Form No. 3350–282

5 and 8 Blade Reels

for Reelmaster® 5000 Series

03527—240000001 & Up
03528—240000001 & Up

Operator’s Manual

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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. Figure 1 illustrates the location of the model and serial numbers on the product.

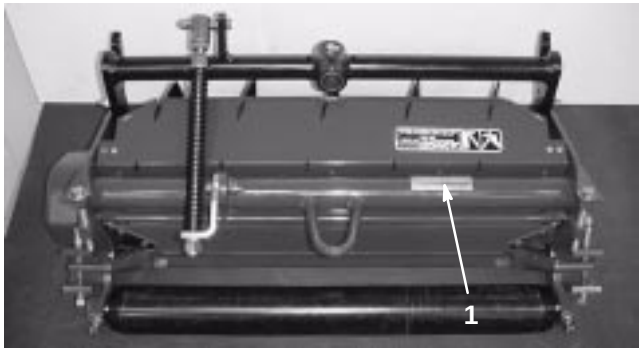


Figure 1

1. Location of the model and serial numbers

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.

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Safety

Safe Operating Practices

- Read, understand, and follow all instructions in the traction unit operator's manual before operating the cutting unit.
- Read, understand, and follow all instructions in this operator's manual before operating the cutting unit.
- Never allow children to operate the cutting units. Do not allow adults to operate traction unit or cutting units without proper instruction. Only trained operators who have read this manual should operate the cutting units.
- Never operate the cutting units when under the influence of drugs or alcohol.
- Keep all shields and safety devices in place. If a shield, safety device or decal is illegible or damaged, repair or replace it before operation is commenced. Also tighten any loose nuts, bolts, and screws to ensure cutting unit is in safe operating condition.
- Always wear substantial shoes. Do not operate cutting unit while wearing sandals, tennis shoes, sneakers or shorts. Also, do not wear loose fitting clothing which could get caught in moving parts. Always wear long pants and substantial shoes. Wearing safety glasses, safety shoes and a helmet is advisable and required by some local ordinances and insurance regulations.
- Remove all debris or other objects that might be picked up and thrown by the cutting unit reel blades. Keep all bystanders away from the mowing area.
- If the cutting blades strike a solid object or the cutting unit vibrates abnormally, stop and shut the engine off. Check cutting unit for damaged parts. Repair any damage before restarting and operating the cutting unit.
- Lower the cutting units to the ground and remove key from ignition switch whenever machine is left unattended.
- Be sure cutting units are in safe operating condition by keeping nuts, bolts and screws tight.
- Remove key from ignition switch to prevent accidental starting of the engine when servicing, adjusting or storing the machine.
- Perform only those maintenance instructions described in this manual. If major repairs are ever needed or assistance is desired, contact an Authorized Toro Distributor.
- To ensure optimum performance and safety, always purchase genuine Toro replacement parts and accessories to keep the Toro all TORO. **Never use "will-fit" replacement parts and accessories made by other manufacturers.** Look for the Toro logo to assure genuineness. Using unapproved replacement parts and accessories could void the warranty of The Toro Company.

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.



ON FRONT SHIELD OF CUTTING UNIT
(Part No. 67–7960)



ON FRONT SHIELD OF CUTTING UNIT
(Part No. 93–6688 for CE)

1. Read the operator's manual before performing maintenance.
2. Cutting hazard to hands or feet—stop the engine and ensure all moving parts have stopped before placing hands or feet in the reel area.

Specifications

Reel Construction: Fairway reels. 5 & 8 blades welded construction.

Recommended Height–of–Cut Range:
5 Blade – 5/8" to 1" (13–25 mm)
8 Blade – 1/4" to 5/8" (6–16 mm)

Reel Diameter: 5 in (127 mm)

Reel Bearings: Taper roller bearings.

Power Attachment: Hydraulic motor splined to reel shaft. Reel motors feature quick disconnect for removal or installation onto cutting unit.

Bedknife and Bedbar adjustment: Opposing fine thread screws.

Height–of–Cut & Roller Adjustment:

Front: 3 fixed positions for setting cutting unit attitude. Optional Adjustable Front Height Of Cut kit, part no. 104–8205, allows for variable adjustment to cutting unit attitude with adjustable height of cut rods, within the height of cut range of 1/4" to 1 3/8".

Rear: Screw adjustable with bolt clamp lock used for setting height of cut.

Selected Clip Control: The Reelmaster 5000 traction unit is equipped with manually adjustable reel speeds (275 rpm to 2000 rpm) which control selected clip.

Note: Refer to Traction Unit Operator's Manual for proper set–up procedure

Rollers: Front roller is a 3" (76 mm) diameter cast Wiehle roller. Rear roller is a 2.5" (64 mm) diameter steel full roller. Both rollers use heavy duty ball bearings with two conventional single lip seals and a Toro labyrinth seal to provide four sealing surfaces to protect the bearings.

