



**Count on it.**

Form No. 3457-362 Rev D

# Operator's Manual

## 18in, 21in, and 26in; 8-Blade, 11-Blade, and 14-Blade Cutting Unit

### Greensmaster® 1018, 1021, or 1026 Traction Unit

Model No. 04823—Serial No. 406000000 and Up

Model No. 04824—Serial No. 409600000 and Up

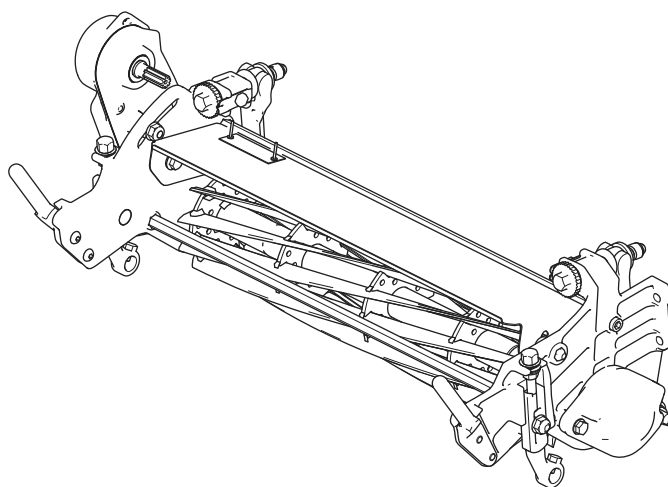
Model No. 04832—Serial No. 408000000 and Up

Model No. 04833—Serial No. 410300000 and Up

Model No. 04834—Serial No. 410000000 and Up

Model No. 04842—Serial No. 410300000 and Up

Model No. 04843—Serial No. 410300000 and Up



This product complies with all relevant European directives. For details, please see the Declaration of Incorporation (DOI) at the back of this publication.

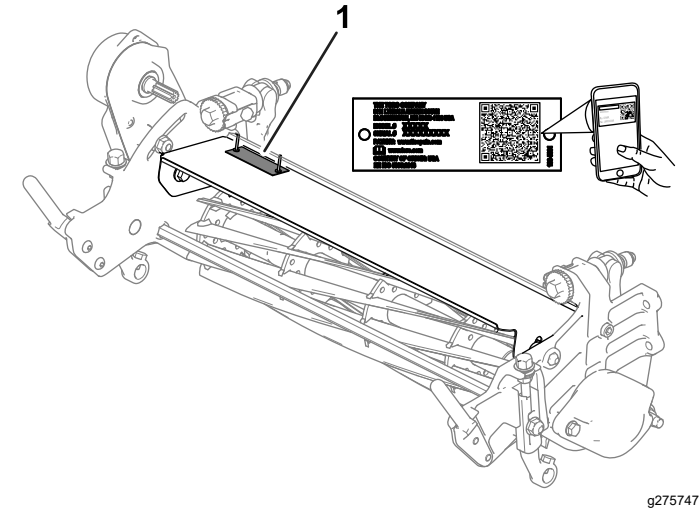
# Introduction

This cutting unit is designed for cutting turf on greens and small fairways of golf courses. Using this product for purposes other than its intended use could prove dangerous to you and bystanders.

Read this information carefully to learn how to operate and maintain your product properly and to avoid injury and product damage. You are responsible for operating the product properly and safely.

Visit [www.Toro.com](http://www.Toro.com) for product safety and operation training materials, accessory information, help finding a dealer, or to register your product.

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** identifies the location of the model and serial numbers on the product. Write the numbers in the space provided.



**Figure 1**

1. Model and serial number location

Model No. \_\_\_\_\_

Serial No. \_\_\_\_\_

This manual identifies potential hazards and has safety messages identified by the safety-alert symbol (**Figure 2**), which signals a hazard that may cause

serious injury or death if you do not follow the recommended precautions.



**Figure 2**

1. Safety-alert symbol

This manual uses 2 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

## General Safety

This product is capable of amputating hands and feet. Always follow all safety instructions to avoid serious personal injury.

- Read and understand the contents of this *Operator's Manual* before starting the machine.
- Use your full attention while operating the machine. Do not engage in any activity that causes distractions; otherwise, injury or property damage may occur.
- Do not put your hands or feet near moving components of the machine.
- Do not operate the machine without all guards and other safety protective devices in place and functioning properly on the machine.
- Keep clear of any discharge opening.
- Keep bystanders and children out of the operating area. Never allow children to operate the machine.
- Before you leave the operator's position, do the following:
  - Park the machine on a level surface.
  - Lower the cutting unit(s).
  - Disengage the drives.
  - Engage the parking brake (if equipped).
  - Shut off the engine and remove the key.
  - Wait for all movement to stop.

Improperly using or maintaining this machine can result in injury. To reduce the potential for injury,

comply with these safety instructions and always pay attention to the safety-alert symbol▲, which means Caution, Warning, or Danger—personal safety instruction. Failure to comply with these instructions may result in personal injury or death.

## Cutting Unit Safety

- The cutting unit is only a complete machine when installed on a traction unit. Read the traction unit *Operator's Manual* carefully for complete instructions on the safe use of the machine.
- Stop the machine, remove the key (if equipped), and wait for all movement to stop before inspecting the attachment after striking an object or if there is an abnormal vibration in the machine. Make all necessary repairs before resuming operation.
- Keep all parts in good working condition and all hardware tightened. Replace all worn or damaged decals.
- Use only accessories, attachments, and replacement parts approved by Toro.

## Blade Safety

A worn or damaged blade can break, and a piece of the blade could be thrown toward you or bystanders, resulting in serious personal injury or death.

- Inspect the blade periodically for wear or damage.
- Use care when checking the blades. Wrap the blades or wear gloves, and use caution when servicing the blades. Only replace or sharpen the blades; never straighten or weld them.
- On multi-bladed machines, take care as rotating 1 blade can cause other blades to rotate.

## Safety and Instructional Decals



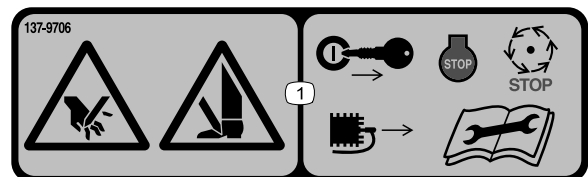
Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or missing.



120-9570

decal120-9570

1. Warning—stay away from moving parts, keep all guards and shields in place.



137-9706

decal137-9706

1. Cutting hazard of the hand or foot—shut off the engine, remove the key or disconnect the spark plug, wait for all moving parts to stop, and read the *Operator's Manual* before performing maintenance.

# Setup

## 1

### Installing the Front Roller

No Parts Required

#### Procedure

The cutting unit is shipped without a front roller. Obtain a roller from your authorized Toro dealer and install it on the cutting unit, as follows:

1. Remove the plow bolt, washer, and flange nut securing one of the height-of-cut arms to the cutting unit side plate ([Figure 3](#)).

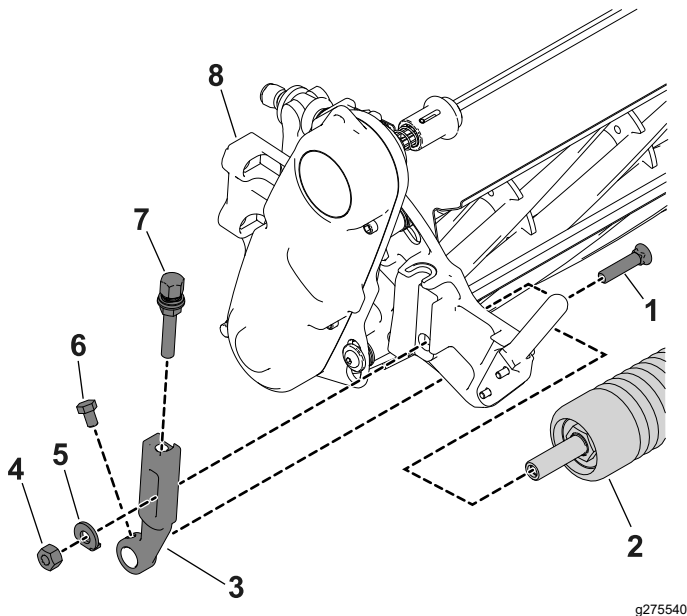


Figure 3

- |                      |                          |
|----------------------|--------------------------|
| 1. Plow bolt         | 5. Washer                |
| 2. Roller            | 6. Flange nut            |
| 3. Height-of-cut arm | 7. Roller-mounting screw |
| 4. Adjusting screw   | 8. Cutting-unit assembly |

2. Loosen the roller-mounting screws in the height-of-cut arms.
3. Slide the roller shaft into the height-of-cut arm on the opposite end of the cutting unit.
4. Slide the height-of-cut arm onto the roller shaft.
5. Loosely secure the roller to the cutting unit with the height-of-cut arm and fasteners previously removed.
6. Center the roller between the height-of-cut arms.

