



Thatching Reel

Reelmaster® 450–D, 4500–D, 335–D & 3500–D

Model No. 03732—Serial No. 250000001 and Up

Model No. 03730—Serial No. 250000001 and Up

Operator's Manual

Introduction

Read this manual carefully to learn how to operate and maintain your product properly. The information in this manual can help you and others avoid injury and product damage. Although Toro designs and produces safe products, you are responsible for operating the product properly and safely.

Whenever you need service, genuine Toro parts, or additional information, contact an Authorized Service Dealer or Toro Customer Service and have the model and serial numbers of your product ready. The two numbers are stamped on a plate which is located on the blower housing.

Write the product model and serial numbers in the space below:

Model No. _____

Serial No. _____

This manual identifies potential hazards and has special safety messages that help you and others avoid personal injury and even death. **Danger**, **Warning**, and **Caution** are signal words used to identify the level of hazard. However, regardless of the hazard, be extremely careful.

Danger signals an extreme hazard that *will* cause serious injury or death if you do not follow the recommended precautions.

Warning signals a hazard that *may* cause serious injury or death if you do not follow the recommended precautions.

Caution signals a hazard that may cause minor or moderate injury if you do not follow the recommended precautions.

This manual uses two other words to highlight information.

Important calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

Safety and Instruction Decals



Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or lost.



67-7960

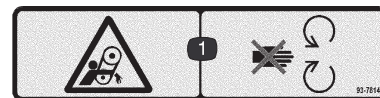


85-6410



93-6688

1. Warning—read the instructions before servicing or performing maintenance
2. Cutting hazard of hand or foot—stop the engine and wait for moving parts to stop.



93-7814

1. Entanglement hazard, belt—stay away from moving parts.

Specifications

General Specifications

Reel diameter	9 in. (23 cm)
Reel width	27 in. (68.5 cm) effective width of cut
Depth of penetration	Infinitely variable to a maximum of 1–1/8 in. (28 mm)
Construction	Welded steel frame with self-aligning ball bearings. Heavy duty, steel rear roller with tapered roller bearings is mounted in rubber bushings for quiet, vibration free, operation. Adjustable deflector shield. Thick, hardened .1046" thick steel blades are spaced 1 1/4" apart.
Reel adjustment	Quick adjustment and positive locking is provided by knob and locking type cone nut on roller adjusters. Gauge marks in 1/8" increments are provided for easy adjustments.
Drive	The reel drive motor turns a cog belt which drives the reel. Drive pulleys and belt are encased in a drive housing for safety and protection from contamination.

Note: Specifications and design subject to change without notice.

Loose Parts

Note: Use this chart as a checklist to ensure that all parts have been received. Without these parts, total setup cannot be completed.

Description	Qty.	Use
Capscrew	2	Use to mount skids
Spacer	2	
Decals	2	Affix to thatching reel
Operator's Manual	1	Read before operating the machine.
Parts Catalog	1	
Shipment Trace Card	1	Fill out and return to Toro.

Set up

Note: The thatching reels are mounted to the traction unit the same as the cutting units. Refer to Cutting Unit Operators Manual for mounting instructions. Make sure floatation kit lockout screw and nut are in the fixed position.

Adjusting Thatching Depth

Method One – Fixed Skid

1. Remove bolt and locknut securing skid to roller bracket (Fig. 1).

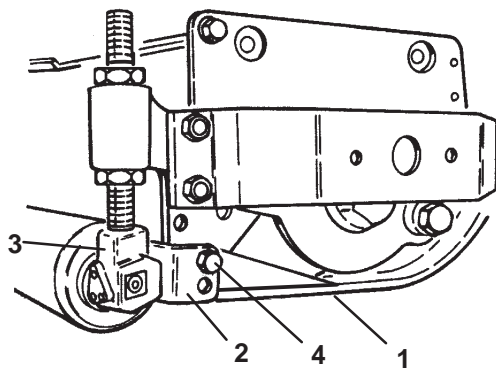


Figure 1

1. Skid
2. Roller bracket
3. Roller adjuster
4. Reposition in top hole (adjustable skids only)

2. Remove (3) bolts and lockwashers securing roller bracket to roller adjuster (Fig. 1).
3. Position spacer between skid and sideplate, aligning mounting holes as shown in Fig. 2.

