



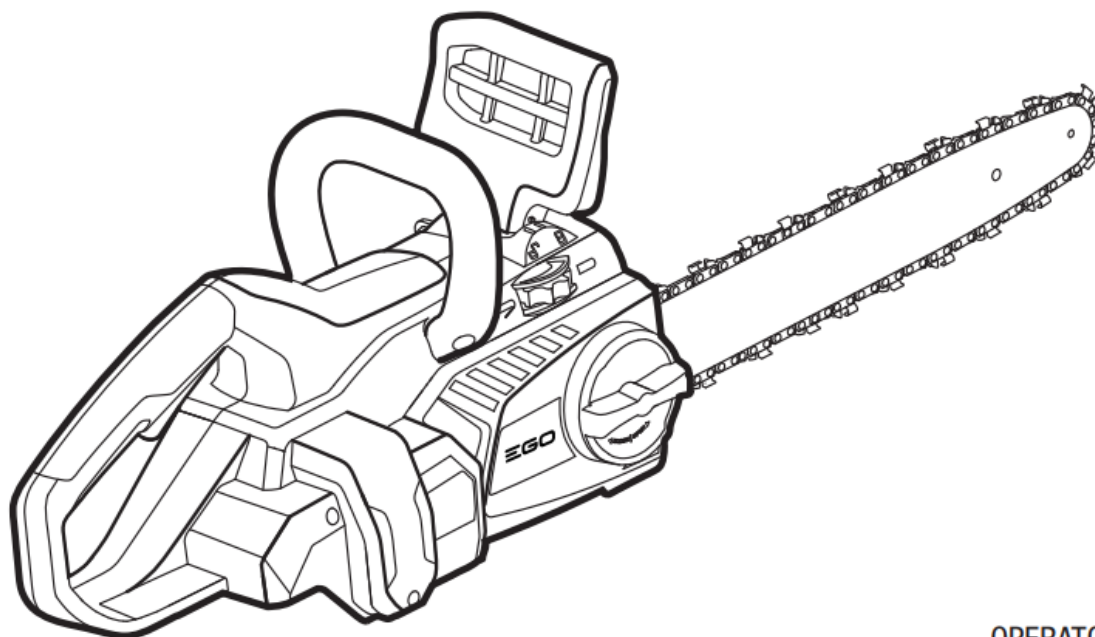
EGO CS1400E 56 Volt Lithium-Ion Cordless Chain Saw User Manual

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*EGO CS1400E 56 Volt Lithium-Ion Cordless
Chain Saw User Manual*



