

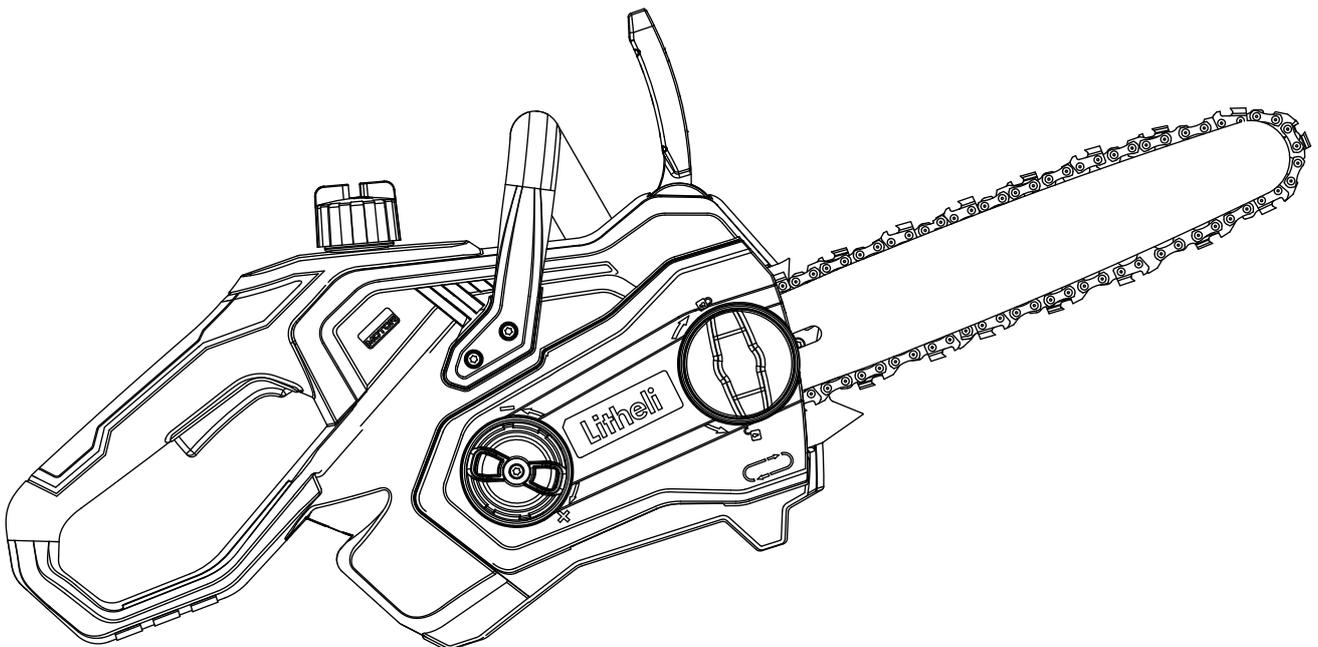
# Operator's Manual

**Save This Manual** Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

# Litheli

## 40V BATTERY POWERED CHAIN SAW

U1CS21113



Visit our website at: <http://www.litheli.com>

BC

### **⚠ WARNING**

Read this material before using this product.  
Failure to do so can result in serious injury.  
**SAVE THIS MANUAL.**

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please contact us: [WWW.LITHELI.COM](http://WWW.LITHELI.COM).

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No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Litheli.  
Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein.  
Tools required for assembly and service may not be included.

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# Litheli

## WARNING SYMBOLS AND DEFINITIONS

	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
	Addresses practices not related to personal injury.

## Important Safety Instructnios

### General Power Tool Safety Warnings

#### WARNING

Read all safety warnings and all instructions.

Failure to follow the warnings and instructions 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 battery-operated (cordless) power tool.

### Work Area Safety

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

### Electrical Safety

Do not expose power tools to rain or wet conditions.

Water entering a power tool will increase the risk of electric shock.

## Personal Safety

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- 1. 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 inattention while operating power tools may result in serious personal injury.
- 2. Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- 3. Prevent unintentional starting. Ensure the Trigger is in the off- position before connecting to power source, picking up or carrying the tool.**  
Carrying power tools with your finger on the Trigger or energizing power tools that have the Trigger on invites accidents.
- 4. Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- 5. Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.
- 6. If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.
- 7. Only use safety equipment that has been approved by an appropriate standards agency.** Unapproved safety equipment may not provide adequate protection. Eye protection must be ANSI-approved and breathing protection must be NIOSH-approved for the specific hazards in the work area.

## Power Tool Use and Care

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- 1. 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.
- 2. Do not use the power tool if the Trigger does not turn it on and off.**  
Any power tool that cannot be controlled with the Trigger is dangerous and must be repaired.
- 3. Disconnect the battery pack 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.
- 4. Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- 5. Maintain power tools. 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.
- 6. Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- 7. 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.

## Battery Tool Use and Care

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- 1. 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.
- 2. Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
- 3. 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 a fire.
- 4. 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.

## Service

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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.

## Chain Saw Safety Warnings

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- 1. Keep all parts of the body away from the saw chain when the chain saw is operating. Before you start the chain saw, make sure the saw chain is not contacting anything.**  
A moment of inattention while operating chain saws may cause entanglement of your clothing or body with the saw chain.
- 2. Always hold the chain saw with your right hand on the rear handle and your left hand on the front handle.** Holding the chain saw 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 or its own cord.**  
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 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 chain saw in a tree.**  
Operation of a chain saw while up in a tree may result in personal injury.
- 6. Always keep proper footing and operate the chain saw only when standing on fixed, secure and level surface.** Slippery or unstable surfaces such as ladders may cause a loss of balance or control of the chain saw.
- 7. When cutting a limb that is under tension be alert for spring back.** When the tension in the wood fibres is released the spring loaded limb may strike the operator and/or throw the chain saw 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 chain saw by the front handle with the chain saw switched off and away from your body. When transporting or storing the chain saw always fit the guide bar cover.** Proper handling of the chain saw 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 chain may either break or increase the chance for 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 chain saw for purposes not intended. For example: do not use chain saw for cutting plastic, masonry or non-wood building materials.**  
Use of the chain saw for operations different than intended could result in a hazardous situation.
- 13. DANGER! People with pacemakers should not use chain saws.** Chain saws produce strong electromagnetic fields that can cause pacemaker interference or pacemaker failure. People with pacemakers should consult their physician(s) for advice.
- 14. 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 towards the operator.  
Pinching the saw chain along the top of the guide bar may push the guide bar rapidly back towards 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 chain saw 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:
  - a. Maintain a firm grip, with thumbs and fingers encircling the chain saw 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 chain saw.

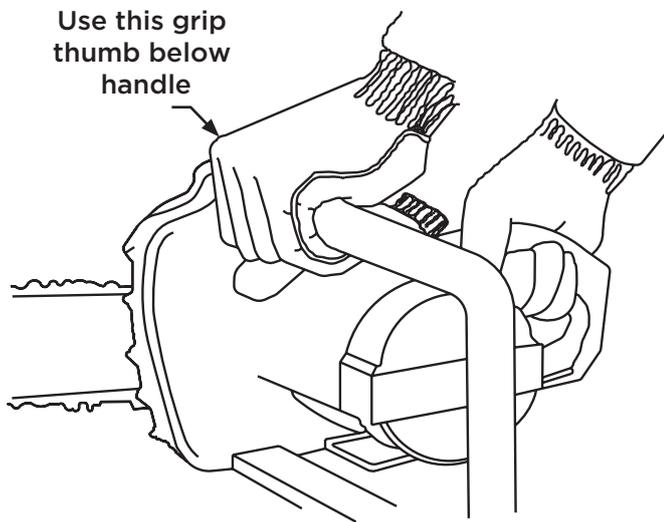


Figure A: Holding the Chain Saw

- b. **Do not overreach and do not cut above shoulder height.** This helps prevent unintended tip contact and enables better control of the chain saw in unexpected situations.
  - c. **Only use replacement bars and chains specified by the manufacturer.** Incorrect replacement bars and chains may cause chain breakage and/or kickback.
  - d. **Follow the manufacturer's sharpening and maintenance instructions for the saw chain.** Decreasing the depth gauge height can lead to increased kickback.
15. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Litheli for a replacement.

