Form No. 3356-805 Rev B

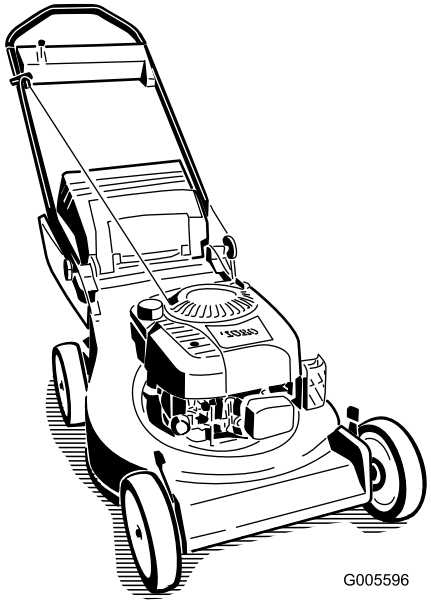
TORO®

Count on it.

Operator's Manual

53cm Rear-Bagging Lawn Mower

Model No. 26634—Serial No. 270000001 and Up



G005596

CE

Register your product at www.Toro.com

Original Instructions (EN)

Introduction

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

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

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

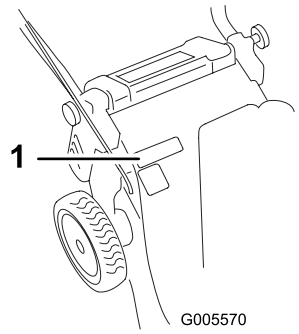


Figure 1

1. Model and serial number location

Model No. _____

Serial No. _____

This manual identifies potential hazards and has safety messages identified by the safety alert symbol (Figure 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.

Contents

Introduction 2
Safety 4
General Lawn Mower Safety 4
Sound Pressure 6
Sound Power 6
Vibration, Hand/arm 6
Safety and Instructional Decals 6
Setup 7
1 Installing the Handle 7
2 Installing the Starter Rope 8
3 Filling the Crankcase with Oil 8
Product Overview 10
Controls 10
Operation 11
Checking the Engine Oil Level 11
Filling the Fuel Tank with Gasoline 11
Starting the Engine 12
Stopping the Engine 12
Using the Self-propel Drive 13
Adjusting the Cutting Height 13
Using the Grass Bag 14
Operating Tips 15
Maintenance 17
Recommended Maintenance Schedule(s) 17
Lubrication 18
Lubricating the Drive Wheels 18
Engine Maintenance 18
Servicing the Air Filter 18
Changing the Engine Oil 18
Replacing the Spark Plug 20
Fuel System Maintenance 20
Emptying the Fuel Tank 20
Drive System Maintenance 20
Adjusting the Wheel Drive 20
Blade Maintenance 21
Maintaining the Blade 21
Cleaning 22
Cleaning the Cooling System 22
Cleaning under the Mower Housing 22
Storage 24
Preparing the Fuel System 24
Preparing the Engine 24

© 2007—The Toro® Company
8111 Lyndale Avenue South
Bloomington, MN 55420

Contact us at www.Toro.com.
Printed in the USA.
All Rights Reserved

General Information 24
Removing the Mower from Storage 24
Troubleshooting 26

Safety

Improperly using or maintaining this mower can result in injury. To reduce the potential for injury, comply with these safety instructions.

Toro designed and tested this mower for reasonably safe service; however, failure to comply with the following instructions may result in personal injury.

To ensure maximum safety, best performance, and to gain knowledge of the product, it is essential that you and any other operator of the mower read and understand the contents of this manual before the engine is ever started. Pay particular attention to the safety alert symbol (Figure 2) which means Caution, Warning, or Danger—"personal safety instruction." Read and understand the instruction because it has to do with safety. Failure to comply with the instruction may result in personal injury.

General Lawn Mower Safety

The following instructions have been adapted from the ISO standard 5395.

This cutting machine is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury or death.

Training

- Read the instructions carefully. Be familiar with the controls and the proper use of the equipment.
- Never allow children or people unfamiliar with these instructions to use the mower. Local regulations can restrict the age of the operator.
- Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.
- Understand explanations for all pictograms used on the mower or in the instructions.

Gasoline

WARNING-Gasoline is highly flammable. Take the following precautions.

- Store fuel in containers specifically designed for this purpose.
- Refuel outdoors only and do not smoke while refueling.
- Add fuel before starting the engine. Never remove the cap of the fuel tank or ad gasoline while the engine is running or when the engine is hot.
- If gasoline is spilled, do not attempt to start the engine but move the mower away from the area of spillage and avoid creating any source of ignition until gasoline vapors have dissipated.
- Replace all fuel tank and container caps securely.

Preparation

- While mowing, always wear substantial footwear and long trousers. Do not operate the equipment when barefoot or wearing open sandals.
- Thoroughly inspect the area where the equipment is to be used and remove all stones, sticks, wires, bones and other foreign objects.
- Before using, always visually inspect to see that guards, and safety devices, such as deflectors and/or grass catchers, are in place and working correctly.
- Before using, always visually inspect to see that the blades, blade bolts and cutter assembly are not worn or damaged. Replace worn or damaged blades and bolts in sets to preserve balance.

Starting

- Disengage all blade and drive clutches and shift into neutral before starting the engine.
- Do not tilt mower when starting the engine or switching on the motor, unless the mower has to be tilted for starting. In this case, do not tilt it more than absolutely necessary and lift only the part, which is away from the operator.
- Start the engine or switch on the motor carefully according to instructions and with feet well away from the blade(s) and not in front of the discharge chute.

Operation

- Never mow while people, especially children, or pets are nearby.
- Mow only in daylight or in good artificial light.

- Avoid operating the lawn mower in wet grass, where feasible.
- Stay alert for holes in the terrain and other hidden hazards.
- Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.
- Never pick up or carry a lawn mower while the engine is running.
- Use extreme caution when reversing or pulling a pedestrian controlled lawn mower towards you.
- Walk, never run.
- Slopes:
  - Do not mow excessively steep slopes.
  - Exercise extreme caution when on slopes.
  - Mow across the face of slopes, never up and down and exercise extreme caution when changing direction on slopes.
  - Always be sure of your footing on slopes.
- Use low throttle settings when engaging the traction-clutch, especially in high gears. Reduce speed on slopes and in sharp turns to prevent overturning or loss of control.
- Stop the blade if the lawn mower has to be tilted for transportation when crossing surfaces other than grass and when transporting the lawn mower to and from the area to be mowed.
- Do not operate the engine in a confined space where dangerous carbon monoxide fumes can collect.
- Stop the engine
  - whenever you leave the lawn mower.
  - before refueling.
  - before removing the grass catcher.
  - before making height adjustment unless adjustment can be made from the operator's position.
- Stop the engine and disconnect the spark-plug wire.
  - before clearing blockages or unclogging chute.
  - before checking, cleaning or working on the lawn mower.
  - after striking a foreign object, inspect the lawn mower for damage and make repairs before restarting and operating the lawn mower.
  - if lawn mower starts to vibrate abnormally (check immediately).
- Reduce the throttle setting during engine shut down, and close the fuel valve at the conclusion of mowing.
- Watch out for traffic when crossing or near roadways.