POWER⁺ CHAIN SAW

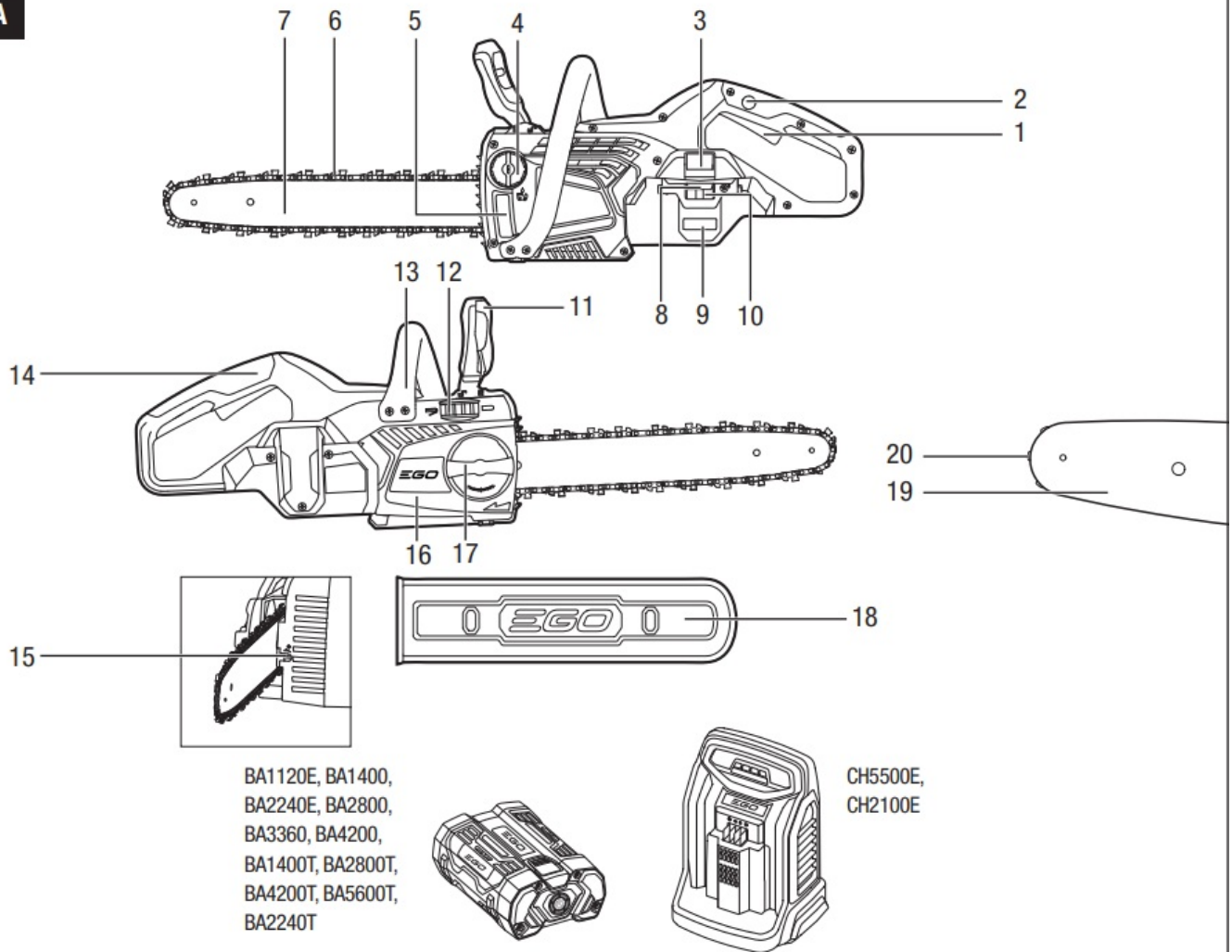


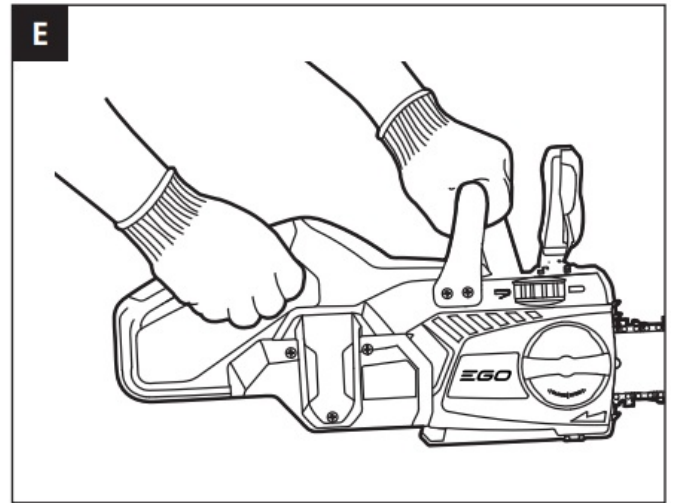
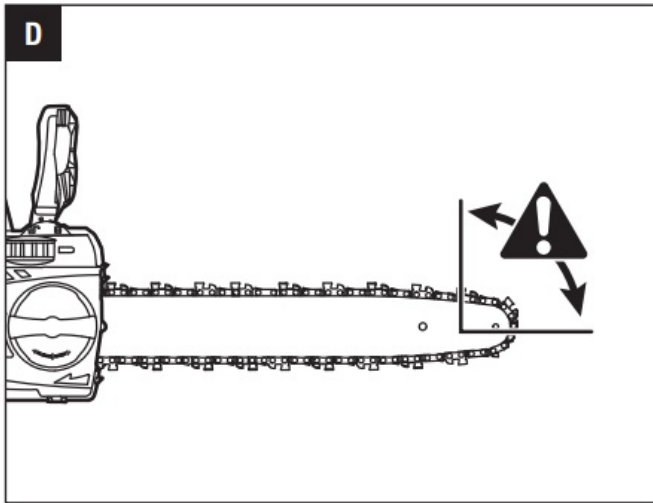
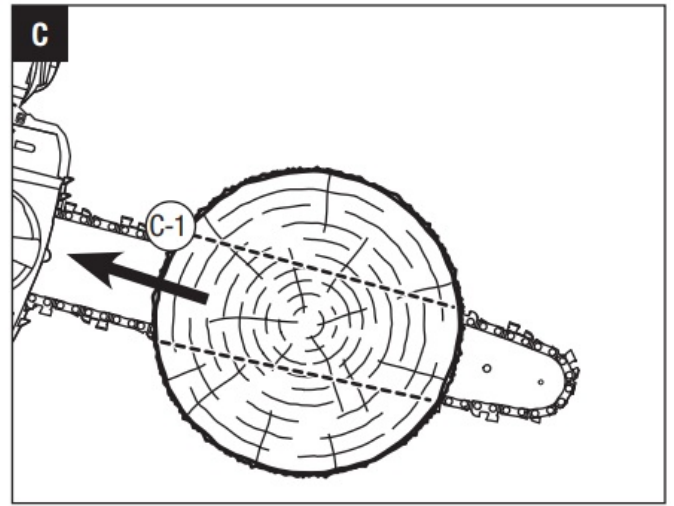
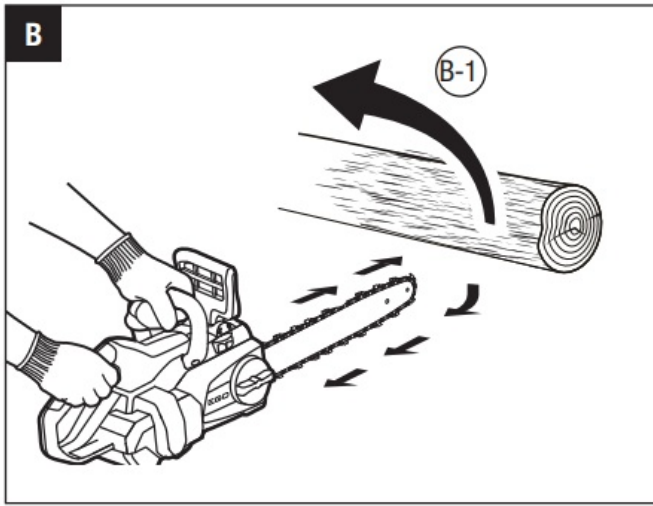
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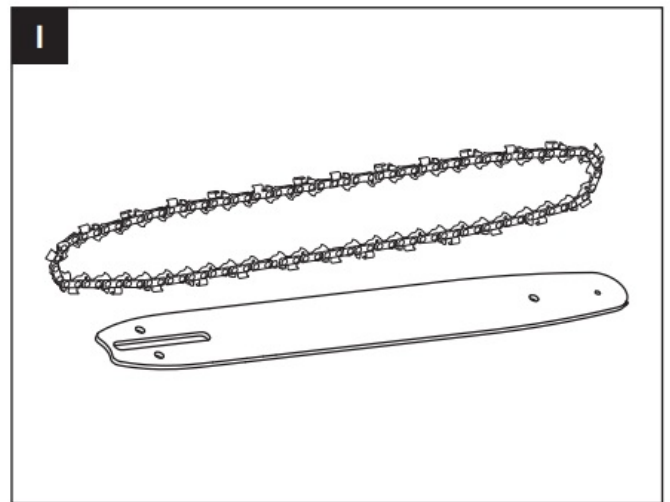
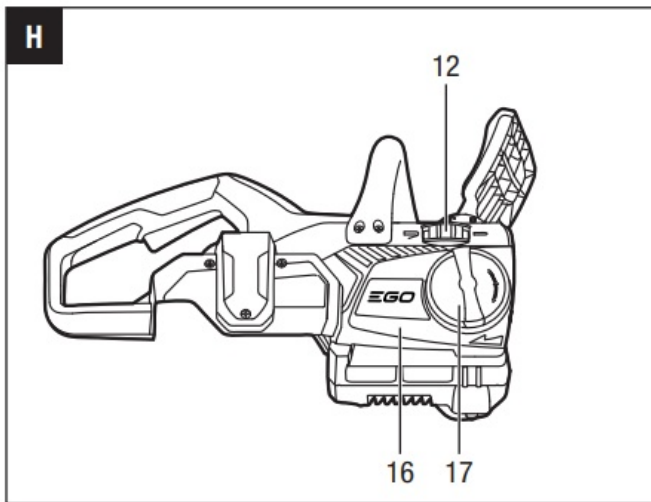
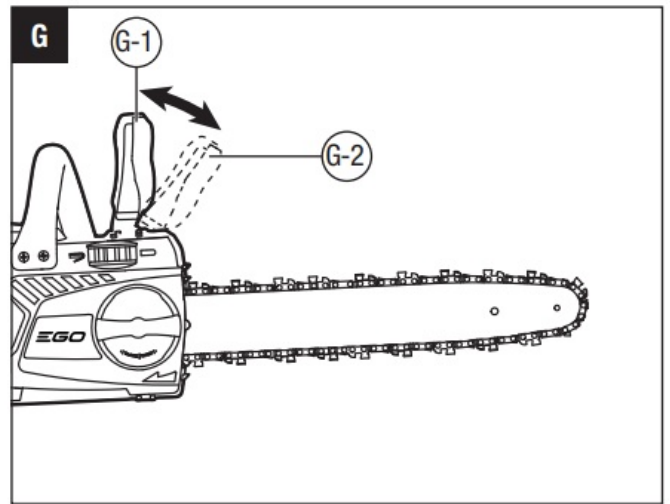
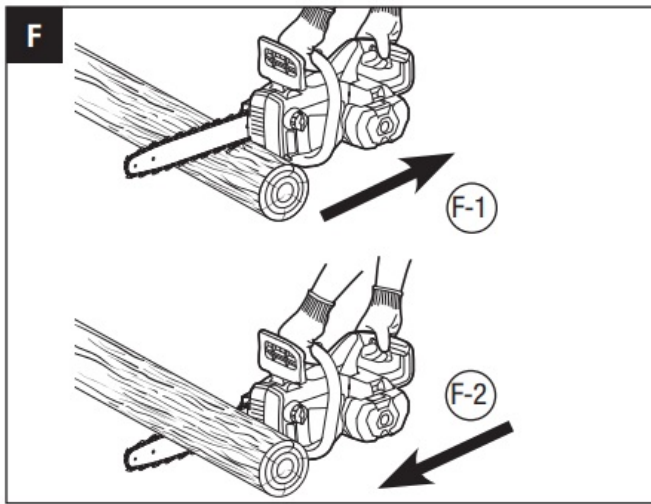
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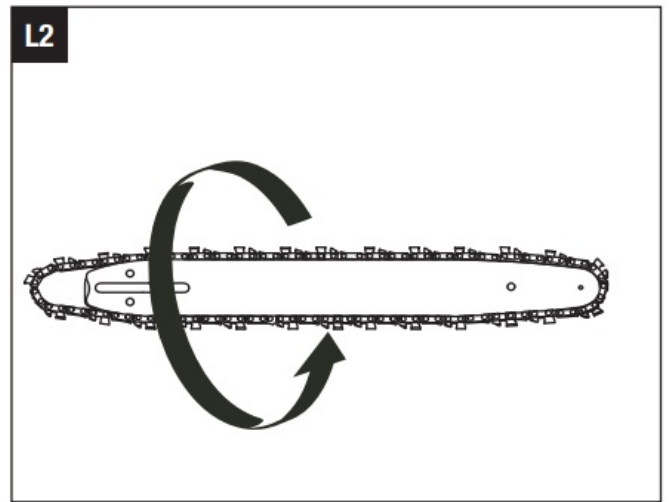
