SUNJOE®

MANUAL REEL MOWER

14-INCH | 9 CUTTING HEIGHTS | RAZOREEL

OPERATOR'S MANUAL

A Division of Snow Joe®, LLC

Model MJ503M

Form No. SJ-MJ503M-880E-MR1

IMPORTANT!
Safety Instructions

All Operators Must Read These Instructions Before Use

Always follow these safety guidelines. Failure to do so may result in serious bodily injury or death.

General Safety WARNINGS!

When using this reel mower, basic safety precautions should always be followed to reduce the risk of personal injury. These precautions include:

⚠**WARNING!** This unit can be dangerous! Careless or improper use can cause serious injury.

⚠**WARNING!** Risk of dismemberment: keep hands and feet away from the rotating blades and the cutting area.

Before using the reel mower, familiarize yourself with the controls, especially how to stop the mower in an emergency. The only individuals who should use the mower are those who thoroughly understand these instructions and know how to properly operate the unit. Children should never be allowed access to the mower.

Retain this manual for future reference and reread it at the start of each mowing season.

Safety Information

1. Never place hands, fingers, or feet inside the reel. Although this mower is not powered by a motor, the reel spins when the wheels turn, and it is sharp enough to cause serious injury.
2. Never mow when the grass is wet as it can be slippery.
3. Do not use the reel mower while barefoot or while wearing sandals.
4. Walk behind, never run, while using the reel mower. Always keep proper footing and balance when using this reel mower.
5. Do not intentionally strike or hit trees, fences, or other objects. Doing so can cause severe injuries or permanently damage the reel mower's mechanisms.
6. Make sure that the reel mower is in proper working order prior to use. Do not attempt to operate this reel mower if it is damaged. Contact your authorized Snow Joe® + Sun Joe® dealer or call the Snow Joe® + Sun Joe® customer service center at 1-866- SNOWJOE (1-866-766-9563).

IMPORTANT!
Safety Instructions for Walk-Behind Reel Mowers

General Operation

- Read, understand, and follow all instructions on the machine and in the manual(s) before starting.
- Do not put hands or feet near or under the machine. Always stay clear of the discharge opening.
- Only responsible adults who are familiar with the instructions should be allowed to operate this machine.
- Clear the mowing area of foreign objects such as rocks, wire, toys, and other miscellaneous articles, which could be picked up and thrown by the rotating blades.
- Make sure that the mowing area is clear of bystanders before starting the mower. Stop the mower if anyone enters the area.
- Always look down and behind before starting and while moving backward with the mower.
- Do not operate the machine without safety protective devices in place and in proper working order.
- Never operate the mower on wet grass. Always be sure of your footing; walk, never run, with the mower.
- Keep blades sharp.
- Keep hands and feet away from the cutting area.
- Always wear eye protection when operating the machine.
- Objects struck by the reel mower blades can cause severe injuries. The mowing area should always be carefully examined and cleared of all objects prior to each mowing.
- Only use identical replacement blades.

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SAVE THESE INSTRUCTIONS

Slope Operation

Slopes are major factors involved in slip and fall accidents. Such accidents can cause severe personal injury. Operating this mower on any inclined surface requires extra caution. If you feel uneasy on a slope, do not mow it.

- Mow across the face of a sloped surface; never mow up and down a slope. Exercise extreme caution when changing direction on a slope.
- Watch for holes, ruts, bumps, rocks, or other hidden objects. These may cause an unexpected slip or fall.
- Do not mow on wet grass or excessively steep slopes. Poor footing could cause a slip and fall accident.
- Do not mow near drop-offs, ditches, or embankments. You could lose your footing or balance.

Children

Tragic accidents can occur if the operator is not alert to the presence of children. Children are often attracted to the mower 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.
- Stay alert and stop the reel mower if a child enters the area.
- Never allow children access to the machine.
- Use extra care when approaching blind corners, shrubs, trees, or other objects that may block your view of a child.

Service

- Keep all nuts and bolts tight.
- Never tamper with safety devices. Regularly check to ensure these devices are in place and in proper working order.
- Keep the reel mower free from grass, leaves, or other debris buildup.
- If you strike a foreign object, stop and inspect the reel mower. Repair, if necessary, before restarting.
- The mower blades are sharp. Wrap the blades or wear gloves when handling.
- Maintain or replace safety and instruction labels as needed.

