

Litheli

OPERATOR'S
MANUAL

20V CORDLESS SNOW SHOVEL

SKU No.: E1SS37013
Model No.: D10101150

WELCOME TO A BATTERY POWERED LIFE



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⚠ WARNING: To reduce the risk of injury, the user must read and understand the operator's manual before using this product. Save this manual for future reference.

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READ ALL INSTRUCTIONS!

 **READ AND UNDERSTAND THE OPERATOR'S MANUAL**

⚠ WARNING: Some dust created by power sanding, sawing, grinding, drilling and other construction activities contains chemicals known to the state of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:




- Lead from lead-based paints.
- Crystalline silica from bricks and cement and other masonry products, and
- Arsenic and chromium from chemically-treated lumber.

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well-ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.






SAFETY SYMBOLS








The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols and the explanations with them deserve your careful attention and understanding. The symbol warnings do not, by themselves, eliminate any danger. The instructions and warnings they give are no substitutes for proper accident prevention measures.

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

SYMBOL	SIGNAL	MEANING
	DANGER	Indicates a hazardous situation, which, if not avoided, will result in death or serious injury.
	WARNING	Indicates a hazardous situation, which, if not avoided, could result in death or serious injury.
	CAUTION	Indicates a hazardous situation, which, if not avoided, may result in minor or moderate injury.
	NOTICE	(Without Safety Alert Symbol) Indicates information considered important, but not related to a potential injury (e.g. messages relating to property damage).

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.

	Read the operator's manual.		WARNING! Do not expose the unit to rain or wet conditions. Keep dry.
	SAFETY ALERT. Indicates a precaution, a warning or a danger.		Wear hearing protection.
	Wear respiratory protection.		Wear eye protection.
	Wear safety footwear.		Wear protective gloves.
	The rotating part will continuously run for several seconds after you turn off the machine.		Do not burn the battery pack.
	Do not use hands to unclog chute.		Indoor use only. Only use battery charger indoors.

	DANGER! Cutting hazard. Keep feet away from the rotating auger.		CAUTION! Beware of stone or other foreign objects that could be thrown from the appliance.
	DANGER! Cutting/dismemberment hazard. Keep feet away from the rotating part.		DANGER! Cutting/dismemberment hazard. Keep hands away from the rotating auger. Stop motor before removing debris.
	Batteries may enter water cycle if disposed of improperly, which can be hazardous to the ecosystem. Do not dispose of old batteries as unsorted municipal waste.		
	Li-Ion battery. This product has been marked with a symbol relating to 'separate collection' for all battery packs. It will then be recycled or dismantled in order to reduce the impact on the environment. Battery packs can be hazardous for the environment and for human health since they contain hazardous substances.		
	This product uses lithium-ion (Li-ion) batteries. Local, state, or federal laws may prohibit disposal of batteries in ordinary trash. Consult your local waste authority for information regarding available recycling and/or disposal options.		

IMPORTANT SAFETY INSTRUCTIONS

⚠WARNING: Only use the accessories that are provided with this product or the accessories approved by manufacture. Use other accessories might increase the risk of injury. Follow the instructions in this manual to properly use the accessories.

⚠WARNING: When using electric gardening appliances, basic safety precautions should always be followed to reduce the risk of fire, electric shock, or injury to persons, including the following.

READ ALL INSTRUCTIONS

- Do not use on graveled surface unless the snow shovel is adjusted for such a surface in accordance with the operator's manual.
- Keep Children Away. All visitors should be kept a safe distance from work area.
- Dress Properly. Do not wear loose clothing or jewelry. They can be caught in moving parts.
- Wear rubber boots when operating the snow shovel.
- Keep hands away from moving parts.
- Keep guards in place and in working order.
- Don't Force Snow Shovel. It will perform better and safer at the rate for which it was designed.
- Don't Overreach. Keep proper footing and balance at all times.
- If the snow shovel strikes a foreign object follow these steps:
 - Stop snow shovel. Release the switch.
 - Remove the battery pack.
 - Inspect for damage.
 - Repair any damage before restarting and operating the snow shovel.
- Disconnect Snow Shovel-Remove the battery pack from the snow shovel when not in use, before servicing, when changing accessories, and the like.
- Store Idle Snow Shovel Indoors-When not in use, snow shovel should be stored indoors in dry, locked-up place, out of reach of children.
- Maintain Snow Shovel With Care-Follow instructions for lubricating and changing accessories.

SAVE THESE INSTRUCTIONS

Safe Operation Practices for Snow Shovel

This snow shovel is capable of amputating hands and feet and throwing objects. Failure to observe the following safety instructions could result in serious injury.

Training

- Read, understand and follow all instructions on the machine and in the manual(s) before operating this unit. Be thoroughly familiar with the controls and the proper use of the equipment. Know how to stop the unit and disengage the controls quickly.
- Never allow children to operate the equipment. Never allow adults to operate the equipment without proper instruction.
- Keep the area of operation clear of all persons, particularly small children.
- Exercise caution to avoid slipping or falling, especially when operating the snow shovel in reverse.

Preparation

- Thoroughly inspect the area where the equipment is to be used and remove all doormats, sleds, boards, wires, and other foreign objects.
- Do not operate the equipment without wearing adequate winter garments. Avoid loose fitting clothing that can get caught in moving parts. Wear footwear that will improve footing on slippery surfaces.
- Never attempt to make any adjustments while the motor is running (except when specifically recommended by manufacturer).
- Always wear safety glasses or eye shields during operation or while performing an adjustment or repair to protect eyes from foreign objects that may be thrown from the machine.

