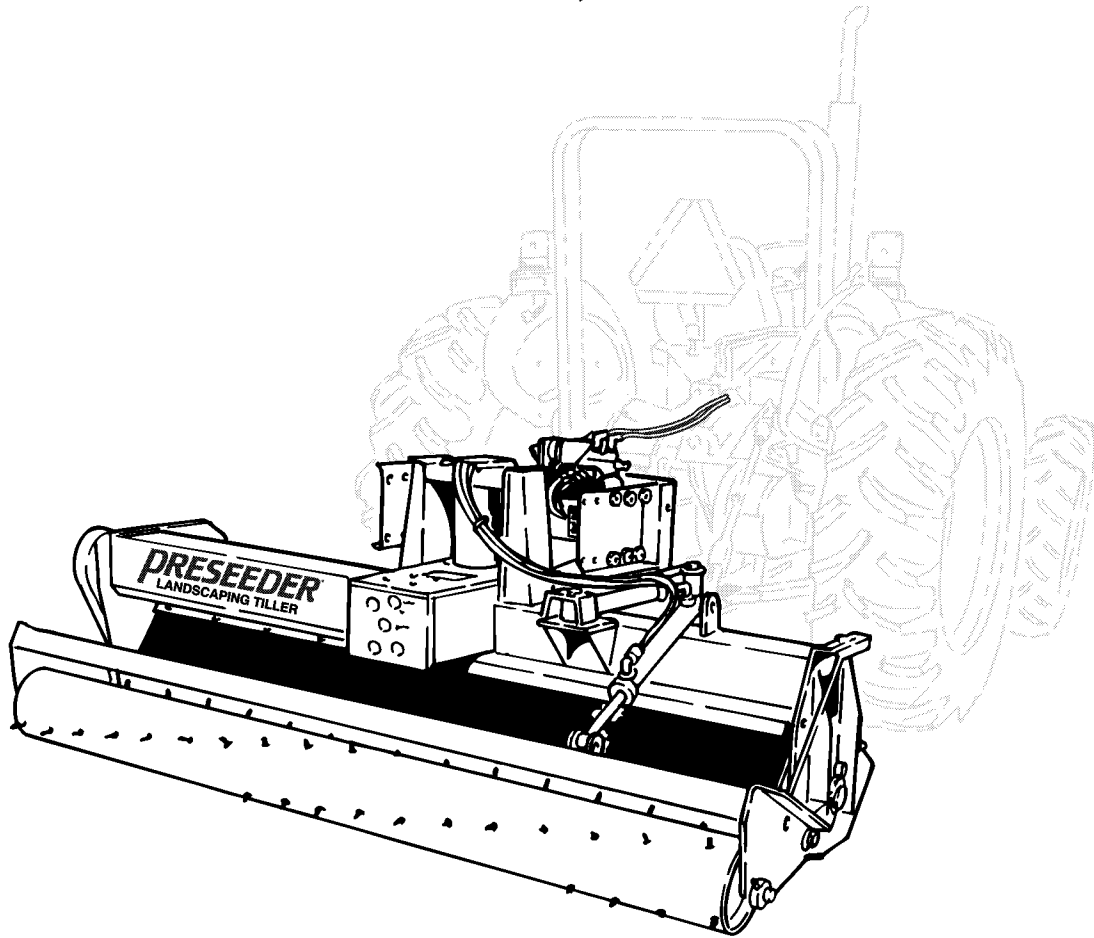


# ***PRESEEDER***<sup>®</sup> **LANDSCAPING TILLER**

## **OPERATORS MANUAL**

**FOR**

**MODELS 605, 725 & 805**



**ATI**   
**C O R P O R A T I O N**

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**FEBRUARY 2004**

CAT.# PS605725805OM-0204



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New Holland, PA 17557 U.S.A.

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### **DISCLAIMER**

THE INFORMATION IN THIS MANUAL IS PROVIDED TO PROMOTE THE SAFE USE OF, AND ASSIST THE OPERATOR IN ACHIEVING THE BEST PERFORMANCE FROM, MODEL 605, 725 and 805 Preseeder<sup>®</sup> Landscaping Tillers DESCRIBED HEREIN, FOR THEIR INTENDED APPLICATIONS.

Preseeder<sup>®</sup> is a registered trademark of ATI Corporation.



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## INTRODUCTION

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This manual is furnished to you, the owner/operator, as a guide to get the greatest benefit from your Preseeder tiller. ATI Corporation wants you to be able to get the most use out of your tiller through safe and efficient operation.

Before attempting to operate the tiller, carefully read all sections of this manual. Be sure that you thoroughly understand all of the safety information and operating procedures.

Pay special attention to the **Safety Precautions** and particularly all **DANGER, WARNING, and CAUTION** notices included in this manual. These items combined form the guidelines for promoting a safe and efficient operating environment, along with continuous, reliable service and minimum down time.

**NOTE:** References made to left, right, front, and rear are those directions viewed when facing the unit from the rear.

**NOTE:** Some equipment depicted in illustrations may not reflect exact production model configurations.

**NOTE:** All safety, operating, and servicing information reflects current production models at the time of publication of this manual.

**NOTE:** ATI Corporation reserves the right to discontinue models at any time, change specifications, and improve design without notice and without incurring obligation on goods previously purchased and to discontinue supplying any part listed, when the demand does not warrant production.

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## WARRANTY

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This Preseeder tiller is designed and manufactured to high quality standards. ATI Corporation, therefore, guarantees this tiller to be free from defect in workmanship and materials for three years from purchase date. **If the machine is used for rental purposes, the warranty is limited to ninety (90) days.**

Vendor Components, Hydraulic Motor and Control Valve are warranted separately by their specific manufacturer.

Rotor teeth and normal wear are not covered by this warranty.

Misuse, abuse, misapplication, and unauthorized alterations will void this warranty.

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# SAFETY PRECAUTIONS


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## THE BEST OPERATOR IS A CAREFUL OPERATOR.


By using common sense, observing general safety rules, and adhering to the precautions specific to the Preseeder tiller, you, the operator, can promote safe equipment operation. Read and be sure you understand all precautions in this section before operating your tiller. The machine must only be operated by properly trained and authorized operators.

## SAFETY PRECAUTION DEFINITIONS

**Dangers, Warnings, Cautions, and Notes** are strategically placed throughout this manual to further emphasize the importance of personal safety, qualifications of operating personnel, and proper use of the tiller in its intended application. These precautions supplement and/or complement the safety information decals affixed to the unit and include headings that are defined as follows:

 **DANGER** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

 **WARNING** Indicates a potentially hazardous situation or practice which, if not avoided, could result in death or serious injury.


 **CAUTION** Indicates a potentially hazardous situation or practice which, if not avoided, will result in damage to equipment and/or minor injury.

**NOTE:** Indicates an operating procedure, practice, etc., or portion thereof, which is essential to highlight.

The tiller must only be operated by qualified persons who are familiar with all information in the operator's manual. Do not attempt to operate the tiller in areas with steep inclines, ditches, large rocks, stumps, or holes which may endanger the operator by upsetting the tractor or cause damage to the tiller.

