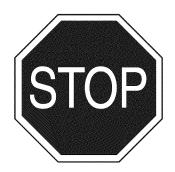
# **Operator's Manual**

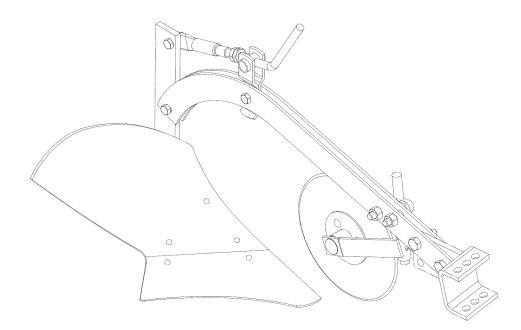


# **10-INCH MOLDBOARD PLOW**



DO NOT RETURN TO STORE For Missing Parts or Assembly Questions Call 1-866-576-8388

# Model No. 486.24560



## **CAUTION:**

Before using this product, read this manual and follow all Safety Rules and Operating Instructions.

Sears, Roebuck and Co., Hoffman Estates, IL 60179 U.S.A. www.sears.com/craftsman

- Safety
- Assembly
- Operation
- Maintenance
- Parts

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## SAFETY

- Read the tractor and 10-Inch Moldboard Plow owner's manuals and know how to operate your tractor before using tractor with this attachment.
- Never operate tractor and attachment without wearing substantial footwear and proper clothing.
- This attachment contains sharp edges, always wear gloves when handling or working with the attachment.
- Never allow children to operate tractor and snow blade and do not allow adults to operate without proper instructions.
- Keep others away from area in which you are working, especially small children and pets.

• Inspect the area that you will be using the tractor and attachment first and mark out any holes or other hazards.

7 i N

- Maintain tractor and attachment as detailed in their owner's manuals.
- Stay away from creeks, ditches and public highways.
- If an object is struck, immediately stop tractor and inspect tractor and attachment. Repair any damage found before continuing use of tractor and attachment.
- Always begin transmission in first (low) gear and gradually increase speed only when needed.

## WARRANTY

## **CRAFTSMAN FULL WARRANTY**

When operated and maintained according to all supplied instructions, if this Craftsman product fails due to a defect in material or workmanship within one year from the date or purchase, return it to any Sears store or other Craftsman outlet in the United States for free replacement.

This warranty applies for only 90 days from the date of purchase if this product is ever used for commercial or rental purposes.

This warranty does not include items considered to expendable parts that can wear out from normal use within the warranty period.

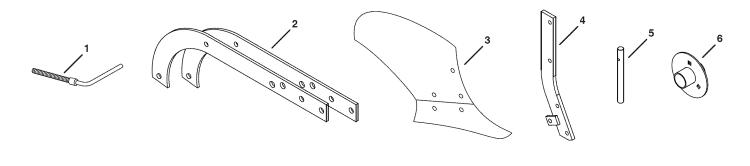
This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

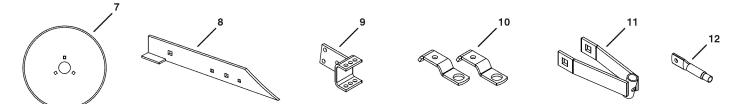
#### Sears, Roebuck and Co., D817WA, Hoffman Estates, IL 60179

DO NOT RETURN TO STORE for Missing Parts or Assembly Questions Call 1-866-576-8388 Attachment Hotline

The model number and serial numbers will be found on a decal attached to the 10-Inch Moldboard Plow. You should record both the serial number and the date of purchase and keep in a safe place for future reference.	MODEL NUMBER: 486.24560 SERIAL NUMBER: DATE OF PURCHASE:
--	--

