



**Twin Soft Bagger**  
**for Z200 and Z500 Series Z Masters**  
Model No. 78498—Serial No. 25000201 and Up

**Operator's Manual**

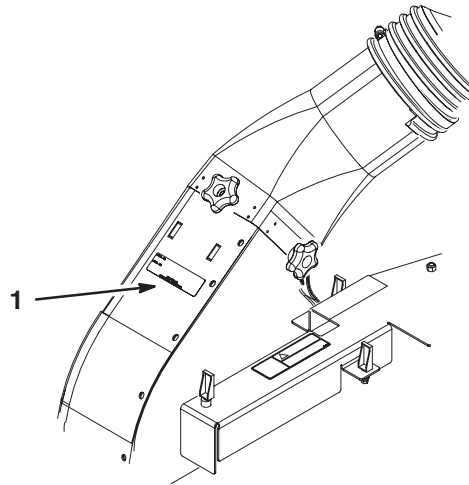
# Contents

	Page
Introduction .....	2
Safety .....	3
Safety and Instruction Decals .....	4
Setup .....	5
Loose Parts .....	5
Before Installation .....	7
Prepare the Mower .....	7
Positioning the Flow Baffle .....	7
Installing the Bagger Mounting Kit .....	7
Installing the Bagger Mounting Bracket .....	7
Installing the Hood Assembly and Bags .....	8
Installing the Blower Assembly .....	10
Installing the Bagger Belt and Idler Spring .....	10
Installing the Belt Cover .....	12
Installing the Bagger Tube .....	13
Installing the Weights .....	14
Adjusting the Parking Brake .....	15
Operation .....	16
Emptying the Grass Bags .....	16
Clearing Obstructions From the Bagger System ..	17
Transporting Machines .....	17
Operating and Bagging Tips .....	17
Maintenance .....	19
Recommended Maintenance Schedule .....	19
Cleaning the Hood Screen .....	19
Cleaning the Bagger .....	19
Checking and Adjusting the Bagger Belt Tension ..	19
Checking and Adjusting the Blower Latch .....	20
Replacing the Blower Belt .....	21
Checking the Blower Liner .....	22
Replacing the Blower Liner .....	22
Inspecting the Bagger .....	23
Greasing the Blower .....	23
Inspecting the Mower Blades and Baffles .....	23
Installing the Mower Blades .....	24
Storage .....	24
Troubleshooting .....	25
The Toro Total Coverage Guarantee .....	28

# 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. Figure 1 illustrates the location of the model and serial numbers on the product.



m-6231

**Figure 1**

1. Location of the model and serial numbers

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

<p><b>Model No.</b> _____</p> <p><b>Serial No.</b> _____</p>
--

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

The following list contains safety information specific to Toro products and other safety information you must know.

- Become familiar with the safe operation of the equipment, with the operator controls, and safety signs.
  - Use extra care with grass catchers or other attachments. These can change the operating characteristics and the stability of the machine.
  - Do not use a grass catcher on steep slopes. A heavy grass catcher could cause loss of control or overturn the machine.
  - Slow down and use extra care on hillsides. Be sure to travel in the recommended direction on hillsides. Turf conditions can affect the machine's stability. Use extreme caution while operating near drop-offs.
  - Keep all movement on slopes slow and gradual. Do not make sudden changes in speed, directions or turning.
  - The grass catcher can obstruct the view to the rear. Use extra care when operating in reverse.
  - Use care when loading or unloading the machine into a trailer or truck
  - Never operate with the discharge deflector raised or removed and never altered, unless using a grass catcher or mulching baffles.
  - Keep hands and feet away from moving parts. Do not make adjustments with the engine running.
  - Stop on level ground, disengage drives, set the parking brake, shut off the engine before leaving the operator's position for any reason including emptying the grass catcher or unclogging the chute.
  - If you remove the grass catcher, be sure to install any discharge deflector or guard that might have been removed to install the grass catcher. Do not operate the mower without either the entire grass catcher or the grass deflector in place.
  - **Turn off the engine and wait for all moving parts to stop before removing the grass catcher or unclogging the chute.**
  - Do not use your hands to unclog the chute, blower or bagger.
  - Do not leave grass in grass catcher for extended periods of time.
- Grass catcher components are subject to wear, damage and deterioration, which could expose moving parts or allow objects to be thrown. Frequently check components and replace with manufacturer's recommended parts, when necessary.
  - Do not leave grass or debris in grass catcher while transporting the machine.

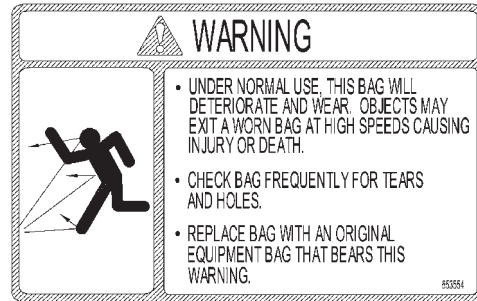
# Safety and Instruction Decals



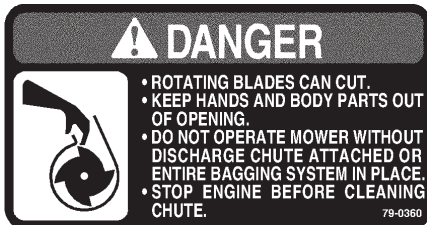
Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or lost.



79-0350



1-653554



79-0360



106-0871



80-8040



98-4387

1. Warning—wear hearing protection.



88-8950



68-3650



93-1122

# Setup

**Important** These instructions are for Z200 and Z500 Sieres mowers.

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

## Loose Parts

**Note:** Use the chart below to verify all parts have been shipped.

**Important** This kit and bagger will require significant time to install the first time.

**Important** If your bagger has a latch as shown in Figure 11, use this manual for your bagger. Use the manual included in the Finishing Kit for only installing parts include in that kit. If your bagger latch is different, use that manual included with the Finishing Kit for installing parts and your bagger manual.

Step	Description	Qty.	Use
<b>1</b>	Obtain Bagger Mounting Kit from an Authorized Service Dealer.	–	Installing the bagger mounting kit.
<b>2</b>	Bagger mounting bracket Bolt, 3/8 x 1 inch Flange nut, 3/8 inch Curved washer, 3/8 inch	1 6 6 6	Installing the bagger brackets
<b>3</b>	Hood assembly Bag Clevis pin Hairpin cotter	1 2 2 2	Installing the hood assembly and bags
<b>4</b>	Blower assembly	1	Installing the blower assembly
<b>5</b>	Blower belt cover Bagger Belt Idler spring Pulley cover	1 1 1 1	Installing the bagger belt and idler spring
<b>6</b>	Belt cover	1	Installing the belt cover
<b>7</b>	Bagger tube Clamp Knob Blower adapter	1 1 2 1	Installing the bagger tube

Step	Description	Qty.	Use
<b>8</b>	Caster weight	2	Installing the weights
	U-bolt	2	
	Nut, 1/2 inch	4	
	Lock washer, 1/2 inch	4	
	Plate	2	
	Top weight	2	
	Bolt, 1/2 x 3 inch	2	
	Plate	2	
<b>9</b>	No parts needed		Adjusting the parking brake

# Before Installation

## Prepare the Mower

Perform the following procedure to prepare the mower for attaching the blower and finishing kit.

1. Disengage the PTO, move the motion control levers to the neutral locked position and set the parking brake.
2. Stop the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Clean the mower of any debris on the deck or rear of mower to ease installation.

## Positioning the Flow Baffle

The middle position or Position B is recommended for bagging.

Move the adjustable flow baffle to the middle position. To adjust the baffle refer to your mower Operator's Manual.

### Position B

#### Middle Position

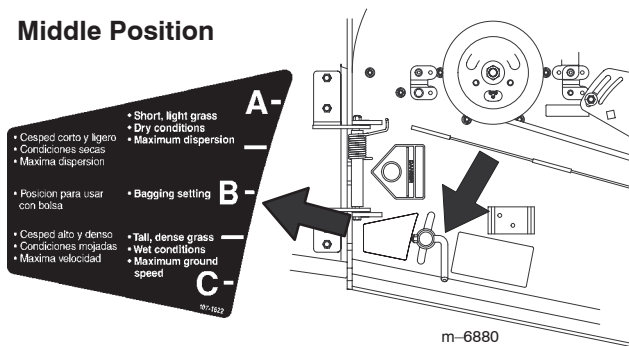


Figure 2

## Step 1

### Parts needed for this step:

- 1 Bagger Mounting Kit

## Installing the Bagger Mounting Kit

Obtain the Bagger Mounting Kit from an Authorized Service Dealer and install it.

