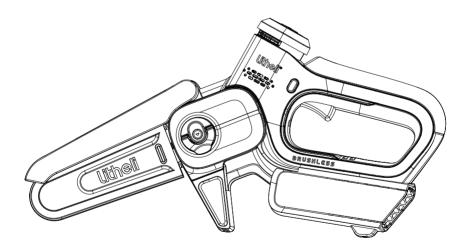
# lithelitcol

Operating Manual

# U20 Brushless Mini Chainsaw

SKU: U20MC01-0A120



### 

To reduce the risk of injury, the user must read and understand the user manual before using this product. Save this manual for future reference.

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## **READ ALL INSTRUCTIONS!**

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.

### **Important Safety Instructions**

### **A** WARNING:

Only use the accessories that are provided with this product or the accessories approved by Litheli. Using other accessories might increase the risk of injury. Follow the instructions in this manual to properly use the accessories.

### **WARNING**:

This product can expose you to chemicals including lead and Di(2-ethylhexyl) phthalate (DEHP) which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

The appliance is only to be used with the power supply unit provided with the appliance.

#### **GENERAL POWER TOOL SAFETY WARNINGS**

### **WARNING**:

**Read all safety warnings, instructions, illustrations and specifications provided with this power tool.** Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

The term "power tool" in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

#### 1.WORK AREA SAFETY

- **a.Keep the work area clean and well-lit.** Cluttered or dark areas invite accidents.
- **b.Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks that may ignite dust or fumes.
- **c.Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

#### 2.ELECTRICAL SAFETY

- a.Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce the risk of electric shock.
- **b.Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
- **c.Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- d.Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep the cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- e.When operating a power tool outdoors, use an extension cord suitable for outdoor use. The use of a cord suitable for outdoor use reduces the risk of electric shock.
- f.If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. The use of an RCD reduces the risk of electric shock.

#### **3.PERSONAL SAFETY**

- a.Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
- **b.Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust masks, non-skid safety shoes, hard hats, or hearing protection used for appropriate conditions will reduce personal injuries.
- c.Prevent unintentional starting. Ensure the Trigger is in the off-position before connecting to the power source, picking up or carrying the tool. Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.
- **d.Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- e.Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- f.Dress properly. Do not wear loose clothing or jewelry. Keep your hair and clothing away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- g.lf devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. The use of dust collection can reduce dust-related hazards.
- h.Do not let familiarity gained from the frequent use of tools allow you to become complacent and ignore tool safety principles. A careless action can cause severe injury within a fraction of a second.

#### 4.POWER TOOL USE AND CARE

- **a.Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- **b.Do not use the power tool if it cannot be turned on/off by the switch.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- c.Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.

- d.Store idle power tools out of the reach of children and do not allow pers ons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
- e.Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- **f.Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g.Use the power tool, accessories and tool bits, etc. in accordance with these instructions, taking into account the working conditions and the work to **be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.
- h.Keep handles and grasping surfaces dry, clean and free from oil and grease. Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.

#### **5.BATTERY TOOL USE AND CARE**

- **a.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.
- **b.Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
- c.When the battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
- d.Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts the eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.
- **e.Do not use a battery pack or tool that is damaged or modified.** Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.

#### **f.Do not expose a battery pack or tool to fire or excessive temperature.** Exposure to fire or temperature above 130 °C may cause an explosion.

**g.Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions.** Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

#### 6.Service

- **a.Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.
- **b.Never service damaged battery packs.** Service of battery packs should only be performed by the manufacturer or authorized service providers.

#### MINI CHAINSAW SAFETY WARNINGS

- 1.Keep all parts of the body away from the saw chain when the mini chainsaw is operating. Before you start the chainsaw, make sure the saw chain is not contacting anything. A moment of inattention while operating chainsaws may cause entanglement of your clothing or body with the saw chain.
- **2.Always hold the mini chainsaw with your hand firmly.** Holding the mini chainsaw with a reversed hand configuration increases the risk of personal injury and should never be done.
- **3.Hold the power tool by insulated gripping surfaces only, because the saw chain may contact hidden wiring.** Saw chains contacting a live wire may make exposed metal parts of the power tool live and could give the operator an electric shock.
- **4.Wear safety glasses and hearing protection. Further protective equipment for the head, hands, legs and feet is recommended.** Adequate protective clothing will reduce personal injury by flying debris or accidental contact with the saw chain.
- **5.Do not operate a mini chainsaw in a tree.** Operation of a mini chainsaw while up in a tree may result in personal injury.
- **6.Always keep proper footing and operate the mini chainsaw only when standing on a fixed, secure, and level surface.** Slippery or unstable surfaces such as ladders may cause a loss of balance or control of the chainsaw.
- **7.When cutting a limb that is under tension be alert for spring back.** When the tension in the wood fibers is released the spring-loaded limb may strike the operator and/or throw the mini chainsaw out of control.