Safety Symbols

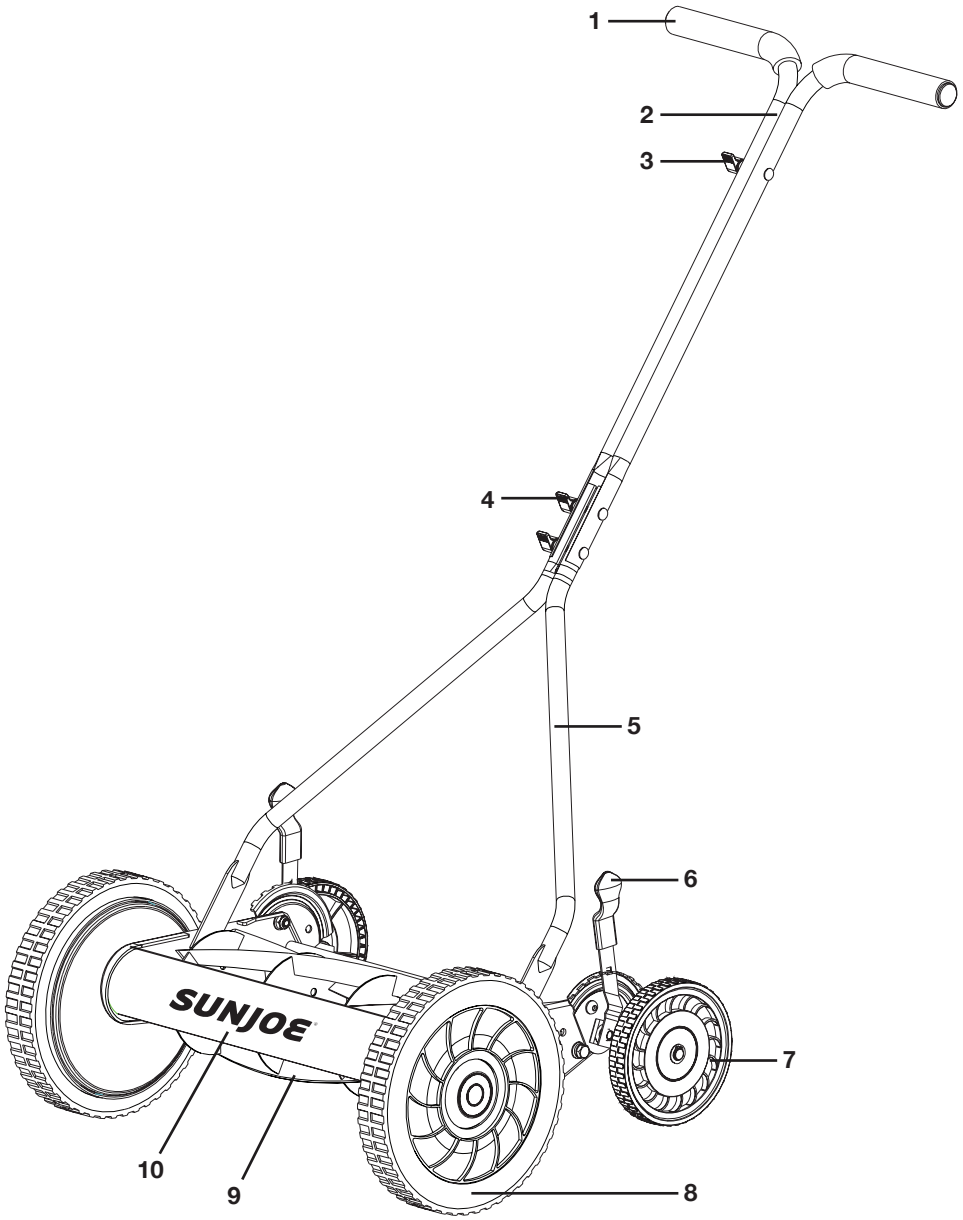
The following table depicts and describes safety symbols that may appear on this product. Read, understand, and follow all instructions on the machine before attempting to assemble and operate.

