



Count on it.

Form No. 3457-738 Rev A

Operator's Manual

Flex™ Tooth Rake

Sand Pro® 2040Z Traction Unit

Model No. 08716—Serial No. 314000001 and Up

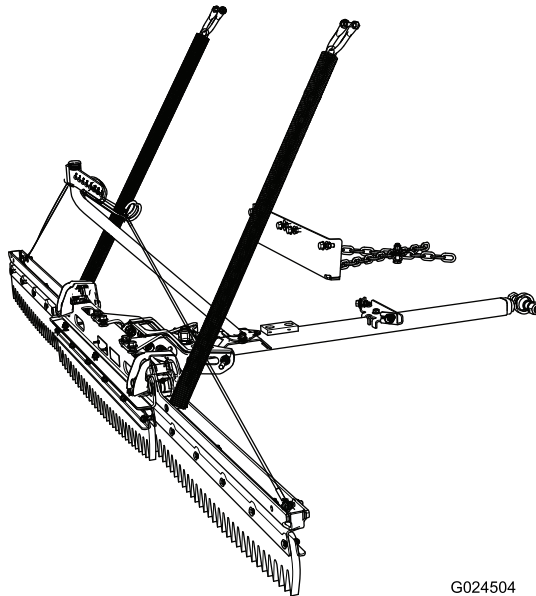
Model No. 08716—Serial No. 314000131 and Up

Model No. 08716—Serial No. 315000001 and Up

Model No. 08716—Serial No. 316000001 and Up

Model No. 08716—Serial No. 400000000 and Up

Model No. 08716—Serial No. 314000001 and Up



G024504



⚠ 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.



Figure 2

g000502

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.

Introduction

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.

You may contact Toro directly at www.Toro.com for product and 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** illustrates the location of the model and serial numbers on the product. Write the numbers in the space provided.

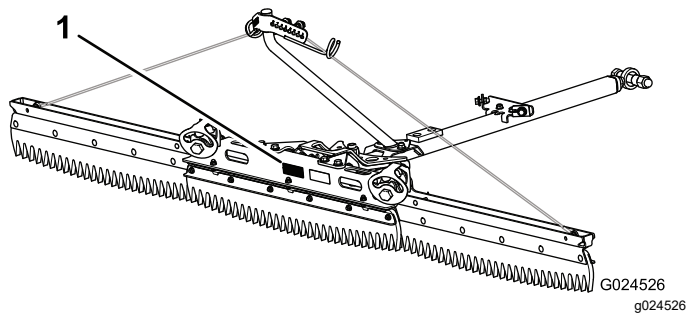


Figure 1

1. Location of the model and serial numbers

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.

Contents

Setup	3
1 Adjusting the Tire Pressure	4
2 Removing the Shipping Board	4
3 Connecting the Center Assembly and the Side Assemblies	4
4 Connecting the Drawbar to the Rake	5
5 Attaching the Boom	6
6 Attaching the Cables	7
7 Attaching the Stop-chain Assembly	7
Product Overview	8
Operation	9
Installing and Removing the Weights	9
Installing the Rake to the Machine	9
Adjusting the Pivot Stop Bolts	11
Inspecting the Raking Pattern and Adjusting the Lift-in-turn System	11
Adjusting the Rake Pitch	12
Raising and Lowering the Rake	13
Removing the Rake from the Machine	13
Raking a Sand Trap	13
Troubleshooting	15

Setup

Loose Parts

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

Procedure	Description	Qty.	Use
1	No parts required	–	Adjust the tire pressure.
2	No parts required	–	Remove the shipping board from the machine.
3	Center assembly Right-side assembly Left-side assembly Bolt (3/4 x 3-1/2 inches) Locknut (3/4 inch) Long spacer Cable guard	1 1 1 2 2 2 2	Connect the center assembly and the side assemblies.
4	Drawbar Bolt (3/4 x 3-1/2 inches) Locknut (3/4 inch) Long spacer	1 1 1 1	Connect the drawbar to the rake.
5	Boom assembly Carriage bolt (3/8 x 3/4 inch) Flange nut (3/8 inch) Bolt (1/4 x 5/8 inch)	1 2 2 1	Attach the boom.
6	Cable Shoulder bolt Flange nut (5/16 inch)	2 4 4	Attach the cables.
7	Stop-chain assembly U-bolt Flange nut (5/16 inch)	1 1 2	Attach the stop-chain assembly.

Media and Additional Parts

Description	Qty.	Use
Bolt (5/16 x 2-1/2 inches)	2	Install the rake to the machine.
Flange locknut (5/16 inch)	2	
Shackle	2	
Bolt (3/4 x 4-1/2 inches)	1	
Locknut (3/4 inch)	1	
Short spacer	2	
Bolt (5/16 x 1 inch)	4	
Flange locknut (5/16 inch)	4	

1

Adjusting the Tire Pressure

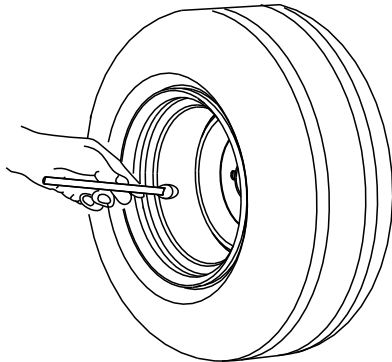
No Parts Required

Procedure

For the rake to work properly, it is important for the machine to have the correct tire pressure. Ensure that the tire pressure is 48 kPa (7 psi) (Figure 3).