- **8.Use extreme caution when cutting brush and saplings.** The slender material may catch the saw chain and be whipped toward you or pull you off balance.
- 9.Carry the mini chainsaw by the front handle with the mini chainsaw switched off and away from your body. When transporting or storing the mini chainsaw always fit the guide bar cover. Proper handling of the mini chainsaw will reduce the likelihood of accidental contact with the moving saw chain.
- **10.Follow instructions for lubricating, chain tensioning and changing accessories.** Improperly tensioned or lubricated chains may either break or increase the chance of kickback.
- **11.Keep handles dry, clean, and free from oil and grease.** Greasy, oily handles are slippery causing loss of control.
- 12.Cut wood only. Do not use the mini chainsaw for purposes not intended. For example: do not use the mini chainsaw for cutting plastic, masonry or non-wood building materials. Use of the mini chainsaw for operations different than intended could result in a hazardous situation.
- **13.Do not attempt to fall a tree until you have an understanding of the risks and how to avoid them.** Serious injury could occur to the operator or bystanders while falling a tree.

#### CAUSES AND OPERATOR PREVENTION OF KICKBACK:

Kickback may occur when the nose or tip of the guide bar touches an object, or when the wood closes in and pinches the saw chain in the cut.

Tip contact in some cases may cause a sudden reverse reaction, kicking the guide bar up and back toward the operator.

Pinching the saw chain along the top of the guide bar may push the guide bar rapidly back toward the operator.

Either of these reactions may cause you to lose control of the saw which could result in serious personal injury. Do not rely exclusively upon the safety devices built into your saw. As a mini chainsaw user, you should take several steps to keep your cutting jobs free from accident or injury.

Kickback is the result of tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below:

• Maintain a firm grip, with thumbs and fingers encircling the mini chainsaw handles, with both hands on the saw and position your body and arm to allow you to resist kickback forces. Kickback forces can be controlled by the operator if proper precautions are taken. Do not let go of the chainsaw.

• Do not overreach and do not cut above shoulder height. This helps prevent unintended tip contact and enables better control of the mini chainsaw in unexpected situations.

• Only use replacement bars and chains specified by the manufacturer. Incorrect replacement bars and chains may cause chain breakage and/or kickback.

• Follow the manufacturer's sharpening and maintenance instructions for the saw chain. Decreasing the depth gauge height can lead to increased kickback.

#### **RESIDUAL RISKS**

Even with the intended use of the appliance, there is always a residual risk, which can not be prevented.

According to the type and construction of the appliance, the following potential hazards might apply:

- Contact with exposed saw teeth of the saw chain (cutting hazards)
- Access to the rotating saw chain (cutting hazards)
- Unforeseen, abrupt movement of the guide bar (cutting hazards)
- Flung out of parts from the saw chain (cutting/injection hazards)
- Flung out of parts of the workpiece
- Skin contact with the oil
- Loss of hearing, if no required ear protection is used during work

#### SAVE THESE INSTRUCTIONS

Instructions concerning the proper techniques for basic limbing, and cross-cutting.

#### 1. Limbing a tree

Limbing is removing the branches from a fallen tree. When limbing leave larger lower limbs to support the log off the ground. Remove the small limbs in one cut as illustrated in Figure 1. Branches under tension should be cut from the bottom up to avoid binding the pruning saw.



Fig.1

#### 2.Bucking a log

Bucking is cutting a log into lengths. It is important to make sure your footing is firm and your weight is evenly distributed on both feet. When possible, the log should be raised and supported by the use of limbs, logs or chocks. Follow the simple directions for easy cutting.

