



**Count on it.**

Form No. 3366-705 Rev B

# Operator's Manual

## **Turf Groomer**

### **Sand Pro® Traction Unit with QAS**

**Model No. 08794—Serial No. 311000001 and Up**

**Model No. 119-2827**

**Model No. 119-7107**

**Model No. 119-7108**

**Model No. 119-7109**

# Introduction

This product complies with all relevant European directives, for details please see the separate product specific Declaration of Conformity (DOC) sheet.

The Turf Groomer and it's attachments are mounted to a Sand Pro and are intended to be used by professional, hired operators in commercial applications. It is primarily designed to condition synthetic and natural turf.

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](http://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. Write the numbers in the space provided.

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

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

This manual identifies potential hazards and has safety messages identified by the safety alert symbol (Figure 1), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.



Figure 1

- 1. Safety alert symbol

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

# Contents

Introduction.....	2
Safety.....	3
Before Operating .....	3
While Operating.....	3
Maintenance.....	3
Safety and Instructional Decals .....	4
Setup.....	5
Mounting the Turf Groomer to the Traction Unit.....	6
Mounting the Greens Brushes to the Turf Groomer .....	7
Mounting the Synthetic Turf Brush to the Turf Groomer .....	7
Mounting the Groomer Spring Tine to the Turf Groomer .....	7
Mounting the Magnet Attachment to the Turf Groomer .....	8
Adjusting the Link Assembly .....	9
Operation.....	10
Training Period.....	10
Operating Tips .....	10
Conditioning Pattern .....	10
Inspecting and Cleaning the Turf Groomer, Attachments and Traction Unit.....	11
Maintenance.....	12
Lubrication.....	12
Maintaining the Brushes .....	12

# Safety

Hazard control and accident prevention are dependent upon the awareness, concern, and proper training of the personnel involved in the operation, transport, maintenance, and storage of the machine. Improper use or maintenance of the machine can result in injury or death. To reduce the potential for injury or death, comply with the following safety instructions.

## Before Operating

- Read and understand the contents of this Operator's Manual and the Sand Pro Operator's Manual before operating the machine. Become familiar with all of the controls and know how to stop quickly. A free replacement manual is available by sending the complete Model and Serial Number to The Toro® Company, 8111 Lyndale Avenue South, Bloomington, Minnesota 55420-1196.
- Never allow children to operate the machine. Do not allow adults to operate machine without proper instruction. Only trained operators who have read this manual should operate this machine.
- Never operate the machine when under the influence of drugs or alcohol.
- Keep all bystanders away from the operating area.
- Keep all shields and safety devices in place. If a shield, safety device, or decal is illegible or damaged, repair or replace it before operation is commenced. Also tighten any loose nuts, bolts, and screws to ensure that the machine is in safe operating condition.
- Do not operate the machine while wearing sandals, tennis shoes, sneakers, or shorts. Also, do not wear loose fitting clothing which could get caught in moving parts. Always wear long pants and substantial shoes. Wearing safety glasses, safety shoes, and a helmet is advisable and required by some local ordinances and insurance regulations.
- Using the machine demands attention. To prevent loss of control:
  - Operate only in daylight or when there is good artificial light.
  - Drive slowly and watch for holes or other hidden hazards.
  - Use extreme caution when driving into a sand trap, ditch, creek, or other hazard.
  - Reduce your speed when making sharp turns and when turning on hillsides.
  - Avoid sudden starts and stops.
  - Before backing up, look to the rear and ensure that no one is behind the machine.
  - Watch out for traffic when near or crossing roads. Always yield the right-of-way.
- Stay away from the discharge opening when the machine is operating. Keep all bystanders away from the discharge opening and don't direct discharge toward bystanders.
- If the engine stalls or the machine loses headway and cannot make it to the top of a slope, do not turn the machine around. Always back slowly straight down the slope.
- **Do not take an injury risk!** When a person or pet appears unexpectedly in or near the operating area, **stop operation.** Careless operation, combined with terrain angles, ricochets, or improperly positioned guards can lead to thrown object injuries. Do not resume operation until the area is cleared.
- Lightning can cause severe injury or death. If lightning is seen or thunder is heard in the area, do not operate the machine; seek shelter.
- Do not touch the engine or muffler while the engine is running or soon after it is stopped. These areas could be hot enough to cause a burn.