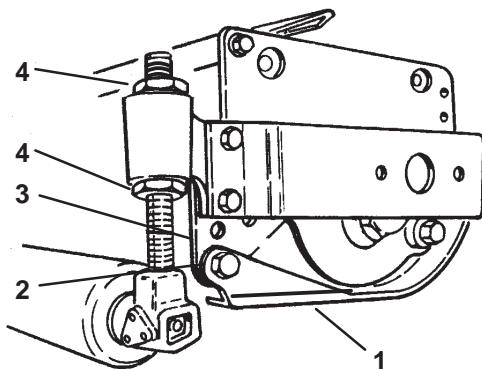


Figure 2

1. Skid
2. Spacer
3. Sideplate
4. Cone nut

4. Secure spacer and skid to sideplate with 1/2-13 x 1 1/4" capscrew. Bolt to be installed from outside of sideplate (Fig. 3).
5. Make sure front of skid is in highest position and mounting bolt is secure.

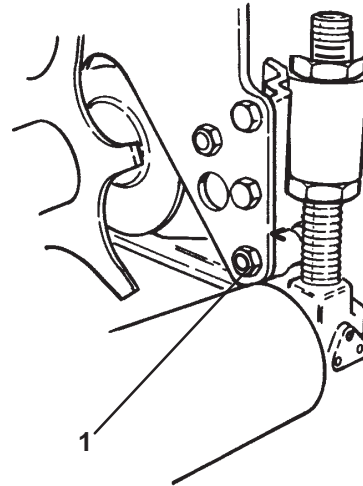


Figure 3

1. Skid mounting bolt and lock nut

6. Loosen the cone nut on each roller adjuster and rotate top cone nut until desired thatching depth is attained (Fig. 2).
7. Tighten cone nuts and recheck adjustments. Use gauge marks on roller adjusters to assure depth is equal.

Method Two – Adjustable Skid

1. Remove bolt and locknut securing skid to roller bracket (Fig. 1).
2. Pivot skid upward aligning it with top hole in roller bracket (Fig. 1).
3. Loosen bolt securing front of skid to sideplate.
4. Loosen the cone nut on each roller adjuster and rotate top cone nut until desired thatching depth is attained.
5. Tighten cone nuts and recheck adjustment. Use gauge marks on roller adjuster to assure depth is equal.
6. Level the skid to the sideplate and tighten fasteners at front and rear of skid.

Adjusting Grass Shield

1. Pivot grass shield up or down until desired throw is attained.

Note: When using thatching reels it is recommended that roller scrapers, Toro part no. 59-6090, be installed.

Operation

Training Period

Before thatching with the thatching reels, The Toro Company suggests you find a clear area and practice starting, stopping, raising, lowering and thatching with the thatching reels. This training period will be beneficial to the operator in gaining confidence in the performance of the thatching reels.

Experiment with grass conditions to see that the grass shield is properly adjusted and is throwing grass and debris as desired. This training period will ensure that the proper adjustment of grass shields has been made.

Note: Care should be taken when making turns. At all times avoid sharp turns when using thatching reels. Lift inside wing cutting unit when making sharp turns.

Before Operation Of The Thatching Reels

Survey turf to determine if there are any obstacles that will be damaged or will result in damage to the thatching reels such as sprinkler heads and protruding objects.

Changes based on your local turf conditions may be required in order to gain the results you want to establish.

Maintain A Straight Line

Maintain a straight line by sighting off an object in the foreground. Try to minimize the amount of overlap to keep the thatching even.

Operating Tips

1. Maintain maximum reel speed to achieve optimum thatching.
2. Vary ground speed depending on amount of thatch in turf.
3. Change blades when they are worn or bent.
4. In extremely heavy thatch conditions, raise and latch one or both wing units and operate with center three units until thatch buildup has been reduced.

Maintenance

Lubrication

There are (4) grease fittings on each thatching reel unit — one on the end of each roller and reel shaft. Each should be greased daily with #2 general purpose grease (Fig. 4).

