

# *NEUTON™ Cordless Electric Mower*

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## *Safety & Operating Instructions*

Model: EM 4.1



COUNTRY HOME PRODUCTS®, INC.

[www.neutonowners.com](http://www.neutonowners.com)

# THANK YOU!

And congratulations on your purchase of the NEUTON™ Cordless Electric Mower EM 4.1 — the *Smart Mower for Small Lawns!*

The NEUTON Mower EM 4.1 is designed with state-of-the-art battery technology to make mowing your lawn as easy and enjoyable as possible.

If you haven't already ordered it, be sure to try the EM 4.1's Trimmer Attachment, too. This option makes the EM 4.1 the only mower that can also trim and edge your lawn — saving you steps, plus a whole garage full of separately powered equipment.

Please call us, toll-free, at 1-(866)-NEUTON1 (638-8661) if you have any questions or difficulties as you get used to your new mower.

We also hope to hear from you on how much you like your new helper!

Thanks once again!



for all of us at...  
Country Home Products, Inc.



Country Home Products®, Inc.  
Meigs Road  
P.O. Box 25  
Vergennes, VT 05491

Toll-free phone: 1-(866)-NEUTON1 (638-8661)  
Fax: 1-(802)-877-1213  
Web site: [www.neutonowners.com](http://www.neutonowners.com)  
E-mail: [info@countryhomeproducts.com](mailto:info@countryhomeproducts.com)

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DOCUMENTATION

Written by Page Designs Inc.

Produced in Taiwan R.O.C. exclusively for Country Home Products, Inc. Meets CPSC blade safety requirements.

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# Chapter 1: Introducing the NEUTON Mower EM 4.1

Congratulations on purchasing your new NEUTON Mower EM 4.1, the *Smart Mower for Small Lawns*. The advanced technology built into your NEUTON Mower makes lawn care easy and enjoyable, year after year.

As you get to know your NEUTON, you'll discover that it's strong, light, easy to maintain, and whisper quiet. It's clean, too, because it runs on a battery. You'll breathe easy and keep your lawn beautiful the smart, fun way — with your NEUTON Mower

This manual is shipped with the NEUTON Cordless Electric Mower, Model EM 4.1. It explains how to set up and safely operate your new NEUTON Mower. Carefully adhering to the safety and operating instructions in this manual will ensure many years of productive use.

Please let us know if you have any questions. Just call us at our toll-free phone number 1 (866) NEUTON1 (638-8661); our Technical Support Department will be happy to help you. When you call, please have your serial number or order number available so we can help you quickly.

## About this Manual

This manual is broken down into the following chapters:

### Chapter 1: Introducing the NEUTON Mower EM 4.1

- Explains the organization of, and conventions used in, this manual.
- Provides contact information for Country Home Products, Inc.

### Chapter 2: Important Safety Considerations

- Describes the safety labels on your mower.
- Explains guidelines for safely operating your NEUTON Mower.

### Chapter 3: Setting Up Your NEUTON Mower

- Describes the contents of the NEUTON Mower package as shipped.
- Explains how to easily set up your NEUTON Mower.
- Describes and explains the mower's features and controls.

### Chapter 4: Operating Your NEUTON Mower

- Provides instructions for starting and stopping your mower.
- Explains how to adjust the mower's cutting height.
- Offers useful tips when using your NEUTON Mower to care for your lawn.

### Chapter 5: Charging and Caring for the Battery

- Explains how to use and care for the battery that powers your NEUTON Mower.

### Chapter 6: Optional Attachments

- Describes the attachments available for use with your NEUTON Mower, and how to use them.

### Chapter 7: Maintaining and Storing your NEUTON Mower

- Provides tips on maintaining your mower.
- Describes how best to store your NEUTON Mower.

### Chapter 8: Troubleshooting Tips

- Lists common problems and their solutions.

In addition to these chapters, the manual includes a parts list, a schematic drawing of the NEUTON Mower, a section for your notes, the warranty, and a checklist of daily maintenance procedures (on the back cover) to help you keep your mower performing well for years to come.

## Conventions used in this manual



**WARNING!** The exclamation point within an equilateral triangle alerts you to essential operating, safety, and maintenance (servicing) instructions.

**Important:** This information is important for the proper use of your machine. Failure to follow this instruction could result in injury to you or damage to your mower.



This is a helpful hint to guide you in getting the most out of your mower.

**Note:** This information may be helpful to you in using your mower.

**Tools needed:** This indicates you will need a special tool to perform a maintenance function on your mower.

**Note:** Country Home Products, Inc. reserves the right to discontinue, change, and improve its products at any time without notice or obligation to the purchaser. The descriptions and specifications contained in this manual were in effect at printing. Equipment described within this manual may be optional. Some illustrations may not be applicable to your machine.

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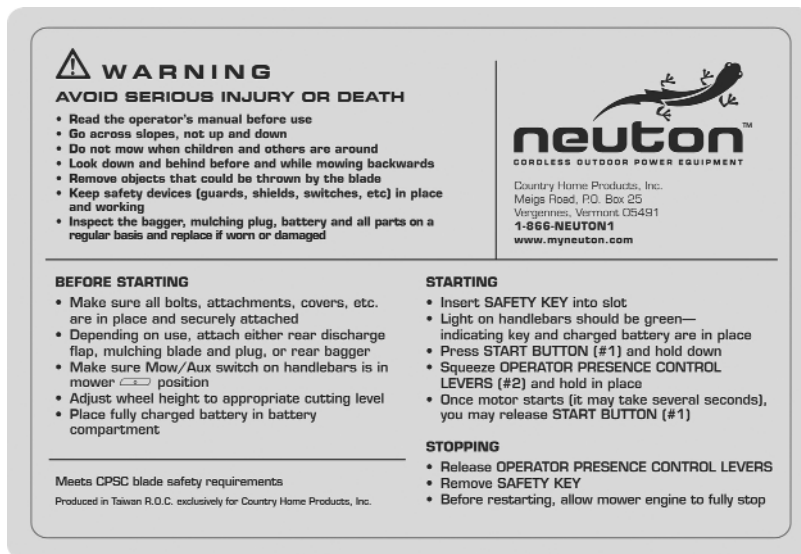
## Chapter 2: Important Safety Considerations

We want you to enjoy years of safe and productive use from your NEUTON Cordless Electric Mower. We don't want you to get injured, so please take a few moments to read the following guidelines for safely operating your new machine.

**Important:** Please read these instructions before using your mower.

### Safety and Information Labels

You will find the following two labels on your NEUTON Mower.



NEUTON Mower safety instructions label (176741)



Warning label (176701)

## Protecting Yourself and Those Around You

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



**WARNING!** 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.

- Be sure the area is clear of other people before mowing. Do not allow children, other bystanders, or pets in your work area when the mower is being operated. Stop the mower if anyone enters the area.
- Keep children out of the mowing area and under the watchful care of a responsible adult.
- Be alert and turn the mower off if children enter the area.
- Only allow responsible individuals who have a thorough understanding of these instructions to operate the mower. Never allow children to operate the mower.
- Before and while moving backwards, look behind and down for small children.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may obscure your vision.

**Important:** If you are ever unsure about an action you are about to take, contact Country Home Product's toll-free at 1-(866)-NEUTON1 (638-8661).

## Dressing Appropriately

- Always use safety goggles or safety glasses with side shields when using your NEUTON Mower. Use a face or dust mask if operating in dusty conditions.
- Do not operate the mower when barefoot or while wearing open sandals. Always wear substantial footwear with soles that grip and long pants. Do not wear loose clothing or jewelry as they can get caught in the moving parts.

## Preparing to Use Your Mower

- Read, understand, and follow all instructions on the machine and in the manuals. Be thoroughly familiar with the controls and the proper use of the mower before starting.
- If you have any questions or are unsure of anything regarding the use of your NEUTON Mower, please call Country Home Products, toll-free, at 1-(866)-NEUTON1 (638-8661) before proceeding.
- Never operate the NEUTON Mower without the proper guards, safety switches, or other safety and protective devices in place and properly connected. Inspect to determine that these safety devices are properly installed, in good repair, and operate properly. If the condition or operation of these devices is questionable, they must be repaired or replaced before using the mower.
- Follow the instructions for the proper installation and operation of accessories. Use only accessories approved by the manufacturer. Do not alter any aspect of the mower, attachments, or accessories in anyway.



- Thoroughly inspect the area where the mower is to be used, and remove all stones, sticks, wire, pet supplies or lawn toys, and any other foreign objects that could be thrown by the mower blade. Objects struck by the lawn mower blade can cause severe injuries. Also note the location of holes, ruts, bumps, stumps, and other possible hazards.
- Mow only in daylight or in an area well-lit by artificial light.