When the log is supported along its entire length as illustrated in Figure 2, it is cut from the top

(over a buck), avoid contacting the ground as this will greatly reduce the chain sharpness.

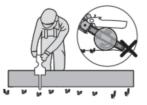


Fig.2

When the log is supported on one end, as illustrated in Figure 3, cut 1/3 the diameter from the underside (under buck) (1). Then make the finished cut by over-bucking (2) to meet the first cut.

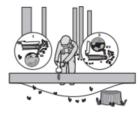
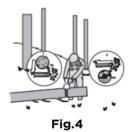


Fig.3

When the log is supported on both ends, as illustrated in Figure 4, cut 1/3 the diameter from the top (overbuck) (1). Then make the finished cut by under-bucking (2) the lower 2/3 to meet the first cut.



When bucking on a slope always stand on the uphill side of the log, as illustrated in Figure 5. When "cutting through", to maintain complete control release the cutting pressure near the end of the cut without relaxing your grip on the mini chainsaw handles. Don't let the chain contact the ground. After completing the cut, wait for the saw chain to stop before you move the pruning saw. Always stop the motor before moving from tree to tree.

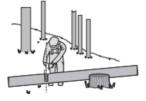


Fig.5

#### SAFETY WARNINGS FOR BATTERY PACK

- 1.Do not modify or attempt to repair the battery pack. Do not dismantle, open or shred the battery pack.
- 2.Do not expose a battery pack or appliance to fire or excessive temperature. Exposure to fire or temperature above 265°F (130°C) may cause an explosion.
- 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 the battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects that can make a connection from one terminal to another. Shortening the battery terminals together may cause burns or fire.
- 4.Do not subject the battery pack to mechanical shock.
- 5.Observe the plus (+) and minus (-) marks on the battery back and equipment and ensure correct use.
- 6.Keep the battery pack out of the reach of children.
- 7.Always purchase the battery pack recommended by the device manufacturer for the equipment.
- 8.Keep the battery pack clean and dry.
- 9.Wipe the battery pack terminals with a clean dry cloth if they become dirty.
- 10.The 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 the 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.The battery pack gives its best performance when operated at normal room temperature (20 °C  $\pm$  5 °C).
- 14.Use only the battery pack in the application for which it was intended. Do not use a battery pack or appliance that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.
- 15.Remove the battery pack from the equipment when not in use.
- 16.Dispose of it properly.
- 17.Do not handle the charger, including the charger plug, or charger terminals with wet hands.
- 18.Do not charge the battery pack outdoors, in rainy, or 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 the 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 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 not substitutes for proper accident prevention measures.

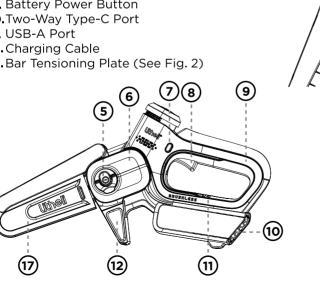
The following signal words and meanings are intended to explain the levels of risk associated with this product.

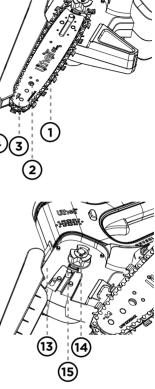
Symbol	Description	Symbol	Description
	To reduce the risk of injury, user must read instruction manual.		Do not expose to rain.
$\triangle$	WARNING		Wear ear protection.

	Wear eye protection.	Wear a dust mask.
	Wear head protection.	Wear protective gloves.
	Wear protective footwear.	Do not burn the battery pack.
	Avoid bar nose content. Tip contact can cause the guide bar to move suddenly upward and backward, which can cause serious injury.	Indoor use only. Only use and charge the battery indoors.
Li-lon	Li-lon battery. This product has been marked with a symbol relating to a 'separate collection' for all battery packs. It will then be recycled or dismantled to reduce the impact on the environment. Battery packs can be hazard- ous to the environment and human health since they contain hazardous substances.	Waste electrical prod- ucts must not be disposed of with house- hold waste. Please recycle where facilities exist. Check with your local authorities or retailer for recycling advice.