7. Tighten the roller-mounting screws.
8. Adjust to the desired height-of-cut and tighten the height-of-cut arm mounting fasteners.

## 2

### Installing the Cutting Unit to the Traction Unit

No Parts Required

#### Procedure

Install the cutting unit to the traction unit; refer to your traction unit *Operator's Manual* for installation instructions.

## 3

### Adjusting the Cutting Unit

No Parts Required

#### Procedure

1. Access the cutting unit by lowering the traction-unit handle to the ground ([Figure 4](#)).

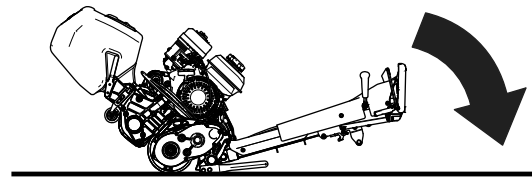


Figure 4

2. Adjust the bedknife to the reel; refer to [Adjusting the Bedknife to the Reel](#) (page 7).
3. Adjust the height of cut; refer to [Adjusting the Height of Cut](#) (page 8).
4. Adjust the grass shield; refer to [Adjusting the Grass Shield](#) (page 12).

# Product Overview

## Specifications

<b>Traction-unit compatibility</b>	These cutting units mount on the appropriately-sized Greensmaster 1018, 1021 and 1026 traction units.		
<b>Cutting width</b>	<b>Model No. 04823 and 04824</b>	<b>Model No. 04832, 04833, and 04834</b>	<b>Model No. 04842 and 04843</b>
	46 cm (18 inches)	53 cm (21 inches)	66 cm (26 inches)
<b>Height-of-cut</b>	Adjust the front roller by 2 vertical screws and held by 2 screws and nuts.		
<b>Height-of-cut range</b>	<b>1.5 to 8 mm (0.062 to 0.312 inch)</b>	<b>6 to 16 mm (0.250 to 0.625 inch)</b>	<b>13 to 25.4 mm (0.5 to 1.0 inch)</b>
	Position the traction-unit drum in the front setting.	Position the traction-unit drum in the rear setting.	Position the traction-unit drum in the rear setting and install 2 front, high height-of-cut brackets (Part No. 99-4286).
<b>Reel bearings</b>	There are 2 sealed stainless steel, deep-groove ball bearings.		
<b>Front roller</b>	The front roller is 6.3 cm (2.5 inches) in diameter with a variety of configurations selected by the customer.		
<b>Bedknife</b>	This machine comes standard with an EdgeMax Microcut bedknife. Optional bedknives with a variety of configurations are available. The bedknife is fastened to a machined, cast-iron bedbar with 11 screws (Greensmaster 1018), 13 screws (Greensmaster 1021), or 16 screws (Greensmaster 1026).		
<b>Bedknife adjustment</b>	There is a dual-screw adjustment to the reel with detents corresponding to 0.018 mm (0.0007 inch) of bedknife movement for each indexed position.		
<b>Grass shield</b>	The shield enhances grass discharge from the reel in wet conditions.		
<b>Counterweight</b>	A cast-iron weight mounted opposite to the drive line balances the cutting unit.		
<b>Net weight</b>	<b>Model No. 04823 and 04824</b>	<b>Model No. 04832, 04833, and 04834</b>	<b>Model No. 04842 and 04843</b>
	04823: 23 kg (51 lb); 04824: 24 kg (54 lb)	04832: 24 kg (52 lb); 04833: 25 kg (55 lb); 04834: 26 kg (58 lb)	04842: 27 kg (59 lb); 04843: 29 kg (63 lb)
<b>Clip rate</b>	Refer to your traction unit <i>Operator's Manual</i> .		

## Attachments/Accessories

A selection of Toro approved attachments and accessories is available for use with the machine to enhance and expand its capabilities. Contact your Authorized Service Dealer or authorized Toro distributor or go to [www.Toro.com](http://www.Toro.com) for a list of all approved attachments and accessories.

To ensure optimum performance and continued safety certification of the machine, use only genuine Toro replacement parts and accessories. Replacement parts and accessories made by other manufacturers could be dangerous, and such use could void the product warranty.

# Operation

Refer to your traction unit *Operator's Manual* for detailed operation instructions. Before using the cutting unit each day, adjust the bedknife; refer to [Adjusting the Bedknife Daily](#) (page 6). Test the quality of cut by cutting a test swath before using the cutting unit on a green to ensure that the finished cut is correct.

## Adjusting the Cutting Unit

### Adjusting the Bedknife-to-Reel Contact

#### Adjusting the Bedknife Daily

Prior to mowing each day, or as required, verify proper bedknife-to-reel contact. **Perform this procedure even though quality of cut is acceptable.**

**Note:** This procedure can be performed with the cutting unit installed to the traction unit.

1. Shut off the traction-unit engine.
2. Access the cutting unit by lowering the traction-unit handle to the ground ([Figure 5](#)).

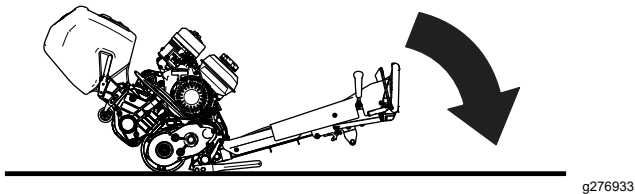


Figure 5

3. Slowly rotate the reel in a reverse direction, listening for reel-to-bedknife contact.
  - If no contact is evident, adjust the bedknife as follows
    - A. Turn the bedbar adjusting screws clockwise ([Figure 6](#)), 1 click at a time, until you feel and hear light contact.

**Note:** The bedbar adjusting screws have detents corresponding to 0.018 mm (0.0007 inch) bedknife movement for each indexed position.

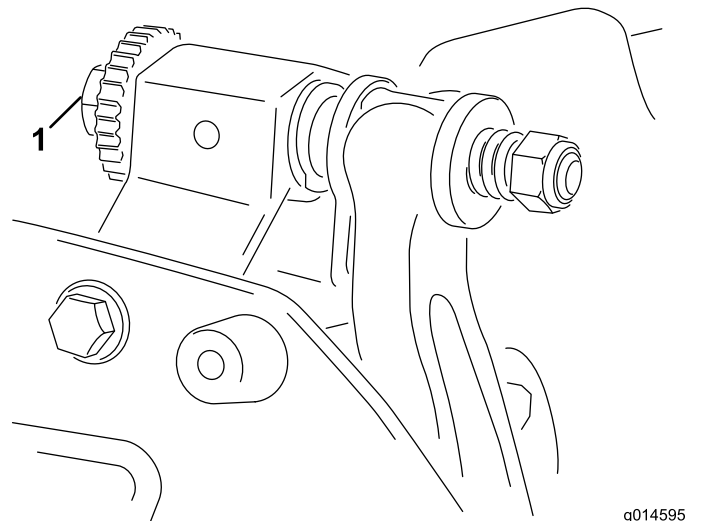


Figure 6

1. Bedbar adjusting screw

- B. Insert a long strip of cutting performance paper (Toro Part No. 125-5610) between the reel and bedknife, perpendicular to the bedknife ([Figure 8](#)), then **slowly** rotate the reel forward; it should cut the paper; if not, repeat steps [A](#) and [B](#) until it does.
- If excessive contact/reel drag is evident, backlap, reface the front of the bedknife, or grind the cutting unit to achieve the sharp edges needed for precision cutting (Refer to the *Toro Manual for Sharpening Reel and Rotary Mowers*, Form No. 09168SL).

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

**Note:** As the reel blades continue to run against the bedknife, a slight burr will appear on the front cutting edge surface along the full length of the bedknife. Occasionally run a file across the front edge to remove this burr to improve cutting.

After extended running, a ridge will eventually develop at both ends of the bedknife. Round off these notches or file them flush with the cutting edge of the bedknife to ensure smooth operation.

## Adjusting the Bedknife to the Reel

Use this procedure during initial cutting-unit setup and after grinding, backlapping, or disassembling the reel. This **is not** a daily adjustment.

**Note:** This procedure can be performed with the cutting unit installed to the traction unit.

1. Shut off the traction-unit engine.
2. Access the cutting unit by lowering the traction-unit handle to the ground ([Figure 7](#)).