Maintenance and Storage

- Keep all nuts, bolts and screws tight to be sure the equipment is in safe working condition.
- Do not use pressure cleaning equipment on machine.
- Never store the equipment with gasoline in the tank and inside a building where fumes can reach an open flame or spark.
- Allow the engine to cool before storing in any enclosure.
- To reduce the fire hazard, keep the engine, silencer, battery compartment and gasoline storage are free of grass, leaves, or excessive grease.
- Check grass catcher components and the discharge guard frequently and replace with manufacturer's recommended parts, when necessary.
- Replace worn or damaged parts for safety.
- Replace faulty silencers.
- If the fuel tank has to be drained, do this out-doors.
- Do not change the engine governor settings or overspeed the engine. Operating an engine at excessive speed can increase the hazard of personal injury.
- Be careful during adjustment of the lawn mower to prevent entrapment of the fingers between moving blades and fixed parts of the lawn mower.
- **To ensure the best performance and safety, purchase only genuine Toro replacement parts and accessories. Do not use will fit parts and accessories; they may cause a safety hazard.**

Sound Pressure

This unit has an equivalent continuous A-weighted sound pressure level at the operator ear of 89 dBA, based on measurements of identical machines per EN 11094 and EN 836.

Sound Power

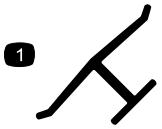
This unit has an equivalent continuous A-weighted sound power level of 98 dBA, based on measurements of identical machines per EN 11094.

Vibration, Hand/arm

This unit does not exceed a hand/arm vibration level of 4.6 m/s^2, based on measurements of identical machines per EN 1033.

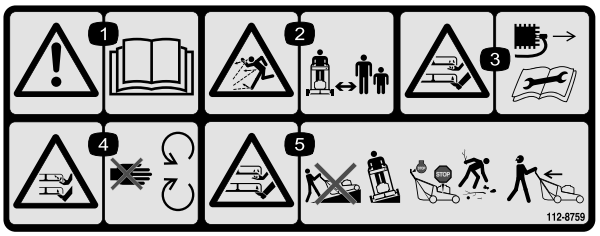
Safety and Instructional Decals

Safety decals and instructions are easily visible to the operator and are located near any area of potential danger. Replace any decal that is damaged or lost.



Manufacturer's Mark

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



112-8759

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—remove the wire from the spark plug, and read the instructions before servicing or performing maintenance.
4. Cutting/dismemberment hazard of hand or foot, mower blade—stay away from moving parts.
5. Cutting/dismemberment hazard of hand or foot, mower blade—do not operate up and down slopes; operate side to side on slopes; stop the engine before leaving the operating position; and look behind you when backing.

Setup

Loose Parts

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

Step	Description	Qty.	Use
1	Handle Bolt Locknut Cable tie	1 1 1 1	Install the handle.
2	No parts required	–	Install the starter rope.
3	No parts required	–	Fill the crankcase with oil.

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

Step 1

Installing the Handle

Parts needed for this step:

1	Handle
1	Bolt
1	Locknut
1	Cable tie

Procedure

1. Loosen the knobs on the mounting brackets (Figure 3).

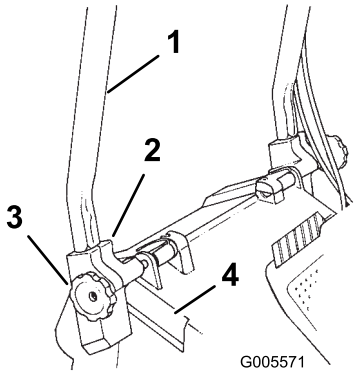


Figure 3

1. Handle
2. Mounting bracket (2)
3. Knob (2)
4. Housing pocket (2)

2. Position the mounting brackets vertically so the holes face upward.
3. Slide the handle ends into the holes in the mounting brackets until the handle ends fully seat into the brackets (Figure 3).

   Note: Ensure that the blade brake cable and the traction cable rest on top of the left mounting bracket (Figure 4).

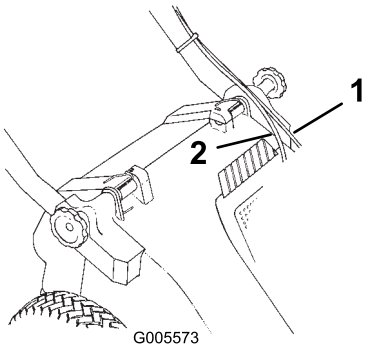


Figure 4

1. Blade brake cable
2. Traction cable

4. Rotate the handle and the mounting brackets rearward until the brackets fit securely into the housing pockets (Figure 3).
5. Tighten the knobs until the edges of the slots on top of the mounting brackets touch.
6. Secure the cables to the lower side of the left hand tube with a cable tie.
7. Position the cable tie 1 inch (25 mm) from the bend in the handle as shown in Figure 5.

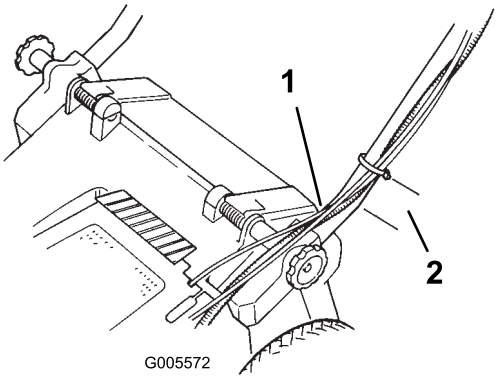


Figure 5

1. Cable tie
2. 1 inch (2.5 cm)

Note: Ensure that the cables do not interfere with the raising or lowering of the discharge door.

8. Cut any excess length from the end of the cable tie.
9. Secure the control lever to the control bar with a bolt and a locknut (Figure 6).

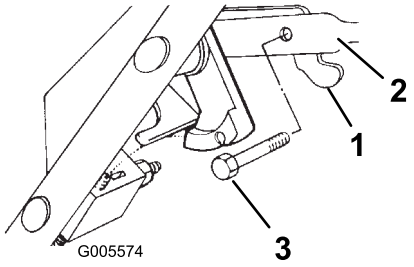


Figure 6

1. Control lever
2. Control bar
3. Bolt
4. Locknut (not shown)

Step 2

Installing the Starter Rope

No Parts Required

Procedure

Pull the starter rope through the rope guide on the handle (Figure 7).

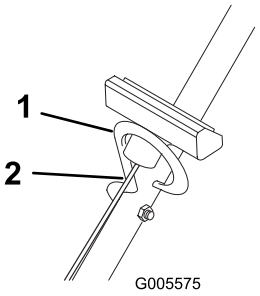


Figure 7

1. Rope guide
2. Starter rope

Note: To make the rope easier to install, squeeze the control bar on the handle to release the blade brake.

Step 3

Filling the Crankcase with Oil

No Parts Required

Procedure

The crankcase can hold 22 ounces (0.65 liters) of oil. Use only high-quality SAE 30 detergent oil that has the American Petroleum Institute (API) service classification SF, SG, SH, or SJ.

Before each use, ensure that the oil level is between the Add and the Full marks on the dipstick (Figure 8).

