

MT3 One-Bottom Two-Way Integral Tractor Plow



OPERATORS MANUAL MT3 One-Bottom Two-Way Integral Tractor Plow

OMA29350 (01MAR50) English

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LITHO IN U.S.A.
ENGLISH





Behind your new plow is an organization that has specialized in designing and building plows for over one hundred and ten years. This plow was built in the world's largest plow factory by experienced men, many who have worked in this large plant for from ten to forty-five years, thus assuring the utmost in good design, high-grade workmanship, and thorough inspection, so essential to the production of good plows.

High-quality materials, precision production methods, and accurately-controlled heat-treating assure maximum strength and long life for every part.

This manual has been carefully prepared and profusely illustrated, so that you may make the necessary adjustments for adapting your plow to work properly in practically all types of soil and field conditions. These adjustments, such as proper hitching and adjusting for width and depth of cut, are fully covered in this manual, which has been prepared by plow experts. Study the manual carefully and make it your guide.

Occasionally your plow may need new parts to replace worn parts, or emergency service may be required that is not covered in this manual. If so, we suggest that you take advantage of the facilities offered by your John Deere dealer, which assure you of genuine JOHN DEERE Parts and prompt "know-how" service in the field or shop.

If you will furnish your dealer the part number, description, and the information which should be recorded at the bottom of this page, when the plow is delivered, he can give you prompt and efficient service.

**John Deere MT3 One-Bottom Two-Way Integral
Tractor Plow**

No. of Plow

Date Purchased **19**

(To be filled in by Purchaser)

TABLE OF CONTENTS

	<i>Page</i>
IDENTIFICATION VIEWS.....	2-3
SPECIFICATIONS.....	4
OPERATING AND ADJUSTING.....	5-8
Good Plowing.....	5
Setting Tractor Wheels.....	5
Attaching.....	5-6
Detaching.....	6
Adjusting Depth.....	7
Leveling the Plow.....	7
Adjusting Rolling Coulters.....	7
Setting Jointers.....	8
MAINTENANCE SUGGESTIONS.....	8-9
Protecting Plow Bottoms, Coulters, and Jointers Against Rust..	8
Sharpening Share.....	8
Setting Share.....	9
Sharpening Coulters.....	9
LUBRICATION.....	9
SHIPPING BUNDLES.....	10
SETTING-UP INSTRUCTIONS.....	10-13
Setting Tractor Wheels.....	11
Control Shaft and Levers.....	11
Beams.....	11
Hitch.....	11-12
Power Lift.....	12
Bottoms.....	12
Rolling Coulters.....	13
Jointers.....	13
Lowering Spring.....	13
PARTS LIST AND ILLUSTRATIONS.....	14-29
Index to Parts List.....	15
NUMERICAL INDEX OF PARTS.....	30

