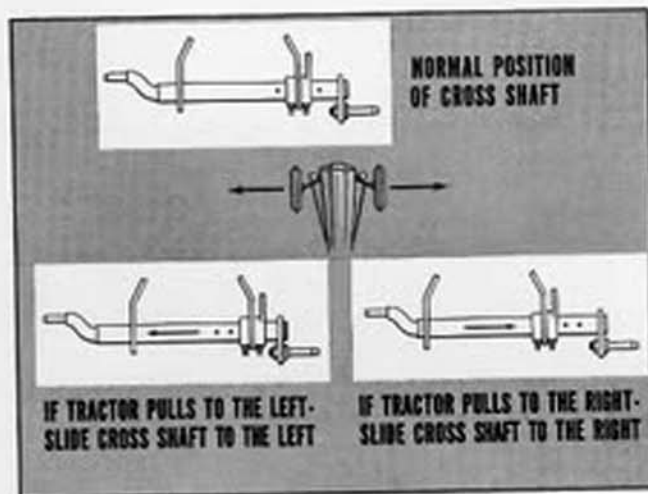


Figure 13  
Eliminating Side Pull

## STEERING

If there is excessive side pull after completing all of the above adjustments, refer to Figure 13 and slide the cross shaft to a new set of holes. Always slide the shaft in the direction of pull.

Category II hitches are not adjustable.

## HYDRAULIC SYSTEM

Set the tractor hydraulic system as instructed below:

**2000-4000 Series:** Refer to Tractor Hydraulic System Draft Spring information on Page 4.

**2000 Dexta and 5000 Series:** Start with the flow control knob turned in all the way. In heavy soils where draft corrections are severe, screw the knob out until the corrections are less abrupt and the plow operates smoothly.

**Ford 2000, 3000, 4000, and 5000 Tractors:** Position the hydraulic selector lever in the draft control position, as described in your Tractor Operator's Manual. Select a middle flow control setting, as required, to obtain the desired hydraulic response.

**6000 Series:** Begin plowing with the Multi-trol lever in the constant draft position (the most forward hole). If draft corrections are too frequent, move the handle back one hole at a time until the plow operates smoothly.

## COULTERS

Set the coulters only deep enough to cut trash, and far enough to the left of the plow shin to leave a clean, straight furrow wall.

For maximum trash clearance, set the coulters in the forward position. Install the coulters in the rear position if penetration is a problem.

Keep the coulters well lubricated and adjusted. Use a multi-purpose grease every four hours. Tighten the bearings frequently to eliminate excessive side play.



## JOINTERS

Depending upon trash conditions, set the jointers 1" to 3" deep.

The point of the jointer should always touch the coulter blade lightly to prevent the accumulation of trash. As wear occurs, keep the point in contact by rotating the jointer.

## COVERBOARDS

Initially, set the coverboards flush with the moldboards, Figure 14. Additional soil can be thrown by setting the coulters farther from the moldboard shins. To throw less soil, tilt the coverboard wings up.

Where scouring or fluffy trash is a problem, tilt the coverboard wings as high as possible. In some instances, it may be necessary to remove the coverboards entirely.

**NOTE:** Be sure to use the support wedge, Figure 14.

## PLOWING SPEED

Vary tractor speed with ground conditions and the type of bottoms being used. 3-1/2 to 5 mph is normal.

## LIFTING SEMI-MOUNTED PLOWS

When the hydraulic lift control is actuated, the front of the plow is raised until the lift springs, Figure 35, over-ride the hydraulic system and cause the rear of the plow to rise. When the springs are in adjustment, the front of the plow will be fully raised slightly before the rear, and the hydraulic system will automatically return to neutral.

If the rear of the plow does not rise, hook the springs in the next shorter chain links until the proper delayed lift is obtained.

## OPERATION SUMMARY

### MEASURING DEPTH

Measure depth at the rear bottom. Set the stop on

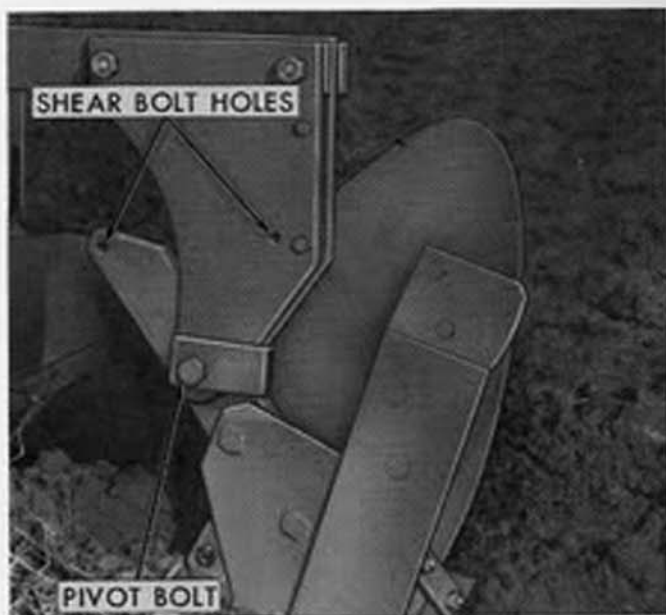


Figure 14  
Bottom in Tripped Position

the quadrant so the plow always will be returned to the same depth.

### LEVELING FORE-AND-AFT

Set the tractor upper link so the rolling landside leaves a slight mark at the base of the furrow wall. Sliding landsides should run about 1/2" above the furrow bottom.

### LEVELING SIDE-TO-SIDE

Use the leveling crank to level the frame from side-to-side.

### WIDTH OF CUT

Rotate the cross shaft adjusting arm forward to increase, and rearward to decrease the cut.

### STEERING

Alleviate side pull by sliding the cross shaft in the direction of pull (Category I shaft).

### HYDRAULIC SYSTEM

Set the system so the plow reacts smoothly to draft corrections.

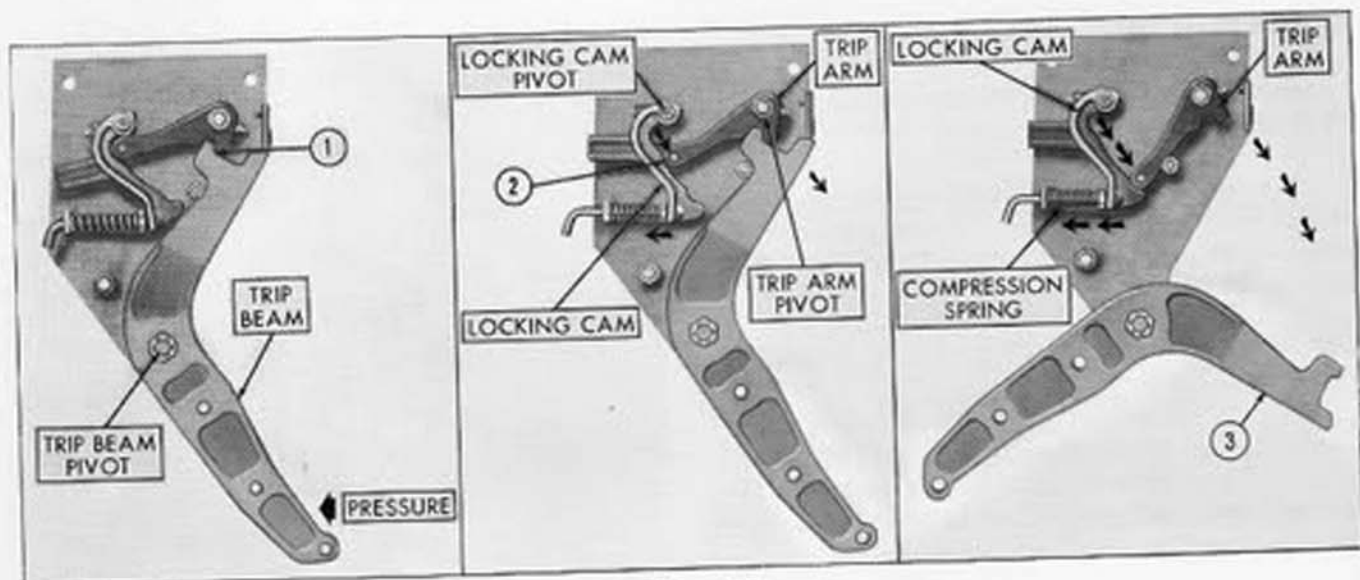


Figure 15  
Tripping Cycle of the Spring Trip Beam

## SETTING COULTERS

Set the coulters only deep enough to cut trash and leave a clean, straight furrow wall.

## ADJUSTING JOINTERS

Keep the points in slight contact with the coulters, and only deep enough to cover trash.

## SETTING COVERBOARDS

Keep the coverboard flush with the moldboard. Tilt the wing up to throw less soil, or if the wings impede the flow of trash.

## SAFETY SHEAR BOLT AND SPRING TRIP

One of two safety devices is available to prevent damage to the plow when obstacles are hit.

### SHEAR BOLT

Shear bolt beams have a special heat treated bolt (Part No. 372451-S8) which allows the bottom to trip, as shown in Figure 14.

