Form No. 3398-211 Rev A

53cm Mulching/Rear Bagging/Side Discharging Lawn Mower

Model No. 29730—Serial No. 316000001 and Up

Model No. 29732—Serial No. 316000001 and Up

Model No. 29734—Serial No. 316000001 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 for product and accessory information, help finding a dealer, or to register your product.

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

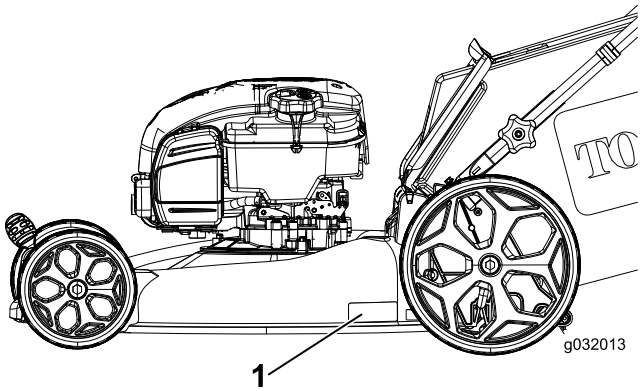


Figure 1

1. Model and serial number plate

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.

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.

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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 you start the engine. Ensure that everyone using this product knows how to use it and understands the warnings.
- 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 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.

Sound Pressure

This unit has a sound pressure level at the operator's ear of 88 dBA, which includes an Uncertainty Value (K) of 1 dBA.

The sound pressure level was determined according to the procedures outlined in EN ISO 5395:2013.

Sound Power

This unit has a guaranteed sound power level of 98 dBA, which includes an Uncertainty Value (K) of 1 dBA.

The sound power level was determined according to the procedures outlined in ISO 11094.

⚠ CAUTION

Long-term exposure to noise while operating the machine may cause some hearing loss.

Wear adequate hearing protection whenever you operate the machine for an extended period of time.

Hand/Arm Vibration

Model 29730

Measured vibration level for right hand = 4.9 m/s^2

Measured vibration level for left hand = 4.2 m/s^2

Uncertainty Value (K) = 2.5 m/s^2

Measured values were determined according to the procedures outlined in EN ISO 5395:2013.

Models 29732 and 29734

Measured vibration level for right hand = 2.2 m/s^2

Measured vibration level for left hand = 1.9 m/s^2

Uncertainty Value (K) = 1.1 m/s^2

Measured values were determined according to the procedures outlined in EN ISO 5395:2013.

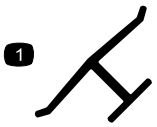
⚠ CAUTION

Long-term exposure to vibration while operating the machine may cause some numbness in the hands and wrists.

Wear gloves that dampen the vibration whenever you operate the machine for an extended period of time.

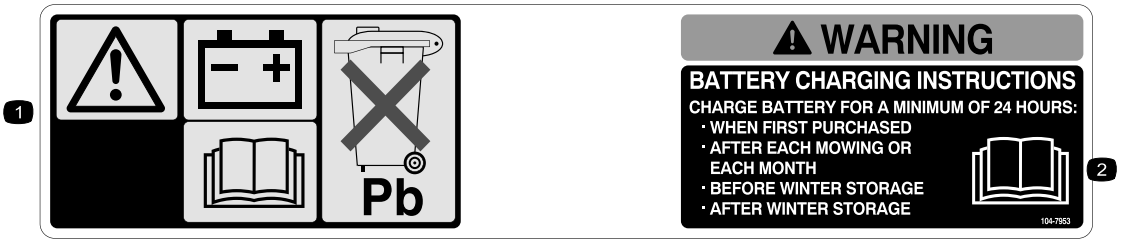
Safety and Instructional Decals

Important: **Safety and instruction decals are located near areas of potential danger. Replace damaged decals.**



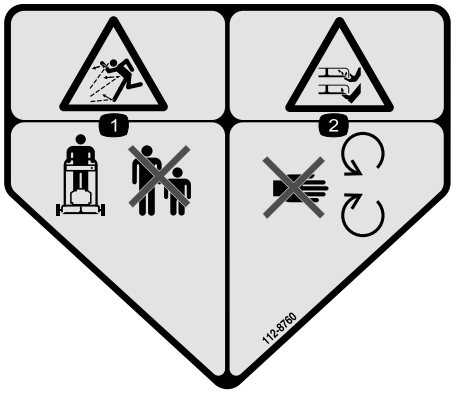
Manufacturer's Mark

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



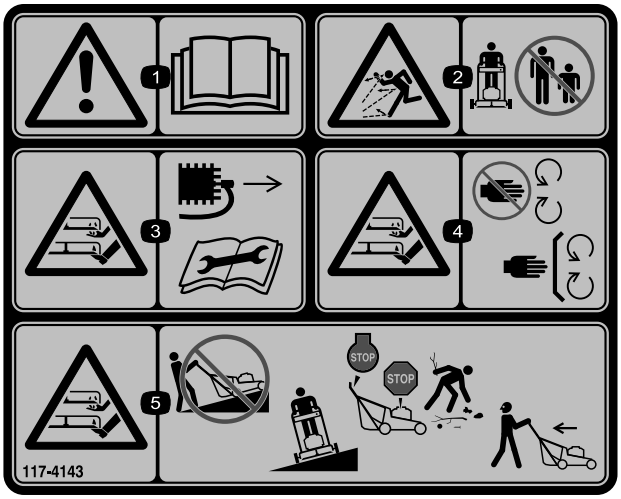
104-7953

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



112-8760

1. Thrown object hazard—keep bystanders a safe distance from the machine.
2. Cutting/dismemberment of hand or foot—stay away from moving parts.



117-4143

1. Warning—read the *Operator's Manual*.
2. Thrown object hazard—keep bystanders a safe distance from the machine.
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. Cutting/dismemberment hazard of hand or foot, mower blade—stay away from moving parts and keep all guards and shields in place.
5. Cutting/dismemberment hazard of hand or foot, mower blade—do not mow up and down slopes, only mow across; stop the mower and engine, pick up debris before operating; look behind and down when reversing.

Setup

Important: **Remove and discard the protective plastic sheet that covers the engine.**

1

Unfolding the Handle

No Parts Required

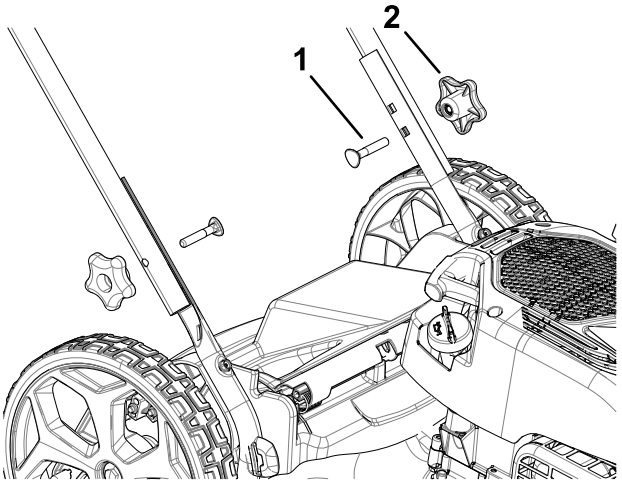
Procedure

⚠ 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 handle knobs and bolts from the machine housing ().
2. Attach the handle to the machine housing ().