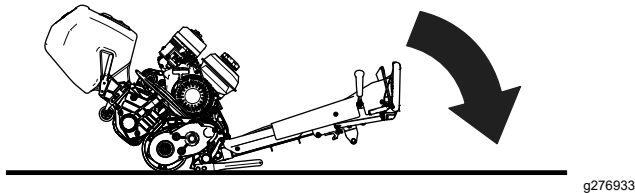


Figure 7

3. Rotate the reel so that 1 of the blades crosses the bedknife edge between the first and second bedknife screw heads located on the right side of the cutting unit.
4. Make an identifying mark on the blade where it crosses the bedknife edge.

**Note:** This makes later adjustments easier.

5. Insert a 0.05 mm (0.002 inch) shim (Toro Part No. 140-5531) between the blade and the bedknife edge at the point marked in step 4.
6. Turn the right bedbar adjusting screw ([Figure 6](#)) until you feel light pressure on the shim when sliding it side-to-side. Remove the shim.
7. For the left side of the cutting unit, slowly rotate the reel so that the closest blade crosses the bedknife edge between the first and second screw heads.
8. Repeat steps 4 through 6 for the left side of the cutting unit and left bedbar adjusting screw.
9. Repeat steps 5 and 6 until there is light pressure at the contact points on both the left and right sides of the cutting unit.
10. To obtain light contact between the reel and bedknife, turn each bedbar adjusting screw clockwise 3 clicks.

**Note:** Each click on the bedbar adjusting screw moves the bedknife 0.018 mm (0.0007 inches).

**Do not over tighten the adjusting screws.**

Turning the adjusting screw clockwise moves the bedknife edge closer to the reel. Turning the adjusting screw counterclockwise moves the bedknife edge away from the reel.

11. Insert a long strip of cutting performance paper (Toro Part No. 125-5610) between the reel and

bedknife, perpendicular to the bedknife ([Figure 8](#)), then **slowly** rotate the reel forward; it should cut the paper; if not, turn each bedbar adjusting screw clockwise 1 clicks and repeat this step until it cuts the paper.

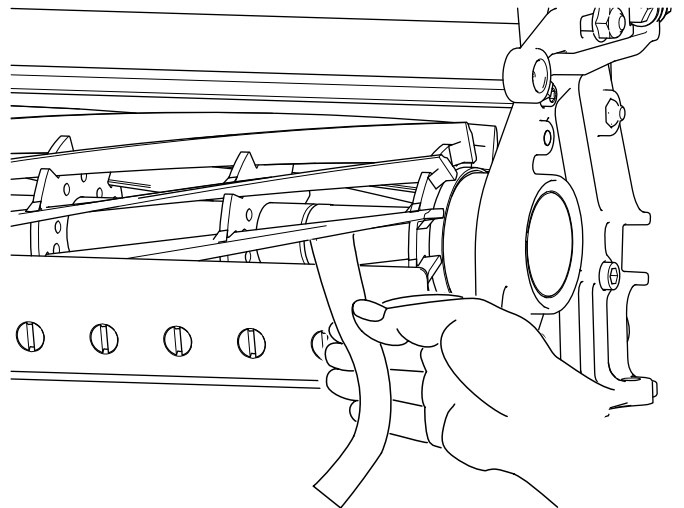


Figure 8

**Note:** If excessive contact/reel drag is evident, backlap, reface the front of the bedknife, or grind the cutting unit to achieve the sharp edges needed for precision cutting (Refer to the *Toro Manual for Sharpening Reel and Rotary Mowers*, Form No. 09168SL).

## Adjusting the Height of Cut

Set the height of cut to the desired height using a height-of-cut gauge, and ensure that your cutting unit is equipped with a bedknife that is best suited for your desired height of cut; refer to [Height-of-Cut and Bedknife Selection Charts](#) (page 9).

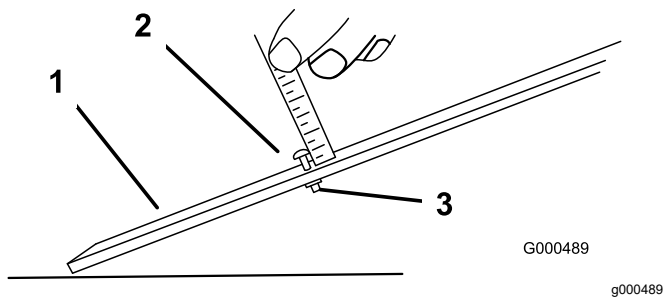
## Adjusting the Height-of-Cut Gauge

Before adjusting the height of cut, set the height-of-cut gauge as follows:

1. Loosen the nut on the gauge bar and set the adjusting screw to the desired height of cut ([Figure 9](#)).

**Note:** The distance between the bottom of the screw head and the face of bar is the height of cut.





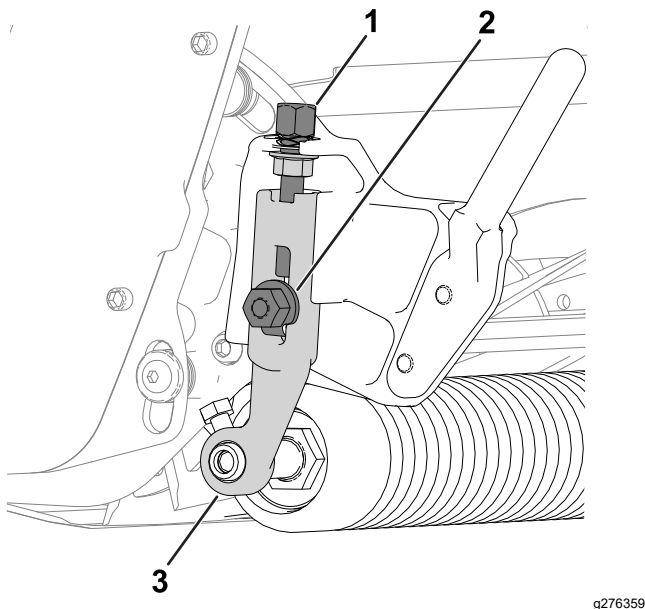
**Figure 9**

1. Gauge bar
2. Height-adjusting screw
3. Nut

2. Tighten the nut.

## Adjusting the Height of Cut

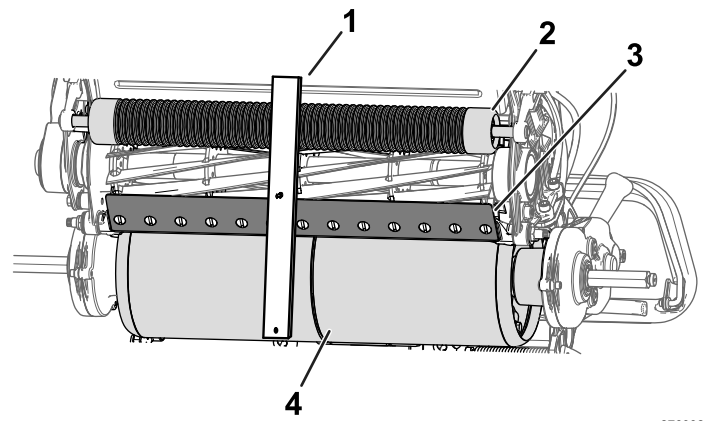
1. Loosen the locknuts that secure the height-of-cut arms to the cutting-unit side plates ([Figure 10](#)).



**Figure 10**

1. Adjusting screw
2. Locknut
3. Height-of-cut arm

2. Hook the screw head of the height-of-cut gauge onto the right side of the cutting edge of the bedknife and rest the rear end of the bar onto the traction drum ([Figure 11](#)).



**Figure 11**

1. Gauge bar
2. Roller
3. Bedknife
4. Traction drum

3. Rotate the adjusting screw until the roller contacts the front of the gauge bar.
4. Repeat steps 2 and 3 for the left side.
5. Adjust both ends of the roller until the entire roller is parallel to the bedknife.

**Important:** When set properly, the roller and traction drum will contact the gauge bar and the screw will be snug against the bedknife. This ensures that the height of cut is identical at both ends of the bedknife.

6. Tighten the nuts to secure the adjustment enough to remove play from the washer.
7. Verify that the height-of-cut setting is correct; repeat this procedure if necessary.



# Height-of-Cut and Bedknife Selection Charts

Height-of-Cut Chart			
Height of Cut (mm)	Height of Cut (inches)	Drum Position	Universal Groomer
1.5	0.062	F	Y
3.2	0.125	F	Y
4.8	0.188	F	Y
6.4	0.250	F/R	Y
9.5	0.312	F/R	Y
9.5	0.375	R	Y
12.7	0.500	R	Y
15.9	0.625	R	N
19.1	0.750*	R	N
22.2	0.875*	R	N
25.4	1.000*	R	N
28.6	1.125*	R	N
30.2	1.188*	R	N

F: Forward drum position; recommended for greens.  
R: Rear drum position; recommended for tees.  
\* 2 High height-of-cut brackets (Part No. 99-4286) required.

