FORM NO. 3318-394 GB Rev A

TORO®

MODEL NO. 03461—60001 & UP

MODEL NO. 03462—60001 & UP

OPERATOR'S MANUAL

5- & 8-BLADE CUTTING UNIT

(For Reelmaster® 2300-D)

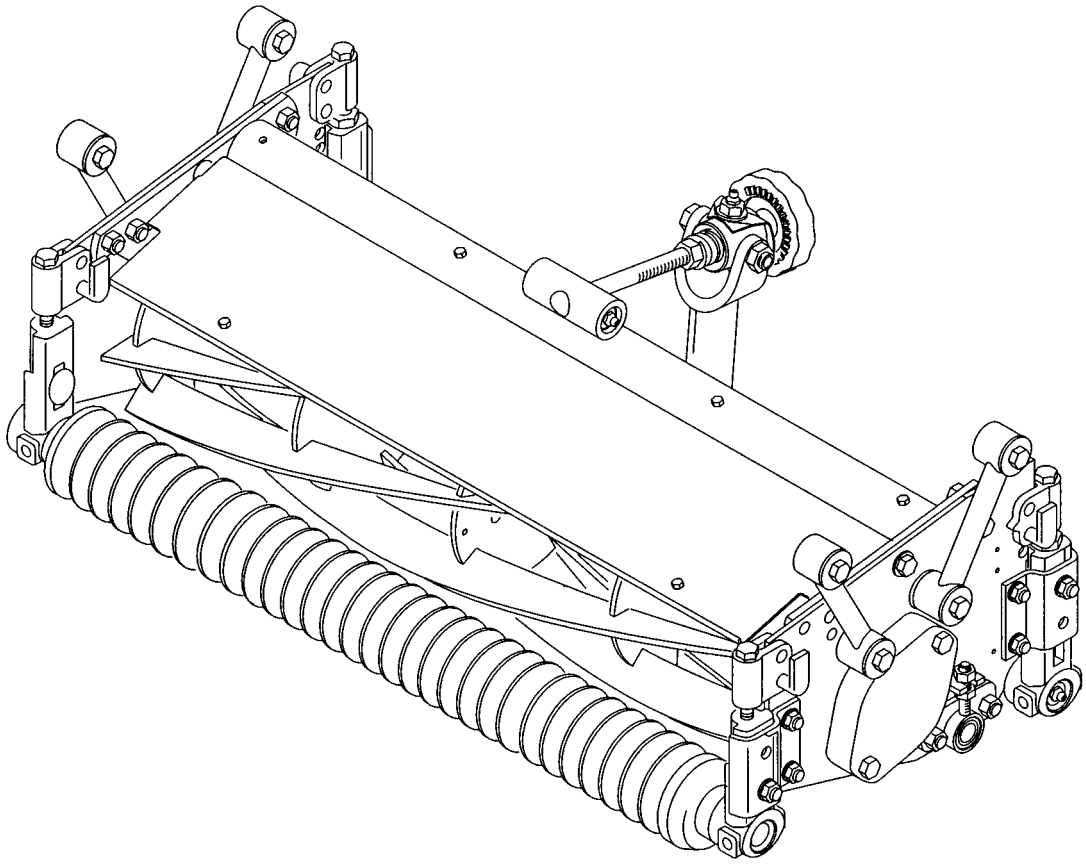

Table of Contents

Safety Instructions

Type of Cutter: All cutting units supported by equal length independent lift arms; interchangeable to all three cutting unit positions.

Construction: 5 or 8 blades, 7" (18 cm) diameter, welded to 5 stamped steel spiders. Reels mounted on greaseable self-aligning ball bearings.

