Form No. 3450-666 Rev B

TORO®

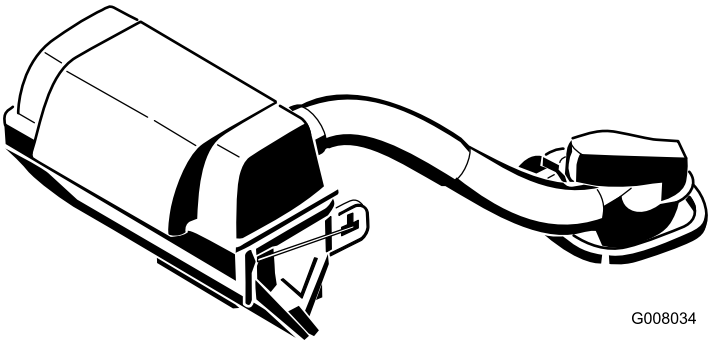
Count on it.

Operator's Manual

60in or 72in E-Z Vac™ DFS Collection System

Z Master® 4000 Series Riding Mower

Model No. 78468—Serial No. 400000000 and Up
Model No. 78474—Serial No. 400000000 and Up



G008034

Register at www.Toro.com.
Original Instructions (EN)

3450-666

⚠ WARNING

CALIFORNIA
Proposition 65 Warning

Use of this product may cause exposure to chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

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.

Visit www.Toro.com for product safety and operation training materials, 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 and Figure 2 identify the location of the model and serial numbers on the product. Write the numbers in the space provided.

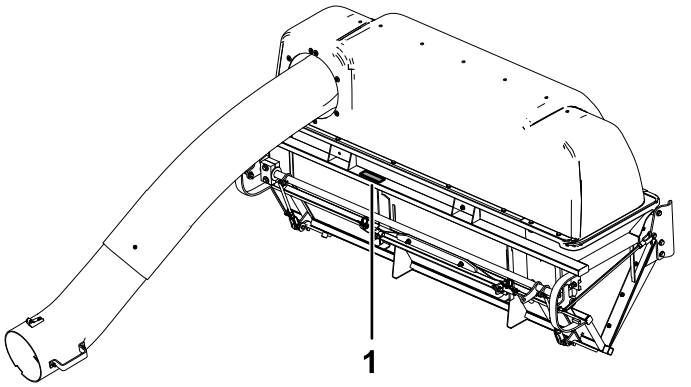


Figure 1

1. Bagger model and serial number location

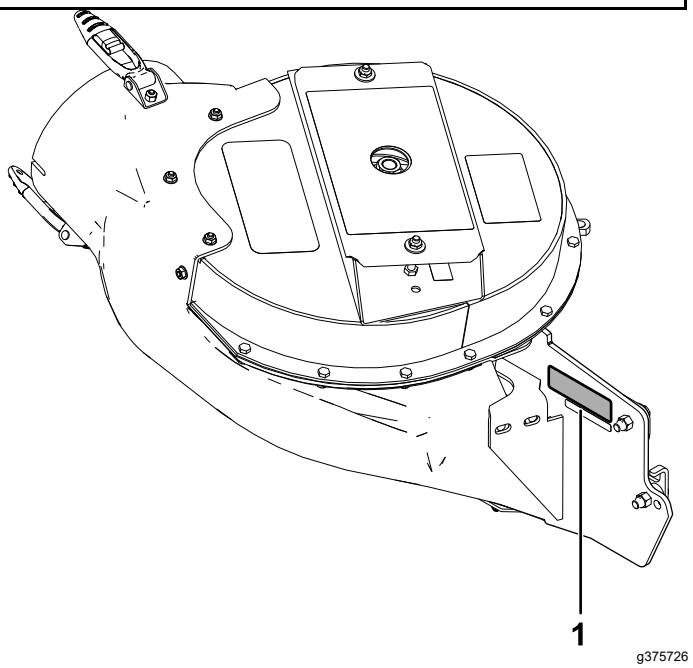


Figure 2

1. Collection system model and serial number location

Model No. _____

Serial No. _____

8111 Lyndale Avenue South
Bloomington, MN 55420

Contact us at www.Toro.com.
Printed in the USA

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

The safety-alert symbol (Figure 3) appears both in this manual and on the machine to identify important safety messages that you must follow to avoid accidents. This symbol will appear with the word **Danger**, **Warning**, or **Caution**.

- **Danger** indicates an imminently hazardous situation which, if not avoided, **will** result in death or serious injury.
- **Warning** indicates a potentially hazardous situation which, if not avoided, **could** result in death or serious injury.
- **Caution** indicates a potentially hazardous situation which, if not avoided, **may** result in minor or moderate injury.

sa-black

Figure 3
Safety-alert symbol

Contents

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 stability of the machine. Use extreme caution while operating near drop-offs.
- Keep all movement on slopes slow and gradual. Do not make sudden changes in speed, direction, 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.
- Park the machine on level ground, disengage the drives, chock the wheels, and 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.
- Shut off the engine before removing the grass catcher or unclogging the chute.
- Do not leave grass in the grass catcher for extended periods of time.
- Grass catcher components are subject to wear, damage and deterioration, which could expose you to moving parts or allow objects to be thrown. Frequently check components and replace with the manufacturer's recommended parts, when necessary.

Towing Safety

- Do not attach towed equipment except at the hitch point.
- Follow the attachment manufacturer's recommendation for weight limits for towed equipment and towing on slopes.
- Never allow children or others in or on towed equipment.
- On slopes, the weight of the towed equipment may cause loss of traction and loss of control. Reduce towed weight and slow down.
- Stopping distance increases with the weight of the towed load. Travel slowly and allow extra distance to stop.
- Make wide turns to keep the attachment clear of the machine.
- Do not tow a load that weighs more than the towing machine.

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 missing.

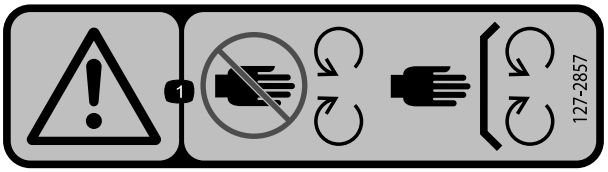
decal133-8061

133-8061

decal126-4659

126-4659

1. Warning—hot pulley; allow to cool.



decal127-2857

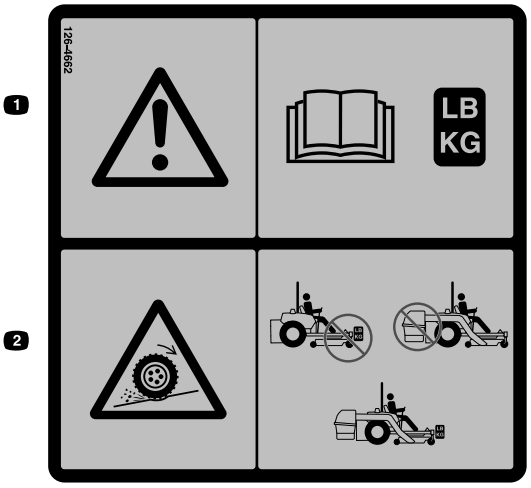
127–2857

1. Warning—keep away from moving parts; keep all guards and safeties in place.

decal126-9595

126-9595

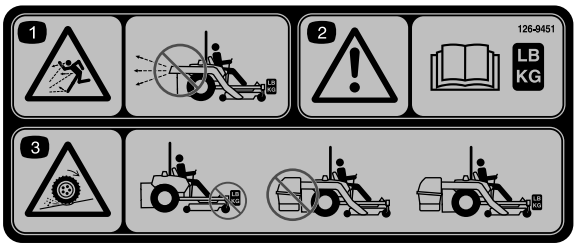
1. Rotation indicator
2. Impeller/Rotating Blades hazard-Keep hands away from moving parts. Keep all safety devices in place and working. Do not reach into the blower unless the rotation indicator has stopped. Disengage the PTO, shut off the engine, remove the key, and wait for all moving parts to stop.



decal126-4662

126-4662

1. Warning—read the *Operator's Manual* for the correct quantity of counterbalance weight(s).
2. Loss of traction and steering or reduced stability hazard—Ez Vac counterbalance weight(s) installed without the Ez Vac may cause loss of traction and steering control. The Ez Vac installed without the Ez Vac counterbalance weight(s) can cause reduced stability. Install weight(s) only when the Ez Vac is installed.



decal126-9451

126-9451

1. Thrown objects hazard—Do not run the blower without the entire collection system installed and latched.
2. Warning–Read the *Operator's manual*about counterbalance weight installation.
3. Loss of traction and steering or reduced stability hazard–Ez Vac counterbalance weight(s) installed without the Ez Vac may cause loss of traction and steering control. The Ez Vac installed without the Ez Vac counterbalance weight(s) can cause reduced stability. Install weight(s) only when the Ez Vac is installed.

Setup

Loose Parts

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

Procedure	Description	Qty.	Use
1	No parts required	–	Prepare the machine.
2	Shoulder bolt Wave washer Locknut (1/2 inch)	2 2 2	Install the ROPS pivot shoulder bolt.
3	12.5 lb weight plate (60-inch machines only) Carriage bolt (3/8 x 2-1/2 inches)—60-inch machines only Hex-socket flange nut (3/8 inch)—60-inch machines only Caster weight Carriage bolt (3/8 x 1 inch) Flange nut (3/8 inch) Weight bracket assembly Suitcase weight Locknut (3/8 inch) Carriage bolt (3/8 x 5 inches)	2 4 4 2 8 8 1 2 2 2	Install the weights.
4	Upper bagger support Support plate Pivot mount Left upper bracket Right upper bracket Hex-head bolt (5/16 x 3-1/4 inches) Washer Flange-head bolt (5/16 x 1-1/4 inches) Hex-head bolt (3/8 x 1-1/4 inches) Locknut (3/8 inch) Locknut (5/16 inch)	1 1 1 1 1 4 4 2 2 2 6	Install the bagger supports and brackets.
5	Left lower support Right lower support Backer plate Locknut (5/16 inch) Carriage bolt (5/16 x 2-1/4 inches) Locknut (3/8 inch) Carriage bolt (3/8 x 7/8 inch) Hopper assembly Pin and hairpin cotter assembly	1 1 2 4 4 1 1 1 2	Install the hopper assembly.
6	Handle assembly Clevis-pin spring Linkage Washer Cotter pin Carriage bolt (3/8 x 7/8 inch) Locknut (3/8 inch)	1 1 1 1 1 1 1	Install the handle assembly.

Procedure	Description	Qty.	Use
7	No parts required	–	Remove the existing belt cover, bracket, and discharge chute.
8	Blower pulley Pulley mount Locknut (3/8 inch) Belt-cover bracket Speed nut Carriage bolt (1/4 x 3/4 inch) Locknut (1/4 inch)	1 1 3 1 1 2 2	Install the blower-pulley assembly.
9	Baffle Carriage bolt (5/16 x 7/8 inch) Flange nut (5/16 inch) Carriage bolt (3/8 x 7/8 inch) Flange nut (3/8 inch)	1 1 1 2 2	Install the baffle.
10	Blower assembly Pivot pin Latch Hex-head bolt (3/8 x 1-1/2 inches) Spacer Locknut (3/8 inch)	1 1 1 1 1 1	Install the blower assembly.
11	Blower-belt cover Cover knob	1 1	Install the bagger belt, spring, and blower-belt cover.
12	Upper tube Lower tube Bolt (#10 x 3/4 inch) Locknut (#10) Washer (7/32 inch)	1 1 3 3 3	Install the discharge tubes.
13	No parts required	–	Check the tire pressure.

Important: **Do not use drive or caster Tweels with this attachment. If the machine is equipped with drive or caster Tweels, replace them with factory pneumatic drive tires or factory pneumatic or semi-pneumatic caster tires.**

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

Important: **If the reinforcement plates (Figure 4) are not installed on the machine, you cannot install the DFS Collection System onto the machine.**

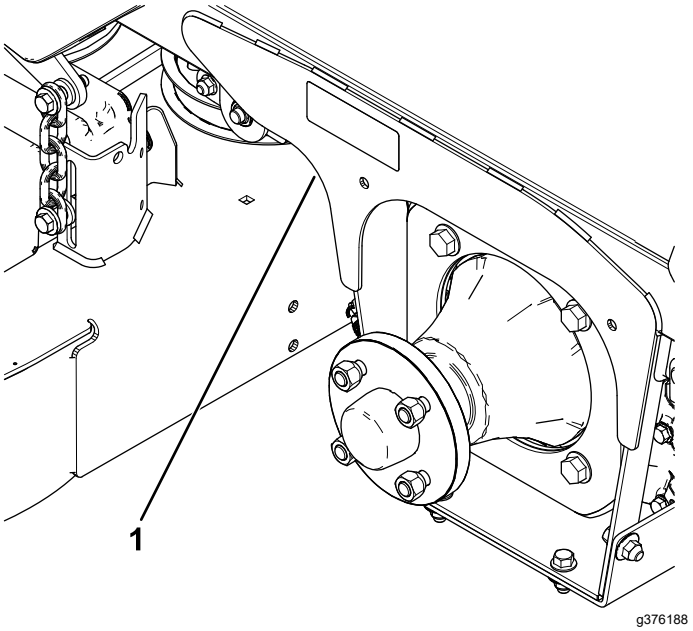


Figure 4
Left side shown

1. Reinforcement plate

1

Preparing the Machine

No Parts Required

Procedure

1. Park the machine on a level surface.
2. Move the motion-control levers to the NEUTRAL-LOCK position.
3. Engage the parking brake.
4. Shut off the engine and remove the key.

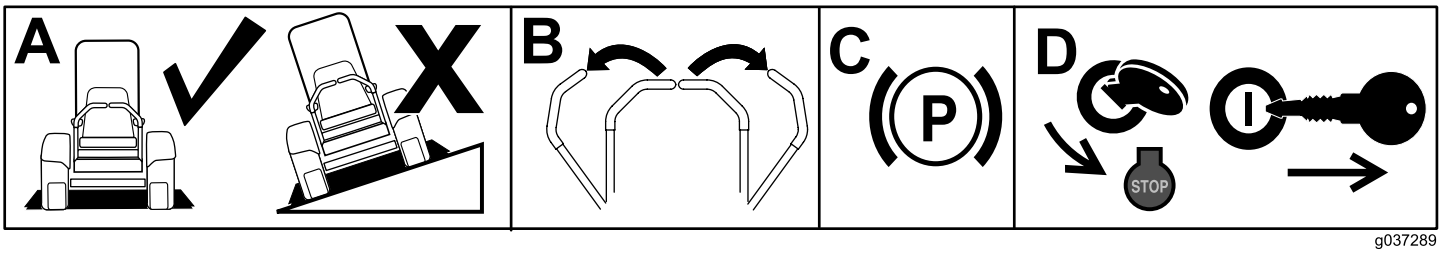


Figure 5

2

Installing the ROPS Pivot Shoulder Bolts

Parts needed for this procedure:

2	Shoulder bolt
2	Wave washer
2	Locknut (1/2 inch)

Procedure

1. Secure the shoulder bolt to the roll bar using a wave washer and locknut (1/2 inch) as shown in Figure 6.
2. Repeat this procedure on the other side.

