

TORO[®]

MODEL NO. 03854-50001
thru 60001 & UP
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OPERATOR'S
MANUAL

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

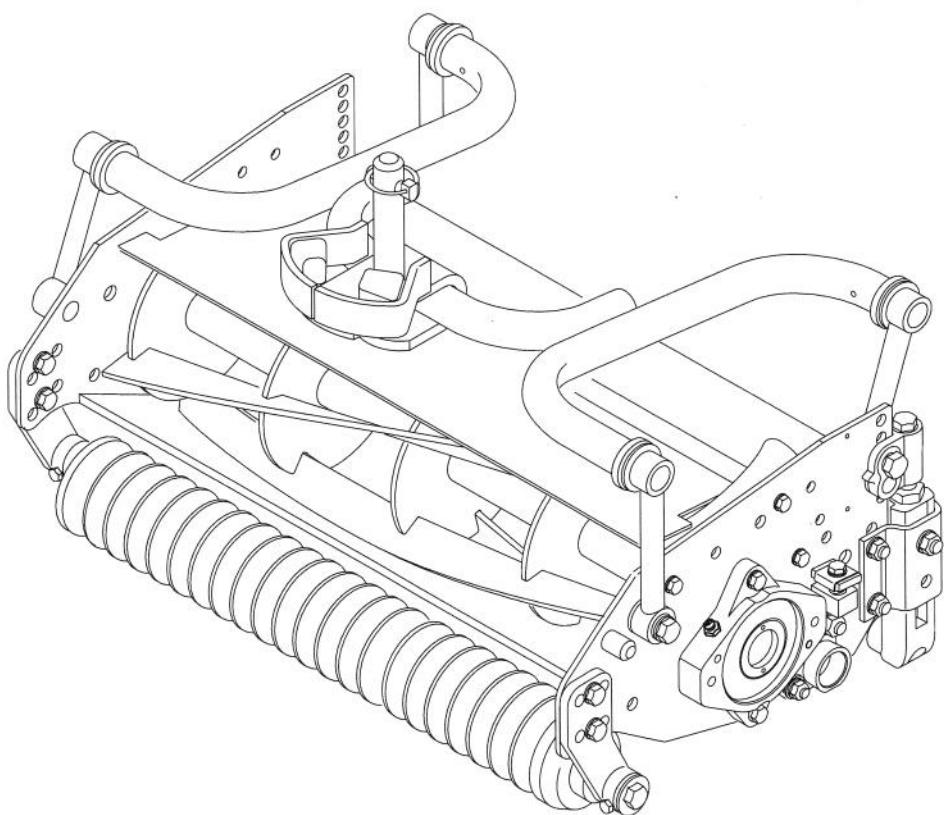


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SPECIFICATIONS

CUTTING UNIT

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

HEIGHT OF CUT RANGE:

5 Blade – 3/4" to 1-1/4"

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 and the pre-set reel type 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.

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. Adjust bedknife to reel.
4. Adjust front roller.
5. Level rear roller.
6. Set set height-of-cut.

ADJUSTING BEDKNIFE TO REEL (Fig. 1-3)

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. 1).

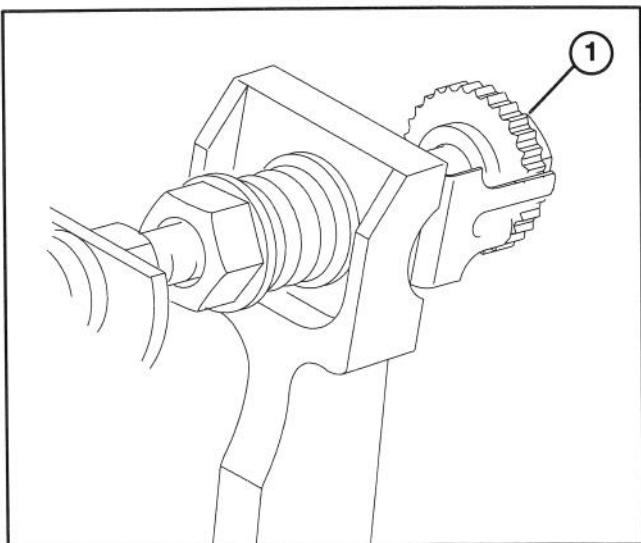


Figure 1

1. Bedknife adjusting knob

2. Tip cutting unit rearward to gain access to reel and bedknife (Fig. 2).
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, proceed to next step.