## **Operating Your Mower**

- The length of time that the mower's battery can hold its charge while mowing a lawn depends upon lawn conditions; tall, thick, or wet grass make the mower work harder, causing the battery to discharge faster.
- Before starting the mower, adjust the cutting height to cut 1 to 2 inches of grass at a time. Cut thicker grass at a greater cutting height, or cut a narrower swath. Do not force the lawn mower forward in thick grass. Your NEUTON Mower will do a better and safer job when cutting at a steady rate.
- Your mower can operate either as a discharging, mulching, or bagging mower. Learn how to use the proper cutting blade for the type of mowing you want to perform, and know how to use the rear discharge plate, rear bagger, and mulching plug as appropriate.
- Shut the motor off and wait until the blade comes to a complete stop before removing the rear bagger or other attachments.
- Do not insert the safety key into the mower until you are ready to operate the mower. Store the safety key away from children and people not authorized to use the mower.
- The cutting blade turns when the motor is running. (There is no clutch to allow the blade to stop while the motor is running.) Learn how to quickly stop the mower's motor. Remember that the blade will continue to rotate for up to three seconds after the motor has stopped.
- Stop the motor, wait for the blade to stop moving, and remove the safety key whenever you leave the operating position (behind the handlebar) for any reason, including clearing grass and making any inspections, adjustments, or repairs to the mower.
- Do not put your hands and feet near or under rotating parts. Be especially careful when the safety key is still inserted. Keep clear of the discharge area at all times.
- Before cleaning, repairing, inspecting, adjusting the height of the cut, or exchanging the mulching plug and rear bagger, shut off the motor, make certain the blade has stopped rotating, and remove the safety key.
- Never operate the mower in the rain or when the grass is wet. Always be sure of your footing.
- Keep a firm hold on the handle, and walk — never run.
- Never cut grass by pulling the mower towards you. It is designed to only be pushed forward while cutting.
- Use extreme caution when maneuvering backwards. Always look first to check your footing, look down and behind you, and release the control levers to shut the motor off before moving backwards.
- Stop the motor when crossing over loose materials such as gravel drives, walks, or roads, as objects discharged by the mower can be hazardous.

- After striking a foreign object, or if the mower vibrates abnormally, stop the motor and remove the safety key. Inspect the mower for any damage and repair the damage before restarting and operating the lawn mower. **Excessive vibration is generally a sign of trouble.**
- Stay alert and watch what you are doing.
- Do not operate the lawn mower when you are tired or under the influence of drugs or alcohol.
- Remove the safety key when the mower is not in use.
- Allow the motor to cool for at least 5 minutes before storing the mower in any type of tight space or enclosure.
- Do not modify your mower or over-speed the motor.
- Do not use your NEUTON Mower for any job other than those for which it is intended.

## Mowing on Slopes

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

*Do:*

- Mow across slopes, never up and down. Exercise caution when changing directions on slopes.
- Remove objects such as rocks and tree limbs, or any other potential object that could be thrown by the mower blade. Objects struck by the lawn mower blade can cause severe injuries.
- Watch for holes, ruts, or bumps. Tall grass can hide obstacles.

*Do Not:*

- Do not mow steep slopes or other areas where stability or traction is in doubt.
- Do not mow near drop-offs, ditches, or embankments. You could lose your footing or balance.
- Do not mow excessively steep slopes.
- Do not mow on wet grass. Reduced footing could cause you to slip.

## Servicing Your Mower

- Never make adjustments or repairs with the motor running. Remove the safety key to prevent accidental starting.
- Keep all nuts and bolts tight, especially blade attachment bolts, and keep the equipment in good condition.
- Never tamper with safety devices. Check their proper operation regularly.
- Keep mower free of grass, leaves, or other debris build-up.
- Allow mower to cool before storing.
- Never attempt to make wheel-height adjustments while the motor is running.
- Grass-catcher components are subject to wear, damage, and deterioration, which could expose moving parts or allow objects to be thrown. Check components frequently, and replace them with the manufacturer's recommended parts when necessary.
- Mower blades are sharp and can cut. Wrap the blade or wear gloves, and use extra caution when working with them.

## Maintaining and Storing Your Mower



**WARNING!** ALWAYS remove the safety key before performing any adjustments or repairs, or when storing your mower.

- Maintain the lawn mower with care — keep cutting edges sharp and clean for the best and safest performance. Keep all nuts, bolts, and screws tight to be sure the mower is in safe operating condition. Follow the instructions in this manual for changing accessories.
- Periodically inspect the cords on the charger unit and the handlebar for damage. If damage occurs, do not use the mower until the cords have been replaced or repaired.
- Do not operate the mower if it does not start normally or does not stop normally when the control levers are released.
- Use identical replacement blades only. Check the blade and motor mounting bolts at frequent intervals for proper tightness.
- Keep mower clean and dry. Use a damp cloth when cleaning. Never use water, gasoline, solvents, or other petroleum-based or solvent-based products for cleaning.
- When not in use, store the lawn mower indoors in a dry place and out of the reach of children.
- To reduce fire hazard, keep the mower free of grass and leaves.

## Handling the Battery Safely

- Do not charge the lawn mower battery in the rain or in wet locations.
- Exercise care in handling the battery in order not to short-circuit it with conducting materials such as rings, bracelets, and keys. When short-circuited, the battery or conductor may overheat and cause burns.
- Do not attempt to replace the individual battery cells inside the battery. Mixing fresh and discharged batteries could increase internal cell pressure and rupture the discharged battery. Improper wiring within the battery could result in leakage or explosion.
- Do not dispose of batteries in a fire, as the battery cells may explode. Do not open or mutilate the batteries. Released electrolyte (battery acid) is corrosive and will cause damage to eyes, skin, or clothes. Battery acid is toxic if swallowed or if the fumes are inhaled.



**WARNING!** Please dispose of used batteries responsibly, according to your local hazardous materials regulations.

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## Chapter 3: Setting Up Your NEUTON Mower

This chapter outlines a few simple steps needed to set up your new mower. Before beginning assembly, it may be helpful to familiarize yourself with the controls and features on your mower by reviewing the photograph of the mower on the next page and reading about the mower's controls and features.

Please check that you have all of the components listed below. If anything is missing, please call Country Home Products, toll-free, at 1-(866)-NEUTON1 (638-8661).

### NEUTON Mower Package Checklist

Country Home Products ships the following items (*Figure 1*) in your mower package. Please check to make sure you have everything listed below:

- 1. NEUTON Mower
- 2. Upper handlebar assembly
- 3. Quick-connect knobs, green (two)
- 4. Lower handlebar sections (two pieces) with two black connector knobs attached
- 5. Rear discharge plate
- 6. Battery (inside the mower)
- 7. Battery charger
- 8. Safety key
- 9. 36 mm wrench (to remove the blade)
- 10. *NEUTON EM 4.1 Cordless Electric Mower Safety & Operating Instructions* Manual

## Package Contents



1. NEUTON Mower



2. Upper handlebar assembly



3. Quick-connect knobs



5. Rear discharge plate



4. Lower handlebars with connector knobs



6. Battery



7. Battery charger



8. Safety key



9. 36 mm wrench

# Assembling Your NEUTON Mower

To allow you to quickly begin using your NEUTON mower, it is shipped to you partially assembled. The assembly process is easy and does not require any special tools, knowledge, or strength.

Assembling your NEUTON takes just a few steps:

**Step 1:** Read these “Safety and Operating Instructions” before proceeding.

**Step 2:** Attach the lower handlebar sections.

**Step 3:** Attach the upper handlebar assembly.

**Step 4:** Cut and remove the strapping holding the battery in place.

**Step 5:** Attach the cable to the handlebar assembly.

**Step 6:** Charge the battery before your first use.

**Step 7:** Attach the rear discharge plate.

Each of these steps is described in detail below. (See page 14 for the fully assembled mower.)

## Step 1: Read the Safety and Operating Instructions Before Proceeding

The NEUTON Mower is a motorized cutting machine that uses a sharp blade. For your safety, and for the best results, it is important to read the information in “Chapter 2: Important Safety Considerations” before you assemble or use the mower.

To familiarize yourself with the assembly, features, and operation of your mower, please read the remainder of this manual before proceeding.

## Step 2: Attach the Lower Handlebar Sections

**TIP** → To keep the mower from moving while you assemble it, put a foot behind one of the wheels.

Use the green quick-connect knobs to attach the lower handlebar sections to the mower. The installation process is the same for each handlebar.

**Note:** Set the cutting height to the highest adjustment position when attaching the lower handlebar sections (position 6 in *Figure 2*). This makes it easier to reach the slots on the mower frame.

1. Position the lower handlebar, with the indentation facing out, against the frame of the mower. Slide it down into the slot on the frame until the holes line up (*Figure 2*).

Be sure to slide the lower handlebar with the cable guide tab (see *Figure 3*) on the right side (from the operator’s point of view) of the mower.

2. Insert a green quick-connect knob through the lined-up holes in the handle and mower frame to attach each side of the lower handlebar to the mower.
3. Hand tighten until firmly snug.