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

Pressure: 48 kPa (7 psi)



G001055

Figure 3

g001055

2

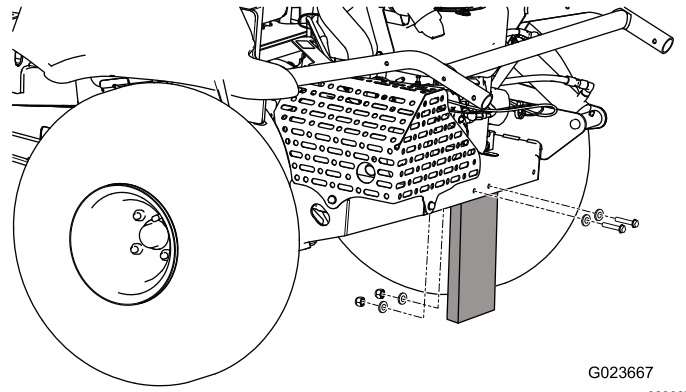
Removing the Shipping Board

No Parts Required

Procedure

Before you can install the rake on a new machine, you must remove the shipping board from the machine.

1. Remove the nuts, bolts, and washers securing the shipping board to the rear of the machine.



G023667

g023667

Figure 4

2. Discard the fasteners and the shipping board.

3

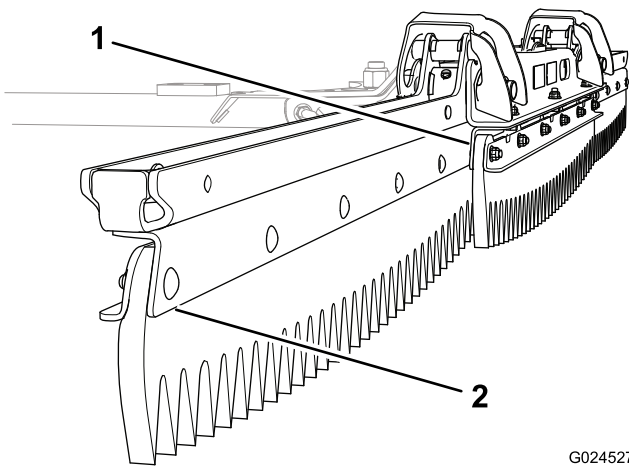
Connecting the Center Assembly and the Side Assemblies

Parts needed for this procedure:

1	Center assembly
1	Right-side assembly
1	Left-side assembly
2	Bolt (3/4 x 3-1/2 inches)
2	Locknut (3/4 inch)
2	Long spacer
2	Cable guard

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 5).

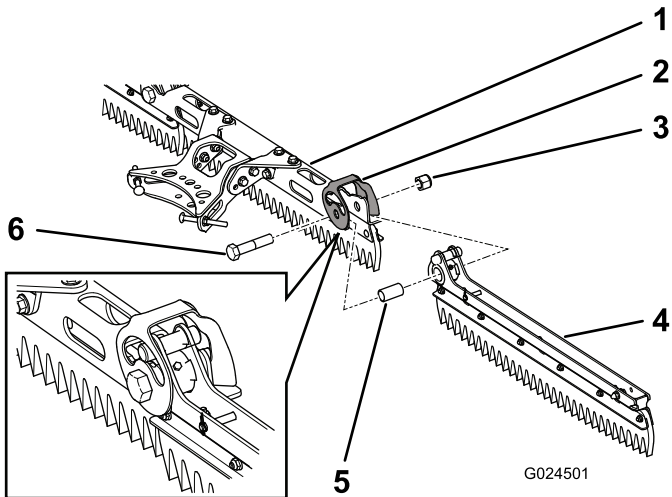


G024527
g024527

Figure 5

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

2. Insert a long spacer into the pivot hole of each side assembly (Figure 6).



G024501

g024501

Figure 6

1. Center assembly
2. Cable guard
3. Locknut (3/4 inch)
4. Side assembly
5. Long spacer
6. Bolt (3/4 x 3-1/2 inches)

3. Align the pivot hole in the right-side assembly to the pivot hole on the right-hand side of the center assembly.
4. Align a cable guard over the pivot hole, and secure them 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 6.

Note: Ensure that the side assembly pivots freely. Slightly loosen the nut and bolt if necessary. Ensure that the carriage bolts do not contact each other throughout the range of motion.

5. Align the pivot hole in the left-side assembly to the pivot hole on the left-hand side of the center assembly.
6. Align a cable guard over the pivot hole, and secure them 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 6.

4

Connecting the Drawbar to the Rake

Parts needed for this procedure:

