

TORO[®]

Count on it.

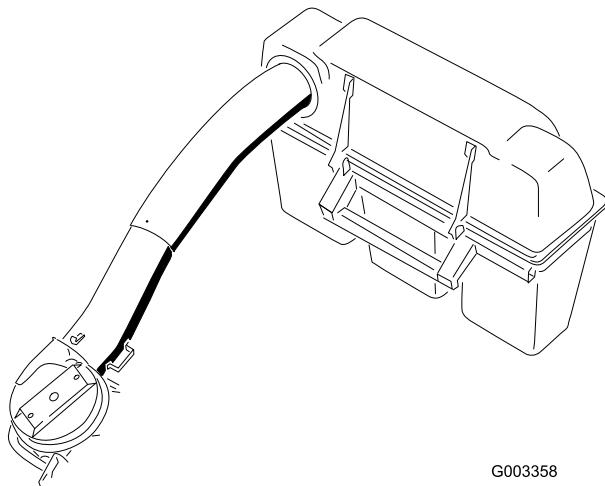
Operator's Manual

60 and 72in Triple Bagger

For Z500 Series Z Master Mowers

Model No. 78534—Serial No. 260000001 and Up

Model No. 78535—Serial No. 260000001 and Up



G003358

Introduction

Read this information carefully to learn how to operate and maintain your product properly and to avoid injury and product damage. You are responsible for operating the product properly and safely.

You may contact Toro directly at www.Toro.com for product and accessory information, help finding a dealer, or to register your product.

Whenever you need service, genuine Toro parts, or additional information, contact an Authorized Service Dealer or Toro Customer Service and have the model and serial numbers of your product ready. Figure 1 identifies the location of the model and serial numbers on the product. Write the numbers in the space provided.

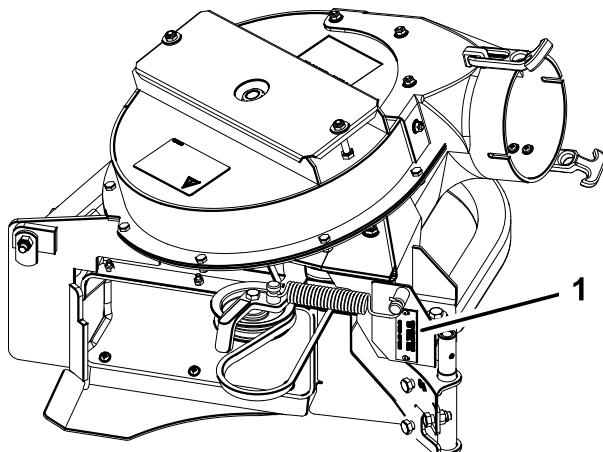


Figure 1

1. Blower model and serial number location

Model No. _____

Serial No. _____

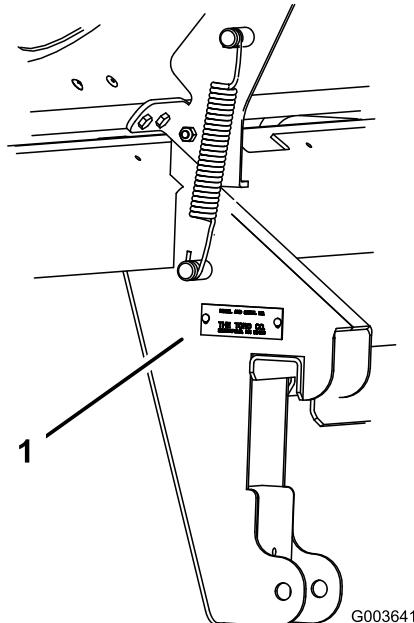


Figure 2

1. Bagger model and serial number location

Model No. _____

Serial No. _____

This manual identifies potential hazards and has safety messages identified by the safety alert symbol (Figure 3), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.



Figure 3

1. Safety alert symbol

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

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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.
- Follow the manufacturer's recommendations for adding or removing wheel weights or counterweights to improve stability.
- 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, removed or altered, unless using a grass catcher.
- Keep hands and feet away from moving parts. Do not make adjustments with the engine running.
- Stop on level ground, disengage drives, chock or block wheels, shut off 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.
- Stop the engine before removing the grass catcher or unclogging the chute.
- 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.

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.



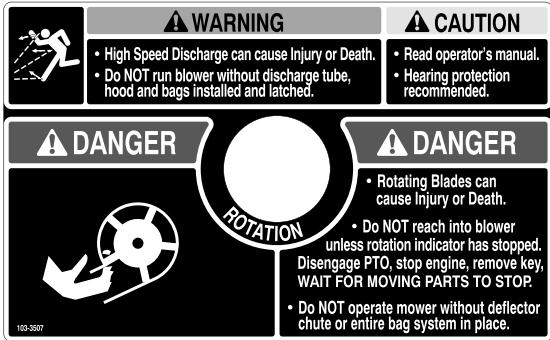
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Setup

Loose Parts

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

Step	Description	Qty.	Use
1	No parts required	–	Prepare the mower.
2	Bagger mounting bracket Bagger side plate Spacer Bolt, (3/8 x 1-1/2 inches) Bolt, (3/8 x 1 inch) (for Z593 mowers only) Flange Nut, (3/8 inch) Curved washer	1 2 2 14 2 14 14	Install the bagger mounting bracket
3	No parts required	–	Tighten all mounting bolts
4	Hood assembly Bags Clevis pin Hairpin cotter pin	1 3 2 2	Install the hood assembly and bags.
5	Bagger belt (from Blower and Drive Kit)	1	Route the bagger belt into the blower assembly.
6	Blower assembly (from Blower and Drive Kit) Spring (from Blower and Drive Kit)	1 1	Install the blower assembly.
7	Upper tube	1	Size the upper tube for 60 inch mowers with gas engines.
8	Upper tube Lower tube Bolt, (#10 x 3/4 inches) Locknut, (#10) Washer, (7/32 inch)	1 1 3 3 3	Install the discharge tubes.
9	Belt cover (from Blower and Drive Kit)		Install the belt cover.
10	Caster weight U-bolt Nut, (1/2 inch) Lock washer, (1/2 inch) Plate Top weight (for 60 inch mower decks only) Bolt, 1/2 x 2-1/2 inch- for top weights	2 2 4 4 2 2 2	Install the weights.
11	No parts required	–	Adjust the parking brake.
12	No parts required	–	Check the tire pressure.

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

Step

1

Preparing the Mower

No Parts Required

Procedure

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. Repair all bent or damaged areas of mower deck and replace any missing parts.
4. Clean the mower of any debris on the deck or rear part of the mower to ease installation.

Step

2

Installing the Bagger Mounting Bracket

Parts needed for this step:

1	Bagger mounting bracket
2	Bagger side plate
2	Spacer
14	Bolt, (3/8 x 1-1/2 inches)
2	Bolt, (3/8 x 1 inch) (for Z593 mowers only)
14	Flange Nut, (3/8 inch)
14	Curved washer

Procedure

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

Refer to **Tightening the Mounting Bolts for the correct procedure to tighten the bolts.**

1. Remove the bolts, nuts, and washers holding the roll bar to one side of the machine. Discard the nuts, bolts, and washers (Figure 4, Figure 5, and Figure 6).
2. Install the bagger side plate and the roll bar section to the side of the machine using 4 bolts (3/8 x 1-1/2 inches), 4 curved washers (3/8 inch), and 4 flange nuts (3/8 inch) (Figure 4, Figure 5, and Figure 6).
3. Repeat the steps above for the opposite side (Figure 4, Figure 5, and Figure 6).

Note: Make sure the curved washers are installed as shown in Figure 4, Figure 5, and Figure 6.

4. Install the bagger mounting bracket to the left and right side bagger brackets with 4 bolts (3/8 x 1-1/2 inches), 4 curved washers (3/8 inch), and 4 flange nuts (3/8 inch) (Figure 4, Figure 5, and Figure 6).
5. Install the bagger mounting bracket to the rear frame of the machine with 2 bolts (3/8 x 1-1/2 inches) (use 2 bolts (3/8 x 1 inch) for Z593 mowers as shown in Figure 5), 2 curved

washers (3/8 inch), and 2 flange nuts (3/8 inch) (Figure 4, Figure 5, and Figure 6).

