

Count on it.

Operator's Manual

Debris Blower

for Groundsmaster® 300 Series Traction Unit Model No. 30855—Serial No. 310000001 and Up

Introduction

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

This debris blower is mounted to a ride-on machine and is intended to be used by professional, hired operators in commercial applications. It is primarily designed to use wind power to quickly clear large areas of unwanted debris on well-maintained lawns in parks, sports fields, and on commercial grounds.

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. Write the numbers in the space provided.

Model No	•
Serial No	ı

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.



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	
Before Operating	
While Operating	
Maintenance	
Safety and Instructional Decals	
Setup	
1 Mounting the Castor Wheels	
2 Installing the Stand	
3 Mounting the Debris Blower to the Traction	
Unit	7
4 Installing the Drive Shaft	8
5 Install Rear Ballast	
6 Grease the Blower	9
Product Overview	10
Specifications	10
Operation	11
Transporting the Blower	11
Adjusting the Discharge Opening	
Operating Tips	
Maintenance	12
Lubrication	12
Adjusting the Blower Belt	12
Adjusting the Blower Belt	
Storage	
Troubleshooting	15

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 before operating the machine. Become familiar with all of the controls and know how to stop quickly.
- 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.

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.
- This product may exceed noise levels of 85 dB(A) at the operator position. Hearing protection is recommended for prolonged exposure to reduce the potential of permanent hearing damage.

- 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.
 - Do not drive close to 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.

Check the fan shaft bearing mounting bolts and nuts frequently to be sure that they are tightened to specification.

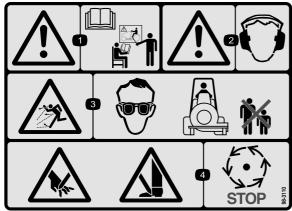
- Make sure that all hydraulic line connectors are tight and all hydraulic hoses and lines are in good condition before applying pressure to the system.
- Keep your body and hands away from pin hole leaks in hydraulic lines that eject high pressure hydraulic fluid. Use cardboard or paper to find hydraulic 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 blower 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.

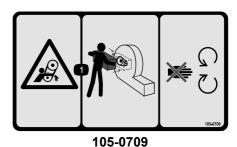


98-3110

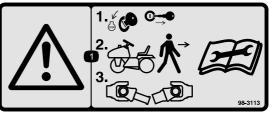
- 1. Warning—read the Operator's Manual and receive training.
- 2. Warning—wear hearing protection.
- Thrown object hazard—wear eye protection and keep bystanders a safe distance from the machine.
- Cutting hazard of hand or foot—wait for moving parts to stop.



1. Point of rotation



1. Entanglement hazard, belt—keep all guards and shields in place; stay away from moving parts.



98-3113

. Warning—stop the engine and remove the key before leaving the machine or disconnecting the PTO shaft; read the instructions before servicing or performing maintenance.



93-7283

 Entanglement hazard, PTO shaft—keep bystanders a safe distance from the machine.



93-9083

 Cutting/dismemberment hazard, fan—stay away from moving parts.

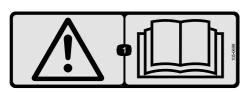


93-6674

 Crushing hazard, hand—read the instructions before servicing or performing maintenance.



105-0707



105-0698

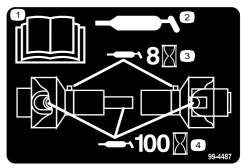
Apply over decal 105-0707 for CE compliance

1. Warning—read the Operator's Manual.



99-4486

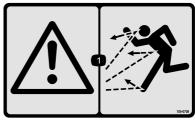
1. Entanglement hazard, belt—stay away from moving parts, keep all guards and shields in place.



99-4487

- Read the Operator's Manual.
- 2. Grease

- 3. Grease every 8 hours.
- 4. Grease every 100 hours.



105-0708

 Warning—thrown object hazard; keep bystanders away from machine.

Setup

Loose Parts

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

Procedure	Description	Qty.	Use
1	No parts required	-	Mount the castor wheels to the debris blower (shipped on blower)
2	No parts required	_	Install the stand (shipped on blower)
	Debris blower assembly	1	
	Capscrew	4	
2	Washer	8	Mount the debris blower to the traction
3	Nut	4	unit
	Lift arm bracket	1	
	Pin	1	
4	No parts required	_	Install the drive shaft
5	No parts required	_	Install rear ballast
6	No parts required	-	Grease the blower

Media and Additional Parts

Description	Qty.	Use
Parts Catalog Operator's Manual	1 1	Read before operating.
Declaration of Conformity	1	

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

Important: The fasteners on the covers of this machine are designed to remain on the cover after removal. Loosen all of the fasteners on each cover a few turns so that the cover is loose but still attached, then go back and loosen them until the cover comes free. This will prevent you from accidentally stripping the bolts free of the retainers.