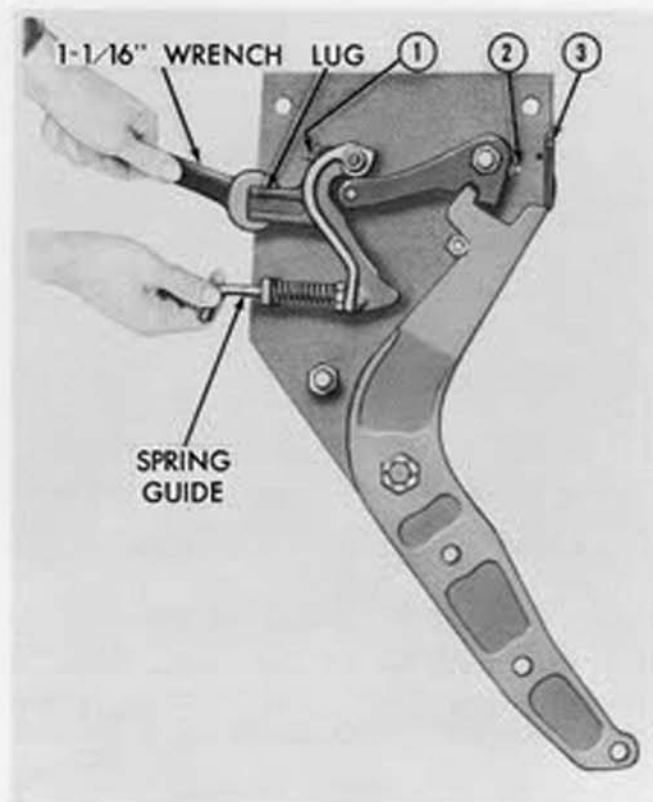
## SPRING TRIP

Spring trip beams have a spring trip mechanism. Figure 15 illustrates a complete tripping cycle. The right-hand gusset has been removed to show the working parts of the spring trip. When an obstruction is hit by the plow bottom, the trip beam tends to pivot, exerting a pressure at (1), Figure 15. Pressure at the trip arm causes the trip arm roller (2), to move downward on the inner surface of the locking cam. This action forces pressure against the compression spring. When pressure on the plow bottom becomes greater than the counteracting pressure of the compression spring on point (1), the bottom trips and pivots free of the obstruction.

To reset a tripped bottom in the field, simply leave the plow in the ground and back the tractor until the bottom resets.

**Adjustments:** The spring trip mechanism is pre-set at the factory; however an adjustment is possible to change the setting.

To change the beam trip resistance, raise the locking cam lug with a 1-1/16" open end wrench, Figure 16, and rotate the spring guide. Turning the spring guide clockwise tightens the spring and increases the beam trip resistance. A counterclockwise rotation lets the beam trip more easily. Make adjustments in series of two or three turns.



**Figure 16**  
*Adjustment of the Tripping Load*

**Lubrication:** Lubricate the grease fittings at (1) and (2), Figure 16, daily. The fitting at (1) can be reached from the rear of the beam. The fitting at (2) can be reached by removing the tap in plug (3).

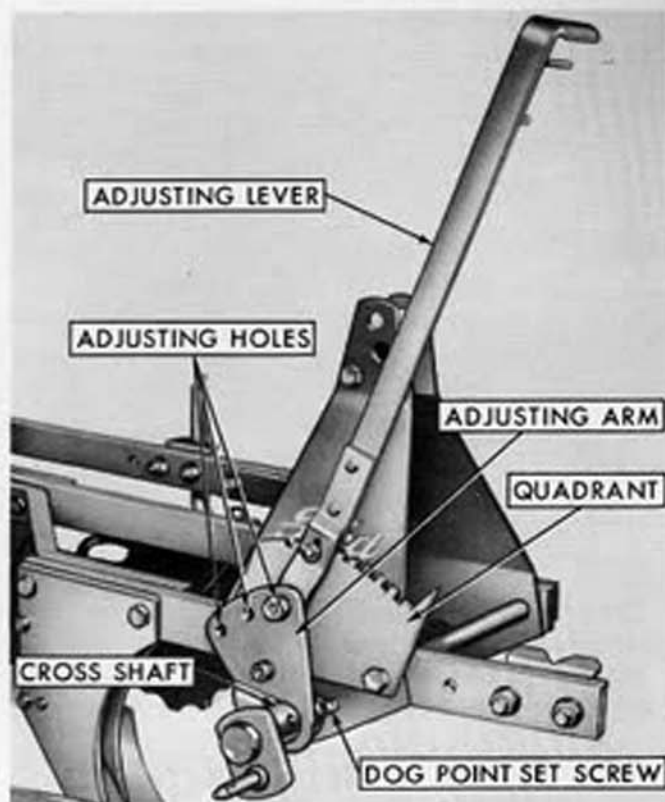
**IMPORTANT:** After the first few hours of operation, retighten the beam pivot bolts securely. These bolts should be checked regularly for lateral play. Over tightening will cause difficult resetting.

## ACCESSORIES

The following accessories are available as extra equipment:

### WIDTH OF CUT ADJUSTING LEVER

The adjusting lever, Figure 17, may be installed to replace the cross shaft J-bolt. The adjusting lever is especially useful for hillside plowing, where frequent width-of-cut corrections are necessary. Moving the adjusting lever forward increases, and rearward decreases, the width of cut.



**Figure 17**  
*Adjusting Lever Attached*

Attach the lever as follows:

1. Remove the J-bolt, Figure 25, from the cross shaft adjusting arm.
2. Detach the J-bolt anchor bracket and bushing (3), Figure 20.
3. Attach the quadrant to the right A - frame member as shown in Figure 17. Use the two bolts, lock washers, and nuts provided in the plow frame.
4. Attach the adjusting lever to the bottom adjusting bracket hole with a 7/16" x 1-1/4" hex bolt, lock washer, and nut, and to the rear adjusting hole with a 5/8" x 1-1/2" hex bolt, lock washer, and nut. Position the bolts so the nuts are to the outside.
5. Slide the adjusting arm and lever assembly to the rear of the quadrant. Pull the lever forward until the lever lock can engage a quadrant notch.
6. Reposition the adjusting arm on the cross shaft and tighten the dog point set screws.

The range of adjustment may be changed by attaching the upper portion of the adjusting lever in either of the three adjusting holes in the adjusting arm. It is recommended that the front adjusting hole be used as a starting position. This provides improved accessibility of the lever from the tractor seat.

## ROLLING COULTERS

Rolling coulters, Figure 18, are available in 16 or 18 inch diameters with smooth or notched blades. Notched blades do a better job of cutting in heavy trash.

**NOTE:** DO NOT use 20 inch coulters on the Series 101 Plow.

Attach the coulters as follows:

Attach the stem (1), Figure 18, to the plow beam with the U-bolt and seat (2), as shown. Adjust the coulters as directed under Pre-Field Adjustments. Tighten the U-bolt nuts securely.

Also available for installation on the Series 101 Plow are the new one arm coulters. Install the one arm coulters, as shown in Figure 19. Use Clamp Bracket, Part No. 201823, on the first beam and Clamp Bracket, Part No. 201810, on the second, third and fourth beams. Be sure Clamp Bracket, Part No. 201823, is installed with the word "TOP" in the up position, as shown. Use U-Bolt Clamp, Part No. 201805, on the first beam and U-Bolt Clamp,

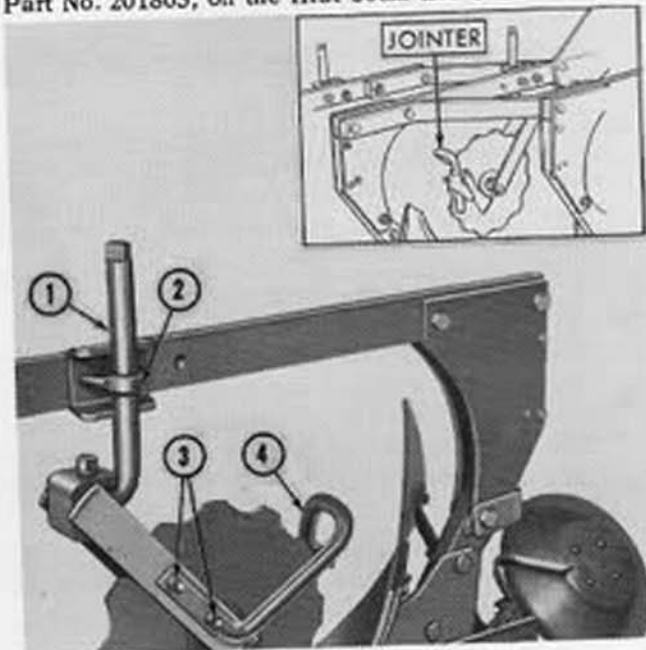


Figure 18  
Coulters and Joints Attached

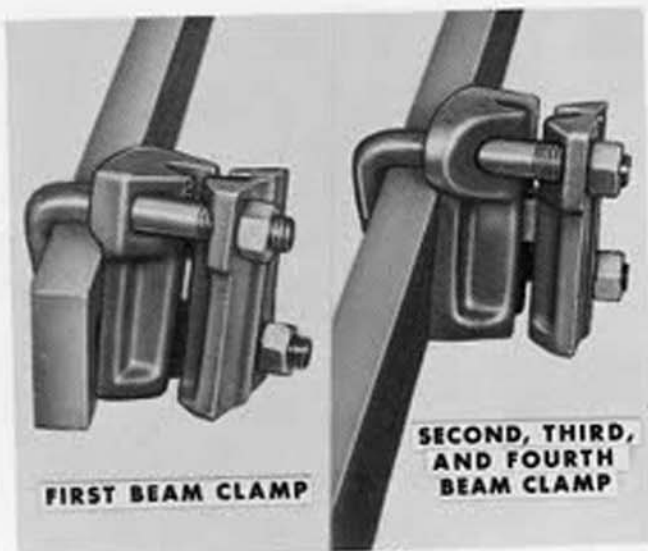


Figure 19  
One Arm Coulters Clamps

Part No. 201807, on the other beams, Figure 20. When installing U-Bolt Clamp, Part No. 201805, place the 4-3/4" U-Bolt arm on top of the beam.

