

LawnMaster[®]

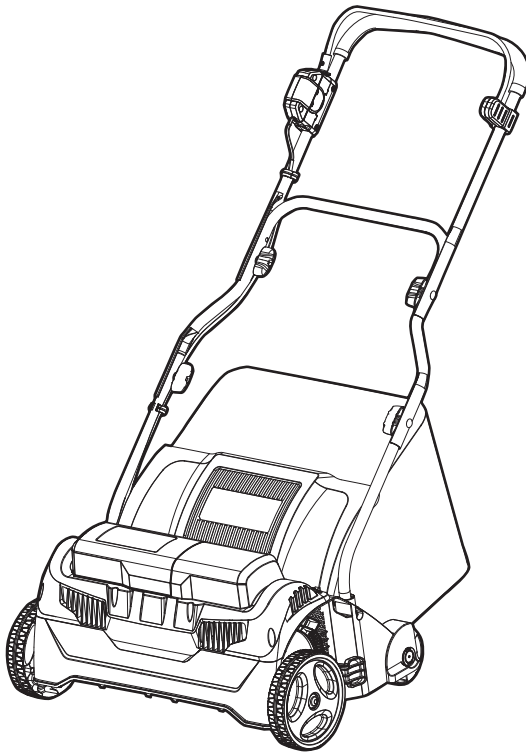
Operator's Manual

16" 48V MAX* Lithium-Ion Cordless Scarifier and Lawn Dethatcher CLGVB4816

Save this manual for future reference

* Maximum initial battery workload voltage (measured without a workload) is 48 volts (2*24 V).

Nominal voltage is 43.2 volts (2*21.6 V).



Battery Model Number is 24LB4005-CN
Charger Model Number is 24LFC15-ETL



Read all safety rules and instructions carefully before operating this tool.

Distributed By: Suzhou Cleva Electric Appliance Co., Ltd.

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SPECIFICATIONS

48V MAX* CORDLESS SCARIFIER/DETHATCHER

Type	Cordless, Battery-powered
No-load Speed	3200 RPM
Cutting Width	16 inch (406 mm)
Height Adjustments	14 positions: -0.39 - 0.19 inch (-10 - 5mm) for Scarifier Cylinder 14 positions: -0.19 - 0.39 inch (-5 - 10mm) for Dethatcher Cylinder
Collection Bag Capacity	11.9 gallon (45 liters)
Wheel Size	3.9 inch (100 mm) / 6.7 inch (170 mm)
Unit Weight (With two 4.0Ah Batteries)	26.5 lbs (12 kg)

BATTERY PACK

Model Number	24LB4005-CN
Rated Voltage of Battery	24 V Max* D.C.
Capacity of Battery	4.0 Ah
Battery Type	Lithium-ion

BATTERY CHARGER

Model Number	24LFC15-ETL
Charger Input	120 V ~ 60 Hz 120 W
Charger Output	24 V D.C. 4.0 A
Charging Time	150 minutes (For two 24LB4005-CN) 80 minutes (For one 24LB4005-CN)

* Maximum initial battery workload voltage (measured without a workload) is 48 volts (2*24 V).
Nominal voltage is 43.2 volts (2*21.6 V).

IMPORTANT SAFETY INSTRUCTIONS



WARNING

READ AND UNDERSTAND ALL INSTRUCTIONS.

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

INTRODUCTION

This product has many features for making its use more pleasant and enjoyable.

Safety, performance, and dependability have been given top priority in the design of this product making it easy to maintain and operate.



WARNING

This symbol indicates important safety instructions. If these instructions are not followed, it could endanger the personal safety and/or property of the operator and others. Read and understand all instructions in this manual before attempting to operate the scarifier/dethatcher. Failure to comply with these instructions may result in personal injury.

TRAINING AND PREPARATION

- Read this Operator's Manual carefully in its entirety before attempting to assemble this tool. Read, understand, and follow all instructions on the tool and in the manual before operating it. Keep this manual in a safe place for future and regular reference and for ordering replacement parts.
 - Be completely familiar with the proper use of this tool before operating it.
 - Avoid operating the tool in a dangerous environment. Do not use the tool in damp or wet conditions or operate in the rain.
 - Only allow operators, who are responsible, trained, familiar with the instructions, and physically capable to operate the tool.
 - Keep the area of operation clear of all persons, particularly small children, and pets. Stop the tool and attachment(s) if anyone enters the working area.
 - Wear appropriate personal protective equipment such as safety glasses, hearing protection, and footwear.
 - Dress properly. Do not wear loose clothing or jewelry. They can be caught in moving parts. Use of rubber gloves and footwear is recommended when working outdoors.
 - Clear the operating area of any objects which could be thrown by or interfere with operation of the tool.
 - Avoid operating the tool on wet grass. Poor footing could cause a slip and fall accident.
 - Do not operate the tool under any condition where traction, steering, or stability is uncertain. Tires could slide even if the wheels are stopped.
 - Use the scarifier/dethatcher for the correct purpose. Do not use the tool for any job except that for which it is intended.
-

IMPORTANT SAFETY INSTRUCTIONS

- Ground Fault Circuit Interrupter (GFCI) protection should be provided on the circuit(s) or outlet(s) to be used for the scarifier/dethatcher. Receptacles are available having built-in GFCI protection and may be used for this measure of safety.
- Store idle scarifier/dethatcher indoors. When not in use, the tool should be stored indoors, in a dry and secure place that cannot be accessed by children.
- Maintain the tool with care. Keep cutting edges sharp and clean for best and safest performance.
- Check damaged parts. Check all safety guards or other parts that could affect operation carefully to ensure that the tool will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, broken parts, mounting, and any other condition that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by a qualified person.

OPERATION

- Only operate the equipment in daylight or good artificial light.
- Avoid unintentional starting – be sure switch is off when inserting the batteries.
- Do not put hands or feet near or under rotating parts or the scarifier/dethatcher. Always keep clear of the discharge opening.
- Avoid holes, ruts, bumps, rocks, or other hidden hazards. Uneven terrain could overturn the tool, or cause operator to lose their balance or footing.
- Do not direct discharge material toward anyone. Avoid discharging material against a wall or obstruction. Material may ricochet back toward the operator.
- Always wear safety glasses with side shields. Everyday glasses have only impact-resistant lenses. They are NOT safety glasses. Following this rule will reduce the risk of eye injury. Use a face mask if operation is dusty.
- Always be sure of your footing. A slip and fall can cause serious personal injury.
- Do not operate the tool in reverse unless absolutely necessary. Always look down and behind before and while backing.
- Always be sure the cylinder has stopped after releasing the switch lever and unplug before removing the collection bag, cleaning, servicing, transporting, or lifting the scarifier/dethatcher.
- Stay behind the handle when the motor is running.
- Do not force the tool. It will do the job better and safer at the rate for which it was designed.
- Stop the motor and remove the battery packs whenever leaving the equipment, before cleaning the scarifier/dethatcher housing, and before making any repairs or inspections.
- Do not operate the tool on excessively steep slopes.
- Avoid starting and stopping on slopes. Avoid making sudden changes in speed or direction. Make turns slowly and gradually.
- Stay alert. Watch what you are doing. Use common sense. Do not operate the scarifier/dethatcher when you are tired.
- Do not overreach. Always keep proper footing and balance.
- Do not make the equipment overload, such as scarify too deep or operate at a very high speed.
- Only use parts and accessories made for this tool by the manufacturer. Failure to do so can result in personal injury.
- Thoroughly inspect the area where the equipment is to be used and remove all stones, sticks, wires, and other foreign objects.
- Never attempt to make a wheel height adjustment while the motor is running.