Mounting the Castor Wheels

No Parts Required

Procedure

The castor wheel assemblies are installed upside down on the debris blower for shipping

1. Remove the tensioning caps from the spindle shafts and slide off the castor wheel, spacers, and thrust washers (Figure 2).

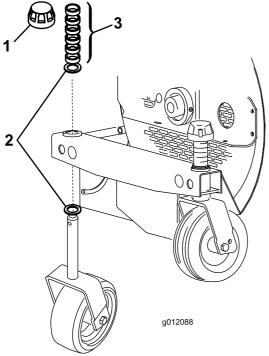


Figure 2

- 1. Tensioning cap
- 2. Thrust washers
- 3. Spacers
- 4. Front castor spindle
- 2. Slide the spacers onto the castor spindle to get the desired height. Slide a thrust washer onto the spindle and push the castor spindle through the frame. Install another thrust washer and the remaining spacers onto the spindle and install the tensioning cap to secure the assembly (Figure 2).

Important: The thrust washers-not the spacers-must contact the top and bottom of the blower frame.

3. Ensure that both castor wheels are set at the same height.

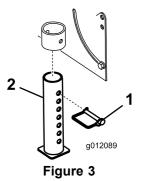


Installing the Stand

No Parts Required

Procedure

1. Remove the snapper pin securing the stand to the tube on the blower frame (Figure 3).



- 1. Snapper pin
- 2. Stand tube
- 2. Lower the stand. Install the pin through the upper set of holes in the stand and tube (Figure 3). Secure the pin.
- 3. Remove the snapper pin securing the stand to the tube on the blower frame.
- 4. Raise the stand. Install the pin through the lower set of holes in the stand and tube. Secure the pin.
- 5. Stand the blower up on the castor wheels and stand (storage position).



Mounting the Debris Blower to the Traction Unit

Parts needed for this procedure:

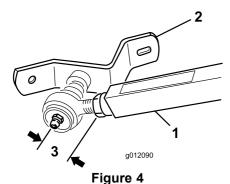
1	Debris blower assembly
4	Capscrew
8	Washer
4	Nut
1	Lift arm bracket
1	Pin

Procedure

1. Remove the cutting unit or other attachment from the traction unit. Do not remove the ball joint mounts from the lift arms. The lift arms must be equipped with Toro ball joint mounts, Part No. 21-3050 and 21-3020.

Note: Retain the fasteners for future installation of cutting unit or attachment.

2. The right and left ball joints are properly adjusted when the distance from the end of the lift arm nut to the center of the ball joint grease fitting is 1-5/8 inch (41 mm) (Figure 4 and Figure 5).



- 1. Lift arm
- 3. 1-5/8 inches (41 mm)
- 2. Right ball joint mount (21-3020)

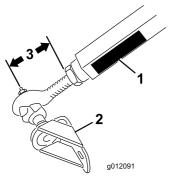


Figure 5

1. Lift arm

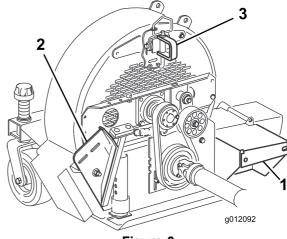
- 3. 1-5/8 inches (41 mm)
- 2. Left ball joint mount (21-3050)
- 3. Position the traction unit in line with the rear of the Debris Blower.

A WARNING

Since the right-hand lift arm is spring loaded to about 100 pounds and the left-hand lift arm is spring loaded to about 150 pounds, sudden release of the lift arm could cause injury

Use a helper to push the arm down.

4. Have a helper carefully push down on the right push arm until the holes in the ball joint mount line up with the holes in the blower mounting bracket (Figure 6).



- Figure 6
- 1. Right mounting bracket
- 3. Lift arm bracket
- 2. Left mounting bracket
- 5. Secure the ball joint mount to the right blower bracket with the cutting unit mounting fasteners.
- 6. Have a helper carefully push down on the left push arm until the holes in the ball joint mount line up with the holes in the castor arm. Immediately slide a 4 x 4 inch block of wood between the top of the push arm and underside of the chassis.

A WARNING

Sudden release of the lift arm could cause injury.

Make sure that the wooden block does not slip out accidentally.

- 7. Secure the ball joint mount to left blower bracket with the cutting unit mounting fasteners.
- 8. Carefully remove the wood block holding the push arm down.
- 9. Pivot the blower rearward and secure the lift bracket to the T-bar on the traction unit with the lift arm bracket and pin.



Installing the Drive Shaft

No Parts Required

Procedure

A DANGER

The PTO shaft rotates with enough force to cause serious injury.

Do not start the engine and engage the PTO lever when the PTO shaft is not connected to the blower gear box.