## Step 2

### Parts needed for this step:

- 1 Bagger mounting bracket
- 6 Bolts, 3/8 x 1 inch
- 6 Flange nuts, 3/8 inch
- 6 Belleville washers, 3/8 inch

## Installing the Bagger Mounting Bracket

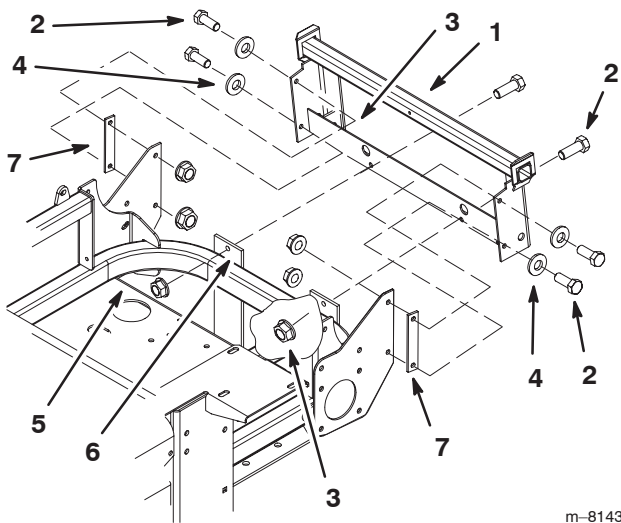
**Note:** For diesel engines, contact an Authorized Service Dealer for a Triple Bagger Mounting Kit.

### Installing the Side Brackets

**Important** Do not tighten any bolts until both side brackets and bagger mounting bracket are fit loose on the machine.

**Important** Make sure the bagger mounting bracket is installed in the position shown in Figure 3.

1. Remove the existing two bolts in the bottom of the rear frame (Fig. 3).



**Figure 3**

- |                                |  |
|--------------------------------|--|
| 1. Bagger mounting bracket     | 6. Existing bolts located here                                 |
| 2. Bolt, 3/8 x 1 inch          | 7. Spacer, if needed and supplied with the Bagger Mounting Kit |
| 3. Flange nut, 3/8 inch        |  |
| 4. Belleville washer, 3/8 inch |  |
| 5. Rear frame                  |  |

2. Install the bagger mounting bracket to the left and right side bagger brackets with 4 bolts (3/8 x 1 inch), 4 Belleville washers (3/8 inch) and 4 flange nuts (3/8 inch) (Fig. 3).
3. If the bagger mounting bracket moves side to side excessively, install one or both of the spacers between the bagger mounting bracket and mounting plates (Fig. 3).
4. Install the bagger mounting bracket to the rear frame of the machine with 2 bolts (3/8 x 1 inch) and 2 flange nuts (3/8 in.) (Fig. 3).

### Tightening all the Mounting Bolts

The following steps are the correct sequence to tighten the side brackets and the bagger mounting bracket.

All mounting bolts need to be torqued to **35 ft-lb (48 N·m)**.

1. Tighten the bagger mounting bracket to the rear frame first (Fig. 3).
2. Tighten the bagger mounting bracket to the side brackets (Fig. 3).
3. Tighten the side brackets to the side of the mower (Fig. 3).
4. Install the drive wheels and torque to 95 ft-lb (128 N·M).
5. Lower the machine onto the drive wheels.

## Step 3

### Parts needed for this step:

- 1 Hood assembly
- 2 Bags
- 2 Clevis pins
- 2 Hairpin cotter pins

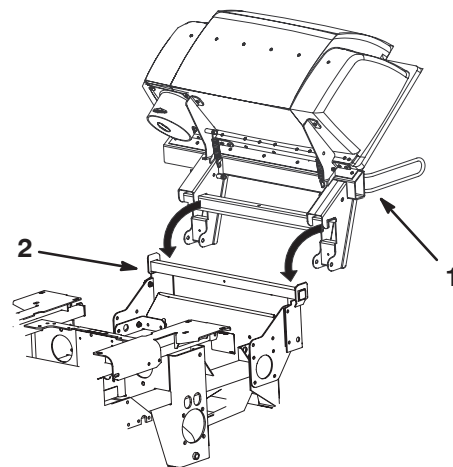
## Installing the Hood Assembly and Bags

**Warning**

Components around engine will be hot if the machine has been running. Touching hot components can cause burns.

- Do not touch engine components when hot.
- Allow engine to cool before performing maintenance.

1. Install the hood assembly onto the bagger mounting bracket (Fig. 4).

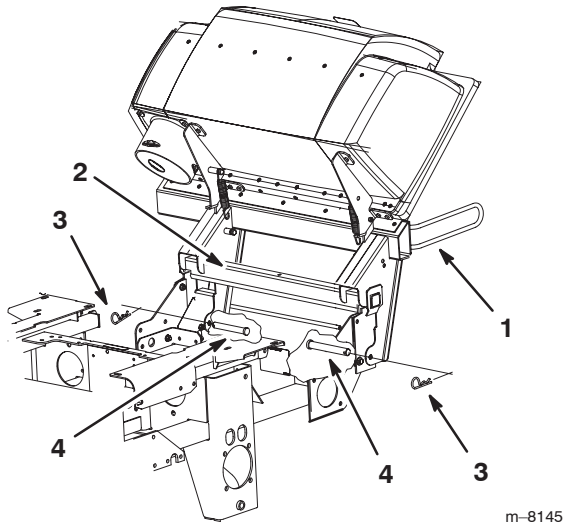


**Figure 4**

- |                  |                            |
|------------------|----------------------------|
| 1. Hood assembly | 2. Bagger mounting bracket |
|------------------|----------------------------|



2. Install the 2 clevis pins into the hood assembly and bagger mounting bracket. Secure it with 2 hairpin cotter pins (Fig. 5).



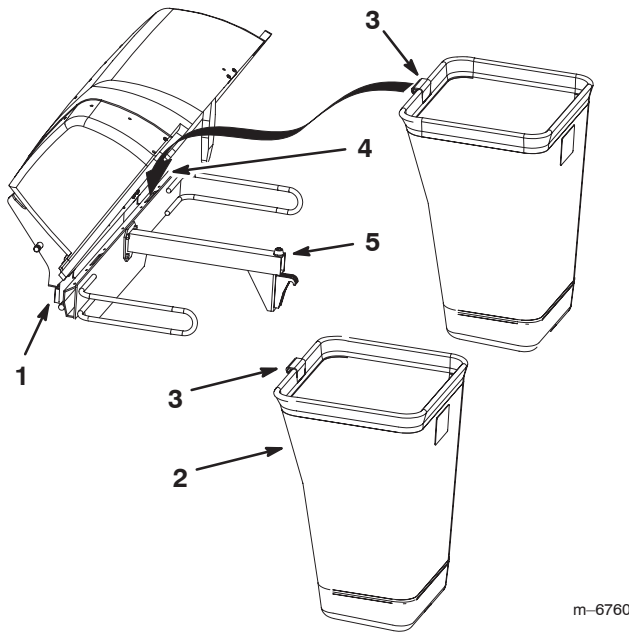
**Figure 5**

m-8145

- |                            |                       |
|----------------------------|-----------------------|
| 1. Hood assembly           | 3. Hairpin cotter pin |
| 2. Bagger mounting bracket | 4. Clevis pin         |

3. Install the bag tab into the notch in the hood assembly (Fig. 6). Do this for both bags.

**Note:** The bag will rest on the bagger frame (Fig. 6).

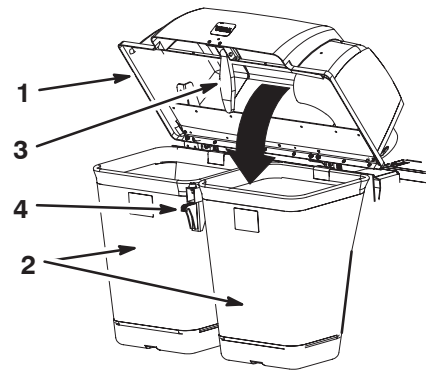


**Figure 6**

m-6760

- |                  |                 |
|------------------|-----------------|
| 1. Hood assembly | 4. Notch        |
| 2. Bag           | 5. Bagger frame |
| 3. Bag tab       |                 |

4. Lower the bagger hood over the bags (Fig. 7).

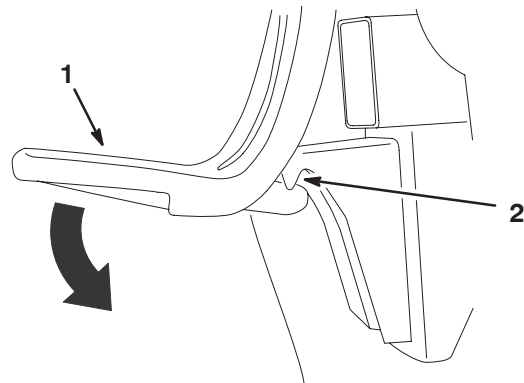


m-6761

**Figure 7**

- |         |                 |
|---------|-----------------|
| 1. Hood | 3. Bagger latch |
| 2. Bags | 4. Latch hook   |

5. Position the bagger latch under the latch hook (Figures 7 and 8).
6. Push down on bagger latch until it locks into place (Fig. 8).



m-6264

**Figure 8**

- |                 |               |
|-----------------|---------------|
| 1. Bagger latch | 2. Latch hook |
|-----------------|---------------|

## Step

# 4

### Parts needed for this step:

- 1 Blower assembly

## Installing the Blower Assembly

**Important** Make sure the mounting plate is installed to the mower. Refer to the Finishing Kit for installing the mounting plate.