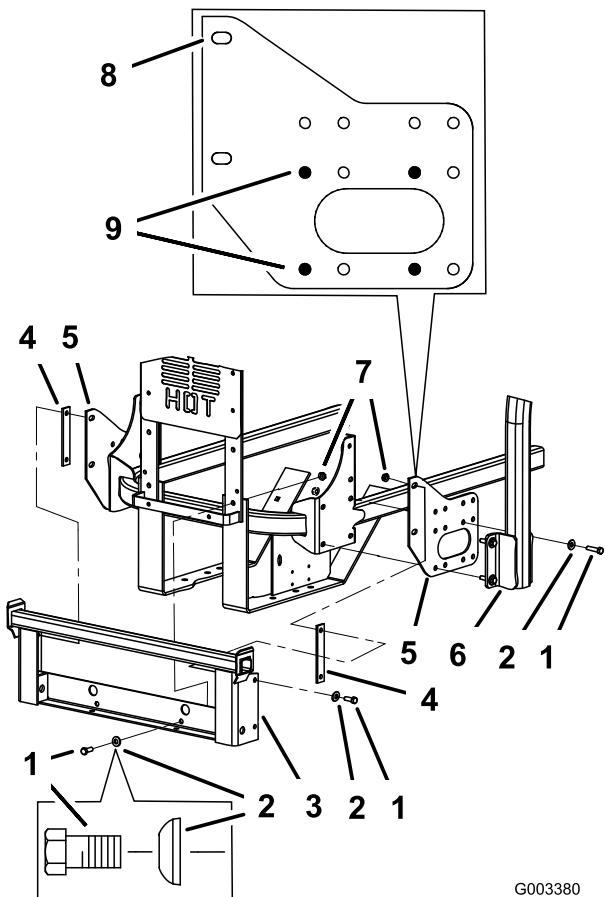


Figure 4

For Z500 Gas Mowers

1. Bolt, (3/8 x 1-1/2 inches)	6. ROPS
2. Curved washer, (3/8 inch)	7. Flange nut, (3/8 inch)
3. Bagger mounting bracket	8. Side view of bagger side plate
4. Spacer	9. Holes to when installing the side bracket
5. Bagger side plate	

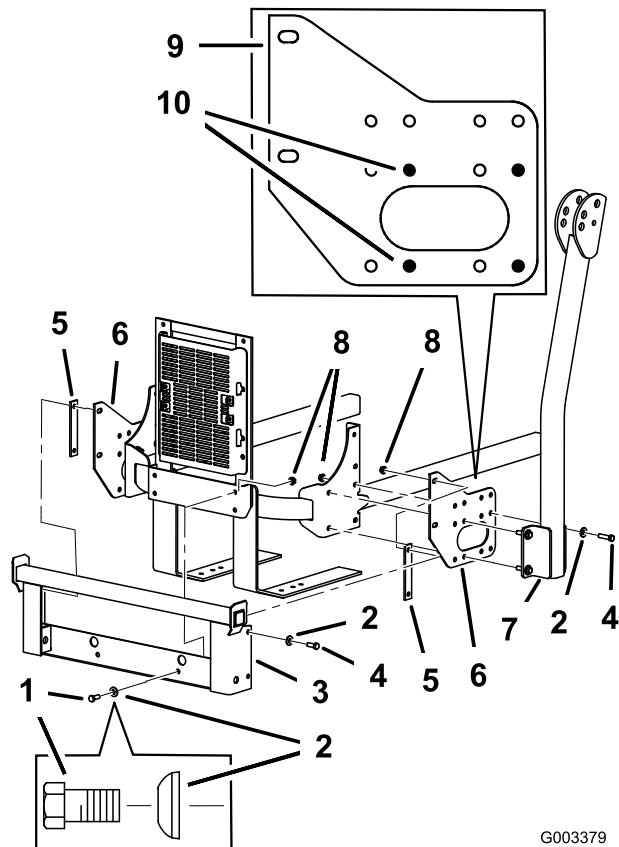


Figure 5

For Z593 Diesel Mowers

1. Bolt, (3/8 x 1 inch)	6. Bagger side plate
2. Curved washer, (3/8 inch)	7. ROPS
3. Bagger mounting bracket	8. Flange nut, (3/8 inch)
4. Bolt, (3/8 x 1-1/2 inches)	9. Side view of bagger side plate
5. Spacer	10. Holes to when installing the side bracket

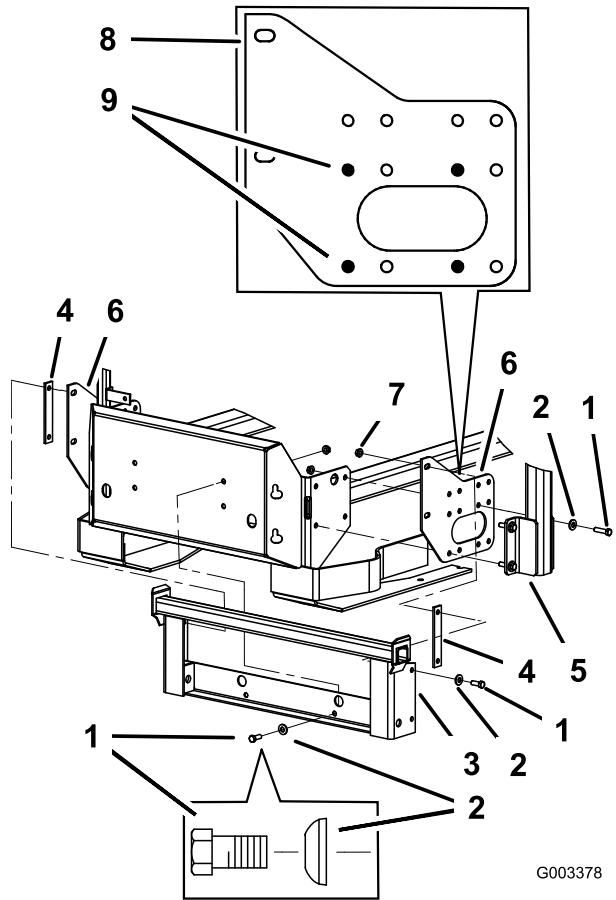


Figure 6
For Z597 Diesel Mowers

1. Bolt, (3/8 x 1-1/2 inches)	6. ROPS
2. Curved washer, (3/8 inch)	7. Flange nut, (3/8 inch)
3. Bagger mounting bracket	8. Side view of bagger side plate
4. Spacer	9. Holes to when installing the side bracket
5. Bagger side plate	

1. Tighten the bagger mounting bracket to the rear frame first.
2. Tighten the ROPS and side brackets to the side of the mower.
3. If the bagger mounting bracket moves side to side an 1/8 inch or more, install one or both of the spacers between the bagger mounting bracket and mounting plates (Figure 4, Figure 5, and Figure 6).
4. Tighten the bagger mounting bracket to the side brackets.

Step 4

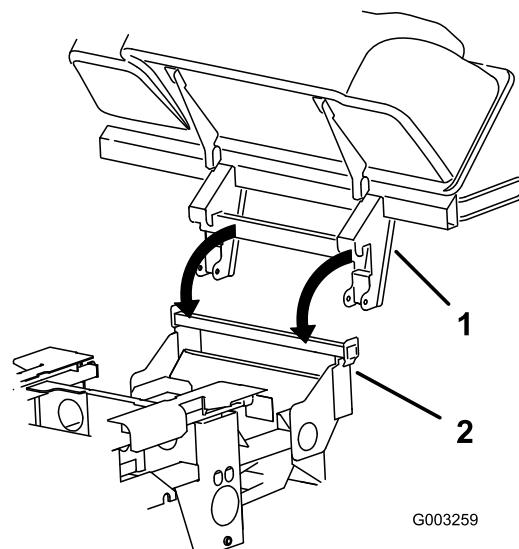
Installing the Hood Assembly and Bags

Parts needed for this step:

1	Hood assembly
3	Bags
2	Clevis pin
2	Hairpin cotter pin

Procedure

1. Install the hood assembly onto the bagger mounting bracket (Figure 7).



Step 3

Tightening all Mounting Bolts

No Parts Required

Procedure

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. Hood assembly
2. Bagger mounting bracket

2. Install the 2 clevis pins into the hood assembly and bagger mounting bracket. Secure them with 2 hairpin cotter pins (Figure 8).