16. Avoid unintentional starting. Prepare to begin work before turning on the tool.
17. Do not leave the tool unattended when the Battery Pack is connected. Turn off the tool, and remove the Battery Pack before leaving.

18.  The battery Charger gets hot during use. The Charger's heat can build up to unsafe levels and create a fire hazard if it does not receive adequate ventilation, due to an electrical fault, or if it is used in a hot environment. Do not place the Charger on a flammable surface. Do not obstruct any vents on the Charger.

**Especially avoid placing the Charger on carpets and rugs; they are not only flammable, but they also obstruct vents under the Charger.**

Place the Charger on a stable, solid, nonflammable surface (such as a stable metal workbench or concrete floor) at least 1 foot away from all flammable objects, such as drapes or walls. Keep a fire extinguisher and a smoke detector in the area. Frequently monitor the Charger and Battery Pack while charging.

19. This product is not a toy. Keep it out of reach of children.
20. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

## Lithium Battery Safety Warnings



**LITHIUM BATTERIES STORE A LARGE AMOUNT OF ENERGY AND WILL VENT FIRE OR EXPLODE IF MISTREATED:**



- 1. Keep Battery Pack dry.
- 2. **DO NOT DO ANY OF THE FOLLOWING TO THE BATTERY PACK:**
  - a. Open,
  - b. Drop,
  - c. Short-circuit,
  - d. Puncture,
  - e. Incinerate,
  - f. Expose to temperatures greater than 104°F.
- 3. Charge Battery Pack only according to its Charger's instructions.
- 4. Inspect Battery Pack before every use; do not use or charge if damaged.

## Battery Charger Safety

1. SAVE THESE INSTRUCTIONS - This manual contains important safety and operating instructions for Battery Charger Model U1CS21113.
2. Before using Battery Charger, read all instructions and cautionary markings on Battery Charger, Battery, and product using Battery.
3. CAUTION - To reduce risk of injury, charge only li-ion type rechargeable batteries. Other types of batteries may burst causing personal injury and damage.
4. Do not charge or use tool in rain, or in wet locations.
5. Do not use battery-operated tool in rain.
6. Remove or disconnect battery after use, before servicing, cleaning or removing material from the tool.
7. Do not dispose of battery in a fire. The cell may explode. Check with local codes for possible disposal instructions.
8. Do not open or mutilate the battery. Released electrolyte is corrosive and may cause damage to the eyes or skin. It may be toxic if swallowed.
9. Exercise care in handling batteries in order not to short the battery with conducting materials such as rings, bracelets, and keys. The battery or conductor may overheat and cause burns.

## Vibration Safety

This tool vibrates during use.

**Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibration-related injury:**

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
2. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.
3. Wear suitable gloves to reduce the vibration effects on the user.
4. Use tools with the lowest vibration when there is a choice.
5. Include vibration-free periods each day of work.
6. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.
7. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.



**SAVE THESE INSTRUCTIONS.**

## Specifications

Charger Input Rating	120VAC / 60 Hz
Charger Output Rating	36VDC / 3.3A
Battery Rating	40VDC / 2.5Ah / 90Wh
Battery Type	40V Litheli Li-Ion
Chain Speed	11m/s
Saw Chain	Oregon 14 in

**Note:** This electric chainsaw is for cutting small logs and for lighter weight trimming jobs. A more powerful chainsaw may be needed for heavy duty use.

## Grounding

### ⚠️ WARNING



#### TOPREVENT ELECTRIC SHOCK AND DEATH FROM INCORRECT GROUNDING:

Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the charger. Do not use the charger if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

## Extension Cords

**Note:** Extension cords must not be used with this item's Charger.

## Symbology

	Double Insulated		WARNING marking concerning Risk of Explosion. Do not puncture, short, or open battery packs and do not charge damaged battery packs.
	WARNING marking concerning Risk of Eye Injury. Wear ANSI-approved safety goggles with side shields.		WARNING marking concerning Risk of Kickback. Contact of the guide bar tip with any object should be avoided.
	Read the manual before set-up and/or use.		WARNING marking concerning Risk of Kickback. Tip contact can cause the guide bar to move suddenly upward and backward, which can cause serious injury.
	WARNING marking concerning Risk of Fire. Do not cover Charger ventilation ducts. Charge on fireproof surface only.		WARNING marking concerning Risk of Loss of Control. Do not operate the chainsaw with only one hand.
	WARNING marking concerning Risk of Electric Shock. Properly connect Charger's power cord to appropriate outlet.		WARNING marking concerning Risk of Loss of Control. Always use two hands when operating the chainsaw.
	Never throw the rechargeable battery into water.		WARNING marking concerning Saw Chain Orientation. Cutters must face in direction of rotation.
	Risk of explosion! Never throw batteries onto a fire.		Charge level indication.
	Rechargeable battery contains lithium! Do not dispose of in trash bin! - Discharge the rechargeable battery by operating the tool at idle until the motor stops. - Take the rechargeable battery out of the tool.		Indication of the noise level LWA in dB.
	Do not expose the battery to sunlight for a long time and do not place it on radiators (max. 45 ° C).		Charge level indication.
	Dispose of the batteries at a collection point for old batteries, from where they are taken to environmentally friendly recycling.		

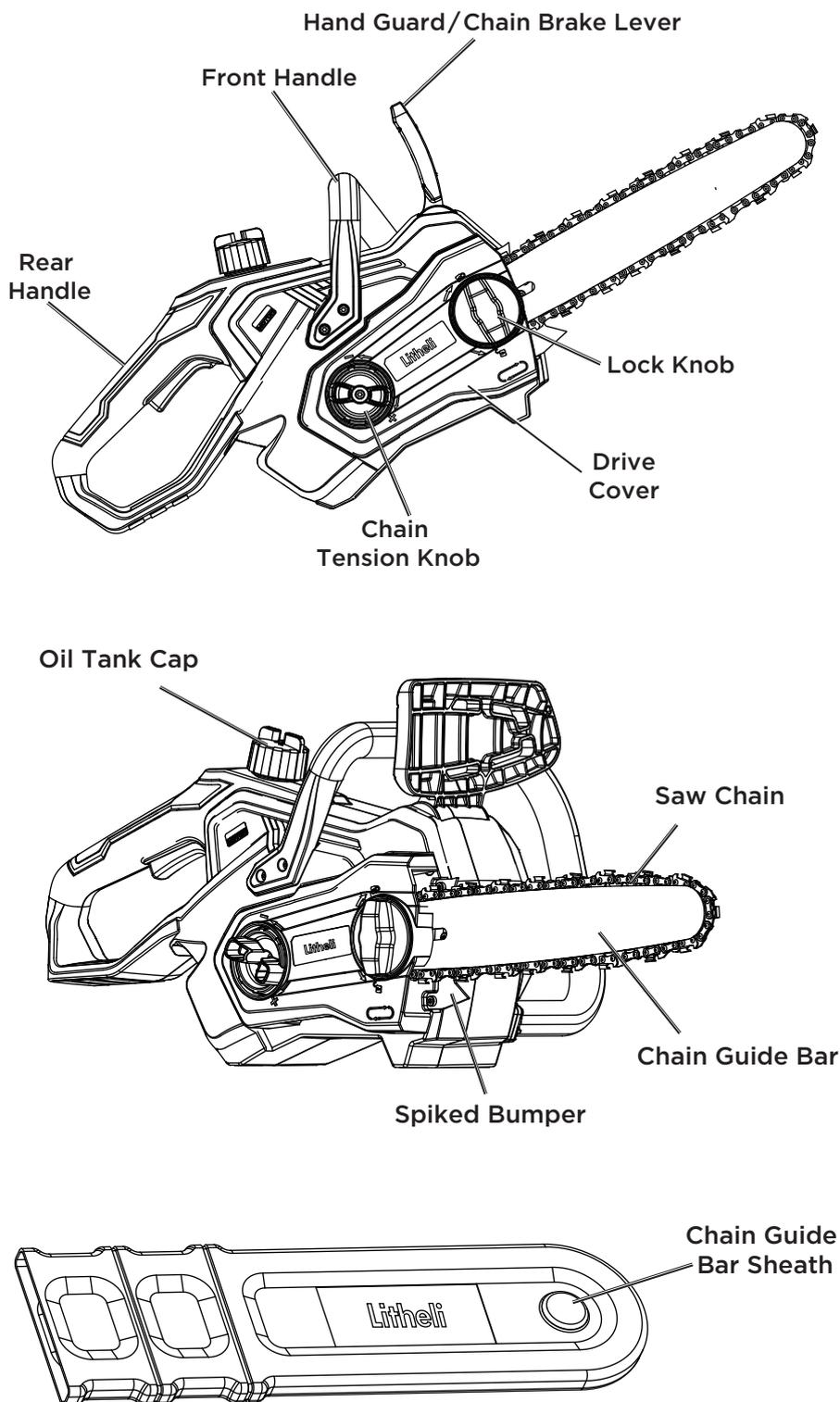
## Setup - Before Use:



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

**Note:** For additional information regarding the parts listed in the following pages, refer to Parts List and Diagram on page 22.

