



# QAS Flex™ Tooth Rake

## Sand Pro®/Infield Pro® 3040 and 5040 Traction Unit

Model No. 08767—Serial No. 316000001 and Up

Model No. 08767—Serial No. 400000000 and Up

Model No. 08767—Serial No. 404800000 and Up

### Operator's Manual

#### ⚠ WARNING

##### CALIFORNIA Proposition 65 Warning

Use of this product may cause exposure to chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

## Setup

### Loose Parts

Use the chart below to verify that all parts have been shipped.

| Procedure | Description                                                                                                                          | Qty.                  | Use                                                 |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------|-----------------------------------------------------|
| <b>1</b>  | No parts required                                                                                                                    | —                     | Adjust the tire pressure.                           |
| <b>2</b>  | Spacer<br>Bolt (3/4 x 3-1/2 inches)<br>Locknut (3/4 inch)                                                                            | 2<br>2<br>2           | Install the side assemblies to the center assembly. |
| <b>3</b>  | Pivot bar<br>Cotter pin                                                                                                              | 1<br>3                | Install the lift arm to the QAS assembly.           |
| <b>4</b>  | Bolt (3/8 x 3 inches)<br>Washer<br>Flange nut (3/8 inch)                                                                             | 2<br>4<br>2           | Install the lift tube to the lift arm.              |
| <b>5</b>  | Bolt (1/2 x 1-3/4 inches)<br>Flange-head bolt (3/8 x 1 inch)<br>Flange nut (3/8 inch)<br>Flange nut (1/2 inch)<br>Locknut (1/2 inch) | 1<br>1<br>1<br>1<br>1 | Install the rake assembly to the hitch tube.        |
| <b>6</b>  | No parts required                                                                                                                    | —                     | Install the lift chains to the lift tube.           |



# 1

## Adjusting the Tire Pressure

No Parts Required

### Procedure

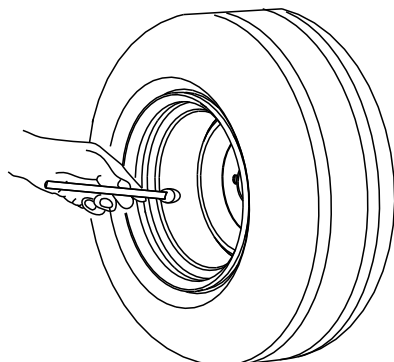
For the rake to work properly, it is important for the machine to have the correct tire pressure. (Figure 1).

To get the most accurate reading, check the tire pressure when the tires are cold.

- Treaded tires: 70 kPa (10 psi)

**Note:** If additional traction is required for blade operation, reduce the pressure to 55 kPa (8 psi).

- Smooth tires: 55 to 70 kPa (8 to 10 psi)



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Figure 1

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# 2

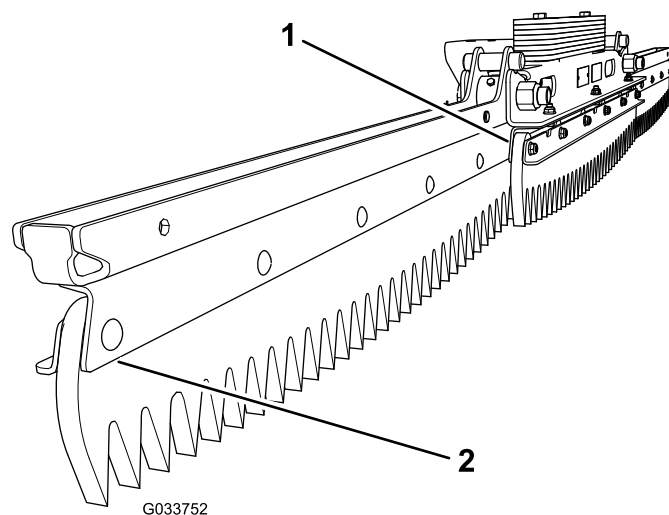
## Installing the Side Assemblies to the Center Assembly