**Important:** Be sure to tighten the green quick-connect knobs by hand. Do not use a tool to tighten; you could easily over tighten them and damage the parts.



*Figure 2. Attaching the lower left handlebar*

### Step 3: Attach the Upper Handlebar Assembly

The black connecting knobs (used to connect the upper and lower handlebar sections together) are attached to the lower handlebar sections.

1. Remove the black connector knobs and connector bolts from the upper ends of the lower handlebars.
2. Line up the holes of the upper handlebars with the holes in the lower handlebar sections.

**TIP** Let the upper handlebar assembly lean on the ground during this process (*Figure 3*). It is easier to start with the upper assembly in this position, so you don't have to hold and balance it while connecting the sections. Once you have the handlebars loosely connected, you can swing the upper assembly into place and tighten it further.

3. Slide the connector bolts (from inside to outside) through the holes in the upper and lower handlebar sections on each side of the mower. Screw on the black connector knobs, then hand-tighten them just enough to hold the upper and lower handlebar sections together on each side.
4. Swing the upper handlebar assembly into position. The bars will line up and slide into place (*Figure 4*). Hand-tighten the connecting knobs until they are snug.

**TIP** To save space, you can loosen these connecting knobs to drop the upper handlebar assembly onto the mower's deck when you have placed the mower in storage.

### Step 4: Cut and Remove the Strapping Holding the Battery in Place

The battery is shipped in the mower. Before using the mower, open the batter cover, then cut and remove the strapping used to hold the battery in place.

**TIP** To easily open the battery cover, press down on the mower body next to the indentation by the battery cover handle, then pull the cover open (*Figure 5*).



Figure 3. Leaning the upper handlebar assembly on the floor to help connect it



Figure 4. The upper handlebar assembly after being attached.



Figure 5. Opening the battery cover

## Step 5: Attach the Cable to the Handlebar Assembly

1. Run the cable through the cable guide tab (*Figure 6*) on the right lower handlebar section.



*Figure 6. Cable guide on the handlebars*

2. Align the half-moon cut-out on the cable end (*Figure 7*) with the cable housing on the handlebars, and slide together.



*Figure 7. The half-moon cut-out on the cable end*

3. Hand-tighten the locking nut to connect the cable (*Figure 8*).



*Figure 8. Hand-tightening the locking nut*



## Step 6: Charge the Battery Before Your First Use

You **MUST** charge the battery for 12 hours before you use the mower for the first time. If you do not charge it before using it, the battery's charging capacity may decrease.

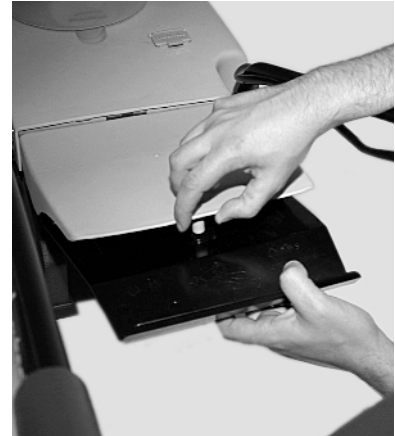
Read "Charging the Battery" in Chapter 5 before you operate the mower.

## Step 7: Attach the Rear Discharge Plate

The rear discharge plate allows the cut grass to be properly discharged and prevents clogging.

1. Raise the hinged discharge guard on the back of the mower.
2. Position the black discharge plate with the ribbed bend facing up, flush against the rear of the discharge guard (*Figure 9*).
3. Lower the hinged guard so the pin locks into the hole on the plate.

There are other discharge options available. With the rear bagger, you can bag the cut grass; with the mulching kit, you can mulch your grass. Please refer to "Chapter 6: Optional Attachments" to learn more.



*Figure 9. Inserting the rear discharge plate*



Figure 10. Your NEUTON Mower!

## Controls and Features

Make certain that you are familiar with the controls, parts, and operation of your NEUTON Mower before using it.

### Key Slot

The key slot is for both the external battery charger and the safety key. This design serves as a safety measure: you can never connect both the external battery charger and insert the safety key at the same time. In other words, you can either operate your mower or charge its battery; you cannot do both at the same time.

### Safety Key

Insert the safety key to run the motor (*Figure 11*). The safety key can be inserted either way — it has no front or back.

The safety key has a built-in circuit breaker to protect the motor. **When the built-in circuit breaker is tripped, the white button on top of the safety key will pop up.** Before attempting to restart the mower, push the white button all the way down until it locks into place. (There is no replacement fuse inside the safety key.)

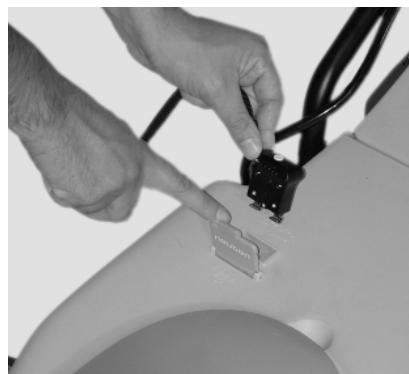


Figure 11. Inserting the safety key

### Start Button

The start button starts the motor (but only when the control levers are depressed).

### Control Levers

The control levers are a safety feature. When the levers are depressed, the motor continues to run and the blade spins. When the levers are released, the motor shuts off and the blade stops spinning within three seconds.

### Indicator Light

The status indicator light on the upper handlebar assembly (*Figure 12*) illuminates when a charged battery is installed and the safety key inserted. The light is green.

**Note:** A green indicator light does not guarantee that the battery is fully charged, only that it has some charge, that the electrical system is ready, and that the mower can be started.

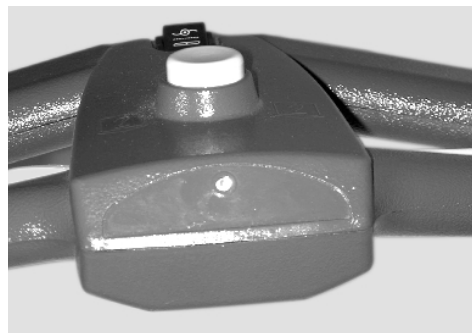


Figure 12. Indicator light



**WARNING!** If the green light goes out, do not operate the mower again until the battery is fully charged; otherwise the battery's charging capacity might be decreased.

**Note:** Although you may notice that a short period of rest may restore the indicator light, you must still fully charge the battery before continuing to mow. For best results, be sure to always fully charge the battery after every use, no matter how brief.

## Cutting Height Lever

The cutting height lever (*Figure 13*) allows you to easily adjust how high or low you cut the grass.

**TIP** → To easily move the cutting height lever, hold the handlebars with your right hand to keep the mower steady and adjust the lever with your left hand.

To easily adjust this lever, pull the lever out rather than lifting or lowering it. Once you pull it out, it very easily adjusts to a different level.



*Figure 13. Cutting height lever*

## Mower/Auxiliary Switch

This switch (*Figure 14*) controls the optional mower attachments. This switch has two settings:

- Mower, used for normal mowing.
- Auxiliary, used when operating an attachment.

For more information about options available for your NEUTON Mower, see “Chapter 6: Optional Attachments.”



*Figure 14. Pushing the Mower/Auxiliary switch to the Mower setting*

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## Chapter 4: Operating Your NEUTON Mower

This chapter explains how to start, stop, and adjust the cutting height of your mower.

**Note:** If the mower battery is not fully charged or if you are unpacking a new mower for the first time, read “Chapter 5: Charging and Caring for the Battery” before operating the mower. You should charge the battery for a minimum of 12 hours before using it in the mower.

### Pre-Start Checks



**WARNING!** Do not insert the safety key until you have completed all of the pre-start checks and you have moved the mower to the area being mowed.

Perform the following checks before operating your mower.

- Check under the mower deck and make sure you are using the correct blade (for mulching or cutting) and that the blade is attached securely. Make sure all knobs, bolts, attachments, and covers are in place and securely attached. Inspect for any visible damage to the blade or deck, and remove any accumulation of dirt, dust, or dried grass clippings.
- Attach either the rear discharge plate, the rear bagger, or the mulching blade and plug.
- Set the mower to the desired cutting height. (See “Adjusting the Cutting Height” on page 19 for details.)
- Be sure the battery is fully charged.
- Be sure the Mower/Auxiliary Switch is on mowing (with the Mowing side of the switch pushed down).
- Push the mower (before starting it) to the lawn area to be mowed.

**Note:** The length of time that a battery can hold its charge while mowing depends upon lawn conditions; tall or thick grass make the mower work harder causing the battery to discharge faster.

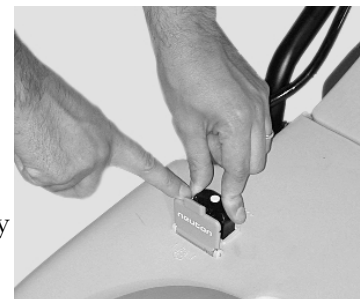
### Starting the Motor and Engaging the Blade



**WARNING!** Starting, stopping, and restarting an electric motor repeatedly within a few seconds can generate a great deal of heat and damage the motor. To protect the life of your NEUTON Mower, always wait at least five seconds after stopping before restarting the mower.

