

**Integral Tractor
Plows M1A and M2A**

**MT1A and MT2A for
Models "M" and
"MT" Tractors**



JOHN DEERE

OPERATORS MANUAL

Integral Tractor Plows M1A and M2A MT1A and
MT2A for Models "M" and "MT" Tractors

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SPECIFICATIONS AND DATA

TYPES.....	M1A is a Quik-Tatch, one-bottom, 14, 16 or 18-inch, Integral Tractor PLOW for John Deere Model "M" Tractor with 24-inch rear tires. MT1A is a Quik-Tatch, one-bottom, 14, 16 or 18-inch, Integral Tractor PLOW for John Deere Model "MT" Tractor, and 14 or 16-inch for Model "M" Tractor with 26-inch rear tires. M2A is a Quik-Tatch, two-bottom Integral Tractor PLOW for the John Deere Model "M" Tractor with 24-inch rear tires. It is available in 10-inch frame for 10-inch bottoms and 12-, 14-inch frame for 12- or 14-inch bottoms. MT2A is a Quik-Tatch, two-bottom, 12- or 14-inch, Integral Tractor PLOW for the John Deere Model "MT" Tractor and the Model "M" Tractor with 26-inch rear tires.
DEPTH RANGE.....	M1A—MT1A—2 to 10 inches, depending on type and size of bottom. M2A—MT2A—2 to 8 inches, depending on type and size of bottoms.
LEVELING.....	Leveling screw and handle are within easy reach of the operator.
SAFETY BOTTOM TRIP.....	Regular equipment.
BOTTOMS.....	Various types available as ordered.
LANDSIDE.....	M1A—MT1A—Bottom with long landside. M2A—MT2A—Front bottom with short landside. Rear bottom with long landside.
REAR WHEEL.....	Adjustable, steel or rubber tired, special.
HITCH.....	Quik-Tatch.
COULTERS.....	M1A—MT1A—17-inch Plain, Regular. 17-inch Notched, Special 17-inch Notched with Ball Bearing, Special 18-inch Plain, Special M2A—MT2A—15-inch Plain, Regular 17-inch Notched with Ball Bearing, Special.
JOINTERS.....	Independent or Combination, Special. (Combination Jointers cannot be used with the 17-inch Notched Ball Bearing Coulters.)

Note: When the terms "right" or "left" are used it means from a position behind the plow and facing the front.

(It is a John Deere policy to improve our machines at every opportunity. Consequently, it may be necessary to change design without notice).

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ing the control bar into the depth control hanger as shown in Figure 4.

3. Pull the hitch pin "C," Figure 5.

4. Using the Touch-o-matic control lever, line up the drawbar hole with the hitch plate hole and guide the hitch plate onto the drawbar. *NOTE: Hitch plate must be level; use leveling screw.*

5. Insert the hitch pin and the plow is ready for work.

6. For ordinary plowing conditions the hitch pin should be used in position "C," Figure 5. For finishing a land or wherever the plow is desired rigid behind the tractor, the hitch pin can be used in position "D," Figure 5.

Detaching the Plow from the Tractor.

1. Lower plow onto an approximately level surface.

2. Pull hitch pin and drive tractor forward.

Adjusting Hitch Plate.

This plow is so designed that the correct line of draft is maintained regardless of working depth, provided initial adjustments have been made properly.

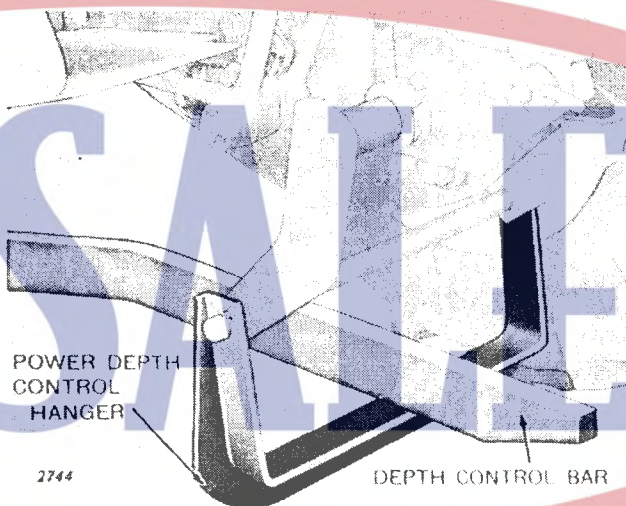


Figure 4—Depth Control Bar, M1A and M2A



Figure 5—Hitch Plate

The cut of the front bottom is regulated by the spacers on the hitch plate. If the plow is under-cutting, move the spacers (one spacer for each 1/2-inch required) from the left side to the right side of the frame bar "A," Figures 6 and 7. Reverse this procedure to obtain correct width of cut if plow is overcutting. A 14-inch plow bottom must cut exactly 14 inches, not 13 or 15 inches, if a good job of plowing is desired. The cut of the front bottom is measured from the rolling coulter to the furrow wall as

OPERATING AND ADJUSTING INSTRUCTIONS

the rolling coulter outlines the cut of the bottom.