1	Drawbar
1	Bolt (3/4 x 3-1/2 inches)
1	Locknut (3/4 inch)
1	Long spacer

Procedure

1. Insert a long spacer into the hole in the rear of the drawbar (Figure 7).

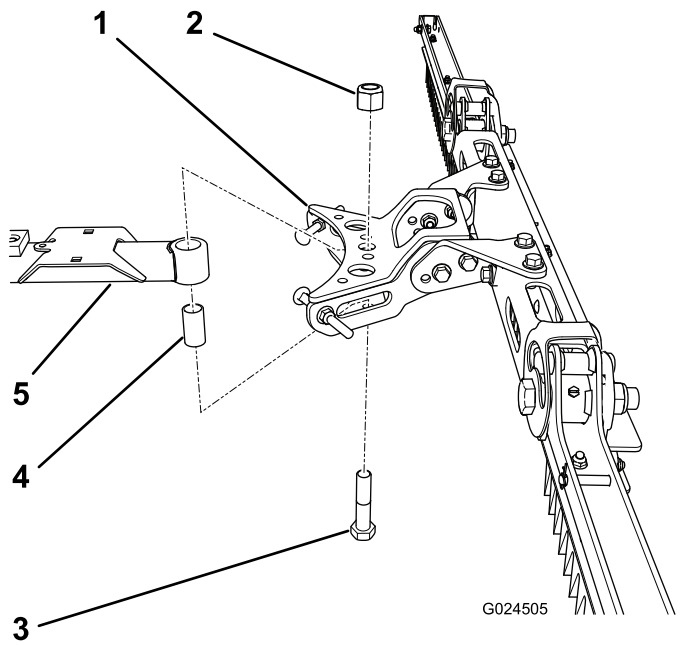


Figure 7

1. Pivot assembly
2. Locknut (3/4 inch)
3. Bolt (3/4 x 3-1/2 inches)
4. Long spacer
5. Drawbar

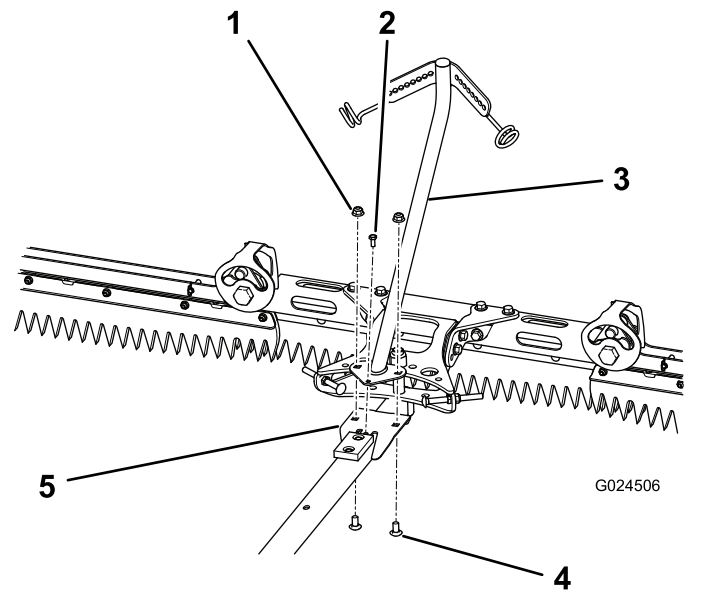


Figure 8

1. Flange nut—3/8 inch (2)
2. Bolt (1/4 x 5/8 inch)
3. Boom
4. Carriage bolt—3/8 x 3/4 inch (2)
5. Drawbar

2. Align the hole in the rear of the drawbar with the hole in the pivot assembly.
3. Insert the bolt (3/4 x 3-1/2 inches) to secure the drawbar to the pivot assembly.
4. Install the locknut (3/4 inch) onto the bolt, and torque it to 163 to 217 N-m (120 to 160 ft-lb).

2. Install 2 carriage bolts (3/8 x 3/4 inch) into the holes, and secure the bolts with 2 flange nuts (3/8 inch).
3. Install the bolt (1/4 x 5/8 inch) in the hole in the front of the plates.

5

Attaching the Boom

Parts needed for this procedure:

1	Boom assembly
2	Carriage bolt (3/8 x 3/4 inch)
2	Flange nut (3/8 inch)
1	Bolt (1/4 x 5/8 inch)

Procedure

1. Align the holes in the plate at the bottom end of the boom assembly with the holes in the plate near the rear of the drawbar (Figure 8).

6

Attaching the Cables

Parts needed for this procedure:

2	Cable
4	Shoulder bolt
4	Flange nut (5/16 inch)

Procedure

1. Align the end of each cable with a hole in the end of the rake (Figure 9).

Note: To decrease the chance of binding, ensure that the ends of the cables are positioned as shown in Figure 9.