## Functions



# Charging the Battery Pack

**NOTE:** The Battery Pack comes partly charged.

Charge the Battery Pack prior to first use, ideally at least 60 minutes.

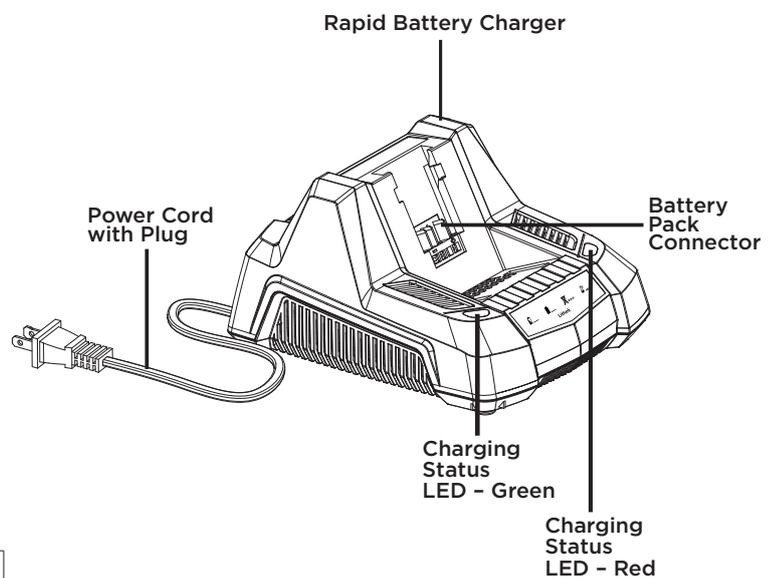
Always pull out the Power Plug of the Charger from the mains before removing or connecting the Battery Pack to the charger.

Never charge the Battery Pack when the ambient temperature is below 10 °C or above 40 °C.

Rest the Charger for at least 15 minutes between successive charging sessions.

If no Battery Pack is inserted into the Charger and the charger is connected to mains, the Charging Status LED flashes green.

1. Align the Battery Pack to the rails of the Charger and slide it in. Ensure it clicks noticeably in place.
2. Connect the Power Plug of the Charger with the mains. The Charging Status LED lights up red. The continuously lit green Charging Status LED indicates that the charging process is complete.
3. Disconnect the Power Plug of the Charger from the mains and remove the Battery Pack from the charger.
4. Attach the Battery Pack back to the product (see "Installing and Removing Battery Pack").



## Charging status LEDs

Green LED flashes without battery pack	Charger ready
Green LED lights up with battery pack	Battery pack fully charged
Red LED lights up with battery pack	Battery pack charging
Red and green LEDs flashing	Battery pack defect
Red and green LEDs continuously lit	Battery pack too cold or warm

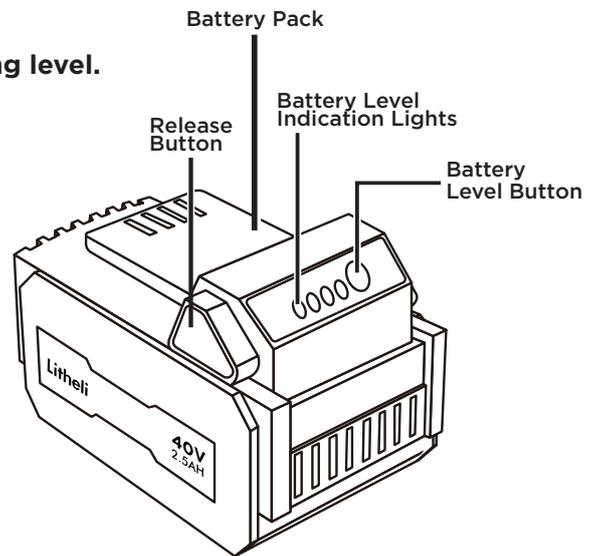
## Checking the Battery Charging Level

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**NOTE:** Press the Battery Level Button to check the charging level of the Battery Pack. The charging level will be shown on the Battery Level Indication Lights.

**Charge the Battery Pack before operation when it is at 25% or low battery charging level.**

LED status	Charging level
● ○ ○ ○	Charging level too low
● ● ○ ○	Between 5% and 50%.
● ● ● ○	Between 50% and 80%.
● ● ● ●	More than 80%.



## Safety Device Explanation

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1. Hand Guard-A guard that protects your hand on the Front Handle from the Saw Chain.
2. Chain Brake-A mechanical braking device designed to quickly stop the Chainsaw and Chain in the event of kickback. If kickback occurs, this safety feature is activated when the operator's hand strikes the Hand Guard/Chain Brake Lever and pushes it forward, stopping the Chain.
3. Switch Lockout-A movable stop that prevents the unintentional operation of the Trigger until manually activated.
4. Low-Kickback Chain-A Chain that complies with the kickback performance requirements of ANSI B175.1-1991 when tested on a representative sample of chainsaws.

# Guide Bar and Saw Chain Installation and Adjustment

## **⚠WARNING**

**TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:**

Make sure that the Trigger is in the off-position and remove the Battery Pack before performing any procedure in this section.

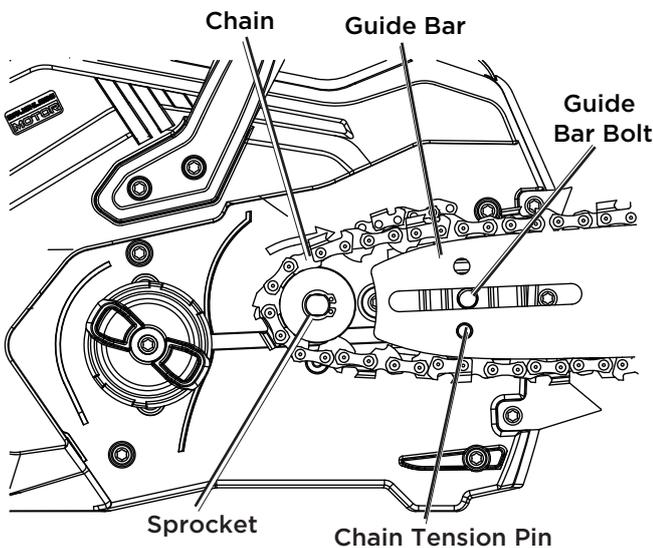
**Note:** New Saw Chains often need to be tensioned several times during first use. Check a new Saw Chain's tension often when first using.

Follow the directions in the following sections for installing the Guide Bar and Saw Chain, for checking and adjusting Saw Chain tension, and for replacing the Saw Chain when necessary.

## Guide Bar/Saw Chain Installation

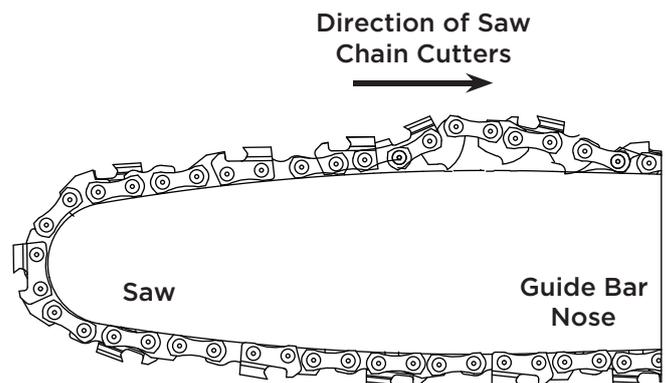
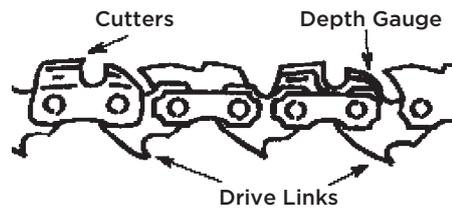
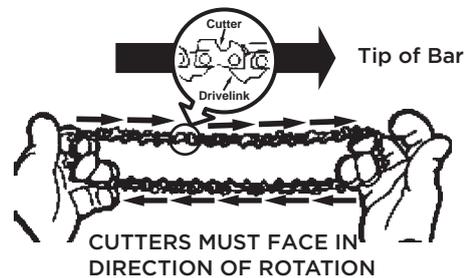
**CAUTION!** Wear heavy-duty work gloves when handling Saw Chain.