Parts needed for this procedure:

|   |                           |
|---|---------------------------|
| 2 | Spacer                    |
| 2 | Bolt (3/4 x 3-1/2 inches) |
| 2 | Locknut (3/4 inch)        |

### Procedure

1. Position the assemblies so that the top plate of the center assembly faces forward and the top plate of each side assembly faces backward (Figure 2)



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Figure 2

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1. Top plate facing forward (center assembly)
2. Top plate facing backward (side assembly)

2. Insert a spacer into the pivot hole of each side assembly (Figure 3).

# 3

## Installing the Lift Arm to the QAS Assembly

### Parts needed for this procedure:

|   |            |
|---|------------|
| 1 | Pivot bar  |
| 3 | Cotter pin |

### Procedure

1. Align the holes in the lift arm with the holes in the QAS assembly ([Figure 4](#)).

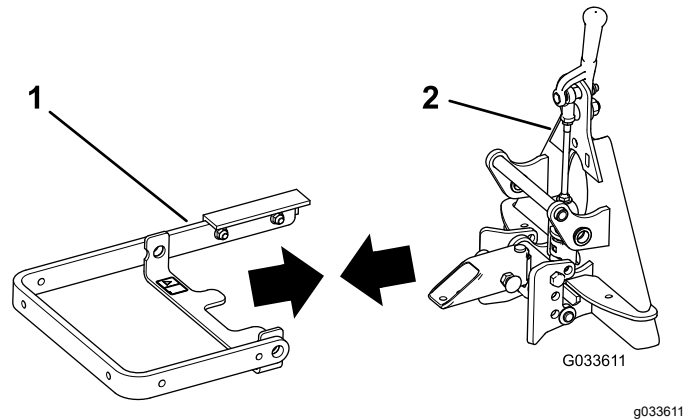


Figure 4

1. Lift arm
2. QAS assembly

2. Insert the pivot bar through the holes ([Figure 5](#)).

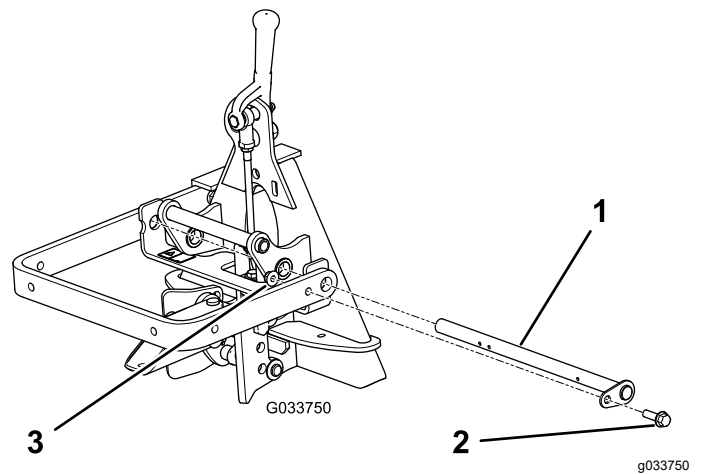


Figure 5

1. Pivot bar
2. Flange-head bolt
3. Flange nut

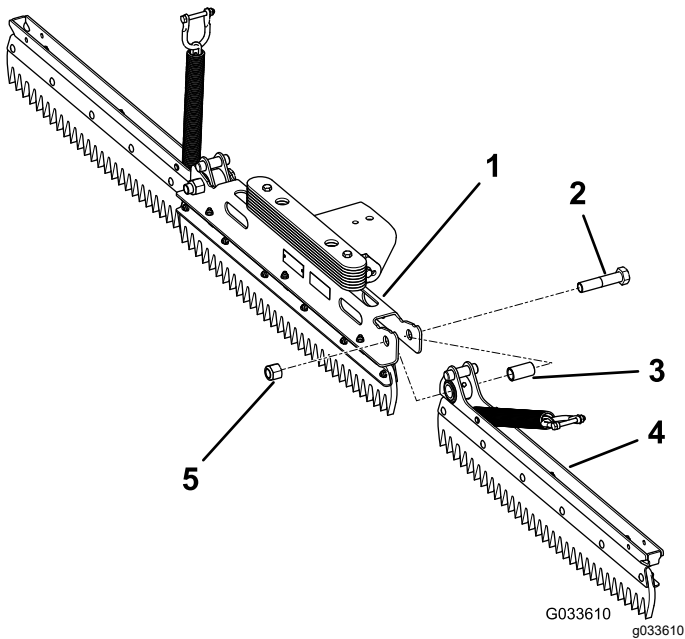


Figure 3

Left side assembly shown installed

1. Center assembly
2. Bolt (3/4 x 3-1/2 inches)
3. Spacer
4. Right side assembly
5. Nut (3/4 inch)

3. Align the pivot hole in the left side assembly to the pivot hole on the left side of the center assembly.
