



MODEL NO. 03853-70001 thru 80001 & UP
MODEL NO. 03854-50001 thru 80001 & UP
MODEL NO. 03856-50001 thru 80001 & UP

**OPERATOR'S
MANUAL**

**5, 7 & 11 BLADE REELS
REELMASTER 6000 SERIES**

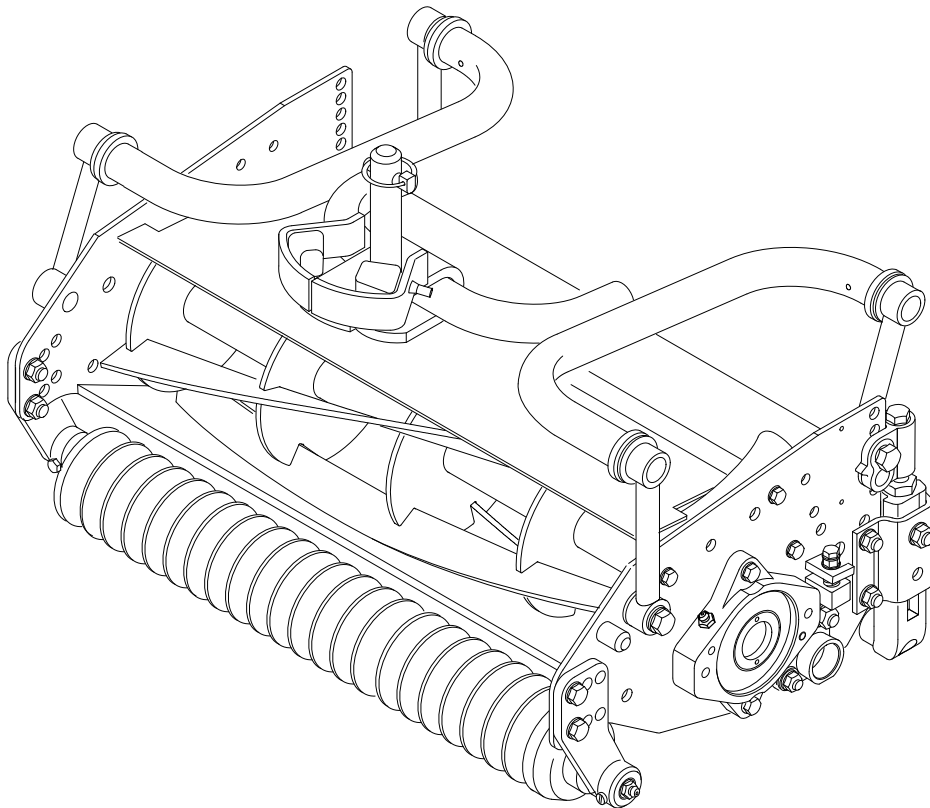


TABLE OF CONTENTS

	Page No.		Page No.
Specifications	2	Adjust Grass Shield and Fins	6
Adjusting Bedknife to Reel	3	Adjust Rear Shield	6
Adjusting Front Roller	4	Backlapping Cutting Unit	7
Set Height-of-Cut	5	Lubrication	7
Verify Height-of-Cut Setting	6	Toro Promise	8

SPECIFICATIONS

CUTTING UNIT

REEL CONSTRUCTION: Fairway reels. All welded. 5, 7 or 11 blades.

HEIGHT OF CUT RANGE:

5 Blade – 3/4” to 1–1/4”

7 Blade – 1/2” to 1–1/8”

11 Blade – 3/8” to 3/4”

REEL DIAMETER: 7 in.

POWER: Reel motors feature quick disconnect for removal or installation onto cutting unit. Cutting units can be driven from either end.

HEIGHT-OF-CUT & ROLLER ADJUSTMENT:

Height-of-cut adjustment is made at the rear roller with quick locating pin and/or threaded micro-adjustment. Front roller position is adjustable to 3 locations to set cutting unit attitude.

BEDKNIFE AND BEDBAR ADJUSTMENT: Single point adjustment mechanism.

CLIP FREQUENCY: .375” – 1.25”. Reel speed automatically adjusts to maintain proper clip. Reel speed is continuously calculated based on the current forward speed, reel type (number of blades) and height of cut.

ROLLERS:

Front rollers: 3” diameter Wiehle rollers. Optional 3” diameter full rollers, Part No. 93–3040, are available for the front position.