Height-of-Cut: 1/4"-1-3/4" (6.4mm -44.4mm)

Frequency of Clip:
(With variable speed set to maximum rpm)
5 blade @880 reel rpm @ 4 mph (6.4 km/h)
.96" (24.4 mm) clip.
5 blade @880 reel rpm @ 5 mph (8 km/h)
1.19" (30.3 mm) clip.
8 blade @880 reel rpm @ 4 mph (6.4 km/h)
.60" (15.2 mm) clip.
8 blade @880 reel rpm @ 5 mph (8 km/h)
.75" (19.1 mm) clip.

Bedknife-to-Reel Adjustment: Single knob screw adjustment for bedknife to reel, located at center of bedbar. Adjustment knob detent with .001 movement of bedknife for each indexed position.

Suspension System: Fully floating with adjustable spring counterbalance. L-I-N-K-ST cutting unit suspension system provides fore and aft oscillation. Main center pivot allows side-to-side oscillation. With optional Fixed Kit, Part No. 93-6915, cutting units can be locked into fixed (fore/aft) position for use without front roller.

Cutting Unit Lift: Hydraulic lift with automatic reel shut off. All units are controlled from one lever.

Optional Equipment:

Full Roller Kit	Model No. 03440
Sectional Roller Kit	Model No. 03445
Wiehle Roller Kit	Model No. 03450
Anti-Scalp Kit	Model No. 03447
Grass Basket Kit	Model No. 03443
Roller Scraper Kit	Part No. 60-9560
Comb Kit	Part No. 67-9400
Fixed Kit	Part No. 93-6915
Skid Kit	Part No. 94-3664

Specifications and design subject to change without notice.

Adjusting Cutting Units

IMPORTANT: Read this Operator's Manual thoroughly before operating cutting unit. Failure to do so may result in damage to the cutting unit.

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.

2. Insure that all nuts and bolts are securely fastened.

3. Adjust the bedknife to the reel.

4. Adjust the front roller.

5. Level the rear roller.

6. Set set height of cut.

MOUNT THE FRONT ROLLER (Fig. 1)

1. Remove the (2) Iocknuts securing each angle bracket to the cutting unit.

2. Remove the height-of-cut pins.

3. Insert the smaller diameter shaft end of the roller into the white bushing in the roller bracket, making sure the flanged end of the nylon bushing faces inside toward the roller. The hex of the roller bracket must mate with the hex of the adjustment nut.

4. Press the roller bracket onto other shaft end of the roller. The hex of the roller bracket must mate with the hex of the adjustment nut.

5. Hold one roller bracket stationary and use the other bracket as a wrench to loosen or tighten bearing clearance to allow the roller to rotate freely and to eliminate bearing end play.

6. Roller brackets must be aligned for installation onto the cutting unit. lf alignment is necessary after the bearing adjustment, remove the roller bracket on the side with the flanged nyliner and align with the opposite roller bracket within + one hex flat and replace.

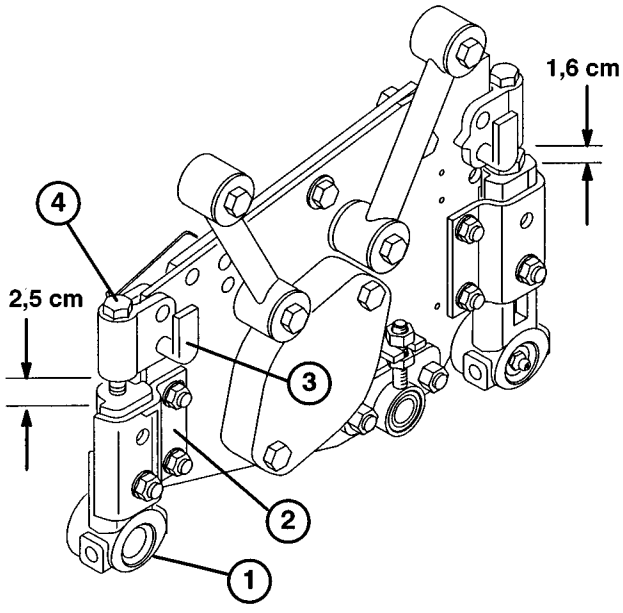

Figure 1

1. Roller bracket
2. Angle bracket
3. Height-of-cut pin
4. Support capscrew

7. Reinstall the height-of-cut pins.

8. Reinstall the (2) locknuts securing each angle bracket to the cutting unit.

SET THE HEIGHT OF CUT AND LEVEL THE REAR ROLLER (Fig. 1)

