



Debris Blower

200 Series Groundsmaster®

Model No. 30823—Serial No. 230000001 and Up

Operator's Manual





Warning



CALIFORNIA

Proposition 65 Warning

Diesel engine exhaust and some of its constituents are known to the State of California to cause cancer, birth defects, and other reproductive harm.

Contents

	Page
Introduction	2
Safety	3
Safe Operating Practices	3
Sound Pressure Level	4
Sound Power Level	4
Vibration Level	4
Safety and Instruction Decals	5
Specifications	6
Blower Specifications	6
Optional Equipment	6
Setup	7
Loose Parts	7
Installing Frame Mount to Traction Unit	7
Install Castor Wheel Assemblies	8
Install Stand	8
Mount Frame Mount To Blower	8
Install Drive Shaft	9
Rear Ballast	9
Grease Blower	9
Operation	10
Transporting Blower	10
Adjust Discharge Opening	10
Maintenance	11
Lubrication	11
Adjusting Blower Belt	12
Troubleshooting	13
Storage	14
The Toro General Commercial Products Warranty ...	16

Introduction

Read this manual carefully to learn how to operate and maintain your product properly. The information in this manual can help you and others avoid injury and product damage. Although Toro designs and produces safe products, you are responsible for operating the product properly and safely.

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. The numbers can be found on a plate that is mounted on the blower housing.

Write the product model and serial numbers in the space below:

Model No. _____

Serial No. _____

This manual identifies potential hazards and has special safety messages that help you and others avoid personal injury and even death. ***Danger***, ***Warning***, and ***Caution*** are signal words used to identify the level of hazard. However, regardless of the hazard, be extremely careful.

Danger signals an extreme hazard that *will* cause serious injury or death if you do not follow the recommended precautions.

Warning signals a hazard that *may* cause serious injury or death if you do not follow the recommended precautions.

Caution signals a hazard that may cause minor or moderate injury if you do not follow the recommended precautions.

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

Safety

Safe Operating Practices

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

- 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 assure machine is in safe operating condition.
- Do not operate 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.
- Check interlock switches daily for proper operation (Refer To Section in Traction Unit Operator's Manual on Checking Interlock Switches). Do not rely entirely on safety switches - shut off engine before getting off seat. If a switch fails, replace it before operating the machine. The interlock system is for your protection, so do not bypass it. Replace all interlock switches every two years. Interlock switches should be adjusted so:
 - Engine cannot be started unless traction pedal is released (neutral position) and PTO switch is DISENGAGED (off position).
 - Engine stops if operator gets off seat when traction pedal is depressed.
 - Engine stops if operator gets off seat when PTO lever is ENGAGED (on position).
- Fill fuel tank before starting the engine. Avoid spilling any fuel. Since fuel is flammable, handle it carefully.
 - Use an approved fuel container.

- Do not fill tank while engine is hot or running.
- Do not smoke while handling gasoline.
- Fill fuel tank outdoors and up to about one inch from top of the tank, not the filler neck.
- Wipe up any spilled gasoline.

While Operating

- Do not run the engine in a confined area without adequate ventilation. Exhaust fumes are hazardous and could possibly be deadly.
- 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. Ear protectors are recommended for prolonged exposure to reduce the potential of permanent hearing damage.
- Before starting the engine:
 - A. Engage the parking brake.
 - B. Ensure traction pedal is in neutral and PTO is in the OFF, disengaged position.
 - C. After engine is started, release parking brake and keep foot off traction pedal. Machine must not move. If movement is evident, the neutral return mechanism is adjusted incorrectly; therefore, shut engine off and adjust until machine does not move when traction pedal is released.
- Using the machine demands attention, and 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 speed when making sharp turns and when turning on hillsides.
 - Avoid sudden starts and stops.
 - Before backing up, look to the rear and assure no one is behind the machine.
 - Watch out for traffic when near or crossing roads. Always yield the right-of-way.
- Stay away from discharge opening when machine is operating. Keep all bystanders away from the discharge opening and don't direct discharge toward bystanders.