Rear rollers: 2.5” diameter full rollers. All rollers use the same heavy duty ball bearings with two conventional single lip seals and a Toro labyrinth seal to provide four sealing surfaces to protect the bearings.

ROLLER SCRAPER KITS:

Front Roller Scraper Kit, P/N 93–2967.

Rear Roller Scraper Kit, P/N 93–2962.

ADJUSTING CUTTING UNIT

IMPORTANT: Read this Operator's Manual thoroughly before operating cutting unit. Failure to do so may result in damage to the cutting unit or a unsatisfactory quality of cut.

IMPORTANT: Toro strongly recommends the use of a leveling plate when setting-up or adjusting any reel type cutting unit. The leveling plate will help to ensure accurate and consistent adjustments.

Note: Right and left ends of cutting unit is determined by standing in the operator's position (Fig. 1).

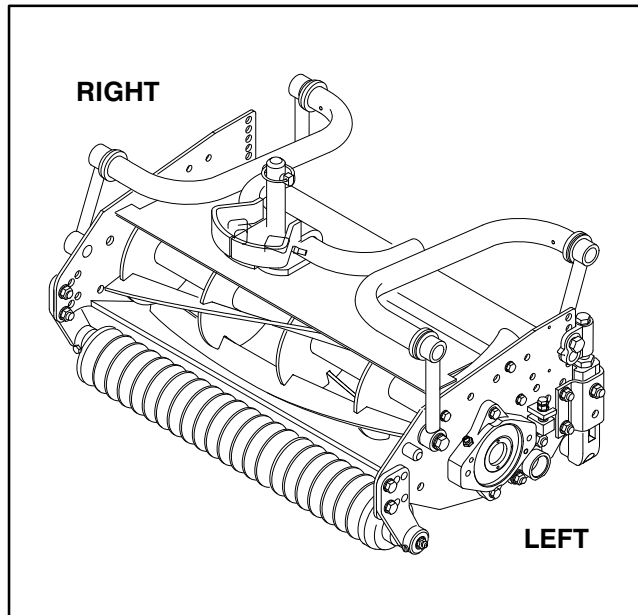


Figure 1

After the cutting unit is unboxed, use the following procedures to assure the cutting units are adjusted properly.

1. Check each end of the reel for grease. Grease should be visibly evident in the reel bearings and internal splines of reel shaft.
2. Insure that all nuts and bolts are securely fastened.
3. Make sure 4 bar link suspension operates freely and does not bind when moved back and forth.
4. Adjust bedknife to reel.
5. Adjust and level front and rear rollers.
6. Set height-of-cut.

ADJUSTING BEDKNIFE TO REEL (Fig. 2-4)

1. A 19 mm (3/4 inch) wrench will be needed to rotate bedknife adjustment knob. Each notch on the knob will move the bedknife .0005 inches (.013 mm) (Fig. 2).

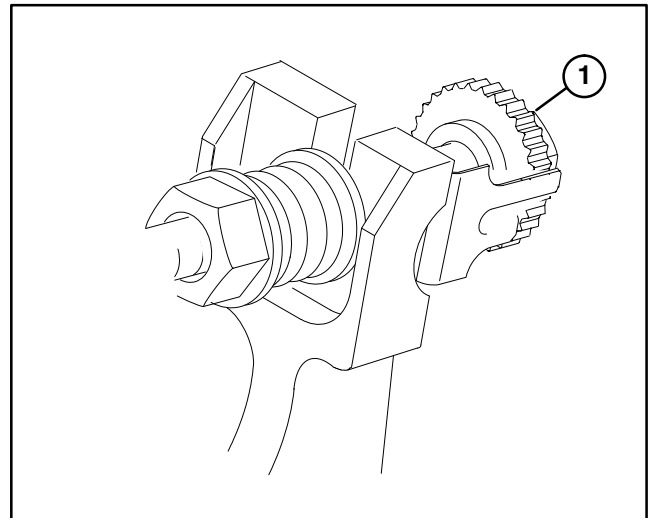


Figure 2

1. Bedknife adjusting knob

2. Tip cutting unit rearward to gain access to reel and bedknife (Fig. 3).
3. On either end of reel, insert a long strip of dry newspaper between reel and bedknife. While slowly rotating reel into bedknife, turn bedknife adjusting knob clockwise, one click at a time until paper is pinched lightly, which results in a slight drag when paper is pulled.
4. Check for light contact at other end of reel using paper. If light contact is not evident or if a gap exists, the bedknife is not parallel to reel. Proceed to steps 5 thru 9.