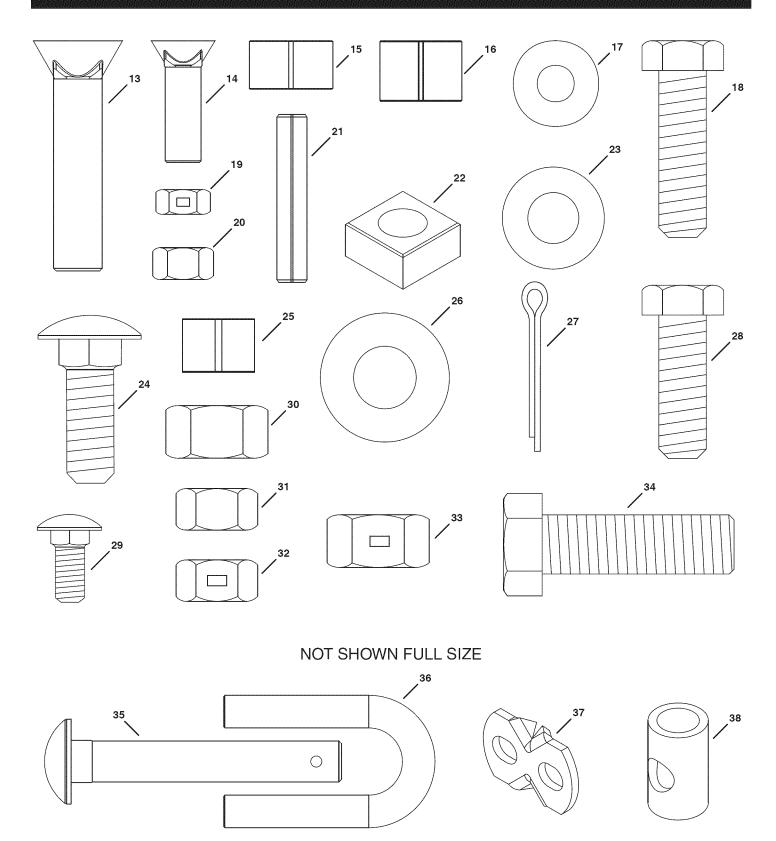
# **CARTON CONTENTS**





REF	QTY	DESCRIPTION	REF	QTY	DESCRIPTION		
1	1	Crank	7	1	Coulter Blade		
2	2	Half Beam	8	1	Landside		
3	1	Moldboard	9	1	Hitch Bracket		
4	1	Standard	10	2	Adjustment Bracket		
5	1	Coulter Standard	11	1	Coulter Fork		
6	1	Coulter Hub	12	1	Threaded Tube		

# FULL SIZE HARDWARE CHART



REF	QTY	DESCRIPTION	REF	QTY	DESCRIPTION		
13	1	Plow Bolt, 1/2 x 2"	26	2	Washer, 5/8"		
14	2	Plow Bolt, 3/8" x 1"	27	1	Cotter Pin, 1/8 x 1-1/4"		
15	2	Spacer, 5/8" x 1/2"	28 2 Hex Bolt, 1/2 x 1-1/2"				
16	1	Spacer, 5/8" x 5/8"	29	3	Carriage Bolt, 5/16 x 3/4"		
17	3	Washer, 5/16"	30	4	Hex Nut, 5/8"		
18	1	Hex Bolt, 1/2 x 1-3/4"	31	2	Hex Nut, 1/2"		
19	3	Lock Nut, 5/16"	32	3	Lock Nut, 1/2"		
20	2	Hex Nut, 3/8"	33	2	Lock Nut, 5/8"		
21	1	Roll Pin, 5/16 x 1-3/4"	34	2	Hex Bolt, 5/8 x 2"		
22	1	Square Nut, 1/2"	35	1	Coulter Axle		
23	1	Washer, .5312 x 1.0625 x .09"	36	1	"U" Bolt, 5/8"		
24	2	Carriage Bolt, 1/2 x 1-1/2"	37	1	Coulter Clamp		
25	1	Spacer, 1/2" x 9/16"	38	1	Trunnion		

# ASSEMBLY

#### TOOLS REQUIRED FOR ASSEMBLY

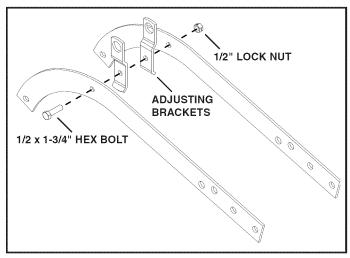
- 1 10" Adjustable Wrench
- 1 15/16" Wrench
- 1 13/16" Wrench
- 1 3/4" Wrench
- 1 1/2" Wrench
- 1 9/16" Wrench
- 1 Pliers
- 1 Gloves
- Remove the loose parts and the hardware packages from the carton. Lay out all parts and hardware and identify using the illustrations on pages 3 and 4.

