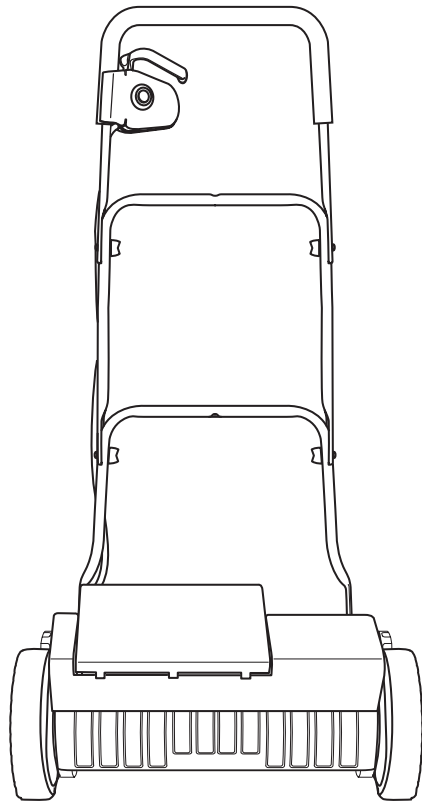


# Owner's Manual

for

**Sunlawn™**



Electric Rechargeable Power  
Reel Mower

(Model EM-2)

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For service inquiries, parts replacement,  
and maintenance tips, see

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

## WELCOME

Congratulations on your purchase of a Sunlawn mower. This and our other Sunlawn products originate from our commitment to *conscientious gardening solutions*. Please use this manual as a reference.

## WARRANTY

Sunlawn, Inc. (the Manufacturer) guarantees this product for private use for a period of 2 years from the date of purchase. This guarantee applies to all serious defects of the product which can be proven to have been caused by faulty materials or workmanship. The Manufacturer has the option of supplying a replacement of the product in perfect working order or repairing the product free of charge at an authorized facility, provided that the following conditions are fulfilled:

- The appliance has been handled correctly and in accordance with the instructions in the Owner's Manual.
- Neither the buyer nor a third party has attempted to repair the product.

This guarantee is void if replacement parts or accessories are used other than those approved by the Manufacturer.

The product, accompanied by a copy of the original receipt, must be delivered, prepaid, to a service center authorized by the Manufacturer.

This Manufacturer's guarantee shall not affect any guarantee claims against the dealer or seller of the product.