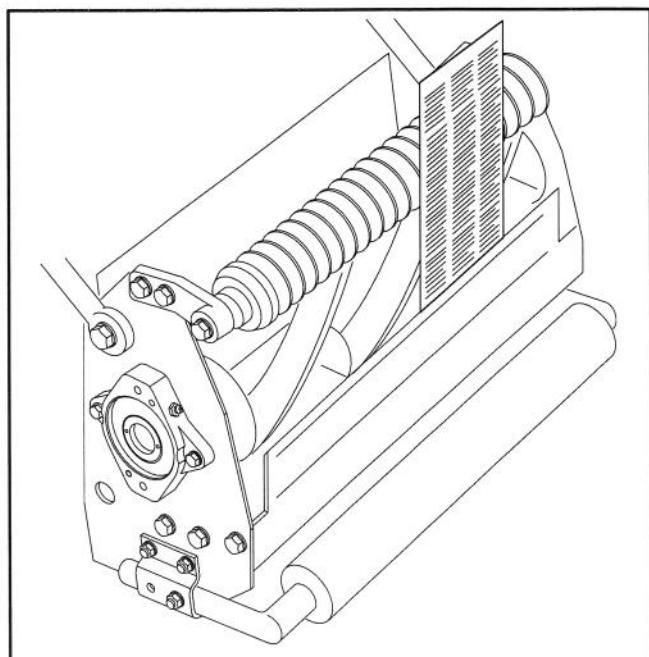


Figure 2

5. Slightly loosen (crack) (2) locknuts securing pivot hub to left sideplate (Fig. 3).

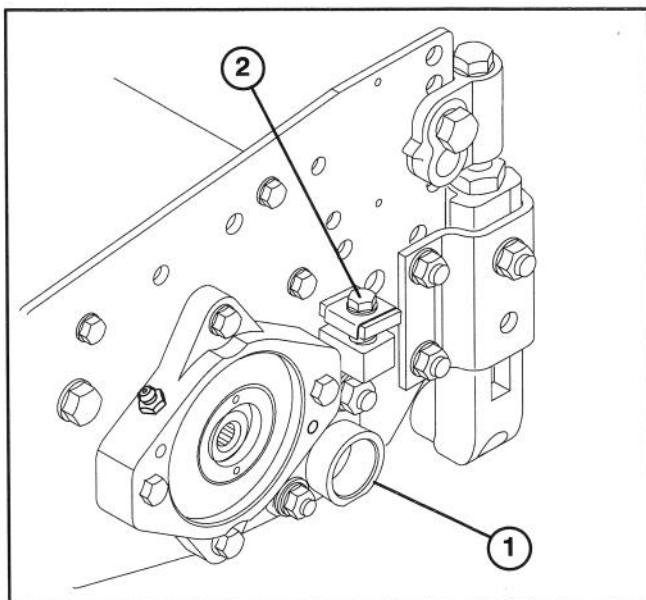


Figure 3

1. Pivot hub
2. 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. 3).
7. On right 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.

ADJUSTING CUTTING UNIT

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 FRONT ROLLER

The front roller has three mounting positions. Use the following chart to determine the desired location of the roller.

Roller Position	Bedknife Position	Application
A	Behind Reel Center Line	• Aggressive Mowing
B	Mid Point	• Normal Mowing
C	Ahead of Reel Center Line	• Less Aggressive Cutting Action

Note: Cutting units are shipped from the factory with the front roller mounted in the B (Middle) 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.