## Maintenance

- Remove the key from the ignition switch to prevent accidental starting of the engine when servicing, adjusting, or storing the machine.
- Perform only those maintenance instructions described in this manual. If major repairs are ever needed or assistance is desired, contact an Authorized Toro Distributor.
- To reduce a potential fire hazard, keep the engine free of excessive grease, grass, leaves, and accumulations of dirt. Never wash a warm engine or any electrical parts with water.
- Be sure that the machine is in safe operating condition by keeping nuts, bolts, and screws tight.

## While Operating

- Do not run the engine in a confined area without adequate ventilation. Exhaust fumes are hazardous and could possibly be deadly.
- The maximum seating capacity is one person. Never carry passengers.
- Sit on the seat when starting the engine and operating the machine.

- Make sure that all hydraulic line connectors are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.
- Keep your body and hands away from pin hole leaks in hydraulic lines that eject high pressure hydraulic fluid. Use cardboard or paper to find hydraulic leaks. Hydraulic fluid escaping under pressure can penetrate skin and cause injury. Fluid accidentally injected into the skin must be surgically removed within a few hours by a doctor familiar with this form of injury or gangrene may result.
- Before disconnecting or performing any work on the hydraulic system, all pressure in the system must be relieved by stopping the engine and lowering the pump to the ground.
- If the engine must be running to perform a maintenance adjustment, keep hands, feet, clothing, and other parts of the body away from the fan and other moving parts.
- Do not overspeed the engine by changing the governor settings. To be sure of safety and accuracy, have an Authorized Toro Distributor check the maximum engine speed with a tachometer.
- The engine must be shut off before checking the oil or adding oil to the crankcase.
- To ensure optimum performance and safety, always purchase genuine Toro replacement parts and accessories to keep the machine all Toro. **Never use “will-fit” replacement parts and accessories made by other manufacturers.** Look for the Toro logo to ensure genuineness. Using unapproved replacement parts and accessories could void the warranty.

## 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 lost.



114-0646

1. Warning—keep bystanders a safe distance from the brush.

# Setup

## Loose Parts

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

Description	Qty.	Use
Turf groomer assembly	1	Mount the turf groomer to the traction unit
Greens brushes	7	Mount the greens brushes
Bolt, 5/16 x 1-1/2 inch	28	
Washer	28	
Synthetic turf brush	14	Mount the synthetic turf brush
Flange bolt, 5/16 x .613 inch	42	
Flange nut, 5/16 inch	42	
Groomer spring tine	1	Mount the groomer spring tine
Flag pin	2	
Bolt, 5/16 x 1 inch	2	
Retainer bracket	2	
Quick pin	1	
Magnet attachment	1	Mount the magnet attachment
Flange bolt, 5/16 x 1 inch	4	
Flange nut, 5/16 inch	4	
No parts required	—	Adjust the link assembly

## Media and Additional Parts

Description	Qty.	Use
Parts catalog	1	Use to reference part numbers
Operator's Manual	1	Read before operating the machine
Certificate of conformity	1	Declaration of conformity

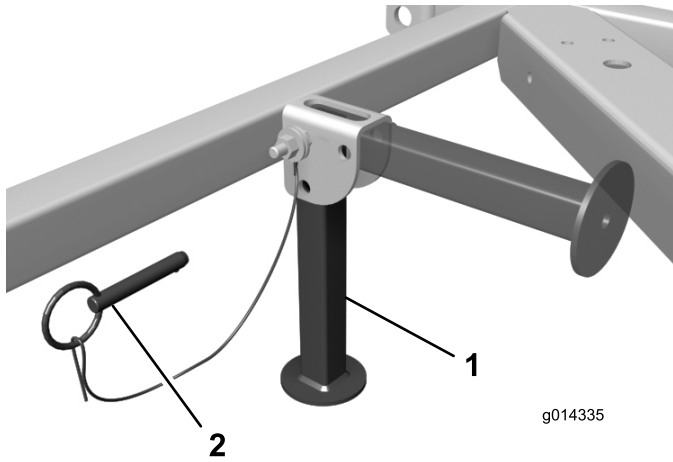
**Note:** Determine the left and right sides of the machine from the normal operating position.

**Note:** For optimum performance, it is recommended that the Weight Kit, Part No. 100-6442 be installed on the Sand Pro if it is equipped with more than one attachment.

**Note:** When working on greens, Smooth Tires, Part No. 112-0034 or Sports Tires, Part No. 94-6126 can be installed on the Sand Pro to help prevent damage to the turf.