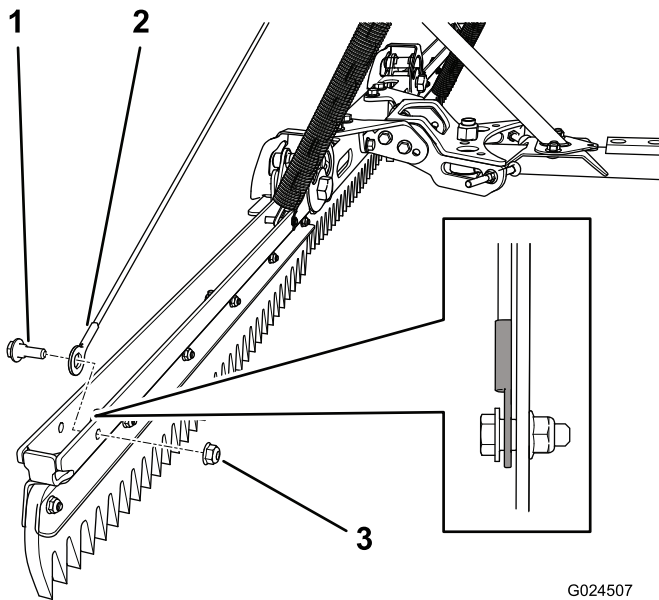


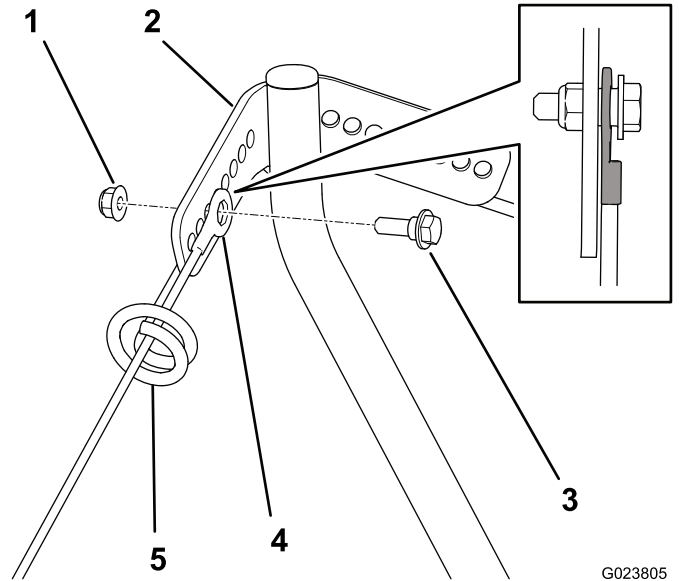
Figure 9

G024507
g024507

1. Shoulder bolt
2. Cable
3. Flange nut (5/16 inch)

2. Secure each cable with a shoulder bolt and a flange nut (5/16 inch).
3. Route the other end of each cable through the appropriate cable support, and align each with a hole in the top of the boom assembly (Figure 10).

Note: To decrease the chance of binding, ensure that the ends of the cables are positioned as shown in Figure 10.



G023805
g023805

Figure 10

1. Flange nut (5/16 inch)
2. Boom
3. Shoulder bolt
4. Cable
5. Cable support

4. Secure the top of each cable with a shoulder bolt and a flange nut (5/16 inch).

Note: Adjust the upper cable position as necessary after completing the installation; refer to [Adjusting the Lift-in-turn System](#) (page 11).

7

Attaching the Stop-chain Assembly

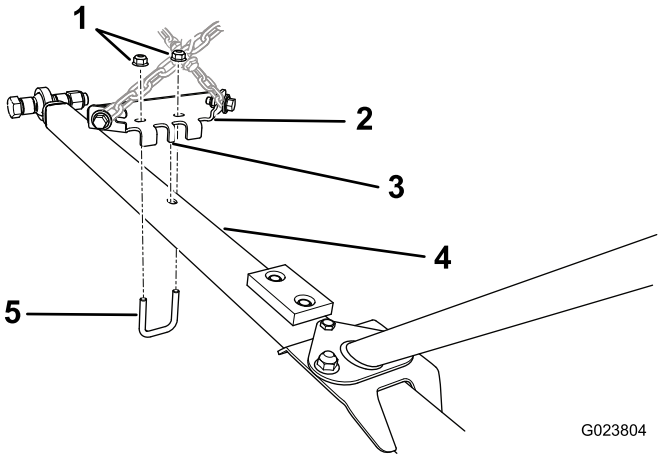
Parts needed for this procedure:

1	Stop-chain assembly
1	U-bolt
2	Flange nut (5/16 inch)

Procedure

1. Align the center tab on the drawbar bracket to the hole in the center of the drawbar (Figure 11).

Product Overview

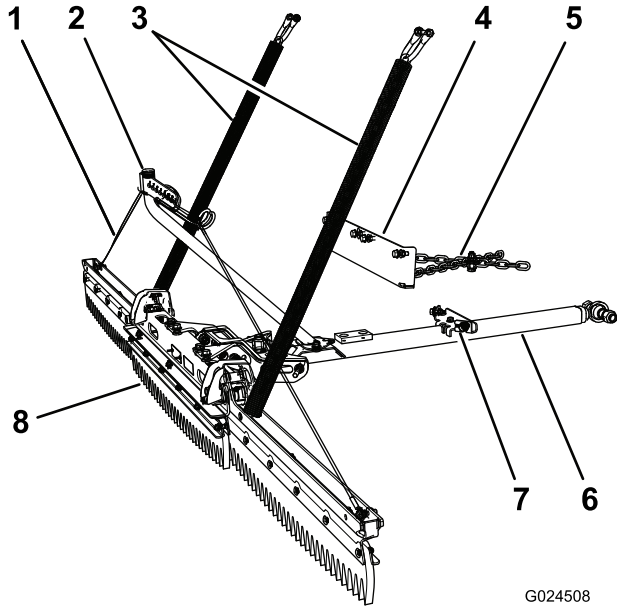


G023804
g023804

Figure 11

- 1. Flange nut (5/16 inch)
- 2. Drawbar bracket
- 3. Center tab
- 4. Drawbar
- 5. U-bolt

2. Install the U-bolt and secure it with 2 flange nuts (5/16 inch).



G024508
g024508

Figure 12

- 1. Cable
- 2. Boom
- 3. Lift chains
- 4. Frame bracket
- 5. Stop-chain assembly
- 6. Drawbar
- 7. Drawbar bracket
- 8. Rake

Operation

Installing and Removing the Weights

The flex tooth rake requires 4 weights, which are included with the machine. Always ensure that your machine has the appropriate number of weights.

Refer to the following table for how many weights are required on the front of the machine:

Attachment	Number of weights required
Flex tooth rake	4
Flex tooth rake with finish brush	6
Nail drag	6
Nail drag with finish drag mat	8

1. Remove the 2 bolts and 2 nuts securing the existing weights on the front of the machine (Figure 13).

Note: If the machine is equipped with the light kit, remove the nut and the bolt securing the front light to the machine. Retain all of the parts; refer to the *Light Kit Installation Instructions*.