Operation

- Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times.
- Exercise extreme caution when operating on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic.
- After striking a foreign object, stop the motor,

- remove the battery pack, thoroughly inspect the snow shovel for any damage, and repair the damage before restarting and operating the snow shovel.
4. If the unit should start to vibrate abnormally, stop the motor and check immediately for the cause. Vibration is generally a warning of trouble.
 5. Stop the motor and remove the battery whenever you leave the operating position, before unclogging the rotor housing, and when making any repairs, adjustments or inspections.
 6. When cleaning, repairing or inspecting the snow shovel, stop the motor and make certain all moving parts have completely stopped. Remove the battery pack to prevent someone from accidentally starting the motor.
 7. Exercise extreme caution when operating on slopes.
 8. Never operate the snow shovel without proper guards, and other safety protective devices in place and in proper working order.
 9. Never direct the discharge toward people or areas where property damage can occur. Keep children, pets and other bystanders away from the work area.
 10. Do not overload the machine capacity by attempting to clear snow at too fast a rate.
 11. Never operate the machine at high transport speeds on slippery surfaces.
 12. Remove the battery pack when snow shovel is transported or not in use.
 13. Use only attachments and accessories approved by the manufacturer of the snow shovel.
 14. Never operate the snow shovel without good visibility or light. Always be sure of your footing, and keep a firm hold on the handles. Walk; never run.

Clearing a Clogged Rotor Housing

Hand contact with the rotating auger inside the rotor housing is the most common cause of injury associated with snow shovels. Never use your hand to clean out the rotor housing.

To clear the chute:

1. SHUT THE MOTOR OFF! Remove the battery.
2. Wait 10 seconds to be sure the rotating auger has stopped rotating.
3. Always use a clean-out tool, not your hands, to free the rotating auger.

Maintenance and Storage

1. Check all bolts at frequent intervals for proper tightness to be sure the equipment is in safe

working condition.

2. Always refer to operator's manual for important details if the snow shovel is to be stored for an extended period.
3. Maintain or replace safety and instruction labels, as necessary.
4. Run the machine a few minutes after throwing snow to prevent freeze-up of the auger.

ADDITIONAL SAFE OPERATION PRACTICES FOR SNOW SHOVEL

A.1 . SAFETY INSTRUCTIONS

A.1.1 Training

The following should be carried out for training:

- a. Read the operating and service instruction manual carefully. Be thoroughly familiar with the controls and the proper use of the equipment.
- b. Never allow children to operate a power shovel.
- c. Keep the area of operation clear of all persons, particularly small children, and pets.
- d. Do not use a shovel for any job except that for which it is intended.

A.1.2 Preparation

The following preparations should be carried out:

- a. Thoroughly inspect the area where the equipment is to be used and remove all stones, sticks, wires, bones, and other foreign objects.
- b. Do not operate the equipment when barefoot or wearing open sandals. Always wear substantial footwear.
- c. Work only in daylight or in good artificial light.
- d. Always be sure of your footing; keep a firm hold on the handle and walk, never run.

A.1.3 Operation

During operation, the following should be observed:

- a. Do not put hands or feet near or under rotating parts. Keep clear of the discharge opening at all times. Stop the auger when crossing gravel drives, walks, or roads.
- b. After striking a foreign object, stop the motor, remove the battery pack, thoroughly inspect the machine for any damage, and repair the damage before restarting and operating.
- c. If the equipment should start to vibrate abnormally, stop the motor and check immediately for the cause. Vibration is generally a warning of trouble.

- d. Stop the motor and remove the battery pack whenever leaving the equipment, before cleaning the rotor housing, and before making any repairs or inspections.
- e. Do not clear snow across the face of slopes, or in an up-and-down fashion. Exercise extreme caution when changing directions on slopes. Do not attempt to clear steep slopes.
- f. Never operate the shovel without proper guards, plates, or other safety protective devices in place.
- g. Do not wash with a hose; avoid getting water in motor and electrical connections.

A.1.4 Maintenance

The following maintenance measures should be carried out:

- a. Check the scraper/auger and the mounting bolts at frequent intervals for proper tightness.
- b. Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
- c. Replace the auger if it is bent or cracked. An unbalanced auger causes vibration that could damage the motor drive unit or cause personal injury.
- d. Clean the auger thoroughly and check its balance by supporting it horizontally on a thin nail through its centre hole. The nail should also be in a horizontal position. If either end of the auger rotates downward, remove some plastic from the heavy or lower end until the auger is balanced. It is balanced when neither end drops.

SAFETY WARNINGS FOR BATTERY PACK

1. Do not dismantle, open or shred battery pack.
2. Do not expose battery pack to heat or fire. Avoid storage in direct sunlight. The cells may explode. Check with local codes for possible special disposal instructions.
3. Do not short-circuit a battery pack. Do not store battery packs haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by other metal objects. When 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 fire.
4. Do not subject battery pack to mechanical shock.
5. Observe the plus (+) and minus (-) marks on

the battery back and equipment and ensure correct use.