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Figure 3

1. Bolt
2. Knob

3. Move the handle to the operating position (Figure 4).

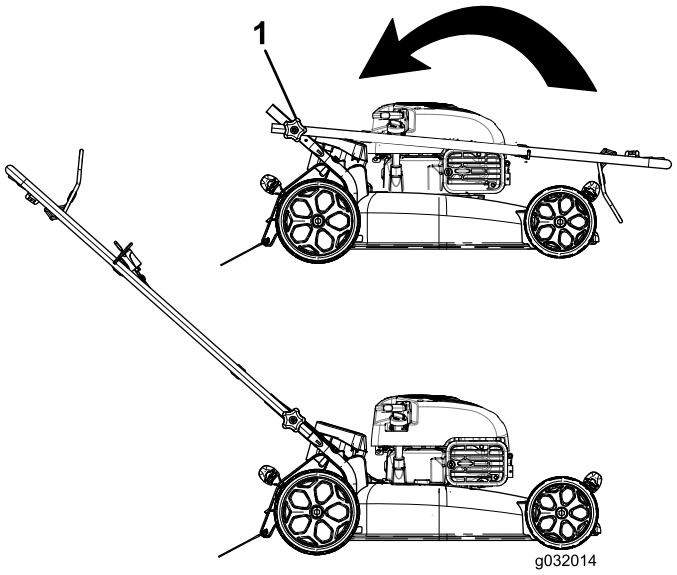


Figure 4

1. Handle knob (2)

Important: **Route the cables to the outside of the handle as you unfold the handle (Figure 5).**

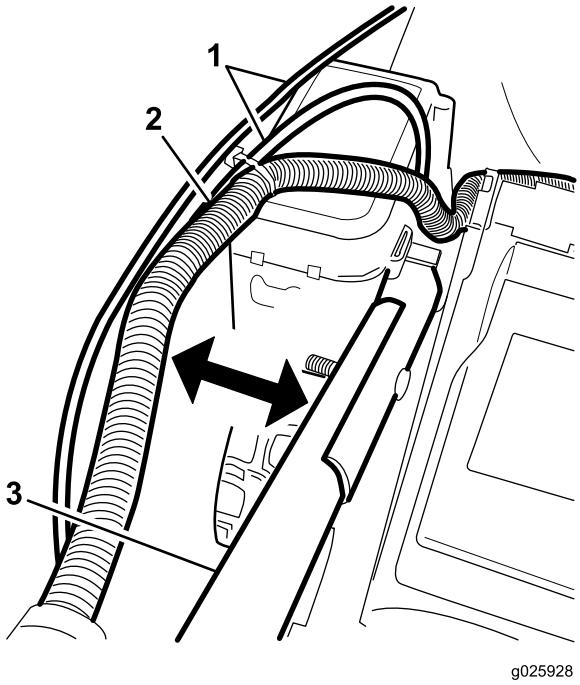


Figure 5

Electric-start model shown

1. Cables
2. Wiring harness (electric-start model only)
3. Handle

4. Install the handle knobs and tighten them firmly by hand.

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).

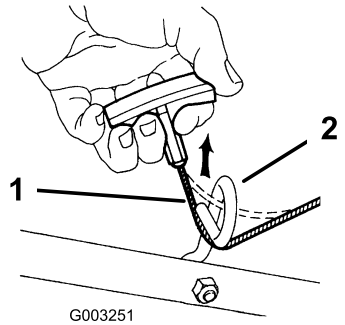


Figure 6

1. Recoil-starter rope
2. Rope guide

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.**

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

   Note: Max. fill: 0.53 L (18 oz), type: 10W-30 or SAE 30 detergent oil with an API service classification of SJ or higher.

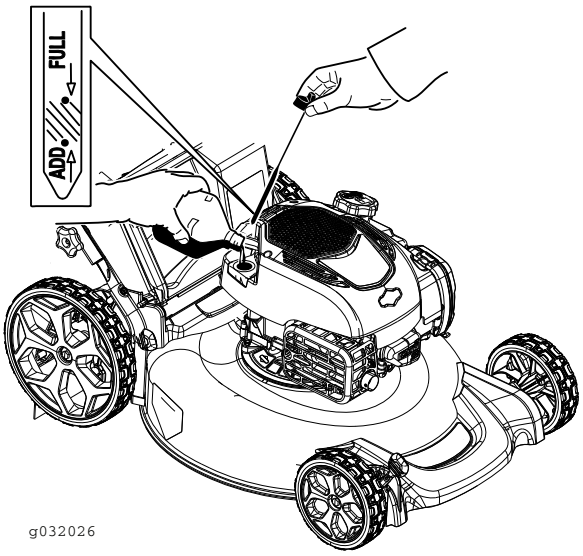


Figure 7

3. Wipe off the dipstick with a clean cloth.
4. Insert the dipstick into the oil-fill tube and screw it in until it stops.
5. Remove the dipstick and read the oil level on the dipstick (Figure 7).
   - If the oil level is below the Add mark on the dipstick, slowly add a small amount of oil to the oil-fill tube, and then repeat steps 3 through 5 until the oil level is at the Full mark on the dipstick.
   - If the oil level 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 15).

     Important: If the oil level in the crankcase is too low or too high and you run the engine, you may damage the engine.
6. Install the dipstick securely by hand.

4

Charging the Battery (Electric-start model only)

No Parts Required

Procedure

Refer to Charging the Battery (Electric-start model only) (page 16).

5

Assembling the Grass Bag

No Parts Required

Procedure

1. Slip the grass bag over the frame as shown in Figure 8.

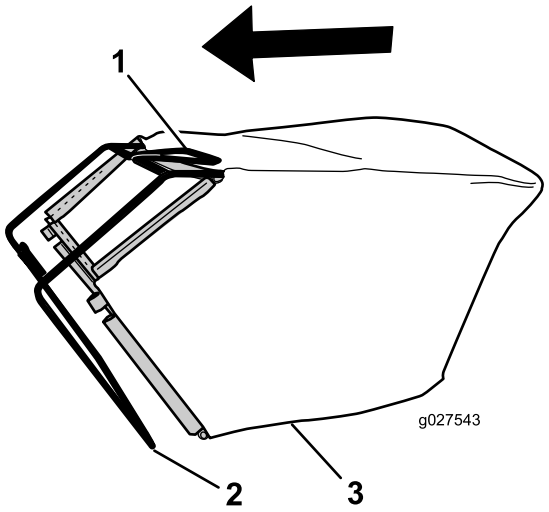


Figure 8

1. Handle
2. Frame
3. Grass bag

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).