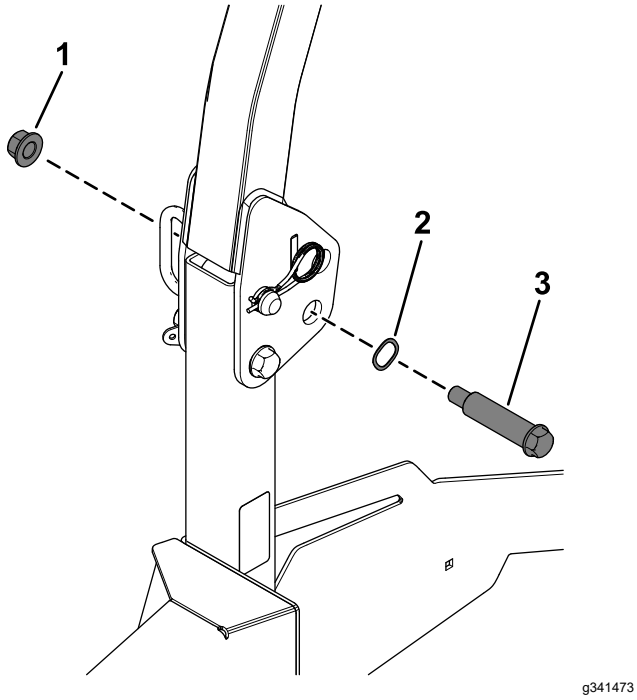


Figure 6

1. Locknut (1/2 inch)
2. Wave washer
3. Shoulder bolt

3

Installing the Weights

Parts needed for this procedure:

2	12.5 lb weight plate (60-inch machines only)
4	Carriage bolt (3/8 x 2-1/2 inches)—60-inch machines only
4	Hex-socket flange nut (3/8 inch)—60-inch machines only
2	Caster weight
8	Carriage bolt (3/8 x 1 inch)
8	Flange nut (3/8 inch)
1	Weight bracket assembly
2	Suitcase weight
2	Locknut (3/8 inch)
2	Carriage bolt (3/8 x 5 inches)

60-inch Machines

1. Remove the existing 2 carriage bolts and 2 nuts from the top of the caster weight (Figure 7).

   Discard the 2 carriage bolts and 2 nuts.

2. Secure the 12.5 lb weight plate to the caster weight and bracket using the 2 carriage bolts (3/8 x 2-1/2 inches) and 2 hex-socket flange nuts (3/8 inch) as shown in Figure 7.

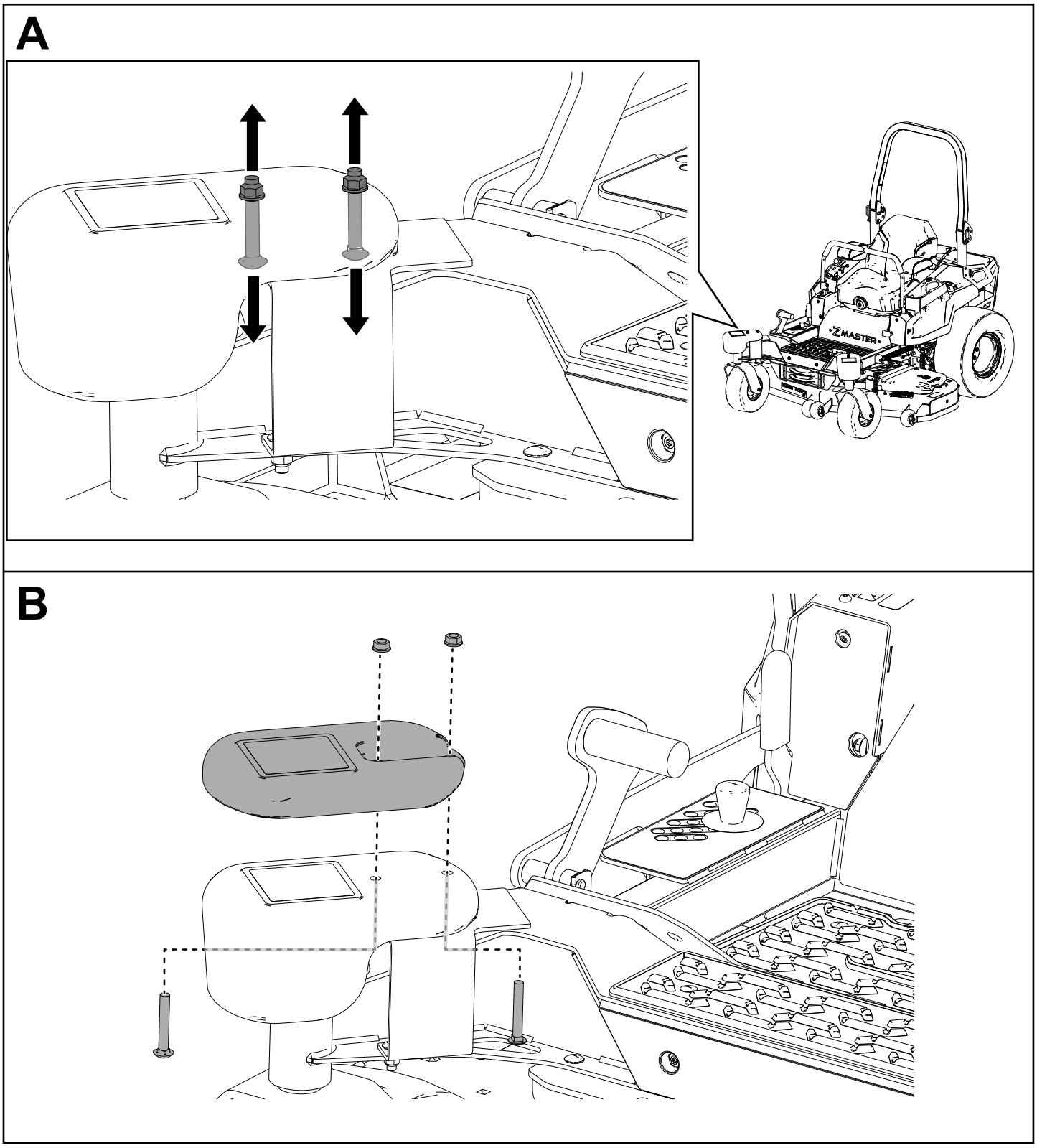
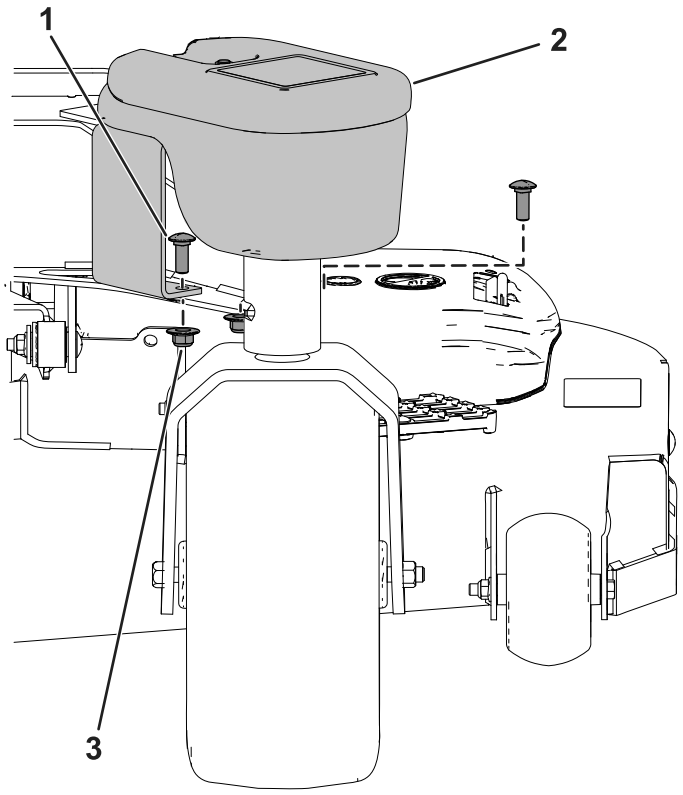


Figure 7

3. Secure the assembled caster weight to the caster arm using 2 carriage bolts (3/8 x 1 inch) and 2 flange nuts (3/8 inch) as shown in Figure 8.

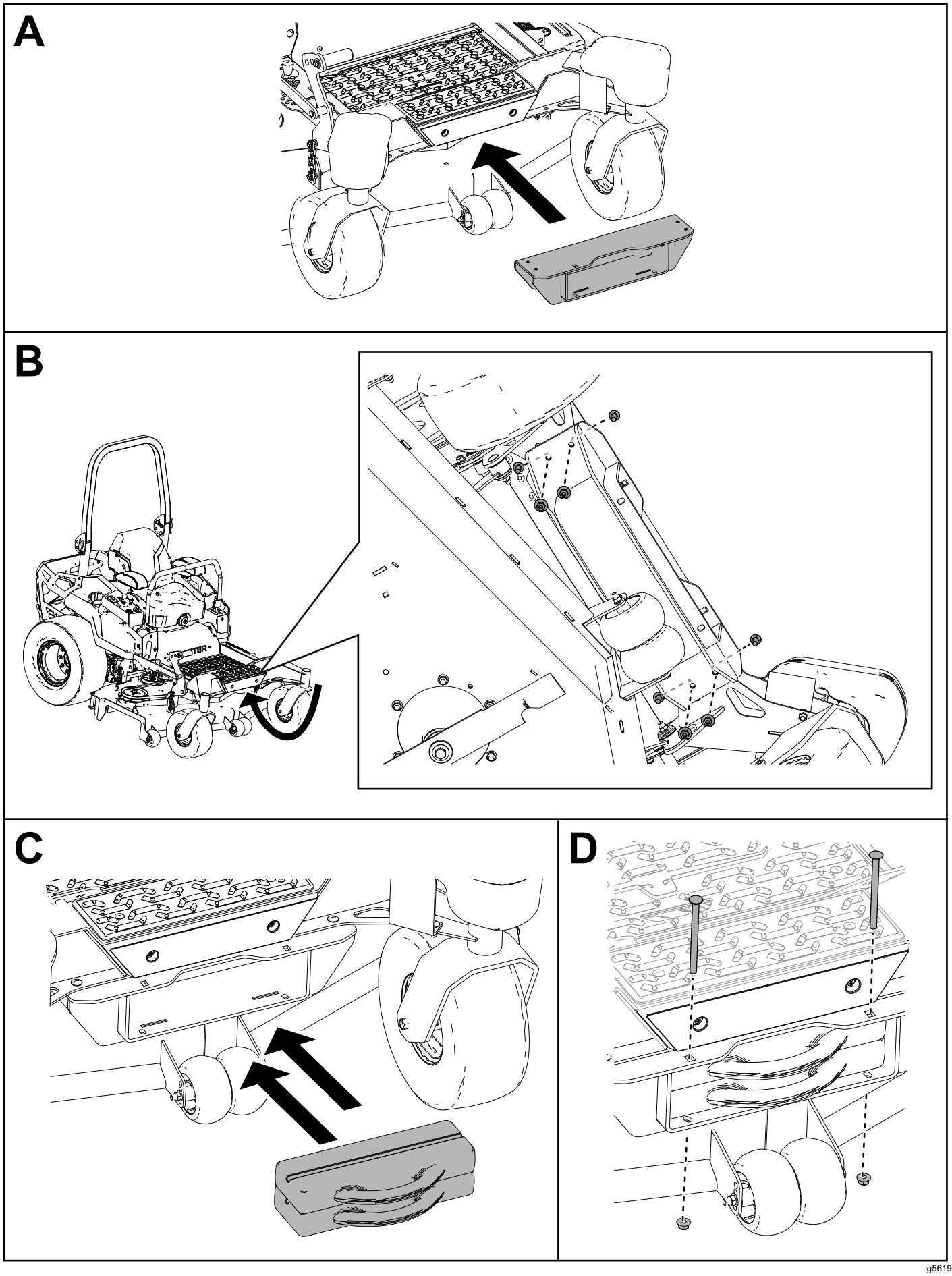


g375807

Figure 8

1. Carriage bolt (3/8 x 1 inch)
2. Weight
3. Flange nut (3/8 inch)

4. Repeat steps 1 through 3 on the other side.
5. Secure the weight bracket assembly to the frame using 4 carriage bolts (3/8 x 1 inch) and 4 flange nuts (3/8 inch) as shown in Figure 9.
6. Insert the 2 suitcase weights into the weight bracket assembly and secure them using 2 carriage bolts (3/8 x 5 inches) and 2 locknuts (3/8 inch) as shown in Figure 9.



g561956

Figure 9

72-inch Machines

1. Secure the weight to the caster arm using 2 carriage bolts (3/8 x 1 inch) and 2 flange nuts (3/8 inch) as shown in Figure 10.
2. Repeat this procedure on the other side.

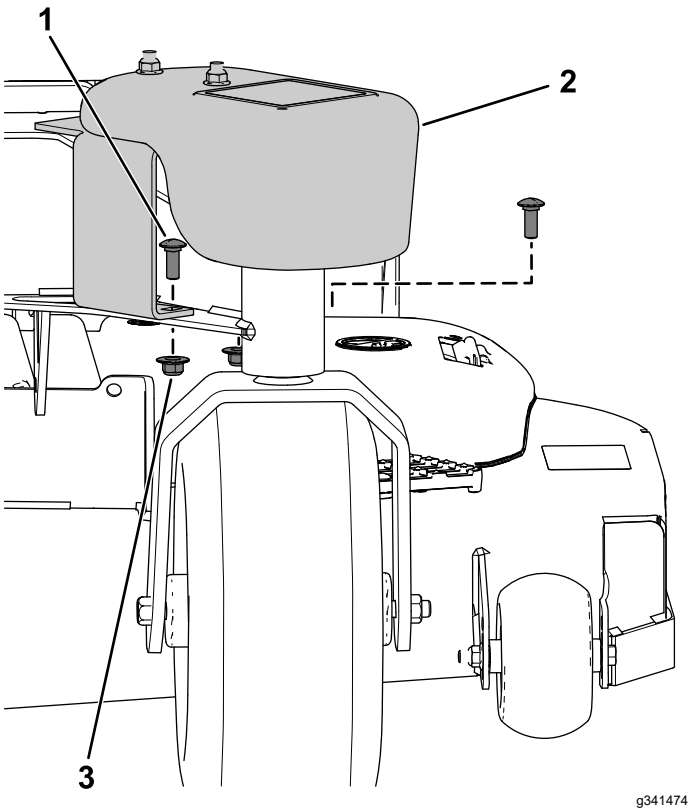


Figure 10

1. Carriage bolt (3/8 x 1 inch)
2. Weight
3. Flange nut (3/8 inch)

3. Secure the weight bracket assembly to the frame using 4 carriage bolts (3/8 x 1 inch) and 4 flange nuts (3/8 inch) as shown in Figure 9.
4. Insert the 2 suitcase weights into the weight bracket assembly and secure them using 2 carriage bolts (3/8 x 5 inches) and 2 locknuts (3/8 inch) as shown in Figure 9.

4

Installing the Bagger Supports and Brackets

Parts needed for this procedure:

1	Upper bagger support
1	Support plate
1	Pivot mount
1	Left upper bracket
1	Right upper bracket
4	Hex-head bolt (5/16 x 3-1/4 inches)
4	Washer
2	Flange-head bolt (5/16 x 1-1/4 inches)
2	Hex-head bolt (3/8 x 1-1/4 inches)
2	Locknut (3/8 inch)
6	Locknut (5/16 inch)

Procedure

1. Secure the upper bagger support and support plate to the center, rear guard using 2 flange-head bolts (5/16 x 1-1/4 inches) and 2 locknuts (5/16 inch) as shown in Figure 11.

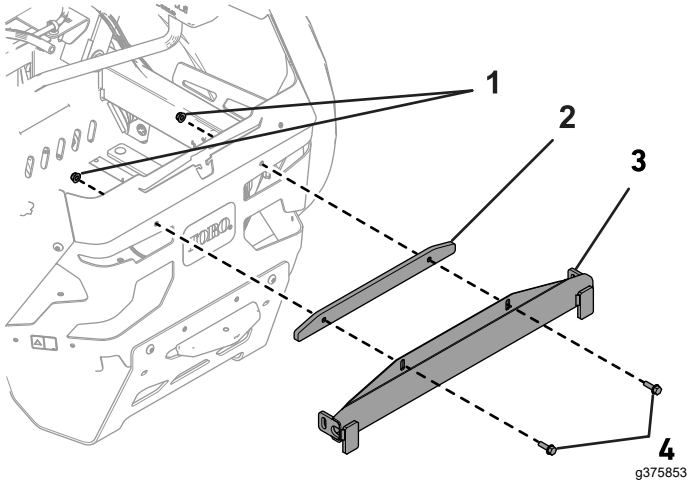


Figure 11

1. Locknut (5/16 inch)
2. Support plate
3. Upper bagger support
4. Flange-head bolt (5/16 x 1-1/4 inches)

2. Remove the 2 torx-head bolts and 2 nuts from the left, rear guard (Figure 12).

   Note: Perform the step above on 1 side of the machine, then the other.

