



# Super Recycler<sup>®</sup> Lawn Mower

Model No. 20381—Serial No. 40000000 and Up

Model No. 20384—Serial No. 40000000 and Up

## Operator's Manual

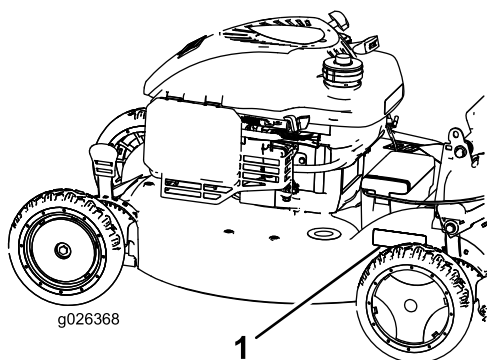
### Introduction

This rotary-blade, walk-behind lawn mower is intended to be used by residential homeowners. It is designed primarily for cutting grass on well-maintained lawns on residential properties. It is not designed for cutting brush or for agricultural uses.

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](http://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.



**Figure 1**

1. Model and serial number plate

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

Model No. _____
Serial No. _____

This manual identifies potential hazards and has safety messages identified by the safety-alert symbol (**Figure 2**), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.



**Figure 2**

1. Safety-alert symbol

This manual uses 2 words to highlight information.

**Important** calls attention to special mechanical information and **Note** emphasizes general information worthy of special attention.

**⚠ WARNING**

**CALIFORNIA**  
**Proposition 65 Warning**

**This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects, or reproductive harm.**

**The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.**

It is a violation of California Public Resource Code Section 4442 or 4443 to use or operate the engine on any forest-covered, brush-covered, or grass-covered land unless the engine is equipped with a spark arrester, as defined in Section 4442, maintained in effective working order or the engine is constructed, equipped, and maintained for the prevention of fire.

This spark ignition system complies with Canadian ICES-002.

**Net Torque:** The gross or net torque of this engine was laboratory rated by the engine manufacturer in accordance with the Society of Automotive Engineers (SAE) J1940. As configured to meet safety, emission, and operating requirements, the actual engine torque on this class of mower will be significantly lower. Go to [www.Toro.com](http://www.Toro.com) to view specifications on your mower model.

**Important:** If you are using this machine above 1500 m (5,000 ft) for a continuous period, ensure that the High Altitude Kit has been installed so that the engine meets CARB/EPA emission regulations. The High Altitude Kit increases engine performance while preventing spark-plug fouling, hard starting, and increased emissions. Once you have installed the kit, attach the high-altitude label next to the serial decal on the



machine. Contact any Authorized Toro Service Dealer to obtain the proper High Altitude Kit and high-altitude label for your machine. To locate a dealer convenient to you, access our website at [www.Toro.com](http://www.Toro.com) or contact our Toro Customer Care Department at the number(s) listed in your Emission Control Warranty Statement.

Remove the kit from the engine and restore the engine to its original factory configuration when running the engine under 1500 m (5,000 ft). Do not operate an engine that has been converted for high-altitude use at lower altitudes; otherwise, you could overheat and damage the engine.

If you are unsure whether or not your machine has been converted for high-altitude use, look for the following label (Figure 3).



Figure 3

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## Safety

This machine has been designed in accordance with EN ISO 5395:2013 and ANSI B71.1-2012.

### General Safety

This product is capable of amputating hands and feet and of throwing objects. Always follow all safety instructions to avoid serious personal injury.

Using this product for purposes other than its intended use could prove dangerous to you and bystanders.

- Read and understand the contents of this *Operator's Manual* before starting the engine.
- Do not put your hands or feet near moving components of the machine.
- Do not operate the machine without all guards and other safety protective devices in place and working on the machine.
- Keep clear of any discharge opening. Keep bystanders a safe distance away from the machine.
- Keep children out of the operating area. Never allow children to operate the machine.
- Stop the machine and shut off the engine before servicing, fueling, or unclogging the machine.

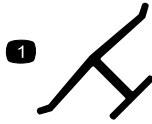
Improperly using or maintaining this machine can result in injury. To reduce the potential for injury, comply with these safety instructions and always pay attention to the safety-alert symbol, which means Caution, Warning, or Danger—personal safety instruction. Failure to comply with these instructions may result in personal injury or death.

You can find additional items of safety information in their respective sections throughout this manual.

# 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.



decalocemmark

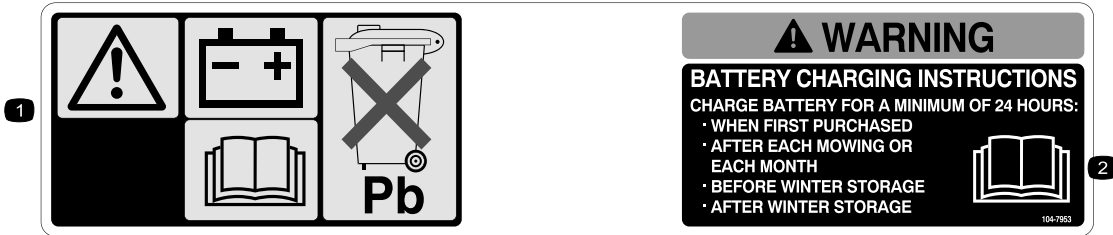
## Manufacturer's Mark

1. Indicates the blade is identified as a part from the original machine manufacturer.



decal04-8072

94-8072



104-7953

Electric-start model only

decal104-7953

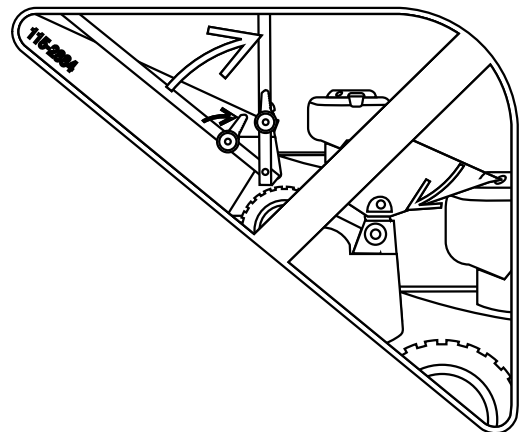
1. Warning—read the *Operator's Manual* for information on charging the battery; contains lead; do not discard.
2. Read the *Operator's Manual*.



decal112-8867

112-8867

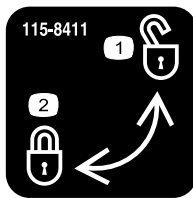
1. Lock
2. Unlock



decal115-2884

115-2884

Handle Position Adjustment



115-8411

decal115-8411

1. Unlocked

2. Locked

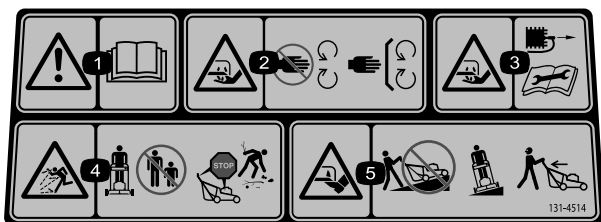
**CALIFORNIA SPARK ARRESTER WARNING**

Operation of this equipment may create sparks that can start fires around dry vegetation. A spark arrester may be required. The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements. 117-2718

117-2718

117-2718

decal117-2718

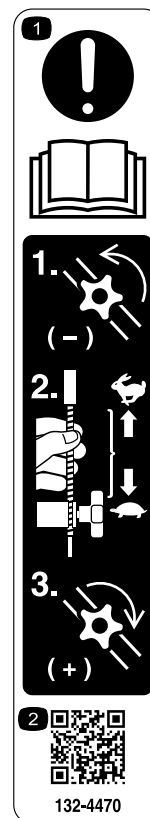


131-4514

131-4514

decal131-4514b

1. Warning—read the *Operator's Manual*.
2. Cutting/dismemberment hazard of hand or foot, mower blade—stay away from moving parts; keep all guards and shields in place.
3. Cutting/dismemberment hazard of hand or foot, mower blade—disconnect the spark-plug wire and read the instructions before servicing or performing maintenance.
4. Thrown object hazard—keep bystanders a safe distance from the machine; stop the engine before leaving the operating position; pick up any debris before mowing.
5. Cutting/dismemberment hazard of hand or foot, mower blade—do not operate up and down slopes; operate side to side on slopes; look behind you when backing up.



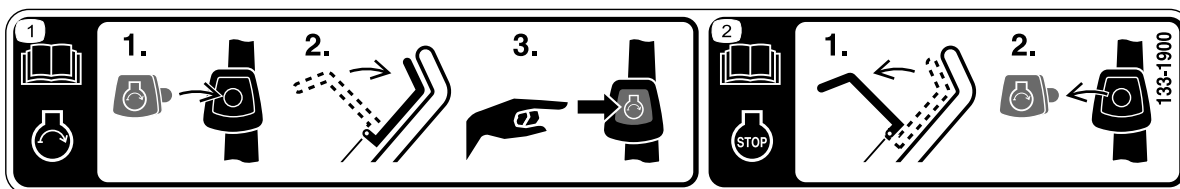
132-4470

decal132-4470

132-4470

**Traction Adjustment**

1. Attention; read the *Operator's Manual*—1) Loosen the knob by turning it counterclockwise; 2) Pull the cable(s) away from the engine to decrease the traction, or push the cable(s) toward the engine to increase the traction; 3) Tighten the knob by turning it clockwise.
2. Scan the QR code for more information on traction adjustment.



133-1900

decal133-1900

(Electric-start models only)

1. Read the *Operator's Manual* for more information on starting the engine—1) Insert the electric-start button into the ignition; 2) Engage the blade-control bar; 3) Push the electric-start button to start the engine.
2. Read the *Operator's Manual* for more information on stopping the engine—1) Release the blade-control bar; 2) Remove the electric-start button from the ignition.

# Setup

**Important:** Remove and discard the protective plastic sheet that covers the engine and any other plastic or wrapping on the machine.

**Important:** To prevent accidental starting, do not insert the electric-start button into the electric starter switch until you are ready to start the engine.

## 1

## Assembling and Unfolding the Handle

Parts needed for this procedure:

2	Handle bolt
2	Washer

### Procedure

#### ⚠ WARNING

Assembling and unfolding the handle improperly can damage the cables, causing an unsafe operating condition.

- Do not damage the cables when assembling and unfolding the handle.
- Ensure that the cables are routed to the outside of the handle.
- If a cable is damaged, contact an Authorized Service Dealer.