# Mounting the Turf Groomer to the Traction Unit

1. Remove the fasteners securing the turf groomer to the shipping crate. Remove the turf groomer from the shipping crate.
2. Remove the quick pins securing the storage stands in the raised position (Figure 2). Pivot the stands down and secure with the quick pins.



**Figure 2**

1. Storage stand
2. Quick pin

3. Remove any attachment from the machines traction unit adapter.
4. Move the traction unit into position in front of the attachment adapter.

**Note:** Make sure the locking lever (Figure 3) is pivoted to the left (unlocked position) as viewed from the rear of the machine. Transport in the full up position and lower it for a more aggressive grooming.

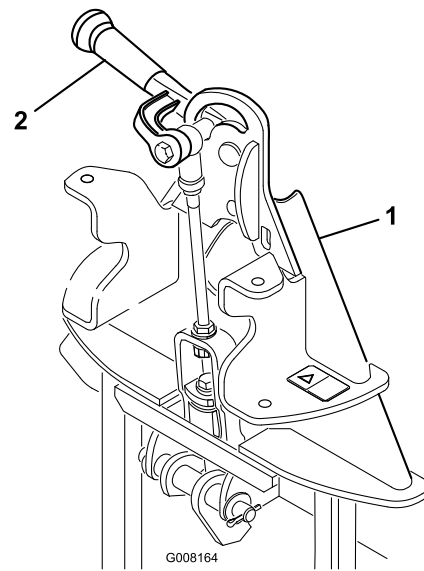
5. Slide the attachment adapter onto the traction adapter.

## ⚠ CAUTION

If you are not careful, you could pinch your fingers between the attachment and traction unit adapters.

Always lift and move the attachment using the handle on the back of the attachment adapter.

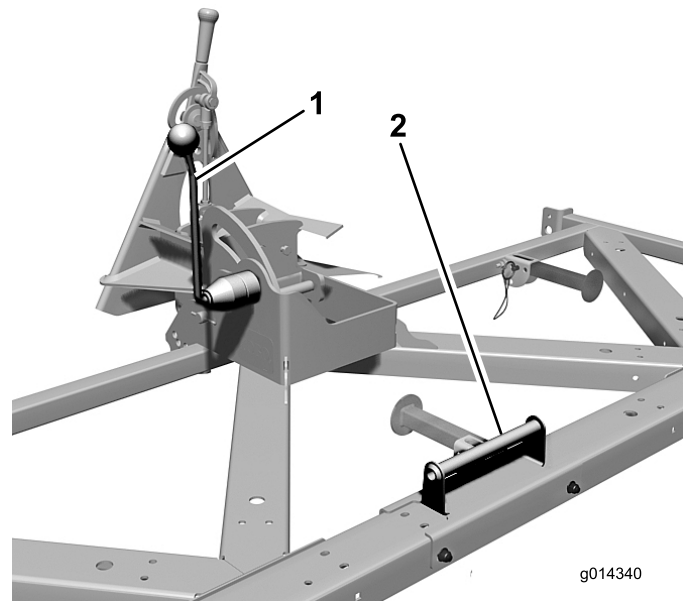
6. Pivot the locking lever to the right to lock the adapters together.
7. Raise the adapters.



**Figure 3**

1. Attachment adapter
2. Locking lever

**Note:** To rotate the Turf Groomer upward, loosen the lockout lever, pivot the Turf Groomer upward to the desired position and tighten the lever (Figure 4). Transport in the full up position and lower for more aggressive grooming.



**Figure 4**

1. Lockout lever
2. Handle

# Mounting the Greens Brushes to the Turf Groomer

The greens brushes are for use on natural turf after light topdressing.

1. Secure each of the (7) brushes to the underside of turf groomer assembly with (4) 5/16 x 1-1/2 inch bolts and washers. Position the brushes as shown in Figure 5.

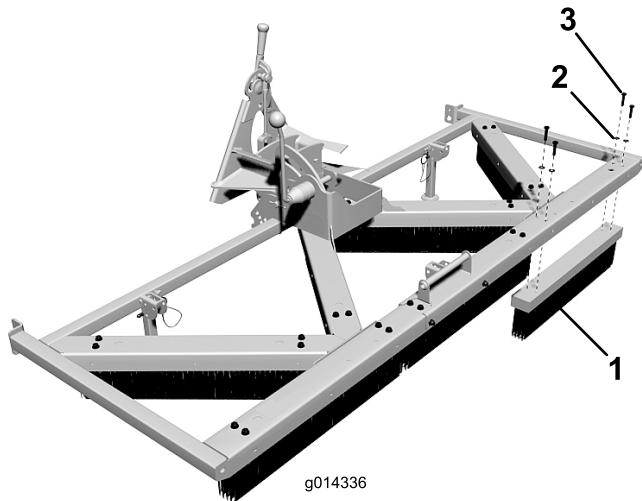


Figure 5

- |                         |           |
|-------------------------|-----------|
| 1. Brush                | 3. Washer |
| 2. Bolt (5/16 x 1-1/21) |           |

2. Tighten all the bolts firmly. Check the tightness of all the hardware after the first use, and then check periodically thereafter.