1. Move the grass deflector into the upright position.
2. Slide the blower assembly peg into the hole on the bracket (Fig. 9).

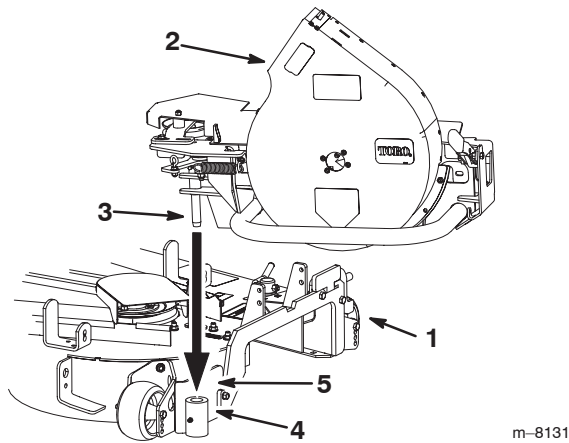


Figure 9

- |                        |                        |
|------------------------|------------------------|
| 1. Mower deck          | 4. Mounting plate hole |
| 2. Blower assembly     | 5. Mounting plate      |
| 3. Blower assembly peg |                        |

3. Close the blower assembly. (Fig. 12).
4. Check if the latch **fully engages** the front latch peg. Refer to Checking and Adjusting the Blower Latch on page 20.

**Note:** There needs to be a little or no gap between the blower assembly and the mounting plate.

## Step

# 5

### Parts needed for this step:

- 1 Blower belt cover
- 1 Idler spring
- 1 Bagger belt
- 1 Pulley cover

## Installing the Bagger Belt and Idler Spring

**Important** The idler spring and bagger belt need to be installed together.

This will create slight tension on both the spring and belt while installing them.

1. Check that the blower assembly is closed and ensure the blower front latch is engaged on the front peg.
2. Slide the spring into the blower eyebolt (Fig. 10).
3. Install the spring into the idler arm eyebolt (Fig. 10).

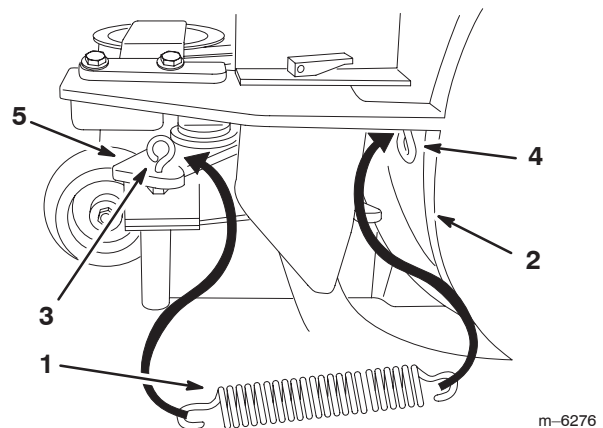
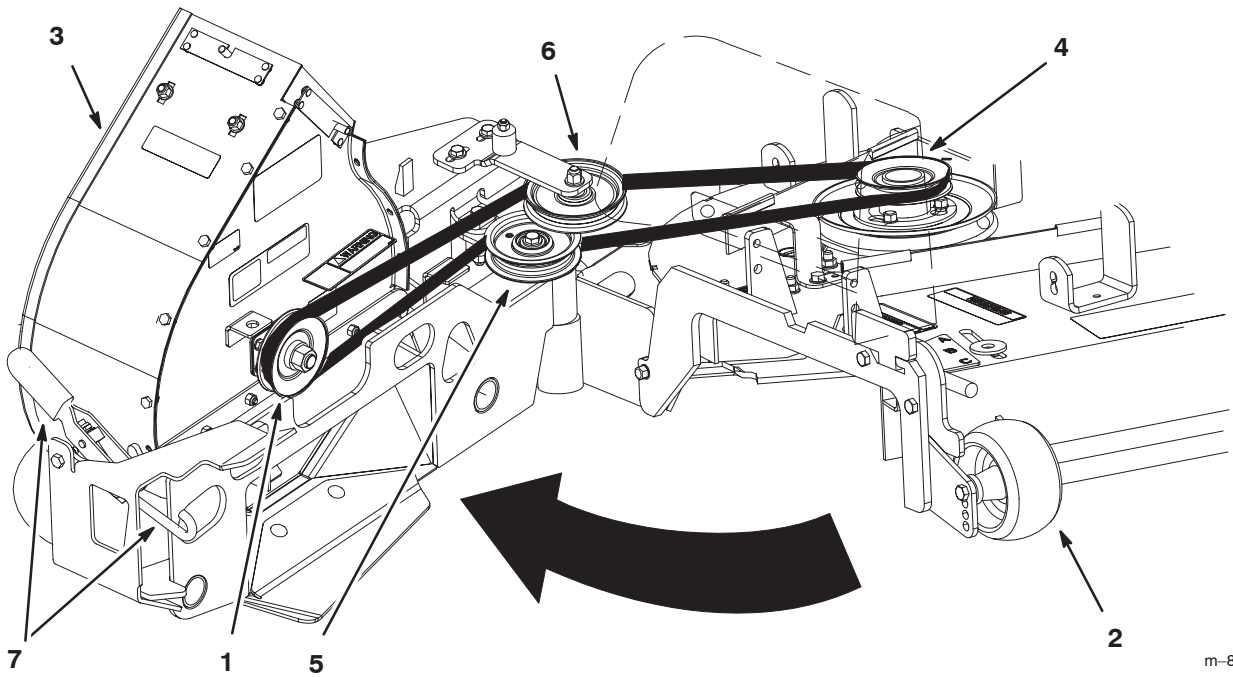


Figure 10

- |                             |                          |
|-----------------------------|--------------------------|
| 1. Idler spring             | 4. <b>Blower</b> eyebolt |
| 2. Blower assembly          | 5. Idler arm             |
| 3. <b>Idler arm</b> eyebolt |                          |

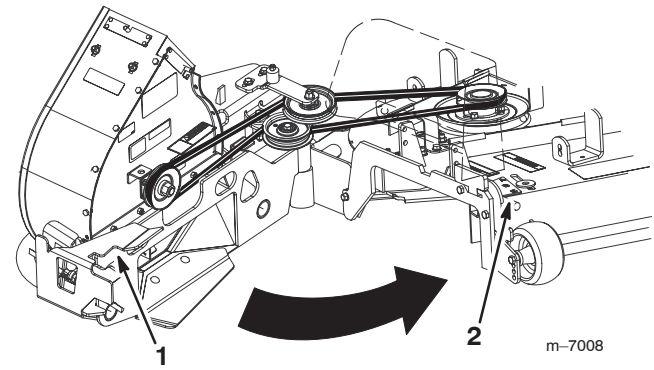


m-8132

**Figure 11**

- |                    |  |  |                       |
|--------------------|--|--|-----------------------|
| 1. Blower pulley   | 4. Top pulley of mower pulley assembly | 5. Spring loaded idler pulley (belt back side touching pulley) | 6. Fixed idler pulley |
| 2. Mower           |  |  | 7. Front latch        |
| 3. Blower assembly |  |  |                       |

4. Push down on the front latch (colored red) and open the blower assembly (Fig. 11).
5. Install the bagger belt on the top mower pulley (Fig. 11).
6. Route the bagger belt around the **top pulley of the mower pulley assembly** (Fig. 11).
7. Feed the belt between the idler pulleys (Fig. 11).
8. Route the bagger belt around the **spring-loaded idler pulley** (Fig. 11). The backside of belt will be touching the pulley.
9. Route the bagger belt around the **fixed idler pulley** (Fig. 11).
10. Route the bagger belt around the **blower pulley** (Fig. 11).
11. Close the blower assembly and ensure the blower front latch engages onto the front peg (Fig. 12).



m-7008

**Figure 12**

- |                             |              |
|-----------------------------|--------------|
| 1. Blower front latch (red) | 2. Front peg |
|-----------------------------|--------------|

**Important** Make sure to check the belt tension and spring length after the initial 8 hours of use.

12. Adjust the bagger belt tension. Refer to Checking and Adjusting the Bagger Belt Tension on page 19.

13. Install the belt cover over the pulley assembly and secure the 3 cover latches into the blower (Fig. 13).

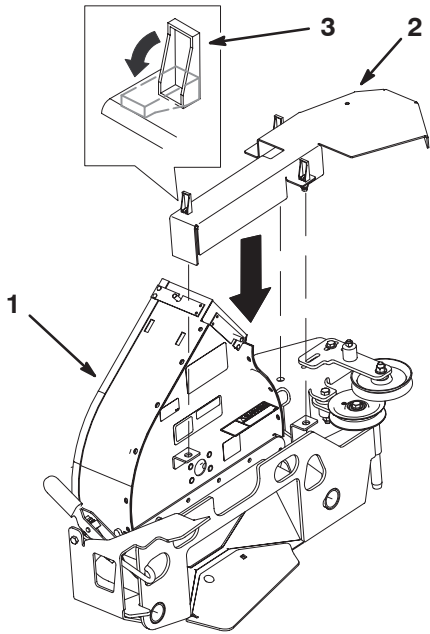


Figure 13

m-8134

- 1. Blower assembly
- 2. Blower belt cover
- 3. Latch

# Step 6

Parts needed for this step:

