

# **21" Gas Powered Lawn Mower**



**WARNING!** To Reduce The Risk Of Injury, User  
Must Read And Understand Instruction Manual.

**SP-PM135G**

**FOR SERVICE CALL: 888-896-6881**  
**PARA SERVICIO LLAME: 888-896-6881**

## Introduction

This rotary-blade, walk-behind lawn mower is intended to be used by residential homeowners or professional, hired operators. It is designed primarily for cutting grass on well-maintained lawns on residential or commercial 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.

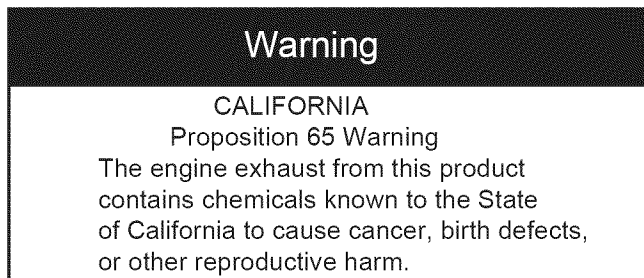
You may contact Steele directly at 888-896-6881 for product and accessory information, help finding a dealer, or to register your product. This manual identifies potential hazards and has safety messages identified by the safety alert symbol (Figure 1), which signals a hazard that may cause serious injury or death if you do not follow the recommended precautions.



Figure 1

### 1. Safety alert symbol

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



Important: This engine is not equipped with a spark arrest-muffler. It is a violation of California Public Resource Code Section 4442 to use or operate the engine on any forest covered, brush-covered, or grass-covered land. Other states or federal areas may have similar laws.

The enclosed Engine Owner's Manual is supplied for information regarding the US Environmental Protection Agency (EPA) and the California Emission Control Regulation of emission systems, maintenance, and warranty. Replacements may be ordered through the engine manufacturer.

For models with stated engine horsepower, the gross horsepower of the engine was laboratory rated by the engine manufacturer in accordance with SAE J1940. As configured to meet safety, emission, and operating requirements, the actual engine horsepower on this class of lawn mower will be significantly lower.

Do not tamper with the engine controls or alter the governor speed; doing so may create an unsafe condition resulting in personal injury.

## Safety

This lawn mower meets or exceeds the CPSC blade safety requirements for walk-behind rotary lawn mowers and the B71.1 of the American National Standards Institute in effect at the time of production.

Read and understand the contents of this manual before you start the engine.

The safety alert symbol (Figure 1) is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death. Improperly using or maintaining this mower could result in injury or death. To reduce this potential, comply with the following safety instructions.

The following instructions have been adapted from the ANSI/OPEI standard B71.1-2003.

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

### General Operation

- Read, understand, and follow all instructions on the machine and in the manual(s) before starting.
- Do not put hands or feet near or under the machine. Keep clear of the discharge opening at all times.
- Only allow responsible adults, who are familiar with the instructions, to operate this machine.
- Clear the area of objects such as rocks, wire, toys, etc., which could be thrown by the blade. Stay behind the handle when the engine is running.
- Be sure the area is clear of bystanders before operating. Stop machine if anyone enters the area.
- Do not operate machine barefooted or while wearing sandals. Always wear substantial footwear.
- Do not pull machine backward unless absolutely necessary. Always look down and behind before and while moving backward.
- Never direct discharged material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator. Stop the blade when crossing gravel surfaces.
- Do not operate machine without the entire grass catcher, discharge guard, rear guard, or other safety protective devices in place and working.
- Never leave a running machine unattended.
- Stop the engine and wait until the blade comes to a complete stop before cleaning the machine, removing grass catcher, or unclogging the discharge guard.
- Operate machine only in daylight or good artificial light.

- Do not operate machine while under the influence of alcohol or drugs.
- Never operate mower in wet grass. Always be sure of your footing; walk; never run.
- Disengage the drive system, if so equipped, before starting the engine.
- If the machine should start to vibrate abnormally, stop the engine and check for the cause immediately. Vibration is generally a warning of trouble.
- Always wear eye protection when operating machine.
- Lightning can cause severe injury or death. If you see lightning or hear thunder in the area, do not operate the machine; seek shelter.
- See manufacturer's instructions for proper operation and installation of accessories. Only use accessories approved by the manufacturer.

