

ESSENTIAL
EJ321E
Cordless
Chain Saw



ESSENTIAL EJ321E Cordless Chain Saw Instruction Manual

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ESSENTIAL™

ESSENTIAL EJ321E Cordless Chain Saw



SAFETY INSTRUCTION

PRODUCT SAFETY

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.

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

- 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 risk of electric shock.
- 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.
- Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

PERSONAL SAFETY

- 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.
- 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.
- Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
- 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.
- Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.

- Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
- 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.
- Do not let familiarity gained from 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.

Power tool use and care

- 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.
- Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- 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.
- 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.
- 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.
- Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- 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.
- 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.

Battery tool use and care

- 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.
- Use power tools only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- 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.
- 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.
- Do not use a battery pack or tool that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.
- Do not expose a battery pack or tool to fire or excessive temperature. Exposure to fire or temperature above

130 °C may cause explosion.

- 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.

SERVICE

- 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.
- Never service damaged battery packs. Service of battery packs should only be performed by the manufacturer or authorized service providers.

General chain saw safety warnings:

- 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.
- 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.
- Hold the chain saw 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 chain saw “live” and could give the operator an electric shock.
- Wear safety glasses protection. Further, protective equipment for hearing, head, hands, legs and feet is recommended. Adequate protective clothing will reduce personal injury by flying debris or accidental contact with the saw chain.
- Do not operate a chainsaw in a tree, on a ladder, from a rooftop, or any unstable support. Operation of a chain saw in this manner could result in serious personal injury.
- Always keep proper footing and operate the chain saw only when standing on a fixed, secure, and level surface. Slippery or unstable surfaces may cause a loss of balance or control of the chain saw.
- When cutting a limb that is under tension, be alert for springback. When the tension in the wood fibers is released, the spring-loaded limb may strike the operator and/or throw the chain saw out of control.
- 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.
- 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.
- Follow instructions for lubricating, chain tensioning and changing the bar and chain. Improperly tensioned or lubricated chain may either break or increase the chance for kickback.
- Cut wood only. Do not use chain saw for purposes not intended. For example: do not use chain saw for cutting metal, plastic, masonry or non-wood building materials. Use of the chain saw for operations different than intended could result in a hazardous situation.
- Do not attempt to fell 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 felling a tree.

- Follow all instructions when clearing jammed material, storing or servicing the chain saw. Make sure the switch is off and the battery pack is removed. Unexpected actuation of the chain saw while clearing jammed material or servicing may result in serious personal injury.
- The recommendation that the first-time user should, as a minimum, practice cutting logs on a saw-horse or cradle.
- Recommendation to have sharpening and maintenance of the saw chain performed by authorized service centers.

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 chain saw 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 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.
- 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.
- Only use replacement bars and chains specified by the manufacturer. Incorrect replacement guide bars and saw 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

SAFETY WARNINGS FOR BATTERY PACK

- Do not dismantle, open, or shred cells or battery pack.
- 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 conductive materials. 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.

- Do not expose the battery pack to heat or fire. Avoid storage in direct sunlight.
- Do not subject the battery pack to mechanical shock.
- In the event of battery leaking, do not allow the liquid to come into contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice.
- Keep the battery pack clean and dry.
- Wipe the battery pack terminals with a clean dry cloth if they become dirty.
- The battery pack needs to be charged before use. Always refer to this instruction and use the correct charging procedure.
- Do not maintain the battery pack on charge when not in use.
- After extended periods of storage, it may be necessary to charge and discharge the battery pack several times to obtain maximum performance.
- Recharge only with the charger specified by Essential. Do not use any charger other than that specifically provided for use with the equipment.
- Do not use any battery pack which is not designed for use with the equipment.
- Keep battery packs out of the reach of children.
- Retain the original product literature for future reference.
- Remove the battery from the equipment when not in use.
- Dispose of it properly.
- Do not mix cells of different manufacture, capacity, size, or type within a device.
- Keep the battery away from microwaves and high pressure.
- **Warning!** Do not use non-rechargeable batteries.

SAVE THESE INSTRUCTIONS

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 1. 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.

Notching undercut

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

Felling back cut

Make the felling back cut (Y) at least 50 mm higher than the horizontal notching cut as illustrated in Figure 1. 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 hingewood 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 aluminum (Z) to open the cut and drop the tree along the desired line of fall (3). 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 (2). Be alert for overhead limbs falling and watch your footing. (See Figure 1)

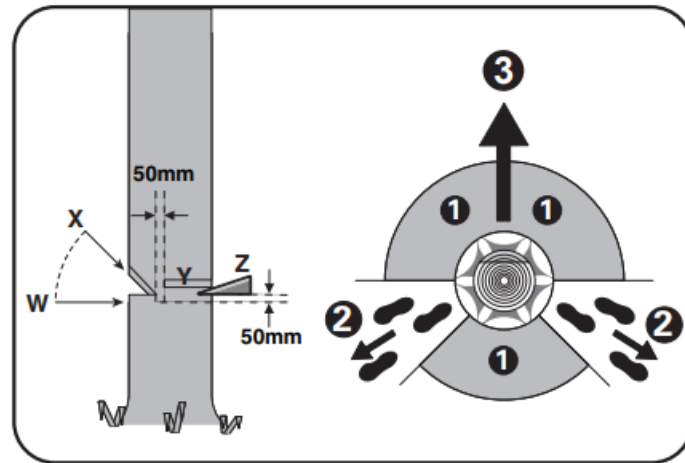


Figure 1

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 2. Branches under tension should be cut from the bottom up to avoid binding the Chainsaw.

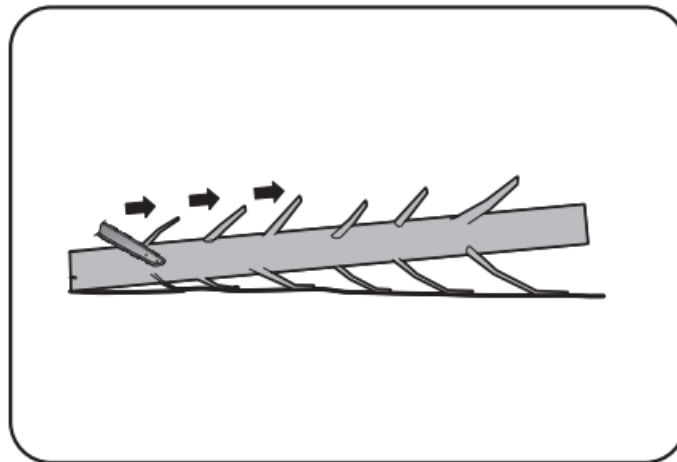


Figure 2

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 3, it is cut from the top (overbuck), avoid contacting ground as this will greatly reduce the chain sharpness.