1. Position the cutting unit on a flat level table or board.

2. Slightly loosen (crack) the nut securing each roller bracket to the angle bracket.

3. Adjust the support capscrew to achieve 2,54 ±0,16 cm dimension between the height-of-cut support and the front roller bracket (2 places).

4. Adjust the support capscrew to achieve 1,6 ±0,16 dimension between the height-of-cut support and the rear roller bracket (2 places).

5. Remove the hairpin cotters securing the rear height-of-cut pins and reinstall in the 1,27 cm setting as indicated on the height-of-cut plate.

6. Remove the hairpin cotters securing the front height-of-cut pins and reinstall in the 0,625 cm setting as indicated on the height-of-cut plate to allow clearance between the roller and the table.

7. Position a 1,27 cm or thicker bar under the reel blades and against the front face of the bedknife. Make sure the bar covers the full length of the reel blades.

8. Verify if the rear roller is level by inserting a piece of paper under each end of the roller.

9. Level the roller by adjusting the appropriate support capscrew on the rear roller supports until the roller is parallel and the entire length of the roller contacts the table.

10. When the roller is level, adjust both rollers to desired height-of-cut pins. Tighten the nuts securing the roller brackets.

ADJUST THE BEDKNIFE PARALLEL TO THE REEL (Fig. 2–3)

1. Make sure reel contact is removed by turning the bedknife adjustment knob counterclockwise (Fig. 2). Tip the cutting unit to gain access to the reel and bedknife (Fig. 3).

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

3. Check for light contact at other end of the reel using paper. If light contact is not evident, proceed to next step.

4. Loosen the (2) carriage bolts on the bedbar adjuster (Fig. 4).

5. Adjust the nuts to move the bedbar adjuster up or down until the paper is pinched along the entire bedknife surface when the bedknife adjustment knob is adjusted to no more than two clicks beyond the first contact of the reel bedknife (Fig. 4).

6. Tighten the nuts and carriage bolts and verify adjustment.

VERIFY THE HEIGHT-OF-CUT SETTING (Fig. 5)

1. On a gauge bar, set the head of screw to the desired height of cut. This measurement is from the bar face to the underside of the screw head. A gauge bar (Toro Part No. 13-8199) may be obtained from your local Toro Distributor.

2. Slightly loosen (crack) the nut securing each front roller bracket to the angle bracket.

3. Place the bar across the front and rear rollers and adjust the front roller support screws until the underside of the screw head engages the bedknife cutting edge. Do this on both ends of the reel.