**Important:** The cutting blade turns when the motor is running; there is no clutch to allow the blade to stop rotating while the motor is running.

1. Perform the pre-start checks listed above.
2. Insert the safety key into the key hole (*Figure 15*). The safety key can be inserted either way. The green indicator light should come on.



*Figure 15. Safety key in the mower*

## Starting the Mower

1. Press and hold down the start button (*Figure 16*).



Figure 16. Step 1: Push the start button

2. Squeeze and hold the control levers (*Figure 17*).



Figure 17. Step 2: Squeeze the control levers

3. Release the start button (*Figure 18*). The motor starts (it may take several seconds).

Continue to hold the control levers against the handlebar for as long as you want the motor to run.



Figure 18. Step 3: Release the start button

**TIP** If the mower does not start, first check for some simple solutions:

- Make sure the battery is in, the safety key is in, and the indicator light is green.
- Make sure the Mower/Auxiliary switch is set to Mower.
- Did you follow the correct sequence: push the button and hold it down, then squeeze the control levers?

**Note:** If the mower does not start, follow the steps in “Chapter 8: Troubleshooting Tips.”



**WARNING!** The control levers are a safety device. Do not tamper with them.

## Stopping the Motor and Blade

Simply releasing the control levers stops the motor and blade.

**Important:** The blade will continue to rotate for a few seconds after the motor is shut off.

## When Finished Mowing

Remove the safety key when the mower is unattended and the motor is shut off.

Remember to recharge the battery after each use, no matter how short a time it was used. See “Charging the Battery” in Chapter 5 for details.



**WARNING!** The safety key, with its built-in circuit breaker, should never be inserted during assembly, adjustments, cleaning, blade replacement, or when the mower is not in use. Removing the safety key will prevent accidental starting, and help avoid serious personal injury.

## Adjusting the Cutting Height

Using the cutting height lever (*Figure 19*), adjust the cutting height to cut 1 to 2 inches of grass at a time.

1. Remove the safety key.
2. Make sure all four wheels are level.
3. Pull the lever (toward the wheel) out of its position notch. (The cutting height lever is spring-loaded.)



To easily adjust the cutting height, hold the handlebars with your right hand to keep the mower steady and adjust the lever with your left hand.

4. Move the lever to any one of the six cutting height settings.

Each position moves the mower to cut a different cutting height. Pulling the cutting height lever up towards position 1 cuts more grass (which leaves your grass shorter); pushing it down towards position 6 cuts less grass (leaving your grass higher). The following table lists the final cut grass heights.

Lever Position	Cut Height
1	1.6" (40 mm)
2	2.0" (50 mm)
3	2.4" (60 mm)
4	2.8" (70 mm)
5	3.2" (80 mm)
6	3.6" (90 mm)



*Figure 19. Cutting height lever set to leave your grass 1.6 inches high*

## **Mowing and Lawn Care Tips**

- For best results, mow at a steady pace. If you try to walk too quickly, especially in tall grass, the quality of the cut may not be uniform.
- Mow as often as needed so that you are only cutting 1 to 2 inches of grass each mowing session. Trying to cut more than 2 inches will drastically reduce the charge life of the battery. (For example, if you want to cut 5-inch tall grass down to 2 inches, cut 1½ inches off one day, then cut it again four or five days later.)
- For the healthiest lawn, avoid removing more than one third of the leaf blade during any one mowing session. When more than one third of the blade is removed, the grass plant produces less food for itself and therefore becomes weaker and more susceptible to disease and insect damage.
- Keep your mower blade sharp! A sharp mower blade cuts the grass quickly and cleanly, using less of the mower's power, which conserves battery life. For best results, inspect the blade often and have an extra, sharp blade ready to install as a replacement while the dull blade is being sharpened.
- Mow across slopes; never up and down.



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## Chapter 5: Charging and Caring for the Battery

**Important:** Before charging the battery, read all instructions and cautionary markings in this manual and on your mower. Do not operate your mower until you have read and understand all instructions and the battery has been fully charged.

### The Battery

The battery in your NEUTON Mower is completely sealed. The battery should not leak, regardless of the position in which the mower is stored. (Read “Handling the Battery Safely” in Chapter 2.)

The battery is completely maintenance-free. You never need to add water. However, as with all rechargeable batteries, after years of use they will eventually need replacement. Please refer to “Chapter 7: Maintaining and Storing Your NEUTON Mower” for more information.



**WARNING!** Do not attempt to alter or open the battery.



Purchase at least one additional battery for your NEUTON Mower. That way, while you're using your mower, the second battery can be charging.

### Removing the Battery

You can quickly and easily change the battery in your mower. You'll need to do this whenever your battery needs recharging and you want to replace it with a fully charged battery.

1. Remove the safety key and open the battery cover.



Remember to press down on the mower body next to the battery cover handle before pulling the cover open.

2. Push the metal bar towards the housing and away from the battery (*Figure 20*).



To help keep the mower from rolling, put one foot behind a wheel when lifting and lowering the battery.

3. Pull the battery straight up to remove it.



When removing the battery, remember to push the metal bar towards the housing and away from the battery before lifting it. It is easiest to push the metal bar over with one hand while removing the battery with the other hand.



*Figure 20. Removing the battery*

## Inserting the Battery

1. Correctly orient the battery. Face the indicator light and the arrow on the sticker towards the metal bar. The indentations on the bottom of the battery must line up with the metal tabs in the bottom of the housing.
2. After confirming the correct orientation of the battery, insert the battery into the battery opening (*Figure 21*). The battery snaps into place.



*Figure 21. Inserting the battery*

**Important:** If the battery is not oriented correctly, it will not fully depress into the opening. If this happens, remove the battery, recheck the orientation, and try again.

## Caring for the Battery

You can lengthen the life of your battery and reduce your average annual battery cost by following some simple guidelines. These guidelines explain how and when you should charge the battery, and how you should do it.

- Always charge the mower indoors in a garage or other covered area where it will be dry and protected from the weather.
- Only charge the mower when the temperature is at least 32°F (0°C) — above freezing — but not more than 104°F (40°C). Charging in lower or higher temperatures can be harmful to the battery.
- Always keep the mower away from water, heat sources (stoves, radiators, open flames, etc.), and hazardous chemicals.
- Always use the NEUTON™ Mower EM 4.1 Charger to charge your battery; never attempt to use any other charger. This charger is specifically designed to optimize the performance of your battery.
- Never use the charger with any other product. Never operate the charger if it is damaged. If a cord or the charger unit has been damaged, replace the charger or have it repaired.
- Do not worry about leaving the battery charging for longer than 12 hours — the mower cannot be overcharged and will not be damaged after 12 hours. Still, try not to leave the battery always charging.
- When storing the battery after removing it from the mower, follow the storage guidelines in “Chapter 7: Maintaining and Storing Your NEUTON Mower.”
- For long term storage, please refer to “Recharging to a Full Charge for Off-Season Storage” on page 25.

## Charging the Battery

You must charge your battery before using your mower for the first time.

**Important:** While the battery in your mower has been charged at the factory, you must recharge it fully (at least 12 hours) before first using your mower. Otherwise, the battery's charging capacity may be decreased.

As your battery ages, you may need to charge the battery longer, even up to 24 hours.



**WARNING!** Use normal household voltage (110 volts) when charging your battery. Plug the charger directly into the electrical outlet. Do not abuse the cords. Never carry the charger by the cord. Always pull the plug — and not the cord — when disconnecting the cords from the electrical outlet (wall outlet) and from the charger.

**Note:** When using an extension cord with your charger, use a heavy-duty extension cord of a type “suitable for outdoor use” (although you should never charge the mower in the open outdoors).

**Important:** Always connect the charger to the battery first, and then plug it into the wall outlet. When unplugging, reverse the process: unplug the charger from the wall outlet first, and then disconnect it from the battery.

You can charge the battery in the mower or removed from the mower. Either method is acceptable.

### Charging the Battery in the Mower

1. Make sure all four wheels of the mower touch the floor.
2. Remove the safety key.
3. Plug the charger's round plug into the key slot on the mower (*Figure 22*).
4. Plug the charger into a wall outlet.

A full charge takes at least 12 hours, and up to 24 hours. For the first five hours, the charger will be warm to the touch. This is normal and does not indicate a problem.



*Figure 22. Charging the battery in the mower*

## Charging with the Battery Removed from the Mower

1. Remove the battery from the mower.
2. Connect the charger plug to the charger receptacle on the battery (*Figure 23*).
3. Plug the charger into a wall outlet. The red light on the battery illuminates.

**Note:** The red light on the battery only indicates that the charger is plugged in and the battery is charging — it will not automatically turn off when charging is complete.

