



# Caster Kit

Model No. 161-8186

## Installation Instructions

# Safety

### ⚠ WARNING

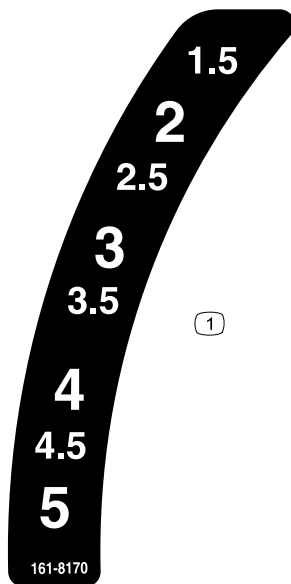
The blades are sharp; contacting a blade can result in serious personal injury.

Wear gloves when servicing the blades.

## 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.



161-8170

decal161-8170

161-8170

1. Height of cut



# Installation

## Loose Parts

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

Procedure	Description	Qty.	Use
<b>1</b>	No parts required	–	Prepare the machine.
<b>2</b>	No parts required	–	Remove the existing wheels.
<b>3</b>	No parts required	–	Remove the existing bumper assembly.
<b>4</b>	No parts required	–	Remove the belt cover.
<b>5</b>	Right belt cover Left belt cover	1 1	Install the belt cover.
<b>6</b>	Front caster assembly Hex-head bolt (3/8 x 3-3/4 inches) Washer Spacer Locknut (3/8 inch) Spring	1 2 2 2 2 2	Assemble the front caster assembly.
<b>7</b>	Height-of-cut plate Hex-head bolt (5/16 x 7/8 inch) Locknut (5/16 inch)	1 2 2	Install the height-of-cut plate.
<b>8</b>	Hex-head bolt (5/16 x 7/8 inch) Locknut (5/16 inch) Engine guard bracket (left) Engine guard bracket (right) Engine guard arm (left) Engine guard arm (right) Carriage bolt (5/16 x 3/4 inch)	2 6 1 1 1 1 4	Install the front caster assembly.



behind the rear wheels to prevent the machine from moving.

## Preparing the Machine

No Parts Required

### Procedure

1. Shut off the engine, wait for all moving parts to stop, and allow the machine to cool.
2. Disconnect the wire from the spark plug.
3. Lift the front of the machine using an appropriate lifting device or jack stands.

**Note:** If using jack stands, use the front lip of the deck to hold the machine up. Place blocks

# 2

## Removing the Existing Wheels

No Parts Required

### Procedure

Remove the wheel nuts securing the front wheels. Remove the wheels from the wheel bolts and retain the wheels.

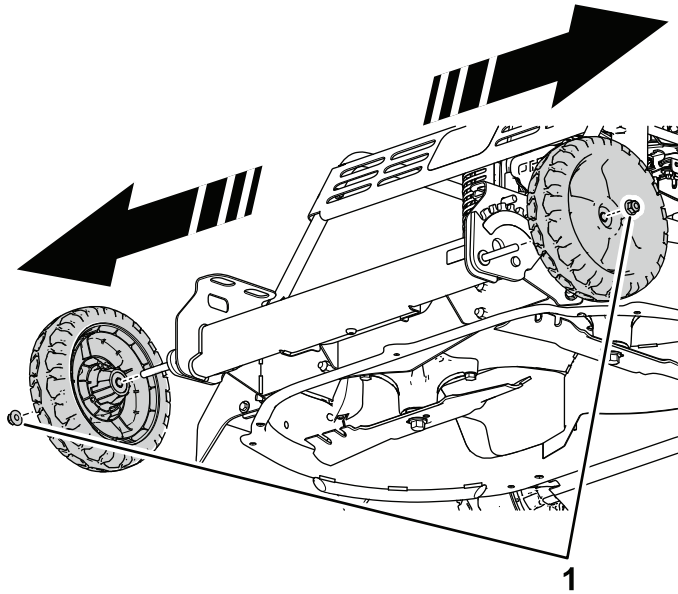


Figure 1

g543333

1. Locknut (2)

# 3

## Removing the Bumper Assembly

No Parts Required

### Procedure

1. Remove the engine shield and arms.
  - A. Remove the engine shield. Retain it and the fasteners for later installation.