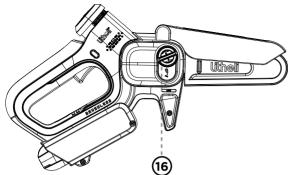
### **Know Your Tool**

- 1. Chain
- 2. Guide Bar
- 3. Chain Direction Symbol
- 4. Chain Guard
- 5. Chain Cover Locking Knob
- 6. Chain Cover
- 7. Lock-off Button
- 8. On/Off Switch
- 9. Rear Handle
- 10. Battery Compartment
- 11. Battery Pack Release Button
- 12. Bumper Spike
- 13. Bar Pad
- 14. Drive Sprocket
- 15. Fastening Bar Bolt
- 16. Oil Tank Cap
- 17. Bar and Chain Sheath
- 18. Battery Power Indicator Light
- 19. Battery Power Button
- 20. Two-Way Type-C Port
- 21. USB-A Port
- 22. Charging Cable
- 23. Bar Tensioning Plate (See Fig. 2)

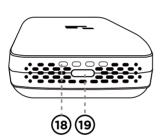


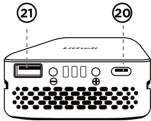


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### **Technical Data**

Model No.	U20MC01-0A120
Voltage	20V <b></b>
Bar Length	6" (150 mm)
Chain Speed	24.6 ft/s ±10% (7.5 m/s ±10%)
Oil Tank Capacity	≥50 mL
Chain Pitch	0.3" (7.6 mm)
Chain Gauge	0.043" (1.1 mm)
Tool Weight (Battery Excluded)	2.98 lbs (1.35 kg)

### Accessories

SKU	U20MC01-0A120
Battery Pack	1pc
Charging Cable	1pc
Bar and Chain Sheath	1pc

### **Charging Your Battery**

### **WARNING:**

Charge the battery in a dry and ventilated room, far away from combustibles and ignition sources.

NOTICE: The charger is not supplied with this appliance. You should prepare a charger to work with the supplied charging cable for charging. Make sure the charger meets the charging requirements of the battery pack. If you have any questions, please contact Litheli Customer Service for assistance. NOTICE: Lithium-ion batteries are shipped partially charged. Before using it

for the first time, fully charge the battery.

NOTICE: Please refer to the Charging Your Battery section of the battery pack manual for details of the indicated lights display and charging considerations.

### 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 no assembly.
- As you may need to disassemble and reassemble the product for cleaning or storage purposes, please follow the steps below for guidance on how to safely disassemble and reassemble the product.
- 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 occurs 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.

#### BAR AND CHAIN ASSEMBLY

1.Place the chainsaw on a suitable flat surface with the chain cover facing upwards. Remove the chain cover by lifting the pull ring on the Chain Cover Locking Knob and rotate it counterclockwise to loosen it.

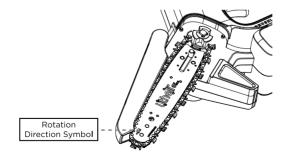


Fig. 1

2.Slide the chain in the slot around the guide bar, making sure the chain is installed in the correct rotation direction. (Fig. 2)



Fig. 2

3.Fit the chain onto the drive sprocket, and make sure the fastening bar bolt on the bar pad fits into the keyway of the opening on the guide bar, and the tension pin on the bar pad fits into the groove (A) on the guide bar. (Fig. 3, 4)

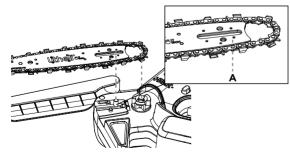


Fig. 3

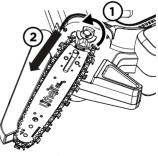


Fig. 4

- 4.Assure all parts are seated properly and hold the chain and guide bar in a level position. Make sure the drive links are fully seated in the drive sprocket (Fig. 5), avoiding a kink as shown in (Fig. 6). If a kink occurs, pick up the chain at the guide bar just ahead of the kink and then pull it out.
- NOTICE: The chain should rotate freely and be free of kinks.

