



CORDLESS SNOW BLOWER

21-INCH | 100-VOLT MAX* | LED LIGHTS

OPERATOR'S MANUAL

A Division of Snow Joe®, LLC

Model iON100V-21SB

Form No. SJ-iON100V-21SB-880E-M


IMPORTANT!

Safety Instructions

All Operators Must Read These Instructions Before Use

Read all instructions when using cordless snow blowers. Basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury.

General Safety Rules

Notice the personal safety alert symbol  used in this manual to draw your attention to a **WARNING** given along with the particular operating instruction. This means that the operation requires special **ATTENTION, CAUTION, and AWARENESS**.

- **Keep work area clean and well lit** – Cluttered, dark areas invite accidents.
- **Keep bystanders away** – All bystanders and pets should be kept a safe distance away from the work area.
- **Dress properly** – Do not wear loose clothing or jewelry. They can get caught in moving parts. Protective rubber gloves and non-slip footwear are recommended when working outdoors.
- **Use the right product** – Do not use this machine for any job except that for which it is intended.
- **⚠CAUTION!** – Exercise caution to avoid slipping or falling. Wear protective footwear that will protect your feet and improve your footing on slippery surfaces.
- **Use safety glasses** – Also use safety footwear, snug-fitting clothing, protective gloves, hearing and head protection.
- **Do not force the snow blower** – Use the snow blower at the rate for which it was designed to ensure optimal performance and safe operation.
- **Stay alert** – Watch what you are doing. Use common sense. Do not operate the snow blower when you are tired or under the influence of alcohol or drugs.
- **Do not overreach** – Keep proper footing and balance at all times.
- **Store indoors** – When not in use, the snow blower should be kept dry and stored out of the reach of children in a high or locked place.
- **Maintain snow blower with care** – Follow instructions for lubricating and changing accessories.

⚠WARNING! Always disengage the switch bar lever, and disconnect the battery pack; wait for all movement to stop before making any adjustments, inspecting, servicing, changing accessories, cleaning the snow blower, or when any other dangerous conditions present. Any such operation should be performed after revolving parts inside the snow blower stop completely. Such preventive safety measures reduce the risk of starting the power tool accidentally.

⚠WARNING! When replacing any parts, you must strictly observe the instructions and procedures described in this user manual. Special care should be paid to any rubber parts, since these parts may increase the engine load and decrease its mechanical power if damaged.

⚠WARNING! If you notice that the snow blower is not running properly or hear abnormal sounds from the engine when it is in use, immediately stop the machine, disconnect the battery pack, and contact Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563).

- **Surfaces** – This snow blower is intended for use on paved surfaces. Do not use on gravel, stone or other unpaved surfaces unless the snow blower is adjusted for such surfaces according to the instructions given in the operator's manual.
- **Moving parts present risks** – Keep your face, hair, clothing, hands, and feet away from moving parts. All guards and safety attachments must be installed properly before using the unit. Shut off and disconnect the battery pack before touching any parts other than the handles and switch.
- **Avoid accidental starting** – Make sure the safety button is off and the switch bar lever is disengaged before inserting the battery pack into the unit. Do not transport the snow blower with the safety button and the switch bar lever engaged.
- **Do not overreach** – Maintain proper footing and balance at all times. Place heels firmly on the ground and tightly grasp the handle grips. Watch for uneven surfaces and do not overreach. In case you fall or collide with the snow blower, inspect the unit for any damages or cracks. When stepping backwards, be careful to avoid obstacles beneath your feet or behind you to avoid falling.

⚠WARNING! If the snow blower strikes any object, follow these steps:

- i) Stop the snow blower and remove the battery pack.
- ii) Inspect for damage.

- iii) Repair any damage before restarting and operating the snow blower.

Battery + Charger Safety Instructions

We pay a great deal of attention to the design of every battery pack to ensure that we supply you with batteries that are safe, durable and have a high energy density. The battery cells have a wide range of safety devices. Each individual cell is initially formatted and its electrical characteristic curves are recorded. This data is then used exclusively to be able to assemble the best possible battery packs.

Despite all the safety precautions, caution must always be exercised when handling batteries. The following points must be obeyed at all times to ensure safe use. Safe use can only be guaranteed if undamaged cells are used. Incorrect handling of the battery pack can cause cell damage.

IMPORTANT! Analyses confirm that incorrect use and poor care of high-performance batteries are the main factors responsible for personal and/or product damage.

⚠️ WARNING! Use only approved replacement batteries; other batteries may damage the cordless snow blower and cause it to malfunction, which can lead to serious personal injury.

⚠️ CAUTION! To reduce the risk of injury, charge the iON100V-5AMP lithium-ion battery pack only in its designated lithium-ion charger, the iON100V-RCH. Other types of chargers present risk of fire, personal injury and damage. Do not wire a battery pack to a power supply plug or car cigarette lighter. Such misuse will permanently disable or damage the battery pack.

- **Avoid dangerous environments** – Do not charge the battery pack in rain, snow or in damp or wet locations. Do not use the battery pack or charger in the presence of explosive atmospheres (gaseous fumes, dust or flammable materials) because sparks may be generated when inserting or removing the battery pack, which could lead to a fire.
- **Charge in a well-ventilated area** – Do not block the charger vents. Keep them clear to allow for proper ventilation. Do not allow smoking or open flames near a charging battery pack. Vented gases may explode.

NOTE: The safe temperature range for the battery is -4°F (-20°C) to 113°F (45°C). Do not charge the battery outside in freezing weather; charge it at room temperature.

- **Maintain charger cord** – When unplugging the charger, pull the plug, not the cord, from the receptacle to reduce the risk of damage to the electrical plug and cord. Never carry the charger by its cord or yank it by the cord to disconnect it from the receptacle. Keep the cord away from heat, oil and sharp edges. Make sure the cord will not be stepped on, tripped over or subjected to damage or stress when the charger is in use. Do not use the charger with a damaged

cord or plug. Replace a damaged charger immediately.

- **Do not use an extension cord unless it is absolutely necessary** – Using the wrong, damaged or improperly wired extension cord poses a risk of fire and electric shock. If an extension cord must be used, plug the charger into a properly wired 18 gauge or larger extension cord with the female plug matching the male plug on the charger. Make sure that the extension cord is in good electrical condition.
- **Charger iON100V-RCH is rated for 100 – 120 volt AC only** – The charger must be plugged into an appropriate receptacle.
- **Use only recommended attachments** – Use of an attachment not recommended or sold by the battery charger or battery pack manufacturer may result in risk of fire, electric shock or personal injury.
- **Unplug charger when not in use** – Make sure to remove battery packs from unplugged chargers.

⚠️ WARNING! To reduce the risk of electric shock, always unplug the charger before performing any cleaning or maintenance. Do not allow water to flow into the charger. Use a Ground Fault Circuit Interrupter (GFCI) to reduce shock hazards.

- **Do not burn or incinerate the battery pack** – Battery packs may explode, causing personal injury or damage. Toxic fumes and materials are created when battery packs are burned.
- **Do not crush, drop or damage the battery pack** – Do not use the battery pack or charger if they have sustained a sharp blow, been dropped, run over or have been damaged in any way (i.e. pierced with a nail, hit with a hammer, stepped on, etc.).
- **Do not disassemble** – Incorrect reassembly may pose a serious risk of electric shock, fire or exposure to toxic battery chemicals. If the battery or charger are damaged, contact an authorized Snow Joe® + Sun Joe® dealer or call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563) for assistance.
- **Battery chemicals cause serious burns** – Never let a damaged battery pack contact the skin, eyes or mouth. If a damaged battery pack leaks battery chemicals, use rubber or neoprene gloves to safely dispose of it. If skin is exposed to battery fluids, wash the affected area with soap and water and rinse with vinegar. If eyes are exposed to battery chemicals, immediately flush with water for 20 minutes and seek medical attention. Remove and dispose of contaminated clothing.
- **Do not short circuit** – A battery pack will short circuit if a metal object makes a connection between the positive and negative contacts on the battery pack. Do not place a battery pack near anything that may cause a short circuit, such as paper clips, coins, keys, screws, nails and other metallic objects. A short-circuited battery pack poses a risk of fire and severe personal injury.
- **Store your battery pack and charger in a cool, dry place** – Do not store the battery pack or charger where temperatures may exceed 104°F (40°C), such as in direct

sunlight or inside a vehicle or metal building during the summer.

Information about the battery

1. The battery pack supplied with your cordless snow blower is only partially charged. The battery pack has to be charged completely before you use the tool for the first time.
2. For optimum battery performance, avoid low discharge cycles by charging the battery pack frequently.
3. Store the battery pack in a cool place, ideally at 59°F (15°C) and charged to at least 40%.
4. Lithium-ion batteries are subject to a natural aging process. The battery pack must be replaced at the latest when its capacity falls to just 80% of its capacity when new. Weakened cells in an aged battery pack are no longer capable of meeting the high power requirements needed for the proper operation of your snow blower, and therefore pose a safety risk.
5. Do not throw battery packs into an open fire as this poses a risk of explosion.
6. Do not ignite the battery pack or expose it to fire.
7. Do not exhaustively discharge batteries. Exhaustive discharge will damage the battery cells. The most common cause of exhaustive discharge is lengthy storage or non-use of partially discharged batteries. Stop working as soon as the performance of the battery falls noticeably or the electronic protection system triggers. Place the battery pack in storage only after it has been fully charged.
8. Protect the battery and the tool from overloads. Overloads will quickly result in overheating and cell damage inside the battery housing even if this overheating is not apparent externally.
9. Avoid damage and shocks. Immediately replace batteries that have been dropped from a height of more than one meter or those that have been exposed to violent shocks, even if the housing of the battery pack appears to be undamaged. The battery cells inside the battery may have suffered serious damage. In such instances, please read the waste disposal information for proper battery disposal.
10. If the battery pack suffers overloading and overheating, the integrated protective cutoff will switch off the equipment for safety reasons. If this situation happens, stop the tool and let the battery cool down for a few minutes before restarting.
11. Use only original battery packs. The use of other batteries poses a fire risk and may result in injuries or an explosion.