1. Loosen the fasteners securing the belt guard to the blower frame (Figure 7). Remove the belt guard.

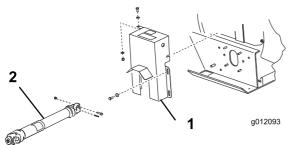


Figure 7

- 1. Belt guard
- 2. PTO shaft
- 2. Slide the drive shaft onto the traction unit PTO shaft (Figure 7). Align the mounting holes in each shaft and slide them together.
- 3. Secure them with a roll pin and (2) capscrews and nuts (Figure 7).
- 4. Slide the shafts together.
- 5. Slide drive shaft onto the blower shaft. Align the mounting holes in each shaft and slide them together.
- 6. Secure them with a roll pin and (2) capscrews and nuts.
- 7. Install the belt guard and tighten the mounting fasteners (Figure 7).

Note: To ensure proper blower operation, check/adjust the blower belt tension after the first 20 hours of operation; refer to Adjusting the Blower Belt.

5

Install Rear Ballast

No Parts Required

Procedure

The Groundsmaster 300 series 2 Wheel Drive traction unit complies with the ANSI B71.4-1990 Standard when (5) 35 lb. weights (Part No. 24-5790) are installed. Order two Weight Kits, Part No. 24-5780 and one Weight Kit, Part No. 24-5790 from your Toro Distributor.



Grease the Blower

No Parts Required

Procedure

Before the blower is operated, the PTO shaft must be greased to ensure proper lubricating characteristics; refer to Greasing the Blower in the Maintenance section. Failure to properly grease the unit will result in premature failure of critical parts.

Product Overview

Specifications

Fan	Backward curved, cast aluminum fan. 12 blades per side, 21 in. (53 cm) outside diameter, 6-3/8 in. (16 cm) width, 34 lb. (16 kg)
Fan housing	10 gauge steel face plates welded to 10 gauge wrapper. Increasing scroll from cutoff.
Fan drive	PTO driven A 3VX banded belt drive to fan. Final drive ratio of 1.5:1 with a over running clutch in belt drive pulley. Fan shaft rotates on greaseable ball bearings.
Fan speed	2700 RPM
Fan output	3700 + 200 CFM, 140 + 20 MPH (225 km/h)
Outlet	Outlet opening is 47 in ²
Weight	335 lb. (152 kg)

Operation

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

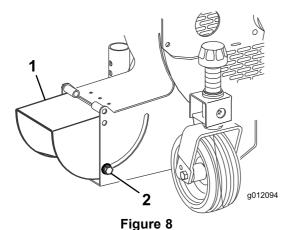
Transporting the Blower

- Start the traction unit and run it at a low RPM.
- Disengage the PTO and wait for the PTO to stop.
- 3. Raise the blower to the transport position.

Adjusting the Discharge **Opening**

The discharge opening is adjustable to increase or decrease air output velocity and volume. Decreasing the discharge opening size will increase the velocity.

1. Loosen the discharge opening deflector mounting screws (Figure 8).



- 1. Deflector
- 2. Mounting screw
- 2. Pivot the deflector to the desired opening.
- 3. Tighten the mounting screws.

Operating Tips

A WARNING

Discharged air has considerable force and could cause injury or loss of footing.

- Stay away from the discharge opening when the machine is operating.
- Keep bystanders away from the discharge opening when the machine is running.
- 1. Start the traction unit and run it at a low RPM.

- 2. Lower the blower using the traction unit lift mechanism.
- 3. Engage the PTO while the engine is at idle speed.
- 4. Increase the PTO speed to 1800 RPM.
- 5. Practice blowing material. It is advisable to blow the same direction the wind is blowing to prevent material from blowing back into the cleared area.

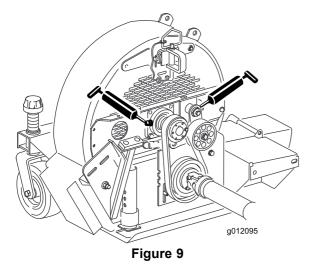
Maintenance

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

Lubrication

Idler Arm Bearing

The idler arm bearing (Figure 9) must be lubricated after every 8 hours of operation with a No. 2 Lithium-based grease.

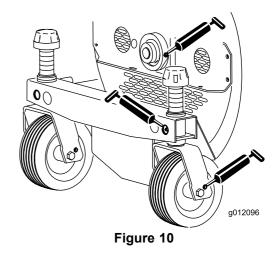


Fan Shaft Bearing

The 2 fan shaft bearings (Figure 9 and Figure 10) must be lubricated after every 8 hours of operation with a No. 2 Lithium-based grease.