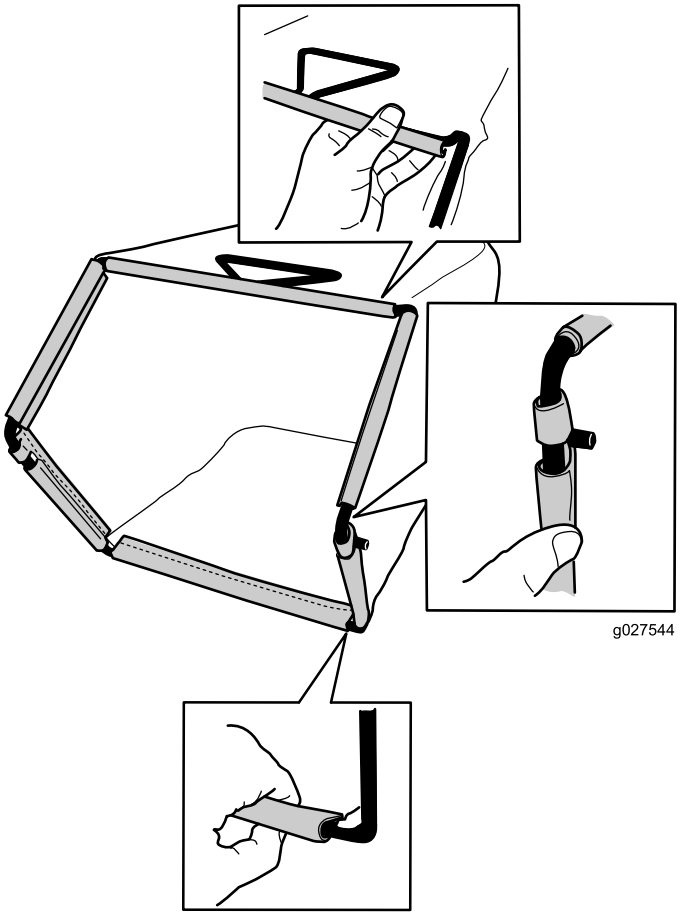


Figure 9

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

Product Overview

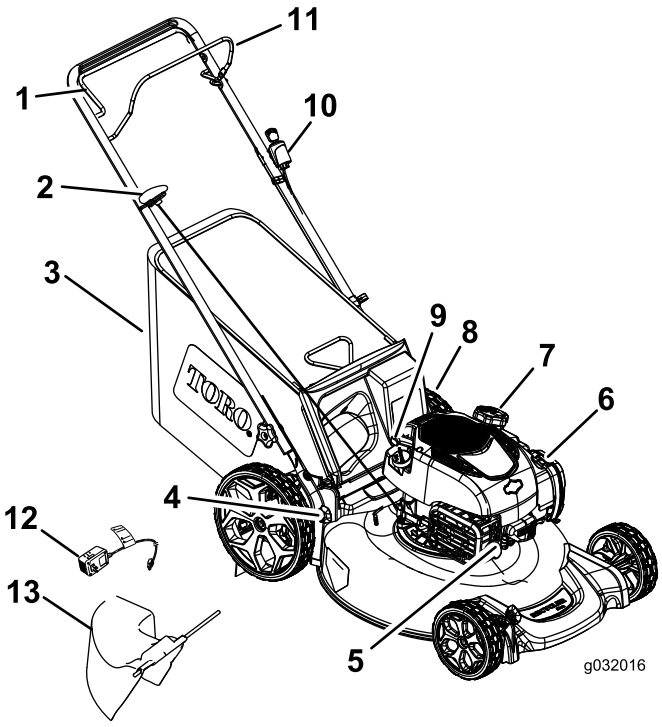


Figure 10

Electric-start model shown

1. Self-propel-drive bar (self-propel model only)
2. Recoil-start handle
3. Grass bag
4. Cutting-height lever (4)
5. Spark plug
6. Air filter
7. Fuel-tank cap
8. Battery (electric-start model only)
9. Oil fill/Dipstick
10. Ignition key (electric-start model only)
11. Blade-control bar
12. Battery charger (electric-start model only)
13. Side-dischange chute

Specifications

Model	Weight	Length	Width	Height
29730	32 kg (71 lb)	140 cm (55 inches)	56 cm (22 inches)	102 cm (40 inches)
29732	34 kg (76 lb)	140 cm (55 inches)	56 cm (22 inches)	102 cm (40 inches)
29734	39 kg (85 lb)	140 cm (55 inches)	56 cm (22 inches)	102 cm (40 inches)

Attachments/Accessories

A selection of Toro approved attachments and accessories is available for use with the machine to enhance and expand its capabilities. Contact your Authorized Service Dealer or

Distributor or go to www.Toro.com for a list of all approved attachments and accessories.

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 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 (less than 30 days old), 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.
- **Ethanol:** Gasoline with up to 10% ethanol (gasohol) or 15% MTBE (methyl tertiary butyl ether) by volume is acceptable. Ethanol and MTBE are not the same. Gasoline with 15% ethanol (E15) by volume is not approved for use. **Never use gasoline that contains more than 10% ethanol by volume**, such as E15 (contains 15% ethanol), E20 (contains 20% ethanol), or E85 (contains up to 85% ethanol). Using unapproved gasoline may cause performance problems and/or engine damage 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 a fuel stabilizer is used.
- **Do not** add oil to gasoline.

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

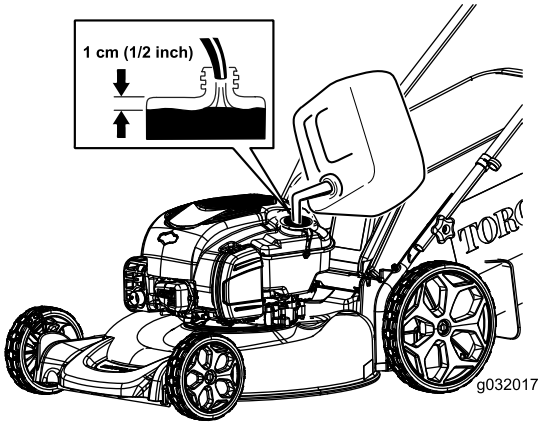


Figure 11

Checking the Engine-Oil Level

Service Interval: Before each use or daily

Max. fill: 0.53 L (18 oz), type: 10W-30 or SAE 30 detergent oil with an API service classification of SJ or higher.