1. Raise the rear of the machine housing to its highest cutting-height setting by moving the 2 rear cutting-height levers all the way forward. Refer to [Adjusting the Cutting Height \(page 10\)](#).
2. Attach the handle ends to the machine housing with 2 washers and 2 handle bolts ([Figure 4](#)), but do not tighten the handle bolts.

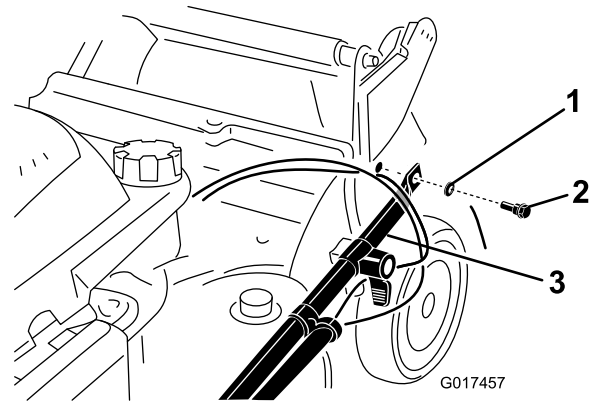


Figure 4

1. Washer
2. Handle bolt
3. Handle end

**Important:** Route the cables to the *outside* of the handle ([Figure 4](#)).

3. Rotate the handle rearward ([Figure 5](#)).

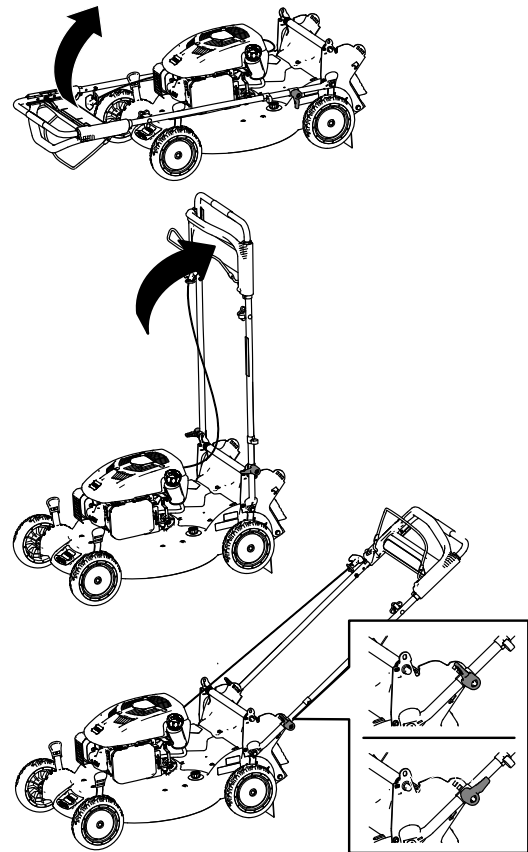


Figure 5

4. Lock the handle at your desired height. Refer to [Adjusting the Handle Height \(page 9\)](#).
5. Torque the handle bolts to 14 to 17 N·m (120 to 160 in-lb).
6. Adjust the cutting height. Refer to [Adjusting the Cutting Height \(page 10\)](#).

# 2

## Installing the Recoil-starter Rope in the Rope Guide

No Parts Required

### Procedure

**Important:** To start the engine safely and easily whenever you use the machine, install the recoil-starter rope in the rope guide.

Hold the blade-control bar to the upper handle and pull the recoil-starter rope through the rope guide on the handle (Figure 6).

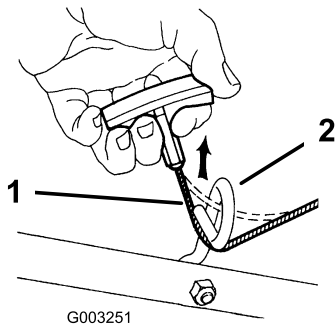


Figure 6

1. Recoil-starter rope
2. Rope guide

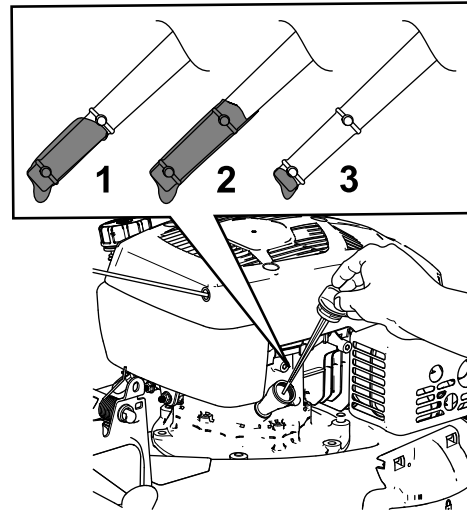


Figure 7

1. Full
2. High
3. Low

4. Wipe off the dipstick end with a clean cloth.
5. Insert the dipstick into the oil-fill tube, but **do not** screw it in, then remove the dipstick.
6. Read the oil level on the dipstick (Figure 7).
  - If the oil is below the Add mark on the dipstick, slowly pour a small amount of oil into the oil-fill tube, wait 3 minutes, and then repeat steps 3 through 5 until the oil level is at the Full mark on the dipstick
  - If the oil is above the Full mark on the dipstick, drain the excess oil until the oil level is at the Full mark on the dipstick. To drain the excess oil, refer to [Changing the Engine Oil](#) (page 19).
7. Install the dipstick into the oil-fill tube securely.

**Important:** Check the engine-oil level before each use and add oil as needed; refer to [Checking the Engine-Oil Level](#) (page 9).

# 3

## Filling the Engine with Oil

No Parts Required

### Procedure

**Important:** Your machine does not come with oil in the engine. Before starting the engine, fill the engine with oil.

Engine oil capacity: 0.5 L (18 fl.oz)

Oil viscosity: SAE 30 or SAE 10W-30 detergent oil

API service classification: SJ or higher

1. Move the machine to a level surface.
2. Wait for 3 to 5 minutes for the oil to settle.
3. Remove the dipstick (Figure 7) and pour about 3/4 of the crankcase capacity of the specified oil into the oil-fill tube.

# 4

## Charging the Battery

No Parts Required

### Procedure

Electric-Start Model Only

Refer to [Charging the Battery](#) (page 20).

# 5

## Assembling the Grass Bag

No Parts Required

### Procedure

1. Slip the grass bag over the frame as shown in [Figure 8](#).

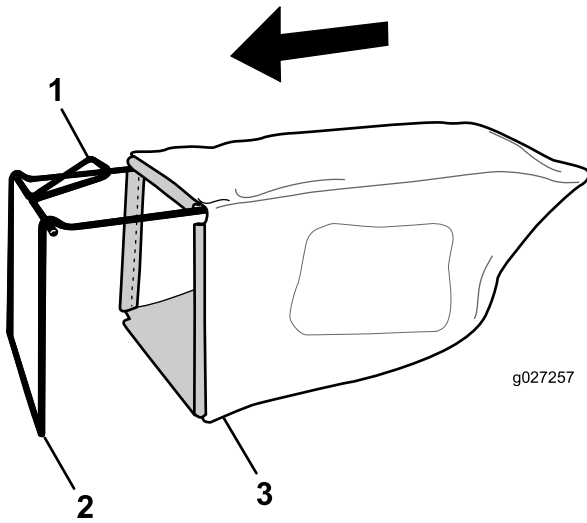
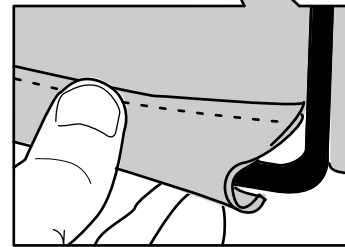
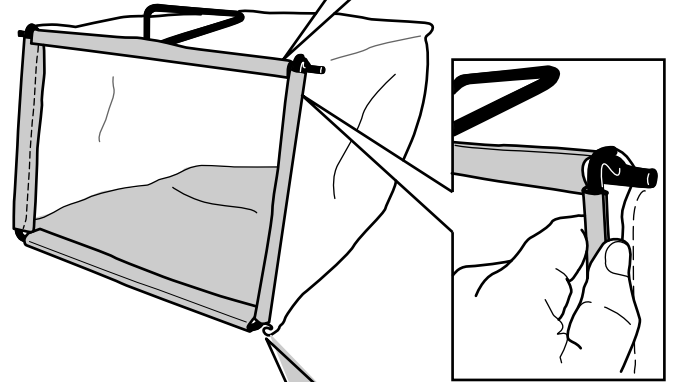
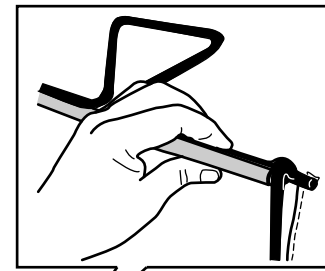


Figure 8

1. Handle
2. Frame
3. Grass bag



g027258

Figure 9

g027258

3. Hook the top and side channels of the bag onto the top and sides of the frame, respectively ([Figure 9](#)).

**Note:** Do not slip the bag over the handle ([Figure 8](#)).

2. Hook the bottom channel of the bag onto the bottom of the frame ([Figure 9](#)).

# Product Overview

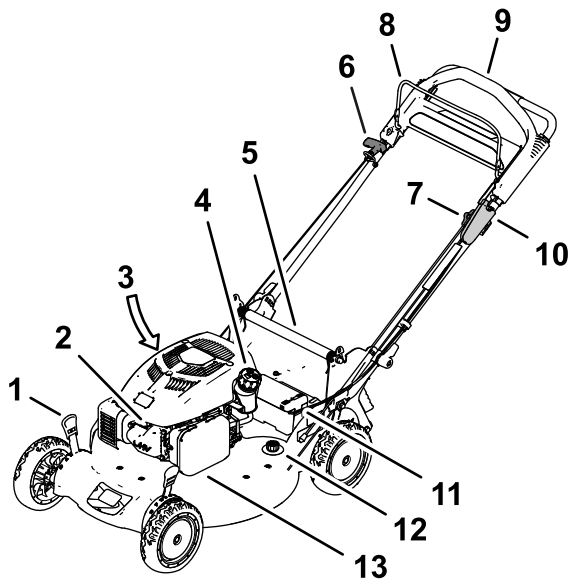


Figure 10

g189025

- |  |   |
|--|---|
| 1. Cutting-height lever (4)                  | 8. Blade-control bar                                  |
| 2. Spark plug                                | 9. Upper handle                                       |
| 3. Oil fill/Dipstick (not shown)             | 10. Electric-start button (electric-start model only) |
| 4. Fuel tank cap                             | 11. Battery (electric-start model only)               |
| 5. Rear door                                 | 12. Washout port                                      |
| 6. Recoil start handle                       | 13. Air filter  |
| 7. Adjustment knob for the self-propel drive |   |