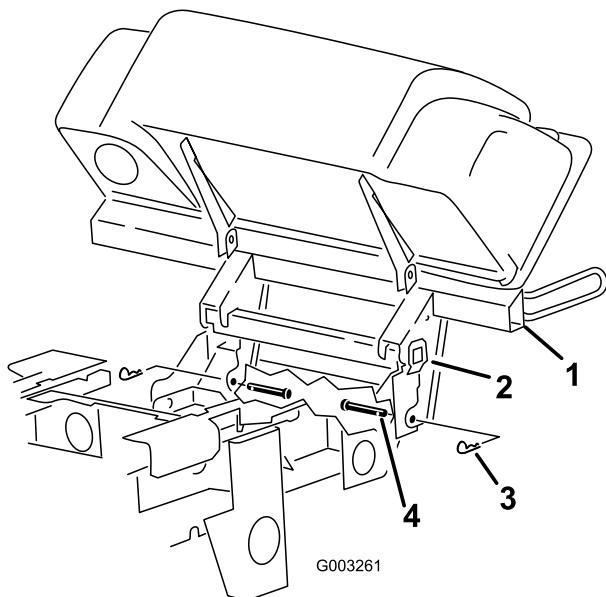


Figure 8

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

3. Install the bag tab into the notch in the hood assembly. Do this for all bags (Figure 9).

Note: The bags will rest on the bagger frame.

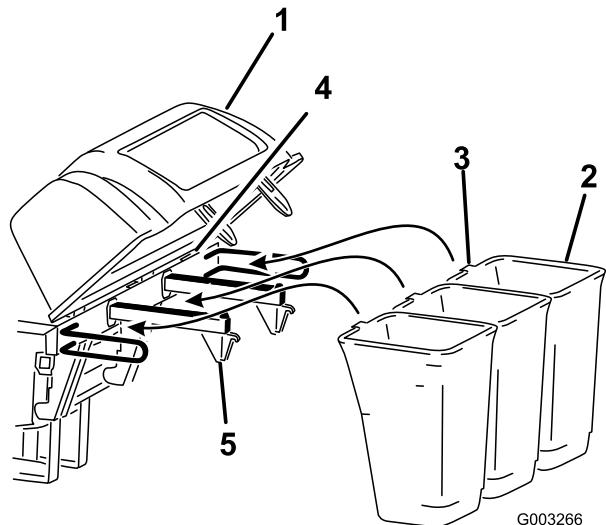


Figure 9

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

4. Lower the bagger hood over the bags (Figure 10).

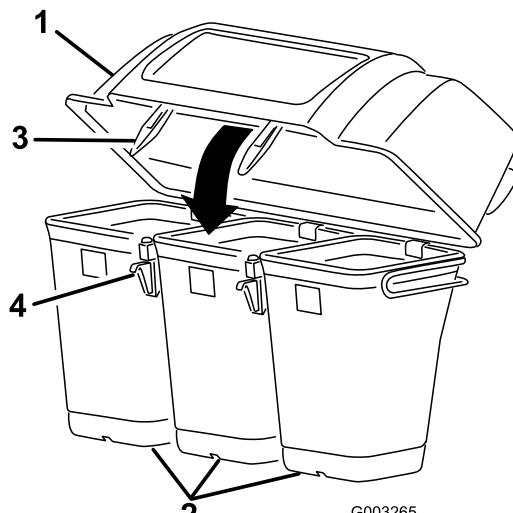


Figure 10

1. Hood
2. Bag
3. Bagger latch
4. Latch hook

5. Position the bagger latch under the latch hook (Figure 11).
6. Push down on bagger latch until it locks into place (Figure 11).

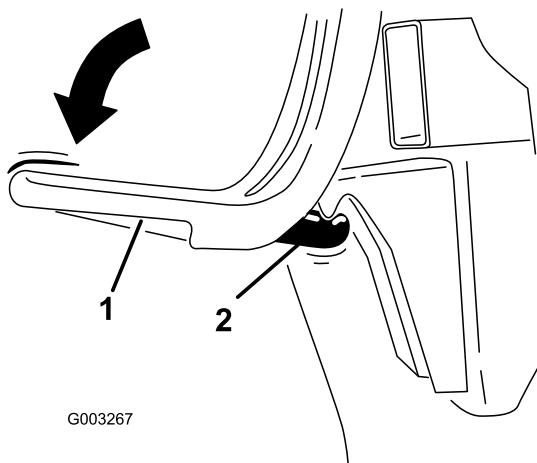


Figure 11

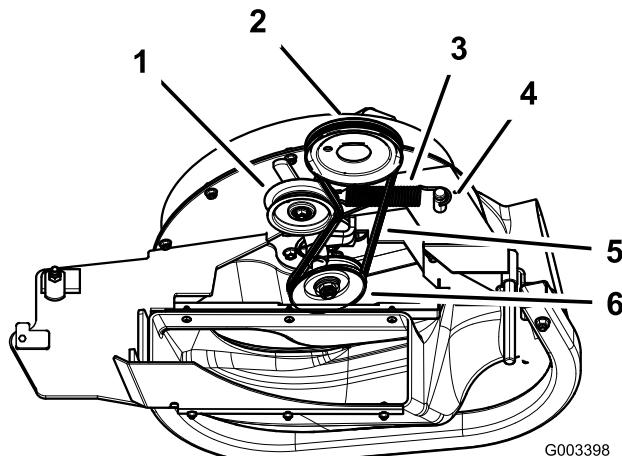
1. Bagger latch
2. Latch hook

Step**5****Routing the Bagger Belt into the Blower Assembly****Parts needed for this step:**

1	Bagger belt (from Blower and Drive Kit)
---	---

Procedure

1. Install the belt around the blower pulley (Figure 12).
2. Install the spring to the idler arm and the peg on the blower assembly (Figure 12).

**Figure 12**

1. Idler pulley	4. Peg
2. Mower deck pulley	5. Belt
3. Spring	6. Blower pulley

Step**6****Installing the Blower Assembly****Parts needed for this step:**

1	Blower assembly (from Blower and Drive Kit)
1	Spring (from Blower and Drive Kit)

Procedure

An uncovered discharge opening could allow the lawn mower to throw objects in the operator's or bystander's direction and result in serious injury. Also, contact with the blade could occur.

- Never operate the lawn mower unless you install a cover plate, a mulch plate, or a grass chute and catcher.
- Make sure the grass deflector is installed when the grass chute and catcher are removed.

1. Remove the side discharge chute from the mower deck (Figure 13).

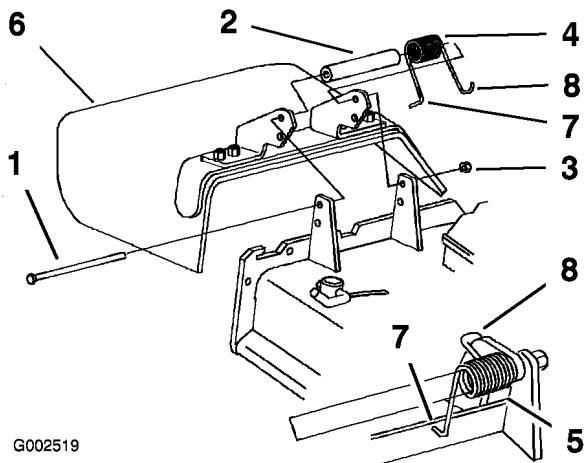


Figure 13

1. Bolt	5. Spring installed
2. Spacer	6. Grass Deflector
3. Locknut	7. L end of spring, place behind deck edge before installing bolt
4. Spring	8. J hook end of spring

2. Slide the blower assembly peg into the pivot hole. For 60 inch mowers refer to Figure 14 and for 72 inch mowers refer to Figure 15.