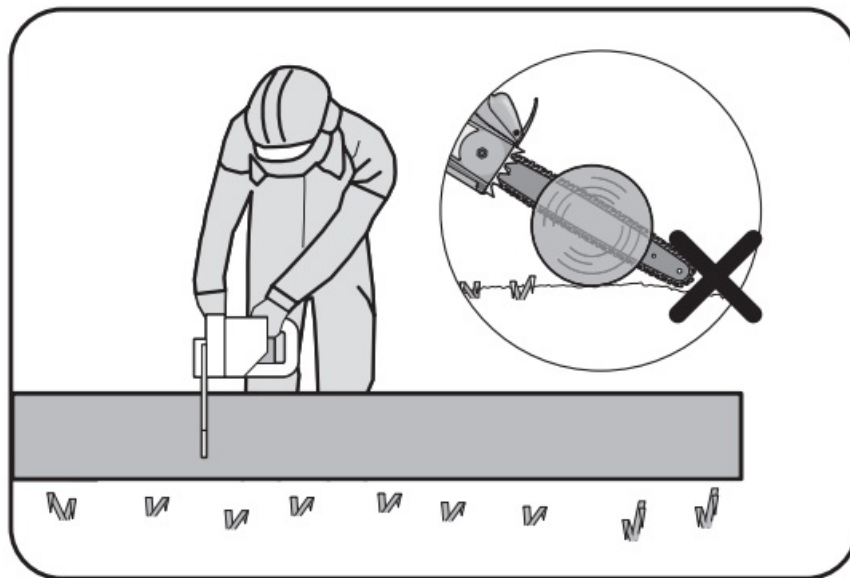


Figure 3

When the log is supported on one end, as illustrated in Figure 4, cut $\frac{1}{3}$ the diameter from the underside (underbuck) (1). Then make the finished cut by overbucking (2) to meet the first cut.

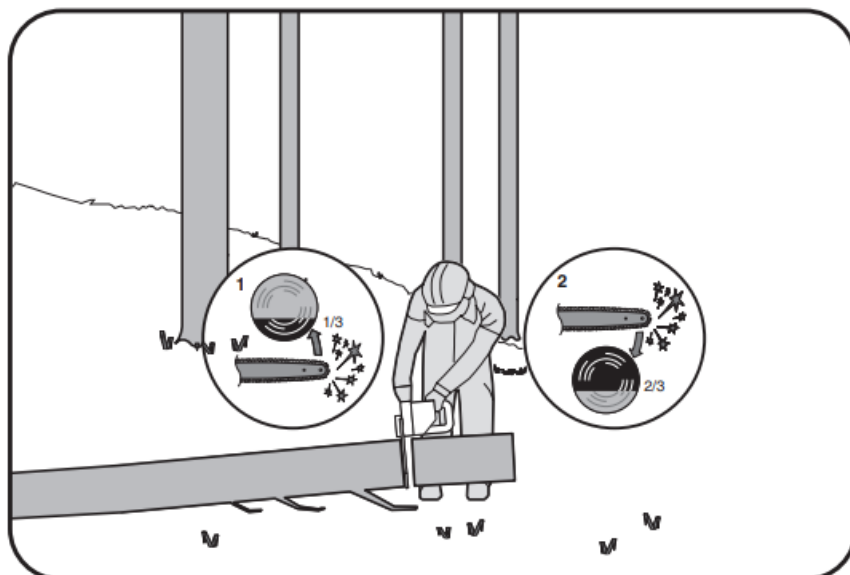


Figure 4

When the log is supported on both ends, as illustrated in Figure 5, cut $\frac{1}{3}$ the diameter from the top (overbuck) (1). Then make the finished cut by underbucking (2) the lower $\frac{2}{3}$ to meet the first cut.

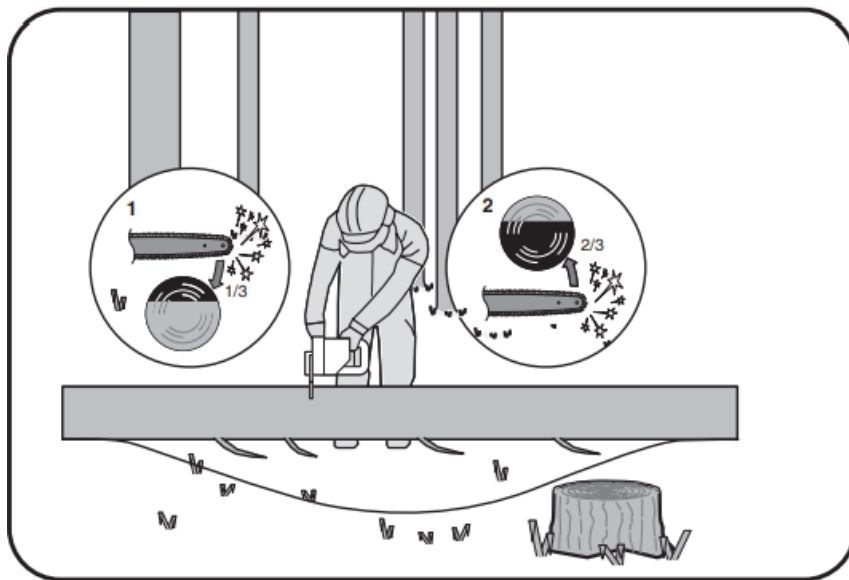


Figure 5

When bucking on a slope always stand on the uphill side of the log, as illustrated in Figure 6. 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.

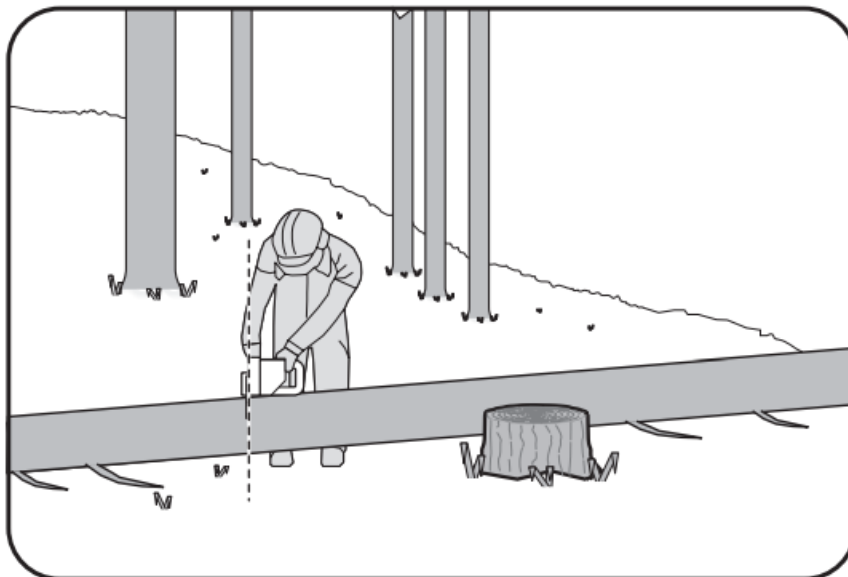


Figure 6

SYMBOLS



To reduce the risk of injury, user must read instruction manual



Warning



Wear ear protection



Wear eye protection



Wear dust mask



Do not expose to rain



Wear protective gloves



Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.