4. Secure the left side assembly with a bolt (3/4 x 3-1/2 inches) and a locknut (3/4 inch), torqued to 163 to 217 N-m (120 to 160 ft-lb); refer to [Figure 3](#).
5. Align the pivot hole in the right side assembly to the pivot hole on the right side of the center assembly.
6. Secure the right side assembly with a bolt (3/4 x 3-1/2 inches) and a locknut (3/4 inch), torqued to 163 to 217 N-m (120 to 160 ft-lb); refer to [Figure 3](#).

**Note:** Ensure that the side assemblies pivot freely. Slightly loosen the nuts and bolts if necessary. Ensure that the carriage bolts do not contact each other throughout the range of motion.

- Align the hole in the retainer plate with hole in the lift arm, and install the flange-head bolt and the flange nut (Figure 5).
- Install a cotter pin in each of the 3 holes in the pivot bar (Figure 6).

**Note:** Ensure that the holes in the pivot bar are positioned as shown in Figure 6.

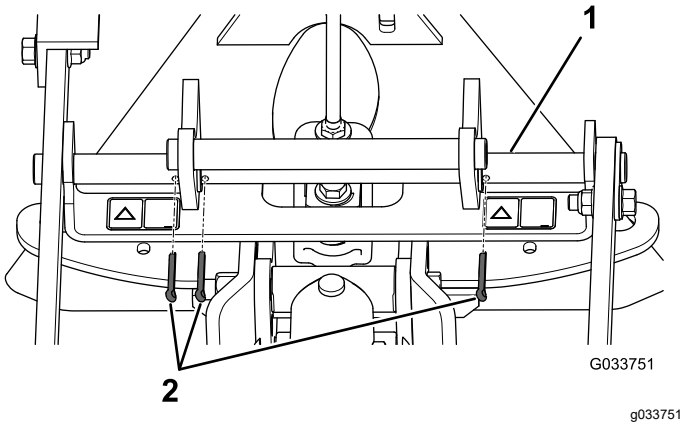


Figure 6

- Pivot bar
- Cotter pins

- Bend the ends of the cotter pins to secure the pin in position.

# 4

## Installing the Lift Tube to the Lift Arm

Parts needed for this procedure:

|   |                       |
|---|-----------------------|
| 2 | Bolt (3/8 x 3 inches) |
| 4 | Washer                |
| 2 | Flange nut (3/8 inch) |

## Procedure

Secure the lift tube to the lift arm as shown in Figure 7.