## USE OF THIS PRODUCT

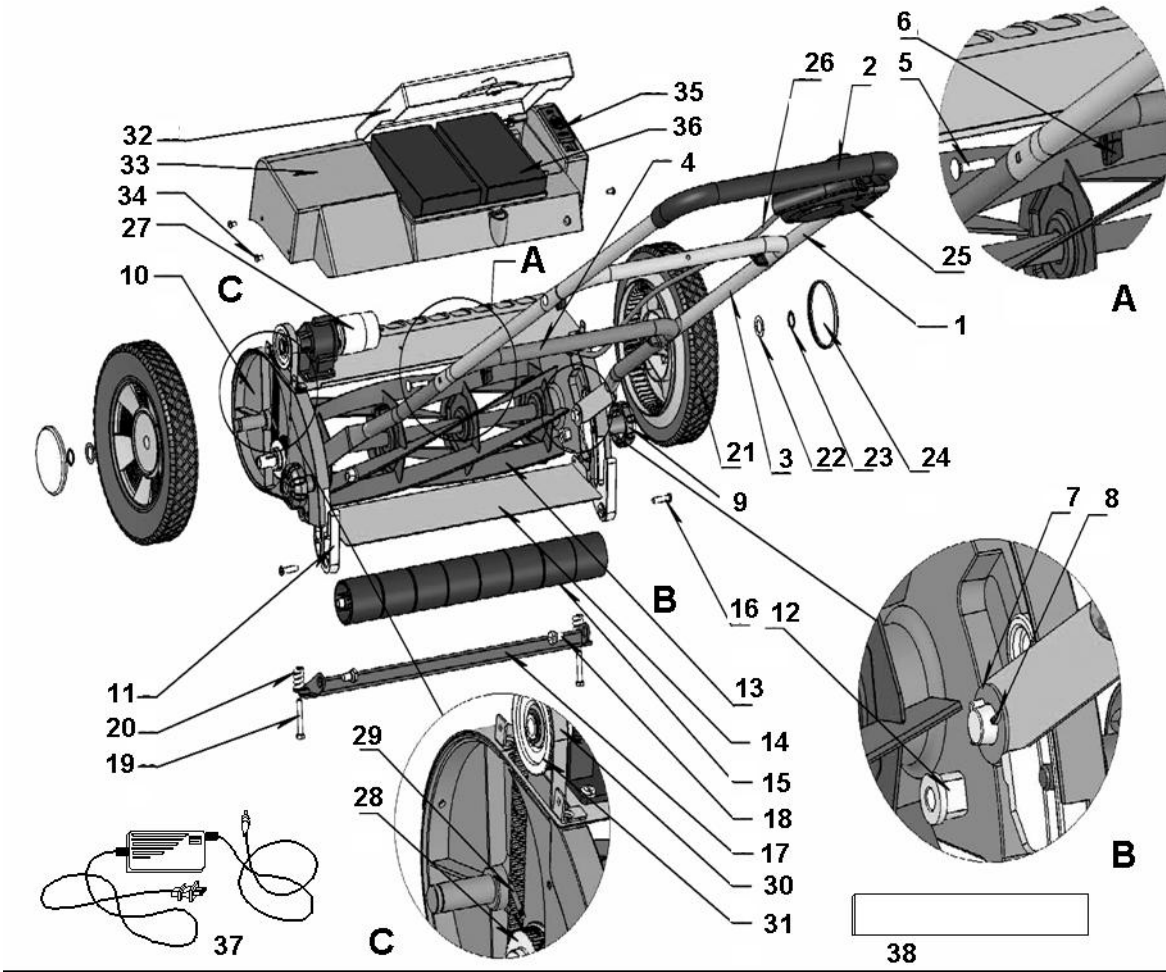


### WARNING

**For safety reasons persons of less than 16 years of age or persons not familiar with these operating instructions must not use the electric rechargeable mower.**

# ASSEMBLY

## PARTS LIST



- |  |  |   |
|--|--|---|
| <ul style="list-style-type: none"> <li>1. Handle top section</li> <li>2. Handle grip</li> <li>3. Handle mid section</li> <li>4. Handle lower section</li> <li>5. Handle bolt (4)</li> <li>6. Handle wing nut (4)</li> <li>7. Handle spacer</li> <li>8. Handle cotter pin</li> <li>9. Adjustment knob</li> <li>10. Side panels (L/R)</li> <li>11. Adjusting arms (L /R)</li> <li>12. Compression nut (2)</li> </ul> | <ul style="list-style-type: none"> <li>13. Reel blade</li> <li>14. Catcher apron</li> <li>15. Roller assembly</li> <li>16. Roller screw (2)</li> <li>17. Cutting bar</li> <li>18. Cutting bar secure bolt (2)</li> <li>19. Cutting bar adjusting bolt (2)</li> <li>20. Cutting bar spring (2)</li> <li>21. Wheel (2)</li> <li>22. Wheel spacer (2)</li> <li>23. Wheel Clip (2)</li> <li>24. Hub cap (2)</li> <li>25. Two hand safety switch</li> <li>26. Switch cable</li> </ul> | <ul style="list-style-type: none"> <li>27. Motor assembly</li> <li>28. Lower drive gear</li> <li>29. Lower drive gear secure pin</li> <li>30. Drive belt</li> <li>31. Motor drive gear</li> <li>32. Battery cover</li> <li>33. Power housing</li> <li>34. Housing screws (4)</li> <li>35. OFF/RESET switch</li> <li>36. Battery (2)</li> <li>37. Battery charger</li> <li>38. Adjustment gauge</li> </ul> |
|--|--|---|