Use the following chart to determine which bedknife is best suited for the desired height of cut.

Bedknife/Height-of-Cut Selection Chart					
Bedknife	GR 18" Part No.	GR 21" Part No.	GR 26" Part No.	Height of Cut	Top Grind Angle
EdgeMax Micro-cut (Standard 04824, 04832, 04833, 04834)	117-1530	115-1880	139-4324	1.5 to 4.7 mm (0.062 to 0.188 inch)	3°
Micro-cut (Optional)	98-7261	93-4362	112-9275	1.5 to 4.7 mm (0.062 to 0.188 inch)	3°
Micro-cut Extended (Optional)	110-2300	108-4303	-	1.5 to 4.7 mm (0.062 to 0.188 inch)	7°
EdgeMax Micro-cut Short (Optional)	139-4318	139-4320	139-4322	1.5 to 4.7 mm (0.062 to 0.188 inch)	3°
EdgeMax Tournament (Standard 04842, 04843)	115-1532	115-1881	117-1548	3.1 to 12.7 mm (0.125 to 0.500 inch)	3°
Tournament (Optional)	98-7260	93-4263	94-5885	3.1 to 12.7 mm (0.125 to 0.500 inch)	3°
Tournament Extended (Optional)	-	108-4302	-	3.1 to 12.7 mm (0.125 to 0.500 inch)	7°
EdgeMax Tournament Short (Optional)	139-4319	139-4321	139-4323	3.1 to 12.7 mm (0.125 to 0.500 inch)	3°
Low-cut (Optional)	110-2301	93-4321	93-9015	4.7 to 25.4 mm (0.188 to 1.00 inch)	3°
High-cut (Optional)	-	94-6392	104-2646	7.9 to 25.4 mm (0.312 to 1.00 inch)	3°
EdgeMax Fairway (Optional)	-	137-6092	-	9.5 to 25.4 mm (0.375 to 1.00 inch)	10°
Fairway (Optional)	-	137-6097	107-8181	9.5 to 25.4 mm (0.375 to 1.00 inch)	10°

**Note:** Use extended or short bedknives for less or more aggressive cut.

# Maintenance

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

## Checking the Reel-Driveshaft Grease Point

**Service Interval:** Yearly

1. Remove the hardware that secures the reel-drive assembly to the side plate (Figure 12).

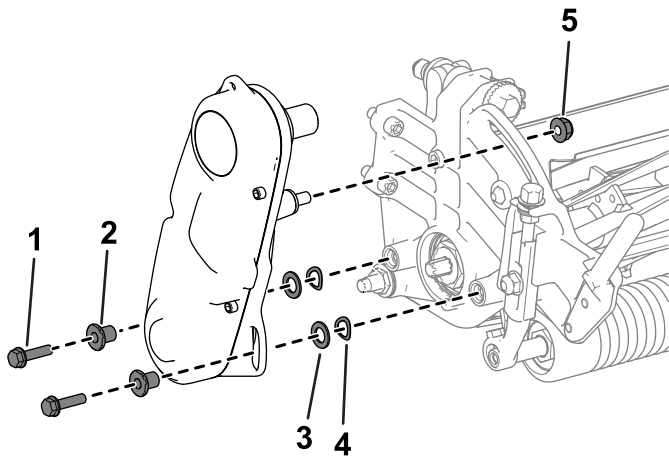


Figure 12

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- |                      |                  |
|----------------------|------------------|
| 1. Socket-head screw | 4. Spring washer |
| 2. Spacer            | 5. Nut           |
| 3. Washer            |                  |

2. Remove the reel-drive assembly, flat washers, spring washers, and spacers from the side plate (Figure 12).
3. Check the inside of the reel driveshaft (Figure 13) for any remaining grease.

If you do not see a sufficient amount of grease, add more grease to the male and female spline shaft.

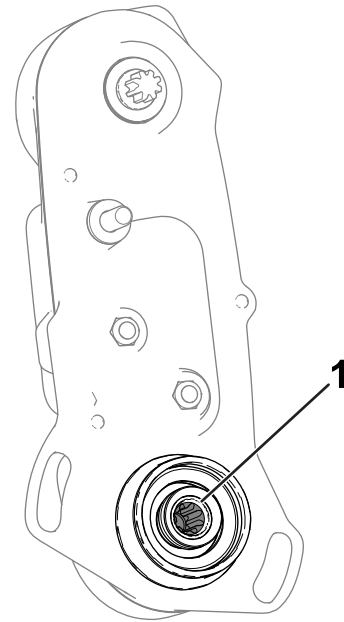


Figure 13

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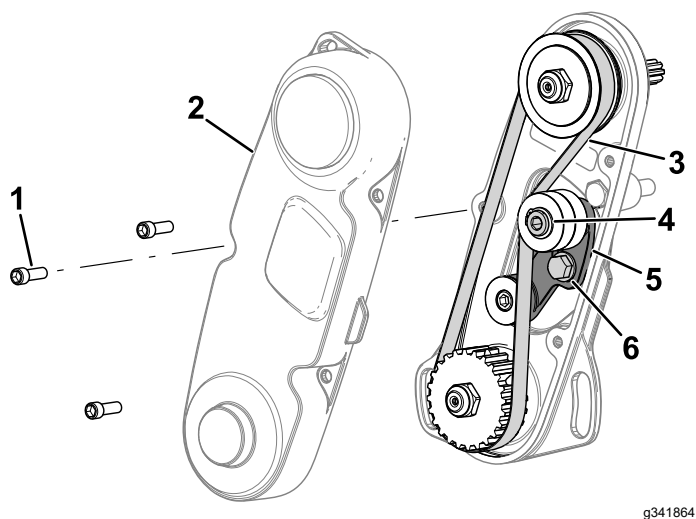
1. Reel driveshaft

4. Use the previously removed socket-head screws, washers, and spacers to secure the reel-drive assembly to the side plate.
5. Install the cutting unit to the traction unit; refer to your traction unit *Operator's Manual*.

## Adjusting the Reel Drive Belt Tension

**Service Interval:** Yearly

1. Remove the cover from the reel drive housing by removing the 3 screws holding it in place.
2. Loosen the idler-arm bolt and rotate the idler arm to remove tension from the belt.
3. Use a beam-style torque wrench to apply 6 to 7 N·m (55 to 60 in-lb) of force to the upper idler-arm internal screw (Figure 14).



**Figure 14**

- |                      |                           |
|----------------------|---------------------------|
| 1. Socket-head screw | 4. Idler-arm internal hex |
| 2. Belt cover        | 5. Idler arm              |
| 3. Belt              | 6. Idler-arm bolt         |

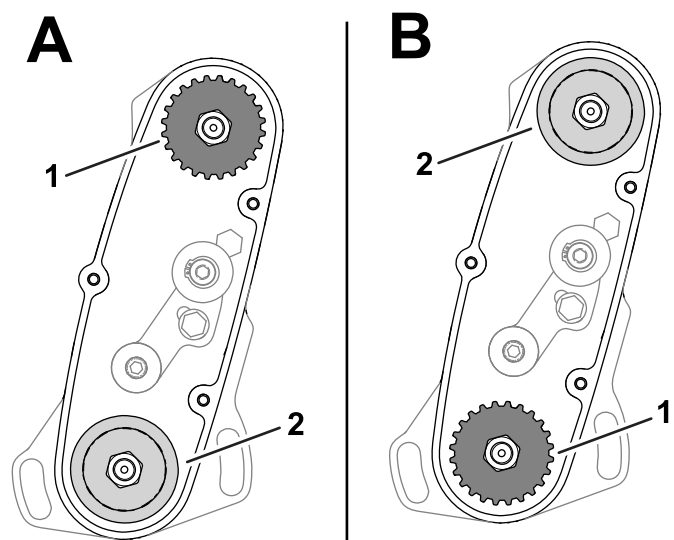
4. Tighten the idler-arm bolt to secure the idler arm.
5. Install the cover with the 3 corresponding screws.