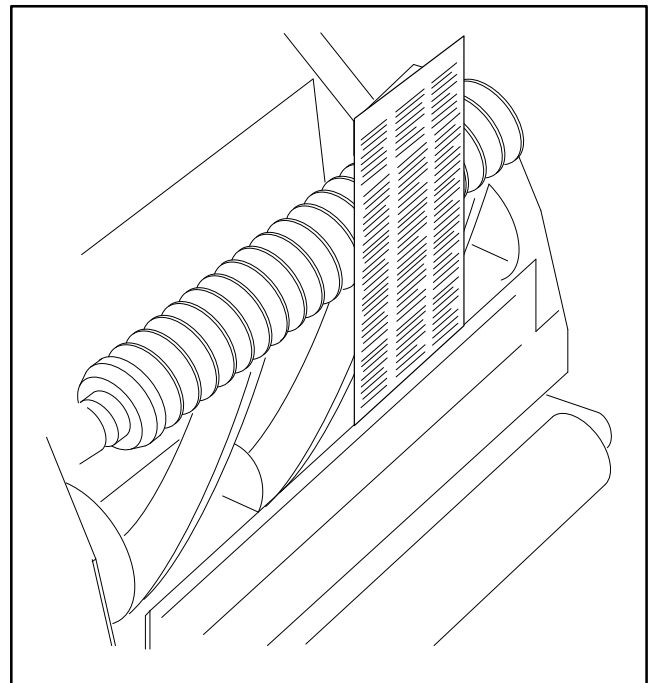


Figure 3

5. Slightly loosen (2) locknuts securing pivot hub to left sideplate (Fig. 4).

ADJUSTING CUTTING UNIT

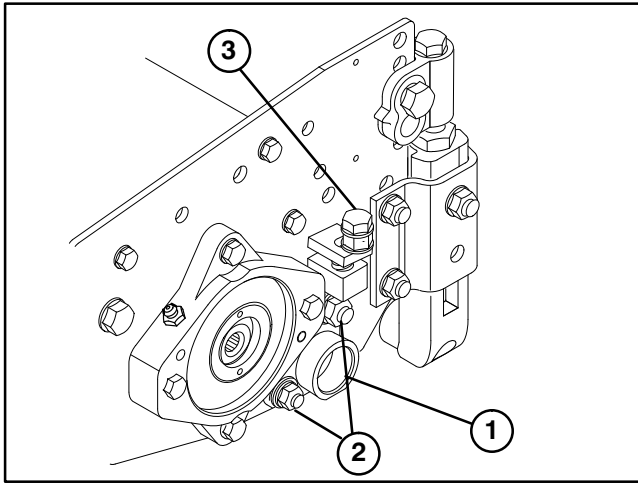


Figure 4

1. Pivot hub
2. Pivot hub locknuts
3. Pivot hub adjusting screw

6. Rotate pivot hub adjusting screw until a slightly larger gap exists between reel blades and bed knife on left end than on right end (Fig. 4).

7. On right end of reel, insert a long strip of dry newspaper between reel and bedknife. While slowly rotating reel towards bedknife, turn bedknife adjusting knob clockwise, one click at a time until paper is pinched lightly, which results in a slight drag when paper is pulled.

8. Rotate pivot hub adjusting screw until the gap between reel blades and bedknife is equal on both ends.

9. Tighten locknuts securing pivot hub to left sideplate and verify adjustment.

ADJUSTING AND LEVELING FRONT ROLLER

The front roller has three mounting positions which determine how aggressive the cutting units will operate. Use the following chart to select the desired location of the roller.

Note: Cutting units are shipped from the factory with the front roller mounted in the “C” position.