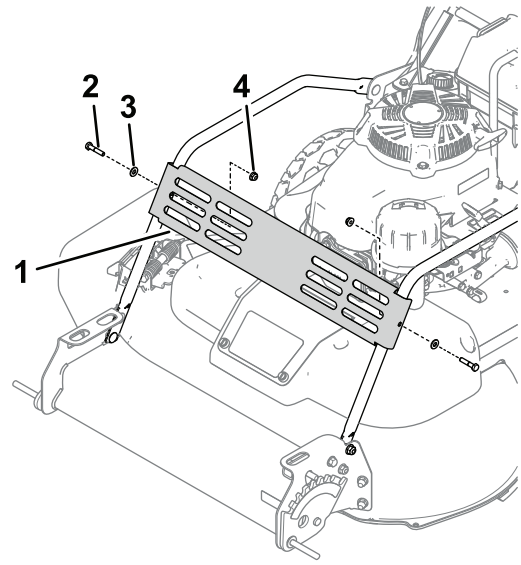


Figure 2

g543346

1. Engine shield
2. Bolt
3. Washer
4. Locknut

- B. Remove the carriage bolts securing the engine shield arms to the height-of-cut brackets and the bumper assembly. Remove and discard the engine shield arms.

Retain the height-of-cut bracket fasteners for later installation.

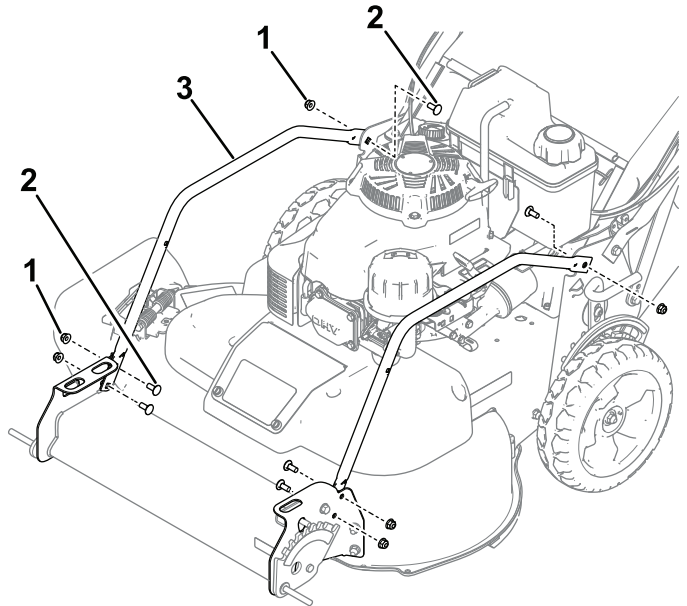
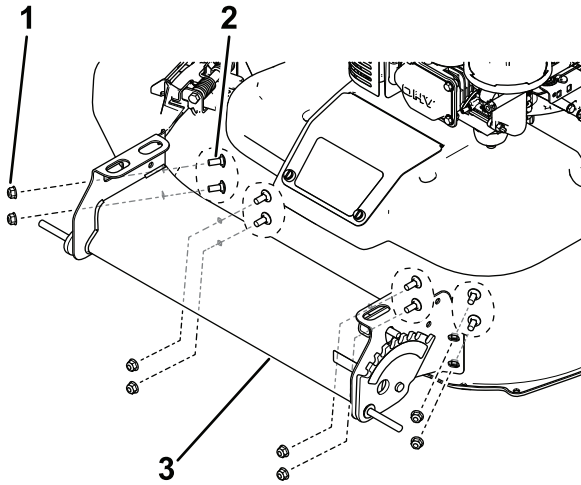


Figure 3

g543678

1. Locknut
  2. Carriage bolt
  3. Engine shield arm
2. Remove the fasteners securing the front bumper assembly to the deck.

Retain the fasteners for later installation.