Install the coulters blades, as shown in Figure 21 and 22.

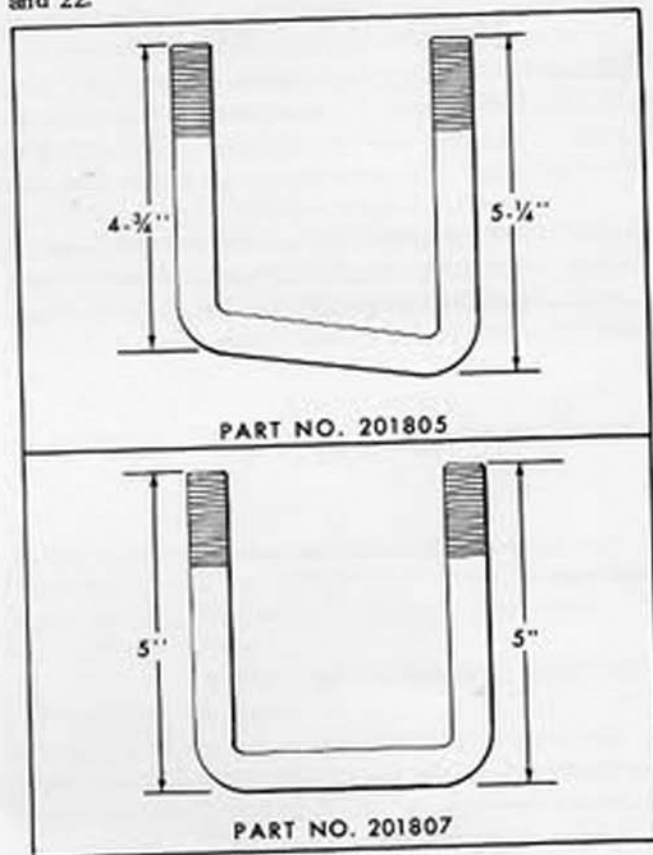
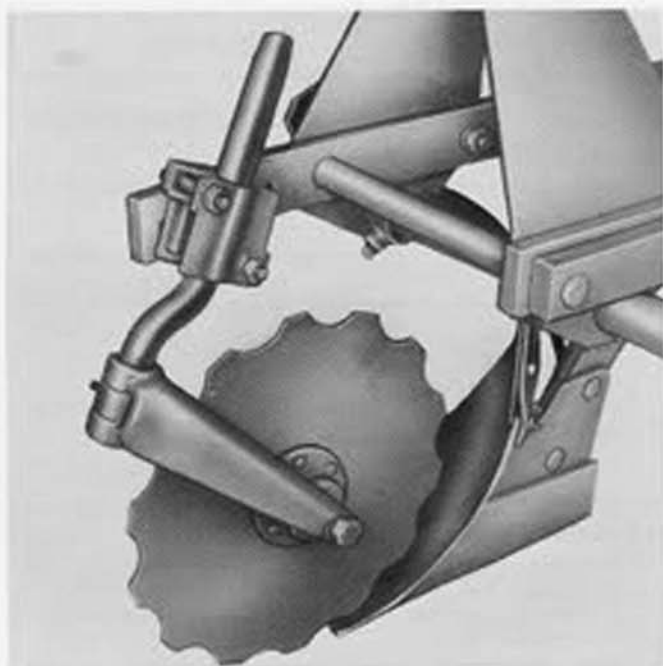
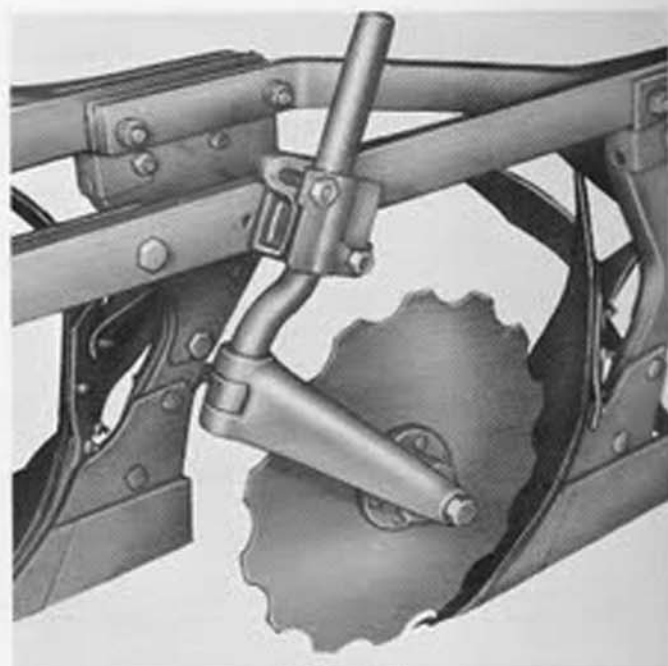


Figure 20  
One Arm Coulters Clamp U-Bolts



**Figure 21**  
*One Arm Coulter Installed on First Beam*



**Figure 22**  
*One Arm Coulter Installed on Second, Third, or Fourth Beam*

## JOINTERS

Short growth and trash are turned under more readily when jointers are installed with the coulters, Figures 1 and 18. Jointers are available with long and short blades.

Attach the jointers as below:

Bolt the jointer arm (4), Figure 18, to the left side of the coulter fork with two carriage bolts, lock washers, and nuts (3). Adjust the jointer so the point lightly touches the coulter about 2" above the lower edge of the blade.

## COVERBOARDS

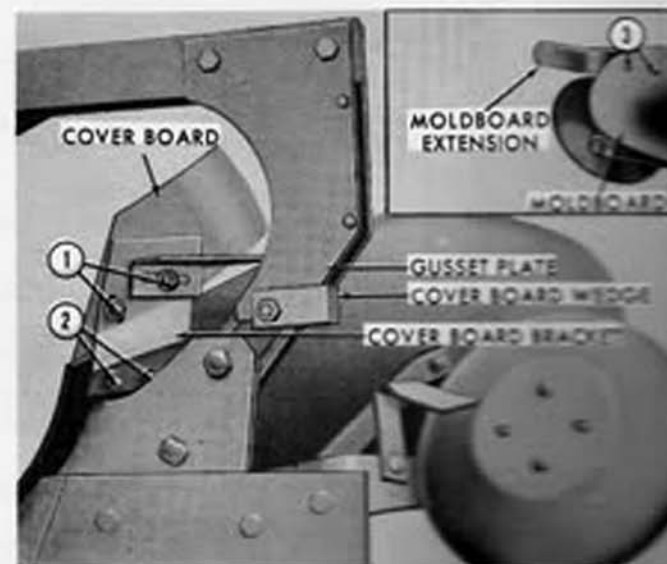
Coverboards are effective where heavy trash is a problem. Refer to Figure 23, and make the installation as below:

1. Attach the coverboard bracket to the moldboard shin with two  $7/16'' \times 1-3/4''$  bolts (2).
2. Connect the coverboard to the coverboard bracket using two  $3/8'' \times 1-1/4''$  bolts, flat washers, and nuts (1). Be sure to attach the coverboard wedge with the rear bolt (1). Set the wedge to contact the inside edge of the right-hand gusset plate.

## MOLDBOARD EXTENSIONS

When extensions are used, furrow slices are given an additional roll as they leave the moldboard. Extensions are available for installation on Economy Sod and Clay Bottoms only.

Use the two existing plow bolts, washers, and hex nuts (3), Figure 14, to make the installation. The bolt spacers are not used.



**Figure 23**  
*Coverboard Attached*

# TROUBLE SHOOTING

| PROBLEM                           | POSSIBLE CAUSE   | REMEDY   |
|-----------------------------------|--|--|
| <b>PENETRATION</b>                | <ol style="list-style-type: none"><li>1. Worn or bent shares.</li><li>2. Insufficient suck.</li><li>3. Coulters too deep.</li><br/><li>4. Soil too hard and dry.</li></ol>   | <ol style="list-style-type: none"><li>1. Replace with new shares.</li><li>2. Shorten upper link.</li><li>3. Run coulters only deep enough to cut trash.</li><li>4. Wait for improved soil conditions.</li></ol>  |
| <b>PLOW CROWDS TO EITHER SIDE</b> | <ol style="list-style-type: none"><li>1. Plow not level.</li><li>2. Width of cut too wide.</li><br/><li>3. Width of cut too narrow.</li></ol>  | <ol style="list-style-type: none"><li>1. Level plow.</li><li>2. Decrease width of cut; decrease tractor rear wheel spacing.</li><li>3. Increase width of cut; increase tractor wheel spacing.</li></ol>  |
| <b>UNEVEN DEPTH OF PLOWING</b>    | <ol style="list-style-type: none"><li>1. Tractor hydraulic system.</li><li>2. Insufficient suck.</li><li>3. Too much suck</li><li>4. Worn or bent shares.</li></ol>  | <ol style="list-style-type: none"><li>1. Check draft control spring adjustment.</li><li>2. Shorten upper link.</li><li>3. Lengthen upper link.</li><li>4. Replace.</li></ol>   |
| <b>UNEVEN FURROWS AND RIDGING</b> | <ol style="list-style-type: none"><li>1. Plow not level.</li><li>2. Front bottom cutting too wide or too narrow.</li><li>3. Coulters not cutting uniform width.</li><li>4. Incorrect bottom for type of soil conditions.</li><li>5. Bottoms not same type.</li><br/><li>6. Bottoms not uniform.</li><br/><li>7. Mixed shares.</li><li>8. Sprung beams or frames.</li></ol> | <ol style="list-style-type: none"><li>1. Level plow.</li><li>2. Adjust width of cut.</li><li>3. Set all coulters for equal cut.</li><li>4. Select proper bottom.</li><br/><li>5. Check style of frogs and moldboards.</li><li>6. Loosen mounting bolts and push point down.</li><li>7. All shares same length and type.</li><li>8. Check for damaged part.</li></ol> |
| <b>TRASH NOT COVERING</b>         | <ol style="list-style-type: none"><li>1. Plowing too deep for size of bottom.</li><li>2. Coulters set too shallow.</li><li>3. Plow not level.</li><li>4. Need coverboard attachment.</li><li>5. Excessive trash</li><li>6. Wrong style bottom.</li><li>7. Ground speed too slow or erratic.</li></ol>  | <ol style="list-style-type: none"><li>1. Depth - 1/2 to 2/3 of bottom width.</li><li>2. Reset coulters.</li><li>3. Level Plow.</li><li>4. See Dealer.</li><li>5. Install trash wires.</li><li>6. See Dealer.</li><li>7. Increase or maintain uniform ground speed.</li></ol>   |

