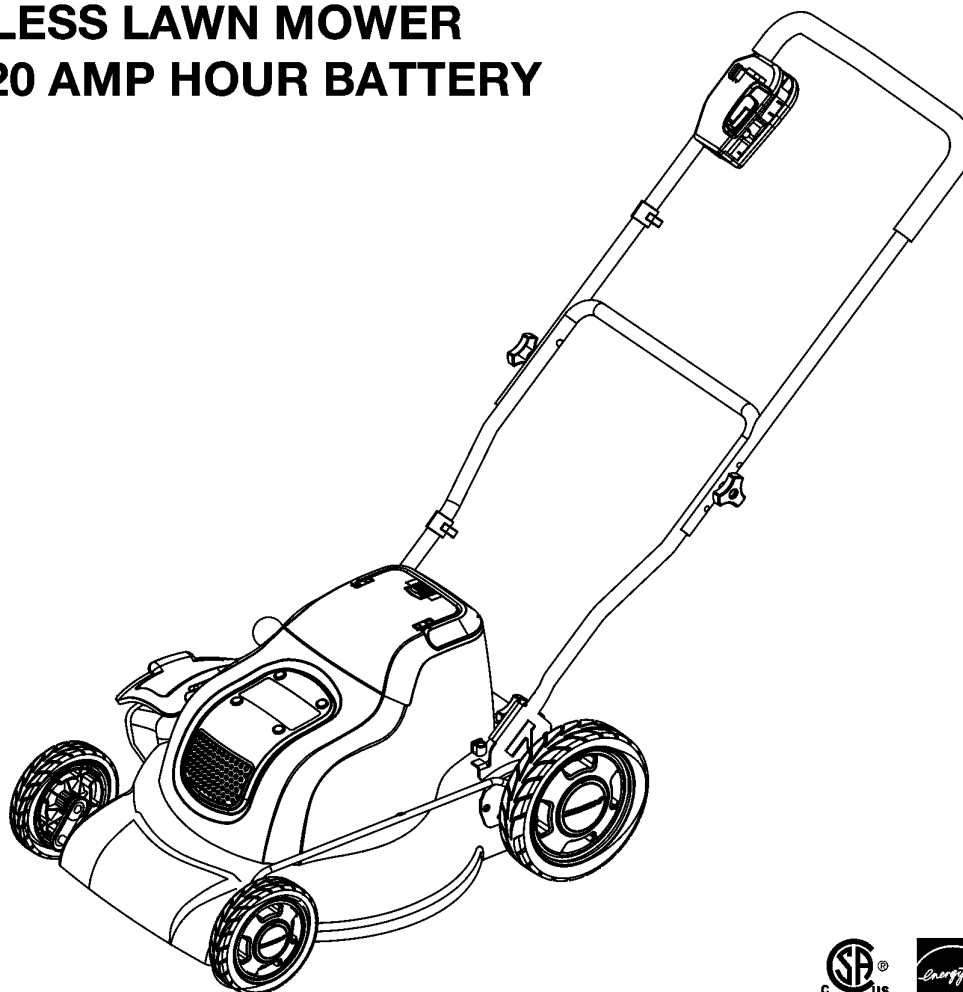




# OPERATOR'S MANUAL

United States Patent Pending

## 20 in. 24 VOLT CORDLESS LAWN MOWER WITH 20 AMP HOUR BATTERY 60120



Your lawn mower has been engineered and manufactured to our high standard for dependability, ease of operation, and operator safety. Properly cared for, it will give you years of rugged, trouble-free performance.



**WARNING:** To reduce the risk of injury, the user must read and understand the operator's manual before using this product.

Thank you for your purchase.

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**SAVE THIS MANUAL FOR FUTURE REFERENCE**

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## INTRODUCTION

This product has many features for making its use more pleasant and enjoyable. Safety, performance, and dependability have been given top priority in the design of this product making it easy to maintain and operate.

## GENERAL SAFETY RULES



### WARNING:

#### READ AND UNDERSTAND ALL INSTRUCTIONS.

Failure to follow all instructions listed below and on the machine may result in electric shock, fire, and/or serious personal injury.

### READ ALL INSTRUCTIONS

- This cutting machine is capable of amputating hands and feet and throwing objects. Failure to observe all safety instructions could result in serious injury or death.
- Do not use the lawn mower in damp or wet conditions or operate in the rain.
- Keep the area clear of all bystanders, children, and pets while mowing. Stop machine if anyone enters the area.
- 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.
- Do not wear loose clothing or jewelry. They can be caught in moving parts. Use of rubber gloves and footwear is recommended when working outdoors.
- Keep firm footing and balance. Do not overreach. Overreaching can result in loss of balance.
- Do not operate the equipment while barefoot or when wearing sandals or similar lightweight footwear. Wear protective footwear that will protect your feet and improve your footing on slippery surfaces.
- Do not leave the mower unattended while running.
- Keep hands and feet away from cutting area. Keep clear of the discharge opening at all times.
- Operate the lawn mower only in daylight or good artificial light.
- Always wear safety glasses with side shields. Everyday glasses have only impact resistant lenses. They are NOT safety glasses. Following this rule will reduce the risk of eye injury. Use face mask if operation is dusty.
- Wear safety glasses or goggles that are marked to comply with ANSI Z87.1 standard when operating this product.
- Use the right appliance. Do not use the lawn mower for any job except that for which it is intended.
- Do not force the lawn mower. It will do the job better and safer at the rate for which it was designed.
- Stay alert, watch what you are doing and use common sense when operating the lawn mower. Do not operate the mower while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the lawn mower may result in serious personal injury.
- Keep machine in good working condition. Keep blades sharp and guards in place and in working order.
- Check all nuts, bolts, and screws at frequent intervals for proper tightness to be sure the equipment is in safe working condition.
- Stop the motor and wait until the blade comes to a complete stop before cleaning the lawn mower, removing the grass catcher, or unclogging the discharge guard.
- When not in use, mower should be stored indoors in a dry, locked up place—out of the reach of children.

## SPECIFIC SAFETY RULES

- Do not operate the mower without the entire grass catcher, discharge guard, rear guard, or other safety protective devices in place and working.
- Follow manufacturer's instructions for proper operation and installation of accessories. Only use accessories approved by the manufacturer.
- Clear the work area before each use. Remove all objects such as rocks, sticks, wire, bones, toys, or other objects which can be thrown by the blade. Stay behind the handle when the motor is running.
- Avoid holes, ruts, bumps, rocks, or other hidden objects. Uneven terrain could cause a slip and fall accident.
- Do not mow near drop-offs, ditches, or embankments.
- Mow across the face of slopes, never up and down. Exercise extreme caution when changing direction on slopes.
- Plan your mowing pattern to avoid discharge of material toward roads, sidewalks, bystanders and the like. Also, avoid discharging material against a wall or obstruction, which may cause the material to ricochet back toward the operator.
- Do not mow on wet grass or excessively steep slopes. Poor footing could cause a slip and fall accident. Walk, never run.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may block your view.
- Do not pull the mower backward unless absolutely necessary. If you must back the mower away from a wall or obstruction, first look down and behind to avoid tripping.
- 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.
- Objects struck by the lawn mower blade can cause severe injuries to persons. The lawn should always be carefully examined and cleared of all objects prior to each mowing.