## Adjusting the Clip Rate

The clip rate is determined by the following machine settings:

- **Reel speed:** The reel speed can be adjusted to a high or low setting; refer to your traction unit *Operator's Manual*.
- **Reel-drive-pulley position:** The reel-drive pulleys (22-tooth and 24-tooth) can be set in 2 positions:
  - **HIGH** position: "A" in [Figure 15](#)
  - **LOW** position: "B" in [Figure 15](#)

**Note:** The pulley position is set to the Low position from the factory.

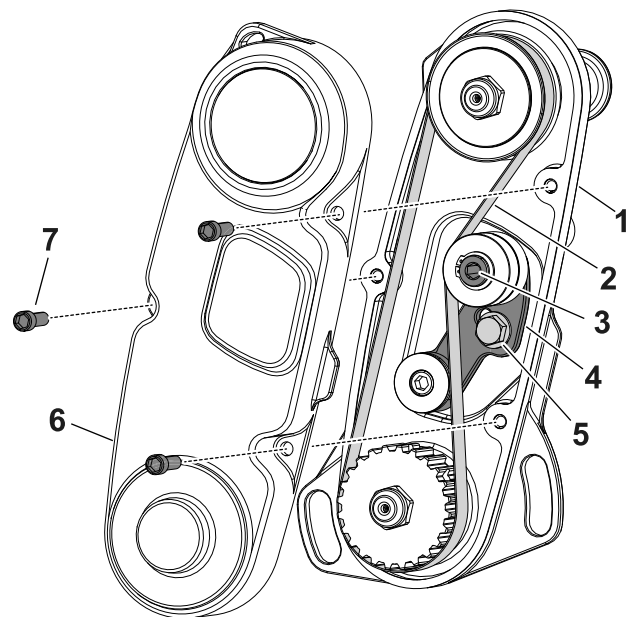


**Figure 15**

- |                      |                      |
|----------------------|----------------------|
| 1. Pulley (24 tooth) | 2. Pulley (22 tooth) |
|----------------------|----------------------|

To adjust the position of the pulleys, refer to the following steps:

1. Remove the belt cover to expose the belt ([Figure 16](#)).

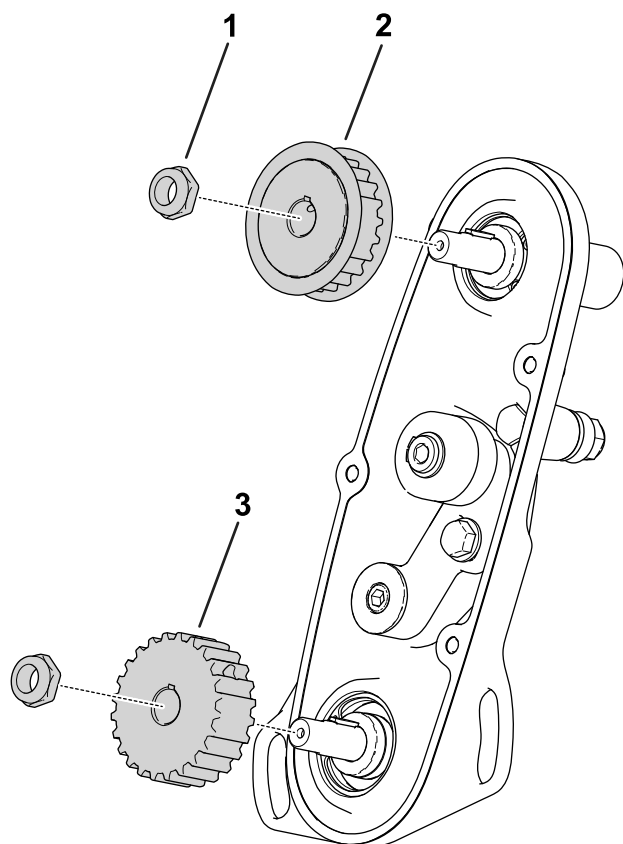


**Figure 16**

- |                                |                      |
|--------------------------------|----------------------|
| 1. Reel-drive-assembly housing | 5. Idler-arm bolt    |
| 2. Belt                        | 6. Belt cover        |
| 3. Idler-arm internal hex      | 7. Socket-head screw |
| 4. Idler arm                   |                      |

2. Loosen the idler-arm bolt and rotate the idler arm ([Figure 16](#)) to release tension on the belt.
3. Remove the belt ([Figure 16](#)).

4. Loosen the nut on each pulley, remove the pulleys, and use the nuts to install the pulleys in your desired configuration.



**Figure 17**

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- |                      |                      |
|----------------------|----------------------|
| 1. Nut               | 3. Pulley (24 tooth) |
| 2. Pulley (22 tooth) |                      |

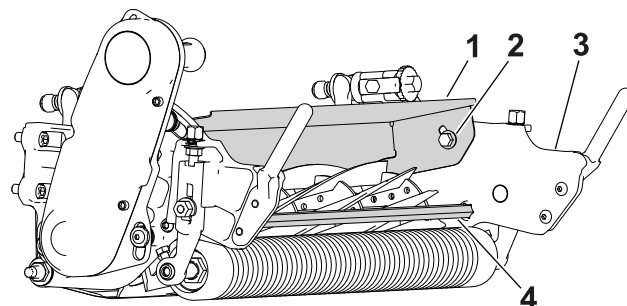
5. Torque the pulley nuts to 37 to 45 N·m (27 to 33 ft-lb)
6. Install the belt and tension the belt by applying 6 to 7 N·m (55 to 60 in-lb) to the idler-arm internal hex shown in [Figure 16](#).
7. Tighten the idler-arm bolt and install the belt cover.

## Adjusting the Grass Shield

Adjust the grass shield to ensure that the clippings are cleanly discharged from the reel area, as follows:

**Note:** The shield is adjustable to compensate for changes in turf conditions. Adjust the shield closer to the reel when the turf is extremely dry. By contrast, adjust the shield further away from the reel when the turf conditions are wet. The shield should be parallel to the reel to ensure optimum performance. Adjust it after the reel is sharpened on a reel grinder.

1. Loosen the screws that secure the grass shield ([Figure 18](#)) to the cutting unit.



g275291

**Figure 18**

- |                 |                |
|-----------------|----------------|
| 1. Grass shield | 3. Side plate  |
| 2. Bolt (2)     | 4. Support rod |

2. Insert a 1.5 mm (0.060 inch) feeler gauge between the top of the reel and the shield, then tighten the screws.

**Important:** Ensure that the shield and reel are an equal distance apart across the entire reel.

**Note:** Adjust the gap as needed for your turf conditions.

# Bedknife Specifications

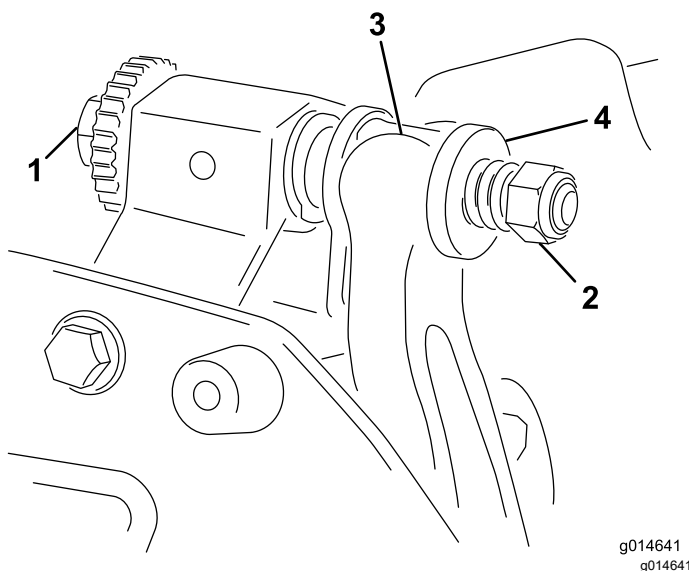
## Servicing the Bedknife

Only a properly trained mechanic should service the bedbar and bedknife to prevent damage to the reel, bedbar, or bedknife. Ideally, take the cutting unit to your authorized Toro distributor for service. Refer to the *Service Manual* for your traction unit for complete instructions, special tools, and diagrams for servicing the bedknife. Should you ever need to remove or assemble the bedbar yourself, instructions are provided below, as are the specifications for servicing the bedknife.

**Important:** Always follow the bedknife procedures detailed in your *Service Manual* when servicing the bedknife. Failure to install and grind the bedknife correctly can lead to damage to the reel, bedbar, or bedknife.