Information about the charger and the charging process


1. Please check the data marked on the rating plate of the battery charger. Be sure to connect the battery charger to a power supply with the voltage marked on the rating plate. Never connect it to a different mains voltage.
2. Protect the battery charger and its cord from damage. Keep the charger and its cord away from heat, oil and sharp edges. Have damaged cords repaired without delay by a qualified technician at an authorized Snow Joe® + Sun Joe® dealer or call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563).
3. Electrical plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with grounded appliances. Unmodified plugs and matching outlets will reduce the risk of electric shock.
4. Keep the battery charger, battery pack(s) and the cordless tool out of the reach of children.
5. Do not use the supplied battery charger to charge other cordless tools.
6. During periods of heavy use, the battery pack will become warm. Allow the battery pack to cool to room temperature before inserting it into the charger to recharge.
7. Do not overcharge batteries. Do not exceed the maximum charging times. These charging times only apply to discharged batteries. Frequent insertion of a charged or partially charged battery pack will result in overcharging and cell damage. Do not leave batteries in the charger for days on end.
8. Never use or charge batteries if you suspect that it has been more than 12 months since the last time they were charged. There is a high probability that the battery pack has already suffered dangerous damage (exhaustive discharge).
9. Charging batteries at a temperature below 50°F (10°C) will cause chemical damage to the cells and may cause a fire.
10. Do not use batteries that have been exposed to heat during the charging process, as the battery cells may have suffered dangerous damage.
11. Do not use batteries that have suffered curvature or deformation during the charging process or those that exhibit other atypical symptoms (gassing, hissing, cracking, etc.)
12. Never fully discharge the battery pack (maximum recommended depth of discharge is 80%). A complete discharge of the battery pack will lead to premature aging of the battery cells.

Protection from environmental influences

1. Wear suitable work clothes. Wear safety goggles.
2. Protect your cordless tool and the battery charger from moisture and rain. Moisture and rain can cause dangerous cell damage.
3. Do not use the cordless tool or the battery charger near vapors and flammable liquids.
4. Use the battery charger only in dry conditions and at an ambient temperature of 50-104°F (10-40°C).
5. Do not keep the battery charger in places where the temperature is liable to reach over 104°F (40°C). In particular, do not leave the battery charger in a car that is parked in the sunshine.
6. Protect batteries from overheating. Overloads, overcharging and exposure to direct sunlight will result in overheating and cell damage. Never charge or work with batteries that have been overheated – replace them immediately, if possible.
7. Store the charger and your cordless tool only in dry locations with an ambient temperature of 50-104°F (10-40°C). Store your lithium-ion battery packs in a cool, dry place at a temperature of 50-68°F (10-20°C). Protect the battery pack, charger and cordless tool from humidity and direct sunlight. Only place fully charged batteries in storage (charged to at least 40%).
8. Prevent the lithium-ion battery pack from freezing. Battery packs that were stored below 32°F (0°C) for more than 60 minutes must be discarded.
9. When handling batteries, be wary of electrostatic charge. Electrostatic discharges can damage the electronic protection system and the battery cells. Avoid electrostatic charging and never touch the battery poles.

Additional Safety Instructions

Safety Instructions for Walk-Behind Snow Blowers

 **WARNING!** Rotating blades can cause serious injury. Never attempt to unclog or clean unit while auger is running.

- **Read the operator's manual carefully** – Learn your snow blower's applications and limitations as well as the specific potential hazards related to this machine. Do not use this machine for any purpose other than the one for which it was designed. Failure to adhere to these precautions may cause mechanical defaults, serious damage, or personal injury.

Understand:

- How to operate all controls.
- The functions of all controls.
- How to STOP in an emergency.














- **Preliminary unit inspection** – Thoroughly inspect the unit before use. Make sure all the parts are secure and installed correctly. If you notice any abnormalities, do not use the machine until it has been properly repaired. Always perform a test run the first time you use the snow blower or after replacing parts to ensure that the unit is functioning properly.
- **Preliminary area inspection** – Clear the area to be plowed before each use. Remove all objects such as rocks, broken glass, nails, wire, or string, which can be thrown by or become entangled in the snow blower. Keep the area of operation clear of all persons, children, and pets.
- **Excessive force** – The snow blower was designed to respond at a certain rate for various snow conditions for optimal safety and performance. Do not force it; keep the applied pressure constant throughout its operation.
- **Malfunctioning switch** – Do not use the snow blower if the switch does not turn it on and off. Any appliance that cannot be controlled by the switch is not safe to use and must be repaired.
- **Hitting an object** – If the snow blower accidentally strikes an object, first stop the snow blower motor and remove battery packs; next, inspect for damage; finally, repair or replace any damaged part before restarting and operating the snow blower.
- **Discharge chute safety** – Never direct the snow discharge chute at the operator, at bystanders, at vehicles, or at windows. The discharged snow, which may contain foreign objects accidentally picked up by the snow blower, can cause serious damage and personal injury. Do not use your hands to unclog the discharge chute. Stop the motor, remove the battery pack before removing debris.
- **Abnormal operation** – If you find that the snow blower is not running properly or hear abnormal sounds from the motor, immediately stop the machine, remove the battery pack, and contact an authorized Snow Joe® + Sun Joe® dealer or call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563) for assistance.
- **Noise control** – When using the snow blower, respect the local laws and regulations regarding noise control and environmental protection. To avoid noise disturbance, you should carefully decide upon an appropriate operation time and consider the surrounding conditions.
- **When work is completed** – Remove the battery pack from the snow blower when not in use, when changing accessories, and before performing any maintenance task.
- **Store safely** – Store the snow blower indoors in a dry area between uses. Keep in a locked area, where children and unauthorized users cannot gain access. Never store the snow blower with the battery pack installed. It may cause damage and injury.
- **Maintain for safety and longevity** – Check for misalignment or binding of moving parts, breakage of parts, and any other conditions that may affect the unit's operation. If damaged, repair or replace the damaged part before use. Use only those replacement parts made for your

model. When replacing any parts, you must strictly observe the instructions and procedures described in this manual. Special care should be paid to any rubber parts, since these parts may increase the engine load and decrease its mechanical power if damaged.

- **Tip over hazard** – DO NOT operate near drop-offs, ditches, or embankments. Unit can suddenly turn over if a wheel is over the edge of a cliff or ditch, or if an edge caves in.
- **Always back up slowly** – Do not operate in reverse unless absolutely necessary. Always look down and behind before and while backing.
- **Prevent unauthorized use** – Never leave snow blower unattended. Always stop the motor, remove battery pack to prevent unauthorized use.
- **Check all controls frequently** – Check both switch bar lever and safety button frequently. Adjust and service as required. The auger must stop quickly when the switch bar is released.
- **Avoid steep slopes** – DO NOT operate on steep slopes. DO NOT clear snow across the face of slopes. Keep all movement on slopes slow and gradual. DO NOT make sudden changes in speed or direction. Use a slow speed to avoid stops or shifts on slopes. Avoid starting or stopping on a slope.
- **Keep all hardware properly tightened** – Check shear bolts frequently.

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.		WARNING! Do not expose the unit to rain or wet conditions. Keep dry.
	SAFETY ALERT – Indicates a precaution, a warning or a danger.		DANGER! Cutting/dismemberment hazard - Keep feet away from the rotating auger.
	Wear hearing protection. Wear eye protection. Wear breathing protection.		CAUTION! Beware of stones and other foreign objects that could be thrown from the appliance.
	Keep hands, feet and clothing away from the rotating auger to avoid injury.		The rotating part will continuously run for several seconds after you turn off the machine.
	Wear protective gloves and non-slip footwear when using the machine and handling debris.		Keep bystanders and children a safe distance (at least 33 ft/10 m) away from the work area.
	Do not use hands to unclog chute.		DANGER! Cutting/dismemberment hazard – Keep hands away from the rotating auger. Do not use hands to unclog rotor housing. Stop motor before removing debris.
	Indoor use only. Only use battery charger indoors.		