- 1 Belt cover

## Installing the Belt Cover

1. Install the new belt cover over the pulley assembly and secure the latches (Fig. 14).

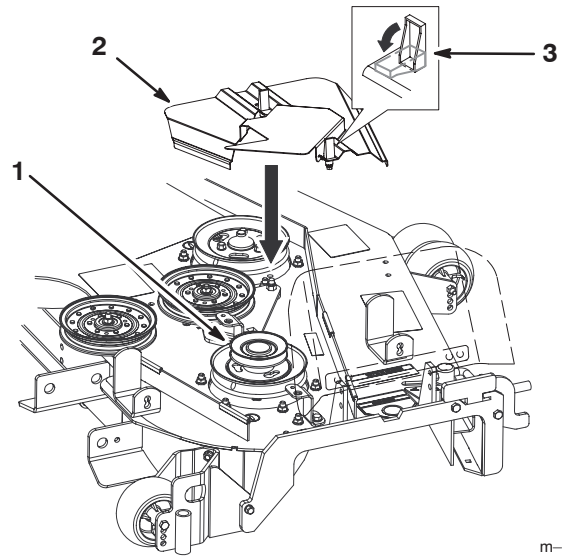


Figure 14

m-7811

- 1. Pulley assembly
- 2. Belt cover
- 3. Latch

**Step**  
**7**

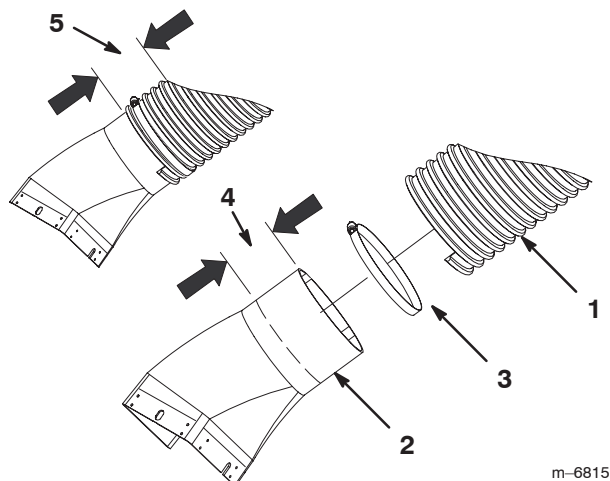
**Parts needed for this step:**

- 1 Bagger tube
- 1 Clamp
- 2 Knobs
- 1 Blower adapter

**Installing the Bagger Tube**

**Note:** To ease assembly of the bagger tube to the blower adapter, apply a little soapy water to both the bagger tube and the adapter.

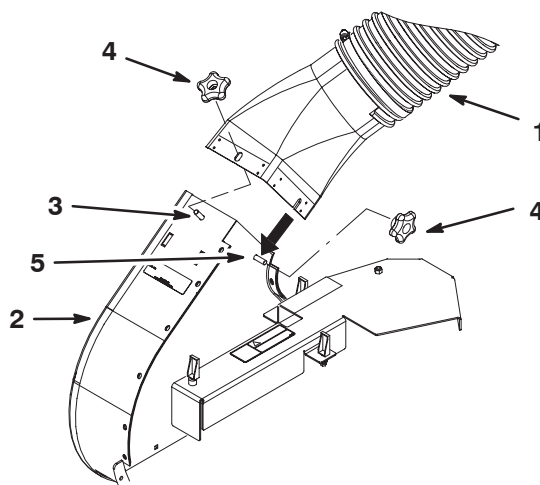
1. Install one end of the tube, 4 to 4-1/2 inches (102 to 114 mm) onto the blower adapter and secure it with a clamp (Fig. 15).



**Figure 15**

- |                                      |  |
|--------------------------------------|--|
| 1. Tube                              | 5. Tube installed onto the adapter 4 to 4-1/2 inches (102 to 114 mm) |
| 2. Blower adapter                    |  |
| 3. Clamp                             |  |
| 4. 4 to 4-1/2 inches (102 to 114 mm) |  |

2. Place the blower adapter over the top blower stud and slide it into the side stud (Fig. 16).
3. Install the knobs onto the top and side stud (Fig. 16). This will secure the lower tube end to the blower assembly.



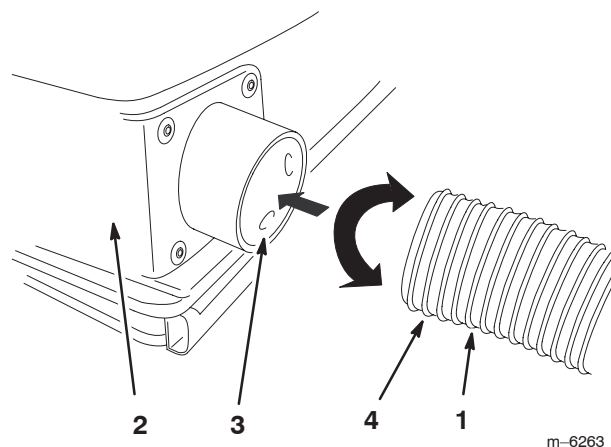
m-6252

**Figure 16**

- |                    |                     |
|--------------------|---------------------|
| 1. Tube            | 4. Knob             |
| 2. Blower assembly | 5. Side blower stud |
| 3. Top blower stud |                     |

**Note:** There are nubs on the inside of the bagger hood that hold the upper end of the bagger tube (Fig. 17).

4. Place the upper tube into the bagger hood (Fig. 17).
5. Move the upper tube back and forth, until at least two ribs engage into the nubs inside the bagger hood



m-6263

**Figure 17**

- |                |         |
|----------------|---------|
| 1. Tube        | 3. Nubs |
| 2. Bagger hood | 4. Ribs |

# Step 8

## Parts needed for this step:

- 2 Caster weights
- 2 Top weights
- 2 U-bolts
- 4 Nuts, 1/2 inch
- 2 Plates
- 4 Lock washers, 1/2 inch
- 2 Bolts, 1/2 x 3 inch

## Installing the Weights

To comply with ANSI/OPEI B71.4–1999 Standard, weights must be added to the machine.

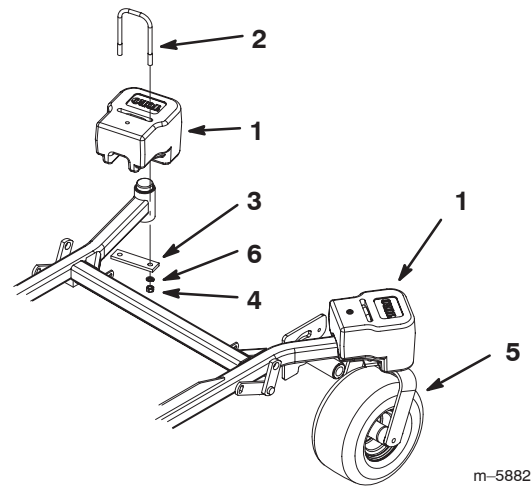
### Installing the Caster Weights

! **Caution** !

**The bagger adds a lot of weight to the rear of the machine and may cause an unstable condition which could result in a loss of control.**

- **Install the front caster weights and top weights.**

1. Place a caster weight on the front caster and install the U-bolt through the caster weight (Fig. 18).
2. Install the plate, the nuts (1/2 inch) and the lock washer (1/2 inch) under the frame and caster weight (Fig. 18).
3. Repeat for the opposite side.

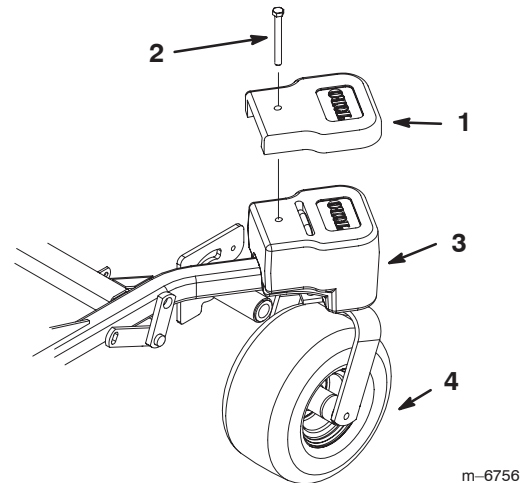


**Figure 18**

- |                        |                 |
|------------------------|-----------------|
| 1. Front caster weight | 4. Nut          |
| 2. U-bolt              | 5. Front caster |
| 3. Plate               | 6. Lock washer  |

### Installing the Extra Top Weight

1. Install the top weight on top of the caster weight with a bolt (1/2 x 3 inch) (Fig. 19).



**Figure 19**

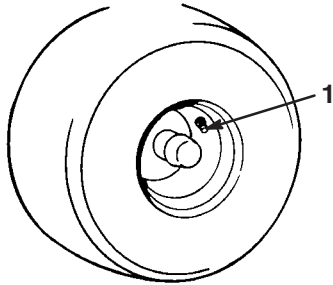
- |               |                        |
|---------------|------------------------|
| 1. Top weight | 3. Front caster weight |
| 2. Bolt       | 4. Front caster wheel  |

## Checking the Tire Pressure

**Note:** The tire pressure needs to increase due to the additional weight.

Check and increase the air pressure in the front caster wheels (Fig. 19) and rear tires (Fig. 20).