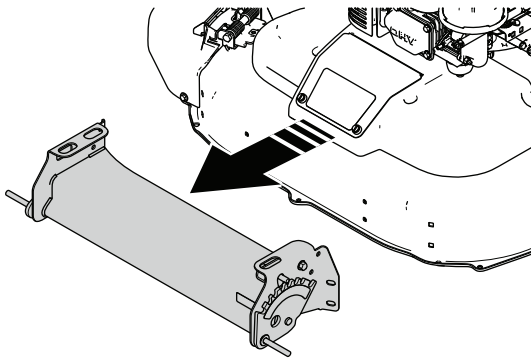


**Figure 4**

g543721

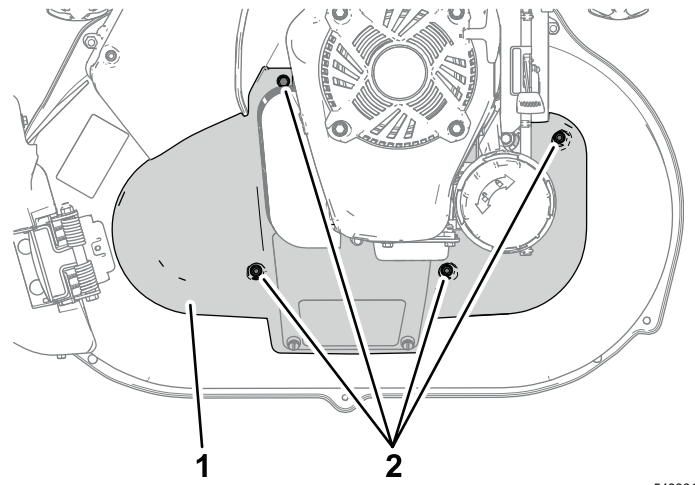
1. Locknut
2. Carriage bolt
3. Front bumper assembly

3. Remove the front bumper assembly.



**Figure 5**

g543722

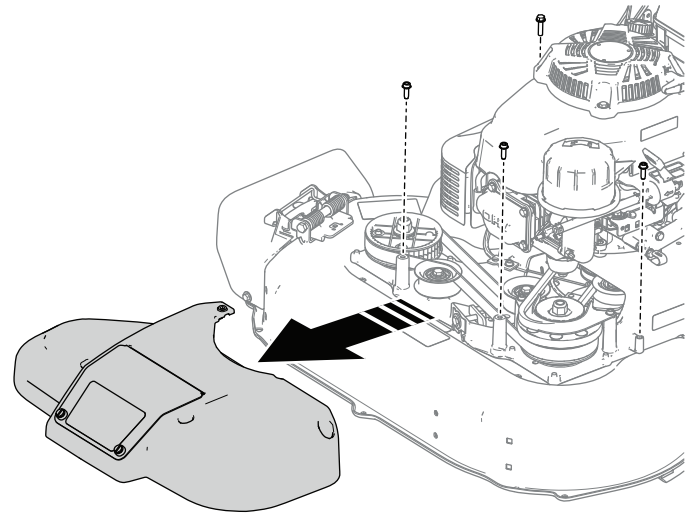


**Figure 6**

g543361

Kawasaki® model shown

1. Belt cover
2. Flange-head bolt



**Figure 7**

g543765

Kawasaki® model shown

# 4

## Removing the Belt Cover

No Parts Required

### Procedure

Remove the 4 flange-head bolts securing the belt cover. Remove the belt cover and retain the bolts for later installation.

**Note:** If your machine has a Kohler® engine, a push-in fastener instead of a bolt will be in the rearmost hole of the belt cover.

# 5

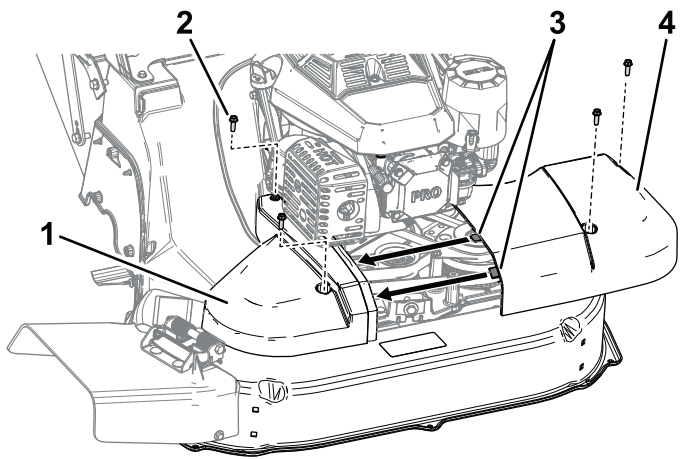
## Installing the Belt Cover

Parts needed for this procedure:

1	Right belt cover
1	Left belt cover

### Procedure

1. Install the right belt cover to the deck using the previously removed bolts or fasteners.



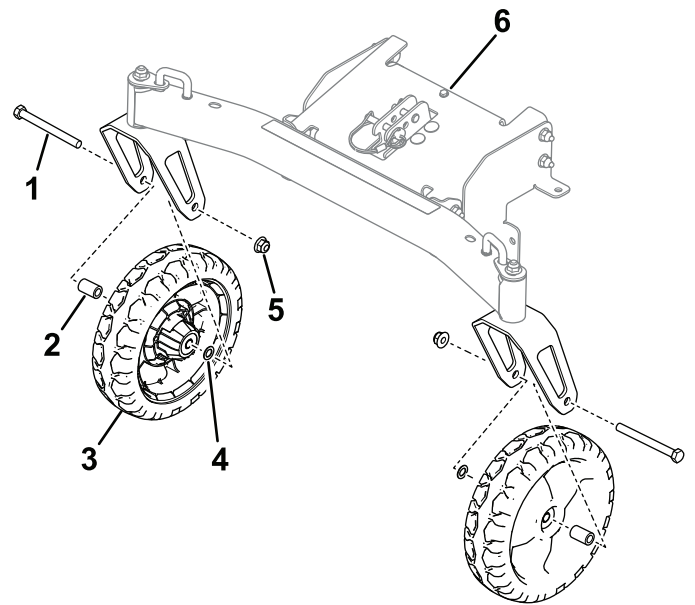
**Figure 8**

g544004

1. Right belt cover
2. Previously removed bolts or fasteners
3. Ensure that the tabs are inserted into the belt cover.
4. Left belt cover

2. Slide the tabs of the left belt cover into the right belt cover. Secure the left belt cover using the remaining fasteners.

**Note:** Ensure that the tabs are inserted into the belt cover, not over the top of the belt cover.



**Figure 9**

g542758

1. Hex-head bolt (3/8 x 3-3/4 inches)
2. Spacer
3. Wheel
4. Washer
5. Locknut (3/8 inch)
6. Front caster assembly

**Note:** If the bolt does not go through the holes in the caster fork, flex the wheel slightly so that the bolt and holes are aligned, then push the bolt through.

# 6

## Assembling the Front Caster Assembly

### Parts needed for this procedure:

1	Front caster assembly
2	Hex-head bolt (3/8 x 3-3/4 inches)
2	Washer
2	Spacer
2	Locknut (3/8 inch)
2	Spring

### Procedure

Install the previously removed wheels to the caster forks on the front caster assembly using 2 hex-head bolts (3/8 x 3-3/4 inches), 2 washers and spacers, and 2 locknuts (3/8 inch). Torque the locknuts to 37 to 44 N·m (27 to 33 ft-lb).

# 7

## Installing the Height-of-Cut Plate

Parts needed for this procedure:

1	Height-of-cut plate
2	Hex-head bolt (5/16 x 7/8 inch)
2	Locknut (5/16 inch)

### Procedure

#### ⚠ CAUTION

Using a drill without proper eye protection may allow debris to enter the eyes, causing injury. When drilling, always wear eye protection.