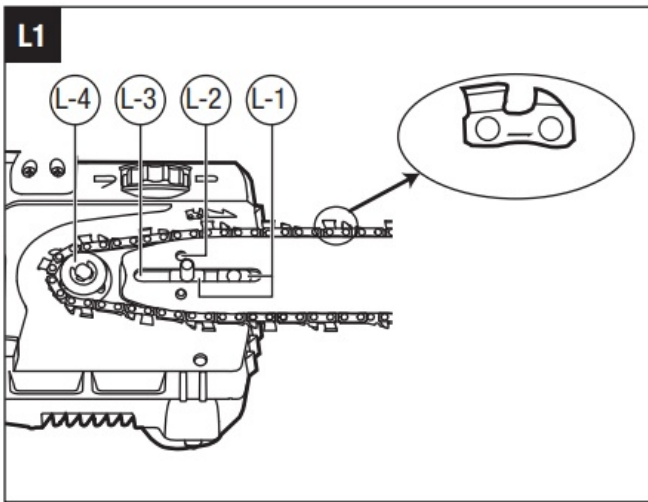
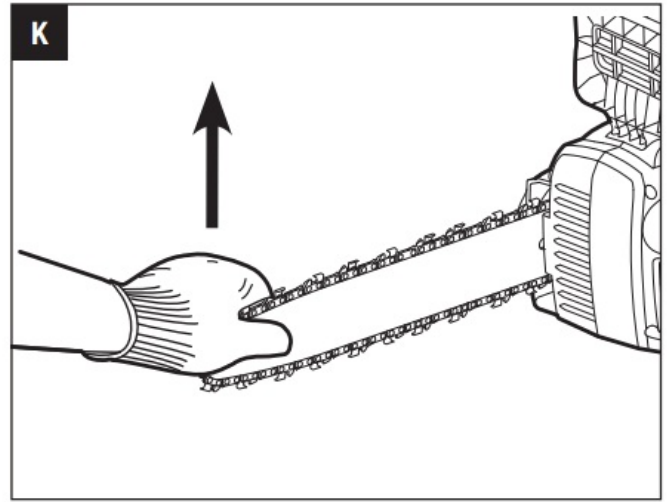
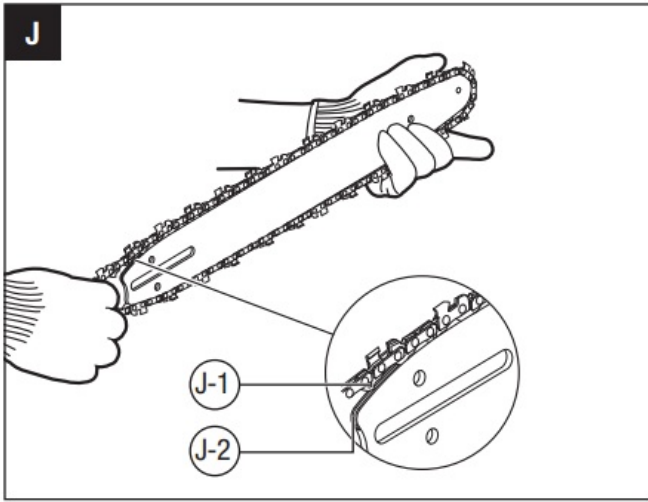
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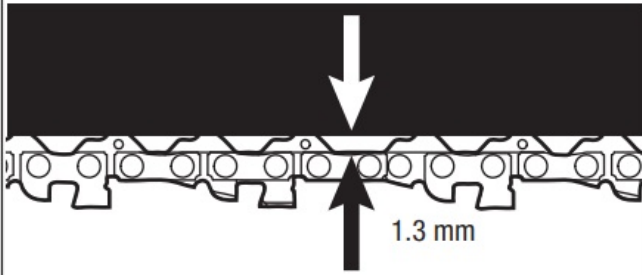
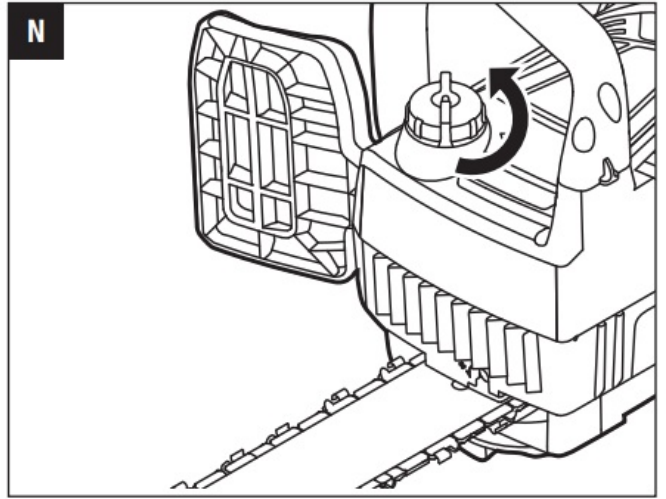
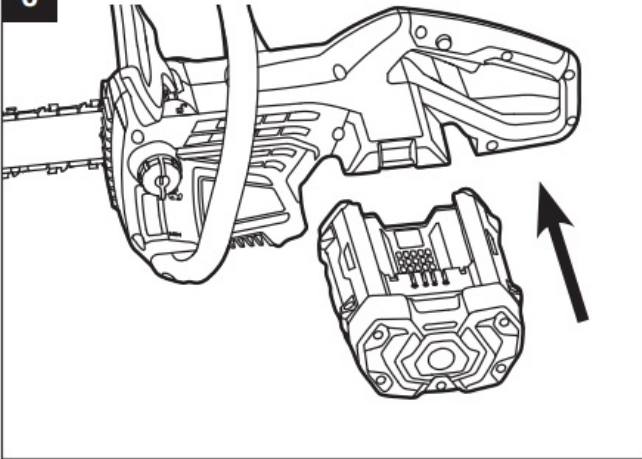
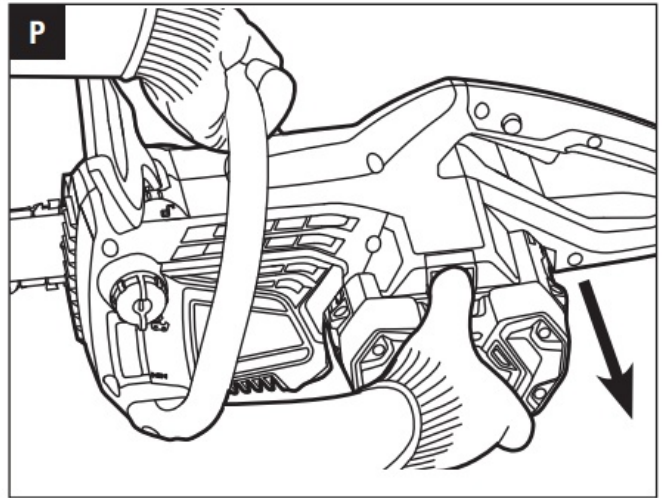
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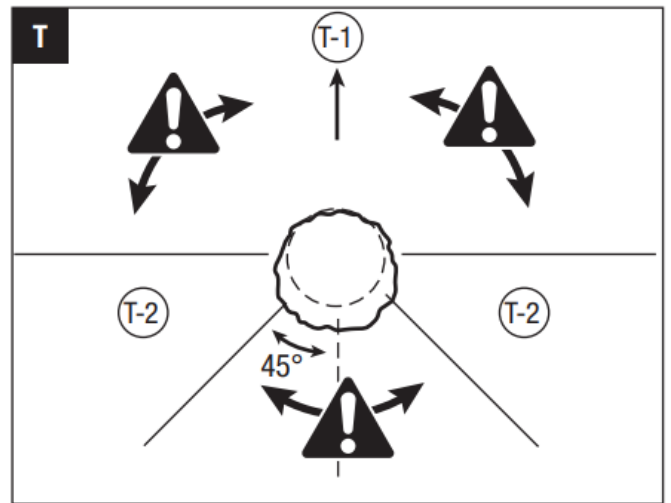
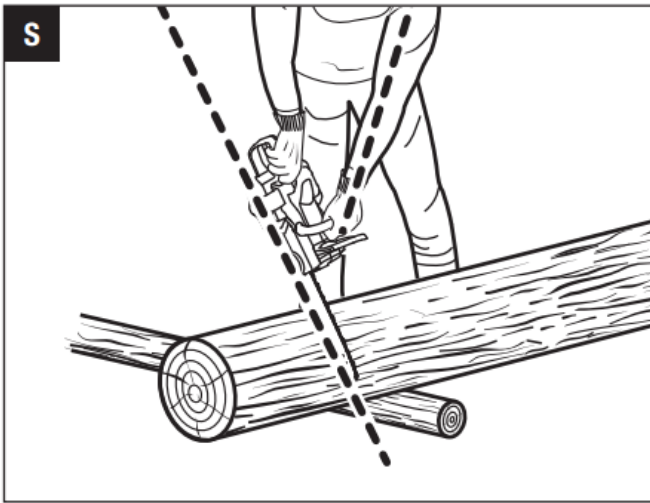
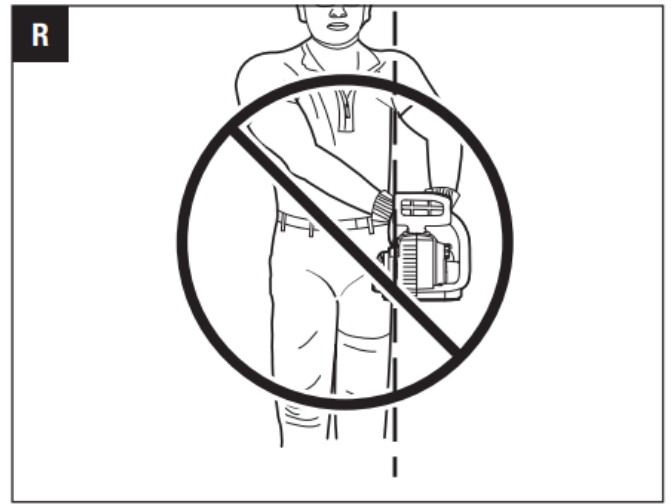
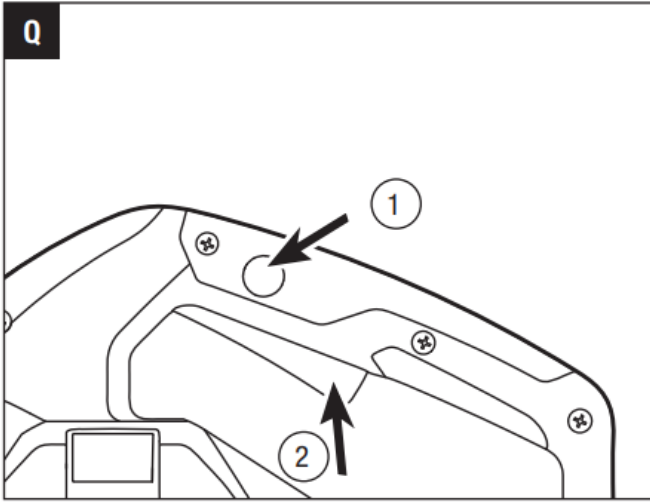