Symbols	Descriptions	Symbols	Descriptions
	**READ THE OPERATOR'S MANUAL(S) –** Read, understand, and follow all instructions in the user manual(s) before attempting to assemble and operate.		**CAUTION!** Beware of stones and other foreign objects that could be thrown from the appliance.
	**SAFETY ALERT –** Indicates a precaution, a warning, or a danger.		**Slip on slope hazard –** Use extra caution when mowing on slopes to prevent slip and fall accidents.
	**DANGER!** Cutting/dismemberment hazard – Keep feet away from the rotating blades.		Keep bystanders and children a safe distance away.
	**DANGER!** Sharp blades can sever fingers and toes. Keep away from the cutting area.		**DANGER!** Cutting/dismemberment hazard – Keep hands away from the rotating blades.

Know Your Manual Reel Mower

Read the owner's manual and safety instructions carefully before operating the reel mower. Compare the illustration below to the reel mower in order to become familiar with the location of the various controls and adjustments. Save this manual for future reference.

1. Foam grip
2. Upper handle bar (2)
3. Upper handle knob and bolt
4. Lower handle knob and bolt (2)
5. Lower handle bar (2)
6. Height adjustment lever
7. Rear wheel (2)
8. Front wheel (2)
9. Steel blades
10. Reel mower body



Technical Data

Rotor	5 steel blades
Cutting Width	14 in. (35.6 cm)
Cutting Heights	1.1 in. – 2.9 in. (27 mm – 73 mm)
Wheel Size	Front: 10 in. (25 cm) Rear: 6 in. (15 cm)
Height Control	9-position manual height adjustment
Weight	23.8 lbs (10.8 kg)

Unpacking

Carton Contents:

- Reel mower body
- Upper handle bar (2)
- Lower handle bar (2)
- Handle knob and bolt (3)
- Paper test strips (20)
- Hex wrench
- Manual with registration card

1. Carefully remove the manual reel mower and check to see that all of the above items are supplied.
2. Inspect the product carefully to make sure no breakage or damage occurred during shipping. If you find damaged or missing parts, DO NOT return the unit to the store. Please call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563).

   NOTE: Do not discard the shipping carton and packaging material until you are ready to use your new manual reel mower. The packaging is made of recyclable materials. Properly dispose of these materials in accordance with local regulations.

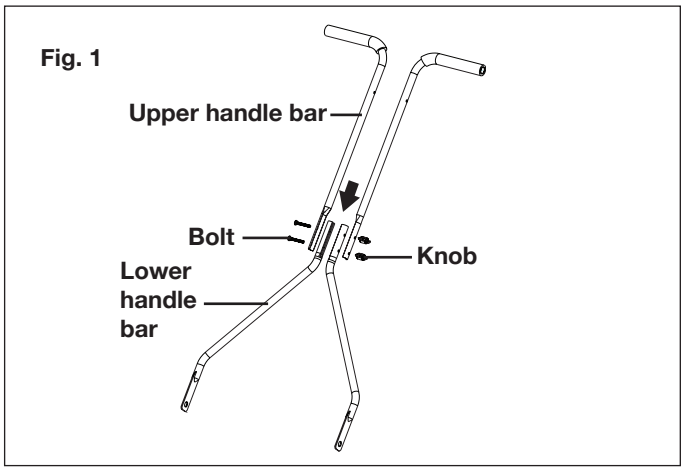
IMPORTANT! The equipment and packaging material are not toys. Do not let children play with plastic bags, foils, or small parts. These items can be swallowed and pose a suffocation risk!

Assembly

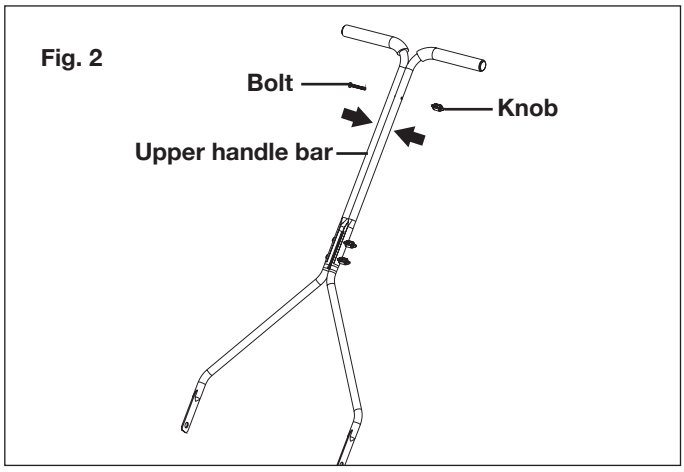
Fitting the Handle

NOTE: Do not tighten the knobs completely until assembly is complete.