## SPECIFIC SAFETY RULES

- If the lawn mower strikes a foreign object, follow these steps:
  - Stop the lawn mower and release the switch control lever.
  - Disconnect the power cord.
  - Thoroughly inspect the mower for any damage.
  - Repair any damage before restarting and continuing to operate the mower.
- Stop the motor, remove the switch key, and wait until the blade comes to a complete stop before removing the grass catcher or unclogging the chute. The cutting blade continues to rotate for a few seconds after the motor is shut off. Never place any part of the body in the blade area until you are sure the blade has stopped rotating.
- If the mower should start to vibrate abnormally, stop the motor and check immediately for the cause. Vibration is generally a warning of trouble.
- Service on the product must be performed by qualified repair personnel only. Service or maintenance performed by unqualified personnel could result in injury to the user or damage to the product.
- Use only identical replacement parts when servicing the product. Use of unauthorized parts may create a risk of serious injury to the user, or damage to the product.
- Do not place battery tools or their batteries near fire or heat. This will reduce the risk of explosion and possibly injury.
- Do not open or mutilate battery (ies). Released electrolyte is corrosive and may cause damage to the eyes or skin. It may be toxic if swallowed.
- If electrolyte contacts the skin, wash it off immediately with water.
- If electrolyte contacts the eyes, flush thoroughly and immediately with water. Seek medical attention.

### SAFETY RULES FOR CHARGER






- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- Use of an attachment not recommended or sold by the battery charger manufacturer may result in a risk of fire, electric shock, or injury to persons. Following this rule will reduce the risk of electric shock, fire, or serious personal injury.
- Do not service mower with switch key or charger installed.
- Do not use the charger when the ambient temperature is above 40°C or below 0°C.

- Do not operate charger with a damaged cord or plug, which could cause shorting and electric shock. If damaged, have the charger replaced by an authorized serviceman.
  - Do not operate charger if it has received a sharp blow, been dropped, or otherwise damaged in any way. Take it to an authorized serviceman for electrical check to determine if the charger is in good working order.
  - Unplug charger from outlet before attempting any maintenance or cleaning to reduce the risk of electric shock.
  - Disconnect charger from the power supply when not in use to prevent damage to the charger during a power surge.
  - Risk of electric shock. Do not touch uninsulated portion of output connector or uninsulated battery terminal.
  - Do not expose charger to wet or damp conditions. Water entering charger will increase the risk of electric shock.
  - Make sure cord is located so that it will not be stepped on, tripped over, come in contact with sharp edges or moving parts or otherwise subjected to damage or stress. This will reduce the risk of accidental falls, which could cause injury, and damage to the cord, which could result in electric shock.
  - Keep cord and charger away from heat to prevent damage to housing or internal parts.
  - Do not let gasoline, oils, petroleum-based products, etc. come in contact with plastic parts. They contain chemicals that can damage, weaken, or destroy plastic.
  - An extension cord should not be used unless absolutely necessary. Use of improper extension cord could result in a risk of fire and electric shock. If extension cord must be used, make sure:
    - a. That pins on plug of extension cord are the same number, size and shape as those of plug on charger.
    - b. That extension cord is properly wired and in good electrical condition; and
    - c. That wire size is large enough for AC ampere rating of charger as specified below:

Cord Length (Feet)	25'	50'	100'
Cord Size (AWG)	16	16	16
- NOTE:** AWG = American Wire Gauge
- Save these instructions. Refer to them frequently and use them to instruct others who may use this product. If you loan someone this tool, loan them these instructions also.




## SYMBOLS

Some of the following symbols may be used on this product. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the product better and safer.

SYMBOL	NAME	DESIGNATION/EXPLANATION
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
hrs	Hours	Time
gal	Gallon	Volume
qt	Quart	Volume
	Wet Conditions Alert	Do not expose to rain or use in damp locations.
	Read The Operator's Manual	To reduce the risk of injury, user must read and understand operator's manual before using this product.
	Eye Protection	Always wear safety goggles or safety glasses with side shields and, as necessary, a full face shield when operating this product.
	Safety Alert	Precautions that involve your safety.
	Electric Shock	Failure to use in dry conditions and to observe safe practices can result in electric shock.

## SYMBOLS

The following signal words and meanings are intended to explain the levels of risk associated with this product.

SYMBOL	SIGNAL	MEANING
	<b>DANGER:</b>	Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.
	<b>WARNING:</b>	Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
	<b>CAUTION:</b>	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	<b>CAUTION:</b>	(Without Safety Alert Symbol) Indicates a situation that may result in property damage.

### SERVICE

Servicing requires extreme care and knowledge and should be performed only by a qualified service technician. For service we suggest you return the product to your nearest **AUTHORIZED SERVICE CENTER** for repair. When servicing, use only identical replacement parts.



### WARNING:

To avoid serious personal injury, do not attempt to use this product until you read thoroughly and understand completely the operator's manual. If you do not understand the warnings and instructions in the operator's manual, do not use this product. Call EarthWise customer service for assistance.



### WARNING:



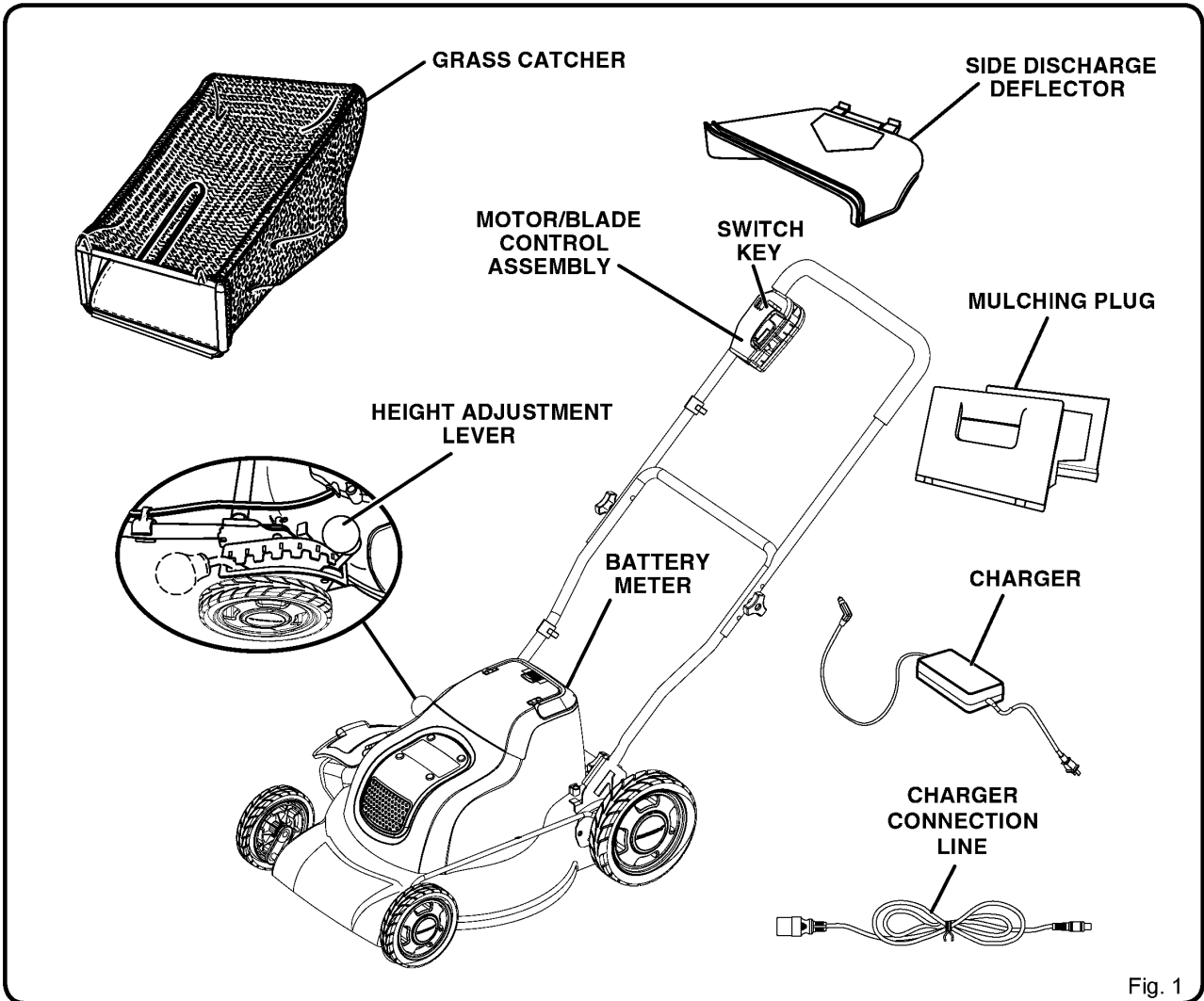
The operation of any power tool can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles or safety glasses with side shields and, when needed, a full face shield. We recommend Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields. Always use eye protection which is marked to comply with ANSI Z87.1.