## THE PRESEEDER TILLER

1. Read this manual carefully to become familiar with your tiller. Lack of operating knowledge can be dangerous and lead to accidents.
2. Keep all shields in place and properly tighten all mounting hardware.

 **WARNING** *Stay clear of rotating drive lines. Do not operate without drive line and slip-clutch shields in place and in good condition. Failure to heed these warnings can result in personal injury or death.*

3. Periodically inspect all parts for wear and replace with factory-authorized parts if excessive wear is present.
4. Keep safety decals clean and readable. Replace if missing, damaged, or illegible.
5. Do not modify, alter or permit anyone to modify or alter this equipment or any of its components without written approval from ATI Corporation.

## OPERATING THE PRESEEDER TILLER


1. Never allow anyone to ride on the tiller at any time.
2. Keep personnel and objects away from the tiller before adjusting angle of the rotor. Serious injury or death may result from getting caught in the tiller's pinch point.
3. Do not stand or allow others to stand near the tiller while it is operating.
4. Disengage power take-off (PTO) when transporting the tiller.

---

## SAFETY PRECAUTIONS

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5. Never leave the tiller in raised position unattended.
6. Never wear loose clothing when operating the PTO, or when around other rotating equipment.
7. Never clean, adjust, or repair the tiller with the tractor running.
8. The operator must never get off the tractor while it is in motion.
9. When operating the tiller, always shut off the engine and wait until the PTO stops turning before getting off the tractor.
10. Make sure PTO shield is properly installed and secure on both tractor and tiller.
11. Always shut off engine before attaching or detaching PTO shaft to tractor. Attach PTO shaft to tiller before attaching to tractor.

 **WARNING** *Keep hands and feet from under Preseeder tiller at all times. Make certain everyone is clear of the machine before operating.*

### SAFETY DECALS

The safety decals appearing in Figure 1 are a sampling of those affixed to the tiller. These examples are not meant to represent all decals, but do illustrate typical precautionary and informational signage relating to tiller operation and use.

***IMPORTANT: It is the responsibility of the operator to locate, read, and adhere to all information provided on all decals affixed to the unit being operated.***



**SAFETY PRECAUTIONS**

# **PRESEEDER®**

## **LANDSCAPING TILLER**

**605**

**725**

**805**

**⚠ WARNING**



**HIGH-PRESSURE FLUID HAZARD**

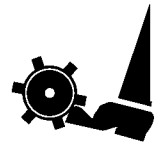
To prevent serious injury or death:

- Relieve pressure on system before repairing or adjusting or disconnecting.
- Wear proper hand and eye protection when searching for leaks. Use wood or cardboard instead of hands.
- Keep all components in good repair.

**⚠ WARNING**

**AVOID INJURY FROM ROTATING TEETH**

**Keep hands, feet, and clothing away.**



**⚠ WARNING**



Read and understand the Operator's Manual before attaching tiller or operating the unit.

When starting or operating tiller, keep all bystanders clear of machine; be alert for flying debris. (Max. PTO speed is 540 rpm)

Do not operate tiller if shields are not in place and secured.

Before servicing, cleaning or clearing debris:

- Position PTO control lever to "off".
- Shut down tractor engine.
- Wait for PTO and tiller rotation to stop.
- Lower tiller to ground or block securely.

Consult your tractor operator's manual for front/rear ballast (weight) requirements with tiller installed.

**DO NOT STAND OR RIDE ON TILLER.**

**OIL FILL**

**OIL LEVEL**



**⚠ DANGER**



**ROTATING DRIVELINE**  
CONTACT CAN CAUSE DEATH  
**KEEP AWAY!**

- DO NOT OPERATE WITHOUT -**
- ALL DRIVELINE, TRACTOR AND EQUIPMENT SHIELDS IN PLACE
  - DRIVELINES SECURELY ATTACHED AT BOTH ENDS
  - DRIVELINE SHIELDS THAT TURN FREELY ON DRIVELINE

**⚠ DANGER**



**SHIELD MISSING**  
**DO NOT OPERATE**

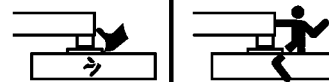
**⚠ DANGER**



**SHIELD MISSING**  
**DO NOT OPERATE**

**⚠ DANGER**

**⚠ WARNING**



**PINCH POINT HAZARD**  
**KEEP AWAY**

To prevent serious injury or death:

- Stop engine, set park brake, remove ignition key and wait for all moving parts to stop before adjusting.
- Keep hands, feet, hair and clothing away from moving parts.
- Keep others away.

SW203

MANUFACTURED BY **ATI CORPORATION** New Holland PA 17657

**MODEL**

**SERIAL**



39143000

FIGURE 1 Decals

# OPERATION

## GENERAL SAFETY

The Preseeder tiller is a machine designed to quickly prepare a level, fine-textured bed, ready for seeding turfgrass. It is intended for conditioning and leveling the top layer of soil; it is not designed to be used as a deep tiller. If hard, unbroken soil is encountered, it is recommended that a chisel be used first for two reasons:

1. To break up the soil for more efficient operation.
2. To allow more water to be absorbed, thereby reducing surface erosion.

**WARNING** *To prevent personal injury, make certain all tractor and Preseeder tiller safety shields are in place and secure before operating.*

Before dismounting the tractor, disengage PTO, turn off engine, set parking brake and allow the tiller rotor to come to a complete stop.

## ATTACHING PRESEEDER TILLER TO TRACTOR

- A. Attach the two lift arms of tractor 3-point hitch to the two lower points of tiller hitch frame. You may need to use lift arm adjuster.
- B. Attach top link of tractor 3-point hitch to top point of the hitch frame. (You may need to adjust length.)

**NOTE:** Hitch frame can be mounted onto the main frame in one of three positions to accommodate various tractor configurations. (See Figure 3.) Hitch frame should be positioned so that space between the main frame and rear tractor tire is minimum of 2 inches in any position of lift travel and in fully-angled positions.

**NOTE:** If excessive vibration or shuddering occurs when the PTO is engaged on the tractor, changing the mounting position of the hitch frame can often eliminate it. Move the hitch frame forward one position at a time (See Figure 3) until the vibration subsides.