1. Move the machine to a level surface.
2. Remove the dipstick (Figure 12).

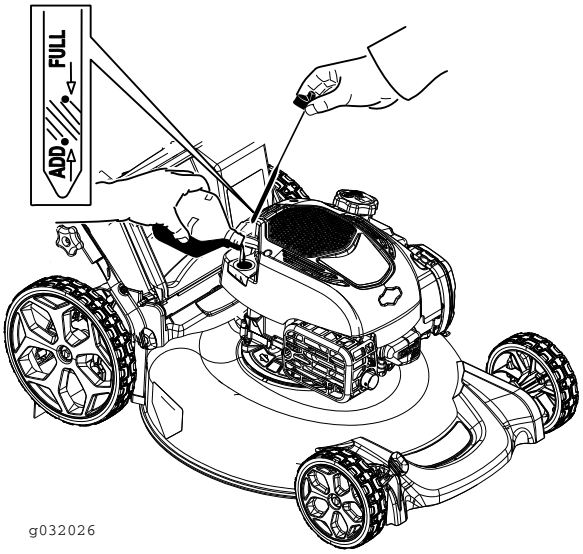


Figure 12

3. Wipe off the dipstick end with a clean cloth.
4. Insert the dipstick into the oil-fill tube and screw it in until it stops.
5. Remove the dipstick and read the oil level; refer to Figure 12.
   - If the oil level is below the Add mark on the dipstick, add a small amount of oil slowly to the oil-fill tube, and then repeat steps 3 through 5 until the oil level is at the Full mark on the dipstick.
   - If the oil level 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 15).

     Important: If the oil level in the crankcase is too low or too high and you run the engine, you may damage the engine.
6. Install the dipstick securely by hand.

Adjusting the Cutting Height

Adjusting the Cutting Height (High-wheel model only)

Adjust the cutting height as desired. Set the front wheels and the rear wheels to the same height.

Note: To raise or lower the machine, move the cutting-height levers as shown in Figure 13.

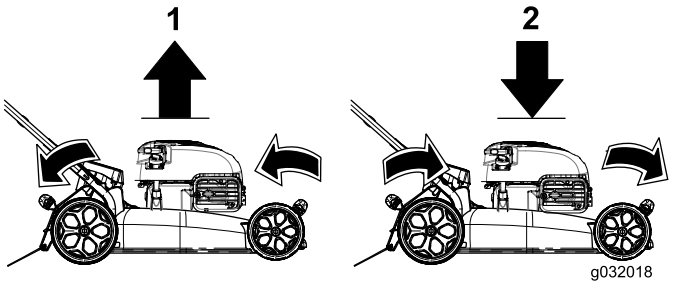


Figure 13

1. Raise the machine
2. Lower the machine

Important: The cutting height settings are 32 mm (1-1/4 inches); 44 mm (1-3/4 inches); 57 mm (2-1/4 inches); 70 mm (2-3/4 inches); 83 mm (3-1/4 inches); and 95 mm (3-3/4 inches).

Adjusting the Cutting Height (Regular-wheel model only)

Adjust the cutting height as desired. Set the front wheels and the rear wheels to the same height.

Note: To raise or lower the machine, move the cutting-height levers as shown in Figure 14.

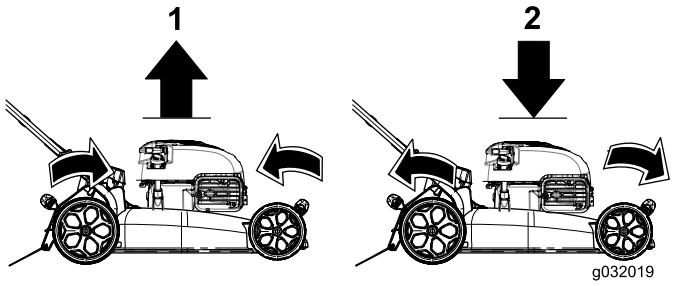


Figure 14

1. Raise the machine
2. Lower the machine

Important: The cutting height settings are 32 mm (1-1/4 inches); 44 mm (1-3/4 inches); 57 mm (2-1/4 inches); 70 mm (2-3/4 inches); 83 mm (3-1/4 inches); and 95 mm (3-3/4 inches).

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 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 lighting.
- 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 key, 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.

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.
- Do not mow near drop-offs, ditches, or embankments. You could lose your footing or balance.

Starting the Engine

1. Hold the blade-control bar (Figure 15) against the handle.

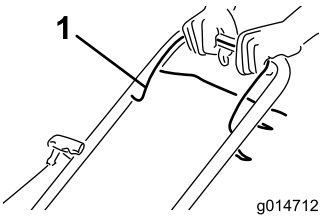


Figure 15

1. Blade-control bar

2. Turn the ignition key (electric-start models only; refer to Figure 16) or pull the recoil-start handle (Figure 17).

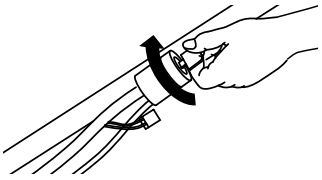


Figure 16

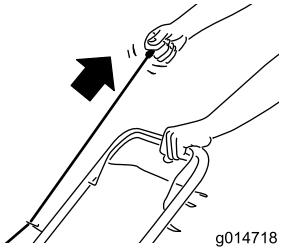


Figure 17

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

Using the Self-propel Drive (Self-propel model only)

To operate the self-propel drive, squeeze the self-propel drive bar (Figure 18) toward the handle and hold it.

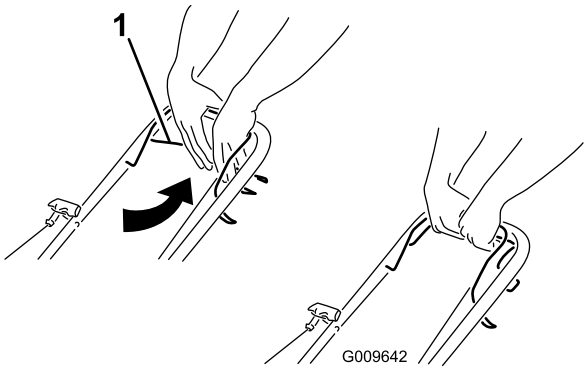


Figure 18

1. Self-propel drive bar

To disengage the self-propel drive, release the self-propel drive bar.

Note: The maximum self-propel ground speed is fixed. To reduce the ground speed, increase the space between the self-propel drive bar and the handle.

Stopping the Engine

Service Interval: Before each use or daily

To stop the engine, release the blade-control bar (Figure 19).

Note: Remove the ignition key when you leave the machine (electric-start models only).

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

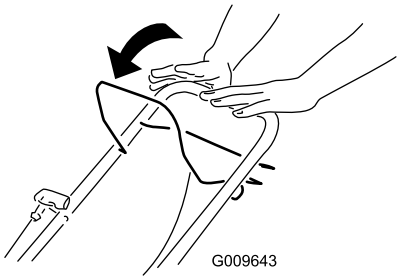


Figure 19

Mulching the Clippings

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

If the grass bag is on the machine, remove it before mulching the clippings. Refer to Removing the Grass Bag (page 12).

