



40-VOLT 16-INCH CORDLESS CHAIN SAW – CORE TOOL

Model iON16CS-CT

Form No. SJ-iON16CS-CT-880E-M


A Division of Snow Joe®, LLC

OPERATOR'S MANUAL

IMPORTANT! Safety Instructions

All Operators Must Read These Instructions Before Use

Read all the instructions contained in this manual. Keep this manual in a safe place, so that the information is available at all times. If you give the equipment to another person, make sure to provide these operating instructions. Basic safety precautions should always be followed to reduce the risk of fire, electric shock, and personal injury.

Notice the personal safety alert symbol  used in this manual to draw your attention to a **WARNING** given along with the particular operating instruction. This means that the operation requires special **ATTENTION, CAUTION, and AWARENESS**.

Know Your Tool and Its Capabilities

This machine is a battery-powered portable chain saw that is designed for residential use.

This machine is composed of an electric motor, which drives a chain that runs on a bar.

The double braking system stops chain movement when the motor is stopped or in the event of kickbacks while working.

Intended use

This machine was designed and manufactured for felling, bucking, and delimbing trees or cutting wooden objects with dimensions suitable for the cutting bar's capabilities.

Improper use


Any other use differing from the above mentioned applications poses a serious hazard to the user and may damage both the tool and your personal property. Examples of improper use include, but are not limited to:

- trimming hedges;
- carving;
- sectioning pallets, crates, and various packing materials;
- sectioning furniture or other materials with nails, screws, or other metal components;
- butchering meat;

- using the machine to lift, move, or split objects;
- using the machine while fastened to fixed supports.

Improper use of the machine will invalidate the warranty, relieve the manufacturer from all liabilities, and the user will consequently be liable for all and any damage or injury to himself/herself or others.

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

1. Keep the work area clean and well-lit. Cluttered, dark areas invite accidents.
2. 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.
3. Keep children, bystanders, and pets a safe distance away from the power tool during operation and as the machine cools. Children must always be supervised to ensure that they do not play with the equipment.

Electrical safety

1. 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.
2. Do not expose power tools or chargers to rain or wet conditions. Water entering a power tool or charger will increase the risk of electric shock.

Personal safety

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 of inattention while operating a power tool may result in serious personal injury.

2. Use personal protective equipment suited to your work conditions to help reduce personal injuries. This includes a dust mask, rubber gloves, non-skid safety shoes, a hard hat, safety glasses, and hearing protection.
3. Prevent unintentional starting. Ensure that the machine is switched off before inserting the battery, picking up, or carrying the power tool. Carrying the power tool with your finger on the switch or fitting the battery with the switch "ON" can cause accidents.
4. Remove any adjusting key or wrench before turning on the power tool. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
5. Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
6. 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.
7. If devices are provided for the connection of dust extraction and collection facilities, ensure these are properly connected and used. Use of dust collection devices can reduce dust-related hazards.
5. Maintain power tools with care to ensure safe operation and optimal performance. Keep handles dry, clean, and free from oil and grease. Check for misalignment or obstruction of moving parts, breakage of parts, and any other condition that may affect the power tool's operation. If damage is found, 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 become jammed and are easier to control.
7. Use the power tool and accessories in accordance with these instructions, and be sure to take into account the working conditions and the work to be performed. Using the power tool for operations other than those intended could result in a hazardous situation.
8. Moving parts presents risks. Keep your face, hair, clothing, hands, and feet away from all moving parts. All guards and safety attachments must be installed properly before using the power tool. Shut off and disconnect the battery before touching any parts other than the handles and the switch.

Power tool use and care

⚠ WARNING! Turn off the power switch and disconnect the battery before adjusting, inspecting, servicing, or cleaning the power tool, when changing accessories or when any other dangerous conditions present themselves. All maintenance tasks should be performed after the power tool's rotating parts have stopped completely. Such preventive safety measures reduce the risk of starting the power tool accidentally.

1. Do not force the power tool. Use the correct power tool for your application. The correct power tool will perform better with less likelihood of personal or mechanical damage if it is used at the rate for which it was designed.
2. 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.
3. Remove the battery from its compartment before making any adjustments, changing accessories, or storing the power tool. Such preventive safety measures reduce the risk of starting the power tool accidentally.
4. Store idle power tools indoors in a dry, locked place out of the reach of children. Do not allow anyone who is unfamiliar with the power tool or these instructions access to the machine. Power tools are dangerous in the hands of untrained users.

Service

- Have your power tool serviced by a qualified repair person at an authorized Snow Joe® + Sun Joe® dealer using only identical replacement parts or call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563). This will ensure that the safety of the power tool is maintained.

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 the chain saw 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.
- Wear safety glasses and hearing protection. If you are using the chain saw every day under normal conditions, you can be exposed to a noise level of 85 dB (A) or higher. 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.
- Do not operate the chain saw in a tree. Operation of a chain saw while up in a tree may result in 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 such as ladders may cause a loss of balance or control of the chain saw.

- When cutting a limb that is under tension, be cautious of spring back. 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 accessories. An improperly tensioned or poorly lubricated chain may either break or increase the chance for kickback.
- Keep handles dry, clean, and free from oil and grease. Greasy, oily handles are slippery and can cause loss of control.
- Cut wood only. Do not use the chain saw for any other purpose. For example, do not use the chain saw to cut plastic, masonry, or non-wood building materials. Using the chain saw in these incorrect ways could result in serious damage to you and your tool.

Causes and 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 detailed below:

- Maintain a firm grip (right hand on the rear handle and left hand on the front handle with thumbs and fingers encircling the respective handles) and position your body and arms 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.
- Always observe the safety regulations and follow the correct sawing techniques.
- Ensure safe carrying of the chain saw. Whenever the machine is to be handled or transported, you must:
 - switch off the motor, remove the battery, and wait for the chain to stop;
 - mount the guide bar cover;
 - hold the machine using the hand grips and position the bar in the opposite direction to that used during operation.

When using a vehicle to transport the machine, fasten it firmly and position it so that it is not a danger to any passengers.

- Before felling or delimbing for the first time, make sure:
 - you have been specifically trained to use this type of equipment;
 - you have carefully read the safety regulations and user instructions contained in this manual;
 - you practice first on logs on the ground or attached to trestles, in order to get familiar with the machine and the proper cutting techniques.


Battery + Charger Safety Instructions

NOTE: This unit is a core tool. The battery and the charger are not included. They must be purchased separately. The iON16CS-CT is compatible with the following batteries (models iBAT40 and iBAT40XR) and chargers (models iCHRG40 and iCHRG40QC).

We pay a great deal of attention to the design of every battery pack to ensure that we supply you with batteries that are safe, durable, and have a high energy density. The battery cells have a wide range of safety devices. Each individual cell is initially formatted and its electrical characteristic curves are recorded. This data is then used exclusively to be able to assemble the best possible battery packs.

Despite all the safety precautions, caution must always be exercised when handling batteries. The following points must be obeyed at all times to ensure safe use. Safe use can only be guaranteed if undamaged cells are used. Incorrect handling of the battery pack can cause cell damage.

IMPORTANT! Analyses confirm that incorrect use and poor care of high-performance batteries are the main factors responsible for personal and/or product damage.

 **WARNING!** Use only approved replacement batteries; other batteries may damage the chain saw and cause it to malfunction, which can lead to serious personal injury.

⚠ CAUTION! To reduce the risk of injury, charge the EcoSharp® iBAT40 battery pack or the EcoSharp® PRO iBAT40XR battery pack only in their compatible chargers (models iCHRG40 and iCHRG40QC). Other types of chargers present risk of fire, personal injury, and damage. Do not wire a battery pack to a power supply plug or car cigarette lighter. Such misuse will permanently disable or damage the battery pack.

- **Avoid dangerous environments** – Do not charge the battery pack in rain, snow, or in damp or wet locations. Do not use the battery pack or charger in the presence of explosive atmospheres (gaseous fumes, dust, or flammable materials) because sparks may be generated when inserting or removing the battery pack, which could lead to a fire.
- **Charge in a well-ventilated area** – Do not block the charger vents. Keep them clear to allow for proper ventilation. Do not allow smoking or open flames near a charging battery pack. Vented gases may explode.

NOTE: The safe temperature range for the battery is -4°F (-20°C) to 113°F (45°C). Do not charge the battery outside under extremely cold or extremely hot conditions; charge it at room temperature.

- **Maintain charger cord** – When unplugging the charger, pull the plug, not the cord, from the receptacle to reduce the risk of damage to the electrical plug and cord. Never carry the charger by its cord or yank it by the cord to disconnect it from the receptacle. Keep the cord away from heat, oil, and sharp edges. Make sure the cord will not be stepped on, tripped over, or subjected to damage or stress when the charger is in use. Do not use the charger with a damaged cord or plug. Replace a damaged charger immediately.
- **Do not use an extension cord unless it is absolutely necessary** – Using the wrong, damaged, or improperly wired extension cord poses a risk of fire and electric shock. If an extension cord must be used, plug the charger into a properly wired 16 gauge or larger extension cord with blades that are the same number, size, and shape as the blades on the charger. Make sure that the extension cord is in good electrical condition.
- **Charger iCHRG40 and iCHRG40QC are rated for 120 volt AC only** – The charger must be plugged into an appropriate receptacle.
- **Use only recommended attachments** – Use of an attachment not recommended or sold by the battery charger or battery pack manufacturer may result in risk of fire, electric shock, or personal injury.
- **Unplug charger when not in use** – Make sure to remove battery packs from unplugged chargers.

⚠ WARNING! To reduce the risk of electric shock, always unplug the charger before performing any cleaning or maintenance. Do not allow water to flow into the charger. Use a Ground Fault Circuit Interrupter (GFCI) to reduce shock hazards.

- **Do not burn or incinerate battery packs** – Battery packs may explode, causing personal injury or damage. Toxic fumes and materials are created when battery packs are burned.
- **Do not crush, drop, or damage battery packs** – Do not use the battery pack or charger if they have sustained a sharp blow, been dropped, been run over, or have been damaged in any way (i.e. pierced with a nail, hit with a hammer, stepped on, etc.).
- **Do not disassemble** – Incorrect reassembly may pose a serious risk of electric shock, fire, or exposure to toxic battery chemicals. If the battery or charger are damaged, contact your authorized Snow Joe® + Sun Joe® dealer or call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563).
- **Battery chemicals cause serious burns** – Never let a damaged battery pack contact the skin, eyes, or mouth. If a damaged battery pack leaks battery chemicals, use rubber or neoprene gloves to safely dispose of it. If skin is exposed to battery fluids, wash the affected area with soap and water and rinse with vinegar. If eyes are exposed to battery chemicals, immediately flush with water for 20 minutes and seek medical attention. Remove and dispose of contaminated clothing.
- **Do not short circuit** – A battery pack will short circuit if a metal object makes a connection between the positive and negative contacts on the battery pack. Do not place a battery pack near anything that may cause a short circuit, such as paper clips, coins, keys, screws, nails, and other metallic objects. A short-circuited battery pack poses a risk of fire and severe personal injury.
- **Store your battery pack and charger in a cool, dry place** – Do not store the battery pack or charger where temperatures may exceed 104°F (40°C), such as in direct sunlight or inside a vehicle or metal building during the summer.