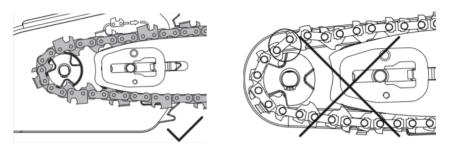


Fig. 5

Fig. 6

5.Fit the chain cover and tighten it by turning the chain cover locking knob clockwise until it is tight. Push down the pull ring to lock it in place. (Fig.7)

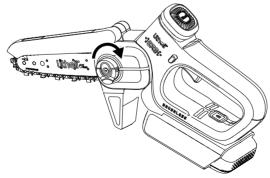


Fig. 7

#### LUBRICATION

### WARNING:

The mini chainsaw is not filled with oil. It is essential to fill it with oil before use. Never operate the mini chainsaw without chain oil or at an empty level, as this will result in extensive damage to the product.

**NOTICE:** Chain life and cutting capacity depend on optimum lubrication. Fill the oil tank with a proper amount of oil before each use, and the oil tank will automatically oil the chain.

#### CHECKING OIL LEVEL

Check the oil level from the oil level window before each start and regularly during operation. (Fig. 8) You should fill the oil tank when the oil level reaches the MIN mark.

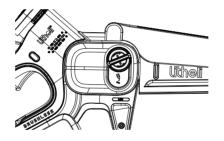


Fig. 8

#### FILLING OIL TANK

#### **WARNING:** Remove the battery pack before filling the oil tank.

- 1.Set the mini chainsaw on any suitable surface with the oil tank cap facing upward.
- 2.Clean the area around the oil tank cap with a cloth and unscrew the cap by turning it counterclockwise. (Fig. 9)

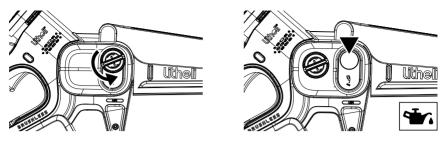


Fig. 9

Fig. 10

3.Add bar and chain oil until the oil tank is full. (Fig. 10)

4.To avoid dirt or debris entering the oil tank, refit the oil tank cap and tighten it by turning clockwise.

### **A** WARNING:

To allow venting of the oil tank, small breather channels are provided between the oil tank cap and the strainer, to prevent leakage, and ensure the tool is left in a horizontal position when not in use.

It is important to use only the recommended standard bar and chain oil to avoid damage to the chainsaw. This can be found at the location where you purchased this saw or at your local hardware store. Never use recycled/old oil. Use of non-approved oil will void the warranty.

Do not swallow. If swallowed, call a physician immediately. Keep out of reach of children. Store away from heat or open flame.

#### INSTALLING OR REMOVING THE BATTERY PACK

#### - To install:

Push the battery into the battery compartment at the end of the handle, in the correct direction and position (The recessed logo on the battery should face inward, while the battery power indicator light should face outward.), and push the battery to the end. (See Fig. 11)

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

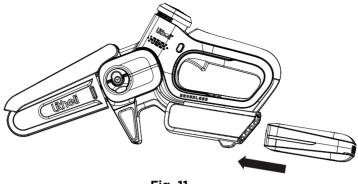


Fig. 11

#### - To remove:

Press the battery release button, and the battery will pop out from the compartment automatically. Hold the battery and remove it from the tool. (See Fig. 12)

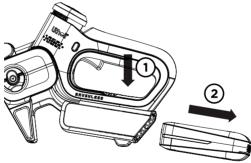


Fig. 12

### Operation

#### Intended use

The mini chainsaw is intended for cutting only wood and branches up to a diameter corresponding to the length of the pruning saw guide bar.

- The mini chainsaw must be used at ground level or from a suitable platform that is completely stable and secure.
- During use, the mini chainsaw should be held firmly.
- The mini chainsaw is intended for outdoor use only.
- The mini chainsaw is not intended for any other use.
- Mounting of parts on the mini chainsaw is authorized only for original or manufacturer-approved spare parts (chain guides or saw chains for example) as well as for authorized chain guide / saw chain combinations as indicated in the manual.
- The user is responsible for any accident resulting from improper use or unauthorized modification of the mini chainsaw.