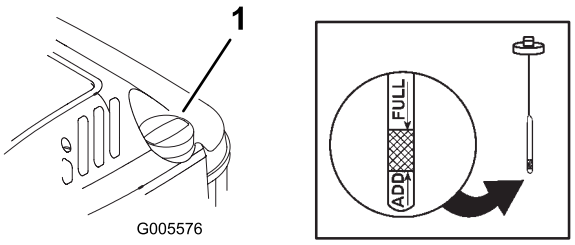


Figure 8

1. Oil fill cap
2. Dipstick

To add oil:

1. Move the mower to a level surface.
2. Clean around the dipstick (Figure 8).

3. Remove the dipstick from the oil fill tube by rotating the cap counterclockwise and pulling it out.
4. Wipe the dipstick clean with a clean cloth.
5. Fully insert the dipstick into the filler neck, then remove it.

   Note: To ensure an accurate oil level reading, you must fully install the dipstick.

6. Read the oil level on the dipstick (Figure 8).
7. If the oil level reading is below the Add mark on the dipstick, **slowly** pour only enough oil into the oil fill tube to raise the oil level to the Full mark on the dipstick.

   Important: Do not overfill the crankcase with oil and run the engine; engine damage can result. Drain the excess oil until the oil level on the dipstick reads Full.

8. Insert the dipstick into the filler neck and rotate the cap clockwise until it is tight.

Product Overview

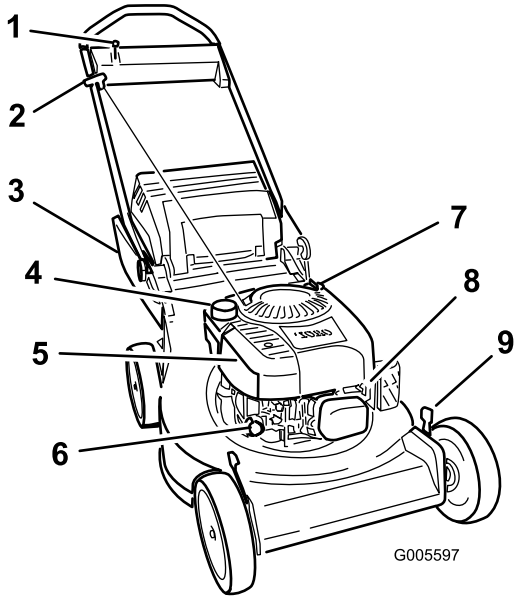


Figure 9

1. Ground speed control lever
2. Starter handle
3. Grass bag
4. Fuel tank cap
5. Air filter
6. Primer
7. Oil fill cap/dipstick
8. Spark plug
9. Cutting height lever

Controls

The controls are located on the upper handle as shown in Figure 10.

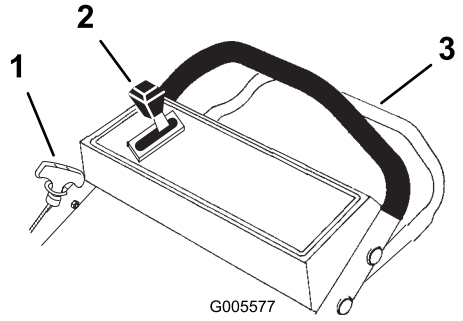


Figure 10

1. Starter handle
2. Ground speed control lever
3. Control bar

Operation

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

Each time before you mow, make sure that the self-propel drive and the blade control bar operate properly. When you release the blade control bail, the blade and self-propel drive should stop. If they do not, contact an Authorized Service Dealer.

Checking the Engine Oil Level

Before you use the mower, ensure that the oil level is between the Add and the Full marks as shown on the dipstick (Figure 8). If the oil level is below the Add mark, add oil Refer to Filling the Crankcase Oil.

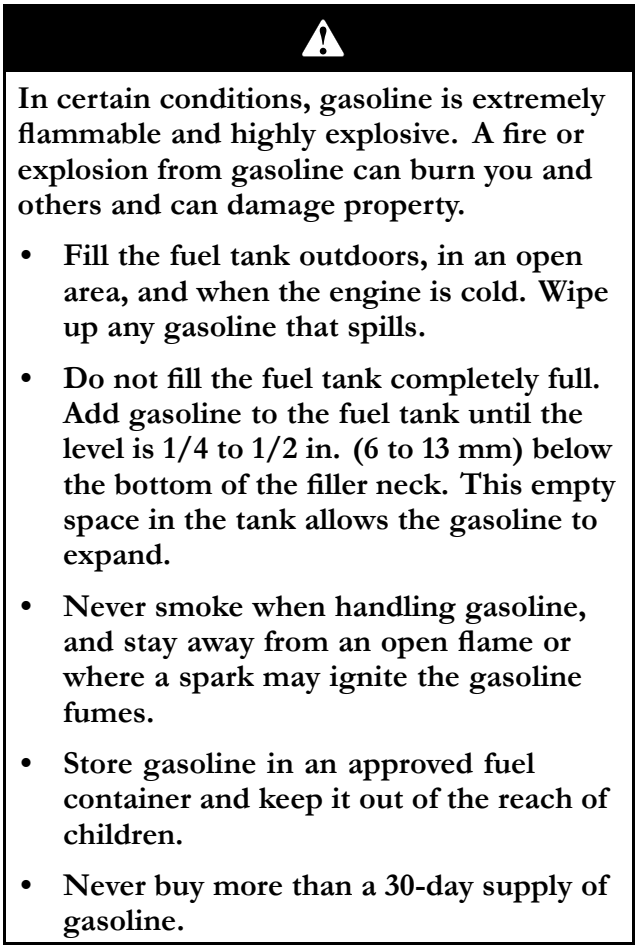
Filling the Fuel Tank with Gasoline

For best results, use clean, fresh, lead-free gasoline with an octane rating of 87 or higher. To ensure freshness, purchase only the quantity of gasoline that you expect to use in 30 days. Using unleaded gasoline results in fewer combustion deposits and longer engine life. You may use leaded gasoline if unleaded gasoline is not available.

Important: Do not add oil to the gasoline.

Important: Do not use methanol, gasoline containing methanol, gasohol containing more than 10% ethanol, premium gasoline, or white gas. Using these fuels can damage the engine's fuel system.

Important: Do not use gasoline that has been stored since the last mowing season or longer.



In certain conditions, gasoline is extremely flammable and highly explosive. A fire or explosion from gasoline can burn you and others and can damage property.

- **Fill the fuel tank outdoors, in an open area, and when the engine is cold. Wipe up any gasoline that spills.**
- **Do not fill the fuel tank completely full. Add gasoline to the fuel tank until the level is 1/4 to 1/2 in. (6 to 13 mm) below the bottom of the filler neck. This empty space in the tank allows the gasoline to expand.**
- **Never smoke when handling gasoline, and stay away from an open flame or where a spark may ignite the gasoline fumes.**
- **Store gasoline in an approved fuel container and keep it out of the reach of children.**
- **Never buy more than a 30-day supply of gasoline.**

When fueling, under certain circumstances, a static charge can develop, igniting the gasoline. A fire or explosion from gasoline can burn you and others and damage property.