Batteries may enter water cycle if disposed improperly, which can be hazardous for ecosystem. Do not dispose of waste batteries as unsorted municipal waste.



Do not burn



Li-Ion battery This product has been marked with a symbol relating to 'separate collection' for all battery packs and battery pack. It will then be recycled or dismantled in order to reduce the impact on the environment. Battery packs can be hazardous for the environment and for human health since they contain hazardous substances.



The symbol on the packaging is for France only.



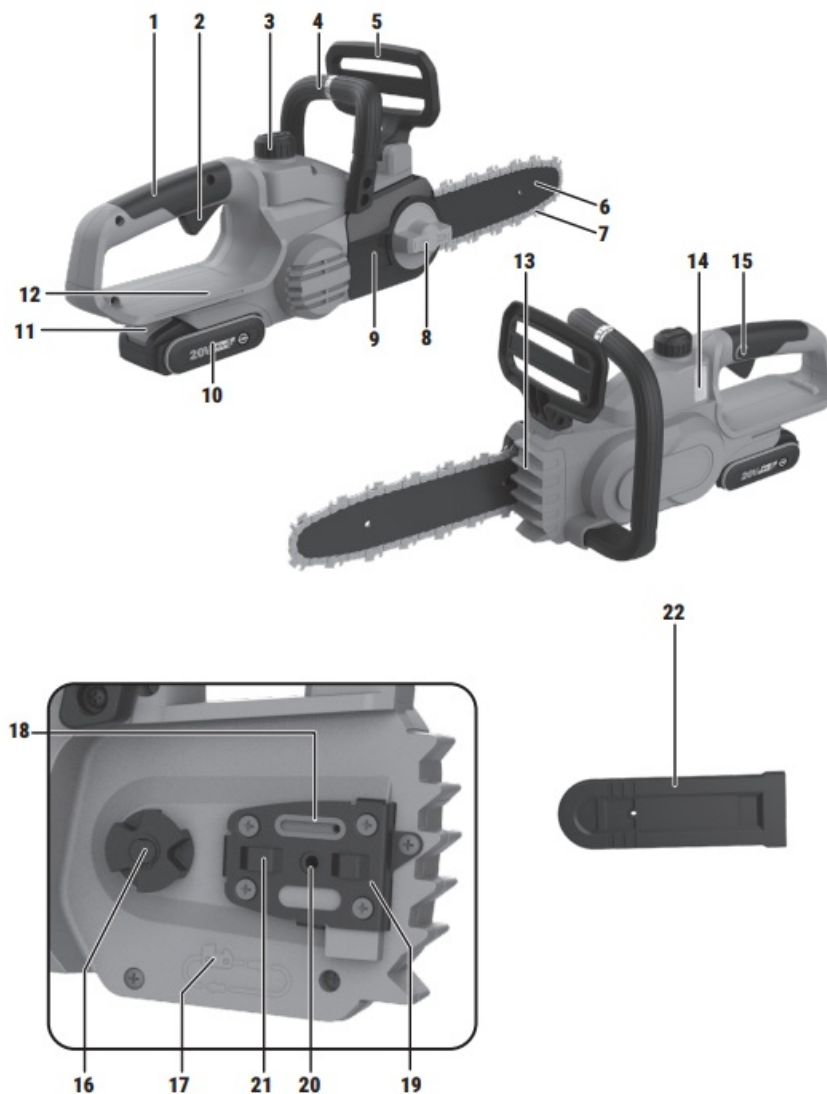
Beware of chain saw kickback and avoid contact with bar tip



Always use chain saw two-handed

COMPONENT LIST

1.	Rear handle	13.	Bumper spike
2.	On/off switch	14.	Oil level window
3.	Oil filler cap	15.	Lock-out button
4.	Front handle	16.	Drive sprocket
5.	Hand guard	17.	Chain direction symbol
6.	Guide bar	18.	Oil outlet
7.	Chain	19.	Bar pad
8.	Chain tensioning knob	20.	Fastening bar hole
9.	Chain cover	21.	Bar locating tabs
10.	Battery pack*	22.	Bar and chain storage/transportation cover*(sheath)
11.	Battery pack release button*	23.	Bar tensioning plate (See Fig. A)
12.	Rear hand guard		



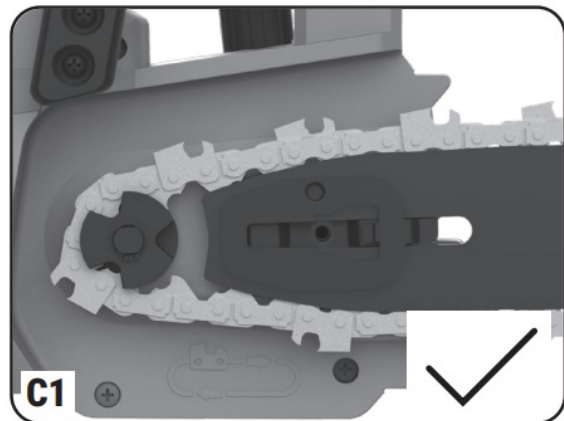
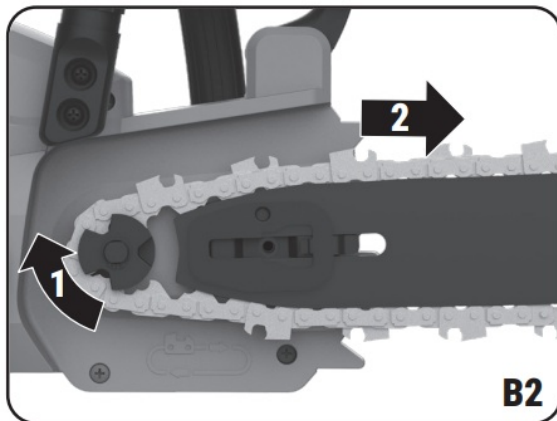
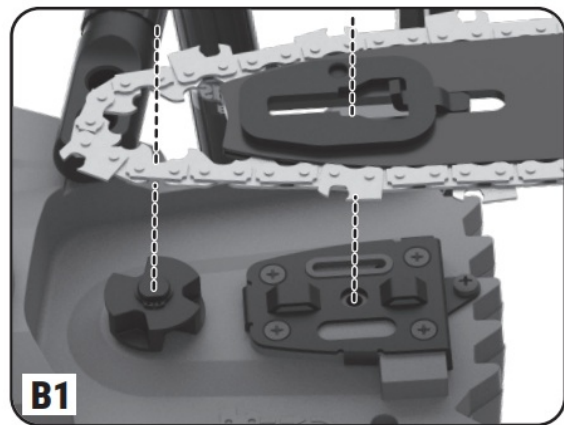
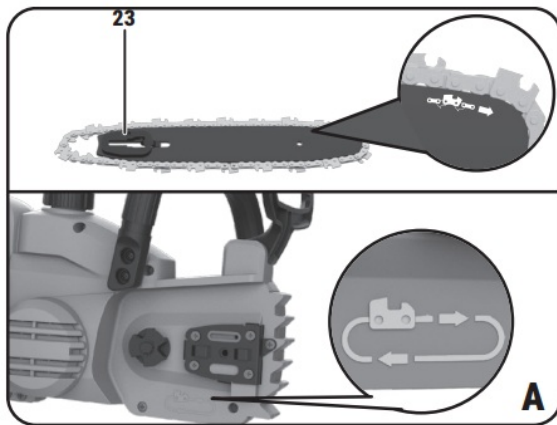
INTENDED USE