1. **BEFORE FIRST USE:** Soak Saw Chain in bar and chain oil (purchased by yourself) overnight.
2. Loosen the Lock Knob and remove the Drive Cover from the Saw.
3. Place the slotted end of the Chain Guide Bar over the Guide Bar Bolt and insert the Chain Tension Pin into the lower hole in the Guide Bar. Refer to Figure B.



**Figure B: Installing Guide Bar and Chain**

4. Place the Saw Chain around the Sprocket and over the Guide Bar. Make sure the Cutters of the Saw Chain are facing away from the Chainsaw along the top edge of the Guide Bar. Fit the Chain links into the groove around the Guide Bar.
5. Replace the Drive Cover and tighten the Lock Knob so that the Cover is snug, but not tight. Tension the Saw Chain following the steps in Adjusting Saw Chain Tension on page 11.



## Checking Saw Chain Tension

1. Before using, check the Saw Chain tension.
2. While wearing heavy-duty gloves, use your index finger and thumb to carefully grab the Saw Chain in the middle section under the Chain Guide Bar.
3. Pull the Saw Chain away from the Guide Bar.
4. The Saw Chain should snap back against the Guide Bar. The Chain should fit snugly in the groove of the Chain Guide Bar, yet you should still be able to slide the chain along the Chain Guide Bar by hand.
5. There should be no sagging between the Guide Bar and Saw Chain on the underside of the Guide Bar.

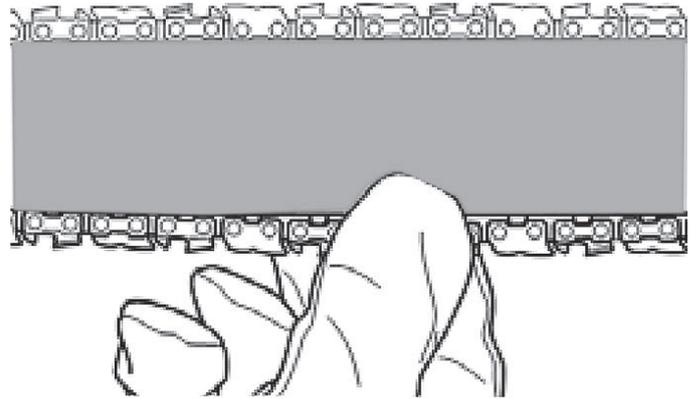


Figure C: Checking Saw Chain Tension

## Adjusting Saw Chain Tension

1. Loosen the Lock Knob on the Drive Cover several turns.
2. Turn the Chain Tension Knob clockwise to increase chain tension and counterclockwise to decrease tension.
3. Tighten the Lock Knob on the Drive Cover.
4. Check the Saw Chain tension again following steps 2 through 5 under Checking Saw Chain Tension above. If needed, repeat the adjusting steps to achieve the correct tension.

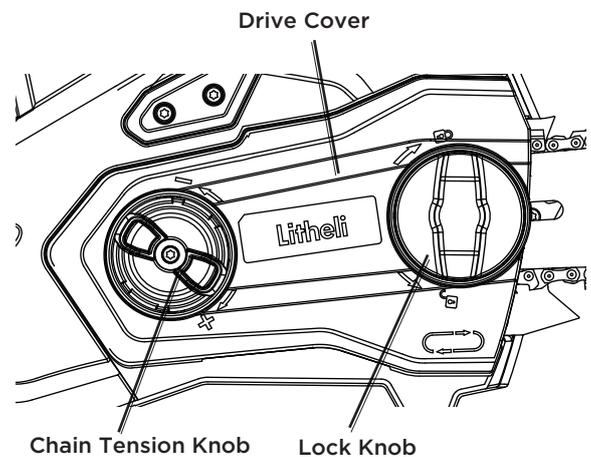


Figure D: Adjusting Saw Chain Tension

## Replacing the Saw Chain

### **⚠WARNING**

1. Soak the new Saw Chain overnight in Bar and Chain Oil (Buy it locally).
2. Loosen the Lock Knob on the Drive Cover, then turn the Chain Tension Knob counterclockwise until the Saw Chain is loose.
3. Unthread the Lock Knob and remove the Drive Cover.
4. Push the Chain Guide Bar towards the Sprocket to further loosen the Saw Chain.
5. Remove the Saw Chain from the Sprocket, then the Guide Bar.

**NOTE:** Check the condition of the Sprocket when replacing the Chain. The Sprocket should be replaced if it shows signs of wear or is damaged. If needed, have the Sprocket replaced and the bearings greased by a qualified technician.

**NOTE:** Check the condition of the Chain Guide Bar when replacing the Chain. Refer to Chain Guide Bar Care on page 19.

6. Flip the Chain Guide Bar over before mounting the new Saw Chain. This will ensure that the Chain Guide Bar wears evenly over time.
7. Place the new Saw Chain around the Sprocket and over the Guide Bar. Make sure the Cutters of the Saw Chain are facing away from the Chainsaw along the top edge of the Guide Bar. Fit the Chain links into the groove around the Guide Bar.
8. Replace the Drive Cover and tighten the Lock Knob so that the Cover is snug, but not tight. Tension the Saw Chain following the steps in Adjusting Saw Chain Tension above.

## Operating Instructions



Read the **ENTIRE IMPORTANT SAFETY INFORMATION** section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

### Charging Battery Pack

1. Place Battery Charger on a dry, flat, fireproof surface indoors.

**NOTE:** Allow battery to cool completely before charging.

2. Examine Battery Pack. **Do not charge a cracked, open, or leaking Battery Pack, or charge a non-recommended type of Battery Pack.**

3. Battery Pack is designed to fit this Charger specifically. If Battery Pack does not fit Charger properly, do not try to insert it. **Do not force Battery Pack into the Charger.**

4. Plug Charger into a grounded, 120VAC, 60Hz receptacle. The green LED will blink, showing that power is supplied to the Charger.

5. Slide Battery Pack onto Charger. Red LED will light continuously while charging.

**NOTE:** A fully discharged Battery Pack will take about 1 hour to fully charge.

**NOTE:** While charging, Battery Pack and Charger may become warm to the touch and the Charger's fan may come on. This is normal.

6. Green LED will light continuously when Battery Pack is charged. Unplug Charger and remove Battery Pack when finished.

7. Allow Battery Pack to cool completely before use.

### Installing and Removing Battery Pack

1. To install: Slide Battery Pack into slot on back of Chainsaw until it clicks into place.

2. To remove: Press both Battery Pack Release Buttons and pull Battery Pack out of slot.

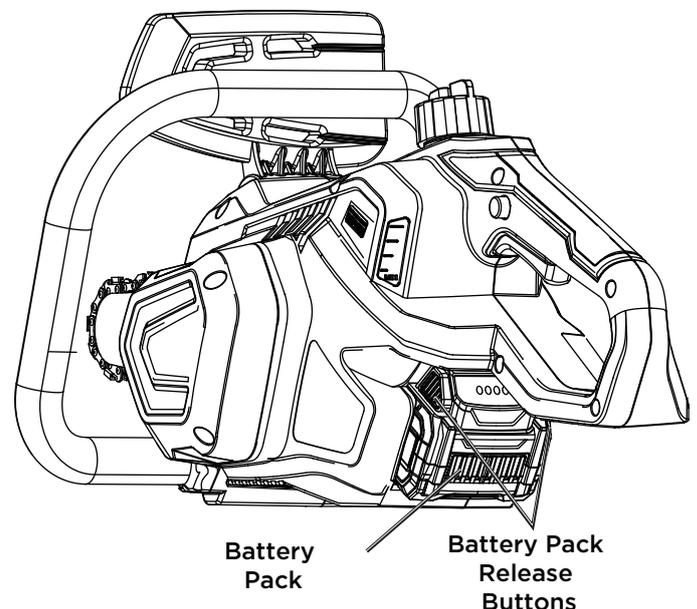


Figure E: Battery Pack

## Workpiece and Work Area Set Up

1. Designate a work area that is clean and well lit. The work area must not allow access by children or pets to prevent distraction and injury.
2. There must not be objects, such as utility lines, nearby that will present a hazard while working.
3. A first-time user should, as a minimum practice, cut logs on a saw-horse or cradle before cutting down trees.