IMPORTANT SAFETY INSTRUCTIONS

OPERATING THE SCARIFIER/DETHATCHER ON A SLOPE



CAUTION

Slopes are a major factor related to slip and fall accidents, which can result in severe injury. Operation on slopes requires extra caution. If you feel uneasy on a slope, do not operate this tool.

- Scarify/dethatch across the face of slopes; never up and down. Exercise caution when changing direction on slopes.
- Watch for holes, ruts, rocks, hidden objects, or bumps that can cause you to slip or trip.
- Always be sure of your footing. A slip and fall can cause serious personal injury.
- Do not operate the tool near drop-offs, ditches, or embankments; you could lose your footing or balance.
- Do not operate the tool in wet grass. Unstable footing could cause slipping.

CHILDREN

Tragic accidents can occur if the operator is not alert in the presence of small children. Children are often attracted to the tool and the scarifying/dethatching activity. Children do not understand the dangers. Never assume that children will remain where you last saw them.

- Keep children out of the working area and under the watchful care of a responsible adult other than the operator.
- Be alert and stop operating if a child or others, including pets, enter the area.
- Use extreme care when approaching blind corners, doorways, shrubs, trees, or other objects that may obscure your vision of a child who may run into the scarifier/dethatcher.
- Never allow children to operate this tool.

BATTERY PACK

- The battery pack is only compatible with LawnMaster® 24LFC15-ETL, 24LFC14-ETL, 24LFC02-ETL or 24LSC01-ETL chargers.
- Recharge only with the charger specified by the manufacturer and listed in this manual. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- Do not charge battery in a damp or wet location. Following this rule will reduce the risk of electric shock.
- Do not place battery powered tools or their batteries near fire or heat. This will reduce the risk of explosion and possibly injury.
- Do not open or mutilate the battery. Released electrolyte is corrosive and may cause damage to the eyes or skin. It may be toxic if swallowed.
- Do not dispose of battery packs in fire. They will explode or leak and cause injury. Liquid ejected from the battery may cause irritation or burns.
- Do not crush, drop or damage the battery pack. Do not use a battery pack or charger that has been dropped or received a sharp blow. A damaged battery is subject to explosion. Properly dispose of a dropped or damaged battery immediately.

IMPORTANT SAFETY INSTRUCTIONS

- Batteries can explode in the presence of a source of ignition, such as a pilot light. To reduce the risk of serious personal injury, never use any cordless product in the presence of open flame. An exploded battery can propel debris and chemicals. If exposed, flush with water immediately.
- Under extreme usage or temperature conditions, battery leakage may occur. If liquid comes in contact with your skin, wash immediately with soap and water. If liquid gets into your eyes, flush them with clean water for at least 10 minutes, then seek immediate medical attention. Following this rule will reduce the risk of serious personal injury.
- When the battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws, or other small metal objects, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
- Do not expose a battery pack or the tool to fire or excessive temperature. Exposure to fire or temperature above 265°F (130°C) may cause an explosion.
- Do not modify or attempt to repair the tool or the battery pack (as applicable) except as indicated in the instructions for use and care.
- Follow all charging instructions and do not charge the battery pack or the tool outside of the temperature range specified in the instructions. Charging improperly or at temperatures outside of the specified range may damage the battery and increase the risk of fire.
- All tool services should be performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.
- When replacing batteries, all batteries should be replaced at the same time. Mixing fresh and discharged batteries could increase internal cell pressure and rupture the discharge battery(ies).

BATTERY CHARGER

- This charger is only compatible with LawnMaster® 24LB4005-C, 24LB4005-CN, 24LB1304, 24LB2004, 24LB2605, or 24LB4005 lithium-ion batteries.
- To reduce the risk of injury, charge only the specified lithium-ion rechargeable batteries. Other types of batteries may burst, causing personal injury or damage.
- Keep cord and charger away from heat to prevent damage to housing or internal parts.
- Do not operate charger with a damaged cord or plug, which could cause shorting and electric shock. If damaged, immediately discontinue use. Replace the charger with the identical unit as listed in the Parts List of this manual.
- Do not use a charger that has been dropped or received a sharp blow.
- Do not disassemble charger. Take it to a qualified service center for check or replacement. Incorrect reassembly may result in a risk of electric shock or fire.
- Do not abuse the charger cord. Never use the cord for carrying, pulling or unplugging.
- Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock. If the charger cord is damaged, replace the charger with an identical model as listed in this manual.
- A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- Charge the battery at the normal charging temperature between 40°F (4°C) and 100°F (38°C).

IMPORTANT SAFETY INSTRUCTIONS

FCC COMPLIANCE

- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
 - This device may not cause harmful interference, and
 - This device must accept any interference received, including interference that may cause undesired operation.
- **NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
 - Reorient or relocate the receiving antenna.
 - Increase the separation between the equipment and receiver.
 - Connect the equipment into an outlet on a circuit different from that of the receiver.
 - Consult the dealer or an experienced radio/ TV technician for help.

SAVE THESE INSTRUCTIONS

Refer to them frequently and use them to instruct others who may use this tool. If you loan someone this tool, loan them these instructions also.

SYMBOLS

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

SYMBOL	NAME	DESIGNATION/EXPLANATION
V	Volts	Voltage
A	Amperes	Current
Hz	Hertz	Frequency(cycles per second)
W	Watt	Power
hrs	Hours	Time
	Class II Construction	Double-insulated construction

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

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

SERVICE

Service requires extreme care and knowledge and should be performed only by a qualified service technician. When servicing, use only identical replacement parts.

For troubleshooting or replacement, please call Customer Service for assistance (Toll-free number 1-866-384-8432).