Pressure: Rear tires—20 psi (138 kPa)  
Front caster wheels—25 psi (172 kPa)



**Figure 20**

1. Valve stem

m-1872

## Check the Level of the Mower

Refer to the mower *Operator's Manual* for the correct procedure.



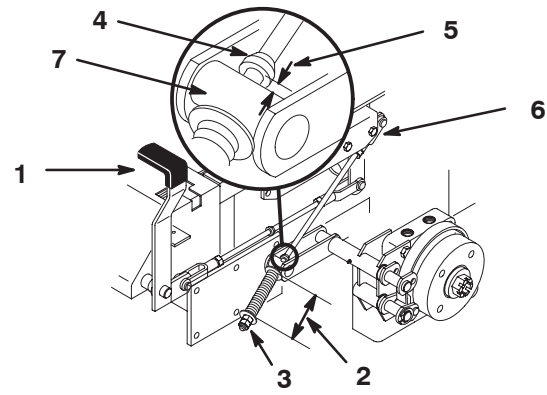
**No parts needed for this step.**

## Adjusting the Parking Brake

Check the parking brake for proper adjustment.

**Important** It is necessary to adjust and check the proper function of the brake due to the added weight of the bagger to the unit.

1. Disengage the brake lever (lever down).
2. Measure the length of the spring. The measurement should be 2-5/8 inch (67 mm) between the washers (Fig. 21).



m-3788

**Figure 21**

1. Brake lever
2. Spring 2-5/8 inch (67 mm)
3. Adjusting nut and jam nut below the spring
4. Collar on brake rod
5. 5/16 inch (8 mm)
6. Yoke and jam nut
7. Trunnion roller

3. If adjustment is necessary, loosen the jam nut below the spring and adjust the nut directly below the spring (Fig. 21).
4. Turn the nut until the correct measurement is obtained. Turn the nut clockwise to shorten the spring length and turn them counterclockwise to lengthen the spring.
5. Tighten the two nuts, below the spring, together and repeat on the opposite side of the machine.
6. Engage the parking brake (lever up).
7. Measure the distance between the trunnion roller and the collar on brake rod. The measurement needs be 5/16 inch (8 mm) (Fig. 21).
8. If adjustment is necessary, loosen the jam nut directly next to the yoke. Turn the nuts below the spring until the correct measurement is obtained (Fig. 21).
9. Tighten the jam nut next to the yoke and repeat on the opposite side of the machine.

# Operation

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

**Important** Set the parking brake when leaving the machine unattended, even for just a few minutes.



## Warning



To avoid personal injury, follow these procedures:

- Become familiar with all operating and safety instructions in the operator's manual for your mower before using this attachment.
- Never remove the bagger or bagger tubes while the engine is running.
- Always turn the engine off and wait for all moving parts to stop before clearing an obstruction from the bagging system.
- Never do maintenance or repairs while the engine is running.
- Set the parking brake before clearing an obstruction from the bagging system and before any maintenance.



## Warning



Without the grass deflector, bagger tubes or complete bagger assembly mounted in place, you and others are exposed to blade contact and thrown debris. Contact with the rotating mower blade(s) and thrown debris will cause injury or death.

- Always move the grass deflector into position when removing the bagger and changing to side discharge mode.
- If the grass deflector is ever damaged, replace it immediately. The grass deflector routes material down toward the turf.
- Never put your hands or feet under the mower.
- Never try to clear the discharge area or mower blades unless you move the power take off (PTO) to *off* and rotate the ignition key to *off*.
- Turn off the engine before unblocking the discharge chute.



## Caution



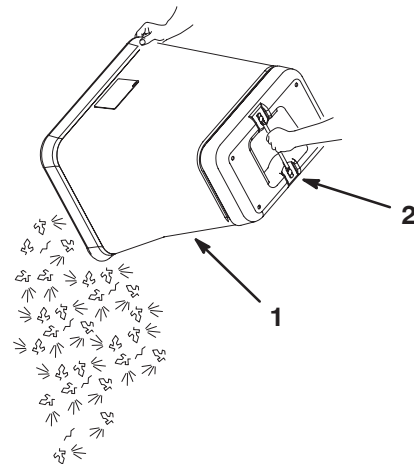
Children or bystanders may be injured if they move or attempt to operate the machine while it is unattended.

Always remove the ignition key and set the parking brake when leaving the machine unattended, even for just a few minutes.

## Emptying the Grass Bags

Grass bags are heavy when full. Be careful when lifting or handling a grass bag that is full.

1. Disengage the PTO and set the parking brake.
2. Unlatch the bagger latches (Fig. 8).
3. Open the bagger hood.
4. Compress the debris into the bags. With both hands, lift up on the bag and unhook it from the bagger bracket.
5. Grab the handle on the bottom of the bag and tip it over to empty the bag (Fig. 22).



m-6242

Figure 22

1. Bag
2. Bottom handle

6. Repeat for the other bags.
7. Install the bag tab into the notch in the bagger support frame (Fig. 6). Do this for all bags.
8. Lower the bagger hood over the bags (Fig. 7).
9. Latch the bagger hood (Fig. 8).



## Clearing Obstructions From the Bagger System



### Danger



When the bagger is in operation, the blower can be rotating and cut off or injure hands.

- Before adjusting, cleaning, repairing and inspecting the blower, and before unclogging the chute, *turn off the engine and wait for all moving parts to stop*. Remove the key.
- Use a stick, *not your hands*, to remove an obstruction from the blower and tube.
- Keep face, hands, feet, and any other part of your body or clothing away from concealed, moving, or rotating parts.

1. Disengage the PTO and set the parking brake.
  2. Turn off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
  3. Empty the bags.
  4. Remove the knobs and then the tube from the blower assembly (Fig. 16).
  5. Remove the tube from the bagger hood (Fig. 17).
  6. Using a stick or similar object, **not your hands**, to remove and clear the obstruction from the tube assembly.
- Note:** In most cases, the debris can be shaken out of the tube.
7. If the blower assembly is plugged, unlatch the bagger blower assembly and swing it open (Fig. 11).
  8. Using a stick or similar object, **not your hands**, to remove and clear the obstruction from the blower assembly.
  9. After you remove the obstruction, install the complete bagger system and resume operation.

## Transporting Machines

Do not leave grass or debris in the bagger while transporting the machine.



### Warning



Transporting the machine with grass or debris in the bagger can damage the machine.

Do not leave grass or debris in the bagger while transporting the machine.

## Operating and Bagging Tips

### Machine Size

Remember that the machine is longer and wider with this attachment installed. By turning too sharply in confined places you may damage the attachment or other property.

### Trimming

Always trim with the left side of the mower. Do not trim with the right side of the mower because you could damage the blower assembly and bagging tube.

### Cutting Height

For optimum bagging performance, set the deck height-of-cut to remove no more than 2 to 3 inches (51 to 76 mm) or 1/3 of the grass height, whichever is less. Cutting off more than this will reduce the capacity of the vacuum system.

### Cutting Frequency

Cut the grass often, especially when it grows rapidly. You will have to cut your grass twice if it gets excessively long. Refer to Bagging Long Grass on page 18.

### Cutting Technique

For best lawn appearance, be sure to slightly overlap the mower into the previously cut area. This helps reduce the load on the engine and reduces the chance of plugging the blower assembly and tube.

### Bagging Speed

The bagging system may plug if you drive too fast and the engine speed gets too slow. On hills it may be necessary to slow the machines ground speed. Mow down hill whenever possible.



## Caution



**As the bagger fills, extra weight is added to the back of the machine. If you stop and start suddenly on hills, you may lose steering control or the machine may tip.**

- **Do not start or stop suddenly when going uphill or downhill. Avoid uphill starts.**
- **If you do stop the machine when going uphill, disengage the PTO. Then back down the hill using a slow speed.**
- **Do not change speeds or stop on slopes.**

## Bagging Long Grass

If the grass is ever allowed to grow longer than normal, or if it contains a high degree of moisture, raise the cutting height higher than usual and cut and bag the grass at this setting. Then cut and bag the grass again using the lower, normal setting.

Excessively long grass is heavy and may not be propelled completely into the bagger. If this happens, the tube and blower assembly may plug.

## Bagging Wet Grass

If possible, always try to cut grass when it is dry. Wet grass can cause plugging.