- **Always place gasoline containers on the ground and away from your vehicle before filling.**
- **Do not fill gasoline containers inside a vehicle or on a truck or trailer bed because interior carpets or plastic truck bed liners may insulate the container and slow the loss of any static charge.**
- **When practical, remove gasoline-powered equipment from the truck or trailer and refuel the equipment with its wheels on the round.**
- **If this is not possible, then refuel such equipment on a truck or trailer from a portable container, not from a gasoline dispenser nozzle.**
- **If you must use a gasoline dispenser nozzle, keep the nozzle in contact with the rim of the fuel tank or container opening at all times until fueling is complete.**

Use a fuel stabilizer/conditioner regularly during operation and storage. A stabilizer/conditioner cleans the engine during operation and prevents gum-like varnish deposits from forming in the engine during periods of storage.

Important: Do not use fuel additives other than a fuel stabilizer/conditioner. Do not use fuel stabilizers with an alcohol base such as ethanol, methanol, or isopropanol.

1. Clean around the fuel tank cap (Figure 11).

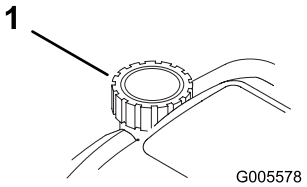


Figure 11

1. Fuel tank cap

2. Remove the fuel tank cap.
3. Fill the fuel tank with unleaded gasoline to within 1/4 to 1/2 inch (6 to 13 mm) from the top of the tank. **Do not fill into the filler neck.**
4. Install the fuel tank cap and wipe up any spilled gasoline.

Starting the Engine

1. Connect the wire to the spark plug (Figure 12).

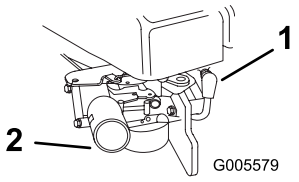


Figure 12

1. Spark-plug wire 2. Primer

2. Move the ground speed control to the (Neutral) position.
3. Push in the primer 3 times, waiting one second between each push (Figure 12).

   Note: If the temperature is 55˚F (13˚C) or below, push in the primer 5 times, waiting one second between each push.

   Note: Do not use the primer to start a warm engine after a brief shutdown. However, cool weather may require you to prime the engine again.
4. Hold the control bar against the upper handle (Figure 10).
5. Pull the starter handle lightly until you feel resistance, then pull it sharply. Allow the rope to return to the handle slowly.

   Note: If the engine fails to start after 3 pulls, repeat steps 3 through 5.

Stopping the Engine

Release the control bar. Both the engine and the blade should stop. If they do not stop properly, contact an Authorized Service Dealer.

Using the Self-propel Drive

1. Move the ground speed control to the desired setting.
2. Squeeze the control bar against the handle to drive (Figure 13).

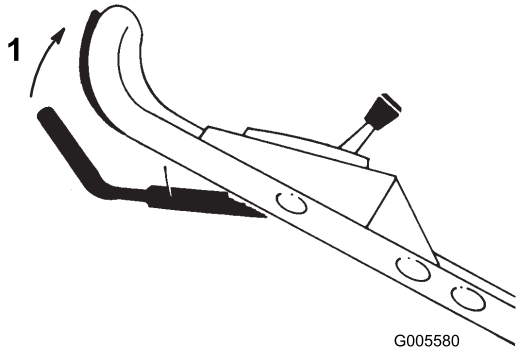


Figure 13

1. The ground speed increases as you move the control bar toward the handle.

You can vary the ground speed by increasing or decreasing distance between control bar and handle (Figure 13) as follows:

- Lower control bar to slow the mower. If you lower control bar too far, the mower stops self-propelling.
- Squeeze the control bar closer to the handle to increase the ground speed.
- Move the ground speed control to the (Neutral) position when using the mower for trimming.

Note: The drive wheels come with freewheeling clutches that enable you to pull the mower rearward more easily when you disengage the wheel drive. To disengage the clutches, push the mower forward at least 1 inch (2.5 cm) after stopping the wheel drive operation.

Adjusting the Cutting Height

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

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

1. Stop the engine and wait for all moving parts to stop.
2. Disconnect the wire from the spark plug (Figure 12).

   Note: For easier adjustment, lift up the housing so that the wheel is off the ground. Do not put your fingers under housing to lift up the mower.
3. Squeeze the cutting height lever toward the wheel (Figure 14) and move it to the desired setting.

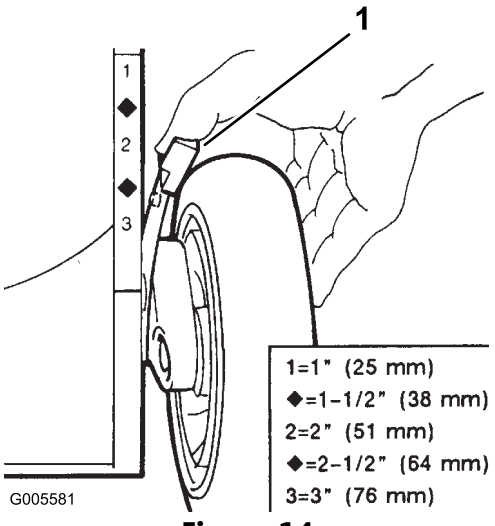


Figure 14

1. Cutting height lever

4. Engage the pin on the cutting height lever in the desired notch.
5. Adjust all the wheels to the same setting.

Using the Grass Bag

Installing the Grass Bag

1. Wait for all moving parts to stop.
2. Raise the discharge door, slide the bag ramp attached to the grass bag into the discharge opening, and hook the bag frame onto the rounded portion of the mounting brackets (Figure 15).

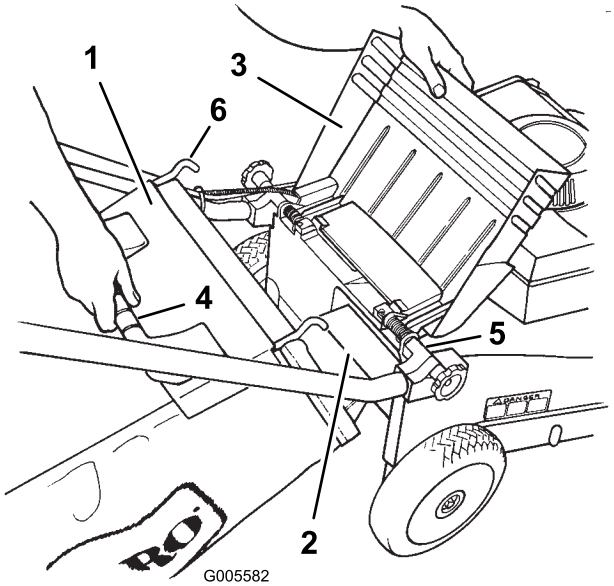


Figure 15

1. Bag door
2. Bag ramp
3. Discharge door
4. Bag handle
5. Mounting bracket (2)
6. Bag frame hook (2)

Note: Ensure that the grass bag door is fully closed against the grass bag before installing the bag.