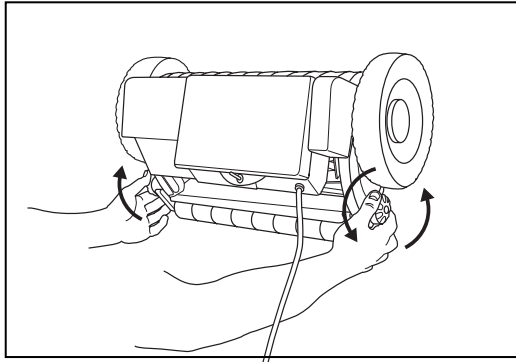


**CAUTION**

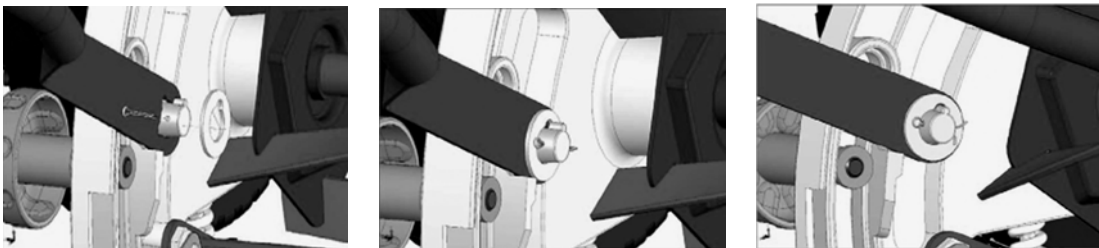
**Always keep the battery cover locked. Failure to do so may allow batteries to fall out, causing damage to batteries, cables, and electric circuits.**

**ASSEMBLE THE HANDLE SECTIONS**

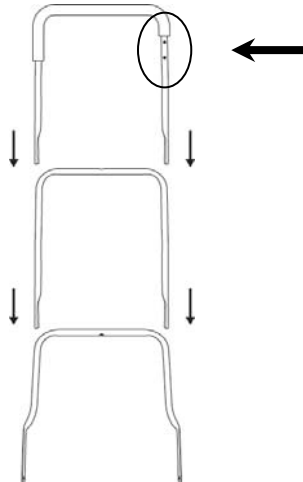
1. Set the cutting height to the highest setting as shown below. This will make it easier to attach the lower handle section.
  - a. Loosen the two large black knobs [Part # 9], one on each side of the mower body, to allow movement of the height adjustment arms [Part # 11]. NOTE: the handle is mounted to the adjusting arms and thus moves with the arms.
  - b. Set the height to the highest setting and re-tighten the black knobs.



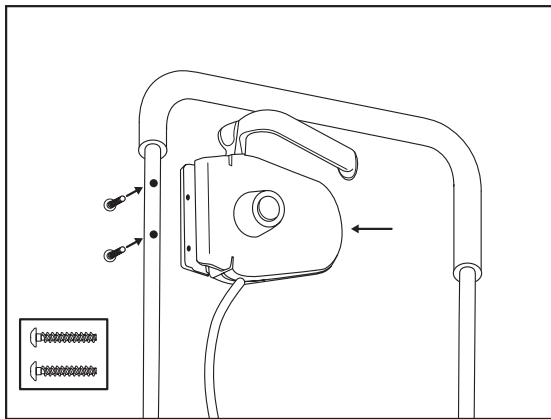
2. Fit the lower section of the handle [Part # 4] so that the holes are over the handle posts on the mower. [See Insert B] Then rock the handle to align the locking tabs and allow the handle section to fit into place. Place the spacer [Part # 7] over the post and put the cotter pin [Part # 8] through the hole to secure the handle.