Optional Equipment:

Dethatching Cutting Unit	Model No. 03516
Grass Basket Kit (5)	Model No. 03532
Rear Roller Brush Kit	Model No. 03533
Comb kit	Part No. 104–3385
Adjustable Front H.O.C kit	Part No. 104–8205
Wiehle Roller Scraper	Part No. 104–3380–03
Rear Roller Scraper kit	Part No. 104–3395
Shoulder Roller	Part No. 104–3369
Shoulder Roller Scraper	Part No. 104–8208–03
Heavy Duty Bedknife (for height of cut above 1/2" (13mm)	Part No. 100–3350
3" Collar Kit	Part No. 104–8215
Gauge Bar Assembly	Part No. 98–1852
Angle Indicator	Part No. 99–3503
Backlapping Brush Assembly	Part No. 29–9100
Bedknife Screw Tool	Part No. TOR510880

Set–Up

Note: Determine the left and right sides of the machine from the normal operating position.

Loose Parts

Note: Use the chart below to verify all parts have been shipped.

DESCRIPTION	QTY.	USE
Decal	1	Apply over existing decal for CE
Operator's Manual	1	Read before operating machine.
Parts Catalog	1	Use for ordering replacement parts.
Registration Card	1	Fill out and return to Toro.

Inspection

After the cutting unit is unboxed, inspect the following:

1. Check for looseness in the bearings between the end plate and reel. Check for looseness of bearings by moving reel laterally or axially on each end of cutting unit, refer to section on Servicing and Adjusting the Reel Bearings.
2. Check each end of the reel for grease. Grease should be visibly evident in the reel bearings and internal spline of reel shaft end.
3. Ensure that all nuts and bolts are securely fastened.
4. Make sure carrier frame suspension operates freely and does not bind when moved back and forth.

Adjusting Front Shield

Adjust front shield for desired grass clippings dispersion and filing of baskets.

1. Position cutting unit on a flat level surface.
2. Loosen capscrews and nuts securing shield to each side plate. Move shield to desired angle and tighten fasteners (Fig. 2).

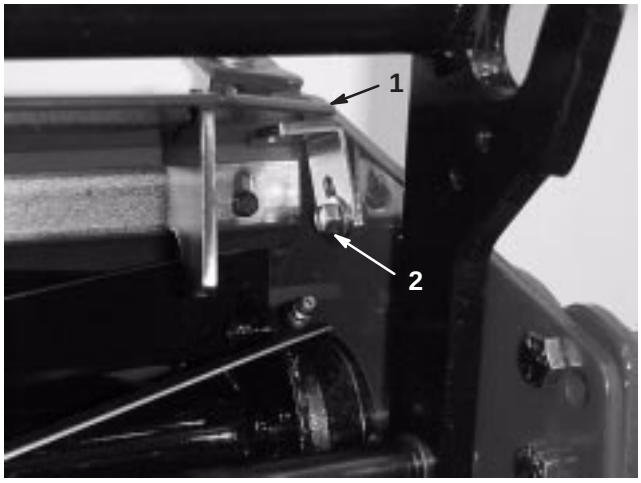


Figure 2

1. Front grass shield
2. Capscrew & nut

Adjusting Rear Shield

Under most conditions, best dispersion is attained when rear shield is closed (front discharge). When conditions are heavy or wet, rear shield may be opened.

1. To open rear shield (Fig. 3), loosen flange head capscrew securing shield to right side plate, rotate shield to open position and tighten capscrew.

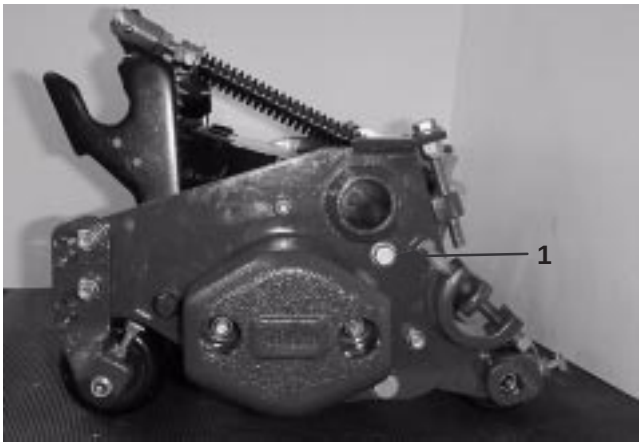


Figure 3

1. Rear grass shield mounting capscrew

Adjusting Cut–Off Bar

The Cut–Off bar is designed to keep the gap between the reel and the Cut–Off minimal to insure grass clippings discharge cleanly from reel area.

Note: The gap between the Cut–Off bar and reel will increase as: 1) the reel wears, 2) reel is sharpened by grinding, or 3) if the front grass shield is adjusted.