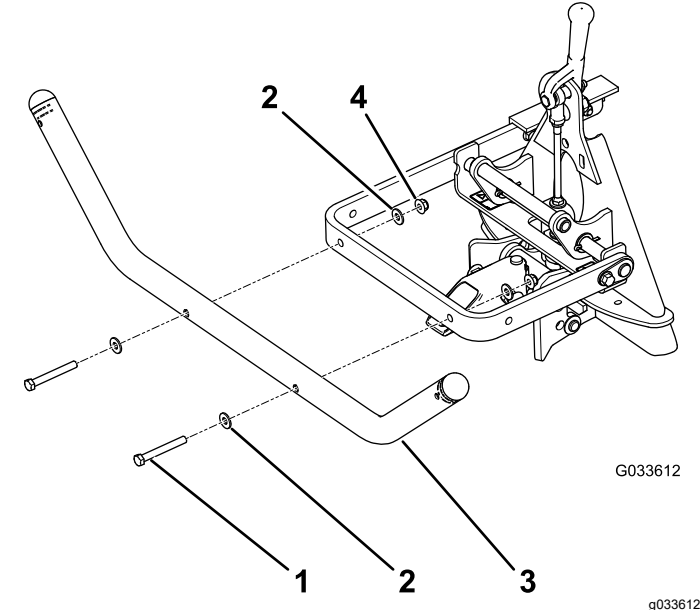


Figure 7

- Bolt (2)
- Washer (4)
- Lift tube
- Nut (2)

# 5

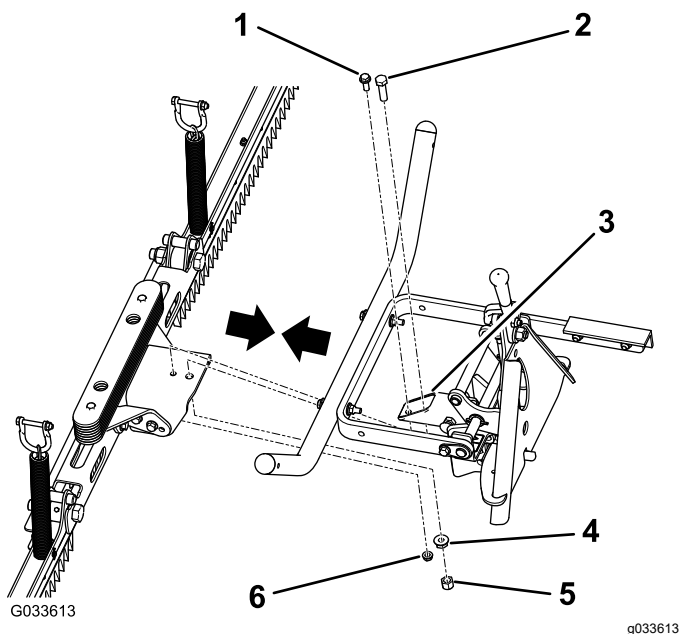
## Installing the Rake Assembly to the Hitch Tube

Parts needed for this procedure:

|   |                                 |
|---|---------------------------------|
| 1 | Bolt (1/2 x 1-3/4 inches)       |
| 1 | Flange-head bolt (3/8 x 1 inch) |
| 1 | Flange nut (3/8 inch)           |
| 1 | Flange nut (1/2 inch)           |
| 1 | Locknut (1/2 inch)              |

## Procedure

- Align the 2 holes in the bracket in the center of the rake assembly with the 2 holes in the hitch tube (Figure 8).



**Figure 8**

- |                                    |                          |
|------------------------------------|--------------------------|
| 1. Flange-head bolt (3/8 x 1 inch) | 4. Flange nut (1/2 inch) |
| 2. Bolt (1/2 x 1-3/4 inches)       | 5. Locknut (1/2 inch)    |
| 3. Hitch tube                      | 6. Flange nut (3/8 inch) |

- Secure the rake assembly to the hitch tube with a bolt (1/2 x 1-3/4 inches), a flange nut (1/2 inch), a locknut (1/2 inch), a flange-head bolt (3/8 x 1 inch), and a flange nut (3/8 inch).