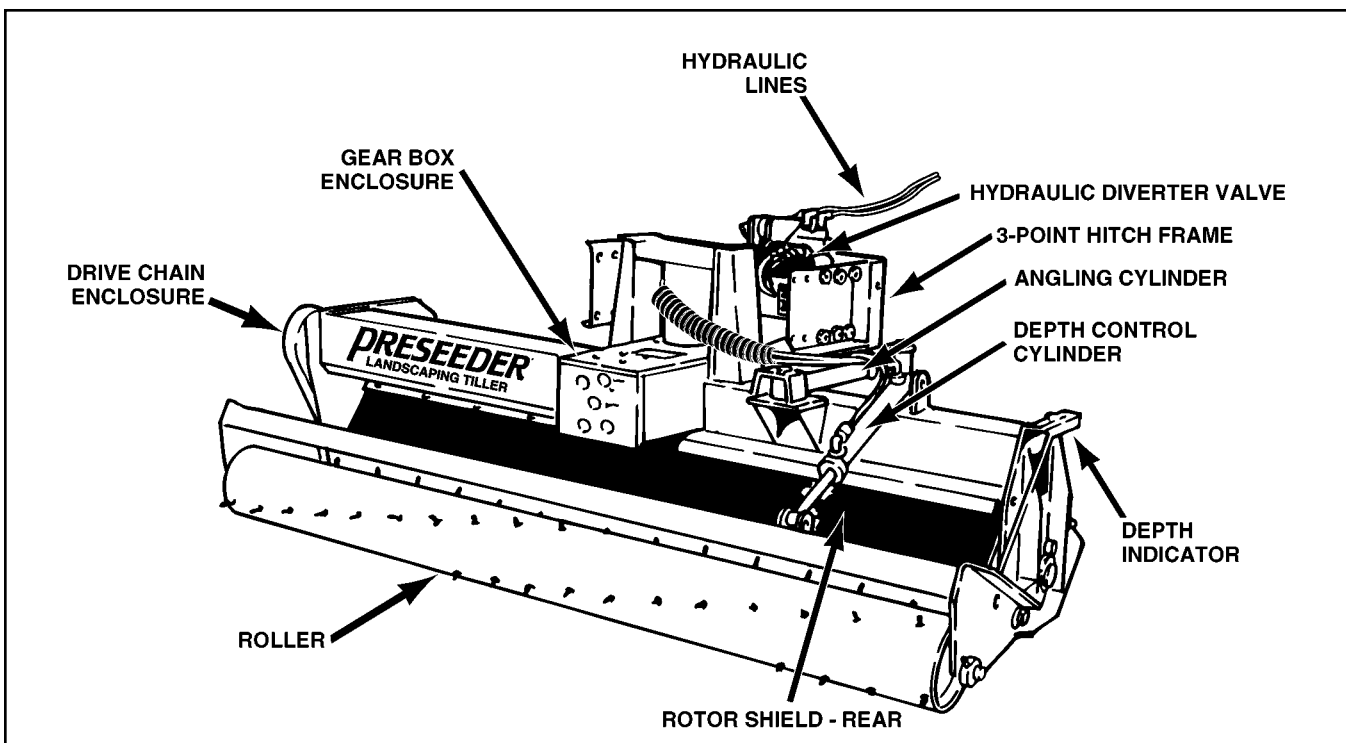


FIGURE 2 Preseeder Landscaping Tiller General Arrangement

# OPERATION

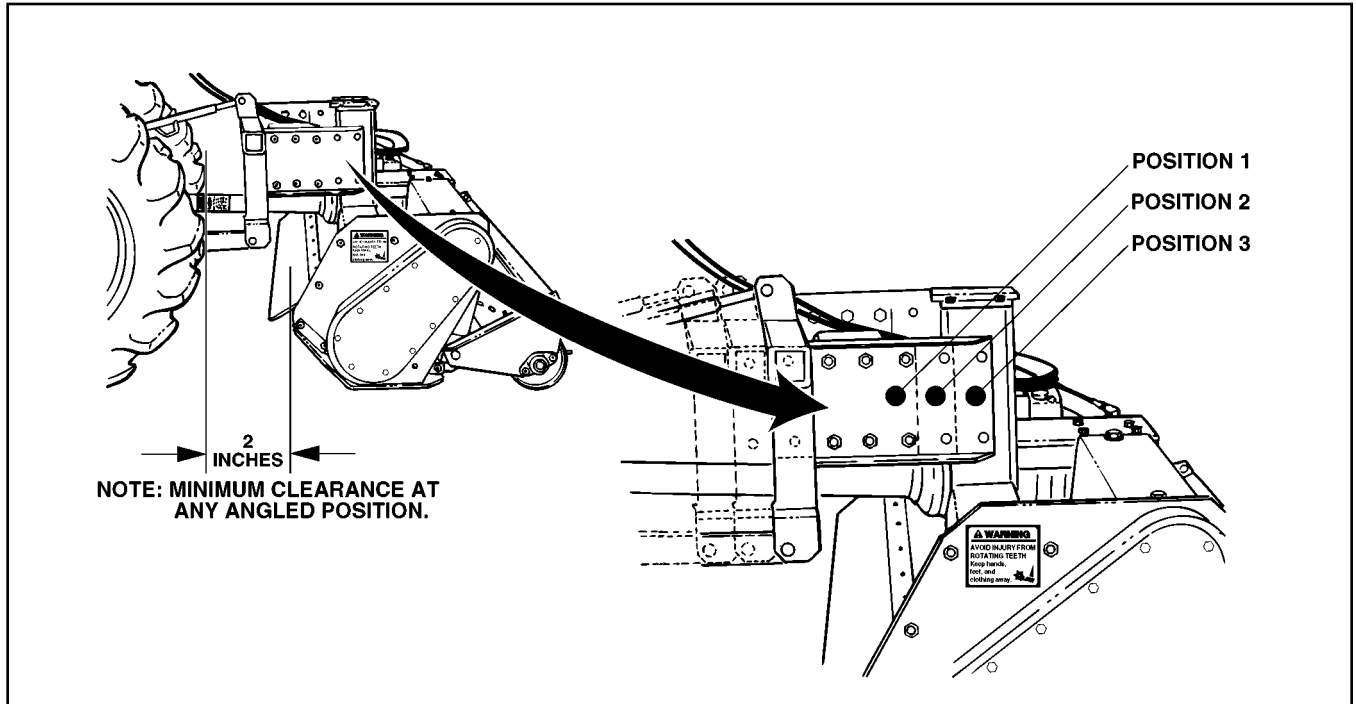


FIGURE 3 Hitch Frame Mounting Positions

**CAUTION** Before operating the Preseeder tiller, be sure the PTO drive shaft overlap is within acceptable limits.

C. Check PTO drive shaft overlap as follows (See Figure 4):

1. Collapse PTO drive shaft lengthwise completely. Then extend by 1/2-inch. This is *minimum length*.

We recommend no less than 11 inches overlap of the two sections of PTO shaft, in the operating position.

2. Extend PTO drive shaft to point of separating, then push together 11 inches. This is *maximum length*. We recommend no less than 11 inches overlap of the two sections of PTO shaft, in the operating position.

**IMPORTANT:** Do not operate the tiller with PTO drive shaft bottomed out in any position of lift travel. If drive shaft does bottom out, contact your dealer to cut it to proper length.