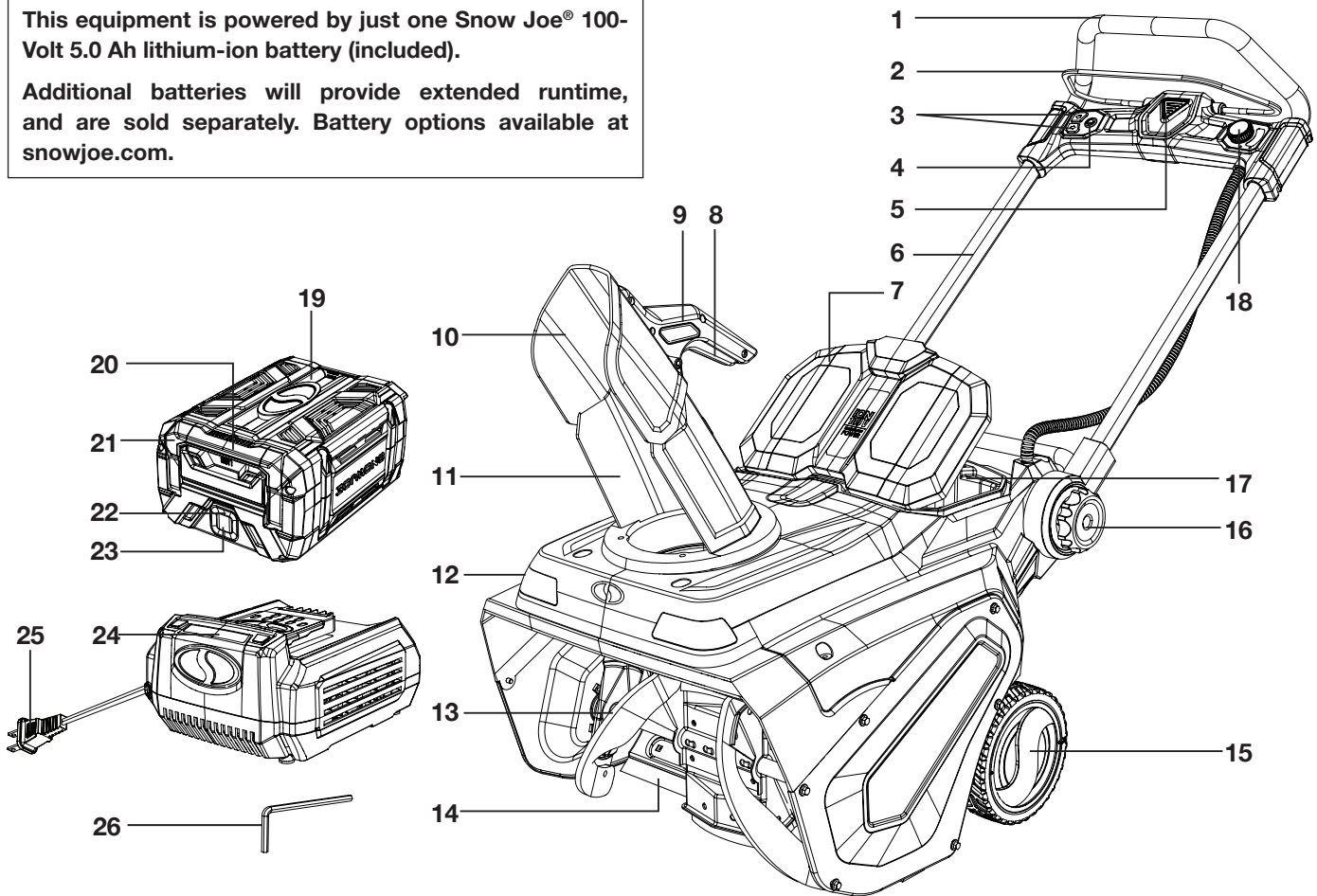
Know Your Cordless Snow Blower

Read the owner's manual and safety rules carefully before operating your cordless snow blower. Compare the illustration below to the actual unit in order to familiarize yourself with the location of the various controls and adjustments. Save this manual for future reference.

ONE AND DONE!

This equipment is powered by just one Snow Joe® 100-Volt 5.0 Ah lithium-ion battery (included).

Additional batteries will provide extended runtime, and are sold separately. Battery options available at snowjoe.com.



- | | |
|--|---------------------------------------|
| 1. Soft grip | 14. Scraper bar |
| 2. Switch bar level | 15. Wheels (2) |
| 3. Chute rotate buttons (left and right) | 16. Handle frame locks (2) |
| 4. LED light button | 17. Battery compartment |
| 5. Safety button | 18. Auger speed dial |
| 6. Handle frame | 19. iON100V-5AMP lithium iON battery |
| 7. Battery compartment cover | 20. 0.35 watt LED light |
| 8. Chute deflector trigger | 21. Battery handle |
| 9. Chute deflector handle | 22. Battery indicator |
| 10. Chute deflector | 23. Push button for battery indicator |
| 11. Discharge chute | 24. iON100V-RCH battery quick charger |
| 12. LED lights (2) | 25. Charger plug |
| 13. Auger blades | 26. Hex key wrench |

Technical Data

Battery Voltage*	100 V D.C.
Battery Capacity	5.0 Ah
Charging Time	100 mins (for full charge)
Charger Input	100 – 120 V AC, 50 – 60 Hz, 500 W
Charger Output	100 V DC 4 A
Run Time Max	30 mins
No Load Speed	1000 - 1500 RPM
Auger	2-blade paddle auger
Motor	2800 W Brushless
Clearing Width	21 in. (53 cm)
Depth of Snow Cut	12 in. (30 cm)
Throw Distance Max	30 ft (9 m)
Plowing Capacity Max	16 tons/charge (14.5 metric tons/charge)
Stages	Single stage
Type of Snow	Light, fluffy
Directional Control	180° auto-rotate chute
LED Light	2.5 watt (each)
Weight (snow blower alone)	62 lbs (28 kg)
Weight (snow blower with battery installed)	69 lbs (31 kg)

*Initial no-load voltage, when fully charged, peaks at 100 volts; nominal voltage under typical load is 86.4 volts.

Unpacking

Carton Contents:

- Cordless snow blower with handle frame
- Discharge chute assembly
- iON100V-5AMP lithium-ion battery (1)
- iON100V-RCH battery quick charger
- Discharge chute screws (3)
- Hex key
- Manuals with registration card

1. Carefully remove the cordless snow blower 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 the cordless snow blower. The packaging is made of recyclable materials. Properly dispose of these materials in accordance with local regulations or save the packaging for long-term product storage.

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!

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This equipment is powered by just one Snow Joe® 100-Volt 5.0 Ah lithium-ion battery (included).

Additional batteries will provide extended runtime, and are sold separately. Battery options available at snowjoe.com.

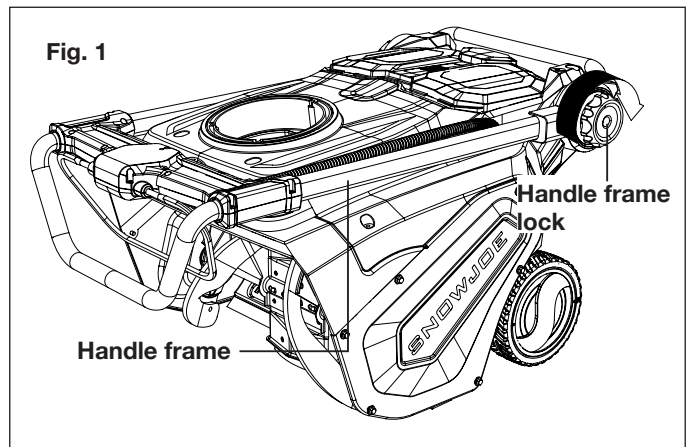
Assembly

⚠️ WARNING! To avoid serious personal injury, read and understand all safety instructions provided.

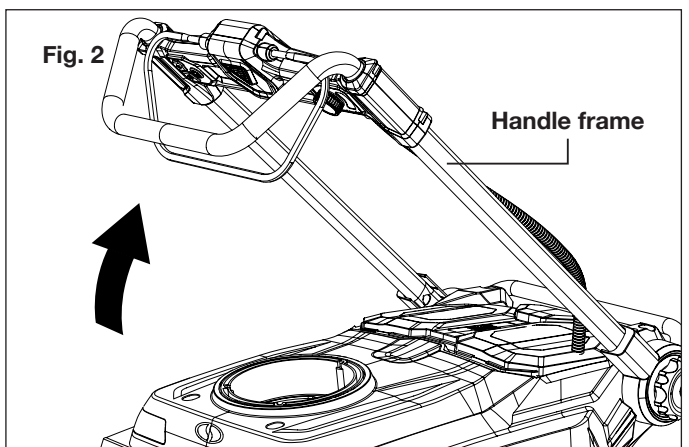
⚠️ WARNING! Unpacking and assembly should be completed on a flat and stable surface, with adequate space for moving the machine and its packaging.

Adjusting the Handle Frame

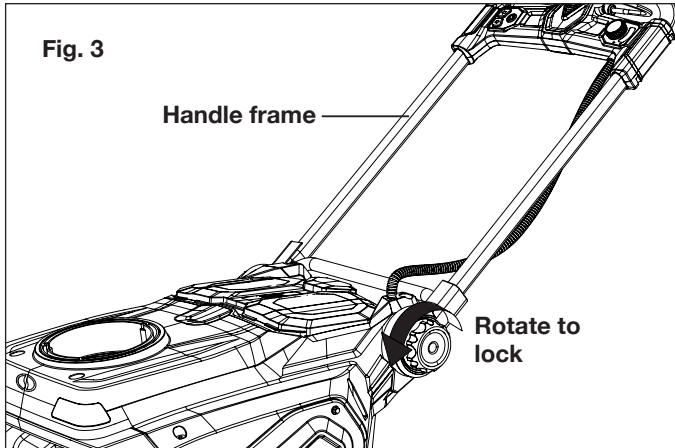
1. Unlock the handle frame by rotating the handle frame locks on both sides clockwise (Fig. 1).



2. Rotate the handle frame up in a comfortable operation position (Fig. 2).

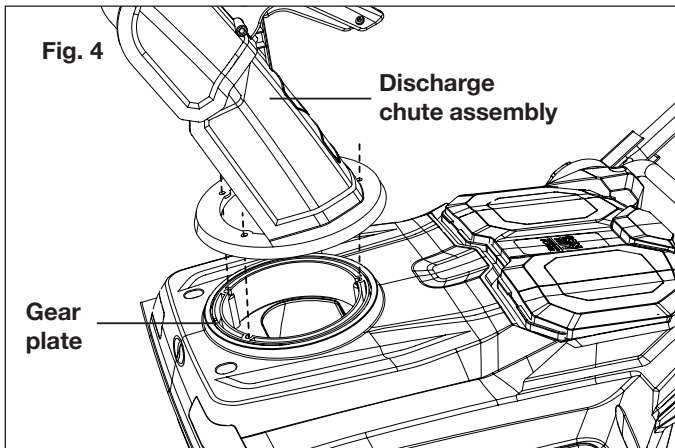


- Lock the handle frame in position by rotating the handle frame locks on both sides counter-clockwise (Fig. 3).

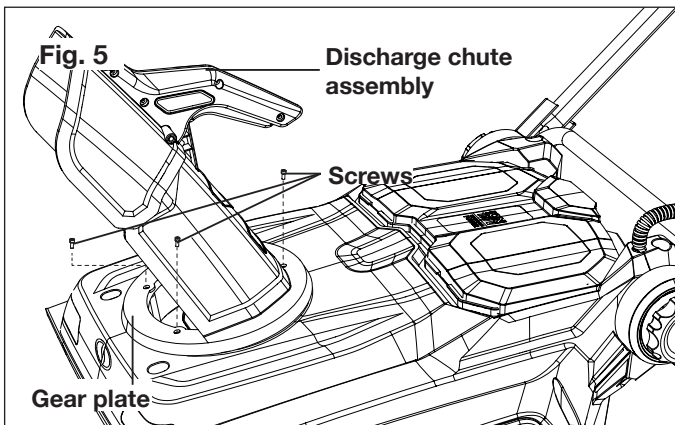


Discharge Chute Assembly

- Place the discharge chute assembly onto the gear plate, aligning the 3 holes in the gear plate, and push down until the chute is flush and flat against the housing (Fig. 4).