- If engine stalls or machine loses headway and cannot make it to the top of a slope, do not turn machine around. Always back slowly straight down the slope.
- **DON'T 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 area is cleared.
- Do not touch engine or muffler while engine is running or soon after it is stopped. These areas could be hot enough to cause a burn.
- Before getting off the seat:
 - Move traction pedal to neutral position and remove foot from pedal.
 - Set the parking brake and disengage the PTO.
 - Shut the engine off and remove the key from the ignition switch. Wait for all movement to stop before getting off the seat.
- Lower the blower to the ground and remove key from ignition switch whenever machine is left unattended.
- Before disconnecting or performing any work on the hydraulic system, all pressure in system must be relieved by stopping engine and lowering 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 governor settings. To be sure of safety and accuracy, have an Authorized TORO Distributor check maximum engine speed with a tachometer.
- Engine must be shut off before checking oil or adding oil to the crankcase.
- At the time of manufacture the blower conformed to safety standards in effect for riding mowers. Therefore, to ensure optimum performance and safety, always purchase genuine TORO replacement parts and accessories to keep the Toro all TORO. NEVER USE "WILL-FIT" REPLACEMENT PARTS AND ACCESSORIES MADE BY OTHER MANUFACTURERS. Look for the TORO logo to assure genuineness. Using unapproved replacement parts and accessories could void the warranty of The Toro Company.

Maintenance

- Remove key from 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 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 machine is in safe operating condition by keeping nuts, bolts and screws tight. Check the rotor bearing mounting bolts and nuts frequently to be sure they are tightened to specification.
- Make sure all hydraulic line connectors are tight, and all hydraulic hoses and lines are in good condition before applying pressure to the system.
- Keep 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.

Sound Pressure Level

A GM 2XX series traction unit with the debris blower attachment has an equivalent continuous A-weighted sound pressure at the operator ear of: 98 dB(A), based on measurements of identical machines per SAE J1174– Mar 85 procedures.

Sound Power Level

A GM 2XX series traction unit with the debris blower attachment has a sound power level of: 110 dB(A) / 1 pW, based on measurements of identical machines per procedures outlined in Directive 79/113/EEC and amendments.

Vibration Level

Hand–Arm

A GM 2XX series traction unit with the debris blower attachment does not exceed a vibration level of 4.0 m/s² at the hands based on measurements of identical machines per ISO 5349 procedures.

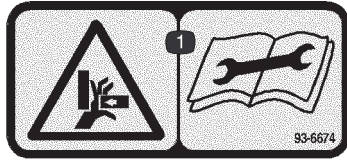
Whole Body

A GM 2XX series traction unit with the debris blower attachment does not exceed a vibration level of 0.5 m/s² at the posterior, based on measurements of identical machines per ISO 2631 procedures.

Safety and Instruction 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.



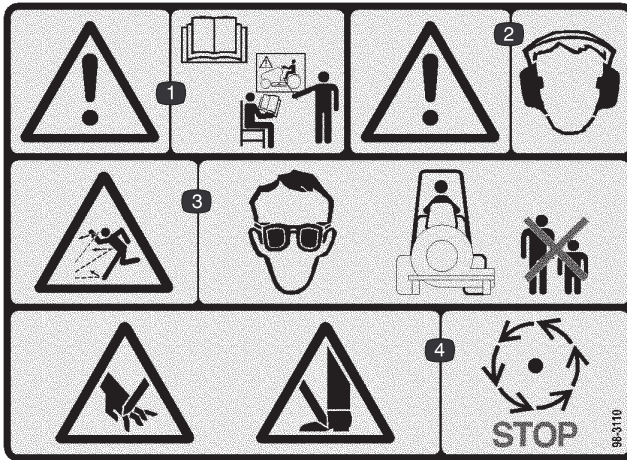
93-6674

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



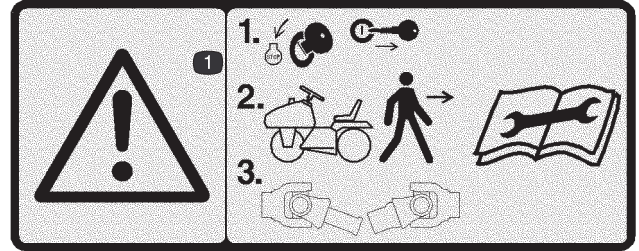
93-9083

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



98-3110

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



98-3113

1. 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.