# 6

## Installing the Lift Chains to the Lift Tube

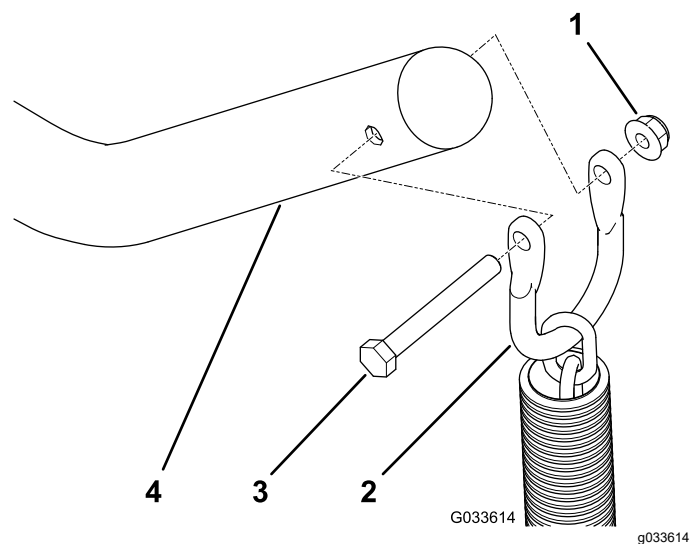
### No Parts Required

### Procedure

- Remove the bolt and the nut from the shackle at the end of each lift chain.

**Note:** Retain the bolts and the nuts for installing the lift chains to the lift tube.

- Align the holes in the shackle with the holes in the lift tube.



**Figure 9**

- |               |              |
|---------------|--------------|
| 1. Flange nut | 3. Bolt      |
| 2. Shackle    | 4. Lift tube |

## Operation

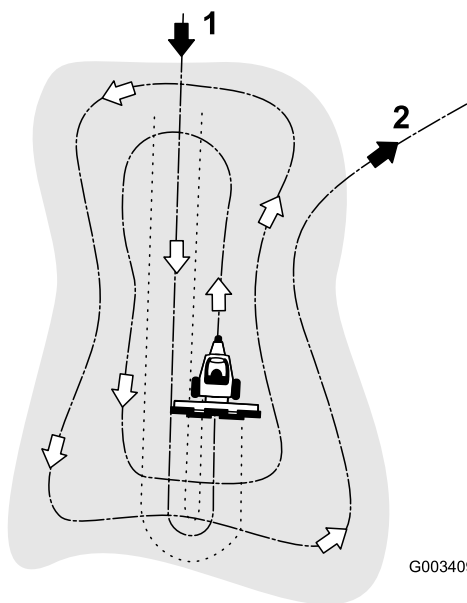
### Raking a Sand Trap

Read this entire section on raking before raking a sand trap. There are many conditions that will determine the adjustments necessary. The texture and depth of the sand, moisture content, weeds, and the amount of compaction are all factors that can vary from course to course, or even from trap to trap on the same course. Make the adjustments on the rake for optimum results in your particular area.

### Learning How to Rake

Practice raking in a large and level trap on the course. Practice starting and stopping, turning, raising and lowering the rake, entering and leaving the trap, etc. Practice at a moderate engine speed and a slow ground speed. This training will help the operator to gain confidence in the performance of the machine.

The recommended pattern for raking a trap is shown in [Figure 10](#). This pattern avoids unnecessary overlap, keeps compaction to a minimum, and leaves a neat, attractive pattern on the sand. This is the most efficient raking method, however, it is important to vary the raking pattern regularly to reduce the chance of creating a washboard effect.



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**Figure 10**

1. Enter a trap straight into the long dimension in a level area.
2. Exit a trap at a right angle in a level area.

Enter the trap straight into the long dimension, where the bank is the least steep. Drive through the center of the trap almost to the end, turn to either direction as sharp as you can, and come back right next to the first pass. Spiral outward as shown in [Figure 10](#), and leave the trap at a right angle in a level area.

Leave steep, short banks and small pockets for touch-up with a hand rake.

## Entering and Leaving the Trap

When entering the trap, do not lower the rake until it is over the sand. This avoids cutting the turf or dragging grass clippings or other debris into the trap. Lower the rake while the machine is moving.

When leaving the trap, start raising the rake when the front wheel leaves the trap. As the machine moves out, the rake will be lifting and will not drag sand out onto the grass.

Through experience and practice, the operator will soon understand the required timing for entering and leaving the trap properly.