6. Keep battery pack out of the reach of children.
7. Always purchase the battery pack recommended by the device manufacturer of the equipment.
8. Keep battery pack clean and dry.
9. Wipe the battery pack terminals with a clean dry cloth if they become dirty.
10. Battery pack needs to be charged before use. Always use the correct charger and refer to the manufacturer's instructions or equipment manual for proper charging instructions.
11. Do not leave battery pack on prolonged charge when not in use.
12. After extended periods of storage, it may be necessary to charge and discharge the battery pack several times to obtain maximum performance.
13. Battery pack gives its best performance when it is operated at normal room temperature (20 °C ± 5 °C).
14. Use the battery pack only in the application for which it was intended.
15. Remove the battery pack from the equipment when not in use.
16. Dispose of properly.
17. Do not handle the charger, including charger plug, or charger terminals with wet hands.
18. Do not charge the battery pack outdoors, in rain, or in wet locations.
19. Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
20. Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
21. Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

Save these instructions. Refer to them frequently and use them to instruct others who may use this tool. If you lend this tool to someone else, also lend these instructions to them to prevent misuse of the product and possible injury.

SAFETY WARNINGS FOR BATTERY CHARGER

Information for radiated emission

This device complies with Canadian ICES-001.

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

⚠ 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.

NOTICE: 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.

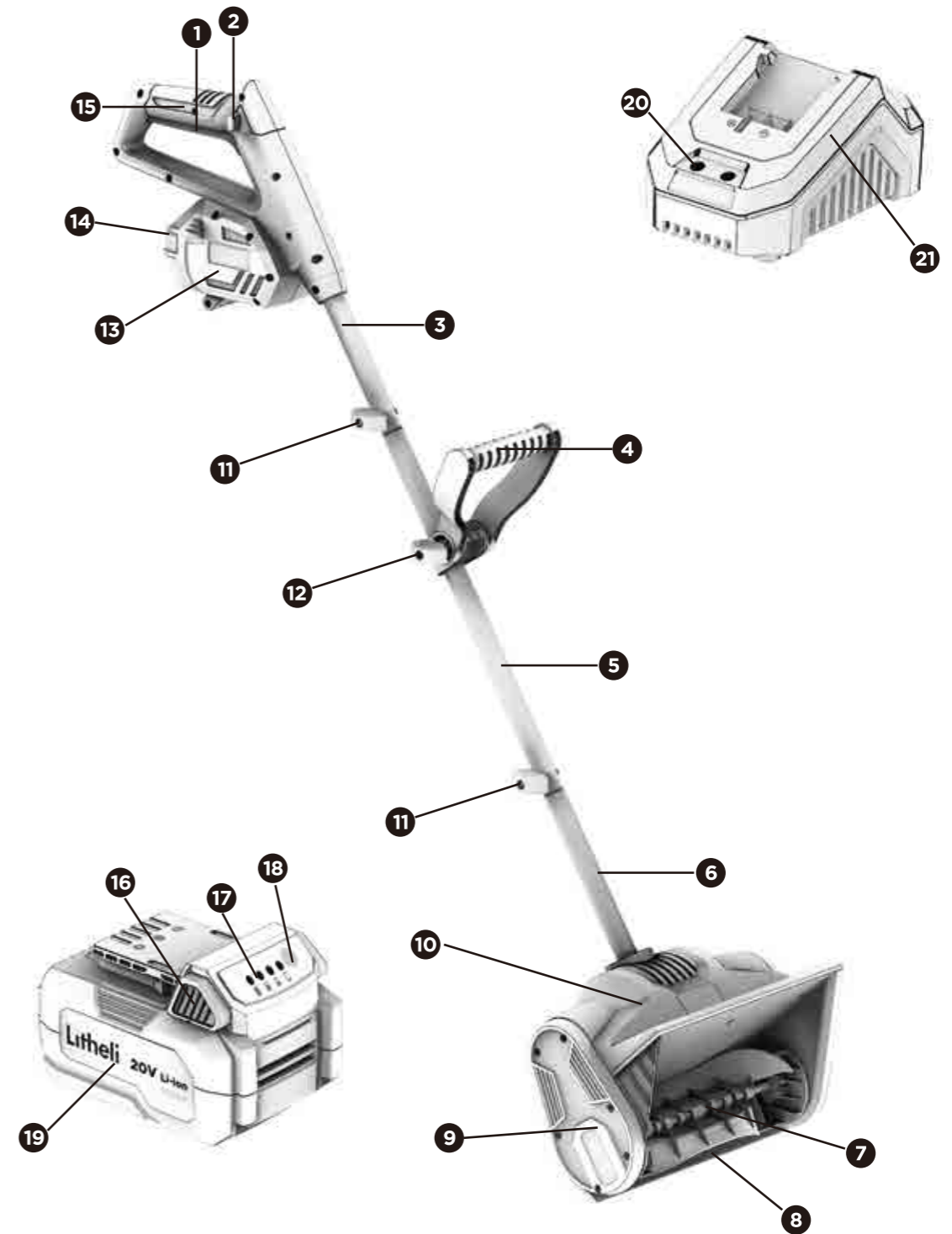
This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

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.