**NOTE:** Right hand (R.H.) and left hand (L.H.) are determined from the operators position while seated on the tractor.

**NOTE:** Carefully follow directions for when fasteners are to be tightened.

#### STEP 1: (SEE FIGURE 1)

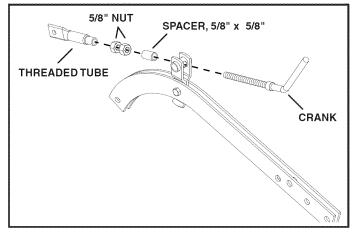
 Assemble adjusting brackets to inside of both beams using one 1/2 x 1-3/4" hex bolt and 1/2" lock nut. Do not tighten yet.



**FIGURE 1** 

#### STEP 2: (SEE FIGURE 2)

- Slide trunnion through holes in adjusting brackets. Insert crank through hole in side of trunnion, spacer, two 5/8" nuts and then thread into threaded tube.
- **Tighten** first nut against the spacer until there is slight resistance when crank is turned. **Do not overtighten** and cause crank to bind. Lock nut in place using two wrenches and second 5/8" nut.

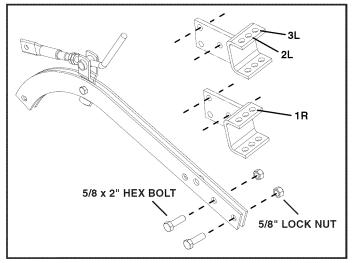




#### STEP 3: (SEE FIGURE 3)

- Measure the distance between the rear wheels of your tractor and consult the table below for how to assemble the hitch bracket and which hole to use with hitch bracket
- Assemble hitch bracket **between** beams using two 5/8 x 2" hex bolts and 5/8" lock nuts.
- Do not tighten yet.

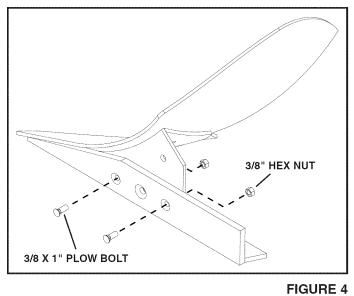
DISTANCE BETWEEN REAR TRACTOR WHEELS (INCHES)	USE HOLE #
16-19	1R
19-21	2L
21+	3L



#### **FIGURE 3**

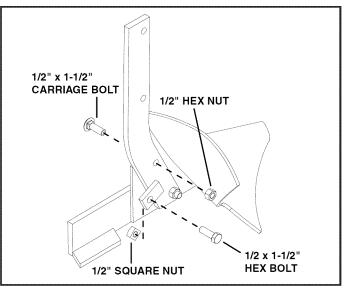
#### STEP 4: (SEE FIGURE 4)

 Assemble the landside to frog using two 3/8 x 1" plow bolts and 3/8" hex nuts. Do not tighten yet.



## STEP 6: (SEE FIGURE 6)

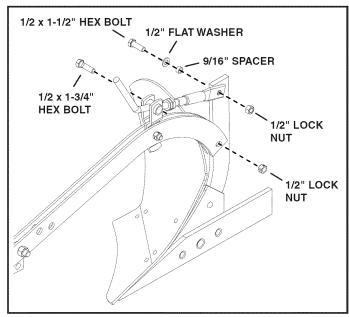
- Insert 1/2 x 1-1/2" carriage bolt through frog and standard, securing it with a 1/2" hex nut. **Do not tighten yet**.
- Insert a 1/2 x 1-1/2" hex bolt through tab at bottom of standard. Place the 1/2" square nut between the tab and frog, threading the hex bolt into the nut until tight.
- **Tighten** fasteners assembled in steps 4-6 at this time.