## General Operating Instructions

1. Before first use and before each use thereafter, remove the Oil Tank Cap. Inspect the Cap Gasket for damage. Fill the oil reservoir to just below fill plug with oil (not included). Then replace the Oil Tank Cap. Oil is automatically applied to the Saw Chain during operation.
2. Make sure that the Trigger is in the off-position, then slide the Battery Pack into slot on back of Chainsaw until it clicks into place.
3. Place the Hand Guard/Chain Brake Lever in normal operating (disengaged) position by pulling the Hand Guard back toward the Handle. Refer to Figure F.
5. Stand in front of the wood to be cut with your feet firmly in place.
6. Push the Lockout Switch to the left or right, then squeeze and hold the Trigger. With the Chainsaw running, you may release pressure on the Lockout Switch. Releasing the Trigger will stop the motor.

**NOTE:** The Trigger cannot be activated unless the Lockout Switch is depressed.

**DANGER!** To prevent serious injury and death from kickback: Do not touch the Guide Bar Nose to the wood.

7. When the Chainsaw reaches full speed, begin cutting with a light, downward pressure against the bottom mid-section of the Saw Chain. Allow the Saw Chain to cut at its own rate. Applying too much pressure can damage the tool.

**DANGER!** When cutting loose, round wood stock, place the wood stock on a sawhorse, in a cradle, or use a timberjack (all purchased by yourself) to avoid grabbing and throw back.

8. To prevent accidents, turn off the tool, remove its Battery Pack, and place the Hand Guard/Chain Brake Lever forward in its engaged position after use.
9. When the Saw has cooled completely, clean thoroughly and cover the Chain Guide Bar with the Chain Guide Bar Sheath. Store the tool indoors out of children's reach.

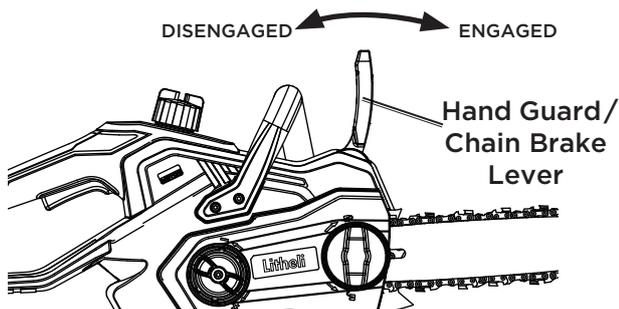


Figure F: Chain Brake

**NOTE:** The Chainsaw will not operate unless the Hand Guard/Chain Brake Lever is in the disengaged position.

4. Grasp the Handles with both hands. Always grip the handle with the thumb and fingers encircling the handle as shown in Figure G.

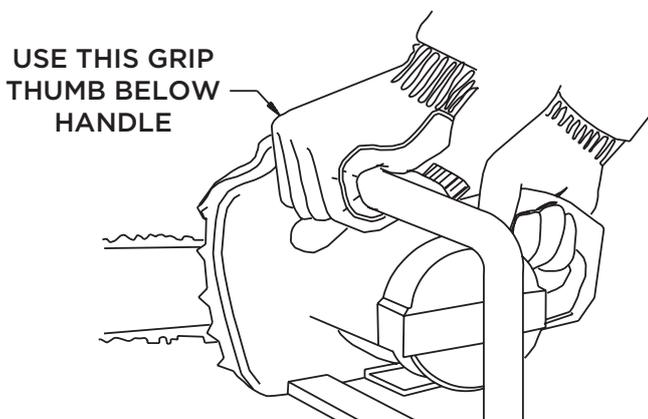


Figure G: Holding the Chainsaw

**NOTE:** Front Hand Guard not shown.

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

## Felling a Tree

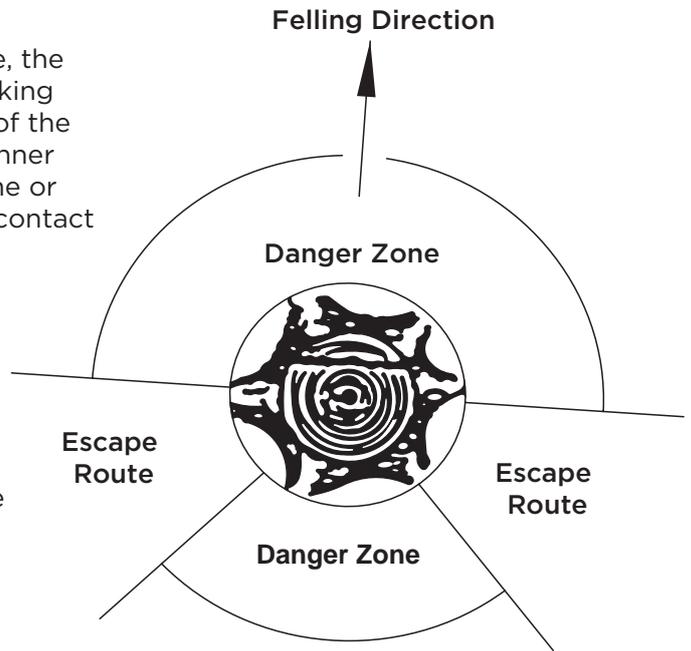
When bucking and felling operations are being performed by two or more persons at the same time, the felling operations should be separated from the bucking operation by a distance of at least twice the height of the tree being felled. Trees should not be felled in a manner that would endanger any person, strike any utility line or cause any property damage. If the tree does make contact with any utility line, the company should be notified immediately.

The chainsaw operator should keep on the uphill side of the terrain as the tree is likely to roll or slide downhill after it is felled.

An escape path should be planned and cleared as necessary before cuts are started. The escape path should extend back and diagonally to the rear of the expected line of fall as illustrated in Figure H.

Before felling is started, consider the natural lean of the tree, the location of larger branches and the wind direction to judge which way the tree will fall.

Remove dirt, stones, loose bark, nails, staples and wire from the tree.



**Figure H: Escape Routes**

## Notching Undercut

Make the notch 1/3 the diameter of the tree, perpendicular to the direction of falls as illustrated in Figure I. Make the lower horizontal notching cut first. This will help to avoid pinching either the saw chain or the guide bar when the second notch is being made.

## Felling Back Cut

Make the felling back cut at least 2 inches higher than the horizontal notching cut as illustrated in Figure I. Keep the felling back cut parallel to the horizontal notching cut. Make the felling back cut so enough wood is left to act as a hinge. The hinge wood keeps the tree from twisting and falling in the wrong direction. Do not cut through the hinge.

As the felling gets close to the hinge, the tree should begin to fall. If there is any chance that the tree may not fall in desired direction or it may rock back and bind the saw chain, stop cutting before the felling back cut is complete and use wedges of wood, plastic or aluminium to open the cut and drop the tree along the desired line of fall.

When the tree begins to fall remove the chainsaw from the cut, stop the motor, put the chainsaw down, then use the retreat path planned. Be alert for overhead limbs falling and watch your footing.

## 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 J. Branches under tension should be cut from the bottom up to avoid binding the chainsaw.