KNOW YOUR TOOL



1. On/Off Switch
2. Safety Lock-off Button
3. Upper Shaft
4. Auxiliary Handle
5. Middle Shaft
6. Lower Shaft
7. Auger

8. Scraper blade
9. Belt Drive Cover
10. Motor Housing
11. Shaft Locking Knob + Locking Bolt
12. Auxiliary Handle Locking Knob
13. Battery Compartment
14. Battery Pack Compartment Cover

15. Main Handle
16. Battery Pack Release Button
17. Battery Power Indicator Light
18. Battery Power Button
19. Battery Pack
20. Charging Indicator Light
21. Charger

TECHNICAL DATA

SKU No.	E1SS37013
Model No.	D10101150
Voltage	20V D.C.
Motor	Brushed
No-load speed	2000 ± 10% RPM
Maximum Throwing Distance	20ft (6 m)
Clearing width	12 in. (30 cm)
Machine weight (Without battery)	8.8 lbs
Battery pack	4.0Ah Li-ion (D01202900)
Charger	2.4A Charger (D02203100)
Charger Rating	Input: 120V-60Hz, 70W Output: Max. 21.2V D.C., 2.4A
Charging Time (Approx.)	120min

ACCESSORIES

Model No.	D10101150
Battery pack (D01202900)	1pc
Charger (D02203100)	1pc
Locking knob + locking bolt for auxiliary handle	1 set
Locking knob + locking bolt for main shaft	2 sets

CHARGING YOUR BATTERY

BATTERY INDICATOR

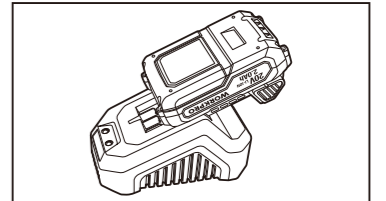
The battery pack is equipped with a push button for checking the charge level. Simply press the push button to read off the battery charge level from the LEDs of the battery indicator.

LED Indicator	Battery Charge Level/Working Conditions
4 lights on	75% < Charge Level ≤ 100%
3 lights on	50% < Charge Level ≤ 75%
2 lights on	25% < Charge Level ≤ 50%
1 light on	10% < Charge Level ≤ 25%
1 light flashes	Charge Level ≤ 10%

⚠ WARNING: Do not use the charger outdoors or expose it to wet or damp conditions. Water entering the charger will increase the risk of electric shock.

NOTICE: Lithium-ion battery packs are shipped partially charged. Before using it the first time, fully charge the battery pack.

- Connect the charger to the power supply (120V-60Hz). The red LED indicator will shine, indicating that the charger is working correctly.
- Align the raised ribs of the battery pack with the mounting slots in the charger; slide the battery pack onto the charger.
- When the battery is inserted properly, the green LED indicator will slowly flash to indicate that the battery is charging. The red light will turn off.
- When the green light stays on, the battery is fully charged.



NOTICE:

- The battery pack will fully charge if left on the charger, but it will not overcharge. If the battery pack remains on the charger for one month or more, it will perform self-maintenance and drop to less charge capacity. If this occurs, reinstall the battery pack on the charger to recharge it fully.
- A significantly reduced run time after fully charging the battery pack indicates that the batteries are near the end of their usable life and must be replaced.
- The charger may warm during charging. This is part of the normal operation of the charger. Charge in a well-ventilated area.

CHARGER LED INDICATOR TABLE

Use the table below to determine charger light patterns and possible causes. For all other issues, contact Litheli Customer Service.

Indication	Possible Reason
Red Light - On Green Light - Off	No load - There's no battery inserted in the charger.
Red Light - Off Green Light - Rapidly flashes	Low voltage charging - The battery is heavily discharged. It may take some time to recover to normal charging.
Red Light - Off Green Light - Slowly flashes	Normal charging - The battery is being charged.
Red Light - Off Green Light - On	Fully charged - The battery is fully charged and the charging process is finished.
Red Light - Slowly flashes Green Light - Off	Temperature abnormal - Charging process stopped and will restart when battery returns to normal temperature.
Red Light - Rapidly flashes Green Light - Off	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 Litheli Customer Service.

ASSEMBLY

⚠WARNING: To prevent accidental starting that could cause serious personal injury, always remove the battery pack from the tool when assembling parts.

⚠WARNING: Do not attempt to modify this tool or create accessories not recommended for use with this tool. Any such alteration or modification is misuse and could result in a hazardous condition leading to serious injury.

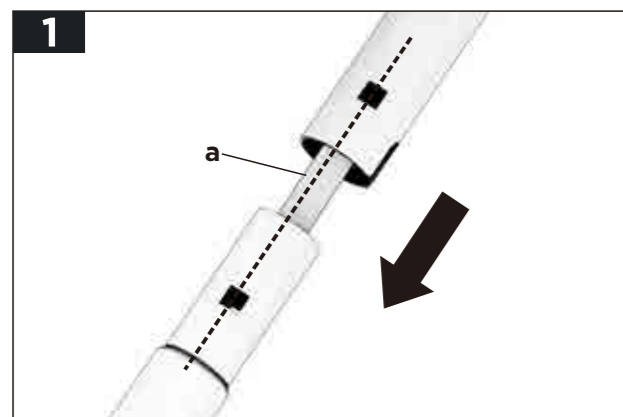
⚠WARNING: Do not attempt to start the tool before it has been completely assembled.

UNPACKING

- This product requires assembly.
- Remove all the items from the carton. Make sure that all items listed in the parts list are included.
- Inspect the product carefully to make sure that no breakage or damage occurred during shipping.
- Do not discard the packing material until you have carefully inspected and satisfactorily operated the tool.
- If any parts are damaged or missing, please return the tool to the place of purchase.