# TROUBLE SHOOTING

| PROBLEM                 | POSSIBLE CAUSE  | REMEDY   |
|-------------------------|---|--|
| EXCESSIVE DRAFT         | <ol style="list-style-type: none"><li>1. Upper link too short.</li><li>2. Plow not pulling straight.</li><li>3. Furrow wheel out of adjustment.</li></ol>   | <ol style="list-style-type: none"><li>1. Lengthen upper link.</li><li>2. Readjust plow; see Operations Section.</li><li>3. Readjust.</li></ol>   |
| BOTTOMS TRIP TOO EASILY | <ol style="list-style-type: none"><li>1. Incorrect shear bolt.</li><li>2. Incorrect model plow.</li><li>3. Plowing speed too fast for field conditions.</li><li>4. Spring trip not properly adjusted.</li><li>5. Spring trip mechanism damaged or broken.</li><li>6. Gusset plate and beam pivot bolts too loose.</li></ol> | <ol style="list-style-type: none"><li>1. Use proper shear bolt, Part Number 372451-S8.</li><li>2. Use spring trip in extremely stoney soil.</li><li>3. Slow down.</li><li>4. Readjust trip.</li><li>5. Repair damage.</li><li>6. Tighten to remove lateral play.</li></ol> |
| BOTTOMS TRIP TOO HARD   | <ol style="list-style-type: none"><li>1. Spring trip improperly adjusted.</li><li>2. Spring trip mechanism not properly lubricated.</li></ol>   | <ol style="list-style-type: none"><li>1. Readjust trip.</li><li>2. Lubricate and check all parts for free movement.</li></ol>  |



## SAFETY PRECAUTIONS



1. Keep the tractor keys where they are not accessible to children.
2. Always lower the implement and turn off the engine when leaving the tractor.
3. Keep persons away from the plow when the tractor is parked with the engine running.
4. Do not let anyone ride on the tractor with the operator.
5. Do not plow or transport the implement at excessive speeds.



The Tractor and Implement Division of the Ford Motor Company, being a member of the National Safety Council, is privileged to use the Green Cross to denote safety instructions in operators manuals.

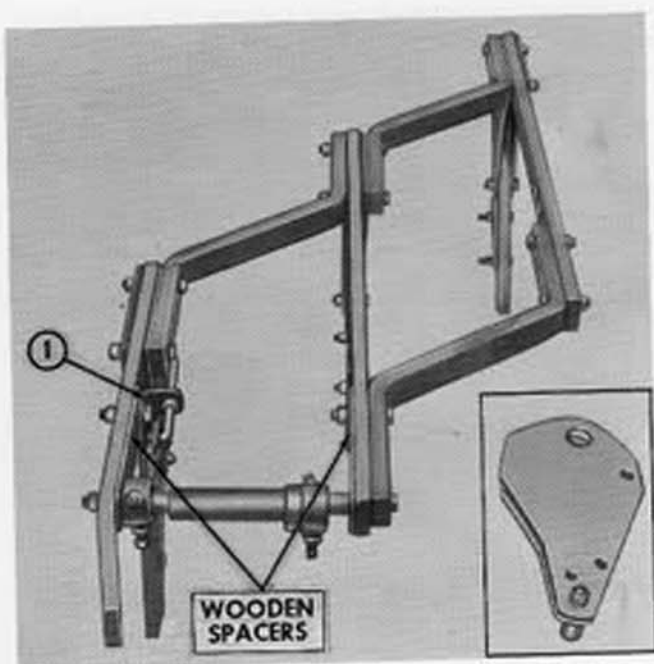


Figure 24  
Moldboard Plow Bundled for Shipment

## SHIPPING

Ford 101 Plow Frames are shipped as shown in Figure 24. Bundles for a complete plow are listed below:

| Frames                             | Qty.      |
|------------------------------------|-----------|
| Frame Bundle                       | 1         |
| A - Frame Bundle                   | 1         |
| Front Bottom                       | 1         |
| Rear Bottom                        | As Req'd. |
| <b>Choice of:</b>                  |           |
| Rolling Landside (10-449)          | 1         |
| Sliding Landside (10-525)          | 1         |
| <b>Choice of:</b>                  |           |
| Cross Shaft (Category I) (10-347)  | 1         |
| Cross Shaft (Category II) (10-524) | 1         |

## ATTACHMENTS

The following attachments are available as extra equipment:

|                                   |        |
|-----------------------------------|--------|
| 12" Fourth Beam Kit - Shear Bolt  | 10-363 |
| 14" Fourth Beam Kit - Shear Bolt  | 10-364 |
| 16" Fourth Beam Kit - Shear Bolt  | 10-365 |
| 12" Fourth Beam Kit - Spring Trip | 10-434 |
| 14" Fourth Beam Kit - Spring Trip | 10-435 |
| 16" Fourth Beam Kit - Spring Trip | 10-436 |
| Wheel Bundle - Semi-Mounted Kit   | 10-391 |
| Support and Cylinder Bundle       |        |
| Parts and Hardware                |        |
| Gauge Wheel                       | 10-349 |

## ASSEMBLY

Assembling the Mounted 101 Plow is the dealer's responsibility. The implement should be completely assembled when delivered.

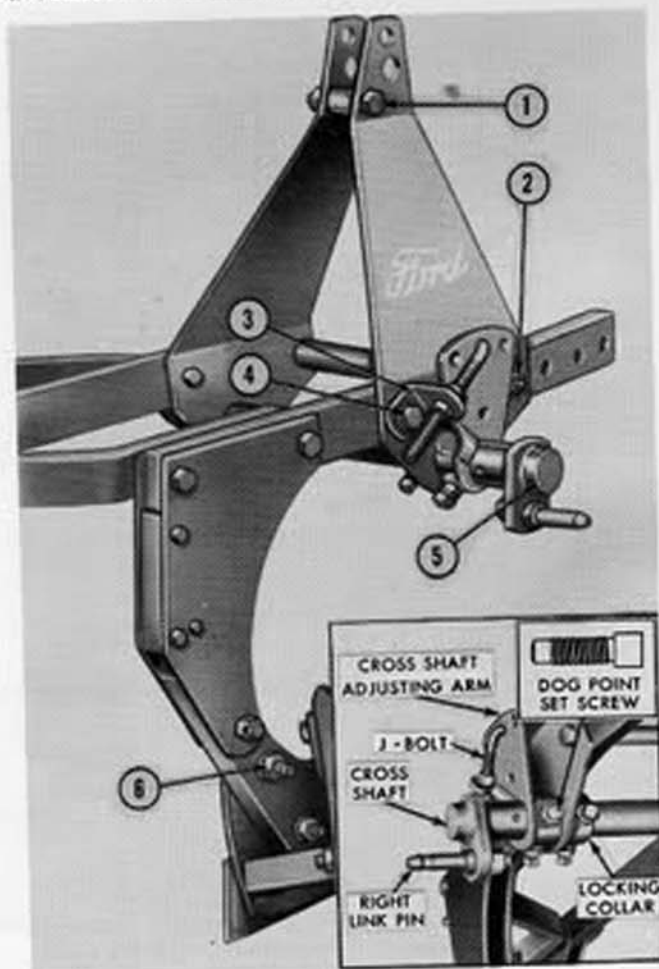
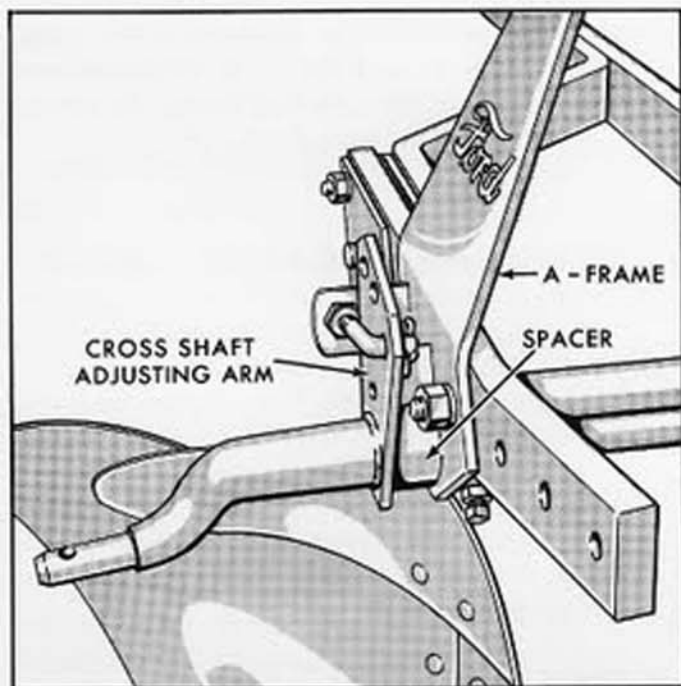