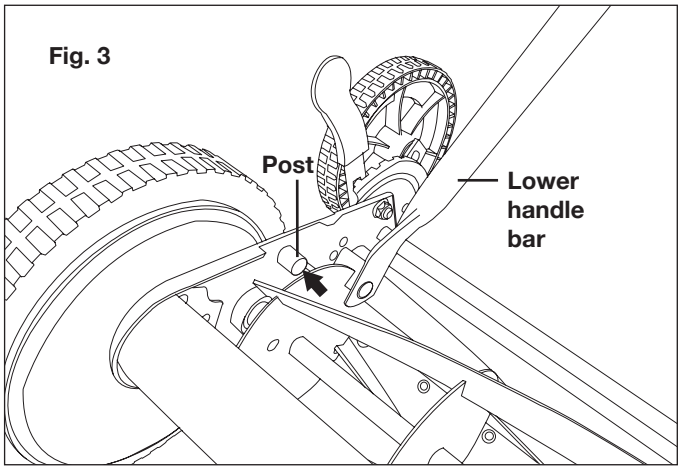
1. Secure the two lower handle bars to the upper handle bars using the two knobs and bolts provided. Tighten the knobs on each side to ensure a secure fit (Fig. 1).



2. Attach the two upper handle bars to each other using one bolt and knob provided. Tighten the knob to ensure a secure fit (Fig. 2).



3. After assembling the handle, line up the holes at the lower end of each handle arm with the short posts that extend from the side plates of the mower base (Fig. 3).



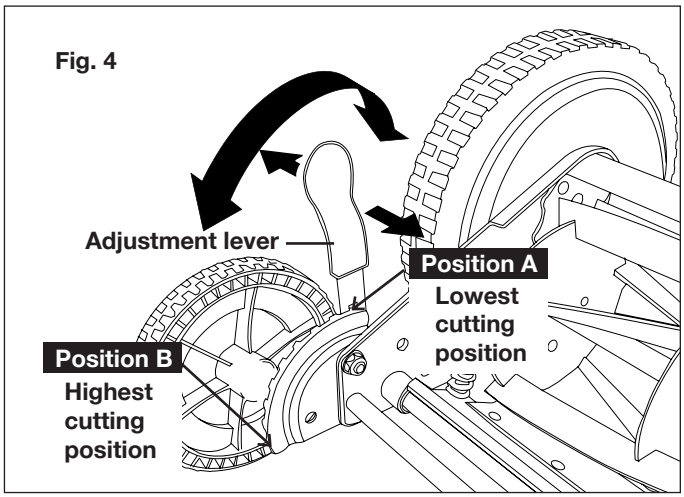
4. Pull both sides of the lower handle bars over the posts on the mower body. Press inward on the handle bars to ensure a secure fit over the posts.

Operation

Cutting Height Adjustment

1. The cutting height of the 14 in. (35.6 cm) reel mower can be adjusted from 1.1 in. to 2.9 in. (27 mm to 73 mm) by moving the 9-position height adjustment levers to the desired setting. The height adjustment levers are located next to the smaller wheels.
2. In order to set the mower to its lowest cutting position, pull the adjustment levers on both sides, one at a time, and set them to position A (Fig. 4).
3. In order to set the mower to its highest cutting position, move the adjustment levers on both sides to position B (Fig. 4).

   NOTE: The two adjustment levers MUST be set to the same position (height).