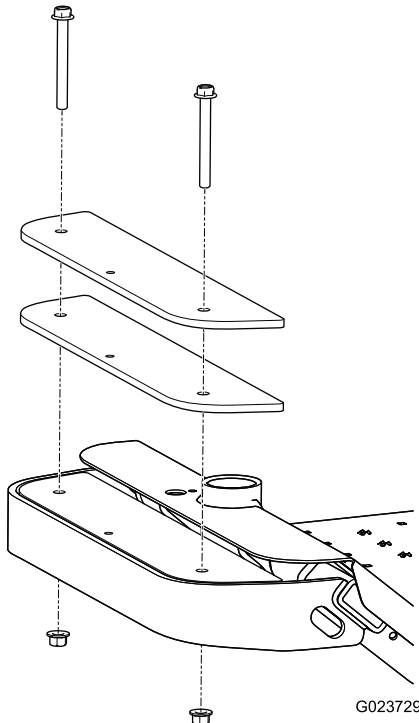


Figure 13

G023729

g023729

2. Add or remove weights as necessary.
3. Secure the weights with the 2 bolts and the 2 nuts.

Note: If the machine is equipped with the light kit, install the front light by inserting the bolt through the weights and securing it with the nut; refer to the *Light Kit Installation Instructions*.

Installing the Rake to the Machine

Connecting the Chains to the Attachment Lift

1. Slide the drawbar under the rear of the machine.
2. Route the chains **under** the cables.
3. Install a shackle on the end of each lift chain.

Important: Ensure that the chains are not twisted.

4. Align each shackle to the appropriate side of the attachment lift on the machine (Figure 14).

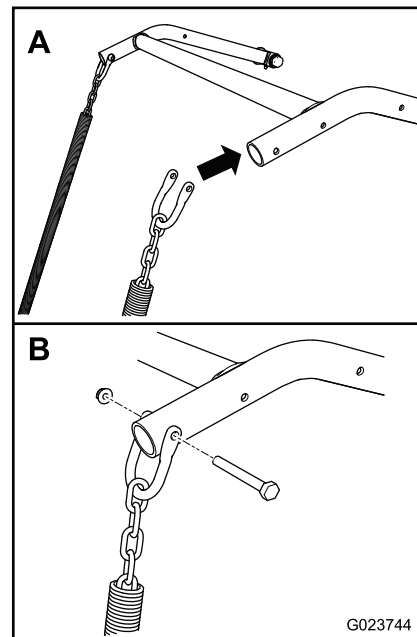


Figure 14

g023744

5. Secure each shackle with a flange locknut (5/16 inch) and a bolt (5/16 x 2-1/2 inches).

Note: Ensure that the threads of each bolt contact the nylon insert of the flange locknut, and that each shackle pivots freely.

Connecting the Drawbar to the Frame Hitch

1. Align the rod end of the drawbar to the frame hitch (Figure 15).

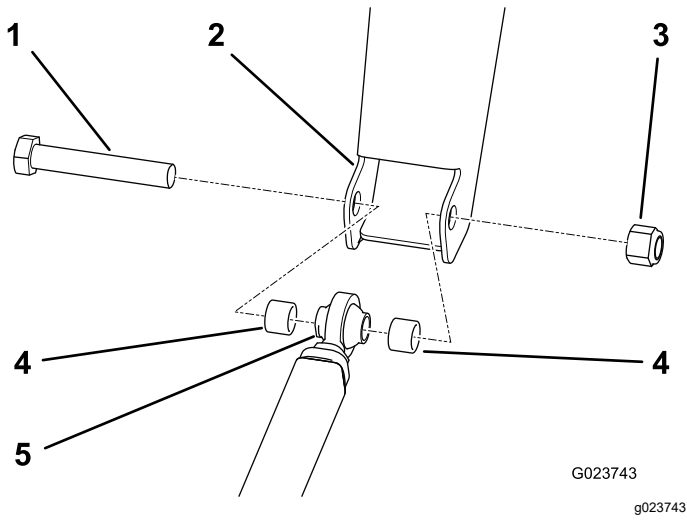


Figure 15

- | | |
|------------------------------|-----------------|
| 1. Bolt (3/4 x 4-1/2 inches) | 4. Short spacer |
| 2. Frame hitch | 5. Rod end |
| 3. Locknut (3/4 inch) | |

2. Align a spacer on each side of the rod end, and insert the bolt (3/4 x 4-1/2 inches) through the frame hitch, the rod end, and the spacers.
3. Secure the bolt with the locknut (3/4 inch) torqued to 163 to 217 N-m (120 to 160 ft-lb).

Connecting the Frame Bracket

1. Remove the nut and the bolt securing the muffler shield to the back of the machine (Figure 16).

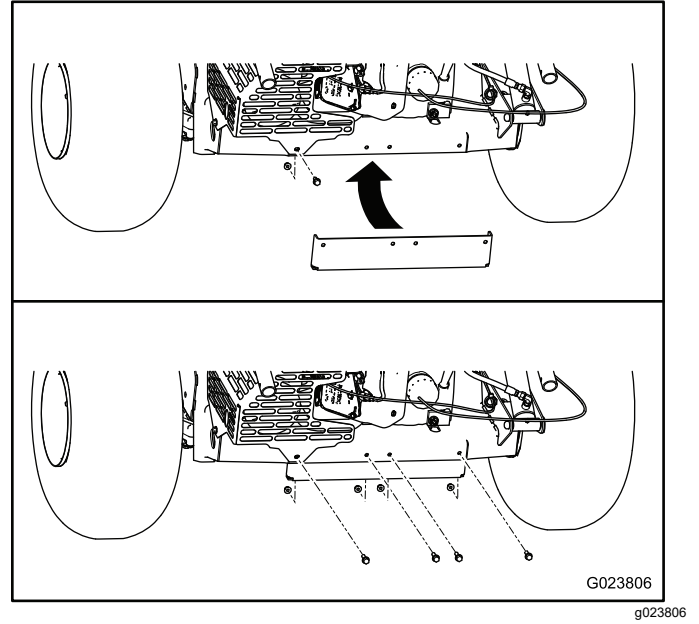


Figure 16

2. Align the bolt holes in the frame bracket with the bolt holes in the frame.

Note: Ensure that the chains are crossed as shown in Figure 17.