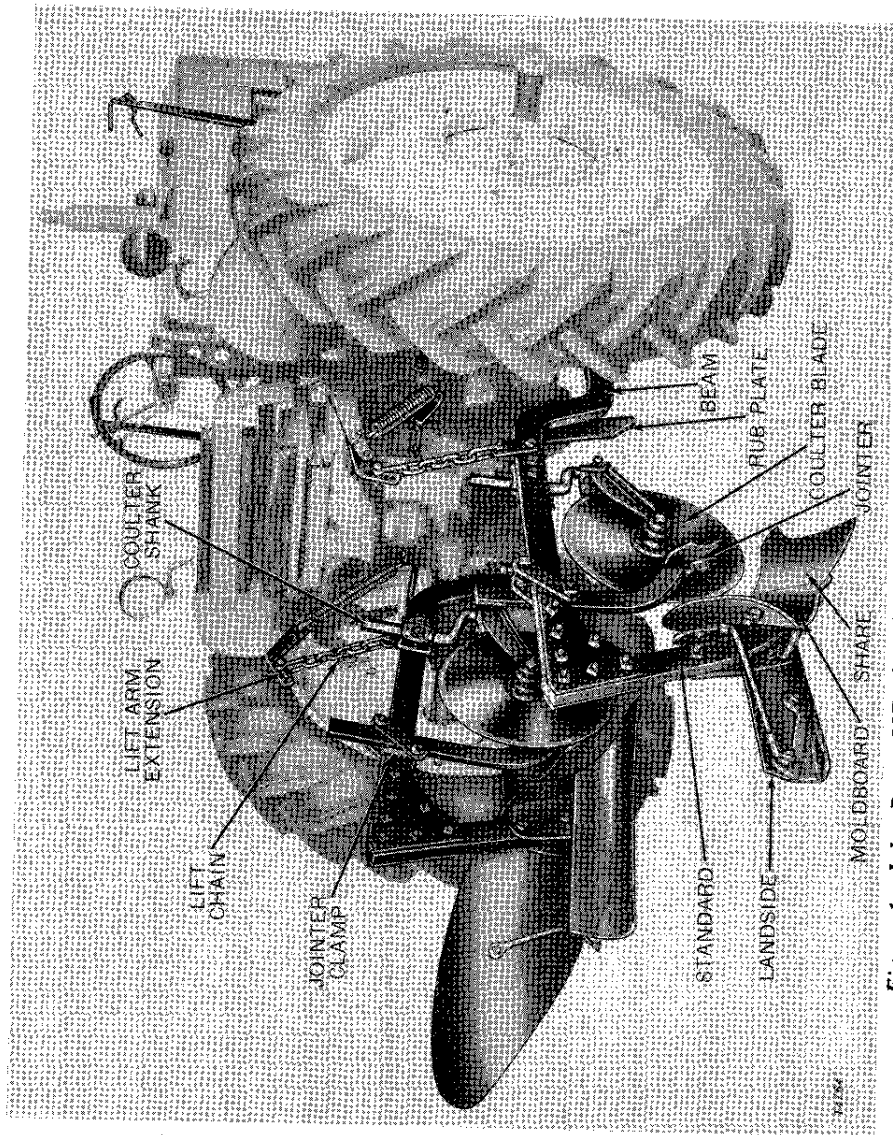


Figure 1—John Deere MT3 One-Bottom Two-Way Integral Tractor Plow

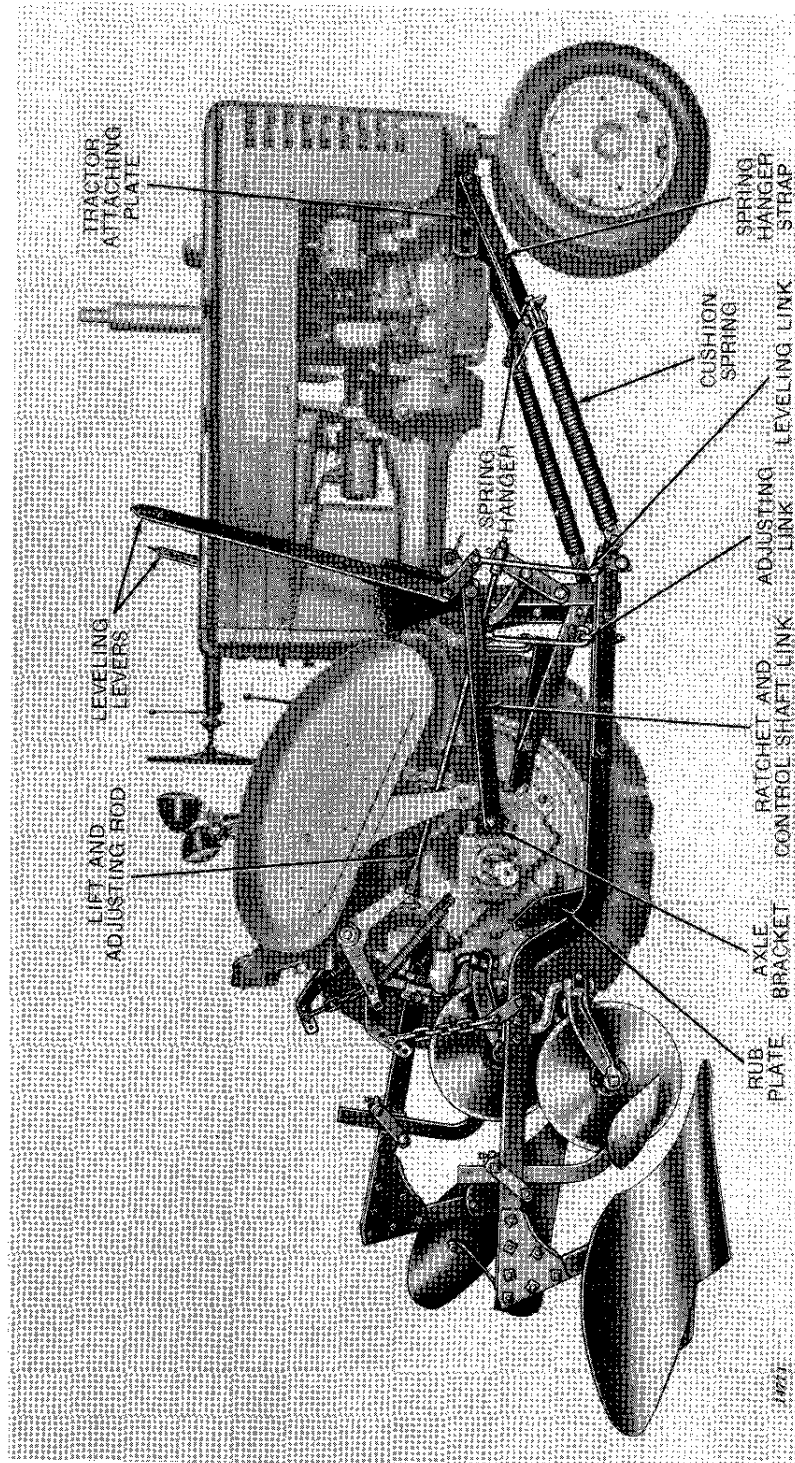


Figure 2—John Deere MT3 One-Bottom Two-Way Integral Tractor Plow—Side View

SPECIFICATIONS AND DATA

TYPES The MT3 is a One-Bottom Two-Way Integral Plow, available with 12-inch, 14-inch, or 16-inch bottoms, for the John Deere Model "MT" Tractor.

DEPTH RANGE 4 inches to 12 inches, depending on type and size of bottom.

BOTTOMS As ordered.

LANDSIDE Bottom with No. 6 Long Landside.

HITCH Plain Hitch regular; Spring Cushion special.

COULTER 17-inch Plain, regular; 17-inch Notched, special.

JOINTERS Steel or Cast Independent Jointers, as ordered.

- NOTES:**
1. *When the terms "right" or "left" are used, it means from a position behind the plow and looking toward the front.*
 2. *If the tractor is equipped with a pulley, it must be removed before attaching the plow.*

(Detail design subject to change without notice.)

OPERATING AND ADJUSTING INSTRUCTIONS

Good Plowing.

Your new plow is fully adjustable, and when properly adjusted to operate in the type of soil and field conditions on your farm, it will do a good job of plowing at a minimum of expense. A well-adjusted plow pulls lighter; its furrow slices are uniform in width and depth; it covers trash; it leaves the soil in proper condition to be worked down into the best type seedbed.

Setting Tractor Wheels.

For average plowing conditions the rear tractor wheels should be set 54 inches for 12-inch bottoms; 58 inches for 14-inch bottoms; and 62 inches for 16-inch bottoms, from center to center of tires. By setting the wheels according to these recommendations, the proper cut of the bottom is obtained, whether using 12-inch, 14-inch, or 16-inch bottoms.

Attaching Plow to Tractor.

If the tractor is equipped with a pulley, remove the pulley and replace with the pulley cover plate, see "F," Figure 3. Protect the splined end of the shaft against rust and damage.