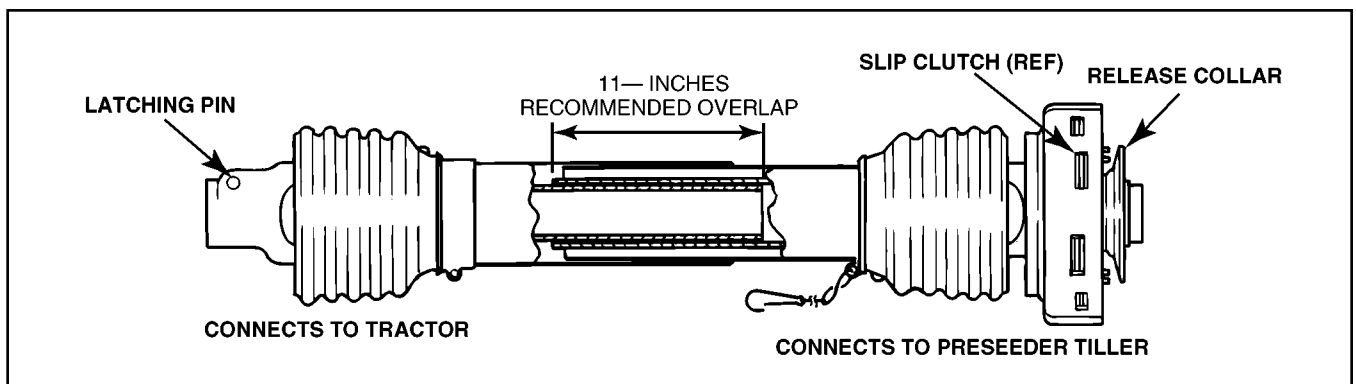


FIGURE 4 Minimum PTO Shaft Overlap

## OPERATION

- D. Connect drive shaft end with slip clutch to the tiller gearbox shaft. Depress latching pin or release collar to allow drive shaft end to slip onto gearbox shaft. Release latching pin or release collar so it can seat into groove of gearbox shaft. Tug on drive shaft to be sure it is securely connected. Repeat above procedure to attach other end to tractor PTO shaft.

**WARNING** *Never attach or detach PTO shaft when engine is running.*

**WARNING** *When attaching PTO drive shaft to tractor, it is important that the spring-activated locking system works. A loose drive shaft could slip off and result in personal injury or damage to the equipment.*

- E. Attach/adjust 3-point hitch stabilizer bars or sway chains to prevent side sway.
- F. Connect hose ends to tractor remote hydraulic outlets at rear of tractor. Coupler tips must be compatible with tractor couplers. If they are not compatible, contact your tractor dealer.
- G. For most operations the tiller rotor should be parallel with the ground. **Adjust top link so that horizontal section of hitch frame is parallel to ground and vertical section of hitch frame is perpendicular to ground.** (See Figure 5.)

- H. Ground must be flat and rear roller in raised position for following adjustment.
1. Raise tiller, then lower gently to ground. Both ends of the rotor should touch the ground at the same time.
  2. Adjust tractor lift linkage as necessary.
- I. For transport, raise the tiller off ground, raise rear roller fully with remote control valve.

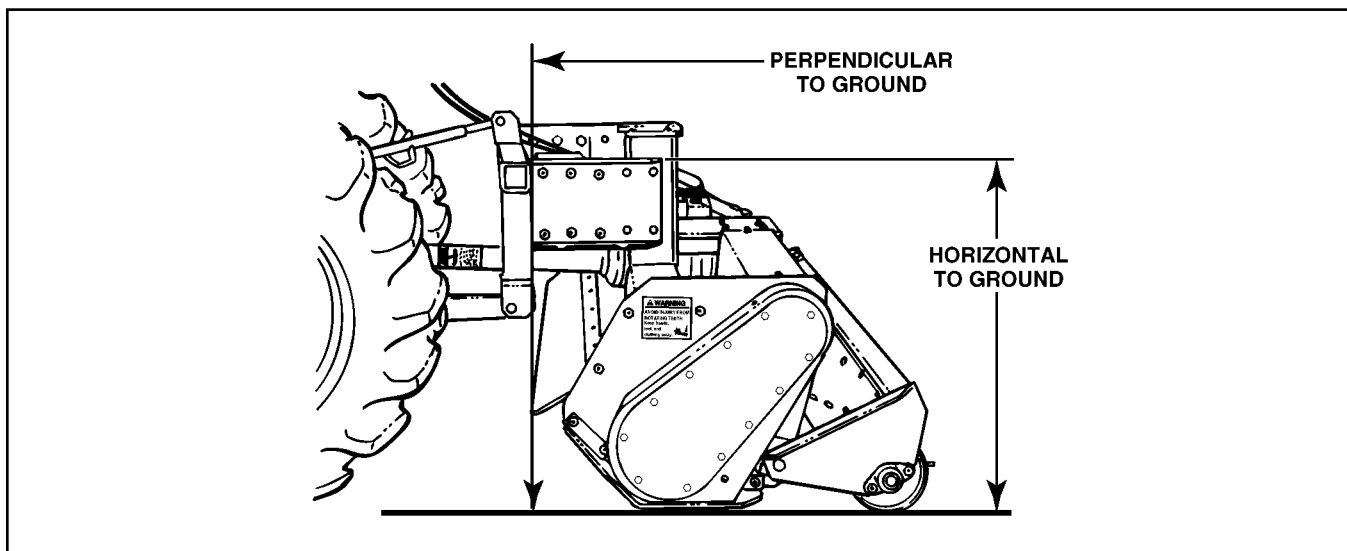


FIGURE 5 Leveling the Rotor

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# OPERATION

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## HYDRAULIC FUNCTIONS

The Preseeder tiller is equipped with two hydraulic cylinders that allow the operator to adjust to changing conditions. The tractor's remote hydraulic system provides the power to make the changes to the cylinder. The cylinder functions are:

- 1. Depth Cylinder Function** – The depth control cylinder adjusts the depth that the rotor tills the soil. Retracting the depth control cylinder allows the tiller to work deeper, moving more soil. Extending the depth control cylinder raises the tiller, keeping the rotor depth shallow.
- 2. Angling Cylinder Function** – The angling cylinder controls the angle of the tiller's rotor. The tiller's angle determines which side the stone windrow discharges. Retracting the angling cylinder angles the tiller to the left. Extending the angling cylinder angles the tiller to the right.


The electro-hydraulic diverter valve is an option for tractors that only have one hydraulic remote valve. It allows the operator to choose between the depth cylinder and angling cylinder by flipping an electric toggle switch. The two-position toggle switch has a lighted indicator to communicate to the operator which function has been chosen.

## WEIGHT DISTRIBUTION


Proper weight distribution may require front end weights for stability and steering control when the tiller is raised by the tractor's 3-point hitch. It is recommended that no less than 20% of the tractor weight be on the front wheels when the implement is raised to the transport position. Add front end weight as required for stability. REFER TO TRACTOR OPERATOR'S MANUAL.

## OPERATION

- Lubricate the machine as necessary. Refer to LUBRICATION section of this manual.
- Start tractor according to tractor operator's manual. Engage PTO drive with engine at low speed.

 **WARNING** *Rotation of the rotor may cause tractor to move backwards, under certain soil conditions, if tractor is not moving forward under power, or if brakes are not applied.*

- Lower the tiller to ground carefully, placing tractor lift control lever to fully lowered position.

 **CAUTION** *Operating at excessive speeds can cause excessive wear or damage to the machine.*

## SUGGESTIONS FOR EFFICIENT SEEDBED PREPARATION

The following suggestions are to be understood as general in nature, since each operator will develop their own style of operation, specific to the plot and terrain that is being prepared.

Soil type and conditions vary considerably and must be addressed individually, as they are encountered.

There are three basic operations that a tiller performs: CLEARING, TILLING, and LEVELING.