As with charging in the mower, a full charge takes at least 12 hours and can take up to 24 hours. For the first five hours, the charger will be warm to the touch. This is normal and does not indicate a problem.

**Important:** Always keep the battery in a dry place.

## Disconnecting the Charger

Remember to disconnect the battery using this sequence:

1. Disconnect the charger from the wall outlet.
2. Disconnect the charger from the battery or the key slot on the mower.

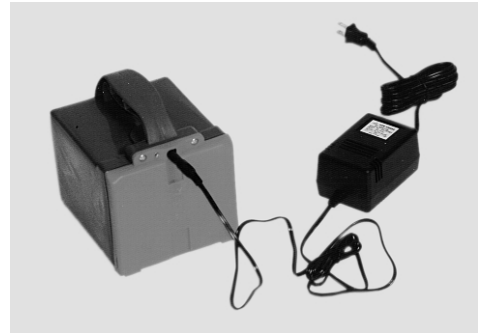


**WARNING!** Always disconnect the charger from the electrical (wall) outlet first, and then disconnect the round charger plug from the mower's key slot or the battery. If the round charger plug is removed first, the exposed connector can be accidentally short-circuited by foreign material, which might cause a fire.

## Recharging After Each Use of the Mower

Always fully recharge the battery immediately after each use, no matter how short a time it was used. Fully recharge even if the indicator light on the mower is still green. This is important in order to maintain maximum mower performance and extend the useful life of the battery.

**Important:** If a depleted battery is stored, the battery's charging capacity might decrease.



*Figure 23. Charging the battery out of the mower*

## Recharging to a Full Charge for Off-Season Storage

Always charge the battery fully before putting it away during the off-season. After charging the battery fully (at least 12 hours of charging), you can leave the mower in storage for the entire off-season (up to 6 or 7 months) without adversely affecting the battery — provided the storage temperature is between  $-4^{\circ}\text{F}$  ( $-20^{\circ}\text{C}$ ) and  $+104^{\circ}\text{F}$  ( $+40^{\circ}\text{C}$ ).

The NEUTON's battery will discharge much less than conventional lead acid batteries. Nonetheless, remember to give the battery a full charge before first using the mower next season.

**TIP** → The method most likely to contribute to a long battery life is to recharge for at least 12 hours about once every three or four months during off-season storage.

Leaving a battery charging for weeks at a time, or even for the entire off-season, will not damage the charger, the battery, or the mower. Leaving a battery charging for this long, however, is not as good for the battery life as periodic recharging.

### Storage Temperature Range

For superior battery performance, always store the mower in temperatures between  $-4^{\circ}\text{F}$  ( $-20^{\circ}\text{C}$ ) and  $+104^{\circ}\text{F}$  ( $+40^{\circ}\text{C}$ ). Make sure the storage temperatures will never be outside these limits. The lower the storage temperature is within the specified range, the better: the battery will discharge more slowly at low temperatures.

For more information on storing your mower, see “Chapter 7: Maintaining and Storing your NEUTON Mower.”

### Disposing of the Battery

**Important:** Please dispose of used batteries responsibly, according to your local hazardous materials regulations.

## Getting the Most Out of Your Battery

How you charge and use your NEUTON Mower can have a great impact on the performance of your battery. Here are some tips to help you make a battery perform well and last as long as possible:

- It takes at least 12 hours to fully charge the battery. Do not use a battery that has been charged less than 12 hours.
- Be sure to fully charge the battery before using the mower for the first time.
- Fully charge the battery after each use, no matter how briefly you operated the mower.
- Experience has shown that, under normal conditions, the battery should run for approximately  $\frac{3}{4}$  to 1 hour. The length of time depends on the length and density of the grass, and whether the grass is wet. If you intend to use your mower and trimmer longer than that, purchase an extra battery and have it fully charged before you start.
- Frequent stops and restarts use additional battery energy. Try to work continuously and smoothly when mowing.
- Long or dense grass takes more power from the battery when cutting. Plan to cut long grass in several passes, several days apart, to get it to the ideal length. See “Mowing and Lawn Care Tips” in Chapter 4 for more information.
- It is safe to run the battery until the mower stops or until the green indicator light goes out. At this point, recharge the battery for at least 12 hours. If you have purchased a spare battery, you can use the fully-charged battery to continue mowing while you recharge the spent battery outside of the mower.
- You do not need to remove the battery from the mower when recharging or storing it.
- Again, to get the maximum life out of the battery, disconnect the charger soon after the battery is fully charged and then periodically recharge it if the mower is not used.
- Pushing your mower too hard during heavy mowing can cause the motor to slow down. Either raise the cutting height or walk slower while pushing your mower. To avoid damage and extend battery life, always mow at a pace where the motor runs smoothly.
- If the motor will not run after you have fully charged the battery, consult the techniques in “Chapter 8: Troubleshooting Tips.” If you still need help, call Technical Support at 1-(866)-NEUTON1 (638-8661); our staff will be happy to assist you.

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## Chapter 6: Optional Attachments

You can purchase several optional attachments for your NEUTON Mower. To order any of these optional attachments, please call Country Home Products toll free at 1-(866)-NEUTON1 (638-8661).

Your NEUTON Mower is shipped with the rear discharge plate, allowing you to discharge grass clippings as the standard mowing mode. To mulch or to collect clippings, you must order the appropriate optional attachments.

### NEUTON Trimmer

The NEUTON Trimmer (MA 3.0) gives you the option of both trimming and edging while using your mower (*Figure 24*). The trimmer simply plugs into the front of your NEUTON Mower. The Trimmer can also be used as an edger, helping you keep your lawn, driveway, and walkway neat and trim.

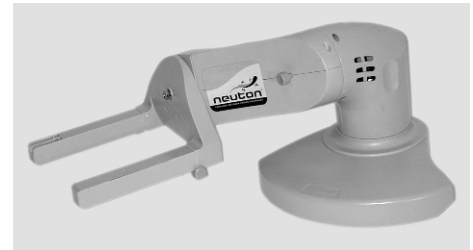


Figure 24. NEUTON Trimmer attachment

### NEUTON Rear Bagger

The NEUTON Rear Bagger (MA 4.0) allows you to catch your grass clippings (*Figure 25*). No more raking.



Figure 25. NEUTON Rear Bagger

### NEUTON Mulching Kit

The NEUTON Mulching Kit (MA 1.0) allows you to mulch your grass clippings. Mulched grass doesn't need to be raked — it just stays on your lawn and acts as a fertilizer. The Mulching Kit contains a mulching blade and mulching plug (*Figure 26*).



### Spare Batteries

Owning a spare battery (MA 2.0) can be a wonderful time saver. A spare battery allows you to quickly insert a fully charged battery when the one you are using to mow runs down.



Figure 26. Mulching plug and mulching blade

## The NEUTON Trimmer

The NEUTON™ Trimmer (*Figure 27*) is a unique attachment that, used with your NEUTON Mower, enables you to trim and edge your lawn and yard without having to buy a separate trimmer and edger — like three machines in one.

The Trimmer is described in a separate manual, the *NEUTON™ Trimmer Safety & Operating Instructions* (which is shipped with the NEUTON Trimmer). For more information about the NEUTON Trimmer attachment, please contact Country Home Products at 1-(866)-NEUTON1 (638-8661) or visit us on the Web at [www.neutonowners.com](http://www.neutonowners.com).



*Figure 27. The NEUTON Trimmer attached to your NEUTON Mower*

## Using the Rear Bagger

The rear bagger lets you catch clippings as they are cut, eliminating the need to rake. Before using it though, you must first assemble it.

### Assembling the Rear Bagger

The rear bagger comes in three parts: the bagger, a cover, and a steel frame. To assemble the rear bagger:

1. Attach the front of the steel frame to the front of the bagger. Make sure the frame is securely snapped into place.
2. Snap the cover onto the bagger.
3. Snap the front of the cover onto the steel frame.

Make sure all of the connections are secure before using the bagger.

### Attaching the Rear Bagger

1. Raise the hinged discharge guard on the rear of the mower, and hold it open.  
Remove the mulching plug or the rear discharge plate, if either is installed. (The plug is seated in the chute by “press fit” and it may be necessary to pull quite hard.)
2. With your other hand, insert the rear bagger into the slots on both sides of the mower (*Figure 28*).
3. Press the pin on the discharge guard into the hole on the top of the rear bagger.
4. Lock the rear bagger in place by sliding the orange tab on the handle over the discharge guard.



*Figure 28. Attaching the rear bagger*



## Removing the Rear Bagger

1. Unlock the orange tab on the rear bagger handle.
2. Raise the discharge guard, grab the rear bagger by its handle and remove it by lifting it up while pulling out.
3. Release the discharge guard.

## Installing the Mulching Kit

To mulch your grass, install both the mulching plug and blade.

1. If necessary, remove the rear bagger or the rear discharge plate from the mower.
2. Install the mulching plug (*Figure 29*). Be sure to push the plug all the way in until the notch in its bottom is engaged.