- Use the 3 discharge chute screws to secure the discharge chute assembly to the gear plate as shown. Tighten with the provided hex key (Fig. 5).

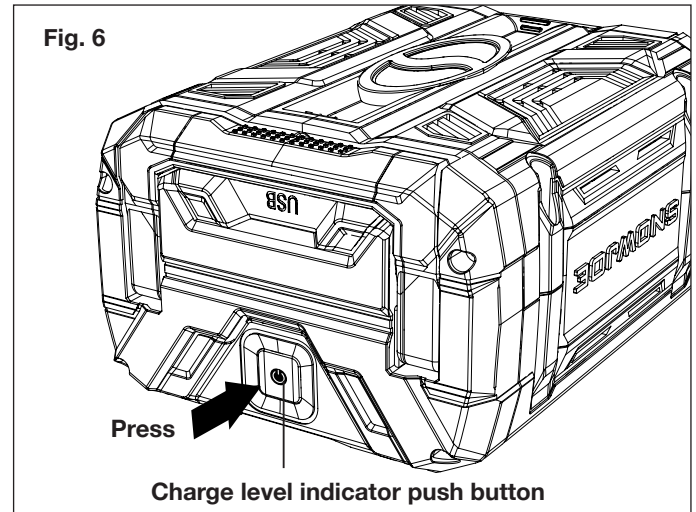


Battery Pack Operation

This equipment is powered by either one or two lithium-ion batteries (additional batteries sold separately). The battery packs are completely closed and maintenance free.

Battery Charge Level Indicator

The battery pack is equipped with a push button for checking the charge level. Simply press the push button to read off the battery charge level from the LEDs of the battery indicator (Fig. 6):



- All 4 level monitoring LEDs are lit: Battery charge level is high.
- 3 level monitoring LEDs are lit: Battery charge level is decreasing.
- 2 level monitoring LEDs are lit: Battery charge level is decreasing. Stop work as soon as possible.
- 1 level monitoring LED is lit: Battery is flat. Stop work IMMEDIATELY and charge the battery. Otherwise the battery's service life will be greatly shortened.

Lights	Light Indicators
	The battery is at 20% capacity and requires charging
	The battery is at 50% capacity and requires charging soon
	The battery is at 70% capacity
	The battery is at full capacity

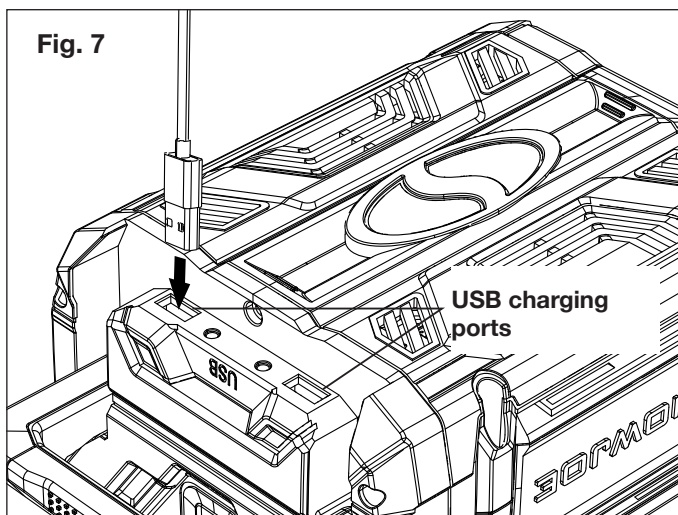
NOTE: If the charge level button does not appear to be working, place the battery pack on the charger and charge as needed.

NOTE: Immediately after using the battery pack, the charge level button may display a lower charge than it will if checked a few minutes later. The battery cells “recover” some of their charge after resting.

USB Charging Port

The iON100V-5AMP lithium-iON battery is equipped with 2 USB charging ports, which can provide 5 V power for most smart phones, tablets, wearables and other USB devices.

To charge with the battery, connect a USB cable that came with your selected electronic device to one of the USB ports under the handle of the iON100V-5AMP battery pack and to your device. The charging process will start immediately (Fig. 7).

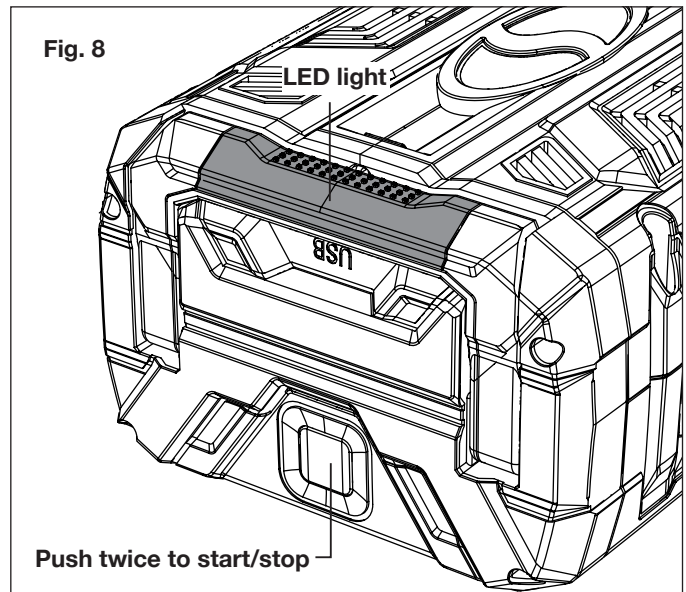


NOTE: If you experience any issues with charging your particular device, ensure that the battery pack is fully charged.

⚠ WARNING! Make sure the battery’s USB ports are not contaminated with lint or other debris. Use a canned-air type of product periodically to ensure that the port openings are clear.

LED light

The iON100V-5AMP battery is equipped with a 0.35 watt LED light located on the handle, which is good for camping and emergency illumination. To turn on the LED light, open the carry handle, and press the battery push button twice in a row. To turn off the LED light, press the battery push button twice again (Fig. 8).



Charger Operation

⚠ WARNING! Charge only the iON100V-5AMP lithium-ion battery pack in compatible iON100V-RCH battery charger. Other types of batteries may cause personal injury and damage.

To reduce the risk of electric shock, do not allow water to flow into the charger’s AC/DC plug.

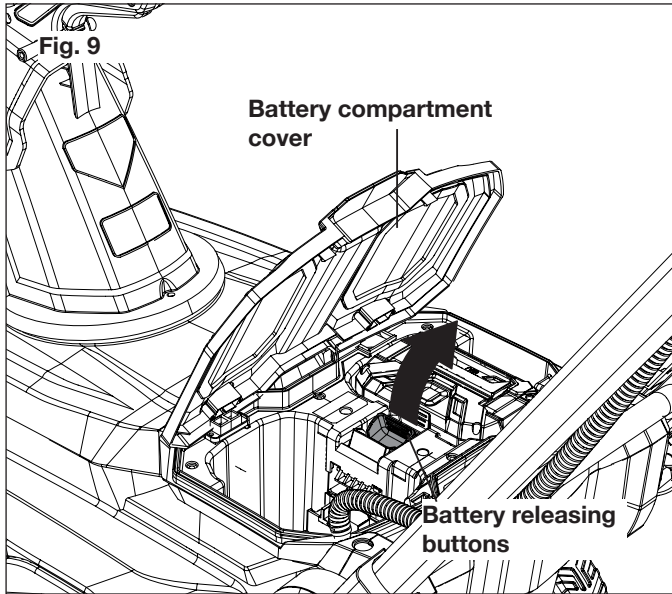
When to Charge the iON100V-5AMP Lithium-Ion Battery

NOTE: The iON100V-5AMP lithium-ion battery pack does not develop a “memory” when charged after only a partial discharge. Therefore, it is not necessary to run down the battery pack before placing it into the charger.

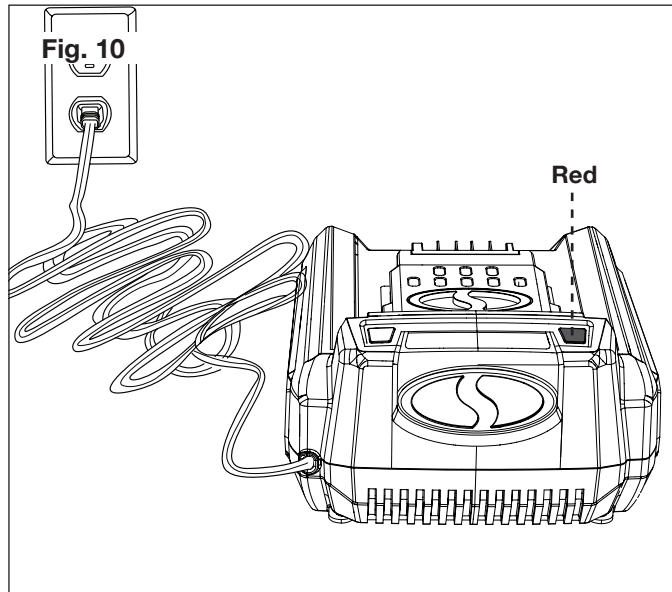
- Use the battery charge indicator lights to determine when to charge your iON100V-5AMP lithium-ion battery packs.
- You can “top-off” your battery pack’s charge before starting a big job or after a long day of use.

Charging the Battery Packs

1. Flip open the battery compartment cover, push the battery releasing button to release the battery pack. Pull the battery out of the equipment. (Fig. 9).