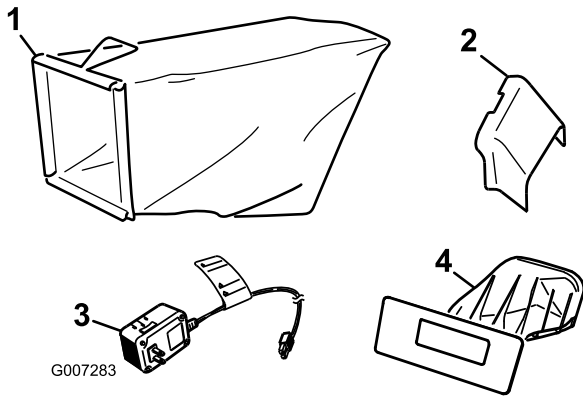


Figure 11

g007283

- |                         |  |
|-------------------------|--|
| 1. Grass bag            | 3. Battery charger (electric-start model only) |
| 2. Side-discharge chute | 4. Rear plug (installed)                       |

# Operation

## Before Operation

### Before Operation Safety

#### General Safety

- Become familiar with the safe operation of the equipment, operator controls, and safety signs.
- Check that all guards and safety devices, such as deflectors and/or grass catcher, are in place and working properly.
- Always inspect the machine to ensure that the blades, blade bolts, and cutting assembly are not worn or damaged.
- Inspect the area where you will use the machine and remove all objects that the machine could throw.
- Adjusting the cutting height may bring you into contact with the moving blade, causing serious injury.
  - Shut off the engine, remove the electric-start button (electric-start model only), and wait for all moving parts to stop.
  - Do not put your fingers under the housing when adjusting the cutting height.

#### Fuel Safety

#### **⚠ DANGER**

Fuel is extremely flammable and highly explosive. A fire or explosion from fuel can burn you and others and can damage property.

- To prevent a static charge from igniting the fuel, place the container and/or machine directly on the ground before filling, not in a vehicle or on an object.
- Fill the fuel tank outdoors, in an open area, when the engine is cold. Wipe up any fuel that spills.
- Do not handle fuel when smoking or around an open flame or sparks.
- Store fuel in an approved container and keep it out of the reach of children.

#### **⚠ WARNING**

Fuel is harmful or fatal if swallowed. Long-term exposure to vapors can cause serious injury and illness.

- Avoid prolonged breathing of vapors.
- Keep your hands and face away from the nozzle and the fuel-tank opening.
- Keep fuel away from your eyes and skin.



# Filling the Fuel Tank

- For best results, use only clean, fresh, unleaded gasoline with an octane rating of 87 or higher ((R+M)/2 rating method).
- Oxygenated fuel with up to 10% ethanol or 15% MTBE by volume is acceptable.
- **Do not** use ethanol blends of gasoline, such as E15 or E85, with more than 10% ethanol by volume. Performance problems and/or engine damage may result, which may not be covered under warranty.
- **Do not** use gasoline containing methanol.
- **Do not** store fuel either in the fuel tank or in fuel containers over the winter unless fuel stabilizer has been added to the fuel.
- **Do not** add oil to gasoline.

Fill the fuel tank with fresh unleaded regular gasoline from a major name-brand service station (Figure 12).

**Important:** To reduce starting problems, add fuel stabilizer to the fuel all season, mixing it with gasoline less than 30 days old.

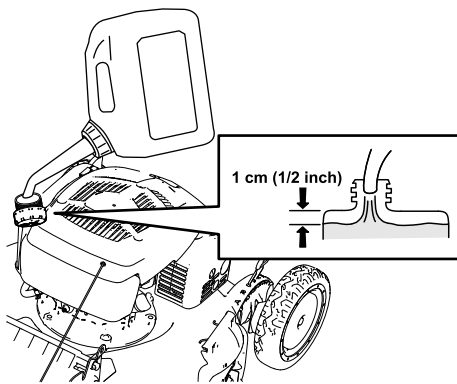


Figure 12

g186584

# Checking the Engine-Oil Level

**Service Interval:** Before each use or daily

**Oil viscosity:** SAE 30 or SAE 10W-30 detergent oil

**API service classification:** SJ or higher

1. Move the machine to a level surface.
2. Remove the dipstick (Figure 13).

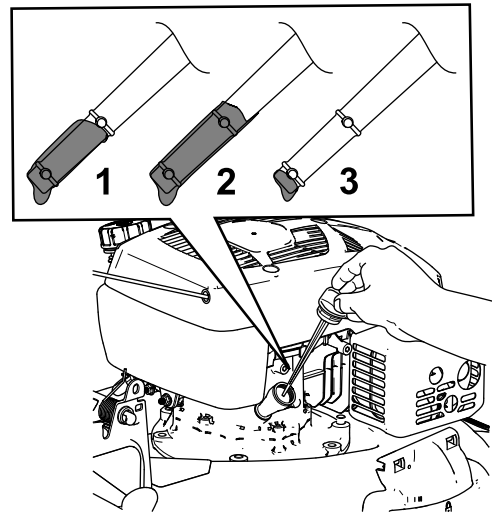


Figure 13

g186624

1. Full
2. High
3. Low

3. Wipe off the dipstick end with a clean cloth.
4. Insert the dipstick into the oil-fill tube, but **do not** screw it in, then remove the dipstick.
5. Read the oil level on the dipstick (Figure 13).
  - If the oil is below the Add mark on the dipstick, slowly pour a small amount of oil into the oil-fill tube, wait 3 minutes, and then repeat steps 3 through 5 until the oil level is at the Full mark on the dipstick
  - If the oil is above the Full mark on the dipstick, drain the excess oil until the oil level is at the Full mark on the dipstick. To drain the excess oil, refer to [Changing the Engine Oil](#) (page 19).
6. Install the dipstick into the oil-fill tube securely.

**Important:** If the oil level in the crankcase is too low or too high and you run the engine, you may damage the engine.

# Adjusting the Handle Height

You may raise or lower the handle to a position comfortable for you.

Rotate the handle lock, move the handle to 1 of 3 positions, and lock the handle into position (Figure 14).

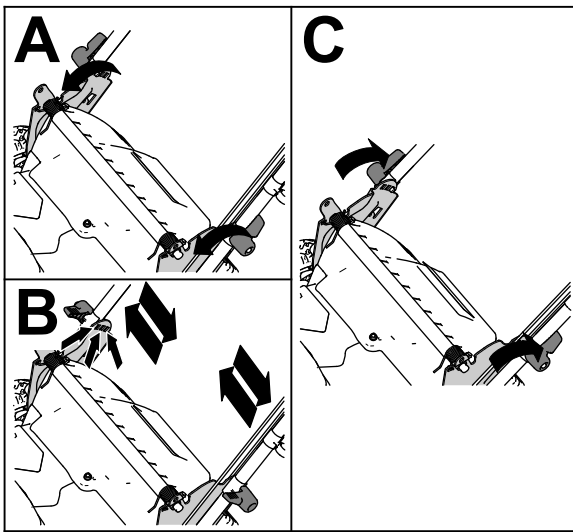


Figure 14

g188996

## During Operation

### During Operating Safety

#### General Safety

- Wear appropriate clothing, including eye protection; slip-resistant, substantial footwear; and hearing protection. Tie back long hair, secure loose clothing, and do not wear jewelry.
- Do not operate the machine while ill, tired, or under the influence of alcohol or drugs.
- The blade is sharp; contacting the blade can result in serious personal injury. Shut off the engine, remove the electric-start button (electric-start model only), and wait for all moving parts to stop before leaving the operating position.
- When you release the blade-control bar, the engine should shut off and the blade should stop within 3 seconds. If not, stop using your machine immediately and contact an Authorized Service Dealer.
- Operate the machine only in good visibility and appropriate weather conditions. Do not operate the machine when there is the risk of lightning.
- Wet grass or leaves can cause serious injury if you slip and contact the blade. Mow only in dry conditions.
- Use extreme care when approaching blind corners, shrubs, trees, or other objects that may block your view.
- Watch for holes, ruts, bumps, rocks, or other hidden objects. Uneven terrain could cause a slip-and-fall accident.
- Stop the machine and inspect the blades after striking an object or if there is an abnormal vibration in the machine. Make all necessary repairs before resuming operation.
- Before leaving the operating position, shut off the engine, remove the electric-start button (electric-start model only), and wait for all moving parts to stop.
- If the engine has been running the muffler will be hot and can severely burn you. Keep away from the hot muffler.
- Check the grass catcher components and the discharge guard frequently and replace them with the manufacturer's recommended parts when necessary.
- Use accessories and attachments approved by the The Toro® Company only.

## Adjusting the Cutting Height

### ⚠ WARNING

Adjusting the cutting height may bring you into contact with the moving blade, causing serious injury.

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

### ⚠ CAUTION

If the engine has been running, the muffler will be hot and can severely burn you. Keep away from the hot muffler.

Adjust the cutting height as desired. Set all the cutting-height levers to the same height. To raise and lower the machine, refer to [Figure 15](#).

- |                         |                          |
|-------------------------|--------------------------|
| A = 3 cm (1-1/4 inches) | E = 8 cm (3-1/4 inches)  |
| B = 4 cm (1-3/4 inches) | F = 10 cm (3-3/4 inches) |
| C = 6 cm (2-1/4 inches) | G = 11 cm (4-1/4 inches) |
| D = 7 cm (2-3/4 inches) |                          |

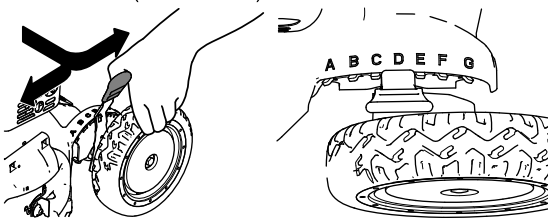


Figure 15

g189041

#### Slope Safety

- Mow across the face of slopes; never up and down. Use extreme caution when changing direction on slopes.
- Do not mow on excessively steep slopes. Poor footing could cause a slip-and-fall accident.
- Mow with caution near drop-offs, ditches, or embankments.

# Starting the Engine

You can start the engine using either the electric-start button or the recoil-start handle.

