



**Count on it.**

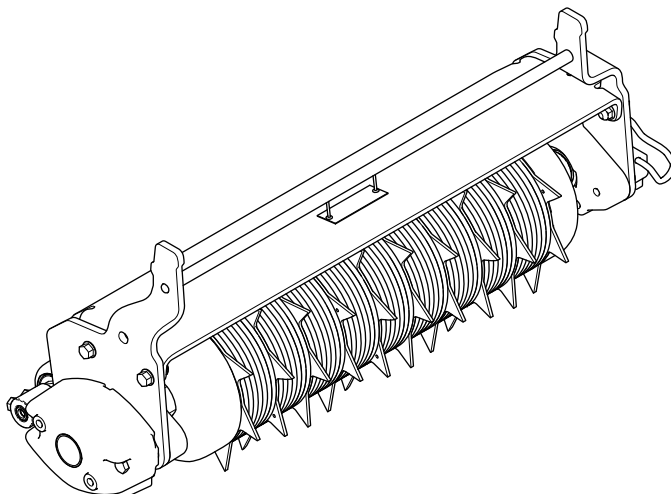
Form No. 3457-334 Rev A

# Operator's Manual

## Spiker

### Greensmaster® 3300/3400 Series TriFlex® Traction Unit

Model No. 04723—Serial No. 406000000 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.

This spiker 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.

**Important:** With your mobile device, you can scan the QR code on the serial number decal (if equipped) to access warranty, parts, and other product information.

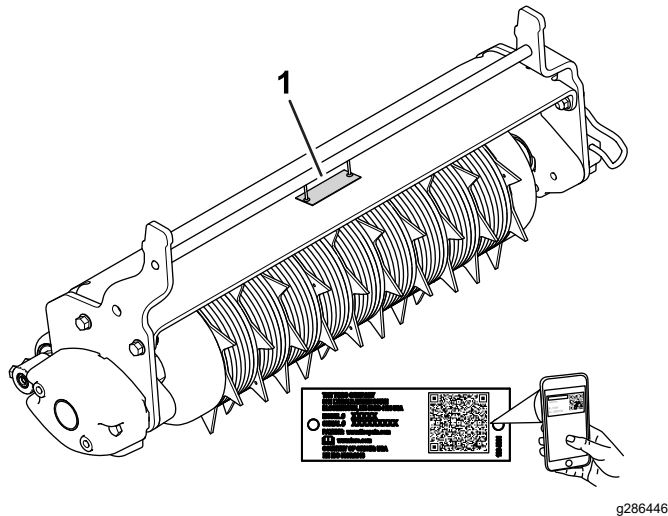
This manual identifies potential hazards and has safety messages identified by the safety-alert symbol ([Figure 2](#)), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.



**Figure 2**  
Safety-alert symbol

g000502

This manual uses 2 words to highlight information. **Important** calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.



**Figure 1**

1. Model and serial number location

Model No. _____
Serial No. _____




# 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 engine.
- 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 working on the machine.
- Keep clear of any discharge opening. Keep bystanders and pets away from the machine.
- Keep children out of the operating area. Never allow children to operate the machine.
- Park the machine on a level surface, lower the cutting units, disengage the drives, engage the parking brake (if provided), shut off the engine, and remove the key before leaving the operator's position for any reason.

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.

## Spiker Safety

- The spiker is only a part of 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, and wait for all moving parts 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 spiker blade can break, and a piece of it could be thrown toward you or bystanders, resulting in serious personal injury or death.

- Inspect the spiker periodically for wear or damage.
- Use care and wear gloves when checking or servicing the spiker.
- On machines with multiple cutting units, take care as rotating 1 spiker can cause other spikers to rotate.