1. Loosen screws securing Cut–Off bar (Fig. 4). Insert 0.060" (2 mm) feeler gauge between top of reel and Cut–Off bar.

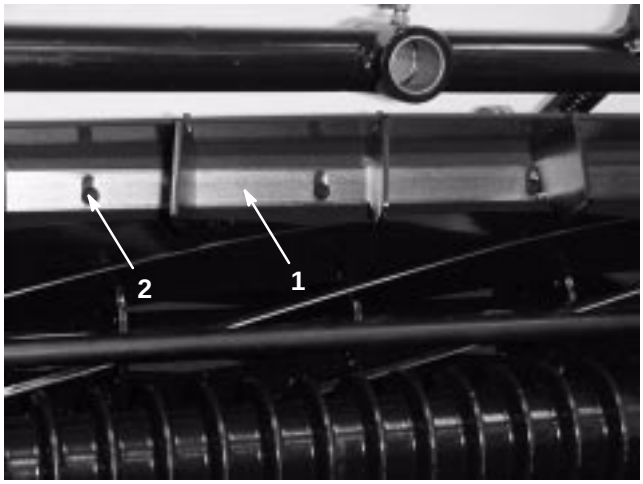


Figure 4

1. Cut–off bar
2. Screw (4)

2. Ensure gap is set equally across reel, and retighten screws.

Setting Height–of–Cut

Important To insure proper setting of height-of-cut, these procedures must be followed in this order:

A. Adjusting (Parallel) Bedknife To Reel

B. Setting Cutting Unit Attitude

C. Leveling Front Roller

D. Adjusting The Height Of Cut

E. Adjusting Turf Compensation Kit

Important Each cutting unit must be set consistently. Minor differences in either height-of-cut, attitude, bedknife wear, or reel blade wear, among cutting units, may result in negative after cut appearance.

Note: The cutting unit has been set at the factory at 1/2" (13 mm) height-of-cut and the front roller set in the normal attitude position (middle hole in front brackets). Also, the bedknife has been backed off from the reel to prevent shipping damage.

A. Adjusting (Parallel) Bedknife to Reel

Important The reel and bedknife must be parallel to insure the cutting unit cuts grass across the bedknife, and the reel and bedknife wear evenly.

1. Rotate cutting unit backward to gain access to the reel and bedknife (Fig. 6).

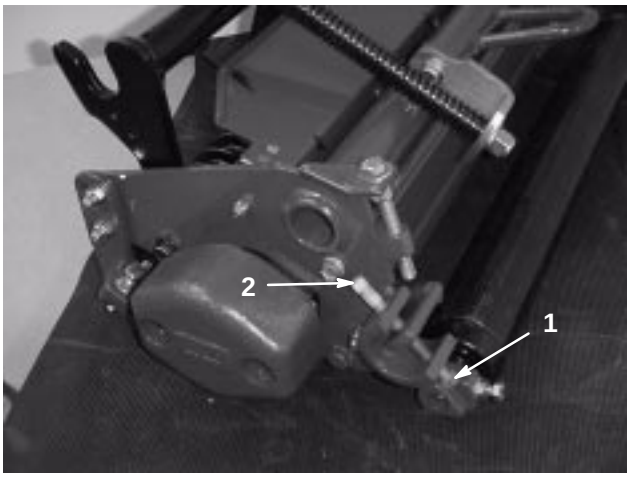


Figure 5

1. Bottom bedknife adjusting screw
2. Top bedknife adjusting screw

2. Adjustment of bedknife to reel is accomplished by first, loosening bottom screw on each side of cutting unit (Fig. 5), then tightening the top adjustment screw on each side of cutting unit. This adjustment will position the bedknife closer to the reel blades. Adjust until light contact is heard on both ends of the reels.

Note: Correct reel to bedknife contact should not increase the reel rolling torque more than 3 in–lbs. over the reel bearing rolling torque setting (see Servicing and Adjusting the reel bearings for checking reel rolling torque).

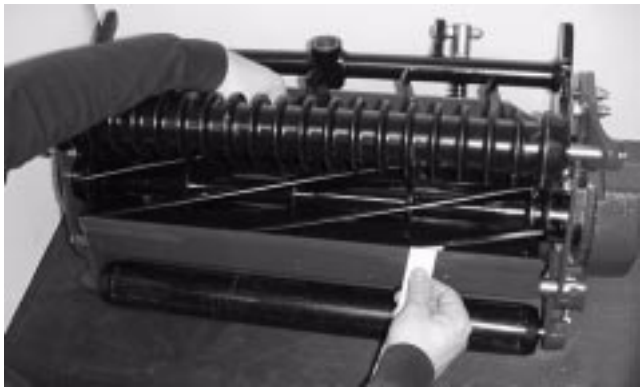


Figure 6

Important Use only a 3/8 open end wrench 3" to 6" (76–152 mm) in length for adjusting bedknife to reel. A longer wrench will provide too much leverage and may cause distortion of the mounting plate for the adjustment screw.

3. After adjusting bedknife to reel, make sure that both the top and the bottom adjustment screws are secured on both ends of the cutting unit (Fig. 5).

4. Insert 1" (25 mm) wide piece of newspaper perpendicular to the bedknife, and then rotate the reel slowly in the mowing direction to see if the reel cuts the paper – do this on both ends of the bedknife (Fig. 6).

5. If paper is cut on both ends, the bedknife is parallel to the reel. If not, go back to step 2.

Note: If reel makes contact on both sides of bedknife but still does not cut paper, cutting unit may need to be backlapped (refer to backlapping) or reel and/or bedknife may need to be reground (refer to Toro manual for Sharpening Reel and rotary Mowers, Form No. 80–300PT).

B. Setting Cutting Unit Attitude

Important Cutting unit "attitude" has a significant impact on the performance of the cutting unit. Attitude refers to the angle of the bedknife relative to the ground (Fig. 7). Adjustable front and rear brackets allow for variable adjustment of cutting unit attitude within the height-of-cut range. All cutting units on a given machine must be set to the same attitude, otherwise after-cut appearance could be negatively affected.