4. Tighten the nuts securing the roller brackets.

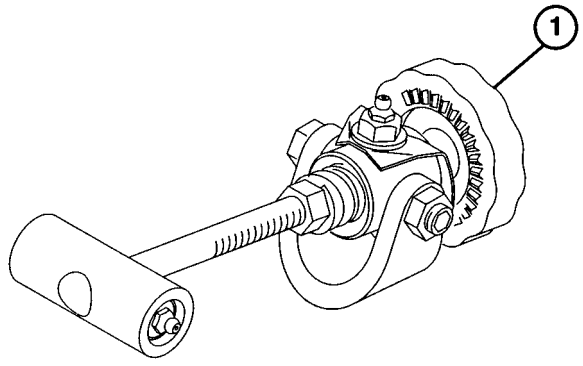

Figure 2

1. Bedknife adjusting screw

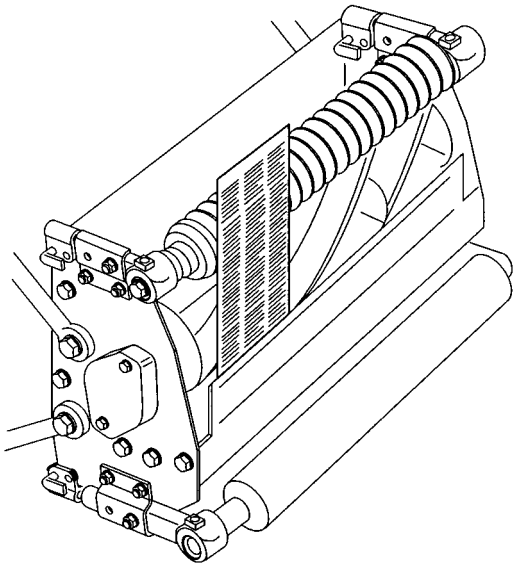

Figure 3

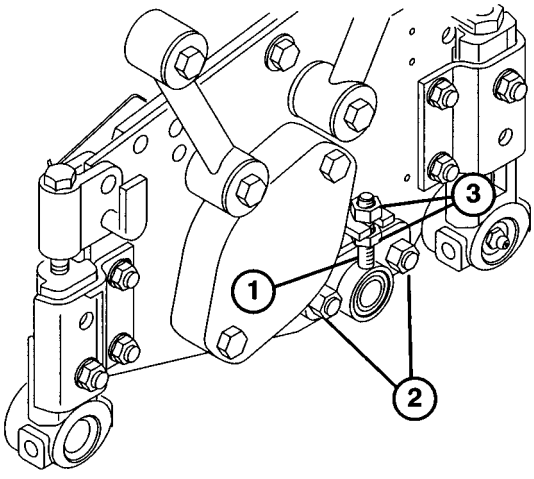

Figure 4

1. Bedknife adjuster
2. Carriage bolts
3. Adjustment nuts

Operating Instructions

CUTTING UNIT CHARACTERISTICS

The single knob bedknife-to-reel adjustment system incorporated in this cutting unit simplifies the adjustment procedure needed to deliver optimum mowing performance. The precise adjustment possible with the single knob/bedbar design gives the necessary control to provide a continual self-sharpening action—thus maintaining sharp cutting edges, assuring good quality of cut, and greatly reducing the need for routine backlapping.

In addition, the rear roller positioning system permits optimum bedknife attitude and location for varying heights of cut and turf conditions.

CUTTING UNIT DAILY ADJUSTMENTS

Prior to each day's mowing, 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 the cutting units onto a hard surface, shut off the engine and remove the key from the ignition.

2. Slowly rotate the reel in reverse direction, listening for reel-to-bedknife contact. If no contact is evident, turn the bedknife adjusting knob clockwise, one click at a time, until light contact is felt and heard.

3. If excessive contact is felt, turn the bedknife adjusting knob counterclockwise, one click at a time until no contact is evident. Then turn the bedknife adjusting knob one click at a time clockwise, until light contact is felt and heard.

IMPORTANT: Light contact is preferred at all times. If light contact is not maintained, the 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

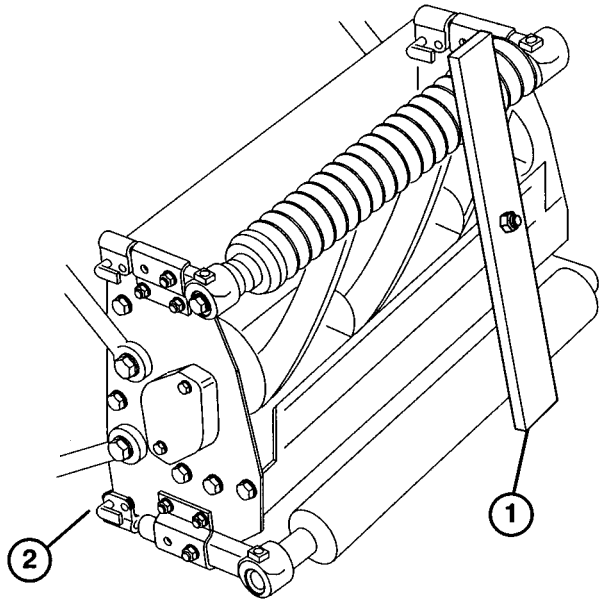

Figure 5

1. Gauge bar
2. Front roller support screw

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 the cutting edge of the bedknife to assure smooth operation.