Figure 25  
Cross Shaft Installed





**Figure 26**  
*Category II Hitch Assembly*

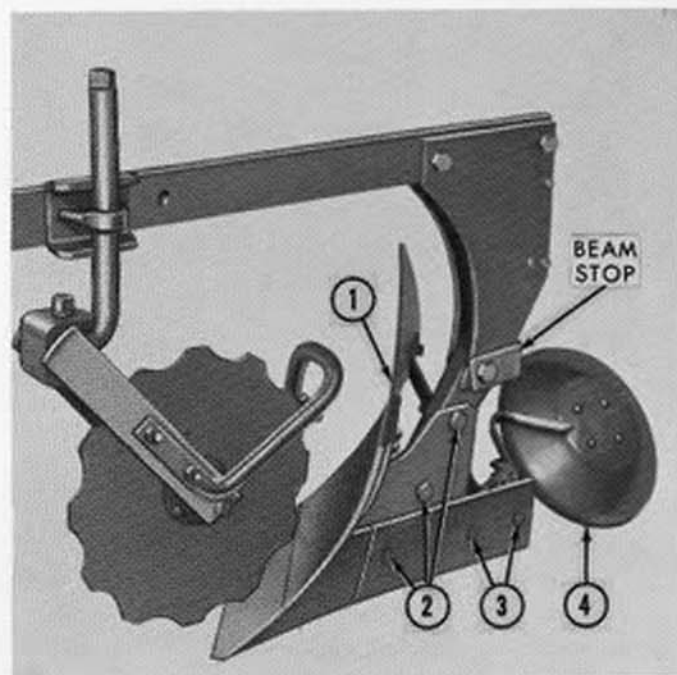
**NOTE:** The wooden spacers, Figure 24, indicate where to attach the A - frames, Steps 1 and 3 below. The spacers must be removed to attach the A - frames. Figures 30, 31, and 32 give additional information about the A - frame attaching points.

1. Raise the left side of the plow with a jack stand, and attach the left A - frame, Figure 25.
2. Reposition the J-bolt bracket (1), Figure 24, as shown in Figure 25.
3. Refer to Figure 25 and install the cross shaft assembly as follows:

- a. Slide the adjusting arm and right A - frame onto the cross shaft (5).

**NOTE:** Figure 26 shows the Category I cross shaft. Category II cross shafts are not adjustable and need a spacer between the adjusting arm and A - frame, Figure 26. Two and three bottom 16" plows with Category I hitches also need a spacer (Part No. 109674, supplied with the frame).

- b. Install the right A - frame, with the long bolt at (2). Do not tighten the nuts.
- c. Place the locking collar on the shaft, and slide the shaft through the left A - frame.



**Figure 27**  
*Bottoms and Rolling Landside Attached*

- d. Install the dog point set screws in the second set of holes from the right end of the cross shaft. Tighten the jam nuts.

- e. Install the top A - frame bolt and spacer (1).

- f. Tighten the bolts at (2) and (4).

- g. Slide the cross shaft to the left until there is no play between the adjusting arm and A - frame. Tighten the locking collar set screws and jam nuts.

- h. Adjust the J-bolt so the link pins are in line directly under the cross shaft.

4. Attach the bottoms as follows:

- a. Attach the plow to the tractor three-point linkage and raise it with the tractor hydraulic system. Remove the plow bottom attaching bolts from their shipping position in the beams.

- b. Back the plow frame over the bottom assemblies and lower the frame until the holes in the plow beams align with the holes in the bottoms.

- c. Attach the beams and bottoms with three bolts, lock washers, and nuts (2), Figure 27.

**IMPORTANT:** Before tightening the bolts, push down on the point of the share to remove any slack in the attaching holes. Be sure to install the beam stop, Figure 28.

## ROLLING LANDSIDE INSTALLATION

1. Bolt the rolling landside arm to the sliding landside with two plow bolts, lock washers, and nuts (3), Figure 27. Do not tighten the nuts.
2. Raise the plow. Turn the set screw in the bottom of the rolling landside arm until the rolling landside is  $\frac{3}{8}$ " to  $\frac{1}{2}$ " below the sliding landside. Tighten the jam nut.
3. Tighten the plow bolts (3), Figure 27.

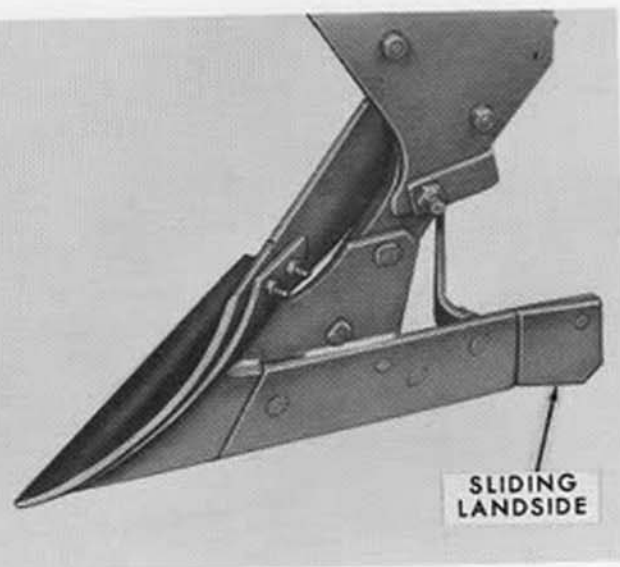


Figure 28  
Sliding Landside

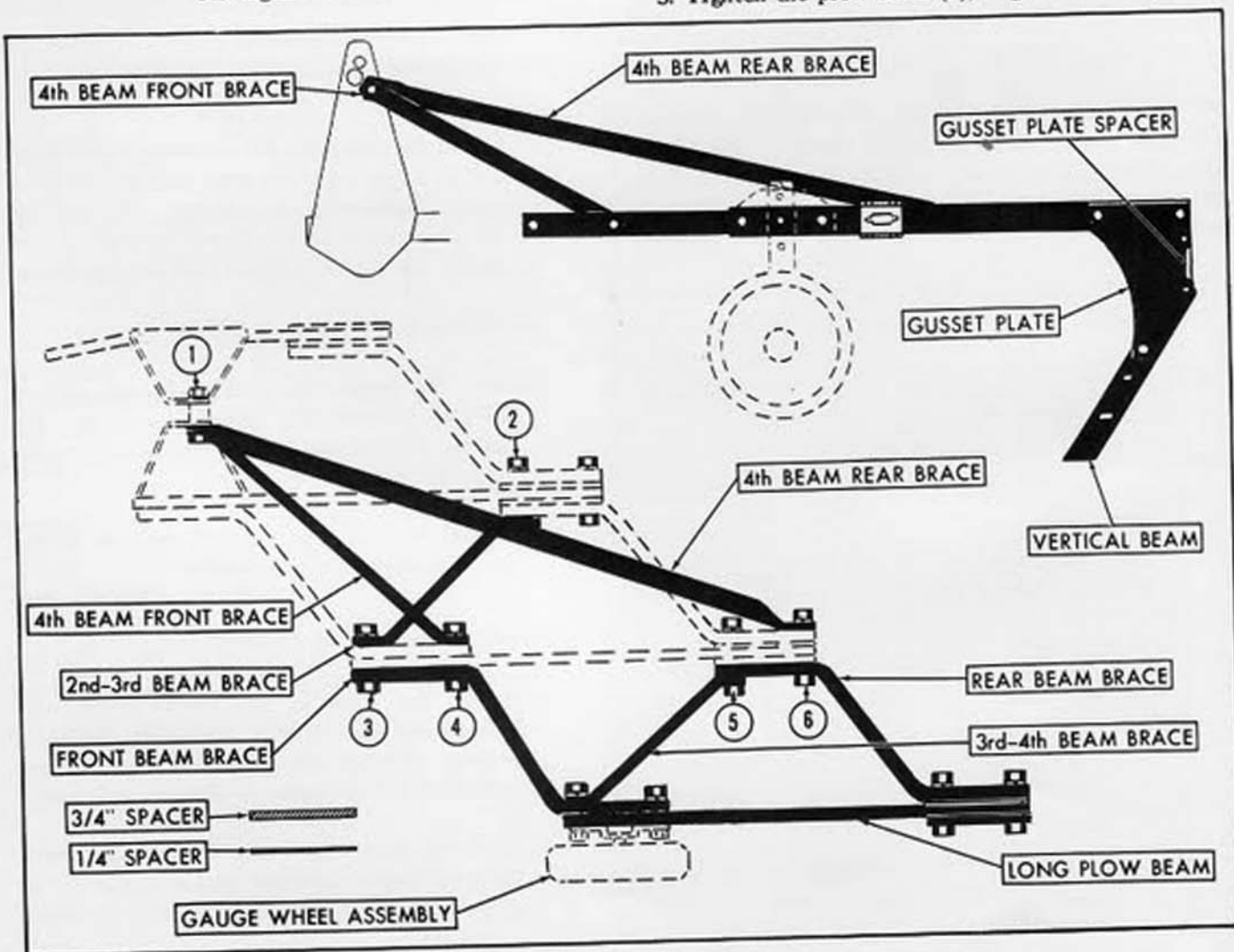


Figure 29 - Fourth Beam Conversion Kit Identification Chart

- Set the scraper so it lightly touches the rolling landside.