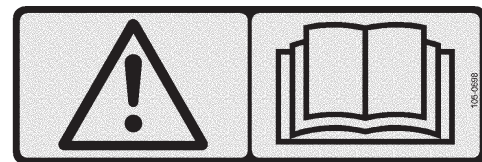


105-0708

1. Warning—thrown objects



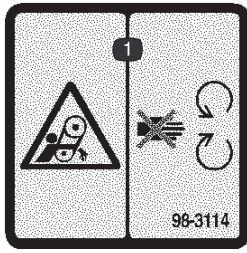
105-0707



105-0698

Place over decal 105-0707 for CE

1. Warning—read the *Operator's Manual*.



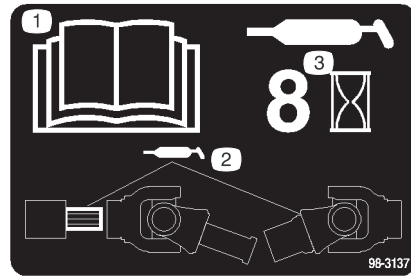
98-3114

1. Entanglement hazard—stay away from moving parts.



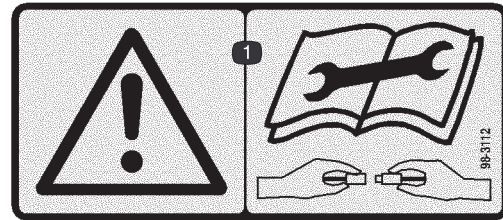
98-3115

1. Rotating shaft



98-3137

1. Read the *Operator's Manual*.
2. Grease
3. Grease every 8 hours.



98-3112

1. Warning—read the instructions before servicing or performing maintenance on the electrical wiring.

Specifications

Blower Specifications

Fan	Backward curved, cast aluminum fan. 12 blades per side, 21" outside diameter, 6.375" width, 34 lbs.
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 1.2:1 with a over running clutch on fan shaft. Fan shaft rotates on greaseable ball bearing.
Fan Speed	2700 rpm.
Fan Output	3650 +/- 200 CFM, 130 +/- 20 mph.
Outlet	Outlet opening is 47 square inches.
Weight	300 lbs.

Note: Specifications subject to change without notice.

Optional Equipment

Discharge Chute Kit	Model No. 08860
Counterbalance Kit	Model No. 30712

Setup

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

Loose Parts

Note: Use this chart as a checklist to ensure that all parts necessary for assembly have been received. Without these parts, total setup cannot be completed. Some parts may have already been assembled at the factory.

Description	Qty.	Use
Frame Mount	1	Install frame mount to blower & traction unit
Pivot Pin	2	
Cotter Pin—5/32 x 1—3/4	2	
Capscrew	6	
Flatwasher	12	
Nut	6	
Drive Shaft	1	Mount drive shaft to blower & traction unit
Capscrew	4	
Nut	4	
Roll Pin	2	
Decal	1	Apply over decal part number 105—0707 for CE
Operator's Manual	1	Read Before Operating Machine
Part Catalog	1	
Registration Card	1	Fill Out and Return to Toro

! **Danger** !

Do not start the engine and engage the PTO lever when PTO shaft is not connected to blower gear box because the PTO shaft will rotate with enough force to cause serious injury.

Installing Frame Mount to Traction Unit

Note: Traction unit must be equipped with larger carrier bracket pin, part no. 98–2328. If the traction unit serial number is 70001 or prior and is equipped with old style bracket, part no. 92–9786, a new bracket must be obtained from your Toro Distributor.

1. Park the machine on a level surface, lower the cutting unit to the floor, engage the parking brake, be sure the traction pedal is in the neutral position, the PTO lever is in the OFF position, shut the engine OFF and remove the key from the switch. Move lift lever to FLOAT position.
2. Remove the cutting unit or other attachment from the traction unit. Refer to cutting unit or attachment operator's manual.
3. On right side of the traction unit, loosen (do not remove) the wheel nuts securing wheel and tire assembly to front wheel studs.

4. Jack up machine until the front wheel is off the floor. Use jack stands or block the machine to prevent it from falling accidentally.
5. Remove wheel nuts and slide wheel and tire assembly off studs.
6. Mount frame mount to pivot bracket with a large pivot pin and cotter pin (Fig. 1). Grease fitting to be positioned downward.