1. Drill 2 holes (8 mm or 5/16 inch) into the front of the deck as shown in [Figure 10](#).

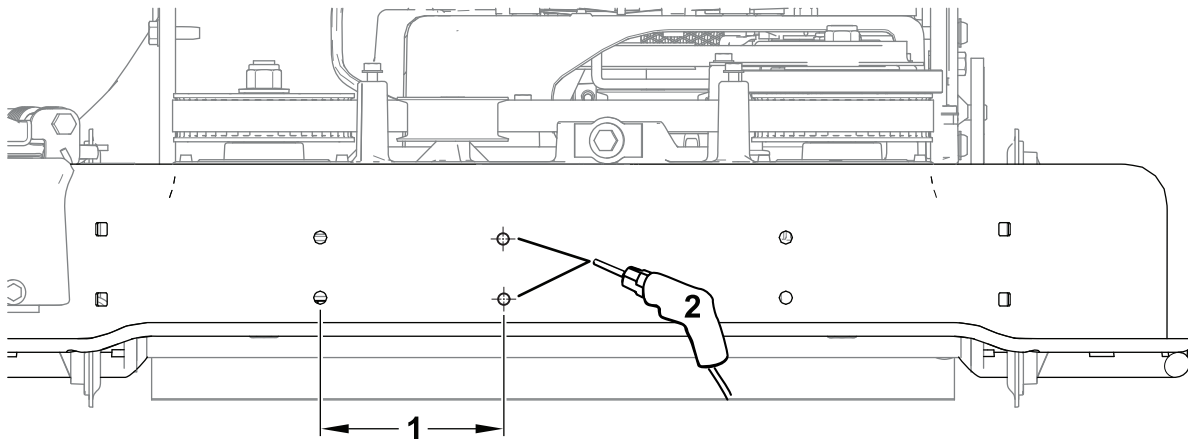


Figure 10

g542619

1. 12.4 cm (4-7/8 inches)
2. 8 mm (5/16 inch) hole

2. Secure the height-of-cut plate to the holes in the deck using 2 hex-head bolts (5/16 x 7/8 inch) and 2 locknuts (5/16 inch). Torque the locknuts to 20 to 25 N·m (175 to 225 in-lb).

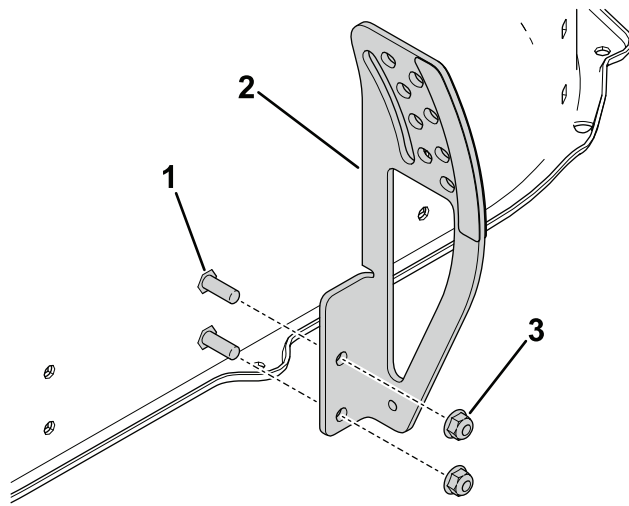


Figure 11

g543723

1. Hex-head bolt (5/16 x 7/8 inch)
2. Height-of-cut plate
3. Locknut (5/16 inch)

# 8

## Installing the Front Caster Assembly

### Parts needed for this procedure:

2	Hex-head bolt (5/16 x 7/8 inch)
6	Locknut (5/16 inch)
1	Engine guard bracket (left)
1	Engine guard bracket (right)
1	Engine guard arm (left)
1	Engine guard arm (right)
4	Carriage bolt (5/16 x 3/4 inch)