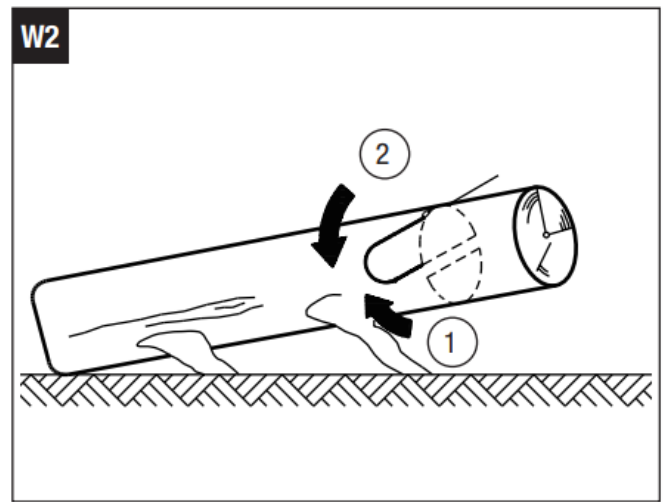
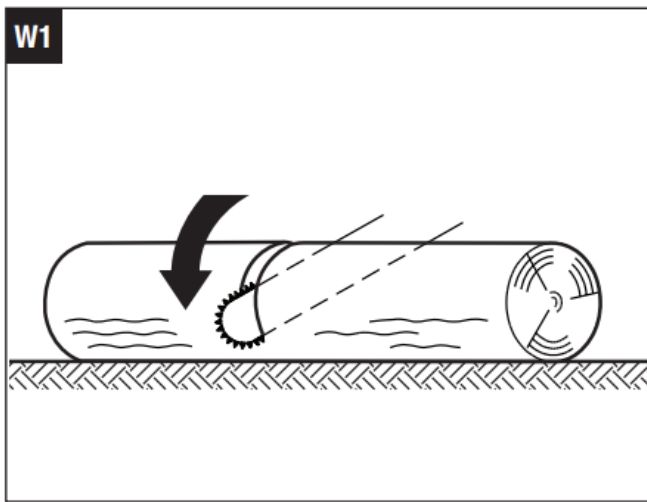
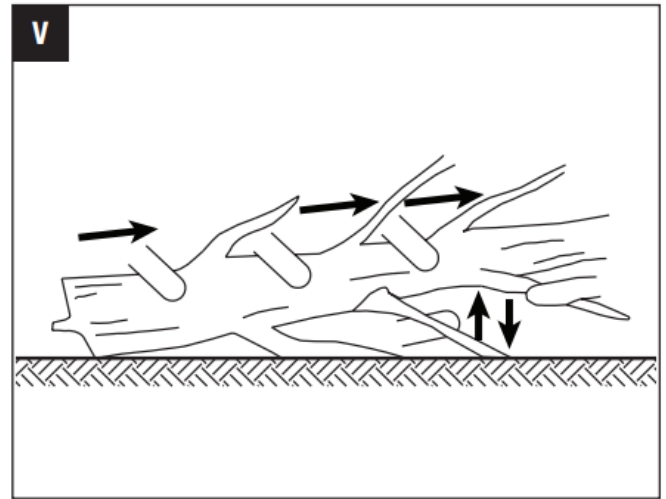
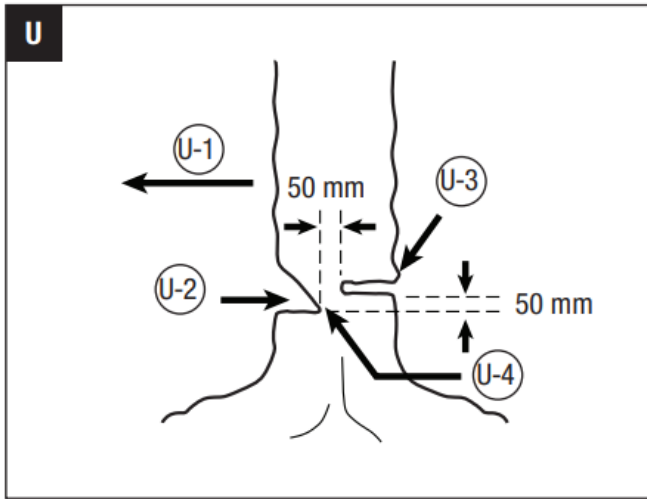