## Slope Operation

Slopes are a major factor related to slip and fall accidents, which can result in severe injury. Operation on all slopes require extra caution. If you feel uneasy on a slope, do not mow it.

- Mow across the face of slopes; never up and down. Exercise extreme caution when changing direction on slopes.
- Watch for holes, ruts, bumps, rocks, or other hidden objects. Uneven terrain could cause a slip and fall accident. Tall grass can hide obstacles.
- Do not mow on wet grass or 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.

## Children

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the machine and the mowing activity. Never assume that children will remain where you last saw them.

- Keep children out of the mowing area and under the watchful care of a responsible adult other than the operator.
- Be alert and turn mower off if a child enters the area.
- Never allow children to operate the machine.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may block your view of a child.

## Service

### Safe Handling of Gasoline

**To avoid personal injury or property damage, use extreme care in handling gasoline. Gasoline is extremely flammable and the vapors are explosive.**

- Extinguish all cigarettes, cigars, pipes, and other sources of ignition.
- Use only an approved gasoline container.
- Never remove gas cap or add fuel with the engine running. Allow engine to cool before refueling.
- Never refuel the machine indoors.

- 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.
- Never fill containers inside a vehicle or on a truck or trailer bed with a plastic liner. Always place containers on the ground away from your vehicle before filling.
- Remove gas-powered equipment from the truck or trailer and refuel it on the ground. If this is not possible, then refuel such equipment with a portable container, rather than from 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. Do not use a nozzle lock-open device.
- If fuel is spilled on clothing, change clothing immediately. Never overfill fuel tank. Replace gas cap and tighten securely.



**Exhaust contains carbon monoxide, an odorless, deadly poison that can kill you.**

**Do not run the engine indoors or in an enclosed area.**

## General Service

- Never operate machine in a closed area.
- Keep all nuts and bolts tight to be sure the equipment is in safe working condition.
- Never tamper with safety devices. Check their proper operation regularly.
- Keep machine free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage and remove any fuel-soaked debris. Allow machine to cool before storing.
- If you strike a foreign object, stop and inspect the machine. Repair, if necessary, before starting.
- Never make any adjustments or repairs with the engine running. Disconnect the spark-plug wire and ground against engine to prevent unintended starting.
- Check grass catcher components and the discharge guard frequently and replace with manufacturer's recommended parts, when necessary.
- Mower blades are sharp. Wrap the blade or wear gloves, and use extra caution when servicing them.
- Do not change the engine governor setting or overspeed the engine.
- Maintain or replace safety and instruction labels, as necessary.

## Product specification

Component	specification
Rated power	3600w/5HP
Rated speed	3000rpm
Displacement	140cc
Cutting width	508mm(20")
Height Adjustment	1.5" to 3" (3 Positions)
Wheels	7"and12"
machine weight	30kg

## Safety and Instructional Decals

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



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

##### Procedure



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 from the mower housing (Figure 2).

**Important:** Route the cables to the outside of the handle as you install the handle.

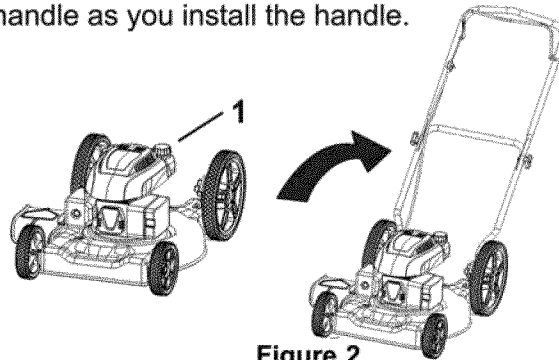


Figure 2

1. Handle knob (2)
2. Move the handle to the operating position.
3. Install and tighten the handle knobs that you removed in step 1 (Figure 2).

#### 2. Filling the Engine with Oil

##### Procedure

Your mower does not come with oil in the engine, but it does come with a bottle of oil.