## Reducing Plugging

To avoid plugging the bagging system, reduce ground speed and mow the grass at a high height-of-cut, then lower the mower to your normal cutting height and repeat the bagging process.

## Signs of Plugging

As you are bagging, a small amount of grass clippings normally blow out the front of the mower. An excessive amount of clipping blow-out indicates that the bagger is full or the tube is plugged.

## Bagging Blades

In most mowing conditions, the standard high lift blades will provide the best bagging performance.

The Toro Atomic blade is recommended for bagging leaves in dry conditions. In dry dusty conditions, the medium lift or low lift blades will reduce dust and dirt blowout while providing effective bagging air flow.

Contact an Authorized Service Dealer for the proper blades for different mowing conditions.

## Curb Climbing and Loading

Always lift the deck to the highest position when loading the machine on trailers or ascending/descending a curb. Leaving the mower in a lower position can cause damage to mower baffles while loading and going over a curb. If a curb is higher than 6 inches (152 mm), cross it at a sharp angle with the deck fully raised. **Use extreme caution when loading onto a trailer.**

## Front Blowout

A bagging enhancement kit is available to reduce grass blowout at the front of the mower deck. Contact an Authorized Service Dealer for the proper kit.

# Maintenance

**Important** If the machine is on a slope and set the parking brake to prevent the machine from slowly rolling.

## Recommended Maintenance Schedule

Maintenance Service Interval	Maintenance Procedure
Each Use	<ul style="list-style-type: none"><li>• Hood screen—clean</li></ul>
First 8 Hours	<ul style="list-style-type: none"><li>• Bagger—inspect</li><li>• Bagger belt—check and adjust</li></ul>
25 Hours	<ul style="list-style-type: none"><li>• Bagger belt—check and adjust</li><li>• Bagger idler arm—grease</li></ul>
40 Hours	<ul style="list-style-type: none"><li>• Blower liner—inspect</li></ul>
100 Hours	<ul style="list-style-type: none"><li>• Bagger—inspect</li></ul>
Storage Service	<ul style="list-style-type: none"><li>• Belt—check for wear/cracks</li><li>• Bagger—inspect</li><li>• Bagger—clean</li></ul>

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

### Cleaning the Hood Screen

The screen needs to be cleaned before each use. In wet grass it will need to be cleaned more often.

1. Disengage the PTO and set the parking brake.
2. Turn off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Open the bagger and hold the bagger hood open.
4. Clean the debris from the screen.
5. Close the bagger hood.

### Cleaning the Bagger

The bagger needs to be cleaned as needed when debris is observed and at storage.

1. Wash the inside and outside of the bagger hood, tube, and the underside of the mower. Use a mild automotive detergent to remove dirt.
2. Make sure you remove matted grass from all parts.
3. After washing all parts, let them dry thoroughly.

**Note:** With all parts installed, start and run the machine for a minute to assist in drying.

### Checking and Adjusting the Bagger Belt Tension

Check the bagger belt tension after the first 8 hours of use.

Check the bagger belt tension every 25 hours.

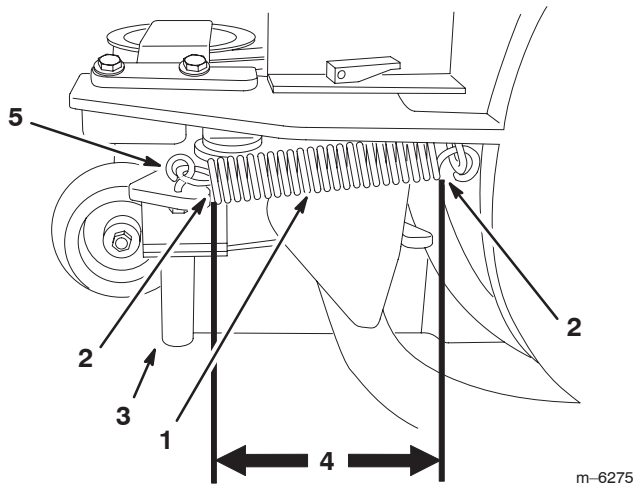
**Important** Make sure to inspect the belt and check the spring length after the first 8 hours of use.

**Note:** When checking the belt tension, the spring length needs to be **between 4 inches and 4-3/4 inches** (102 and 121 mm) (Fig. 23).

**Important** Adjust the bagger belt if the spring length is 4 inches (102 mm) or less.

1. Disengage the PTO and set the parking brake.
2. Turn off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.

3. Close the blower assembly and measure between the spring coil ends. See Figure 23 for measuring the spring length and eye hook orientation.



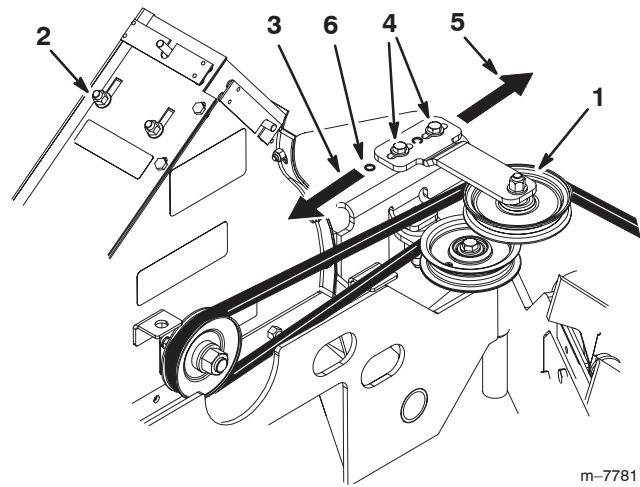
**Figure 23**

- |                        |  |
|------------------------|--|
| 1. Spring              | 4. Distance between spring coil ends, 4 to 4-3/4 inches (102 mm to 121 mm) |
| 2. End of spring coils |  |
| 3. Blower assembly peg |  |
| 5. Eyebolt             |  |

**Note:** When adjustment is needed, set the spring length between 4 inches and 4-3/4 inches (102 and 121 mm) (Fig. 23).

4. If adjustment is needed, open the blower assembly to remove tension from the bagger belt (Fig. 28).
5. Loosen the two bolts that hold the fixed idler to the blower assembly (Fig. 24).

**Important** There are two extra holes in the blower assembly that can be used to obtain the correct belt tension. If needed, remove the fixed idler and install it in the extra holes to get more belt tension adjustment (Fig. 24).



**Figure 24**

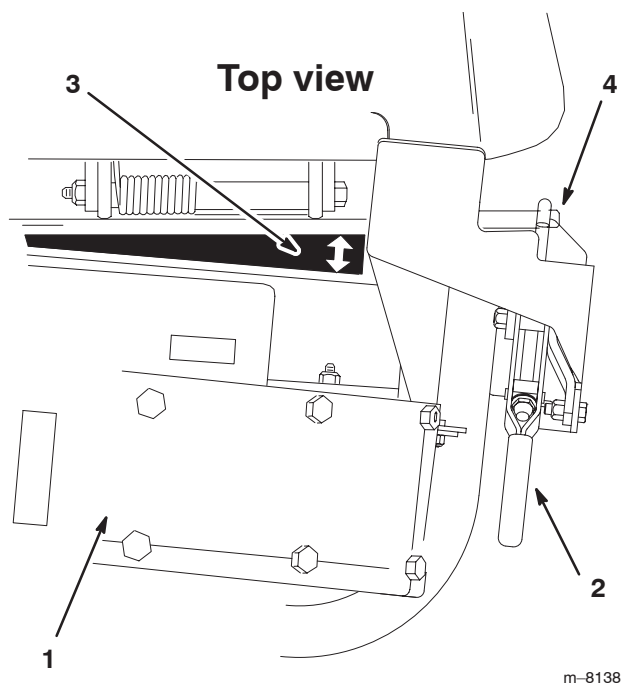
- |  |  |
|--|--|
| 1. Fixed idler                                     | 5. Adjust idler to the rear to lengthen the spring |
| 2. Blower assembly                                 | 6. Extra holes for adjusting belt tension          |
| 3. Adjust idler to the front to shorten the spring |  |
| 4. Bolts   |  |

6. Adjust the fixed idler towards the rear to **lengthen the spring and increase belt tension** (Fig. 24).
7. Adjust the fixed idler towards the front to **shorten the spring and decrease belt tension** (Fig. 24).
8. Tighten the two bolts that hold the fixed idler to the blower assembly (Fig. 24).
9. Close the blower assembly and measure the spring length again. Adjust the fixed idler until the correct spring length is achieved.

## Checking and Adjusting the Blower Latch

Adjust the blower latch when it does not engage the front peg correctly.