## Mounting the Synthetic Turf Brush to the Turf Groomer

The synthetic turf brushes are to used on synthetic turf or on natural turf after heavy topdressing.

1. Secure each of the (14) synthetic turf brushes to the sides of the turf groomer assembly with (3) 5/16 x .613. inch flange bolts and flange nuts. The brushes are to be positioned under the flange as shown in Figure 6.

**Important:** If the brushes are not positioned as shown in figure Figure 6, they will interfere with each other.

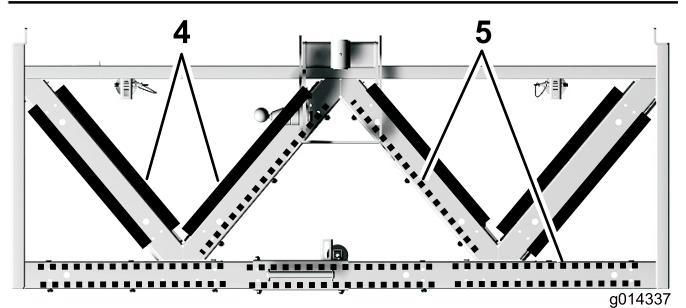
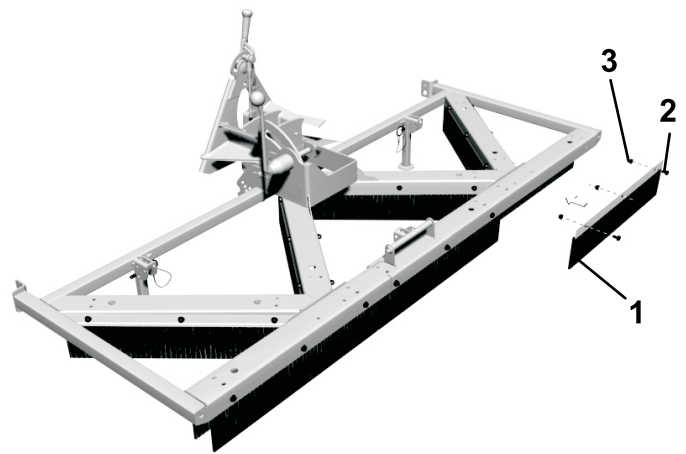


Figure 6

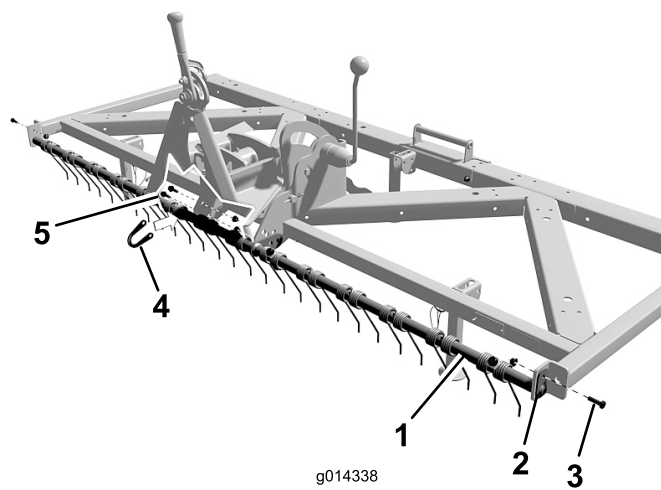
- |                         |   |
|-------------------------|---|
| 1. Synthetic Turf Brush | 4. Outside of support channel (solid lines shown) |
| 2. Hex Head Screw       | 5. Inside of support channel (dashed lines shown) |
| 3. Flange Nut           |   |

2. Tighten all the bolts and nuts firmly. Check the tightness of all the hardware after the first use, and check periodically thereafter.

## Mounting the Groomer Spring Tine to the Turf Groomer

The groomer spring tine can be used to redistribute and loosen the infill mixture on synthetic turf.