1. Remove the dipstick (Figure 3)

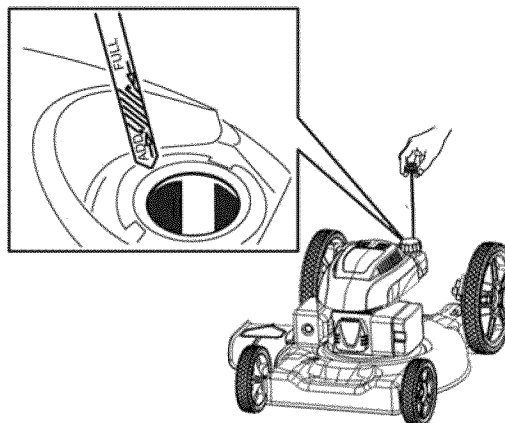


Figure 3

2. Slowly pour oil into the oil tube until the oil level reaches the Full line on the dipstick (Figure 4). Do not overfill (Max.20 oz. (0.59 l), type: SAE 30 detergent oil with an API service of SF,SG, SH, SJ, SL, or higher.)

**Note:** If you overfill the engine, pour some oil out of it as directed in Changing the Engine Oil.

3. Install the dipstick securely.

**Important:** Change the engine oil after the first 5 operating hours; change it yearly thereafter. Refer to Changing the Engine Oil.

## Product Overview

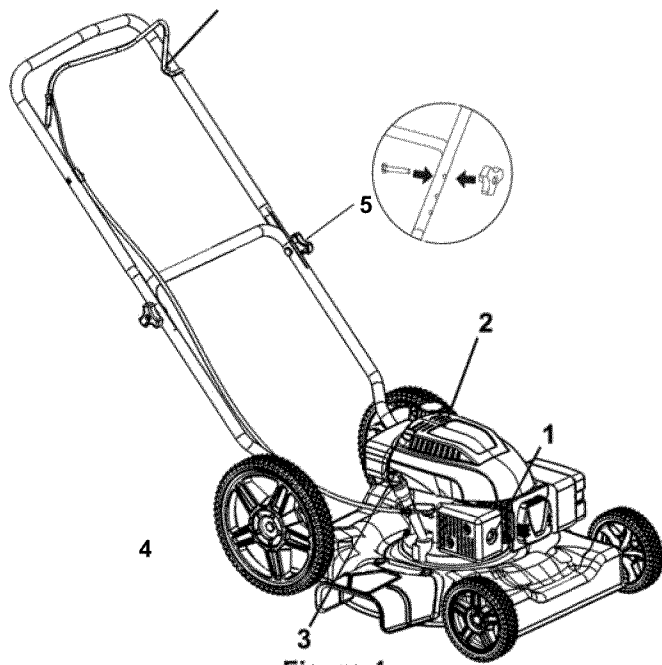


Figure 4

1. Air filter
2. Fuel tank cap
3. Oil fill/dipstick
4. Blade control bar
5. Knob

## Operation

### Attachments/Accessories

A selection of **Steele®** approved attachments and accessories are available for use with the machine to enhance and expand its capabilities. Contact your Authorized Service Dealer or Distributor at **888-896-6881**.

## Filling the Fuel Tank



**Gasoline is extremely flammable and explosive. A fire or explosion from gasoline can burn you and others.**

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

Fill the fuel tank with fresh unleaded regular gasoline from a major name-brand service station (Figure 5).

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



Figure 5

## Checking the Engine Oil Level

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

1. Remove the dipstick, wipe it clean, and fully install the dipstick (Figure 6).

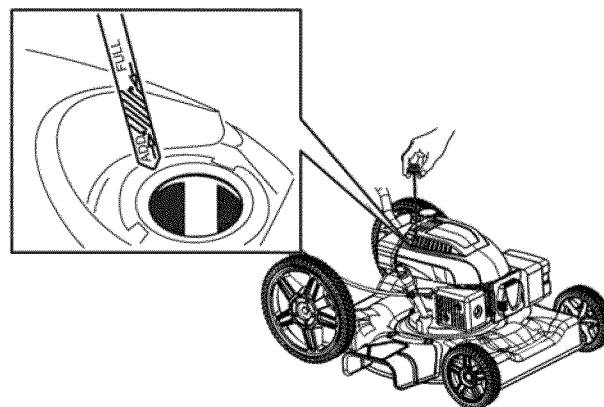


Figure 6

2. Remove the dipstick and check the oil level (Figure 6). If the oil level is below the Add mark on the dipstick, slowly pour oil into the oil fill tube to raise the oil level to the Full mark on the dipstick. Do not overfill (Max. fill 20 oz. (0.59 l), type: SAE 30 detergent oil with an API service of SF, SG, SH, SJ, SL, or higher.)