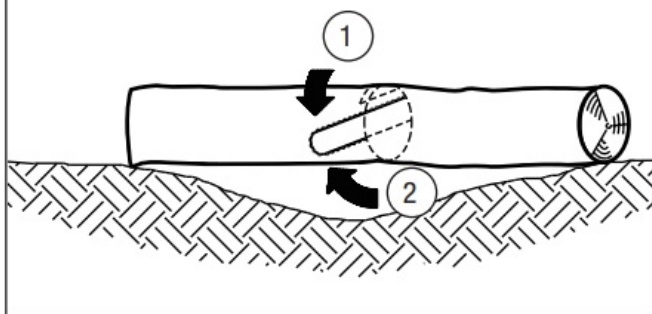
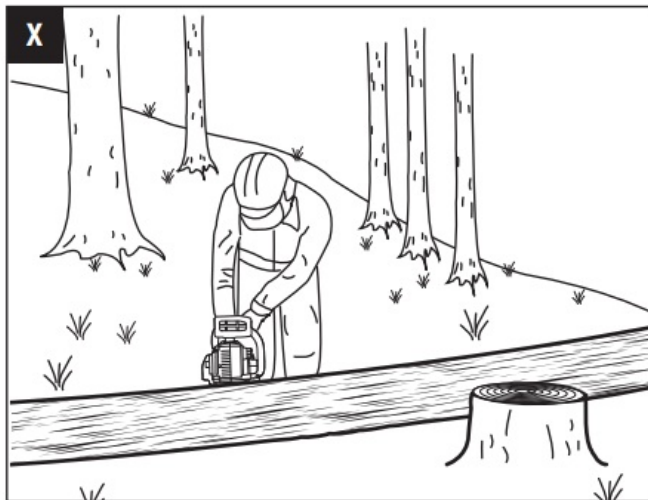
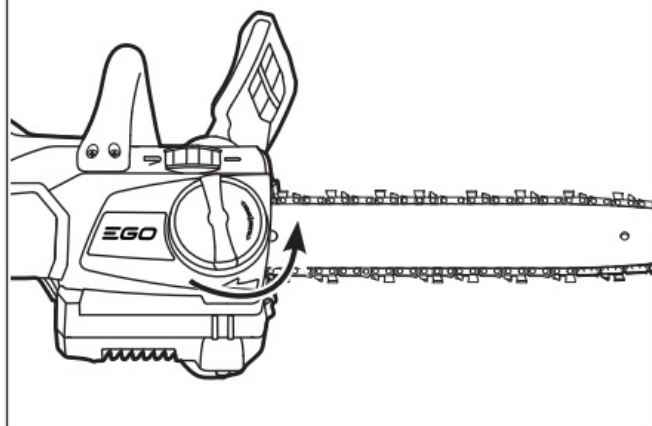




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READ ALL INSTRUCTIONS!


READ & UNDERSTAND INSTRUCTION MANUAL

⚠ Residual risk! People with electronic devices, such as pacemakers, should consult their physician(s) before using this product. Operation of electrical equipment in close proximity to a heart pacemaker could cause interference or failure of the pacemaker.

 **WARNING:** To ensure safety and reliability, all repairs and replacements should be performed by a qualified service technician.


SAFETY SYMBOLS

The purpose of safety symbols is to attract your attention to possible dangers. The safety symbols and the explanations with them deserve your careful attention and understanding. The symbol warnings do not, by themselves, eliminate any danger. The instructions and warnings they give are no substitutes for proper accident prevention measures.

 **WARNING:** Be sure to read and understand all safety instructions in this Operator's Manual, including all safety alert symbols such as "DANGER," "WARNING," and "CAUTION" before using this tool. Failure to following all instructions listed below may result in electric shock, fire, and/or serious personal injury.

SYMBOL MEANING

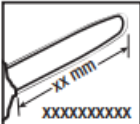






SAFETY ALERT SYMBOL: Indicates DANGER, WARNING, or CAUTION. May be used in conjunction with other symbols or pictographs.





 **WARNING:** The operation of any power tools can result in foreign objects being thrown into your eyes, which can result in severe eye damage. Before beginning power tool operation, always wear safety goggles or safety glasses with side shields and a full face shield when needed. We recommend a Wide Vision Safety Mask for use over eyeglasses or standard safety glasses with side shields.

SAFETY INSTRUCTIONS

This page 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.

	Safety Alert	Indicates a potential personal injury hazard.
	Read the Operator's Manual	To reduce the risk of injury, user must read operator's manual.
	Wear Eye Protection	Always wear safety goggles or safety glasses with side shields and a full face shield when operating this product.
	Wear Ear Protection	Always wear ear protection when operating this product.
	Wear Head Protection	Wear an approved safety hard hat to protect your head.
	Wear Protective Gloves	Protect your hands with gloves when handling saw and saw chain. Heavy-duty, nonslip gloves improve your grip and protect your hands.

	Guide Bar	The information of guide bar.
	Be Aware of Kickback	Contact of the guide bar tip with any object should be avoided
	Guide Bar Tip Kickback	Tip contact can cause the guide bar to move suddenly upward and backward, which can cause serious injury.
	Two Handed Hold	Always use two hands when operating the chain saw
	Do Not Expose To Rain	Do not use in the rain or leave outdoors while it is raining.
	CE	This product is in accordance with applicable EC directives.
	Noise	Guaranteed sound power level. Noise emission to the environment according to the European community's Directive.

 	WEEE	Waste electrical products should not be disposed of with household waste. Take to an authorized recycler.
V	Volt	Voltage
A	Amperes	Current
Hz	Hertz	Frequency (cycles per second)
W	Watt	Power
min	Minutes	Time
	Alternating Current	Type of current
	Direct Current	Type or a characteristic of current
n_0	No Load Speed	Rotational speed, at no load
... /min	Per Minute	Revolutions per minute

GENERAL POWER TOOL SAFETY WARNINGS



WARNING: Read all safety warnings and 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.

Save all warnings and instructions for future reference.

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

WORK AREA SAFETY

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

ELECTRICAL SAFETY

- Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adaptor plugs with earthed (grounded) power tools. Unmodified plugs and matching outlets will reduce risk of electric shock.

- Avoid body contact with earthed or grounded surfaces, such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.
- Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.
- Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.
- When operating a power tool outdoors, use an extension cord suitable for outdoor use. Use of a cord suitable for outdoor use reduces the risk of electric shock.
- If operating a power tool in a damp location is unavoidable, use a Ground-fault circuit interrupter protected supply. Use of GFCI reduces the risk of electric shock.

PERSONAL SAFETY

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.
- Use personal protective equipment. Always wear eye protection. Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.
- Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
- Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.
- If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust devices can reduce dust-related hazards.

POWER TOOL USE AND CARE

- Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
- Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
- Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.
- Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.

BATTERY TOOL USE AND CARE

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

risk of injury and fire.

- When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.

- Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.

SERVICE

- Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.

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 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 power tool by insulated gripping surfaces only, because the saw chain may contact hidden wiring. Saw chains contacting a “live” wire may make exposed metal parts of the power tool “live” and could give the operator an electric shock.

- Wear safety glasses and hearing protection. Further protective equipment for head, hands, legs and feet is recommended. Adequate protective clothing will reduce personal injury by flying debris or accidental contact with the saw chain.

- Do not operate a 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 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 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. Improperly tensioned or 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 causing loss of control.

- Cut wood only. Do not use chain saw for purposes not intended. For example: do not use chain saw for cutting plastic, masonry or non-wood building materials. Use of the chain saw for operations different than intended could result in a hazardous situation.

CAUSES AND OPERATOR PREVENTION OF KICKBACK (Fig. B, C, D & E)

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 (Fig. B).

Pinching the saw chain along the top of the guide bar may push the guide bar rapidly back towards the operator (Fig. C).