Bagging the Clippings

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

Installing the Grass Bag

1. Lift up the rear deflector (Figure 20).

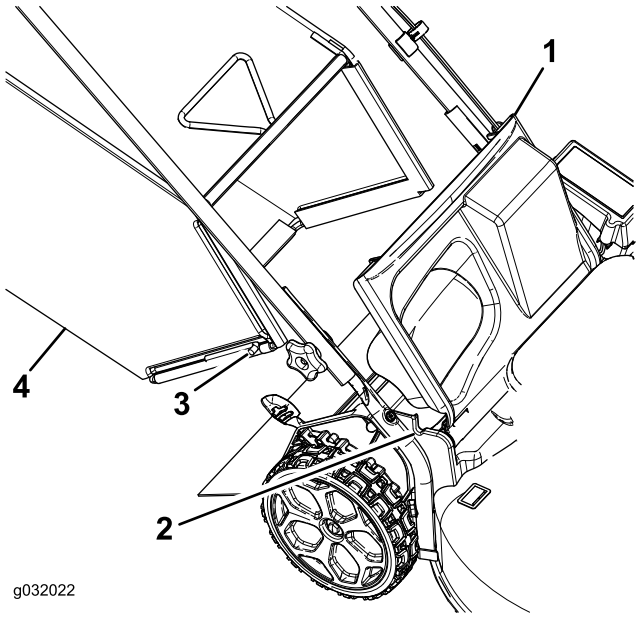


Figure 20

1. Rear deflector
2. Notch in the handle bracket (2)
3. Rod end (2)
4. Grass bag

2. Insert the rod ends of the grass bag into the notches in the handle brackets (Figure 20).
3. Allow the rear deflector to rest on the bag.

Removing the Grass Bag

1. Lift up the rear deflector (Figure 20).
2. Lift the grass-bag handle out from the notches on the handle brackets and remove the bag from the machine.
3. Close the rear deflector.

Side-Discharging the Clippings

Installing the Side-Discharge Chute

1. Lift up the rear deflector (Figure 21).

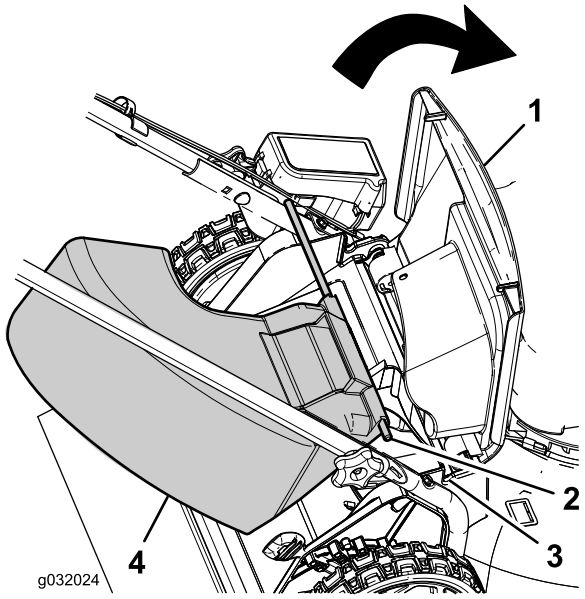


Figure 21

1. Rear deflector
2. Rod end (2)
3. Notch in the handle bracket (2)
4. Side-discharge chute

Note: If the grass bag is on the machine, remove it; refer to Removing the Grass Bag (page 12).

2. Insert the rod ends of the side-discharge chute into the notches on the handle brackets (Figure 21).
3. Allow the rear deflector to rest on the chute.

Removing the Side-Discharge Chute

1. Lift up the rear deflector (Figure 21).
2. Lift the side-discharge chute out form the notches on the handle brackets and remove the chute from the machine.
3. Close the rear deflector.

Operating Tips

General Mowing Tips

- Clear the area of sticks, stones, wire, branches, and other debris that the blade could hit.
- Avoid striking solid objects with the blade. Never deliberately mow over any object.
- If the machine strikes an object or starts to vibrate, immediately stop the engine, disconnect the wire from the spark plug, 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 the 2 inch (51 mm) setting unless the grass is sparse or it is late fall when grass growth begins to slow down. Refer to Adjusting the Cutting Height (page 9).
- When cutting grass over 6 inches (15 cm) 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.
- Mow only dry grass or leaves. Wet grass and leaves tend to clump on the yard and can cause the machine to plug or the engine to stall.
- 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.
  - Set the cutting height on the front wheels a notch lower than the rear wheels. For example, set the front wheels at 2 inches (51 mm) and the rear wheels at 2-1/2 inches (64 mm).

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

- Use care when loading or unloading the machine into a trailer or truck.
- Use full-width ramps for loading the machine into a trailer or truck. Do not exceed a 15° angle between the ramp and the trailer or truck.
- Tie the machine down securely using straps, chains, cable, or ropes. Both front and rear straps should be directed down and outward from the machine.

Folding the Handle

1. Loosen the handle knobs until you can move the handle freely (Figure 22).

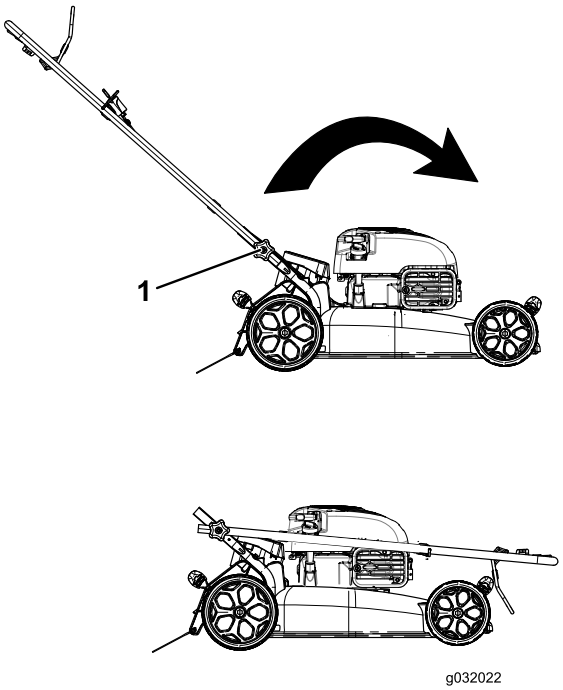


Figure 22

1. Handle knob (2)

2. Move the handle forward as shown in Figure 22.

Cleaning under the Machine

Service Interval: After each use

1. With the engine running on a flat paved surface, spray a stream of water in front of the **right** rear wheel (Figure 23).

   The water will splash into the path of the blade, cleaning out the clippings.



Figure 23

2. When no more clippings come out, stop the water and move the machine to a dry area.
3. Run the engine for a few minutes to dry the underside of the machine to prevent it from rusting.