**Note:** If you overfill the engine, pour some oil out of it as directed in Changing the Engine Oil.

3. Install the dipstick.

## Adjusting the Cutting Height



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

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



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

Adjust the cutting height as desired. Set all four wheels to the same height.

**Note:** To raise the mower, move the cutting height levers forward; to lower the mower, move the all the cutting height levers rearward (Figure 7).

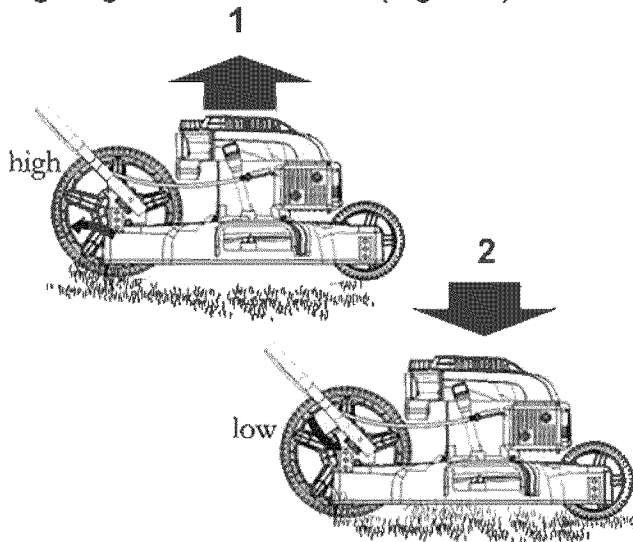


Figure 7

1. Raise the mower 2. Lower the mower

**Note:** The cutting height settings are (36mm); (54mm); (72mm)

## Starting the Engine

1. Hold the blade control bar (Figure 8) against the handle.

1. Blade control bar

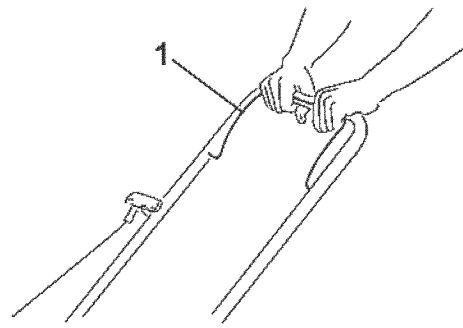


Figure 8

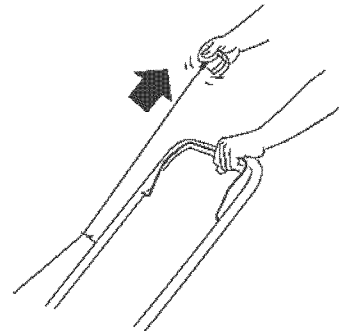


Figure 9

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

## Stopping the Engine

Service Interval: Before each use or daily

To stop the engine, release the blade control bar (Figure 10).

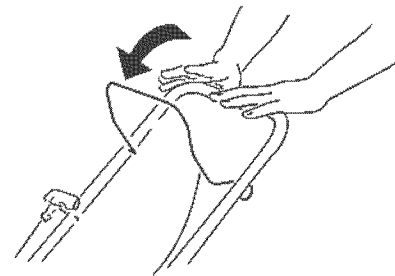


Figure 10

**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 mower immediately and contact an Authorized Service Dealer.

## Mulching the Clippings

Your mower comes from the factory ready to mulch the grass and leaf clippings back into the lawn. If the grass bag is on the mower, remove it (refer to Removing the Grass Bag) before mulching the clippings.

## Bagging the Clippings (Not Included)

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



**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.**



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

**Stop the engine and wait for all moving parts to stop before leaving the operating position.**



**Wet grass or leaves can cause serious injury if you slip and contact the blade. Mow only in dry conditions.**

## 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 mower strikes an object or starts to vibrate, immediately stop the engine, disconnect the wire from the spark plug, and examine the mower for damage.
- For best performance, install a new blade before the cutting season begins.
- Replace the blade when necessary with a Steele® replacement blade.