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

ROLLER POSITION	APPLICATION
A	Very Aggressive Mowing
B	Aggressive Mowing
C	Less Aggressive Mowing

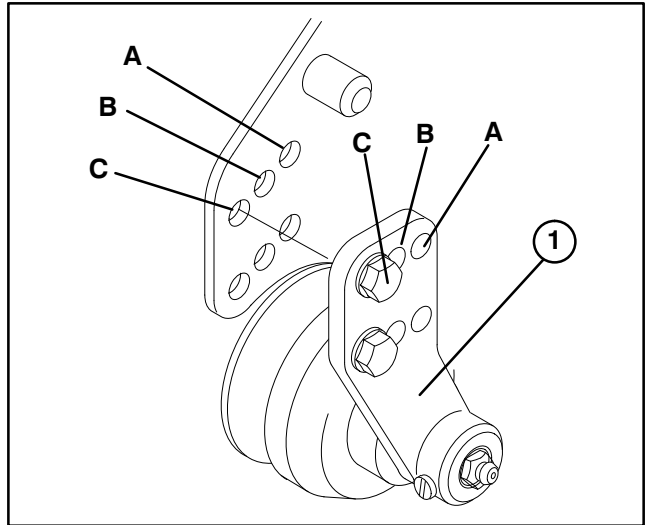


Figure 5

1. Roller bracket

When setting-up a cutting unit, or if repositioning or installing a front roller to the cutting unit, proceed as follows:

1. Position cutting unit on a flat level surface (leveling plate).
2. Position a 1/2" (13mm) or thicker bar under the reel blades and against the cutting edge of the bedknife (Fig. 6). **Make sure bar covers the full length of reel blades.** Rear roller should not contact surface.
3. Make sure capscrews and locknuts securing front roller brackets to side plates are loose (Fig. 6).
4. Make sure capscrews securing front roller to front roller brackets are loose. (Fig. 6)

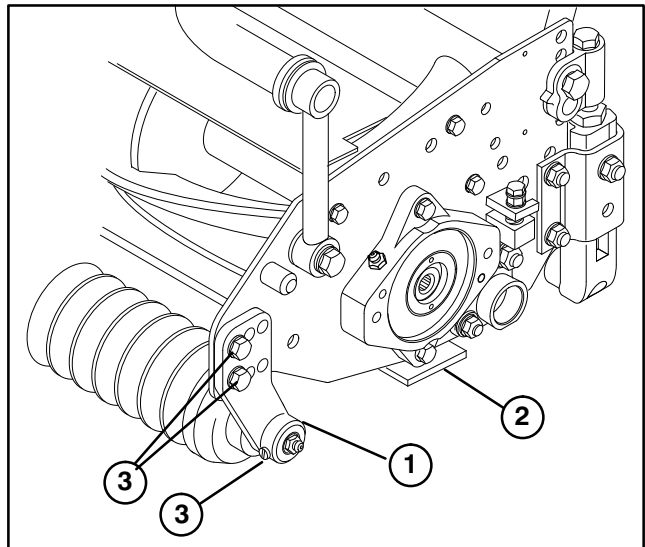


Figure 6

1. Front roller bracket
2. 1/2" Steel bar
3. Loosen capscrews & nuts

5. Rock cutting unit forward (on reel blades and steel bar) until front roller contacts flat surface. Reel blades and bedknife must maintain contact with bar.

ADJUSTING CUTTING UNIT

6. Make sure both ends of roller are in contact with level surface. Use a piece of paper to check to see if any gap exists between roller ends and flat surface.

7. Tighten front roller bracket mounting nuts to 27–35 ft–lbs. Do not tighten capscrews. Make sure roller brackets do not move and both ends of roller remain in contact with level surface.

8. Tighten front roller mounting capscrews to 13–27 ft–lbs.

9. Re-check roller contact with paper to insure roller has not changed position and is parallel with the reel and bedknife.

SET HEIGHT-OF-CUT

The Height-of-Cut adjustment is made by moving the rear roller up or down, after adjusting and leveling the front roller. This can be done by using the adjusting screw or quick height-of-cut locating pin (Fig. 7 & 9).

Note: To ensure accuracy, initial rear roller set-up should be performed on a leveling plate.

1. Select proper rear roller position holes for desired height-of-cut (Fig. 9 & 10).

Note: If final height-of-cut settings other than those shown in figure 10 are desired, select the set of position holes closest to desired height-of-cut. Use top capscrews (Fig. 7) to adjust to final setting.

2. Position cutting unit on a flat level surface (leveling plate).

3. Depending on which front roller position is selected, adjust capscrew on top of each rear roller bracket to attain approximate distance (Dimension X) between support and bracket (Fig. 7 & 8).