Information about the battery

1. The battery pack (model iBAT40 or iBAT40XR) that must be purchased separately for use with this cordless lawn mower is only partially charged. The battery pack has to be charged completely before you use the tool for the first time.
2. For optimum battery performance, avoid low discharge cycles by charging the battery pack frequently.
3. Store the battery pack in a cool place, ideally at 59°F (15°C) and charged to at least 40%.
4. Lithium-ion batteries are subject to a natural aging process. The battery pack must be replaced at the latest when its capacity falls to just 80% of its capacity when new. Weakened cells in an aged battery pack are no longer capable of meeting the high power requirements needed for the proper operation of your chain saw, and therefore pose a safety risk.
5. Do not throw battery packs into an open fire as this poses a risk of explosion.
6. Do not ignite the battery pack or expose it to fire.

7. Do not exhaustively discharge batteries. Exhaustive discharge will damage the battery cells. The most common cause of exhaustive discharge is lengthy storage or non-use of partially discharged batteries. Stop working as soon as the performance of the battery falls noticeably or the electronic protection system triggers. Place the battery pack in storage only after it has been fully charged.
8. Protect batteries and the tool from overloads. Overloads will quickly result in overheating and cell damage inside the battery housing even if this overheating is not apparent externally.
9. Avoid damage and shocks. Immediately replace batteries that have been dropped from a height of more than one meter or those that have been exposed to violent shocks, even if the housing of the battery pack appears to be undamaged. The battery cells inside the battery may have suffered serious damage. In such instances, please read the waste disposal information for proper battery disposal.
10. If the battery pack suffers overloading and overheating, the integrated protective cutoff will switch off the equipment for safety reasons.
IMPORTANT! Do not press the ON/OFF switch any more if the protective cut-off has been activated. This may damage the battery pack.
11. Use only original battery packs. The use of other batteries poses a fire risk and may result in injuries or an explosion.

Information about the charger and the charging process

















1. Please check the data marked on the rating plate of the battery charger (sold separately). Be sure to connect the battery charger to a power supply with the voltage marked on the rating plate. Never connect it to a different mains voltage.
2. Protect the battery charger and its cord from damage. Keep the charger and its cord away from heat, oil, and sharp edges. Have damaged cords repaired without delay by a qualified technician at an authorized Snow Joe® + Sun Joe® dealer or call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563).
3. Electrical plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with grounded appliances. Unmodified plugs and matching outlets will reduce the risk of electric shock.
4. Keep the battery charger, battery pack(s), and the cordless tool out of the reach of children.
5. Do not use the battery charger to charge other cordless tools.
6. During periods of heavy use, the battery pack will become warm. Allow the battery pack to cool to room temperature before inserting it into the charger to recharge.
7. Do not overcharge batteries. Do not exceed the maximum charging times. These charging times only apply to discharged batteries. Frequent insertion of a charged or partially charged battery pack will result in overcharging and cell damage. Do not leave batteries in the charger for days on end.
8. Never use or charge a battery pack if you suspect that it has been more than 12 months since the last time it was charged. There is a high probability that the battery pack has already suffered dangerous damage (exhaustive discharge).
9. Charging batteries at a temperature below 50°F (10°C) will cause chemical damage to the cells and may cause a fire.
10. Do not use batteries that have been exposed to heat during the charging process, as the battery cells may have suffered dangerous damage.
11. Do not use batteries that have suffered curvature or deformation during the charging process or those that exhibit other atypical symptoms (gassing, hissing, cracking, etc.)
12. Never fully discharge the battery pack (maximum recommended depth of discharge is 80%). A complete discharge of the battery pack will lead to premature aging of the battery cells.

Protection from environmental influences

1. Wear suitable work clothes. Wear safety goggles.
2. Protect your cordless tool and the battery charger from moisture and rain. Moisture and rain can cause dangerous cell damage.
3. Do not use the cordless tool or the battery charger near vapors and flammable liquids.
4. Use the battery charger and cordless tool only in dry conditions and at an ambient temperature of 50-104°F (10-40°C).
5. Do not keep the battery charger in places where the temperature is liable to reach over 104°F (40°C). In particular, do not leave the battery charger in a car that is parked in the sunshine.
6. Protect batteries from overheating. Overloads, overcharging, and exposure to direct sunlight will result in overheating and cell damage. Never charge or work with batteries that have been overheated – replace them immediately, if possible.
7. Store the charger and your cordless tool only in dry locations with an ambient temperature of 50-104°F (10-40°C). Store your lithium-ion battery pack in a cool, dry place at a temperature of 50-68°F (10-20°C). Protect the battery pack, charger, and cordless tool from humidity and direct sunlight. Only place fully charged batteries in storage (charged to at least 40%).
8. Prevent the lithium-ion battery pack from freezing. Battery packs that were stored below 32°F (0°C) for more than 60 minutes must be discarded.
9. When handling batteries, be wary of electrostatic charge. Electrostatic discharges can damage the electronic protection system and the battery cells. Avoid electrostatic charging and never touch the battery poles.

Safety Symbols

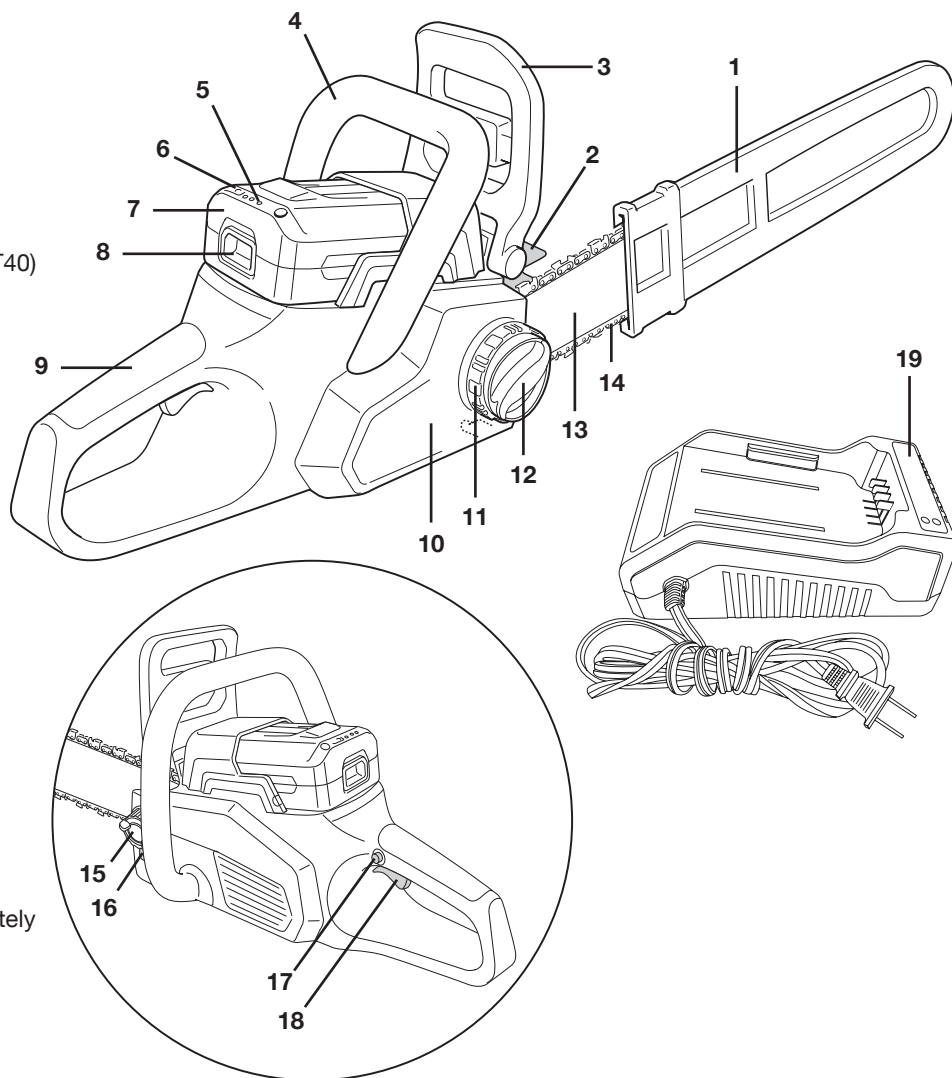
The following table depicts and describes safety symbols that may appear on this product. Read, understand and follow all instructions on the machine before attempting to assemble and operate.

Symbols	Descriptions	Symbols	Descriptions
	READ THE OPERATOR'S MANUAL(S) – Read, understand and follow all instructions in the user manual(s) before attempting to assemble and operate.		Keep bystanders and children a safe distance away.
	SAFETY ALERT – Indicates a precaution, a warning or a danger.		Wear eye and hearing protection, including safety goggles and ear defenders.
	WARNING! Do not expose the unit to rain or wet conditions.		Correct direction of cutting teeth.
 	DANGER! ROTATING BLADES – Keep hands and feet away from openings while the saw is running.	 	Wear protective gloves and non-slip footwear when using the machine and handling debris.
 	CAUTION! Avoid contacting the guide bar tip with any object. Tip contact may cause the guide bar to move suddenly upward and backwards, which may cause serious injury to the user.	 	WARNING! Two hands are always to be used when operating the chain saw.
	The rotating part will continuously run for several seconds after you turn off the machine.		Indoor use only. Only use battery charger indoors.

Know Your Cordless Chain Saw

Read the owner's manual and safety rules carefully before operating your cordless chain saw. Compare the illustration below to the actual unit in order to familiarize yourself with the location of the various controls and adjustments. Save this manual for future reference.