## SAVE THESE INSTRUCTIONS

# FEATURES

## PRODUCT SPECIFICATIONS

Battery .....	24 V 20AH sealed	Height Adjustments.....	1-1/2 in. to 4 in.
Input .....	24 V, DC only	Wheel Size.....	7 in. front, 9-1/2 in. rear
No-load Speed .....	3,500 r/min. (RPM)	Weight .....	92 lb.
Cutting Path .....	20 in.		



## FEATURES

### KNOW YOUR LAWN MOWER

See Figure 1.

The safe use of this product requires an understanding of the information on the product and in this operator's manual as well as a knowledge of the project you are attempting. Before use of this product, familiarize yourself with all operating features and safety rules.

### BATTERY METER

The battery meter measures the amount of charge remaining in the battery.

### GRASS CATCHER

The grass catcher prevents grass clippings from being strewn across your lawn as you mow.

### HEIGHT ADJUSTMENT LEVER

The height adjustment lever provides cutting height adjustments.

### MOTOR/BLADE CONTROL ASSEMBLY

The motor/blade control, located on the upper handle of the mower, engages and disengages the motor and blade.

### MULCHING PLUG

Your mower is equipped with a mulching plug that cuts and recuts the grass for finer clippings.

### SWITCH KEY

The switch key must be inserted before the mower can be started.

### SIDE DISCHARGE DEFLECTOR

Use the side discharge deflector on your mower when the grass is too high to mulch or when side discharging is preferred. The grass clippings produced when using the side discharge deflector are noticeably larger than those produced when using the mulching plug.

## ASSEMBLY

### UNPACKING

This product requires assembly.

- Carefully remove the product and any accessories from the box. Make sure that all items listed in the packing list are included.
- Inspect the product carefully to make sure no breakage or damage occurred during shipping.
- Do not discard the packing material until you have carefully inspected and satisfactorily operated the product.
- If any parts are damaged or missing, please call 1-800-377-5888 - In Canada call 1-800-561-0004 for assistance.

### PACKING LIST

Mower  
Switch key  
Side Discharge Deflector  
Mulching Plug  
Grass Catcher  
Charger  
Charger Connection Line  
Operator's Manual

#### WARNING:

If any parts are damaged or missing do not operate this product until the parts are replaced. Failure to heed this warning so could result in serious personal injury.

#### WARNING:

Do not attempt to modify this product or create accessories not recommended for use with this product. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious personal injury.

#### WARNING:

Do not insert switch key until assembly is complete. Failure to comply could result in accidental starting and possible serious personal injury.

#### WARNING:

To prevent accidental starting, do not make any adjustments or installations with the switch key inserted.



## ASSEMBLY

### **⚠ WARNING:**

Never operate the mower without the proper safety devices in place and working. Never operate the mower with damaged safety devices. Failure to heed this warning can result in serious personal injury.

### ADJUSTING HANDLE

See Figure 2.

- Fully loosen the handle knobs on both sides of the handle.
- Pull up and back on the upper handle to raise the handle into operating position. Make certain the handles snap into place securely.
- Tighten the handle knobs on both sides of the handle to secure.

### INSTALLING SIDE DISCHARGE DEFLECTOR

See Figure 3.

**NOTE:** When using the side discharge deflector, do not install either mulching plug or grass catcher.

- Lift the side discharge door.
- Align the grooves on the deflector with the pins on the underside of the door.
- Lower the deflector until the hooks on the mower deck are secured in the openings in the deflector.
- Release the deflector and door.

### INSTALLING THE MULCHING PLUG

See Figure 4.

**NOTE:** When using the mulching plug, do not install either the side discharge deflector or the grass catcher.

- Lift the rear discharge door.
- Grasp the mulching plug by its handle and tilt at an approximate 15 degree angle.
- Insert the plug into the rear discharge opening.
- Lower the rear discharge door.

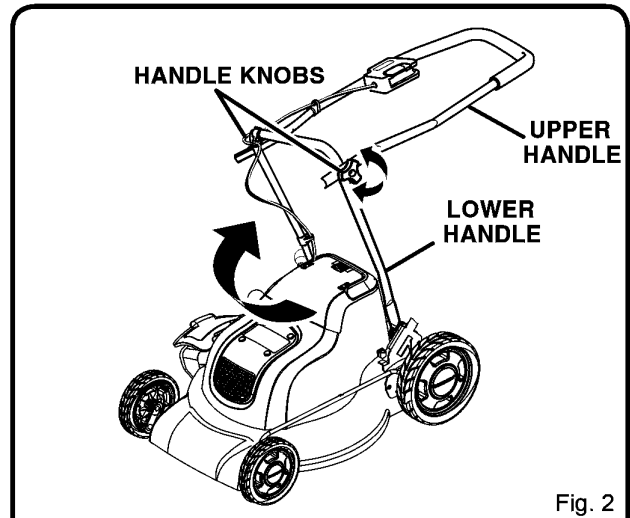


Fig. 2

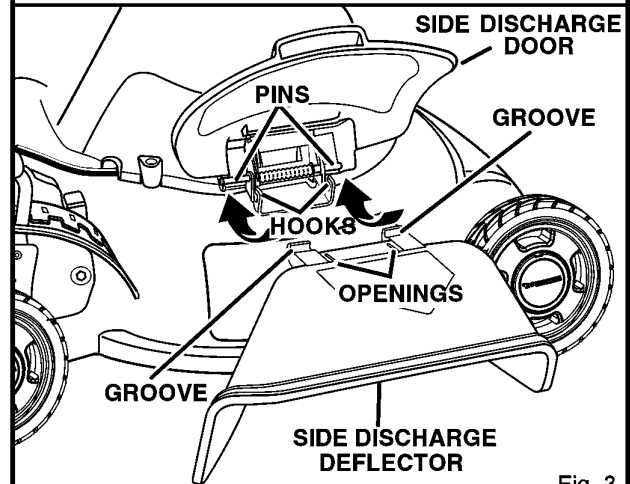


Fig. 3

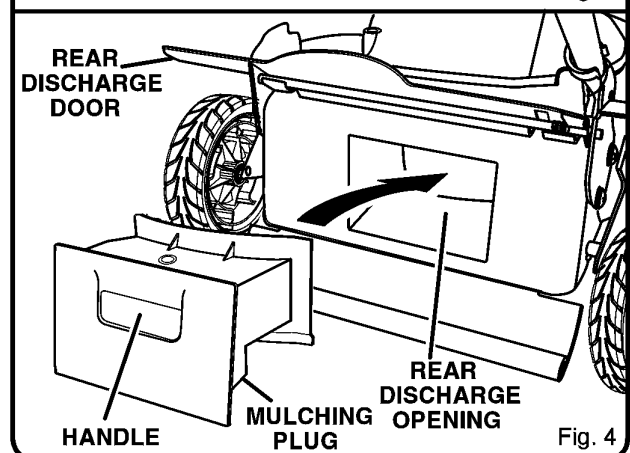


Fig. 4

## ASSEMBLY

### INSTALLING THE GRASS CATCHER

See Figure 5.