3. Continue assembly of the middle [Part # 3] and top sections [Part # 1] of the handle using the handle bolts and wing nuts [Part # 5 and 6]. **The top section must be attached with the two holes near the grip area on the right side (standing behind the mower).**



4. Attach the two-handed safety switch [Part # 25] to the top section. Run the cable [Part # 26] along the top side of the handle (so it does not hang down behind the mower) and close the "clamshell" portion of the safety switch around the screw holes. Fasten by inserting and tightening the two screws provided.

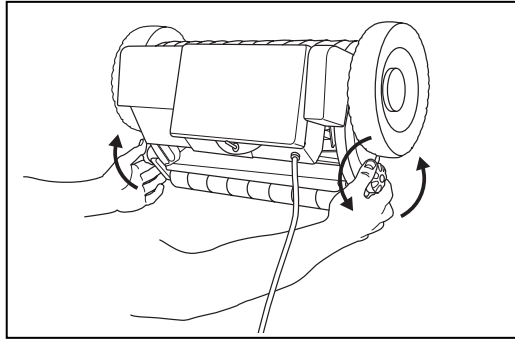


5. Secure the cable to the handle using the two Velcro cable keeper straps.

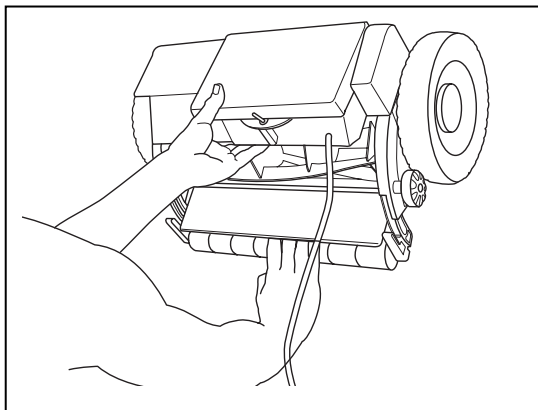
## ADJUSTING THE CUTTING HEIGHT

The cutting height of the EM-2 may be adjusted from approximately .4 inch up to approximately 2.2 inches. Actual height may vary according to the height of the turf. Adjust the mower to the desired height as follows:

1. Loosen the two large black knobs [Part # 9], one on each side of the mower body, to allow movement of the height adjustment arms [Part # 11]. (This is the same movement used to attach the handle.) NOTE: the handle is mounted to the height adjustment arms and thus moves with the arms.



2. Set the height, using the scale on the back of the adjusting arms to the same setting on both sides and re-tighten the black knobs. The mower is now ready to mow at the desired height setting.

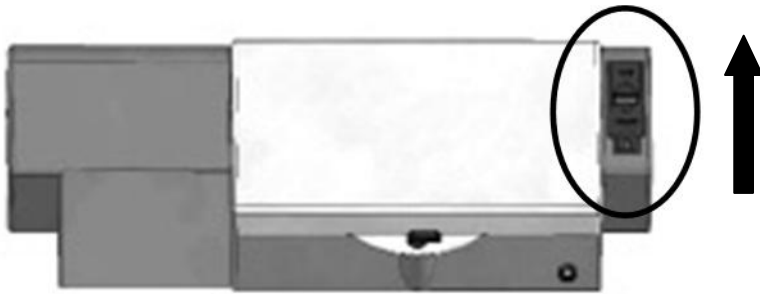


## CHARGING THE MOWER BATTERIES

The batteries come from the factory properly connected. All that is necessary is to charge them.

The batteries must be charged before using the mower for the first time and **after each use**. NOTE: *Do not leave batteries uncharged through the winter.*

1. Move the OFF/RESET switch [Part # 35] up to the OFF position.
2. Plug the charger [Part # 37] into the mower charging receptacle and then into a 110V power outlet.
3. A light on the circuit board and on the charger itself will indicate that the unit is charging. (Set to RESET position when operating.)



**Recharging time for the mower is approximately 5-8 hours.** The charger light, which glows red when the battery is not fully charged, will glow green when charging is complete. To prolong the overall life of the batteries you will need to charge the batteries for a full 24 hours before the first use.

NOTE: The sealed lead acid batteries of the EM-2 do not need to be fully discharged. The batteries will not develop a "memory."