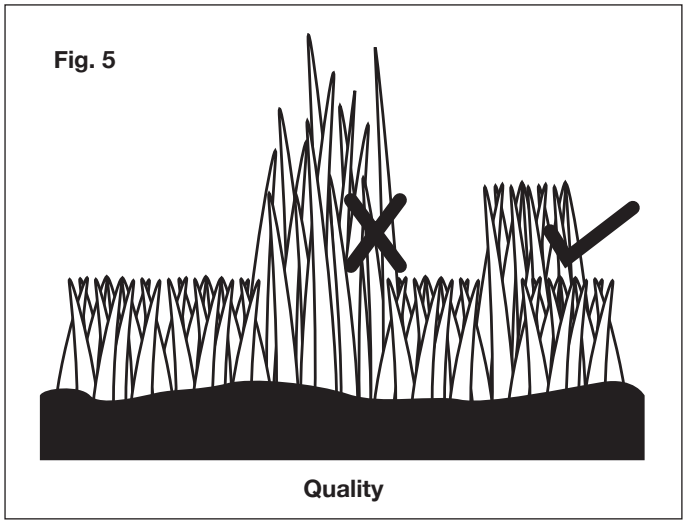
4. Other cutting heights are achieved by moving the adjustment levers to the settings between the highest and lowest positions.

Ensuring a Clean Cut

⚠**WARNING!** The steel blades are extremely sharp. To avoid injury, do not touch the blades while making adjustments.

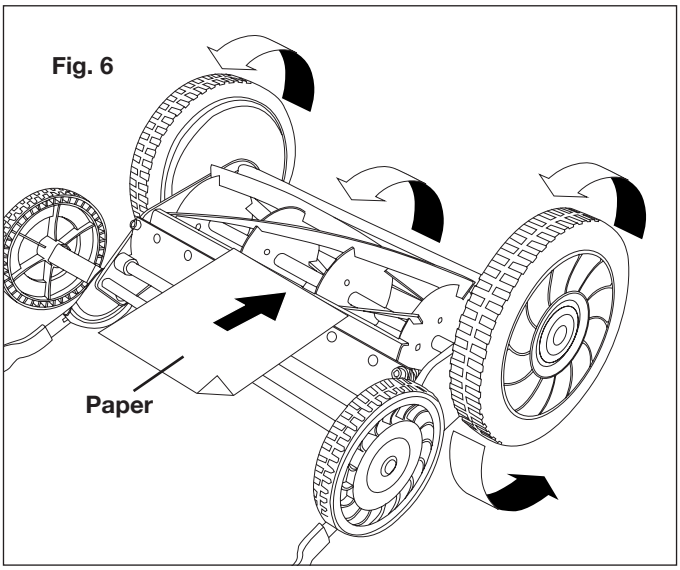
NOTE: Although the blades are pre-adjusted prior to leaving the factory, it is recommended that the adjustment be verified prior to first use.

NOTE: Vibrations during shipping can cause blade misalignment, which often causes the blades to become too loose or too tight. This will result in a rough, uneven cut, or make the mower difficult to push (Fig. 5).



1. To verify proper blade alignment, place the mower on a flat surface. Remove the handles and turn the mower reel upside down to expose the cutting bar.

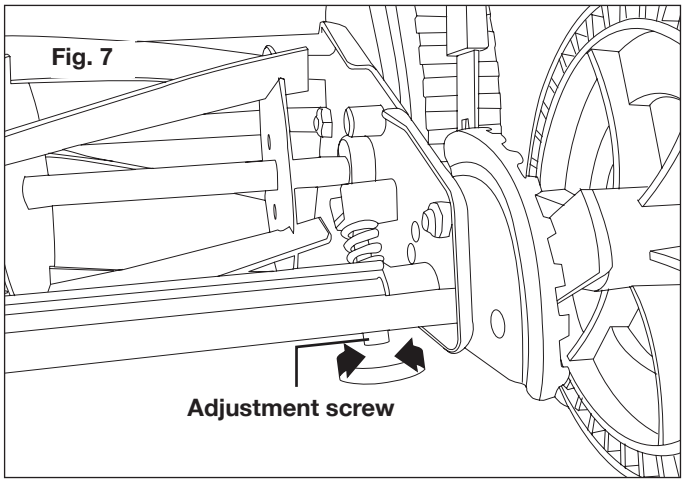
2. Insert a sheet of paper between the blade reel and cutting bar, then slowly turn the wheel by hand (Fig. 6).