Remove the tractor drawbar and the drawbar lock brackets. Bolt the rub plates to the lock bracket attaching holes as shown in Figure 2. Put the power lift arms in the lowered position. Drive the lock pin out of the link pin "A," Figure 3, and remove link. This pin need not be used again since a bolt and nut are furnished with the plow to replace it. Bolt the lift arm extensions "D," Figure 3, to the inside of the power lift arms. Be sure to use the inside power lift arm on the left side as shown in Figure 3.

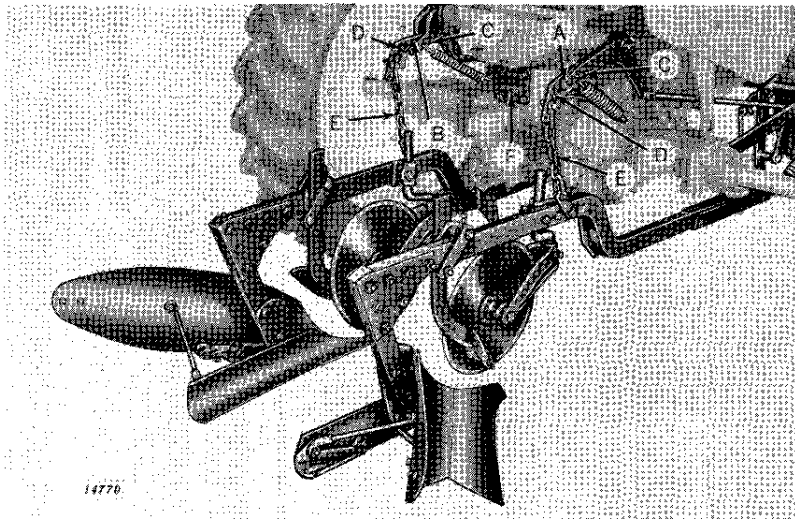


Figure 3—Lift Parts

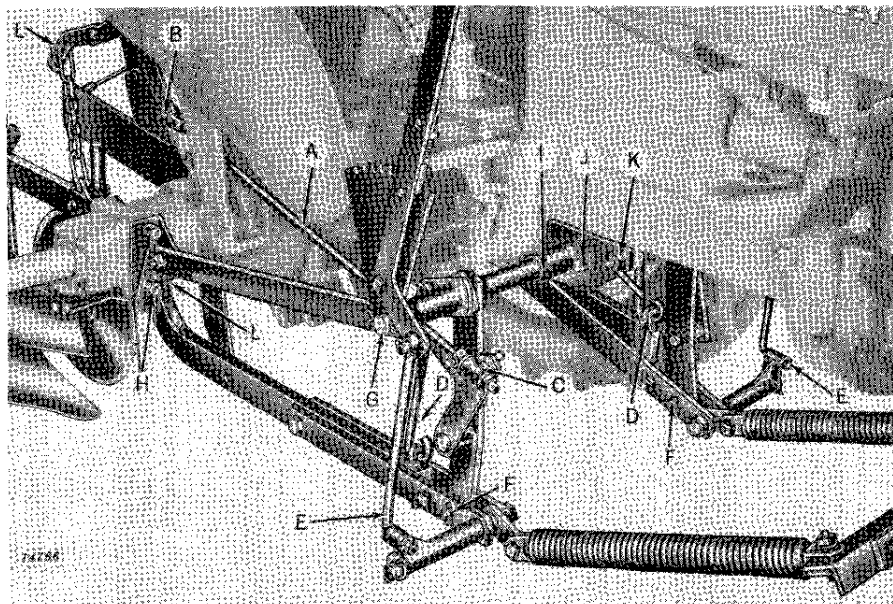


Figure 4—Attaching MT3 Plow

Remove cotter pin "I," Figure 4, and slide bearing plate out enough to clear bolt "K" and attach control shaft to tractor as shown in Figure 4. Slide bearing in and tighten tail nut "K." Replace cotter pin "I" and insert bolt "J," Figure 4. Remove cotter pins at "G" and loosen the studs at "H." Slide brackets "L" over the studs and insert the ratchet and control shaft link at "G." Replace the cotter pins and tighten the studs. Back the tractor over the plow hitch, stopping the tractor in position to attach beam hangers as shown at "F," Figure 4. Bolt the spring hanger straps to the tractor attaching plates as shown in Figure 2. Attach adjusting rods "D" and "E," Figure 4, and replace the cotter pins. Connect the lift and adjusting rods "A" to power lift arms at "B" and to lift cranks at "C," Figure 4. Attach the lift chains to power lift arm extension at "L," Figure 4.

Detaching Plow From Tractor.

Drop both bottoms to lowered position. Detach lift chains "E," Figure 3, from the power lift extension arms. Remove lift and adjusting rods "A," Figure 4, from power lift arms "B" and lift crank "C," Figure 4. Detach adjusting rods "D" and "E," Figure 4. Remove the spring hanger straps from the tractor attaching plates, Figure 2. Detach the beam hanger "F," Figure 4, and drop the beams to the ground. Drive the tractor forward and take off the control shaft links and brackets at "G" and "H." Remove the control shaft from tractor at "I," "J," and "K," Figure 4.