### Cutting Grass

- Cut only about a third of the grass blade at a time. Do not cut below the 1.4 inch (36 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.
- 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 mower 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 mower 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 one 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 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.
- If there are more than 5 inches (13 cm) of leaves on the lawn, set the front cutting height one or two notches higher than the rear cutting height.
- Slow down your mowing speed if the mower does not cut the leaves finely enough.

## Maintenance

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

Maintenance Service Interval	Maintenance Procedure
After the first 5 hours	<ul style="list-style-type: none"><li>• Change the engine oil.</li></ul>
Before each use or daily	<ul style="list-style-type: none"><li>• Check the engine oil level.</li><li>• Ensure that the engine stops within 3 seconds after releasing the blade control bar.</li><li>• Clean grass clippings and dirt from under the mower.</li></ul>
Every 25 hours	<ul style="list-style-type: none"><li>• Replace the air filter replace it more frequently in dusty operating conditions.</li></ul>
Before storage	<ul style="list-style-type: none"><li>• Empty the fuel tank before repairs as directed and before annual storage.</li></ul>
Yearly	<ul style="list-style-type: none"><li>• Change the engine oil.</li><li>• Replace the blade or have it sharpened (more frequently if the edge dulls quickly).</li><li>• Refer to your Engine Operator's Manual for any additional yearly maintenance procedures.</li></ul>

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



## Replacing the Air Filter

**Service Interval:** Every 25 hours

1. Use a screw driver to open the air filter cover (Figure 12).

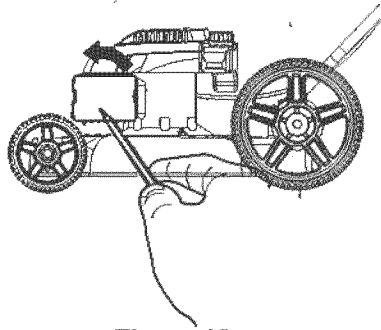


Figure 12

2. Replace the air filter (Figure 13).

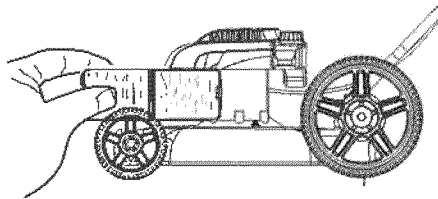


Figure 13

3. Install the cover.

## Changing the Engine Oil

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

**Change the engine oil after the first 5 operating hours; change it yearly thereafter.**

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

1. Perform the pre-maintenance procedures; refer to Preparing for Maintenance.
2. Remove the dipstick (Figure 14).

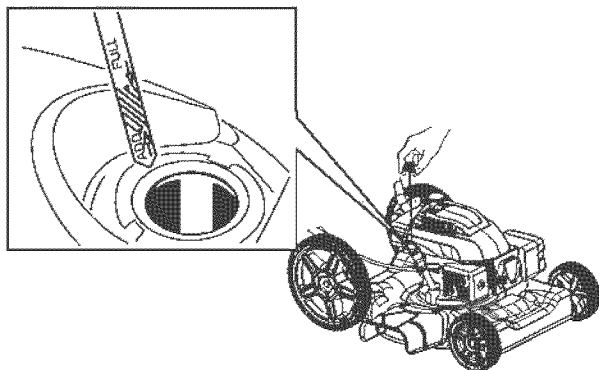


Figure 14

3. Tip the mower onto its side, with the dipstick down, to drain the used oil out through the oil fill tube (Figure 15).

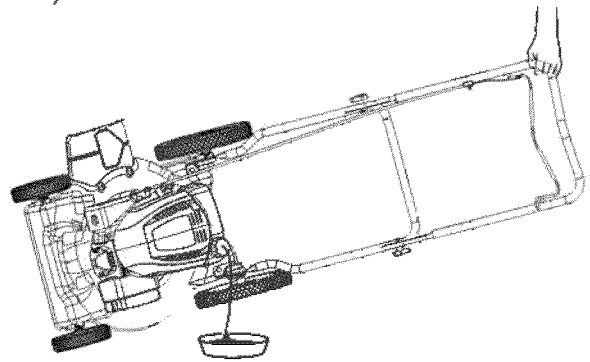


Figure 15

4. Slowly pour oil into the oil fill tube until the oil level reaches the Full line on the dipstick (Figure 15). Do not overfill (Max. fill :20 oz. (0.59 l), type: SAE 30 detergent oil with an API service classification of SF,SG, SH, SJ, SL, or higher.)