Fig. B & C operation description see below:

B-1 Rotational kickback

C-1 Linear kickback

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 (Fig. E). 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.
- Make sure that the area in which you are cutting is free from obstructions. Do not let the nose of the guide bar contact a log, branch, fence, or any other obstruction that could be hit while you are operating the saw.
- Always cut with the unit running at full speed. Fully squeeze the switch trigger and maintain cutting speed.
- With a basic understanding of kickback, you can reduce or eliminate the element of surprise. Sudden surprise contributes to accidents.
- Keep proper footing and balance at all times.
- Push and Pull – The reaction force is always opposite to the direction the chain is moving where wood contact is made. Thus, the operator must be ready to control the PULL when cutting on the bottom edge of the bar, and the PUSH when cutting along the top edge (Fig. F).

KICKBACK SAFETY DEVICES ON THIS CHAIN SAW

Chain Brake

The chain saw comes equipped with a chain brake, which stops both the motor and the motion of the chain when kickback occurs. The chain brake can be activated by the forward motion of the chain kickback brake handle as the saw rotates backward during kickback; it can also be activated by the inertial forces generated during rapid pushback.



WARNING: Never modify or attempt to disable the chain brake.

Make sure that the chain brake is working properly before using the chain saw. The chain kickback brake handle should move back and forth easily. To test the operation of the chain brake, perform the following steps (Fig. G):

- Place the chain saw on a flat bare surface and make sure no objects or obstructions that could come in contact with the bar and chain are in the immediate vicinity.
- Disengage the chain brake by pulling the chain kickback brake handle towards the front handle.
- Start the chain saw.
- Push the chain kickback brake handle towards the front of the saw. A properly functioning hand brake will stop the movement of the chain immediately. If the chain brake is not working properly, do not use the chain saw until it has been repaired by a qualified service technician.

Fig. G operation description see below:

G-1 Chain kickback brake handle in operating position

G-2 Chain kickback brake handle in brake position



WARNING: Confirm that the chain brake works properly before each use.



WARNING: If the chain brake is clogged with wood chips, the function of the chain brake may deteriorate. Always keep the device clean.

Low Kickback Saw Chain

The racers (depth gauges) ahead of each cutter can minimize the force of a kickback reaction by preventing the

cutters from digging in too deeply at the kickback zone. Only use a replacement chain that is equivalent to the original chain or has been certified one.



CAUTION: As saw chains are sharpened during their useful life, they lose some of the low kickback qualities and extra caution should be used.

ADDITIONAL WARNINGS



- A chain saw is intended for two-handed use. Serious injury to the operator, helpers, and/or bystanders can result from one-handed operation.
- Avoid unintentional contact with the stationary saw chain or guide bar rails. These can be very sharp. Always wear gloves and long pants or chaps when handling the chain saw, saw chain, or guide bar.
- 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 switch is released.
- Inspect the work piece for nails, wire, or other foreign objects prior to cutting.
- When bucking, secure the work piece prior to cutting. When felling or pruning, identify and secure hazardous branches.
- Aggressive or abusive cutting or misuse of the chain saw can cause premature bar, chain, and/ or sprocket wear, as well as broken chain or bar, leading to kickback, chain throw or the ejection of material.
- Never use the guide bar as a lever. A bent guide bar can cause premature bar, chain, and/or sprocket wear, as well as a broken chain or bar, leading to kickback, chain throw or the ejection of material.
- Cut only one work piece at a time.
- Use only with battery packs and chargers listed in fig. A.
- Do not charge the battery pack in rain or in wet locations.
- Plan the work, ensuring an obstacle-free work area and, in the case of felling, at least one escape path from the falling tree.
- When felling, keep bystanders at least two tree lengths away.
- If situations occur which are not covered in this manual, use care and good judgment. Contact EGO Customer Service for assistance.

GUIDE BAR

This saw comes equipped with a guide bar that has a small radius nose. Small radius noses generally have less potential for kickback. When replacing the guide bar, be sure to order the bar listed in this manual.

SAVE THESE INSTRUCTIONS!

SPECIFICATIONS

Model		CS1400E	CS1600E
Voltage		56 V 	56 V 
Guide Bar Length		350 mm	400 mm
Chain Pitch		9.5 mm	9.5 mm
Chain Gauge		1.1 mm	1.1 mm
Saw Chain Type		AC1400/ AC1401	AC1600/AC1601 (Recommend) AC1400/AC1401 (Compatible)
Guide Bar Type		AG1400/ AG1401	AG1600/AG1601 (Recommend) AG1400/AG1401 (Compatible)
Chain Oil Tank Capacity		150 ml	150 ml
Weight (without battery pack, chain sheath)		3.81 Kg	3.86 Kg
Measured sound power level L_{WA}		96.73 dB(A) $K_{WA}=2.5$ dB(A)	96.4 dB(A) $K_{WA}=2.5$ dB(A)
Sound pressure level at operator's ear L_{PA}		85.73 dB(A) $K_{PA}=2.5$ dB(A)	85.4 dB(A) $K_{PA}=2.5$ dB(A)
Guaranteed sound power level L_{WA} (according to 2000/14/EC)		100 dB(A)	99 dB(A)
Vibration a_h	Rear Handle	5.373 m/s ² $K=1.5$ m/s ²	3.222 m/s ² $K=1.5$ m/s ²
	Front Handle	4.146 m/s ² $K=1.5$ m/s ²	3.081 m/s ² $K=1.5$ m/s ²

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

NOTICE: The vibration emission during actual use of the power tool can differ from the declared value in which the tool is used; In order to protect the operator, user should wear gloves and ear protectors in the actual conditions of use.

PACKING LIST

PART NAME	QUANTITY
Chain saw power head	1
Saw chain	1
Guide bar	1
Chain sheath	1
Operator's manual	1

DESCRIPTION

KNOW YOUR CHAIN SAW (Fig. A)

1. Trigger Switch
2. Lock-off Button
3. Battery-release Button
4. Oil Tank Cap
5. Oil Inspection Window
6. Saw Chain
7. Guide Bar
8. Latch
9. Ejection Mechanism
10. Electric Contacts
11. Chain Kickback Brake Handle
12. Chain Tensioning Knob
13. Front Handle
14. Rear Handle
15. Chain Tensioning Screw
16. Side Cover
17. Side Cover Knob
18. Chain Sheath
19. Lubricating Hole
20. Sprocket in Guide Bar Tip

NOTICE: The chain kickback brake handle services as the lever for chain brake activation. It also provides protection against projecting branches and helps prevent the left hand from touching the saw chain if it slips off the front handle.

ASSEMBLY



WARNING: If any parts are damaged or missing, do not operate this product until the parts are replaced. Use

of this product with damaged or missing parts could result in serious personal injury.

⚠ WARNING: Do not attempt to modify this product or create accessories not recommended for use with this chain saw. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious personal injury.

⚠ WARNING: To prevent accidental starting that could cause serious personal injury, always remove the battery pack from the tool when assembling parts.

⚠ WARNING: It is recommended that the first-time user should, as a minimum, practice cutting logs on a saw-horse or cradle

ASSEMBLING/REPLACING THE BAR AND CHAIN

⚠ WARNING: Always wear gloves when handling the bar and chain; these components are sharp and may contain burrs.

1. Position the chain saw power head on its side with the side cover facing upwards (Fig. H).
 2. Turn the side cover knob counter clockwise to remove the side cover and then loosen the chain tensioning knob as much as possible.
 3. Lay the new saw chain in a loop on a flat surface and straighten any kinks (Fig. I).
 4. Place the chain drive links into the guide bar groove and make the chain a loop at the back of the guide bar (Fig. J).
 5. Hold the chain in position on the guide bar and place the loop around the sprocket of the power head.
 6. 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 (Fig. L1).
- NOTICE:** Small directional arrows are engraved in the saw chain. Another directional arrow is Molded into the housing. When looping the saw chain onto the sprocket, make sure that the direction of the arrows on the saw chain will correspond to the direction of the arrow on the housing. If they face in opposite directions, turn over the saw chain and guide bar assembly (Fig. L2).
7. Replace the side cover and slightly tighten the side cover knob.
 8. Lift the tip of the guide bar up to check for sag (Fig. K). Release the tip of the guide bar and turn the chain tensioning knob clockwise. Repeat this process until the sag is eliminated.
 9. Tighten the side cover knob securely to ensure that the saw chain is properly tensioned before using.