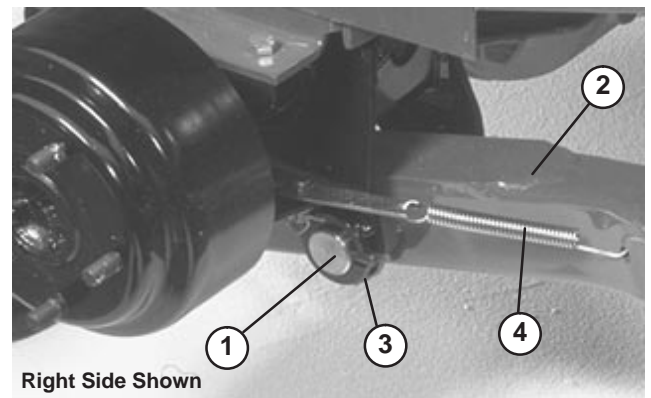


Figure 1

- | | |
|----------------|---------------------------|
| 1. Pivot pin | 3. Lift arm pivot bracket |
| 2. Frame mount | 4. Brake return spring |
-
7. Mount rear of frame mount to lift cylinder with pivot pin and (2) cotter pins (supplied with traction unit).

8. Hook brake return spring to hole in frame mount.
9. Install wheel and tire assembly. Torque wheel nuts to 45–55 ft–lbs.
10. Repeat procedure on left side of machine.

Note: Install drive shaft to traction unit before installing left wheel and tire assembly.

11. Slide drive shaft onto traction unit PTO shaft. Align mounting holes in each shaft and slide together.
12. Secure with roll pin and (2) capscrews and nuts.

Install Castor Wheel Assemblies

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

1. Remove tensioning caps from spindle shafts and slide off castor wheel, spacers and thrust washers (Fig. 2).
2. Slide spacers onto castor spindle to get desired height. Slide a thrust washer onto spindle, push castor spindle through frame. Install another thrust washer and remaining spacers onto spindle and install tensioning cap to secure assembly.

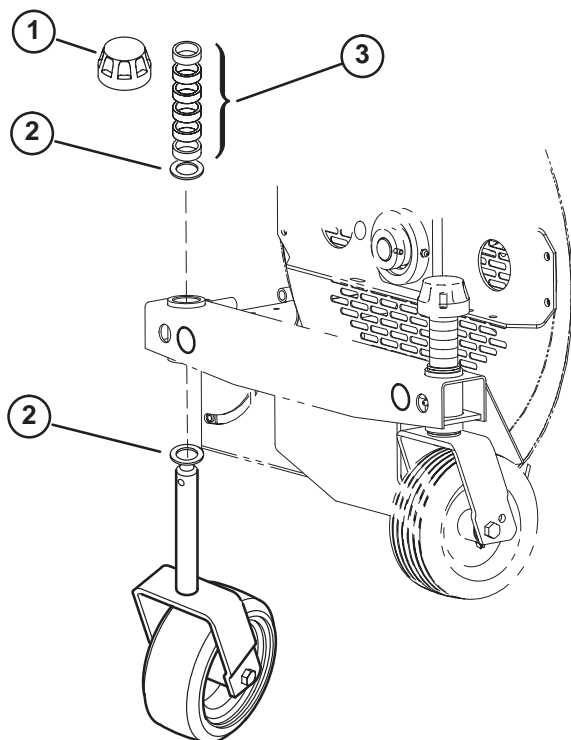


Figure 2

- | | |
|-------------------|-------------------------|
| 1. Tensioning cap | 3. Spacers |
| 2. Thrust washers | 4. Front castor spindle |

Important Thrust washers – not the spacers – must contact the top and bottom of the blower frame.

3. Assure both castor wheels are set at same height.

Install Stand

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

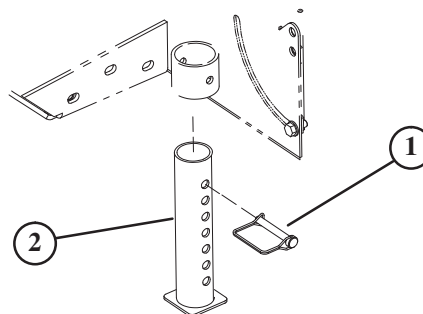


Figure 3

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

Mount Frame Mount To Blower

1. Position traction unit/frame mount in line with rear of Debris Blower.
2. Align frame mount tubes with mounting holes in blower frame (Fig. 4).