1. Secure each end of the spring tine holder to each end of the front of the turf groomer with a flag pin and a 5/16 x 1 inch bolt. Position the spring tine holder as shown in Figure 7.

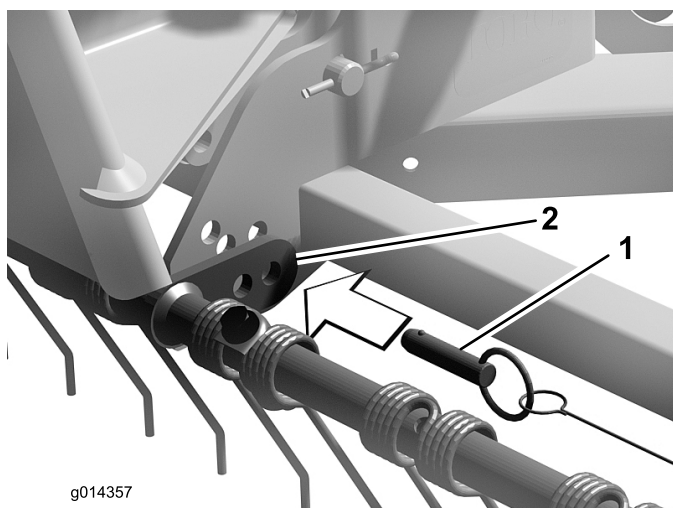


**Figure 7**

- |                       |                     |
|-----------------------|---------------------|
| 1. Spring tine holder | 4. Retainer bracket |
| 2. Flag pin           | 5. Bolt             |
| 3. Bolt               |                     |

2. Secure the spring tine holder to the turf groomer with a retainer bracket and (2) 5/16 x 1 inch bolts (Figure 7).
3. Secure the tab on the spring tine holder to the turf groomer with the quick pin (Figure 8). The attitude of the spring tine groomer can be adjusted by moving the location of the quick pin to a different set of holes on the mounting tab and groomer.

**Note:** To lock the spring tine holder into working or storage position a slight force inward may be required to align the quick pin to the mounting tab (Figure 8).



**Figure 8**

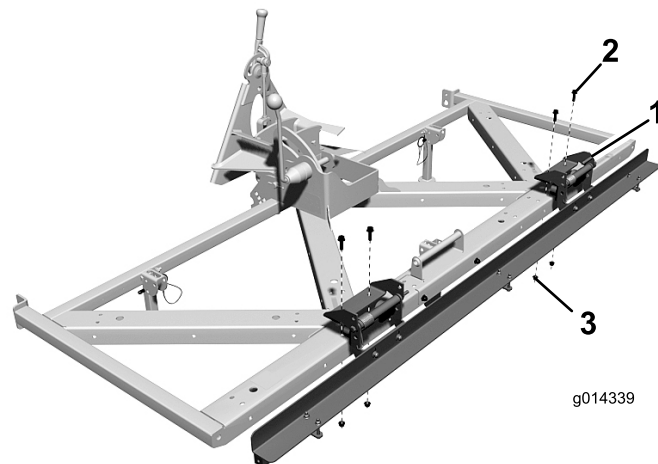
- |              |                 |
|--------------|-----------------|
| 1. Quick pin | 2. Mounting tab |
|--------------|-----------------|

4. Tighten all the bolts and nuts firmly. Check the tightness of all the hardware after the first use, and check periodically thereafter.

## Mounting the Magnet Attachment to the Turf Groomer

The magnet attachment is to be used only with the synthetic turf brushes.

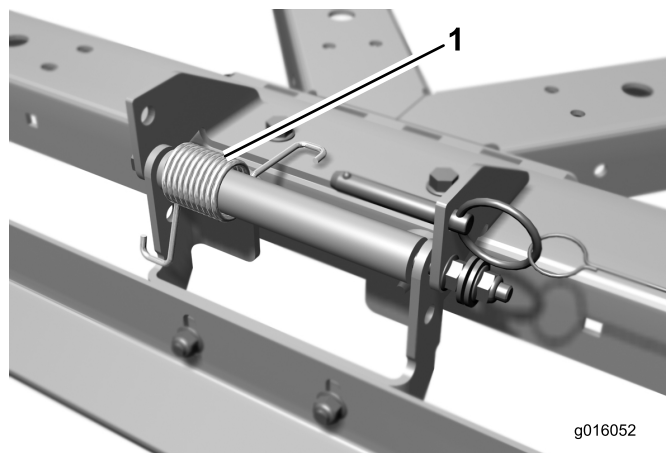
1. Secure each of the magnet attachment brackets to the top of the turf groomer with (2) 5/16 x 1 inch flange bolts and flange nuts (Figure 9).