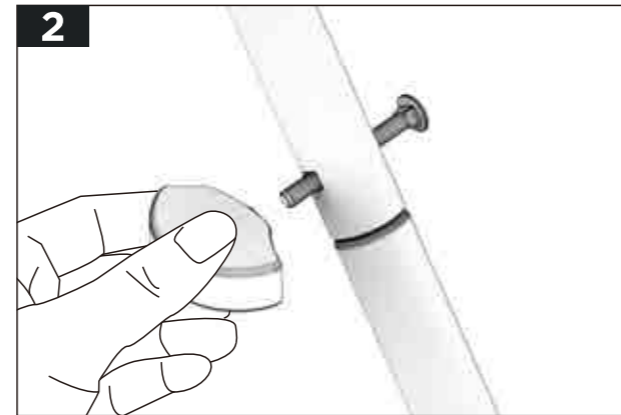
ASSEMBLING THE MAIN SHAFT

- The tool arrives with the shaft locking knobs and bolts detached and shafts loosened. You need to connect and lock the three shafts together. Slide the middle shaft onto the lower shaft. Line up the two square mounting holes on each tube. **Make sure the cable (a) is clear of the square holes.** (Fig. 1)

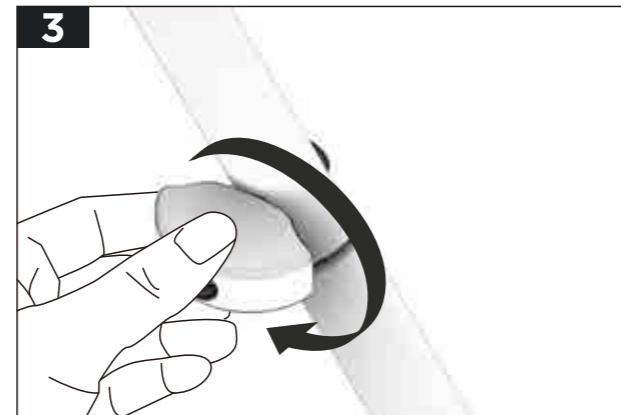


- Align and insert the shaft locking bolt through the aligned holes and into the end. Then insert the shaft locking knob into the end of the bolt from the other side. (Fig. 2)

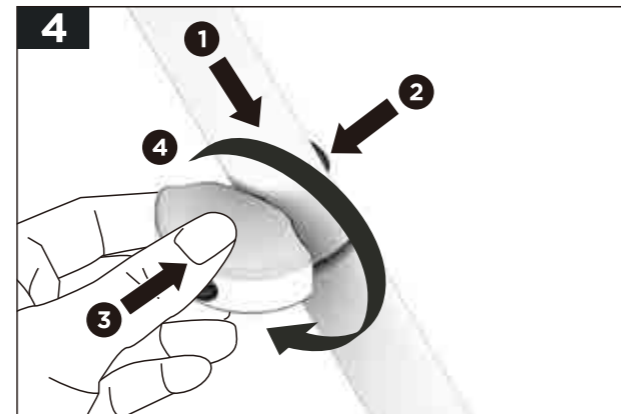
NOTICE: You may have to carefully move the cable inside the tube to one side if it blocks the path of the bolt.



- Turn the locking knob clockwise to tighten. Now the middle shaft is locked with the lower shaft. (Fig. 3)



- Slide the upper shaft onto the middle shaft. Line up the two square mounting holes on each tube. Align and insert the shaft locking bolt through the aligned holes and into the end. Then insert the shaft locking knob into the end of the bolt from the other side. Tighten the knob by turning it clockwise. (Fig. 4)



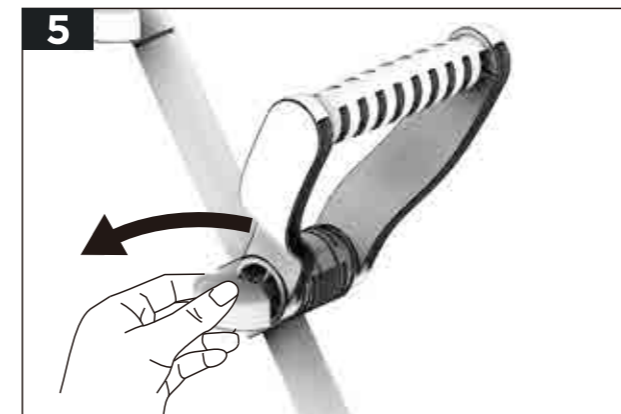
NOTICE: Pay attention to the main handle direction when installing the upper shaft to the middle shaft. The main handle should be the opposite direction with the snow outlet.

BEFORE OPERATION

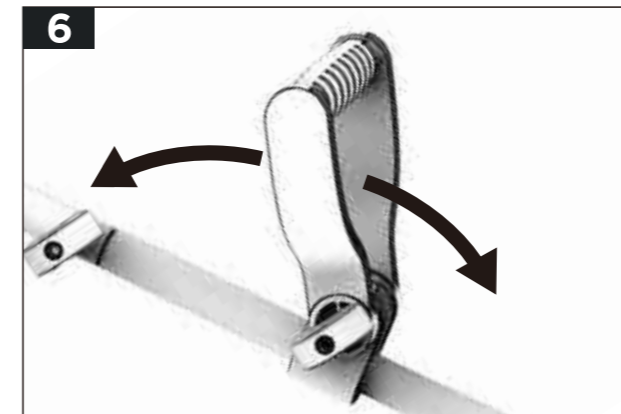
⚠WARNING: ALWAYS stop the machine and remove the battery pack before making any adjustment.