### Removing the Bedbar/Bedknife Assembly

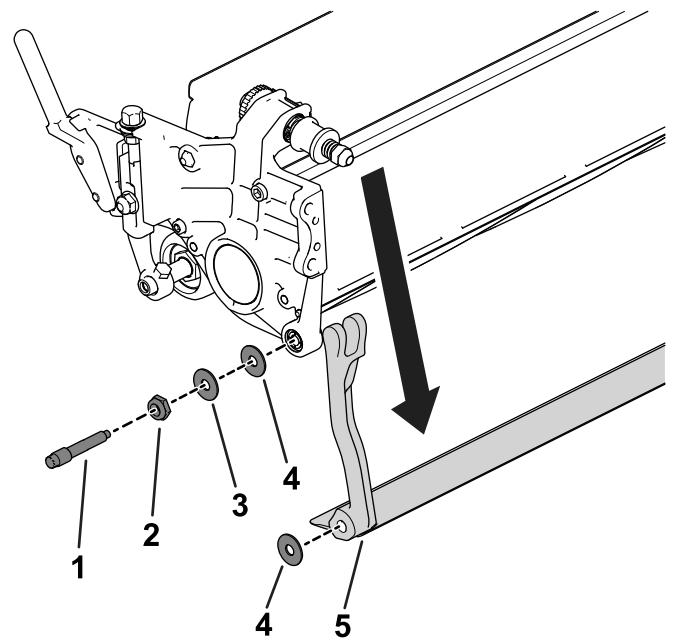
1. Turn the bedbar adjusting-screw counterclockwise to back the bedknife away from the reel ([Figure 19](#)).



**Figure 19**

- |                           |           |
|---------------------------|-----------|
| 1. Bedbar-adjusting screw | 3. Bedbar |
| 2. Spring-tension nut     | 4. Washer |

2. Back out the spring-tension nut until the washer is no longer tensioned against the bedbar ([Figure 19](#)).
3. On each side of the machine, loosen the locknut shown in [Figure 20](#).



**Figure 20**

- |                 |                   |
|-----------------|-------------------|
| 1. Bedbar bolt  | 4. Plastic washer |
| 2. Nut          | 5. Bedbar         |
| 3. Steel washer |                   |

4. Remove each bedbar bolt, allowing the bedbar to be pulled downward and removed from the cutting unit ([Figure 20](#)).

Account for the 2 steel washers and 1 plastic washer on each end of the bedbar ([Figure 20](#)).

5. Remove the bedknife from the bedbar by removing all screws holding it in place. Use a socket wrench with the Bedknife Screw Tool (Part No. TOR510880).

**Note:** You may use a mechanical or pneumatic impact wrench to loosen the bedknife screws.

**Note:** Discard the bedknife and screws.

### Installing the New Bedknife

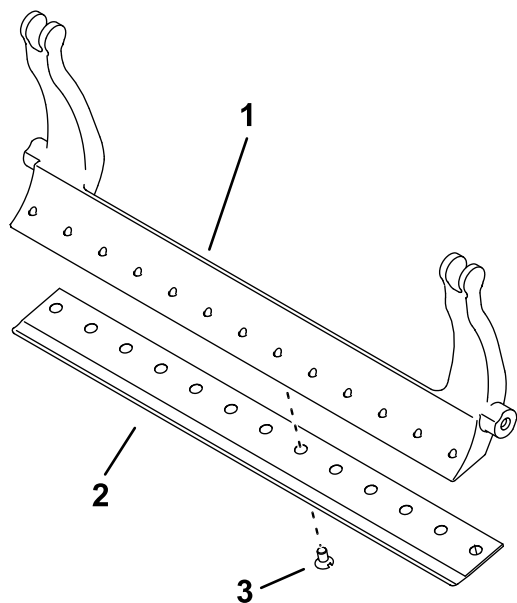
1. Select a new bedknife per the [Height-of-Cut and Bedknife Selection Charts](#) (page 9).
2. Remove the rust, scale, and corrosion from the bedbar surface and apply a thin layer of oil to the bedbar surface.

**Important:** Do not remove casting material from the bedbar. The bedbar is concave in the middle by design; do not grind.

3. Clean the threads in the bedbar.
4. Apply anti-seize compound on the new bedknife screws and install the bedknife on the bedbar.

**Important:** Only use new bedknife screws.

**Note:** The quantity of screws varies depending on the bedbar.



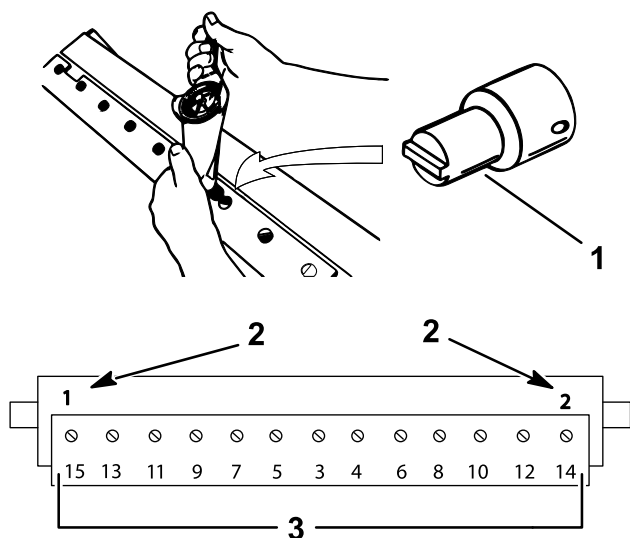
**Figure 21**

Bedbar with 13 Screws Shown

1. Bedbar
2. Bedknife
3. Screw

5. Torque the 2 outer screws to 1 N·m (10 in-lb).
6. Working from the center of the bedknife, torque the screws to 25.9 +/- 1.4 N·m (19 +/- 1 ft-lb).

**Important:** Do not tighten the bedknife screws using a mechanical or pneumatic impact wrench.

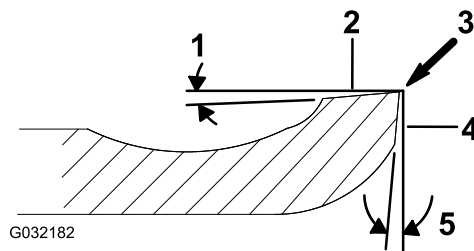


**Figure 22**

1. Bedknife screw tool (Part No. TOR510880)
2. Install and torque these first to 1 N·m (10 in-lb).
3. Torque to 25.9 +/- 1.4 N·m (19 +/- 1 ft-lb).

7. Grind the new bedknife; refer to [Bedknife Grinding Specifications](#) (page 14).

## Bedknife Grinding Specifications



**Figure 23**

1. Relief angle
2. Top face
3. Remove burr
4. Front face
5. Front angle

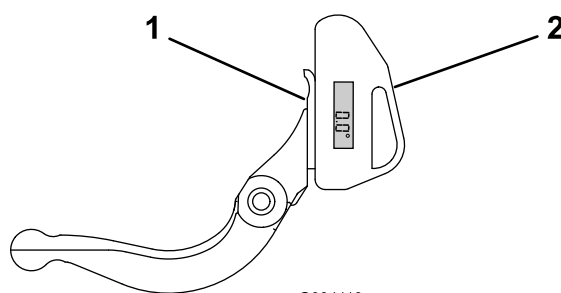
Bedknife Relief (Top) Angle	See <a href="#">Height-of-Cut and Bedknife Selection Charts</a> (page 9).
Front Angle Range	13° to 17°
Fairway Bedknife Front Angle	10°

## Checking the Top Grind Angle

The angle that you use to grind your bedknives is very important.

Use the angle indicator (Toro Part No. 131-6828) and the angle-indicator mount (Toro Part No. 131-6829) to check the angle that your grinder produces and then correct for any grinder inaccuracy.

1. Place the angle indicator on the bottom side of the bedknife as shown in [Figure 24](#).

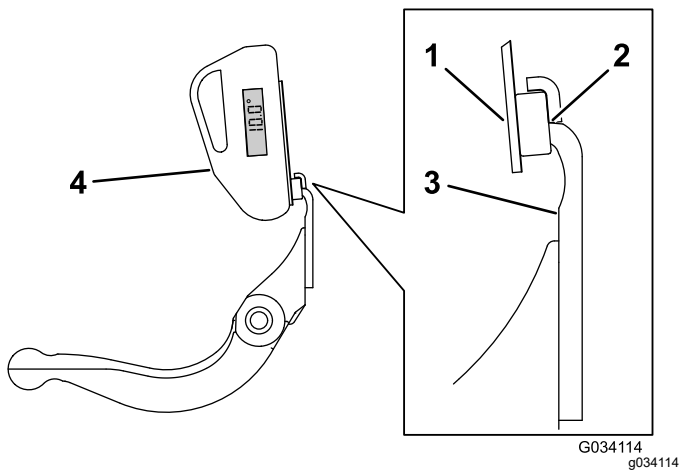


**Figure 24**

1. Bedknife (vertical)
2. Angle indicator

2. Press the Alt Zero button on the angle indicator.
3. Place the angle-indicator mount on the edge of the bedknife so that the edge of the magnet mates with the edge of the bedknife ([Figure 25](#)).