**NOTE:** When using the grass catcher, do not install either the side discharge deflector or the mulching plug.

- Lift the rear discharge door.
- Lift the grass catcher by its handle and place under the rear discharge door so that the hooks on the grass catcher are seated on the door rod.
- Release the rear discharge door. When installed correctly, the hooks on the grass catcher will extend through the openings on the rear discharge door.

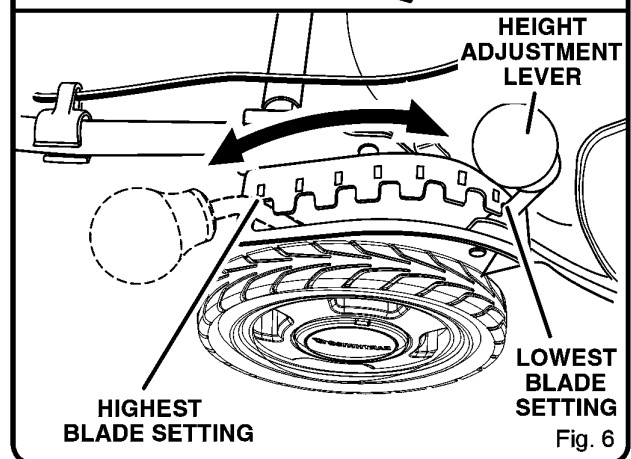
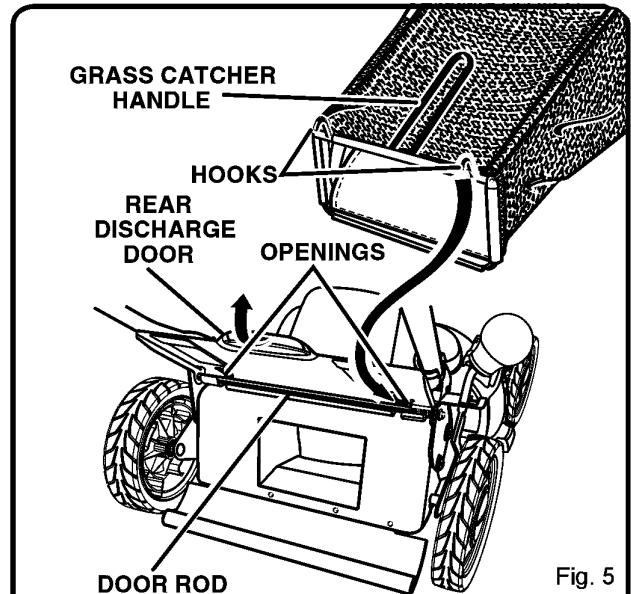
### SETTING BLADE HEIGHT

See Figure 6.

When shipped, the wheels on the mower are set to a low-cutting position. Before using the mower for the first time, raise the cutting position to the height best suited for your lawn. The average lawn should be between 1-1/2 in. to 2 in. during cool months and between 2 in. and 3-1/4 in. during hot months.

#### To adjust the blade height:

- To raise the blade height, grasp the height adjustment lever and move it toward the back of the mower.
- To lower the blade height, grasp the height adjustment lever and move it toward the front of the mower.



## OPERATION

### ⚠ WARNING:

Do not allow familiarity with this type of product to make you careless. Remember that a careless fraction of a second is sufficient to inflict serious injury.

### ⚠ WARNING:

Always wear safety goggles or safety glasses with side shields when operating this product. Failure to do so could result in objects being thrown into your eyes, resulting in possible serious injury.

### ⚠ WARNING:

Do not use any attachments or accessories not recommended by the manufacturer of this product. The use of attachments or accessories not recommended can result in serious personal injury.

### APPLICATIONS

You may use this product for the purpose listed below:

- Mowing your lawn

## OPERATION

### BATTERY METER

See Figure 7.

Since the mower battery is shipped in a low charge condition, the battery must be charged before use. The battery has 5 LED lights to indicate battery capacity. These lights will only illuminate when the mower is running.

If 3 GREEN lights illuminate, the battery is charged and ready for use. 2 green lights are equal to 50-80% charge, while 1 green light is equal to 30-50% charge.

If the AMBER light illuminates, the battery will soon require charging. It is recommended that the battery be charged at this point. The battery is at 5-30% charge when the yellow light illuminates.

If the RED light illuminates and/or flashes at any time, the battery must be charged IMMEDIATELY before use. There is less than 5% of battery charge when the red light comes on.

**NOTE:** When the red light illuminates, you must stop the mower and charge the battery immediately, or it will reduce the life of the battery.

### CHARGING THE BATTERY PACK

See Figures 7 - 8.

The lawn mower comes with a maintenance free, sealed 24 volt storage battery.

- Remove the switch key.
- Charge the battery pack only with the charger provided.
- Allow at least 15 hours of charge time before initial use of the mower.
- Make sure the power supply is normal household voltage, **120 volts, 60 Hz, AC only.**
- The battery should be charged in a cool, dry place.
- To improve battery life, store battery indoors in a controlled climate. **Fully charge battery pack every 30 days.**
- Since the battery will not develop a memory, it does not have to be fully discharged before recharging.
- 2 to 3 initial charging/discharging cycles may be required to achieve maximum run time/capacity.
- When fully charged, the battery can be safely stored in temperatures down to -40°F for a period of up to two weeks, before requiring charging. **Fully charge battery pack every 30 days.**
- The battery charger should be operated in temperatures between 23°F and 104°F.
- The battery supplied is sealed, maintenance free and spill free.

### TO CHARGE

See Figures 7 - 8.

- Remove the switch key and store in a secure location out of the reach of children.
- Plug the charger connector into the receptacle on the mower.
- Insert the 120 volt plug of the charger into the wall receptacle.

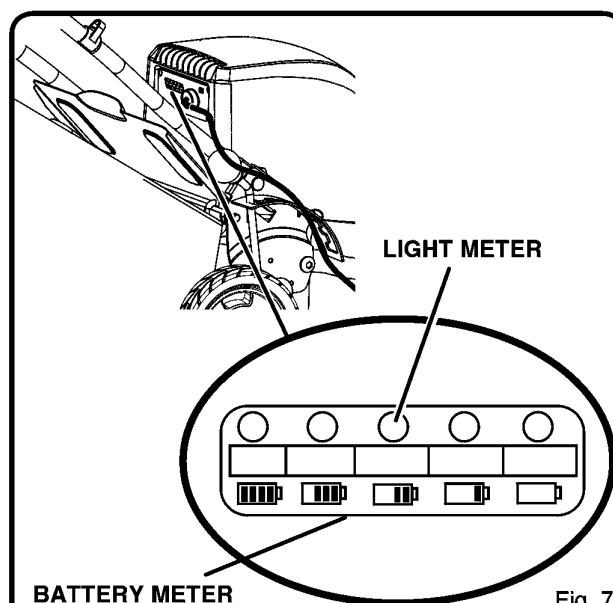


Fig. 7

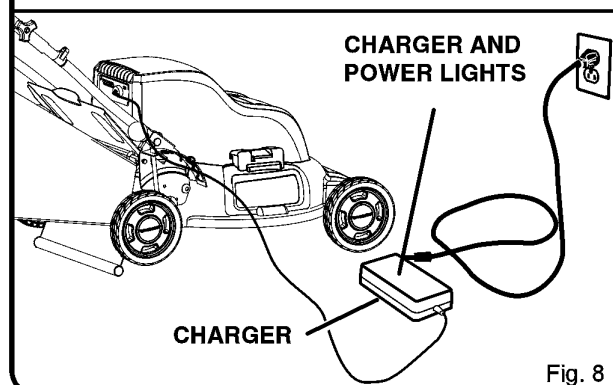


Fig. 8

- After plugging into the wall receptacle the charger light and power light will turn on. When the battery is fully charged the charging light will turn from red to green. It takes approximately 15 hours to charge a fully discharged mower.
- Do not charge battery any longer than 24 hours. This is not a trickle charger.

