RYOBI POWER EQUIPMENT

WARRANTY

Subject to the warranty conditions below, this RYOBI tool (hereinafter called “the Product”), is warranted by Ryobi (herein called “the Company”) to be free from defects in material or workmanship for a period of 24 months from the date of original purchase covering both parts and labour. Under the terms of this warranty, the repair or replacement of any part shall be the opinion of the Company or its authorised agent. Should service become necessary during the warranty period, the owner should contact the authorised Ryobi retailer from whom the product was purchased, or the nearest Company branch office. In order to obtain warranty service, the owner must include the Sales Docket and Warranty Certificate to confirm date of purchase. This Product is sold by the dealer or agent as principal and the dealer has no authority from the Company to give any additional warranty or guarantee on the Company’s behalf except as herein contained or herein referred to.

Warranty Conditions

This warranty only applies provided that the Product has been used in accordance with the manufacturer's recommendations under normal use and reasonable care (in the opinion of the Company) and such warranty does not cover consumable components, damage, malfunction or failure resulting from misuse, neglect, abuse, or used for a purpose for which it was not designed, or is not suited and no repairs, alterations or modifications have been attempted by other than an Authorised Service Agent. This guarantee will not apply if the tool is damaged by accident or if repairs arise from normal wear and tear.

Accessories such as bits,blades, sanding discs, cutting lines, etc., are excluded from this guarantee. Normal consumable parts, such as carbon brushes, bearings, chucks, cord assembly’s, spark plugs, recoil pulleys and bump head assembly’s are specifically excluded from this guarantee.

The Company accepts no additional liability pursuant to this warranty for the costs of traveling or transportation of the Product or parts to and from the sevice dealer or agent - which costs are not included in the warranty.

Nothing herein shall have the effect of excluding, restricting or modifying any conditions, warranty, right or liability imposed, to the extent only that such exclusion, restriction or modification would render any term herein void.

RYOBI®

STEVENS & CO (Pty) Ltd
604, 16th Street, Randjespark
Midrand, South Africa

P O Box 4059
HALFWAY HOUSE
1685, South Africa

Tel: +27 (11) 357-9600
Fax: +27 (11) 805-5541
email: stevens@ryobi.co.za

THIS WARRANTY FORM
SHOULD BE RETAINED BY THE CUSTOMER AT ALL TIMES.

For your record and to assist in establishing date of purchase (necessary for in-warranty service), please keep your purchase docket and this form, completed with the following particulars.

PURCHASED FROM:.....

ADDRESS OF DEALER:.....

DATE:..... MODEL NO..... SERIAL NO.....

Present this form with your Purchase Docket when Warranty Service is required.

RYOBI®

OWNER'S OPERATING MANUAL

ELECTRIC CHAINSAW

MODEL CS-2000

SPECIFICATIONS

Voltage	230V~50Hz
Rated input	2000W
No load speed	8000min^{-1}
Cutting length	395mm
Chain brake	< 0.12s
Bar length	16"/400mm
Chain speed	13m/s
Chain oil tank capacity	260ml
Automatic lubrication	Yes
Cable length	35cm
Sound pressure level	L_{pA} 89.3dB(A),k=2.5dB(A)
Sound power level	L_{WA} 100.3dB(A),k=2.5dB(A)
Vibration level	7.618m/s^2, K=1.5m/s^2
Net weight	5.2kg

THANK YOU FOR BUYING A RYOBI ELECTRIC CHAINSAW

Your new electric chainsaw has been engineered and manufactured to Ryobi's high standard of dependability, ease of operation and operator safety. Properly cared for, it will give you years of rugged, trouble free performance. If you use your electric chainsaw properly and only for what it is intended, you will enjoy years of safe, reliable service.

CAUTION: Carefully read through this entire owner's manual, paying close attention to the general safety rules and rules for safe operation, before using.

KEEP THIS MANUAL FOR FUTURE REFERENCE

IMPORTANT SAFETY INSTRUCTIONS

The purpose of safety rules is to attract your attention to possible dangers. The safety symbols and the explanations with them, require your careful attention and understanding. The safety warnings do not by themselves eliminate any danger. The instruction or warnings they give are not substitutes for proper accident prevention measures.

SAFETY ALERT SYMBOL. Indicates danger, caution or warning. May be used in conjunction with other symbols or pictures.

Failure to obey a safety warning can result in serious injury to yourself or to others. Always follow the safety precautions to reduce the risk of fire, electric shock and personal injury.