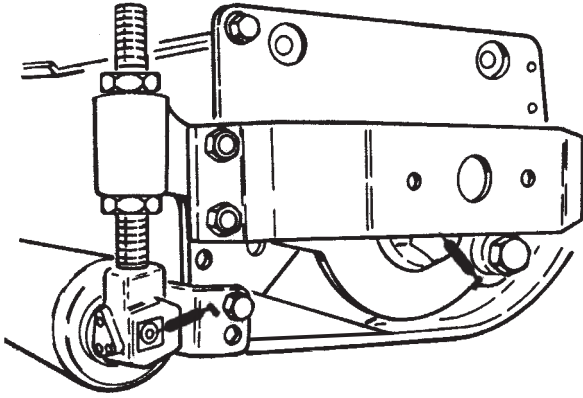


Figure 4

Removing Thatching Reel

1. Remove the guards and skids from each end of unit. Also remove roller.
2. Remove (2) shoulder bolts, locknuts, and (1) Belleville washer securing bearing housing to right side of unit. Slide bearing housing off reel shaft (Fig. 5).

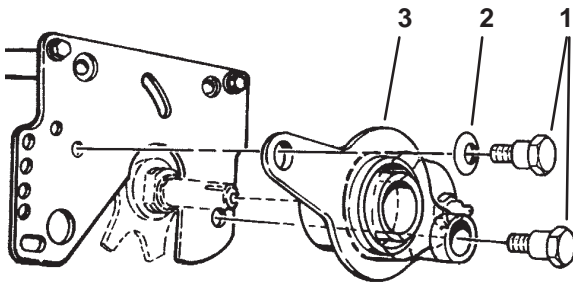


Figure 5

1. Shoulder bolts
2. Belleville washer
3. Bearing housing

Note: When reassembling bearing housing, make sure washer is positioned on rear shoulder bolt.

3. Remove (2) flange screws securing cover to drive housing and remove cover. Remove drive belt from housing (Fig. 6).

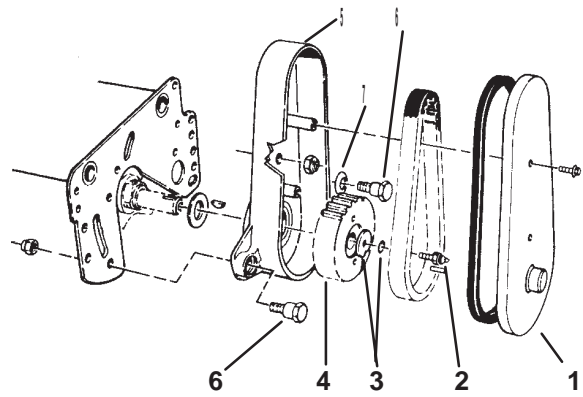


Figure 6

1. Drive housing cover
2. Reel capscrew
3. Washers
4. Pulley
5. Drive housing
6. Shoulder bolt
7. Belleville washer

4. Remove the reel capscrew, toothed washer, and pulley washer from reel shaft.
5. Using a puller, remove the pulley from the shaft. Remove the woodruff key from the shaft.
6. Remove the (2) shoulder bolts, locknuts, and (1) Belleville washer securing the drive housing to the sideplate. Remove the drive housing.

Note: When reassembling bearing housing, make sure washer is positioned on rear shoulder bolt.

7. Slide the reel shaft out the slots in sideplates.
8. Loosen set screw securing nut to left side of reel shaft. Remove nut (Fig. 7).

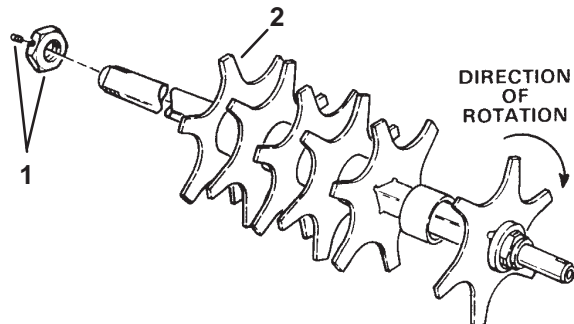


Figure 7

1. Setscrew and nut
2. Leading edge of blade

9. Remove spacers and worn blades from shaft.

10. Reinstall spacers and new blades as shown in Fig. 7. Make sure blades are alternated properly and leading edge of each blade is correct for the direction of rotation.