### CHARGER CONNECTION LINE

**USE ONLY WHEN BATTERY HAS BEEN REMOVED FROM MOWER.**

To charge battery.

- Insert 3 slot plug into socket of battery assembly.
- Attach female connector of the charger connection line to the male connector of the battery charger.
- Plug charger into electrical outlet.
- Disconnect when charging is complete.

# OPERATION

## REMOVING BATTERY ASSEMBLY

### *To Remove Battery Assembly*

- Lift handle to release lock and pull upward.
- Rest battery on top of motor cover or on ledge inside of motor cover.
- Pull plug downward to disconnect cord from battery assembly.
- Remove battery.

### *To Re-install Battery Assembly*

- Rest battery on top of motor cover or on ledge inside of motor cover.
- Reconnect plug with arrow visible at the front of the battery.
- Place battery assembly into the battery compartment of the motor cover.
- Lower handle to lock in place.

## STARTING/STOPPING THE MOWER

### *See Figure 9.*

- Insert the switch key into the slot on the motor/blade control assembly.
- Rotate the lever release counterclockwise and hold to allow access to the switch control lever.
- Pull the switch control lever toward the mower handle and let go of the lever release. Continue to hold the switch control lever against the mower handle as you mow.
- To stop the mower, release the switch control lever.

**NOTE:** A high-pitched noise and sparking may occur as the electric motor decelerates. This is normal.

# OPERATION

## MOWING TIPS

See Figure 10.

- Make sure the lawn is clear of stones, sticks, wires, and other objects that could damage the lawn mower blades or motor. Such objects could be accidentally thrown by the mower in any direction and cause serious personal injury to the operator and others.
- For a healthy lawn, always cut off one-third or less of the total length of the grass.
- When cutting heavy grass, reduce walking speed to allow for more effective cutting and a proper discharge of the clippings.
- Do not cut wet grass. It will stick to the underside of the deck and prevent proper mulching of grass clippings.
- New or thick grass may require a narrower cut.
- Clean the underside of the mower deck after each use to remove grass clippings, leaves, dirt, and any other accumulated debris.

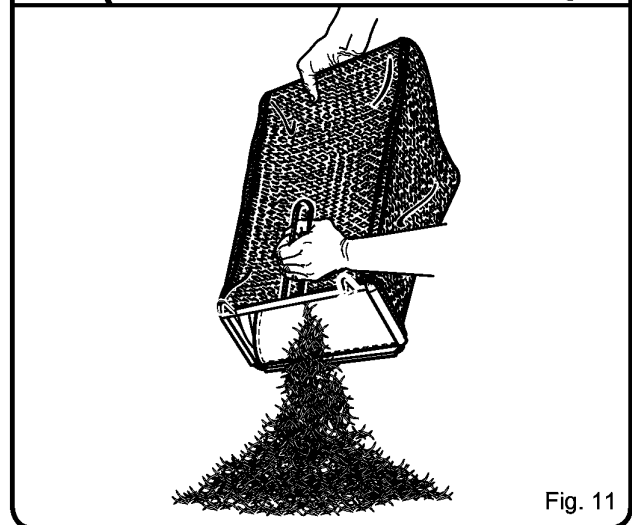
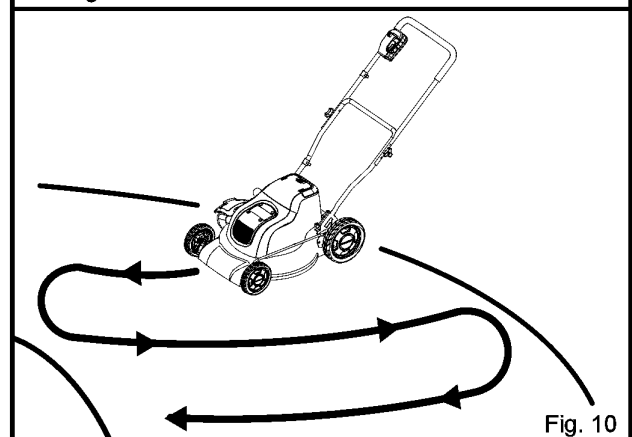
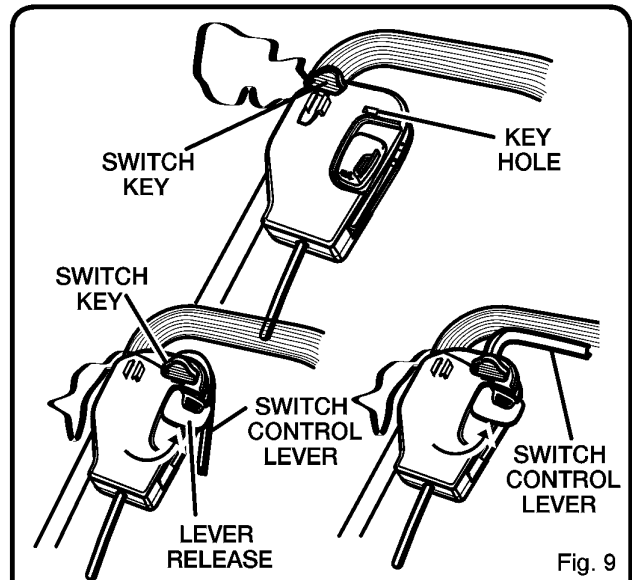
## SLOPE OPERATION

- Slopes are a major factor related to slip and fall accidents that can result in severe injury. Operation on slopes requires extra caution. If you feel uneasy on a slope, do not mow it. For your safety, do not attempt to mow slopes greater than 15 degrees.
- Mow across the face of slopes, not up and down. Exercise extreme caution when changing direction on slopes.
- Watch for holes, ruts, rocks, hidden objects, or bumps which can cause you to slip or trip. Tall grass can hide obstacles. Remove all objects such as rocks, tree limbs, etc., which could be tripped over or thrown by the blade.
- Always be sure of your footing. A slip and fall can cause serious personal injury. If you feel you are losing your balance, release the switch control lever immediately.
- Do not mow near drop-offs, ditches, or embankments; you could lose your footing or balance.

## EMPTYING THE GRASS CATCHER

See Figure 11.

- Lift the grass catcher by its handle and lift to remove from mower.
- Empty grass clippings.
- Lift the rear discharge door and reinstall the grass catcher as described earlier in this manual.



## MAINTENANCE

### **⚠ WARNING:**

When servicing, use only identical replacement parts. Use of any other parts may create a hazard or cause product damage.