## SLIDING LANDSIDE INSTALLATION

Install the sliding landside assembly on the rear bottom with the two 5/8" flat washers and existing bolts, as shown in Figure 28.

## ATTACHING FOURTH BEAM CONVERSION KITS

Fourth Beam Conversion Kits are available to convert three bottom plows to four bottoms. Accessories are available at extra cost.

Assemble and attach Fourth Beam Conversion Kits as follows:

Figures 30, 31, and 32 show top views of assembled 12", 14", and 16" four bottom plows. The bolts at (1), (2), (3), (4), (5), and (6), Figure 29, are removed in the conversion process. Re-use the bolts at (3), (5), and (6).

On plows already assembled, transfer the third bottom and rolling landside to the fourth beam. If installed, transfer the gauge wheel, Figures 30 through 32.

Attach the braces, spacers, and beam to the three bottom plow following the order indicated by the reference numbers in Figures 30, 31, and 32. Use the bolts, lock washers, and nuts listed next to the reference numbers. Be sure to position the large and small spacers as shown in the applicable top view.

## ATTACHING SEMI-MOUNTED CONVERSION KITS

The Semi-Mounted Moldboard Plow Conversion Kit is designed to convert fully mounted three or four bottom plows to semi-mounted plows, Figure 33. Use the following procedure as a guide.

- Detach the bolts at (1), (2), and (3), Figure 34, and remove the right-hand A-frame and the cross shaft.