The hitch pin "C," Figure 5, must be removed and the tractor moved forward to separate the hitch plate from the drawbar. The spring locking pins make it possible to change spacers rapidly.

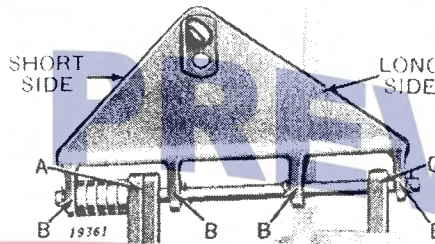


Figure 6—Hitch Plate, M1A, MT1A, M2A and 14-inch MT2A Plows

The lugs "B," Figure 6, are shown in the correct position for hitching the M1A, MT1A, 12- and 14-inch M2A, and the 14-inch MT2A Plows.

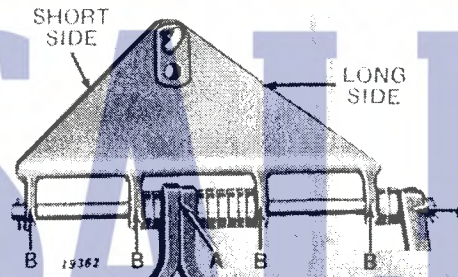


Figure 7—Hitch Plate 12-Inch MT2A Plow

The lugs "B," Figure 7, are shown in the correct position for hitching the 12-inch MT2A Plow.

Adjusting Control Bar Height.



Figure 8—Adjusting M1A and MT1A Control Bar Height

The M1A, MT1A, M2A and MT2A Plows can be leveled fore and aft by adjusting the height of the control bar.

The safety trip support on the M1A and MT1A plows and the safety trip yoke on the M2A and MT2A Plows have slotted holes to permit adjusting the height of the control bar.

Loosen the nuts "A," Figure 8, to adjust M1A and MT1A Plows and nuts "A," Figure 9, to adjust M2A and MT2A Plows.

Set the control bar height so bottoms will run level and maintain an even depth of plowing. If the control bar is set too low, it will be difficult to get the plow to penetrate the ground and excessive weight will be placed on rear of plow. If the control bar is

Rolling Coulters.

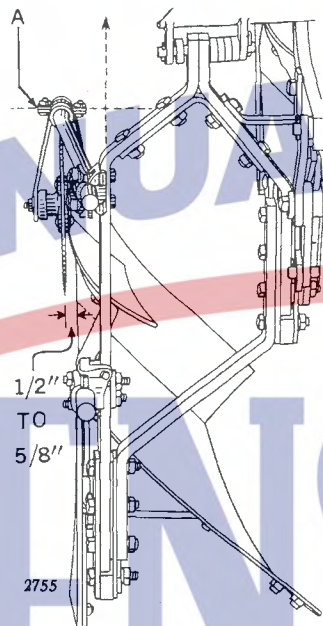


Figure 11—Rolling Coulters Adjustment

The coulter blade must be sharp and ordinarily should be set with the center of the coulter over point of plowshare. In hard ground the center of the coulter should be set well back of the point of the share. If center of coulter is set over point of share, and too deep, it will act as a gauge wheel, and tend to ride the plow out of the ground. For land having considerable trash, or in bad scouring conditions, the coulter should be set ahead of the share point. In both cases the coulter should be set out 1/2-inch to 5/8-inch to the left of, and parallel to, the landside, and just deep enough to cut the trash. See Figure 11.

A collar is provided to hold the coulter yoke to the shank and still allow the coulter to swing enough when turning. This collar must be bolted to the shank at right angles to the line of travel as shown at "A," Figure 11.

The front coulter can be adjusted for depth by loosening nut "A" and tightening nut "B," Figure 12, or the reverse as required.