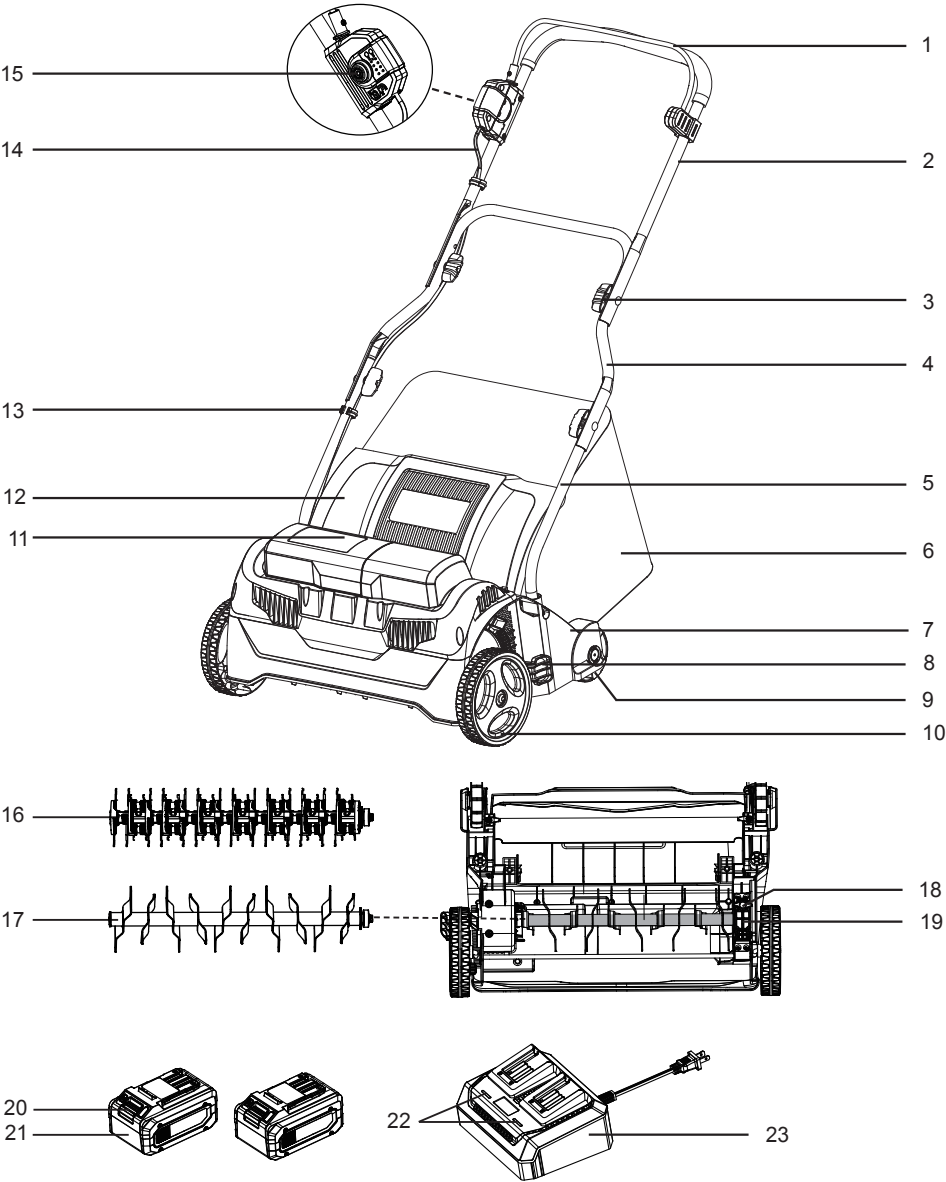
WARNING

To avoid serious personal injury, do not attempt to use this product until you read thoroughly and understand completely the Operator's Manual.

If you do not understand the warnings and instructions in the Operator's Manual, do not use this product. Call Customer Service for assistance (Toll-free number 1-866-384-8432).

KNOW YOUR SCARIFIER/DETHATCHER

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



KNOW YOUR SCARIFIER/DETHATCHER

Components

- | | |
|----------------------------------|--------------------------------|
| 1. Start/Stop Bale Switch | 13. Cable Clip (X2) |
| 2. Upper Handle | 14. Control Cable |
| 3. Carriage Bolt & Wing Nut (X4) | 15. Safety Switch Button |
| 4. Middle Handle | 16. Dethatcher Cylinder |
| 5. Lower Handle | 17. Scarifier Cylinder |
| 6. Collection Bag | 18. Mounting Bolt |
| 7. Deck | 19. Bearing Cover |
| 8. Height Adjustment Lever | 20. Battery Release Button |
| 9. Rear Wheel | 21. Battery Pack (X2) |
| 10. Front Wheel | 22. Battery Charger Indicators |
| 11. Battery Compartment Cover | 23. Battery Charger |
| 12. Safety Guard Flap | |

ASSEMBLY

This product requires assembly.

- Carefully remove the product and any accessories from the box. Make sure that all items listed in the packing list are included.
- Inspect the product carefully to make sure no breakage or damage occurred during shipping.
- Do not discard the packing material until you have carefully inspected and satisfactorily operated the product.
- If any parts are damaged or missing, call Customer Service for assistance (Toll-free number 1-866-384-8432).

PACKING LIST

- (1) Scarifier/Dethatcher
- (1) Upper Handle
- (1) Middle Handle
- (2) Lower Handles
- (2) Screws
- (4) Carriage Bolts
- (4) Wing Nuts
- (2) Cable Clips
- (1) Collection Bag Assembly (Bag & Metal Frame)
- (1) Dethatcher Cylinder
- (1) Scarifier Cylinder (Pre-installed)
- (1) 24V Lithium-ion Battery Charger
- (2) 24V 4.0Ah Lithium-ion Battery Packs
- (1) Operator's Manual



WARNING

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



WARNING

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



WARNING

Do not connect the batteries before the product is completely assembled. Failure to comply could result in accidental starting and possible serious personal injury.