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
Before each use or daily	• Check the engine-oil level. • Ensure that the engine stops within 3 seconds after releasing the blade-control bar.
After each use	• Clean grass clippings and dirt from under the machine.
Every 25 hours	• Replace the air filter; replace it more frequently in dusty operating conditions. • Charge the battery for 24 hours (electric-start model only).
Every 50 hours	• Change the engine oil.
Every 100 hours	• Clean the cooling system (refer to your engine owner's manual). • Replace the spark plug.
Before storage	• Empty the fuel tank before repairs as directed and before annual storage.
Yearly	• Change the engine oil. • Replace the blade or have it sharpened (more frequently if the edge dulls quickly). • Refer to your engine owner's manual for any additional yearly maintenance procedures.

Important: Refer to your engine owner's manual for additional maintenance procedures.

Maintenance Safety

- Disconnect the spark-plug wire from the spark plug 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.

Preparing for Maintenance

1. Stop the engine and wait for all moving parts to stop.
2. Disconnect the spark-plug wire from the spark plug (Figure 24) before performing any maintenance procedure.

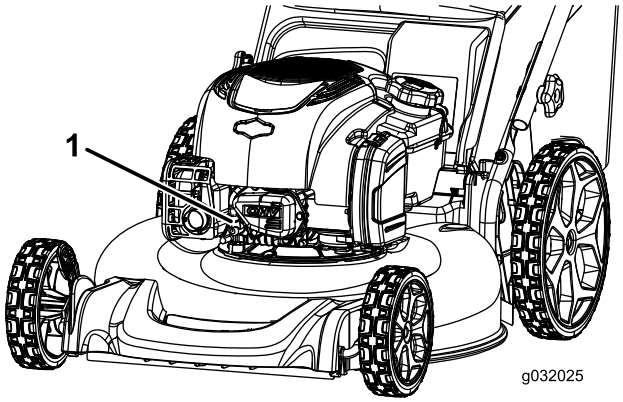


Figure 24

1. Spark-plug

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

Replacing the Air Cleaner

Service Interval: Every 25 hours/Yearly (whichever comes first)

1. Pull the tab to open the air-filter cover (Figure 25).

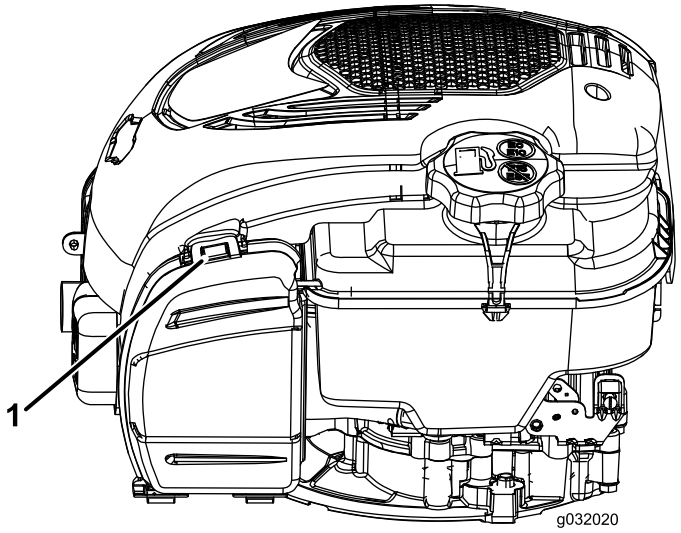


Figure 25

1. Tab

2. Replace the air filter.
3. Close the air-filter cover.

Changing the Engine Oil

Service Interval: Every 50 hours

Yearly

Note: Max. fill: 0.59 L (20 oz), type: 10W-30 or SAE 30 detergent oil with an API service classification of SJ or higher.

1. Move the machine to a level surface.
2. Ensure that the fuel tank contains little or no fuel so that fuel does not leak out when you tip the machine onto its side.
3. Run the engine a few minutes before changing the oil to warm it.

   Note: Warm oil flows better and carries more contaminants.
4. Disconnect the wire from the spark plug; refer to Preparing for Maintenance (page 14).
5. Set an oil-drain pan beside the machine on the side of the dipstick.
6. Remove the dipstick from the oil-fill tube (Figure 10).
7. Tip the machine onto its side, with the oil-fill tube down, to drain the used oil out through the oil-fill tube into the oil-drain pan (Figure 26).

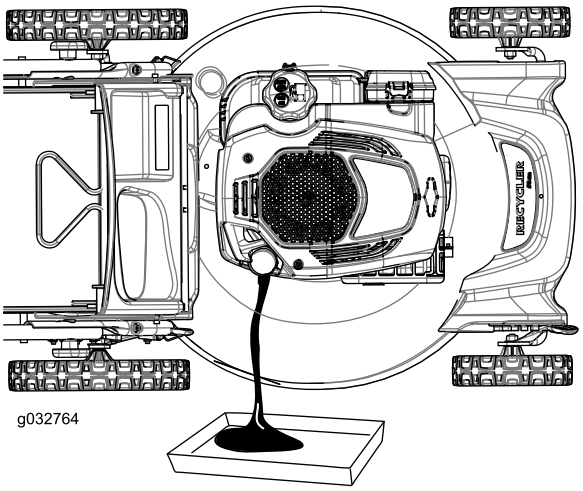


Figure 26

8. After draining the used oil, return the machine to the operating position.
9. Pour about 3/4 of the crankcase capacity of oil into the oil-fill tube.
10. Wipe off the dipstick end with a clean cloth.
11. Insert the dipstick into the oil-fill tube and screw it in until it stops.
12. Remove the dipstick and read the oil level on the dipstick (Figure 27).

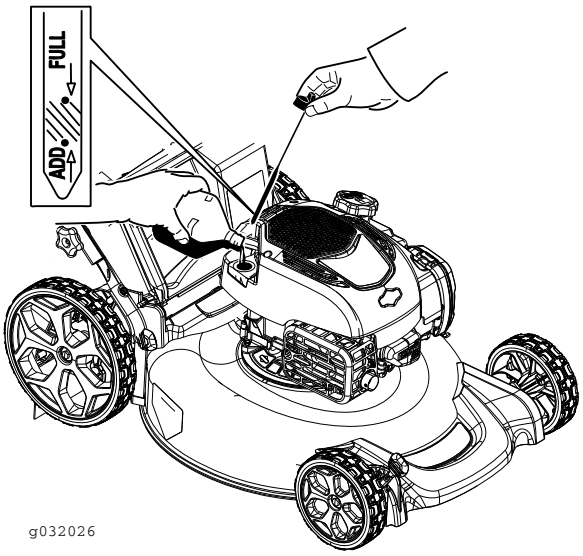


Figure 27

- If the oil level is below the Add mark on the dipstick, add a small amount of oil slowly to the oil-fill tube, and then repeat steps 10 through 12 until the oil level is at the Full mark on the dipstick.
- If the oil level is above the Full mark on the dipstick, drain the excess oil until the oil level is at the Full mark on the dipstick.

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

13. Install the dipstick securely by hand.
14. Recycle the used oil properly.

Charging the Battery (Electric-start model only)

Service Interval: Every 25 hours

WARNING

CALIFORNIA
Proposition 65 Warning

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer and reproductive harm. Wash hands after handling.