ADJUSTING THE AUXILIARY HANDLE

- Stop the machine and remove the battery pack. Wait until the auger comes to a complete stop. Turn the auxiliary handle locking knob counter-clockwise to loosen the handle. (Fig. 5)



- Rotate the auxiliary handle or adjust the height as needed to a comfortable position. (Fig. 6)



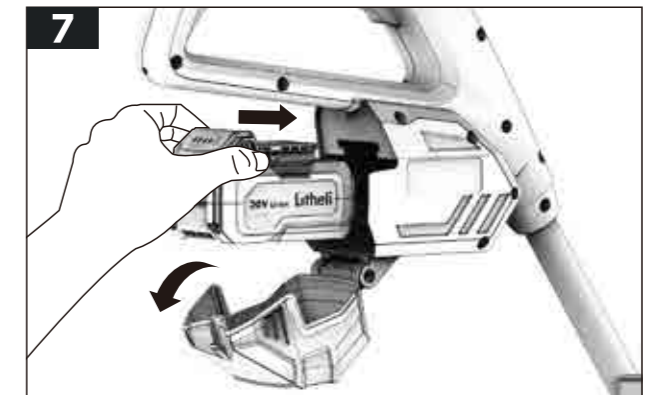
- Re-tighten the handle locking knob by turning it clockwise. Be sure to tighten securely in order to prevent the auxiliary handle from moving around or sliding.

INSTALLING OR REMOVING THE BATTERY PACK

To install:

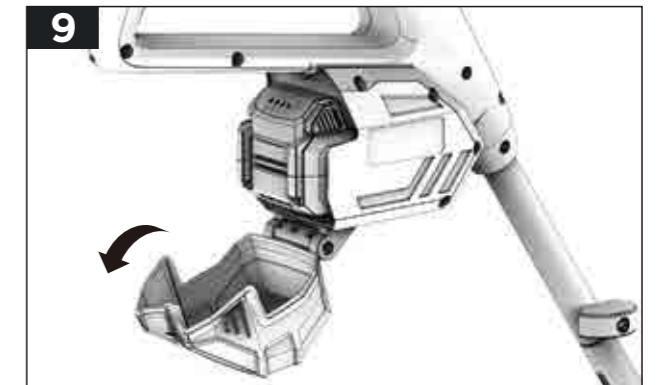
- Open the battery pack compartment cover, slide the battery pack into the port inside of the compartment. Push to the end with a sufficient force until it clicks to lock in place. (Fig. 7)
- Close the battery pack compartment cover. (Fig. 8)

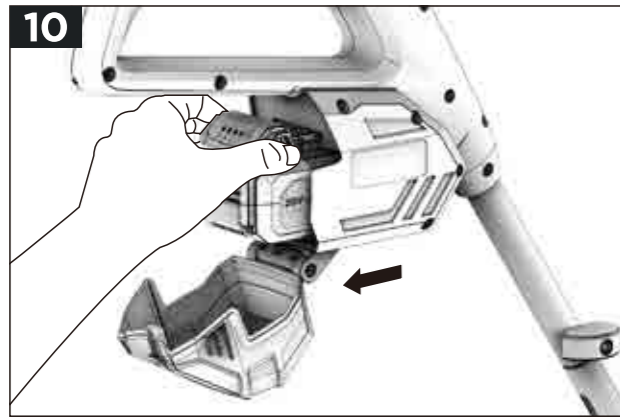
NOTICE: The battery can only be installed in one way.



To remove:

- Open the battery pack compartment cover.
- (Fig. 9) Depress the battery pack release button at both sides and hold them, then pull the battery pack out from the battery compartment. (Fig. 10)





OPERATION

INTENDED USE

This snow shovel is intended to be used to sweep snow from sidewalks, steps, patios, decks and other hard flat surfaces such as paved driveways. Use it only on hard, flat surfaces free of sand, stone and debris, wires or any other objects.

⚠WARNING: Do not allow familiarity with this product to make you careless. Remember that a careless fraction of a second is sufficient to inflict serious injury.

⚠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: Keep the area to be cleared free of stones, toys or other foreign objects that the auger might pick up and throw. Such items could be covered by snow and are easy to overlook, so be sure to conduct a thorough inspection of the area before beginning work.

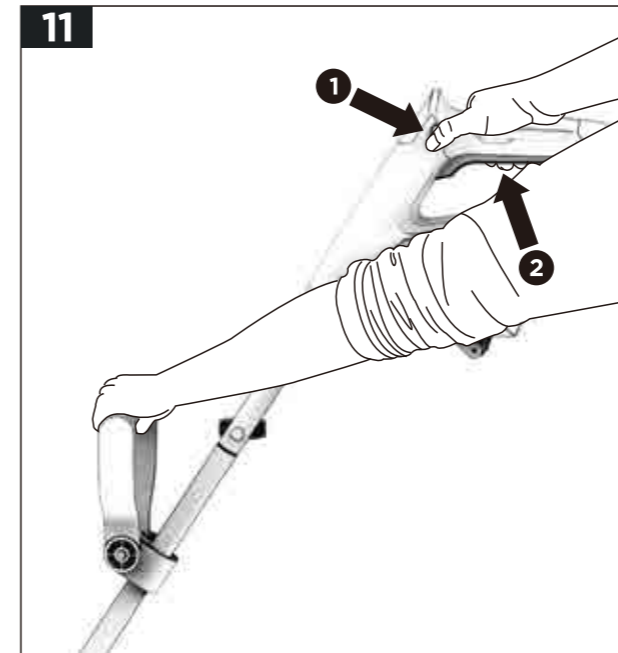
STARTING/STOPPING THE SNOW SHOVEL

NOTICE: Before each use, check and make sure all fasteners on the snow shovel (screws, bolts, etc.) are fully tightened. Check the scraper blade and the auger for wear and tear at regular intervals.