3. Allow the discharge door to close on top of the grass bag (Figure 16).

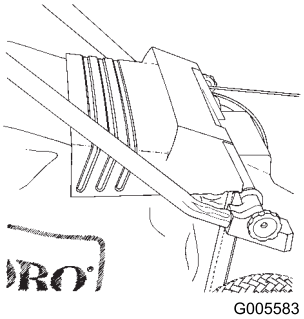


Figure 16

Mowing with the Grass Bag

A worn grass bag could allow small stones and other similar debris to be thrown in the operator's or bystander's direction and result in serious personal injury or death to the operator or bystanders.

Check the grass bag frequently. If it is damaged, install a new Toro replacement bag.

Removing the Grass Bag

The mower can throw grass clippings and other objects through an open discharge tunnel. Objects thrown with enough force could cause serious personal injury or death to the operator or bystander.

Do not operate the mower without a grass bag installed.

1. Stop the engine and wait for all moving parts to stop.
2. Raise the discharge door and hold it up.
3. Grasp the handle on the grass bag and lift it off the mower.
4. Close the discharge door.

Note: When removing the grass bag, the bag ramp removes any clippings that may plug the discharge opening. If the discharge opening is still plugged, disconnect the wire from the spark plug and remove the clippings with a stick.

If the discharge door does not close completely, the mower could throw objects, causing serious personal injury or death.

If you cannot close the discharge door because the grass clippings clog the discharge area, stop the engine, wait for all moving parts to stop, and gently move the discharge door handle back and forth until you can close the discharge door completely. If you still cannot close the discharge door, remove the obstruction with a stick, not your hand.

Operating Tips

General Tips

- Maintain a sharp blade throughout the cutting season. Periodically file down nicks on the blade.
- Replace the blade when necessary with an original Toro replacement blade.
- Mow only dry grass or leaves. Wet grass and leaves tend to clump on the yard and can cause the mower to plug or the engine to stall.

Wet grass or leaves can cause serious injury if you slip and contact the blade.

Mow only in dry conditions.

- Clean under the mower housing after each mowing. See Cleaning under the Mower Housing.
- Keep the engine in good running condition.
- Set the engine speed to the fastest position for the best cutting results.

Operating a mower with its engine running at a speed greater than the factory setting can cause the mower to throw a part of the blade or engine into the operator's or bystander's area and result in serious personal injury or death.

- **Do not change the engine speed setting.**
- **If you suspect the engine speed is faster than normal, contact an Authorized Service Dealer.**

- Clean the air filter frequently. Mulching stirs up more clippings and dust which clogs the air filter and reduces engine performance.

Cutting Grass

- Grass grows at different rates at different times of the year. In the summer heat, it is best to cut grass at the 2-inch (51 mm), 2-1/2 inch (64 mm), or 3-inch (76 mm) cutting height settings. 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.
- When cutting grass over 6 inches (15 cm) tall, first 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 and the leaves clump on top of the lawn, the mower may plug and cause 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 one or more of the following:

- Sharpen the blade.
- Walk at a slower pace while mowing.
- Raise the cutting height on your mower.
- 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 one 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).

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 one pass over the leaves.
- For light leaf coverage, set all the wheels at the same cutting height setting.
- If there are more than 5 inches (12.7 cm) of leaves on the lawn, set the front cutting height 1 or 2 notches higher than the rear cutting height. This makes it easier to feed the leaves under the mower housing.
- Slow down your mowing speed if the mower does not cut the leaves finely enough.
- If you mow over oak leaves, you can add lime to the grass in the spring to reduce the acidity of the oak leaves.

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 operating hours	• Change the engine oil.
Before each use or daily	• Check the engine oil level. • Check the stopping time of the blade brake. The blade must stop within 3 seconds of releasing the control bar; if it does not, contact an Authorized Service Dealer for repair. • Check the blade and engine mounting fasteners. Tighten them if they are loose. • Remove grass clippings and dirt from under the housing.
Every 25 hours	• Clean the air filter pre-cleaner and replace the paper air filter (replace the paper air filter more frequently in dusty conditions). • Inspect the spark plug and replace it if necessary.
Every 50 hours	• Change the engine oil (more often in dusty conditions). • Check for leaks in the fuel system and/or a deteriorating fuel hose. Replace parts if necessary. • Adjust and grease the wheel drive. • Sharpen or replace the blade (maintain it more frequently if the edge dulls quickly in rough or in sandy conditions).
Every 100 hours	• Clean the cooling system.
Before storage	• Empty the fuel tank before repairs as directed or before storage.

Important: **Refer to your Engine Operator's Manual for additional maintenance procedures.**

If you leave the wire on the spark plug, someone could accidently start the engine and seriously injure you or other bystanders.

Disconnect the wire from the spark plug before you do any maintenance. Set the wire aside so that it does not accidently contact the spark plug.

Lubrication

Lubricating the Drive Wheels

After every 25 operating hours or when the season ends, lubricate the pivot arms.

1. Apply 2 or 3 drops of light oil on the inside of the front wheels and on the outside of all the wheel bolts.
2. Spin the wheels to distribute the oil into the bushings.
3. Wipe up any excess oil.
4. Move the rear wheel cutting height levers to the 2-inch (51mm) setting.
5. Wipe the grease fittings with a clean rag (Figure 17).

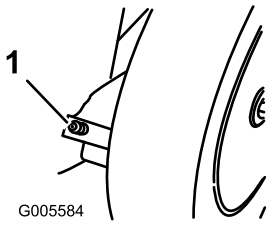


Figure 17

1. Grease fitting

6. Install a grease gun onto the fitting and gently apply 2 or 3 pumps of #2 multi-purpose lithium base grease.

   Important: Applying grease using excessive pressure may damage the seals.

Engine Maintenance

Servicing the Air Filter

Clean the pre-cleaner and replace the air filter once every season or every 25 operating hours; replace it more frequently in dusty operating conditions.

Important: Do not operate the engine without the air filter assembly; extreme engine damage will occur.

1. Stop the engine and wait for all moving parts to stop.
2. Disconnect the wire from the spark plug (Figure 12).
3. Remove the screw that secures the air cleaner cover (Figure 18).

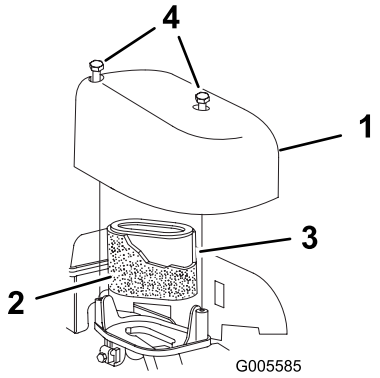


Figure 18

1. Cover
2. Foam pre-cleaner
3. Air filter
4. Screws

4. Remove the cover and clean it thoroughly (Figure 18).
5. Remove the foam pre-cleaner.
6. Wash the pre-cleaner with a mild detergent and water, then blot it dry (Figure 18).
7. Remove the paper air filter and discard it (Figure 18).

   Important: Do not try to clean a paper filter.

8. Insert the new paper air filter into the foam pre-cleaner (Figure 18).
9. Install the new air filter.
10. Install the cover and secure it.

Changing the Engine Oil

Change the oil after the first 5 operating hours and then after every 50 operating hours or every season. Run the engine just before changing the oil to warm the oil. Warm oil flows better and carries more contaminants.

Note: Change the oil after every 25 operating hours when operating under heavy load or in high temperatures.