**Note:** If you overfill the engine, pour some oil out of it as directed in step 3 above.

5. Install the dipstick securely.
6. Dispose of the used oil properly at a local recycling center.

## 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.



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

- Disconnect the wire from the spark plug.
- Wear gloves when servicing the blade.

1. Disconnect the spark-plug wire from the spark plug. Refer to Preparing for Maintenance.
2. Tip the mower 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 16).

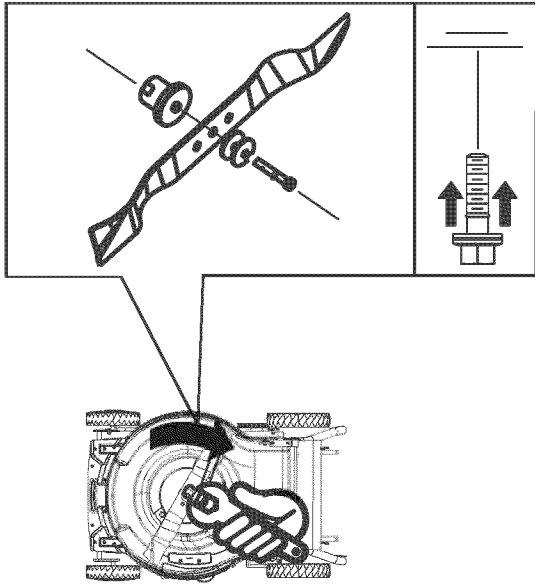


Figure 16

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

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

**Important: A bolt torqued to 60 ft-lb (82 N-m) 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.**

## Cleaning the Mower

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



**The mower may dislodge material from under the mower housing.**

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

1. With the engine running on a flat paved surface, spray a stream of water in front of the right rear wheel (Figure 17).

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

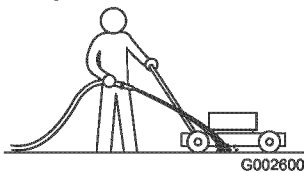


Figure 17

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

## Storage

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

### Preparing the Mower for Storage



**Gasoline vapors can explode.**

- Do not store gasoline more than 30 days.
- Do not store the mower 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 mower 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 1 oz. (30 ml) 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 15 ft-lb (20 N-m).
8. Tighten all nuts, bolts, and screws.

## Folding the Handle



**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. Loosen the handle knobs until you can move the handle freely (Figure 18).

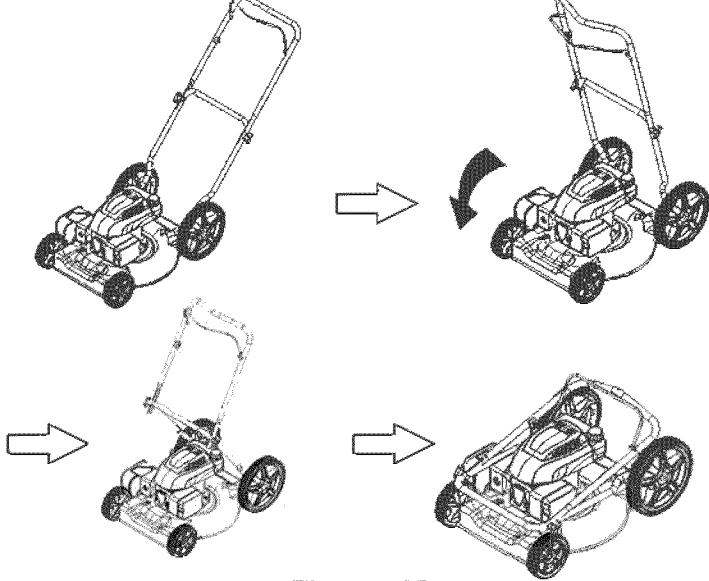


Figure 18

1. Handle knob
2. Move the handle forward as shown in Figure 18.

**Removing the Mower from Storage**

Connect the wire to the spark plug.