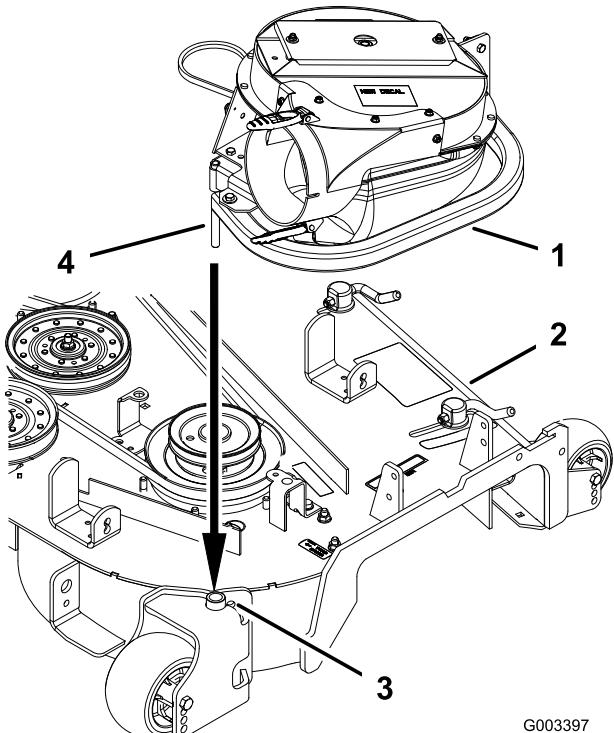


Figure 14

60 inch Mower Deck

1. Blower assembly	3. Pivot hole
2. Mower deck, 60 inch (152 cm) shown	4. Blower assembly peg

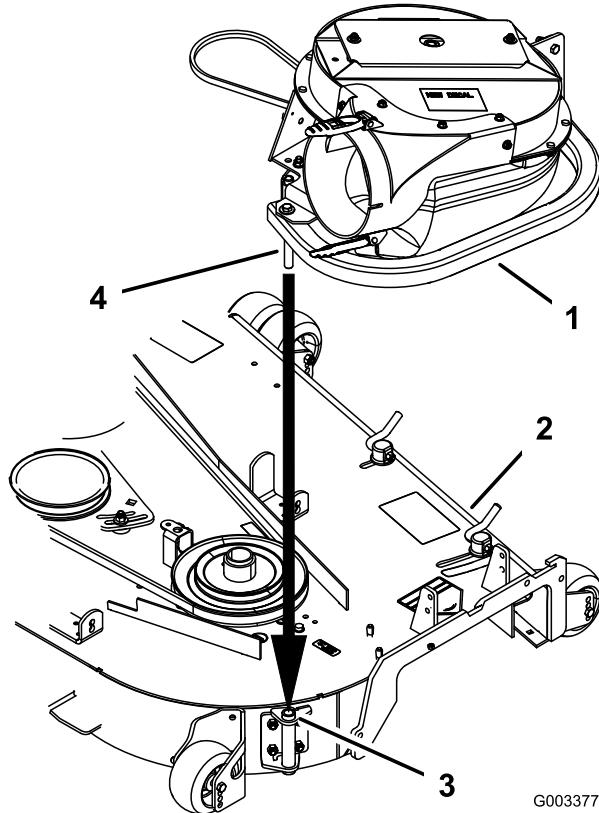


Figure 15

72 inch Mower Deck

1. Blower assembly	3. Pivot hole
2. Mower deck, 72 inch (183 cm) shown	4. Blower assembly peg

3. Close the blower assembly to see if the latches are adjusted correctly. Loosen or tighten the bolt so the latches firmly hold the blower assembly against the mower deck, but can be released by hand (Figure 16).

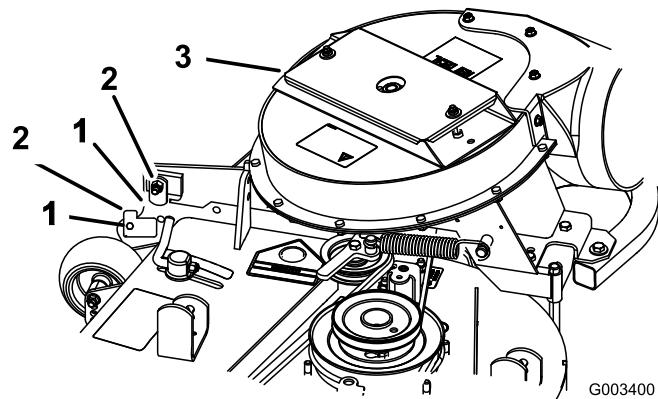


Figure 16

1. Latch	3. Blower assembly
2. Bolt	

4. Install the spring as shown in Figure 17.

Make sure the hooks are in the correct position.

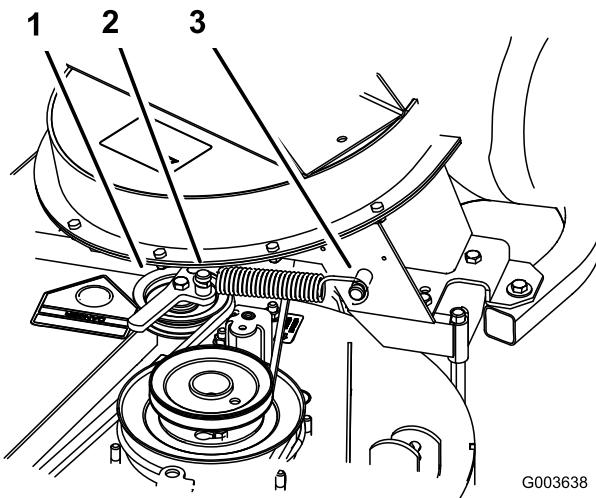


Figure 17

- 1. Spring loaded idler pulley
- 2. Short hook end
- 3. Long hook end

- 5. Pull the spring loaded idler pulley back and route the belt around the mower deck pulley. Ensure the belt is routed around the blower pulleys correctly (Figure 18).

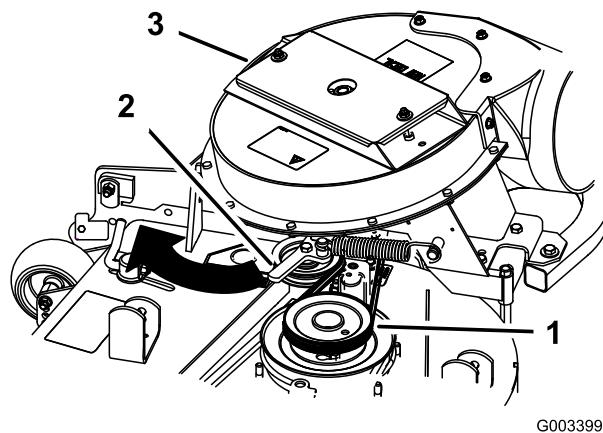


Figure 18

- 1. Mower deck pulley
- 2. Spring loaded Idler pulley
- 3. Blower

Step

7

Sizing the Upper Tube for 60 inch Mowers with Gas Engines

Parts needed for this step:

1	Upper tube
---	------------

Procedure

Note: This procedure is for 60 inch mowers with gas engines only.

- 1. Measure up 3-1/2 inches (89 mm) from the bottom of the upper tube. Use the existing 3 holes as marks and then mark it in several places to create a line around the tube (Figure 19).
- 2. Cut the 3-1/2 inches (89 mm) off the upper tube (Figure 19).

Note: Notice the three indentations in the tube. This is where holes will be drilled in the following procedure.

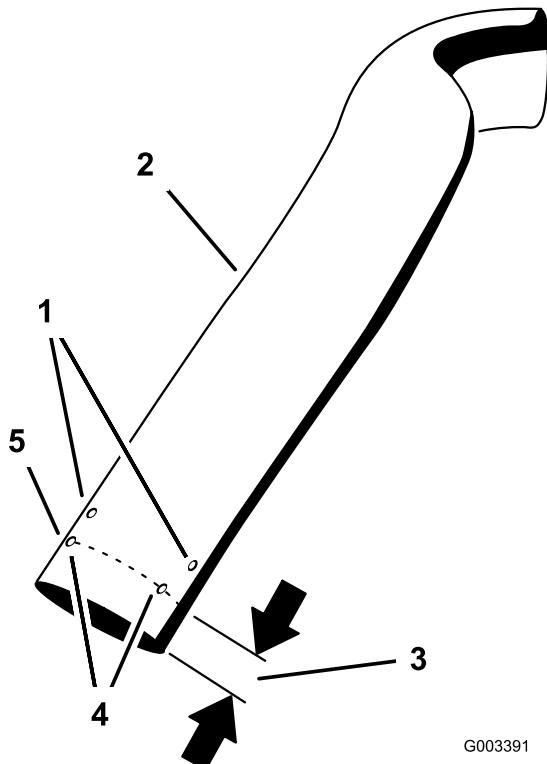


Figure 19

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- 1. Indentations for drilling holes
- 2. Upper tube
- 3. Cut off 3-1/2 inches (89 mm) for 60 inch mowers with gas engines only
- 4. Use the existing holes to create a line
- 5. Line to cut tube

Note: Remember to replace the grass deflector when the bagger is removed from the mower. Refer to Replacing the Grass Deflector.

1. Disengage the PTO 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. Lower the mower deck to the lowest height-of-cut position.
4. Remove the bags for viewing the tube under the hood.
5. Install the upper tube into the bagger opening and pull it back out so the rubber seal is protruding out (Figure 20).