### 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.

### **A** 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.

### **A** WARNING:

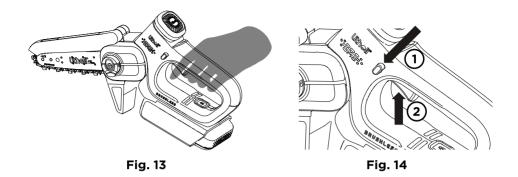
To avoid serious injury and property damage, inspect the area before using the blower. Remove all hard objects from the work area. Do not blow debris in the direction of people, animals, or property. Use both hands when operating the blower.

#### STARTING/STOPPING THE CHAINSAW

#### - To turn on the mini chainsaw:

ATTENTION: Check the battery packs before using your cordless tool. Only use the battery pack listed in the accessories section.

1.Firmly grasp the rear handle with your hand. (See Fig. 13) 2.Press the lock-off button, then fully press the on/off switch and hold in this position. With the mini chainsaw running, the lock-off button can be released. (See Fig. 14)



#### - To stop the chainsaw:

For switching off, release the on/off switch.

#### **CUTTING INSTRUCTIONS**

#### IMPORTANT: Is the oil tank filled? Refill oil when the oil level is low.

(1)Installing the battery packs into the tool.

(2)Make sure the section of the log to be cut is not laying on the ground. This will keep the chain from touching the ground as it cuts through the log. Touching the ground while the chain is moving is dangerous and will dull the chain. (3)Grip the saw firmly with your hand. Thumbs and fingers must wrap around saw handles.

(4)Make sure your footing is firm. Keep feet shoulder-width apart. Distribute your weight evenly on both feet.

(5)When ready to make a cut, push the lock-out button completely in with the right thumb and squeeze the trigger. This will turn the saw on. Releasing the trigger will turn the saw off. Make sure the saw is running at full speed before starting a cut.

(6)When starting a cut, slowly place the moving chain against the wood. The wood should be as close to the saw body as possible. Hold the saw firmly in place to avoid possible bouncing or skating (sideways movement).

(7)Guide the saw using light pressure and do not put excessive force on the saw, letting the saw do its work. The motor will overload and can burn out. It will do the job better and safer at the rate for which it was intended.

(8)Remove the saw from a cut with the saw running at full speed. Stop the saw by releasing the on/off switch. Make sure the chain has stopped before setting the saw down.

(9)Keep practicing on scrap logs in a secure working area until you are comfortable, using a fluid motion and a steady cutting rate.

#### **Kickback Safety Devices On This Saw**

This saw has a low-kickback chain and reduced kickback Guide Bar. Both items reduce the chance of kickback. However, kickback can still occur with this saw. The following steps will reduce the risk of kickback.

- Use both hands to grip the saw while the saw is running. Use a firm grip. Thumbs and fingers must wrap around saw handles.
- Keep all safety items in place on the saw. Make sure they work properly.
- Do not overreach or cut above shoulder height.
- Keep solid footing and balance at all times.
- Stand slightly to the left side of the saw. This keeps your body from being in direct line with chains.
- Do not let Guide Bar's nose touch anything when the chain is moving.
- Never try cutting through two logs at the same time. Only cut one log at a time.
- Do not bury the Guide Bar nose or try plunge cut (boring into wood using the guide bar nose).
- Watch for shifting of wood or other forces that may pinch the chain.
- Use extreme caution when reentering a previous cut.
- Use only the low-kickback chain and guide bar that are supplied with this mini chainsaw or recommended.
- Never use a dull or loose chain. Keep the chain sharp with proper tension.

#### HOW TO USE SAW SAFELY

- 1. Use the mini chainsaw only with a secure footing.
- 2. Hold the mini chainsaw on the right-hand side of your body (See Fig. 15).

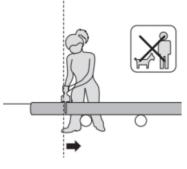


Fig. 15

3. The chain must be running at full speed before it makes contact with the wood.

4. Use the Bumper Spikes to secure the saw onto the wood before starting to cut.

5. Use the Bumper Spikes as a leverage point while cutting. (See Fig. 16)

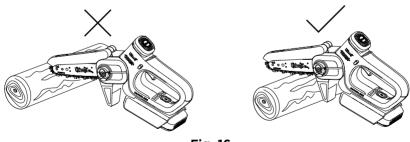


Fig. 16

6.Do not operate the mini chainsaw with arms fully extended, attempt to saw areas that are difficult to reach, or stand on a ladder while sawing (See Fig. 17).