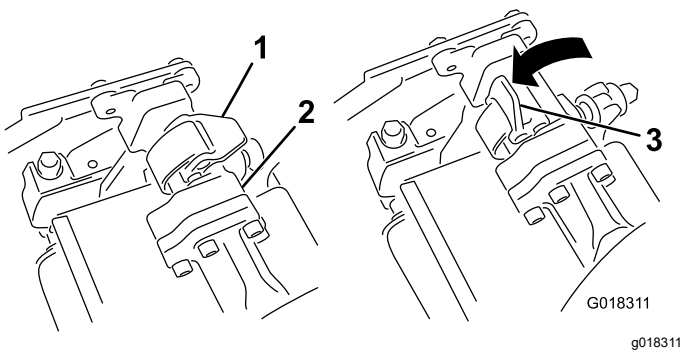
# 1

## Installing the Spiker Units

### No Parts Required

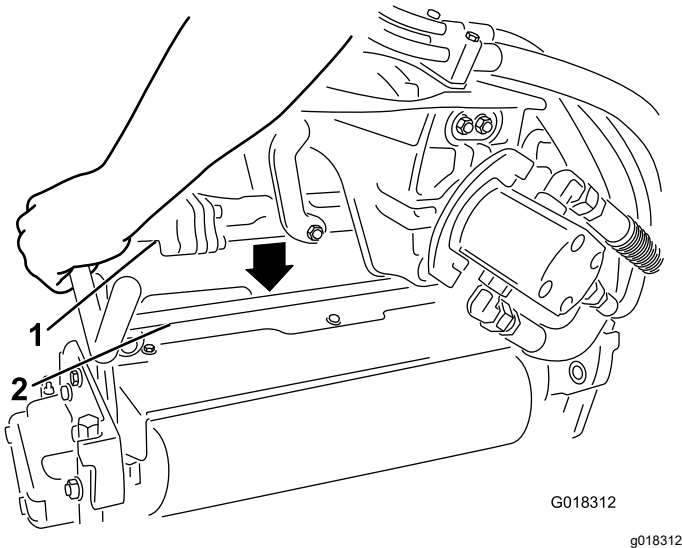
### Procedure

1. Position the spiker unit under the traction-unit suspension arm.
2. With the latches on the suspension-arm bar opened (Figure 3), push the suspension arm down so that it fits over the bar across the top of the spiker unit (Figure 4).



**Figure 3**

1. Latch—closed
2. Suspension-arm bar
3. Latch—opened



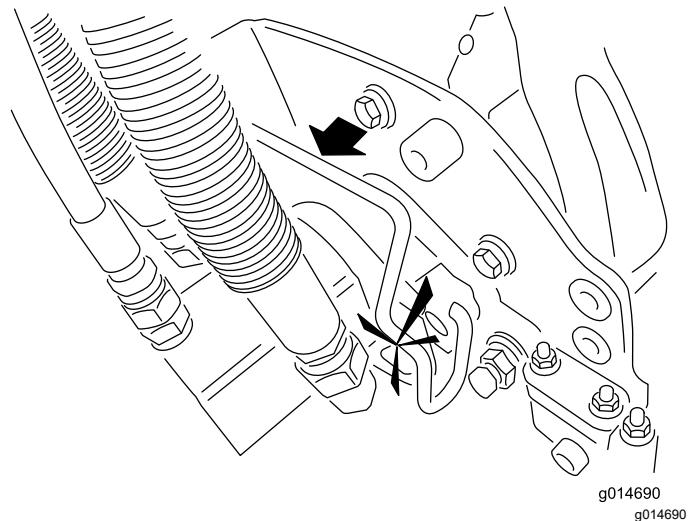
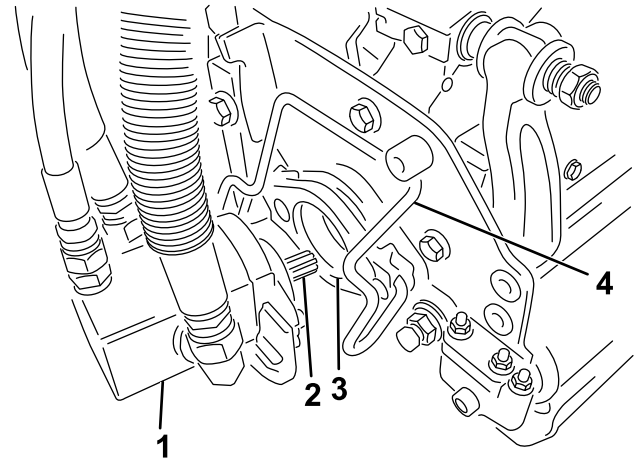
**Figure 4**

1. Suspension-arm bar
2. Spiker-unit bar

3. Close the latches to lock the spiker unit in place (Figure 3)

**Note:** When the latches are properly locked, you can hear and feel a click.

4. Insert the motor into the left side of the spiker unit (as viewed from the operator's position), and pull the motor retaining bar on the spiker unit toward the motor until you hear a click from both sides of the motor (Figure 5).