### **⚠ WARNING:**

Always wear safety goggles or safety glasses with side shields during power tool operation or when blowing dust. If operation is dusty, also wear a dust mask.

### GENERAL MAINTENANCE

Avoid using solvents when cleaning plastic parts. Most plastics are susceptible to damage from various types of commercial solvents and may be damaged by their use. Use clean cloths to remove dirt, dust, oil, grease, etc.

### **⚠ WARNING:**

Do not at any time let brake fluids, gasoline, petroleum-based products, penetrating oils, etc., come in contact with plastic parts. Chemicals can damage, weaken, or destroy plastic which may result in serious personal injury.

Periodically check all nuts and bolts for proper tightness to ensure safe operation of the mower.

Remove any buildup of grass and leaves on or around the motor cover. Wipe the mower clean with a dry cloth occasionally. Do not use water.

### LUBRICATION

All of the bearings in this product are lubricated with a sufficient amount of high grade lubricant for the life of the unit under normal operating conditions. Therefore, no further bearing lubrication is required.

#### At the beginning and end of each mowing season:

- Lubricate the springs on the rear discharge door with light oil.
- Lubricate the height adjustment lever and related hardware with light oil.
- Remove the wheels and lubricate the surface of the axle bolt and the inner surface of the wheel with light oil.
- Remove the blade and blade hub assembly and lubricate the motor shaft with light oil or engine oil. See **Replacing the Cutting Blade** for instructions on removing the blade.

### **⚠ WARNING:**

Always protect hands by wearing heavy gloves and/or wrapping the cutting edges of the blade with rags and other material when performing blade maintenance. Failure to heed this warning so could result in serious personal injury.

### **⚠ WARNING:**

Before performing any maintenance, make sure the mower is unplugged from the power supply and the switch key is removed. Failure to heed this warning could result in serious personal injury.

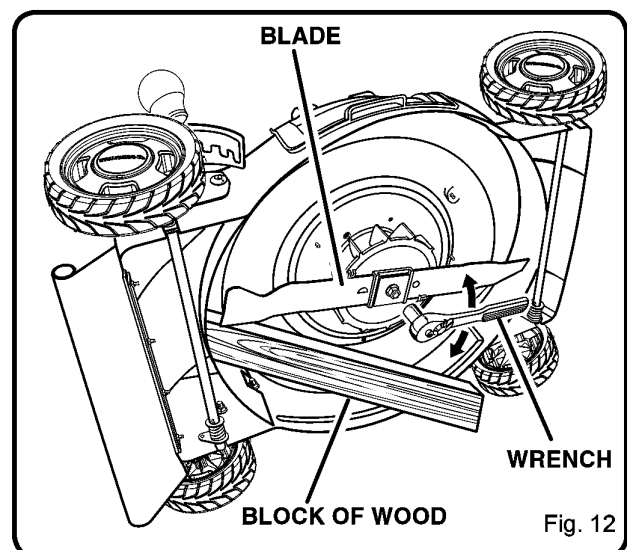
### REPLACING THE CUTTING BLADE

See Figure 12 - 13.

Since the mower is equipped with a sealed battery, the mower can be tipped for maintenance without the danger of acid spillage.

**NOTE:** Only use identical replacement blades.

- Stop the motor and remove the switch key. Allow blade to come to a complete stop.
- Turn the mower on its side.
- Wedge a block of wood between the blade and mower deck to prevent the blade from turning.
- Loosen the blade nut using a 15 mm wrench or socket (not provided).
- Remove the blade nut, spacer, blade insulator, and blade.
- Make certain the fan assembly is pushed completely against the motor shaft.



## MAINTENANCE

- Place the new blade on the shaft against the fan assembly. Make sure it is installed with the curved ends pointing up toward the mower deck and not down toward the ground.
- Replace the blade insulator and spacer, then thread the blade nut on the shaft and finger tighten.  
**NOTE:** Make certain all parts are replaced in the exact order in which they were removed.
- Torque the blade nut down using a torque wrench (not provided) to ensure the bolt is properly tightened. The recommended torque for the blade nut is 220-310 in. lbs.

### SHARPENING THE BLADE

See Figure 14.

For best mowing performance, the mower blade must be kept sharp. A dull blade does not cut grass evenly and overloads the motor. Under normal circumstances, sharpening the blade twice during the mowing season is usually sufficient. However, if your lawn has sandy soil, more frequent sharpenings may be required.

- Following the instructions in the **Replacing the Cutting Blade** section, remove the mower blade. **DO NOT** attempt to sharpen the blade while it is attached to the mower.

#### **⚠ WARNING:**

When removing, inspect the blade carefully. If blade is bent or damaged, replace immediately with a new blade. Failure to replace a bent or damaged blade could cause an accident resulting in possible serious injury.

- Using a fine-tooth file or stone, sharpen cutting edges on both ends of the blade, removing equal amounts of material from both ends.

### BALANCING THE BLADE

See Figure 15.

When sharpening, care should be taken to keep the blade balanced. An unbalanced blade will cause excessive vibration when the mower is running. This vibration will eventually cause damage to the mower, especially the motor.

#### **To check the blade balance:**

- Clamp a screwdriver horizontally in a vise as shown.  
**NOTE:** If a vise is not available, a straight nail can also be used.
- Place the center hole of blade on the screwdriver (or nail) shank.
- If blade is balanced, it will remain in a horizontal position. If either end of the blade drops downward, sharpen the heavy side until the blade is balanced.

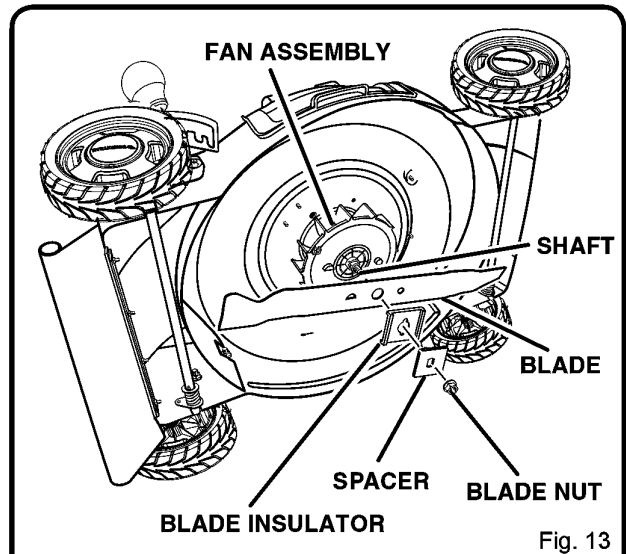


Fig. 13

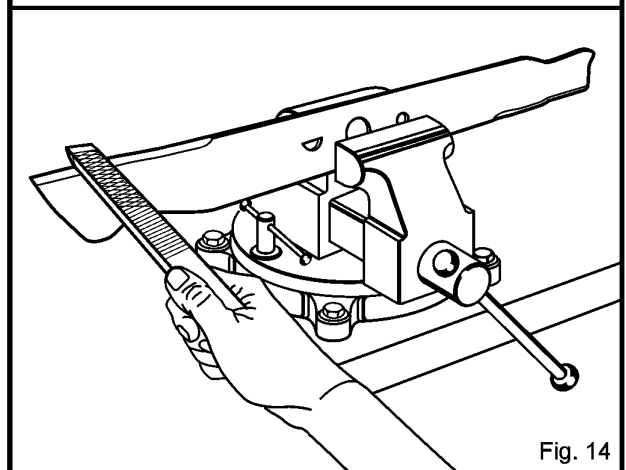


Fig. 14

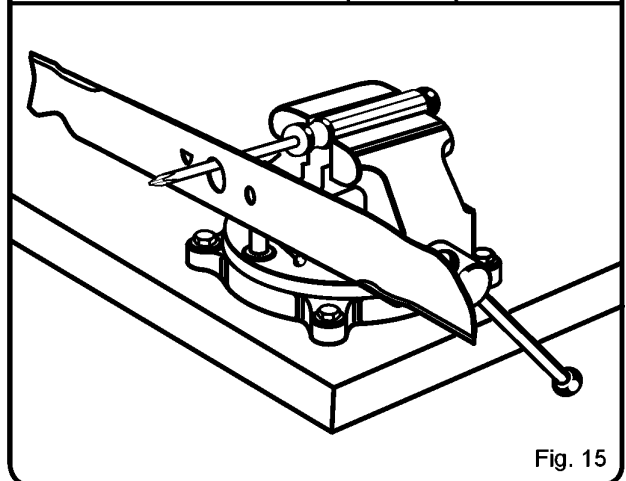


Fig. 15

## MAINTENANCE

### REPLACING WHEELS

See Figure 16.