**Figure 9**

- |                              |               |
|------------------------------|---------------|
| 1. Magnet attachment bracket | 3. Flange nut |
| 2. Flange bolt               |               |

**Note:** To ease the mounting of the attachment brackets to the turf groomer, the tension on the torsion springs may be released (Figure 10).



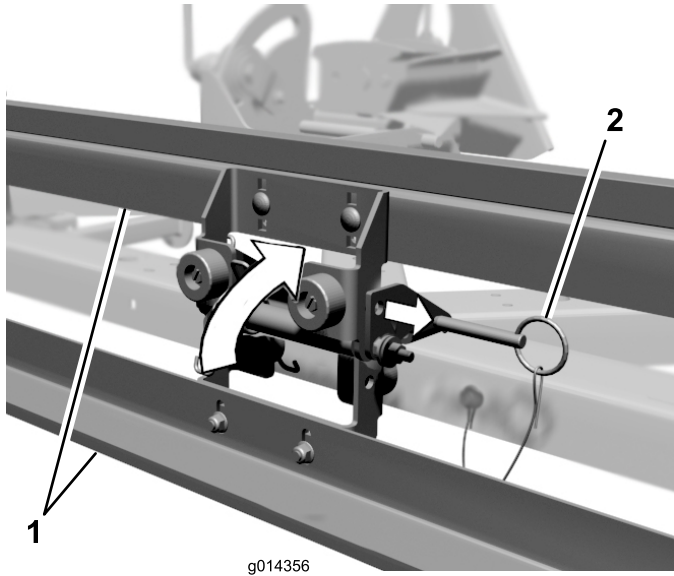
**Figure 10**

- |                   |
|-------------------|
| 1. Torsion spring |
|-------------------|

2. Tighten all the bolts and nuts firmly. Check the tightness of all the hardware after the first use, and check periodically thereafter.

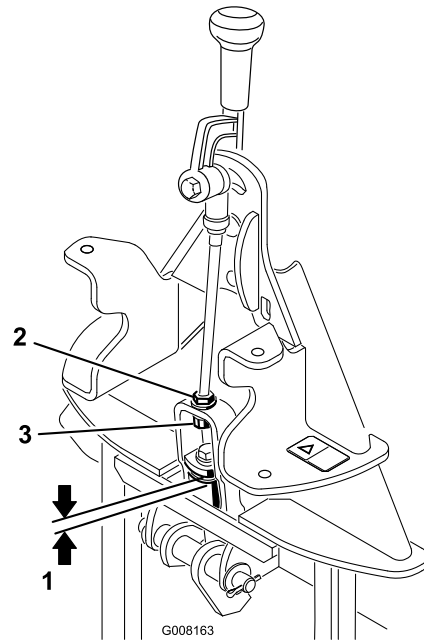


3. Adjust the turf groomer so the bottom of the magnet is a 1/4 inch to 1 inch (6 mm to 25 mm) above the turf when grooming.
4. To rotate the magnet upward, remove the quick pin, pivot the magnet upward and reinstall the quick pin (Figure 11). This can be done when debris has to be removed from the magnet.



**Figure 11**

1. Magnet
2. Quick pin



**Figure 12**

1. 0.060 to 0.080 inch
2. Jam nut
3. Adjustment nut

## Adjusting the Link Assembly

1. With the turf groomer mounted and secured on the traction unit, raise the attachment.
2. Measure the gap between the top washer and the spacer in the link assembly on the attachment adapter as shown in Figure 12.

**Note:** The gap between the washer and the shoulder should be 0.060 to 0.080 inch

# Operation

Read this **entire section on grooming** before actually working on turf. There are many conditions that will determine the adjustments necessary. Make the adjustments on the attachments for optimum results in your particular area.

## Training Period

Practice grooming before moving onto the turf. Practice starting and stopping, turning, raising and lowering the conditioner. Practice at a slow ground speed. This training period will be beneficial to the operator in gaining confidence in the performance of the machine.

**Note:** Do not back up the traction unit with the attachment lowered. Damage to the attachment and turf will occur.

## Operating Tips

The Turf Groomer and its attachments are designed to aid in topdressing turf, redistributing the infill mixture to keep the playing surface level and consistent to maintain predictable performance. Also, the Groomer will “Stand Up” the turf and the magnetic attachment will pick up metal debris on synthetic surfaces.