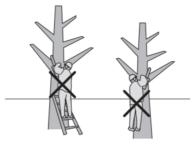


Fig. 17

### WARNING:

Never use the mini chainsaw above shoulder height.

#### **CUTTING WOOD UNDER TENSION (SEE FIG. 18)**

### A WARNING:

#### When cutting a limb that is under tension, use extreme caution. Be alert for wood springing back. When wood tension is released, the limb could spring back and strike the operator, causing severe injury or death.

When sawing logs supported on both ends, start the cut from above(Y) about 1/3 of the diameter into the log (over a buck) and then finish the cut (Z) from below, to avoid contact of the mini chainsaw with the ground. When sawing logs supported on only one end, start the cut from below (Y) about 1/3 of the diameter into the log (under a buck) and finish the cut from above (Z) to avoid log splitting or jamming of the chainsaw.

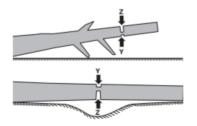


Fig. 18

### Maintenance

### A 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.

### WARNING:

To prevent serious injury from appliance failure, do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

#### **GENERAL MAINTENANCE TIPS**

- 1.Do not attempt to repair the tool unless you have the proper tools and instructions for disassembly and repair of the tool.
- 2.Check bolts, screws and fasteners at frequent intervals for proper tightness to ensure that the tool is in safe working condition.
- 3.BEFORE EACH USE, inspect the general condition of the appliance. Check for:
- loose hardware,
- misalignment or binding of moving parts,
- cracked or broken parts,
- and any other condition that may affect its safe operation.

#### CLEANING

Regular cleaning and maintenance of your mini chainsaw will ensure efficiency and prolong the life of the product.

- After each use, wipe the external surfaces of the appliance with a clean damp cloth and mild soap.
- Never wet or spray water on the tool.
- Do not use any detergents or solvents as these could cause irreparable damage to the chainsaw. Chemicals can destroy plastic parts.

#### SAW MAINTENANCE

Follow the maintenance instructions in this manual.

Proper cleaning of saw and chain and Guide Bar maintenance can reduce chances of kickback. Inspect and maintain the saw after each use. This will increase the service life of your saw.

**NOTE:** Even with proper sharpening, the risk of kickback can increase with each sharpening.

#### MAINTENANCE AND STORAGE OF CHAINSAW

1.Remove the battery pack

- when not in use.
- before moving from one place to another.
- before servicing.
- before changing accessories or attachments, such as saw chain and guard.

2.Inspect the mini chainsaw before and after each use.

Check the saw closely if the guard or other part has been damaged. Check for any damage that may affect operator safety or the operation of the saw. Check for alignment or binding of moving parts. Check for broken or damaged parts. Do not use a mini chainsaw if damage affects safety or operation. Have damage repaired by the authorized service center.

3. Maintain the mini chainsaw with care.

- Never expose saw to rain or direct moisture.
- Keep the chain sharp, clean, and lubricated for better and safer performance.
- Follow the steps outlined in this manual to sharpen the chain.
- Keep the handle dry, clean, and free of oil and grease.
- Keep all screws and nuts tight.

4.When servicing, use only identical replacement parts.5.When not in use, always store the chainsaw

- in a high or locked place, out of children's reach,
- in a dry place,
- and with Bar and Chain Sheath in place.

#### **Bar Maintenance**

To maximize bar life, the following bar maintenance is recommended. The bar rails that carry the chain should be cleaned before storing the tool or if the bar or chain appears to be dirty.

The rails should be cleaned every time the chain is removed.

#### To clean the Bar rails:

1.Remove the chain cover and bar and chain. (See section BAR AND CHAIN ASSEMBLY.)

2.Using a wire brush, screwdriver or similar tool, clear the residue from the inner groove of the bar (See Fig. 19).

3. Make sure to clean oil passages thoroughly.

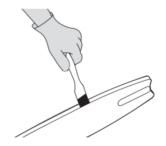


Fig. 19

#### Conditions that require chain and guide bar maintenance:

- Saw cuts to one side or at an angle.
- Saw has to be forced through the cut.
- Inadequate supply of oil to the bar and chain.