The chainsaw is intended for sawing of trees, tree trunks, branches, wooden beams, planks, etc. Cuts can be sawed with or across the grain. This product is not suitable for sawing mineral materials.

OPERATING INSTRUCTIONS

WARNING! Do not install the battery pack before it has been completely assembled. Always use gloves when handling the chain.

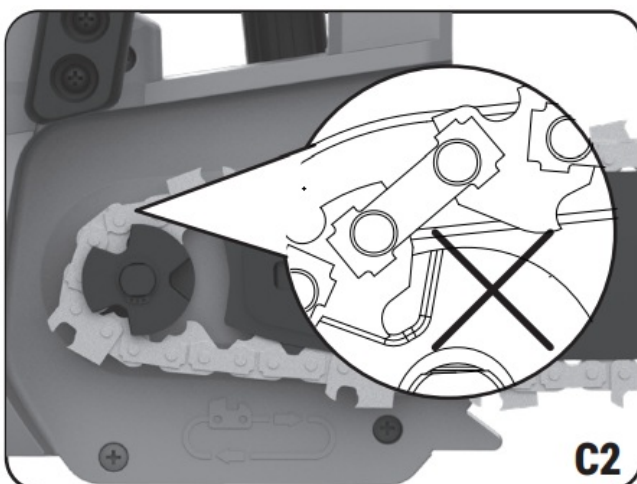
CHAIN AND GUIDE BAR ASSEMBLY



1. Unpack all parts carefully.
2. Place the chain saw on a solid, level surface.
3. Use only genuine Essential chains or those recommended for the guide bar.
4. Slide the chain in the slot around the guide bar. Ensure the chain is in the correct running direction by comparing it to the chain icon on the guide bar or referring to the chain direction symbol found on the saw body. Ensure the bar tensoning plate is facing outward. (See Fig. A)
5. Fit the chain onto the drive sprocket, so that the fastening bar hole and the two bar locating tabs on the bar pad fit into the keyway of the opening on the guide bar. (See Fig. B1, B2)
6. Assure all parts are seated properly. Make sure the drive links are fully seated in the drive sprocket (See Fig. C1), avoiding a kink as shown in Fig. C2. If a kink occurs, pick up on the chain at the guide bar just ahead of the kink and then pull the kink out.

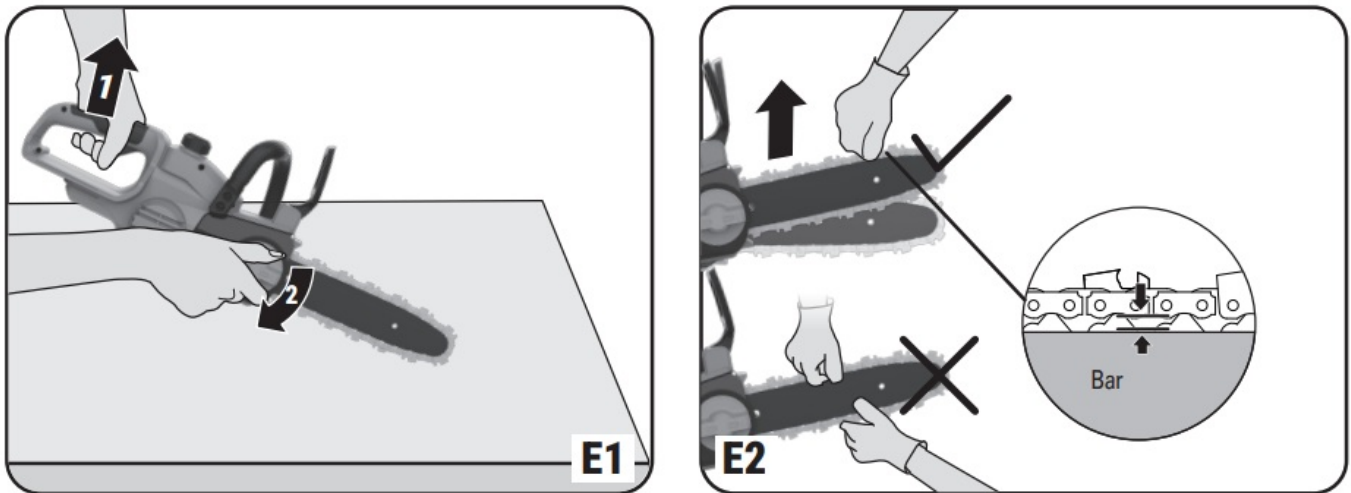
NOTE: Chain should rotate freely and be free of kinks.

7. Fit the chain cover and tighten the chain cover by turning the chain tensoning knob clockwise until it is tight. (See Fig. D)



WARNING: The chain is not yet tensioned. Tensioning the chain applies as described under “TENSIONING CHAIN”. The chain now needs to be inspected to make sure it is properly tensioned.

TENSIONING CHAIN (See Fig. E1, E2)



NOTE: New saw chains will stretch. Check the chain tension frequently when first used and tighten when the chain becomes loose around the guide bar.

WARNING:

- Removing the battery pack before adjusting the saw chain tension.
- The cutting edges on the chain are sharp. Use protective gloves when handling chains.
- Maintain proper chain tension always. A loose chain will increase the risk of kickback. A loose chain may jump out of the guide bar groove. This may injure operator and damage chain. A loose chain will cause chain, bar, and sprocket to wear rapidly.

1. Place the chain saw on any suitable flat surface.
2. Turn the chain tensioning knob clockwise until it is hand-tight.

NOTE: The tension is automatically increased while the chain tensioning knob is being turned in a clockwise direction. The built-in ratchet mechanism prevents the chain tension from loosening.