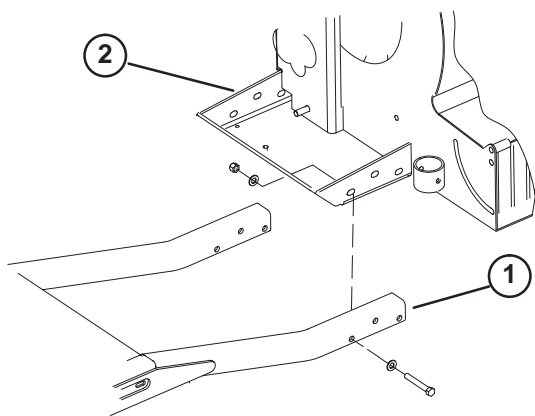


Figure 4

1. Frame mounting tube 2. Blower

3. Mount each frame mount tube to blower frame with (3) capscrews, (6) washers and (3) nuts.

Install Drive Shaft

1. Remove (3) capscrews, (6) washers and (3) nuts securing belt guard to blower frame (Fig. 5).

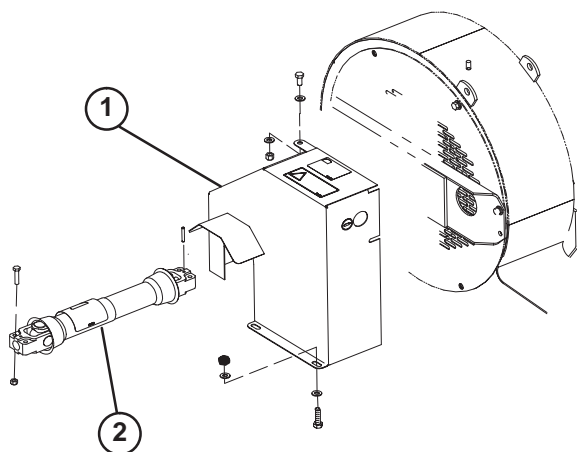


Figure 5

1. Belt guard 2. PTO shaft

2. Slide shafts together.
3. Slide drive shaft onto blower shaft. Align mounting holes in each shaft and slide together.
4. Secure with roll pin and (2) capscrews and nuts.
5. Re-install belt shaft guard with fasteners previously removed.

Note: To assure proper blower operation, check/adjust blower belt tension after first 20 hours of operation. Refer to Adjusting Blower Belt.

Rear Ballast

A GM 2XX series 2WD traction unit complies with the ANSI B71.4-1990 Standard when (4) 35 lb. weights are installed. Order two Weight Kits, Part No. 24-5780 from your Toro Distributor.

Grease Blower

Before the Debris Blower is operated, the PTO shaft must be greased to assure proper lubricating characteristics: refer to Lubrication section of manual. Failure to properly grease the unit will result in premature failure of critical parts.

Operation

Operating Tips



Warning



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

- Stay away from discharge opening when machine is operating.
- Keep bystanders away from discharge opening when machine is running.

- Start the traction unit and run at a low RPM.
- Lower the blower using the traction unit lift mechanism.
- Engage the PTO while the engine is at idle speed.
- Increase the PTO speed to 1800 RPM.
- 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.

Transporting Blower

- Reduce the engine speed to idle position.
- Disengage the PTO and wait for the PTO to stop.
- Raise the blower to transport position.

Adjust Discharge Opening

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

1. Loosen discharge opening deflector mounting screws (Fig. 6).

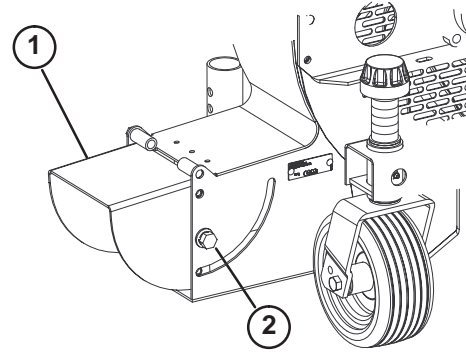


Figure 6

1. Deflector

2. Mounting screw

2. Pivot deflector to desired opening.
3. Tighten mounting screws.

Maintenance

Lubrication

The Idler arm bearing (Fig. 7) must be lubricated after every 8 hours of operation with a No. 2 Lithium based grease.