- 1. CLEARING** involves removing rocks from the soil surface. This is generally the final operation, but in extremely rocky conditions it is advisable to clear the area of excessive rocks for more efficient operation.

# OPERATION

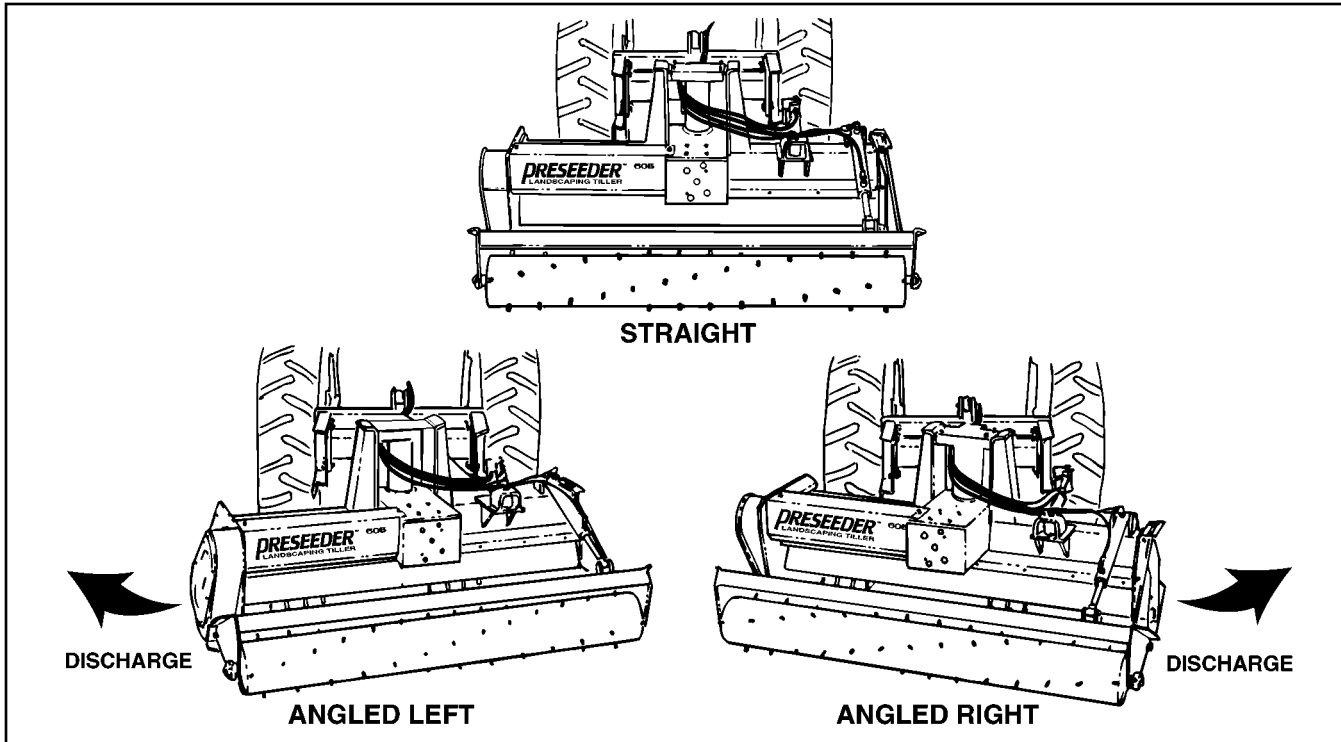


FIGURE 6 Working Angles of the Preseeder Tiller



**CAUTION** *Do not attempt to operate the Preseeder tiller in areas with heavy weeds, rope, wire, package strapping, or anything that can wrap around the end of the rotor. Steel strapping is extremely abrasive and causes excessive and premature wear when caught in the tiller.*

**NOTE:** When clearing an area with excessive rocks, adjust rotor depth so it just touches soil surface, then proceed to work and windrow rocks.

**NOTE:** Rock windrows should be picked up before they become too large. **Large windrows affect performance and cause premature wear of the Preseeder tiller.**

The adjustable angling feature of the tiller provides added efficiency when clearing an area. By reversing the angle, it is possible to continue moving rocks toward the collection area, while traveling in either direction.

If tractor is equipped with dual remote valves, actuate remote lever controlling “angling” function and position tiller to desired angle of operation. (The other remote valve controls rotor depth.)

If tractor is only equipped with a single remote valve, and the optional diverter valve is used (see Figure 2), position diverter valve control lever for “angling” function, then actuate tractor remote valve to achieve desired operating angle.

**NOTE:** Rotor depth adjustment is accomplished in the same manner, except operator must position and actuate controls that activate rotor depth adjustment.

2. **TILLING** is the main operation the machine performs. A rotor setting of 1 to 2-inches deep is used to loosen soil so it can be moved to level more effectively. In hard soils, it may be necessary to chisel soil prior to using the tiller, thus allowing adequate drainage to prevent run-off and erosion as well as retain the moisture needed for new seed. A working depth of 1 to 2-inches is recommended for tilling in most conditions. Experience will give the operator a feel for the best setting to use. Excessive depth can cause rock jamming.

## OPERATION

In rocky conditions the tiller should be set at a shallow working depth for more efficiency. When there is a build-up of soil in front of the rotor, the soil build-up prevents rocks from being discharged away from the rotor and thus the machine jams much more readily. It is more efficient to make an extra pass at a shallower setting. Deeper tillage should be done only in soil that is relatively rock-free.

The tiller drive line is protected by a slip-clutch. It is designed to slip when the machine is overloaded. Overloading can be caused by an object such as a rock or root caught in the machine or by tilling too deeply in heavy, wet soil.

**NOTE:** The tiller's slip clutch is a non-adjustable design. The four nuts on the back face of the clutch are for disassembly purpose only, and should be backed-off the clutch face completely during normal operation. Tightening these nuts will only decrease the factory torque setting. Any tampering with the slip-clutch will void the warranty.

**NOTE:** The slip-clutch is equipped with an alarm which produces a loud clicking sound when slipping. **Disengage PTO immediately** when clutch is slipping, to prevent burnout of the clutch. **The operator should be constantly alert** to the rotor speed to detect slippage even if the alarm is not heard.

3. **LEVELING** occurs during the tilling process. Deeper rotor depth produces the best leveling. More shallow settings produce the smoothest seedbed.

In areas where the surface is already fairly smooth, the rotor should not be angled, and a working depth of 1-inch is generally satisfactory. Uneven surfaces will require a deeper setting to level soil more effectively. (See Figure 7.)

When possible, it is best to work along contours rather than across them. The leveling function will cut off ridges and fill in valleys. It is possible to work across contours if the operator follows through with the hydraulic depth adjustment by raising it over ridges and lowering it through valleys.