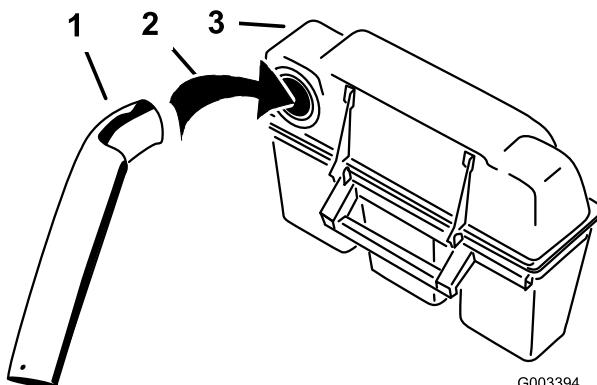


Figure 20

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- 1. Upper tube
- 2. Bagger opening
- 3. Bagger hood

Step

8

Installing the Discharge Tubes

Parts needed for this step:

1	Upper tube
1	Lower tube
3	Bolt, (#10 x 3/4 inches)
3	Locknut, (#10)
3	Washer, (7/32 inch)

Procedure

Important: Make sure the mower deck is in the lowest height-of-cut position while installing the discharge tubes.

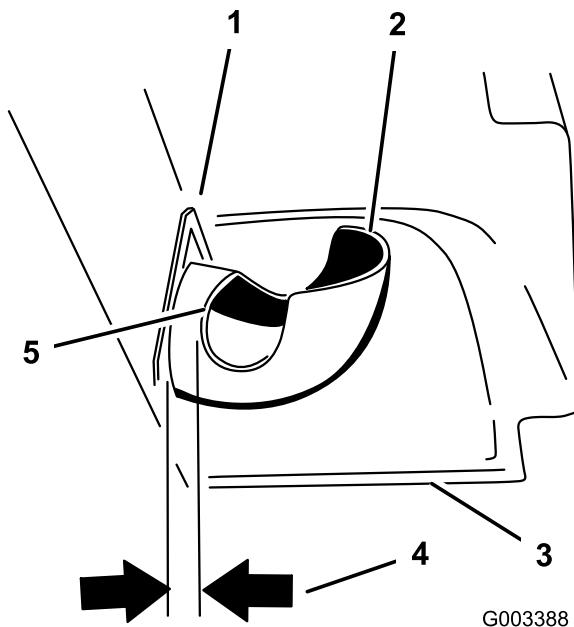


Figure 21

- 1. Hood plate
- 2. Upper tube
- 3. Hood in the down position
- 4. 3/4 inch (19 mm)
- 5. Edge of tube

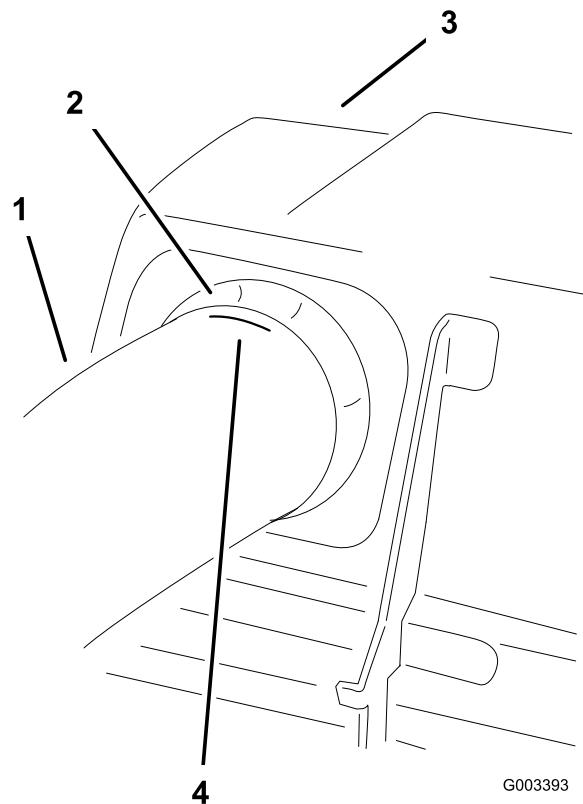


Figure 22

- 1. Upper tube
- 2. Rubber seal protruding out
- 3. Bagger hood
- 4. Mark here against the rubber seal

- 7. Once the 3/4 inch (19 mm) measurement has been achieved, mark the upper tube on the out side where the rubber seal protrudes out. This is marked to ensure the correct position for the upper tube when drilling the holes and connecting the upper and lower tubes (Figure 22).

Note: The rubber seal must protrude out from the bagger hood.

- 8. Install the lower tube into the upper tube (Figure 23).

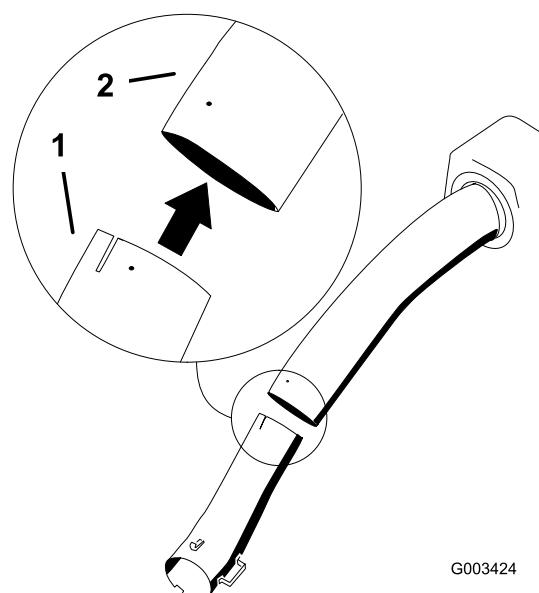


Figure 23

- 1. Lower tube
- 2. Upper tube

9. Slide the lower tube onto the boot and latch them together (Figure 24).

Note: There is a latch on the top and bottom of the blower housing.

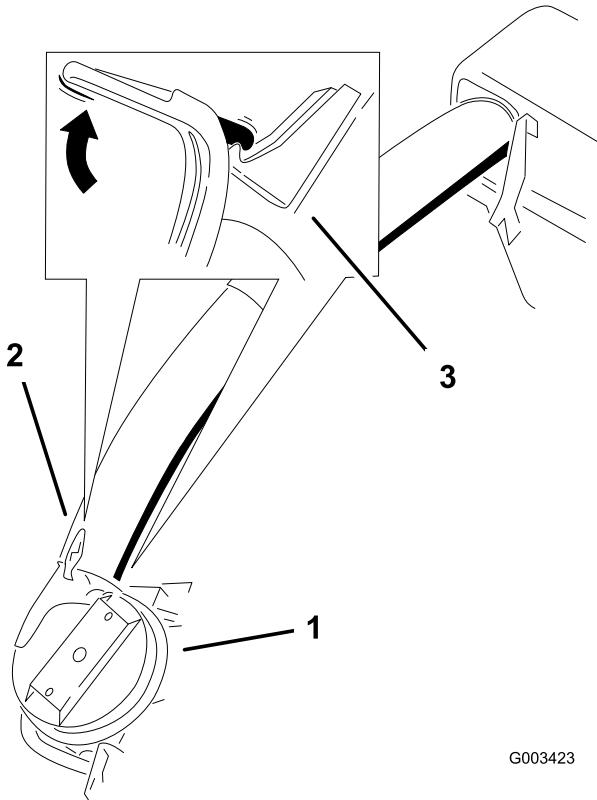


Figure 24

1. Blower assembly	3. Latch
2. Lower tube	

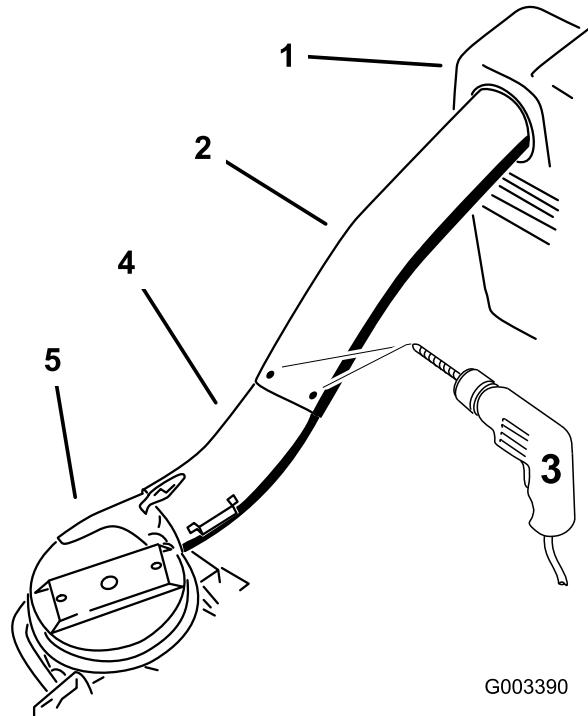


Figure 25

1. Bagger hood	4. Lower tube
2. Upper tube	5. Blower assembly
3. Drill 7/32 inch diameter holes here (use upper tube as a template)	

10. Make sure the mower deck is in the lowest height-of-cut position.
11. Check to make sure the mark from Figure 22 is still in place.
12. Using the three holes or indentations in the upper tube as a template, drill three holes (7/32 inch diameter) where the upper and lower tubes join together (Figure 25).