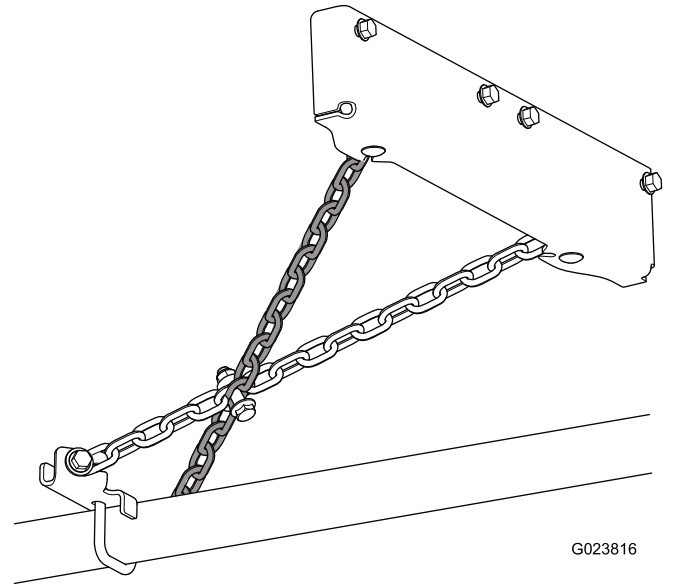


Figure 17
Machine not shown

3. Secure the frame bracket with 4 bolts (5/16 x 1 inch) and 4 flange nuts (5/16 inch); refer to Figure 16).

Adjusting the Pivot Stop Bolts

1. Pivot the rake to 1 side. The stop bolt should contact the drawbar when the rake is 51 mm (2 inches) away from the tire (Figure 18).

If there is 51 mm (2 inches) of clearance between the rake and the tire, no adjustment is necessary.

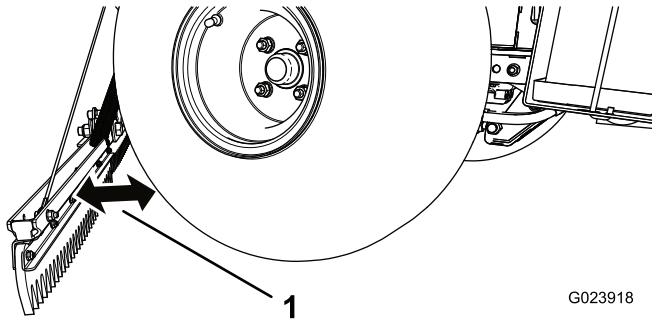


Figure 18

1. 51 mm (2 inches)

2. Determine whether there is not enough clearance or too much clearance between the tire and the rake.
 - If there is not enough clearance, loosen the flange locknut.
 - If there is too much clearance, loosen the jam nut.

Note: Use a wrench on the square neck of the bolt to prevent the bolt from spinning.

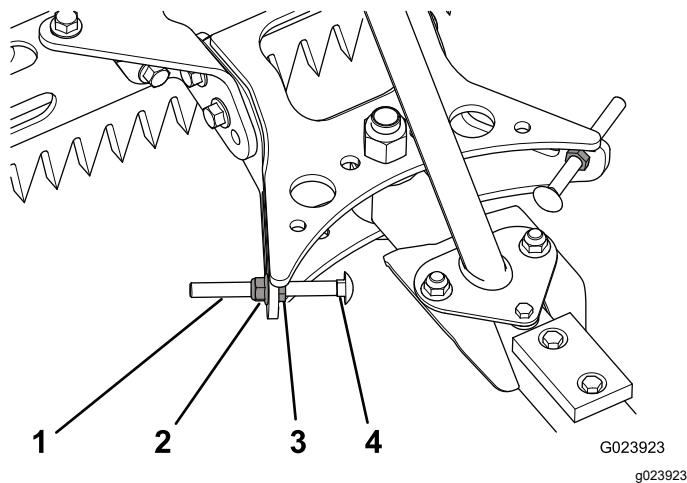


Figure 19

1. Stop bolt
 2. Flange locknut
 3. Jam nut
 4. Square neck
3. When the stop bolt is in position so that there is 51 mm (2 inches) of clearance between the rake and the tire, tighten the appropriate nut.

- If you loosened the flange locknut, tighten the jam nut now.
- If you loosened the jam nut, tighten the flange locknut now.

Note: Use a wrench on the square neck of the bolt to prevent the bolt from spinning.

4. Repeat the procedure for the other stop bolt.
5. Ensure that the rake does not contact the tires throughout the range of motion.

Inspecting the Raking Pattern and Adjusting the Lift-in-turn System

Inspecting the Raking Pattern

1. Ensure that the tires are inflated to 48 kPa (7 psi).
2. Drive the machine to a sand trap—with a flat bottom, if possible.
3. With the rake in the lowered position, turn the machine to the left while driving, so that the rake is fully pivoted.
4. Stop the machine, stop the engine, set the parking brake, remove the key, and wait for all moving parts to stop.
5. Get off the machine, and inspect the left-hand side of the raking path in the sand.

Note: The rake should groom over the tire tracks, but it should not contact the sand beyond the tire tracks. If the raking path is not correct, refer to [Adjusting the Lift-in-turn System \(page 11\)](#).