#### To replace a wheel:

- Stop the motor and remove the switch key.
- Turn the mower on its side.
- Using a flat blade screwdriver, pry off the hubcap.
- Remove the cotter pin from the wheel axle, then remove the wheel.
- Replace with new tire and insert new cotter pin to secure.
- † Replace hubcap.

### STORING THE MOWER

See Figure 17.

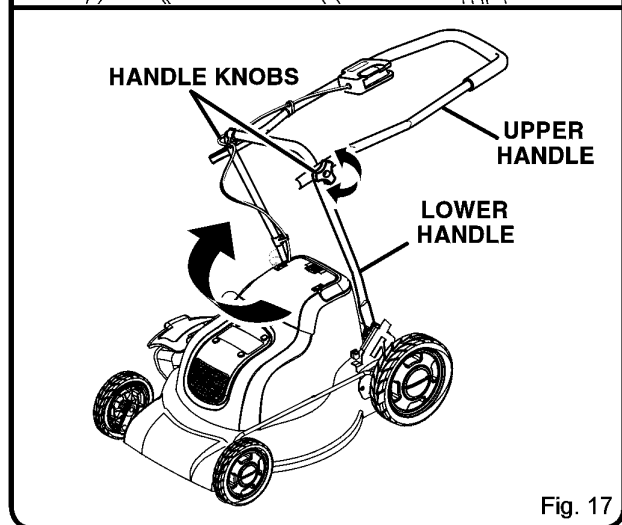
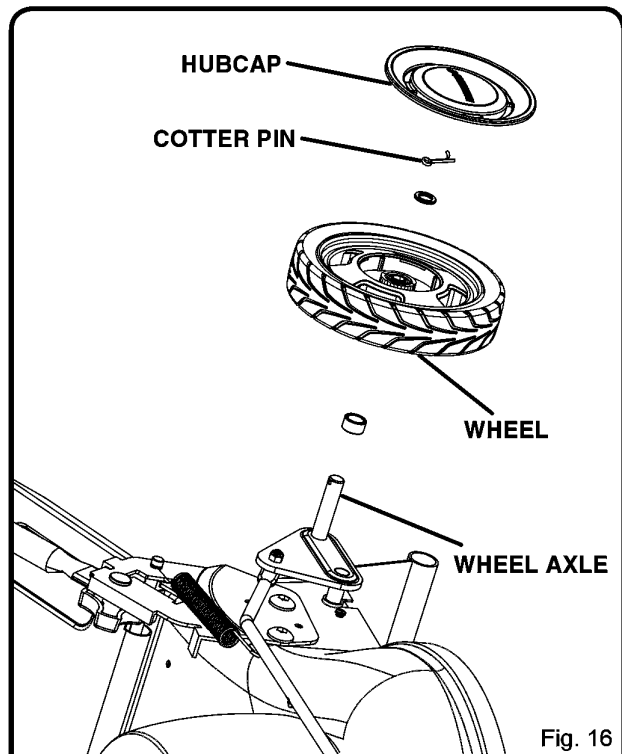
- Remove the switch key and store in a secure location out of the reach of children.
- Turn mower on its side and clean grass clippings that have accumulated on the underside of the mower deck.
- Wipe the mower clean with a dry cloth.
- Check all nuts, bolts, knobs, screws, fasteners, etc., for tightness.
- Inspect moving parts for damage, breakage, and wear. Have repairs made on any damaged or missing parts.
- Store mower indoors in a clean, dry place out of the reach of children.
- Do not store near corrosive materials such as fertilizer or rock salt.

#### To lower the handle before storing:

- Fully loosen the handle knobs on the sides of the handle and fold the upper handle down.
- Push inward on each side of the lower handle, and lift the sides of the lower handle past the edges of the handle mounting brackets.

### BATTERY MAINTENANCE

It is recommended to charge the mower every 2 months for optimum performance when not in use. If the battery has been in storage for a long time without recharging, it will be in a low charge state.





## TROUBLESHOOTING

Problem	Possible Cause	Solution
Handle not in position.	Carriage bolts not seated properly.  Handle knobs not tightened.	Adjust the height of the handle and make sure the carriage bolts are seated properly.  Tighten handle knobs.
Mower not starting.	Battery is low in charge.  Battery is either defective or will not take a charge.	Charge the battery.  Replace the battery.
Mower cutting grass unevenly.	Lawn is rough or uneven or cutting height not set properly.	Move the wheels to a higher position. All wheels must be placed in the same cutting height for the mower to cut evenly.
Mower not mulching properly.	Wet grass clippings sticking to the underside of the deck.	Wait until the grass dries before mowing.
Mower hard to push.	High grass, rear of mower housing and blade dragging in heavy grass, or cutting height too low.	Raise cutting height.
Mower vibrating at higher speed.	Blade is unbalanced.  Bent motor shaft.	Balance the blade by grinding each cutting edge equally.  Stop the motor, disconnect the power source, and inspect for damage. Have repaired by an authorized service center before restarting.