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 wire harness located below the ignition key (Figure 28).

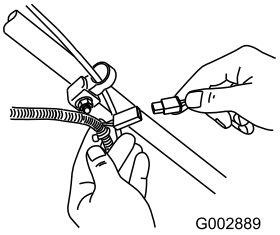


Figure 28

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)

Your machine comes with a fuse that protects the electric starter. 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-amp plug-in type fuse.

Important: You cannot start the machine with the electric starter or charge the battery unless you install the fuse.

1. Unclip the battery cover and remove it (Figure 29).

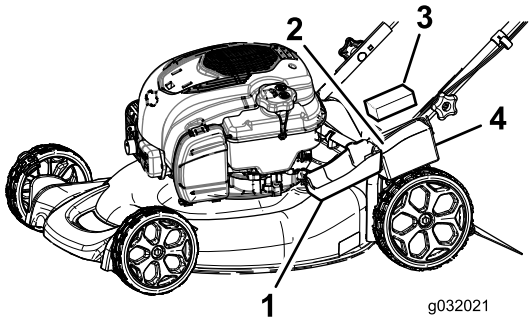


Figure 29

1. Battery cover
2. Foam
3. Battery
4. Fuse holder

2. Insert the fuse into the fuse holder (Figure 30).

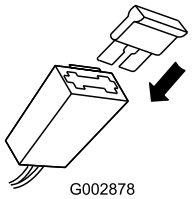


Figure 30

3. Install the battery cover.

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 gasoline. If the blade is damaged or cracked, replace it immediately. If the blade edge is dull or nicked, have it sharpened or replace it.

1. Disconnect the spark-plug wire from the spark plug. Refer to Preparing for Maintenance (page 14).
2. Tip the machine onto its side, with the air filter up.
3. Use a block of wood to hold the blade steady.
4. Remove the blade (turn the blade bolt counterclockwise), saving all the mounting hardware.
5. Install the new blade (turn the blade bolt clockwise) and all mounting hardware (Figure 31).

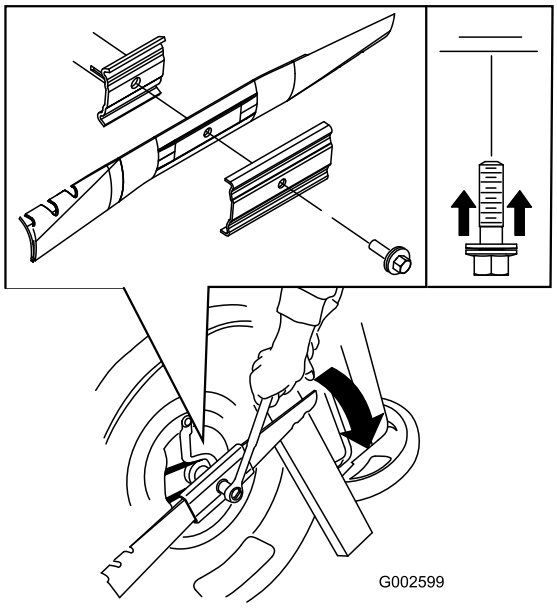


Figure 31

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

6. 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 Cable (Self-propel model only)

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

1. Loosen the cable-support nut (Figure 32).

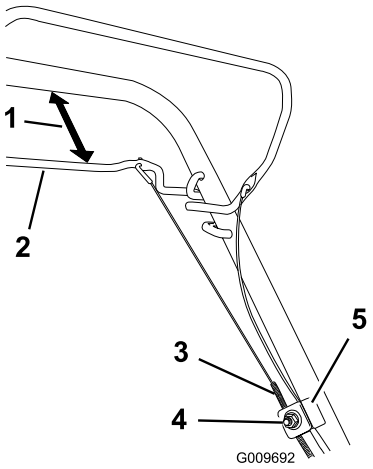


Figure 32

1. 25 to 38 mm (1 to 1-1/2 inches)
2. Self-propel drive bar
3. Cable jacket
4. Cable-support nut
5. Cable support

2. Hold the self-propel bail 25 to 38 mm (1 to 1-1/2 inches) from the handle (Figure 32).
3. Pull down the cable jacket (toward the machine) until there is no slack in the cable (Figure 32).
4. Tighten the nut on the cable support.
5. Release the self-propel drive bar and ensure that the cable is loose.

Note: The cable must be loose with the self-propel drive bar in the released position; otherwise, the machine may creep when you disengage the bar.

Storage

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

Storage Safety

Keep the machine free of grass, leaves, or other debris buildup. Clean up oil or fuel spills and remove any fuel-soaked debris. Allow the machine to cool before storing it.

Preparing the Machine for Storage

⚠ WARNING

Gasoline vapors can explode.

- **Do not store gasoline more than 30 days.**
- **Do not store the machine in an enclosure near an open flame.**
- **Allow the engine to cool before storing it.**

1. On the last refueling of the year, add fuel stabilizer to the fuel as directed by the engine manufacturer.
2. Run the machine until the engine stops from running out of fuel.
3. Prime the engine and start it again.
4. Allow the engine to run until it stops. When you can no longer start the engine, it is sufficiently dry.
5. Disconnect the wire from the spark plug.
6. Remove the spark plug, add 30 ml (1 oz) of 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.
7. Install the spark plug and tighten it with a torque wrench to 20 N-m (15 ft-lb).
8. Tighten all nuts, bolts, and screws.
9. Charge the battery for 24 hours, then unplug the battery charger an 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 (electric-start model only).

Removing the Machine from Storage

1. Remove the spark plug and spin the engine rapidly by pulling the recoil-start handle to blow the excess oil from the cylinder.
2. Install the spark plug and tighten it with a torque wrench to 20 N-m (15 ft-lb).
3. Charge the battery for 24 hours (electric-start model only).
4. Connect the wire to the spark plug.