**FIGURE 6** 

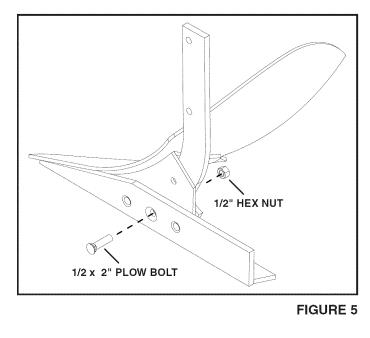
### STEP 7: (SEE FIGURE 7)

- Insert the standard between the beams and fasten together using the lower hole in the standard with one 1/2 x 1-3/4" hex bolt and 1/2" lock nut.
- Attach end of threaded tube to upper hole on side of standard using one 1/2 x 1-1/2" hex bolt, 1/2" flat washer, a 9/16" spacer placed inside hole of standard and a 1/2" lock nut.
- **Tighten** fasteners assembled in this step but make sure threaded tube is free to pivot.



### STEP 5: (SEE FIGURE 5)

• Attach the standard to the frog using a 1/2 x 2" plow bolt and 1/2" hex nut. **Do not tighten yet**.



### STEP 8: (SEE FIGURE 8)

Insert coulter standard into fork; align the holes and drive the 5/16 x 1-1/4" pin through. Leave an equal amount of pin showing on each side.

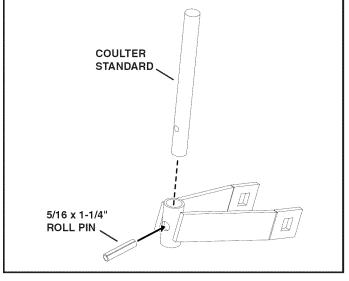
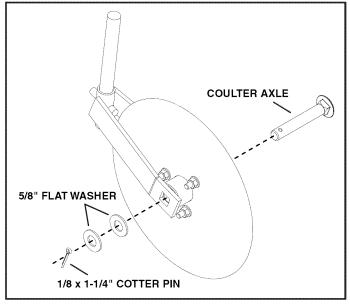


FIGURE 8

#### STEP 10: (SEE FIGURE 10)

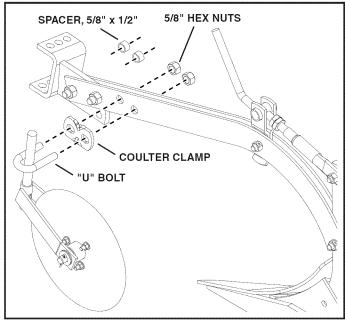
 Install the coulter blade on the fork by inserting the axle through one leg of the fork, the coulter hub and the other leg of the fork. Secure with two 5/8" flat washers and an 1/8 x 1-1/4" cotter pin by bending the ends over.



**FIGURE 10** 

## STEP 11: (SEE FIGURE 11)

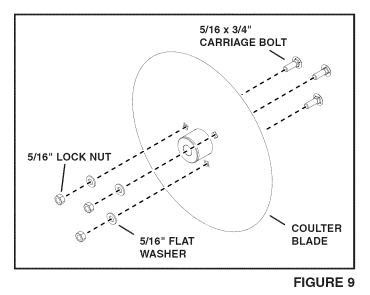
- Attach the coulter assembly to the plow beam using the "U" bolt, coulter clamp, two spacers (located between the plow beams) and secure with two 5/8" hex nuts.
- Position the coulter standard between the "U" bolt and coulter clamp and move up to the highest position.
- Refer to the coulter adjustment section for proper setting to be adjusted after you begin plowing.
- Tighten bolts assembled in step 3 at this time.



#### FIGURE 11

#### STEP 9: (SEE FIGURE 9)

 Attach the coulter hub to the coulter blade using three 5/16 x 3/4" carriage bolts, 5/16" flat washers and 5/16" lock nuts.