13. Remove the lower tube from the blower.
14. Join the upper and lower tubes with 3 bolts (#10 x 3/4 inches), 3 flat washers (7/32 inch), and 3 locknuts (#10) (Figure 26).

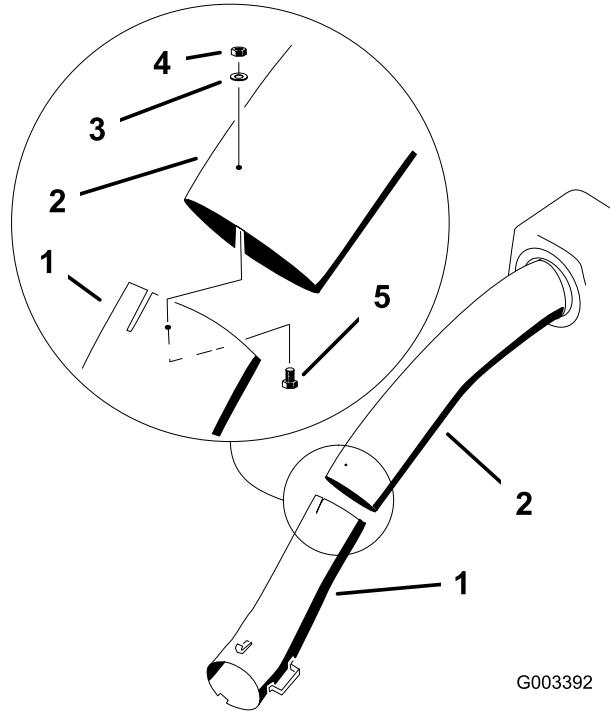


Figure 26

- 1. Lower tube
- 2. Upper tube
- 3. Flat washer, (7/32 inch)
- 4. Locknut, (#10)
- 5. Bolt, (#10 x 3/4 inches)

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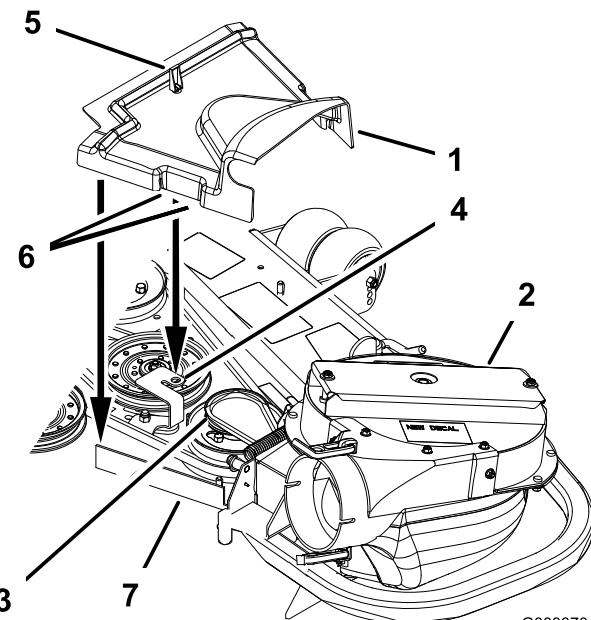


Figure 27

- 1. Belt cover
- 2. Blower assembly
- 3. Pulley assembly
- 4. Belt cover bracket
- 5. Latch
- 6. Belt cover notch
- 7. Belt cover support

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- 15. Install the lower tube onto the blower housing and secure it with the latches.
- 16. Install the bags onto the bagger.

Step 9

Installing the Belt Cover

Parts needed for this step:

Belt cover (from Blower and Drive Kit)

Procedure

1. Lower the mower deck to the lowest height-of-cut position.
2. Install the new belt cover so the notches on both sides go over the belt cover supports and secure the latch (Figure 27).

Step 10

Installing the Weights

Parts needed for this step:

2	Caster weight
2	U-bolt
4	Nut, (1/2 inch)
4	Lock washer, (1/2 inch)
2	Plate
2	Top weight (for 60 inch mower decks only)
2	Bolt, 1/2 x 2-1/2 inch- for top weights

Procedure

To comply with ANSI/OPEI B71.4-2004 Standard, weights must be added to the machine.



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.

1. Place caster weights on the front casters.
2. Install plate, nuts (1/2 inch) and lock washer (1/2 inch) under the frame and weight (Figure 28).
3. Repeat for opposite side.

Note: All Z Master mowers receive the caster weights.

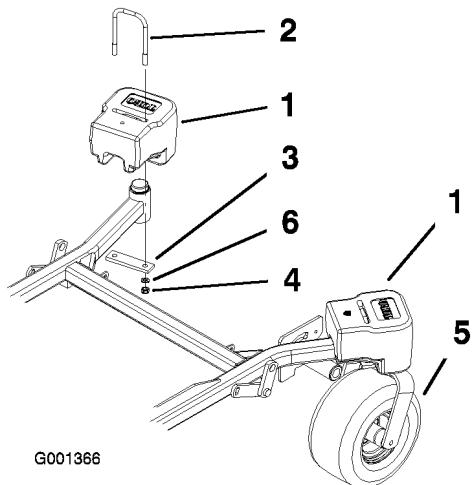


Figure 28

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

Note: Only Z Master mowers with 60 inch mower decks receive the top weights.

4. Install the top weights on top of each caster weight for 60 inch mowers with 2 bolts (1/2 x 2-1/2 inches) (Figure 29).

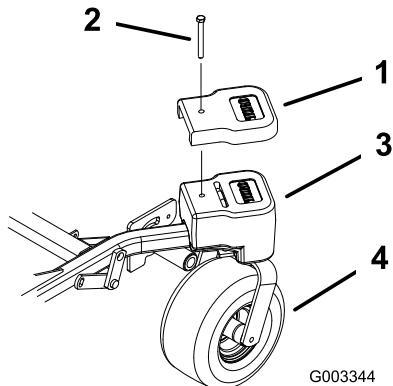


Figure 29

1. Top weight	3. Front caster weight
2. Bolt, (1/2 x 2-1/2 inches)	4. Front caster wheel

Step

11

Adjusting the Parking Brake

No Parts Required

Procedure

Check the parking brake for proper adjustment.

1. Disengage brake lever (lever down).
2. Measure the length of the spring.

The measurement should be 2-3/4 inch (70 mm) between washers (Figure 30).

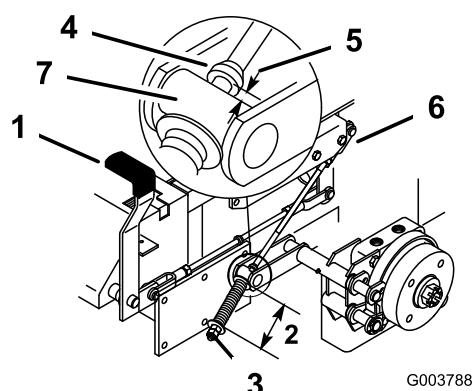


Figure 30

1. Brake lever	5. 3/16-1/4 inch (5-7 mm)
2. Spring (2-3/4 inches/70 mm)	6. Jam nut and yoke
3. Adjusting nuts	7. Trunnion roller
4. Collar on brake rod	

3. If adjustment is necessary, loosen the jam nut below the spring and tighten the nut directly below the yoke (Figure 30). Turn the nut until the correct measurement is obtained. Tighten the two nuts together and repeat on opposite side of unit.
4. Turn nuts clockwise to shorten spring length and turn counter-clockwise to lengthen the spring.
5. Engage parking brake, lever up.
6. Measure the distance between the trunnion roller and the collar on brake rod.