### All Surfaces

- Operation of the Sand Pro can be in the float position when using the Turf Groomer. This keeps the weight consistent on the attachment.
- For more aggressive grooming, down pressure can be used. This is useful when moving large amounts of material around the field.
- When transporting the Turf Groomer, it must be in the fully raised position.

### Synthetic Surfaces

- Remove large debris from surface prior to grooming. Failing to remove debris prior to grooming will result in the debris being worked into the turf and ultimately result in lack of permeability of turf.

**Note:** If using a blower to remove debris, use caution not to point the nozzle too deep.

- Groom every 1-2 weeks depending on condition of surface. Frequency of grooming will depend on many factors including type of surface and usage. Document grooming practices in maintenance log.

## Conditioning Pattern

- Never groom perpendicular to the seams.
- Lower the groomer and travel in straight lines.
- Always raise the groomer when turning.
- Drag the groomer in alternating directions keeping in mind the direction of seams.
- Change the dragging pattern occasionally to prevent grain in the turf.
- The recommended pattern for grooming sports field is shown in Figure 13.

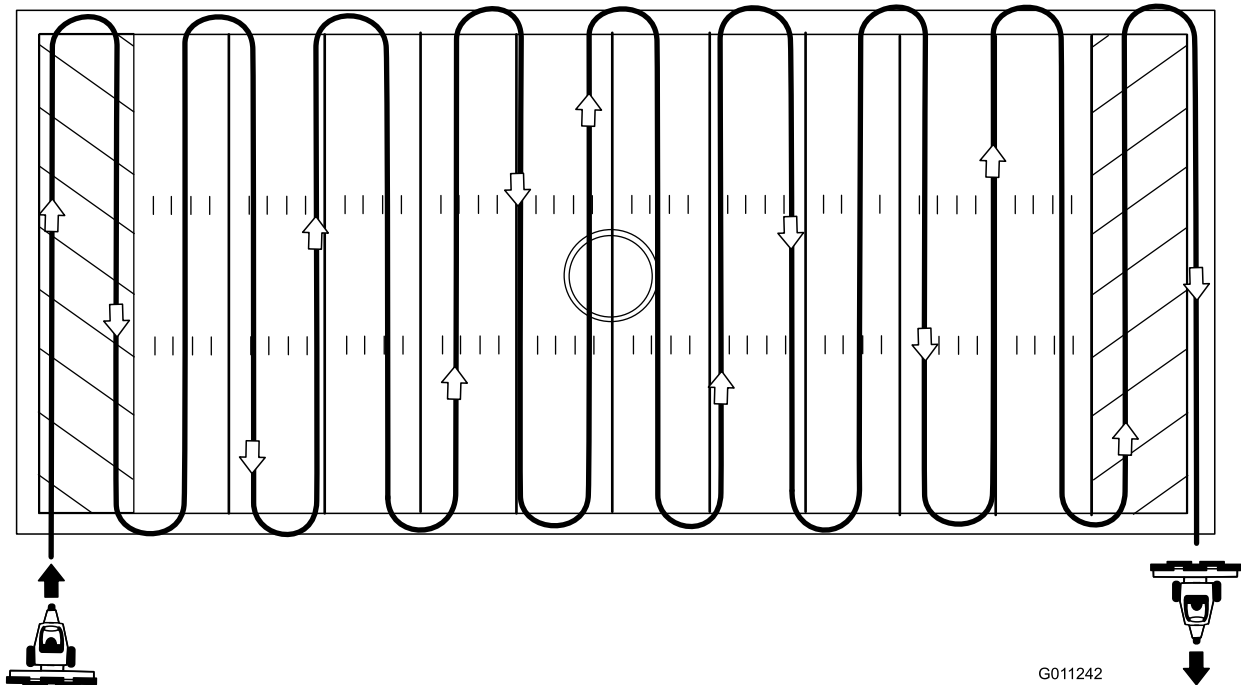


Figure 13

## Inspecting and Cleaning the Turf Groomer, Attachments and Traction Unit

When the grooming operation is completed, clean the machine thoroughly with water to remove debris from the attachments.

**Note:** If the attachment adapter becomes stuck to the traction unit adapter, insert a pry bar/screwdriver into the pry slot to disengage the parts (Figure 14).