3. All the blades should slice the paper evenly along the entire length of the cutting bar while the reel is turned smoothly.
4. If the mower cuts the paper intermittently, adjustment should be made to the appropriate side of the blades to achieve optimal cutting performance.

Adjusting the Mower Blades

1. Each end of the cutting bar can be adjusted separately.
2. The cutting bar blade, which is located under the reel, is able to pivot. The two adjustment nuts located at the back of the mower move the cutting bar away from the blades when they are turned counterclockwise, and closer to the blades when they are turned clockwise (Fig. 7).



⚠ **WARNING!** Do not overtighten the adjustment screws as this could damage the cutting bar. Both screws must be tight on final adjustment.

3. To loosen the blades, use the hex wrench provided and turn both adjustment screws by an equal amount counterclockwise.
4. To tighten the blades, tighten both screws by an equal amount by turning them clockwise.

NOTE: If you have any questions, please call the Snow Joe® + Sun Joe® customer service department at 1-866-SNOWJOE (1-866-766-9563) for assistance.

5. Once the mower blades have been properly adjusted and their alignment has been verified, you can now proceed to use your reel mower. Align the cutting path indication arrow with the previously cut path.

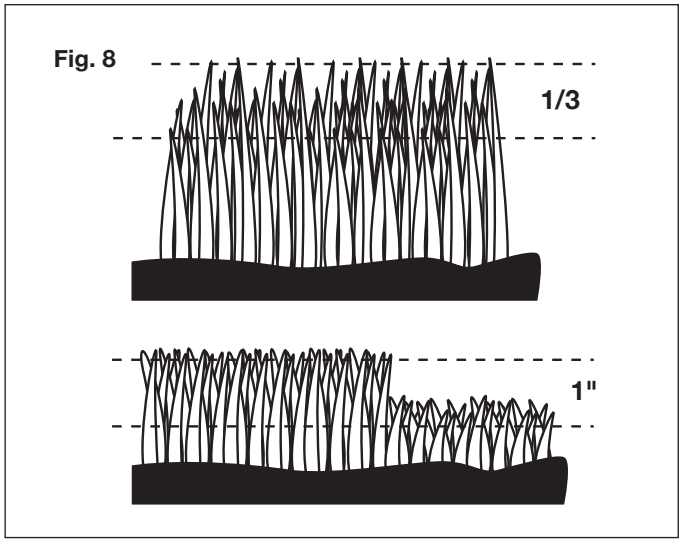
   NOTE: The width of the reel mower's actual cut is indicated below. Do not use the mower's wheels as a reference point for the grass cut line.

Mowing Tips

Follow the 1/3 Rule

The 1/3 rule is key to an enjoyable mowing experience and a healthy lawn.

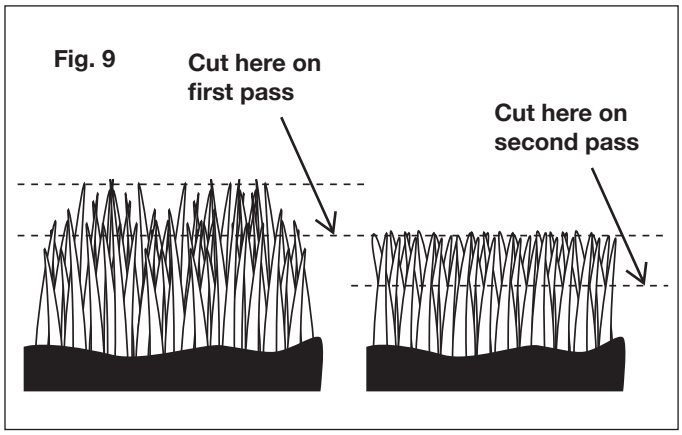
1. You should mow your lawn regularly, at least once a week, during the growing season.
2. Be guided by observing the lawn and taking care not to remove more than 1/3 of the total height of the turf at any mowing session and never more than 1 inch at a time (Fig. 8).



3. Following this rule will stimulate the turf's root growth, maintain its health, and encourage its natural ability to crowd out unwanted weeds.

Tall Grass Requires Incremental Cutting

1. For extremely tall grass, set the cutting height at the mower's maximum setting for the first pass, and then reset it to the desired height and mow a second or third time (Fig. 9).