**Notes:**

**Notes:**

# 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  |
|-----------|------------------|-----------------------------------------------------------------------|---------------------|---------------------|------------|
| 08767     | 316000001 and Up | QAS Flex Tooth Rake, Sand Pro/Infield Pro 3040 and 5040 Traction Unit | QAS FLEX TOOTH RAKE | Flex groomer        | 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  
October 18, 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         |
|-----------|------------------|-----------------------------------------------------------------------|---------------------|---------------------|--------------------|
| 08767     | 316000001 and Up | QAS Flex Tooth Rake, Sand Pro/Infield Pro 3040 and 5040 Traction Unit | QAS FLEX TOOTH RAKE | Flex groomer        | 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  
October 18, 2022

Authorized Representative:

Marcel Dutrieux  
Manager European Product Integrity  
Toro U.K. Limited  
Spellbrook Lane West  
Bishop's Stortford  
CM23 4BU  
United Kingdom

## International Distributor List

| <b>Distributor:</b>                | <b>Country:</b>      | <b>Phone Number:</b> | <b>Distributor:</b>          | <b>Country:</b> | <b>Phone Number:</b> |
|------------------------------------|----------------------|----------------------|------------------------------|-----------------|----------------------|
| Agrolanc Kft                       | Hungary              | 36 27 539 640        | Maquiver S.A.                | Colombia        | 57 1 236 4079        |
| Asian American Industrial (AAI)    | Hong Kong            | 852 2497 7804        | Maruyama Mfg. Co. Inc.       | Japan           | 81 3 3252 2285       |
| B-Ray Corporation                  | Korea                | 82 32 551 2076       | Mountfield a.s.              | Czech Republic  | 420 255 704 220      |
| Brisa Goods LLC                    | Mexico               | 1 210 495 2417       | Mountfield a.s.              | Slovakia        | 420 255 704 220      |
| Casco Sales Company                | Puerto Rico          | 787 788 8383         | Munditol S.A.                | Argentina       | 54 11 4 821 9999     |
| Ceres S.A.                         | Costa Rica           | 506 239 1138         | Norma Garden                 | Russia          | 7 495 411 61 20      |
| CSSC Turf Equipment (pvt) Ltd.     | Sri Lanka            | 94 11 2746100        | Oslinger Turf Equipment SA   | Ecuador         | 593 4 239 6970       |
| Cyril Johnston & Co.               | Northern Ireland     | 44 2890 813 121      | Oy Hako Ground and Garden Ab | Finland         | 358 987 00733        |
| Cyril Johnston & Co.               | Republic of Ireland  | 44 2890 813 121      | Parkland Products Ltd.       | New Zealand     | 64 3 34 93760        |
| Fat Dragon                         | China                | 886 10 80841322      | Perfetto                     | Poland          | 48 61 8 208 416      |
| Femco S.A.                         | Guatemala            | 502 442 3277         | Pratoverde SRL.              | Italy           | 39 049 9128 128      |
| FIVEMANS New-Tech Co., Ltd         | China                | 86-10-6381 6136      | Prochaska & Cie              | Austria         | 43 1 278 5100        |
| ForGarder OU                       | Estonia              | 372 384 6060         | RT Cohen 2004 Ltd.           | Israel          | 972 986 17979        |
| G.Y.K. Company Ltd.                | Japan                | 81 726 325 861       | Riversa                      | Spain           | 34 9 52 83 7500      |
| Geomechaniki of Athens             | Greece               | 30 10 935 0054       | Lely Turfcare                | Denmark         | 45 66 109 200        |
| Golf international Turizm          | Turkey               | 90 216 336 5993      | Lely (U.K.) Limited          | United Kingdom  | 44 1480 226 800      |
| Hako Ground and Garden             | Sweden               | 46 35 10 0000        | Solvart S.A.S.               | France          | 33 1 30 81 77 00     |
| Hako Ground and Garden             | Norway               | 47 22 90 7760        | Spypros Stavrinides Limited  | Cyprus          | 357 22 434131        |
| Hayter Limited (U.K.)              | United Kingdom       | 44 1279 723 444      | Surge Systems India Limited  | India           | 91 1 292299901       |
| Hydroturf Int. Co Dubai            | United Arab Emirates | 97 14 347 9479       | T-Markt Logistics Ltd.       | Hungary         | 36 26 525 500        |
| Hydroturf Egypt LLC                | Egypt                | 202 519 4308         | Toro Australia               | Australia       | 61 3 9580 7355       |
| Irrimac                            | Portugal             | 351 21 238 8260      | Toro Europe NV               | Belgium         | 32 14 562 960        |
| Irrigation Products Int'l Pvt Ltd. | India                | 0091 44 2449 4387    | Valtech                      | Morocco         | 212 5 3766 3636      |
| Jean Heybroek b.v.                 | Netherlands          | 31 30 639 4611       | Victus Emak                  | Poland          | 48 61 823 8369       |