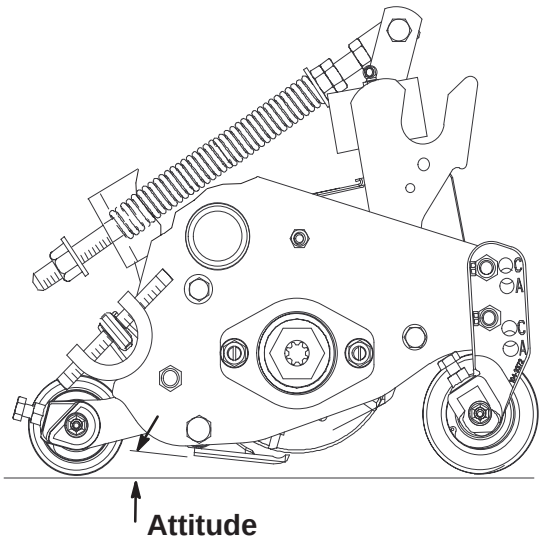


Figure 7

The front brackets have 3 fixed positions for setting cutting unit attitude within the same height–of–cut range (Fig 7). Each change in position changes the cutting unit attitude by 3 degrees. The positions are:

Position A: Very Aggressive

Position B: Aggressive (Normal)

Position C: Less Aggressive

Adjustable Front Height Of Cut Kit, Toro Part No. 104–8205, allows for variable adjustment of cutting unit attitude within the height–of–cut range.

The best cutting unit attitude is dependent on your turf conditions and desired results. Experience with the cutting unit on your turf will determine the best setting to use.

In general, less aggressive attitudes (position C) are more appropriate for warm season grasses (Bermuda, Zoysia) while cool season grasses (Bluegrass, Rye, Bent) may require more aggressive attitudes (position B or A). More aggressive attitudes cut more grass off by allowing the spinning reel to pull more grass up into the bedknife. An angle that is too flat (attitude less than 1 degree) may allow the bedbar or other parts of the cutting unit to drag in the turf causing tufting. Therefore, minimum recommended attitude is 1 degree.

The following chart, **Setting Cutting Unit Attitude Guide,** lists available cutting unit attitude for new cutting units.

Cutting Unit Attitude Guide (New Cutting Units Only)

Desired Height of Cut (HOC)		Front Fixed Bracket			Optional Adjustable Front Height of Cut Kit
		Position A	Position B	Position C	Attitude Range (min. to max.)
Inches	(mm)	(Degrees)	(Degrees)	(Degrees)	(Degrees)
.250	(6)	6	3	Not Recommended	1 to 10
.375	(10)	7	4	1	1 to 11
.500	(13)	9	6	3	1 to 13
.625	(16)	10	7	4	1 to 14
.750	(19)	11	8	5	1 to 15
.875	(22)	Not Recommended	10	7	1 to 11
1.000	(25)	Not Recommended	Not Recommended	8	1 to 10
1.125	(29)	Not Recommended	Not Recommended	Not Recommended	1 to 8
1.250	(32)	Not Recommended	Not Recommended	Not Recommended	1 to 7
1.375	(35)	Not Recommended	Not Recommended	Not Recommended	1 to 6

Note: Due to wear on the bedknife and reel, over time the attitude of the cutting unit will decrease.

Checking/Adjusting the Cutting Unit Attitude

For setting consistent cutting unit attitude, Toro strongly recommends using a two-screw gauge bar, Toro part no. 98-1852 (Fig. 8). The height of cut screw, farthest screw from end of gauge bar, is used to set the height-of-cut. The attitude screw is used to set cutting unit attitude. This screw is only used when the Front Height of Cut kit, Part No. 104–8205 is installed on cutting unit.

Note: The attitude screw setting is an easy method of transferring cutting unit attitude to all cutting units on a machine.

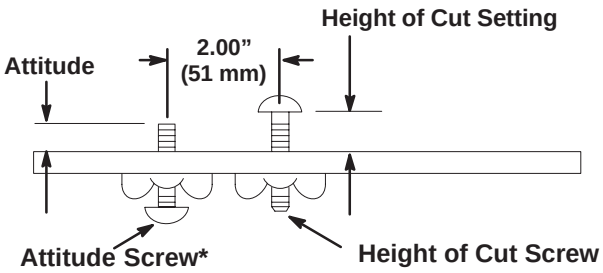


Figure 8

* Used only with Front Height of Cut kit, Part No. 104–8205

1. Place an angle indicator, Toro Part No. 99-3503, on the bedknife and record the bedknife angle (Fig. 9).



Figure 9

1. Bedknife angle

2. Using a two-screw gauge bar, Toro Part No. 98-1852, set the height of cut screw to the desired height-of-cut.

3. Place the gauge bar across the front and rear rollers. The height of cut screw head needs to fit snugly over the edge of the bedknife while the gauge bar contacts the rollers (Fig. 10).