1. Cutting bar sheath
2. Spiked bumper
3. Front hand guard
4. Front hand grip
5. Battery charge level indicator
6. Push button for battery indicator
7. 40 V 4.0 Ah EcoSharp® (model iBAT40) or 40 V 5.0 Ah EcoSharp® PRO (model iBAT40XR) lithium-ion battery – Sold separately
8. Push lock button
9. Rear hand grip
10. Chain/sprocket end cover
11. Ring nut
12. Chain tension adjustment knob
13. 16" (405 mm) Oregon guide bar
14. 16" (405 mm) Oregon chain
15. Oil tank cap
16. Oil level indicator window
17. Safety lock button
18. Trigger switch
19. 40 V EcoSharp® battery charger (model iCHRG40) or 40 V EcoSharp® SWIFT battery charger (model iCHRG40QC) – Sold separately



Technical Data

No Load Speed	4400 ± 10% rpm	Battery Runtime (Max)	40 min (using iBAT40) 65 min (using iBAT40XR)
Battery Voltage*	40 V D.C.	Motor	600 W brushless
Battery Capacity	4.0 Ah (model iBAT40) 5.0 Ah (model iBAT40XR)	Bar Chain Length	16 in. (405 mm)
Charging Time	2.5 – 3 hours (using iBAT40 with iCHRG40) 3 – 3.5 hours (using iBAT40XR with iCHRG40)	Cutting Thickness (Max)	14.6 in. (371 mm)
		Oil Tank Capacity	2.4 fl oz (70 ml)
		Weight (chain saw alone)	9.5 lbs (4.3 kg)

*Initial no-load voltage, when fully charged, peaks at 40 volts; nominal voltage under typical load is 36 volts.

Unpacking

Carton Contents

- Cordless chain saw
- 16 in. (405 mm) Oregon chain (pre-mounted)
- 16 in. (405 mm) Oregon guide bar (pre-mounted)
- Cutting bar sheath
- Manual with registration card

NOTE: In order to operate this chain saw, you will need to additionally purchase either the EcoSharp® (model iBAT40) or EcoSharp® PRO (model iBAT40XR) lithium-ion battery and either the EcoSharp® charger (model iCHRG40) or the EcoSharp® SWIFT charger (model iCHRG40QC).

1. Carefully remove the chain saw and check to see that all of the above items are supplied.
2. Inspect the product carefully to make sure no breakage or damage occurred during shipping. If you find damaged or missing parts, DO NOT return the unit to the store. Please call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563).

NOTE: Do not discard the shipping carton and packaging material until you are ready to use your new cordless chain saw. The packaging is made of recyclable materials. Properly dispose of these materials in accordance with local regulations.

IMPORTANT! The equipment and packaging material are not toys. Do not let children play with plastic bags, foils, or small parts. These items can be swallowed and pose a suffocation risk!

Assembly

⚠ WARNING! Mount the components very carefully to ensure the safety and efficiency of the machine. If in doubt, contact an authorized Snow Joe® + Sun Joe® dealer or call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563).

⚠ WARNING! Unpacking and assembly should be completed on a flat and stable surface, with adequate space for moving the machine and its packaging.

For safety and transportation reasons, the lithium-ion battery is packed separately from the machine and is already partially charged. Charge the battery before using the tool following the instructions in the “Charging the battery” section.

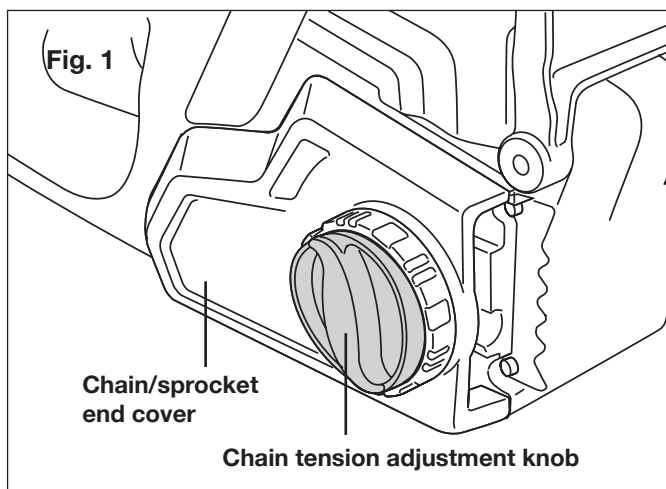
Bar and Chain Mounting

⚠ WARNING! Always wear heavy-duty gloves when handling the bar and chain. Mount the bar and chain very carefully so as not to impair the safety and efficiency of the machine. If in doubt, contact an authorized Snow Joe® + Sun Joe® dealer or call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563).

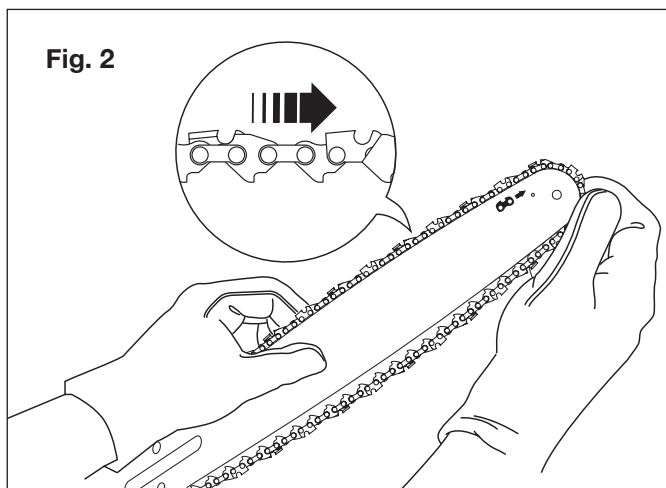
⚠ WARNING! Make sure the battery is not inserted in its housing.

Before fitting the guide bar, make sure the chain brake is not engaged; this is done by pulling the front hand guard back towards the body of the machine.

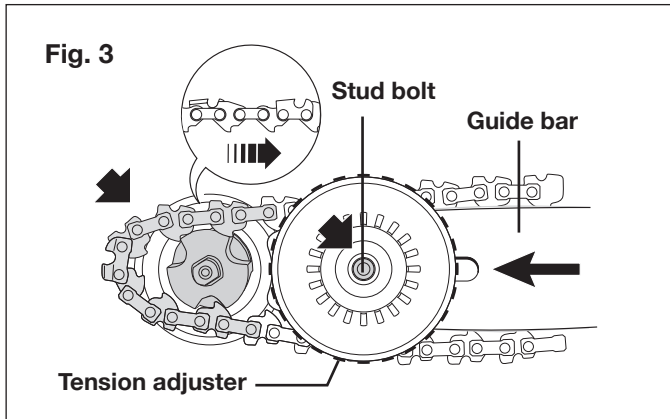
1. Unscrew the chain tension adjustment knob and remove the chain/sprocket end cover to expose the sprocket and access the area where the guide bar needs to be fitted (Fig. 1).



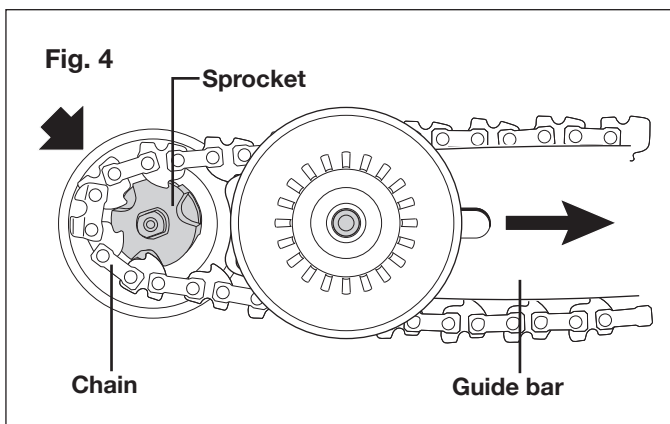
2. Mount the chain in the right direction on the guide bar. If the tip of the bar has a nose sprocket, make sure the drive links are correctly inserted in the sprocket rims (Fig. 2). ➡



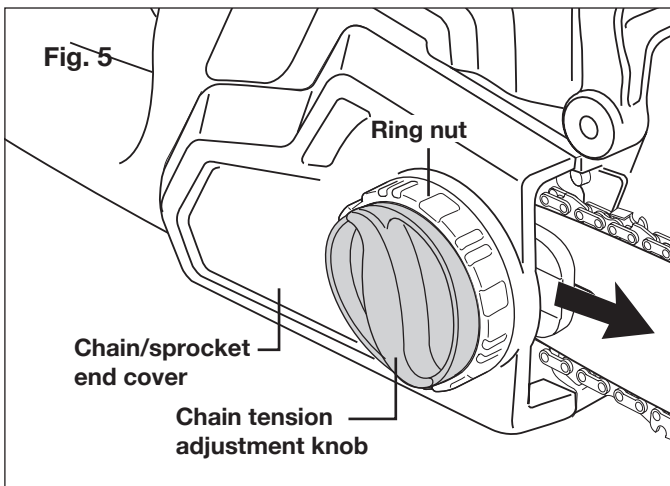
3. Mount the guide bar by inserting the stud bolt into the bar's hole using the tension adjuster; move the bar towards the back of the machine body (Fig. 3).



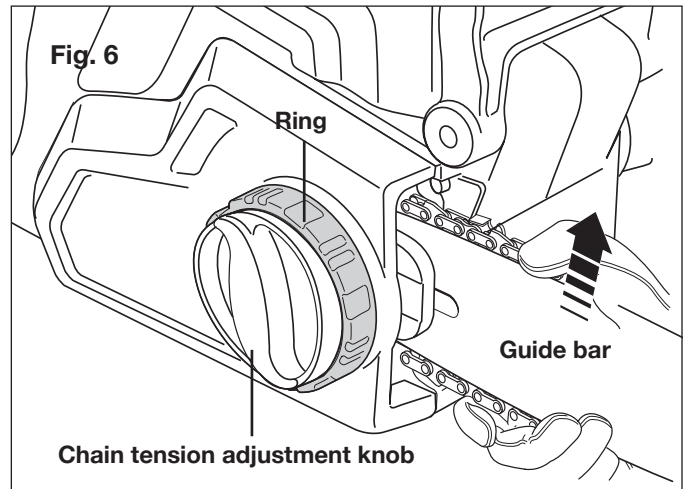
4. Wind the chain around the sprocket and push the guide bar forward to achieve an initial tensioning of the chain (Fig. 4).



5. Fit the chain/sprocket end cover back on by screwing on the chain tension adjustment knob without tightening it. Turn the ring nut clockwise until you find the right chain tension (Fig. 5).



6. Raise the guide bar and tighten the chain tension adjustment knob securely (Fig. 6).



Preparing To Work

Checking the Machine

⚠ WARNING! Before performing any checks, adjustments, repairs or maintenance on the machine, make sure the battery is not inserted in its housing.