ASSEMBLY



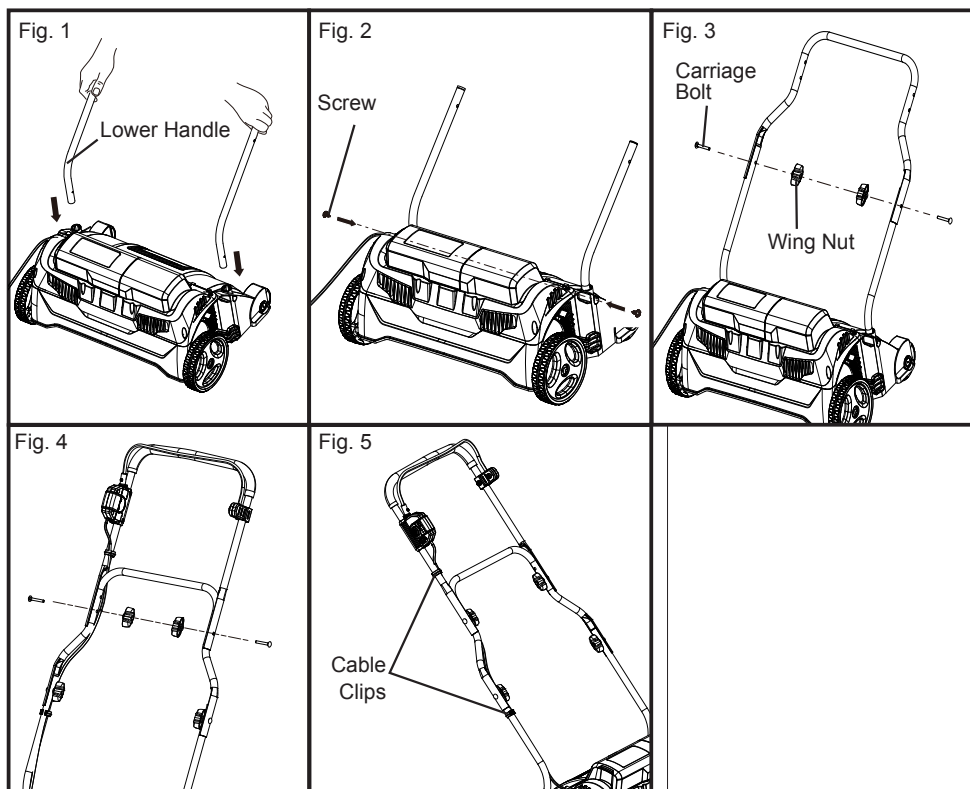
WARNING

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

ASSEMBLING THE HANDLE (See Figs. 1-5)

- Insert the two lower handles into the deck and secure them with two screws (Fig. 1 & 2).
- Place the cord retainer on middle handle. Secure the middle handle to the lower handle with two carriage bolts and two wing nuts (Fig. 3).
- Secure the upper handle to the middle handles, at the desired height, with two carriage bolts and two wing nuts (Fig. 4). There are two possible positions.
- Use the two cable clips to attach the control cable to the handles (Fig. 5).

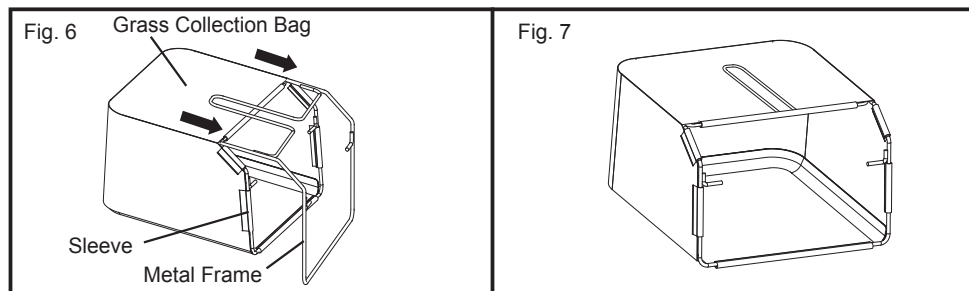
During assembly, ensure that the control cable is not squeezed and that it has sufficient play.



ASSEMBLY

ASSEMBLING THE COLLECTION BAG

- Check the collection bag before assembling to make sure there is no damage.
- Pull the grass collection bag over the metal frame as shown (Fig. 6).
- Pry open the soft plastic clamping sleeves and insert the metal frame into the sleeves. Ensure all sleeves are properly clamped on the frame.
- The completely assembled grass collection bag is shown as below (Fig. 7).



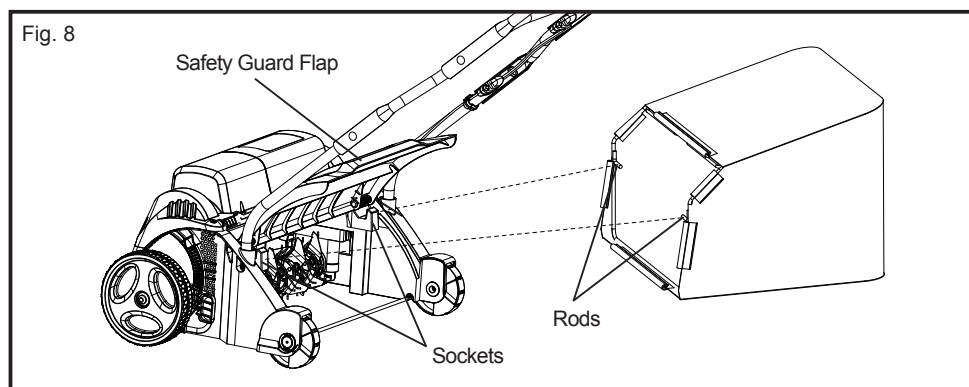
INSTALLING AND REMOVING THE COLLECTION BAG

NOTE: The safety flap is spring operated. Ensure you have a firm grip when opening and closing to avoid personal injury.

Recommendation: Work with the collection bag for dethatching and without the collection bag for scarifying.

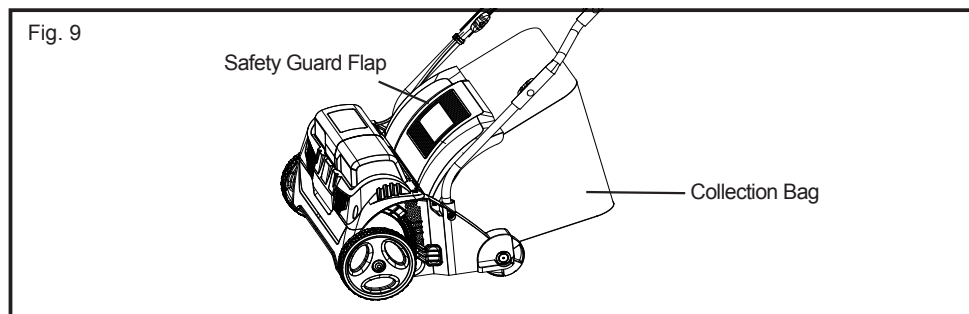
Installing the collection bag:

- Lift the safety guard flap and hold it in position.
- Lift the collection bag by its handle and make the collection bag seated on the sockets in the deck (Fig. 8).
- Release the safety guard flap.



ASSEMBLY

- Make sure both rods are firmly seated on the sockets and the safety guard flap rests firmly against the top of the grass collection bag (Fig. 9).



Removing the collection bag:

- Lift the safety guard flap and hold it in position.
- Lift the grass collection bag by its handle and remove it from the scarifier/dethatcher.
- Release the safety guard flap.