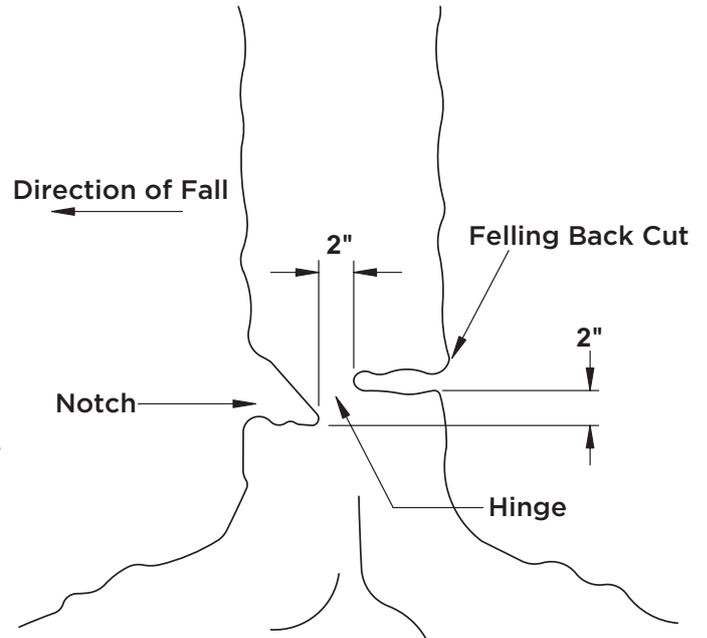
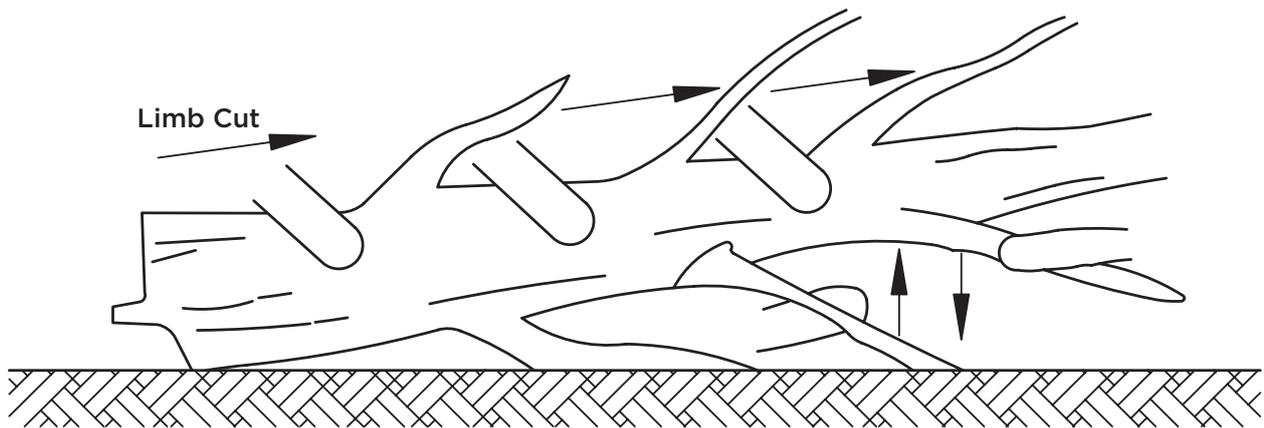


Figure I: Undercutting

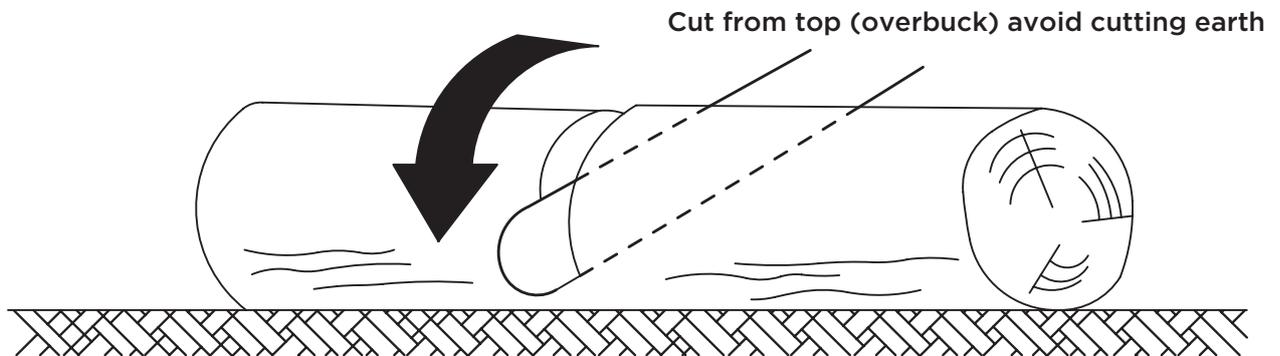


Keep work off ground leave support limbs until log is cut

Figure J: Tree Limbing

## Bucking a Log

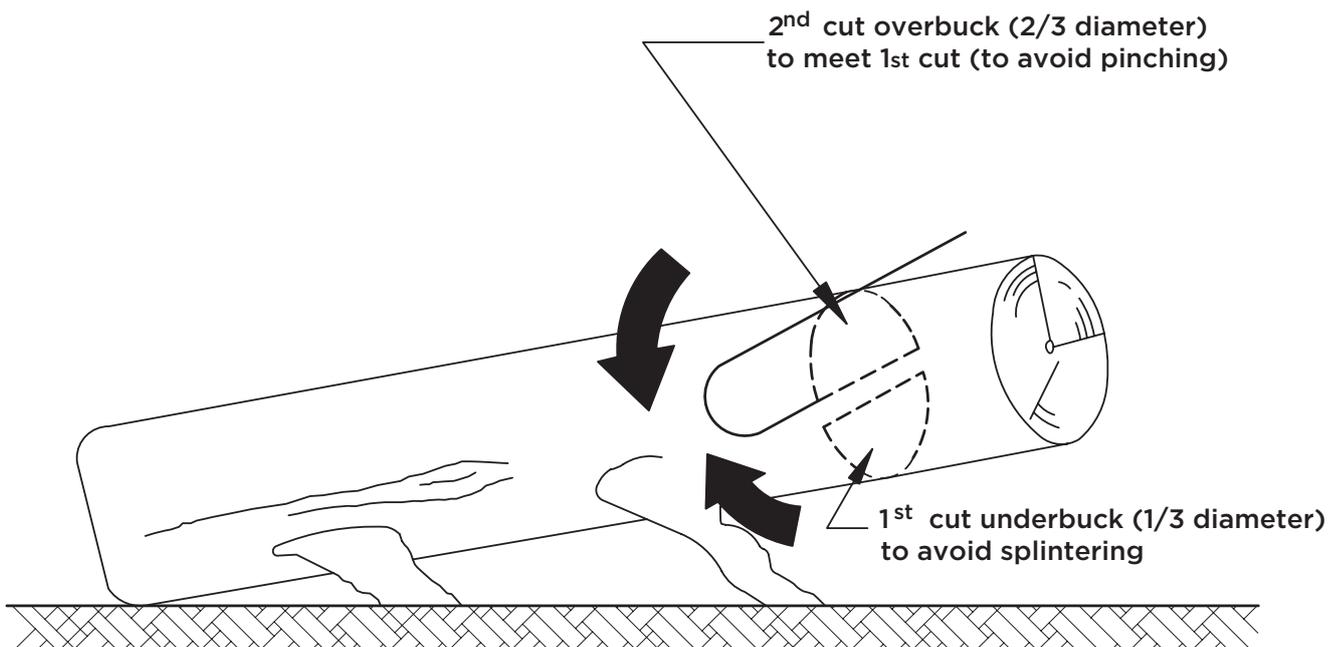
Bucking is cutting a log into lengths. It is important to make sure your footing is firm and your weight is evenly distributed on both feet. When possible, the log should be raised and supported by the use of limbs, logs or chocks. Follow the simple directions for easy cutting. When the log is supported along its entire length as illustrated in Figure K, it is cut from the top (overbuck).



**Figure K: Log Supported Along the Entire Length**

When the log is supported on one end, as illustrated in Figure L, cut  $\frac{1}{3}$  the diameter from the underside (underbuck).