Before starting work please:

- Check that all the screws on the machine and the guide bar are tightly fastened;
- Check that the chain is tensioned correctly, sharp and there are no signs of any damage;
- Check that hand grips and protection devices are clean and dry, correctly mounted and securely fastened to the machine;
- Check that the chain brake is working efficiently;
- Check that the trigger switch and the safety button move freely without forcing and return automatically and rapidly back to their neutral positions;
- Check that the trigger switch remains locked until the safety button is pressed;
- Make sure the cooling air vents are not clogged with sawdust or debris;
- Check that the chain's oil level is not below the "MIN" level mark; if necessary, top up the oil to 1 cm from the rim of the filler.

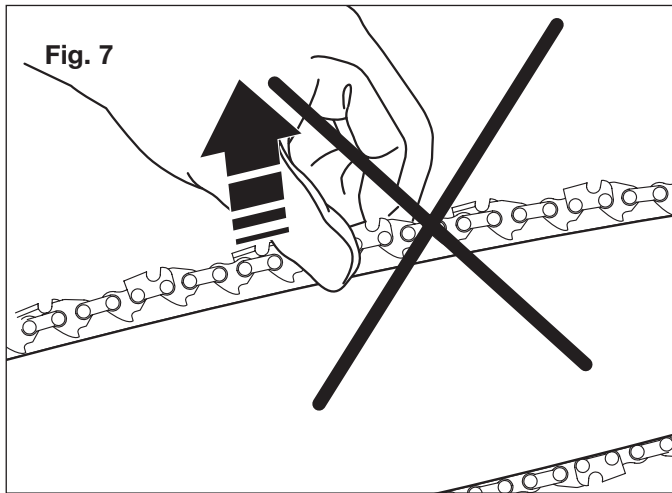
NOTE: You must fill the chain oil tank with bar and chain oil before using your chain saw.

Adjusting the Chain Tension

⚠ WARNING! Before performing any checks, adjustments, repairs, or maintenance on the machine, make sure the battery is not inserted in its housing.

1. Loosen the chain tension adjustment knob (Fig. 5).
2. Turn the ring nut to obtain the desired chain tension level (Fig. 5).
3. Raise the guide bar and tighten the chain tension adjustment knob securely (Fig. 6).

The tension is correct when the drive links do not slip out of the chain guides if you hold the chain in the middle of the guide bar (Fig. 7).



Loosen the brake by pressing both the switch and the safety button. Using a screwdriver, run the chain along the guides to check that it moves smoothly.

Checking the Chain Brake

This machine is equipped with a double braking system that intervenes in two situations:

1. When the switch lever is released, a brake is automatically activated that slows and stops chain movement. This is intended to prevent the risk of injury should the chain continue to turn after the chain saw has been switched off.
2. The brake will also engage in the event of a kickback while working, following an irregular contact of the tip of the guide bar and when an abrupt upward movement causes the operator's hand to strike the front guard. In this case, the brake blocks chain movement and must be released manually in order to disengage it.

This brake can be operated manually by pushing the front guard forward. To release the brake, pull the front guard towards the hand grip until you hear a click.

To check that the brake works efficiently, proceed as follows:

- Start the motor by holding the front hand grip and push the front hand guard forward with your thumb (towards the guide bar).
- When the brake is engaged, release the trigger switch.

The chain must stop as soon as the brake is engaged.

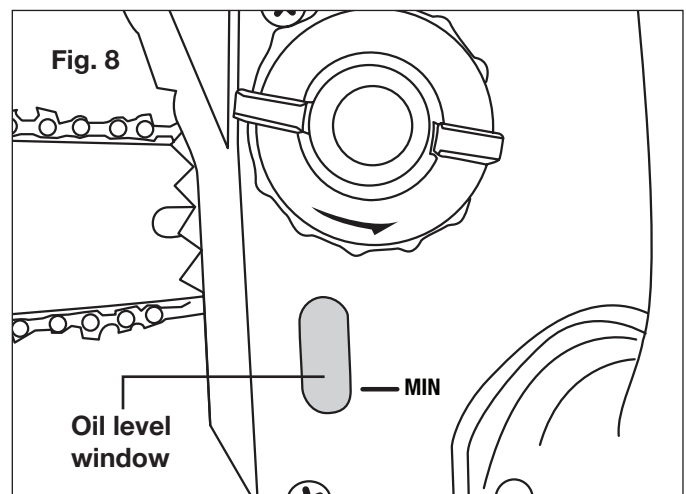
⚠ WARNING! Do not use the machine if the chain brake does not function correctly and have the machine inspected by an authorized Snow Joe® + Sun Joe® dealer.

Chain Lubricant

IMPORTANT! Only use a good quality bar and chain oil designed specifically for use with chain saws to ensure optimal lubrication of the cutting parts. Do not use oil containing impurities to avoid clogging the tank filter and permanently damaging the oiler.

IMPORTANT! The chain lubricating oil is bio-degradable. The use of mineral oil or engine oil can have a serious impact on the environment. It is essential that you use good quality oil to lubricate the cutting parts effectively. Used or poor quality oil does not guarantee good lubrication and reduces the lifespan of the chain and bar.

IMPORTANT! Before each machine use, the oil level should be checked and topped up to 1 cm from the rim of the filler. To fill the oil tank, remove the oil tank cap and add the recommended bar and chain oil. The oil level must not drop below the "MIN" level mark, as indicated on the oil level window (Fig. 8).











Battery Pack Operation

The equipment is powered by a lithium-ion battery. The battery pack is completely sealed and maintenance free.

Battery Charge Level Indicator

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

- All 3 level monitoring LEDs are lit: Battery charge level is high.
- 2 level monitoring LEDs are lit: Battery charge level is decreasing. Stop work as soon as possible.
- 1 level monitoring LED is lit: Battery is flat. Stop work IMMEDIATELY and charge the battery. Otherwise the battery's service life will be greatly shortened.

<div>     </div>	
Lights	Light Indicators
	Charge level button
	The battery is at 30% capacity and requires charging
	The battery is at 60% capacity and requires charging soon
	The battery is at full capacity

NOTE: If the charge level button does not appear to be working, place the battery pack on the charger and charge as needed.

Immediately after using the battery pack, the charge level button may display a lower charge than it will if checked a few minutes later. The battery cells "recover" some of their charge after resting.

Charger Operation

⚠ WARNING! Charge only the EcoSharp® iBAT40 or the EcoSharp® PRO iBAT40XR lithium-ion battery packs in compatible EcoSharp® iCHRG40 or EcoSharp® SWIFT iCHRG40QC battery chargers. Other types of batteries may cause personal injury and damage.

To reduce the risk of electric shock, do not allow water to flow into the charger.

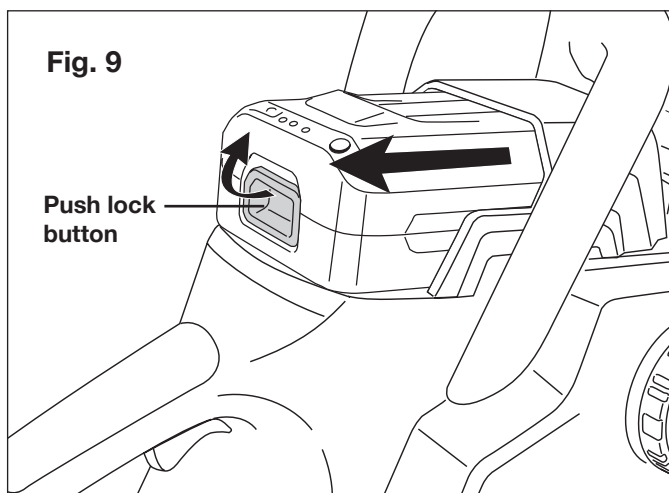
When to Charge the Battery

NOTE: The EcoSharp® iBAT40 and EcoSharp® PRO iBAT40XR lithium-ion battery packs do not develop a "memory" when charged after only a partial discharge. Therefore, it is not necessary to run down the battery pack before placing it into the charger.

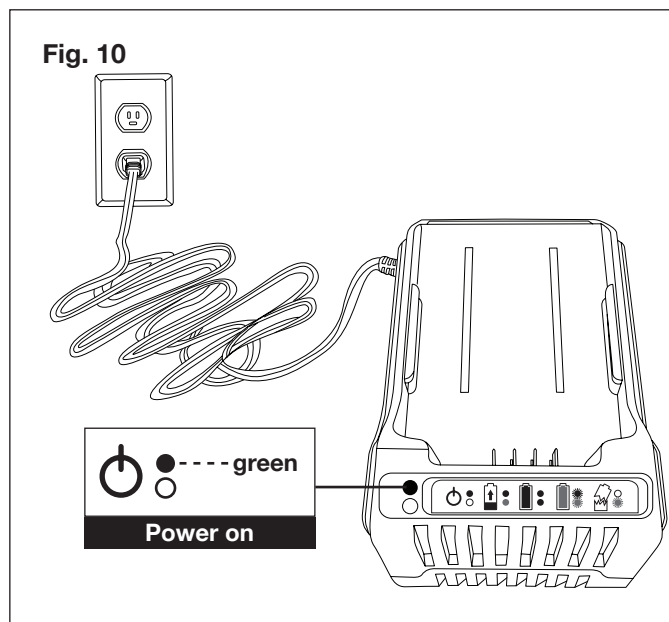
- Use the battery charge indicator lights to determine when to charge your EcoSharp® iBAT40 or EcoSharp® PRO iBAT40XR lithium-ion battery pack.
- You can "top-off" your battery pack's charge before starting a big job or after a long day of use.