Draining the Oil above the Housing (Preferred Method)

Oil may be hot after engine has been run, and contact with hot oil can cause severe personal injury.

Avoid contacting the hot engine oil when you drain it.

1. Remove the grass bag.
2. Stop the engine and wait for all moving parts to stop.
3. Disconnect the wire from the spark plug (Figure 12).
4. Drain the gasoline from the fuel tank; refer to Emptying the Fuel Tank.
5. Remove the dipstick from oil fill tube and place a drain pan next to the left side of the mower.
6. Tip the mower onto its **left** side, allowing the oil to drain into the drain pan (Figure 19).

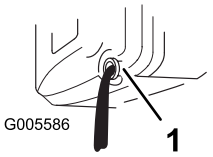


Figure 19

1. Oil fill tube

7. Turn the mower upright.
8. Fill the crankcase to the Full line on the dipstick with fresh oil. Refer to the Filling the Crankcase with Oil.
9. Install the dipstick.
10. Wipe up any spilled oil.
11. Connect the wire to the spark plug.
12. Recycle the used oil according to local codes.

Draining the Oil below the Housing (Optional Method)

Note: You will need a 3/8-inch ratchet extension to perform this procedure.

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

Wear gloves or wrap the sharp edges of the blade with a rag.

1. Disconnect the wire from the spark plug (Figure 12).
2. Drain the gasoline from the fuel tank; refer to Emptying the Fuel Tank.
3. Tip the mower onto its **left** side and secure it to prevent it from falling.
4. Place a drain pan under the mower.
5. Remove the oil drain plug, return the mower to its operating position, and allow the oil to drain into the drain pan (Figure 20).

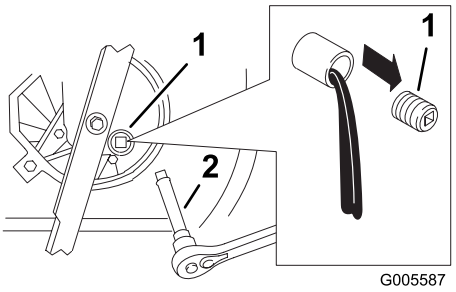


Figure 20

1. Oil drain plug
2. 3/8-inch Ratchet extension

Note: Avoid spilling the oil on the belt.

Important: You may need to move the blade to get to the oil drain plug. Move the blade as little as possible to avoid future starting problems.

6. Tip the mower onto its **left** side and install the oil drain plug.
7. Move the oil drain pan from under the mower and turn the mower upright.
8. Fill the crankcase with fresh oil to the Full mark on the dipstick. Refer to Filling the Crankcase with Oil.
9. Install the dipstick.
10. Wipe up any spilled oil.
11. Connect the wire to the spark plug.
12. Recycle the used oil according to local codes.

Replacing the Spark Plug

Check the spark plug after every 25 operating hours. Use a **Champion RC12YC** spark plug or equivalent.

1. Stop the engine and wait for all moving parts to stop.
2. Disconnect the wire from the spark plug (Figure 12).
3. Clean around the spark plug.
4. Remove the spark plug from the cylinder head.

   Important: Replace a cracked, fouled, or dirty spark plug. Do not clean the electrodes because grit entering the cylinder can damage the engine.

5. Set the gap on the plug to 0.020 in. (0.5 mm) (Figure 21).

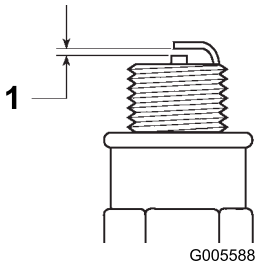


Figure 21

1. 0.020 inch (0.5 mm)

6. Install the spark plug and the gasket seal.
7. Torque the plug to 15 ft-lb (20 N·m).
8. Connect the wire to the spark plug.

Fuel System Maintenance

Emptying the Fuel Tank

1. Stop the engine and wait for it to cool.

   Important: Drain gasoline from a cold engine only.

2. Disconnect the wire from the spark plug (Figure 12).
3. Remove the cap from the fuel tank.
4. Use a hand pump to pump the gasoline into a clean approved gasoline container.
5. Connect the wire to the spark plug.
6. Run the engine until it stops.
7. Start the engine again to ensure that all the gasoline is out of the carburetor.

Drive System Maintenance

Adjusting the Wheel Drive

If the mower does not self-propel or has a tendency to creep forward when you disengage the wheel drive, adjust the wheel traction control cable.

1. Stop the engine and wait for all moving parts to stop.
2. Disconnect the wire from the spark plug.
3. Loosen the nut on the support block (Figure 22).

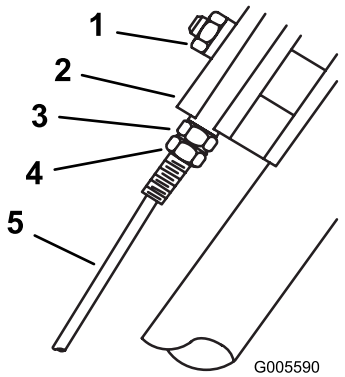


Figure 22

1. Nut
2. Support block
3. Top jam nut
4. Bottom jam nut
5. Wheel traction cable

4. Loosen the bottom jam nut on the wheel traction cable.
5. Lift the control bar until you feel some resistance. The control bar should be 1-1/2 inches (4 cm) from the handle when it is properly adjusted (Figure 23).

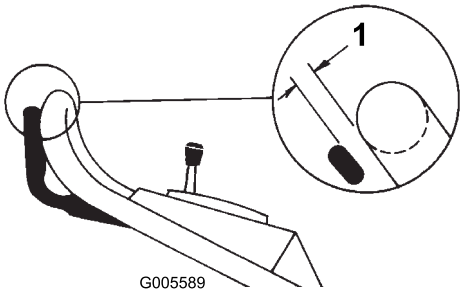


Figure 23

1. 1-1/2 inches (4 cm)

6. Move the top jam nut up to increase or down to decrease the clearance between the control bar and the handle.
7. Tighten the bottom jam nut to lock the top jam nut against the support block (Figure 23).
8. Tighten the nut on the support block.

Blade Maintenance

Maintaining the Blade

A straight, sharp blade provides the best cutting performance. Regularly inspect and sharpen the blade.

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

Wear gloves or wrap the sharp edges of the blade with a rag.

1. Stop the engine and wait for all moving parts to stop.
2. Disconnect the wire from the spark plug (Figure 12).

Tipping the mower may cause the fuel to leak from the carburetor or the fuel tank. Gasoline is extremely flammable, highly explosive and under certain conditions can cause personal injury or property damage.

Avoid fuel spills by running the engine dry or removing gasoline with a hand pump; never siphon.

3. Drain the gasoline from the fuel tank; refer to Emptying the Fuel Tank.
4. Tip the mower onto its **left** side.

Important: Move the blade as little as possible to avoid future starting problems.

Inspecting the Blade

Carefully examine the blade for sharpness and wear, especially where the flat and the curved parts meet (Figure 24A). Because sand and abrasive material can wear away the metal that connects the flat and curved parts of the blade, check the blade before using the mower. If you notice a slot or wear (Figure 24B and Figure 24C), replace the blade; refer to Removing the Blade.