## OPERATIONS

### INSPECT THE MOWING AREA

1. Before beginning to mow, remove any foreign objects, such as stones, branches, or toys, from the area.
2. Continue to check for such obstacles during mowing.

#### **The Lawn Should Be Relatively Dry**

1. Mowing wet grass causes an uneven cut and can cause damage to the electrical components of the mower.
2. Do not mow when it is raining.

## STARTING AND OPERATING



### WARNING

- Before starting the mower, check within the blade area for any foreign objects and remove them.
- Do not operate the mower on areas other than turf surfaces. The mower should be sitting upright on a level part of the lawn before starting operation.

1. To start and operate the mower, press and hold down the red safety button with your finger, and with the other hand pull the starting lever back toward the handle grip. There are similar instructions on the handle itself stating: "To operate pull handle while depressing safety button."
2. As soon as the mower has started, release the red safety button.
3. When the starting lever is released, the motor switches off.
4. The mower may be restarted at any time with the same procedure.  
***Please note: there is two to three second delay before the mower will restart.***

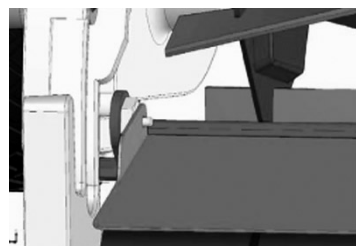
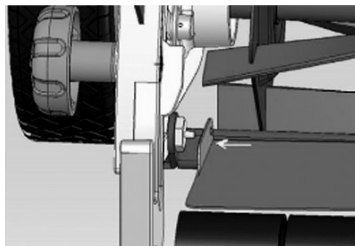
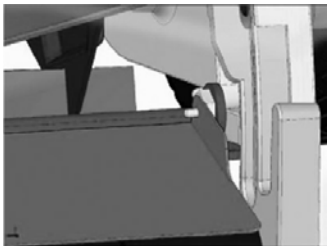
## NORMAL MOWING

To obtain a clean cut, push the mower in straight lines (passes) at a deliberate walking pace. Overlap the passes to even the cut and to avoid any uncut strips.

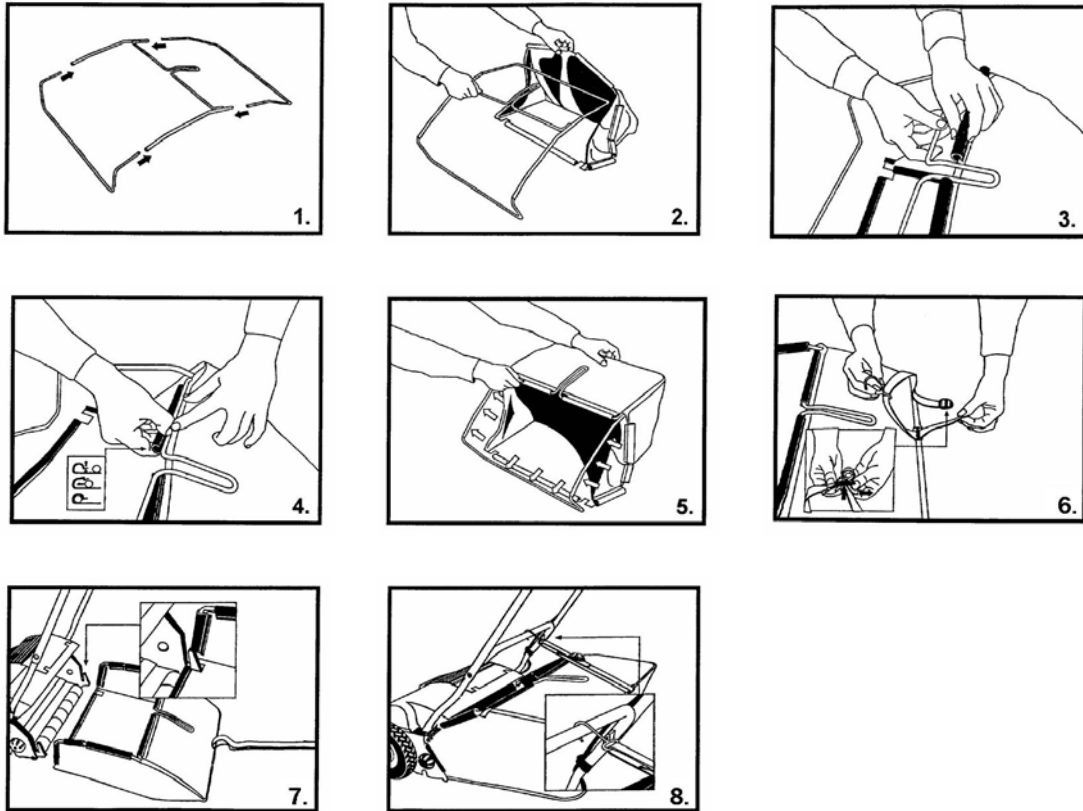
## MOWING USING THE GRASS CATCHER (OPTIONAL ACCESSORY)