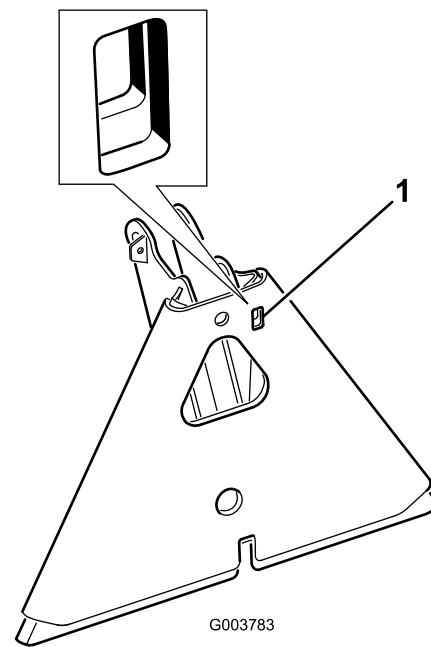


Figure 14

1. Pry slot

# Maintenance

## Lubrication

### Greasing the Bushings

If you operate the Turf Groomer under normal conditions, lubricate all grease fittings for the bearings and bushings after **every 50 hours of operation** with No. 2 General Purpose Lithium Base Grease. Lubricate bearings and bushings **immediately** after every washing, regardless of the interval listed.

The grease fitting locations and quantities are as follows:

Attachment adapter pivot - Qty. 1 (Figure 15)

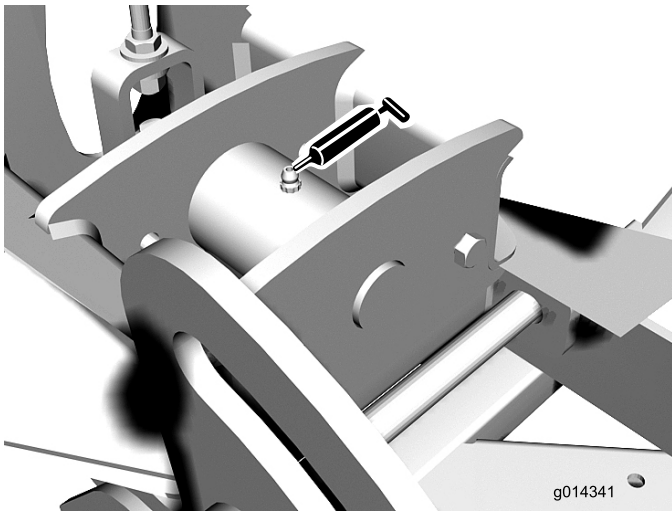


Figure 15

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### Greasing the Attachment Adapter

If the locking lever on the attachment adapter does not pivot freely and easily, apply a light coat of grease to the area shown in Figure 16.

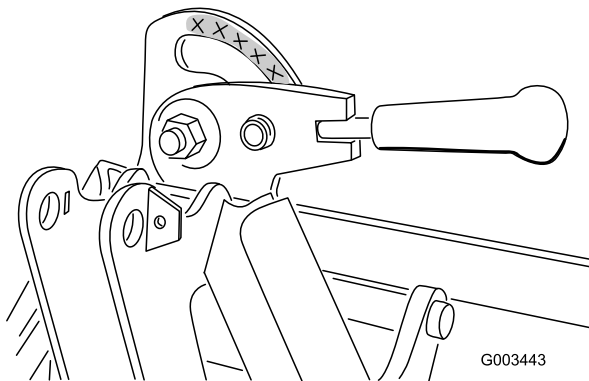


Figure 16

## Maintaining the Brushes

### Rotating the Brushes

The brushes can be rotated for increased life. If a set occurs on the bristles, rotate the brushes.

**Notes:**

**Notes:**

**Notes:**



## 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:

Commercial Products Service Department  
Toro Warranty Company  
8111 Lyndale Avenue South  
Bloomington, MN 55420-1196  
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, brakes pads and linings, clutch linings, blades, reels, bed knives, tines, spark plugs, castor wheels, tires, filters, belts, and certain sprayer components such as diaphragms, nozzles, and check valves, etc.
- Failures caused by outside influence. Items considered to be outside influence include, but are not limited to, weather, storage practices, contamination, use of unapproved coolants, lubricants, additives, fertilizers, water, or chemicals, etc.

- 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.

#### Note Regarding Deep Cycle Battery Warranty:

Deep cycle 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.

#### Maintenance is at Owner's Expense

Engine tune-up, lubrication cleaning and polishing, replacement of Items and Conditions Not Covered 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 printed in your *Operator's Manual* 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. If all other remedies fail, you may contact us at Toro Warranty Company.