4. Continue to adjust top capscrews slightly to level rear roller if required.

5. Tighten retainer nut securing roller bracket to angle bracket.

6. Verify desired height-of-cut using gauge bar.

Note: Once cutting unit has been properly set-up (leveled and parallel), height-of-cut can be quickly changed by changing the quick height-of-cut pin location.

Figures 9 & 10 show the height-of-cut settings which can be achieved by installing the the quick height-of-cut pin in the different hole combinations.

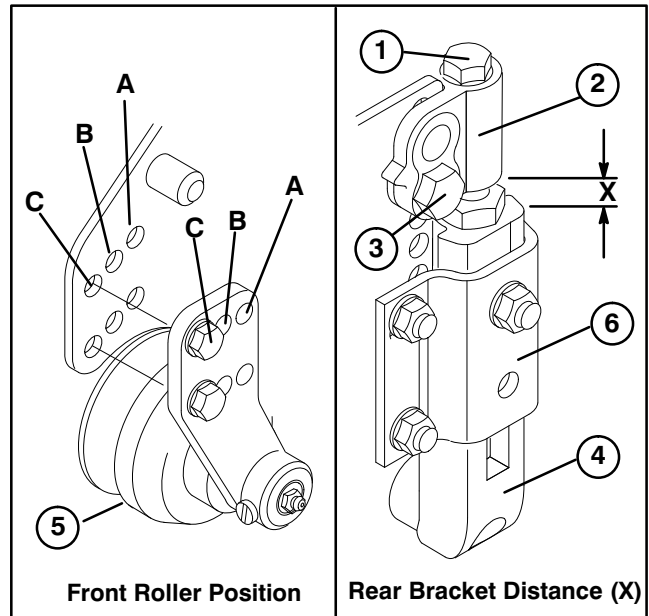


Figure 7

- 1. Height-of-cut adjusting capscrew
- 2. Height-of-cut support
- 3. Quick height-of-cut pin
- 4. Roller bracket
- 5. Front roller
- 6. Angle bracket

Front Roller Position	Distance Between Height-of-Cut Support and Rear Roller Bracket (Dimension X in Fig. 7)
A	15/16" (24mm)
B	5/8" (16mm)
C	1/2" (13mm)

Figure 8

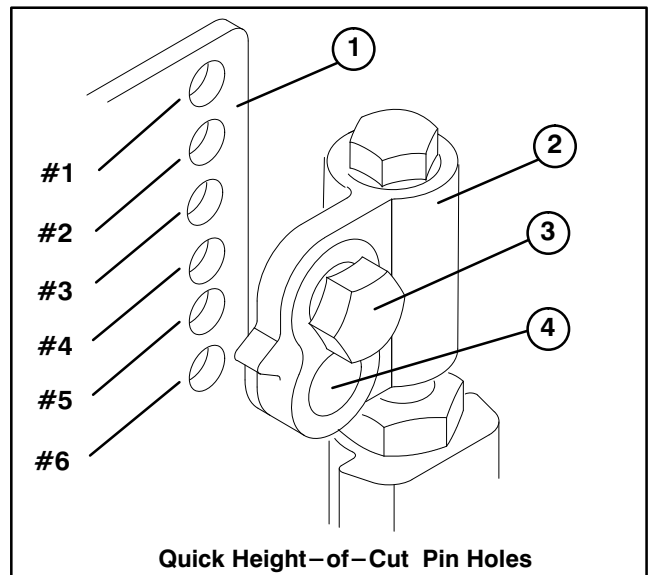


Figure 9

- 1. Side plate
- 2. Height-of-cut support
- 3. Upper hole
- 4. Lower hole

ADJUSTING CUTTING UNIT

REAR ROLLER POSITIONS

Height -of-Cut	Height-of-Cut Hole In Support		Side Plate Hole					
	Upper	Lower	1	2	3	4	5	6
3/8" (9mm)	X		X					
1/2" (13mm)		X			X			
5/8" (16mm)	X			X				
3/4" (19mm)		X				X		
7/8" (22mm)	X				X			
1" (25mm)		X					X	
1-1/8" (28mm)	X					X		
1-1/4" (31mm)		X						X

Figure 10

VERIFY HEIGHT-OF-CUT SETTING

1. Using a gauge bar, Toro part No. 59-7900 or equivalent (Fig. 11), set head of screw to desired Height-of-Cut. This measurement is from bar face to underside of screw head.
2. Place gauge bar across front and rear rollers (Fig. 11).
3. Adjust rear roller up or down until underside of screw head engages bedknife edge. Do this on both ends of reel to verify height-of-cut.