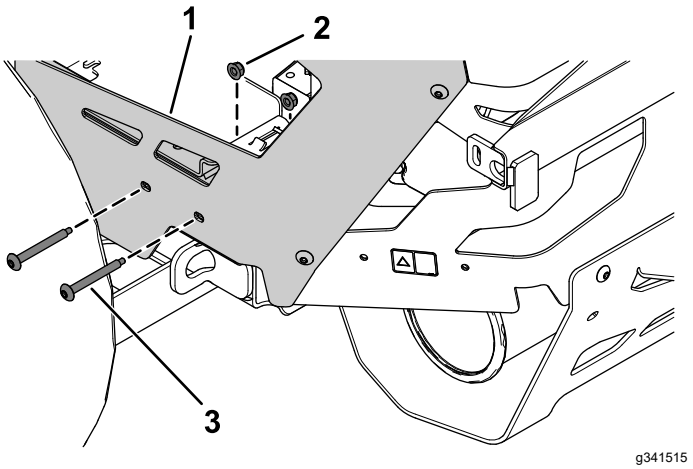
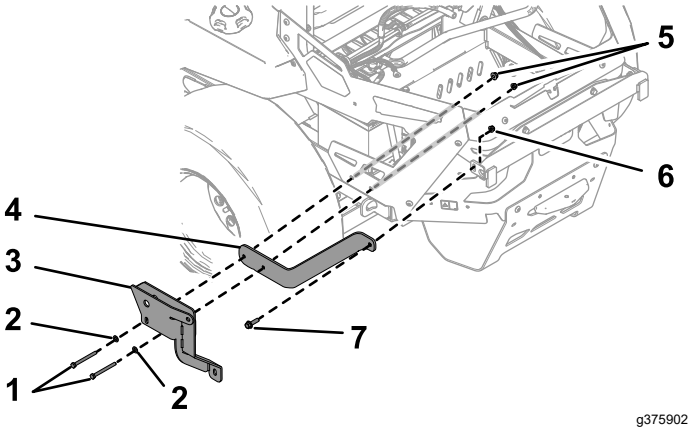


Figure 12

1. Left, rear guard
2. Nut
3. Torx-head bolt

3. Secure the pivot mount and left upper bracket to the left, rear guard and bagger support using 2 hex-head bolts (5/16 x 3-1/4 inches), 2 washers, 2 locknuts (5/16 inch), 1 hex-head bolt (3/8 x 1-1/4 inches), and 1 locknut (3/8 inch) as shown in Figure 13.



g375902

Figure 13

Left side shown

1. Hex-head bolt (5/16 x 3-1/4 inches)
2. Washer
3. Pivot mount
4. Left upper bracket
5. Locknut (5/16 inch)
6. Locknut (3/8 inch)
7. Hex-head bolt (3/8 x 1-1/4 inches)

4. Secure the right upper bracket to the right, rear guard and bagger support using 2 hex-head bolts (5/16 x 3-1/4 inches), 2 washers, 2 locknuts (5/16 inch), 1 hex-head bolt (3/8 x 1-1/4 inches), and 1 locknut (3/8 inch) as shown in Figure 13.

5

Installing the Hopper Assembly

Parts needed for this procedure:

1	Left lower support
1	Right lower support
2	Backer plate
4	Locknut (5/16 inch)
4	Carriage bolt (5/16 x 2-1/4 inches)
1	Locknut (3/8 inch)
1	Carriage bolt (3/8 x 7/8 inch)
1	Hopper assembly
2	Pin and hairpin cotter assembly

Procedure

1. Secure the left lower support to the machine frame and pivot mount using 2 carriage bolts (5/16 x 2-1/4 inches), 1 backer plate, 2 locknuts (5/16 inch), 1 carriage bolt (3/8 x 7/8 inch), and 1 locknut (3/8 inch) as shown in Figure 14.
2. Secure the right lower support to the machine frame using 2 carriage bolts (5/16 x 2-1/4 inches), 1 backer plater, and 2 locknuts (5/16 inch) as shown in Figure 14.

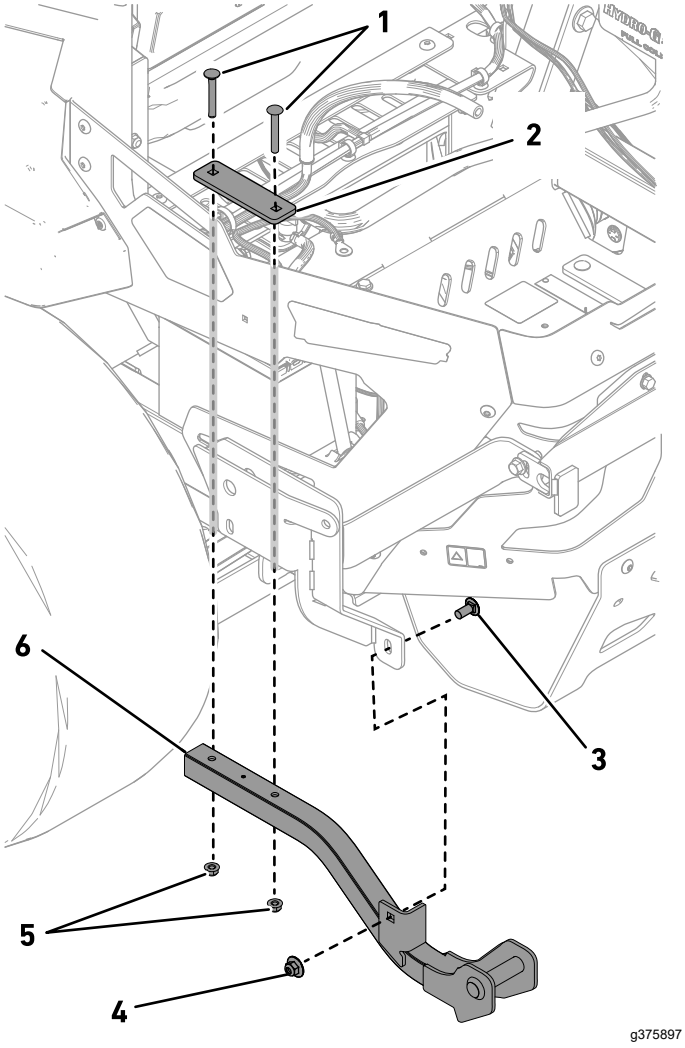


Figure 14

Left side shown

1. Carriage bolt (5/16 x 2-1/4 inches)
2. Backer plate
3. Carriage bolt (3/8 x 7/8 inch)
4. Locknut (3/8 inch)
5. Locknut (5/16 inch)
6. Left lower support

3. Position the hopper assembly on its back.
4. Slide the hooks onto the lower mounting bracket (Figure 15).
5. Rotate the hopper assembly onto the lower hopper mounting bracket (Figure 15).
6. Align the hole in the hopper with the upper mounting bracket.
7. Install the pin and secure it using the hairpin cotter on both sides (Figure 15).

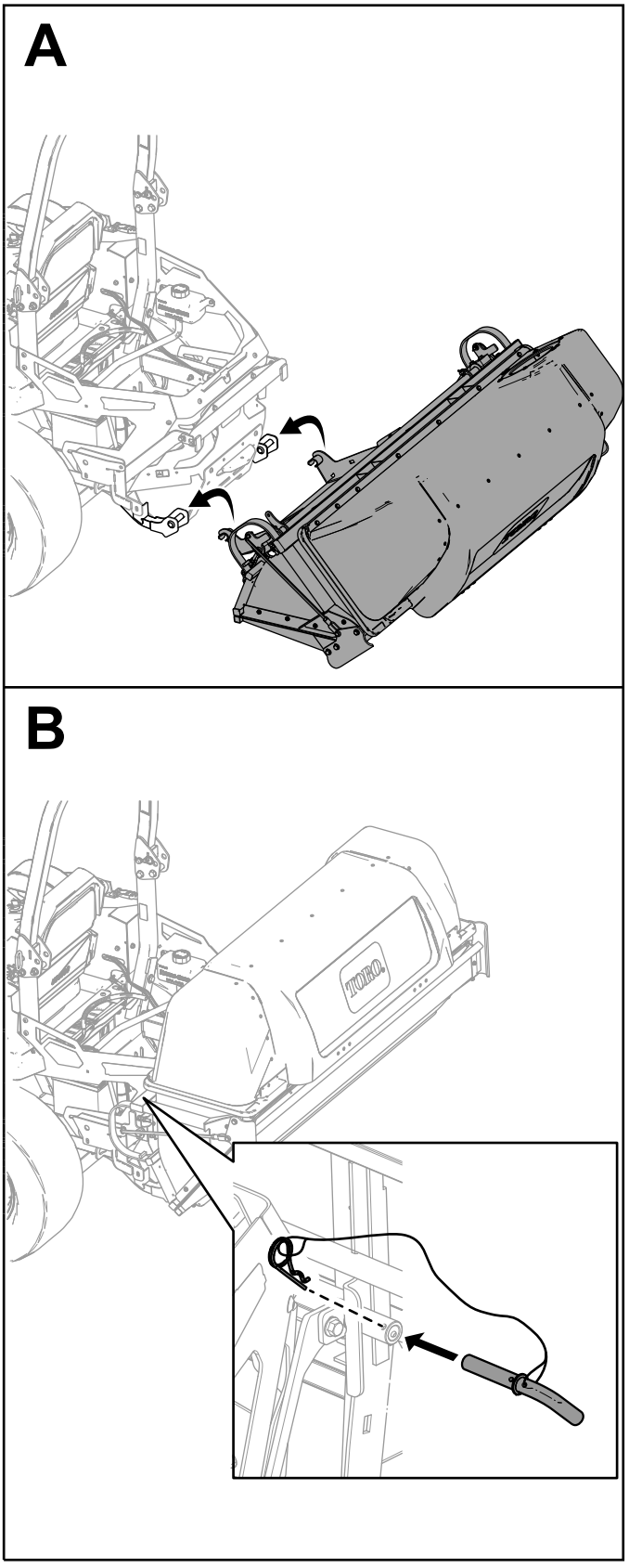


Figure 15

6

Installing the Handle Assembly

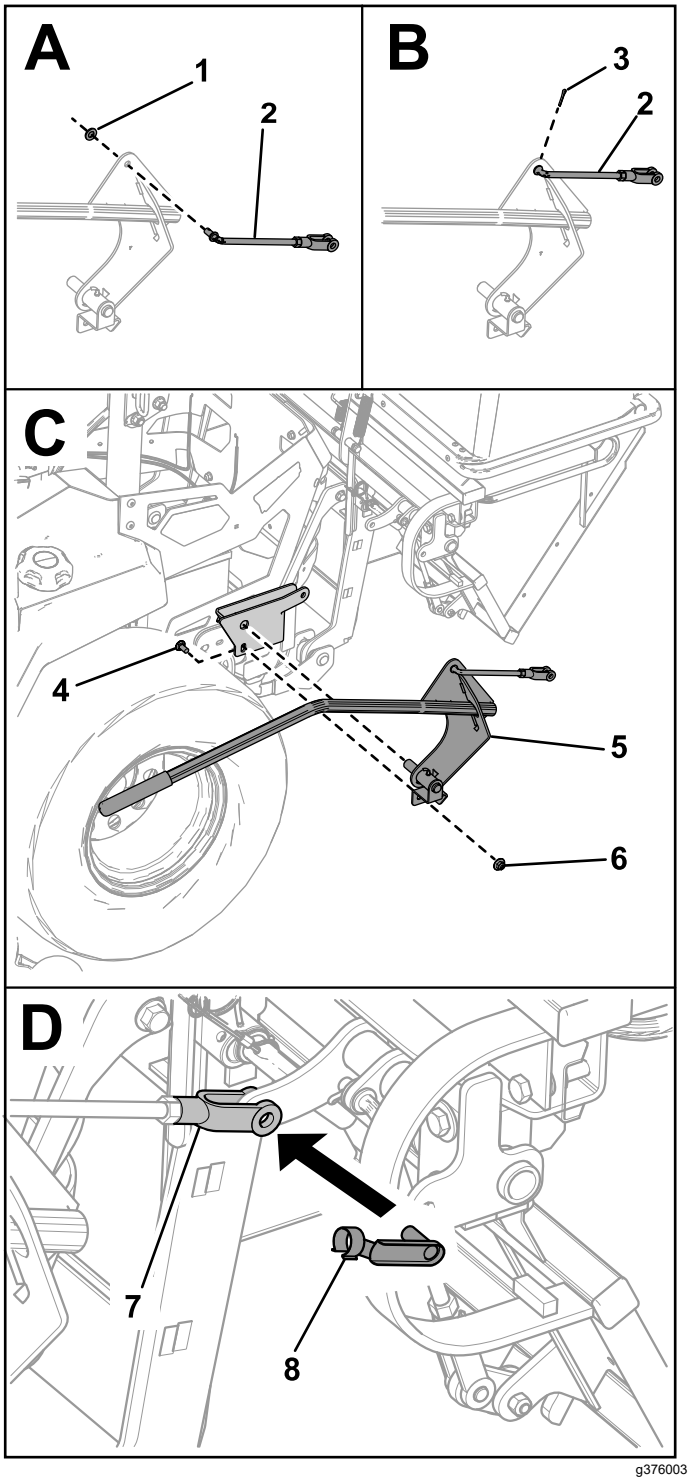
Parts needed for this procedure:

1	Handle assembly
1	Clevis-pin spring
1	Linkage
1	Washer
1	Cotter pin
1	Carriage bolt (3/8 x 7/8 inch)
1	Locknut (3/8 inch)

Procedure

1. Insert the linkage into the handle assembly and install the washer (Figure 16).
2. Secure the linkage to the handle assembly using the cotter pin (Figure 16).
3. Secure the handle assembly to the pivot mount using the carriage bolt (3/8 x 7/8 inch) and locknut (3/8 inch) as shown in Figure 16.
4. Rotate the hopper-handle linkage up to the hopper assembly and secure it using the clevis-pin spring (Figure 16).

   Note: Loosen and rotate the yoke if needed to align it with the hopper assembly.



g376003

Figure 16

1. Washer
2. Linkage
3. Cotter pin
4. Carriage bolt (3/8 x 7/8 inch)
5. Handle assembly
6. Locknut (3/8 inch)
7. Yoke
8. Clevis-pin spring

7

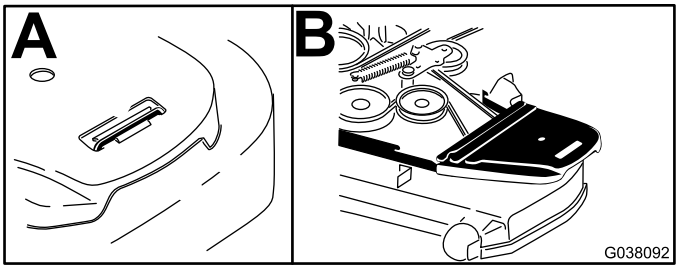
Removing the Existing Belt Cover, Bracket, and Discharge Chute

No Parts Required

Procedure

Note: Clean the area around the belt cover before removing it.