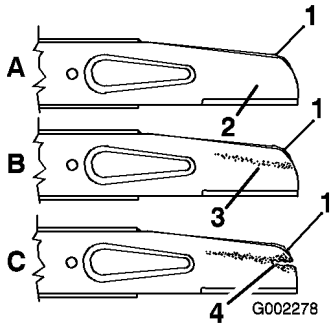


Figure 24

1. Sail
2. Flat part of the blade
3. Wear
4. Slot formed

Note: For the best performance, install a new blade before the cutting season begins. During the year, file down any small nicks to maintain the cutting edge.

A worn or damaged blade can break, and a piece of the blade could be thrown into the operator's or bystander's area, resulting in serious personal injury or death.

- **Inspect the blade periodically for wear or damage.**
- **Replace a worn or damaged blade.**

Removing the Blade

1. Grasp the end of the blade using a rag or a thickly padded glove.
2. Remove the blade bolt and the blade (Figure 25).

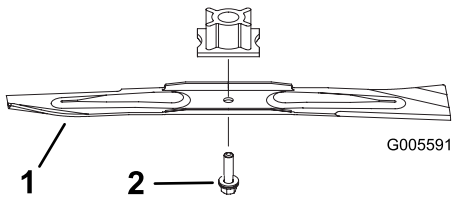


Figure 25

1. Blade
2. Blade bolt

Sharpening the Blade

File the top side of the blade to maintain its original cutting angle (Figure 26A) and inner cutting edge radius (Figure 26B). The blade will remain balanced if you remove the same amount of material from both cutting edges.

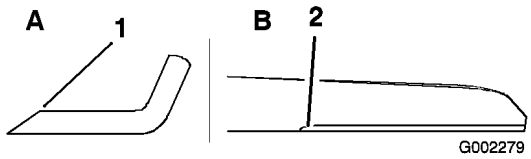


Figure 26

1. Sharpen at this angle only.
2. Maintain the original radius here.

Balancing the Blade

1. Check the balance of the blade by placing the center hole of the blade over a nail or screwdriver shank clamped horizontally in a vise (Figure 27).

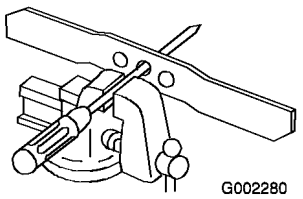


Figure 27

Note: You can also check the balance using a commercially manufactured blade balancer.

2. If either end of the blade rotates downward, file that end (not the cutting edge or the end near the cutting edge). The blade is properly balanced when neither end drops.

Installing the Blade

1. Install a sharp, balanced Toro blade and the blade bolt.

   Note: The sail part of the blade must point upward (toward the top of the mower housing).
2. Torque the blade nuts to 60 ft-lb (82 N·m).
3. Return the mower to its operating position.
4. Connect the wire to the spark plug.

Cleaning

Cleaning the Cooling System

After every 100 operating hours or every season, clean the dirt and the chaff from the cylinder, the cylinder head fins, and around the carburetor and the linkage. Remove debris from the air intake slots on the recoil housing. This will ensure proper cooling and the best engine performance.

Cleaning under the Mower Housing

Tipping the mower may cause the fuel to leak from the carburetor or the fuel tank. Gasoline is extremely flammable, highly explosive, and, under certain conditions, can cause personal injury or property damage.

Avoid fuel spills by running the engine dry or by removing the gasoline with a hand pump; never siphon.

Tip the mower onto its left side and scrape it clean.

1. Remove the grass bag.
2. Disconnect the wire from the spark plug (Figure 12).
3. Drain the fuel from the fuel tank. Refer to Emptying the Fuel Tank.
4. Tip the mower onto its **left** side.
5. Remove the dirt and grass clippings with a hardwood scraper. Avoid burrs and sharp edges.

Important: Move the blade as little as possible to avoid future starting problems.

6. Return the mower to its operating position.
7. Connect the wire to the spark plug.

Storage

To prepare the mower for off-season storage, perform the recommended maintenance procedures. Refer to Maintenance.

Store the mower in a cool, clean, dry place. Cover the mower to keep it clean and protected.

Preparing the Fuel System

Gasoline can vaporize if you store it over long periods of time and explode if it comes into contact with an open flame.

- **Do not store gasoline over long periods of time.**
- **Do not store the mower with gasoline in the fuel tank or the carburetor in an enclosure with an open flame. (For example, a furnace or a water heater pilot light.)**
- **Allow the engine to cool before storing it in any enclosure.**

Empty the fuel tank when mowing the last time before storing the mower.

1. Run the mower until the engine stops from running out of fuel.
2. Prime the engine and start it again.
3. Allow the engine to run until it stops. When you can no longer start the engine, it is sufficiently dry.

Preparing the Engine

1. While the engine is still warm, change the oil from the crankcase. Refer to Changing the Engine Oil.
2. Remove the spark plug.
3. Using an oil can, add about one tablespoon of oil to the crankcase through the spark plug hole.
4. Slowly rotate the engine several times, using the starter rope, to distribute the oil.
5. Install the spark plug but **do not** connect the wire to the spark plug.

General Information

1. Clean the mower housing. Refer to Cleaning under the Mower Housing.
2. Clean any dirt and chaff from the cylinder, cylinder head fins, and blower housing.
3. Remove grass clippings, dirt, and grime from the external parts of the engine, the shrouding, and the top of the mower housing.
4. Check the condition of the blade. Refer to Maintaining the Blade.
5. Service the air filter; refer to Servicing the Air Filter.
6. Lubricate the self-propel drive; refer to Lubricating the Drive Wheels.
7. Tighten all nuts, bolts, and screws.
8. Touch up all rusted or chipped paint surfaces with paint available from an Authorized Service Dealer.

Removing the Mower from Storage

Folding or unfolding the handle improperly can pinch, stretch, or damage one or more of the cables. Any pinched, stretched, or damaged cable may cause an operational failure that results in an unsafe operating condition.

- **Do not pinch, stretch, or damage the cables.**
- **Handle the cables with care when folding or unfolding the handle.**
- **Do not use the mower if one or more of the cables are pinched, stretched, or damaged. Contact an Authorized Service Dealer.**

1. Carefully unfold the upper handle until it nests with the lower handle, then tighten the knobs.
2. Check and tighten all fasteners.
3. Remove the spark plug and spin the engine rapidly using the starter to blow excess oil from the cylinder.

4. Clean the spark plug or replace it if it is cracked, broken, or if the electrodes are worn.
5. Install the spark plug and torque it to 15 ft-lb (20 N·m).
6. Perform any needed maintenance procedures; refer to Maintenance.
7. Fill the fuel in the fuel tank with fresh, clean gasoline.
8. Check the engine oil level. Refer to Checking the Engine Oil Level.
9. Connect the wire to the spark plug.