NOTE: To reduce the risk of injury, frequently inspect the bag assembly and replace if there are any signs of wear or deterioration.

INSTALLING AND REMOVING THE BATTERY PACKS

WARNING

If any parts are broken or missing, do not attempt to attach the battery packs to the product or operate the product until the broken or missing parts are replaced. Failure to do so could result in serious injury. Do not connect the batteries before the product is completely assembled.

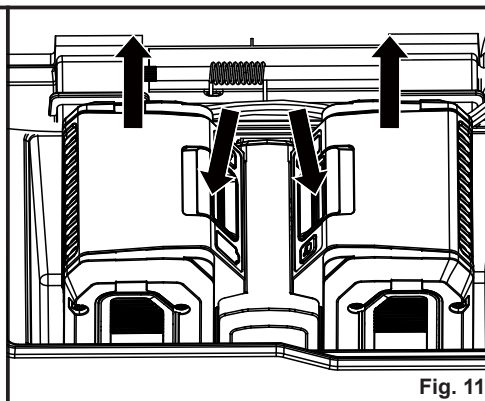
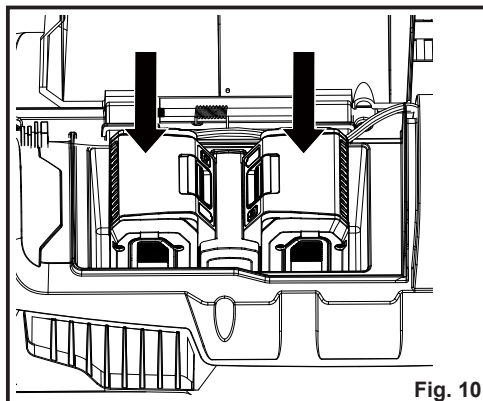
NOTE: Both batteries should be installed into the compartments in order to start the product.

To install battery packs:

1. Make sure both batteries are fully charged.
2. Lift the plastic battery compartment cover on the top of the deck.
3. Align the raised ribs on the product with the grooves in the battery pack, and then insert the battery packs into the compartment (Fig. 10).
4. Push the battery packs until you hear a "click".
5. Close the battery compartment cover.

NOTE: Make sure that the battery packs firmly snap into place and are secured to the product before starting operation.

ASSEMBLY



To remove battery packs:

1. Stop the product. Lift the battery compartment cover.
2. Press the release button on the battery pack, grasp the battery pack firmly and pull out of the battery compartment. Remove the second battery in the same way (Fig. 11).
3. Close the battery compartment cover.

BATTERY PACK AND CHARGER

BATTERY CHARGING

1. Use only with 24V LawnMaster® battery chargers. The battery charger supplied is specifically designed for the lithium-ion batteries used in this tool.
2. Check the power voltage! Battery chargers operate on 120V.
3. The batteries are charged between 40°F (4°C) and 100°F (38°C). This ensures an optimum battery service life.
4. Protect the batteries from heat, from continuous exposure to sun and keep away from radiation or other heat sources. Do not leave the batteries in the product in direct sunlight over long periods.
5. The batteries are supplied partially charged. To ensure full capacity of each battery, charge the batteries before using the tool for the first time. The lithium-ion batteries can be charged at any time without reducing their service life. Interrupting the charging procedure does not affect the batteries.

LED CHARGER STATUS

1. If batteries are not inserted into the charger, **continuous red LED lights** indicate that the outlet plug is plugged into an outlet socket and the battery charger is ready for operation.
2. Charging: **Flashing green LEDs** on the charger indicate that batteries are charging normally. The LED's flashing frequency is 1Hz.
3. Charged: Continuous green LEDs on the charger indicate that batteries are ready for use.
4. Technical Issue: **Flashing red LED lights** on the charger indicates that batteries have a charging problem or might be defective.
 - a) One possible condition is the battery temperature is lower than 0°C. As soon as the permitted temperature is reached, the battery charger will automatically switch to charging.
 - b) If the temperature range is correct and flashing red LED light continues, then remove and reinstall the battery pack. If the LED status repeats a second time, try to charge another identical battery. If the battery charges normally, dispose of the defective battery pack (see Environmentally Safe Battery Disposal section).
 - c) If the flashing red light continues after installing the second battery, the charger may be defective. Replace with a new one.
5. **Flashing green LED lights** on the charger (the LED's flashing frequency (2Hz) is faster than charging normally (1Hz)), which indicates the battery temperature is higher than 50°C. As soon as the permitted temperature is reached, the battery charger will automatically switch to charging.
6. After continuous or repeated charging cycles without interruption, the charger may warm up. This is normal and does not indicate a technical defect of the battery charger.

BATTERY PACK AND CHARGER

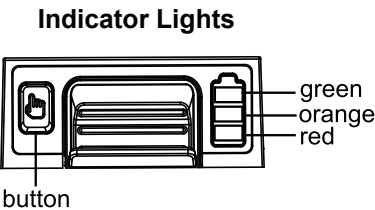
The indicator lights on the charger show the charger status:

SYMBOL	INDICATOR LIGHTS	STATUS
	Red, continuous	Connected to power supply
	Green, blinking. (flashing frequency: 1Hz)	Charging.
	Green, blinking. (flashing frequency: 2Hz)	Battery is overheated.
	Green, continuous.	Fully charged.
	Red, blinking. (flashing frequency: 2Hz)	Charging problem: See Technical Issue above

BATTERY LED PANEL

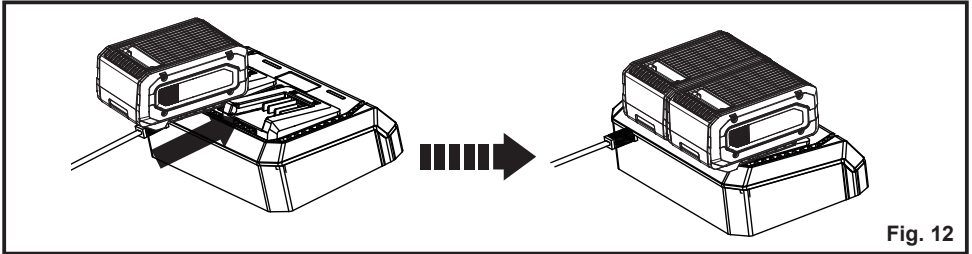
1. The panel consists of 3 LEDs on the battery. Press and hold the button, then release it, the LEDs will show you the charge levels.
2. The battery's charge level can be checked either when the battery is attached on the charger/tool or removed from the charger/tool.

LEDs on Battery (Continuous Lighting)	Battery Capacity
3 LEDs	Fully charged
2 LEDs (orange & red)	≥40%
1 LED (red only)	<40% (Recharge required)



BATTERY PACK AND CHARGER

CHARGING THE BATTERY PACK



WARNING

If any part of the charger is missing or damaged, do not operate it! Replace the charger with a new one. Failure to heed this warning could result in possible serious injury. Check the voltage! The voltage must comply with the information on the rating label.