1. Lower the mower deck to the lowest height-of-cut position.
2. Remove the right belt cover (Figure 17).

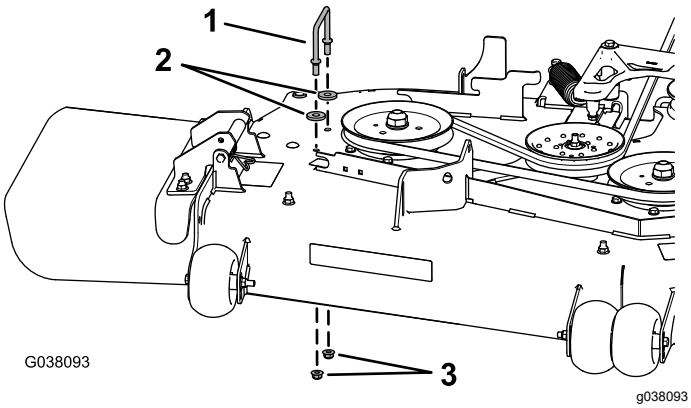


g038092

Figure 17

3. Remove the right belt-cover bracket, 2 washers, and 2 flange nuts from the mower deck (Figure 18).

   Note: Retain the hardware that you removed during this procedure so that it is available for changeover.

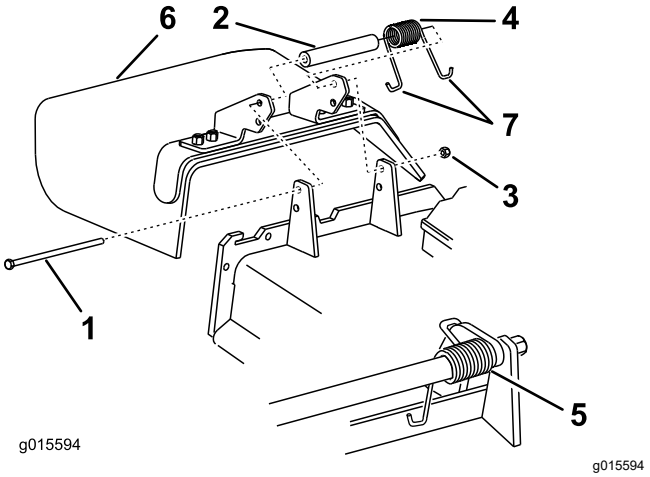


g038093

Figure 18

1. Right belt-cover bracket
2. Washers
3. Flange nuts

4. Remove the locknut, bolt, spring, and spacer holding the deflector to the pivot brackets (Figure 19).



g015594

Figure 19

1. Bolt
2. Spacer
3. Locknut
4. Spring
5. Spring installed
6. Grass deflector
7. J-hook end of spring

5. Remove the grass deflector (Figure 19).

   Note: Retain the hardware that you removed during this procedure so that it is available for changeover.

8

Installing the Blower-Pulley Assembly and Belt-Cover Bracket

Parts needed for this procedure:

1	Blower pulley
1	Pulley mount
3	Locknut (3/8 inch)
1	Belt-cover bracket
1	Speed nut
2	Carriage bolt (1/4 x 3/4 inch)
2	Locknut (1/4 inch)

Procedure

1. Use a 3/8-inch ratchet in the square hole in the idler arm to remove tension on the idler spring (Figure 20).

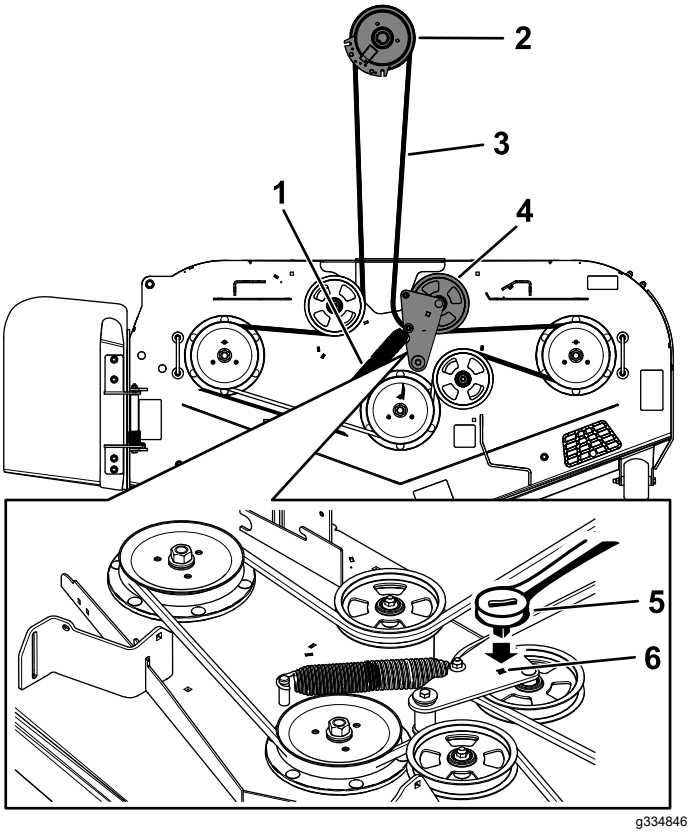


Figure 20

1. Spring
2. Clutch pulley
3. Mower belt
4. Spring-loaded idler assembly
5. Ratchet
6. Square hole in the idler arm for the ratchet

2. Remove the belt from the right mower-deck pulley.

3. Use a wrench (1-1/2 inches) to hold the spindle shaft, as you remove the hex nut (3/4 inch) and washer from the spindle shaft (Figure 21).

   Note: Retain the hex nut (3/4 inch) and washer.

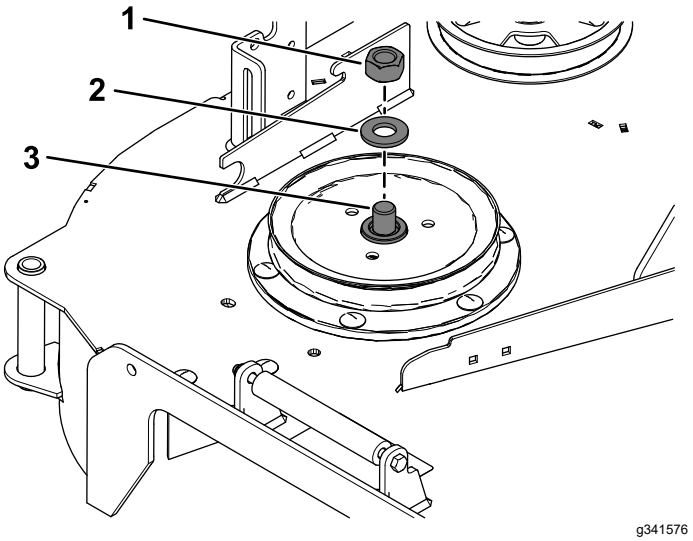


Figure 21

1. Hex nut (3/4 inch)
2. Washer
3. Right spindle shaft

4. Insert the threaded studs on pulley mount through the holes in the deck pulley (Figure 22).
5. Secure the deck pulley to the spindle shaft using the previously removed hex nut (3/4 inch) and washer (Figure 22).
6. Torque the hex nut (3/4 inch) to 176 to 217 N·m (130 to 160 ft-lb).
7. Arrange the blower pulley onto the threaded studs and loosely install the 3 locknuts (3/8 inch) as shown in Figure 22.
8. Rotate the blower pulley until the narrow slots stop on the studs.
9. Torque the 3 locknuts (3/8 inch) to 18 N·m (13 ft-lb).

   Ensure that the pulley does not rotate while torquing the locknuts.

   Note: If the blower pulley is not centered on the studs, it could cause premature damage to the blower belt.

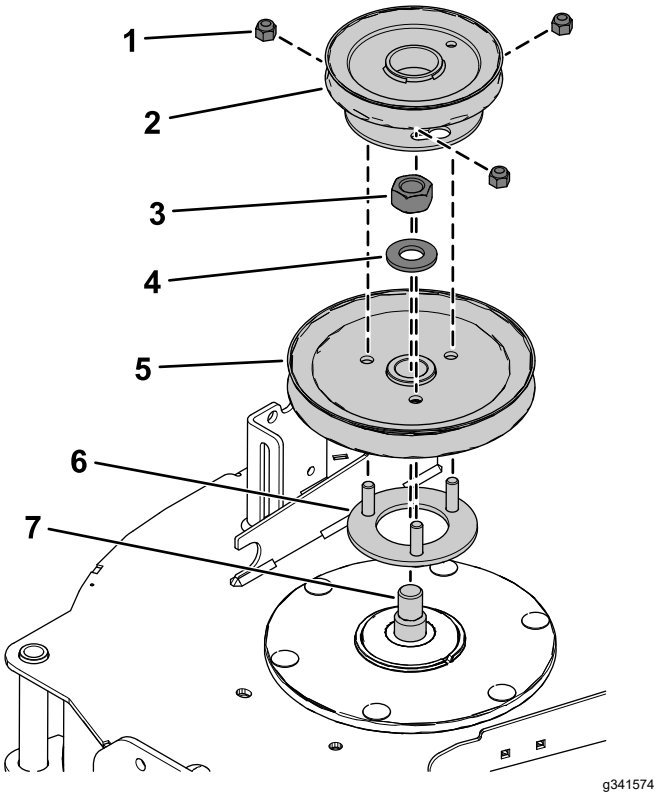


Figure 22

1. Locknut (3/8 inch)
2. Blower pulley
3. Hex nut (3/4 inch)
4. Washer
5. Existing deck pulley
6. Pulley mount
7. Right spindle shaft

10. Ensure that the blade bolt is torqued to 75 to 81 N·m (55 to 60 ft-lb).
11. Install the mower belt around the lower pulley of the double pulley (Figure 23).

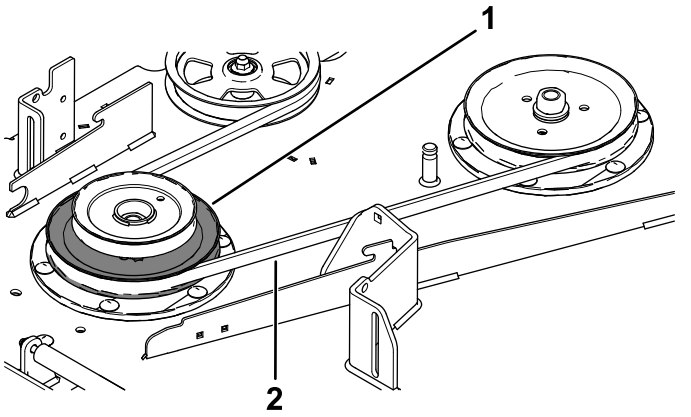


Figure 23

1. Lower pulley
2. Mower belt

12. Install the belt-cover bracket to the mower deck using 2 carriage bolts (1/4 x 3/4 inch) and 2 locknuts (1/4 inch) as shown in Figure 24.
13. Install the speed nut onto the belt-cover bracket (Figure 24).

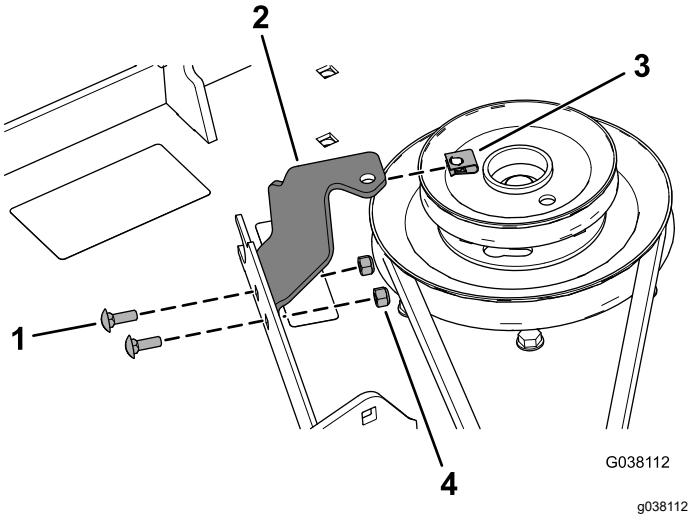


Figure 24

1. Carriage bolt (1/4 x 3/4 inch)
2. Belt-cover bracket
3. Speed nut
4. Locknut (1/4 inch)

14. Install the mower deck belt around the spring-loaded idler pulley (Figure 20).

9

Installing the Baffle

For Z Master 4000 Machines Serial Numbers 418025477 and Before Only

Parts needed for this procedure:

1	Baffle
1	Carriage bolt (5/16 x 7/8 inch)
1	Flange nut (5/16 inch)
2	Carriage bolt (3/8 x 7/8 inch)
2	Flange nut (3/8 inch)

Procedure

1. Remove the 2 existing flange nuts (3/8 inch) and 2 carriage bolts (3/8 x 7/8 inch) from the mower deck (Figure 25).

   Note: Retain the hardware that you removed during this procedure so that it is available for changeover.

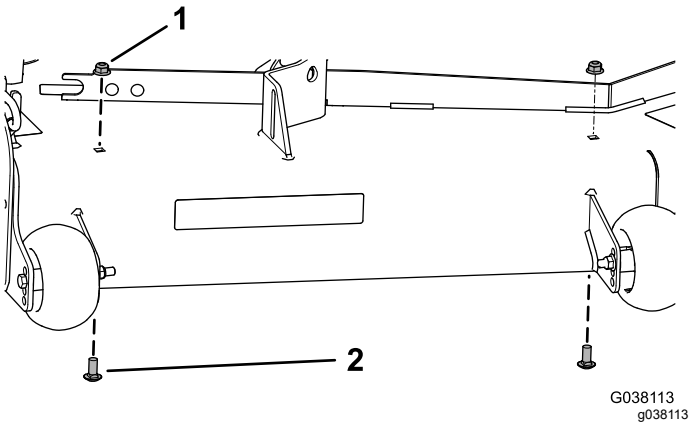


Figure 25

1. Flange nut (3/8 inch)
2. Carriage bolt (3/8 x 7/8 inch)

2. Install the baffle using the carriage bolt (5/16 x 7/8 inch), flange nut (5/16 inch), 2 carriage bolts (3/8 x 7/8 inch), and 2 flange nuts (3/8 inch) as shown in Figure 26 and Figure 27.