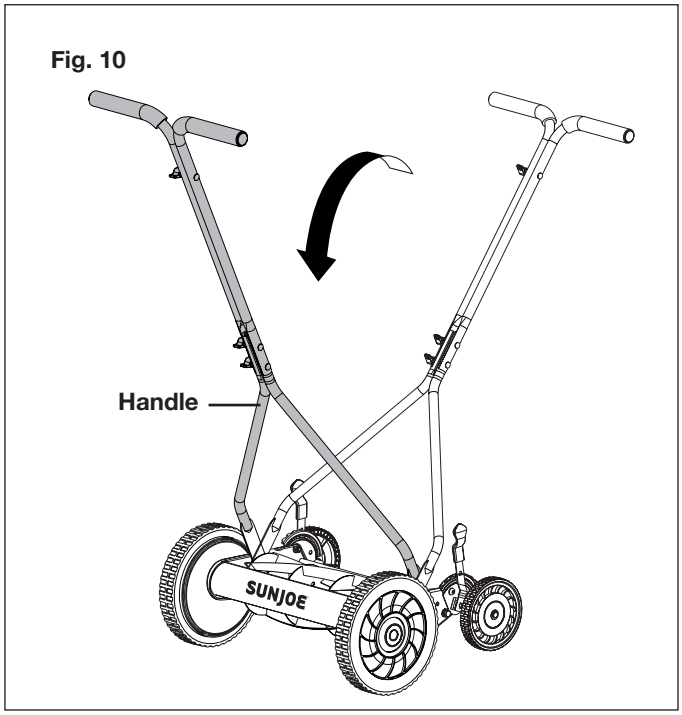


2. Removing too much of the turf's height, especially in the heat of summer, can cause root shock and weaken the lawn; bringing down the height by successive mowing over two or more days can avoid this damage and maintain the health of the turf.
3. If the lawn is overgrown (to higher than 4 inches) it may be necessary to use a brush cutter to remove the excess turf mass before resuming mowing at normal heights.

NOTE: Do not cover the grass surface with a heavy layer of clippings. Consider using a grass collection system and starting a compost pile.

Transporting the Mower

During normal operation, the blade reel will turn anytime the mower's front wheels are turning. To safely move the mower from one location to another without the blade reel turning, simply pivot the handle over the reel and push the mower from the opposite side. Pushing the mower in this manner (transport mode) prohibits the blade reel from turning (Fig. 10).



Care + Maintenance

1. Minimum care is required to ensure smooth operation of your mower.
2. To avoid damage to the mower or cutting blades, keep the area to be mowed free from debris.
3. For best results, regularly apply lubricant to the mower's cutting surfaces, cutting reel axle shaft, and wheels.

Sharpening the Cutting Blades

1. Spread a thin layer of lapping compound on the front edge of the reel blades.
2. Adjust the cutting bar so that the blade has light but firm contact across the full width of the bar.

⚠**CAUTION!** Do not overtighten the adjusting screws, as this could damage the cutting bar. Tighten both screws during final adjustment.

3. Turn the reel blades until the front edge of the cutting bar blade is polished.

⚠**WARNING!** Clean any grinding compound or debris from the cutting bar blade, reel blade, pinions, and pawls.

NOTE: Use industrial or valve lapping compound between 100 and 240 grit.

NOTE: Lubricate the axle and pinion with a light film of wheel bearing grease.

Cleaning and Storage

1. Clean the exterior of the machine thoroughly using a soft brush and cloth before storing. Do not use water, solvents, or polishes.
2. Turn the mower on its side to clean the blade area.

⚠**WARNING!** Do not place your hands inside or near the cutting area. If grass cuttings are compacted in the blade area, remove them using a wood or plastic cleaning tool appropriate for blade cleaning.

3. Store the mower in a dry place. Do not place other objects on top of the mower during storage.

Maintenance Tips

Reel mowers are relatively low maintenance. For consistent cutting, follow the below instructions:

- Always keep the cutting bar properly adjusted. Refer to the instruction manual for further directions.
- Regularly clean and lubricate cutting edges with light spray oil.

IMPORTANT! Reel mowers have difficulty cutting tall weeds, such as dandelions, and will often bend, rather than cut, such weeds. Cut often to prevent this.