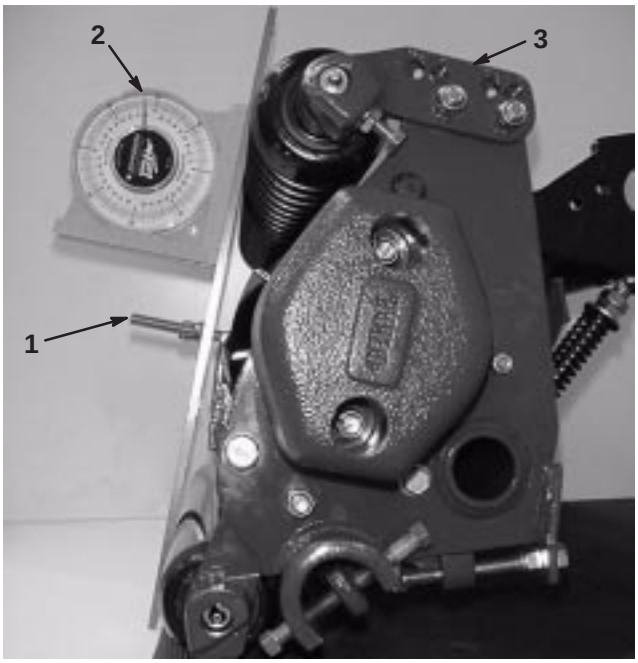


Figure 10

1. Height of cut screw
2. Gauge bar angle
3. Roller bracket (A, B,C)

4. Place an angle indicator on the gauge bar and record the gauge bar angle (Fig. 10).

5. Bedknife Angle (step 1) – Gauge Bar Angle (step 4) = Cutting Unit Attitude (degrees)

6. For adjusting the cutting unit attitude, change the position of the roller (A, B or C) (Fig. 10).

Note: If Front Height of Cut kit, Part No. 104–8205 is installed on cutting unit (Fig. 11), adjust front roller to desired attitude and reset attitude screw. Gauge bar can now be utilized to set remaining cutting units on machine.

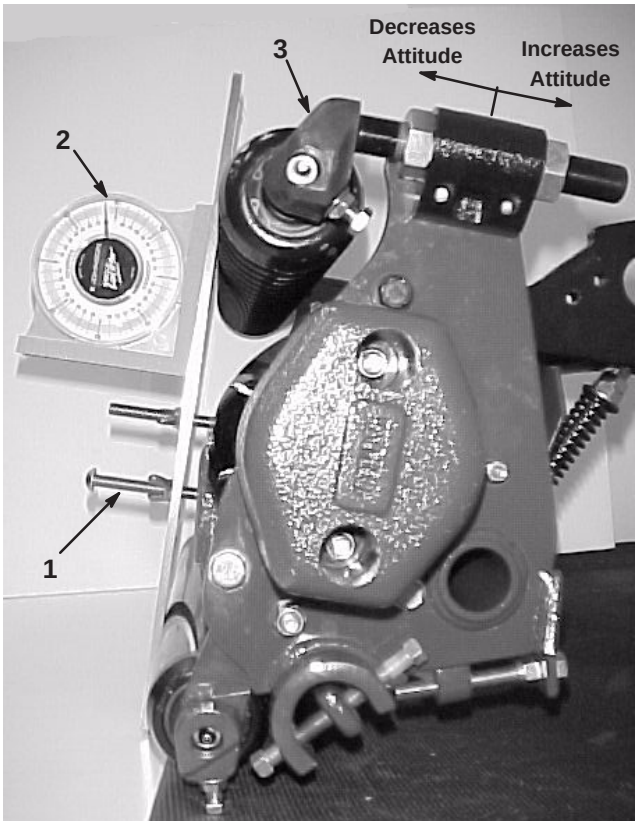


Figure 11

1. Attitude screw
2. Gauge bar angle
3. Front height of cut kit

C. Leveling Front Roller

1. Place a 1/2 in. or thicker plate under the reel blades and against the cutting edge of the bedknife (Fig. 12). The rear roller should not contact surface.

Note: Be sure the plate covers the full length of reel blades.

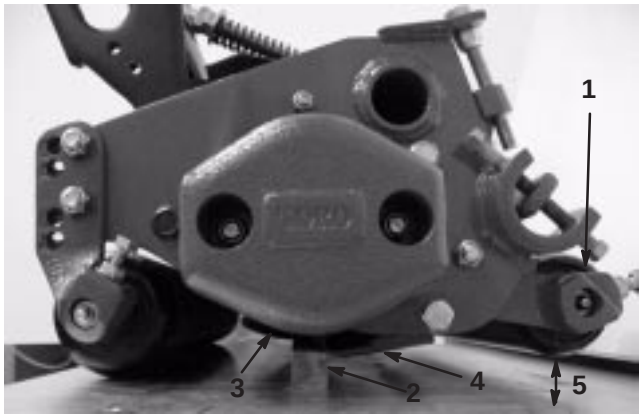


Figure 12

1. Rear roller
2. 1/2 in. steel plate
3. Reel blades
4. Bedknife
5. Gap

2. Level front roller to reel by loosening the 4 capscrews holding the front roller brackets and rotating the front roller until it contacts the surface that the plate is on. Tighten the capscrews and make sure that the roller has not changed position. To prevent moving the roller bracket when tightening (Fig. 13), hold the nut while tightening capscrew.