International Distributor List

Distributor:	Country:	Phone Number:	Distributor:	Country:	Phone Number:
Agrolanc Kft	Hungary	36 27 539 640	Maquiver S.A.	Colombia	57 1 236 4079
Asian American Industrial (AAI)	Hong Kong	852 2497 7804	Maruyama Mfg. Co. Inc.	Japan	81 3 3252 2285
B-Ray Corporation	Korea	82 32 551 2076	Mountfield a.s.	Czech Republic	420 255 704 220
Brisa Goods LLC	Mexico	1 210 495 2417	Mountfield a.s.	Slovakia	420 255 704 220
Casco Sales Company	Puerto Rico	787 788 8383	Munditol S.A.	Argentina	54 11 4 821 9999
Ceres S.A.	Costa Rica	506 239 1138	Norma Garden	Russia	7 495 411 61 20
CSSC Turf Equipment (pvt) Ltd.	Sri Lanka	94 11 2746100	Oslinger Turf Equipment SA	Ecuador	593 4 239 6970
Cyril Johnston & Co.	Northern Ireland	44 2890 813 121	Oy Hako Ground and Garden Ab	Finland	358 987 00733
Cyril Johnston & Co.	Republic of Ireland	44 2890 813 121	Parkland Products Ltd.	New Zealand	64 3 34 93760
Fat Dragon	China	886 10 80841322	Perfetto	Poland	48 61 8 208 416
Femco S.A.	Guatemala	502 442 3277	Pratoverde SRL.	Italy	39 049 9128 128
FIVEMANS New-Tech Co., Ltd	China	86-10-6381 6136	Prochaska & Cie	Austria	43 1 278 5100
ForGarder OU	Estonia	372 384 6060	RT Cohen 2004 Ltd.	Israel	972 986 17979
G.Y.K. Company Ltd.	Japan	81 726 325 861	Riversa	Spain	34 9 52 83 7500
Geomechaniki of Athens	Greece	30 10 935 0054	Lely Turfcare	Denmark	45 66 109 200
Golf international Turizm	Turkey	90 216 336 5993	Lely (U.K.) Limited	United Kingdom	44 1480 226 800
Hako Ground and Garden	Sweden	46 35 10 0000	Solvert S.A.S.	France	33 1 30 81 77 00
Hako Ground and Garden	Norway	47 22 90 7760	Spypros Stavrinides Limited	Cyprus	357 22 434131
Hayter Limited (U.K.)	United Kingdom	44 1279 723 444	Surge Systems India Limited	India	91 1 292299901
Hydroturf Int. Co Dubai	United Arab Emirates	97 14 347 9479	T-Markt Logistics Ltd.	Hungary	36 26 525 500
Hydroturf Egypt LLC	Egypt	202 519 4308	Toro Australia	Australia	61 3 9580 7355
Irrimac	Portugal	351 21 238 8260	Toro Europe NV	Belgium	32 14 562 960
Irrigation Products Int'l Pvt Ltd.	India	0091 44 2449 4387	Valtech	Morocco	212 5 3766 3636
Jean Heybroek b.v.	Netherlands	31 30 639 4611	Victus Emak	Poland	48 61 823 8369

European Privacy Notice

The Information Toro Collects
Toro Warranty Company (Toro) respects your privacy. In order to process your warranty claim and contact you in the event of a product recall, we ask you to share certain personal information with us, either directly or through your local Toro company or dealer.

The Toro warranty system is hosted on servers located within the United States where privacy law may not provide the same protection as applies in your country.

BY SHARING YOUR PERSONAL INFORMATION WITH US, YOU ARE CONSENTING TO THE PROCESSING OF YOUR PERSONAL INFORMATION AS DESCRIBED IN THIS PRIVACY NOTICE.

The Way Toro Uses Information
Toro may use your personal information to process warranty claims, to contact you in the event of a product recall and for any other purpose which we tell you about. Toro may share your information with Toro's affiliates, dealers or other business partners in connection with any of these activities. We will not sell your personal information to any other company. We reserve the right to disclose personal information in order to comply with applicable laws and with requests by the appropriate authorities, to operate our systems properly or for our own protection or that of other users.

Retention of your Personal Information
We will keep your personal information as long as we need it for the purposes for which it was originally collected or for other legitimate purposes (such as regulatory compliance), or as required by applicable law.

Toro's Commitment to Security of Your Personal Information
We take reasonable precautions in order to protect the security of your personal information. We also take steps to maintain the accuracy and current status of personal information.

Access and Correction of your Personal Information
If you would like to review or correct your personal information, please contact us by email at legal@toro.com.

Australian Consumer Law

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

The Toro Warranty and The Toro GTS Starting Guarantee

Conditions and Products Covered

The Toro Company and its affiliate, Toro Warranty Company, pursuant to an agreement between them, jointly promise to repair for the original purchaser[1] the Toro Product listed below if defective in materials or workmanship 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.

The following time periods apply from the date of purchase:

Products	Warranty Period
Walk Power Mowers	
• Cast Deck	5 years Residential Use[2] 90 Days Commercial Use
• Engine	5 years GTS Guarantee, Residential Use[3]
• Battery	2 years
• Steel Deck	2 years Residential Use[2] 30 Days Commercial Use
• Engine	2 years GTS Guarantee, Residential Use[3]
TimeMaster Mowers	3 years Residential Use[2] 90 Days Commercial Use
• Engine	3 years GTS Guarantee, Residential Use[3]
• Battery	2 years
Electric Hand Held Products and Walk Power Mowers	2 years Residential Use[2] No Warranty for Commercial Use
Snowthrowers	
• Single Stage	2 years Residential Use[2] 45 Days Commercial Use
• Engine	2 years GTS Guarantee, Residential Use[3]
• Two Stage	3 years Residential Use[2] 45 Days Commercial Use
• Chute, chute deflector and impeller housing cover	Lifetime (original owner only)[5]
Electric Snowthrowers	2 years Residential Use[2] No Warranty for Commercial Use
All Ride-On Units Below	
• Engine	See engine manufacturer's warranty[4]
• Battery	2 years Residential Use[2]
• Attachments	2 years Residential Use[2]
DH Lawn & Garden Tractors	2 years Residential Use[2] 30 Days Commercial Use
XLS Lawn & Garden Tractors	3 years Residential Use[2] 30 Days Commercial Use
TimeCutter	3 years Residential Use[2] 30 Days Commercial Use
TITAN Mowers	3 years or 240 hours[5]
• Frame	Lifetime (original owner only)[6]

[1]Original Purchaser means the person who originally purchased the Toro Product.

[2]Residential use means use of the product on the same lot as your home. Use at more than one location is considered commercial use and the commercial use warranty would apply.

[3]The Toro GTS Starting Guarantee does not apply when the product is used commercially.

[4]Some engines used on Toro Products are warranted by the engine manufacturer.

[5]Whichever occurs first.

[6]Lifetime Frame Warranty - If the main frame, consisting of the parts welded together to form the tractor structure that other components such as the engine are secured to, cracks or breaks in normal use, it will be repaired or replaced, at Toro's option, under warranty at no cost for parts and labor. Frame failure due to misuse or abuse and failure or repair required due to rust or corrosion are not covered.

Warranty may be denied if the hour meter is disconnected, altered, or shows signs of being tampered with.

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.

Instructions for Obtaining Warranty Service

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

1. Contact your seller to arrange service of the product. If for any reason it is impossible for you to contact your seller, you may contact any Toro Authorized Distributor to arrange service. See attached Distributor List.
2. Bring the product and your proof of purchase (sales receipt) to the servicing outlet. If for any reason you are dissatisfied with the servicing outlet's analysis or with the assistance provided, contact us at:

   Toro Customer Care Department, RLC Division
   Toro Warranty Company
   8111 Lyndale Avenue South
   Bloomington, MN 55420-1196
   001–952–948–4707

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 or misused or neglected and 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 that 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

The purchaser is covered by the national laws of each country. The rights to which the purchaser is entitled with the support of these laws are not restricted by this warranty.