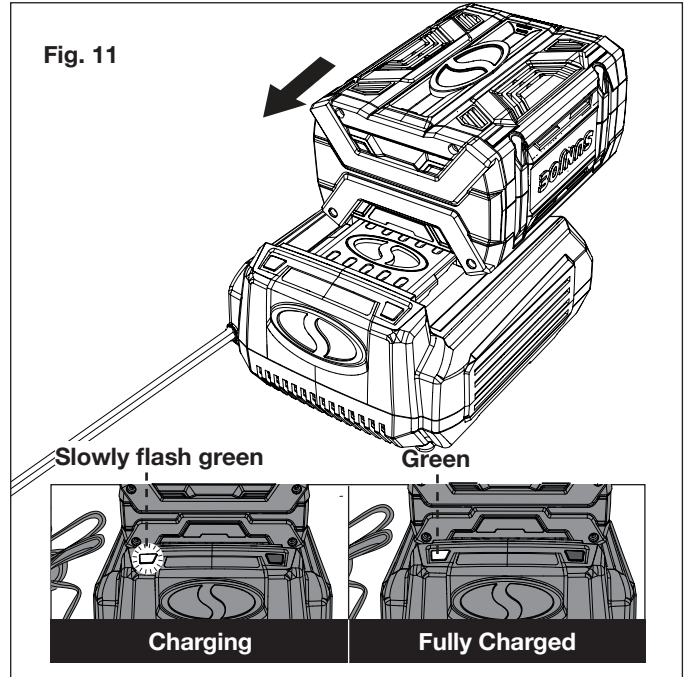


2. Check that the mains voltage is the same as that marked on the rating plate of the battery charger. Then, insert the charger's plug into the electrical wall outlet. When you plug in the charger, the red light will illuminate steadily (Fig. 10).

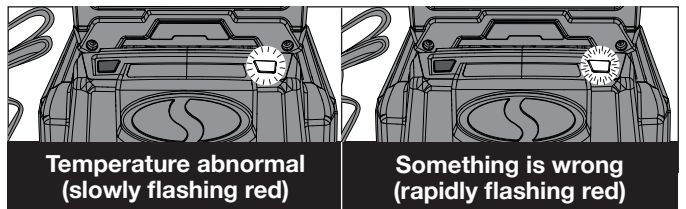


⚠ CAUTION! Charger iON100V-RCH is rated for 100 – 120 volt AC only. DO NOT plug the charger into any outlet that will provide power with a higher voltage. Over voltage charging will be harmful to both the battery and charger, and may cause the charger to burn out.

3. Place the battery pack into the charger by sliding the pack as shown until it clicks into the position. When the battery is inserted properly, the green light will slowly flash to indicate that the battery is charging. The red light will turn off. You will also hear a fan sound (Fig. 11).
4. When the green light stays on, the battery is fully charged (Fig. 11).



NOTE: If the green light is off while the red light flashes slowly, this indicates a temperature abnormality (i.e. that the battery pack is too hot). If the green light is off while the red light flashes rapidly, this indicates there's something wrong with the charger or the battery. Wait for a while and try to reinsert the battery into the charger. If the situation still persists, contact Snow Joe® + Sun Joe® customer service at 1-866-SNOWJOE (1-866-766-9563).



5. A fully discharged iON100V-5AMP battery pack with an internal temperature in the normal range will fully charge in 100 minutes (between 32°F/0°C and 113°F/45°C). Heavily discharged battery packs may take longer to charge completely.

6. When charging is complete, remove the battery from the charger by pulling the battery backward to unlock it from the charger (Fig. 12).

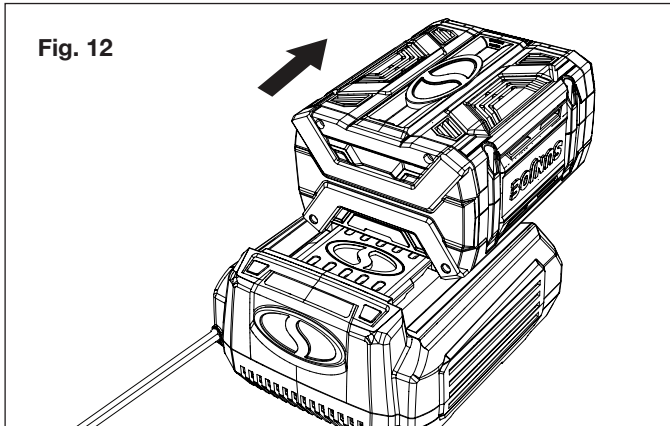


Fig. 12

7. Timely recharging of the battery will help prolong the battery's life. You must recharge the battery pack when you notice a drop in the equipment's power.

IMPORTANT! Never allow the battery pack to become fully discharged as this will cause irreversible damage to the battery.

Charger Light Indicator Table

Use the table below to determine charger light patterns and possible causes. For all other issues, contact Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563).

Indication	Possible Cause (Solution)
<ul style="list-style-type: none"> • Red Light – Steady • Green Light – Off 	<ul style="list-style-type: none"> • No load charging – There's no battery inserted in the charger.
<ul style="list-style-type: none"> • Red Light – Off • Green Light – Slowly flashes 	<ul style="list-style-type: none"> • Normal charging – The battery is being charged.
<ul style="list-style-type: none"> • Red Light – Off • Green Light – Steady 	<ul style="list-style-type: none"> • Fully charged – The battery is fully charged and the charging process is finished.
<ul style="list-style-type: none"> • Red Light – Off • Green Light – Rapidly flashes 	<ul style="list-style-type: none"> • Discharged – The battery is heavily discharged. It may take longer time for charging.
<ul style="list-style-type: none"> • Red Light – Slowly flashes • Green Light – Off 	<ul style="list-style-type: none"> • Temperature abnormal – Charging process will start when battery returns to normal temperature.
<ul style="list-style-type: none"> • Red Light – Rapidly flashes • Green Light – Off 	<ul style="list-style-type: none"> • Over current charging – The current coming through the charger is greater than what the charger can support. Stop charging as soon as possible. • Abnormal performance – Something is wrong with the battery or the charger. Contact Snow Joe® + Sun Joe® customer service at 1-866-SNOWJOE (1-866-766-9563).

Operations

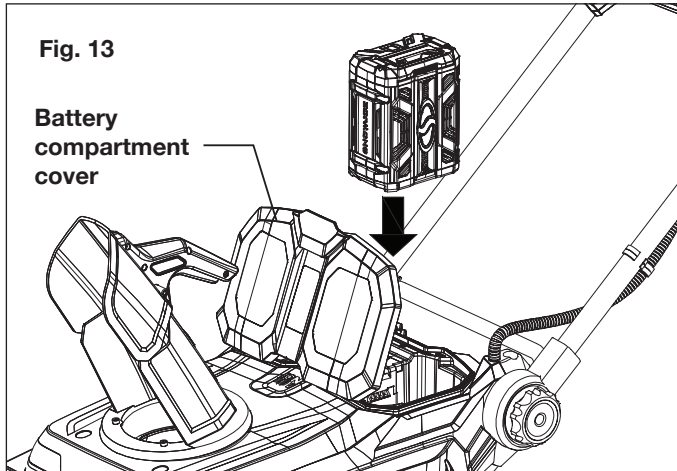
⚠️ WARNING! AVOID INJURY. Read and understand the entire safety section before proceeding.

NOTE: Before inserting the battery, verify that the snow blower's auger and rubber plates are firmly secured. Perform a test run to ensure that the rotor turns freely.

Starting + Stopping

⚠️ WARNING! The auger starts rotating immediately after the snow blower is switched on. Keep hands and feet away from the auger.

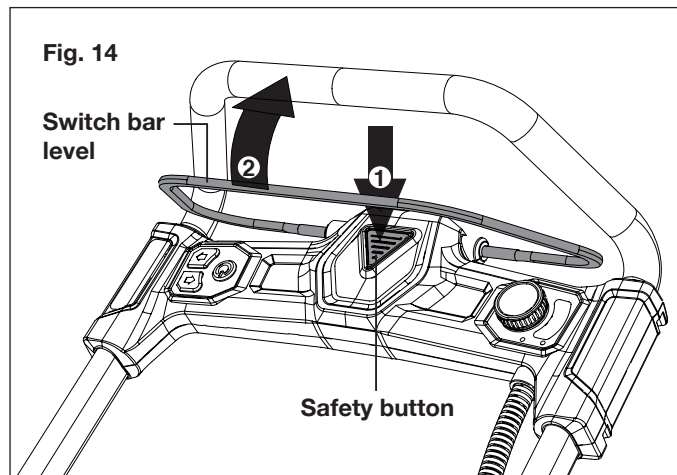
1. Open the battery compartment cover and then push the battery pack down until it clicks and locks into position (Fig. 13). Either side of the battery compartments may be used. Close the cover.



NOTE

This snow blower can be powered by either one (1) or two (2) Snow Joe® 100-Volt lithium-ion batteries. However, make sure to equip the unit with at least one Snow Joe® iON100V-5AMP battery. One or two Snow Joe® iON100V-2.5AMP batteries cannot provide enough power for the snow blower.

2. To switch the snow blower ON, press the safety switch button, then squeeze the switch bar lever (Fig. 14).



3. Once the snow blower starts, release the safety switch button and proceed with operation.
4. To power OFF, release the switch bar lever.