**Figure 5**

1. Motor
2. Spline shaft
3. Cavity
4. Motor-retaining bar

# 2

## Installing the Electrical Counterweights

### Parts needed for this procedure:

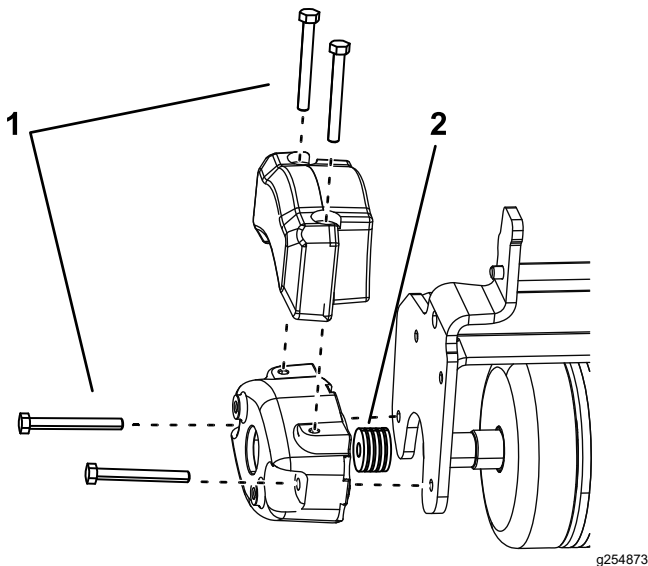
3	Counterweight (not included)
6	Bolts (not included)
24	Washer (not included)

### Procedure

**Note:** If you are installing the spiker on traction unit Model 04540, or on an eTriFlex traction unit Model 04580 or 04590, add an additional counterweight (Part No. 117-6774-03).

1. Remove and discard the existing counterweight bolts from the spiker side plate.
2. Install 2 bolts (5/16-18 x 2-3/4 inch) as shown in [Figure 6](#).

**Note:** The bolts (Part No. 322-33) are not included with the spiker.



**Figure 6**

1. Bolts (5/16-18 x 2-3/4 inch)
2. Washers

3. Install 4 washers (1/8 inch) per bolt between the counterweight and the spiker side plate ([Figure 6](#)).

**Note:** The washers (Part No. 63-8410) are not included with the spiker.

4. Install the auxiliary weight (Part No. 117-6774-03) with bolts.

**Note:** You can use the auxiliary weight and bolts provided with the traction unit, or order additional weights (Part No. 117-6774-03) and bolts (Part No. 322-33).

## Operation

### Training

Before spiking greens, find a clear area to practice starting, stopping, raising, lowering, and rolling with the spiker. This training helps you gain experience and confidence with the spiker before using it on a green.

### Operating Tips

- Survey the green to determine if there are any obstacles that will be damaged or will damage the spikers, such as sprinkler heads or other protruding objects.
- Maintain a straight line when spiking. Do not turn the machine when the spikers are fully lowered and contacting the ground.
- When you reach the edge of the green, raise the spikers before turning or stopping the machine. You must raise the spikers completely before making turns.

# Maintenance

## Preparing for Maintenance

Before starting on any maintenance procedure, do the following:

1. Park the machine on a level surface.
2. Lower the spiker units fully to the ground so that the suspension hydraulics are fully extended.
3. Engage the parking brake, shut off the engine, and remove the key.

## Lubrication

**Service interval:** Every 15 hours.

Lubricate the 2 grease fittings (Figure 7) on each spiker unit after every 15 hours of operation using a No. 2 lithium grease. For best results, use a hand-operated grease gun.