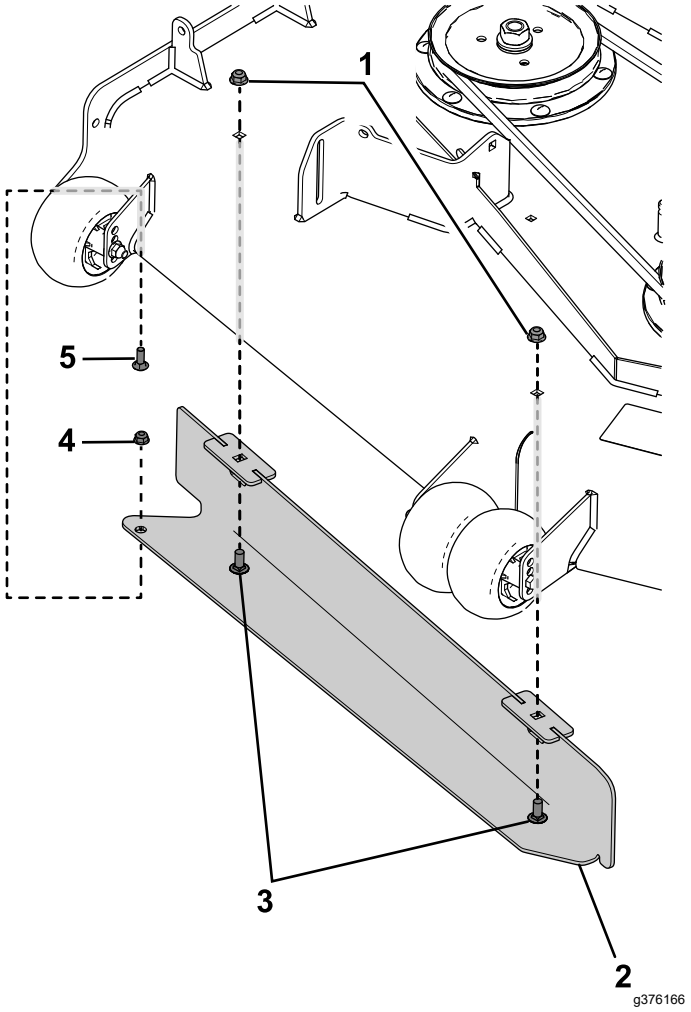


Figure 26

60-inch shown

1. Flange nut (3/8 inch)
2. Baffle
3. Carriage bolt (3/8 x 7/8 inch)
4. Flange nut (5/16 inch)
5. Carriage bolt (5/16 x 7/8 inch)

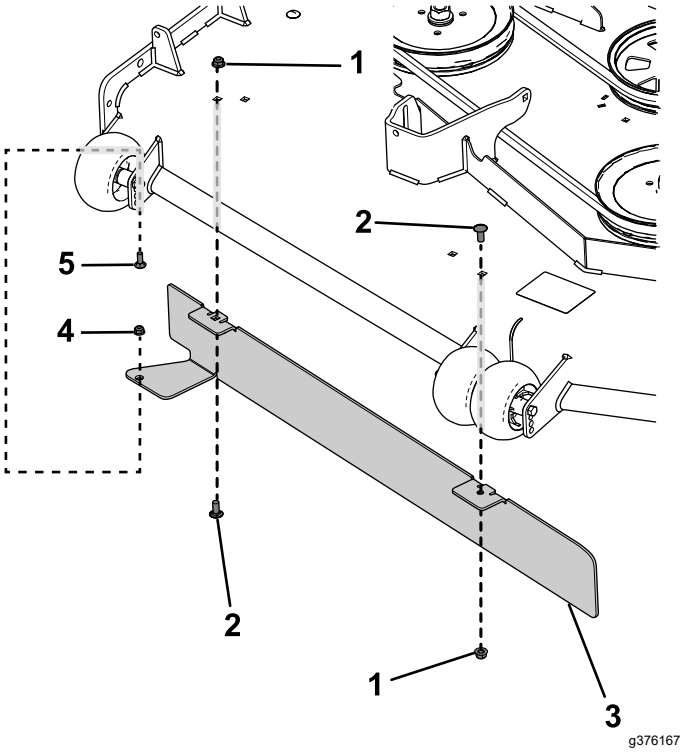


Figure 27

72-inch shown

1. Flange nut (3/8 inch)
2. Baffle
3. Carriage bolt (3/8 x 7/8 inch)
4. Flange nut (5/16 inch)
5. Carriage bolt (5/16 x 7/8 inch)

10

Installing the Blower Assembly

Parts needed for this procedure:

1	Blower assembly
1	Pivot pin
1	Latch
1	Hex-head bolt (3/8 x 1-1/2 inches)
1	Spacer
1	Locknut (3/8 inch)

Procedure

Ensure that the bolts and pivot pin are installed in the correct locations on the blower assembly as shown in Figure 28 and Figure 29.

60-inch:

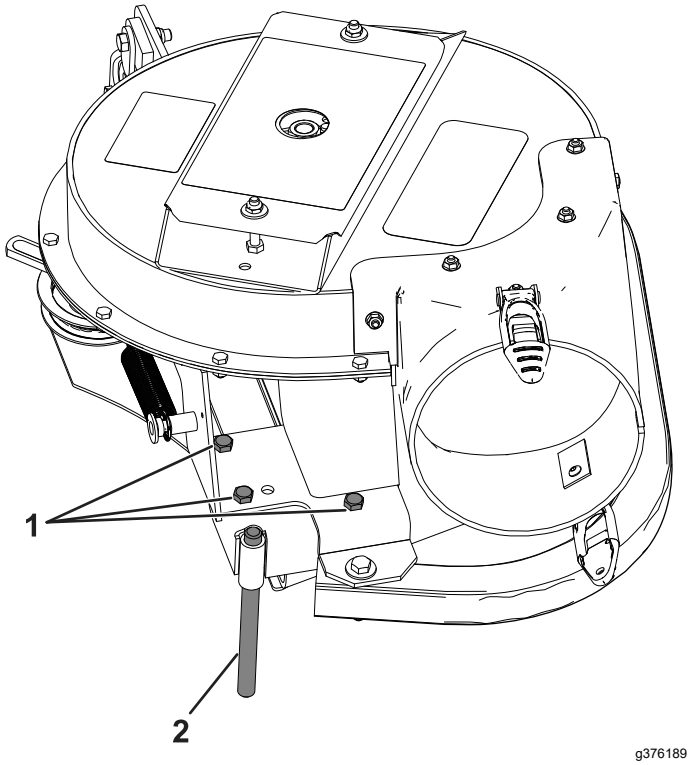


Figure 28

72-inch:

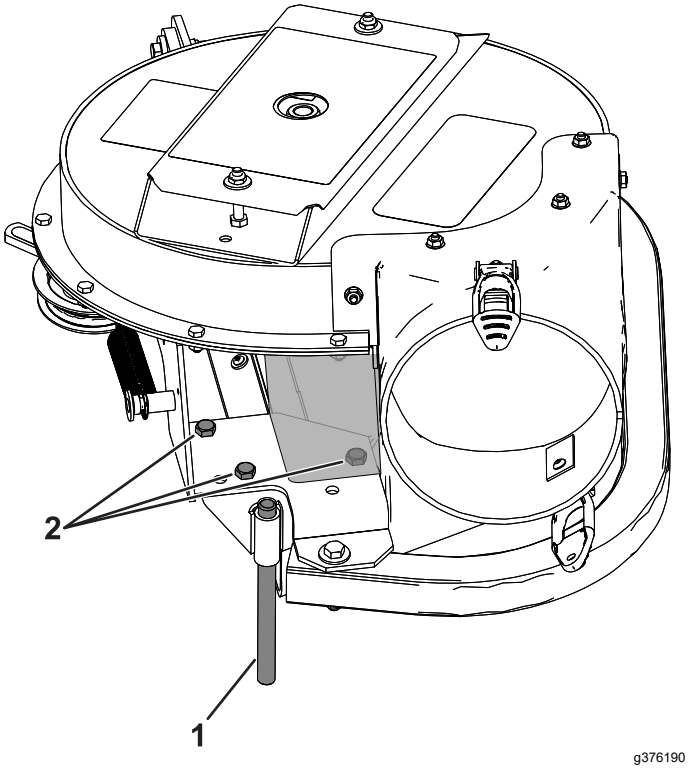
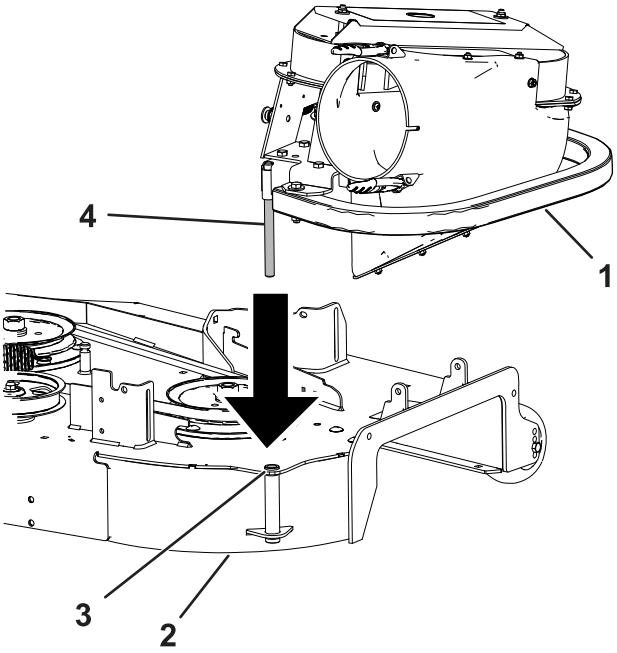


Figure 29

1. Align the pivot pin on the blower with the pivot-pin hole in the mower deck (Figure 30).
2. Lower the blower and slide the pivot pin into the pivot hole (Figure 30).

   Note: Ensure that the belt remains positioned in the blower pulley.

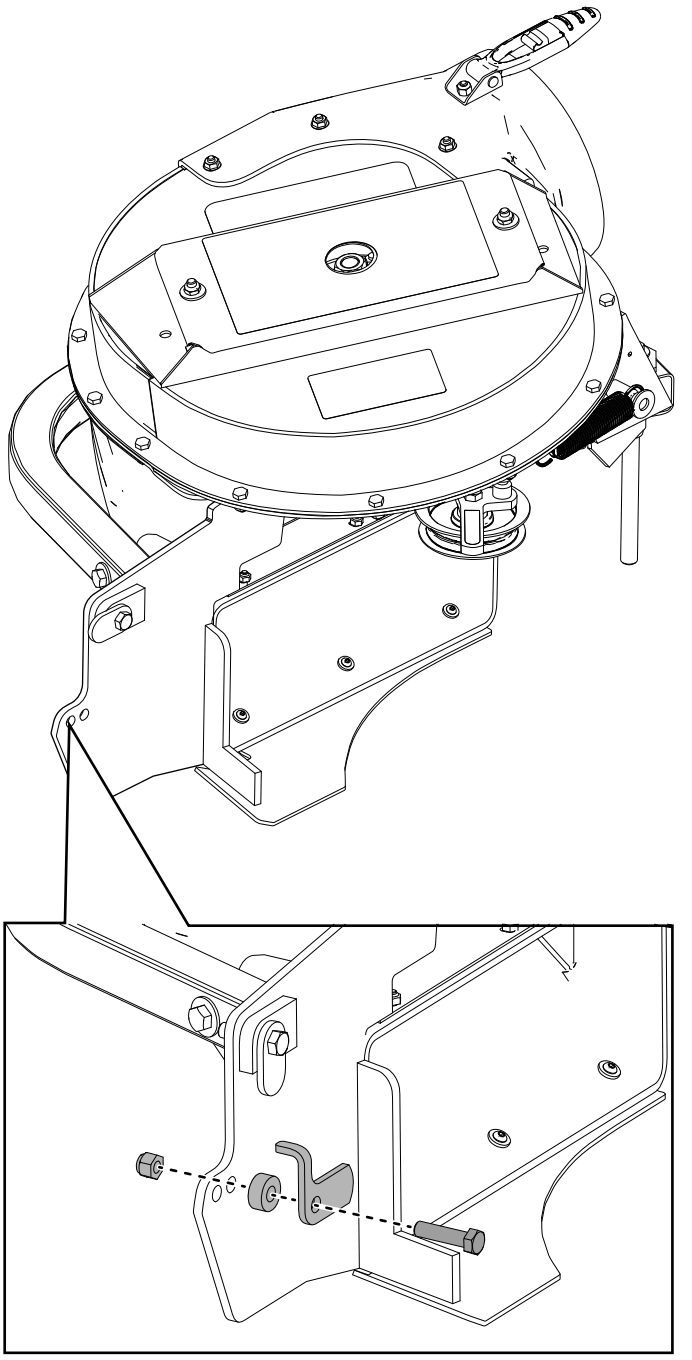


g376058

Figure 30

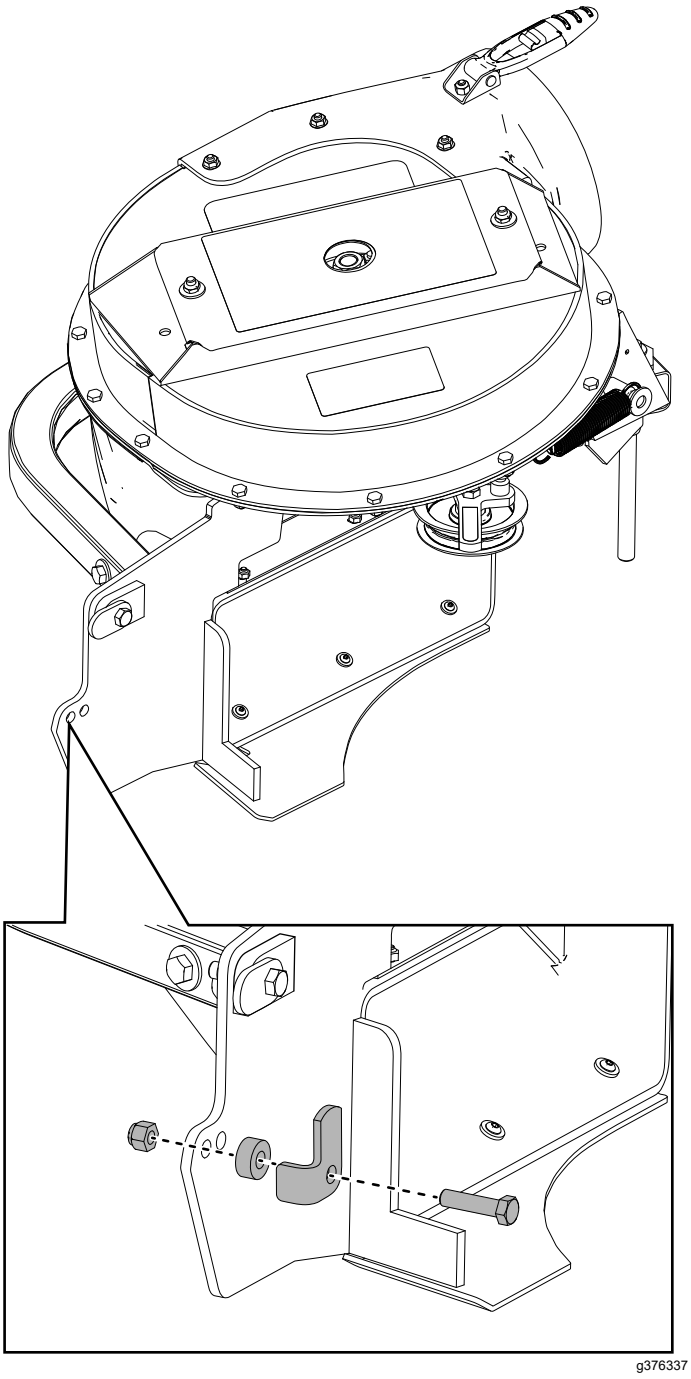
1. Blower assembly
2. Deck
3. Pivot hole
4. Blower-pivot pin

3. Secure the latch to the blower assembly using the hex-head bolt (3/8 x 1-1/2 inches), spacer, and locknut (3/8 inch) as shown in Figure 31 and Figure 32.



g376336

Figure 31
60-inch shown

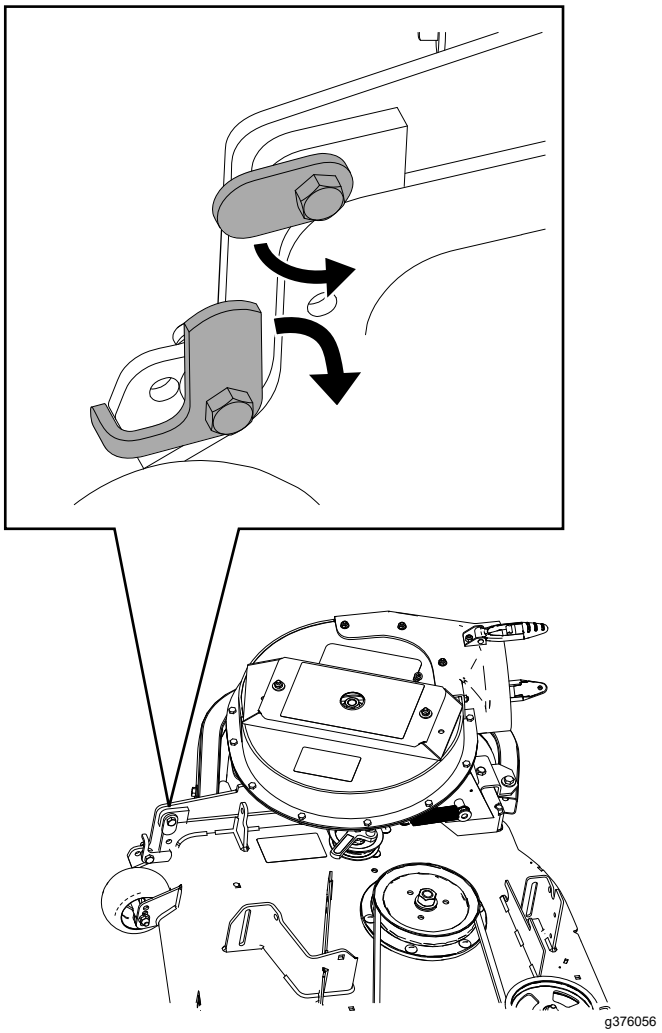


g376337

Figure 32
72-inch shown

4. Close the blower assembly to see if the latches are adjusted correctly (Figure 33 and Figure 34).

   Note: Loosen or tighten the bolt to ensure that the latches firmly hold the blower assembly against the mower deck but can be released by hand.