To remove excessive end play in coulter hubs, loosen nut "A," Figure 12, and turn bolt head to the right until end play is removed. Adjust so that coulter blade will turn freely and tighten nut.

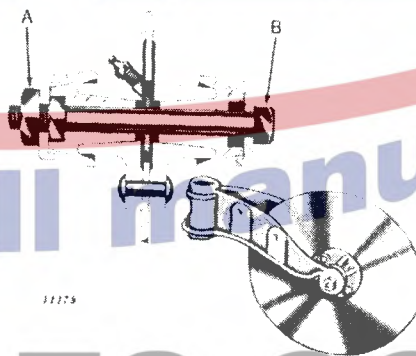


Figure 12—Cross-Sectional View of Coulter Bearing

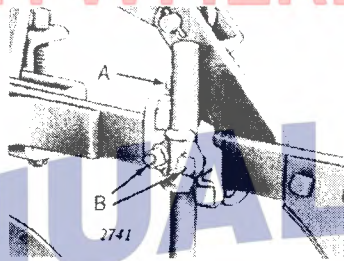


Figure 13—Jointer Clamp

Jointers (Special).

Jointers assist the plow in turning under and covering trash, leaving the plowed land clean. The jointer, when adjusted properly, should touch the coulter blade lightly and be set just deep enough to turn a neat furrow slice.

A set screw "A," Figure 13, is provided to move the jointer forward or rearward. To move the jointer laterally, to or from coulter blade, loosen one nut and tighten the other on the two bolts that hold the jointer clamp to the frame as shown at "B," Figure 13.

Reducing Two-Bottom Plow.

To reduce the M2A and MT2A two-bottom to a one-bottom plow, make the following changes:

1. Remove both bottoms.
2. Remove rear jointer and rear rolling coulter.
3. If rear wheel is used, remove it from rear standard.
4. Remove parts shown in Figure 14. Shaded area in Figure 15 illustrates parts not needed on reduced plow.
5. Attach the rear bottom (with long landside) to the front standard.
6. If rear wheel and adjustable axle are used, attach to standard as shown in Figure 18. Be sure to use the filler and two long bolts just removed from the rear standard. (See "C," Figure 15.) It may be necessary to readjust the cut of the bottom as described in paragraph on "Adjusting Hitch Plate," pages 6 and 7.

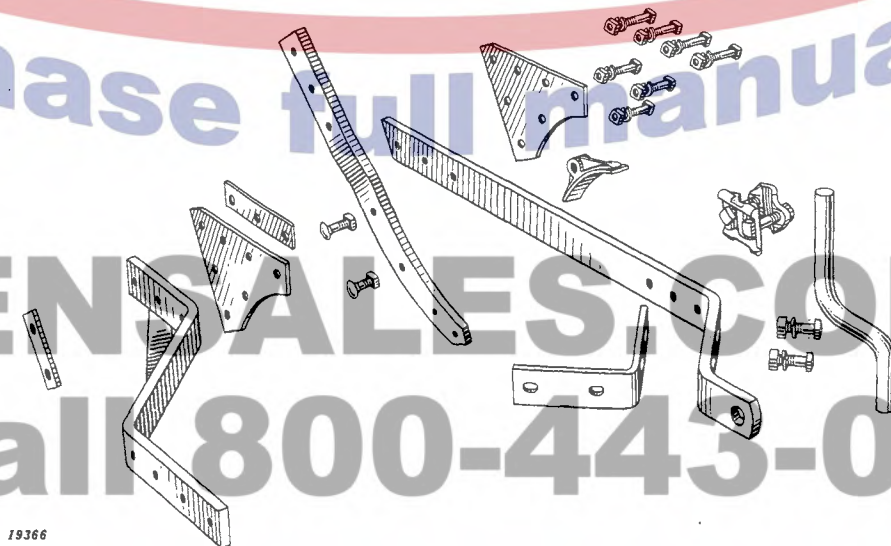


Figure 14—Reducing 2-Bottom Plow

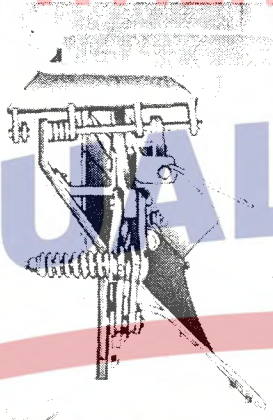


Figure 15—Reducing Two-Bottom Plow

Leveling Screw.

The leveling screw, easily accessible to the operator from tractor seat, levels the bottom or bottoms, for either opening up the field or normal plowing. See Figure 16.