The grass catcher collects the clippings as it mows.

1. Install the catcher apron [Part # 14] on the non-spring pin side
2. Push the spring pin on the other side
3. Install the apron on the spring pin side



The grass catcher attaches at the grass catcher hooks on the mower and by the strap to the mower handle, as seen below.



Mow using the same procedure as for normal mowing (described above).



### CAUTION

**Do not attach or remove the grass catcher while the motor is running.**

### OVERLOADING/OVERHEATING

If the mower blade is blocked, the blade drive will overload and cause slippage of the belt, resulting in a loud “brrrrrrr” sound.

1. Release the starting lever. If there is any foreign object in the blade area, it must be removed before proceeding.
2. The motor is equipped with a circuit limiter that prevents the motor from overworking.

If the motor stops during operation and the batteries have charge remaining, then the motor may be overloaded or overheated. Wait 2-5 minutes to allow an automatic reset before resuming operation.

## MOWING: GENERAL INFORMATION

### THE 1/3 RULE

This is the key to enjoyable mowing and a healthy lawn.

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

If the lawn has become too high (over 4 inches in height) then it is best to set the mower to the highest setting to mow. After mowing, reset down to the normal level and mow again within a day or two.

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 mowings over two or more days can avoid this damage and maintain the health of the turf.

If the lawn is overgrown (to higher than 4 inches) it may be advisable to use a brush cutter to remove the excess turf mass before resuming mowing at normal heights.

## MAINTENANCE



### WARNING

**To avoid injury or damage to the unit do not clean the EM-2 using running water, a hose, or a high pressure stream.**

## CLEANING

After using the mower, clean with a moist cloth. Spray the cylinder and cutting bar with silicon spray lube.

## GENERAL MAINTENANCE

Regularly check to insure that all bolts, nuts, and screws are tight and that the mower is in good working order. Worn out and damaged parts should be replaced.

The blades, if properly cared for, will mow for years before requiring sharpening. **Sharpening can only be done by a professional using a cylinder grinder and proper techniques.**

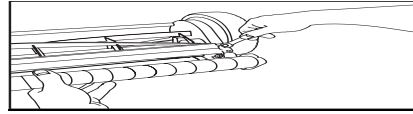
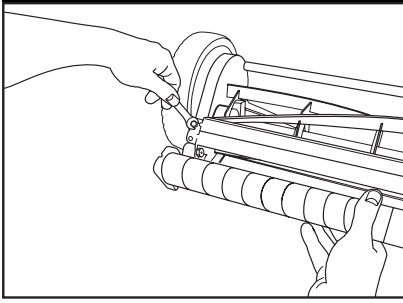
## STORAGE

1. Store the EM-2, **fully charged**, in a cool, dry place.
2. The batteries need not be removed for winter storage unless they will be subject to sub-zero temperatures.
3. The mower should be stored out of the reach of children.