g376056

Figure 33
60-inch shown

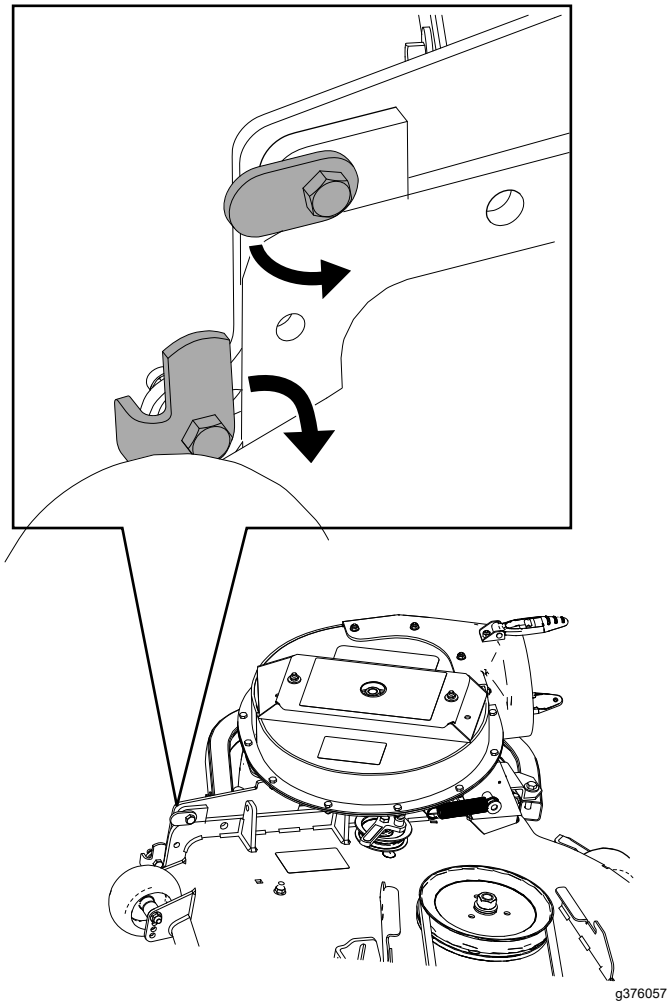


Figure 34
72-inch shown

11

Installing the Blower Belt, Spring, and Blower-Belt Cover

Parts needed for this procedure:

1	Blower-belt cover
1	Cover knob

Procedure

1. Arrange the blower belt around the drive pulley as shown in Figure 35.

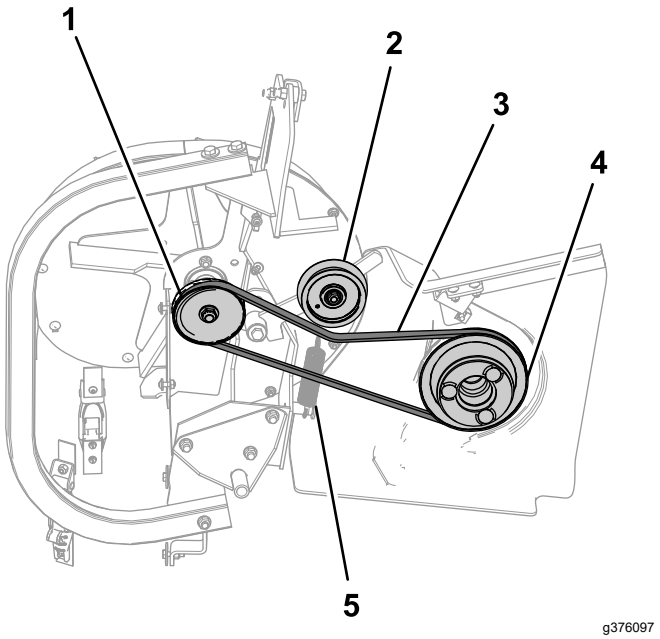


Figure 35

1. Blower pulley
2. Idler pulley
3. Blower belt
4. Drive pulley
5. Spring

2. Temporarily route the belt beneath the drive pulley (Figure 36).
3. Move the idler-pivot bracket toward the fixed spring post and install the spring by aligning the spring hook onto the idler-spring post (Figure 36).

   Note: Ensure that the spring hooks are positioned correctly on the spring posts.
4. Pull the spring-loaded idler pulley away from the fixed spring post, and route the belt around the drive pulley (Figure 36).

Note: Ensure that the belt is correctly routed around the drive pulley.

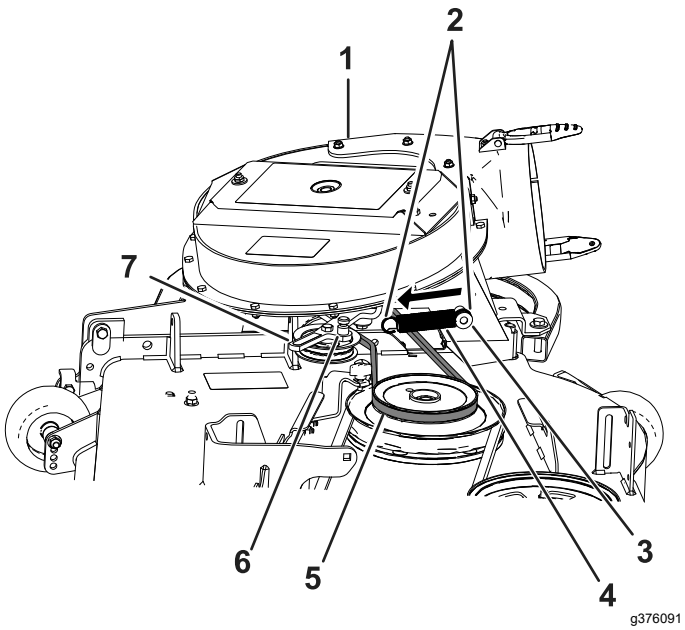


Figure 36

Installing the tension spring and aligning the belt

1. Blower assembly
2. Idler-spring post
3. Fixed spring post
4. Spring
5. Belt routed to the drive pulley
6. Spring (hook end) to post
7. Latch pin (locking position)

5. Install the blower-belt cover over the blower belt and secure the blower-belt cover with the belt knob (Figure 37).

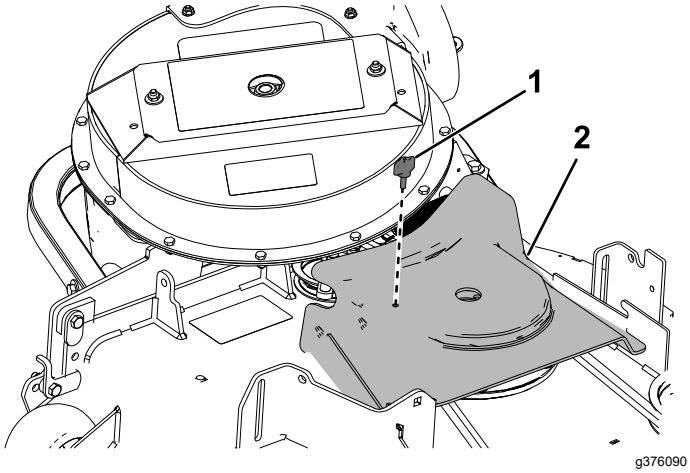


Figure 37

1. Cover knob
2. Blower-belt cover

12

Installing the Discharge Tubes

Parts needed for this procedure:

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

Procedure

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

Note: Remember to replace the grass deflector when the bagger is removed from the mower. Refer to Replacing the Grass Deflector (page 40).

1. Park the machine on a level surface, disengage the blade-control switch, and engage the parking brake.
2. Shut off 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. Install the upper tube into the bagger opening and pull it back out so that the rubber seal is protruding out (Figure 38).

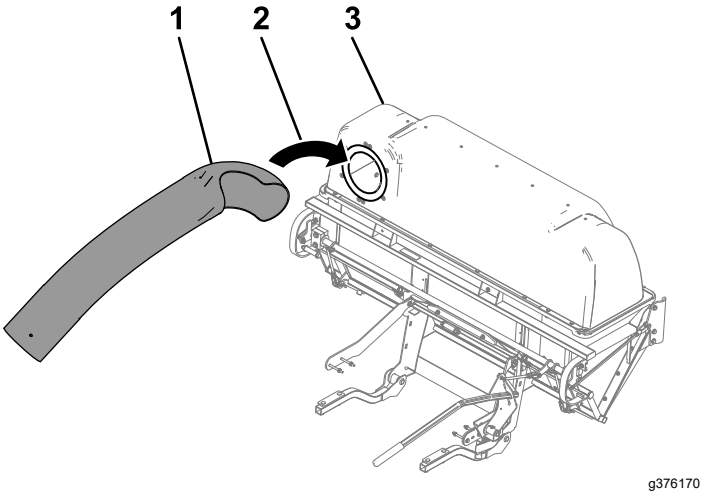


Figure 38

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

5. Measure the distance the tube is inside the hood.

   Note: Measure from the hood plate to the edge of the tube as shown in Figure 39. This distance needs to be 19 mm (3/4 inch).

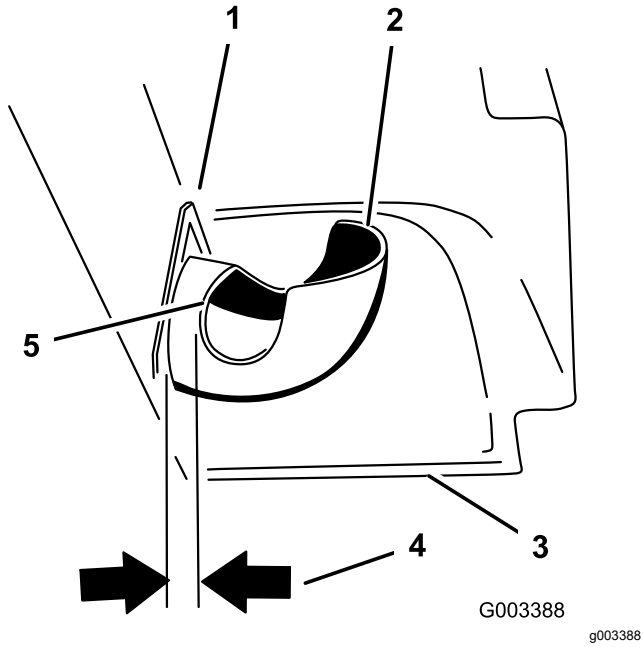


Figure 39

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

6. Once the 19 mm (3/4 inch) measurement has been achieved, mark the upper tube on the outside where the rubber seal protrudes out (Figure 40).

Note: This is marked to ensure the correct position for the upper tube when drilling the holes and connecting the upper and lower tubes.

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

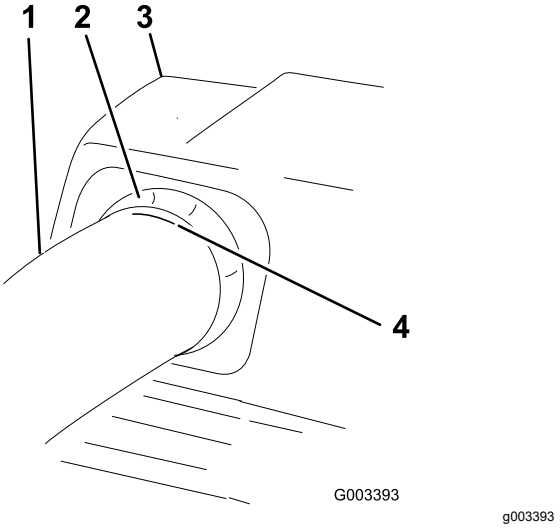


Figure 40

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

7. Install the lower tube into the upper tube (Figure 41).

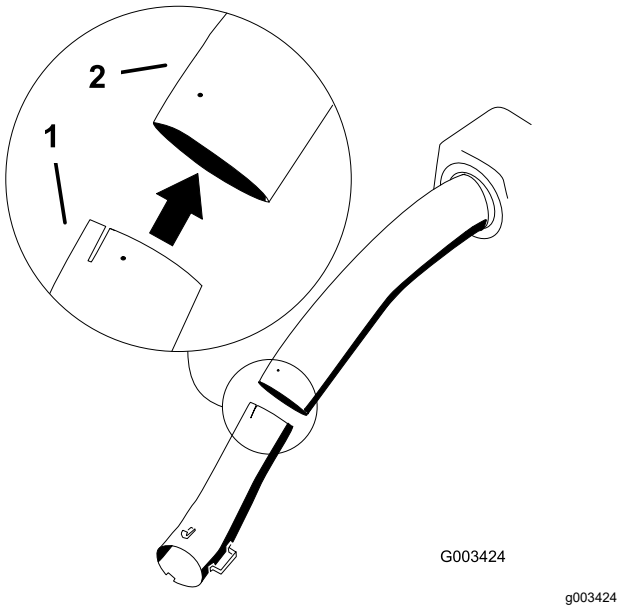


Figure 41

1. Lower tube
2. Upper tube

8. Slide the lower tube onto the boot and latch them together (Figure 42 or Figure 43).

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

   Note: Make sure that the mower deck is in the lowest height-of-cut position and the mark on the upper tube is still positioned against the protruding rubber seal.

   Make sure that the mark from Figure 40 is still in place.