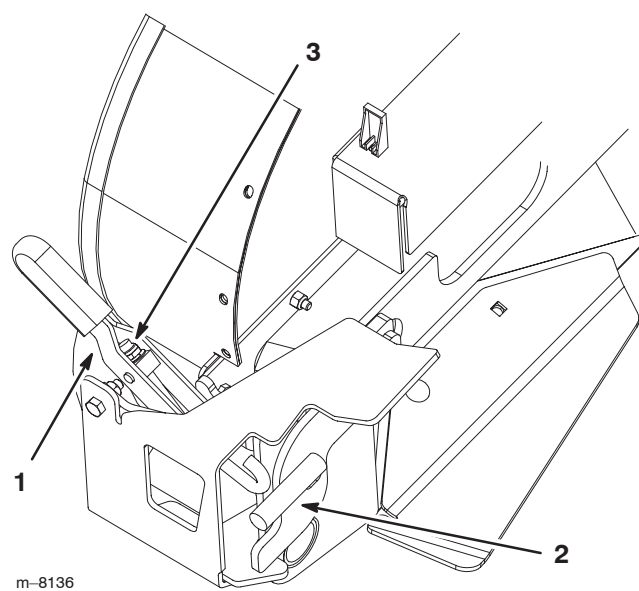
1. There must **not** be a gap between the mounting plate the the blower assembly (Fig. 25). If there is a gap, proceed to step 3 and shorten the latch.



**Figure 25**

- |                             |              |
|-----------------------------|--------------|
| 1. Blower assembly          | 3. Gap shown |
| 2. Blower front latch (Red) | 4. Front peg |

2. The blower latch must engage the front peg (Fig. 26). If it does not, proceed to step 3 and lengthen the latch.



**Figure 26**

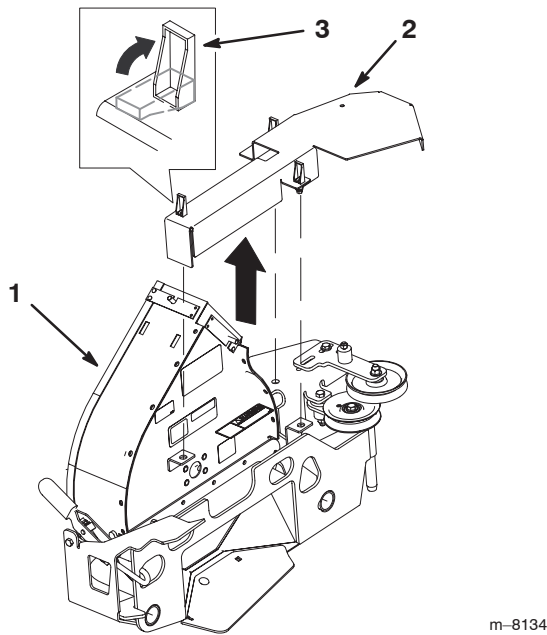
- |                       |                           |
|-----------------------|---------------------------|
| 1. Blower front latch | 3. Hex nut for adjustment |
| 2. Front peg          |                           |

3. To lengthen the latch turn the hex nut counterclockwise (Fig. 26).
4. To shorten the latch turn the hex nut clockwise (Fig. 26).

## Replacing the Blower Belt

Check the bagger belt for wear and cracks after the first 8 hours and then every 25 hours.

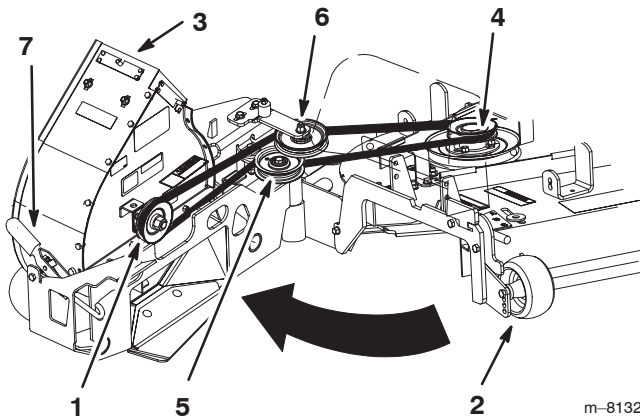
1. Disengage the PTO and set the parking brake.
2. Turn off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Push down on the front latch and open the blower assembly (Fig. 28). This will automatically remove the tension from the blower belt.
4. Remove the blower belt cover (Fig. 27).
5. Remove the bagger belt from the top mower pulley of the mower pulley assembly (Fig. 28).



**Figure 27**

- 1. Blower assembly
- 2. Blower belt cover
- 3. Latch

- 6. Remove the bagger belt from the spring-loaded idler pulley and the fixed idler pulley (Fig. 28).
- 7. Remove the bagger belt from the blower assembly pulley (Fig. 28).



**Figure 28**

- 1. Blower pulley
- 2. Mower
- 3. Blower assembly
- 4. Top mower pulley
- 5. Spring loaded idler pulley
- 6. Fixed idler pulley
- 7. Front latch

- 8. Install the new bagger belt. Refer to Installing the Bagger Belt and Idler Spring on page 10.

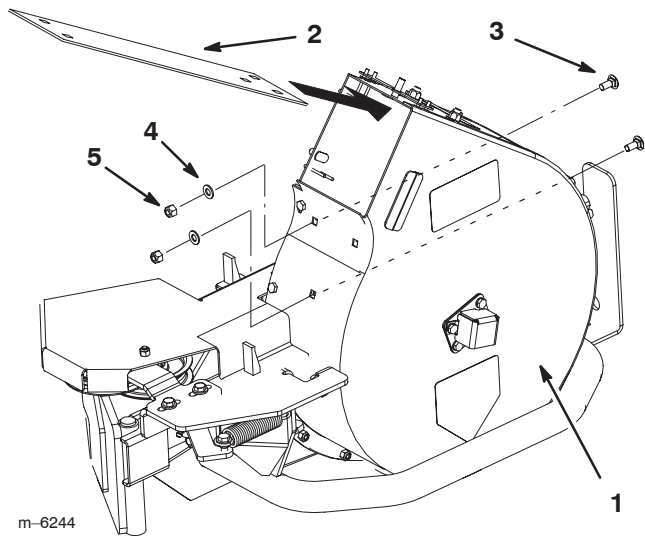
## Checking the Blower Liner

Check the blower liner inside the blower every 40 hours and more often in extreme mowing and bagging conditions.

1. Remove the blower adapter and tube from the blower (Fig. 16).
2. Inspect the liner for any excessive wear. **Do not** use your hands to check the liner or remove debris.
3. Replace the liner if any excessive wear is noticed.

## Replacing the Blower Liner

1. Disengage the PTO and set the parking brake.
2. Turn off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Remove the blower adapter and tube from the blower (Fig. 16).
4. Remove the five bolts that hold the blower liner to the blower (Figures 29 and 30).
5. Pull the liner out of the blower (Fig. 29).

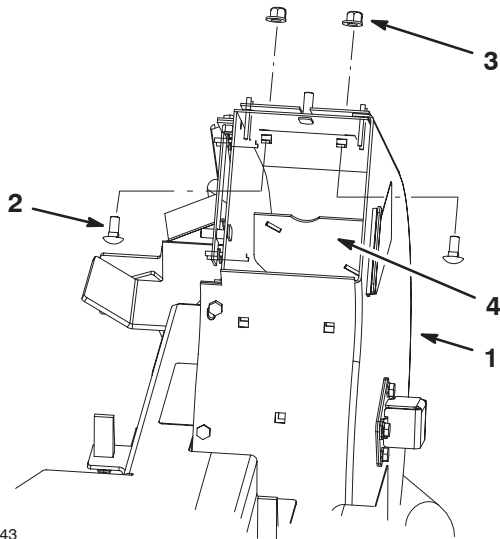


**Figure 29**

- 1. Blower
- 2. Liner
- 3. Bolt
- 4. Washer
- 5. Nut

- 6. Remove any debris from the blower. **Do not** use your hands to remove the debris.
- 7. Slide the new liner around the blower impeller.
- 8. Install 3 bolts into the rear of the blower and the liner (Fig. 29).

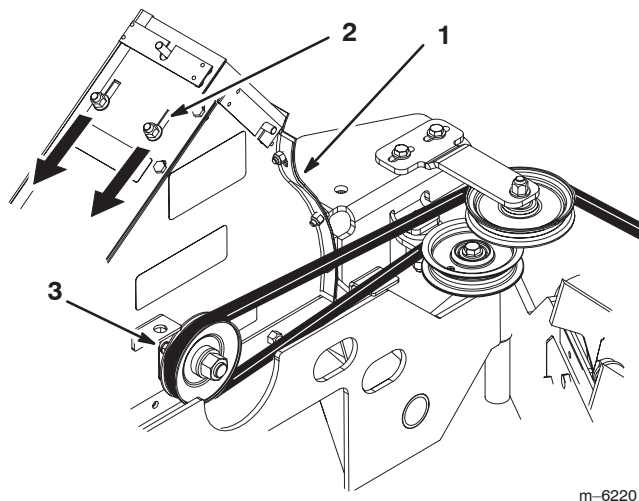
- Loosely install 2 bolts into the liner and the blower (Fig. 30).