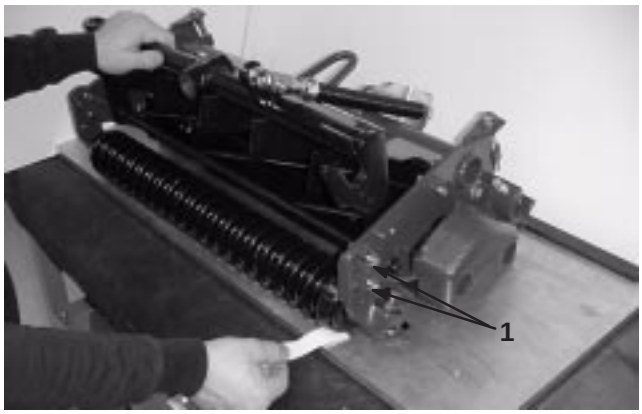


Figure 13

1. Capscrews

Note: Try to slide a piece of paper under each end of roller to make sure there is contact (Fig. 13).

Note: If Front Height of Cut kit, Part No. 104–8205 is installed on cutting unit (Fig. 11), adjust front roller to contact leveling plate.

Note: If cutting unit attitude changes by more than 1° from side to side, reel and/or bedknife may need to be reground to remove uneven wear.

Note: If rollers are parallel to reel before changing bedknife attitude, you can change one roller at a time and still maintain parallelism.

D. Adjusting the Height of Cut

1. Rotate the cutting unit vertical and place the gauge bar across front and rear rollers (Fig. 14).
2. Loosen the locknuts securing the height-of-cut brackets to each end of the cutting unit (Fig. 14).
3. Set the head of the height of cut screw on the gauge bar to the desired height of cut, making this measurement from the bar face to the underside of the screw head.
4. Place the bar across the front and rear rollers and adjust the tap bolt until the underside of the screw head engages the bedknife cutting edge (Fig. 14).

Important Do step 3 on each end of the bedknife. Tighten the height-of-cut adjustment locknuts on both ends. Recheck the adjustment.

Note: Same procedure is used when Front Height of Cut kit, Part No. 104–8205 is installed on cutting unit.

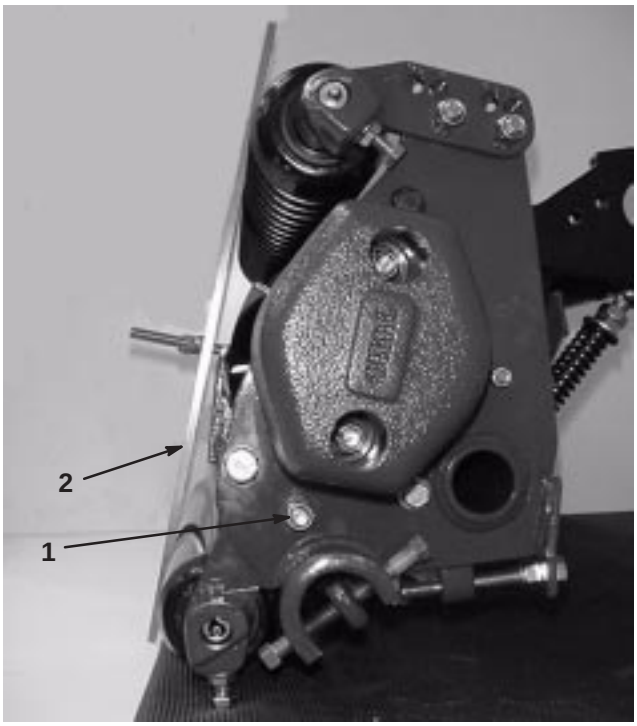


Figure 14

1. Locknut
2. Gauge bar

E. Adjusting Turf Compensation Spring

The Turf Compensation Spring (Fig. 15), connecting carrier frame to cutting unit, controls the amount of fore-aft rotation available for the cutting unit

The Turf Compensation Spring also transfers weight from the front to rear roller. This helps to reduce a wave pattern in the turf, also known as bobbing.

Important Make spring adjustments with cutting unit mounted to traction unit and lowered to shop floor. Refer to Traction Unit Operator's Manual for mounting instructions.

1. Tighten lock nut on rear of spring rod until the gap (C) between rear of spring bracket and front of washer is **1.25" (32 mm)** (Fig. 15).

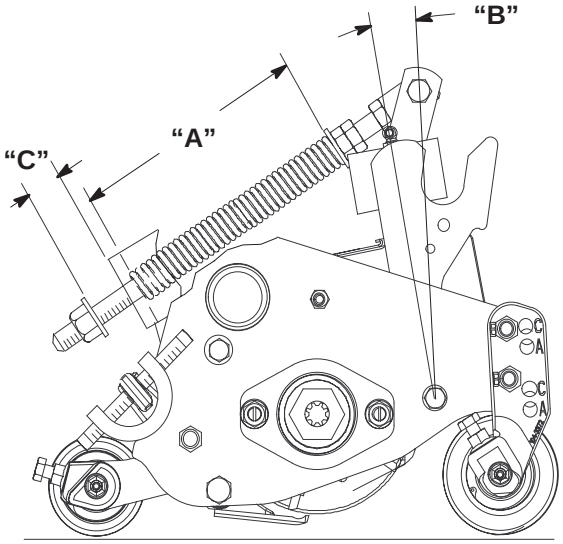


Figure 15

2. Tighten hex nuts on front end of spring rod until the compressed length (A) of spring is **6.25 (159 mm)** (Fig. 15).

Note: As compressed spring length (A) **decreases**, weight transfer from front roller to rear roller **increases** and carrier frame/cutting unit rotation angle (B) **decreases**.