The operator may choose to angle the rotor parallel to the tractor axle to gain maximum leveling. However, when the rotor is straight (see Figure 6), rocks will not discharge to the side. All dirt and rocks gather in front of the rotor. **The operator should be careful not to overload the tiller when the rotor is in this position.**

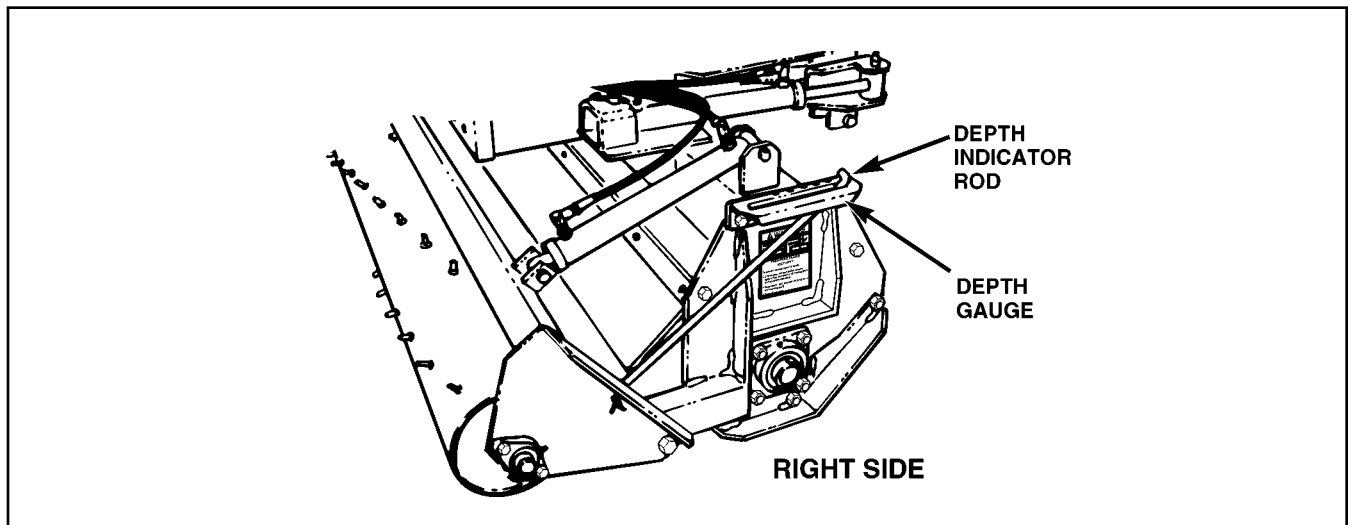



FIGURE 7 Rotor Depth Gauge

Learning to operate your tiller properly will allow you to get the most efficient use from it with minimal downtime. By keeping the following points in mind, you will be able to work more effectively and efficiently.

**Survey the area:** Take a few minutes to walk around the jobsite. These few minutes are time well-spent because you can:

1. **Plan a strategy.** Ask yourself some questions about doing the job most efficiently. Where are the highest points on this job? Where are the lowest? Where should I start? Where should I deposit the rocks? These are the types of questions that you should ask yourself before starting each job.
2. **Look for obstructions.** Walk around the jobsite to spot the enemies of your tiller. These enemies include: roots, steel strapping, rope, wire, plastic wrapping, or anything that may hinder or damage your machine. Remove these enemies before you start operating. Also, look for permanent objects that may often be buried or hidden on jobsites. These include: drainage pipe, electrical wiring, sewer vents, well covers, concrete slabs, etc.

 **WARNING** *Be aware of electrical wires or pipes which may have a shallow cover of earth.*

3. **Prepare for final clean-up.** Clean-up is made easier when you choose an area beforehand that is better for gathering and cleaning up rocks. Areas that are close to your trucks, on solid ground, along a street or grass-covered are ideal for depositing rocks and debris. Work the final windrows towards this area.

## DETACHING PRESEEDER TILLER FROM TRACTOR

- A. Lower rotor to ground; position rear roller so that both rotor and roller rest on ground to give the tiller stability when parked.
- B. Turn off tractor engine and set parking brake. Move remote valve handle back and forth a few times through raise and lower positions to relieve hydraulic line pressures.
- C. Disconnect hydraulic lines from tractor, and store them in a dirt-free location.
- D. Remove tractor top link from the tiller.
- E. Remove lynch pin and pins to detach tractor lift arms from the tiller. Store pins in lower hitch points of tiller hitch frame.



# LUBRICATION

The lubrication points in the accompanying illustration reflect standard production models. Quantities and locations of lube fittings, fill plugs, drain plugs, etc. could vary, as improvements in design and/or changes in machine configuration warrant.

**CAUTION** *Worn grease fittings that will not hold the gun, and fittings with a stuck check ball, must be replaced.*

Items not equipped with grease fittings (linkages, cables, pins, levers, etc.) should be lubricated with SAE 30 oil before the start of each operating day, or more frequently as conditions require. (See Figure 8 for locations.)

## EVERY 10 HOURS

Apply grease to fittings using grease gun to the following.

1. Rotor Bearings (2)
2. Driveshaft Bearing (1)
3. Driveshaft Universal Joint
4. PTO Shaft Universal Joints

## EVERY 20 HOURS

5. Rear Roller Bearings (2) — Apply grease to fittings using grease gun.

## EVERY 40 HOURS

6. Main Hinge Pin (1) — Apply grease to fitting using grease gun.

**NOTE:** *ASN 1706* the Main Hinge Pin is equipped with nylon bushings and does not require grease.

**NOTE:** Do not over-grease lube points. One to two pumps of grease should offer the sufficient quantity of lubricant if the lube schedule is followed. Excessive grease only provides a passage for dirt to enter the bearing races. Be sure to wipe off any remaining grease from around the bearings.

## FILL POINTS

A. Gearbox — with the tiller level, remove oil check plug from back of gearbox (lower hole in gearbox shield). Correct oil level is at bottom of check plug. Add oil if necessary. Gearbox capacity is 2.5 pints. Use anti-foam SAE 90W oil.

B. Drive Chain Case — check the oil level in the drive chain case with the tiller level. Remove lower check plug from side of case. Oil level should be maintained to the bottom of check plug. Add oil if necessary. Chain case capacity is 3.3 pints. Use anti-foam SAE 90W oil.