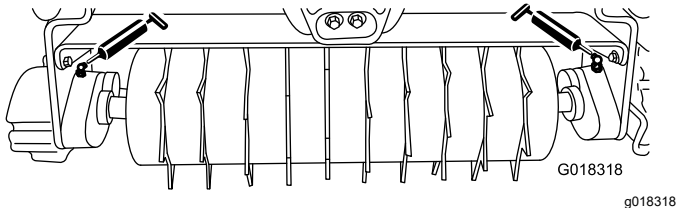


Figure 7

1. Prepare for maintenance; refer to [Preparing for Maintenance \(page 6\)](#)
2. Wipe each grease fitting (Figure 7) with a clean rag.
3. Apply grease to the spiker shaft bearings until you feel pressure.
4. Wipe excess grease away.

## Removing the Spiker Units

1. Prepare for maintenance; refer to [Preparing for Maintenance \(page 6\)](#)
2. Push the motor retaining bar out of the slots on the motor toward the spiker unit and remove the motor from the spiker unit.

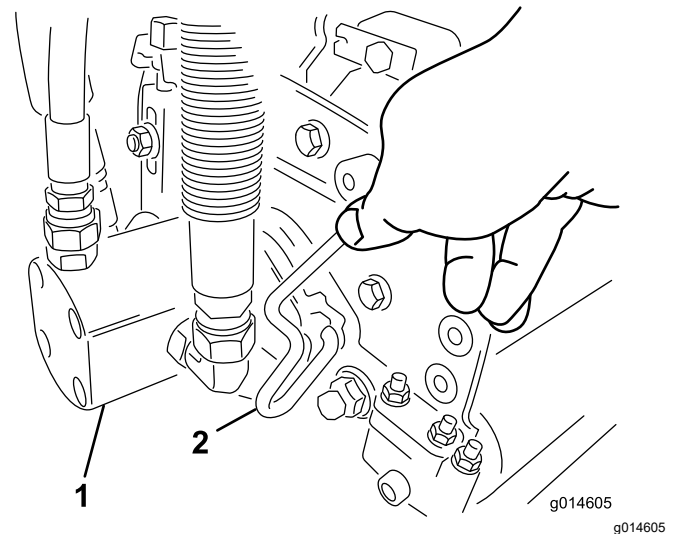


Figure 8

1. Motor
2. Motor-retaining bar

3. Move the motor to the storage location on the front of the suspension arm.

**Important:** Do not raise the suspension to the transport position when the reel motors are in the machine-frame holders. Damage to the motors or hoses could result.