Do not attempt to operate this tool until you have read thoroughly and completely understood the safety rules, etc. contained in this manual. Failure to comply can result in accidents involving fire, electric shock or serious personal injury. Save this Owners Operating Manual and review it frequently for continual safe operation and for instructing others who may use this tool.

INTENDED USE

The product is only intended for use outdoors. For safety reasons the product must be adequately controlled by using two-handed operation at all times.

The product is designed for cutting branches, trunks, logs and beams of a diameter determined by the cutting length of the guide bar. It is only designed to cut wood. It is only to be used in domestic application by adults who have received adequate training on the hazards and preventative measures/actions to be taken whilst using it.

Do not use the product for any purpose not listed above. It is not to be used for professional tree services. The product is not to be used by children or by persons not wearing adequate personal protective equipment and clothing.

WARNING

To reduce the risk of injury, the user must read and understand the operator's manual.

WARNING

Chainsaws are potentially dangerous tools. Accidents involving the use of chainsaws often result in loss of limbs or death. It is not just the chainsaw that is the hazard. Falling branches, toppling trees, rolling logs can all kill.

Diseased or rotting timber poses additional hazards. You should assess your capability of completing the task safely. If there is any doubt, leave it to a professional tree surgeon.

CHAINSAW SAFETY WARNINGS

Keep all parts of the body away from the saw chain when the chainsaw is operating. Before you start the chainsaw, make sure the saw chain is not contacting anything. A moment of inattention while operating chainsaws may cause entanglement of your clothing or body with the saw chain.

Always hold the chainsaw with your right hand on the rear handle and your left hand on the front handle. Holding the chainsaw with a reversed hand configuration increases the risk of personal injury and should never be done.

Hold the power tool by gripping surface only, because the saw chain may contact hidden wiring or its own cord. Saw chains contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.

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 chainsaw in a tree. Operation of a chainsaw while up in a tree may result in personal injury.

Always keep proper footing and operate the chainsaw 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 chainsaw.

When cutting a limb that is under tension be alert for spring back. When the tension in the wood fibres is released the spring loaded limb may strike the operator and/or throw the chainsaw out of control.

IMPORTANT SAFETY INSTRUCTIONS

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 chainsaw by the front handle with the chainsaw switched off and away from your body.

When transporting or storing the chainsaw always fit the guide bar cover. Proper handling of the chainsaw 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 chainsaw for purposes not intended. For example: do not use chainsaw for cutting plastic, masonry or non-wood building materials. Use of the chainsaw for operations different than intended could result in a hazardous situation.

CAUSES AND OPERATOR PREVENTION OF KICKBACK
Kickback may occur when the nose or tip of the guide bar touches an object, or when the wood closes in and pinches the saw chain in the cut.

Tip contact in some cases may cause a sudden reverse reaction, kicking the guide bar up and back towards the operator.

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

Either of these reactions may cause you to lose control of the saw which could result in serious personal injury. Do not rely exclusively upon the safety devices built into your saw. As a chainsaw 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 follows:

Maintain a firm grip, with thumbs and fingers encircling the chainsaw handles, with both hands on the saw and position your body and arm to allow you to resist kickback forces. Kickback forces can be controlled by the operator, if proper precautions are taken. Do not let go of the chainsaw.

Do not overreach and do not cut above shoulder height. This helps prevent unintended tip contact and enables better control of the chainsaw in unexpected situations.

Only use replacement bars and chains specified by the manufacturer. Incorrect replacement bars and chains may cause chain breakage and/or kickback.

Follow the manufacturer's sharpening and maintenance instructions for the saw chain. Decreasing the depth gauge height can lead to increased kickback.

ADDITIONAL CHAINSAW SAFETY WARNINGS
It is recommended to cut logs on a saw-horse or cradle when operating the product the first time.

Ensure all guards, handles and spiked bumper are properly fitted and are in good condition.

Persons using this chainsaw should be in good health. The chainsaw is a heavy unit so the operator requires to be physically fit. The operator should be alert, have good vision, mobility, balance and manual dexterity. If there is any doubt, do not operate the chainsaw.

Do not start using the product until you have a clear work area, secure footing, and a planned retreat path away from the falling tree.

Beware of the emission of lubricant mist and saw dust. Wear a mask or respirator if required.

Electric power should be supplied via a residual current device (RCD) with a tripping current of not more than 30 mA.

If the power cable becomes damaged, you must return the machine to an authorised service centre for repair or replacement.

Always keep the power cable tidy and away from the area of cutting. Apart from the danger of electrocution, untidy cables cause falls and trips.

Do not cut vines and/or small undergrowth (less than 75 mm in diameter).