Charging the Battery

1. Pull the push lock button on the battery to pull the battery pack up and out of the equipment (Fig. 9).

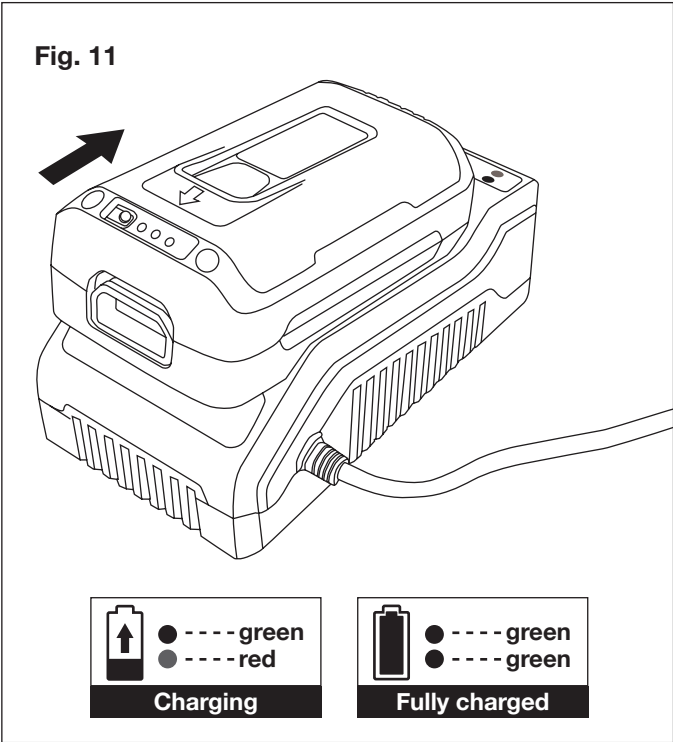


3. Check that the mains voltage is the same as that marked on the rating plate of the battery charger. Then, insert the charger's plug into the electrical wall outlet. When you plug in the charger, the top green light will illuminate and stay green (Fig. 10).



4. Place the battery pack into the charger by sliding the pack as shown to lock it into position. When you insert the battery into the charger, the bottom red light will illuminate to indicate that the battery is charging (Fig. 11).

5. When the bottom light turns green, the battery is fully charged (Fig. 11).

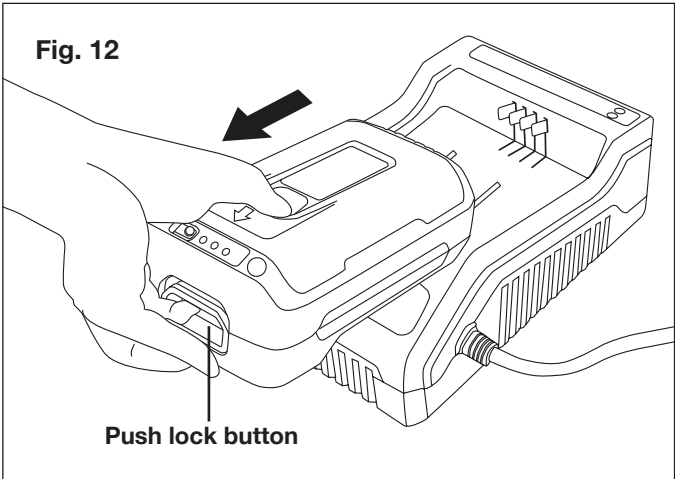


NOTE: If the top light remains green while the bottom light alternately flashes red and green, this indicates a temperature abnormality (i.e. that the battery pack is either too hot or too cold). If there is only a red blinking light, this indicates that something is wrong with the battery. Contact the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563) for assistance.

Temperature abnormal	Something is wrong

6. A fully discharged iBAT40 battery pack with an internal temperature in the normal range will fully charge in 2.5 to 3 hours (between 32°F/0°C and 113°F/45°C). A fully discharged iBAT40XR battery pack with an internal temperature in the normal range will fully charge in 3 to 3.5 hours (between 32°F/0°C and 113°F/45°C). Heavily cycled battery packs may take longer to charge completely.
7. If the charging light indicator alternately blinks red and green or the light indicator does not come on at all, check that the battery pack is fully seated into the bay. Remove the pack and reinsert. If the problem persists, contact the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563) for assistance.

8. When charging is complete, remove the battery from the charger by pulling the push lock button and sliding the battery backward to unlock it from the charger (Fig. 12).



11. Timely recharging of the battery will help prolong the battery's life. You must recharge the battery pack when you notice a drop in the equipment's power.

IMPORTANT! Never allow the battery pack to become fully discharged as this will cause irreversible damage to the battery.

Charging a Hot or Cold Battery Pack

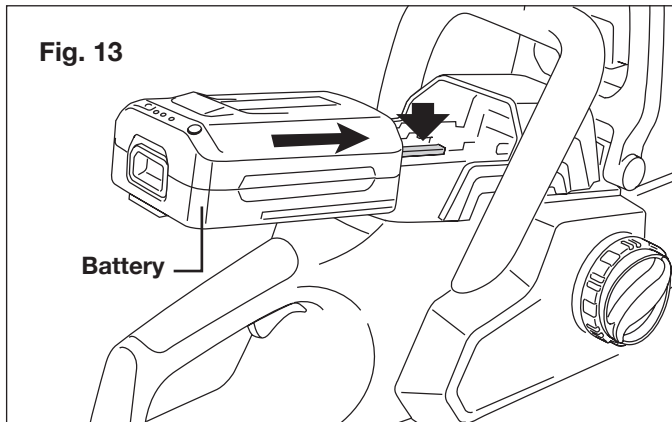
A red and green flashing indicator light on the charger indicates that the battery pack temperature is outside the charging range. Once the pack is within the acceptable range, normal charging will take place and the red light will be continuous. Hot or cold battery packs may take longer to charge.

Lithium-Ion Charging Status		
Battery Pack Temperature	Red Charger Indicator Light	Charging Status
Too hot	Flashing	Not charging
Normal range	Continuous	Normal charging
Too cold	Flashing	Not charging

Operation

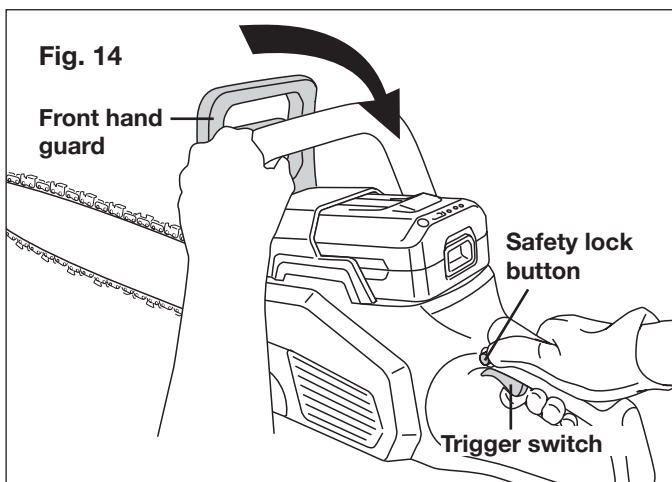
Starting the Machine

1. Insert the battery in its housing (Fig. 13).



2. Take off the cutting bar sheath.
3. Make sure the guide bar is not touching the ground or any other object.
4. Disengage the chain brake by pulling the front hand guard towards the front hand grip (Fig. 14).
5. Hold the chain saw firmly with both hands.
6. Press the safety lock button, then pull the trigger switch (Fig. 14).

NOTE: You can now take your thumb off the safety lock button and just hold down the trigger switch and saw will run.



NOTE: When you release the trigger switch, the safety lock button is also released and the engine stops.

Stopping the Machine

1. Release the trigger switch (Fig. 14).
2. Lift the push lock button and pull out the battery (Fig. 9).

Operating Tips

⚠ WARNING! For your safety and that of others:

1. Do not use the machine without reading the instructions carefully. Become acquainted with the controls and the proper use of the machine. Learn how to stop the machine quickly.
2. Keep in mind that the operator or user is responsible for accidents or hazards occurring to other people or their property.
3. Always wear suitable clothing when using the machine. Wear anti-vibration gloves and other personal protective equipment.

All the above-mentioned precautions do not, however, guarantee the prevention of certain risks – i.e. Raynaud's phenomenon or Carpal tunnel syndrome. For operators who use this machine for prolonged periods, it is therefore recommended to have periodic checkups on their hands and fingers. If any of the above mentioned symptoms should appear, please contact a physician immediately.

4. Work only in daylight or good artificial light.
5. Take utmost care when working near metal fences.
6. Take care not to hit the bar hard against foreign objects or flying debris caused by the movement of the chain.
7. Stop the motor and remove the battery from its compartment:
 - whenever you leave the machine unattended;
 - before cleaning, checking or servicing the machine;
 - after striking a foreign object. Inspect the machine for any damage and make repairs before restarting it again;
 - if the machine begins to vibrate abnormally, immediately look for the cause of the vibrations and have the machine inspected at an authorized Snow Joe® + Sun Joe® dealer or call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563) for assistance.
 - when the machine is not in use.

IMPORTANT! Always remember that an incorrectly used chain saw may disturb others and have a serious impact on the environment.

To respect people and the environment:

- Avoid using the machine in environments or at times of the day when it may disturb others.
- Scrupulously comply with local regulations and provisions for the disposal of waste materials after sawing.
- Scrupulously comply with local regulations and provisions for the disposal of oils, damaged parts or any elements which have a strong impact on the environment.
- A certain amount of chain lubricating oil is released into the environment when the machine is running, so only use biodegradable oils made specifically for this use.

- To avoid the risk of fire, do not leave the machine with the engine hot on leaves or dry grass.

⚠ WARNING! It takes specific training to use the machine for felling and delimbing.

⚠ WARNING! Prolonged exposure to vibrations can cause injuries and neurovascular disorders (also called “Renaud’s syndrome” or “white hand”), especially to people suffering from circulation disorders. The symptoms can regard the hands, wrists, and fingers and manifest with loss of sensitivity, torpor, itching, pain, and discoloring of or structural changes to the skin. These effects can be worsened by low ambient temperatures and/or by gripping the hand grips too tightly. If the symptoms occur, the length of time the machine is used must be reduced and a doctor consulted.

Checks During Work

• Checking the chain tension

The chain tends to stretch gradually as you work, so you need to check its tension frequently.

IMPORTANT! During the first period of use (or after replacing the chain), the chain tension must be checked more frequently due to settling of the chain.

⚠ WARNING! Never work with the chain loose, as it can be hazardous if the chain slips out of its guides.

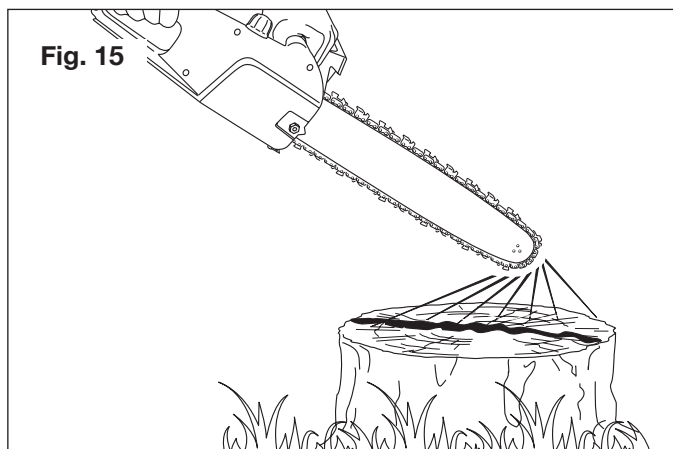
To adjust the chain tension, follow the instructions in “Adjusting the Chain Tension” on pages 10.