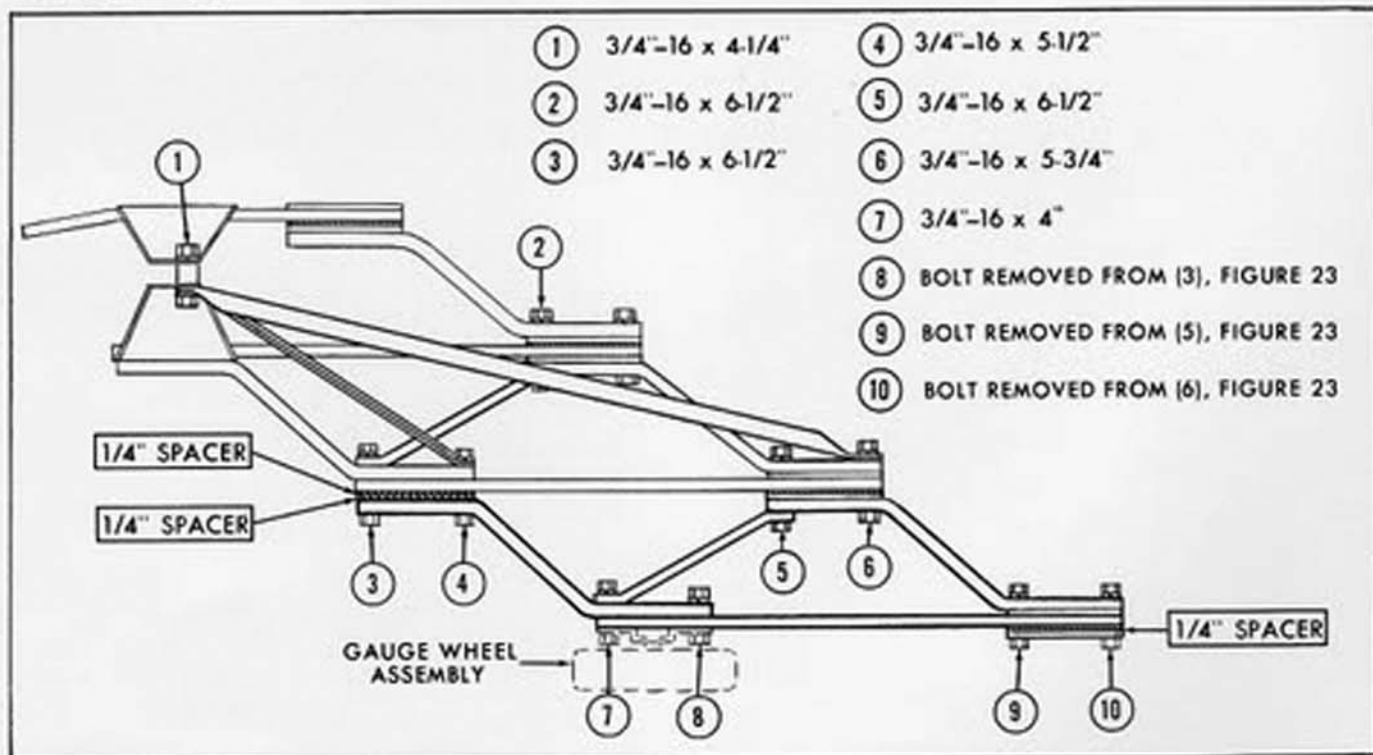


Figure 30 - 12" Plow

# ASSEMBLY

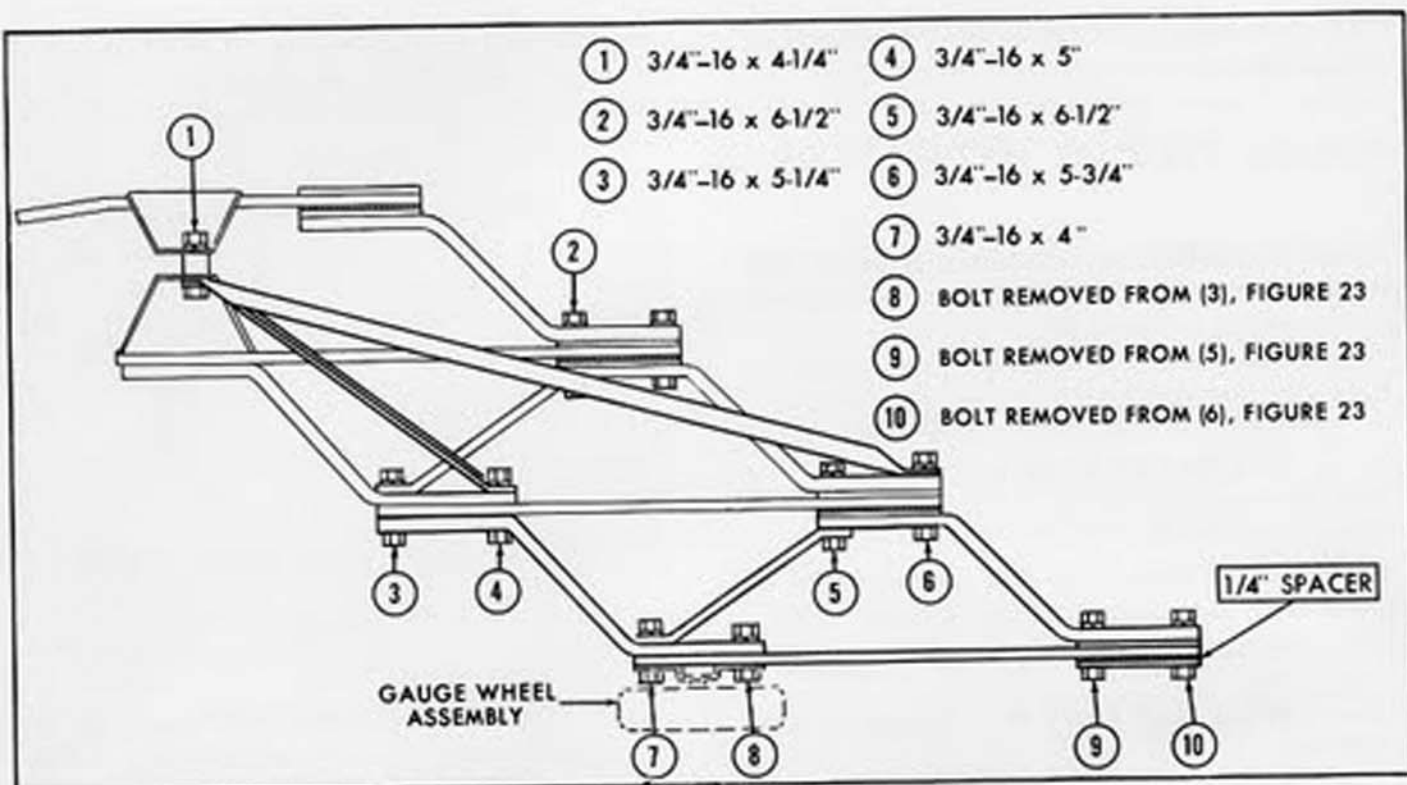


Figure 31  
14" Plow

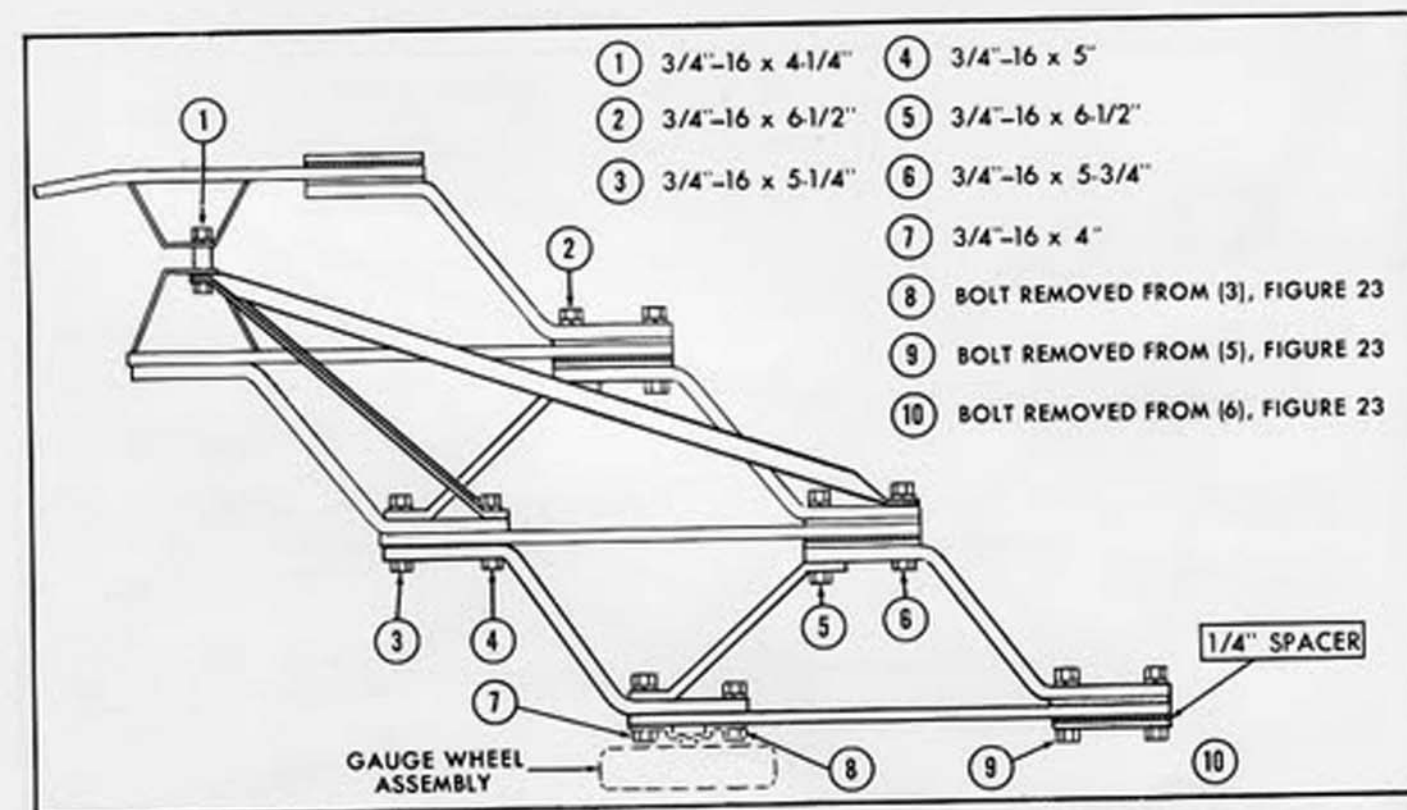
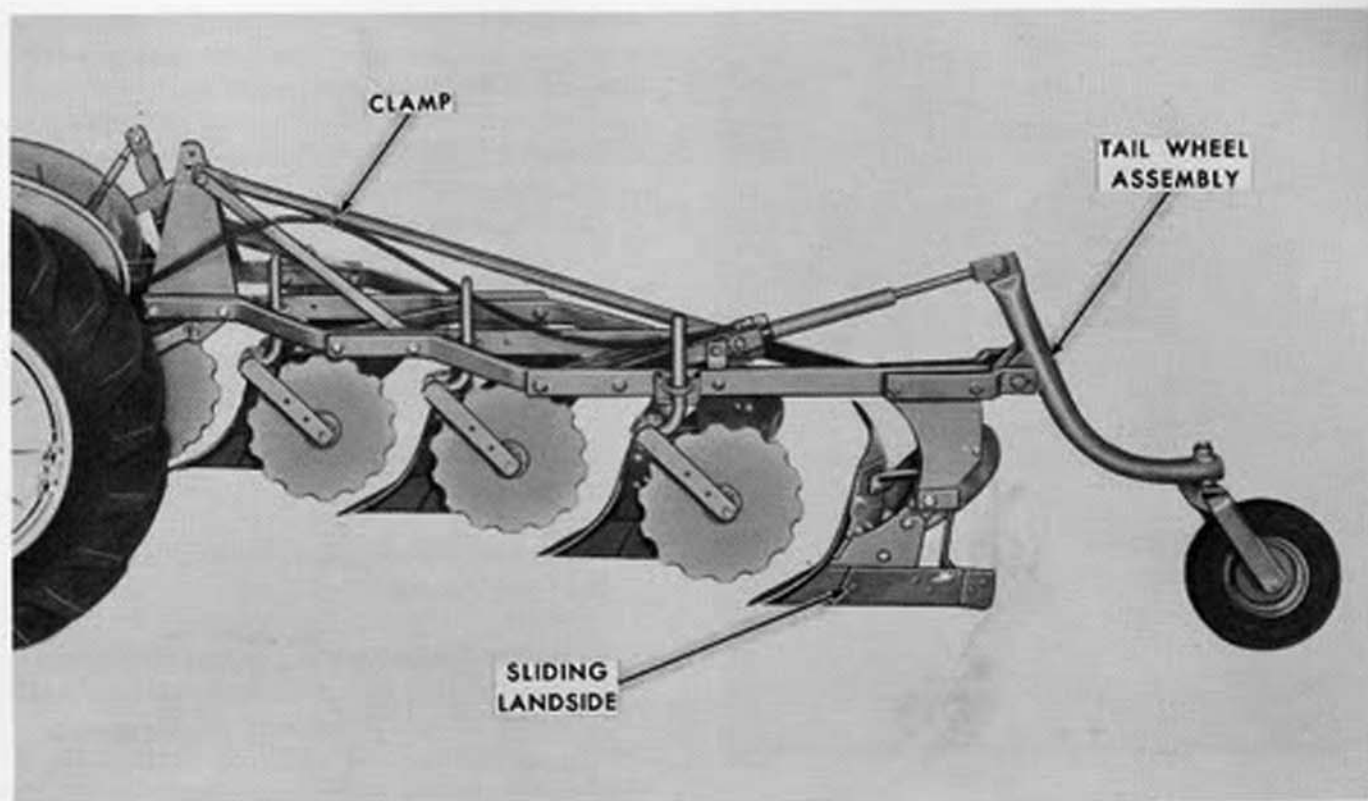
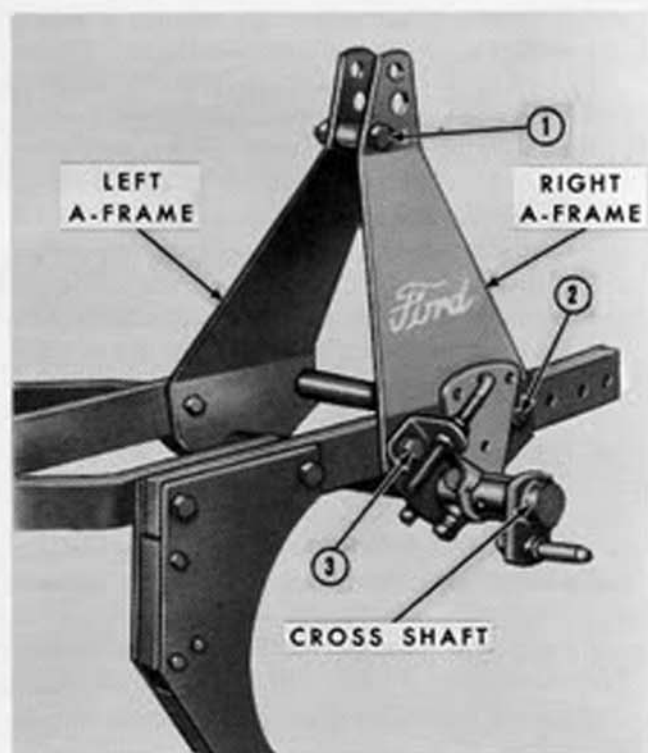