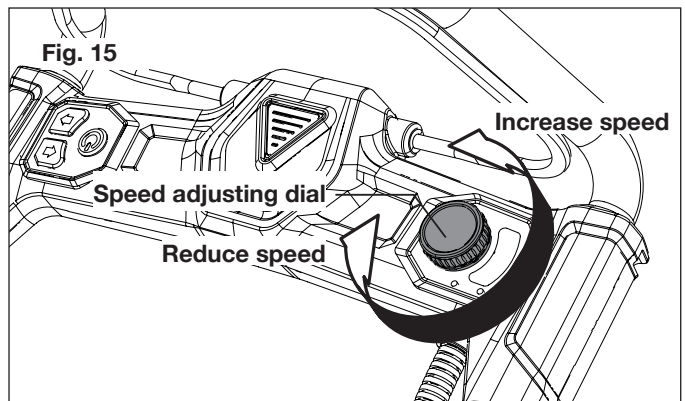
Adjust Auger Speed

This snow blower is equipped with auger speed adjustment system, which can set the auger speed from low to high. Follow the instruction to set the auger speed to fit in the working environment. Consider the working time, snow volume, and the surroundings when adjusting the auger speed. In general, lower auger speed provides longer battery runtime, but smaller plowing capacity and shorter throw distance. Check attached table for the specs that can be affected by the auger speed.

	MIN. Auger Speed	MAX. Auger Speed
Battery Runtime	30 min	15 min
Plowing Capacity	12.5 tons/charge	16 tons/charge
Throw Distance	25 ft (7.6 m)	30 ft (9 m)

NOTE: The specs in above table are based on the power provided by one Snow Joe® iON100V-5AMP battery that comes with the unit. Different battery combinations will affect the specs.

1. To increase the auger speed, scroll the speed adjustable dial counterclockwise with the switch bar level squeezed (Fig. 15).
2. To reduce the auger speed, scroll the speed adjustable dial clockwise with the switch bar lever squeezed (Fig. 15).

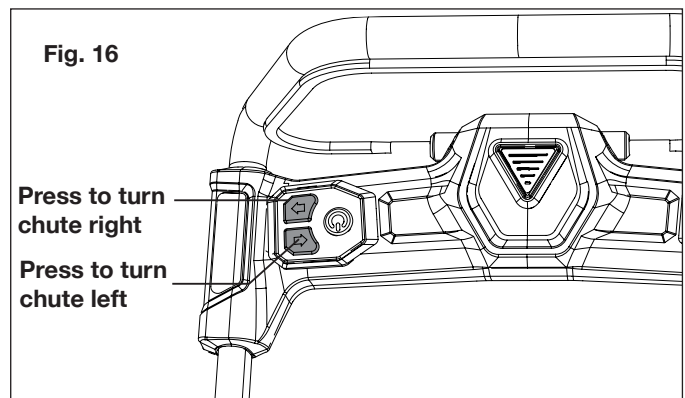


Changing Throw Direction and Throw Height

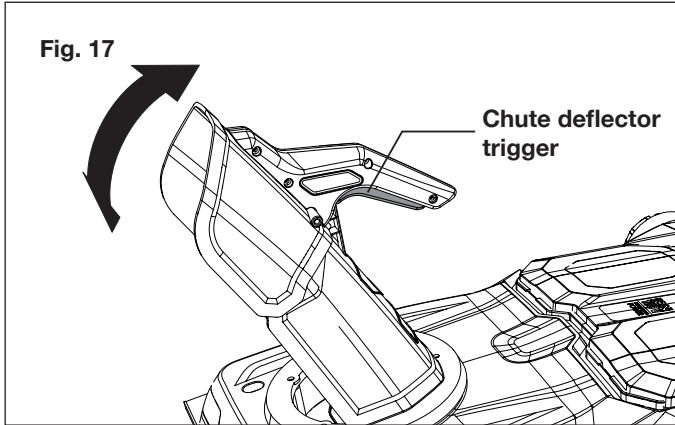
⚠️ WARNING! Never direct the snow discharge chute at the operator, at bystanders, at vehicles or at nearby windows. The discharged snow and foreign objects accidentally picked up by the snow blower can cause serious damage and personal injury.

Always orient the discharge chute in the opposite direction from where you, bystanders, surrounding vehicles or windows are located.

1. The discharge chute can be adjusted 180 degrees by pressing the chute rotate button in the desired direction (Fig. 16).



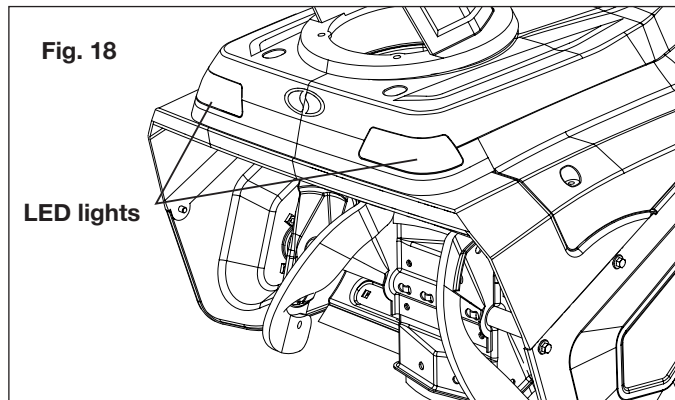
- The chute deflector on the top of the discharge chute controls the height of the snow stream. To adjust the height that the snow is thrown, squeeze the trigger on the chute-deflector handle, and then raise/lower the chute deflector. Release the trigger on the chute deflector handle to lock the chute deflector in place (Fig. 17).



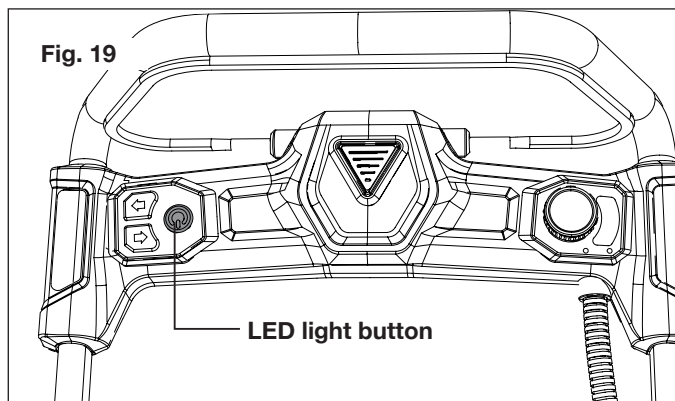
NOTE: ALWAYS position discharge chute deflector at a safe angle before engaging the auger. DO NOT throw snow any higher than necessary.

LED Headlights

The LED headlights are located on the front of the snow blower (Fig. 18).



- To turn on the LED light, press the LED light button (Fig. 19).



- To turn off, press the LED light button again.

NOTE: After you have finished using your snow blower, remember to turn OFF the light switch.

Operating Tips

⚠️WARNING! Foreign objects, such as rocks, broken glass, nails, wire, or string, can be picked up and thrown by the snow blower, causing serious personal injury. Remove all foreign objects from the area to be plowed before operating the snow blower.

Snow is best removed as soon as possible after snow fall.

- Keep the area of operation free of foreign objects that can become thrown by the blades. Perform a thorough inspection of the area since some objects may be hidden from view by surrounding snow. If the snow blower hits an obstruction or picks up a foreign object during use, stop the snow blower, remove the battery, remove the obstruction, and inspect the unit for damage. Repair or replace any damaged part before restarting and operating the unit.
- Keep children, pets, and bystanders away from the area of operation. Be aware that the normal noise of the machine when turned on may make it difficult for you to hear approaching people.
- To clear an area, run unit in an overlapping series of paths. For large areas, start in the middle and throw snow to each side, so snow is not cleared more than once.
- Note the wind direction. If possible, move in the same direction as the wind so that the snow is not thrown against the wind (and thus back into your face and on the just cleared path).
- Do not push the snow blower with excessive force. Do not exceed the unit's intake or throw rate.
- Some parts of the snow blower may freeze under extreme temperature conditions. Do not attempt to operate the snow blower with frozen parts. If the parts freeze while the snow blower is in use, stop the snow blower, remove the battery, and inspect for frozen parts. Free all parts before restarting or operating the snow blower. Never force controls that have frozen.

Maintenance

To order genuine replacement parts or accessories for the Snow Joe® iON100V-21SB cordless snow blower, please visit snowjoe.com or contact the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563).

⚠️WARNING! Make sure to turn off the switch and remove the battery before performing any maintenance task on your snow blower.

General Maintenance Tips

- Do not attempt to repair the machine unless you have the proper tools and instructions for disassembly and repair of the machine.

2. Check bolts and screws at frequent intervals for proper tightness to ensure that the equipment is in safe working condition.
3. After each snow removal, shut off the motor, wait for all revolving parts to stop completely, remove the battery and wipe residual ice and snow off the unit.

Proper Care for Battery + Charger

⚠️ WARNING! To reduce the risk of injury, always unplug the charger and remove the battery pack from the charger before performing any maintenance task. Never disassemble the battery pack or charger. Contact your Snow Joe® + Sun Joe® dealer or the Snow Joe® + Sun Joe® customer service center for ALL repairs.

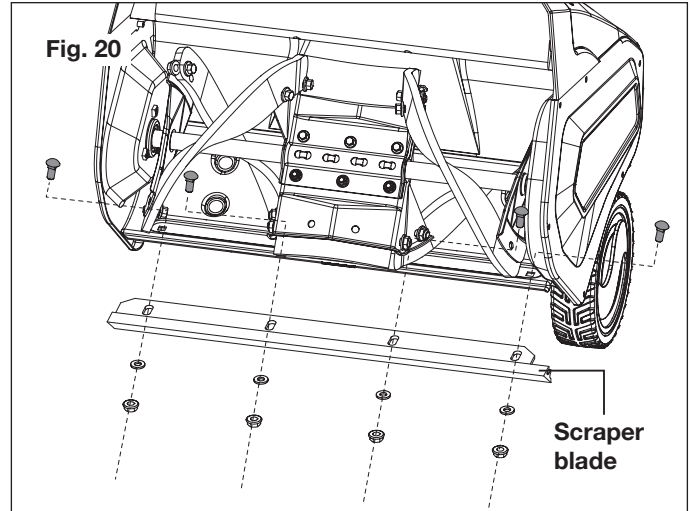
1. To reduce the risk of injury and damage, never immerse your battery packs or charger in liquid or allow any liquid to flow inside these components.
2. Clean out dust and debris from charger vents and electrical contacts by blowing with compressed air.
3. Use only mild soap on a damp cloth to clean the battery pack and charger, keeping away from all electrical contacts. Certain cleaning agents and solvents are harmful to plastics and other insulated parts. Some of these include gasoline, turpentine, lacquer thinner, paint thinner, chlorinated cleaning solvents, ammonia and household detergents containing ammonia. Never use flammable or combustible solvents around battery packs, battery chargers or tools.
4. The iON100V-RCH lithium-ion battery charger has no serviceable parts.