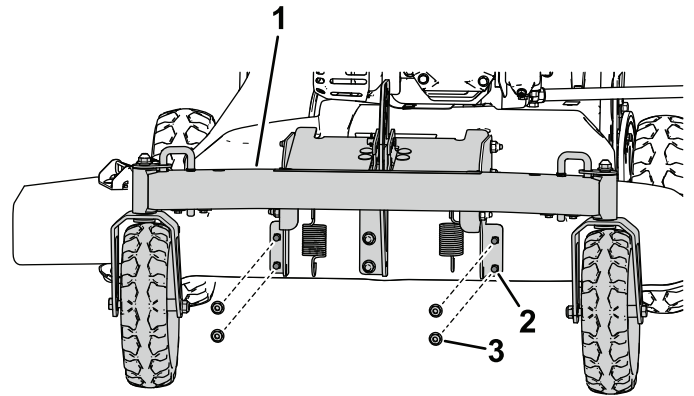


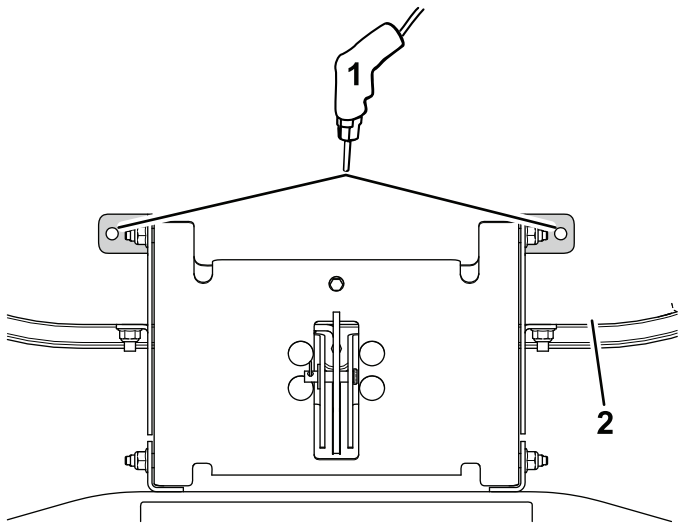
Figure 12

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2. Using the caster bracket tabs as a template, drill 2 holes (8 mm or 5/16 inch) into the top of the deck as shown in [Figure 13](#).

## Procedure

1. Install the assembled front caster assembly from [6 Assembling the Front Caster Assembly \(page 5\)](#) to the front of the deck using carriage bolts (5/16 x 3/4 inch) and locknuts (5/16 inch) previously removed in step 2 of [3 Removing the Bumper Assembly \(page 3\)](#).

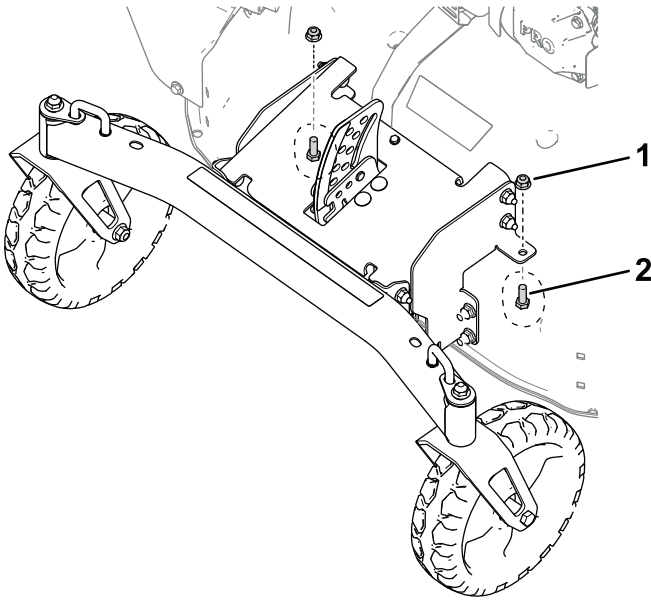


**Figure 13**

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1. 8 mm (5/16 inch) hole
2. Top of deck through caster tabs

3. Insert 2 hex-head bolts (5/16 x 7/8 inch) through the top of the deck and secure with 2 locknuts (5/16 inch). Torque the locknuts to 20 to 25 N·m (175 to 225 in-lb).

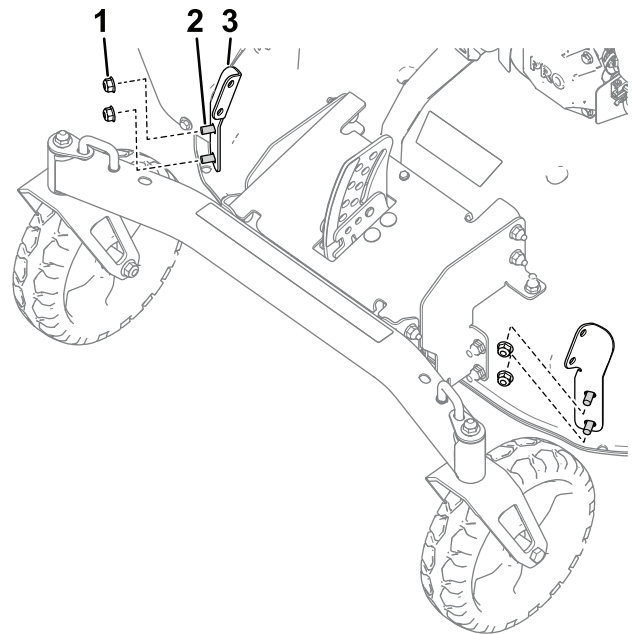


**Figure 14**

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1. Locknut (5/16 inch)
2. Hex-head bolt (5/16 x 7/8 inch)

4. Install 2 engine guard brackets to the sets of holes at the front of the mower using the 4 carriage bolts and 4 locknuts previously removed in step 2 of 3 [Removing the Bumper Assembly \(page 3\)](#).