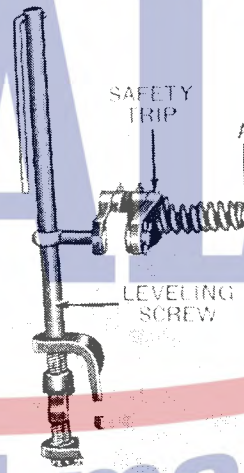


Figure 16—Safety Trip and Leveling Screw

Landing Lever (Special).

The landing lever and hitch plate attached to the plow enables the operator to easily control the width of cut of the front bottom. This attachment is ideal when plow is used on hillsides or working contour. The hole "A," Figure 17, is used when landing lever is used on a 14-inch plow and the hole "B," Figure 17, when used on a 12-inch plow.



Figure 17—Landing Lever

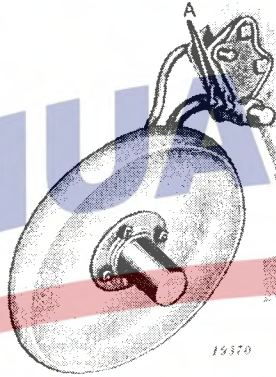


Figure 18—Rear Axle and Wheel
for M2A and MT2A Plows

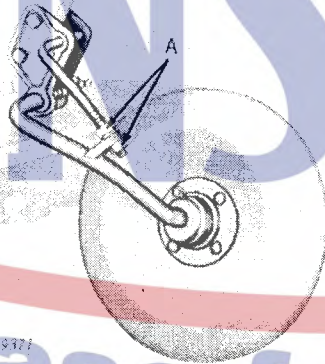


Figure 19—Rear Axle and Wheel
for M1A and MT1A Plows

Rear Axle and Wheel (Special).

Set the rear wheel so there is approximately 3/8-inch clearance between the heel of the landside and bottom of the furrow. *The weight should be carried by the rear wheel.*

To move rear wheel up or down loosen set screws and lock nuts "A," Figure 18, and adjust nuts "A," Figure 19, until wheel is at desired setting.

If the landside is forced against the furrow wall, excessive wear to the landside and additional draft on the plow is the result. Set the rear wheel so there is approximately 3/8-inch clearance between the landside and the furrow wall.

To move the rear wheel toward or away from furrow wall, loosen set screw and lock nut "A," Figure 18, and adjust wheel in or out to desired setting.

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MAINTENANCE SUGGESTIONS

Plow Bottoms, Coulters and Jointers.

The protective coating on the face of the bottom, coultter, and jointer can be removed by applying kerosene, gasoline, naphtha or varnish remover to polished surface. Let the remover soak for a few minutes and rub off. Repeat operation if necessary.

Protect the polished surface from rust when plow is not in use by applying a coat of cup grease or hard oil.

Sharpening the Share.

Heat the point of the share to a low cherry red (not too hot), and hammer the top side until the point is sharp. Hammer at cherry red only. High heat destroys the quality of the steel. Draw the entire cutting edge from the under-side until sharp. Heat at one time only as much as can be hammered. The body of the share should not be heated while sharpening. Should the fitted edges become warped, put the blade in proper shape before hardening. This can be done best at a black heat.

All foregoing information applies to either hard or solid steel shares.

Hardening Soft-Center Steel Shares: Heat the entire share to a uniform cherry red. Dip the share into a tub of clean, cold water, with the cutting edge down, and the blade perpendicular.

Note: Solid or crucible steel shares should not be hardened.

Setting Shares.

Set the point of the share down until there is a $1/8$ - to $3/16$ -inch suction under the landside at point "A," Figure 21. See that the clearance in the throat of the share at "B," Figure 22, is at least $1/8$ inch. For side, set should be about $3/16$ -inch clearance at "C," Figure 23. Set the edge of the share at the wing point "D" without wing bearing (Figure 24).



Figure 20—Unbroken Lines in Overhead and Side Views of Share Above Show Correct Shape for Penetration. Dotted Lines Show How Worn Point Looks Before Sharpening



Figure 21—Share Should Have $1/8$ - to $3/16$ -inch Underpoint Suction at Point "A"

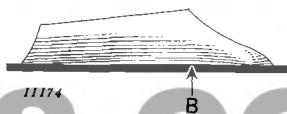


Figure 22—Share Should Have at Least $1/8$ -inch Clearance in Throat at "B"