3. Tilt the saw forward (See E1) where the guide bar tip is pushed in an upward direction. This will remove slack from the chain.
4. Fully tighten the chain tensioning knob by turning it clockwise.
5. Double-check the tension set by the automatic chain tensioning knob. The correct chain tension is reached when the chain can be raised approx. half the drive link depth from the guide bar in the center. This should be done by using one hand to raise the chain against the weight of the machine. (See Fig. E2)

NOTE: The chain is properly tensioned when it can be lifted off of the guide bar and the driveline is within the rail of the guide bar .

NOTE: The chain will stretch while cutting and lose proper tension. When the chain becomes loose, completely unscrew the chain tensioning knob or turn the knob around three full turns in a counter-clockwise direction, then retighten the chain tensioning knob to properly reset the chain tension by repeating Steps 1-4 listed above.

LUBRICATION

- **IMPORTANT:** The chainsaw is not filled with oil. It is essential to fill it with oil before use. Never operate the chain saw without chain oil or at an empty oil tank level, as this will result in extensive damage to the product.
- **NOTE:** Chain life and cutting capacity depend on optimum lubrication. Therefore, the chain is automatically oiled during operation.

FILLING OIL TANK

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

1. Set the chain saw on any suitable surface with the oil filler cap facing upward.
2. Clean the area around the oil filler cap with a cloth and unscrew the cap by turning it counterclockwise.
3. Add bar and chain oil until the tank is full.
4. Avoid dirt or debris entering the oil tank, refit the oil filler cap, and tighten it by turning clockwise until the hand is right.

IMPORTANT: To allow venting of the oil tank, small breather channels are provided between the oil filler cap and the strainer, to prevent leakage, and ensure machine is left in a horizontal position (oil filler cap uppermost) when not in use. It is important to use bar and chain lubricant(not provided) that is formulated to perform over a wide temperature range with no dilution required. This can be found at the location where you purchased this saw or your local hardware store. Do not use dirty, used or otherwise contaminated oils. Damage may occur to the bar or chain. 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.

CHECKING THE AUTOMATIC OILER

Proper functioning of the automatic oiler can be checked by running the chain saw and pointing the tip of the guide chain bar towards a piece of cardboard or paper on the ground. If an increasing oil pattern develops on the cardboard, the automatic oiler is operating fine. If there is no oil pattern, despite a full oil reservoir, contact an Essential customer service agent or an essential-approved service agent.

CAUTION: Do not touch the ground with the chain. Ensure safety clearance of 30 cm.

OPERATION

BEFORE USING YOUR CORDLESS TOOL

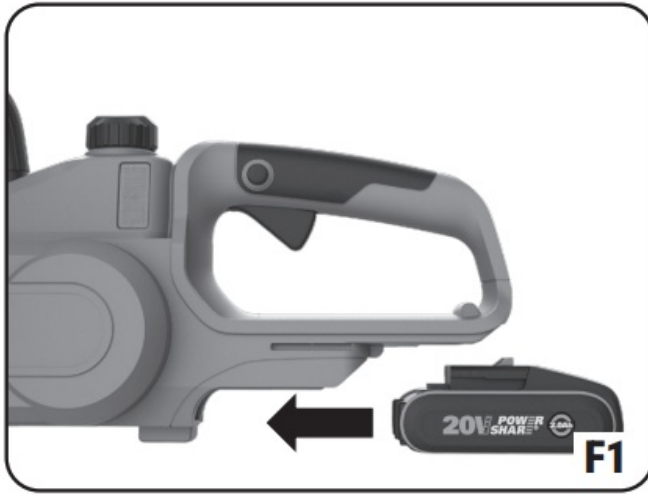
WARNING! The charger and battery pack are specially designed to work together so do not attempt to use any other devices. Never insert or allow metallic objects into your charger or battery pack connections because of an electrical failure and hazard will occur.

NOTE: Your battery pack is UNCHARGED and you must charge once before use. The battery charger supplied is matched to the Li-ion battery installed in the machine. Do not use another battery charger.

CHARGING YOUR BATTERY PACK

The Li-ion battery is protected against deep discharging. When the battery is empty, the machine is switched off by means of a protective circuit. In a warm environment or after heavy use, the battery pack may become too hot to permit charging. Allow time for the battery to cool down before recharging.

TO REMOVE OR INSTALL BATTERY PACK (See Fig. F1, F2)



Depress the battery pack release button to remove the battery pack from your tool. After recharging, insert the battery pack into the battery port. A simple push and slight pressure will be sufficient until a click is heard. Check to see if the battery is fully secured.

NOTE: When removing the battery pack, hold it firmly to avoid dropping and injury

SWITCHING ON AND OFF (See Fig. G)

ATTENTION: Check the battery pack before using your cordless tool. Only use the battery pack listed in the accessories section. To switch on the tool, press the lock-out button, then fully press the on/off switch and hold in this position. The lock-out button can now be released. For switching off, release the on/off switch.