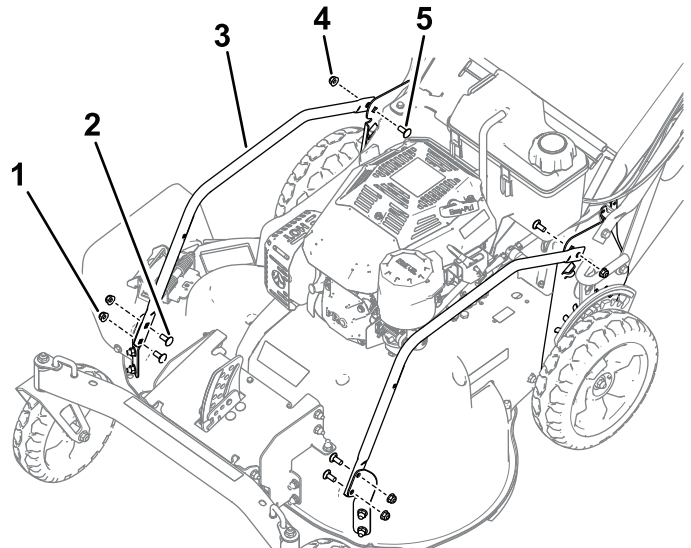


**Figure 15**

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1. Locknut
2. Carriage bolt
3. Engine guard bracket

5. Install 2 engine guard arms to the height-of-cut brackets using the 2 carriage bolts and 2 locknuts previously removed in step B of 3 [Removing the Bumper Assembly \(page 3\)](#). Torque the locknuts to 20 to 25 N·m (175 to 225 in-lb).



**Figure 16**

g543954

1. Carriage bolt (5/16 x 3/4 inch)
2. Locknut (5/16 inch)
3. Engine guard arm
4. Previously removed locknut
5. Previously removed carriage bolt

6. Using 4 carriage bolts (5/16 x 3/4 inch) and locknuts (5/16 inch), secure the engine guard arms to the engine guard brackets. Torque the locknuts to 20 to 25 N·m (175 to 225 in-lb).
7. Install the engine shield to the engine guard arms using the 2 hex-head bolts, 2 washers, and 2 locknuts previously removed in step [A](#) of [3 Removing the Bumper Assembly \(page 3\)](#).

# Operation

## Adjusting the Cutting Height

### ⚠ WARNING

Adjusting the cutting height could bring your hands into contact with a moving blade and result in serious injury.

- Shut off the engine and wait for all moving parts to stop before adjusting the cutting height.
- Do not put your fingers under the housing when adjusting the cutting height.