## Starting the Engine Using the Electric-Start Button

### Electric-Start Model Only

1. Hold the blade-control bar against the handle (Figure 16).

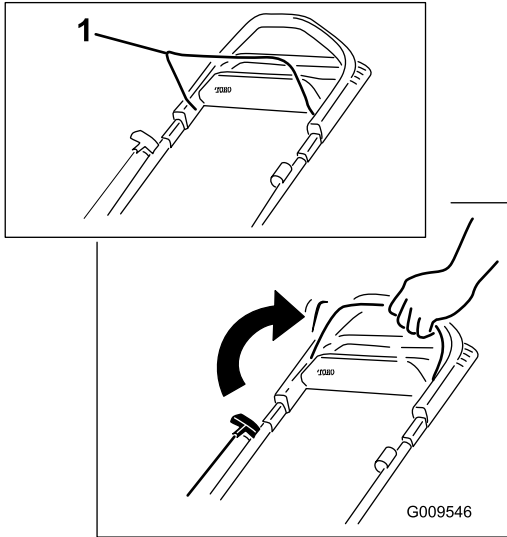


Figure 16

g009546

1. Blade-control bar

2. Push the electric-start button until the engine starts (Figure 17).

**Note:** If the electric-start button has been removed, insert it in the electric starter; refer to Figure 17.

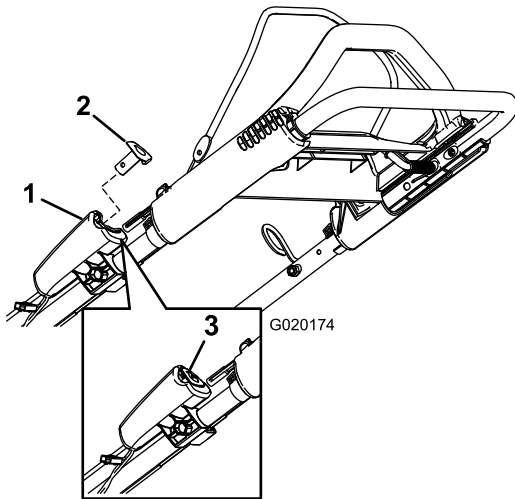


Figure 17

g020174

1. Electric starter
2. Electric-start button
3. Electric-start button (installed)

**Note:** If the machine does not start after several attempts, contact an Authorized Service Dealer.

## Starting the Engine Using the Recoil-Start Handle

1. Hold the blade-control bar against the handle (Figure 18).

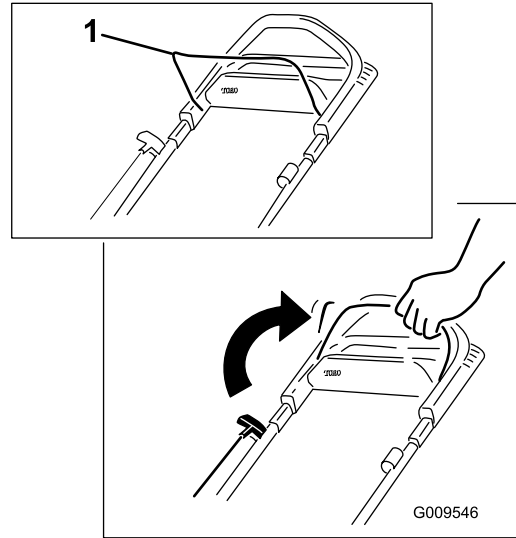


Figure 18

g009546

1. Blade-control bar

2. Pull the recoil-start handle (Figure 19).

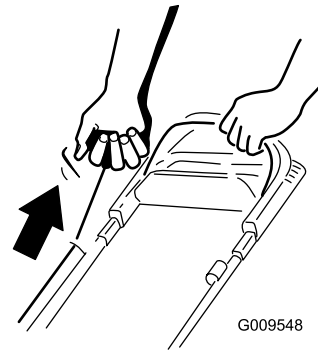


Figure 19

g009548

**Note:** When you pull the recoil-start handle, pull it lightly until you feel resistance, then pull it sharply (Figure 19). Allow the rope to return to the handle slowly.

**Note:** If the machine does not start after several attempts, contact an Authorized Service Dealer.

# Using the Self-Propel Drive

To operate the self-propel drive, simply walk with your hands on the upper handle and your elbows at your sides, and the machine will automatically keep pace with you (Figure 20).

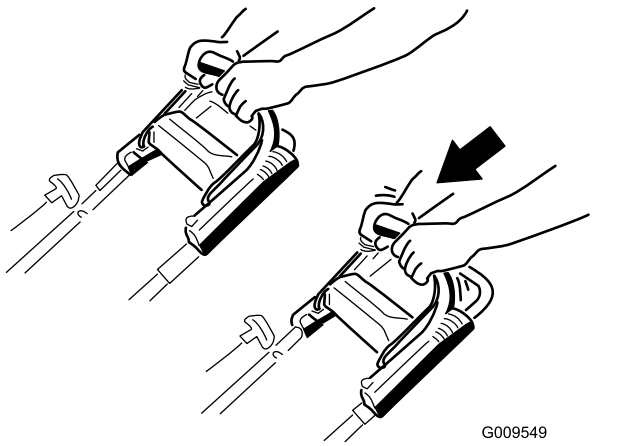


Figure 20

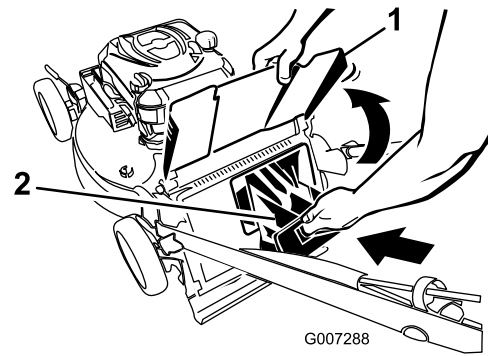


Figure 21

- 1. Rear door
- 2. Rear plug

**Note:** If the machine does not freely roll backward after self-propelling, stop walking, hold your hands in place, and allow the machine to roll a couple of centimeters (inches) forward to disengage the wheel drive. You can also try reaching just under the upper handle to the metal handle and push the machine forward a couple of centimeters (inches). If the machine still does not roll backward easily, contact an Authorized Service Dealer.

# Shutting off the Engine

**Service Interval:** Before each use or daily

To shut off the engine, release the blade-control bar.

**Note:** Remove the electric-start button whenever you leave the machine (electric-start model only).

**Important:** When you release the blade-control bar, the engine should shut off and the blade should stop within 3 seconds. If they do not, stop using your machine immediately and contact an Authorized Service Dealer.

# Recycling the Clippings

Your machine comes from the factory ready to recycle the grass and leaf clippings back into the lawn.

If the side-discharge chute is on the machine, remove it and lock the side discharge door; refer to [Removing the Side-Discharge Chute \(page 15\)](#) before recycling the clippings.

**Important:** Ensure that the rear plug is locked in place. To lock the plug: Raise the rear door (Figure 21), firmly push the plug in until it snaps into place behind the tabs, and rotate the lever on the plug to the left (Figure 22).

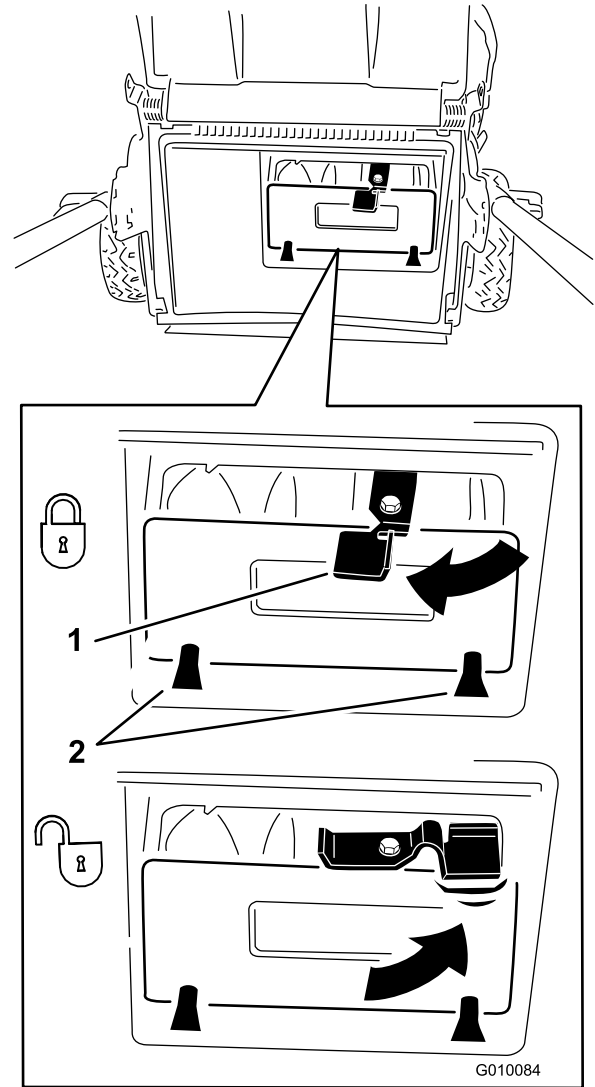


Figure 22

- 1. Lever
- 2. Tabs

**Note:** To unlock the rear plug, rotate the lever on the plug to the right (Figure 22).

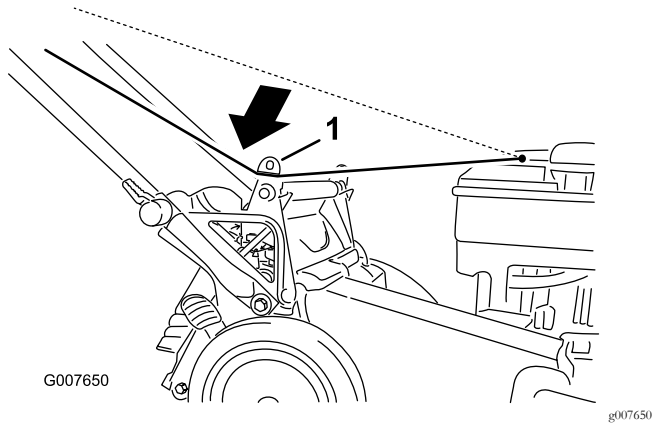
# Bagging the Clippings

Use the grass bag when you want to collect grass and leaf clippings from the lawn.

If the side-discharge chute is on the machine, remove it and lock the side-discharge door; refer to [Removing the Side-Discharge Chute](#) (page 15).