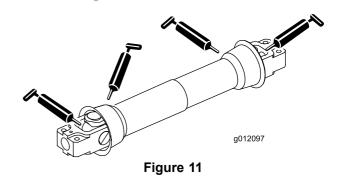
Castor Wheels

Under normal conditions, grease the 2 wheels and 2 wheel pivot tubes (Figure 10) after every 50 hours of use. Use a No. 2 Lithium-based grease



Drive Shaft and Guards

Under normal conditions, grease the (2) drive shaft fittings after every 100 hours of use and the guards after every 8 hours of operation (Figure 11). Use a No. 2 Lithium-based grease.



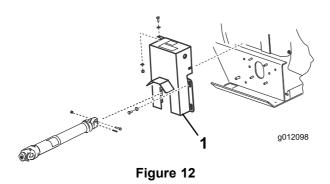
Adjusting the Blower Belt

Make sure belt is properly tensioned to ensure proper operation of the machine and unnecessary wear. Check belt frequently.

Note: Check/adjust the blower belt tension after the first 20 hours of operation.

1. Loosen the fasteners securing the belt guard to the blower housing (Figure 12). Remove the guard.

Note: The drive shaft does not have to be disconnected to adjust the belt.



- 1. Belt guard
- 2. A new belt is properly tensioned when the idler spring body is extended to a length of 3-1/4 to 3-1/2 in. (83-89 mm) (Figure 13).

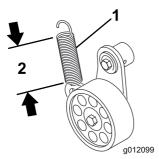
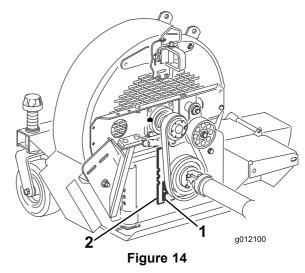


Figure 13

- 1. Idler spring
- 2. 3-1/4 to 3-1/2 in. (83-89 mm)
- 3. When the belt stretches, adjust it as follows:
 - Loosen the nuts securing the belt tensioner to the blower housing.
 - Move the belt tensioner (Figure 13) down until the idler spring body is extended to a length of 3-1/4 to 3-1/2 in. (83-89 mm) (Figure 14), then tighten the nuts.
- 4. Install the belt guard to the blower housing and tighten the mounting fasteners.



- Belt tensioner
- 2. Belt tensioner notch

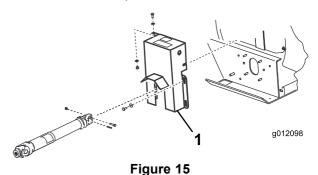
Adjusting the Blower Belt

Make sure belt is properly tensioned to ensure proper operation of the machine and unnecessary wear. Check belt frequently.

Note: Check/adjust the blower belt tension after the first 20 hours of operation.

1. Loosen the fasteners securing the belt guard to the blower housing (Figure 12). Remove the guard.

Note: The drive shaft does not have to be disconnected to adjust the belt.



- 1. Belt guard
- 2. A new belt is properly tensioned when the idler spring body is extended to a length of 3-1/4 to 3-1/2 in. (83-89 mm) (Figure 13).

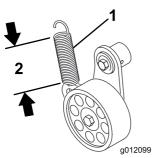


Figure 16

- 1. Idler spring
- 2. 3-1/4 to 3-1/2 in. (83-89 mm)
- 3. When the belt stretches, adjust it as follows:
 - Loosen the nuts securing the belt tensioner to the blower housing.
 - Move the belt tensioner (Figure 13) down until the idler spring body is extended to a length of 3-1/4 to 3-1/2 in. (83-89 mm) (Figure 14), then tighten the nuts.
- 4. Install the belt guard to the blower housing and tighten the mounting fasteners.

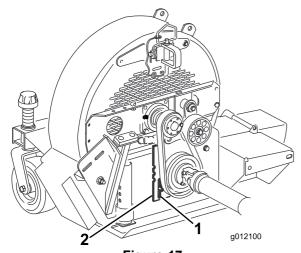


Figure 17

1. Belt tensioner

2. Belt tensioner notch

Storage

- 1. Thoroughly clean the blower. The fan housing should be free of dirt, leaves, and debris.
- 2. Lubricate all grease fittings. Wipe off any excess lubricant.
- 3. Place a light coat of grease on the splines of the PTO adapter.
- 4. Tighten all fasteners.

Troubleshooting

Problem	Problem Possible Cause	
The fan quits turning.	The bolt on the PTO adapter may be sheared.	Replace the bolt.
There is excessive vibration.	The bearing on the fan shaft is damaged.	Replace the bearings.
	2. Material is built up on the fan blades.	Clean out any build up on the inside of the housing.
	3. The RPM of the PTO shaft is too fast.	3. Reduce the PTO speed to 540 RPM.
There is lack of adequate air flow.	The air slots are clogged with debris.	Clean out any debris from the slots.
	2. The RPM on the tractor is too slow.	2. Increase the PTO speed to 540 RPM.
	The throttle on the tractor engine is too low.	Make any necessary repairs to bring the tractor speed up to normal.



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.