• Checking the oil delivery

IMPORTANT! Never use the machine without lubrication! You can check the oil level in the tank through the transparent gauge. Make sure you fill up the oil tank every time you use the machine. For best results, use only a good quality bar and chain oil designed specifically for use with chain saws.

⚠ WARNING! Make sure the bar and the chain are in place when you check the oil delivery.

Start the motor and check if the chain oil is delivered as shown below (Fig. 15).



Cutting Techniques

Before felling or delimbing for the first time, practice sawing logs on the ground or on trestles, so that you can get familiar with the machine and the most suitable sawing techniques.

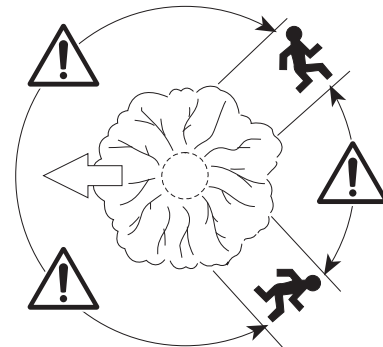
⚠ WARNING! Always hold the machine with both hands when sawing.

⚠ WARNING! Stop the motor immediately if the chain stops during sawing. Beware of kickback, which can occur if the bar contacts an obstacle.

• Felling a tree

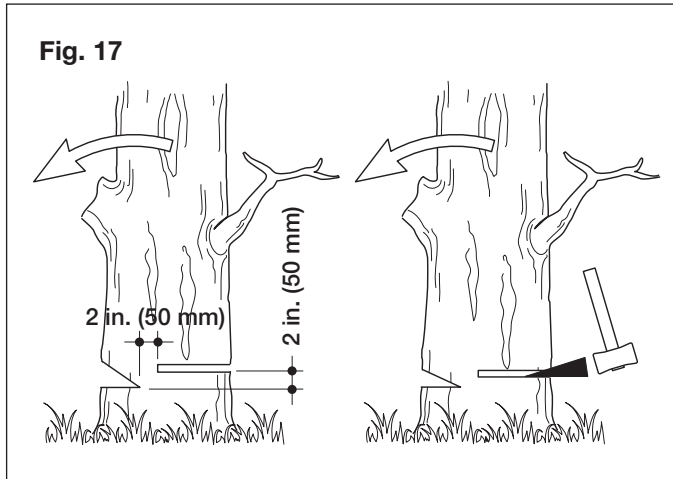
- When bucking and felling are performed by two or more people at the same time, the felling operation should be separated from the bucking operation by a distance of at least twice the height of the tree being felled. Trees should not be felled in a manner that would endanger any person, strike any utility line or cause any property damage. If the tree does make contact with any utility line, the company should be notified immediately.
- The chain saw 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 (Fig. 16).

Fig. 16



- Before felling is started, consider the natural lean of the tree, the location of larger branches and the wind direction to help you 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 (Fig. 17).



Make the lower horizontal notching cut first.

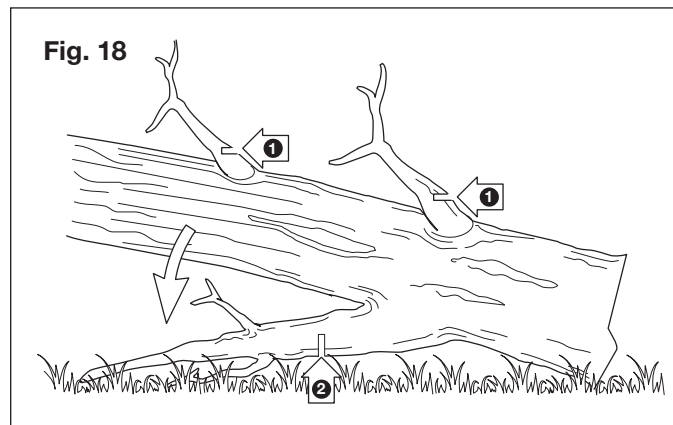
This will help to avoid pinching either the saw chain or the guide bar when the second notch is made.

- **Felling back cut**

- i) Make the felling back cut at least 2 in. (50 mm) higher than the horizontal notching cut as illustrated (Fig. 16). Keep the felling back cut parallel to the horizontal notching cut. Strategically position the felling back cut so that 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.
- ii) 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 the 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.
- iii) When the tree begins to fall, remove the chain saw from the cut, stop the motor, put the chain saw down, then use the retreat path planned. Be alert for overhead limbs falling and watch your footing.

- **Limbing a tree**

Limbing is the process in which branches are removed 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 (Fig. 18). Branches under tension should be cut from the bottom up to avoid binding the chain saw.

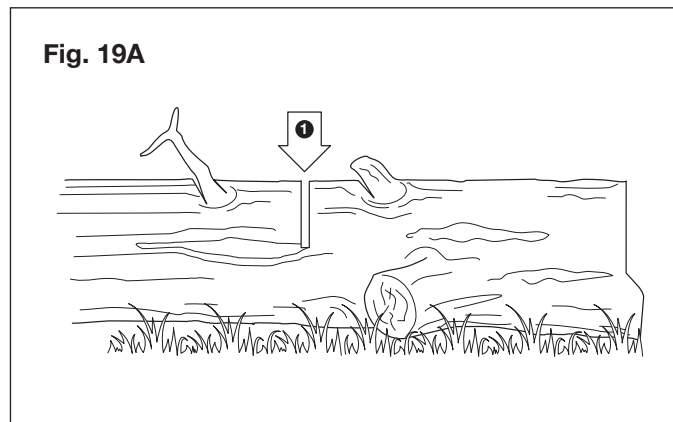


⚠ WARNING! Pay special attention to where the branches are lying on the ground and recognize the following risks: 1) the branches may be under tension; 2) the direction in which the branch will fall during cutting may differ from what you had anticipated; 3) the tree may be unstable after the branch has been cut.

- **Bucking a log**

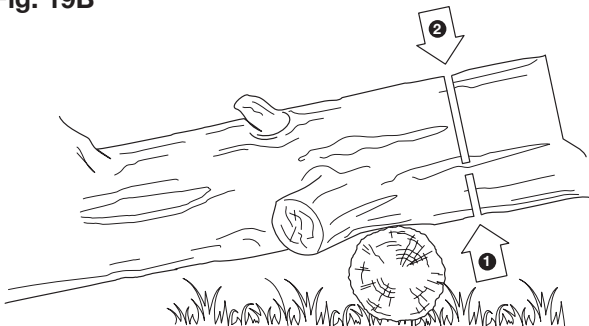
Bucking is the process in which a log is cut into lengths. It is important to make sure your footing is firm and your weight is evenly distributed on both feet. When possible, the log should be raised and supported by the use of limbs, logs, or chocks. Follow the simple directions for easy cutting.

- i) When the log is supported along its entire length as illustrated (Fig. 19A), it is cut from the top (overbuck).



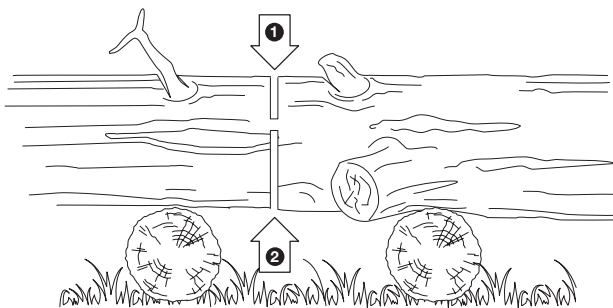
- ii) When the log is supported on one end (Fig. 19B), cut 1/3 the diameter from the underside (underbuck). Then make the finished cut by overbucking to meet the first cut.

Fig. 19B



- iii) When the log is supported on both ends (Fig. 19C), 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.

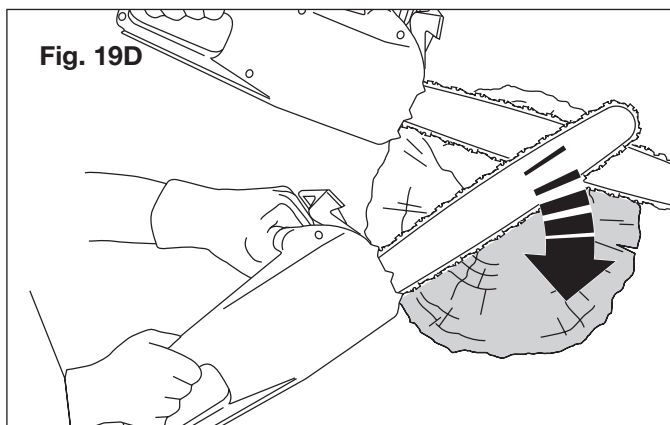
Fig. 19C



- iv) It is easier to saw a log using the spiked bumper (Fig. 19D).

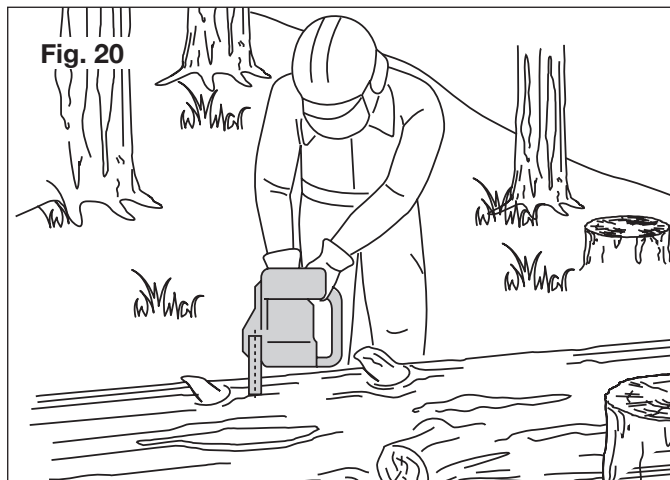
- Dig the spiked bumper into the log and use it as a pivot. Cut with an arched motion to make the bar penetrate the wood.
- Repeat several times if necessary, changing the point where you plant the spiked bumper.
- When bucking on a slope, always stand on the uphill side of the log (Fig. 20). When "cutting through" the log, maintain control by releasing the cutting pressure near the end of the cut without relaxing your grip on the chain saw handles. Do not let the chain contact the ground.

Fig. 19D



After completing the cut, wait for the saw chain to stop before you move the chain saw. Always stop the motor before moving from tree to tree.