# OPERATION

## PREADJUSTMENT

**NOTE:** During normal plowing, the right side tractor wheels will be riding in the previously plowed furrow. A furrow is the cut area your plow makes when turning the soil. An initial setting for your plow is required to cut the first furrow on level ground. The following pre-sets will result in an approximate 5" to 6" plowing depth.

- Remove stabilizer bolts and nuts from sleeve hitch. The plow must be free to move side to side on hitch.
- Lower your tractor lift handle and lock in lowered position.
- Mount the plow to the sleeve hitch with the hitch pin furnished with the hitch. Refer to figure 3 and the accompanying table on page 6 to select the proper mounting hole.
- Adjust lift spring tension on hitch as required, see hitch manual for instructions.
- Adjust the depth crank of plow until point of plow share is on the ground and the rear of plow landside is approximately 1" off the ground. (Refer to figure 12.)

**NOTE:** The plow will appear to be angled to the left. This will allow the plow to run level when the right hand tractor wheels are in the plowed furrow.

- The plowing depth is set by adjusting the tractor sleeve hitch turnbuckle until hitch drawstrap has about 1" of slot exposed between pin and end of slot. Loosen the hex nut on the hitch turnbuckle to adjust it. Make sure to retighten it after adjusting.
- Adjust the plow coulter to its highest position.
- Go and make your first two furrows as shown in figure 13 (X to A and turn B to C). Make sure the tractor lift handle is lowered and locked into the down position. Plow in third gear and near full throttle. Raise the plow to the transport position when turning.
- If your plow is not plowing at 4" to 5" deep on your initial two passes, readjust the plow depth crank by turning it clockwise to go deeper or counter-clockwise to go shallower. Make this adjustment one turn at a time until desired depth is obtained. See figure 16 on page 11.

**NOTE:** The rest of the furrows will be made with the tractor tires in the previously cut furrows; therefore, the pitch (depth) of the plow must be readjusted to a 5" to 6" plowing depth.

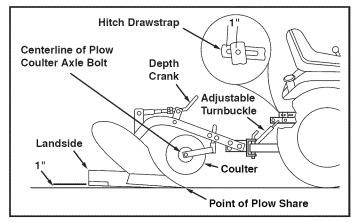
- Position your tractor with the inside of the right side wheels against the side of the previously plowed furrow.
- Start plowing for a short distance and check the depth of the furrow. Adjust the depth crank clockwise or counter-clockwise one turn at a time until the 5" to 6" depth is obtained.
- After plowing depth is set with plow in furrow, stop the tractor and measure the distance from the centerline of the plow coulter axle bolt — it should be about 2"

above the ground. If it is not, raise the plow out of the ground adjust the coulter up or down to obtain the 2" height. Be sure to adjust side motion at this time (see coulter adjustment on page 10, figure 15.)

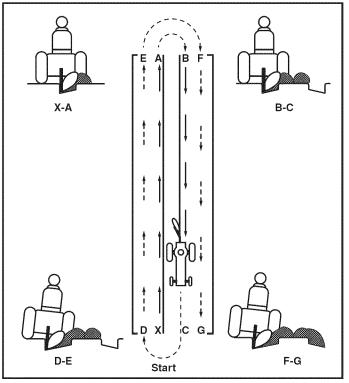
## **TRACKING ADJUSTMENT (OPTIONAL)**

**NOTE:** If the plow appears to track to the left while plowing, an adjustment is available to correct this condition. (Refer to figure 17.)

 The tracking adjustment is made by loosening both 1/2" hex nuts securing the plow bottom to the standard and turning the tracking adjustment bolt clockwise two turns. Retighten hex nuts securely. Repeat adjustment as necessary until plow pulls straight at 10° from the adjacent plowed swath.