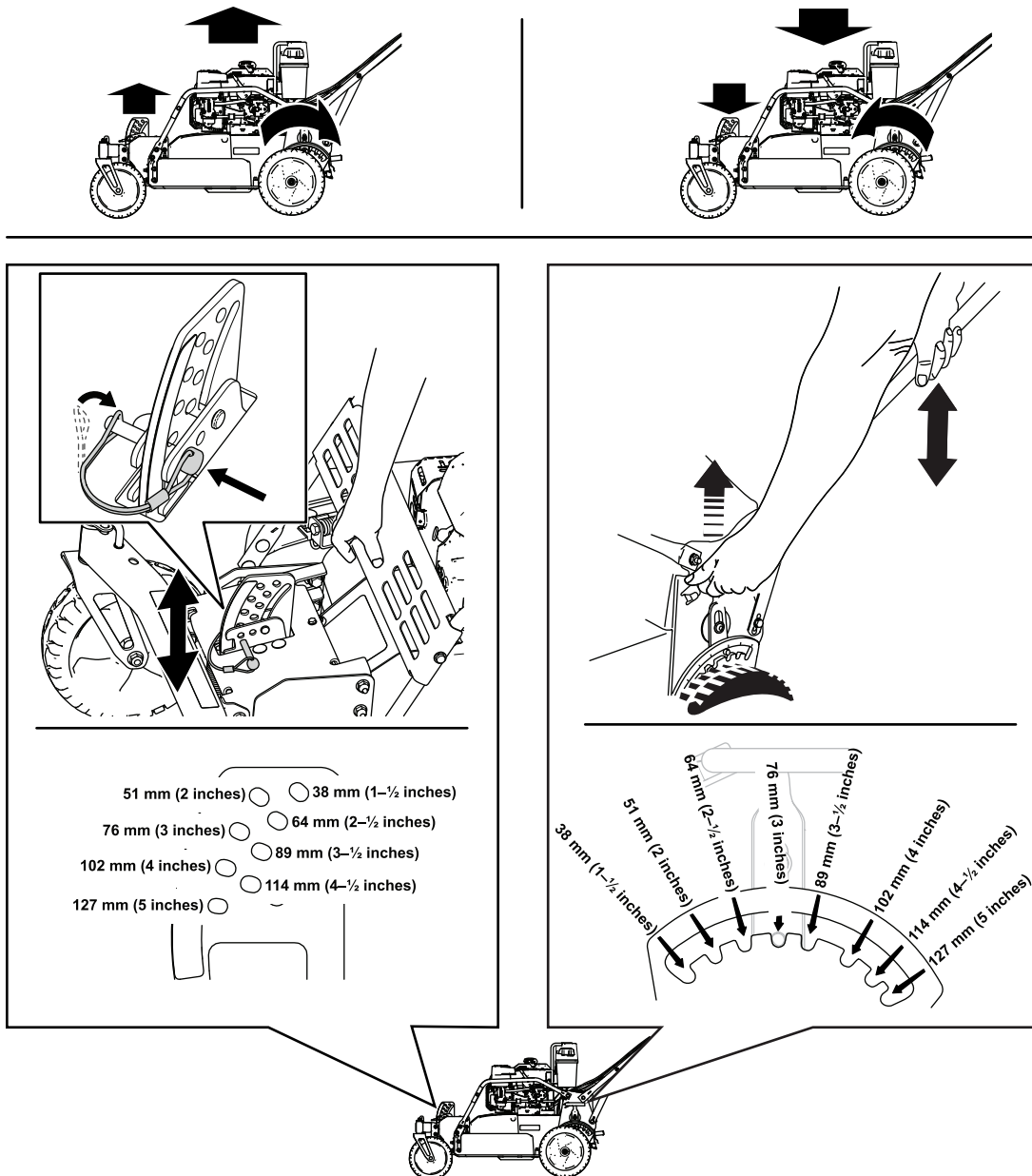


Figure 17

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The cutting height is controlled by the front pin and the rear lever. The pin is at the front of the machine, and the lever is on the left side of the machine. To raise or lower the machine, remove the pin and engage the lever, raise or lower the machine, and lock the pin and disengage the lever.

# Unlocking the Casters

1. Lift the caster lock pins.
2. Turn and insert the pins into the holes on the axle.

Reverse the process to lock the casters.

**Note:** Lock the casters when you want the front wheels to remain straight (for example, when mowing the side of a hill).

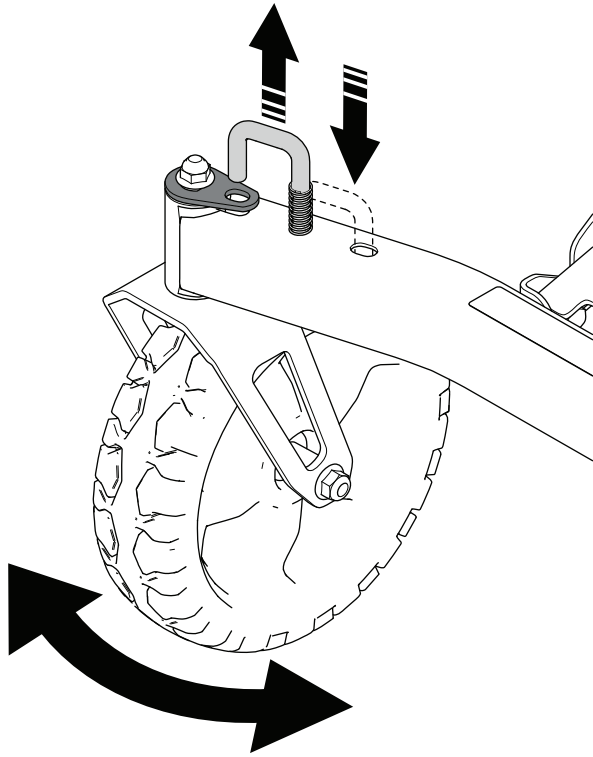


Figure 18

g542608



**Count on it.**