

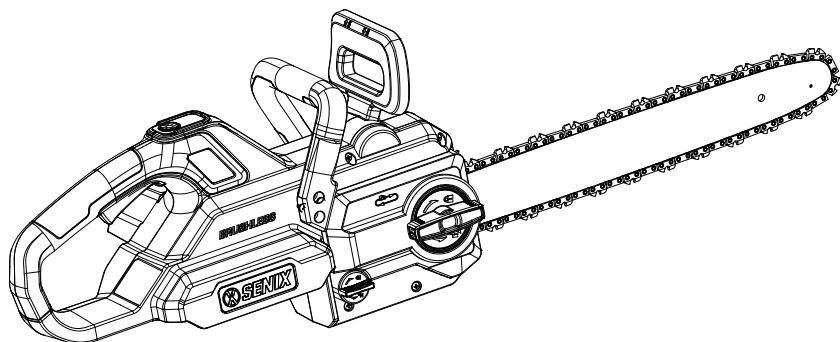
Instruction Manual

Model: CSX6-M-EU
CSX6-M1-EU



X6 **60V** ^{*} **||||** **BRUSHLESS** TM
LITHIUM-ION

CORDLESS CHAINSAW



CAUTION: Before using this tool, please read this manual completely, and follow all operating safety measures.

- SAFETY
- ASSEMBLY
- OPERATION
- MAINTENANCE

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SAFETY & INTERNATIONAL SYMBOLS

Explanation of Safety & international symbols describes safety and international symbols and pictographs that may appear on this product. Read the operator's manual for complete safety, assembly, operating and maintenance and repair information.



Caution / Warning.



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



Wear eye, ear and head protection.



Wear a dust mask.



Wear safety footwear.



Wear protective gloves.



Wear respiratory protection.



Wear tight-fitted protective clothes.



Use appropriate protection for foot-leg and hand-arm.



Do not expose the product to rain or wet conditions.



Do not smoke in the work area, around the product and in the vicinity of flammable materials!



Kickback! Tip contact may cause the guide bar to move suddenly upward and backwards what may cause serious injury to user.



Beware of chain saw kickback and avoid contact with bar tip.



Always use the product with two hands. Do not use one hand when operating the product.




Objects thrown by the product could hit the user or other bystanders. Always ensure that other people and pets remain at a safe distance from the product when it is in operation. In general, children must not come near the area where the product is.



Correct direction of cutting-teeth.



Chain brake (the  symbol shows the position in which the brake is released)



Class II equipment (Charger)



RCM Mark



Power tools that are no longer usable and defective or used battery packs/batteries, must be collected separately and disposed of in an environmentally correct manner.

SAFETY INSTRUCTIONS

ORIGINAL INSTRUCTIONS

GENERAL POWER TOOL SAFETY WARNINGS



WARNING!

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

Save all warnings and instructions for future reference.

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

1) Work Area Safety

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

2) Electrical Safety

- a. **Battery charger 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.
- b. **Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators.**
There is an increased risk of electric shock if your body is earthed or grounded.
- c. **Do not expose power tools to rain or wet conditions.** *Water entering a power tool will increase the risk of electric shock.*
- d. **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.**
Damaged or entangled cords increase the risk of electric shock.
- e. **If operating a battery charger in a damp**

location is unavoidable, use a residual current device (RCD) protected supply.
Use of an RCD reduces the risk of electric shock.

3) Personal Safety

- a. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** *A moment of inattention while operating power tools may result in serious personal injury.*
- b. **Use personal protective equipment. Always wear eye protection.** *Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.*
- c. **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.*
- d. **Remove any adjusting key or wrench before turning the power tool on.** *A wrench or a key left attached to a rotating part of the power tool may result in personal injury.*
- e. **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*
- f. **Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** *Loose clothes, jewellery or long hair can be caught in moving parts.*
- g. **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.*
- h. **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.*

4) Power Tool Use And Care

- a. **Do not force the power tool. Use the correct power tool for your application.** *The correct power tool will do the job better and safer at the rate for which it was designed.*