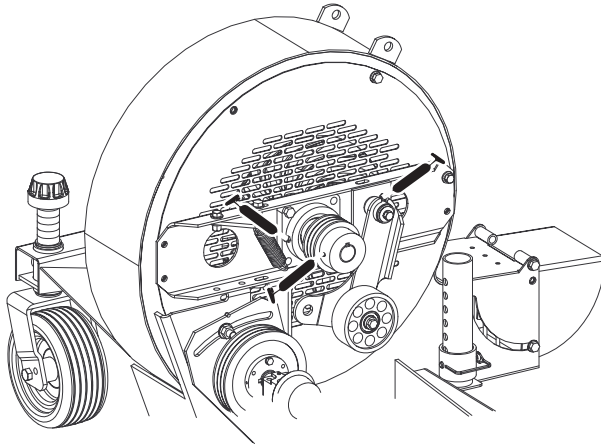


Figure 7

The overrunning clutch pulley (Fig. 7) must be lubricated after every 8 hours of operation with a No. 2 Lithium based grease.

The (2) fan shaft bearings (Fig. 7 & 8) must be lubricated after every 8 hours of operation with a No. 2 Lithium based grease.

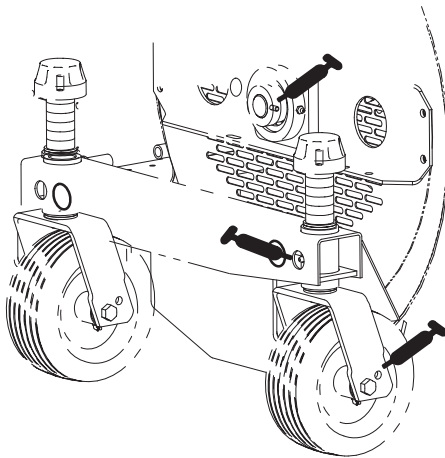


Figure 8

Under normal conditions, grease the (2) castor wheels and (2) wheel pivot tubes (Fig. 8) after every 50 hours of use. Use a No. 2 Lithium based grease.

The (2) mount frame pivots (Fig. 9) must be lubricated after every 8 hours of operation with a No. 2 Lithium based grease.

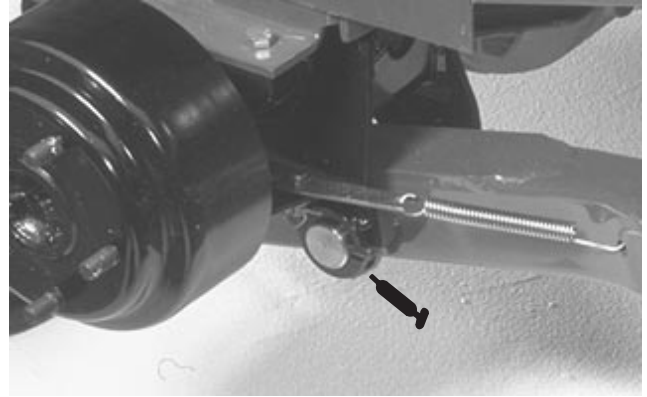


Figure 9

Under normal conditions, grease the (2) drive shaft fittings (Fig. 10) after every 100 hours of use and guards after every 8 hours of operation. Use a No. 2 Lithium based grease.

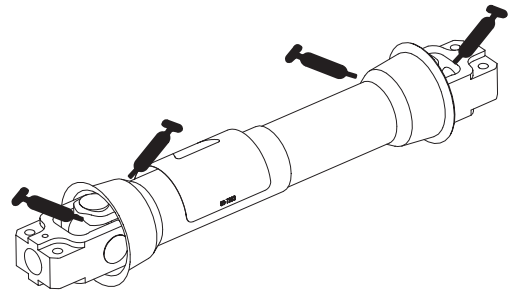


Figure 10

Adjusting Blower Belt

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

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

1. Remove (3) capscrews, (6) washers and (3) nuts securing belt guard to blower housing (Fig. 11). Remove guard.

Note: Drive shaft does not have to be disconnected to adjust belt.