Fig. J & L parts description see below:

J-1 Chain Drive Links

J-2 Guide Bar Groove

L-1 Alignment Flange

L-2 Tension Adjusting Pin

L-3 Guide Bar Slot

L-4 Sprocket

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

NOTICE: If chain is too tight, it will not rotate. Loosen the side cover knob slightly and turn the tensioning knob once from right to left. Lift the tip of the guide bar up and retighten the side cover knob securely. Assure that the chain will rotate without binding.

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 to tension the chain. See the section: "REPLACE THE BAR

AND CHAIN” for additional information.


■ A cold chain is correctly tensioned when there is no slack on the underside of the guide bar and the chain is snug, but it can be turned by hand without binding. The chain must be re-tensioned whenever the flats on the drive links do not sit in the bar groove.


■ 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. M).


NOTICE: New chains tend to stretch; check chain tension frequently and tension as required.


NOTICE: A chain tensioned while it is warm may be too tight upon cooling. Check the cold tension before next use.

OPERATION

 **WARNING:** Do not allow familiarity with this product to make you careless. Remember that a careless fraction of a second is sufficient to inflict serious injury.

 **WARNING:** Always wear eye protection with side shields. Failure to do so could result in objects being thrown into your eyes and other possible serious injuries.

 **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.


 **WARNING:** To prevent accidental starting that could cause serious personal injury, always remove the battery pack from the tool when assembling parts, making adjustments, cleaning, or when not in use. Before each use, inspect the entire product for damaged, missing, or loose parts, such as screws, nuts, bolts, caps, etc. Securely tighten all fasteners and caps and do not operate this product until all missing or damaged parts are replaced.

APPLICATION

You may use this product for basic felling, lambing, pruning and woodcutting of lumber and trees.

NOTICE: The tool is to be used only for its prescribed purpose. Any other use is deemed to be a case of misuse.

FILLING BAR AND CHAIN LUBRICANT

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

NOTICE: The chain saw is not filled with oil at the time of purchase. It is essential to fill the tank with oil before use. 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 cap as well as the area around and then turn it counter clockwise to remove (Fig. N).
3. Carefully pour the specifically designed oil into the tank until reaching the bottom of the filter neck.
4. Wipe off any excessive oil and replace the cap.

NOTICE: With upright position, oil should fill the inspection window. When the oil is no longer visible in the inspection window, stop use immediately and refill.

ATTACHING/DETACHING THE BATTERY PACK Fully charge before first use.

To Attach (Fig. O)

Align the battery ribs with the mounting slots and press the battery pack down until you hear a “click”.

To Detach (Fig. P)

Depress the battery-release button and pull the battery pack out.

STARTING/STOPPING THE CHAIN SAW

NOTICE: Before starting the chain saw, check for the oil level, saw teeth sharpness and properly-working kickback brake handle. Besides, balanced footing and proper distance away from the ground are needed.

To Start

1. Pull the chain kickback brake handle towards the front handle to the operating position (Fig. G).
2. Grasp the front and rear handles firmly, using both hands.
3. Press down the lock-off button first, then squeeze the trigger switch to start (Fig. Q). Release the lock off button and continue to squeeze the trigger for continued operation.



WARNING: Do not attempt to start the saw when the saw chain is in a cut.

To Stop

1. Release the trigger switch.
2. Push the chain kickback brake handle forward to the brake position to engage the chain brake (Fig. G).



WARNING: Always remove the battery pack from the chain saw during work breaks and after finishing work.

Proper Grip On Handles (Fig. E)

- Wear non-slip gloves for maximum grip and protection.
- With the saw on a firm, flat surface, hold the saw firmly with both hands.
- Always grasp the front handle with the left hand and the rear handle with the right.
- The fingers should encircle the handle, with the thumb wrapped under the front handle.



WARNING: Never use a left-handed (cross-handed) grip, or any stance which would place your body or arm across the chain line (Fig. R).

Proper Cutting Stance (Fig. S)

- Both feet should be on solid ground, with weight evenly spread between them.
- The left arm should be straight, with the elbow locked.
- This helps to withstand the forces generated by kickback.

Your body should always be to the left of the chain line.

INSTRUCTIONS CONCERNING THE PROPER TECHNIQUES FOR BASIC FELLING, LIMBING, AND CROSS-CUTTING


WARNING: Always be sure of your footing and hold the chain saw firmly with both hands while the motor is running.



WARNING: When the saw chain is stopped due to pinching during cutting, release the trigger switch; remove the saw chain and guide bar from the wood, then restart the chain saw.



WARNING: Do not pull the saw chain with hand when it is bound by the sawdust. Serious injury could result if the chain saw starts accidentally. Press the saw chain against the wood, move the chain saw back and forth to discharge the debris. Always remove the battery pack before cleaning. Wear heavy protective gloves when handling the saw chain.

 **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.

Felling a tree

- When bucking and felling operations are being performed by two or more persons 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 utility company should be notified immediately.
- The chain saw operator should stand 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 Fig. T shown.
- Before felling is started, consider the natural lean of the tree, the location of larger branches and the wind direction to judge which way the tree will fall.
- Remove dirt, stones, loose bark, nails, staples and wire from the tree

Notching undercut

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

Felling back cut

- Make the felling back cut at least 50 mm higher than the horizontal notching cut as Fig. U shown. Keep the felling back cut parallel to the horizontal notching cut. Make the felling back cut so enough wood is left to act as a hinge. The hinge wood keeps the tree from twisting and falling in the wrong direction. Do not cut through the hinge.
- As the felling gets close to the hinge, the tree should begin to fall. If there is any chance that the tree may not fall in desired direction or it may rock back and bind the saw chain, stop cutting before the felling back cut is complete and use wedges of wood, plastic or aluminium to open the cut and drop the tree along the desired line of fall.
- When the tree begins to fall remove the 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.

Fig. T & U parts description see below:

- T-1 Felling direction
- T-2 Safety retreat path
- U-1 Direction of fall
- U-2 Notch
- U-3 Felling back cut
- U-4 Hinge

Limbing a tree

Limbing is removing the branches from a fallen tree.

When Limbing leave larger lower limbs to support the log off the ground. Remove the small limbs in one cut as Fig. V shown. Branches under tension should be cut from the bottom up to avoid binding the chain saw.


Bucking a log


- Bucking is cutting a log into lengths. It is important to make sure your footing is firm and your weight is evenly distributed on both feet. When possible, the log should be raised and supported by the use of limbs, logs or chocks. Follow the simple directions for easy cutting.
- When the log is supported along its entire length as Fig. W1 shown, it is cut from the top (over buck).
- When the log is supported on one end, as Fig. W2 shown, cut 1/3 the diameter from the underside (underback).


Then make the finished cut by over bucking to meet the first cut.


- When the log is supported on both ends, as Fig. W3 shown, cut 1/3 the diameter from the top (over buck). Then make the finished cut by under bucking the lower 2/3 to meet the first cut.
- When bucking on a slope always stand on the uphill side of the log, as Fig. X shown.
- When “cutting through”, to maintain complete control release the cutting pressure near the end of the cut without relaxing your grip on the chain saw handles. Don’t let the chain contact the ground. 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.


MAINTENANCE

 **WARNING:** When servicing, use only identical replacement parts. Use of any other parts may create a hazard or cause product damage.

 **WARNING:** Always wear protective gloves when performing any maintenance to the chain saw.

 **WARNING:** To avoid serious personal injury, remove the battery pack from the chain saw before inspecting, cleaning, or performing maintenance. A battery operated tool with the battery pack inserted is always on and can start accidentally.