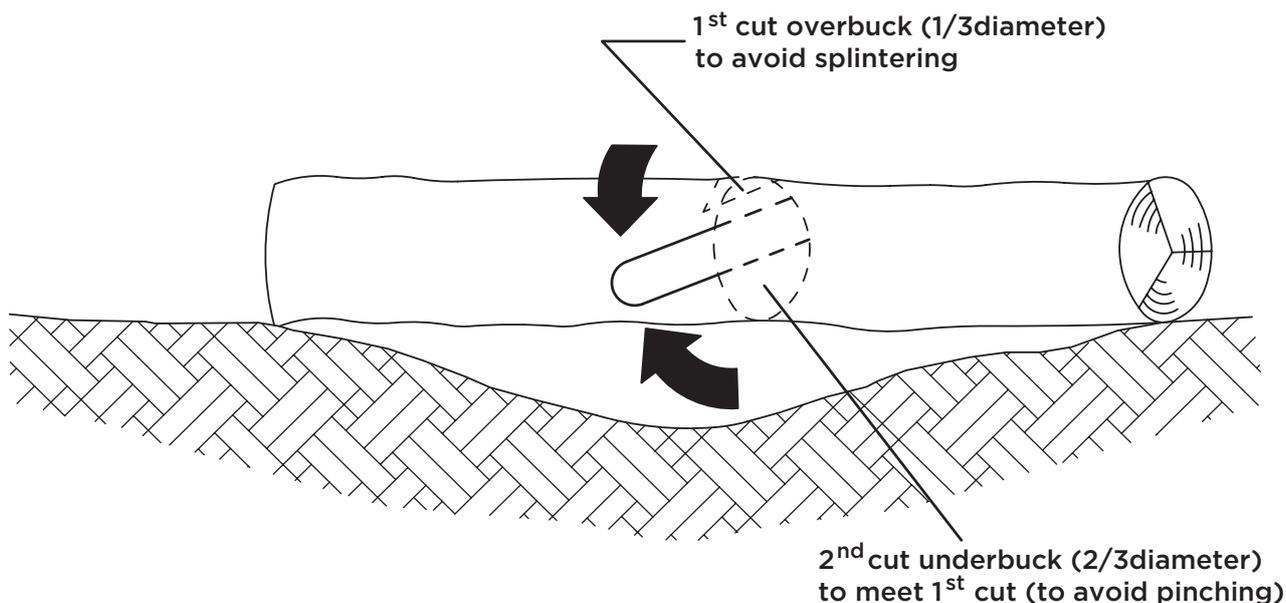
Then make the finished cut by overbucking to meet the first cut.



**Figure L: Log Supported One End**

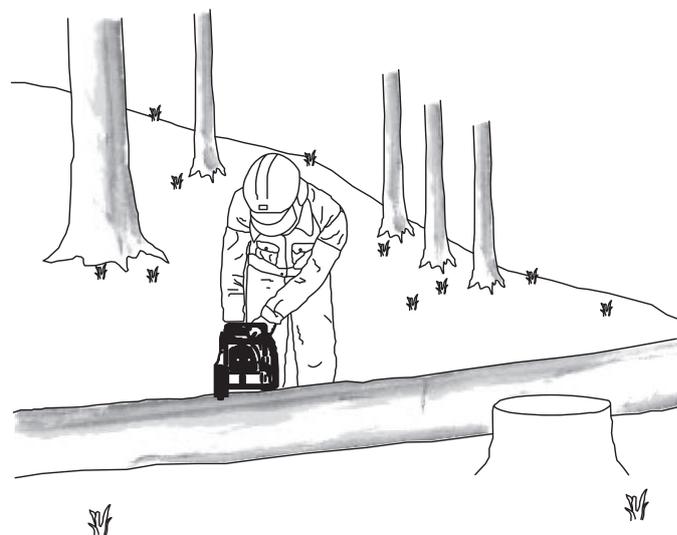
## Bucking a Log (continued)

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



**Figure M: Log Supported Both Ends**

When bucking on a slope always stand on the uphill side of the log, as illustrated in Figure N. When "cutting through", to maintain complete control release the cutting pressure near the end of the cut without relaxing your grip on the 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 chainsaw. Always stop the motor before moving from tree to tree.



**Stand on uphill side when cutting  
because log may roll**

**Figure N: Bucking a Log**

## Maintenance and Servicing



Procedures not specifically explained in this manual must be performed only by a qualified technician.

### **!WARNING**

**TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:** Make sure that the Trigger is in the off-position and remove the Battery Pack before performing any procedure in this section.

**TO PREVENT SERIOUS INJURY FROM TOOL FAILURE:** Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

## Cleaning, Maintenance, and Lubrication

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- BEFORE EACH USE**, inspect the general condition of the tool. Check for:
  - leaking, swollen, or cracked battery pack
  - loose hardware
  - misalignment or binding of moving parts
  - cracked or broken parts
  - dull or damaged saw chain
  - proper chain brake operation
  - any other condition that may affect its safe operation.
- BEFORE FIRST USE AND BEFORE EACH USE THEREAFTER**, make sure the Oil Tank is filled with oil (not included). Refer to Specifications Chart on page 6 for oil type.
- IF THE SAW CHAIN BECOMES LOOSE**, adjust the Saw Chain tension as described under Adjusting Saw Chain Tension on page 11.
- PERIODICALLY OR WHEN REPLACING SAW CHAIN**, turn the Chain GuideBar over to distribute the wear on it. Replace the Guide Bar when bent, cracked, or when the Saw Chain moves excessively from side to side on the Guide Bar due to wear. Refer to Chain Guide Bar Care on page 19.
- AFTER USE**, wipe the outside surface of the Chainsaw with a clean, dry cloth. If necessary use a mild detergent. Do not use solvents. Do not immerse this tool in liquid.
- Li-Ion BATTERY MUST BE RECYCLED OR DISPOSED OF PROPERLY. Do not short, incinerate or open battery.
- Disconnect Battery Pack and store Battery Pack, Charger, and tool in dry, indoor area out of reach of children and away from metal objects (i.e., paperclips, coins) to prevent shorting.

## Sharpening/Replacing the Saw Chain

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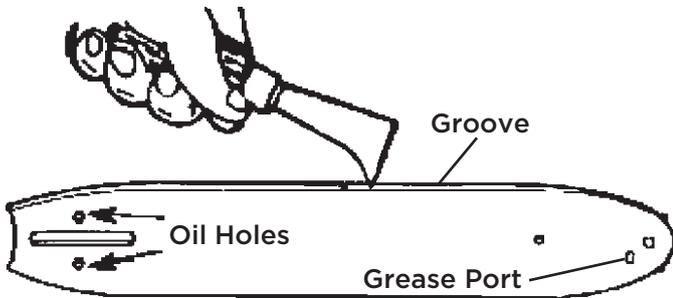
**WARNING!** Wear heavy-duty work gloves when handling the Saw Chain.

- For smooth and safe operation, always keep the Saw Chain cutters sharp.
- Have the cutters sharpened by a qualified technician when you notice any of the following symptoms:
  - The sawdust becomes powder-like.
  - You can't make the cut without extra force.
  - The Chainsaw does not cut straight.
  - Vibration increases.
- A Saw Chain that is damaged or too worn to be restored to a useable condition by sharpening will need to be replaced. Refer to Replacing the Saw Chain on page 11.

## Chain Guide Bar Care

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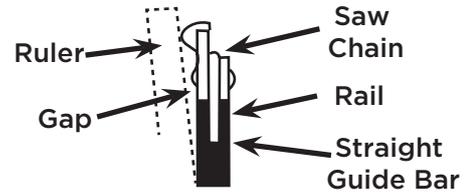
1. Remove the Chain Guide Bar periodically to clean and lubricate.
2. Deburr rails of Guide Bar as needed. Use a flat file to make side edges square.
3. Remove sawdust and sap from the Bar Groove using a Guide Bar cleaning tool (purchased by yourself), then lubricate the nose sprocket at the ports with grease.



**Figure O: Cleaning and Lubricating Guide Bar**

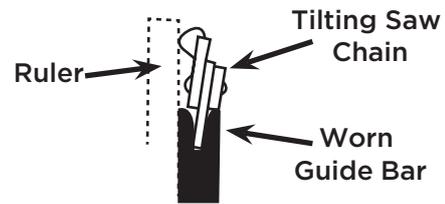
4. Reverse the Guide Bar when replacing the Saw Chain to prevent uneven wear.

5. The rails of the Guide Bar groove shoalways be parallel to each other. Place a ruler along the surface of the Guide Bar and Saw Chain. If there is a gap, the bar is normal.