- b. **Do not use the power tool if 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.*
 - c. **Disconnect the plug from the power source and/or remove the battery pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools.** *Such preventive safety measures reduce the risk of starting the power tool accidentally.*
 - d. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** *Power tools are dangerous in the hands of untrained users.*
 - e. **Maintain power tools and accessories.** **Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** *Many accidents are caused by poorly maintained power tools.*
 - f. **Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*
 - g. **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** *Use of the power tool for operations different from those intended could result in a hazardous situation.*
 - h. **Keep handles and grasping surfaces dry, clean and free from oil and grease.** *Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.*
- a connection from one terminal to another.** *Shorting the battery terminals together may cause burns or a fire.*
- d. **Under abusive conditions, liquid may be ejected from the battery; avoid contact.** *If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.*
 - e. **Do not use a battery pack or tool that is damaged or modified.** *Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.*
 - f. **Do not expose a battery pack or tool to fire or excessive temperature.** *Exposure to fire or temperature above 130°C may cause explosion.*
 - g. **Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions.** *Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.*



WARNING!

Use only with SENIX X6 battery (B30X6/B40X6/B60X6/B80X6/B120X6) and chargers (CHX6-L-EU/CHQX6-EU/CHQX6-M-EU/CHDX6-M-EU).

6) Service

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

5) Battery Tool Use And Care

- a. **Recharge only with the charger specified by the manufacturer.** *A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.*
- b. **Use power tools only with specifically designated battery packs.** *Use of any other battery packs may create a risk of injury and fire.*
- c. **When 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**

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 eye protection. Further protective equipment for hearing, head, hands, legs and feet is recommended.** Adequate protective equipment will reduce personal injury from flying debris or accidental contact with the saw chain.
 - **Do not operate a chain saw, 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 fixed, secure and level surface.** Slippery or unstable surfaces such as ladders may cause a loss of balance or control of the chain saw.
 - **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.
 - **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 accessories.** 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.
 - **Do not operate a chain saw in a tree unless you have been specifically trained to do so.** Operation of a chain saw in a tree without proper training could increase the risk of serious personal injury.
 - **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.

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:

- **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 bars and chains may cause chain breakage and/or kickback.
- **Follow the manufacturer's sharpening and maintenance instructions for the saw chain.** Decreasing the depth gauge height can lead to increased kickback.

ADDITIONAL SAFETY WARNINGS FOR OPERATION

- Always remove the battery pack before assembling, adjusting or cleaning, and before leaving the machine unattended for any period.
- Checking the completeness, assembly and setting of the chain saw (see details below) before start to work. Repeat the checking regularly during your work.
- It is recommended that the unexperienced user should have practical instruction in the use of the chainsaw and the protective equipment from an experienced operator. The initial practice should be cutting logs on a saw horse or cradle.
- This tool is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the equipment by a person responsible for their safety. Children should be supervised to ensure that they do not play with the equipment.
- Children and juveniles, with the exception of apprentices older than 16 years and under supervision, may not operate the chain saw. The same applies for persons who do not or do not sufficiently know how to handle the chain saw.
- The operating instructions should always be ready to hand. Persons unfit or tired must not operate the chain saw.
- Wait until the chain has come to a standstill completely before placing it down.

VIBRATION AND NOISE REDUCTION

To reduce the impact of noise and vibration emission, limit the time of operation, use low-vibration and low-noise operating modes as well as wear personal protective equipment.

Take the following points into account to minimise the vibration and noise exposure risks.

1. Only use the product as intended by its design and these instructions.
 2. Ensure that the product is in good condition and well maintained.
 3. Use correct attachments for the product and ensure they are in good condition.
 4. Keep tight grip on the handles/grip surface.
 5. Maintain this product in accordance with these instructions and keep it well lubricated (where appropriate).
 6. Plan your work schedule to spread any high vibration tool use across a longer period of time.
 7. Prolonged use of the product exposes the user to vibrations that can cause a range of conditions collectively known as hand-arm vibration syndrome (HAVS) e.g. fingers going white; as well as specific diseases such as carpal tunnel syndrome.
- To reduce this risk when using the product, always wear protective gloves and keep your hands warm.
 - The symptoms of HAVS include any combination of the following: Tingling and numbness in the fingers; Not being able to feel things properly; Loss of strength in the hands; Fingers going white (blanching) and becoming red and painful on recovery (particularly in the cold and wet, and probably only in the tips at first). Seek medical advice immediately if such symptoms are experienced.



WARNING!

The declared vibration total values and the declared noise emission values given in this instruction manual have been measured in accordance with a standardised test and may be used to compare one tool with another. They may be used for a preliminary assessment of exposure.