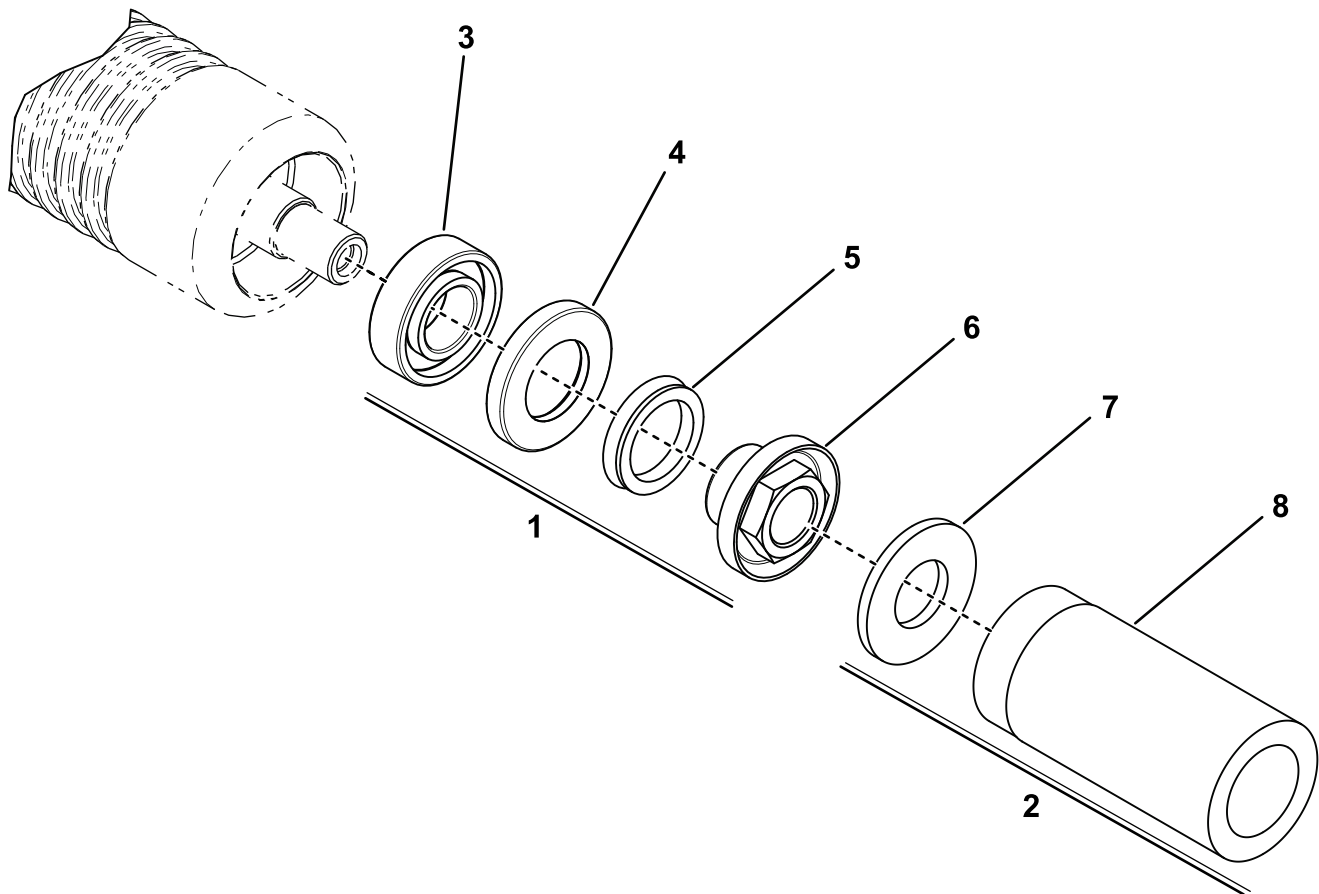
**If you must move the traction unit without the spiker units installed, use cable ties to secure the motors to the suspension arms.**

4. Open the latches on the suspension-arm bar of the spiker unit that you are removing.
5. Disconnect the latches from the spiker unit bar.
6. Roll the spiker unit out from under the suspension arm.
7. Repeat steps 2 through 6 for the other spiker units as required.

## Servicing the Roller

The Greens Roller Rebuild Kit (Part No. 140-5552) and the Greens Roller Rebuild Tool Kit (Part No. 140-5553) (Figure 9) are available for servicing the roller. The Roller Rebuild Kit includes all the bearings, bearing nuts, and seals to rebuild a roller.

The Roller Rebuild Tool Kit includes all the tools and the installation instructions required to rebuild a roller with the roller rebuild kit. Refer to your parts catalog or contact your authorized Toro distributor for assistance.



g346125

**Figure 9**

- |   |                            |
|---|----------------------------|
| 1. Greens Roller Rebuild Kit (Part No. 140-5552)      | 5. V-ring                  |
| 2. Greens Roller Rebuild Tool kit (Part No. 140-5553) | 6. Bearing locknut         |
| 3. Bearing  | 7. Flat washer             |
| 4. Seal   | 8. Bearing/outer-seal tool |

# 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
04723	406000000 and Up	Spiker, Greensmaster 3300/3400 Series TriFlex Traction Unit	GREENS SPIKER KIT-TRIFLEX	Spiker	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 1, 2022

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 regulations 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
04723	406000000 and Up	Spiker, Greensmaster 3300/3400 Series TriFlex Traction Unit	GREENS SPIKER KIT-TRIFLEX	Spiker	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 1, 2022

Authorized Representative:

Marcel Dutrieux  
Manager European Product Integrity  
Toro U.K. Limited  
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

#### 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.



**Count on it.**