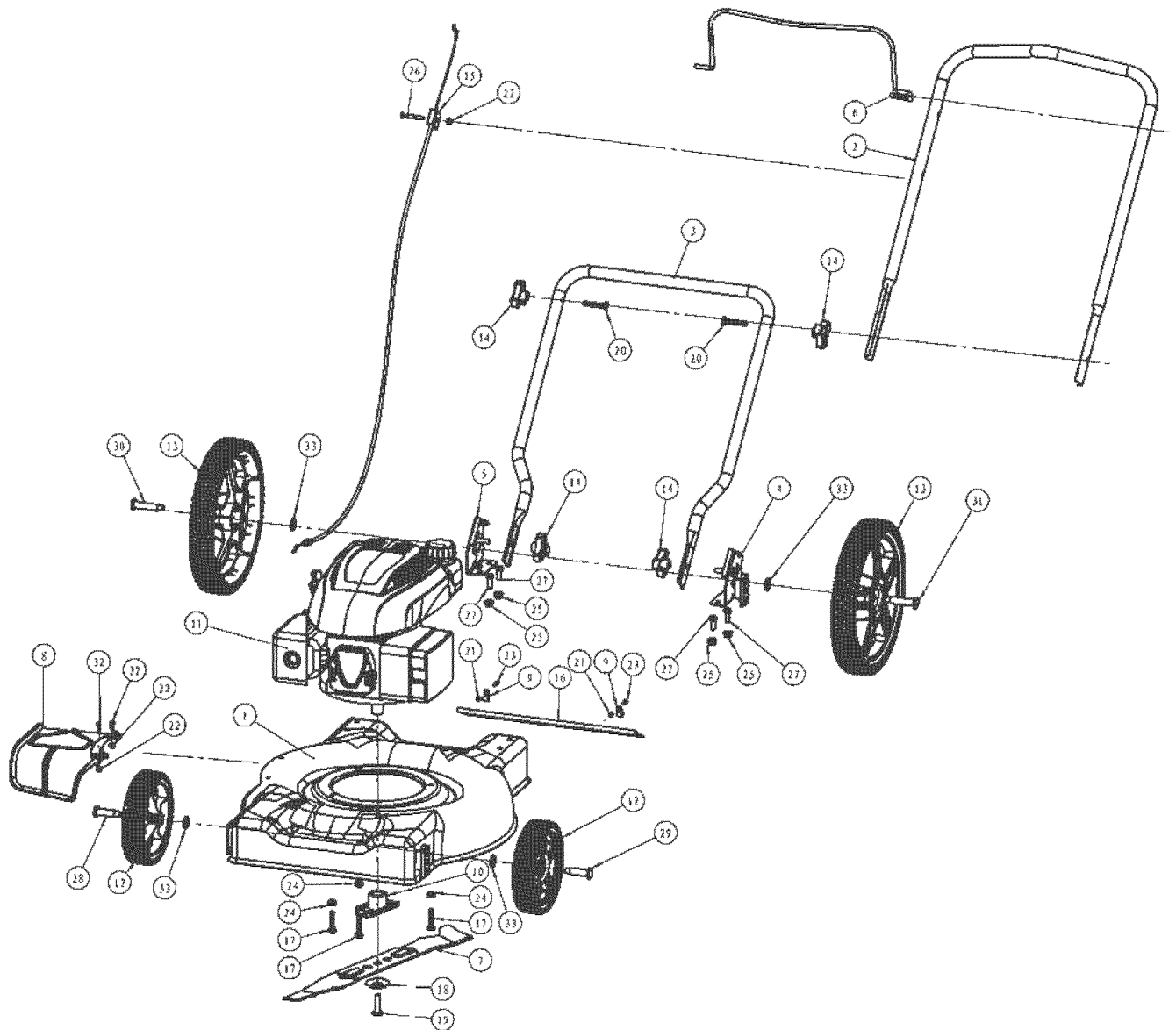


Figure 19