The measurement should be 3/16-1/4 inch (5-7 mm) (Figure 30).

7. If adjustment is necessary, loosen the jam nut directly below the yoke. Turn the bottom rod until the correct measurement is obtained (Figure 30). Tighten jam nut at yoke

Step **12**

Checking the Tire Pressure

No Parts Required

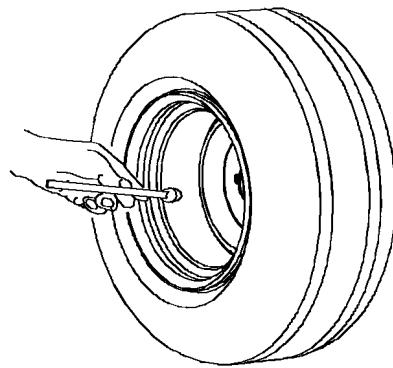
Procedure

Note: Increase the tire pressure due to the additional weight.

Check and increase the air pressure in the front caster wheels and rear tires (Figure 31).

Pressure: Rear tires-20 psi (90 kPa)

Front caster wheels-25 psi (90 kPa)



G001055

Figure 31

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 if just for a few minutes.



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 shut 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.



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 install the grass deflector 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. Also remove the key and pull the wire off of the spark plug(s).
- Turn off the engine before unclogging the discharge chute.



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

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

Positioning the Adjustable Baffle

Adjust the baffle to position B (middle position) for bagging. Refer to the machines Operator Manual for the baffle adjustment procedure.

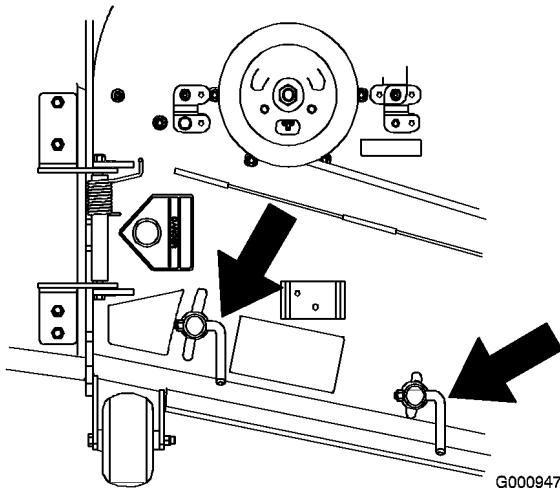


Figure 32

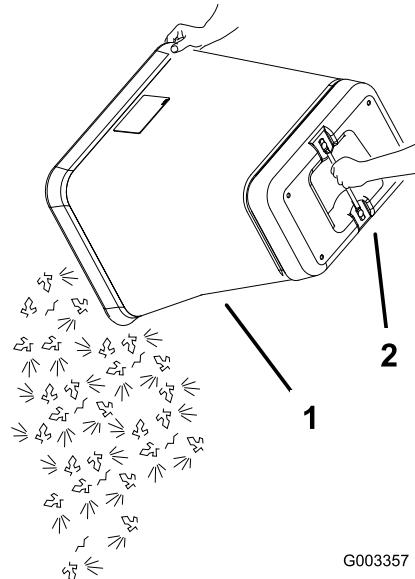


Figure 33

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, set the parking brake, and chock or block the tires if on a slope.
2. Unlatch the bagger latch.
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 (Figure 33).

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

Clearing Obstructions from the Bagger System



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. Unlatch the lower tube.
5. Remove the tubes from the bagger.
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 tubes.

7. If the blower assembly is plugged, unlatch the bagger blower assembly, remove the belt, and swing it open.
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.

Removing the Bagger



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 removing the bagger.

1. Disengage the PTO, set the parking brake, and chock or block the tires.
2. Turn off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Unlatch the lower tube from the blower and remove the tube from the blower assembly.
4. Remove the tube from the bagger hood.
5. Lower the mower deck to the lowest height-of-cut position.
6. Unlatch the belt cover over the mower pulley assembly.
7. Remove the bagger belt from the mower pulley assembly.
8. Open the blower assembly.
9. Remove the blower assembly from the pivot hole.

10. If you are changing to side discharge mode, ensure the grass deflector is installed and can be lowered into working position.
11. Remove the hood and bag assembly.

Using the Grass Deflector



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

- Always install the grass deflector 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 the off position, rotate the ignition key to off and remove the key.

Transporting Machines

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



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 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 bagging tubes.

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).

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 tubes.

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 machine's ground speed. Mow down hill whenever possible.



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

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 the mower.

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.

Maintenance

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 8 operating hours	<ul style="list-style-type: none">• Inspect the bagger belt.• Inspect the bagger.
Before each use or daily	<ul style="list-style-type: none">• Clean the hood screen.• Clean the bagger.
Every 25 hours	<ul style="list-style-type: none">• Inspect the bagger belt.
Every 50 hours	<ul style="list-style-type: none">• Grease the idler arm.
Every 100 hours	<ul style="list-style-type: none">• Inspect the bagger.

Cleaning the Hood Screen

The screens need to be cleaned before each use. In wet grass they will need to be cleaned more often.

1. Disengage the power take off (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 hood.
4. Clean the debris from the screen.
5. Close the bagger hood.

Check belts for cracks, frayed edges, burn marks or any other damage. Replace damaged belts.

Replacing the Bagger Belt

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. Pull back on the spring loaded idler pulley to relieve the belt tension (Figure 34).
4. Remove the existing bagger belt from the mower deck pulley and then the blower pulleys.
5. Install the new belt around the blower pulleys and the mower deck pulley (Figure 34).

Cleaning the Bagger and Bags

The bagger needs to be cleaned daily.

1. Wash the inside and outside of the bagger hood, bags, 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.

Inspecting the Bagger Belt

The bagger belt tension needs to be checked after the first 8 hours and every 25 hours thereafter.

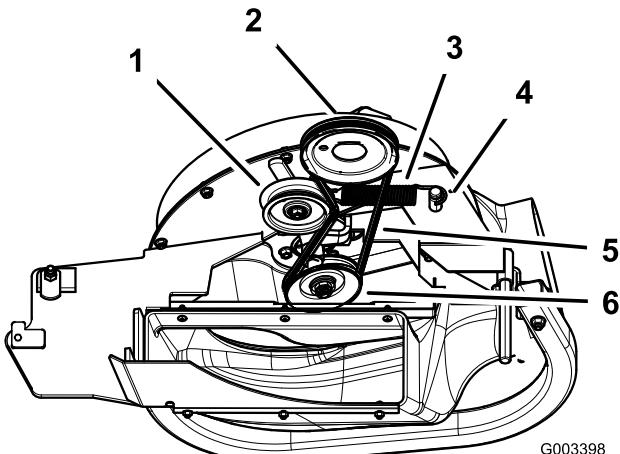


Figure 34

1. Idler pulley	4. Peg
2. Mower deck pulley	5. Belt
3. Spring	6. Blower pulley

6. Install the spring as shown in Figure 35.

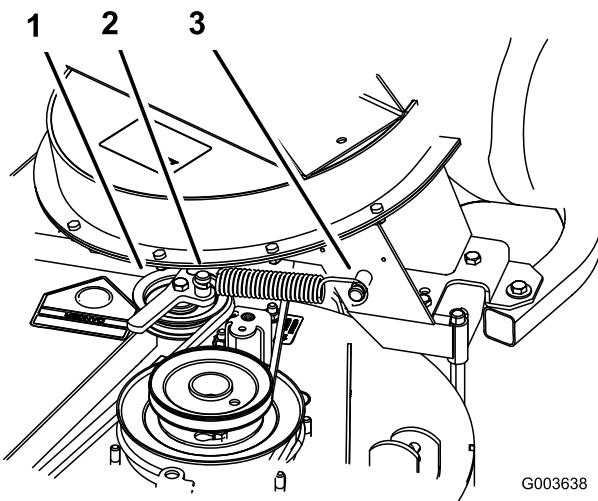


Figure 35

1. Spring loaded idler pulley	3. Long hook end
2. Short hook end	

7. Pull back on the spring loaded idler pulley and install the belt onto the spring loaded idler pulley (Figure 34).

Checking and Adjusting the Blower Latch

Close the blower assembly to see if the latches are adjusted correctly. Loosen or tighten the bolts so the latches firmly hold the blower assembly against the mower deck, but can be released by hand.