**FIGURE 13** 

## **PLOWING TIPS**

- High weeds or grass must be cut down with a rotary mower before plowing.
- Never plow when soil is wet. A rule of thumb is to pick up a handful of soil and roll it into a ball. If the soil does not crumble, it is too wet. If the soil is too dry, it may be difficult for the plow to penetrate properly.
- Avoid low areas, old roadways, paths and other places where soil is overly packed.
- Expect to have some difficulty plowing thick sod. However, by using the proper settings for coulter, hitch and crank, you should be able to do a good job under most conditions.
- Do not tighten stabilizer bolts, the plow must be free to sway from side to side. (Refer to your hitch manual.)
- Your 10" plow works best at a depth of 5" 6".
- Lay out your field to be plowed and if possible make it rectangular in shape.

### TRACTION

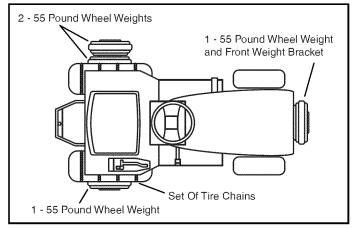
- Four 55 lb. weights are required. Refer to diagram for positioning them. See your local Sears store or catalog outlet for purchase of weights.
- Tire chains or rear chevron tires (agricultural tires) are also recommended with the plow. See your local Sears store or catalog outlet or refer to your tractor owner's manual for tire size.
- When plowing heavy clay soil or sod, it will help to reduce the width of the plow cut. This can be accomplished by hitching the plow one or two holes to the left of the recommended setting (see figure 3.)

**NOTE:** It is easier to plow a few long furrows than many short ones. Leave some room at each end of the field for turning your tractor.

- Always lift the plow before turning.
- Do not plow too fast. Move steadily along so that the earth will turn over and not fall back over the furrow. In most soils, this is done at full throttle in third gear.

**NOTE:** If plowing speed changes, it may be necessary to re-adjust the depth crank to maintain desired plowing depth.

• In light soils, plowing may often be done in a higher gear, but if you travel too fast the furrows will be uneven and the dirt is apt to be thrown rather than rolled over.



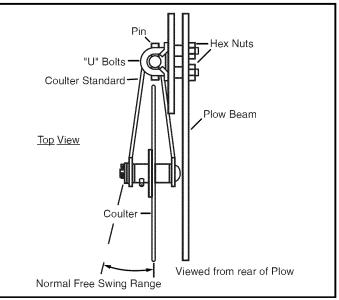
**FIGURE 14** 

# **ADJUSTMENTS**

#### COULTER ADJUSTMENT (SEE FIGURE 15)

- The coulter should be adjusted to slice 2" to 3" deep when plow is in the ground. Make this adjustment by loosening the two hex nuts which secure the "U" bolt and then move the coulter assembly standard up or down as required.
- Rotate the coulter assembly to the left so that the drive pin located in the standard prevents the coulter from swinging into the plow beam or bottom, now tighten the two hex nuts. When properly adjusted, the coulter will be free to swing outward a limited amount only to the left of the beam.

**NOTE:** In extremely hard soil, the coulter may actually prevent the plow from penetrating the surface. Should this situation occur, raise or remove the coulter entirely.



#### **FIGURE 15**

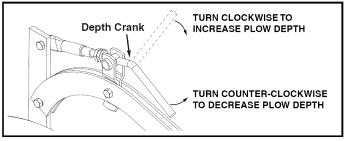
#### **DEPTH ADJUSTMENT (REFER TO FIGURE 16)**

- To turn the plow share into the ground to open the first furrow, adjust the point downward until the plow is cutting 4" to 5" deep.
- After a few furrows, or desired depth is reached, turn the crank counter-clockwise to maintain that depth. Do not allow landside to ride more than 1/2" off bottom of furrow as this will cause excessive wear on bottom of share resulting in poor soil penetration and loss of landside support.

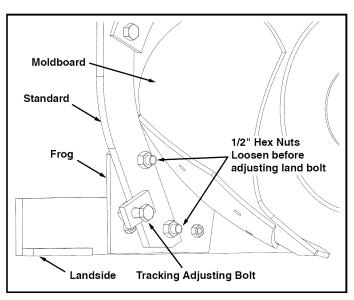
### TRACKING ADJUSTMENT (REFER TO FIGURE 17)

**NOTE:** For most plowing conditions, the landside will be properly adjusted enabling the plow bottom to react like a rudder while ground engaged. If the tip of the plow share is too far left of the beam, the plow will tend to overcut and leave a ragged furrow wall. This condition can be readily corrected by making the following adjustment.