## Installing the Grass Bag

1. Route the starter rope around the lower-rope guide ([Figure 23](#)).



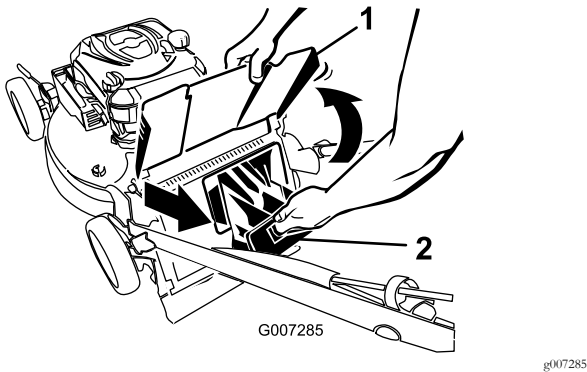
**Figure 23**

1. Lower-rope guide

---

**Note:** The lower-rope guide releases the starter rope when you pull the recoil-start handle.

2. Raise and hold up the rear door ([Figure 24](#)).

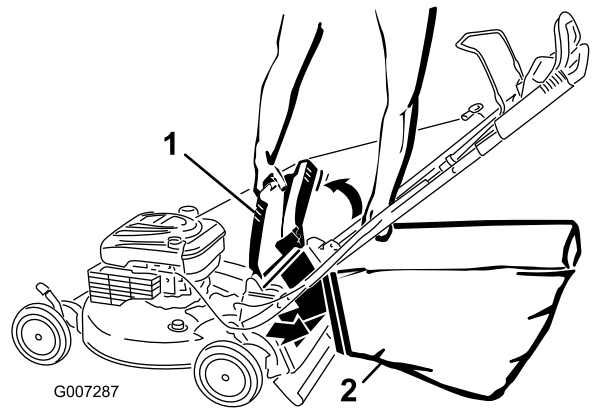


**Figure 24**

1. Rear door

2. Rear plug

- 
3. Pull out the rear plug ([Figure 24](#)).
  4. Hang the upper front edge of the bag from the grass-bag pins on the notches of the handle brackets ([Figure 25](#)).



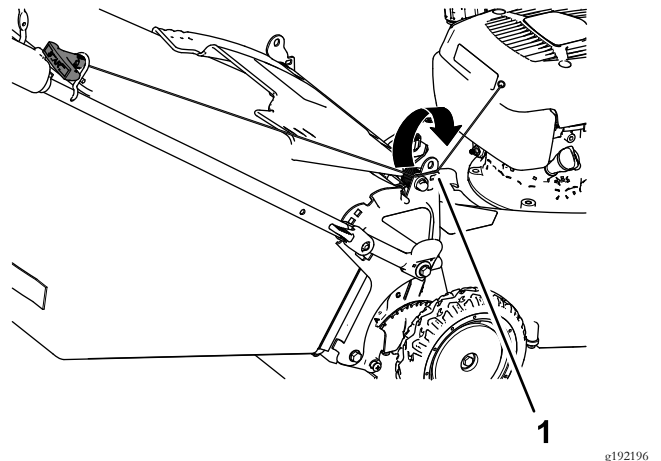
**Figure 25**

1. Rear door
2. Notches—handle brackets (2)
3. Grass-bag pin (2)

- 
5. Lower the rear door.

## Removing the Grass Bag

1. Route the starter rope around the lower-rope guide ([Figure 26](#)).



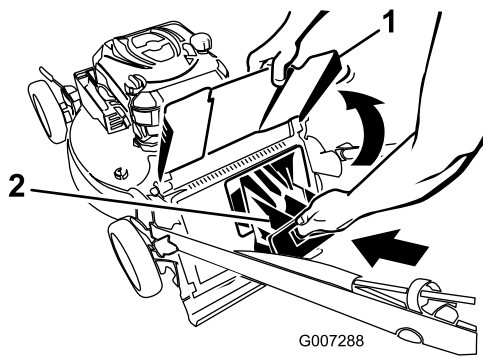
**Figure 26**

1. Lower-rope guide

---

**Note:** The lower-rope guide releases the starter rope when you pull the recoil-start handle.

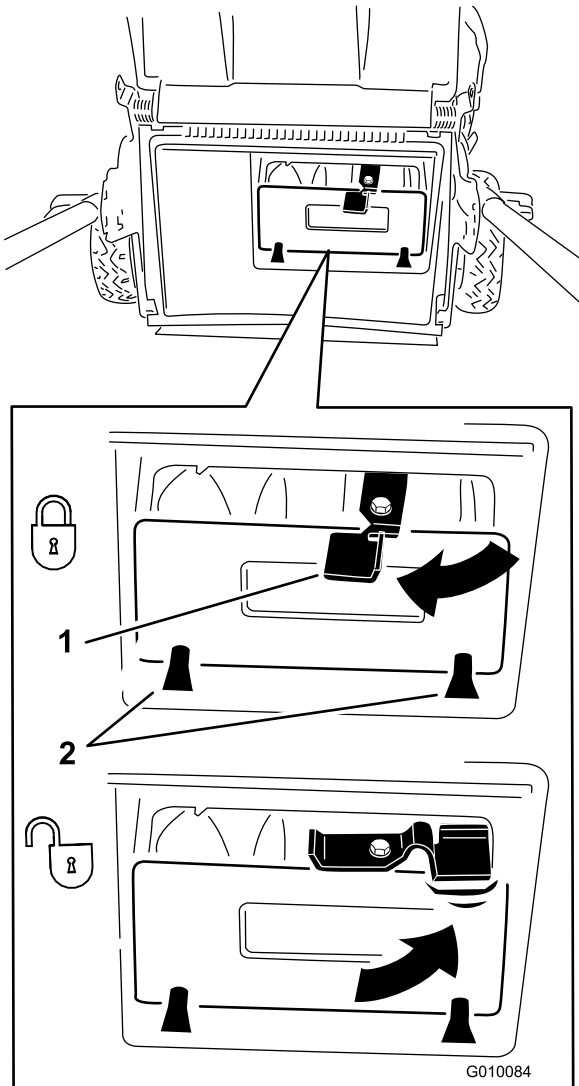
2. Raise and hold up the rear door.
3. Lift the grass bag up by the handle off the notches of the handle brackets.
4. Install the rear plug ([Figure 23](#)).



**Figure 27**

1. Rear door
2. Rear plug

**Important:** Ensure that the rear plug is locked in place. To lock the plug, firmly push the plug in until it snaps into place behind the tabs, and rotate the lever on the plug to the left (Figure 28).



**Figure 28**

1. Lever
2. Tabs

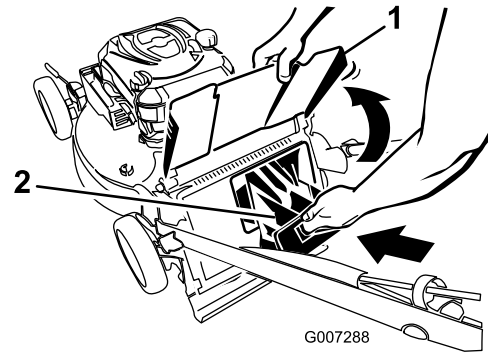
**Note:** To unlock the plug, rotate the lever on the plug to the right (Figure 28).

5. Lower the rear door.

## Side-Discharging the Clippings

If the bag is on the machine, remove it and insert the rear plug; refer to [Removing the Grass Bag](#) (page 13).

**Important:** Ensure that the rear plug is locked in place. To lock the plug, raise the rear door (Figure 29), firmly push the plug in until it snaps into place behind the tabs, and rotate the lever on the plug to the left (Figure 28).



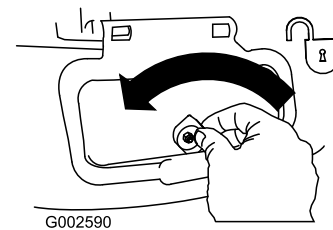
**Figure 29**

1. Rear door
2. Rear plug

**Note:** To unlock the plug, rotate the lever on the plug to the right (Figure 28).

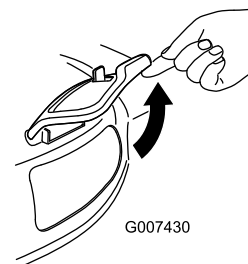
## Installing the Side-Discharge Chute

1. Unlock the side-discharge door (Figure 30).



**Figure 30**

2. Lift open the side-discharge door (Figure 31).



**Figure 31**

3. Install the side-discharge chute and close the door onto the chute (Figure 32).

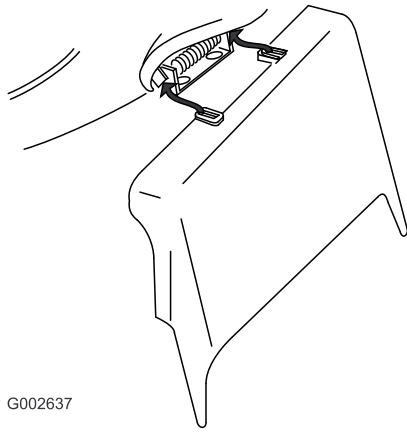


Figure 32

### Removing the Side-Discharge Chute

To remove the side discharge chute, reverse the steps above.

**Important:** Lock the side-discharge door after you close it (Figure 33).

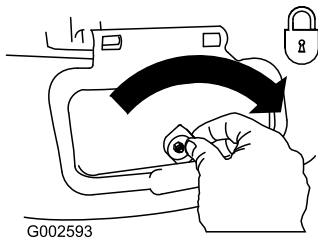


Figure 33

## Operating Tips

### General Mowing Tips

- Inspect the area where you will use the machine and remove all objects that the machine could throw.
- Avoid striking solid objects with the blade. Never deliberately mow over any object.
- If the machine strikes an object or starts to vibrate, immediately shut off the engine, disconnect the wire from the spark plug, remove the electric-start button (electric-start model only), and examine the machine for damage.
- For best performance, install a new blade before the cutting season begins.
- Replace the blade when necessary with a Toro replacement blade.

## Cutting Grass

- Cut only about a third of the grass blade at a time. Do not cut below 51 mm (2 inches) unless the grass is sparse or it is late fall when grass growth begins to slow down.
- When cutting grass over 15 cm (6 inches) tall, mow at the highest cutting height setting and walk slower; then mow again at a lower setting for the best lawn appearance. If the grass is too long, the machine may plug and cause the engine to stall.
- Wet grass and leaves tend to clump on the yard and can cause the machine to plug or the engine to stall. Avoid mowing in wet conditions.
- Be aware of a potential fire hazard in very dry conditions, follow all local fire warnings, and keep the machine free of dry grass and leaf debris.
- Alternate the mowing direction. This helps disperse the clippings over the lawn for even fertilization.
- If the finished lawn appearance is unsatisfactory, try 1 or more of the following:
  - Replace the blade or have it sharpened.
  - Walk at a slower pace while mowing.
  - Raise the cutting height on your machine.
  - Cut the grass more frequently.
  - Overlap cutting swaths instead of cutting a full swath with each pass.