6. Repeat the procedure for the right-hand side of the rake.

Adjusting the Lift-in-turn System

1. Complete steps 1 through 5 in [Inspecting the Raking Pattern \(page 11\)](#).
2. Pivot the rake fully to 1 side.
3. On the inside of the turn (for example, the left-hand side if the rake is pivoted to the left), determine whether the rake contacts the sand too much and grooms beyond the tire tracks, or does not contact the sand enough to groom over the tire tracks.
4. Note the hole to which the top of the cable is mounted.

- Remove the shoulder bolt and the flange nut, and move the end of the cable to the appropriate hole.

- If the rake contacts the sand too much and grooms beyond the tire tracks, move the top of the cable to a hole closer to the center of the boom.

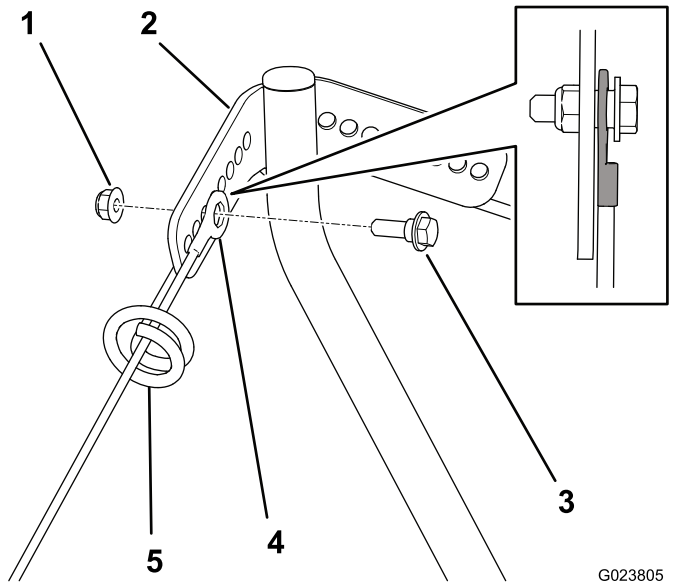


Figure 20

G023805
g023805

- If the rake does not contact the sand enough to groom over the tire tracks, move the top of the cable to a hole further away from the center of the boom.

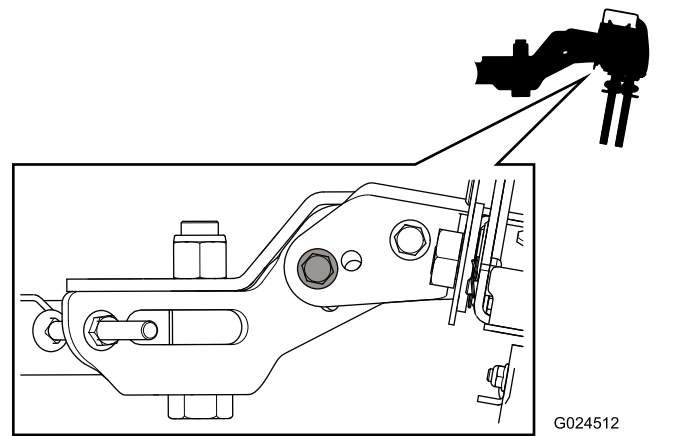
- Secure the cable with the shoulder bolt and the flange nut.

Note: To decrease the chance of binding, ensure that the end of the cable is positioned as shown in [Figure 20](#).

- Repeat the procedure for the other side.

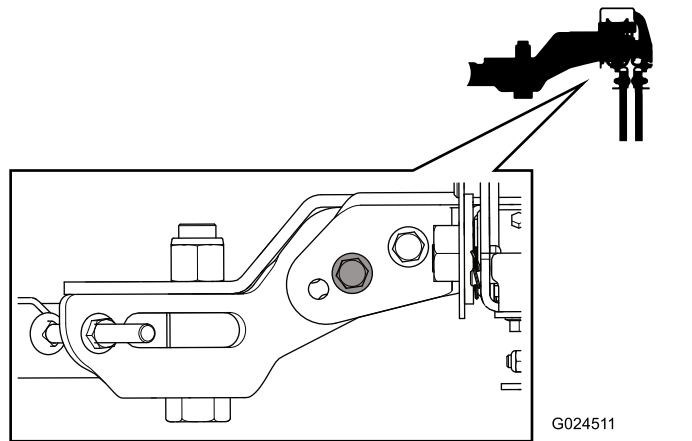
Adjusting the Rake Pitch

You can adjust the pitch of the rake to increase or decrease the amount of material agitation. If the rake edge is angled forward ([Figure 21](#)), toward the machine, the rake will carry more material and agitate the material at a deeper level. If the rake edge is angled backward ([Figure 23](#)), away from the machine, the rake will carry less material and agitate the material at a shallower level.



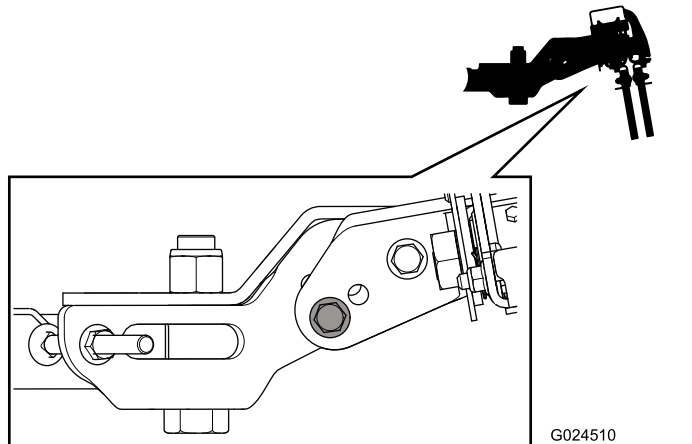
G024512
g024512

Figure 21
Angled forward



G024511
g024511

Figure 22
Middle position



G024510
g024510

Figure 23
Angled backward

- Remove the **front** nuts and bolts securing the rake assembly to the bracket ([Figure 24](#)).