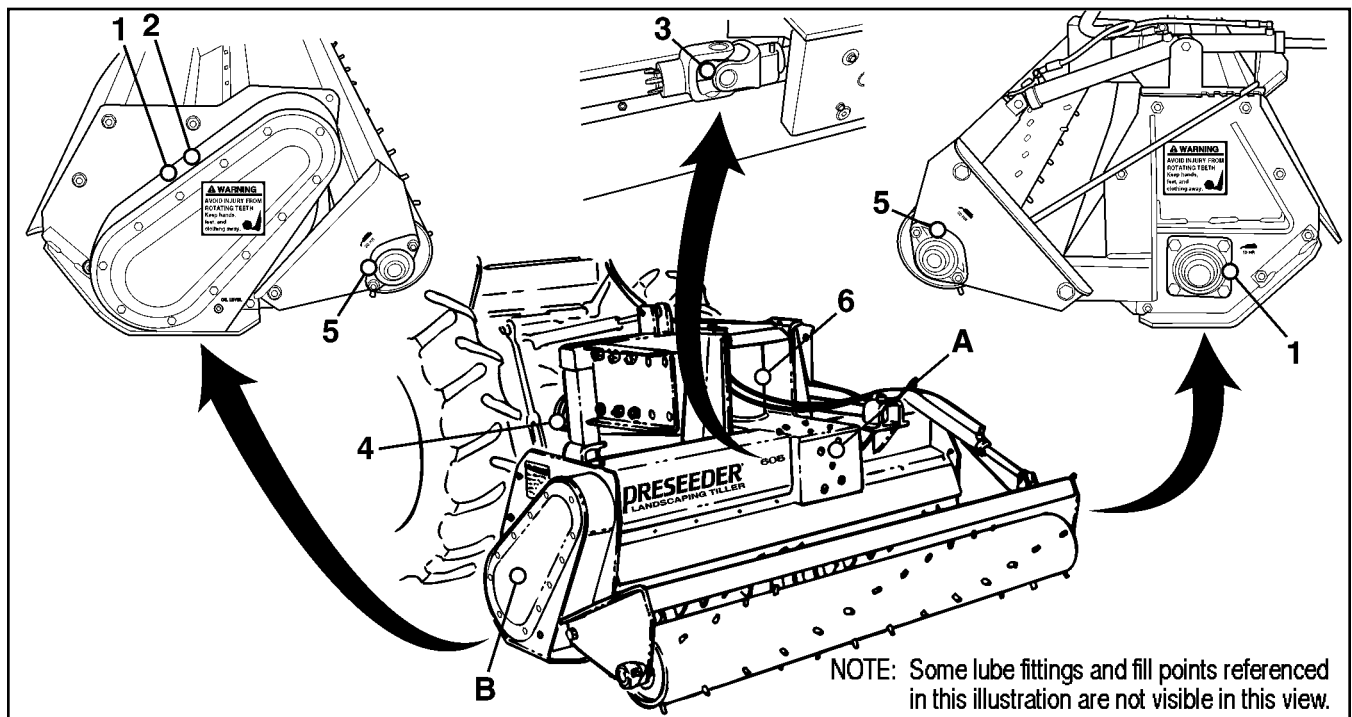


FIGURE 8 Preseeder Tiller Lubrication Points – Typical

## DRIVE CHAIN ADJUSTMENT

Check chain tension after the first 40 hours of operation. Then check/adjust chain every 100 hours following initial adjustment. (See Figure 9.)

1. Lower tiller onto level ground; remove the bolts (10), nuts (2) and access cover on the chain case. Use caution to prevent oil spill from the chain case.
2. Check slack of the chain. Measure [A] midway between the sprockets on the drive side (non-idler) of the chain. If there is more than 3/4" of slack adjust the chain. Loosen the idler bolt one full turn, push the idler assembly toward the drive side of the chain [A], tighten the idler bolt. Then recheck slack.

**NOTE:** To ensure proper sealing make sure the gasket and access cover are free of dirt and debris.

3. Replace the access cover, bolts, nuts and refill with oil (anti-foam SAE 90W) to specified level (see Lubrication Section on page 11).

**NOTE:** Failure to adjust tension will result in premature failure and could void your warranty.

Before performing maintenance as outlined below be sure to:

1. Lower tiller to ground.
2. Turn off tractor.
3. Set tractor brakes.

**WARNING** *If tiller must be raised off the ground, block securely.*

## ROTOR TOOTH WEAR

Carbide teeth offer dramatically longer life. Due to tooth spacing, and rotor tubing material, carbide teeth cannot be welded onto an existing rotor. A new rotor with carbide teeth can be ordered for your tiller. Check with your authorized dealer for specific pricing. (See Figure 10.)

Rotor tooth length is critical to the efficient operation of the tiller. Length of the standard tooth should be no less than 1 inch. To keep your tiller performing effectively, we recommend that replacement teeth (Part no. 200-114-000) be welded onto the front of the original teeth when tooth length approaches the 1 inch minimum length. (See Figure 11.)

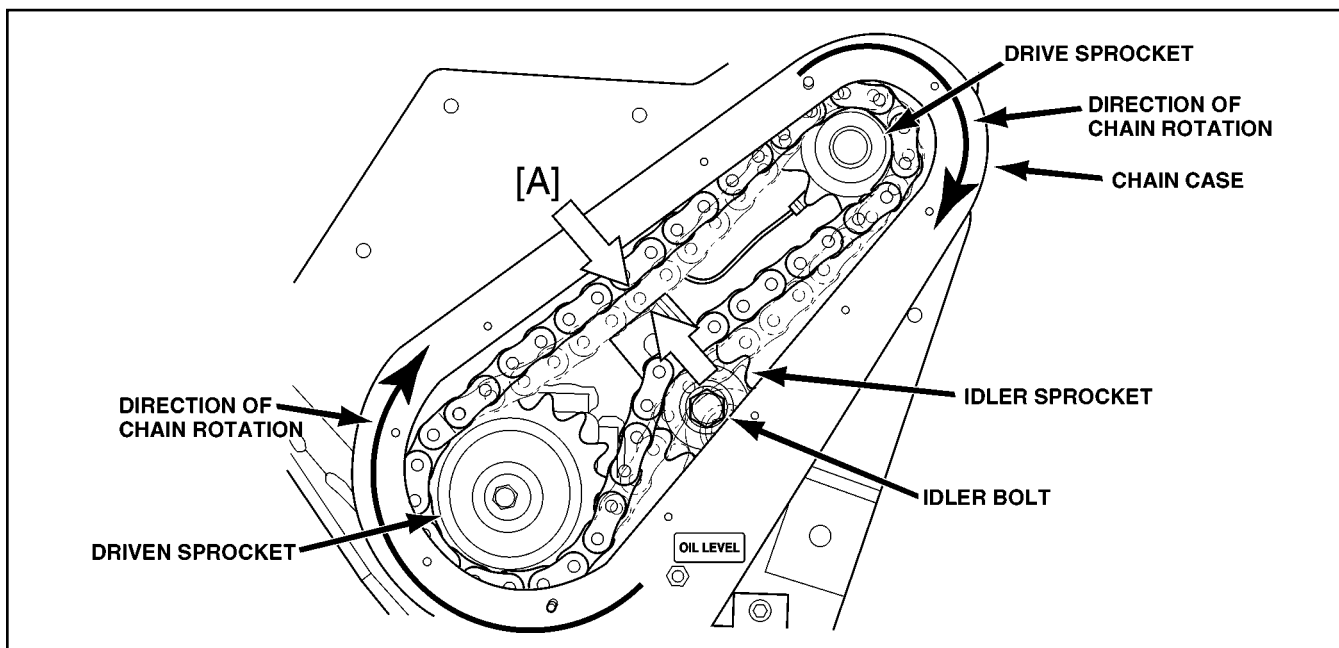


FIGURE 9 Drive Chain Adjustment

# MAINTENANCE

**CAUTION** When welding rotor teeth, welder ground clamp must be attached to rotor to prevent current from flowing through bearings.

## BEFORE EACH USE

1. Check tiller daily for loose, bent, broken, or missing parts.
2. Observe tiller's general condition, noting points that may need attention.
3. Check rotor and roller to be sure no foreign objects such as wire or weeds are wrapped around them.
4. Make certain drive line shields are in place and in good condition.

5. During operation, listen for abnormal sounds which might indicate loose parts, damaged bearings or other damage. Correct any problem immediately.