**Figure P: Normal Guide Bar**

If the ruler is flush with the Guide Bar and Saw Chain, or the Chain tilts to one side, then the Bar is worn and needs to be replaced.



**Figure Q: Worn Guide Bar**

## Cleaning, Maintenance, and Lubrication Schedule

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**NOTE:** This maintenance schedule is intended solely as a general guide. If performance decreases or if equipment operates unusually, check systems immediately. The maintenance needs of each piece of equipment will differ depending on factors such as duty cycle, temperature, air quality, and other factors. If you have doubts about your ability to safely service this tool, have a qualified technician service the equipment instead.

### Periodic Maintenance or When Replacing Saw Chain:

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- a. Clean and lubricate Chain Guide Bar and turn over.
- b. Deburr Guide Bar as needed.
- c. Check Chain Sprocket for wear or damage.

### Monthly Maintenance:

---

Clean Chain Oil Tank.

### If Worn or Damaged:

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- a. Replace Chain Guide Bar if it becomes worn, bent or damaged.
- b. Sharpen or replace Saw Chain.

## **PLEASE READ THE FOLLOWING CAREFULLY**

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THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

## Parts List and Diagram

### Parts List

Part	Description	Qty
1	14" Chain Guide Bar	1
2	14" Saw Chain	1
3	Chain Guide Bar Sheath	1
4	Screw	23
5	Washer	4
6	Chain Tension Knob	1
7	Lock Knob	1
8	Drive Cover	1
9	Circlip	1
10	Sealing Gasket	1
11	Non-Slip Washer	3
12	Bucking Spikes	1
13	Washer	4
14	Chain Tension Pin	1
15	Adjusting Screw Rod	1
16	Gear	1
17	Circlip	2
18	Pressure Plate	1
19	Sprocket	1
20	Knob Seat	1
21	Screw	4
22	Washer	1
23	Right Housing	1
24	Brake Spring	1
25	Left Winding Ring	1
26	Right Winding Ring	1
27	Screw	7
28	Screw	2
29	Connector	1
30	Clamp	1
31	Oil Tube Spring	2
32	Oil Tube	1
33	Circlip	1
34	Circlip	1
35	Bearing	2
36	Screw	4
37	Brake Housing	1
38	Output Shaft	1
39	Torsion Spring	1
40	Motor	1

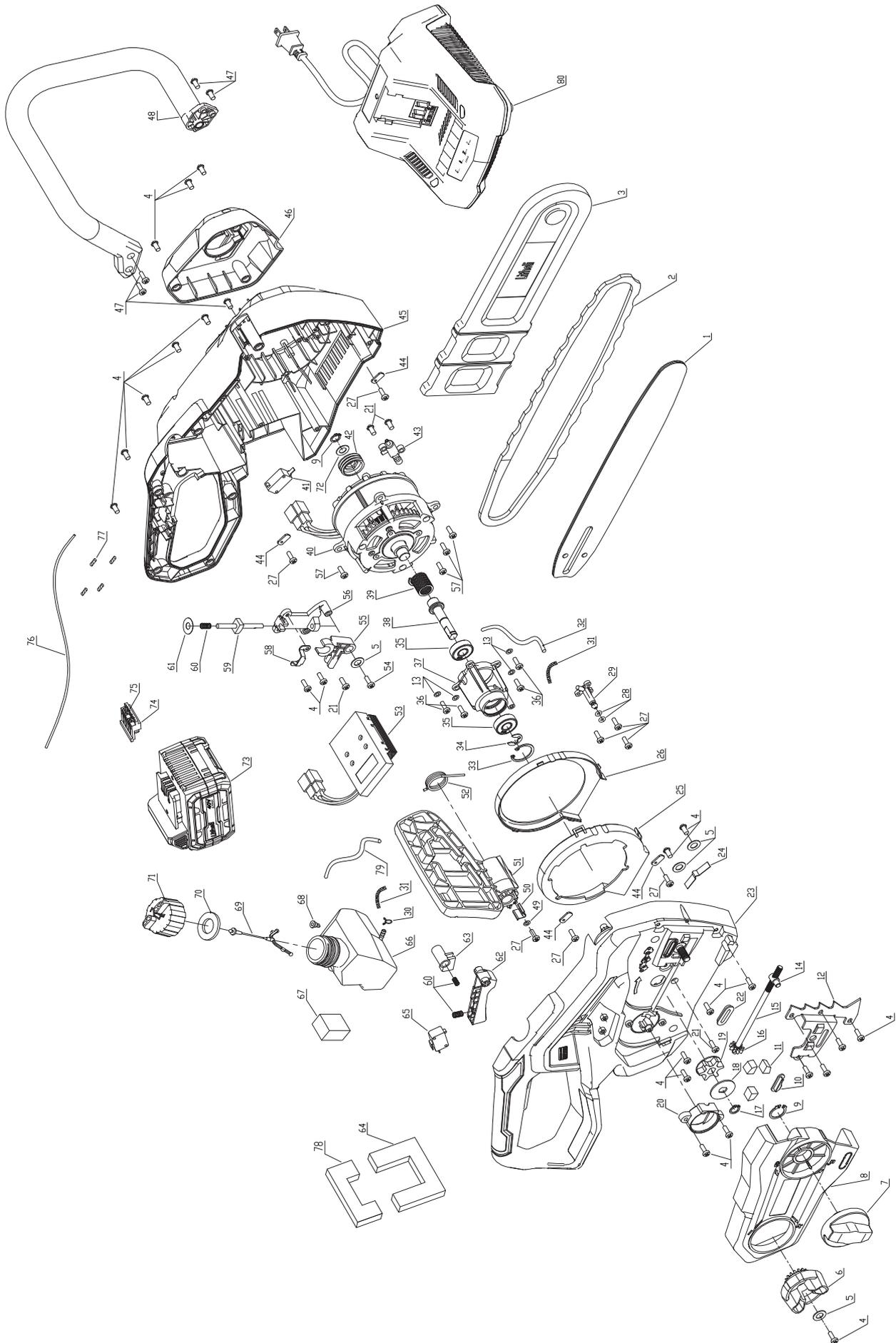
Part	Description	Qty
41	Microswitch	1
42	Worm Gear	1
43	Oil Pump	1
44	Pressure Plate	3
45	Left Housing	1
46	Rear Cover	1
47	Screw	5
48	Front Handle	1
49	Washer	1
50	Brake Pads	1
51	Hand Guard	1
52	Front Baffle Torsion Spring	1
53	Controller Assembly	1
54	Screw	1
55	Brake Connecting Rod	1
56	Brake Seat	1
57	Screw	4
58	Brake Pressure Plate	1
59	Sliding Block	1
60	Spring	3
61	Washer	1
62	Trigger	1
63	Lockout Switch	1
64	Sponge	1
65	Microswitch	1
66	Oil Tank	1
67	Dust-Proof Sponge	1
68	Air Valve	1
69	Anchor	1
70	Washer	1
71	Oil Tank Cap	1
72	Washer	1
73	Battery Pack	1
74	Plug-In Seat	1
75	Male Plug-In	3
76	Inner Wire	1
77	Hot Shrink Tube	4
78	Sponge	1
79	Oil Tube	1
80	Charger	1

Record Product's Serial Number Here: \_\_\_\_\_

**NOTE:** If product has no serial number, record month and year of purchase instead.

**NOTE:** Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

# Assembly Diagram



## Warranty

### 90-Day Money Back

You May Return Your Product for A Full Refund Within The First 90 Days of Your Purchase.

### 3-Year Battery and Charger Warranty

Against Defects in Workmanship and Materials.

Battery and Charger Must Be Used and Maintained in Accordance with The Manual of The Operator's Instructions and Regulations.

### 5-Year Tool Warranty

Against Defects in Materials, Parts or Workmanship.

Litheli at Its Own Discretion Will Repair or Replace Any and All Parts Found To Be Defective.

All Units Must Be Used and Maintained in Accordance with The Directions and Regulations in The Operator's Manual.

### Returning The Product

Contact Us at [www.litheli.com](http://www.litheli.com) for The Return Address, We Will Issue Replace/Refund Upon Receiving Your Return.

**Need An Extra Copy of The Operator's Manual? Visit [www.litheli.com](http://www.litheli.com) to Download it.**

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