The declared vibration and noise emission values represent the main applications of the tool. However, if the tool is used for different applications, used with different accessories, or poorly maintained, the vibration and noise emission may differ. These conditions may significantly increase the exposure levels over the total working period. An estimation of the level of exposure to vibration and noise should take into account the times when the tool is turned off or when it is running idle. These conditions may significantly reduce the

exposure level over the total working period.

EMERGENCY

Familiarize yourself with the use of this product by means of this instruction manual. Memorize the safety directions and follow them to the letter. This will help to prevent risks and hazards.

1. **Always be alert when using this product, so that you can recognize and handle risks early.** Fast intervention can prevent serious injury and damage to property.
2. **Switch off the product and remove the battery pack if there are malfunctions.** Have the product checked by a qualified professional and repaired, if necessary, before you operate it again.

RESIDUAL RISKS

Even if you are operating this product in accordance with all the safety requirements, potential risks of injury and damage remain. The following dangers can arise in connection with the structure and design of this product:

1. Health defects resulting from vibration emission if the product is being used over long periods of time or not adequately managed and properly maintained.
2. Injuries and damage to property due to broken attachments or the sudden impact of hidden objects during use.
3. Danger of injury and property damage caused by flying objects.
4. Prolonged use of this product expose the operator to vibrations and may produce "whitefinger" disease. In order to reduce the risk, please wear gloves and keep your hands warm. If any of the "whitefinger" symptoms appear, seek medical advice immediately. "Whitefinger" symptoms include: numbness, loss of feeling, tingling, pricking, pain, loss of strength, changes in skin colour or condition. These symptoms normally appear in the fingers, hands or wrists. The risk increases at low temperatures.



WARNING!

This product produces an electromagnetic field during operation! This field may under some circumstances interfere with active

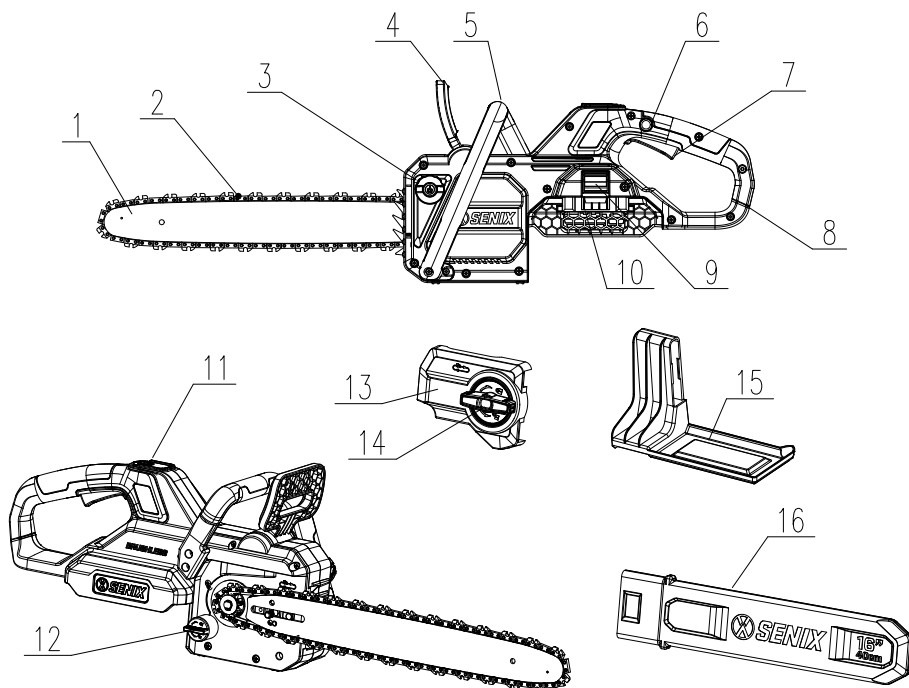
or passive medical implants! To reduce the risk of serious or fatal injury, we recommend persons with medical implants to consult their doctor and the medical implant manufacturer before operating this product!

SAVE THESE INSTRUCTIONS

INTENDED USE

This chain saw is intended for infrequent use by homeowners, cottagers, and campers, and for such general applications as basic limbing, felling, woodcutting, and removing buttress roots. All of the wooden objects to be cut with this chain saw should be no thicker than the guide bar's maximum cutting capability. Please note that this equipment has not been designed for use in commercial, trade or industrial applications. Do not use it for other purpose.