**TIP** → There's a slight knack to installing the plug: push with a slightly arcing motion. Align the plug in the mower, start to push the top of the plug first then put pressure towards the bottom and slide in the plug.

3. Remove the cutting blade and install the mulching blade.  
For detailed instructions, please refer to “Removing and Attaching the Blade” in Chapter 7.

Please refer to *Figure 30* for a comparison of the two blades. Notice that the cutting blade has a longer stabilizer in the blade's center, and one edge of both ends is turned up. The mulching blade, on the other hand, has a much smaller stabilizer and does not have any edges turned up.



*Figure 29. Installing the mulching plug*



*Figure 30. Comparing the cutting blade (top) with the mulching blade (bottom)*

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## Chapter 7: Maintaining and Storing Your NEUTON Mower

This chapter explains how to clean your mower; change, sharpen, and balance blades; and store your mower for the long-term.



**WARNING!** ALWAYS remove the safety key before performing any adjustments, maintenance, blade change, or repairs to your mower.

### Cleaning Your Mower

Periodically clean your mower to ensure peak performance.

#### Supplies needed:

- Clean, damp cloth or sponge
- Mild soap or detergent (if needed)
- Soft nylon brush (if needed)

1. Remove the safety key.
2. Using a damp cloth or sponge with a mild soap or detergent, clean the mower. Do not use water or solvents for cleaning — remember, this is an electric mower.
3. Use a soft nylon brush or non-metallic scrubbing pad to remove any clippings that have accumulated on the underside of the deck and in the rear discharge plate. Do not use a wire brush; it will scratch and harm the surface of your mower.
4. You may use water to clean the rear bagger, but not the mower itself. For proper grass collection, make sure the grass bag is clean and the mesh holes are not clogged. Allow the rear bagger to dry thoroughly before using it again.

**Note:** A wet rear bagger will clog quickly and hamper grass collection.

### Removing and Attaching the Blade

You must remove a blade to sharpen it, or to change to a different blade.

**TIP** → Always check the blade for sharpness, damage, and tightness before and after each use. Replace the blade promptly if it has been bent or damaged.

#### Tools & supplies needed:

- 3/8 inch wrench (supplied with mower)
- 3/4 inch socket or adjustable wrench
- Gloves or rag to protect your hands

Wear heavy gloves to protect your hands when removing and attaching blades.

1. Remove the safety key and the battery. If you are charging the battery, first disconnect the charger from the electrical (wall) outlet.
2. While holding the handlebars (as if you are mowing), turn the mower over on its right side to expose the blade.

3. Place the 36 mm wrench over the steel hex adapter holding the blade (the large metal piece that holds the blade in position).
4. Place the 3/4 inch socket wrench over the blade nut.
5. While holding the steel hex adapter in place, loosen the blade nut turning counterclockwise. Be careful; hold the steel hex adapter in place so the blade does not spin and strike your hand (*Figure 31*).
6. Remove the blade nut, steel hex adapter, blade, plastic spacer, and steel blade adapter, in that order (*Figure 32*).
7. To replace a sharpened blade or to install a new blade, reverse steps 1 to 6. Be sure to replace all parts exactly as they were removed. Make sure the blade is properly seated.
8. Place the 36 mm wrench over the steel hex adapter, then place the 3/4 inch socket wrench over the blade nut.
9. While holding the steel hex adapter in place, tighten the blade nut turning clockwise. Make sure the blade is firmly attached to the mower.
10. Turn your mower upright.

## Sharpening the Blade

When the blade is dull, the cut ends of the grass will be ragged and may turn brown soon after mowing. A dull blade also causes the battery to discharge more quickly. When this occurs, sharpen the blade (as long as the blade is otherwise in good condition).

For best results, remove the blade from the mower to sharpen it.

### Tools & supplies needed:

- Fine-toothed file or sharpening stone
- Gloves
- Safety glasses



Figure 31. Removing the blade

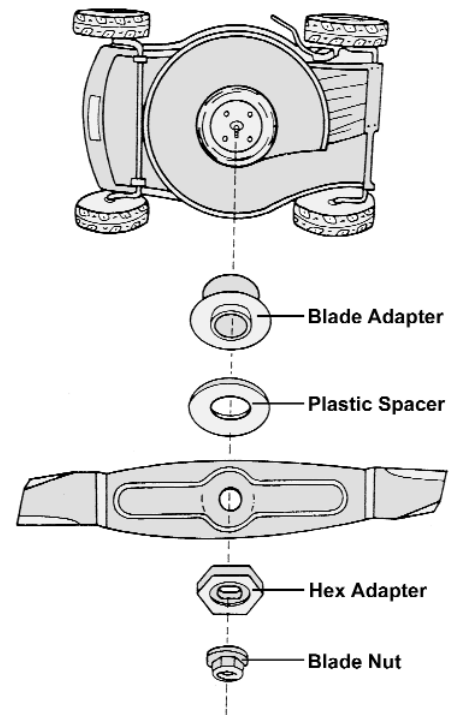


Figure 32. The order of the parts holding the blade

## Sharpening the Blade in a Vise

1. Remove the safety key and the battery. If you are charging the battery, first disconnect the charger from the electrical (wall) outlet.
2. While holding the handlebars (as if you are mowing), turn the mower over on its right side to expose the blade.
3. Remove the blade.
4. Secure the blade in a sturdy vise.
5. While wearing safety glasses, carefully file the cutting edges of the blade using even strokes. Be sure to file both sides of the blade equally.
6. Check the blade after sharpening to be sure it is still balanced.

## Balancing the Blade

An out-of-balance blade causes your machine to vibrate excessively. Excessive vibration may cause damage to the mower, especially to its motor.

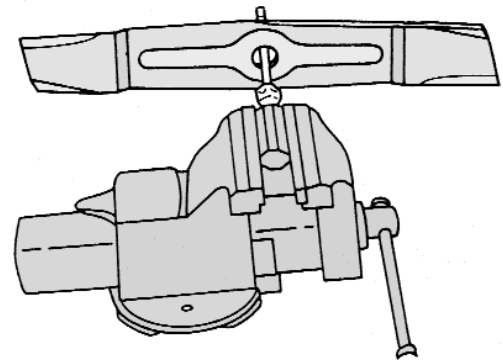
Because you are removing metal from the blade, make sure to remove an equal amount from each side to keep the blade balanced. The best way to balance a blade is with a blade balancer (available at most local hardware stores), or with a large screwdriver, nail, or bolt.

### Tools & supplies needed:

- Gloves
- Blade balancer, or a large screwdriver, nail, or bolt

1. After sharpening the blade, hang it on the balancer and check the level (*Figure 33*). If one side of the blade tips lower, sharpen that side a little at a time until the blade is balanced.
2. When sharpening a used blade, be especially careful to keep it balanced. If in doubt, replace the blade with a new one.

Of course, you can always have a mower service sharpen and balance your blade.



*Figure 33. Balancing the blade with a large screwdriver*

## Lubricating Your Mower

Your NEUTON Mower does not need to be lubricated; please do not lubricate the mower.

## Storing your NEUTON Mower

Whether you store the mower for a short or long period of time, always remember these important guidelines:

- Always store the mower with a full battery charge and follow the recharging instructions in “Chapter 5: Charging and Caring for the Battery.”
- Always store the mower in an environment where the temperature is between  $-4^{\circ}\text{F}$  ( $-20^{\circ}\text{C}$ ) and  $+104^{\circ}\text{F}$  ( $+40^{\circ}\text{C}$ ). Make sure the storage temperatures will never be outside these limits. For long-term storage, store your battery in an environment where the temperature is lower, since the battery self-discharges slower at low temperatures.
- Store the mower in a dry environment.
- Do not store the mower near chemicals such as fertilizers. These products are often highly corrosive and may cause permanent damage to your mower.
- Do not store the battery in proximity to organic solvents.
- Always keep the safety key in a safe place and away from children. You can safely keep the battery in the mower when storing them for the long-term.
- We recommend storing the mower and the battery so that they will not get wet.

If you must store the battery outside the mower, follow these rules:

- If the battery will be used again, give it a full charge before removing it from the mower.
- Do not store the battery close to a source of heat, sparks or open flames.
- The ambient (surrounding) temperature range must be between  $-4^{\circ}\text{F}$  ( $-20^{\circ}\text{C}$ ) and  $+104^{\circ}\text{F}$  ( $+40^{\circ}\text{C}$ ).
- Do not expose the battery to abnormal shaking or shocks.
- Store the battery away from children and animals.
- Do not press, bend, or use force on the terminals.
- Do not apply heat (such as a soldering iron) to the terminals.
- Store the battery in as **dry** an environment as possible. Do not store it on a floor that may be damp or subject to accidental flooding, such as a basement.
- Regularly observe the external appearance of the battery and keep it clean and dry. Never use a battery that shows cracks, changes shape, leaks, or otherwise is obviously damaged.
- Never throw away used batteries. Bring them to a recycling center or dealer for proper disposal.
- During long-term storage of batteries that are intended for reuse, you should reinstall them periodically and recharge as recommended in “Chapter 5: Charging and Caring for the Battery.”