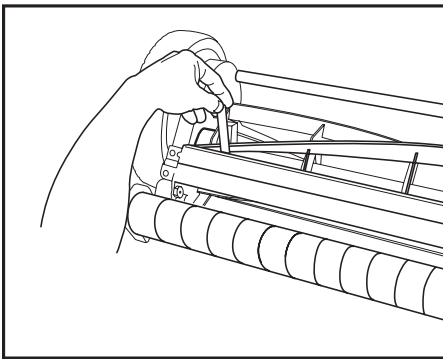
## READJUST THE BLADE CLEARANCE

The blades are optimally adjusted from the factory. However, after using the mower for a long period, if the cut is not clean, the blades need readjusting. The procedure is as follows:

1. Turn off the mower.
2. Set OFF/RESET switch to OFF. Make sure the battery cover is locked. [Part # 32]. **Note: If the battery cover is not latched and the mower is not upright, the batteries can fall out, causing damage to the batteries or electric circuits.**
3. Turn the mower over to expose the cutting bar on the bottom of the mower. [Part # 17].
4. Using a 10mm open end wrench, tighten the hex bolt approximately 1/4 turn [Part # 19] at one end of the cutting bar until the cutting bar and cylinder come into contact. Spin the blade cylinder by hand and back off the bolt approximately 1/8 turn or until the cutting bar and cylinder are no longer in contact.



5. Make the same adjustment at the other end of the cutting bar.
6. Now check the adjustment using the small 0.05mm/0.002 inch gauge (silver strip) [Part # 38] supplied with the EM-2 (or any 0.05mm/0.002 inch feeler gauge). If the gauge is held by the cylinder blades but the cylinder and cutting bar are not touching then the adjustment is correct.



7. The blades may also be tested by inserting a piece of paper vertically into the blades while turning them by hand.



**WARNING**

**Blades are sharp! Be careful of injury — handle the blades carefully to avoid cutting yourself. Wear appropriate gloves or hand protection.**

## REPLACING THE BATTERIES

These instructions are for replacing the batteries if necessary.



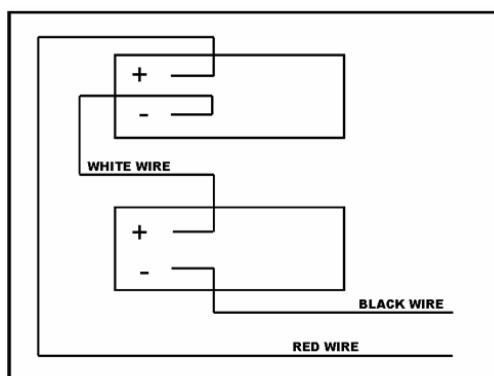
### WARNING

- **Be careful to connect batteries correctly. Failure to do so may result in electric shock or damage to the electrical system of this mower.**
- **Close and latch the battery cover before using or servicing the mower. Otherwise the batteries can fall out, damaging the mower**

Note: the two batteries are identical. Look carefully before removing the batteries to ensure proper replacement.

Connect the batteries as follows:

1. Attach the WHITE jumper cable from the + (positive) terminal of one of the batteries to the - (negative) terminal of the other battery.
2. Attach the BLACK cable to the - (negative) terminal of the first battery.
3. Attach the RED cable to the + (positive) terminal of the second battery.



Do not have batteries resting on cables. Be sure cables are placed in the groves provided.

**TECHNICAL DATA**

Battery		2 x 12V / 7.2Ah
Motor Drive		24V, 6A, 140W
Charger	Input:	AC 100 – 240V 50 / 60 Hz 1.5A
	Output:	24V <u>      </u> 1500 mA
	UL listed	

Mower	Cutting width:	40 cm (16 inches)
	Weight with battery:	35.2 lb
	Cutting height rough (from floor):	.4 to 2.2 inches

CE certified: Declaration of Conformity (November 30, 2005)



EMC Order No.  
Machinery Order No.

MT-E0511395-1  
MT-S0511320-1