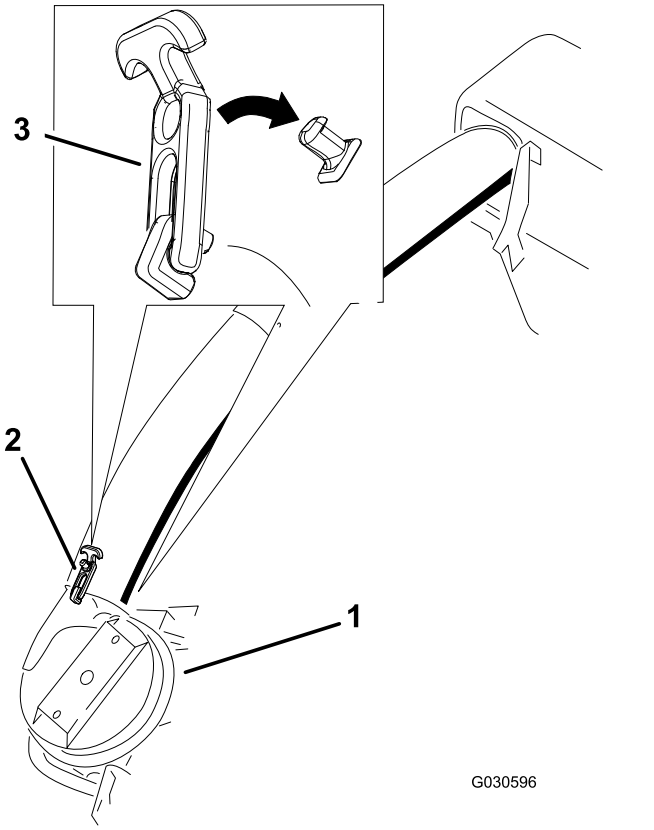


Figure 42

1. Blower assembly
2. Lower tube
3. Latch

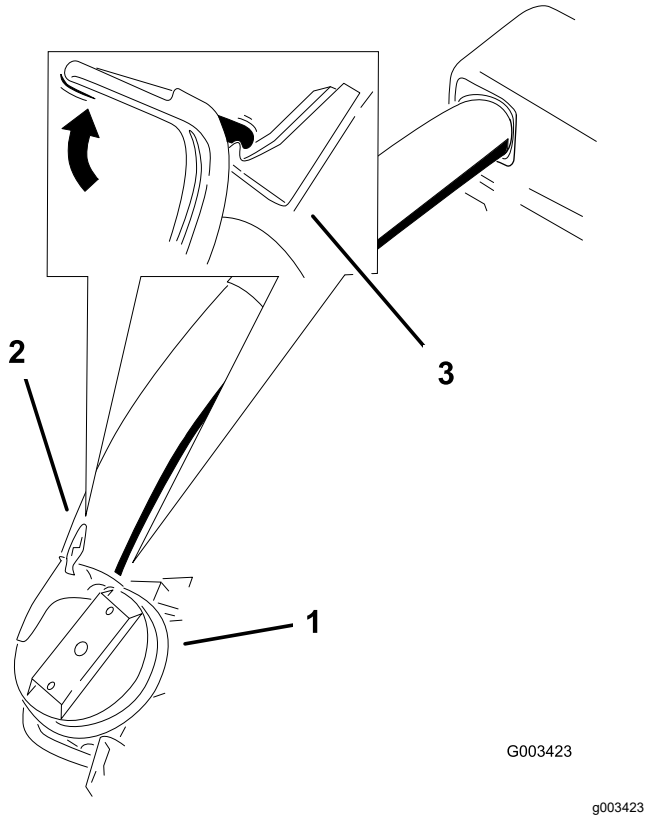


Figure 43

1. Blower assembly
2. Lower tube
3. Latch

9. Using the 3 holes or indentations in the upper tube as a template, drill 3 holes (7/32-inch diameter) where the upper and lower tubes join together (Figure 44).

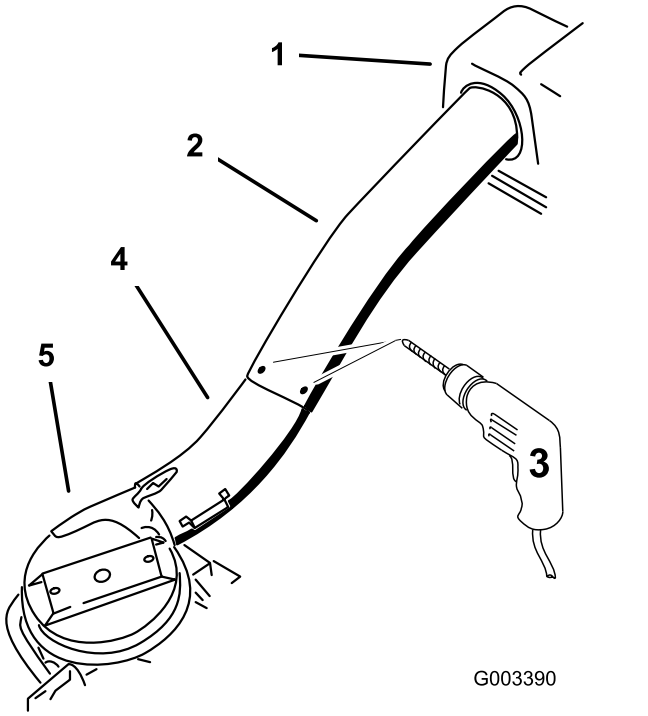


Figure 44

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

10. Remove the lower tube from the blower.

11. Join the upper and lower tubes with 3 bolts (#10 x 3/4 inch), 3 flat washers (7/32 inch), and 3 locknuts (#10) as shown in Figure 45.

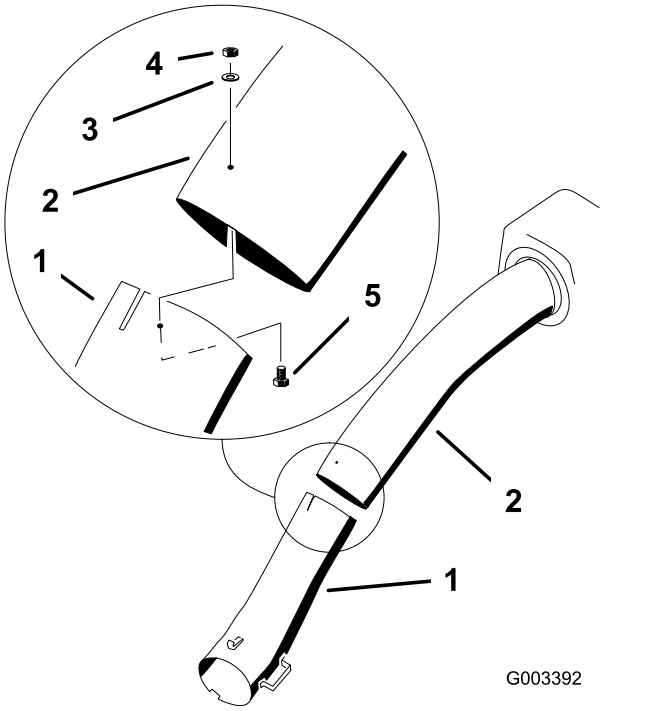


Figure 45

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

12. Install the lower tube onto the blower housing and secure it with the latches.

13

Checking the Tire Pressure

No Parts Required

Procedure

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

Maintain the air pressure in the front and rear tires at 90 kPa (13 psi). Uneven tire pressure can cause uneven cut. Check the tires when they are cold to get the most accurate pressure reading.

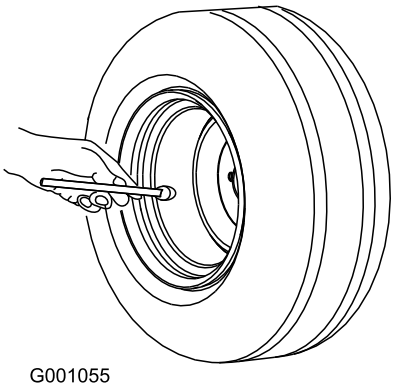


Figure 46

Operation

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

⚠ WARNING

To avoid personal injury, follow these procedures:

- **Become familiar with all operating and safety instructions in the *Operator's Manual* for the mower before using this attachment.**
- **Never remove the discharge tube, bags, bagger top, or the chute while the engine is running.**
- **Shut off the engine 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.**

⚠ WARNING

Without the grass deflector, bagger tubes, or complete collection system 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 you remove the collection system and change 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 the spark plug(s).**
- **Shut off the engine before unclogging the discharge chute.**
- **Never use your hands to unclog the discharge chute, use a stick or similar object.**

⚠ CAUTION

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 engage the parking brake when leaving the machine unattended, even if just for a few minutes.

Emptying the Bagger

1. Park the machine on a level surface, disengage the blade-control switch, and engage the parking brake.
2. Shut off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Lift the handle to open the door and empty the hopper.
4. Push the handle down to close the door (Figure 47).

   Note: If you drive the machine onto a truck or trailer while the hopper is full, always back up the ramp. This will reduce the chance of rearward tip.

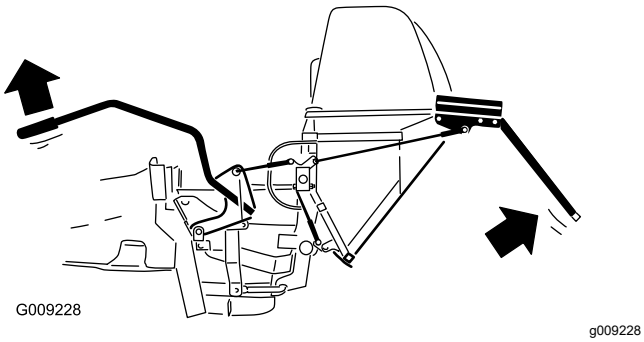


Figure 47

Clearing Obstructions from the Collection System

⚠ WARNING

When you operate the collection system, the blower rotates and can cut off or injure your hands.

- **Before adjusting, cleaning, repairing, and/or inspecting the blower, and before unclogging the chute, shut 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 your face, hands, feet, and any other part of your body or clothing away from concealed, moving, or rotating parts.**

1. Park the machine on a level surface, disengage the blade-control switch, and engage the parking brake.
2. Shut off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Empty the bagger.
4. Unlatch the lower tube.
5. Remove the tubes from the bagger.
6. Use 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 blower assembly, remove the belt, and swing it open.

   Important: **Use a stick or similar object, not your hands, to remove and clear the obstruction from the blower assembly.**
8. After you remove the obstruction, install the complete collection system and resume operation.

Removing the Bagger

⚠ WARNING

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

- **Do not touch the engine components when they are hot.**
- **Allow the engine to cool before removing the bagger.**

1. Park the machine on a level surface, disengage the blade-control switch, and engage the parking brake.
2. Shut 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 blower 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 that the grass deflector is installed and can be lowered into working position.
11. Remove the collection system assembly.

Using the Grass Deflector

⚠ DANGER

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 collection system 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

⚠ DANGER

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 on a trailer or truck.

Maintenance

Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 8 hours	• Inspect the blower belt. • Inspect the collection system.
Before each use or daily	• Clean the hood screen. • Clean the collection system.
Every 25 hours	• Inspect the blower belt.
Every 50 hours	• Grease the idler arm.
Every 100 hours	• Grease the handle pivot. • Inspect the collection system.

Cleaning the Bagger Screen

Service Interval: Before each use or daily

Clean the screen before each use (more often in wet grass).

1. Park the machine on a level surface, disengage the blade-control switch, and engage the parking brake.
2. Shut off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Open the bagger.
4. Clean the debris from the screen.
5. Close the bagger.

Cleaning the Collection System

Service Interval: Before each use or daily

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.

Inspecting the Blower Belt

Service Interval: After the first 8 hours

Every 25 hours

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

Replacing the Blower Belt

1. Disengage the PTO, move the motion-control levers to the NEUTRAL-LOCK position, and engage the parking brake.
2. Shut off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Loosen or remove belt guide (Figure 48).
4. Pull back on the spring-loaded idler pulley to relieve the belt tension (Figure 48).

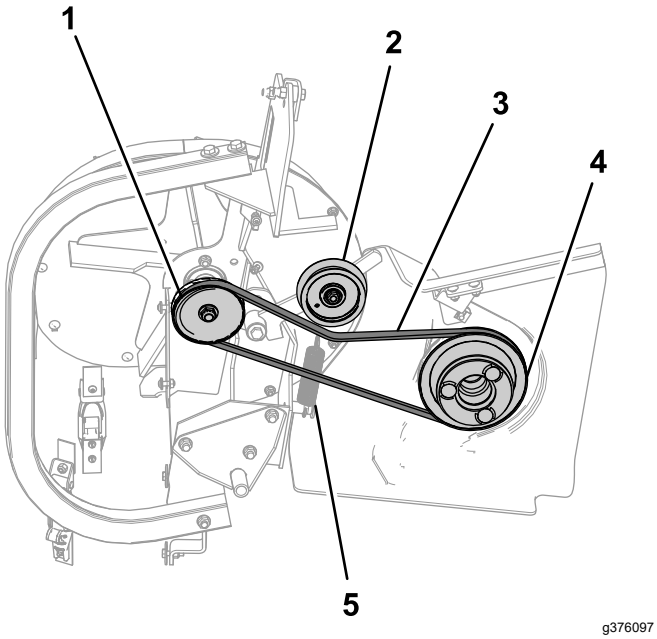


Figure 48

1. Blower pulley
2. Idler pulley
3. Blower belt
4. Drive pulley
5. Spring

5. Remove the existing blower belt.
6. Install the new belt around the blower pulley (Figure 48).
7. Tighten or install the belt guide (Figure 48).
8. Install the spring as shown in Figure 49.

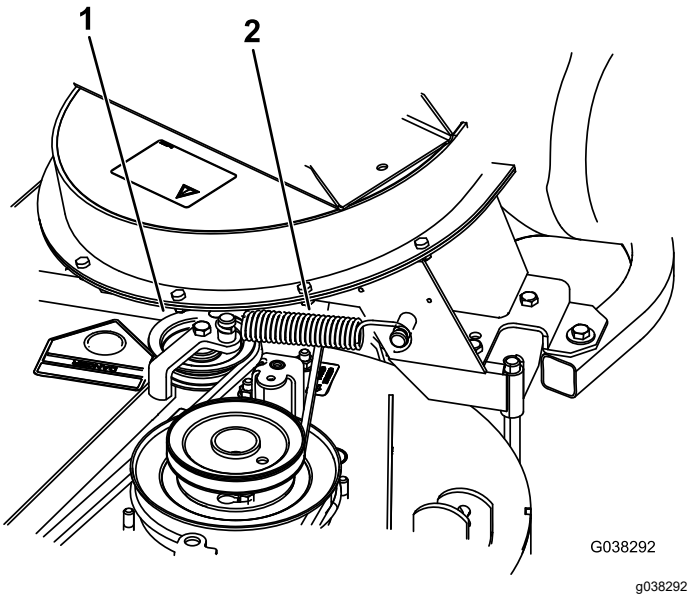


Figure 49

1. Spring-loaded idler pulley
2. Spring

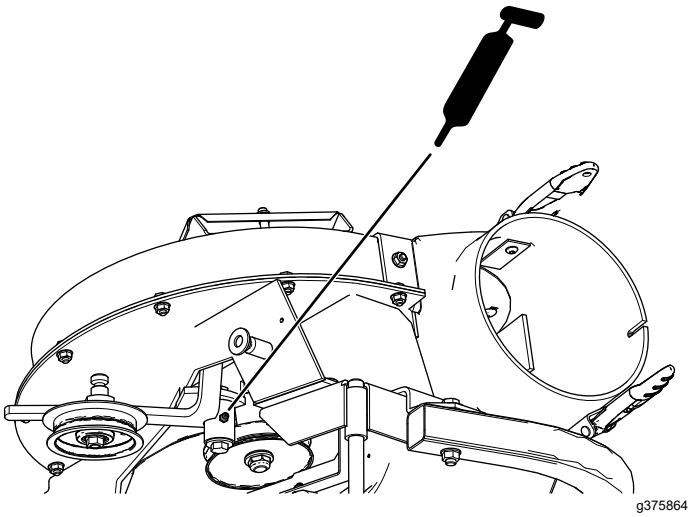
9. Install the belt onto the spring-loaded idler pulley (Figure 49).

Greasing the Idler Arm and Handle Pivot

Service Interval: Every 50 hours—Grease the idler arm.

Every 100 hours—Grease the handle pivot.

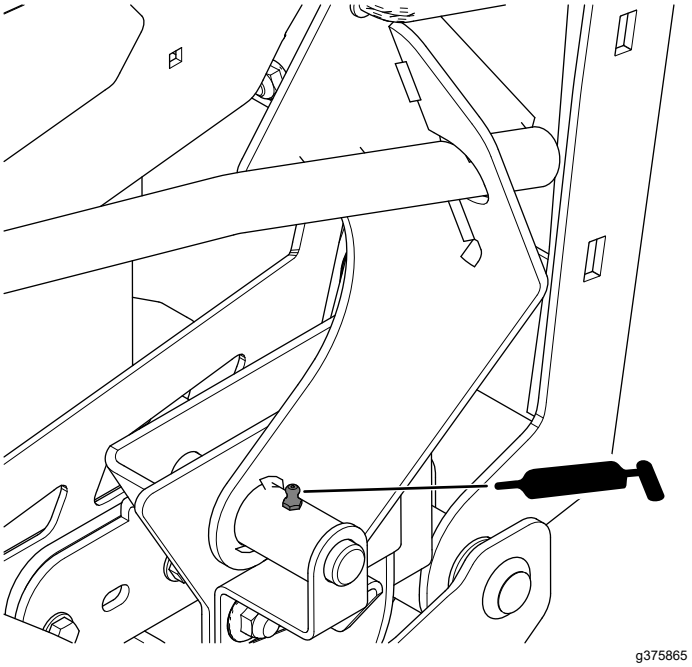
Grease the blower belt idler arm (Figure 50).



g375864

Figure 50

Grease the handle pivot (Figure 51).



g375865

Figure 51

Inspecting the Collection System

Service Interval: After the first 8 hours

Every 100 hours

1. Park the machine on a level surface, disengage the blade-control switch, and engage the parking brake.
2. Shut off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Check the upper tube, lower tube, bagger, and the blower assembly.