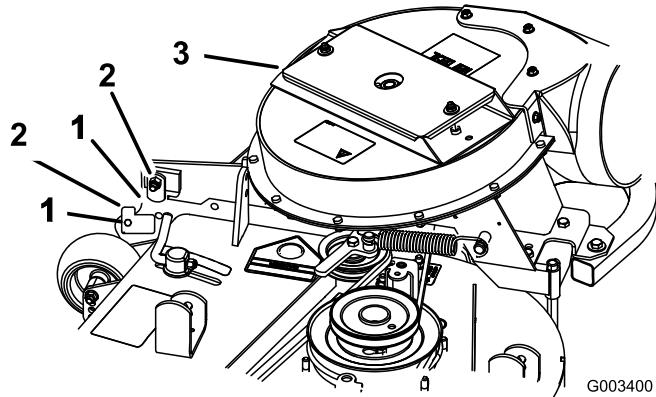


Figure 36

1. Latch	3. Blower assembly
2. Bolt	

Greasing the Idler Arm

Grease the bagger belt idler arm (Figure 37) every 50 hours.

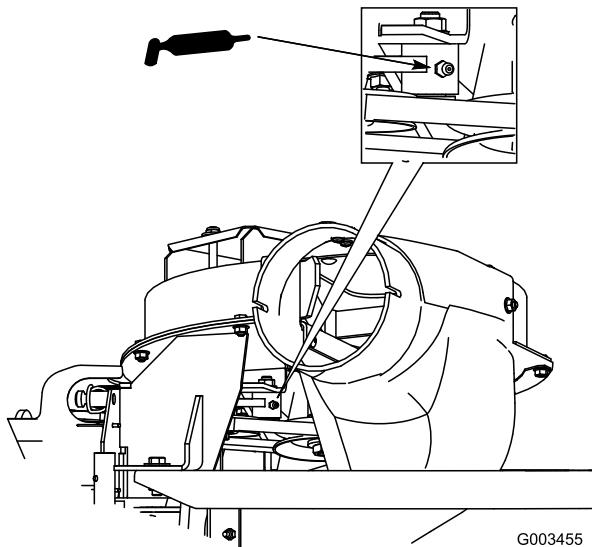


Figure 37

Inspecting the Bagger

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

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.

- Check the upper tube, lower tube, bagger hood, and the blower assembly. Replace these parts if they are cracked or broken.
- Check the bags, bagger frame, and screen. Replace any parts that are cracked or broken.
- Tighten all nuts bolts and screws.

Inspecting the Mower Blades

- Inspect the mower blades regularly and whenever a blade strikes a foreign object.
- If blades are badly worn or damaged, install new blades. 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.

Installing the Grass Deflector



An uncovered discharge opening could allow the lawn mower to throw objects in the operator's or bystander's direction and result in serious injury. Also, contact with the blade could occur.

- Never operate the lawn mower unless you install a cover plate, a mulch plate, or a grass chute and catcher.
- Make sure the grass deflector is in the down position.

- Remove the locknut, bolt, spring and spacer holding the deflector to the pivot brackets (Figure 38).

- Remove the damaged or worn grass deflector.
- Place the spacer and spring onto the grass deflector. Place the **L** end of the spring behind the deck edge.
- Note:** Make sure the L end of the spring is installed behind the deck edge before installing the bolt as shown in Figure 38
- Install the bolt and nut.
- Place the **J** hook end of the spring around the grass deflector (Figure 38).

Important: The grass deflector must be able to lower down into position. Lift the deflector up to test that it lowers into the full down position.

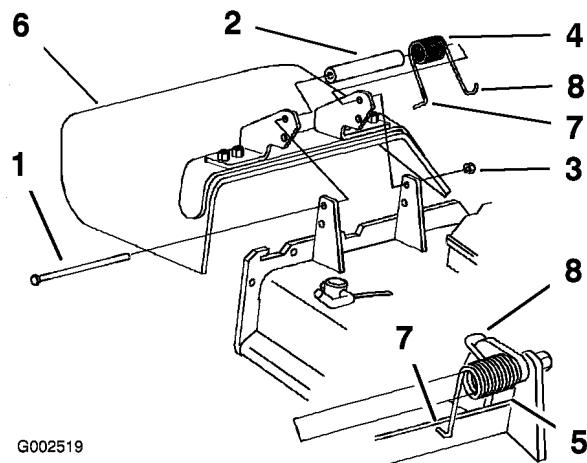


Figure 38

1. Bolt	5. Spring installed
2. Spacer	6. Grass Deflector
3. Locknut	7. L end of spring, place behind deck edge before installing bolt
4. Spring	8. J hook end of spring

Storage

1. Clean the bagger attachment. Refer to Cleaning the Bagger.
2. Inspect the bagger attachment for damage. Refer to Inspecting the Bagger.
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 Cause	Corrective Action
Abnormal vibration.	<ol style="list-style-type: none"> 1. Cutting blade(s) is/are bent or unbalanced. 2. Blade mounting bolt is loose. 3. Loose blower pulley or pulley assembly. 4. Worn bagger belt. 5. Blower fan blade(s) is/are bent or unbalanced. 	<ol style="list-style-type: none"> 1. Install new cutting blade(s). 2. Tighten the blade mounting bolt. 3. Tighten the appropriate pulley. 4. Replace belt. 5. Contact an Authorized Service Dealer.
Reduced bagging performance.	<ol style="list-style-type: none"> 1. Low engine speed. 2. Plugged screen in bagger hood. 3. Loose bagger belt. 4. A plugged tube or blower. 5. Full bags. 	<ol style="list-style-type: none"> 1. Always operate the bagger at full throttle. 2. Remove debris, leaves or grass clippings from the screen. 3. Replace the bagger belt. 4. Locate and remove plugged debris. 5. Empty the hopper.
Blower and tubes plug too frequently.	<ol style="list-style-type: none"> 1. Bags are too full. 2. Low engine speed. 3. Grass is too wet. 4. Grass is too long. 5. Plugged screen in hood. 6. Ground speed is too fast. 7. Worn bagger belt. 	<ol style="list-style-type: none"> 1. Dump more frequently. 2. Always operate the bagger at full throttle. 3. Cut grass when it is dry. 4. Cut no more than 2-3 inches (51-76 mm) or 1/3 of the grass height, which ever is less. 5. Remove debris, leaves or grass clippings from the screen. 6. Drive slower at full throttle. 7. Replace belt.
Debris blowout.	<ol style="list-style-type: none"> 1. Bags are too full. 2. Ground speed is too fast. 3. Mower deck is not leveled. 	<ol style="list-style-type: none"> 1. Dump more frequently. 2. Drive slower at full throttle. 3. See the mower operator's manual for leveling the mower deck.

Problem	Possible Cause	Corrective Action
Blower impeller does not spin freely.	<ol style="list-style-type: none"> <li data-bbox="594 206 894 242">1. Plugged blower. <li data-bbox="594 318 953 354">2. Impeller not aligned. 	<ol style="list-style-type: none"> <li data-bbox="1030 206 1433 304">1. Remove debris, leaves or grass clippings from the blower impeller. <li data-bbox="1030 318 1401 392">2. Contact an Authorized Service Dealer.

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 Products if defective in materials or workmanship. The following time periods apply from the date of purchase:

Products	Warranty Period
All Products	1 year
All Spindles	2 years (parts and labor; third year, parts only)
Engines/Hydraulic Systems* on the following: Outfront and Mid-Mount Z's ProLine Mid-Size Mowers Groundsmaster[Symbol_registersans] Riding Mowers Backpack Blowers	2 years
Deck Shells (32 ² -72 ²) on the following: ProLine Mid-Size Mowers Mid-Mount Z's	2 years
Electric Clutch on 500 Series Mid-Mount Z's	2 years

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

This warranty applies to:

- Outfront and Mid-Mount Z's
- ProLine Mid-Size Mowers
- Groundsmaster Riding Mowers
- Turf Maintenance Equipment
- Debris Management Equipment

Some engines used on Toro LCE Products are warranted by the engine manufacturer.

Instructions for Obtaining Warranty Service

If you think that your Toro 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. You may also call our Toro Customer Care Department toll free at 888-577-7466 (U.S. Customers) or 877-484-9255 (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, contact us at:

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.

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

General Conditions

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.

LCB Customer Service Department
Toro Warranty Company
8111 Lyndale Avenue South
Bloomington, MN 55420-1196