KNOW YOUR UNIT



APPLICATIONS

Model: CSX6-M-EU

CSX6-M1-EU

As a chain saw:

Basic limbing, felling, woodcutting, and removing buttress roots.

1	Guide bar
2	Saw chain
3	Oil-tank cap
4	Chain kickback brake handle
5	Front handle
6	Lock-off button
7	Trigger
8	Rear handle

9	Battery-release button
10	Electric contacts
11	Control panel
12	Chain tensioning knob
13	Side cover
14	Side cover knob
15	Oil storage plate
16	Guide bar cover

SPECIFICATIONS*

Model	CSX6-M-EU	CSX6-M1-EU
Input Voltage	56 V \approx (60 V Max*)	
Rated Output Power	1 800 W	
No-Load Speed	0 - 11 000 RPM tr/min (Eco) 0 - 14 000 RPM tr/min (Max)	
Chain Speed	20 m/s (Eco) 26 m/s (Max)	
Chain & Bar Length	40 cm	45 cm
Guide Bar Type	Manufacturer: OREGON	
	Type/Model NO. : 164BXNA041	Type/Model NO. : 184BXNA041
Saw Chain Type	Manufacturer: OREGON	
	Type/Model NO. : 80TXL064X	Type/Model NO. : 80TXL070X
Oil Tank	260 ml	
Vibration level front handle	Max. 9.891 m/s ²	
Vibration level rear handle	Max. 9.891 m/s ²	
Measurement Uncertainty K	K=1.5 m/s ²	
Sound pressure value L _{PA}	94 dB(A)	
Sound power value L _{WA}	102 dB(A)	
Measurement Uncertainty K _{PA} and K _{WA}	105 dB(A)	
Recommended Operating Temperature	-15°C-40°C	
Recommended Storage Temperature	-20°C-70°C	
Weight (Tool Only)	4.1 kg	

*60V Max battery, maximum initial battery voltage (measured without a workload) is 60V. The nominal voltage is 56V.

ASSEMBLY

1. Unpack all parts and lay them on a flat, stable surface:
2. Remove all packing materials and shipping devices, if applicable.
3. The scope of delivery varies depending on the country and purchased variant.

Models CSX6-M-EU/CSX6-M1-EU

- Chain saw x1
 - Saw chain x1
 - Guide bar x1
 - Guide bar cover x1
 - Oil storage plate x1
 - Instruction manual x1
4. If you find that parts are missing or show damage do not use the product but contact your dealer. Using an incomplete or damaged product represents a hazard to people and property.
 5. Ensure that you have all the accessories and tools needed for assembly and operation. This also includes suitable personal protective equipment.



WARNING!



Wear protective gloves for this assembly work and always lay the product on a flat and stable surface while assembling.



Follow the assembly instructions step-by-step and use the pictures provided as a visual guide to easily assemble the product!
Do not insert the battery pack before the power tool is completely assembled or adjusted!

INSTALLING THE SAW CHAIN AND THE GUIDE BAR



WARNING!

Ensure the battery pack is removed from the chainsaw before attaching the bar and chain.

1. Turn the side cover knob counterclockwise to remove the side cover and then loose the chain tensioning knob as much as possible.

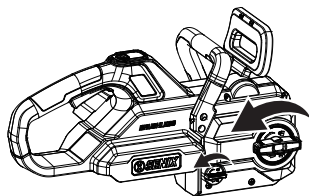


Fig. 1

2. Lay the saw chain in a loop on a flat surface and straighten any kinks.
3. Place the chain drive links into the guide bar groove and make the chain a loop at the back of the guide bar. Make sure the saw chain is in correct running direction by comparing saw chain with the rotation symbol.

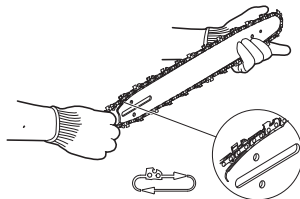


Fig. 2

4. Hold the chain in position on the guide bar and place the loop around the sprocket of the power head.
5. Slide the guide bar slot over the alignment flanges until the tension adjusting pin is inserted in the lower hole in the tail of the bar. And then slightly tighten the chain tensioning knob.