To start the snow shovel:

⚠WARNING: To avoid injury, do not squeeze the trigger while the snow shovel is inverted. When starting, make sure the operator and the snow shovel must be in a stable position.

Hold the snow shovel firmly with two hands, make sure the auger is not touching any surface. Depress and hold the safety lock-off button on the handle grip, and then squeeze the on/off switch and hold it. Once the machine is switched on, you can release the safety lock-off button. (Fig. 11)



To stop the snow shovel:

To stop the snow shovel, just release the on/off switch.

OPERATING TIPS

- Start the cordless snow shovel. Push the shovel forward at a comfortable rate, yet slow enough to clear the path completely. The clearing width of the snow shovel and the depth of snowfall should dictate your forward speed.
- Direct the snow discharge to the right or to the left by holding the cordless snow shovel at a slight angle.
- To remove snow most efficiently, throw the snow downwind and slightly overlap each swath.
- When clearing deeper drifts, hold the cordless snow shovel by the upper and auxiliary handles and use a swinging or sweeping motion. Remove up to 6 in. (15 cm) of snow with each pass and repeat as many times as needed.
- Remove the battery after using the cordless snow shovel. Hang the shovel so it will not be misplaced or damaged.

MAINTENANCE

⚠WARNING: When servicing, use only identical replacement parts. Use of any other parts may create a hazard or cause product damage. To ensure safety and reliability, all repairs should be performed by a qualified service technician.

⚠WARNING: To prevent serious personal injury, remove the battery pack from the tool before servicing, cleaning, changing add-on attachments or removing material from the unit.

⚠WARNING: For the user's safety, worn or damaged parts must be replaced. Replace with original replacement parts only.

CLEANING

Regular cleaning and maintenance of your snow shovel will ensure efficiency and prolong the life of the product. After each use, take apart and clean out the ice and debris from the ventilator and its slots, the auger and the scraper blade. Your snow shovel requires no additional lubrication. Wipe clean with a soft cloth soaked with water and a soft brush. Never wet or spray water on the machine. Do not use detergents or solvents as these could cause irreparable damage to the snow shovel. Chemicals can destroy the plastic parts.

Clearing a Clogged Auger

Hand contact with the rotating auger inside the motor housing is the most common cause of injury associated with cordless snow shovels. Never use your hands to clear a clogged auger.

To clear the auger:

- Shut the motor off and remove the battery.
- Wait 10 seconds to be sure the auger have come to a complete stop.
- Always use a clean-out tool, not your hands, to free the auger.

REPLACING THE AUGER

It is recommended to contact Litheli Customer Service or an authorized agency approved by Litheli for replacing the auger.

REPLACING THE DRIVE BELT

It is recommended to contact Litheli Customer Service or an authorized agency approved by Litheli for replacing the belt.

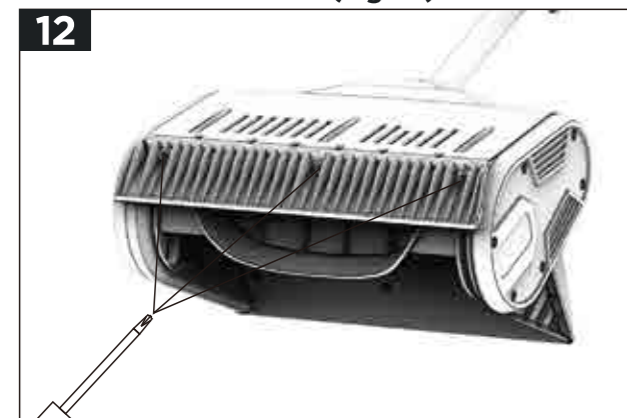
REPLACING THE SCRAPER BLADE

⚠WARNING: Make sure to turn off the machine and remove the battery before performing any maintenance task on your cordless snow shovel.

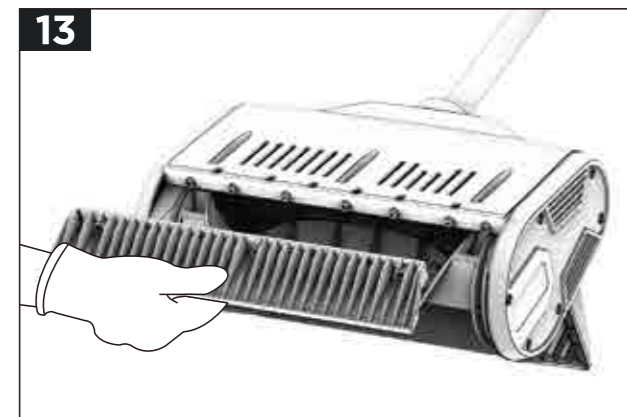
The scraper blade is a wear item and should be replaced when necessary. A worn scraper blade can cause extreme vibration and damage the auger.

NOTICE: To replace the scraper blade, you need to prepare a Torx key set.