Adjusting Depth.

The depth of plowing is regulated by the Touch-o-matic Control on the tractor. Additional adjustment can be obtained by placing chains in different holes on lift arm extension "D," Figure 3. To adjust heel of bottom, loosen set screw and adjust nut at "C," Figure 4.

Leveling the Plow.

The levers shown in Figure 2 are conveniently located to easily level the bottom when plowing. These levers enable the operator to have the

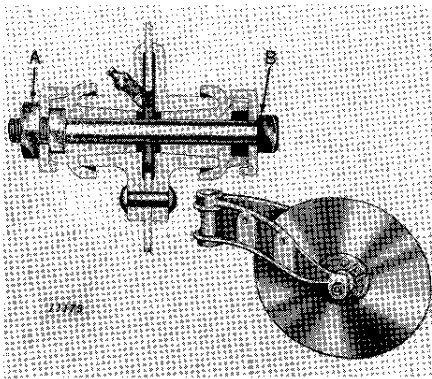


Figure 6—Cross-Sectional View of Coupler Bearing.

The coupler is provided with a collar to hold the yoke to the shank and also keep the coupler from swinging completely around. This collar should be adjusted on the shank to allow the coupler to swing the same distance each side of the share point, thus allowing the coupler to pivot when plow is turned right or left.

To remove excessive end play in rolling coupler hubs, loosen jam nut "A," Figure 6. Turn bolthead "B" clockwise or to the right until end play is removed. Adjust so that coupler blade will turn freely. Tighten jam nut "A."

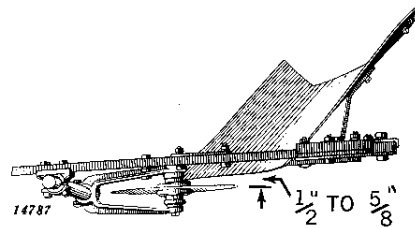


Figure 5—Overhead View of Rolling Coupler.

bottom perfectly level, either for opening up a field or for ordinary plowing.

Adjusting Coulter.

The coupler blade must be sharp. The plow and coupler shanks are designed to give the proper fore-and-aft setting for the coupler blade. The horizontal adjustment can be changed to meet soil conditions. For average conditions set the blade so it runs 1/2-inch to 5/8-inch from the landside, parallel to the landside, and just deep enough to cut the trash. Figure 5 shows this adjustment.

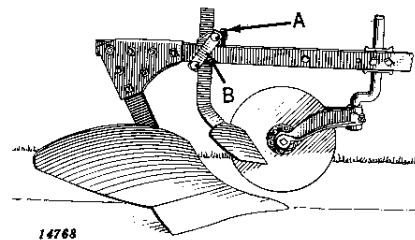


Figure 7—Rolling Coupler and Independent Jointer.