   Note: Replace these parts if they are cracked or broken.
4. Check the bagger frame.

   Note: Replace any parts that are cracked or broken.
5. Tighten all nuts bolts and screws.

Adjusting the Closed Door

1. Park the machine on a level surface, disengage the blade-control switch, and engage the parking brake.
2. Shut off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. With the door closed, loosen the nuts and adjust the stop bolts so that the contact arm is straight up and down (Figure 52).
4. Adjust the length of the hinge links to so that the door completely closes and reasonable force is on the handle (Figure 52).

   Note: Lengthen the links to reduce the force. Shorten the links to increase the force

   Note: Make sure that both the left and right sides are adjusted the same distance. With the door closed, the links should be slightly tight to minimize rattling.
5. Tighten the nuts.

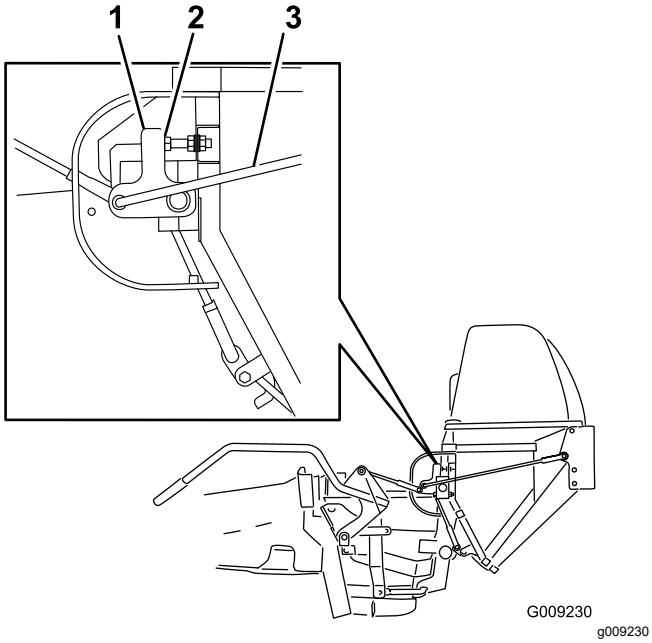


Figure 52

1. Contact arm—straight up and down
2. Stop bolt
3. Hinge links

Adjusting the Open Door

Note: Perform this procedure after adjusting the door to completely close.

Adjust the handle link to so that the door opens as much as possible (Figure 53 and Figure 54).

Note: Lengthen the handle link to open the door farther. Shorten the handle link to open the door less

Note: How far the door opens is controlled by the contact arm hitting the stop. The stop is not adjustable and prevents the door from being opened too far.

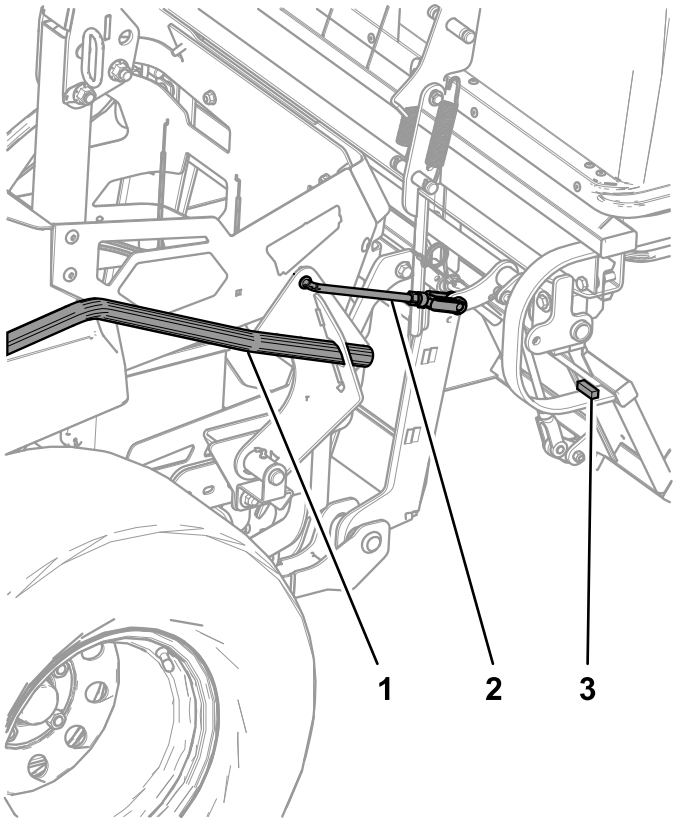


Figure 53

1. Handle
2. Handle link
3. Stop

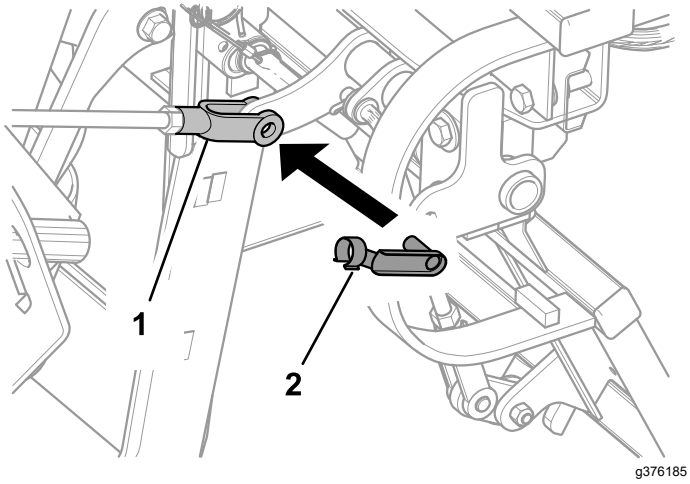


Figure 54

1. Handle assembly yoke
2. Clevis-pin spring

Adjusting the Latches

Note: Adjust the open door and closed door positions before adjusting the latches.

1. Park the machine on a level surface, disengage the blade-control switch, and engage the parking brake.
2. Shut off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Close the door.
4. Ensure that the latches completely engage and contacts the latch rod welded to the door (Figure 55).

   Note: The latches need to be tight against the latch rod. They need to be loose enough to move or wiggle.

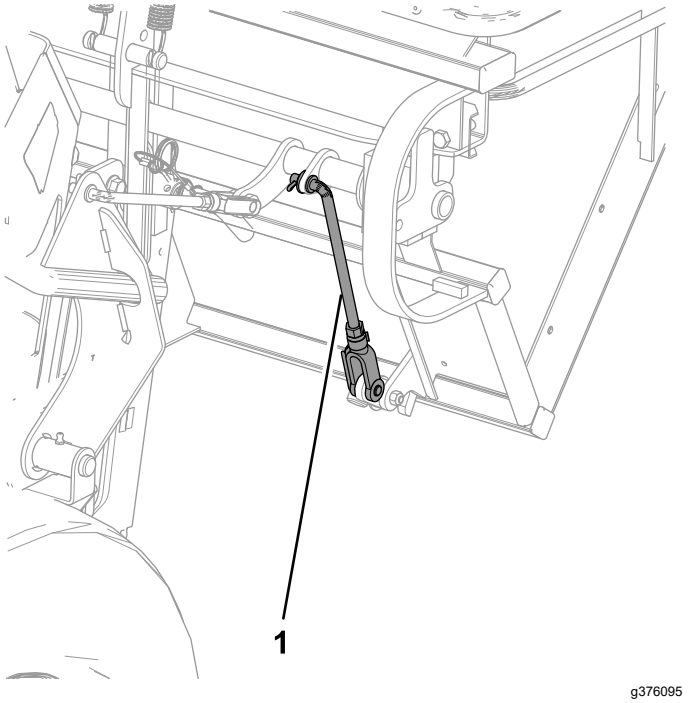


Figure 55

1. Latch rod

Inspecting the Mower Blades

1. Inspect the mower blades regularly and whenever a blade strikes a foreign object.
2. 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 reduces 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.

Replacing the Grass Deflector

⚠ WARNING

An uncovered discharge opening could allow the machine to throw objects toward you or bystanders, resulting in serious injury. Also, contact with the blade could occur.

Never operate the machine unless you install a mulch plate, discharge deflector, or grass collection system.

1. Park the machine on a level surface, disengage the blade-control switch, and engage the parking brake.
2. Shut off the engine, remove the key, and wait for all moving parts to stop before leaving the operating position.
3. Remove the locknut, bolt, spring, and spacer holding the deflector to the pivot brackets (Figure 56).
4. Remove the damaged or worn grass deflector (Figure 56).

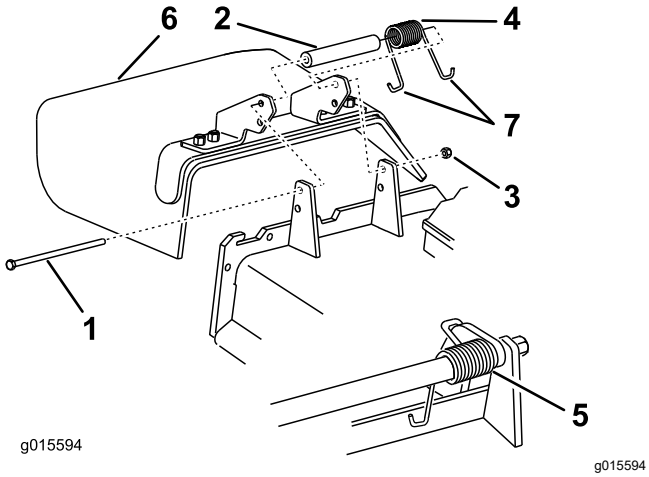


Figure 56

1. Bolt
2. Spacer
3. Locknut
4. Spring
5. Spring installed
6. Grass deflector
7. **J**-hook end of spring

5. Place the spacer and the spring onto grass deflector.
6. Place 1 J-hook end of the spring behind the deck edge.

   Note: Make sure that 1 J-hook end of the spring is installed behind the deck edge before installing the bolt as shown in Figure 56.

7. Install the bolt and the nut.
8. Place 1 J-hook end of the spring around the grass deflector (Figure 56).

   Important: **The grass deflector must be able to rotate. Lift the deflector up to the full open position and ensure that it rotates into the full down position.**

Storage

1. Clean the bagger; refer to Cleaning the Bagger Screen (page 35) and Cleaning the Collection System (page 35).
2. Inspect the bagger for damage; refer to Inspecting the Collection System (page 37).
3. Make sure that the bagger is 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
There is abnormal vibration.	1. Cutting blade(s) is/are bent or unbalanced. 2. A blade-mounting bolt is loose. 3. A blower pulley or pulley assembly is loose. 4. A blower belt is worn. 5. Blower fan blade(s) is/are bent or unbalanced.	1. Install new cutting blade(s). 2. Tighten the blade-mounting bolt. 3. Tighten the appropriate pulley. 4. Replace the blower belt. 5. Contact an Authorized Service Dealer.
Bagging performance is reduced.	1. The engine speed is low. 2. The screen in the bagger hood is plugged. 3. A blower belt is loose. 4. A tube or blower is plugged. 5. The bagger is full.	1. Always operate the collection system at full throttle. 2. Remove debris, leaves or grass clippings from the screen. 3. Replace the blower belt. 4. Locate and remove the plugged debris. 5. Empty the bagger.
Blower and tubes plug too frequently.	1. The bagger is too full. 2. The engine speed is low. 3. Grass is too wet. 4. Grass is too long. 5. The screen in the bagger hood is plugged. 6. The ground speed is too fast. 7. A blower belt is worn.	1. Dump the bagger more frequently. 2. Always operate the collection system at full throttle. 3. Cut grass when it is dry. 4. Cut no more than 51 to 76 mm (2 to 3 inches) or 1/3 of the grass height, whichever is less. 5. Remove debris, leaves or grass clippings from the screen. 6. Drive slower at full throttle. 7. Replace the blower belt.
Debris blow out.	1. The bagger is too full. 2. The ground speed is too fast. 3. The mower deck is not level.	1. Dump the bagger more frequently. 2. Drive slower at full throttle. 3. See the *Operator's Manual* for the machine for leveling the mower deck.
The blower impeller does not spin freely.	1. The blower is plugged. 2. The impeller not aligned.	1. Remove debris, leaves or grass clippings from the blower impeller. 2. Contact an Authorized Service Dealer.

Notes:

California Proposition 65 Warning Information

What is this warning?

You may see a product for sale that has a warning label like the following:

WARNING: Cancer and Reproductive Harm—www.p65Warnings.ca.gov.

What is Prop 65?

Prop 65 applies to any company operating in California, selling products in California, or manufacturing products that may be sold in or brought into California. It mandates that the Governor of California maintain and publish a list of chemicals known to cause cancer, birth defects, and/or other reproductive harm. The list, which is updated annually, includes hundreds of chemicals found in many everyday items. The purpose of Prop 65 is to inform the public about exposure to these chemicals.

Prop 65 does not ban the sale of products containing these chemicals but instead requires warnings on any product, product packaging, or literature with the product. Moreover, a Prop 65 warning does not mean that a product is in violation of any product safety standards or requirements. In fact, the California government has clarified that a Prop 65 warning "is not the same as a regulatory decision that a product is 'safe' or 'unsafe.'" Many of these chemicals have been used in everyday products for years without documented harm. For more information, go to https://oag.ca.gov/prop65/faqs-view-all.

A Prop 65 warning means that a company has either (1) evaluated the exposure and has concluded that it exceeds the "no significant risk level"; or (2) has chosen to provide a warning based on its understanding about the presence of a listed chemical without attempting to evaluate the exposure.

Does this law apply everywhere?

Prop 65 warnings are required under California law only. These warnings are seen throughout California in a wide range of settings, including but not limited to restaurants, grocery stores, hotels, schools, and hospitals, and on a wide variety of products. Additionally, some online and mail order retailers provide Prop 65 warnings on their websites or in catalogs.

How do the California warnings compare to federal limits?

Prop 65 standards are often more stringent than federal and international standards. There are various substances that require a Prop 65 warning at levels that are far lower than federal action limits. For example, the Prop 65 standard for warnings for lead is 0.5 µg/day, which is well below the federal and international standards.

Why don't all similar products carry the warning?

- Products sold in California require Prop 65 labelling while similar products sold elsewhere do not.
- A company involved in a Prop 65 lawsuit reaching a settlement may be required to use Prop 65 warnings for its products, but other companies making similar products may have no such requirement.
- The enforcement of Prop 65 is inconsistent.
- Companies may elect not to provide warnings because they conclude that they are not required to do so under Prop 65; a lack of warnings for a product does not mean that the product is free of listed chemicals at similar levels.

Why does Toro include this warning?

Toro has chosen to provide consumers with as much information as possible so that they can make informed decisions about the products they buy and use. Toro provides warnings in certain cases based on its knowledge of the presence of one or more listed chemicals without evaluating the level of exposure, as not all the listed chemicals provide exposure limit requirements. While the exposure from Toro products may be negligible or well within the "no significant risk" range, out of an abundance of caution, Toro has elected to provide the Prop 65 warnings. Moreover, if Toro does not provide these warnings, it could be sued by the State of California or by private parties seeking to enforce Prop 65 and subject to substantial penalties.