## AFTER EACH USE

1. Clean all debris from tiller especially on the rotor and roller.
2. To prevent rusting, touch up any spots where paint may have worn off.
3. Store in a clean, dry place.

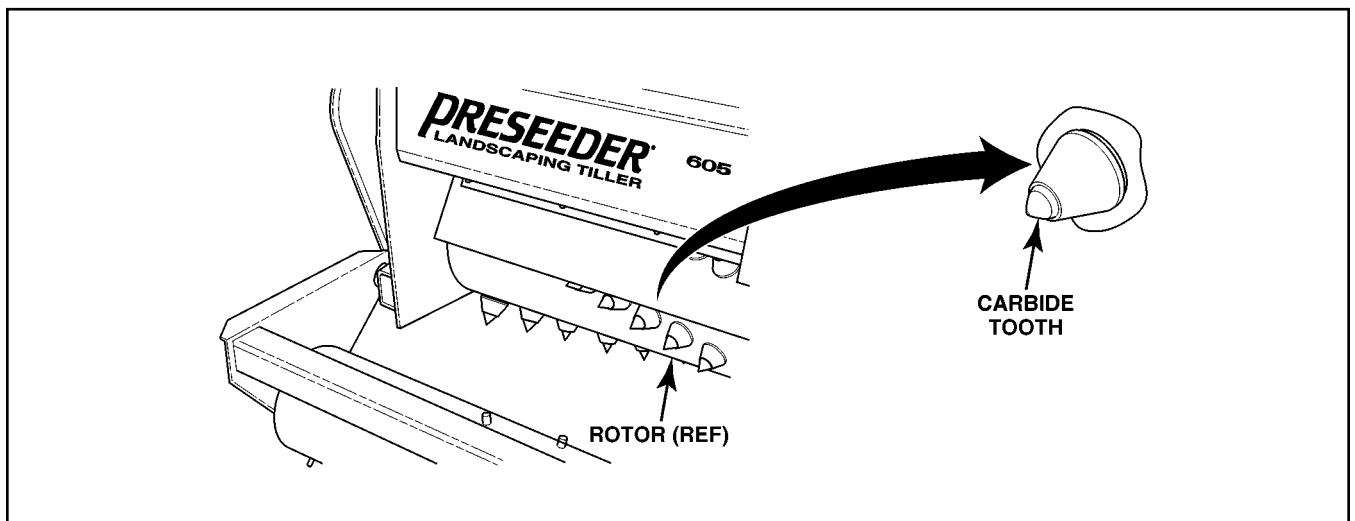


FIGURE 10 Rotor With Carbide Tooth – Typical

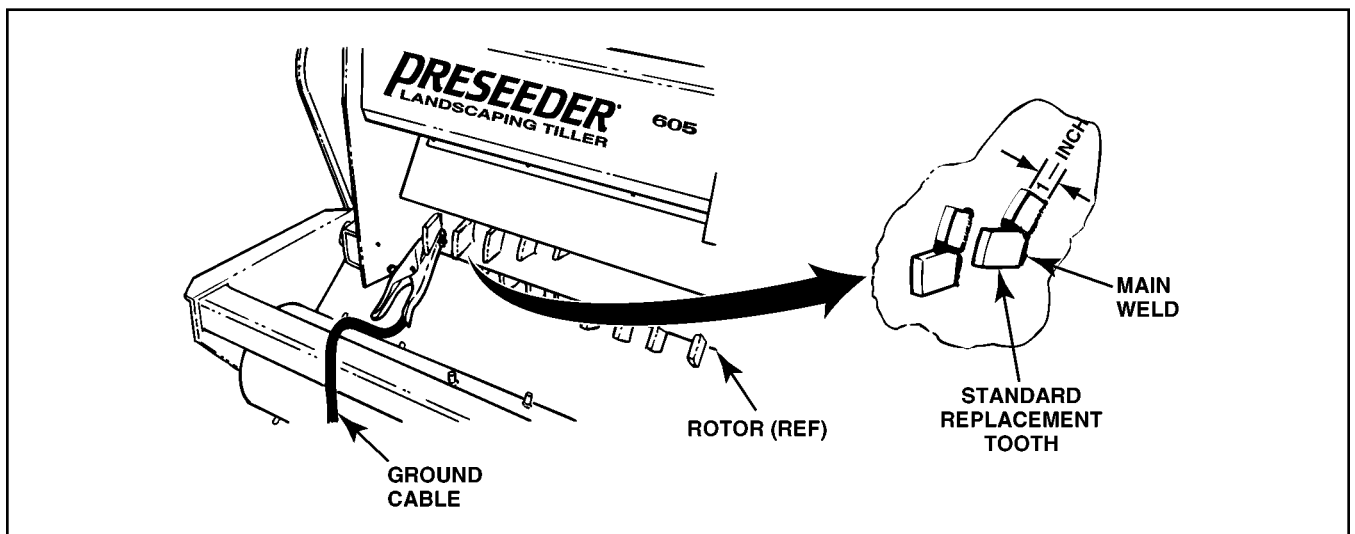


FIGURE 11 Welding Replacement Standard Rotor Tooth – Typical

# TROUBLESHOOTING GUIDE

<b>SYMPTOM</b>	<b>POTENTIAL CAUSE</b>	<b>REMEDY</b>
Rotor does not turn.	Tractor PTO is not engaged.	Engage tractor PTO.
	Obstruction jammed between the rotor and frame.	Clear obstruction from the rotor.
	PTO shaft is improperly installed.	See tractor operator's manual. Warning: Turn off tractor before performing any work on PTO drive system.
	PTO shaft is worn.	See dealer for appropriate service.
Depth/Angle cylinder will not to change position.	Air present in the hydraulic system.	Continue to engage auxiliary move hydraulics.
	Auxiliary Hydraulic hose ends are not properly attached to couplers.	Properly attach the auxiliary hydraulic hose.
Rotor stalls too easily.	Working depth too deep.	Reduce working depth.
	Ground speed too fast.	Reduce ground speed.
	PTO clutch is worn or in need of service.	See tractor operator's manual or see dealer for appropriate service.
Oil leaks.	Loose or damaged hoses.	Tighten or replace hose.
	Loose or damaged connections.	Tighten or replace connections.

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## STORAGE

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When the seeding season is over, the Preseeder tiller should be thoroughly checked so a minimum amount of work will be required to put it back in operation for the next season. The following recommendations are offered to aid in storing the tiller correctly.

1. Clean the tiller thoroughly.
2. Lubricate the tiller. Check the fluid levels; fill to proper level if necessary.

3. Replace badly worn or damaged parts obtained from your authorized dealer.
4. Touch-up paint to prevent rust and maintain the tiller's appearance.
5. Store in a clean, dry place.

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## ORDERING PARTS

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If ordering parts becomes necessary for your Preseeder tiller, call your **authorized dealer** to obtain correct parts replacement information. Please have model number, serial number, part number, and other necessary information ready when ordering parts.

**IMPORTANT:** Always order parts using part numbers from the Preseeder Parts Manual supplied with your unit. Replacement manuals may be obtained at [www.preseeder.com/service](http://www.preseeder.com/service).