 **WARNING:** When cleaning the chain saw, DO NOT immerse in water or other liquids.

 **WARNING:** Do not at any time let brake fluids, petrol, petroleum-based products, penetrating oils, etc., come in contact with plastic parts. Chemicals can damage, weaken, or destroy plastic, which may result in serious personal injury.

CLEANING

- After each use, clean debris from the chain and guide bar with a soft brush. Wipe the chain saw surface with a clean cloth moistened with a mild soap solution.
- Remove the side cover, and then use a soft brush to remove debris from the guide bar, saw chain, sprocket and side cover.
- Always clean out wood chips, saw dust, and dirt from the guide bar groove when replacing the saw chain.

REPLACING THE BAR AND CHAIN

 **WARNING:** Never touch or adjust the chain while the motor is running. The saw chain is very sharp.

NOTICE: When replacing the guide bar and chain, always use the specified bar and chain combination listed in the manual.

Disassemble the Worn Bar and Chain (Fig. Y)

1. Remove the battery, allow the saw to cool and tighten the oil tank cap.
2. Position the chain saw on its side with the side cover facing upwards.
3. Wear gloves. Remove the side cover by turning the side cover knob counter clockwise. Clean the side cover with a dry cloth.

NOTICE: This is a good time to inspect the drive sprocket for excessive wear or damage.

Assemble The New Bar And Chain Follow the instructions in the ASSEMBLING/REPLACING THE BAR AND CHAIN section in this manual.

Adjust The Chain Tension Follow the instructions in the ADJUSTING THE CHAIN TENSION section in this manual.

CHAIN MAINTENANCE



WARNING: Always wear gloves when handling the saw chain; these components are sharp and may contain burrs.

Use only low-kickback chains on this saw. This fast cutting chain will provide kickback reduction when properly maintained.

A properly sharpened saw chain cuts through wood effortlessly, even with very little pressure.

Never use a dull or damaged saw chain. A dull saw chain cutter leads to increased physical strain, increased vibration load, unsatisfactory cutting results and increased wear.

For smooth and fast cutting, the chain needs to be maintained properly. The chain requires sharpening when the wood chips are small and powdery, the chain must be forced through the wood during cutting, or the chain cuts to one side. During maintenance of your chain, consider the following:

- Improper filing angle of the side plate can increase the risk of a severe kickback.
- Raker (depth gauge) clearance. Too low increases the potential for kickback. Not low enough decreases cutting ability.
- If cutter teeth have hit hard objects, such as nails and stones, or have been abraded by mud or sand on the wood, have the chain sharpened by a qualified service technician.

NOTICE: Inspect the drive sprocket for wear or damage when replacing the chain. If signs of wear or damage are present in the areas indicated, have the drive sprocket replaced by qualified service technician.

GUIDE BAR MAINTENANCE

When the guide bar shows signs of wear, reverse it on the saw to distribute the wear for maximum bar life. The bar should be cleaned every day of use and checked for wear and damage. Feathering or burring of the bar rails is a normal process of bar wear. Such faults should be smoothed with a file as soon as they occur. A bar with any of the following faults should be replaced.

- Wear inside the bar rails which permits the chain to lay over sideways.
- Bent guide bar.
- Cracked or broken rails.
- Spread rails.

In addition, the guide bar has a sprocket at its tip (Fig. A-20). The sprocket must be lubricated weekly with a grease syringe to extend the guide bar life. Use a grease syringe to lubricate weekly with chain oil by means of the lubricating hole (Fig. A-19). Turn the guide bar and check that the lubrication holes and chain groove are free from impurities.

TRANSPORTING AND STORING

- Do not store or transport the chain saw when it is running. Always remove the battery pack before storing or transporting.
- Always place the guide bar sheath on the guide bar and chain before storing or transporting the chain saw. Use caution to avoid the sharp teeth of the chain.
- Clean the chain saw thoroughly before storing. Store the chain saw indoors, in a dry place that is locked and/or inaccessible to children.
- Keep away from corrosive agents such as garden chemicals and de-icing salts.

Protecting the environment



Do not dispose of electrical equipment, battery charger and batteries/rechargeable batteries into household waste! According to the European law 2012/19/EU, electrical and electronic equipment that is no longer usable, and according to the European law 2006/66/EC, defective or used battery packs/ batteries, must be collected separately.

If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

TROUBLESHOOTING

! WARNING: Always protect your hands by wearing heavy gloves when performing any maintenance on the saw chain. Always remove the battery pack when servicing or transporting the chain saw.


PROBLEM	CAUSE	SOLUTION
Motor does not run	<ul style="list-style-type: none"> ■ The battery pack is not attached to the chain saw. ■ There is no electrical contact between the saw and battery. ■ The battery pack is depleted. ■ The battery pack or chain saw is too hot. ■ The lock-off button is not depressed before pressing the trigger switch. ■ Chain brake is engaged. ■ Saw chain is bound in the wood. ■ Debris in bar groove. ■ Debris in side cover. 	<ul style="list-style-type: none"> ■ Attach the battery pack to the chain saw. ■ Remove the battery, check contacts and reinstall the battery pack. ■ Charge the battery pack. ■ Allow the battery pack or chain saw to cool until the temperature drops below 67°C. ■ Press down the lock-off button and hold it, then depress the trigger switch to turn on the chain saw. ■ Pull the chain kickback brake handle backward toward the front handle. ■ Release the trigger switch; remove the saw chain and guide bar from the wood, then restart the chain saw. ■ Press the saw chain against the wood, move the chain saw back and forth to discharge the debris. ■ Remove battery pack, then remove side cover and clean out debris.
Motor runs, but chain does not rotate	<ul style="list-style-type: none"> ■ Chain does not engage drive sprocket. 	<ul style="list-style-type: none"> ■ Reinstall the chain, making sure that the drive links on the chain are fully seated on the sprocket.
Chain brake does not engage	<ul style="list-style-type: none"> ■ Debris preventing full movement of the chain kickback brake handle. ■ Possible chain brake malfunction 	<ul style="list-style-type: none"> ■ Clean debris from external chain brake mechanism. ■ Contact EGO Customer Service.

Chain saw does not cut properly	<ul style="list-style-type: none"> ■ Insufficient chain tension. ■ Dull chain. ■ Chain installed backwards. ■ Worn chain. ■ Dry or excessively stretched chain. ■ Chain not in bar groove. 	<ul style="list-style-type: none"> ■ Readjust the chain tension, following the section: “ADJUSTING THE CHAIN TENSION”. ■ Sharpen the chain cutters. ■ Reinstall the saw chain, following the section: “REPLACE THE BAR AND CHAIN”. ■ Replace the chain, following the section: “REPLACE THE BAR AND CHAIN”. ■ Check the oil level. Refill the oil tank if necessary. ■ Reinstall the saw chain, following the section: “REPLACE THE BAR AND CHAIN”.
Bar and chain running hot and smoking	<ul style="list-style-type: none"> ■ Check chain tension for over tightened condition. ■ Chain oil tank is empty. ■ Debris in guide bar groove. 	<ul style="list-style-type: none"> ■ Re-tension the saw chain; see the section: “ADJUSTING THE CHAIN TENSION”. ■ Filling bar and chain lubricant. ■ Clear the debris in the groove.

WARRANTY

EGO WARRANTY POLICY Please visit the website egopowerplus.com for full terms and conditions of the EGO Warranty policy.

Documents / Resources

	<p>EGO CS1400E 56 Volt Lithium-Ion Cordless Chain Saw [pdf] User Manual CS1400E, CS1600E, CS1400E 56 Volt Lithium-Ion Cordless Chain Saw, CS1400E, 56 Volt Lithium-Ion Cordless Chain Saw</p>
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References

-  [The #1 Rated Brand in Cordless Outdoor Power Equipment | EGO](#)