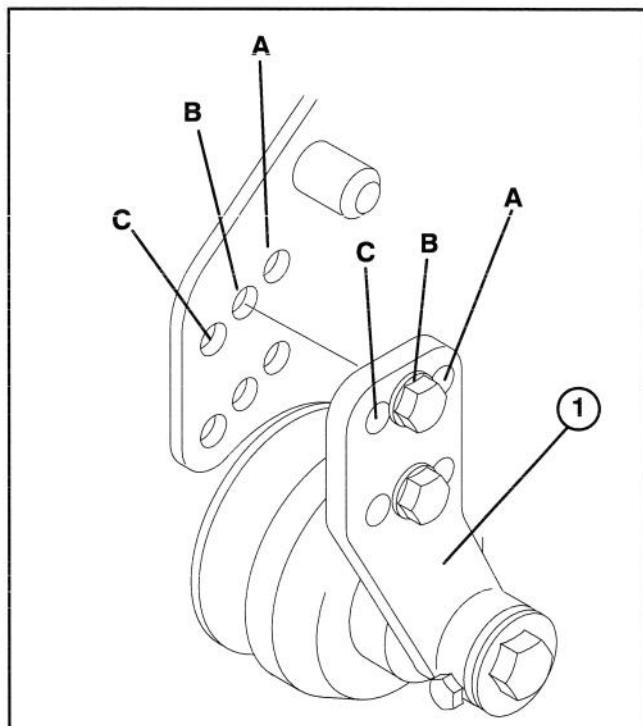


Figure 4
1. Roller bracket

When repositioning or installing a front roller to the cutting unit proceed as follows:

1. Position cutting unit on a flat level surface.

2. Align roller bracket mounting holes to cutting unit side plates mounting holes.
3. Loosely secure each roller bracket to side plates with (2) flangehead capscrews and locknuts. Position roller as shown in figure 4. Capscrew heads to be positioned on outside of roller brackets.
4. Push rearward on roller, hold mounting capscrews stationary and tighten nuts. Do not turn capscrews, doing so may alter roller adjustment.

LEVELING REAR ROLLER

IMPORTANT: The rear roller must be leveled before setting the height-of-cut. For initial set-up of cutting unit, set quick height-of-cut pins in lower holes of height-of-cut supports and through #3 hole in cutting unit side plate (Fig. 9).

1. Position cutting unit on a flat level surface.
2. Slightly loosen (crack) nut, on each side of cutting unit, securing angle bracket to roller bracket.