## Chapter 8: Troubleshooting Tips

Most difficulties are easy to fix. Consult the troubleshooting table for common problems and their solutions. If you continue to experience problems or need repairs beyond these minor adjustments, call Country Home Products, Inc. toll free at 1-(866)-NEUTON1 (638-8661) for assistance.



**WARNING!** Always remove the safety key before performing any adjustments, maintenance, or repairs.

Problem	Corrective Action
<p><i>Motor fails to start when safety key is inserted, button and control levers are depressed</i></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Check to make sure the safety key is properly inserted and the indicator light is on. Check to see if the white button on the safety key has popped up; if it has, then depress the button to reset it.</li> <li><input type="checkbox"/> Check that the battery is installed correctly and that the battery is fully charged. The green indicator light on the mower should be on. If not, replace with a fully-charged battery or recharge the battery.</li> <li><input type="checkbox"/> Check the cable to make sure it is attached and properly connected.</li> <li><input type="checkbox"/> Check to make sure the Mower/Auxiliary Switch is set to the correct position.</li> <li><input type="checkbox"/> Make sure you push the Start button first, and hold it down while squeezing the control levers. Then release the Start button.</li> <li><input type="checkbox"/> The blade may be obstructed. Remove the safety key, turn the mower over, and check the blade.</li> </ul>
<p><i>Mower stops while mowing (for reason other than releasing the control levers)</i></p>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The mower may be overloaded. If both the battery light and the indicator light are out, the circuit breaker inside the safety key has cut off power to protect the motor. Reinsert the safety key, reset the white button, and restart the mower.</li> <li><input type="checkbox"/> Cutting too much grass. Raise the cutting height or narrow your cutting swath and try again.</li> <li><input type="checkbox"/> The blade, mower deck, or rear discharge plate may be clogged with debris. Remove the safety key and battery, turn the mower over, and check below the deck. Clean if necessary.</li> <li><input type="checkbox"/> The white safety button on the safety key may not be fully engaged. Reset it and try again.</li> <li><input type="checkbox"/> The battery has been completely depleted. Recharge the battery fully or replace it with a fully-charged battery.</li> <li><input type="checkbox"/> If the mower bogs down or stalls in heavy grass:               <ul style="list-style-type: none"> <li>■ Raise the height of mower.</li> <li>■ Walk more slowly.</li> <li>■ Cut a narrower swath.</li> <li>■ If the grass is wet, let it dry.</li> </ul> </li> </ul>

<b>Problem</b>	<b>Corrective Action</b>
<i>Excessive vibration or noise</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The blade may be loose. Remove the safety key and the battery, turn the mower over, and check that the blade is tightly attached.</li> <li><input type="checkbox"/> The blade may be unbalanced, bent, or damaged. Remove the safety key, turn the mower over, remove the blade, and check its condition. Replace with a new blade if necessary.</li> </ul>
<i>Mower runs, but cutting performance is unsatisfactory, or there is a loss of power</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Was the battery fully charged at the start?</li> <li><input type="checkbox"/> The blade may be dull. Remove the safety key and the battery, turn the mower over, and check the condition of the blade.</li> <li><input type="checkbox"/> The blade may be bent, loose, or damaged. Remove the safety key, turn the mower over, and check the condition of the blade.</li> <li><input type="checkbox"/> The grass may be too high or too thick for the cutting height. Raise to a higher cutting height.</li> </ul>
<i>Mower is hard to push</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The mower is trying to cut too much grass. Raise the cutting height.</li> <li><input type="checkbox"/> The wheels may not be rotating freely. Remove the safety key, turn the mower over, and check the wheels for damage.</li> </ul>
<i>Battery loses its charge quickly</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Was the battery fully charged when you began? Charge the battery if necessary.</li> <li><input type="checkbox"/> The grass may be too high or too thick. Try raising the cutting height, or mowing a narrower swath.</li> <li><input type="checkbox"/> The battery may be getting old. After some time, usually a few years, the battery will need to be replaced.</li> </ul>
<i>Mower does not finish cutting lawn on a single charge any more</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Was the battery fully charged at the start?</li> <li><input type="checkbox"/> The blade may be dull. Sharpen it.</li> </ul>
<i>Mower rear bagger is collecting grass poorly</i>	<ul style="list-style-type: none"> <li><input type="checkbox"/> The rear bagger is full. Empty the rear bagger, and clean it if necessary.</li> <li><input type="checkbox"/> The grass is too long, or the mower is cutting too low. Raise the cutting height.</li> <li><input type="checkbox"/> The mower is moving too fast. Slow down.</li> <li><input type="checkbox"/> The rear discharge plate may be clogged. Remove the safety key, turn the mower over, and clean away any debris from the rear discharge plate and below the deck.</li> <li><input type="checkbox"/> Are you using correct blade for mulching or cutting? Is the correct side of the blade facing up? Remove the safety key, turn the mower over, and check the blade.</li> </ul>

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## Addendum A: Parts List and Schematic Drawing

The mower parts list is organized into six groups. The item number for each part corresponds to the schematic drawing.

### Handlebar Set (A)

Item #	Description	Qty.	Part Number
	Handlebar assembly (A1–A24)	1	175611
A1	Operator housing set	1	175621
A2	Start button	1	175631
A3	Start button spring	1	175641
A4	Mower/Auxiliary switch	1	175651
A5	Switch cable with Indicator light	1	175661
A7	Indicator light	1	175671
A8	Slide spring	1	175681
A10	Control lever spring	1	175691
A11	Upper handlebar steel frames	2	175701
A12	Housing screws	14	175711
A16	Cable guide tab	1	175721
A18	Lower handlebar steel frame (left)	1	175731
A19	Lower handlebar steel frame (right)	1	175741
A20	Control lever (right)	1	175751
A21	Control lever (left)	1	175761
A22	Quick-connect knobs (green)	2	175771
A23	Handlebar connector bolts	2	175781
A24	Handlebar connector knobs (black)	2	175791

### Upper Mower Housing (B)

Item #	Description	Qty.	Part Number
B1	Upper deck housing	1	175801
B2	Safety key cover	1	175811
B3	Safety key cover spring	1	175821
B4	Safety key cover pin	1	175831
B5	Discharge guard	1	175841
B6	Guard spring	1	175851
B7	Discharge guard hinge	1	175861
B8	End tube ringers	2	175871
B9	Battery cover	1	175881
B10	Battery cover hinge	1	175891
B11	Hinge screws	7	175901
B12	Deck fixed hinge	1	175911
B13	Housing screws	4	175921
B14	Safety key	1	175931
B15	Rear discharge plate	1	175941



## Deck & Motor Assembly (C)

Item #	Description	Qty.	Part Number
C1	Deck	1	175951
C2	Motor	1	175961
C3	Motor mounting plate	1	175971
C4	Motor screws and washers	4	175981
C5	Blade adapter	1	175991
C6	Plastic spacer	1	176001
C7	Cutting blade	1	176011
C8	Hex adapter	1	176021
C9	Blade nut (with flange)	1	176031
C10	Rear axle cap	1	176041
C11	Safety key plate	1	176051
C12	Safety key plate screws	4	176061
C14	Brake wire	1	176071
C15	Ground wire	1	176081
C18	Trimmer relay screws	2	176091
C19	Electrical contacts	2	176101
C20	Contact screws and washers	2	176111
C21	Contact nuts	2	176121
C23	Lever spring	1	176131
C24	Lever spring pin	1	176141
C25	Binding clip	1	176151
C27	Wire, red	1	176161
C28	Wire, black	1	176171
C30	Mower relay	1	176181
C31	Trimmer relay	1	176191
C32	Relay fix plate	1	176201
C33	Mower relay wire	1	176211
C34	Mower relay nuts	4	176221
C35	Mower relay spring washers	4	176231
C36	Mower relay screws	2	176241
C37	Trimmer relay wire	1	176251
C38	Main cable	1	176261
C39	Cable caps	5	176271
C40	36 mm wrench	1	176281

## Wheel Assemblies (D)

Item #	Description	Qty.	Part Number
D1	Front wheels (left and right set)	1	176291
D2	Steel axle bearings	2	176301
D3	Front axle	1	176311
D4	Flat axle washers	4	176321
D5	Axle nuts	2	176331
D6	Front wheel caps	2	176341
D7	Metal axle plates	5	176351
D8	Axle screws	10	176361
D9	Rear wheels (left and right set)	1	176371
D11	Rear axle (with cutting height lever)	1	176381
D12	Rear wheel caps	2	176391
D13	Front to rear axle connector	1	176401
D14	Connector nuts	2	176411
D15	Upper cover	1	176421
D16	Upper cover caps	2	176431
D17	Leading channel hinges	2	176441
D18	Leading channel hinge springs	2	176451
D19	Electrical contact channels	2	176461
D20	Electrical contact channel screws	2	176471
D21	Upper cover screws	4	176481
	Front wheel assembly	1	176771
	Rear wheel assembly	1	176781
	Mulching kit (blade and plug)	1	176761