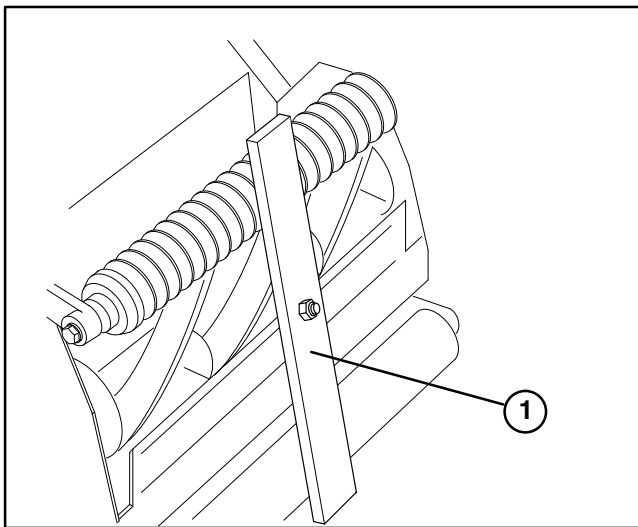


Figure 11
1. Gauge bar

ADJUST GRASS SHIELD AND FINS

Adjust grass shield and/or shield fin angle for desired grass clippings dispersion. For best dispersion under most conditions

1. Position cutting unit on a flat level surface.
2. To adjust fins, unhook and move front mounting tab to the straight ahead or angled position slot.
3. To change grass shield angle, loosen flange head capscrew (Fig. 12) securing shield to left side plate, move shield to desired angle and tighten screw.

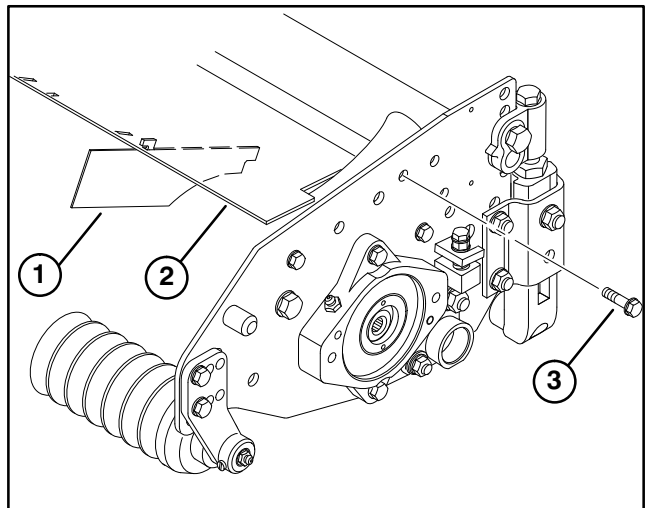


Figure 12

1. Shield fin
2. Grass shield
3. Capscrew

ADJUST 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, loosen flange head capscrews securing shield to each side plate, rotate shield to open position and tighten screws.

BACKLAPPING CUTTING UNITS

BACKLAPPING



Note: When backlapping, the front units all operate together, and the rear units operate together.

1. Position the machine on a level surface, lower the cutting units, stop the engine, engage the parking brake, and move the Enable/Disable switch to disable position.

2. Unlock and raise the seat to expose controls.

3. Open control cover and turn the H.O.C. selection knob to position "P".

Note: Backlapping speed may be increased by moving the H.O.C. selection knob toward to "A". Each position will increase speed 60 rpm. After changing selector, wait 30 seconds for the system to respond to the new speed target.

4. Make initial reel to bedknife adjustments appropriate for backlapping on all cutting units which are to be backlapped.

5. Start engine and run at idle speed.

DANGER: To avoid personal injury, never place hands or feet in reel area while engine is running. Changing engine speed while backlapping may cause reels to stall. Never change engine speed while backlapping. Only backlap at idle engine speed. Never attempt to turn reels by hand or foot while engine is running.

LUBRICATION

GREASING BEARINGS, BUSHINGS AND PIVOT POINTS

Each cutting unit has (6) grease fittings (Fig. 13) that must be lubricated regularly with No. 2 General Purpose Lithium Base Grease.