1. Align the slot of the battery pack with the rail on the charger. Slide the slot onto the rail until the battery pack secures into place. Connect the second battery in the same way (Fig. 12).
2. Connect the charger to the power supply.
3. Allow sufficient charging time (see Specifications), and then disconnect the charger from the power supply.
4. Press the release buttons on the battery packs and remove them from the charger.

NOTE: It is normal for the battery packs and the charger to become warm (but not hot) during charging process. If the battery does not charge properly, check to make sure the electrical outlet is operational. Always charge the battery before storage!

OPERATION



WARNING

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



WARNING

Do not switch on the tool until it has been completely assembled. Before switching on the tool, always check it for signs of damage.

SETTING THE WORKING POSITIONS

The tool has 4 principal position settings:

Transport position ()

This position sets the maximum safety spacing between the tool and the floor.

Working position (1)

Set this position when working with a new tool.

Readjustment working positions (2 & 3)

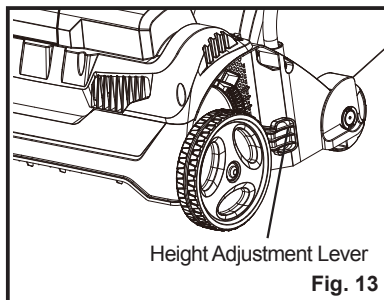
The working position can be lowered with increased knife and spring tine wear. Wear can be identified from an increasingly poor result.

NOTE: When the tool is delivered, it will be set in in the transport position.

To set the work positions:

- Check that the tool is turned off before adjusting the working position.
- Hold the tool and pull up the height adjustment lever. Turn the lever to the appropriate level and push it down to snap in (Fig. 13).

NOTE: The height adjustment lever is not intended for height adjustment but rather to compensate for wear. Selection of a readjustment position without the corresponding wear can overload the motor and damage the cylinder.



Height Adjustment Lever

Fig. 13

OPERATION

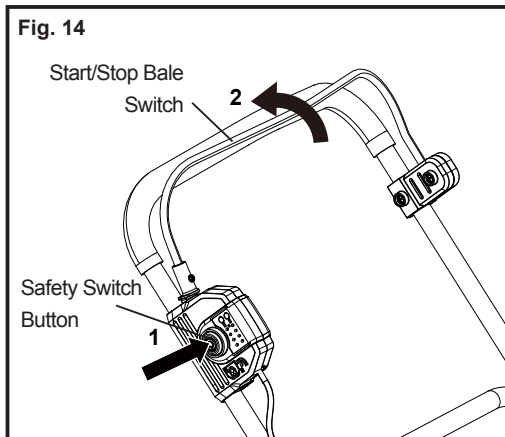
STARTING/STOPPING THE TOOL



WARNING

Before switching on the tool ensure that it is not in contact with any objects. Keep your feet and hands well away from the cylinder and the ejector opening. There is a danger of injury!

- Place the tool on a level lawn surface.
- Press down the safety switch button and hold it (Fig. 14).
- Pull the start/stop bale switch toward the handle and release the safety switch button. Continue to hold the start/stop bale switch against the handle as you operate (Fig. 14).
- To stop the tool, release the start/stop bale switch.



WARNING

The cylinder continues to run for a brief period after the tool has been switched off. Do not tilt or carry the tool while the motor is still running and do not touch the cylinder while it is still rotating. There is a possible danger of injury!

OPERATION

Overload Protection

This product is equipped with overload protection function, and it will be activated in the following circumstances:

1. If the cutting device is wrapped by a build-up of debris.
2. If the material scarified is larger than the motor capacity.
3. Where there is too much resistance against the cutting device.

When the circuit breaker has been activated, switch off the product and disconnect it from the power supply. Let the product cool down and clear the problem before restarting.

CHANGING THE CYLINDER

The tool has two easily exchangeable work cylinders: a dethatcher cylinder made of hard plastic with vertically rotating spring tines, and a scarifier cylinder with vertically mounted high-grade steel knives.



WARNING

Switch off the tool, remove the battery packs and wait until the cylinder is standing still.

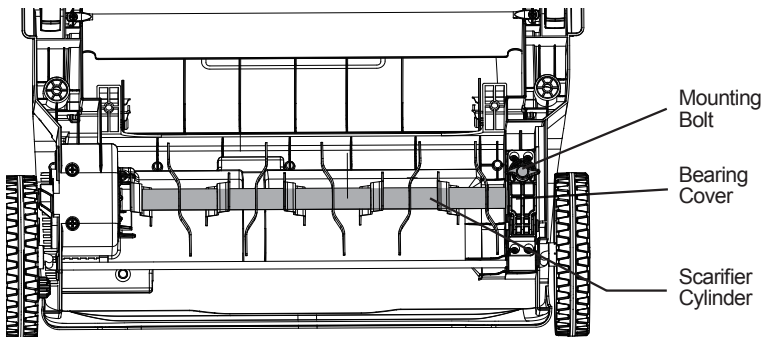


WARNING

Always wear gloves when handling the cylinder.

- Turn the tool over.
 - Release the mounting bolt and fold the bearing cover away (Fig. 15).
 - Tilt the cylinder upwards and pull the shaft out of its seat. Pulling the shaft out of its seat may require some force initially.
-

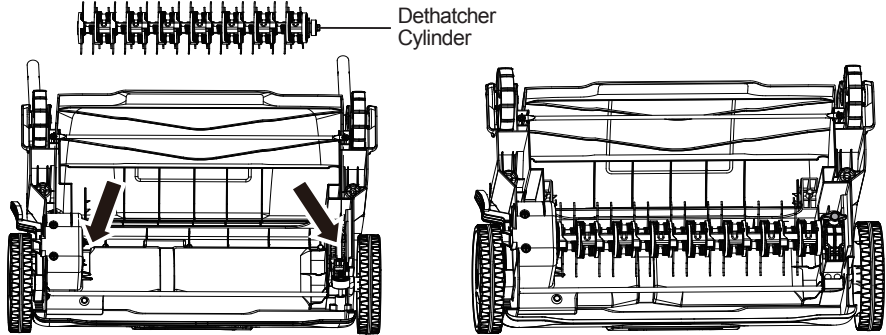
Fig. 15



OPERATION

- Install the new cylinder by reversing the sequence (Fig. 16). Ensure that the flattened side of the bearing shell is first inserted in the bearing.

Fig. 16



USING YOUR TOOL

To maintain a well-cared-for lawn it should be dethatched every 4 to 6 weeks.