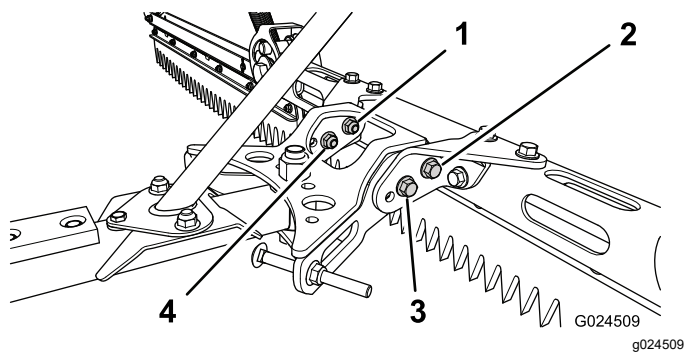


Figure 24

- | | |
|------------------------|-------------------------|
| 1. Rear flange nut (2) | 3. Front bolt (2) |
| 2. Rear bolt (2) | 4. Front flange nut (2) |

- Loosen the **rear** nuts and bolts.
- Adjust the rake to the preferred pitch until the appropriate holes are aligned.

Note: The middle position uses the holes closer to the rear bolts. The other 2 positions use holes farther away from the rear bolts.

- Install the bolts into the holes, and secure them with the nuts.
- Tighten the nuts on the front and rear bolts.

Raising and Lowering the Rake

To raise and lower the rake, use the attachment switch on the right control handle of the machine.

Press upward on the switch to raise the rake, and press downward on the switch to lower the rake; refer to the machine *Operator's Manual*.

Removing the Rake from the Machine

⚠ WARNING

If you drive the machine without an attachment installed, it can tip over and injure someone or damage property.

Do not drive the machine without a Toro-approved attachment installed.

- Disconnect the drawbar from the frame hitch.
- Disconnect the shackles from the attachment lift.
- Remove the frame bracket from the rear of the machine.

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 25](#). 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.

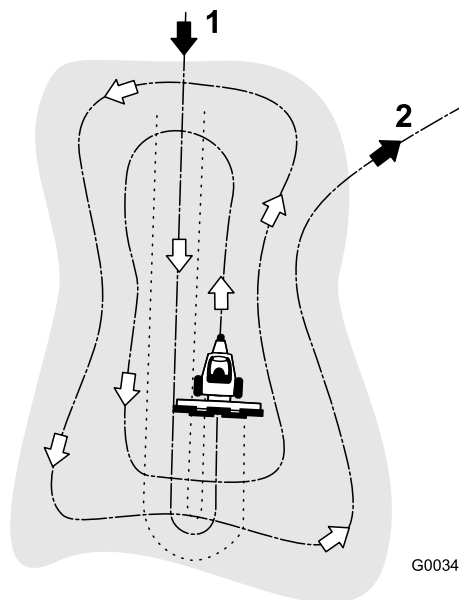


Figure 25

- Enter a trap straight into the long dimension in a level area.
- 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 25](#), 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.

Troubleshooting

Problem	Possible Cause	Corrective Action
There is a teardrop-shaped area that remains ungroomed.	<ol style="list-style-type: none"> 1. The lift-in-turn cables are not adjusted properly. 2. The pivot stop bolts are not adjusted properly. 	<ol style="list-style-type: none"> 1. Adjust the lift-in-turn cables. 2. Adjust the pivot stop bolts.
The appearance of the groomed surface is unacceptable.	<ol style="list-style-type: none"> 1. The rake pitch is not correct. 2. The desired appearance is not possible with the standard configuration. 3. The machine speed is too fast or too slow. 	<ol style="list-style-type: none"> 1. Adjust the rake pitch. 2. Install the optional broom finishing kit (sold separately). 3. Adjust the machine speed, or install the optional speed limiter kit (sold separately).
The rake contacts the tires.	<ol style="list-style-type: none"> 1. The pivot stop bolts are not adjusted properly. 2. The stop chains are not assembled properly. 	<ol style="list-style-type: none"> 1. Adjust the pivot stop bolts. 2. Ensure that the stop chains are crossed and that the bolt securing the chains is installed in the 6th link from the drawbar.
There are ungroomed piles where the rake side assemblies pivot from the center assembly.	<ol style="list-style-type: none"> 1. The rake sections are not installed correctly. 	<ol style="list-style-type: none"> 1. Ensure that the side assemblies are installed correctly to the center assembly to minimize the gap between the center assembly and the side assemblies.
There are tire marks visible in the groomed area.	<ol style="list-style-type: none"> 1. The rake is not lowered fully. 2. A lift chain is twisted inside the protective covering. 	<ol style="list-style-type: none"> 1. Lower the rake fully when grooming. 2. Remove the shackle, eliminate the twist in the chain, and install the shackle again.

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
08716	314000001 and Up	Flex Tooth Rake for Sand Pro 2040Z Traction Unit	TOOTH RAKE - SANDPRO 2040Z	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
September 23, 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 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
08716	314000001 and Up	Flex Tooth Rake for Sand Pro 2040Z Traction Unit	TOOTH RAKE - SANDPRO 2040Z	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 Directives.

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
September 23, 2022

Authorized Representative:

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



The Toro Total Coverage Guarantee

A 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.

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.

- 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