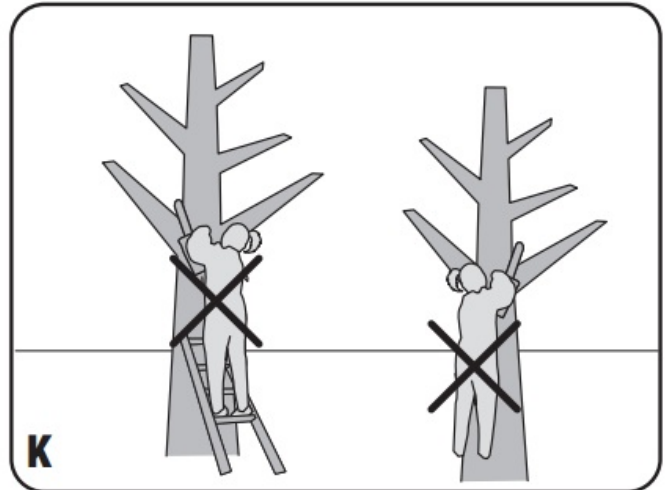
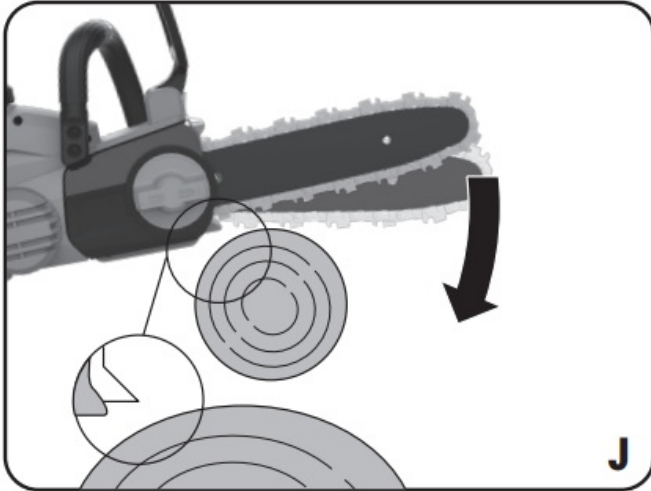
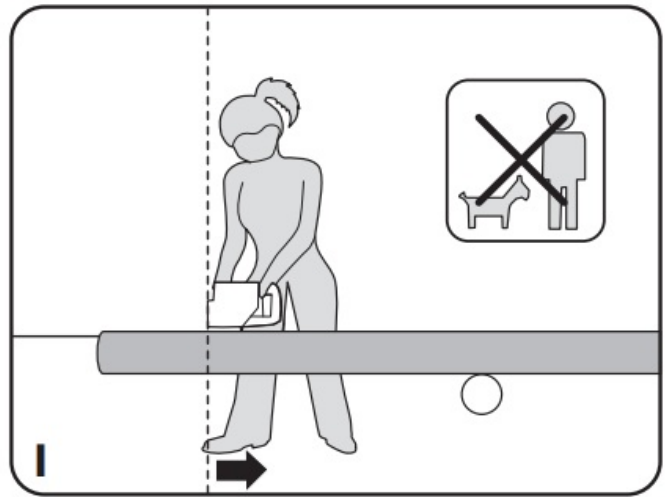
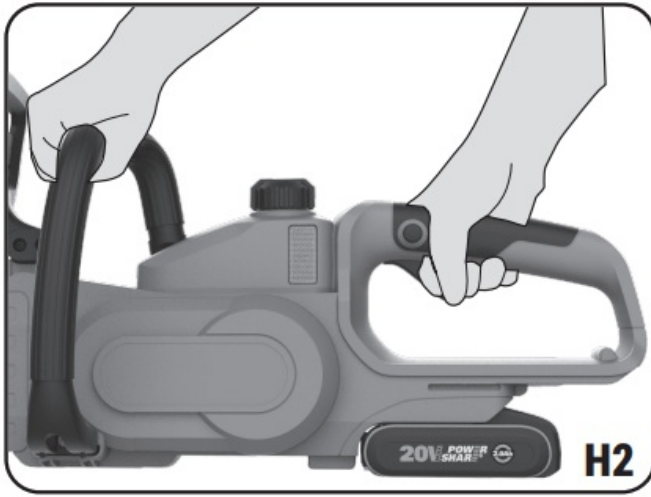
CUTTING

IMPORTANT: Is the oil tank filled? Check the oil level window prior to starting and regularly during operation (See Fig. H1). Refill oil when oil level is low. A full oil tank will last approx. 12 minutes of cutting depending on sawing intensity and stops. Check recently replaced chain tension about every 10 minutes during operation.

1. Installing the battery pack into the machine.
2. Make sure the section of the log to be cut is not lying 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. Use both hands to grip the saw. Always use left hand to grip the front handle and your right hand to grip the rear handle. Use a firm grip. Thumbs and fingers must wrap around saw handles. (See Fig. H2)

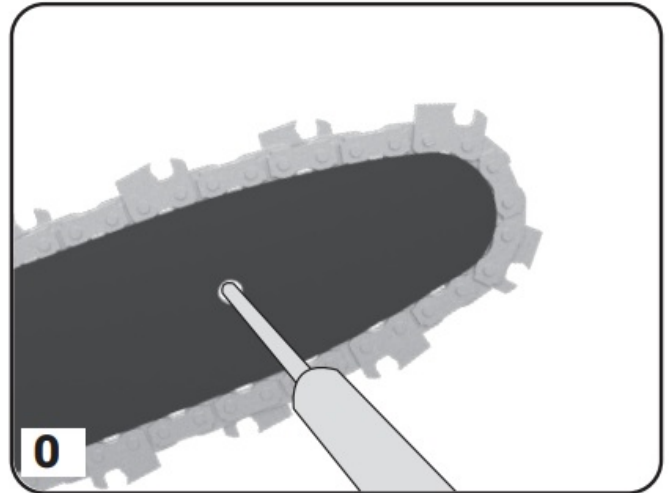
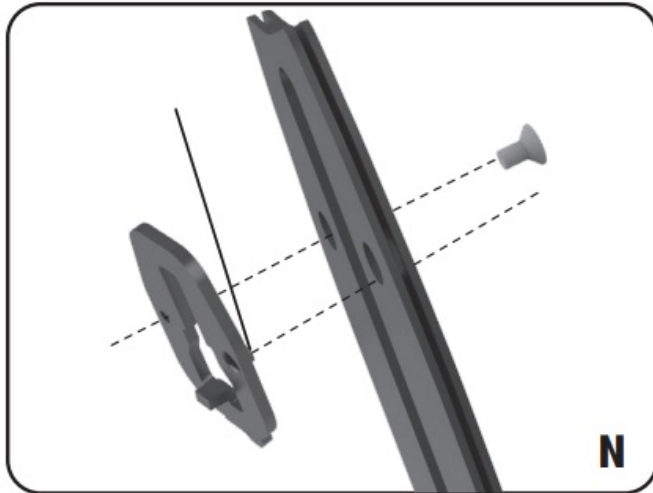
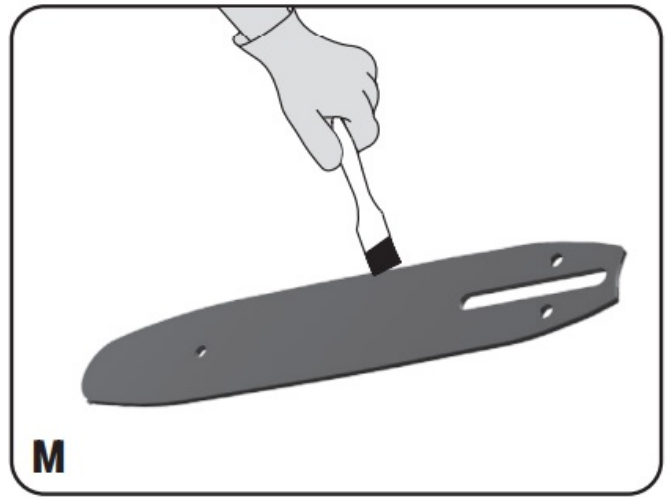
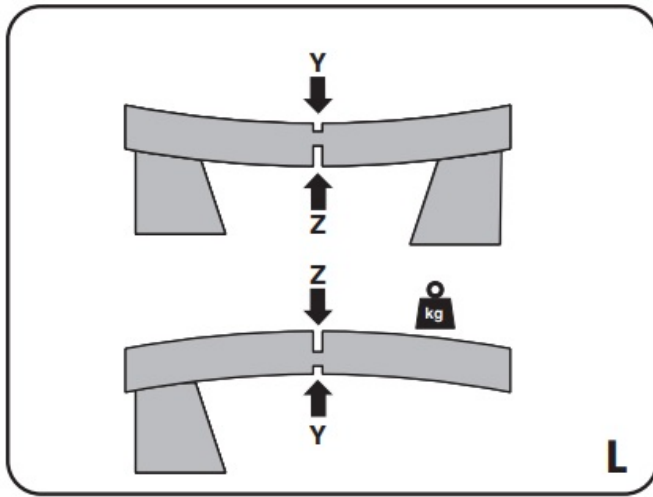
4. Make sure your footing is firm. Keep feet shoulder-width apart. Distribute your weight evenly on both feet.
 5. When ready to make a cut, push the lock-out button completely in with the right thumb and squeeze the trigger. This will turn saw on. Releasing the trigger will turn the saw off. Make sure the saw is running at full speed before starting a cut.
 6. When starting a cut, slowly place moving chain against the wood. The wood should be as close to the saw body as possible. Hold saw firmly in place to avoid possible bouncing or skating (sideways movement) of saw.
 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 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 saw. This keeps your body from being in direct line with chain.
 - Do not let Guide Bar nose touch anything when chain is moving.
 - Never try cutting through two logs at same time. Only cut one log at a time.
 - Do not bury the guide bar nose or try plunge cut (boring into wood using guide bar nose).
 - Watch for shifting of wood or other forces that may pinch chain.
 - Use extreme caution when reentering a previous cut.
 - Use only the low-kickback chain and guide bar that were supplied with this chain saw or recommended.
 - Never use a dull or loose chain. Keep chain sharp with proper tension.