Note: As gap (C) between spring bracket and washer **increases**, cutting unit ground clearance **decreases** and carrier frame/cutting unit rotation angle (B) **increases**.

Maintenance

Cutting Unit Daily Adjustments

Prior to mowing each day, or as required, each cutting unit must be checked to verify proper bedknife–to–reel contact. **This must be performed even though quality of cut is acceptable.**

1. Lower cutting units onto a hard surface, shut off engine and remove key from ignition.
2. Slowly rotate reel in reverse direction listening for reel-to-bedknife contact. If no contact is evident, move the bedknife closer to the reel by loosening bottom screw on each side of cutting unit, then tightening the top adjustment screw on each side of cutting unit until light contact is felt and heard.

Important Light contact is preferred at all times. If light contact is not maintained, bedknife/reel edges will not sufficiently self-sharpen and dull cutting edges will result after a period of operation. If excessive contact is maintained, bedknife/reel wear will be accelerated, uneven wear can result, and quality of cut may be adversely affected.

Note: As the reel blades continue to run against the bedknife a slight burr will appear on the front cutting edge surface the full length of the bedknife. If a file is occasionally run across the front edge to remove this burr, improved cutting can be obtained.

After extended running, a ridge will eventually develop at both ends of the bedknife. These notches must be rounded off or filed flush with cutting edge of bedknife. Also, maintaining a lead–in chamfer (Fig. 16), on right end of bedknife, will ensure smooth operation of the bedknife and reel.

Note: The chamfer from the factory should last approximately half the life of the bedknife.

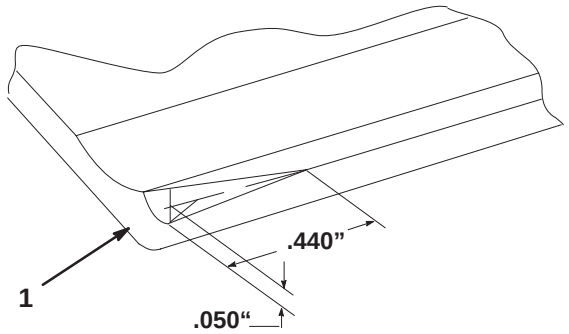


Figure 16

1. Lead–in chamfer on right end of bedknife

Note: Do not make lead–in chamfer too large as it may cause turf tufting.

Important The reel motors must be removed before removing the cutting units to prevent hose damage due to twisting, bending, and kinking.

Lubrication

There are 6 grease fittings on each cutting unit (Fig. 17) which must be lubricated using a No. 2 multi-purpose lithium base grease. A hand operated grease gun is recommended for best results.

Important Toro recommends lubricating the cutting unit immediately after washing to purge water out of the bearings to increase bearing life.

1. Wipe each grease fitting with a clean rag.
2. Grease the (2) reel bearings until grease comes out the weep hole.
3. Apply grease to the (2) front and (2) rear roller bearings until clean grease comes out seals.
4. Wipe excess grease away.

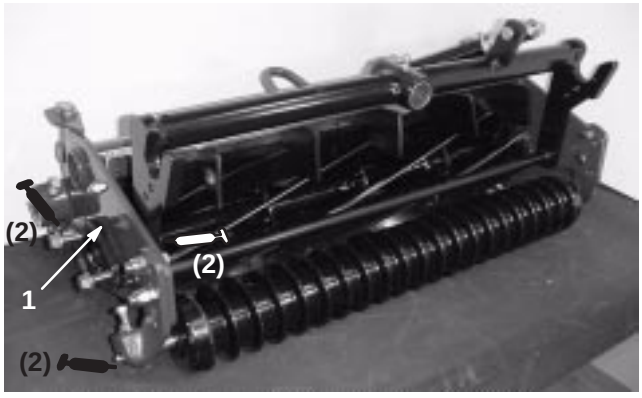


Figure 17

1. Weep hole

Backlapping the Cutting Units

Danger

The reels may stall while backlapping.

- **Do not attempt to restart the reels by hand or adjust them while backlapping.**
- **Set the speed control to position 11 to start the reels; set them to position 1 for backlapping.**

Note: Backlap either the front cutting units together or the rear ones together.

1. Position the machine on a clean, level surface. Lower the cutting units, stop the engine, engage the parking brakes, move enable/disable switch to disable position, and remove the key from the ignition switch.
2. Unlock and raise the seat to expose the controls.
3. Make the initial reel to bedknife adjustments appropriate for backlapping on all cutting units. Start the engine and set the engine at idle speed.
4. Set both reel speed controls to position 11. Select either the front or rear on the backlap switch to determine which units to backlap.
5. Move the enable/disable switch to the enable position. Move the lower mow/raise lever forward to start the backlapping operation on the designated reels.
6. For the cutting units being backlapped, move the reel speed control to position 1.
7. Apply lapping compound with the long handled brush supplied with machine.