### European Privacy Notice

#### The Information Toro Collects

Toro Warranty Company (Toro) respects your privacy. In order to process your warranty claim and contact you in the event of a product recall, we ask you to share certain personal information with us, either directly or through your local Toro company or dealer.

The Toro warranty system is hosted on servers located within the United States where privacy law may not provide the same protection as applies in your country.

BY SHARING YOUR PERSONAL INFORMATION WITH US, YOU ARE CONSENTING TO THE PROCESSING OF YOUR PERSONAL INFORMATION AS DESCRIBED IN THIS PRIVACY NOTICE.

#### The Way Toro Uses Information

Toro may use your personal information to process warranty claims, to contact you in the event of a product recall and for any other purpose which we tell you about. Toro may share your information with Toro's affiliates, dealers or other business partners in connection with any of these activities. We will not sell your personal information to any other company. We reserve the right to disclose personal information in order to comply with applicable laws and with requests by the appropriate authorities, to operate our systems properly or for our own protection or that of other users.

#### Retention of your Personal Information

We will keep your personal information as long as we need it for the purposes for which it was originally collected or for other legitimate purposes (such as regulatory compliance), or as required by applicable law.

#### Toro's Commitment to Security of Your Personal Information

We take reasonable precautions in order to protect the security of your personal information. We also take steps to maintain the accuracy and current status of personal information.

#### Access and Correction of your Personal Information

If you would like to review or correct your personal information, please contact us by email at [legal@toro.com](mailto:legal@toro.com).

### Australian Consumer Law

Australian customers will find details relating to the Australian Consumer Law either inside the box or at your local Toro Dealer.



## The Toro Warranty

### A Two-Year Limited Warranty

#### Conditions and Products Covered

The Toro Company and its affiliate, Toro Warranty Company, pursuant to an agreement between them, jointly warrant your Toro Commercial product ("Product") to be free from defects in materials or workmanship for two years or 1500 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  
Toro Warranty Company  
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*. Failure to perform required maintenance and adjustments can be grounds for disallowing a warranty claim.

#### 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. A separate warranty may be provided by the manufacturer of these items.
- Product failures which result from failure to perform recommended maintenance and/or adjustments. Failure to properly maintain your Toro product per the Recommended Maintenance listed in the *Operator's Manual* can result in claims for warranty being denied.
- Product failures which result from operating the Product in an abusive, negligent, or reckless manner.
- Parts subject to consumption through use unless found to be defective. Examples of parts which are consumed, or used up, during normal Product operation include, but are not limited to, 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, and check valves, etc.
- Failures caused by outside influence. Conditions considered to be outside influence include, but are not limited to, weather, storage practices, contamination, use of unapproved fuels, coolants, lubricants, additives, fertilizers, water, or chemicals, etc.
- 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, etc.

#### 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. Battery replacement may be required during the normal product warranty period at owner's expense. Note: (Lithium-Ion battery only): A Lithium-Ion battery has a part only prorated warranty beginning year 3 through year 5 based on the time in service and kilowatt hours used. Refer to the *Operator's Manual* for additional information.

#### 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.

**Neither The Toro Company nor Toro Warranty Company is 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 engine 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 for details.

#### 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.