How to use a saw safely



1. Use the chain saw only with a secure footing.
2. Hold the chain saw at the right-hand side of your body (See Fig. I).
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. J)
6. Do not operate the chain saw with arms fully extended, attempt to saw areas that are difficult to reach, or stand on a ladder while sawing (see Fig. K). Never use the chain saw above shoulder height

CUTTING WOOD UNDER TENSION (See fig. L)



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 (overbuck), and then finish the cut (Z) from below, in order to avoid contact of the chain saw 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 (underbuck), and finish the cut from above (Z) in order to avoid log splitting or jamming of the chain saw.

MAINTENANCE

SAW MAINTENANCE

Follow the maintenance instructions in this manual. Proper cleaning of saw and chain and guide bar maintenance can reduce the chances of kickback. Inspect and maintain saw after each use. This will increase the service life of your saw.

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

MAINTENANCE AND STORAGE OF CHAIN SAW

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 chain saw before and after each use. Check saw closely if 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 chain saw if damage affects safety or operation. Have damage repaired by the authorized service center.
3. Maintain chain saw 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 handles dry, clean, and free of oil and grease.
 - Keep all screws and nuts tight.
 - Keep the battery pack from heat, oil, and sharp edges.
4. When servicing, use only identical replacement parts.
5. When not in use, always store chain saw
 - in a high or locked place, out of children's reach
 - in a dry place
 - with bar and chain storage/transportation cover in place

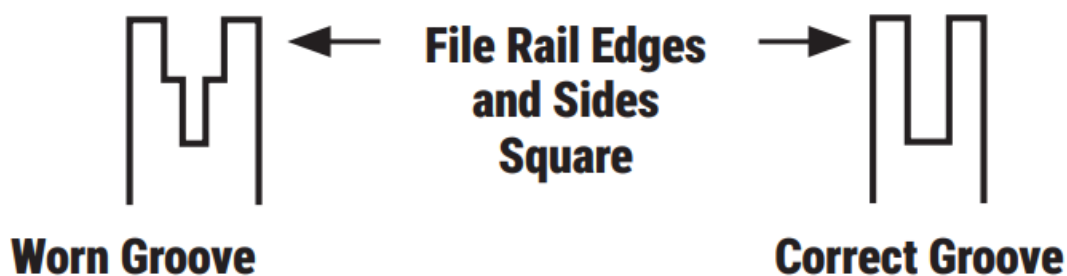
Bar Maintenance

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 chain cover and bar and chain. (see section ASSEMBLY)
2. Using a wire brush, screwdriver or similar tool, clear the residue from the inner groove of the bar (See Fig. M).
3. Make sure to clean oil passages thoroughly 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, with the unit disconnected from the power source, clean all sawdust from the guide bar and sprocket hole. When rail top is uneven, use a flat file to restore square edges and sides.



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 or on the decal located on the chain saw. 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. A worn or damaged guide Bar will

damage the chain. It will also make cutting harder. Fit the bar tensioning plate. Tab into the new bar by tightening the screw clockwise. The tab protrusion (a) must be fitted into the bar hole. (See Fig N)

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 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.

LUBRICATE SPROCKET

WARNING: Wear heavy duty gloves when performing any maintenance or service to this tool. Always remove the battery pack before performing any service or maintenance on this tool.

NOTE: It is not necessary to remove the chain or bar when lubricating the guide bar sprocket.

1. Clean the bar and sprocket
2. Using a grease gun, insert the tip of the gun into the lubrication hole and inject grease until it appears at the outside edge of the sprocket tip (See Fig. O).
3. To rotate the sprocket pull the chain by hand until the ungreased side of the sprocket is in line with the grease hole. Repeat the lubrication procedure.

FOR BATTERY TOOLS

The ambient temperature range for the use and storage of tools and batteries is 0 °C-45 °C. The recommended ambient temperature range for the charging system during charging is 0 °C-40 °C. Details regarding safe disposal of used batteries At the end of the life of the appliance, remove the battery pack safely before disposing of the appliance. Do not throw batteries away or throw them in the normal trash can. Also do not dispose of the battery with the machine. Remove the used battery pack from the appliance and dispose of it at the nearest or convenient dedicated recycling facility. If in doubt, consult your local environmental protection department. Batteries may enter the water cycle if disposed of improperly, which can be hazardous for the ecosystem. Do not dispose of waste batteries as unsorted municipal waste.

ENVIRONMENTAL PROTECTION

Waste electrical products must not be disposed of with household waste. Please recycle where facilities exist. Check with your local authorities or retailer for recycling advice.

TROUBLESHOOTING


The following table gives checks and actions that you can perform if your machine does not operate correctly. If these do not identify/remedy the problem, contact your service agent. Warning: Switch off and remove plug from power source before investigating the fault.

Symptom	Possible Cause	Remedy
Chain saw fails to operate	Out of battery.	Charge the battery pack.