Service and Support

If your Sun Joe® manual reel mower requires service or maintenance, please call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563).

Model and Serial Numbers

When contacting the company or reordering parts, you will need to provide the model and serial numbers of your product. These are found on the decal affixed to the housing of your reel mower. Copy these numbers into the space provided below.

Record the following numbers from the housing or handle of your new product:

Model #: M J 5 0 3 M

Serial #:

NOTES

NOTES



SNOW JOE® + SUN JOE® CUSTOMER PROMISE

ABOVE ALL ELSE, Snow Joe® + Sun Joe® are dedicated to you, our customer. We strive to make your experience as pleasant as possible. Unfortunately, there are times when a product does not work or breaks under normal operating conditions. We think it's important that you know what you can expect from us. That's why we created the Snow Joe® + Sun Joe® promise.

OUR PROMISE: Snow Joe® + Sun Joe® warrant new products for two years from the date of purchase. If your product does not work, or there's an issue with a specific part, we will fix this by either sending you a free replacement part or by sending you a new or comparable product at no charge. How cool is that! Before you know it, you'll be back in action cutting, sawing, mowing, washing and…?

PRODUCT REGISTRATION:

Snow Joe®, LLC ("Snow Joe® + Sun Joe®") strongly encourages you to register your purchase. You can register online at **snowjoe.com/ProductRegistration**, or by printing and mailing in a registration card available online from our website, or calling our Customer Service Department at **1-866-SNOWJOE (1-866-766-9563)**, or by e-mailing us at **help@snowjoe.com**. Failure to register your product purchase will not diminish your warranty rights. However, registering your purchase will allow Snow Joe® + Sun Joe® to better serve you with any of your customer service needs.

WHO CAN SEEK WARRANTY COVERAGE?

This Warranty is extended by Snow Joe® + Sun Joe® to the owner of this new product for residential and personal household use only. This Warranty does not apply to products used for commercial, rental or re-sale purposes. Should ownership of this product change during the 2-year period, please update the product's owner information at **snowjoe.com/ProductRegistration**.

WHAT IS COVERED?

Snow Joe® + Sun Joe® warrants to the owner that if this product fails within 2 years from the date of purchase due to a defect in material or workmanship or as a result of normal wear and tear from ordinary household use, Snow Joe® + Sun Joe® will send a replacement part or product, as needed, free of charge and with free shipping to the original purchaser.

If, in Snow Joe® + Sun Joe®'s sole discretion, the failed product cannot be repaired with a part, Snow Joe® + Sun Joe® will elect to either (A) send a new product at no charge and with free shipping or (B) refund the full purchase price to the owner.

WHAT IS NOT COVERED?

This Warranty does not apply to products that have been used commercially or in non-household applications. This Warranty does not cover cosmetic changes that do not affect performance.

This Warranty is only valid if the product is used and maintained in accordance with the instructions, warnings and safeguards contained in the owner's manual. Snow Joe® + Sun Joe® will not be responsible for the cost of any unauthorized warranty repairs. This warranty does not cover any cost or expense incurred by the purchaser in providing substitute equipment or service during reasonable periods of malfunction or non-use of this product while waiting for a replacement part or unit under this warranty. Wearing parts like belts, augers, chains and tines are not covered under this warranty, and can be purchased at **snowjoe.com** or by calling **1-866-SNOWJOE (1-866-766-9563)**. Batteries are covered in full for 90-days from the date of purchase.

Repair, replacement or refund of the purchase price are the exclusive remedies of purchaser and the sole liability of Snow Joe® + Sun Joe® under this warranty. No employee or representative of Snow Joe® + Sun Joe® is authorized to make any additional warranty or any modification to this warranty which may be binding upon Snow Joe® + Sun Joe®. Accordingly, purchaser should not rely upon any additional statements made by any employee or representative of Snow Joe® + Sun Joe®. In no event, whether based on contract, indemnity, warranty, tort (including negligence), strict liability or otherwise, shall Snow Joe® + Sun Joe® be liable for any special, indirect, incidental, or consequential damages, including, without limitation, loss of profit or revenue.

Some states do not allow limits on warranties. In such states, the above limitations may not apply to you.

Outside the USA, other warranties may apply.



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