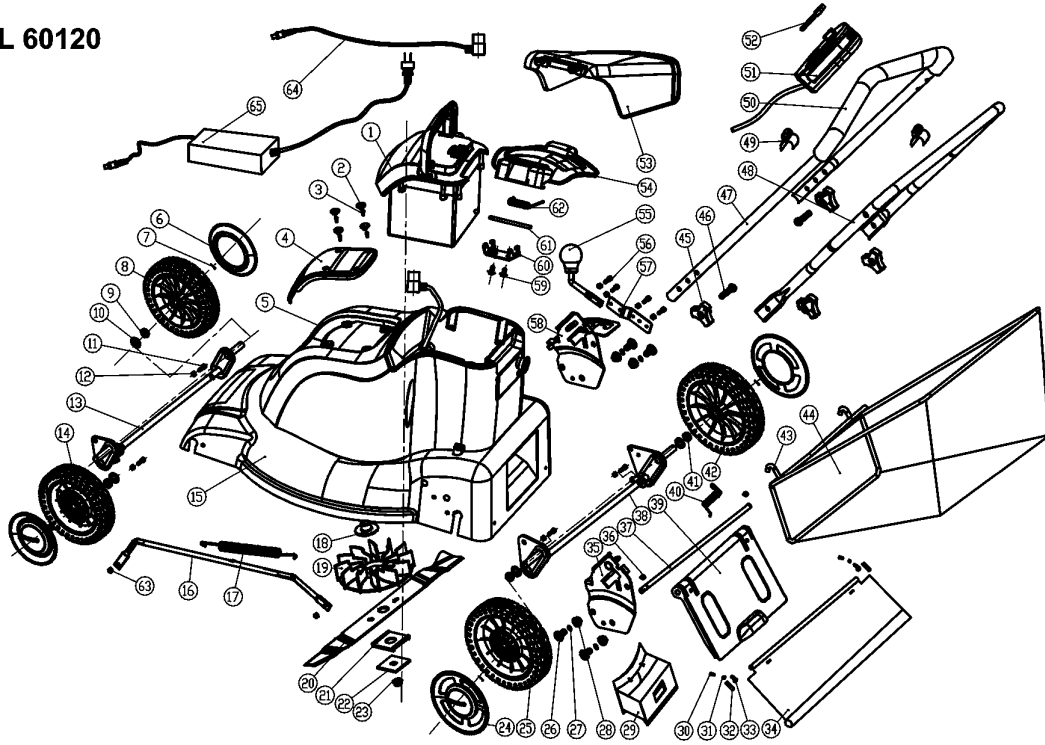


### CALL US FIRST

For any questions about operating or maintaining your product,  
call the EarthWise® Help Line!  
1-800-377-5888 - In Canada call 1-800-561-0004  
Your product has been fully tested prior to shipment to ensure  
your complete satisfaction.

# EXPLODED VIEW/PARTS LIST

## MODEL 60120



Key No.	Part No.	Description	Qty.	Key No.	Part No.	Description	Qty.
1	R8000-517202	battery	1	34	R8181-516201SB	rear flap	1
2	R8024-516201	cap	4	35	R8321-516201	height adjustment bracket left	1
3	R8SJAB40-14B	self-tapping screw	3	36	R8CE-08B	ring washer	2
4	R8181-516202	motor vent	1	37	R8081-516211	rear discharge pin	1
5	R8020-516213SB	motor cover	1	38	R8440-516203	20 in rear wheel axle	1
6	R8020-516208	7 in wheel cover	2	39	R8020-516216	rear discharge door	1
7	R8PA25-20D	cotter pin	4	40	R8342-516210	rear compression spring	1
8	R8121-517204	7 in right front wheel	1	41	R8224-516201	wheel ferrule (B)	2
9	R8224-517001	washer	2	42	R8121-517202	9-1/2 in right rear wheel	1
10	R8202-516202	cross screw	4	43	R8291-516201	grass catcher frame	1
11	R8SACD05-12B	self-locking nut	8	44	R8102-516201	grass catcher bag	1
12	R8NG-05B	self-locking nut	8	45	R8313-513701	knob	4
13	R8440-516201	20 in front wheel axle	1	46	R8206-517001	bolt	2
14	R8121-517203	7 in left front wheel	1	47	R8001-516201	upper handle with soft grip	1
15	R8006-517201	deck	1	48	R8001-516202	lower handle	1
16	R8087-516210	link bar	1	49	R8007-517001SB	cord guide	2
17	R8342-517002	extension spring	1	50	R8331-516201	soft grip (not sold separately)	1
18	R8224-516202	spindle guard	1	51	8000-516202	switch sub assy	1
19	R8403-517001WA	fan	1	52	8214-517201	switch key	1
20	R8231-516201	blade	1	53	R8020-516202SB	side discharge deflector	1
21	R8181-517002WA	blade insulator	1	54	R8020-516203SB	side discharge door	1
22	R8321-517006	spacer	1	55	R8087-517201	height adjustment handle	1
23	R8207-517001	blade nut	1	56	R8SACD05-14B	screw	4
24	R8020-516209	8 in wheel cover	2	57	R8321-517009	spring board	1
25	R8121-517201	9-1/2 in left rear wheel	1	58	R8321-516202	height adjustment bracket right	1
26	R8SBCD10-20D	bolt M10*20	4	59	R8SQDD06-08D	flange bolt	2
27	R8WS-10B	spring pad	4	60	R8321-517008	side discharge bracket	1
28	R8ND-10D	flange nut	4	61	R8081-516204	side discharge pin	1
29	R8020-516204SB	mulching plug	1	62	R8342-516202	side compression spring	1
30	R8SJAD04-12B	pan head screw	2	63	R8NG-06B	self-locking nut	5
31	R8NG-04B	self-locking nut	2	64	R8413-516204	charger connection line	1
32	R8187-516201	rubber board backup plate	2	65	R8426-516201	charger assy	1
33	R8186-517002	clip	2				

## WARRANTY

### **LIMITED WARRANTY, BATTERY POWERED MODELS.**

This product is manufactured for the American Lawn Mower Company/Great States Corporation. American Lawn Mower Company/Great States Corporation, Shelbyville, Indiana has been making lawn mowers for over 100 years and it warrants to the original owner that each new product and service part is free from defects in material and workmanship and agrees to repair or replace under this warranty any defective product or part from the original date of purchase for two (2) years except for the conditions, circumstances and parts listed below. Proof of purchase (original dated sales receipt) must accompany all warranty claims.

#### **THIS WARRANTY IS NOT TRANSFERABLE AND DOES NOT COVER:**

- The battery for more than one year from date of purchase. Products sold damaged or incomplete, sold "as is", sold reconditioned or used as rental equipment.
- Delivery, installation or normal adjustments explained in the operator's manual.
- Damage or liability caused by shipping, improper handling, improper installation, incorrect voltage or improper wiring, improper maintenance, improper modification, or the use of accessories and/or attachments not specifically recommended.
- Repairs necessary because of operator abuse or negligence, or the failure to install, operate, maintain and store the product according to the instructions in the operator's manual.
- Damage caused by cold, heat, rain, excessive humidity, corrosive environments and materials, or other contaminants.
- Expendable items that become worn during normal use.
- Cosmetic defects that do not interfere with tool functionality.
- Freight costs from customer to vendor.
- Repair and transportation costs of products or parts determined not to be defective.
- ANY INCIDENTAL, INDIRECT OR CONSEQUENTIAL LOSS, DAMAGE, OR EXPENSE THAT MAY RESULT FROM ANY DEFECT, FAILURE OR MALFUNCTION OF THE PRODUCT. Some states do not allow the exclusion or limitation on how long an implied warranty lasts, so the above limitations may not apply to you.
- ANY NON-RESIDENTIAL USE OR COMMERCIAL USE VOIDS ALL WARRANTIES.

### **CALL US FIRST !!**

Call us first with questions about operating or maintaining your lawn mower at 1-800-377-5888 - In Canada call 1-800-561-0004 between 7:30 a.m.-4:30 p.m. Eastern Standard Time, or send emails to [earthwise@reelin.com](mailto:earthwise@reelin.com).



# OPERATOR MANUAL

United States Patent Pending

## 20 in. 24 VOLT CORDLESS LAWN MOWER WITH 20 AMP HOUR BATTERY 60120

### SERVICE

For parts or service, contact your nearest EarthWise authorized service dealer. Be sure to provide all relevant information when you call or visit. For the location of the authorized service dealer nearest you, please call 1-800-377-5888 - In Canada call 1-800-561-0004 or visit us online at [www.reelin.com/earthwise](http://www.reelin.com/earthwise).

### REPAIR PARTS

The model number of this tool is found on a plate or label attached to the housing. Please record the serial number in the space provided below.

MODEL NUMBER         60120        

SERIAL NUMBER                                 



830 Webster Street  
Shelbyville, IN 46176  
Phone 1-800-377-5888  
In Canada call 1-800-561-0004  
[www.reelin.com/earthwise](http://www.reelin.com/earthwise)

07/28/08 (REV: 00)