Fig. 20



End of Operations

When you have finished your work:

- Switch off the motor and remove the battery from its housing.
- Wait for the chain to stop and allow the machine to cool.
- Remove any traces of sawdust or oil deposits from the chain.

- If there is excessive dirt or resin build-up, disassemble the chain and place it in a container with a suitable cleanser. Then rinse it with clean water and treat it with a suitable anticorrosive spray before reassembling it on the machine.
- Fit the cutting bar sheath onto the bar before storing.

⚠ WARNING! Let the motor cool completely before storing the chain saw in any enclosure.

To reduce fire hazards, clean the machine thoroughly to remove sawdust, branches, leaves, or excess grease. Never leave containers with cut debris inside the storage area.

Maintenance

Please contact an authorized Snow Joe® + Sun Joe® dealer or call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563) for all maintenance operations not foreseen in this manual. Any operation performed in an unauthorized service center or by unqualified personnel will completely invalidate the warranty.

⚠ WARNING! For your safety and that of others:

- Correct maintenance is essential to maintain the original efficiency and safety of the machine over time.
- Keep all nuts, bolts, and screws tight to be sure the equipment is in safe working condition.
- Never use the machine with worn or damaged parts. Damaged parts are to be replaced and never repaired.
- Only use original Snow Joe® + Sun Joe® replacement parts. Parts that are not of the same quality can seriously damage the equipment, compromise safety, and invalidate the warranty.

⚠ WARNING! Always remove the battery before performing any adjustments, maintenance, or repairs to your cordless chain saw.

- Use protective gloves when handling the bar and chain.
- Keep the bar protection device on, except when intervening directly on the bar or the chain.
- Never dispose of oils or other polluting materials in unauthorized places.

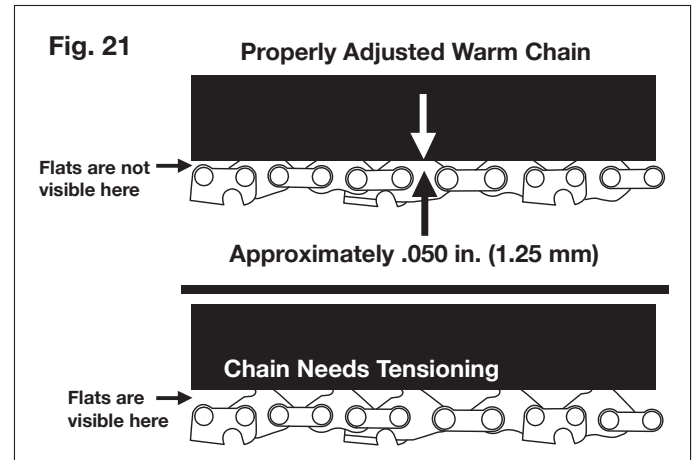
Motor Cooling

To avoid overheating and damage to the motor, always keep the cooling air vents clean and free of sawdust and debris.

Chain Tension

Check the chain tension before using the saw when the chain is cold. The correct tension of a cold chain is when there is no slack on the underside of the guide bar; the chain is snug, but you can rotate it by hand without binding.

During normal saw operation, the temperature of the chain will increase. The drive links of a correctly tensioned warm chain will hang approximately 0.050 in. (1.25 mm) out of the bar groove (Fig. 21). Be aware that a chain tensioned while warm, may be too tight upon cooling. Check the “cold tension” before next use. The chain must be re-tensioned whenever the flats on the drive links hang out of the bar groove (Fig. 21).



NOTE: A new chain tends to stretch. Check the chain tension frequently and re-tension as needed.

Chain Brake

Regularly check the efficiency of the chain brake.

Nuts and Screws

Periodically check that all the nuts and screws are securely tightened and the hand grips are tightly fastened.

Chain Sharpening

⚠ WARNING! To ensure that the chain saw works safely and efficiently, it is essential that the cutting components are well-sharpened. **It is highly recommended to replace the chain once it loses its ability to cut cleanly and safely.** It is possible, however, to sharpen the existing chain if the sharpening is carefully performed. Any work on the chain and bar requires specific experience and special tools. For safety purposes, we recommend you contact an authorized Snow Joe® + Sun Joe® dealer or call the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563).

Sharpening is necessary when:

- The sawdust looks like dust.
- Cutting becomes more difficult.
- The cut is not straight.
- Vibrations increase.

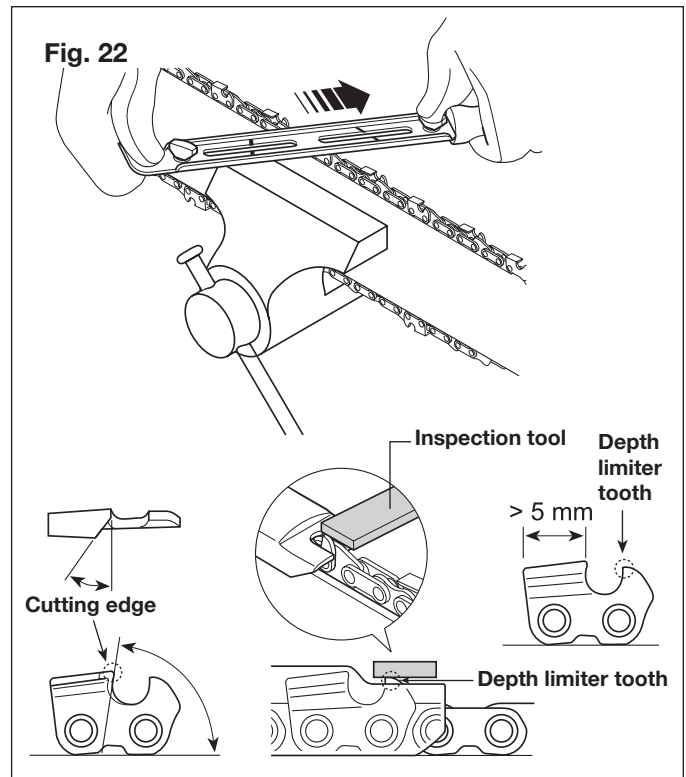
An authorized service center will sharpen the chain using the right tools to ensure minimum removal of material and even sharpness on all the cutting edges.

If you sharpen the chain yourself, use special round-section files with the right diameter depending on the type of chain (see “Chain Maintenance Table” pg. 18). You need a certain amount of skill and experience to avoid damaging the cutting edges.

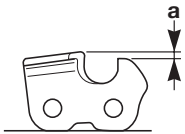
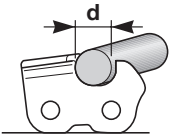
Sharpen the chain as follows (Fig. 22):

- Secure the bar firmly, with the chain mounted, in a suitable vice.
- Tighten the chain if it is loose.
- Mount the file in the guide and then insert it in the tooth at a constant angle from the cutting edge.
- Sharpen in a forward motion a few times and repeat this on all the cutting edges facing the same way (right or left).
- To move the chain forward, use a screwdriver.
- Turn the bar over in the vice and repeat on all the other cutting edges.
- Check that the depth limiter tooth does not stick out farther than the inspection tool and file any projecting parts with a flat file, rounding off the edges (Fig. 22).
- After sharpening, remove all traces of filing and dust and lubricate the chain in an oil bath. Replace the chain whenever:

- the length of the cutting edges decreases to 5 mm or less;
- there is too much play between the links and the rivets.



Chain Maintenance Table

Chain Pitch		Limiter Tooth Level (a)		File Diameter (d)	
					
inches	mm	inches	mm	inches	mm
3/8 Mini	9.32	0.018	0.45	5/32	4.0
0.325	8.25	0.026	0.65	3/16	4.8
3/8	9.35	0.026	0.65	13/64	5.2
0.404	10.26	0.031	0.80	7/32	5.6

Bar Maintenance

To avoid asymmetrical wear on the bar, make sure it is turned over periodically.

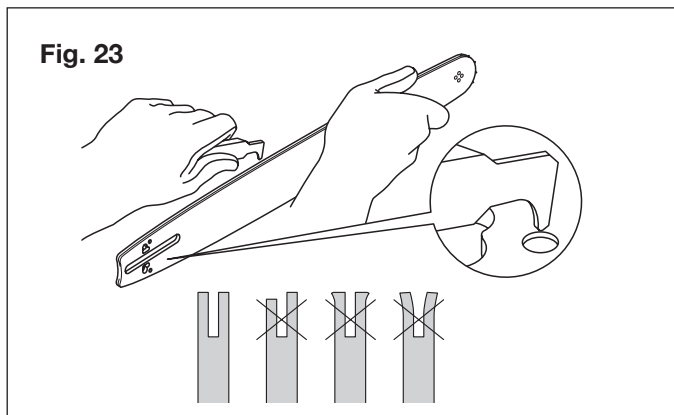
To keep the bar in perfect working order, proceed as follows (Fig. 23):

- Grease the bearings on the nose sprocket.
- Clean the bar groove.
- Clean the lubrication holes.
- With a flat file, remove burr from the edges and level off the guides.

Replace the bar whenever (Fig. 23):

- the groove is not as deep as the height of the drive links (which must never touch the bottom);
- the inside of the guide is worn enough to make the chain lean to one side.

You can purchase replacement parts for your iON16CS-CT chain saw by ordering online at snowjoe.com or, to order by phone, contact Snow Joe® + Sun Joe® customer service at 1-866-SNOWJOE (1-866-766-9563).

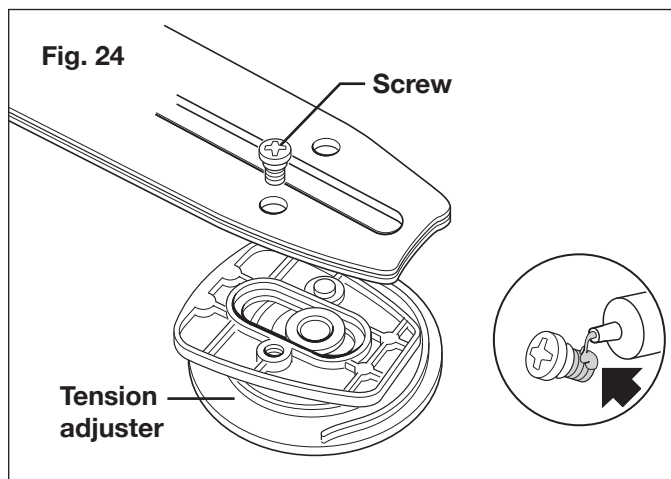


If it should be necessary to turn the bar over or replace it, follow the instructions below (Fig. 24):

- carefully remove the casing, the chain, and the bar;
- remove the screw using a Phillips screwdriver and remove the tension adjuster;

IMPORTANT! When initially assembled, a “threadlocker” was inserted on the screw thread to prevent it from accidentally working loose; this means that a certain amount of force will be needed to remove the screw. Use a clamp to block the bar in place and always use a suitable sized screwdriver.