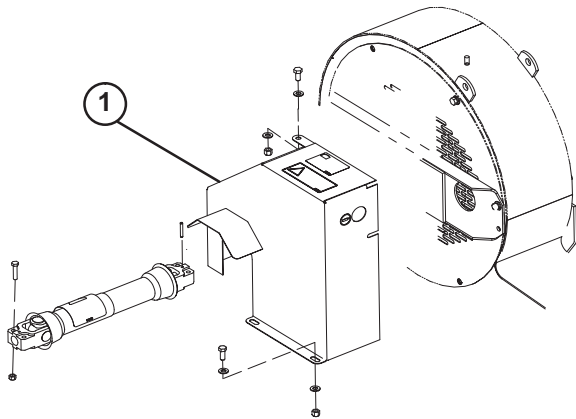


Figure 11

1. Belt guard

2. A new belt will be properly tensioned, when idler spring body is extended to a length of 3.25 – 3.50" (Fig. 12).

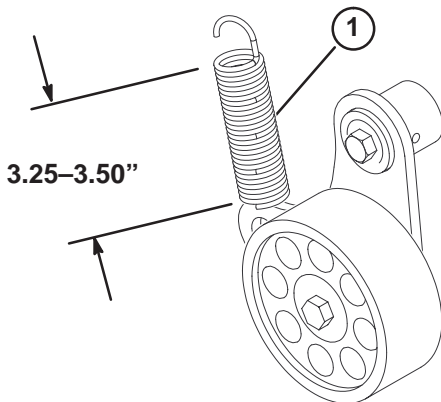


Figure 12

1. Idler spring

3. When belt stretches it can be adjusted as follows:

- A. Loosen nut securing belt tensioner to blower housing (Fig. 13).
- B. Rotate belt tensioner until idler spring body is extended to a length of 3.25 – 3.50" (Fig. 13), then tighten nut.

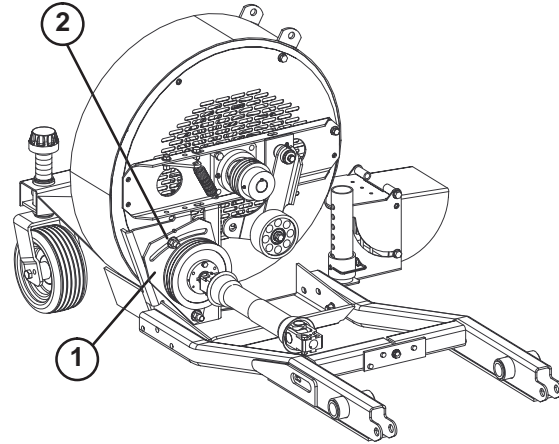


Figure 13

1. Belt tensioner
2. Belt tensioner nut

4. Install belt guard to blower housing with capscrews, washers and nuts.

Troubleshooting

Problem	Possible Causes	Corrective Action
Fan quit turning	<ol style="list-style-type: none"> 1. Belt may be loose or broken. 2. Bearing pressed in the bearing mount may be damaged. 	<ol style="list-style-type: none"> 1. Replace belt or adjust the tension of the belt. 2. Replace the bearing, use #609 Loctite when replacing.
Excessive vibration	<ol style="list-style-type: none"> 1. Bearing on fan shaft may be damaged. 2. Material may be built up on fan blades. 3. RPM of the PTO shaft too fast. 	<ol style="list-style-type: none"> 1. Replace bearings. 2. Clean out any build up inside the housing. 3. Reduce PTO speed to 540 RPM.
Lack of adequate air flow	<ol style="list-style-type: none"> 1. Air slots may be clogged with debris. 2. RPM on tractor too slow. 3. Throttle on tractor engine may be too slow. 	<ol style="list-style-type: none"> 1. Clean out any debris from slots. 2. Increase PTO speed to 540 RPM. 3. Make any necessary repairs to bring tractor speed up to normal.

Storage

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



The Toro General Commercial Products Warranty

A Two-Year Limited Warranty

Conditions and Products Covered

The Toro Company and its affiliate, Toro Warranty Company, pursuant to an agreement between them, jointly warrant your 1996 or newer Toro Commercial Product ("Product") purchased after January 1, 1997, to be free from defects in materials or workmanship for two years or 1500 operational hours*, whichever occurs first. Where a warrantable condition exists, we will repair the Product at no cost to you including diagnosis, labor, parts, and transportation. This warranty begins on the date the Product is delivered to the original retail purchaser.

* Product equipped with 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 800-982-2740
E-mail: commercial.service@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 express 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, modified, or unapproved accessories
- Product failures which result from failure to perform required maintenance and/or adjustments
- 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, blades, reels, bedknives, tines, spark plugs, castor wheels, tires, filters, belts, 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, or chemicals, etc.
- Normal "wear and tear" items. 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 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 factory remanufactured parts rather than new parts for some warranty repairs.

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.