Lubrication

GREASING BEARINGS, BUSHINGS AND PIVOT POINTS

Each cutting unit has (8) grease fittings (with optional front roller installed) that must be lubricated regularly with No. 2 General Purpose Lithium Base Grease.

1. The grease fitting locations and quantities are: bedknife adjuster (2) (Fig. 6); reel bearings (inside sideplate), (2) and front and rear rollers (2 ea.) (Fig. 7)

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

2. Wipe each grease fitting with a clean cloth.

3. Apply grease until pressure is felt against handle.

IMPORTANT: Do not apply too much pressure or grease seals will be permanently damaged.

3. Wipe away excess grease.

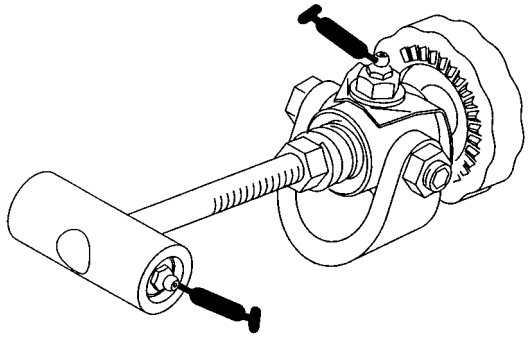

Figure 6

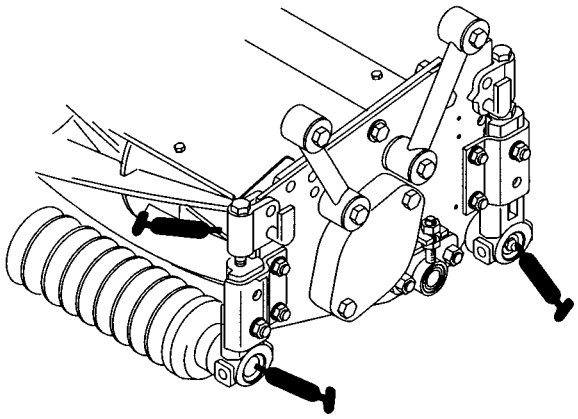

Figure 7

Backlapping Cutting Units

DANGER

TO AVOID PERSONAL INJURY OR DEATH:

- Never place hands or feet in the reel area while the engine is running.
- While backlapping, the reels may stall and then restart.
- Do not attempt to restart reels with your hand or foot.
- Do not adjust the reels while the engine is running.
- If the reel stalls, stop the engine before attempting to clear the reel

1. Position the machine on a clean, level surface, lower the cutting units, stop the engine, engage the parking brake and remove the key from the ignition switch.

2. Unlatch and raise the hood to expose the controls.

3. Rotatethe backlap knob on the valve block clockwise to the backlap position. Rotate the reel speed knob to position 1.

4. Make initial reel-to-bedknife adjustments appropriate for backlapping on all cutting units. Start the engine and set it to low idle speed.

5. Engage the reels by pulling out the knob on the instrument panel.

CAUTION

Be carefull when lapping the reel because contact with the reel or other moving parts can result in personal injury.

6. Apply lapping compound with the long-handled brush supplied with the machine.

7. To make an adjustment to the cutting units while backlapping, turn the reels OFF by pushing in the knob on the instrument panel and turning the engine OFF. After adjustments have been completed, repeat steps 4-6.

8. When backlap operation is completed, turn the backlap knob counter clockwise to the MOW position, set the reel speed controls to the desired mowing setting and wash all lapping compound off the cutting units.

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

Note: For a better the 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.