Caution

Contact with the reel or other moving parts can result in personal injury.

Stay away from the reel and other moving parts while backlapping.

8. To make an adjustment to the cutting units while backlapping, turn the reels Off by moving the lower mow/raise lever rearward, move the enable/disable switch to Disable, and turn the engine off. After adjustments have been completed, repeat steps 3–7.
9. Repeat the procedure for the remaining cutting units.
10. When the backlap operation is completed, return the backlap switch to Off, set the reel speed controls to the desired mowing setting, and wash all lapping compound off of the cutting units.

Note: Additional instructions and procedures on backlapping are available in the Toro Sharpening Reel and Rotary Mowers Manual, Form No. 80-300PT.

Note: For a better cutting edge, run a file across the front face of the bedknife when the lapping operation is completed. This will remove any burrs or rough edges that may have built up on the cutting edge.

Servicing and Adjusting the Reel Bearings

Important Before removing the cutting unit, remove the reel motors to prevent damage to the hydraulic hoses.

Periodically check the drag on the reel bearings. Proper adjustment of the reel bearings ensures that no end play of the reel exists and there is minimum rolling torque of the reel assembly. All measurements and adjustments of the reel rolling torque must be done with a completely assembled cutting unit. Check and adjust the reel bearings in the following manner:

1. Adjust the bedknife so it is not in contact with the reel.
2. Measure the rolling torque with a torque wrench. The measurement should be 5 to 7 in.-lbs. If it is not, or if end play exists, adjust the reel bearing as follows:

   A. Remove the mounting nuts from the counterbalance end weight (Fig. 18).

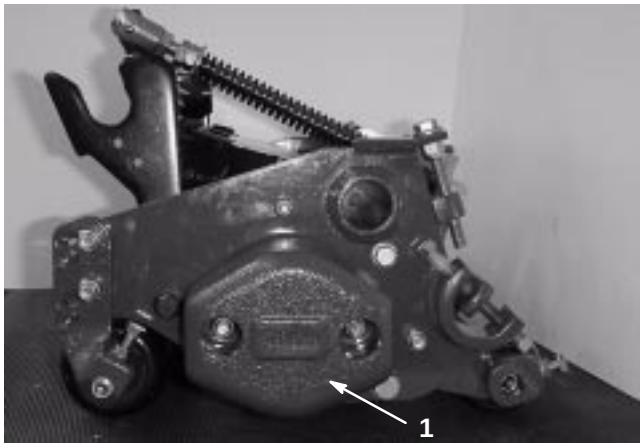


Figure 18

1. Counterbalance end weight

B. Using a large socket wrench, remove the reel bearing adjustment nut (Fig. 19). Tap on the head of the hex head bolt on the end of the reel shaft, with a small hammer, until end play of the reel can be felt.

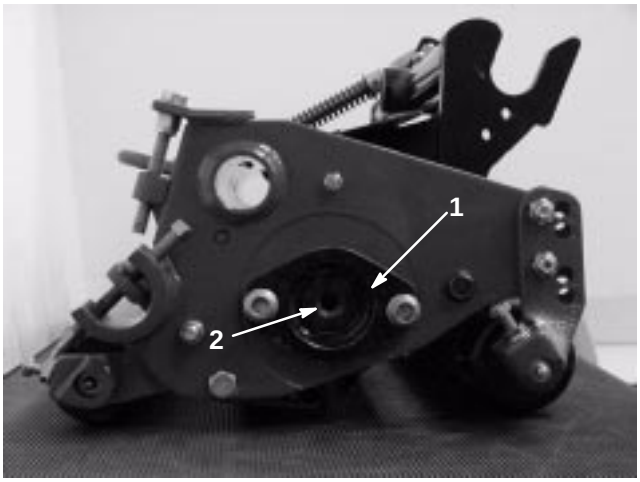


Figure 19

1. Reel bearing housing
2. Splined nut

C. Hold the reel to keep it from turning and slowly tighten the reel bearing adjustment nut until no end play of the reel exists.

D. Using an appropriate torque wrench, check the rolling torque of the reel. The rolling torque of the reel should be 5 to 7 in.-lbs. Check to make sure no end play exists and the reel spins freely.

E. Install the counterbalance end weight.

Removing the Reel Assembly

Important Before removing the cutting unit, remove the reel motors to prevent damage to the hydraulic hoses.

1. Remove the front roller assembly.
2. Remove the counterbalance weight (Fig. 18).
3. Remove the large bearing adjustment nut from the counterbalance end of the reel shaft and the special splined nut (Fig. 19) at the opposite end of the reel shaft.
4. Remove the mounting bolts from the bearing housing on both ends of the cutting unit.

Important Remove the grease fittings from the bearing housing at each end of the cutting unit.

5. Using a plastic headed hammer, rotate the bearing housing slightly, install the bearing housing bolts from outside housing, and turn the bolts alternately against the side plate. Remove the bearing housing.
6. The bearing housing will slip out of the side plates and the reel assembly can be removed as soon as the bearing housings are disassembled from the side plates.

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, etc.
- 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.

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.

Part No. 374-0031 Rev. a