**Figure 30**

- |           |             |
|-----------|-------------|
| 1. Blower | 3. Nut      |
| 2. Bolt   | 4. Impeller |

- Push the top 2 bolts down, toward the front of blower, until the blower liner conforms to the inside of the blower (Fig. 31). This will provide clearance between the impeller and the liner.
- Rotate the blower pulley to verify that the blower fan does not hit the liner (Fig. 31). Adjust the liner if necessary.
- Tighten the 2 top bolts in the liner and the blower (Fig. 31).



**Figure 31**

- |           |                     |
|-----------|---------------------|
| 1. Blower | 2. Top bolt and nut |
|-----------|---------------------|

## Inspecting the Bagger

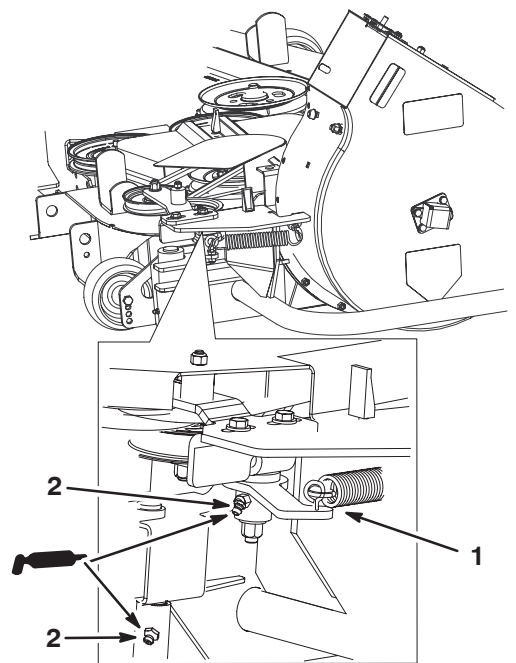
Inspect the bagger attachment after the first 8 hours of operation and 100 hours thereafter.

- Disengage the PTO and set the parking brake.
- Turn off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
- Check the tube, blower assembly, and the bagger hood. Replace these parts if they are cracked or broken.
- Check the bags, bagger frame, and screen. Replace any parts that are cracked, worn or broken.
- Tighten all nuts, bolts and screws.

## Greasing the Blower

Grease the bagger belt idler arm every 25 hours (Fig. 32).

Grease the blower pivot after installing the blower into the mounting hole (Fig. 32).



**Figure 32**

- |                     |                   |
|---------------------|-------------------|
| 1. Bagger idler arm | 2. Grease fitting |
|---------------------|-------------------|

## Inspecting the Mower Blades and Baffles

- Inspect the mower blades and baffles regularly and whenever a blade strikes a foreign object.



2. If blades or baffles are badly worn or damaged, install new blades or baffles. Refer to your mower operator's manual for complete blade maintenance.

## Installing the Mower Blades

In most mowing conditions, the standard high lift blades will provide the best bagging performance.

The Toro Atomic blade is recommended for bagging leaves in dry conditions. In dry dusty conditions, the medium lift or low lift blades will reduce dust and dirt blowout while providing effective bagging air flow.

Contact an Authorized Service Dealer for the proper blades for different mowing conditions.

Refer to the mower Operator's Manual for more information on installing blades.

## Storage

1. Clean the bagger attachment. Refer to Cleaning the Bagger on page 19.
2. Inspect the bagger attachment for damage. Refer to Inspecting the Bagger on page 23.
3. Make sure the bags are empty and thoroughly dry.
4. Check the belt for wear or cracks.
5. Store the machine in a clean, dry place, out of direct sunlight. If you must store the machine outside, cover it with a weatherproof cover. This protects the plastic parts and extends the life of the machine.



# Troubleshooting

Problem	Possible Causes	Corrective Action
Abnormal vibration.	<ol style="list-style-type: none"> <li>1. Cutting blade(s) bent or unbalanced.</li> <li>2. Blade mounting bolt is loose.</li> <li>3. Loose blower pulley or pulley assembly.</li> <li>4. Blower belt is worn or damaged.</li> <li>5. Blower impeller is out of balance.</li> <li>6. Blade interferes with mower baffles.</li> </ol>	<ol style="list-style-type: none"> <li>1. Install new cutting blade(s).</li> <li>2. Tighten blade mounting bolt.</li> <li>3. Tighten the appropriate pulley.</li> <li>4. Replace the blower belt.</li> <li>5. Contact Authorized Service Dealer.</li> <li>6. Do not use machine. Replace bent blades and/or baffles.</li> </ol>
Reduced bagging performance.	<ol style="list-style-type: none"> <li>1. Low engine speed.</li> <li>2. Plugged screen.</li> <li>3. Loose blower belt.</li> <li>4. A plugged tube.</li> <li>5. Full bags.</li> </ol>	<ol style="list-style-type: none"> <li>1. Always operate the bagger at full throttle.</li> <li>2. Remove debris, leaves or grass clippings from the screen.</li> <li>3. Adjust the blower belt tension.</li> <li>4. Locate and remove plugged debris.</li> <li>5. Empty bags.</li> </ol>
Blower and tube plug too frequently.	<ol style="list-style-type: none"> <li>1. Bags are too full.</li> <li>2. Low engine speed.</li> <li>3. Grass is too wet.</li> <li>4. Grass is too long.</li> <li>5. Plugged screen.</li> <li>6. Ground speed is too fast.</li> <li>7. Worn blower belt.</li> </ol>	<ol style="list-style-type: none"> <li>1. Dump more frequently.</li> <li>2. Always operate the bagger at full throttle.</li> <li>3. Cut grass when dry.</li> <li>4. Cut no more that 2 to 3 inches (51 to 76 mm) or 1/3 of the grass height, which ever is less.</li> <li>5. Remove debris, leaves or grass clippings from the screen.</li> <li>6. Drive slower at full throttle.</li> <li>7. Replace belt.</li> </ol>
Debris blowout.	<ol style="list-style-type: none"> <li>1. Bags are too full.</li> <li>2. Ground speed is too fast.</li> <li>3. Mower is not leveled.</li> </ol>	<ol style="list-style-type: none"> <li>1. Dump more frequently.</li> <li>2. Drive slower at full throttle.</li> <li>3. See the mower operator's manual for leveling the mower.</li> </ol>
Blower impeller does not spin freely.	<ol style="list-style-type: none"> <li>1. Plugged blower.</li> <li>2. Impeller not aligned.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove debris, leaves or grass clippings from the blower impeller.</li> <li>2. Contact Authorized Service Dealer.</li> </ol>







Landscape Contractor  
Equipment (LCE)

## 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 promise to repair the listed Toro product if defective in materials or workmanship.

This warranty applies to:

- ProLine Mid-Size Walk Power Mowers and Accessories
- Z Master Mid-Mount ZRTs and Accessories

The following time periods apply from the date of purchase:

<u>Components</u>	<u>Warranty Period</u>
• Engines*	2 years
• Hydraulic Systems	2 years
• Traction Unit Frame	2 years
• Carrier Frame	2 years
• Deck Shells	2 years
• Deck Spindles	3 years Parts, 2 years Labor
• Z500 Series Clutches	2 years
• Remaining Components	1 year

This warranty includes the cost of parts and labor, but you must pay transportation costs.

\* Some engines used on Toro LCE products are warranted by the engine manufacturer.

### Instructions for Obtaining Warranty Service

If you think that your Toro LCE product contains a defect in materials or workmanship, follow this procedure:

1. Contact any Toro Authorized or Master Service Dealer to arrange service at their dealership. To locate a dealer convenient to you, access our website at [www.Toro.com](http://www.Toro.com). You may also call our Toro Customer Care Department toll free at 888-865-5676 (U.S. customers) or 888-865-5691 (Canada customers).
2. Bring the product and your proof of purchase (sales receipt) to the Service Dealer.

If for any reason you are dissatisfied with the Service Dealer's analysis or with the assistance provided, call us toll free at the numbers above or write us at:

LCE Customer Care Department  
8111 Lyndale Avenue South  
Bloomington, MN 55420-1196

### 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.

### Owner Responsibilities

You must maintain your Toro product by following the maintenance procedures described in the *Operator's Manual*. Such routine maintenance, whether performed by a dealer or by you, is at your expense.

### Items and Conditions Not Covered

There is no other express warranty except for special emission system coverage on some products. This express warranty does not cover the following:

- Cost of regular maintenance service or parts, such as filters, fuel, lubricants, tune-up parts, blade sharpening, brake and clutch adjustments.
- Any product or part which has been altered or misused or required replacement or repair due to normal wear, accidents, or lack of proper maintenance.
- Repairs necessary due to improper fuel, contaminants in the fuel system, or failure to properly prepare the fuel system prior to any period of non-use over three months.
- Pickup and delivery charges.
- Operational misuse, neglect, or accidents.
- Repairs or attempted repairs by anyone other than an Authorized Toro Service Dealer using Toro approved parts.

### General Conditions

All repairs covered by this warranty must be performed by an Authorized Toro Service Dealer using Toro approved replacement parts.

**Repair by an Authorized Toro Service 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.**

**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.**

**All implied warranties of merchantability (that the product is fit for ordinary use) and fitness for use (that the product is fit for a particular purpose) are limited to the duration of the express warranty.**

**This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.**