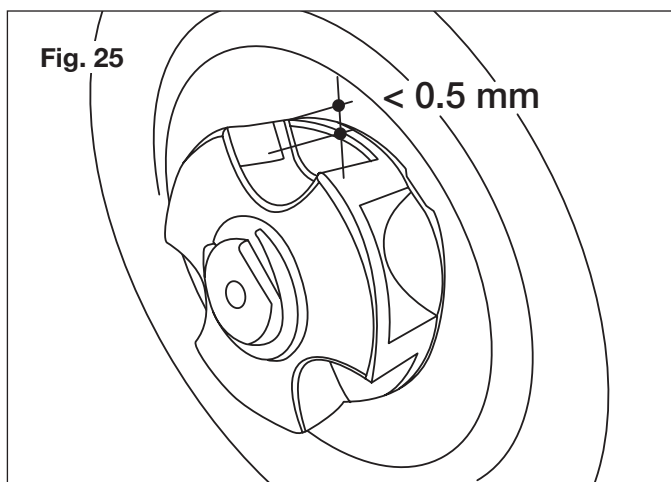
- reassemble the tension adjuster on the other side of the overturned bar, or on the new bar;
- apply a small amount of “threadlocker” on two or three screw threads (following the instructions provided by the manufacturer), then tighten the screw as far as possible;
- replace the bar, the chain, and the casing, following the assembly instructions in the “Bar and Chain Mounting” section.



Chain Sprocket

Regularly check the condition of the sprocket and replace it when wear exceeds 0.5 mm (Fig. 25).

Do not mount a new chain with a worn sprocket or vice-versa.



Proper Care for Battery/Charger

⚠️ WARNING! To reduce the risk of injury, always unplug the charger and remove the battery pack from the charger before performing any maintenance task. Never disassemble the battery pack or charger. Contact your Snow Joe® + Sun Joe® dealer or the Snow Joe® + Sun Joe® customer service center for ALL repairs.

1. To reduce the risk of injury and damage, never immerse your battery pack or charger in liquid or allow any liquid to flow inside these components.
2. Clean out dust and debris from charger vents and electrical contacts by blowing with compressed air.
3. Use only mild soap on a damp cloth to clean the battery pack and charger, keeping away from all electrical contacts. Certain cleaning agents and solvents are harmful to plastics and other insulated parts. Some of these include gasoline, turpentine, lacquer thinner, paint thinner, chlorinated cleaning solvents, ammonia, and household detergents containing ammonia. Never use flammable or combustible solvents around battery packs, battery chargers or tools.
4. The EcoSharp® iCHRG40 and the EcoSharp® SWIFT iCHR40QC battery chargers have no serviceable parts.

Storage

After every work session, clean the machine thoroughly to remove all dust and debris and slide the bar sheath over the cutting bar. Repair or replace any faulty parts on the unit.

Store the machine in a dry, locked place out of the reach of children.

Support

If your Sun Joe® iON16CS-CT cordless chain saw requires service or maintenance, please call 1-866-SNOWJOE (1-866-766-9563) for assistance.

Model and Serial Numbers

When contacting the company, reordering parts or arranging service from an authorized dealer, you will need to provide the model and serial numbers, which can be found on the decal located on the housing of the unit. Copy these numbers into the space provided below.

Record the following numbers from the housing or handle of your new product:

Model #: i | O | N | 1 | 6 | C | S | - | C | T |

Serial #: | | | | | | | | | | | | | | | | | |

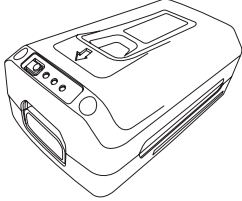
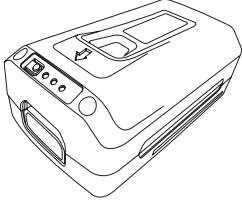
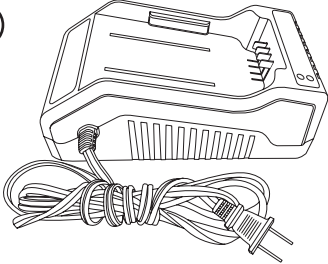

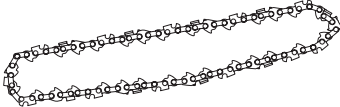
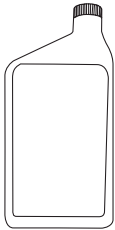
Troubleshooting

Fault	Possible Cause	Remedy
The motor does not start when you switch it on	• No battery or not inserted correctly	• Make sure that the battery is inserted correctly
	• Battery exhausted	• Check charge status and recharge the battery
The motor stops during operation	• No battery or not inserted correctly	• Make sure that the battery is inserted correctly
	• Battery exhausted	• Check charge status and recharge the battery
Reduced battery power reserve	• Difficult operation conditions absorbing more current	• Optimize use by planning cuts in advance, not applying excessive pressure when cutting, keeping the chain sharpened, ensuring proper chain tension and not allowing the battery to discharge completely
The battery charger does not charge the battery	• Dirty contacts • No power supply to battery charger • Defective battery charger	• Clean contacts • Check that the electric plug is properly inserted into the outlet and that the socket receives power • Replace with original spare part
Chain does not move	• Chain brake	• Check the chain brake and release if necessary
Poor cutting performance	• Blunt saw chain • Chain tension • Saw chain fitted incorrectly	• Sharpen or replace the saw chain • Check chain tension • Check saw chain
Chain jumps off guide bar	• Chain tension	• Check chain tension
Chain works with difficulty	• Chain tension	• Check chain tension
Chain becomes hot	• Chain lubricant	• Check oil level and chain lubrication

IMPORTANT! For protection, the motor is equipped with a thermal switch that cuts out when the motor is overloaded and switches on again automatically after a short cooling period.

Accessories

⚠ WARNING! ALWAYS use only authorized Snow Joe® + Sun Joe® replacement parts and accessories. NEVER use replacement parts or accessories that are not intended for use with this saw. Contact Snow Joe® + Sun Joe® if you are unsure whether it is safe to use a particular replacement part or accessory with your saw. The use of any other attachment or accessory can be dangerous and could cause injury or mechanical damage.

Accessories	Item	Model
1 	EcoSharp® 40 V 4.0 Ah Lithium-Ion Battery	iBAT40
2 	EcoSharp® PRO 40 V 5.0 Ah Lithium-Ion Battery	iBAT40XR
3 	EcoSharp® 40 V Lithium-Ion Battery Charger	iCHRG40
4 	16-Inch Oregon Chain Bar	iON16CS-35
5 	16-Inch Oregon Chain	iON16CS-36
6 	Bar and chain oil	SWJ-OIL sold at snowjoe.com or you can purchase equivalent bar and chain oil sold at your local hardware store

NOTE: Accessories are subject to change without any obligation on the part of Snow Joe® + Sun Joe®. Accessories can be ordered online at snowjoe.com or via phone by contacting the Snow Joe® + Sun Joe® customer service center at 1-866-SNOWJOE (1-866-766-9563).

[illegible]



SNOW JOE® + SUN JOE® CUSTOMER PROMISE

ABOVE ALL ELSE, Snow Joe® + Sun Joe® are dedicated to you, our customer. We strive to make your experience as pleasant as possible. Unfortunately, there are times when a product does not work or breaks under normal operating conditions. We think it's important that you know what you can expect from us. That's why we created the Snow Joe® + Sun Joe® promise.

OUR PROMISE: Snow Joe® + Sun Joe® warrant new products for two years from the date of purchase. If your product does not work, or there's an issue with a specific part, we will fix this by either sending you a free replacement part or by sending you a new or comparable product at no charge. How cool is that! Before you know it, you'll be back in action cutting, sawing, mowing, washing and...?

GENERAL CONDITIONS:

Snow Joe® + Sun Joe® operating under Snow Joe®, LLC warrants this new product to the original purchaser for two years against defects in material or workmanship when used for normal residential purposes. If a replacement part or product is needed, it will be sent free of charge to the original purchaser except as noted below.

The duration of this warranty applies only if the product is put to personal use around the household. If the product is put to any business, commercial or industrial use or is rented or leased, then the duration of this warranty is 90 days from the date of original purchase. It is the owner's responsibility to correctly perform all maintenance and minor adjustments explained in the owner's manual.

HOW TO OBTAIN YOUR REPLACEMENT PART OR PRODUCT:

To obtain a replacement part or product, please visit snowjoe.com/help or email us at help@snowjoe.com for instructions. Please be sure to register your unit beforehand to speed up this process. Certain products may require a serial number, typically found on the decal affixed to the housing or guard of your product. All products require a valid proof of purchase.

EXCLUSIONS:

- Wearing parts like belts, augers, chains and tines are not covered under this warranty. Wearing parts can be purchased at snowjoe.com or by calling 1-866-SNOWJOE (1-866-766-9563).
- Batteries are covered in full for 90-days from the date of purchase.

Snow Joe® + Sun Joe® may from time to time change the design of its products. Nothing contained in this warranty shall be construed as obligating Snow Joe® + Sun Joe® to incorporate such design changes into previously manufactured products, nor shall such changes be construed as an admission that previous designs were defective.

This warranty is intended to cover product defects only. Snow Joe®, LLC is not liable for indirect, incidental or consequential damages in connection with the use or misuse of the Snow Joe® + Sun Joe® products covered by this warranty. This warranty does not cover any cost or expense incurred by the purchaser in providing substitute equipment or service during reasonable periods of malfunction or non-use of this product while waiting for a replacement part or unit under this warranty. Some states do not allow exclusions of incidental or consequential damages so the above exclusions may not apply in all states. This warranty may give you specific legal rights in your state.

HOW TO REACH US:

We're here to help Monday through Friday from 9AM to 6PM EST. You can reach us at 1-866-SNOWJOE (1-866-766-9563), online at snowjoe.com, via email at help@snowjoe.com or tweet us @snowjoe.

EXPORTS:

Customers who have purchased Snow Joe® + Sun Joe® products exported from the United States and Canada should contact their Snow Joe® + Sun Joe® distributor (dealer) to obtain information applicable to your country, province or state. If for any reason, you are not satisfied with the distributor's service, or if you have difficulty obtaining warranty information, contact your Snow Joe® + Sun Joe® seller. If in the event your efforts are unsatisfactory, please reach out to us directly.



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