Check the condition of the guide bar each time the chain is sharpened. A worn guide bar will damage the chain and make cutting difficult.

After each use, remove the battery pack, and clean all sawdust from the guide bar and sprocket hole.

When the rail top is uneven, use a flat file to restore square edges and sides.



Fig. 20

Replace the guide bar when the groove is worn, the guide bar is bent or cracked, or when excess heating or burring of the rails occurs. If replacement is necessary, use only the guide bar specified for your saw in the repair parts list.

#### **Replacing Bar & Chain**

Replace the chain when cutters are too worn to sharpen or when the chain stops. Only use the replacement chain noted in this manual. Inspect the guide bar before sharpening the chain. A worn or damaged guide bar is unsafe, and will damage the chain. It will also make cutting harder.

#### SHARPENING SAW CHAIN

### **WARNING**:

Remove the battery pack before servicing. Severe injury or death could occur from electrical shock or body contact with a moving chain. The cutting edges on the chain are sharp. Use protective gloves when handling chains. Keep the chain sharp. Your saw will cut faster and more safely. A dull chain will cause undue sprocket, Guide Bar, chain, and motor wear. If you must force the chain into wood and cutting creates only sawdust with few large chips, the chain is dull.

### Storage

- 1.Examine the cordless mini chainsaw thoroughly for worn, loose or damaged parts. Should you need to repair or replace a part, contact Litheli Customer Service for assistance.
- 2.Remove the battery. Allow the motor to cool and clean the mini chainsaw before storing it.
- 3.Store the cordless mini chainsaw indoors in a locked, dry, well-ventilated place out of the reach of children to prevent unauthorized use or damage.

### Troubleshooting

#### 

Switch off the tool and remove the battery packs before any troubleshooting.

Problem	Possible causes	Remedy
	Battery is not installed well.	Check the battery is fully inserted.
	Battery is depleted.	Charge the battery.
The motor does not start.	Battery is too cold.	Remove battery from the machine. Place battery on charger and allow to charge for 10 minutes. Remove from charger and install in the machine for use.
	On/off switch is defective.	Contact the service center for replacing.

	Overheating	Place the tool in a cool, venti- lated place to cool it down.
Mini chainsaw operates intermittently.	Applying too much pressure while cutting.	Applying relatively less pressure while cutting.
	Loose connection.	
	Internal wiring defective.	Contact Litheli Customer Service.
	On/Off switch defective.	
	No oil in the reservoir.	Refill oil.
Dry chain.	The vent in the oil tank cap is clogged.	Clean cap.
	Oil passage clogged.	Clean oil passage outlet.
Chain/chain bar overheats.	No oil in the reservoir.	Refill oil.
	The vent in the oil tank cap is clogged.	Clean cap.
	Oil passage clogged.	Clean oil passage outlet.
	Dull chain.	Sharpen the chain or replace it.
Mini chainsaw rips, vibrates, and does not saw properly.	Dull chain.	Sharpen the chain or replace it.
	The chain is worn out.	Replace chain.
	Chain teeth are facing in the wrong direction.	Reassemble with chain in the correct direction.

### WARRANTY

#### Litheli WARRANTY POLICY FOR U20 PRODUCT

- 3-year limited warranty on Litheli outdoor power equipment and power tools for personal, household use.
- 1-year limited warranty on Litheli battery packs and chargers for personal, household use.

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

#### LIMITED WARRANTY SERVICE

FOR THREE YEARS from the date of original retail purchase, this Litheli outdoor power equipment and power tools are warranted against defects in material or workmanship. The defective product will receive free repair or will be exchanged.

FOR ONE YEAR from the date of original retail purchase, the Litheli battery pack and charger are warranted against defects in material or workmanship. Defective products 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.The warranty period for any Litheli product, battery pack and charger used for residential only.
- 3. The warranty period for routine maintenance parts, such as, but not limited to, blades, trimmer heads, chain bars, saw chains, belts, scraper bars, blower nozzles, and all other Litheli accessories is 90 days for residential purposes.
- 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 or lack of proper installation, and 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, or to any corrosion or discoloring by heat, abrasive and chemical cleaners.

#### WARRANTY CLAIM

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

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