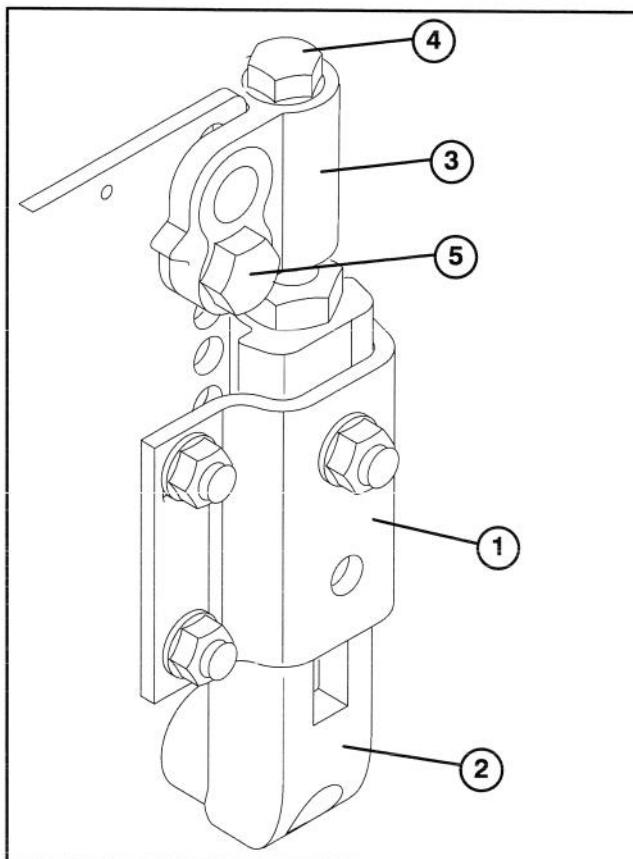


Figure 5

1. Angle bracket
2. Roller bracket
3. Height-of-cut support
4. Height-of-cut adjusting screw
5. Quick height-of-cut pin

Note: Do not tighten quick height-of-cut pin beyond 25–30 in. lb.

3. Position a 1/2" (13mm) or thicker bar under the reel blades and against the front face of the bedknife. Make sure bar covers the full length of reel blades.

ADJUSTING CUTTING UNIT

4. Adjust capscrew, on each side of cutting unit, to attain proper distance between height-of-cut support and rear roller bracket. Refer to figures 6 & 7 for required distance between height-of-cut support and rear roller bracket (dimension X in figure 7) per front roller mounting location.

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 6

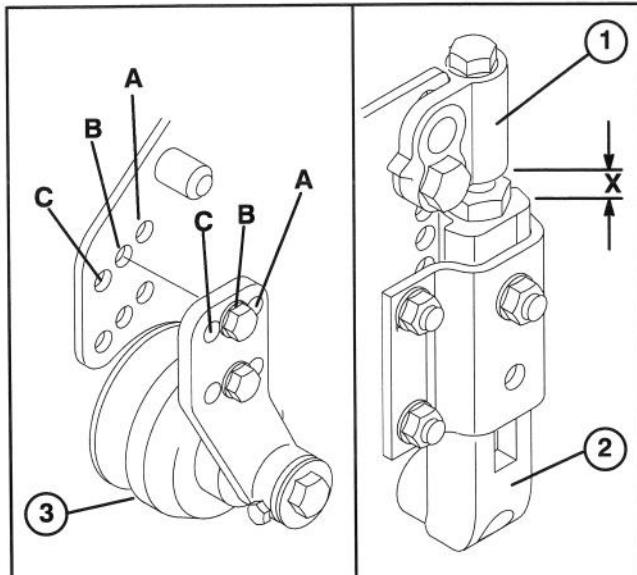


Figure 7
1. Height-of-cut support
2. Roller bracket
3. Front roller

5. Continue to adjust height-of-cut capscrew to achieve contact between table surface and each end of roller. The final gap between height-of-cut support and rear roller bracket may vary slightly from those listed in chart due to manufacturing tolerances.

6. Tighten nut on each side of cutting unit, securing angle bracket to roller bracket

SET HEIGHT-OF-CUT

The Height-of-cut adjustment is made by moving the rear roller up or down, after leveling rear roller to the reel. This can be done by using the adjusting screw or quick height-of-cut locating pin (Fig. 5).

The following charts show the height-of-cut settings which can be achieved by installing the the quick height-of-cut pin in the different hole combinations.

If height-of-cut settings other than those shown in figure 8 are desired, adjust rear roller position by adjusting screw on each end of 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 8