Replacing Scraper Bar

IMPORTANT! Damage to auger housing will result if the scraper bar wears down too far.

To replace scraper bar:

1. Position unit on a hard, flat, smooth level surface.
2. Detach the worn scraper bar from the snow blower by removing the 4 sets of nuts, washers and bolts that hold it in place (Fig. 20).
3. Install the new scraper bar and fasten it securely to the snow blower with the original sets of nuts, washers and bolts.



Replacing Auger Blades

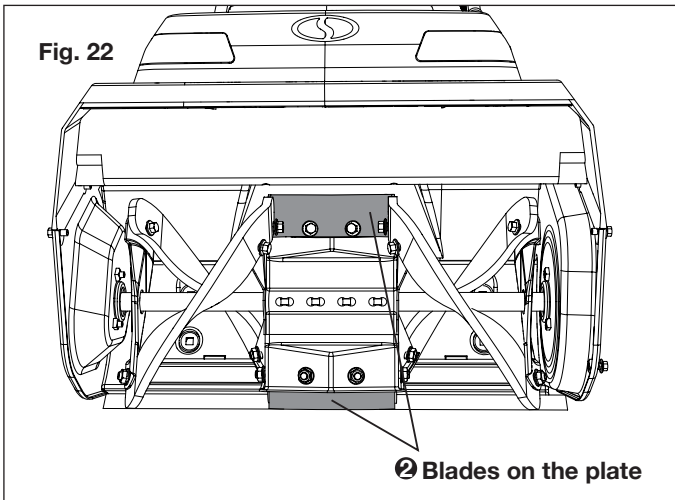
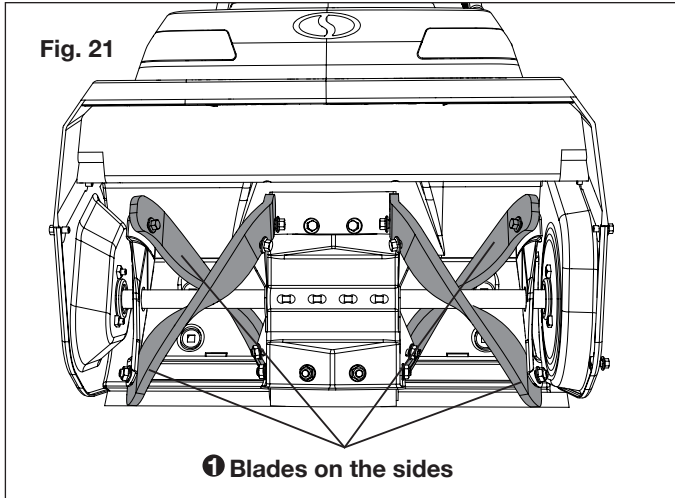
During use, the auger blades will wear down over time, which will eventually cause incomplete cleaning. If the unit cannot plow snow completely and leaves snow on ground, consider changing the auger blades.

⚠️ WARNING! Replacing the auger blades involves close operation with the auger and the blades. To avoid injury caused by unintentional starting, make sure the battery (or batteries) are not inserted before proceeding with the operation, and wear heavy duty gloves during operation.

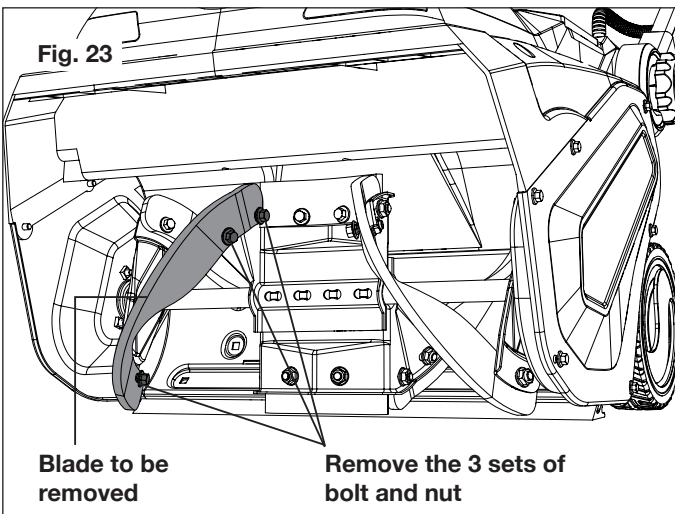
Tools Required (Not Provided):

- 10 mm wrench
- 13 mm wrench
- Heavy duty gloves

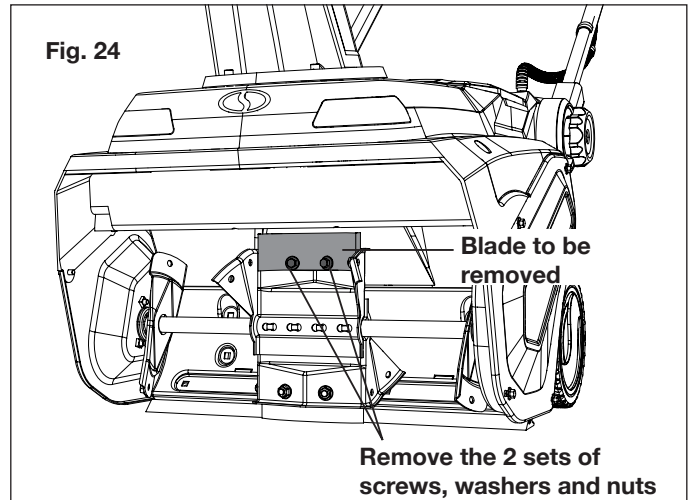
In total there are 6 blade pieces fixed by 16 sets of screws, washers and nuts in the unit. When replacing worn auger blades, pay close attention to the order in which you remove them. Remove the 4 blade pieces on the sides first, and then the 2 blade pieces fixed on the middle steel plate. Assemble the new auger blades in the reverse order of the disassembly (Figs. 21 – 22).



1. To remove the first blade on the side, use a 10 mm wrench to hold the bolt steady, and use a 13 mm wrench to loosen and remove the nut. Repeat the operation to remove all 3 sets of bolt and nut, and gently remove the blade from the auger (Fig. 23).



2. Follow the same instruction to remove the other 3 blades located on the sides. Rotate the auger when working on the blades on the back.
3. After 4 blades on the side are removed, move to the two blade pieces that are fixed on the middle steel plate. Use the 10 mm wrench to hold the bolt steady, and use the 13 mm wrench to loosen and remove the nut. Repeat on the other nut and bolt set, and gently remove the blade from the central plate (Fig. 24).



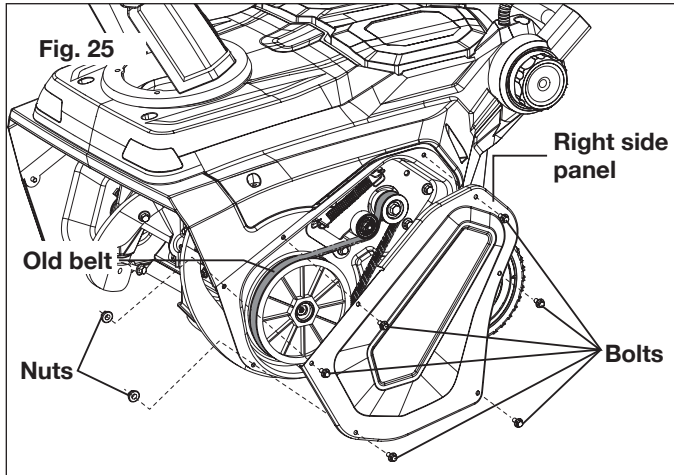
4. Rotate the auger to expose the other blade on the plate. Follow the same instruction to remove it.
5. After all old blades are removed, follow the reverse order to assemble the new blades. Use the original sets of hardware to secure the blades on the auger.

Replacing Auger Belt

Tools Required (Not Provided):

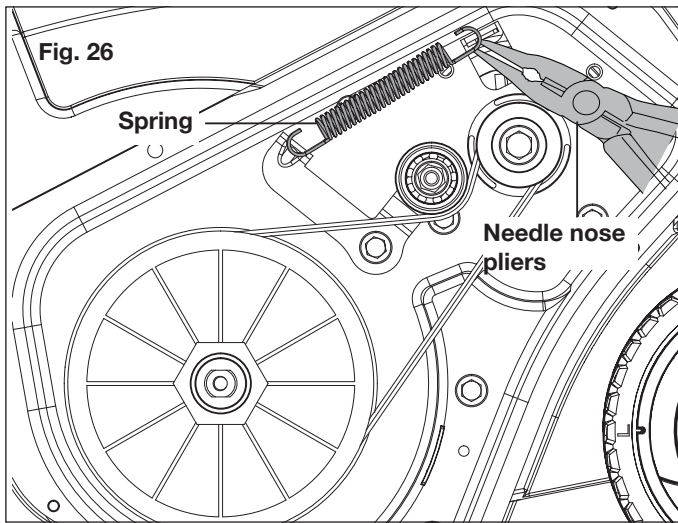
- 10 mm wrench (2)
- Needle nose pliers
- Heavy duty gloves

1. Position unit on a hard, flat, smooth level surface, with the battery (or batteries) removed.
2. Use 2 10 mm wrenches to remove the bolts and nuts that are used to fix the right side panel. Then remove the right side panel to expose the belt, as shown (Fig. 25).