 Loosen both 1/2" hex buts securing plow bottom to the standard and then turn the tracking adjusting bolt clockwise two turns. Retighten hex nuts securely. Repeat adjustment as necessary until plow pulls straight behind tractor and is plowing 8" to 10" wide.









### LIFT ASSIST ADJUSTMENT (ADJUSTABLE SLEEVE HITCHES ONLY)

- Raise the tractor lift handle to transport position in order to adjust the spring to decrease lift effort of the attachment.
- · Loosen the hex jam nut against the spring bushing.
- Turn adjusting bolt clockwise until the washer is flush with hitch bracket. This extends spring and reduces lift effort. Retighten jam nut.
- Operate the hitch with the lift link assembly in the center adjustment hole in the lift arm assembly for most conditions. If spring adjustment does not result in acceptable lift effort, operate the hitch with the turnbuckle assembly in the lower adjustment hole in the lift arm assembly.

NOTE: The upper adjustment hole can be used for lighter weight attachments.

## CUSTOMER RESPONSIBILITY

- The moldboard should be kept in a smooth, polished condition. Fine sandpaper, steel wool, kerosene, naptha, etc may be used to restore the finish on a rusty moldboard.
- The coulter blade edge should be relatively sharp. If sharpening is necessary, use a flat file.
- Every 4 hours lubricate the coulter hub bearing surface through the grease fitting.
- For smooth operation and to prohibit the formation of rust on the crank, keep a light coating of oil on threads.

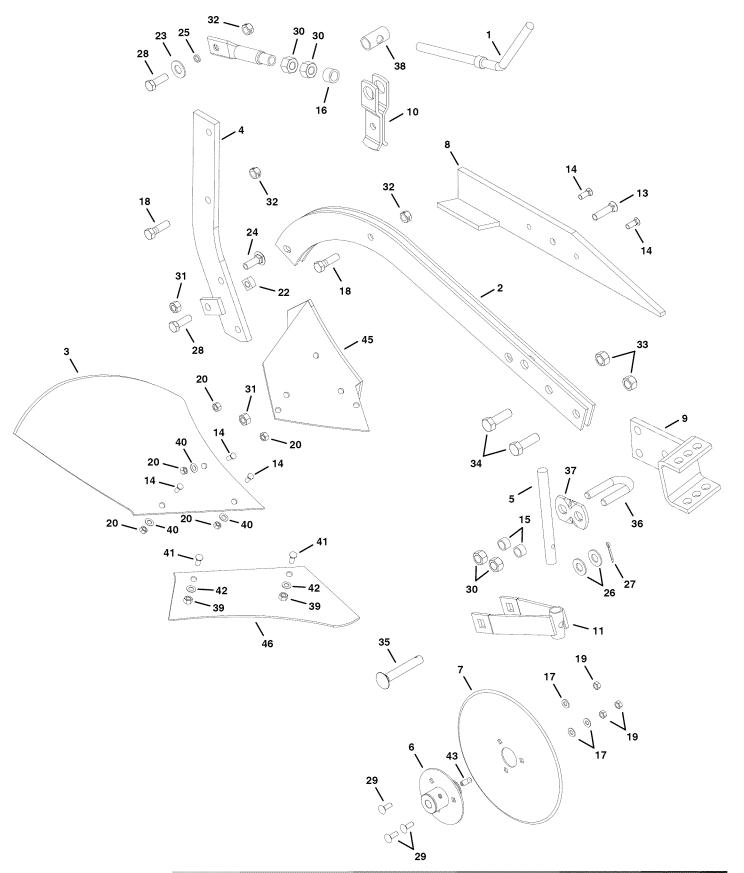
**NOTE:** When lubricating bearing, it is recommended that you use multipurpose grease.