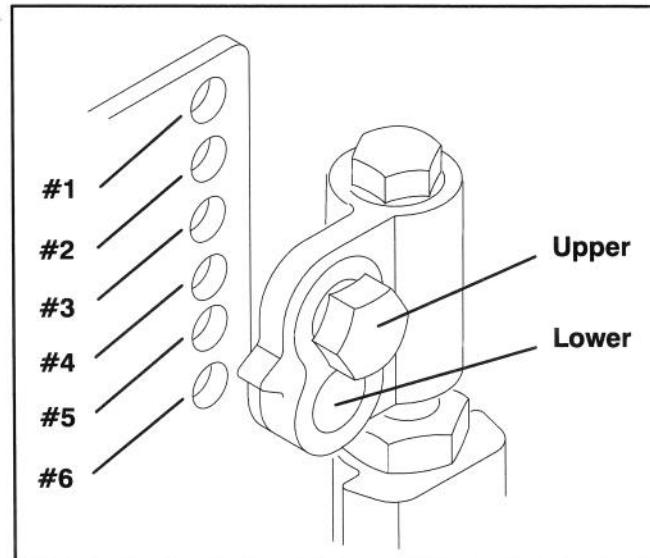


Figure 9

VERIFY HEIGHT-OF-CUT SETTING

1. On gauge bar, set head of screw to desired Height-of-Cut. This measurement is from bar face to underside of screw head.
2. Place the bar across the front and rear rollers and adjust the rear roller up or down until the underside of screw head engages the bedknife edge. Do this on both ends of reel.

ADJUSTING CUTTING UNIT

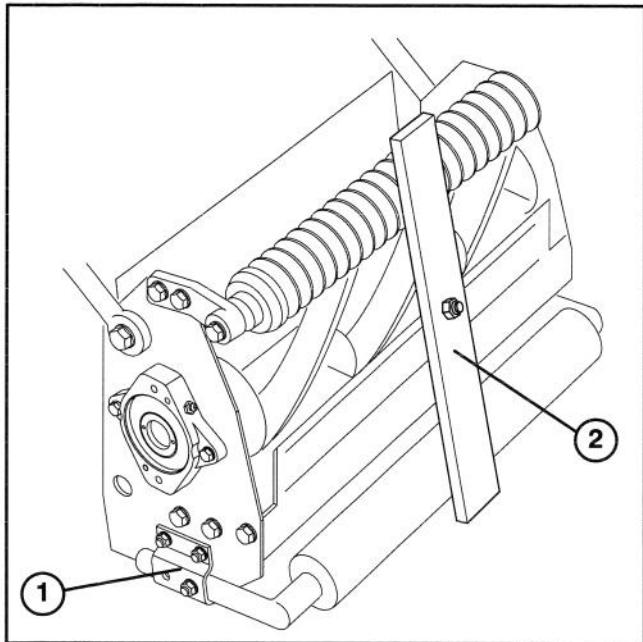


Figure 10

1. Gauge bar
2. Front roller support screw

ADJUST GRASS SHIELD AND FINS

Adjust grass shield and/or shield fin angle for desired grass clippings dispersion.

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 securing shield to left side plate, move shield to desired angle and tighten screw.

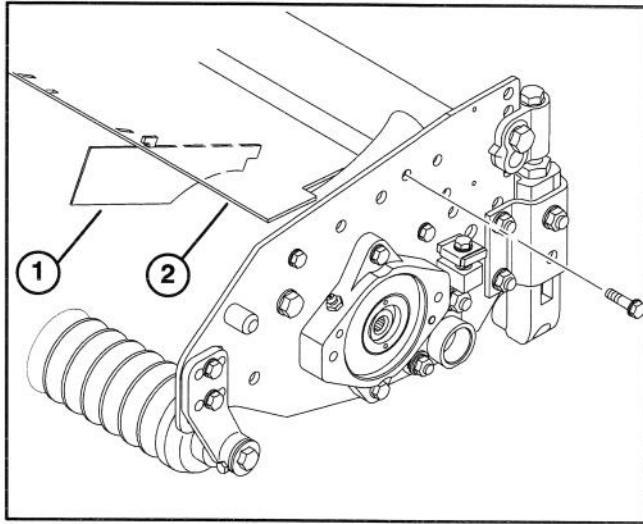


Figure 11

1. Shield fin
2. Grass shield

BACKLAPPING CUTTING UNITS



DANGER

TO AVOID PERSONAL INJURY OR DEATH:

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

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

1. Position 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 key from ignition switch.
2. Unlock and raise seat to expose controls.
3. Make initial reel to bedknife adjustments appropriate for backlapping on all cutting units. Start engine and set engine to low idle speed.
4. Set reel speed control to Position P. Select either front or rear on backlap switch to determine which units to backlap.