11. Apply Never-Seez to reel shaft ends before reinstalling.



The Toro General Commercial Products Warranty

A Two-Year Limited Warranty

Conditions and Products Covered

The Toro Company and its affiliate, Toro Warranty Company, pursuant to an agreement between them, jointly warrant your Toro Commercial Product ("Product") to be free from defects in materials or workmanship for two years or 1500 operational hours*, whichever occurs first. Where a warrantable condition exists, we will repair the Product at no cost to you including diagnosis, labor, parts, and transportation. This warranty begins on the date the Product is delivered to the original retail purchaser.

* Product equipped with hour meter

Instructions for Obtaining Warranty Service

You are responsible for notifying the Commercial Products Distributor or Authorized Commercial Products Dealer from whom you purchased the Product as soon as you believe a warrantable condition exists.

If you need help locating a Commercial Products Distributor or Authorized Dealer, or if you have questions regarding your warranty rights or responsibilities, you may contact us at:

Toro Commercial Products Service Department
Toro Warranty Company
8111 Lyndale Avenue South
Bloomington, MN 55420-1196
952-888-8801 or 800-982-2740
E-mail: commercial.service@toro.com

Owner Responsibilities

As the Product owner, you are responsible for required maintenance and adjustments stated in your operator's manual. Failure to perform required maintenance and adjustments can be grounds for disallowing a warranty claim.

Items and Conditions Not Covered

Not all product failures or malfunctions that occur during the warranty period are defects in materials or workmanship. This express warranty does not cover the following:

- Product failures which result from the use of non-Toro replacement parts, or from installation and use of add-on, modified, or unapproved accessories
- Product failures which result from failure to perform required maintenance and/or adjustments
- Product failures which result from operating the Product in an abusive, negligent or reckless manner
- Parts subject to consumption through use unless found to be defective. Examples of parts which are consumed, or used up, during normal Product operation include, but are not limited to, blades, reels, bedknives, tines, spark plugs, castor wheels, tires, filters, belts, and certain sprayer components such as diaphragms, nozzles, and check valves, etc.

Countries Other than the United States or Canada

Customers who have purchased Toro products exported from the United States or Canada should contact their Toro Distributor (Dealer) to obtain guarantee policies for your country, province, or state. If for any reason you are dissatisfied with your Distributor's service or have difficulty obtaining guarantee information, contact the Toro importer. If all other remedies fail, you may contact us at Toro Warranty Company.

- Failures caused by outside influence. Items considered to be outside influence include, but are not limited to, weather, storage practices, contamination, use of unapproved coolants, lubricants, additives, or chemicals, etc.
- Normal "wear and tear" items. Normal "wear and tear" includes, but is not limited to, damage to seats due to wear or abrasion, worn painted surfaces, scratched decals or windows, etc.

Parts

Parts scheduled for replacement as required maintenance are warranted for the period of time up to the scheduled replacement time for that part.

Parts replaced under this warranty become the property of Toro. Toro will make the final decision whether to repair any existing part or assembly or replace it. Toro may use factory remanufactured parts rather than new parts for some warranty repairs.

General Conditions

Repair by an Authorized Toro Distributor or Dealer is your sole remedy under this warranty.

Neither The Toro Company nor Toro Warranty Company is liable for indirect, incidental or consequential damages in connection with the use of the Toro Products covered by this warranty, including any cost or expense of providing substitute equipment or service during reasonable periods of malfunction or non-use pending completion of repairs under this warranty. Except for the Emissions warranty referenced below, if applicable, there is no other express warranty. All implied warranties of merchantability and fitness for use are limited to the duration of this express warranty.

Some states do not allow exclusions of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions and limitations may not apply to you.

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

Note regarding engine warranty: The Emissions Control System on your Product may be covered by a separate warranty meeting requirements established by the U.S. Environmental Protection Agency (EPA) and/or the California Air Resources Board (CARB). The hour limitations set forth above do not apply to the Emissions Control System Warranty. Refer to the Engine Emission Control Warranty Statement printed in your operator's manual or contained in the engine manufacturer's documentation for details.