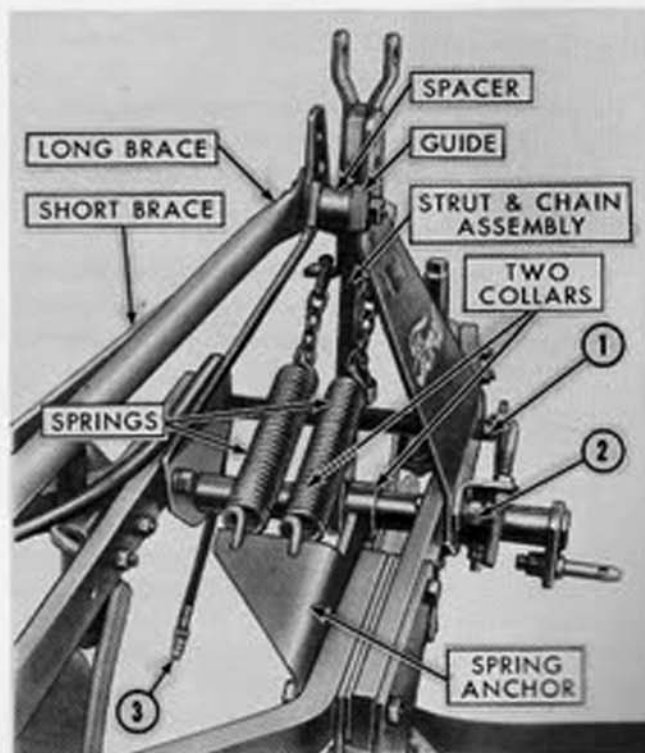
Figure 32  
16" Plow



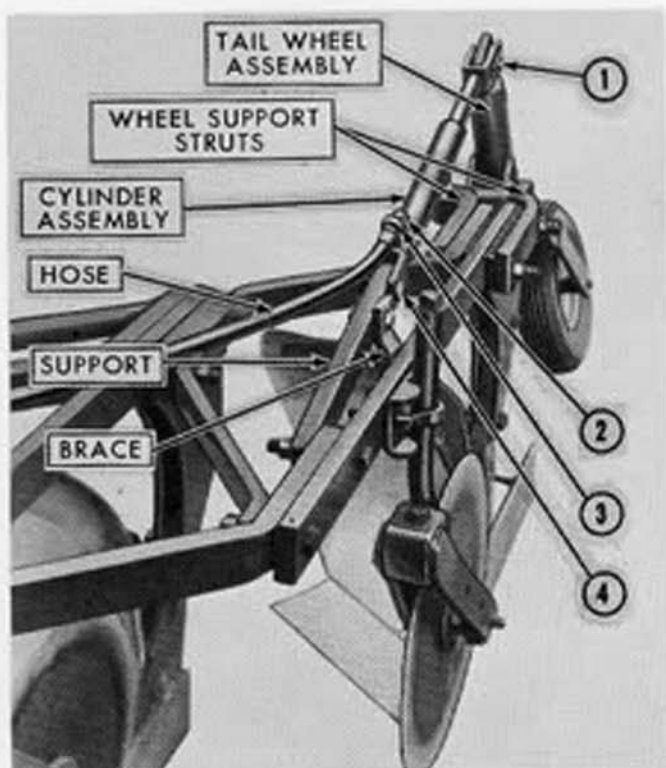
*Figure 33*  
Conversion Kit Installed



*Figure 34*  
A - Frame and Cross Shaft



*Figure 35*  
Strut and Chain Assembly Attached



**Figure 36**  
*Tail Wheel and Cylinder Attached*

2. Position the strut and chain assembly, with retaining collars on each side, on the cross shaft as shown in Figure 35. Reinstall the cross shaft with bolts (1) and (2), Figure 35.
  3. Install the guide and forward end of the long and short braces as shown in Figure 35. Use the 3/4" - 16 x 4-1/2" hex head bolt and spacer provided.
  4. Center the strut and chain assembly on the cross shaft, Figure 35. Slide the retaining collars into position against the strut and tighten the set screws.
  5. Attach the spring anchor, Figure 35, by replacing the original bolts with two 3/4" - 16 x 4-1/2" hex head bolts. Install the springs as shown.
  6. Attach the wheel support struts, as shown in Figure 36, by replacing the original bolts and using the two 3/4" - 16 x 6-1/2" hex head bolts provided.
  7. Connect the tail wheel assembly to the wheel support struts using the 1-1/4" x 7-7/8" drilled pin and two 1/4" x 1-3/4" cotter pins. Refer to Figure 33.
  8. Attach the support, Figure 30, by replacing the original bolt and using the 5/8" - 18 x 4-1/2" hex head bolt, lock washer, and nut.
  9. Thread a 1/4" x 1-3/8" adapter (3), Figure 36, into the cylinder and attach the 90° elbow reducer (2). Thread the 104" hose into the elbow.
  10. Install the cylinder assembly, Figure 36, between the support and tail wheel assembly with drilled pins (1) and (4), and the hair pins included with the cylinder.
  11. Clamp the hose to the long support rod as shown in Figure 33.
  12. Attach the male coupling to the tractor end of the 104" hose (3), Figure 35.
  13. Attach the female coupling to the 16-3/4" hose. Remove the plug from the tractor hydraulic manifold plate and thread the hose into the plate.
  14. When the plow is ready for operation, connect the hoses at the couplings.
  15. Bleed the remote cylinder as follows:
    - a. Raise the plow to the lift position by means of the tractor lift control lever.
    - b. Loosen the remote control hose slightly at the cylinder until air and/or oil can escape.
    - c. Lower the plow to the ground with the lift control lever.
    - d. Manually raise the transport wheel to be sure the remote cylinder is fully retracted and that no air remains in the cylinder.
    - e. Tighten the remote control hose at the cylinder. Check and eliminate any oil leaks in the system.
- NOTE:** Check the tractor hydraulic oil level with the cylinder retracted. Add oil if required.
16. If air is still present in the system, proceed as follows:
    - a. Disconnect the hose and remove the cylinder from the plow.

- b. Expel all air from the remote control hoses by operating the tractor hydraulic lift control lever until a steady flow of oil comes from the end of the hose. The excess oil from the hose should be deposited in a clean container and later added to the hydraulic reservoir.

**NOTE:** *Keep the end of the hose high or in a pan of oil so that no oil is lost.*

- c. Hand fill the cylinder with the cylinder in the extended position.
- d. Reattach the hose to the cylinder making sure that no oil is lost during this operation.
- e. Reassemble the cylinder on the plow.

## GAUGE WHEEL INSTALLATION

A gauge wheel must be installed when using the plow with tractors not equipped with draft control.

### THREE BOTTOM PLOWS

Attach the spacer and gauge wheel bracket to the front of the third beam with two  $3/4'' \times 4-3/4''$  bolts, lock washers, and nuts, Figure 6.

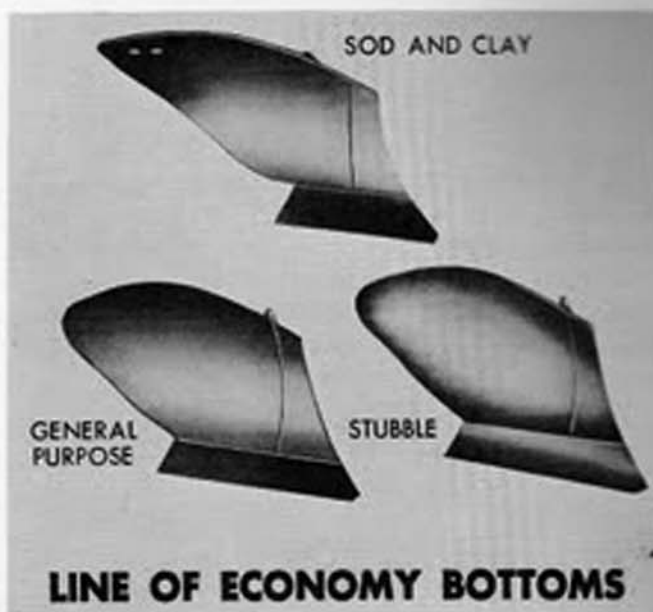
### ONE AND TWO BOTTOM PLOWS

Install the gauge wheel bracket and spacer on the rear of the plow with two  $5/8'' \times 5''$  bolts, lock washers, and nuts. See Insert, Figure 6.

## ECONOMY BOTTOMS

The objective of plowing is the preparation of a good seedbed and rootbed. Seedbed refers to the top inch or two of soil where the planted seeds germinate. Rootbed refers to the lower layer of plowed soil where the plant roots feed. In addition to making it possible to work up a good seedbed, good plowing produces a rootbed that is firm and well granulated.

To prepare a good seedbed and rootbed, there are several key factors to consider:



*Figure 37*  
*Line of Economy Bottoms*

1. Avoid plowing in extremely wet, or dry, hard soil.
2. Use the type of bottom which performs best in the type of soil to be plowed.
3. Under normal speed and plowing conditions, plow at a depth within 50 to 60 per cent of the width of cut.
4. Avoid severe side draft and excessive wear on shares and moldboards by keeping the plow bottoms properly positioned in relation to furrow slices.
5. Regularly lubricate all grease fittings and maintain a polish on the moldboards. Periodically check the plow and make necessary adjustments.
6. Observe the action of the bottoms and regulate the speed of plowing accordingly.
7. Obtain good trash coverage by combining the proper speed, bottoms, and attachments, with a well adjusted plow. Some trash conditions may require special attention before plowing.

The following information is presented to assist in the selection of the proper plow bottom. Additional information can be supplied by your local Ford Tractor-Equipment Dealer. Three styles of economy bottoms with replaceable shares and shins are shown in Figure 37, and described below.

# FORD PLOW BOTTOMS

## STUBBLE

This bottom is designed for use in tough, hard-to-scour soils where good covering, pulverizing, and scouring are required.

surface reduces pulverization and eliminates broken furrow slices. It is not recommended in areas where large rocks or other obstructions are prevalent.

## SOD AND CLAY

The sod and clay bottom is designed for plowing heavy clay or stiff sod. The slow turning moldboard

## GENERAL PURPOSE

The general purpose bottom has a slow turning action designed to function under a variety of conditions in stalks, stubble, and sod.



Your Ford Tractor—Equipment Dealer's "Quality Care" Service Center is equipped, staffed, and stocked to better serve you. "Quality Care" service is a good investment for longer tractor life and more efficient operation from your equipment.



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