**Note:** The digital display should be visible from the same side during this step as it was in step 1.



**Figure 25**

- |   |                    |
|---|--------------------|
| 1. Angle-indicator mount                                  | 3. Bedknife        |
| 2. Edge of the magnet mated with the edge of the bedknife | 4. Angle indicator |

- Place the angle indicator on the mount as shown in [Figure 25](#).

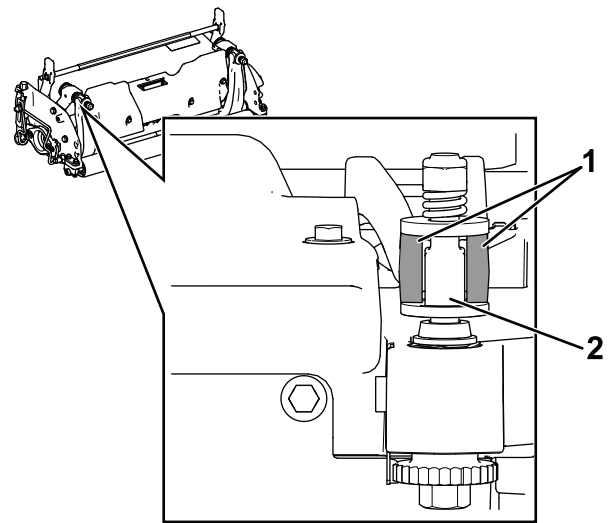
**Note:** This is the angle that your grinder produces, and should be within 2 degrees of the recommended top grind angle.

## Installing the Bedbar/Bedknife Assembly

- Install the bedbar/bedknife assembly, positioning the mounting ears between the washers and the bedbar-adjusting screw ([Figure 19](#)).

**Important:** Center the DPA adjusters in the bedbar ears as shown in [Figure 26](#).

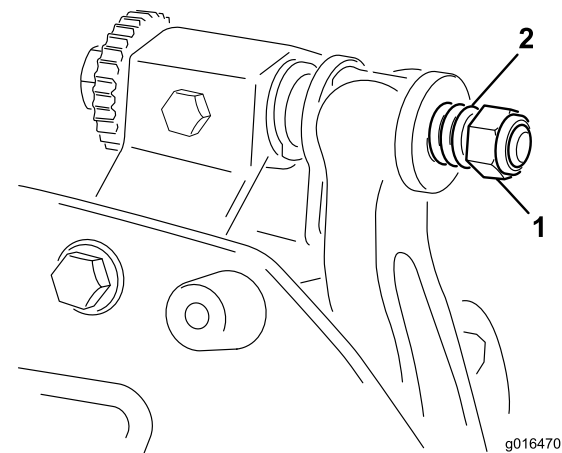
If DPA adjusters are installed against the bedbar ears, this may negatively affect the bedknife-to-reel contact.



**Figure 26**

- |                |                 |
|----------------|-----------------|
| 1. Bedbar ears | 2. DPA adjuster |
|----------------|-----------------|

- Secure the bedbar to each side plate with the bedbar bolts (nuts on bolts) and 3 washers (6 total).
- Position a nylon washer on each side of the side-plate boss. Place a steel washer outside each of the nylon washers ([Figure 27](#)).
- Torque the bedbar bolts to 27 to 36 N·m (20 to 27 ft-lb).
- Tighten the locknuts until you remove the end play from steel washers, but you are able to rotate them by hand. The washers on the inside may have a gap.
- Tighten the spring tension nut until the spring is collapsed, then back it off 1/2 turn ([Figure 27](#)).



**Figure 27**

- |                       |           |
|-----------------------|-----------|
| 1. Spring-tension nut | 2. Spring |
|-----------------------|-----------|



- Adjust the bedknife to the reel; refer to [Adjusting the Bedknife to the Reel \(page 7\)](#).

**Note:** This causes the land width to grow slightly.

- Adjust the cutting unit; refer to your cutting unit *Operator's Manual*.

**Note:** To extend the longevity of the sharpness of the edge of the reel and the bedknife—after grinding the reel and/or the bedknife—check the reel to bedknife contact again after cutting 2 greens, as any burrs will be removed. Burrs may create improper reel to bedknife clearance, which can accelerate wear.

## Reel Specifications

### Preparing the Reel for Grinding

- Ensure that all cutting unit components are in good condition and correct any issues before grinding.
- Follow the reel grinder manufacturer's instructions to grind the cutting reel to the following specifications.

Reel Grinding Specifications	
New Reel Diameter	128.5 mm (5.06 inches)
Reel Diameter Service Limit	114.3 mm (4.50 inches)
Blade Relief Angle	30° ± 5°
Blade Land Width Range	0.8 to 1.2 mm (0.03 to 0.05 inches)
Reel Diameter Taper Service Limit	0.25 mm (0.010 inch)

## Backlapping the Cutting Unit

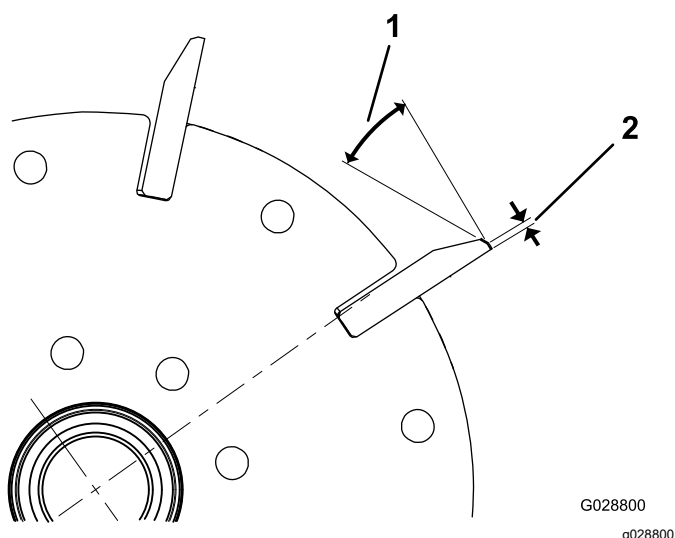
To backlap the cutting unit, use the Access Backlap Kit (Model No. 139-4342) or the Backlap Kit (Model No. 04800); refer to the operating instructions in the kit *Installation Instructions*. Contact your authorized Toro distributor to acquire one of these kits.

### Relief-Grinding the Reel

The new reel has a land width of 1.3 to 1.5 mm (0.030 to 0.050 inch) and a 30° relief grind.

When the land width gets larger than 3 mm (0.120 inch) wide, do the following:

- Apply a 30° relief grind on all reel blades until the land width is 0.8 mm (0.03 inch) wide ([Figure 28](#)).



**Figure 28**

- 30°
- 0.8 mm (0.03 inch)

- Spin grind the reel to achieve <0.025 mm (0.001 inch) reel run-out.

# Declaration of Incorporation

The Toro Company, 8111 Lyndale Ave. South, Bloomington, MN, USA declares that the following unit(s) conform(s) to the directives listed, when installed in accordance with the accompanying instructions onto certain Toro models as indicated on the relevant Declarations of Conformity.

Model No.	Serial No.	Product Description	Invoice Description	General Description	Directive
04823	406000000 and Up	18in 11-Blade Cutting Unit, Greensmaster 1018 Mower	11-BLADE 18IN FIXED CUTTING UNIT	Lawn Mower	2000/14/EC 2006/42/EC
04824	409600000 and Up	18in 14-Blade Cutting Unit, Greensmaster 1018 Mower	14-BLADE 18IN FIXED CUTTING UNIT	Lawn Mower	2000/14/EC 2006/42/EC
04832	408000000 and Up	21in 8-Blade Cutting Unit, Greensmaster 1021 Mower	8-BLADE 21IN FIXED CUTTING UNIT	Lawn Mower	2000/14/EC 2006/42/EC
04833	410300000 and Up	21in 11-Blade Cutting Unit, Greensmaster 1021 Mower	11-BLADE 21IN FIXED CUTTING UNIT	Lawn Mower	2000/14/EC 2006/42/EC
04834	410000000 and Up	21in 14-Blade Cutting Unit, Greensmaster 1021 Mower	14-BLADE 21IN FIXED CUTTING UNIT	Lawn Mower	2000/14/EC 2006/42/EC
04842	410300000 and Up	26in 8-Blade Cutting Unit, Greensmaster 1026 Mower	8-BLADE 26IN FIXED CUTTING UNIT	Lawn Mower	2000/14/EC 2006/42/EC
04843	410300000 and Up	26in 11-Blade Cutting Unit, Greensmaster 1026 Mower	11-BLADE 26IN FIXED CUTTING UNIT	Lawn Mower	2000/14/EC 2006/42/EC

Relevant technical documentation has been compiled as required per Part B of Annex VII of 2006/42/EC.