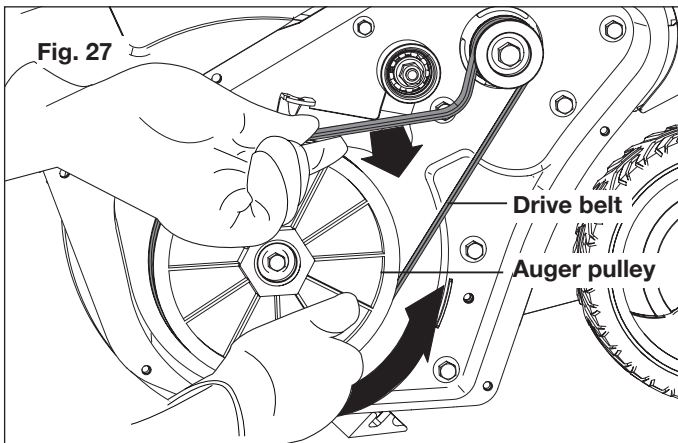


NOTE: The 2 bolts located on the left have 2 nuts on the back, while the other 4 bolts don't. Use one 10 mm wrench to hold the left two bolts steady and remove the nuts with the other 10 mm wrench first, and then remove all the bolts.

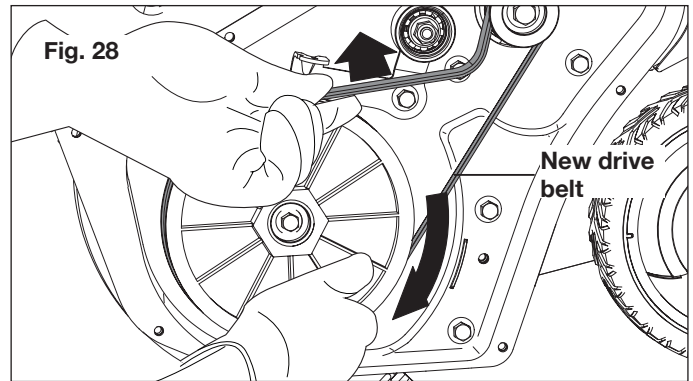
3. Use the needle nose pliers to remove the spring from the hook to release the belt tension (Fig. 26).



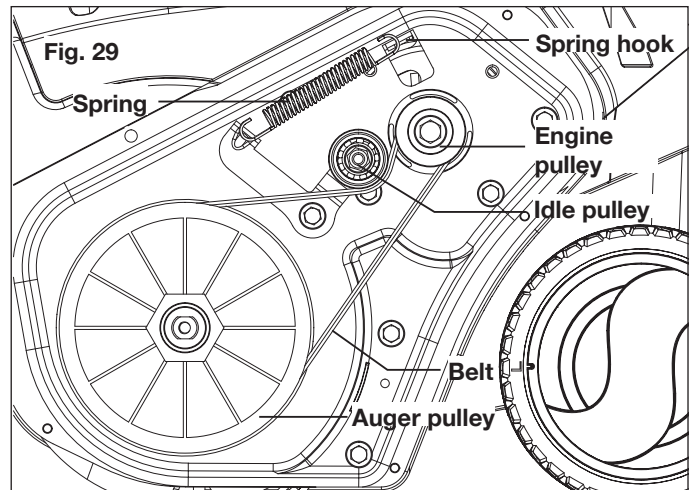
4. Remove the drive belt by slowly turning the auger pulley counterclockwise while pulling the belt outwards (Fig. 27).



5. Install the new drive belt, rotating it onto the pulleys (Fig. 28).



NOTE: Rotate the new drive belt first around the engine pulley, then the idle pulley, and finally around the auger pulley. Slowly turn the auger pulley clockwise to drive the belt inwards (Fig. 29).



6. Use needle nose pliers to reinstall the spring onto the hook to tension the belt. Replace the side panel on the unit, secure with the original hardware. The snow blower is ready to use.

Storage

1. Examine the cordless snow blower thoroughly for worn, loose or damaged parts. Should you need to repair or replace a part, contact an authorized Snow Joe® + Sun Joe® dealer or call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563) for assistance.
2. Clean the snow blower before storing or transporting. Be sure to secure the unit while transporting.
3. Remove the battery pack from the cordless snow blower before storing.
4. Store the cordless snow blower indoors in a locked, dry place out of the reach of children to prevent unauthorized use or damage.

Battery + Charger Off-Season Storage

1. Do not expose your battery pack(s) or charger to water, rain or allow them to get wet. This could permanently damage the charger and the battery packs. Do not use oil or solvents to clean or lubricate your battery pack as the plastic casing can become brittle and crack, causing a serious risk of injury.
2. Store the battery packs and charger at room temperature away from moisture. Do not store in damp locations where corrosion of terminals may occur. As with other battery pack types, permanent capacity loss can result if the pack is stored for long periods of time at high temperatures (over 120°F/49°C).
3. iON100V-5AMP battery packs maintain their charge during storage longer than other battery pack types. As a general practice, it is best to unplug the battery charger and remove the battery pack when they are not in use. Recharge the battery pack every 6 months to 50% capacity (2 lights on) during off-season storage to maintain optimal battery performance.

Battery Caution + Disposal Information

Always dispose of your battery pack according to federal, state, and local regulations. Contact a recycling agency in your area for recycling locations.

⚠ CAUTION! Even discharged battery packs contain some energy. Before disposing, use electrical tape to cover the terminals to prevent the battery pack from shorting, which could cause a fire or explosion.

⚠ WARNING! To reduce the risk of injury or explosion, never burn or incinerate a battery pack even if it is damaged, dead or completely discharged. When burned, toxic fumes and materials are emitted into the surrounding atmosphere.

1. Batteries vary according to device. Consult your manual for specific information.
2. Install only new batteries of the same type in your product (where applicable).
3. Failure to insert batteries in the correct polarity, as indicated in the battery compartment or manual, may shorten the life of the batteries or cause batteries to leak.
4. Do not mix old and new batteries.
5. Do not mix Alkaline, Standard (Carbon-Zinc) or Rechargeable (Nickel Cadmium, Nickel Metal Hydride, or Lithium-Ion) batteries.
6. Do not dispose of batteries in fire.
7. Batteries should be recycled or disposed of as per state and local guidelines.

Service + Support

If your Snow Joe® iON100V-21SB cordless snow blower requires service or maintenance, please call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563).


Model + Serial Numbers

When contacting the company, reordering parts or arranging service from an authorized dealer, you will need to provide the model and serial numbers, which can be found on the decal located on the housing of the unit. Copy these numbers into the space provided below.

Record the following numbers from the housing or handle of your new product:	
Model #:	
i O N 1 0 0 V - 2 1 S B	
Serial #:	

iON100V-RCH

Federal Communications Commission (FCC)

 **WARNING!** Any changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Class B device:

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 to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.



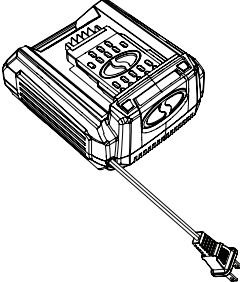
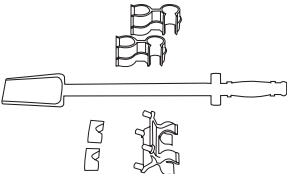
Troubleshooting

⚠️ WARNING! Always turn the tool OFF and remove the battery before performing any adjustments, maintenance, or repairs to your cordless snow blower.

Problem	Possible Cause	Solution
Unit will not start	<ol style="list-style-type: none"> 1. Batteries are flat. 2. Batteries are not locked in position. 3. The safety button is not depressed 	<ol style="list-style-type: none"> 1. Charge the batteries 2. Reinsert the battery, and try to start the machine again. 3. Depress the safety button, and pull the switch bar lever.
The auger doesn't rotate while the motor is running	<ol style="list-style-type: none"> 1. Auger belt is wore out 2. Auger belt is not assembled properly 	<ol style="list-style-type: none"> 1. Change the auger belt 2. Check the auger belt, make sure it's assembled tightly on the rail
Chute doesn't rotate when pressing the button	<ol style="list-style-type: none"> 1. There's no power. 2. Too much wet snow are accumulated around the chute and preventing the chute rotating. 	<ol style="list-style-type: none"> 1. Make sure the batteries are charged and locked in position. 2. Clean the wet snow around the chute.
Snow left on the ground after cleaning	<ol style="list-style-type: none"> 1. Worn out auger blades 2. Worn out scraper bar 	<ol style="list-style-type: none"> 1. Replace the blades 2. Replace the scraper bar

Optional Accessories

⚠ WARNING! ALWAYS use only authorized Snow Joe® + Sun Joe® replacement parts and accessories. NEVER use replacement parts or accessories that are not intended for use with this cordless snow blower. Contact Snow Joe® + Sun Joe® if you are unsure whether it is safe to use a particular replacement part or accessory with your cordless snow blower. The use of any other attachment or accessory can be dangerous and could cause injury or mechanical damage.

Accessories	Item	Model
	100 V 2.5 Ah Lithium-Ion Battery <i>Battery Charge Time Max: 50 min</i> <i>Battery Runtime Max: 45 min when working with one iON100V-5AMP battery</i>	iON100V-2.5AMP
	100 V 5 Ah Lithium-Ion Battery <i>Battery Charge Time Max: 100 min</i> <i>Battery Runtime Max: 30 min with one battery, 60 min with two batteries</i>	iON100V-5AMP
	100 V Battery Quick Charger	iON100V-RCH
	Universal Snow Thrower Chute Clean-Out Tool	SJCOT

NOTE: Accessories are subject to change without any obligation on the part of Snow Joe® + Sun Joe® to provide notice of such changes. Accessories can be ordered online at snowjoe.com or via phone by contacting the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563).



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 Machine (a "Machine" consists of a product powered by a motor) 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 machine change during the 2-year period, please update the Machine's owner information at snowjoe.com/ProductRegistration.

WHAT IS COVERED?

Snow Joe® + Sun Joe® warrants to the owner that if this Machine 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 Machine cannot be repaired with a part, Snow Joe® + Sun Joe® will elect to either (A) send a new Machine 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 the Machines 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 Machine 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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