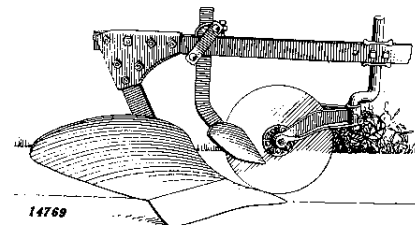


Figure 8—Rolling Coupler Set Too Deep.

Setting Jointers.

Jointers, provided as special equipment, assist the plow bottoms in turning under and covering trash, leaving the plowed land clean. They are of special benefit in turning the furrow slice properly when plowing at high speed. To move jointer forward, turn set screw down in the jointer clamp "A," Figure 7; reverse operation to move to the rear. To move the jointer toward the coulter, loosen the front bolt and tighten the rear bolt on the clamp "B," Figure 7. To move the jointer away from the coulter, loosen the rear bolt and tighten the front bolt.

MAINTENANCE SUGGESTIONS

Plow Bottoms, Coulters, and Jointers.

Protect the face of the moldboard, share, coulter blade, landside, and jointer from rust between plowing seasons or intermittent periods of use by greasing the polished surface with a coat of cup grease or hard oil.

Sharpening the Share.

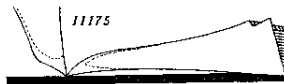


Figure 9—Unbroken Lines in Overhead and Side Views of Share Above Show Correct Shape for Penetration. Dotted Lines Show How Worn Point Looks Before Sharpening.

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 when cherry red only. High heat destroys the quality of the steel. Draw the entire cutting edge from the underside until sharp. Heat only as much as can be hammered at one time. 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.

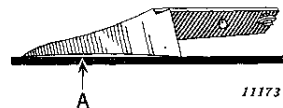


Figure 10—Share Should Have 1/8" to 3/16" Underpoint Suction at Point "A."

Setting Shares.

Set the point of the share down until there is a $1/8$ " to $3/16$ " suction under the landside at point "A," Figure 10. See that the clearance in the throat of the share at "B," Figure 11 is at least $1/8$ ". For side, set should be about $3/16$ " clearance at "C," see Figure 12. Set the edge of the share at the wing point "D" without wing bearing, Figure 13.

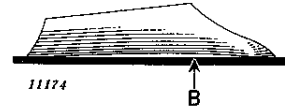


Figure 11—Share Should Have at Least $1/8$ " Clearance in Throat at "B."

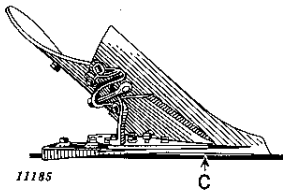


Figure 12—Side Suction Should Be $3/16$ -Inch at Point "C."

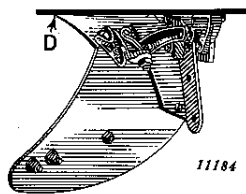


Figure 13—Tractor Plow Shares Are Set Without Wing Bearing at "D."

Keep Your John Deere Plow a John Deere Plow.

Genuine John Deere Shares have more and better material in points and in wearing surfaces. "DEERE" shares stay sharp longer, they fit like the original share. They save you money. Buy your extra shares from your John Deere dealer and insist on shares with the word "DEERE" stamped in the back near the share number.

Sharpening the Coulter Blade.

Remove the yoke and blade from the shank and grind the blade on an emery wheel until sharp. After repeated sharpenings, the blade may be too small to do efficient work. Replace with a new one.

Keep Nuts Tight.

Tighten all nuts. The nuts on the plow bottoms should be inspected periodically. Replace bent bolts or bolts with stripped threads. Loose parts come off or bend easily.

LUBRICATION

Grease fittings are provided on the rolling coulter hubs and should be lubricated every four hours of operation. All working parts should be oiled every four hours of operation with a good grade of lubricating oil.

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