## Cutting Leaves

- After cutting the lawn, ensure that half of the lawn shows through the cut leaf cover. You may need to make more than a single pass over the leaves.
- If there are more than 13 cm (5 inches) of leaves on the lawn, mow at a higher cutting height and then again at the desired cutting height.
- Slow down your mowing speed if the machine does not cut the leaves finely enough.

# After Operation

## After Operating Safety

### General Safety

- Clean grass and debris from the machine to help prevent fires. Clean up oil or fuel spills.
- Allow the engine to cool before storing the machine in any enclosure.
- Never store the machine or fuel container where there is an open flame, spark, or pilot light, such as on a water heater or on other appliances.

### Hauling Safety

- Remove the electric-start button before loading the machine for hauling (electric-start model only).
- Use care when loading or unloading the machine.
- Secure the machine from rolling.

## Cleaning under the Machine

**Service Interval:** Before each use or daily

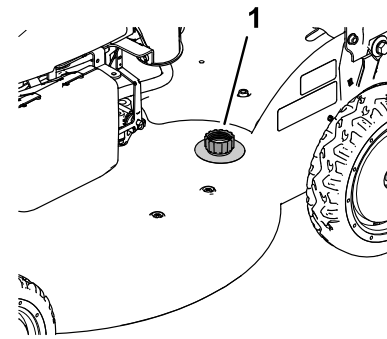
### **⚠ WARNING**

The machine may dislodge material from under the machine.

- Wear eye protection.
- Stay in the operating position (behind the handle) when the engine is running.
- Do not allow bystanders in the area.

For best results, clean the machine soon after you have completed mowing.

1. Lower the machine to the lowest cutting-height setting. Refer to [Adjusting the Cutting Height \(page 10\)](#).
2. Move the machine onto a flat paved surface.
3. Wash out the area under the rear door where the clippings go from the underside of the machine to the grass bag.
4. Attach a garden hose that is connected to a water supply to the washout port on the machine ([Figure 34](#)).



**Figure 34**

g189103

1. Washout port
- 

5. Turn the water on.
6. Start the engine and run it until there are no more clippings that come out from under the machine.
7. Shut off the engine.
8. Shut off the water and disconnect the garden hose from the machine.
9. Start the engine and run it for a few minutes to dry the underside of the machine to prevent it from rusting.
10. Shut off the engine and allow it to cool before storing the machine in an enclosed area.

## Folding the Handle

### **⚠ WARNING**

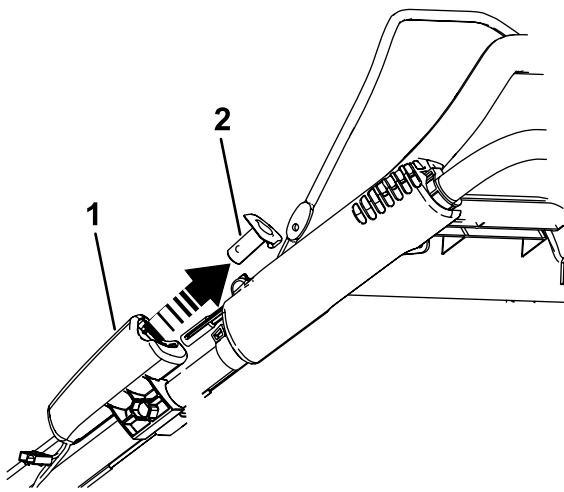
Folding or unfolding the handle improperly can damage the cables, causing an unsafe operating condition.

- Do not damage the cables when folding or unfolding the handle.
- If a cable is damaged, contact an Authorized Service Dealer.

1. Remove the electric-start button as shown in [Figure 35](#) (electric-start model only).



3. To unfold the handle, refer to [1 Assembling and Unfolding the Handle](#) (page 5).



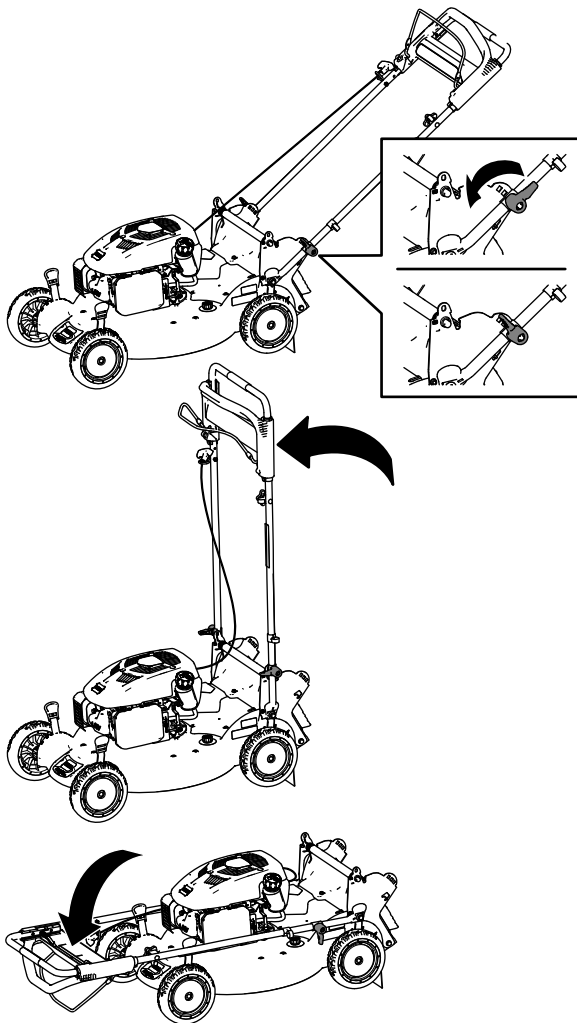
**Figure 35**

g186627

1. Electric starter
2. Electric-start button

2. Rotate the handle forward ([Figure 36](#)).

**Important:** Route the cables to the outside of the handle knobs as you fold the upper handle.



**Figure 36**

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# Maintenance

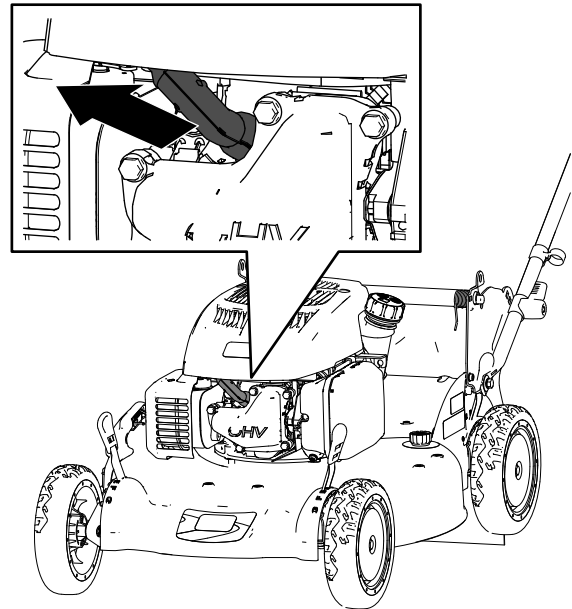
**Note:** Determine the left and right sides of the machine from the normal operating position.

## Recommended Maintenance Schedule(s)

Maintenance Service Interval	Maintenance Procedure
After the first 5 hours	<ul style="list-style-type: none"> <li>Change the engine oil.</li> </ul>
Before each use or daily	<ul style="list-style-type: none"> <li>Check the engine oil level.</li> <li>Ensure that the engine shuts off within 3 seconds after releasing the blade-control bar.</li> <li>Clean grass clippings and dirt from under the machine.</li> </ul>
Every 25 hours	<ul style="list-style-type: none"> <li>Charge the battery for 24 hours (electric-start model only).</li> <li>Lubricate the rear wheel gears.</li> </ul>
Yearly	<ul style="list-style-type: none"> <li>Replace the air filter; replace it more frequently in dusty operating conditions.</li> <li>Change the engine oil.</li> <li>Replace the blade or have it sharpened (more frequently if the edge dulls quickly).</li> <li>Clean the air-cooling system; clean it more frequently in dusty operating conditions. Refer to your engine manual.</li> <li>Refer to your engine manual for any additional yearly maintenance procedures.</li> </ul>
Yearly or before storage	<ul style="list-style-type: none"> <li>Empty the fuel tank before repairs as directed and before yearly storage.</li> </ul>

## Maintenance Safety

- Disconnect the spark-plug wire from the spark plug and remove the electric-start button (electric-start model only) before performing any maintenance procedure.
- Wear gloves and eye protection when servicing the machine.
- The blade is sharp; contacting the blade can result in serious personal injury. Wear gloves when servicing the blade.
- Never tamper with safety devices. Check their proper operation regularly.
- Tipping the machine may cause the fuel to leak. Fuel is flammable and explosive, and can cause personal injury. Run the engine dry to remove the fuel with a hand pump; never siphon the fuel.



**Figure 37**

g189355

## Preparing for Maintenance

- Shut off the engine, remove the electric-start button (electric-start model only), and wait for all moving parts to stop.
- Disconnect the spark-plug wire from the spark plug (Figure 37).

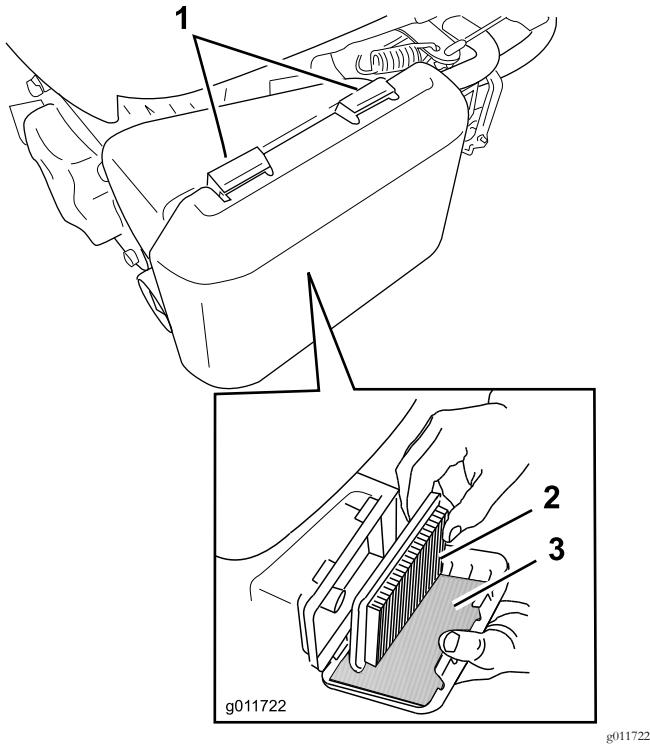
- After performing the maintenance procedure(s), connect the spark-plug wire to the spark plug.