Scarifying with the blade cylinder is a more intensive treatment than dethatching and should only be carried out once a year. The best time is in spring after the lawn has been mown for the first time.

How to use your scarifier

- By scarifying you remove the hardened surface, grass felt, and flat-growing weeds and the crusted over grassroots are loosened up. The lawn will start to breathe again and assimilate nourishing substances such as oxygen and water. This also prevents bacteria from growing in the lawn felt when the grass is dormant.
- Cut the grass to a height of about 1.57 inch (40 mm) before scarifying. The lawn must be dry when using the tool. The best time for scarifying is any time during the vegetative season, from end of April through to September. Scarify it at least once a year. We recommend using a fertilizer straight after airing if you want a healthy lawn.

How to use your dethatcher

- By dethatching you remove the dead matter, moss, and weed that disfigures a lawn. The build-up of dead grass provides a mat of absorbent fibers which prevents water from getting through to the ground.
- Do not force your dethatcher through grass that is longer than 2.95 inch (75 mm). The lawn must be dry when using the tool. It's recommended that your dethatcher be used at the beginning and the end of each grass cutting season to give your lawn a thorough raking. Your dethatcher should also be used after each mowing to remove any grass clippings that may be left by your tool.

OPERATION



WARNING

When working on slopes always proceed across the slope. Be particularly careful when walking backwards and pulling the tool. There is a possible danger of stumbling.

NOTE: The shorter the grass, the better the lawn can be treated. Furthermore, the load on the tool is less and the service life of the cylinder is prolonged.

- The tool can be operated with or without the collection bag.
Recommendation: Work with the collection bag for dethatching and without the collection bag for scarifying.
- To ensure that the safety guard flap closes properly, remove any earth that may have collected on the safety guard springs and/or the housing. When working without the bag, check that the safety guard flap is tightly closed.
- Mow the lawn to the required grass height.
- Do not use the scarifier in long grass. It may otherwise wind around the scarifier blade and result in damage to the tool.
- Select the appropriate working or readjustment position (in the event of cylinder wear) so that the tool is not overloaded.
- Commence work in the vicinity of the power socket and proceed away from the socket.
- Guide the tool at a walking pace down lanes that are as straight as possible. To ensure uninterrupted scarifying/dethatching the individual lanes should always overlap by 2 to 3 inches. Dwelling too long at the same place while the tool is running can damage the lawn.
- After work and to transport the tool, remove the battery packs and wait until the cylinder is standing still.
- Adjust the position to the transport position (0 setting) (see Setting the Working Positions) when transporting the tool.
- Lift the tool to transport it oversteps and sensitive surfaces (e.g., tiles).
- Always clean the tool after each use (see Maintenance).
- After having treated lawns with dense moss growth, it is advisable to reseed the lawn so that it can regenerate itself more quickly.

MAINTENANCE



WARNING

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

Always wear gloves when handling the cylinder.

Prior to all maintenance and cleaning work always switch off the tool, remove the battery packs and wait until the cylinder is standing still.

GENERAL MAINTENANCE



WARNING

Do not jet water onto the tool and do not clean it under flowing water. This would result in the danger of an electric shock and the tool could be damaged.



WARNING

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

- When battery packs are removed and all parts are no longer moving, remove debris adhering to the wheels, inside the ventilation opening, the grass ejector opening and the cylinder. Do not use hard or pointed objects for this purpose as they could damage the tool.
- To ensure that the safety guard flap closes properly, remove any earth that may have collected on the safety guard springs and/or the housing.
- Completely empty the collection bag.
- Always keep the tool clean. Do not use cleaning agents or solvents.

STORAGE

- Remove the battery packs.
 - Store the tool in a clean, dry place out of the reach of children.
 - Allow the motor to cool down before placing the tool in a closed room.
 - Do not wrap plastic sacks around the tool as this could result in the formation of moisture.
 - To store the tool, lower the handle before storing:
 - Remove and clean the collection bag.
 - Fully loosen the wing nuts on the sides of the upper handle and fold the upper handle down (Fig. 17).
 - To save space, the collection bag can be put on the tool (Fig. 18).
-

MAINTENANCE

Fig. 17

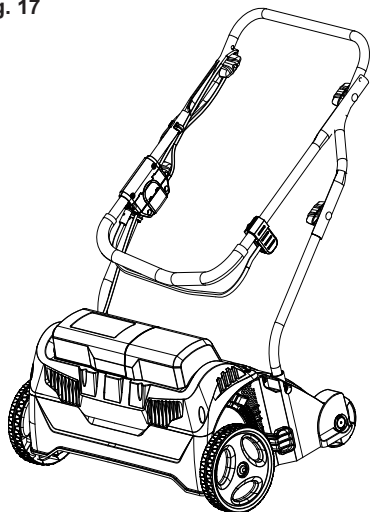
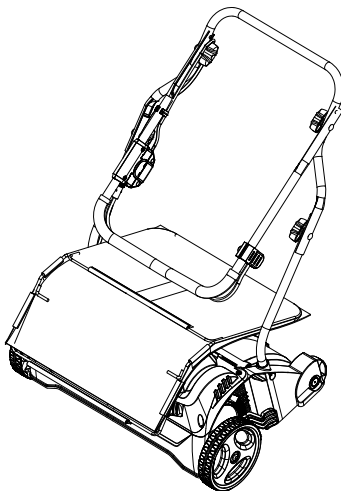


Fig. 18



BATTERY PACK MAINTENANCE

- Fully charge the batteries before placing in storage.
- Recharge the battery packs whenever there is a noticeable reduction in the performance. Do not allow the battery packs to become completely discharged.
- Do not recharge a battery pack that is already fully charged. Overcharging shortens battery life.
- Once the battery packs are fully charged, remove them from the charger and disconnect charger from the outlet.
- Do not store the battery packs on the tool or on the charger.
- If the battery pack is hot, allow it to cool down before recharging.

CHARGER MAINTENANCE

- Keep the charger clean and clear of debris. Do not allow foreign material into the recessed cavity or on the contacts. Wipe with a dry cloth. Do not use solvents, water, or place in wet conditions.
- Always unplug the charger when the battery packs are not installed on the charger.
- Do not store the charger in excessive heat. Do not use in direct sunlight.
- Disconnect the charger from the AC power outlet when not in use and once batteries have reached a full charge.

ENVIRONMENTALLY SAFE BATTERY DISPOSAL



The following toxic and corrosive materials are in the batteries used in this battery pack:
lithium-ion, a toxic material.



WARNING

All toxic materials must be disposed of in a specific manner to prevent contamination of the environment. Before disposing of damaged or worn out lithium-ion battery packs, contact your local waste disposal agency, or the local Environment Protection Agency for information and specific instructions.