Chain saw operates intermittently	<p>Overheating</p> <p>Applying too much pressure while cutting.</p> <p>Loose connection. Internal wiring defective.</p> <p>On/Off switch defective.</p>	<p>Place the machine in a cool, ventilated place to cool it down.</p> <p>Applying relatively less pressure while cutting.</p> <p>Contact service agent. Contact service agent.</p> <p>Contact service agent.</p>
Dry chain	<p>No oil in the reservoir</p> <p>The vent in the oil filler cap clogged</p> <p>Oil passage clogged</p>	<p>Refill oil</p> <p>Clean cap</p> <p>Clean oil passage outlet</p>
Chain/chain bar over-heats	<p>No oil in the reservoir</p> <p>The vent in oil filler cap clogged</p> <p>Oil passage clogged Chain is over tensioned Dull chain</p>	<p>Refill oil</p> <p>Clean cap</p> <p>Clean oil passage outlet Adjust chain tension Sharpen chain or replace</p>
Chain saw rips, vibrates, does not saw properly	<p>Chain tension too loose Dull chain</p> <p>The chain is worn out</p> <p>Chain teeth are facing in the wrong direction</p>	<p>Adjust chain tension Sharpen chain or replace the chain</p> <p>Reassemble with chain in the correct direction</p>

TECHNICAL DATA

Type designation EJ321E EJ321E.X

- (3 – designation of machinery, representative of chain saw and pole saw)
- Voltage.....20 V  Max.***
- Bar length.....25 cm
- Chain speed.....3.8 m/s
- Oil tank capacity.....130 ml
- Chain pitch.....3/8"
- Number of chain drive links.....40
- Chain gauge.....0.043"
- Adaptive chain type.....
- ES: 3/8.043-40E/ QIRUI : A0(T)-40E/ OREGON: 90PX040G
- Adaptive bar type.....
- ES: ES104SDEA041/ QIRUI : PO10-43SR(T) / OREGON: 104MLEA041
- Battery type.....Lithium-ion
- Weight (chain & bar included)(bare tool).....2.4 kg
 - Voltage measured without workload. The initial battery voltage reaches a maximum of 20 volts. The nominal voltage is 18 volts.

- X=1-999, A-Z, M1-M9 there are only used for different customers, there are no safe relevant changes between these models.

SUGGESTED BATTERIES AND CHARGERS

20 V Battery

- WA3639.C.....2.0 Ah

20 V Charger

- WA3880.....2.0 A

We recommend that you purchase your accessories from the same store that sold you the tool. Refer to the accessory packaging for further details. Store personnel can assist you and offer advice.

NOISE INFORMATION

- A weighted sound pressure $L_pA = 85.5 \text{ dB(A)}$ $K_pA = 3.0 \text{ dB(A)}$
- A weighted sound power $L_wA = 93.5 \text{ dB(A)}$ $K_wA = 3.0 \text{ dB(A)}$
- Wear ear protection.

VIBRATION INFORMATION

Vibration total values (triax vector sum) determined according to EN 62841:

- Typical weighted vibration $a_h < 2.5 \text{ m/s}^2$
- Uncertainty $K = 1.5 \text{ m/s}^2$

The declared vibration total value and the declared noise emission value have been measured in accordance with a standard test method and may be used for comparing one tool with another. The declared vibration total value and the declared noise emission value may also be used in a preliminary assessment of exposure.

WARNING: The vibration and noise emissions during actual use of the power tool can differ from the declared value depending on the ways in which the tool is used especially what kind of workpiece is processed depending on the following examples and other variations on how the tool is used: How the tool is used and the materials being cut or drilled. The tool being in good condition and well-maintained. The use of the correct accessory for the tool and ensuring it is sharp and in good condition. The tightness of the grip on the handles and if any anti-vibration and noise accessories are used. And the tool is being used as intended by its design and these instructions. This tool may cause hand-arm vibration syndrome if its use is not adequately managed.

WARNING: To be accurate, an estimation of exposure level in the actual conditions of use should also take account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle but not actually doing the job. This may significantly reduce the exposure level over the total working period. Helping to minimize your vibration and noise exposure risk. Always use sharp chisels, drills, and blades. Maintain this tool in accordance with these instructions and keep well lubricated (where appropriate). If the tool is to be used regularly then invest in anti-vibration and noise accessories. Plan your work schedule to spread any high-vibration tool use across a number of days.

DECLARATION OF CONFORMITY

We, Positec Germany GmbH Postfach 680194, 50704 Cologne, Germany On behalf of Positec declare that the product Description Battery-powered chain saw Type Designation EJ321E EJ321E.X (3 – designation of machinery, representative of chain saw) Function Cutting wood

Complies with the following Directives

- 2006/42/EC, 2014/30/EU
- 2011/65/EU&(EU)2015/863
- 2000/14/EC amended by 2005/88/EC

The notified body involved

- Name: Intertek Deutschland GmbH (Notified body 0905)
- Address: Stangenstraße 1, 70771 LEINFELDEN-ECHTERDINGEN
- Certification No.: 22SHW0964

2000/14/EC amended by 2005/88/EC:

- Conformity assessment procedure as per.....Annex V
- Measured Sound Power Level.....93.5 dB(A)
- Declared Guaranteed Sound Power Level.....96 dB(A)
- Standards conform to EN 62841-1, EN 62841-4-1, EN ISO 3744, EN IEC 55014-1, EN IEC 55014-2, and EN IEC 63000 The person authorized to compile the technical file,
- Name Marcel Filz Address Positec Germany GmbH Postfach 680194, 50704 Cologne, Germany



2024/10/18 Allen Ding Deputy Chief Engineer, Testing & Certification Positec Technology (China) Co., Ltd 18, Dongwang Road, Suzhou Industrial Park, Jiangsu 215123, P. R. China

We, Positec Germany GmbH Postfach 680194, 50704 Cologne, Germany Declare that the product Description Battery pack Type Designation WA3639.C Function Provide energy for power tools, garden tools and similar products Complies with the following Directives: (EU) 2023/1542, 2011/65/EU & (EU) 2015/863 Standards conform to EN 62133-2, EN IEC 63000 The person authorized to compile the technical file, Name Marcel Filz Address Positec Germany GmbH Postfach 680194, 50704 Cologne, Germany



2024/10/18 Allen Ding Deputy Chief Engineer, Testing & Certification Positec Technology (China) Co., Ltd 18, Dongwang Road, Suzhou Industrial Park, Jiangsu 215123, P. R. China. Copyright © 2024, Positec. All Rights Reserved. AR01791302

Specifications

- **Model:** EJ321E EJ321E.X
- **Power Source:** Cordless
- **Weight:** kg

FAQ

Q: What should I do if the chainsaw does not start?

A: Check that the battery is properly charged and inserted. Ensure all safety mechanisms are engaged before attempting to start the chain saw.

Q: How often should I sharpen the chain?

A: It is recommended to sharpen the chain regularly based on usage. Refer to the maintenance section for guidelines on chain sharpening frequency.

Documents / Resources

	<p>ESSENTIAL EJ321E Cordless Chain Saw [pdf] Instruction Manual EJ321E, EJ321E Cordless Chain Saw, Cordless Chain Saw, Chain Saw, Saw</p>
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References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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