**Important:** Before tipping the machine to change the oil or replace the blade, allow the fuel tank to run dry through normal usage. If you must tip the machine prior to running out of fuel, use a hand fuel pump to remove the fuel. Always tip the machine onto its side, with the dipstick down.

# Replacing the Air Cleaner

**Service Interval:** Yearly

1. Press down on the latch tabs on top of the air-cleaner cover (Figure 38).



**Figure 38**

1. Latch tabs
  2. Paper air filter
  3. Foam pre-filter
- 
2. Open the cover.
  3. Remove the paper air filter and the foam pre-filter (Figure 38).
  4. Inspect the foam pre-filter, and replace it if it is damaged or excessively dirty.
  5. Inspect the paper air filter.
    - A. If the paper air filter is damaged or is wet with oil or fuel, replace it.
    - B. If the paper air filter is dirty, tap it on a hard surface several times or blow compressed air less than 207 kPa (30 psi) through the side of the filter that faces the engine.
- Note:** Do not brush the dirt off the filter; brushing forces dirt into the fibers.
6. Remove dirt from the air cleaner body and cover using a moist rag (to trap the dirt and keep it from falling into the engine). **Do not wipe dirt into the air duct.**
  7. Insert the foam pre-filter and the paper air filter into the air cleaner.
  8. Install the cover.

# Changing the Engine Oil

**Service Interval:** After the first 5 hours

Yearly

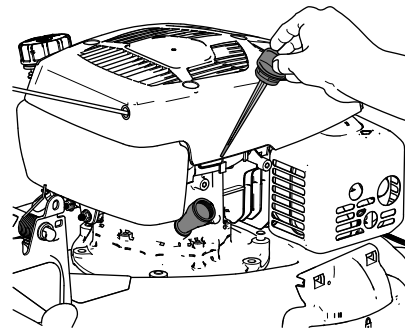
**Engine oil capacity:** 0.5 L (19 fl. oz)

**Oil viscosity:** SAE 30 or SAE 10W-30 detergent oil

**API service classification:** SJ or higher

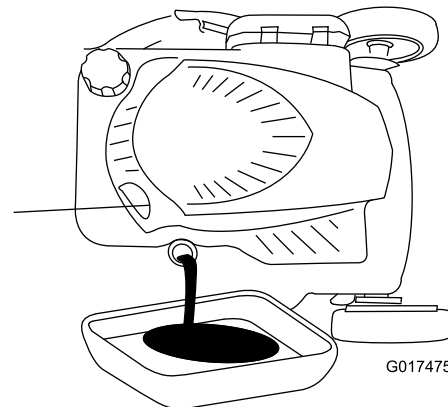
**Note:** Run the engine a few minutes before changing the oil to warm it. Warm oil flows better and carries more contaminants.

1. Move the machine to a level surface.
2. Refer to [Preparing for Maintenance](#) (page 18).
3. Remove the dipstick by rotating the cap counterclockwise and pulling it out (Figure 39).



**Figure 39**

1. Dipstick
- 
4. Tip the machine onto its side (so that the air filter is up) to drain the used oil from the oil-fill tube (Figure 40).



**Figure 40**

5. After draining the used oil, return the machine to the operating position.
6. Carefully pour about 3/4 of the engine capacity of oil into the oil-fill tube.
7. Wait about 3 minutes for the oil to settle in the engine.

8. Wipe the dipstick clean with a clean cloth.
9. Insert the dipstick into the oil-fill tube, then remove the dipstick.
10. Read the oil level on the dipstick (Figure 40).

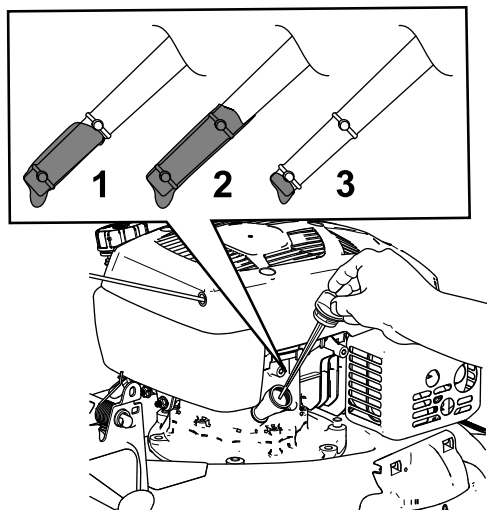


Figure 41

- |         |        |
|---------|--------|
| 1. Full | 3. Low |
| 2. High |        |

- If the oil level on the dipstick is too low, carefully pour a small amount of oil into the oil-fill tube, wait 3 minutes, and repeat steps 8 through 10 until the oil on the dipstick is at the correct level.
- If the oil level on the dipstick is too high, drain the excess oil until the oil on the dipstick is at the correct level.

**Important:** If the oil level in the engine is too low or too high and you run the engine, you may damage the engine.

11. Install the dipstick securely.
12. Recycle the used oil properly.

## Charging the Battery

### Electric-Start Model Only

**Service Interval:** Every 25 hours

Charge the battery for 24 hours initially, then monthly (every 25 starts) or as needed. Always use the charger in a sheltered area and charge the battery at room temperature (70° or 22° C) whenever possible.

1. Connect the charger to the wiring harness located below the electric-start button (Figure 42).

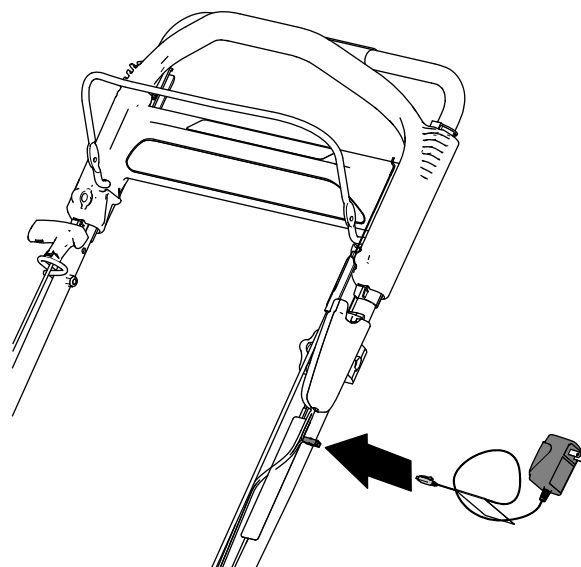


Figure 42

g189390

2. Plug the charger into a wall outlet.

**Note:** When the battery no longer holds a charge, recycle or dispose of the lead-acid battery according to local codes.

**Note:** Your battery charger may have a 2-color LED display that indicates the following states of charging:

- A red light indicates that the charger is charging the battery.
- A green light indicates that the charger is fully charged or the charger is disconnected from the battery.
- A flashing light that alternates between red and green indicates that the battery is nearly fully charged. This state lasts only a few minutes until the battery is fully charged.

## Replacing the Fuse

### Electric-Start Model Only

If the battery does not charge or the engine does not run with the electric starter, the fuse may be blown. Replace it with a 40 A plug-in type fuse.

1. Remove the cover from the battery compartment (Figure 43).
2. Pull out the battery and locate the fuse (Figure 43).
3. Replace the fuse in the fuse holder (Figure 43).

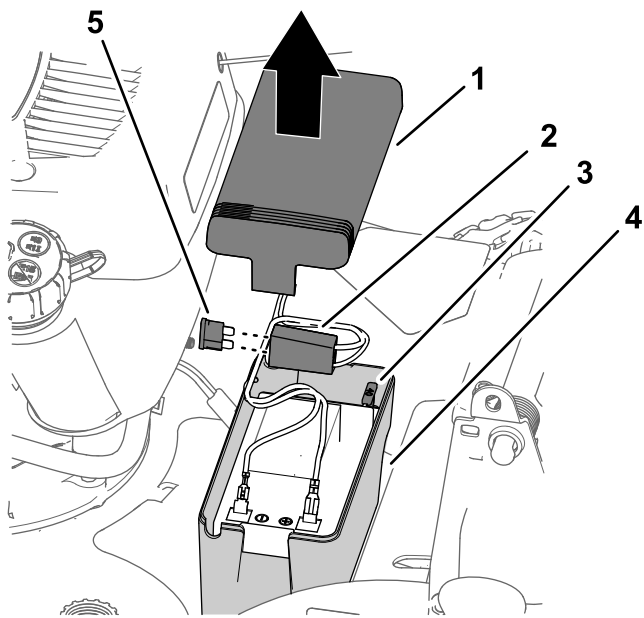


Figure 43

g189463

1. Cover
2. Fuse holder
3. Spare fuse
4. Battery compartment
5. Fuse

**Note:** Your machine comes with a spare fuse in the battery compartment.

4. Install the cover over the battery compartment (Figure 43).

## Lubricating the Wheel Gears

**Service Interval:** Every 25 hours

1. Wipe the grease fittings just inside the rear wheels with a clean rag (Figure 44).

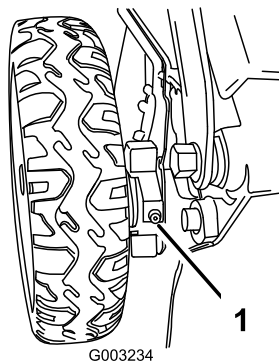


Figure 44

g003234

1. Grease fitting
2. Install a grease gun onto each fitting and gently apply 2 or 3 pumps of #2 multi-purpose, lithium-base grease.

## Replacing the Blade

**Service Interval:** Yearly

**Important:** You will need a torque wrench to install the blade properly. If you do not have a torque wrench or are uncomfortable performing this procedure, contact an Authorized Service Dealer.

Examine the blade whenever you run out of fuel. If the blade is damaged or cracked, replace it immediately. If the blade edge is dull or nicked, have it sharpened and balanced, or replace it.

### ⚠ WARNING

The blade is sharp; contacting the blade can result in serious personal injury.

Wear gloves when servicing the blade.

1. Refer to [Preparing for Maintenance](#) (page 18).
2. Tip the machine onto its side with the air filter up.
3. Use a block of wood to hold the blade steady (Figure 45).