# TROUBLESHOOTING

PROBLEM	CAUSE/CONDITION	REMEDY
	Improper crank adjustment	• Refer to depth adjustment and turn crank clockwise 1 or 2 turns at a time.
	Badly worn plow share	Replace with new share.
Slow ground entry	Ground extremely dry and hard due to lack of moisture	<ul> <li>Add extra weight to tractor or wait until soil conditions are suitable.</li> </ul>
	Hitch downward movement restricted by mower height adjustment	Adjust for shortest cut height.
Plow cutting too wide	Improper tracking adjustment	See tracking adjustment
Plow bottom won't polish	New or rusted bottom	<ul> <li>Clean bottom frequently during use until polish is obtained by; clean bottom with rag soaked in turpentine, or mineral spirits. Old brick or pumice may also be used to polish bottom. Or, rub with a rag soak in oil and dipped in sand.</li> </ul>
	• Extreme variations in soil texture and/or moisture	• See plowing tips. Soil too wet or dry.
Uneven plowing depth	<ul> <li>Plow rides up in harder, dry soil, runs shallow</li> </ul>	<ul> <li>Reduce tractor speed in hard spots. Check depth adjustment.</li> </ul>
	Plow goes too deep	<ul> <li>Check depth adjust, turn counter- clockwise.</li> </ul>

# NOTES

## **REPAIR PARTS ILLUSTRATION**



## MODEL NO. 486.24560 10-INCH MOLDBOARD PLOW

# **REPAIR PARTS LIST**

## MODEL NO. 486.24560 10-INCH MOLDBOARD PLOW

REF.	PART NO.	QTY	DESCRIPTION	REF.	PART NO.	QTY	DESCRIPTION
1	64839	1	Crank	24	47660	1	Carriage Bolt, 1/2" x 1-1/2"
2	25209	2	Half Beam	25	49065	1	Spacer, 1/2" x 9/16"
3	49058	1	Moldboard, 10"	26	R19212113	2	Flat Washer, 5/8"
4	64840	1	Standard	27	43010	1	Cotter Pin, 1/8" x 1-1/4"
5	25224	1	Coulter Standard	28	43020	2	Hex Bolt, 1/2" x 1-1/2"
6	64841	1	Coulter Hub	29	43080	3	Carriage Bolt, 5/16" x 3/4"
7	49060	1	Coulter Blade	30	HA124589	4	Hex Nut, 5/8"
8	49097	1	Landside, 10"	31	712-0206	2	Hex Nut, 1/2"
9	64838	1	Hitch Bracket	32	43262	3	Lock Nut, 1/2"
10	25217	2	Adjustment Bracket	33	712-0261	2	Lock Nut, 5/8"
11	64842	1	Coulter Fork	34	47947	2	Hex Bolt, 5/8" x 2"
12	49056	1	Threaded Tube	35	49067	1	Coulter Axle
13	49063	1	Plow Bolt, 1/2" x 2"	36	49068	1	"U" Bolt
14	49062	5	Plow Bolt, 3/8" x 1"	37	25218	1	Coulter Clamp
15	41155	2	Spacer, 5/8" x 1/2"	38	25225	1	Trunnion
16	41156	1	Spacer, 5/8" x 5/8"	39	R73220700	2	Hex Nut, 7/16"
17	43081	3	Washer, 5/16"	40	43070	3	Flat Washer, 3/8"
18	R74780828	2	Hex Bolt, 1/2" x 1-3/4"	41	41154	2	Plow Bolt, 7/16" x 1-1/4"
19	25H-17	3	Lock Nut, 5/16"	42	43352	2	Washer, 7/16"
20	43015	5	Hex Nut, 3/8"	43	46858	1	Grease Fitting, 5/16"
21	715-0118	1	Roll Pin, 5/16" x 1-3/4"	44	49057	1	Frog
22	49064	1	Square Nut, 1/2"	45	49059	1	Share, 10"
23	HA120396	1	Washer, .5312 x 1.0625 x .09"		49070	1	Owner's Manual

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