WARNING

If the battery pack cracks or breaks, with or without leaks, do not recharge it and do not use it. Dispose of it and replace with a new battery pack.

DO NOT ATTEMPT TO REPAIR IT!

To avoid injury and risk of fire, explosion, or electric shock, and to avoid damage to the environment:

- Cover the battery terminals with heavy-duty adhesive tape.
- **DO NOT** attempt to remove or destroy any of the battery pack components.
- **DO NOT** attempt to open the battery pack.
- If a leak develops, the released electrolytes are corrosive and toxic. **DO NOT** get the solution in eyes or on skin, and do not swallow it.
- **DO NOT** place damaged or defective batteries in your regular household trash.
- **DO NOT** incinerate.
- **DO NOT** place batteries where they will become part of any waste landfill or municipal solid waste stream.
- Take batteries to a certified recycling or disposal center.

TROUBLESHOOTING

Suspected malfunctions are often due to causes that the user can fix themselves.

Therefore, check the product using this section. In most cases the problem can be solved quickly.



WARNING

Only perform the steps described within these instructions!

If further assistance is required, please call Customer Service at 1-866-384-8432. All further inspection, maintenance and repair work must be performed by an authorized service center.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Tool does not start.	The batteries are not installed correctly.	Check connection of batteries to the tool.
	The batteries are not charged or power is too low.	Charge the batteries.
	Safety switch button is not pressed.	Press and hold the safety switch button. Pull the start/stop bale switch toward the handle and release the safety switch button.
	The batteries are defective or old.	Replace the batteries (Toll-free number 1-866-384-8432).
	Start/stop bale switch defective.	Contact Customer Service at 1-866-384-8432.
	Carbon brushes worn out.	
	Motor defective.	
Abnormal noises, clatter or vibrations.	Foreign object in the cylinder.	Remove the foreign object .
	Damaged spring tines or cylinder knives.	Exchange the cylinder.
	Cylinder incorrectly mounted.	Install the cylinder correctly. See Changing the Cylinder on page 22.
	Toothed-belt slip.	Contact Customer Service at 1-866-384-8432.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
Motor fails.	Blocked by a foreign object.	Remove the foreign object.
	Grass is too long.	Mow beforehand. See Operation on page 23-24.
	Clogged by debris.	Clean debris.
Work result is not satisfactory.	Spring tines of dethatcher cylinder worn out.	Exchange the cylinder.
	Blades of scarifier cylinder blunt or damaged.	Exchange the cylinder.
	Toothed-belt defective.	Contact Customer Service at 1-866-384-8432.
	Transport position or incorrect working position selected.	Select working position 1 or readjust position 2-3. See Setting the Working Positions on page 20.
	Grass is too long.	Mow beforehand. See Operation on page 23-24.

LawnMaster® WARRANTY

We take pride in producing a high-quality, durable product. This Lawnmaster® product carries a limited two (2) year warranty against defects in workmanship and materials from date of purchase under normal household use. If product is to be used for commercial, industrial or rental use, a 30-day limited warranty will apply. **Batteries carry a one-year warranty against defects in workmanship and materials.** Batteries must be charged in accordance with the operator's manual directions and regulations in order to be valid. Warranty does not apply to defects due to direct or indirect abuse, negligence, misuse, accidents, repairs or alterations and lack of maintenance. Please keep your receipt/packing list as proof of purchase. This warranty gives you specific legal rights, and you may have other rights, which vary from state to state. For product service call Customer Service at 1-866-384-8432.

Items not covered by warranty:

1. Any part that has become inoperative due to misuse, commercial use, abuse, neglect, accident, improper maintenance, or alteration;
2. The unit, if it has not been operated and/or maintained in accordance with the Operator's Manual;
3. Normal wear, except as noted below;
4. Routine maintenance items such as lubricants, blade sharpening;
5. Normal deterioration of the exterior finish due to use or exposure.

Transportation Charges: Transportation charges for the movement of any power equipment unit or attachment are the responsibility of the purchaser. It is the purchaser's responsibility to pay transportation charges for any part submitted for replacement under this warranty unless such return is requested in writing by LawnMaster®.

SAVE YOUR RECEIPTS. THIS WARRANTY IS VOID WITHOUT THEM.

This exploded view diagram illustrates the components of a snow blower, numbered 1 through 23. The parts are distributed as follows:

- Engine and Drive Components:**
 - 1: Engine assembly with carburetor and spark plug.
 - 1.1: Two drive belts.
 - 2: Two pulleys for the belt drive system.
 - 3: Battery pack with a charging cable and connector.
 - 4: Main transmission housing.
 - 5: Two large rear drive wheels.
 - 5.1: Two small front idler wheels.
 - 6: A small gear or pulley component.
 - 7: A set of four auger blades.
 - 8: A long, cylindrical brush or roller.
 - 9: A long drive shaft with a handle.
 - 10: A small pulley or gear.
 - 11: A protective cover for the rear wheels.
 - 12: A long metal rod or pin.
 - 13: A housing for the auger blades.
 - 14: A small protective cap or cover.
- Chassis and Structural Components:**
 - 15: Two long, curved side rails.
 - 16: Four small wheels or casters.
 - 17: A curved structural brace.
 - 18: A large rectangular storage bin or hopper.
 - 19: A long, curved structural brace.
 - 20: A cable with a connector and a small switch or sensor.
 - 20.1: A small electronic component or sensor.
 - 21: A small metal pin or clip.
 - 22: Two small rectangular components, possibly sensors or switches.
 - 23: A control panel with two buttons and a cable.

PARTS LIST

Key Number	Part Number	Description	Quantity
1		Motor Drive Assembly	1
1.1		Belt	2
2		Rear Wheel Assembly	2
3		PCB Controller Components	1
4		Deck Assembly	1
5		Front Wheel Assembly (170mm)	2
5.1		Cap	2
6		Bearing Holder Assembly	1
7		Scarifier Cylinder	1
8		Dethatcher Cylinder	1
9		Front Axle Assembly	1
10		Deck Baffle Assembly	1
11		Safety Guard Flap Assembly	1
12		Wire Assembly	1
13		Motor Cover Assembly	1
14		Battery Compartment Cover Assembly	1
15		Lower Handle Assembly	2
16		Wing Nut Assembly	4
17		Middle Handle Assembly	1
18		Collection Bag Assembly	1
19		Upper Handle Assembly	1

PARTS LIST

Key Number	Part Number	Description	Quantity
20		Switch Box Assembly	1
20.1		Switch	1
21		Cable Clip	2
22	211070122	Battery	2
23	211070120	Charger	1

Replacement parts highlighted in grey are available for after sales purchase. Replacement of repair or internal parts should only be done by a qualified service professional. Please contact your authorized service dealer or Customer Service at 1-866-384-8432.

[illegible]