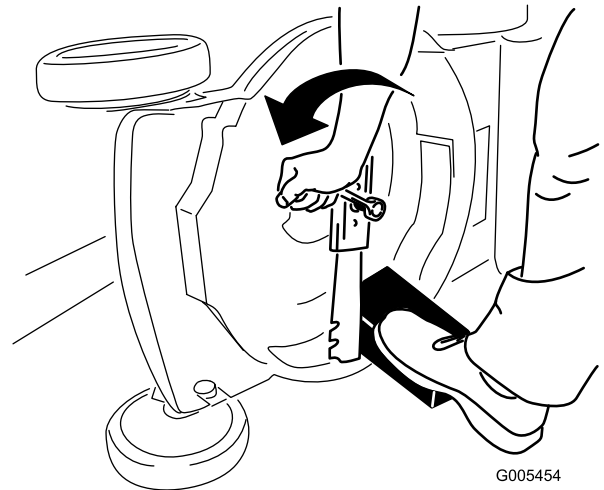


Figure 45

g005454

4. Remove the blade, saving all mounting hardware (Figure 45).
5. Install the new blade and all mounting hardware (Figure 46).

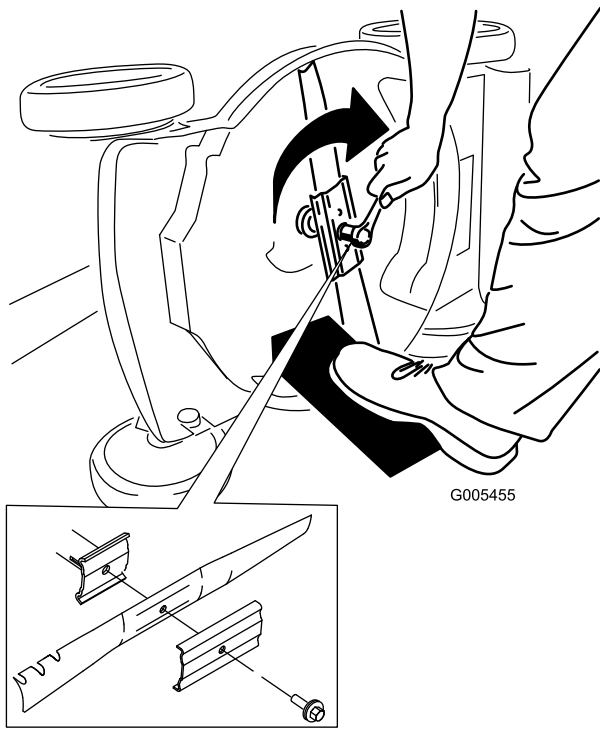


Figure 46

g005455

**Important:** Position the curved ends of the blade to point toward the machine housing.

- Use a torque wrench to tighten the blade bolt to 82 N·m (60 ft-lb).

**Important:** A bolt torqued to 82 N·m (60 ft-lb) is very tight. While holding the blade with a block of wood, put your weight behind the ratchet or wrench and tighten the bolt securely. This bolt is very difficult to overtighten.

## Adjusting the Self-Propel Drive

Whenever you install a new self-propel cable or if the self-propel drive is out of adjustment, adjust the self-propel drive.

- Turn the adjustment knob counterclockwise to loosen the cable adjustment (Figure 47).

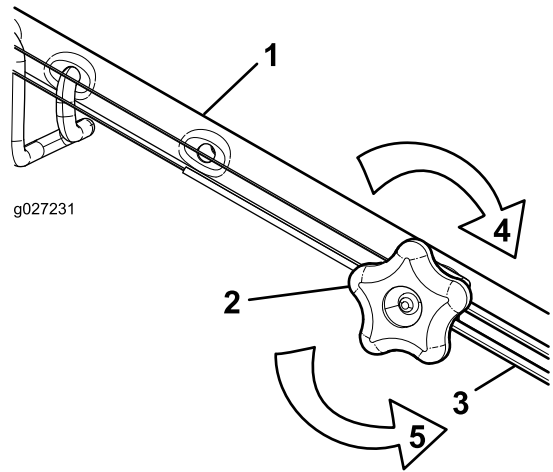


Figure 47

g027231

- Handle (left side)
- Adjustment knob
- Self-propel-drive cable
- Turn the knob clockwise to tighten the adjustment.
- Turn the knob counterclockwise to loosen the adjustment.

- Adjust the tension on the cable (Figure 47) by pulling it back or pushing it forward and holding that position.

**Note:** Push the cable toward the engine to increase the traction; pull the cable away from the engine to decrease the traction.

- Turn the adjustment knob clockwise to tighten the cable adjustment.

**Note:** Tighten the knob firmly by hand.

# Storage

Store the machine in a cool, clean, dry place.

7. Fill the fuel tank with fresh fuel; refer to [Filling the Fuel Tank \(page 9\)](#).
8. Connect the wire to the spark plug.

## Preparing the Machine for Storage

1. On the last refueling of the year, add fuel stabilizer (such as Toro Premium Fuel Treatment) to the fuel.
2. Dispose of any unused fuel properly. Recycle it according to local codes, or use it in your automobile.

**Note:** Old fuel in the fuel tank is the leading cause of hard starting. Do not store fuel without stabilizer more than 30 days, and do not store stabilized fuel more than 90 days.

3. Run the machine until the engine shuts off from running out of fuel.
4. Start the engine again.
5. Allow the engine to run until it shuts off. When you can no longer start the engine, it is sufficiently dry.
6. Disconnect the wire from the spark plug and remove the electric-start button (electric-start model only).
7. Remove the spark plug, add 30 ml (1 oz) of engine oil through the spark-plug hole, and pull the starter rope slowly several times to distribute oil throughout the cylinder to prevent cylinder corrosion during the off-season.
8. Loosely install the spark plug.
9. Tighten all nuts, bolts, and screws.
10. **Electric-start model only:** Charge the battery for 24 hours, then unplug the battery charger and store the machine in an unheated area. If you must store the machine in a heated area, you must charge the battery every 90 days. Refer to [Charging the Battery \(page 20\)](#).

## Remove the Machine from Storage

1. Charge the battery for 24 hours; refer to [Charging the Battery \(page 20\)](#).
2. Check and tighten all fasteners.
3. Remove the spark plug and spin the engine rapidly by pulling the recoil-start handle to blow the excess oil from the cylinder.
4. Install the spark plug and tighten it with a torque wrench to 20 N·m (15 ft-lb).
5. Perform any maintenance procedures; refer to [Maintenance \(page 18\)](#).
6. Check the engine-oil level; refer to [Checking the Engine-Oil Level \(page 9\)](#).



**The Toro Warranty**  
 A 5-Year Full Warranty (45 Day Limited Warranty for Commercial Use)  
**The Toro GTS Starting Guarantee**  
 A 5-Year Full Warranty (Not Applicable for Commercial Use)

Super Recycler®/Walk  
Power Mowers

**Conditions and Products Covered**

The Toro Company and its affiliate, Toro Warranty Company, pursuant to an agreement between them, jointly promise to repair the Toro Products listed below if used for residential purposes\* if it is defective in materials or workmanship or if it stops functioning due to the failure of a component; or if the Toro GTS (Guaranteed to Start) engine will not start on the first or second pull, provided the routine maintenance required in the *Operator's Manual* have been performed.

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

The following time periods apply from the original date of purchase:

<b>Products</b>	<b>Warranty Period</b>
Super Recycler® Mowers	5 year full warranty
GTS (Guaranteed to Start)	5 year full warranty
Battery	1 year full warranty

**Limited Warranty for Commercial Use**

Gas-powered Toro Products used for commercial, institutional, or rental use, are warranted for 45 days against defects in materials or workmanship. Components failing due to normal wear are not covered by this warranty.

The Toro GTS (Guaranteed to Start) Starting Guarantee does not apply when the product is used commercially\*.

**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 Authorized Toro Service Dealer to arrange service at their dealership. To locate a dealer convenient to you, access our web site at [www.Toro.com](http://www.Toro.com). You may also call the numbers listed in item #3 to use the 24-hour Toro Dealer locator system.
2. Bring the product and your proof of purchase (sales receipt) to the Service Dealer. The dealer will diagnose the problem and determine if it is covered under warranty.
3. If for any reason you are dissatisfied with the Service Dealer's analysis or with the assistance provided, contact us at:

Toro Warranty Company  
 Customer Care Department, RLC Division  
 8111 Lyndale Avenue South  
 Bloomington, MN 55420-1196  
 Toll free at 888-865-5688 (U.S. customers)  
 Toll free at 888-865-5705 (Canadian customers)

**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 and engine warranty coverage on some products. This express warranty does not cover the following:

- Cost of regular maintenance service or parts, such as filters, fuel, lubricants, oil changes, spark plugs, air filters, blade sharpening or worn blades, cable/linkage adjustments, or brake and clutch adjustments
- Components failing due to normal wear
- Any product or part which has been altered, misused, neglected, or requires replacement or repair due to accidents or lack of proper maintenance
- Pickup and delivery charges
- Repairs or attempted repairs by anyone other than an Authorized Toro Service Dealer
- Repairs necessary due to failure to follow recommended fuel procedure (consult *Operator's Manual* for more details)
  - Removing contaminants from the fuel system is not covered
  - Use of old fuel (more than one month old) or fuel which contains more than 10% ethanol or more than 15% MTBE
  - Failure to drain the fuel system prior to any period of non-use over one month
- Repairs or adjustments to correct starting difficulties due to the following:
  - Failure to follow proper maintenance procedures or recommended fuel procedure
  - Rotary mower blade striking an object
- Special operational conditions where starting may require more than two pulls:
  - First time starts after extended period of non-use over three months or seasonal storage
  - Cool temperature starts such as those found in early spring and late autumn
  - Improper starting procedures - if you are having difficulty starting your unit, please check the *Operator's Manual* to ensure that you are using the correct starting procedures. This can save an unnecessary visit to an Authorized Toro Service Dealer.

**General Conditions**

All repairs covered by these warranties must be performed by an Authorized Toro Service Dealer using Toro approved replacement parts. Repair by an Authorized Toro Service Dealer is your sole remedy under this warranty.

**Neither The Toro Company nor Toro Warranty Company is liable for indirect, incidental, or consequential damages in connection with the use of the Toro Products covered by these warranties, including any cost or expense of providing substitute equipment or service during reasonable periods of malfunction or non-use pending completion of repairs under these warranties.**

Some states do not allow exclusions of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the above exclusions may not apply to you.

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

**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.

**Australian Consumer Law:** Australian customers will find details relating to the Australian Consumer Law either inside the box or at your local Toro Dealer.

\*Residential purposes means use of the product on the same lot as your home. Use at more than one location, or institutional or rental use, is considered commercial use, and the commercial use warranty would apply.