We will undertake to transmit, in response to requests by national authorities, relevant information on this partly completed machinery. The method of transmission shall be electronic transmittal.

This machinery shall not be put into service until incorporated into approved Toro models as indicated on the associated Declaration of Conformity and in accordance with all instructions, whereby it can be declared in conformity with all relevant Directives.

Certified:



Tom Langworthy  
Engineering Director  
8111 Lyndale Ave. South  
Bloomington, MN 55420, USA  
November 19, 2024

Authorized Representative:

Marcel Dutrieux  
Manager European Product Integrity  
Toro Europe NV  
Nijverheidsstraat 5  
2260 Oevel  
Belgium

# UK Declaration of Incorporation

The Toro Company, 8111 Lyndale Ave. South, Bloomington, MN, USA declares that the following unit(s) conform(s) to the directives listed, when installed in accordance with the accompanying instructions onto certain Toro models as indicated on the relevant Declarations of Conformity.

Model No.	Serial No.	Product Description	Invoice Description	General Description	Regulation
04823	406000000 and Up	18in 11-Blade Cutting Unit, Greensmaster 1018 Mower	11-BLADE 18IN FIXED CUTTING UNIT	Lawn Mower	S.I. 2001 No. 1701, S.I. 2008 No. 1597
04824	409600000 and Up	18in 14-Blade Cutting Unit, Greensmaster 1018 Mower	14-BLADE 18IN FIXED CUTTING UNIT	Lawn Mower	S.I. 2001 No. 1701, S.I. 2008 No. 1597
04832	408000000 and Up	21in 8-Blade Cutting Unit, Greensmaster 1021 Mower	8-BLADE 21IN FIXED CUTTING UNIT	Lawn Mower	S.I. 2001 No. 1701, S.I. 2008 No. 1597
04833	410300000 and Up	21in 11-Blade Cutting Unit, Greensmaster 1021 Mower	11-BLADE 21IN FIXED CUTTING UNIT	Lawn Mower	S.I. 2001 No. 1701, S.I. 2008 No. 1597
04834	410000000 and Up	21in 14-Blade Cutting Unit, Greensmaster 1021 Mower	14-BLADE 21IN FIXED CUTTING UNIT	Lawn Mower	S.I. 2001 No. 1701, S.I. 2008 No. 1597
04842	410300000 and Up	26in 8-Blade Cutting Unit, Greensmaster 1026 Mower	8-BLADE 26IN FIXED CUTTING UNIT	Lawn Mower	S.I. 2001 No. 1701, S.I. 2008 No. 1597
04843	410300000 and Up	26in 11-Blade Cutting Unit, Greensmaster 1026 Mower	11-BLADE 26IN FIXED CUTTING UNIT	Lawn Mower	S.I. 2001 No. 1701, S.I. 2008 No. 1597

Relevant technical documentation has been compiled as required per Schedule 10 of S.I. 2008 No. 1597.

We will undertake to transmit, in response to requests by national authorities, relevant information on this partly completed machinery. The method of transmission shall be electronic transmittal.

This machinery shall not be put into service until incorporated into approved Toro models as indicated on the associated Declaration of Conformity and in accordance with all instructions, whereby it can be declared in conformity with all relevant Regulations.

This declaration has been issued under the sole responsibility of the manufacturer.  
The object of the declaration is in conformity with relevant UK legislation.



Tom Langworthy  
Engineering Director  
8111 Lyndale Ave. South  
Bloomington, MN 55420, USA  
November 19, 2024

Authorized Representative:

Marcel Dutrieux  
Manager European Product Integrity  
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Spellbrook Lane West  
Bishop's Stortford  
CM23 4BU  
United Kingdom

## EEA/UK Privacy Notice

### **Toro's Use of Your Personal Information**

The Toro Company ("Toro") respects your privacy. When you purchase our products, we may collect certain personal information about you, either directly from you or through your local Toro company or dealer. Toro uses this information to fulfil contractual obligations - such as to register your warranty, process your warranty claim or to contact you in the event of a product recall - and for legitimate business purposes - such as to gauge customer satisfaction, improve our products or provide you with product information which may be of interest. Toro may share your information with our subsidiaries, affiliates, dealers or other business partners in connection these activities. We may also disclose personal information when required by law or in connection with the sale, purchase or merger of a business. We will never sell your personal information to any other company for marketing purposes.

### **Retention of your Personal Information**

Toro will keep your personal information as long as it is relevant for the above purposes and in accordance with legal requirements. For more information about applicable retention periods please contact [legal@toro.com](mailto:legal@toro.com).

### **Toro's Commitment to Security**

Your personal information may be processed in the US or another country which may have less strict data protection laws than your country of residence. Whenever we transfer your information outside of your country of residence, we will take legally required steps to ensure that appropriate safeguards are in place to protect your information and to make sure it is treated securely.

### **Access and Correction**

You may have the right to correct or review your personal data, or object to or restrict the processing of your data. To do so, please contact us by email at [legal@toro.com](mailto:legal@toro.com). If you have concerns about the way in which Toro has handled your information, we encourage you to raise this directly with us. Please note that European residents have the right to complain to your Data Protection Authority.



## The Toro Warranty

### Two-Year or 1,500 Hours Limited Warranty

#### Conditions and Products Covered

The Toro Company warrants your Toro Commercial product ("Product") to be free from defects in materials or workmanship for 2 years or 1,500 operational hours\*, whichever occurs first. This warranty is applicable to all products with the exception of Aerators (refer to separate warranty statements for these products). Where a warrantable condition exists, we will repair the Product at no cost to you including diagnostics, labor, parts, and transportation. This warranty begins on the date the Product is delivered to the original retail purchaser.

\* Product equipped with an 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  
8111 Lyndale Avenue South  
Bloomington, MN 55420-1196

952-888-8801 or 800-952-2740  
E-mail: [commercial.warranty@toro.com](mailto:commercial.warranty@toro.com)

#### Owner Responsibilities

As the product owner, you are responsible for required maintenance and adjustments stated in your *Operator's Manual*. Repairs for product issues caused by failure to perform required maintenance and adjustments are not covered under this warranty.

#### Items and Conditions Not Covered

Not all product failures or malfunctions that occur during the warranty period are defects in materials or workmanship. This 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, or modified non-Toro branded accessories and products.
- Product failures which result from failure to perform recommended maintenance and/or adjustments.
- Product failures which result from operating the Product in an abusive, negligent, or reckless manner.
- Parts consumed through use that are not defective. Examples of parts which are consumed, or used up, during normal Product operation include, but are not limited to, brake pads and linings, clutch linings, blades, reels, rollers and bearings (sealed or greasable), bed knives, spark plugs, castor wheels and bearings, tires, filters, belts, and certain sprayer components such as diaphragms, nozzles, flow meters, and check valves.
- Failures caused by outside influence, including, but not limited to, weather, storage practices, contamination, use of unapproved fuels, coolants, lubricants, additives, fertilizers, water, or chemicals.
- Failure or performance issues due to the use of fuels (e.g. gasoline, diesel, or biodiesel) that do not conform to their respective industry standards.
- Normal noise, vibration, wear and tear, and deterioration. 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.

#### 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 your Authorized Toro Service Center.

#### 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 are covered for the duration of the original product warranty and 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 remanufactured parts for warranty repairs.

#### Deep Cycle and Lithium-Ion Battery Warranty

Deep cycle and Lithium-Ion batteries have a specified total number of kilowatt-hours they can deliver during their lifetime. Operating, recharging, and maintenance techniques can extend or reduce total battery life. As the batteries in this product are consumed, the amount of useful work between charging intervals will slowly decrease until the battery is completely worn out. Replacement of worn out batteries, due to normal consumption, is the responsibility of the product owner. Note: (Lithium-Ion battery only): Refer to the battery warranty for additional information.

#### Lifetime Crankshaft Warranty (ProStripe 02657 Model Only)

The ProStripe which is fitted with a genuine Toro Friction Disc and Crank-Safe Blade Brake Clutch (integrated Blade Brake Clutch (BBC) + Friction Disc assembly) as original equipment and used by the original purchaser in accordance with recommended operating and maintenance procedures, are covered by a Lifetime Warranty against engine crankshaft bending. Machines fitted with friction washers, Blade Brake Clutch (BBC) units and other such devices are not covered by the Lifetime Crankshaft Warranty.

#### Maintenance is at Owner's Expense

Engine tune-up, lubrication, cleaning and polishing, replacement of filters, coolant, and completing recommended maintenance are some of the normal services Toro products require that are at the owner's expense.

#### General Conditions

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

**The Toro Company is not 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 Emissions 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 supplied with your product or contained in the engine manufacturer's documentation.