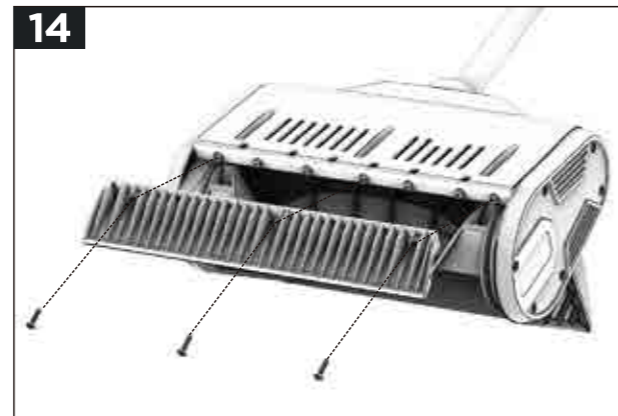
- a. Place the snow shovel on the ground or on a work bench. Turn the snow shovel over. Using a suitable torx key (not supplied) to remove the 3 screws that secure the scraper blade to the base of the unit. (Fig. 12)



- b. Remove the old scraper blade. (Fig. 13)



- c. Install the new scraper blade and fasten it securely to the housing with the 3 screws. (Fig. 14)



STORAGE

CORDLESS SNOW SHOVEL:

- a. Examine the cordless snow shovel thoroughly for worn, loose or damaged parts. Should you need to repair or replace a part, contact Litheli Customer Service for assistance.
- b. Remove the battery from the cordless snow shovel before storing.
- c. Allow to dry thoroughly.
- d. To protect the snow shovel from corrosion when storing for long periods, lightly oil the metal parts.
- e. Store the cordless snow shovel indoors in a locked, dry, well-ventilated place out of the reach of children to prevent unauthorized use or damage.

BATTERY AND CHARGER:

- a. Do not expose your battery pack or charger to water, rain or allow them to get wet. This could permanently damage the charger and the battery pack. 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.
- b. Store the battery pack 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).

TROUBLESHOOTING

Problem	Possible Cause	Solution
Motor does not start	Battery not installed well.	Make sure the battery is fully inserted.
	Battery depleted.	Charge the battery.
	Lock-off button not depressed.	Depress the lock-off button fully and then squeeze the on/off switch.
	Battery too cold.	Remove battery from snow shovel. Place battery on charger and allow to charge for 10 minutes. Remove from charger and install in snow shovel for use.
Poor performance	Drive belt worn or damaged.	Contact the service center for replacing.
	Auger worn or damaged.	Contact the service center for replacing.
	Discharge blocked.	Switch off the snow shovel, remove the battery pack, and clean the discharge.
Abnormal vibrations	Drive belt worn or damaged.	Contact the service center for replacing.
	Auger worn or damaged.	Contact the service center for replacing.
	Scraper blade worn.	Replace the scraper blade.
The motor is on but the auger does not turn.	Driver belt damaged.	Contact the service center for replacing.
The snow shovel leaves a thin layer.	Scraper blade worn.	Replace the scraper blade.

WARRANTY

Litheli WARRANTY POLICY FOR 20V SERIES PRODUCT

- For Litheli 20V SERIES products (bare tool only) used for personal and household purposes, 3-year limited standard warranty + 2-year limited extended warranty available upon product registration;
- For Litheli 20V SERIES battery packs and chargers used for personal and household purposes, 1-year limited standard warranty + 2-year limited extended warranty available upon product registration;

NOTICE: Litheli offers a Warranty Extension Service for 20V SERIES products. Litheli 20V SERIES product Warranty Extension is available only upon product registration. Register your 20V SERIES product on Litheli OFFICIAL website to activate a 2-year limited extended warranty.

Please contact Litheli customer service at service@litheli.com any time you have questions or warranty claims.

LIMITED WARRANTY SERVICE

FOR FIVE (2-year extended warranty included) YEARS from the date of original retail purchase, this Litheli product (battery not included) is warranted against defects in material or workmanship.

FOR THREE (2-year extended warranty included) YEARS from the date of original retail purchase, the Litheli battery pack and charger are warranted against defects in material or workmanship.

Defective product will receive free repair or be exchanged.

1. This warranty applies only to the original purchaser from an authorized Litheli shop and may not be transferred.
2. This warranty only covers Litheli products, battery packs and chargers used for residential purposes.
3. This warranty does not cover the consumables, such as, but not limited to, wheels, blades, trimmer heads, spools, guide bars, saw chains, nozzles, filters, mop pads, augers and straps.
4. This warranty does not cover the damage resulting from modification, alteration or unauthorized repair.
5. This warranty only covers defects arising under normal usage and does not cover any malfunction, failure or defect resulting from misuse, abuse (including overloading of the product beyond capacity, and immersion in water or other liquid), accidents, neglect, lack of proper installation, improper maintenance or storage.
6. This warranty does not cover normal deterioration of the exterior finish, including but not limited to scratches, dents, paint chips, and any corrosion or discoloring by heat, abrasive and chemical cleaners.
7. This warranty does not require Litheli to repair or replace a Litheli lithium-ion battery/ies if the battery/ies present/s shortened runtime/working hour, reduced capacity, and/or weakened performance due to normal chemical age.

PRODUCT REGISTRATION

Please register your Litheli product at [Litheli OFFICIAL website](#).

For better warranty services, we recommend that you register the product within 30 days from the date of the original retail purchase.

WARRANTY CLAIM

For warranty claims, please contact Litheli customer service. You will need to submit a registration document or proof of purchase in the form of a valid receipt that displays date and place of purchase. Replacement tools do not come with a new warranty. The warranty of the products will continue from the date of the original purchase.