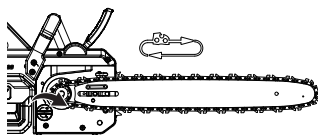


Fig. 3

6. Put on the side cover and slightly tighten the side cover knob.

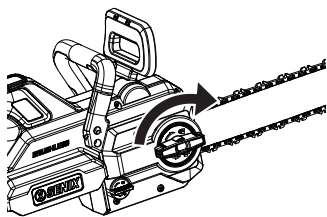


Fig. 4

7. Lift the tip of the guide bar up to check for sag. Release the tip of the guide bar and turn the chain tensioning knob clockwise. Repeat this process until the sag is eliminated.
8. Tighten the side cover knob securely to ensure that the saw chain is properly tensioned before using.



NOTE:

To extend the guide bar life, invert the bar occasionally.

INSTALLING/REMOVING THE BATTERY PACK

To install:

Slide the battery pack to the battery docking port on the product until it clicks.

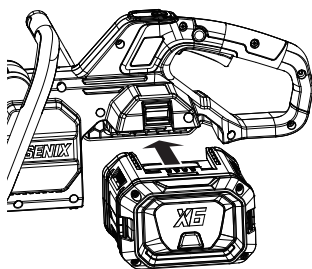


Fig. 5

To remove:

Press the battery-release button on the product and slide the battery pack out.



NOTE:

Charge the battery at an ambient temperature of 4°C to 40°C (39.2°F to 104°F).



NOTE:

Refer to the manuals for the charger and battery pack for more details about how to charge the battery pack and other information regarding to the charger and battery pack.

OPERATION



WARNING!

Never operate a chain saw that is damaged or improperly adjusted or that is not completely and securely assembled. Be sure that the saw chain stops moving when the trigger is released.



WARNING!

To prevent accidental starting that could cause serious personal injury, always remove the battery pack from the machine when assembling parts, making adjustments, cleaning, or when not in use.



WARNING!

Do not use any attachments or accessories not recommended by the manufacturer of this product. The use of attachments or accessories not recommended can result in serious personal injury.

BAR AND CHAIN OIL FILLING



WARNING!

Do not smoke or bring any fire or flame near the oil or the chain saw. Oil may spill and cause a fire.



NOTE:

It is essential to fill with oil before use. Operating the chain saw without bar and chain oil will result in damage to the chain saw. The chain is automatically lubricated with chain oil during operation.

1. Position the chain saw on its side with its oil tank cap facing towards.
2. Clean the oil tank cap and the area around it to ensure that no dirt falls into the oil tank.
3. Position the chain saw on its side on a firm, flat surface, so that the tank cap is facing upwards. Lift up the semicircular plate and rotate the oil tank cap counterclockwise to remove it.

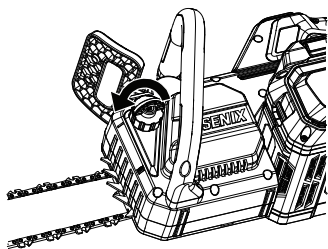


Fig. 6

4. Carefully Pour the bar and chain oil into the tank.
5. Wipe off any excessive oil and replace the cap.



NOTE:

Check the oil level frequently and fill when the oil level falls below the minimum line. Never operate the chain saw if the oil is not visible.

STARTING/STOPPING THE CHAIN SAW



WARNING!

Check for the oil lever and the capacity of the battery pack before starting the chain saw.



WARNING!

Follow the instructions in your operator's manual for starting the chain saw. Control the chain saw with a firm grip on both handles when it is in operation. Always hold the chain saw with your right hand on the rear handle and your left hand on the front handle. Keep handles dry, clean, and free of oil.

1. Pull the chain kickback brack handle towards the front handle to the operation position.

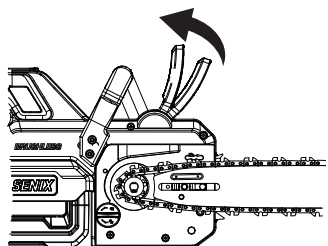


Fig. 7

2. Use both hands to grasp the front and rear handles firmly.
3. Press and hold the lock-off button with the thumb of your right hand, and then squeeze the trigger with the fingers of your right hand to start the chain saw.