The grease fitting locations shown in figure 13 are for each side of cutting unit.

IMPORTANT: Lubricating cutting units immediately after washing helps purge water out of bearings and increases bearing life.

1. Wipe each grease fitting with a clean rag.

2. Apply grease until pressure is felt against handle.

6. Select either front or rear on the backlap switch to determine whether front or rear reels will be backlapped.

DANGER: To avoid personal injury, be certain that you are clear of the cutting units before proceeding.

7. Move Enable/Disable switch to Enable position. Move Lower Mow / Lift control forward to start back-lapping operation on designated reels.

8. Apply lapping compound with a long handle brush (Toro Part No. 29-9100). Never use a short handled brush.

9. If reels stall or become erratic while backlapping, the reel control light will begin to blink and the reels will turn off. If this occurs, turn the H.O.C. selection knob one position closer to "A". Then, toggle the Enable/Disable switch to the disable position followed by the enable position. To resume backlapping, move the Lower Mow / Lift control lever forward.

10. To make an adjustment to the cutting units while backlapping, turn 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 5 - 9.

11. Repeat procedure for all cutting units to be backlapped.

12. When backlap operation has been completed, return the backlap switch to OFF, lower seat and wash all lapping compound off cutting units. Adjust cutting unit reel to bedknife as needed.

IMPORTANT: If the backlap switch is not returned to OFF position after backlapping, the cutting units will not raise or function properly.

Note: Apply grease to reel bearing cavities until a small amount is evident at the inboard reel seal.

3. Wipe excess grease away.

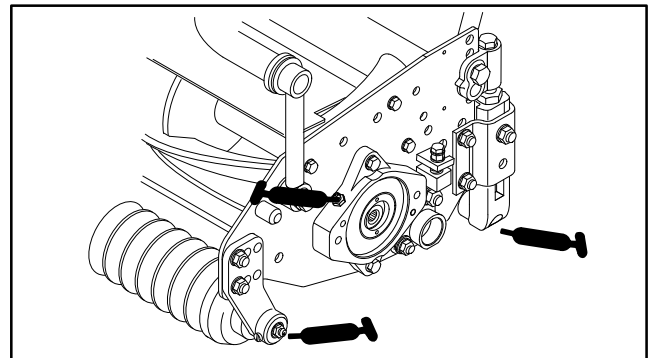


Figure 13

The Toro Commercial Products Two Year Limited Warranty

The Toro Company warrants your 1996 or newer Toro Commercial Product ("Product") purchased after January 1, 1997, to be free from defects in materials or workmanship for the period of time listed below. Where a warrantable condition exists, Toro 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.

Warranty Duration: Two years or 1500 operational hours*, whichever occurs first.

***Product equipped with hour meter**

Owner Responsibilities:

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

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
8111 Lyndale Avenue South
Minneapolis, MN, 55420-1196
Telephone: (612) 888-8801
Facsimile: (612) 887-8258
E-Mail: Commercial.Service@Toro.Com

Maintenance Parts:

Parts scheduled for replacement as required maintenance ("Maintenance Parts"), are warranted for the period of time up to the scheduled replacement time for that part.

Items/Conditions Not Covered:

Not all product failures or malfunctions that occur during the warranty period are defects in materials or workmanship. The items / conditions listed below are not covered by this warranty:

- Product failures which result from the use of non-Toro replacement parts, or from installation and use of add-on, modified, or unapproved accessories are not covered.
- Product failures which result from failure to perform required maintenance and/or adjustments are not covered.
- Product failures which result from operating the Product in an abusive, negligent or reckless manner are not covered.

- This warranty does not apply to 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.
- This warranty does not apply to 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.
- This warranty does not apply to 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.

Other Legal Disclaimers:

The above remedy of product defects through repair by an authorized distributor or dealer is the purchaser's sole remedy for any defect. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

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 the express warranty.

Some states do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.

The Toro Company is not liable for indirect, incidental or consequential damages in connection with the use of the Product, including any cost or expense of providing substitute Product or service during periods of malfunction or non-use.

Some states do not allow the exclusion of incidental or consequential damages, so the above exclusion may not apply to you.

Note to California residents: 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), 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 California Emission Control Warranty Statement printed in your Owner's Manual or contained in the engine manufacturer's documentation for details.