Troubleshooting

Problem	Possible Cause	Corrective Action
Engine does not start	1. The fuel tank is empty or the fuel system contains stale fuel.	1. Drain and/or fill the fuel tank with fresh gasoline. If the problem persists, contact an Authorized Service Dealer.
	2. The throttle lever is not in the Choke position.	2. Move the throttle lever to the Choke position.
	3. The wire is not connected to the spark plug.	3. Connect the wire to the spark plug.
	4. The spark plug is pitted, fouled, or the gap is incorrect.	4. Check the spark plug and adjust the gap if necessary. Replace the spark plug if it is pitted, fouled, or cracked.
Engine starts hard or loses power	1. The fuel tank contains stale fuel.	1. Drain and fill the fuel tank with fresh gasoline.
	2. The fuel cap vent hole is plugged.	2. Clean the fuel cap vent hole or replace the fuel cap.
	3. The air filter element is dirty and is restricting the air flow.	3. Clean the air filter pre-cleaner and/or replace the paper air filter.
	4. The underside of the mower housing contains clippings and debris.	4. Clean under the mower housing.
	5. The spark plug is pitted, fouled, or the gap is incorrect.	5. Check the spark plug and adjust the gap if necessary. Replace the spark plug if it is pitted, fouled, or cracked.
	6. The engine oil level is low or the oil is dirty.	6. Check the engine oil. Change the oil if it is dirty or add oil if it is low

Problem	Possible Cause	Corrective Action
Engine runs rough	1. The wire is not connected to the spark plug. 2. The spark plug is pitted, fouled, or the gap is incorrect. 3. The throttle lever is not in the Fast position. 4. The air filter element is dirty and is restricting the air flow.	1. Connect the wire to the spark plug. 2. Check the spark plug and adjust the gap if necessary. Replace the spark plug if it is pitted, fouled, or cracked. 3. Move the throttle lever to the Fast position. 4. Clean the air filter pre-cleaner and/or replace the paper air filter.
Lawn mower or engine vibrates excessively	1. The blade is bent or is out of balance. 2. The blade mounting nuts are loose. 3. The underside of the mower housing contains clippings and debris. 4. The engine mounting bolts are loose.	1. Balance the blade. If the blade is bent, replace it. 2. Tighten the blade mounting nuts. 3. Clean under the mower housing. 4. Tighten the engine mounting bolts.
Uneven cutting pattern	1. All 4 wheels are not at the same height. 2. The blade is dull. 3. You are mowing in the same pattern repeatedly. 4. The underside of the mower housing contains clippings and debris.	1. Place all 4 wheels at the same height. 2. Sharpen and balance the blade. 3. Change the mowing pattern. 4. Clean under the mower housing.
Mower does not self-propel	1. The self-propel drive cable is out of adjustment or is damaged. 2. There is debris under the belt cover.	1. Adjust the self-propel drive cable. Replace the cable if necessary. 2. Clean the debris from under the belt cover.

International Distributor List—Consumer Products

Distributor:	Country:	Phone Number:
Atlantis Su ve Sulama Sisstemleri Lt	Turkey	90 216 344 86 74
Balama Prima Engineering Equip	Hong Kong	852 2155 2163
B-Ray Corporation	Korea	82 32 551 2076
Casco Sales Company	Puerto Rico	787 788 8383
Ceres S.A	Costa Rica	506 239 1138
CSSC Turf Equipment (pvt) Ltd	Sri Lanka	94 11 2746100
Cyril Johnston & Co	Nothern Ireland	44 2890 813 121
Equiver	Mexico	52 55 539 95444
Femco S.A.	Guatemala	502 442 3277
G.Y.K. Company ltd.	Japan	81 726 325 861
Geomechaniki of Athens	Greece	30 10 935 0054
Guandong Golden Star	China	86 20 876 51338
Hako Gorund and Garden	Sweden	46 35 10 0000
Hydroturf Int. Co	Dubai United Arab Emirates	97 14 347 9479
Hydroturf Egypt LLC	Egypt	202 519 4308
Ibea S.p.A.	Italy	39 0331 853611
Irriamc	Portugal	351 21 238 8260
Jean Heybroek b.v.	Netherlands	31 30 639 4611
Lely (U.K.) Limited	United Kingdom	44 1480 226 800
Maquiver S.A.	Colombia	57 1 236 4079
Maruyama Mfg. Co. Inc.	Japan	81 3 3252 2285
Metra Kft	Hungary	36 1 326 3880
Mountfield a.s.	Czech Republic	420 255 704 220
Munditol S.A.	Argentina	54 11 4 821 9999
Oslinger Turf Equipment SA	Ecuador	593 4 239 6970
Oy Hako Ground and Garden Ab	Finland	358 987 00733
Parkland Products Ltd	New Zealand	64 3 34 93760
Prochaska & Cie	Austria	43 1 278 5100
RT Cohen 2004 Ltd	Israel	972 986 17979
Riversa	Spain	34 9 52 83 7500
Roth Motorgerate GmBh & Co	Germany	49 7144 2050
Sc Svend Carlsen A/S	Denmark	45 66 109 200
Solvert S.A.S	France	33 1 30 81 77 00
Spypros Stavrinides Limited	Cyprus	357 22 434131
Surge Systems India Limited	India	91 1 292299901
T-Markt Logistics Ltd	Hungary	36 26 525 500
Toro Australia	Australia	61 3 9580 7355
Toro Europe BVBA	Belgium	32 14 562 960

The Toro Warranty

Conditions and Products Covered

The Toro® Company and its affiliate, Toro Warranty Company, pursuant to an agreement between them, jointly promises to the original purchaser* to repair any Toro Product used for normal residential purposes* if defective in materials or workmanship. The following time periods apply from the date of original purchase:

Products	Warranty Period
Walk Power Mowers	2-year limited warranty
Rear Engine Riders	2-year limited warranty
Lawn & Garden Tractors	2-year limited warranty
Electric Hand Held Products	2-year limited warranty
Snowthrowers	2-year limited warranty
Consumer Zero Turn	2-year limited warranty

* "Original purchaser" means use the person who originally purchased Toro products.

* "Normal residential purposes" 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.

Limited Warranty for Commercial Use

Toro Consumer Products and attachments used for commercial, institutional, or rental use are warranted against defects in materials or workmanship for the following time periods from the date of original purchase:

Products	Warranty Period
Walk Power Mowers	90 day warranty
Rear Engine Riders	90 day warranty
Lawn & Garden Tractors	90 day warranty
Electric Hand Held Products	90 day warranty
Snowthrowers	90 day warranty
Consumer Zero Turn	45 day warranty

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.
2. Bring the product and your proof of purchase (sales receipt) to your seller or the Service Dealer.

If for any reason you are dissatisfied with the Service Dealer's analysis or with the assistance provided, contact the Toro importer or contact us at:

Customer Care Department, Consumer Division
Toro Warranty Company
8111 Lyndale Avenue South
Bloomington, MN 55420-1196
Manager: Technical Product Support: 001-952-887-8248

See attached Distributor List

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

This express warranty does not cover:

- Cost of regular maintenance service or parts, such as filters, fuel, lubricants, tune-up parts, blade sharpening, brake and clutch adjustments.
- Any product or part which has been altered or misused or required replacement or repair due to normal wear, accidents, or lack of proper maintenance.
- Repairs necessary due to improper fuel, contaminants in the fuel system, or failure to properly prepare the fuel system prior to any period of non-use over three months.
- Engine and transmission. These are covered by the appropriate manufacturer's guarantees with separate terms and conditions.

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

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.