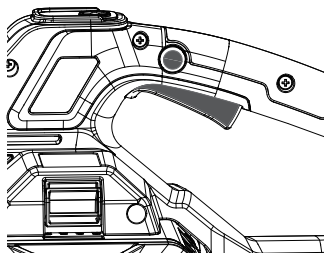


Fig. 8

4. Release the lock-off button and continue to squeeze the trigger for continued operation.
5. To stop the product, release the trigger. Push the chain kickback brake handle forward to the brake position.

ADJUSTING THE CHAIN TENSION

Stop the motor and remove the battery pack before adjusting the chain tension. Make sure the side cover knob is loosened. Turn the chain tensioning knob clockwise till the chain comes to a suitable status. Tighten the side cover knob after adjustment. See the section: "INSTALLING THE SAW CHAIN AND THE GUIDE BAR" for more detailed information.



WARNING!

During normal saw operation, the temperature of the chain will increase. The drive links of a correctly tensioned warm chain will hang approximately 1.3 mm out of the bar groove.

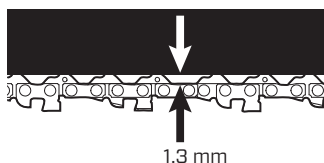


Fig. 9

THE CONTROL PANEL

Battery pack power display:

When the chain saw is switched on/off, the battery pack power display will keep lighting for 5 seconds. When the battery pack is low voltage, the power display will flash.

Chain kickback brake warning light:

The warning light will be on when the chain saw is switched on with chain kickback brake in the brake position.

ECO indicator:

The ECO indicator is off after inserting the battery pack. Press the ECO indicator button and the indicator is on. If the trigger is not activated, the indicator will go out after keeping lighting for 5 seconds. If the trigger is activated, the indicator will keep lighting till the trigger is turned off.

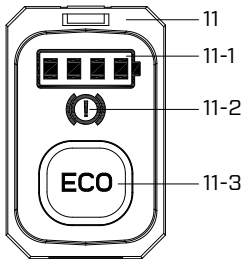


Fig. 10

11	Control panel
11-1	Battery pack power display
11-2	Chain kickback brake warning light
11-3	ECO indicator

CHECKING CHAIN LUBRIATION

The chain lubrication should be checked after everything else is ready before cutting. This product is equipped with an automatic oiling system! The oiling system automatically delivers the proper amount of oil to the bar and chain. Start the machine; keep it running and check if the chain oil is delivered as shown in the figure.



Fig. 11

OVERHEAT PROTECTION OF CHAIN SAW

This chain saw has a overheat protection function. When the temperature of PCB is too high during operation, the chainsaw will be shut down automatically. Wait it to cool down for about five minutes then restart the product.

INSTRUCTIONS CONCERNING THE PROPER TECHNIQUES



WARNING!

Never start the chain saw when it is in contact with the wood. Always allow the chain saw reach full speed before applying the saw to the wood.



WARNING!

It is recommended that the first-time user should, as a minimum, practise cutting logs on a saw-horse or cradle.

Felling a tree

1. 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.

2. The product operator should keep on the uphill side of the terrain as the tree is likely to roll or slide downhill after it is felled.
3. 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.

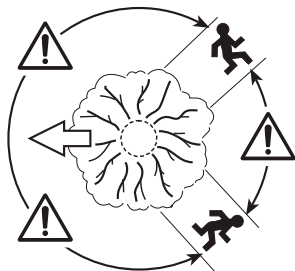


Fig. 12

4. 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.
5. Remove dirt, stones, loose bark, nails, staples and wire from the tree.

Notching undercut and felling back cut

Make the notch (B) 1/3 the diameter of the tree, perpendicular to the direction of falls. 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.

Make the felling back cut (A) at least 50 mm higher than the horizontal notching cut. 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 (C) 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 aluminum to open the cut and drop the tree along the desired line of fall.

When the tree begins to fall remove the product from the cut, switch off and put the product down then use the retreat path

planned. Be alert for overhead limbs falling and watch your footing.

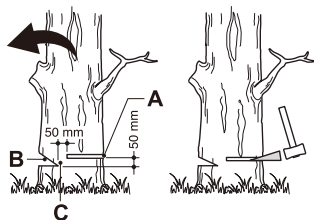


Fig. 13

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. Branches under tension should be cut from the bottom up to avoid binding the chain saw.