5. Move enable / disable switch to enable position. Move lower mow / raise lever forward to start backlapping operation on designated reels.

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



CAUTION

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

7. To make an adjustment to the cutting units while backlapping, Turn reels OFF by moving Lower mow / Raise lever REARWARD, Move Enable / Disable switch to DISABLE and turn engine OFF. After adjustments have been completed, repeat steps 3–6.

8. Repeat procedure for remaining cutting units.

9. When backlap operation is completed, return backlap switch to OFF, set reel speed controls to desired mowing setting and wash all lapping compound off 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 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.

LUBRICATION

GREASING BEARINGS, BUSHINGS AND PIVOT POINTS

Each cutting unit has (6) grease fittings (Fig. 12) that must be lubricated regularly with No. 2 General Purpose Lithium Base Grease.

1. The grease fitting locations and quantities are: reel bearings (2) and front and rear rollers (2 ea.)

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.

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

3. Wipe excess grease away.

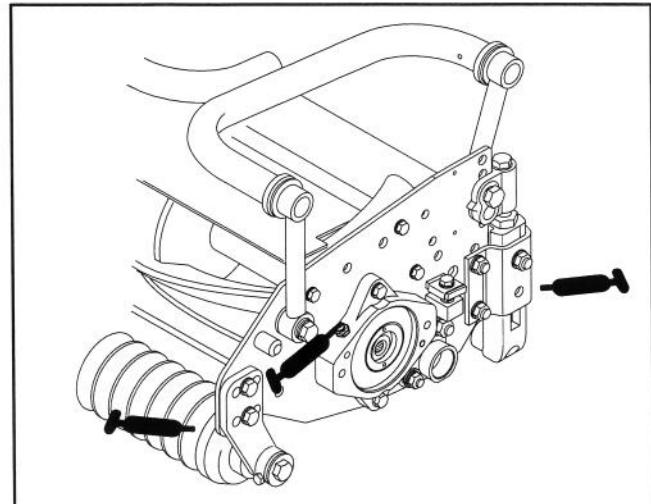


Figure 12

The Toro Promise

A One Year Limited Warranty

The Toro Company promises to repair your TORO Product if defective in materials or workmanship. The following time periods from the date of purchase apply:

Commercial Products **1 Year**

The cost of parts, labor and transportation are included.

If you feel your TORO Product is defective and wish to rely on The Toro Promise, the following procedure is recommended:

1. Contact your Authorized TORO Distributor or Commercial Dealer (the Yellow Pages of your telephone directory is a good reference source).
2. The TORO Distributor or Commercial Dealer will advise you on the arrangements that can be made to inspect and repair your product.
3. The TORO Distributor or Commercial Dealer will inspect the product and advise you whether the product is defective and, if so, make all repairs necessary to correct the defect without an extra charge to you.

If for any reason you are dissatisfied with the distributor's analysis of the defect or the service performed, you may contact us.

Write:

TORO Commercial Products Service Department
8111 Lyndale Avenue South
Minneapolis, MN 55420

The above remedy of product defects through repair by an Authorized TORO Distributor or Commercial Dealer is the purchaser's sole remedy for any defect.

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.

This Warranty applies only to parts or components which are defective and does not cover repairs necessary due to normal wear, misuse, accidents, or lack of proper maintenance. Regular, routine maintenance of the unit to keep it in proper operating condition is the responsibility of the owner.

All warranty repairs reimbursable under The Toro Promise must be performed by an Authorized Toro Commercial Dealer or Distributor using Toro approved replacement parts.

Repairs or attempted repairs by anyone other than an Authorized TORO Distributor or Commercial Dealer are not reimbursable under the TORO Promise. In addition, these unauthorized repair attempts may result in additional malfunctions, the correction of which is not covered by warranty.

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 EQUIPMENT 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.

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

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 The Toro Company.