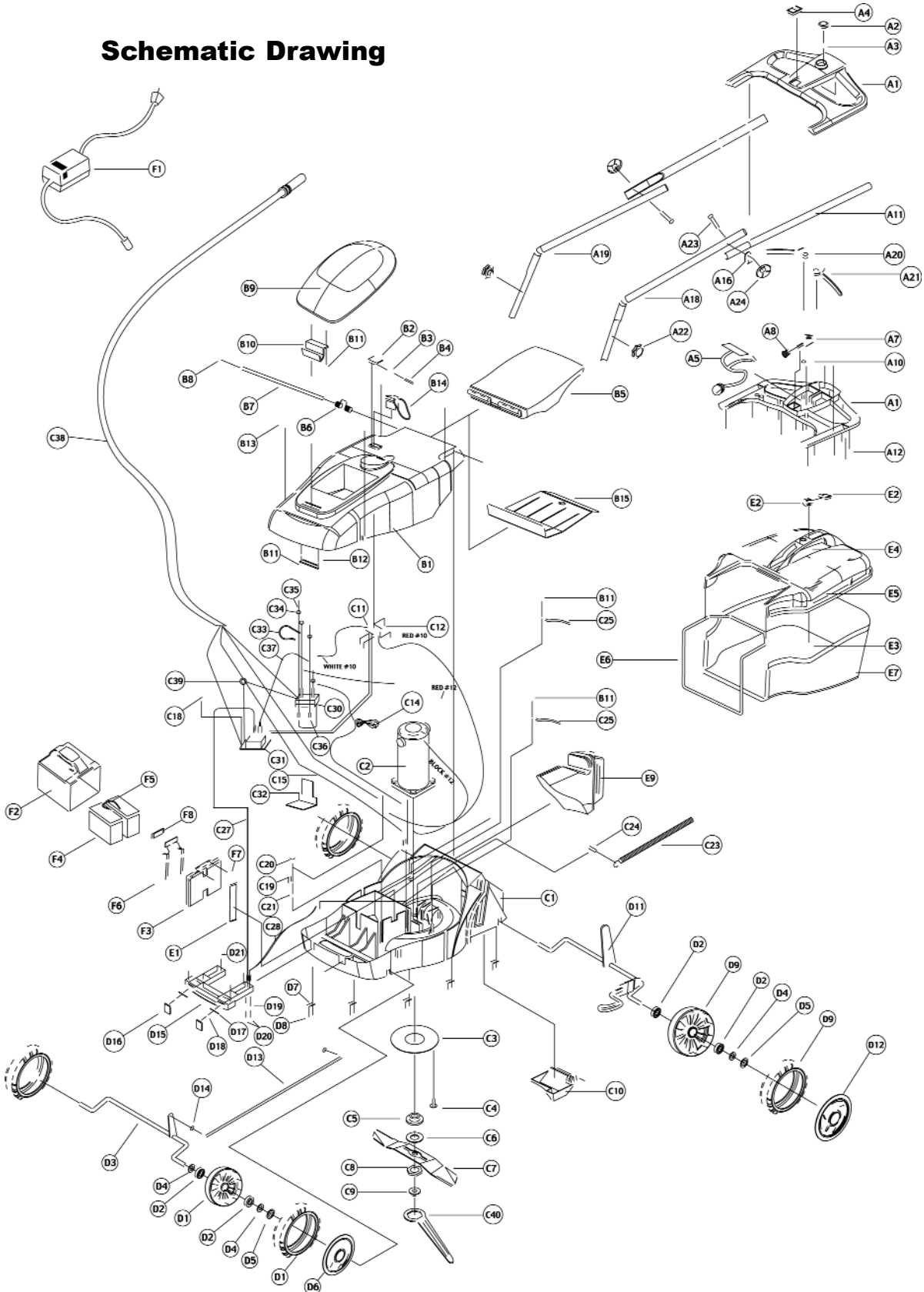
## Rear Bagger Set (E)

Item #	Description	Qty.	Part Number
E2–E7	Rear bagger assembly	1	176501
E2	Clip slide set	1	176511
E3	Shield screw	1	176521
E4	Bagger plastic cover	1	176531
E5	Bagger cover shield	1	176541
E6	Bagger steel frame	1	176551
E7	Bagger	1	176561
E8	Mulching blade (not shown)	1	176571
E9	Mulching plug	1	176581

## Battery Set (F)

Item #	Description	Qty.	Part Number
E1	Battery secure metal strip	1	176491
F1	Battery charger	1	176591
F2–F7	Battery assembly	1	176601
F2	Battery box	1	176611
F3	Battery box plate	1	176621
F4	Batteries	2	176631
F5	Battery wire (in series)	1	176641
F6	Charging plate	1	176651
F7	Battery box plate screws	2	176661
F8	Battery strap snap	1	176671
	Owner's manual	1	176751

# Schematic Drawing



## **Notes**

## **Notes**

# **LIMITED ONE YEAR WARRANTY**

## **Terms and Conditions**

The NEUTON™ EM 4.1 Cordless Electric Mower is warranted for one (1) year against defects in materials or workmanship when put to personal residential household use.

For the purposes of the warranty, “personal residential household use” refers to non-commercial residential use and further excludes misuse, accidents, or damage due to inadequate maintenance.

Country Home Products, Inc. certifies that the NEUTON™ EM 4.1 Cordless Electric Mower is fit for ordinary purposes for which a product of this type is used. Country Home Products, Inc., however, limits the implied warranties of merchantability and fitness in duration to a period of one (1) year in personal residential household use.

The Limited 1-Year Warranty on the NEUTON™ EM 4.1 Cordless Electric Mower starts on the date the machine is shipped from our factory. The Limited 1-Year Warranty is applicable only to the original owner.

The owner is responsible for the performance of all the required maintenance as defined by the manufacturer’s owner’s manuals.

The owner is responsible for replacement of normally wearing parts including blades and batteries.

Attachments and accessories to the machine are not covered by this warranty.

During the warranty period, the warranty holder is responsible for any and all shipping charges, if required.

SOME STATES DO NOT ALLOW LIMITATIONS ON THE LENGTH OF IMPLIED WARRANTIES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

Country Home Products, Inc. shall not be liable under any circumstances for any incidental or consequential damages or expenses of any kind, including, but not limited to, cost of equipment rentals, or cost of hiring services to perform tasks normally performed by the NEUTON™ EM 4.1 Cordless Electric Mower.

SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATIONS MAY NOT APPLY TO YOU.

## **Technical Support Hotline**

Country Home Products, Inc.’s objective is to have 100% satisfied customers. For that reason, we operate a 6-day-per-week Technical Support Department for our NEUTON owners. You can access a Representative by dialing our toll-free hotline at 1-(866)-NEUTON1 (638-8661). The sole job of our well-trained and friendly folks is to ensure that you get any help you need in a timely fashion. They are there to answer all your questions, including: (1) inquiries on any of the above warranties, (2) inquiries about replacement parts, and (3) your questions regarding service, maintenance, and operation.

THIS WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS, AND YOU ALSO HAVE OTHER RIGHTS WHICH VARY FROM STATE TO STATE.

## Daily Checklist for your NEUTON Mower

To help maintain your NEUTON Mower for optimum performance, we recommend you follow this checklist each time you use your machine.

- [ ] Be sure the battery is fully recharged before each use.
- [ ] Before inserting the safety key, inspect the mower blade and clean it to remove any materials (such as grass or twigs) that might be clinging to the blade from its last use. For the best performance and the longest life of the blade, it is best to clean the blade of any clinging materials after each use. Always follow all safety precautions when cleaning the blade.
- [ ] If you notice anything unusual, such as a vibration or odd sound, shut the mower down immediately. Remove the safety key and, following all safety procedures, inspect the mower blade and underside of the mower for any obstructions.

If you cannot find the cause of the problem or are uncertain what to do, then have it inspected by a qualified shop before using it or call the Country Home Products toll-free Technical Support Department at 1-(866)-NEUTON1 (638-8661).

- [ ] If you are uncertain whether the grass you want to cut is too long or thick for optimal cutting, then raise the blade height and mow the yard in multiple passes, cutting it slightly shorter each time. It is best to mow more frequently, rather than let the grass become excessively long. For the best results, see “Mowing and Lawn Care Tips” in Chapter 4.

We hope you will enjoy many years of satisfied use with your NEUTON Mower.



**COUNTRY HOME PRODUCTS, Inc.**

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**MEIGS ROAD, P.O. BOX 25, VERGENNES, VERMONT 05491**

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