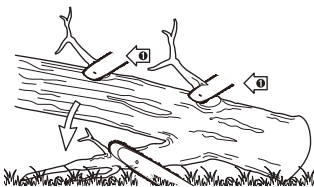


Fig. 14

Bucking a log

1. Follow the simple directions for easy cutting. When the log is supported along its entire length, it is cut from the top (overbuck).

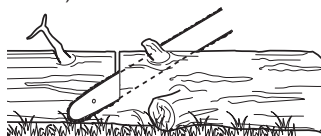


Fig. 15

2. When the log is supported on one end, cut 1/3 the diameter from the underside (underbuck). Then make the finished cut by overbuck to meet the first cut.

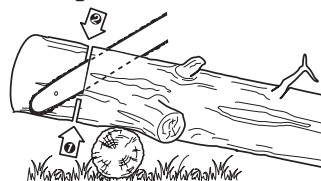


Fig. 16

3. When the log is supported on both

ends, 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.

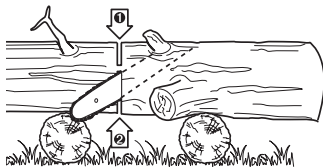


Fig. 17

4. When bucking on a slope always stand on the uphill side of the log. When "cutting through", to maintain complete control release the cutting pressure near the end of the cut without relaxing your grip on the product handles. Do not let the chain contact the ground. After completing the cut, wait for the saw chain to stop before you move the product. Always switch off the product before moving from tree to tree.



Fig. 18

MAINTENANCE



WARNING!

Remove and pull out the battery pack before maintenance! Maintain this product regularly and carefully! If the product is improperly maintained, it may fail at its intended task, which may produce fatal consequences.



WARNING!

Wear heavy duty gloves when performing any maintenance or service to this tool.



WARNING!

Only perform cleaning and maintenance work according to these instructions! All further works must be performed by a qualified specialist!



WARNING!

It is recommended to have sharpening and maintenance of the saw chain performed by authorized service centers.

REPLACING THE SAW CHAIN AND GUIDE BAR

Exchange a worn guide bar and/or chain saw refers to "INSTALLING THE SAW CHAIN AND THE GUIDE BAR". Only use the specified parts for replacements.

SHARPENING THE SAW CHAIN

Do not sharpen the saw chain by yourself, unless you are experienced in doing so. It is recommended to have the chain saw sharpened by an authorized service.

CLEANING

- Remove wood chips and other debris from the housing. Clean dirty with a soft, dry cloth. Dirt or oil can cause a poor electrical connection, resulting in loss of power.
- After use, clean debris from the saw chain and guide bar. Wipe with a cloth moistened with mild soap solution. Never use harsh cleaners or solvents.
- Always clean out wood chips, saw dust and dirt from the bar groove when replacing saw chain.
- Ensure the area under the side cover is free of wood chips and other debris.

TRANSPORTATION

- Install the guide bar cover.
- If desired, drain the bar and chain oil to reduce seepage.
- Carry saw by its handle with bar and chain facing behind the operator.
- Ensure the product is secure and cannot fall or move into contact with people or property.

STORAGE

- Clean chainsaw thoroughly as described above.

- Install the guide bar cover and the oil storage plate before storing the product.
- Store in a dry place.
- Keep out of reach of children or pets.
- We recommend using the original package for storage or covering the product with a suitable cloth or enclosure to protect it against dust.

DISPOSAL

Waste product should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice. Users should clean up dust generated during operation to protect environment.



Electrical products should not be discarded with household products. Used electrical products must be collected separately and disposed of at collection points provided for this purpose. Talk with your local authorities or dealer for advice on recycling.

TROUBLE SHOOTING

Suspected malfunctions are often due to causes that the users can fix themselves. Therefore, check the product using this section. In most cases the problem can be solved quickly.

PROBLEM	POSSIBLE CAUSE	SOLUTION
Motor does not start	Battery is discharged	Charge the battery pack
	Battery pack not fully inserted	Attach properly
	Chain brake engaged	Pull back the guard
Chain saw does not cut properly	Insufficient chain tension	Refer to the manual to tension the saw chain
	Dull / worn chain	Sharpen or replace the chain
	Chain installed backwards	Refer to the manual to properly install the saw chain and guide bar
Product stops running suddenly	Battery is discharged	Charge the battery pack
	Overcurrent protection	Release the trigger and restart the machine