IMPORTANT SAFETY INSTRUCTIONS

Always hold the chainsaw with both hands when operating the saw. Use a firm grip with thumbs and fingers encircling the chainsaw handles. Right hand must be on the rear handle and left hand on the front handle.

Before starting the tool, make sure the saw chain is not contacting any object.

Do not modify your tool in any way or use it to power any attachments or devices not recommended by the manufacturer for your saw.

There should be a first-aid kit containing large wound dressings and a means to summon attention (e.g., whistle) close to the operator. A larger more comprehensive kit should be reasonably nearby.

The operator may be tempted to remove the helmet if there is no danger of falling objects in the work area, but remember the helmet, particularly with the mesh visor, can help reduce the potential for injury to the face and head if kickback occurs.

An incorrectly tensioned chain can jump off the guide bar and could result in serious injury or fatality. The length of chain depends on the temperature. Check the tension frequently.

You should get used to your new chainsaw by making simple cuts on securely supported wood. Do this whenever you have not operated the saw for some time.

To reduce the risk of injury associated with contacting moving parts, always stop the motor, apply chain brake, remove the plug from the power socket and make sure all moving parts have come to a stop before:

- cleaning or clearing a blockage
- leaving the product unattended
- installing or removing attachments
- checking, maintenance or working on the machine

The size of the work area depends on the job being performed as well as the size of the tree or work piece involved. For example, felling a tree requires a larger work area than making other cuts, i.e., bucking cuts, etc. The operator needs to be aware and in control of everything happening in this work area.

Do not cut with your body in line with the guide bar and chain. If you do experience kickback this will help prevent the chain coming into contact with your head or body.

Do not use a back and forward sawing motion, let the chain do the work, keep the chain sharp and don't try to push the chain through the cut.

Do not put pressure on the saw at the end of the cut. Be ready to take on the weight of the saw as it cuts free from the wood. Failure to do so could result in possible serious personal injury.

Do not stop the saw in the middle of a cutting operation. Keep the saw running until it is already removed from the cut.

PUSH & PULL
The reaction force is always opposite to the direction the chain is moving. Thus, the operator must be ready to control the tendency for the machine to pull away (forward motion) when cutting on the bottom edge of the bar and the push backwards (towards the operator) when cutting along the top edge.

SAW JAMMED IN THE CUT
Stop the chainsaw and make it safe. Do not try to force the chain and bar out of the cut as this is likely to break the chain which may swing back and strike the operator. This situation normally occurs because the wood is incorrectly supported and forcing the cut to close under compression thereby pinching the blade. If adjusting the support does not release the bar and chain, use wooden wedges or a lever to open the cut and release the saw. Never try to start the chainsaw when the guide bar is already in a cut or kerf.

PERSONAL PROTECTIVE EQUIPMENT
Good quality, personal protective equipment as used by professionals will help to reduce the risk of injury to the operator. The following items should be used when operating your chainsaw:

SAFETY HELMET
Should comply with EN 397 and be CE marked.

HEARING PROTECTION
Should comply with EN 352-1 and be CE marked.

EYE AND FACE PROTECTION
Should be CE marked and comply with EN 166 (for safety glasses) or EN 1731 (for mesh visors).

IMPORTANT SAFETY INSTRUCTIONS

GLOVES
Should comply with EN381-7 and be CE marked.

LEG PROTECTION (CHAPS)
Should comply with EN381-5, be CE marked and provide all-round protection.

CHAINSAW SAFETY BOOTS
Should comply with EN ISO 20345:2004 and be marked with a shield depicting a chainsaw to show compliance with EN 381-3. (Occasional users may use steel toe-cap safety boots with protective gaiters which conform to EN 381-9 if the ground is even and there is little risk of tripping or catching on undergrowth).

CHAINSAW JACKETS FOR UPPER BODY PROTECTION
Should comply with EN 381-11 and be CE marked.

RESIDUAL RISKS
Even when the product is used as prescribed, it is still impossible to completely eliminate certain residual risk factors. The following hazards may arise in use and the operator should pay special attention to avoid the following:

- Injury caused by vibration. Always use the right tool for the job, use designated handles and restrict working time and exposure.
- Exposure to noise can cause hearing injury. Wear ear protection and limit exposure.
- Contact with exposed saw teeth of the chain (cutting hazards).
- Unforeseen, abrupt movement or kickback of the guide bar (cutting hazards).
- Parts ejected from the saw chain (cutting/injection hazards).
- Thrown out pieces of the work piece (wood chips, splinters).
- Inhalation of saw dust and particles.
- Skin contact with lubricant/oil.

RISK REDUCTION
It has been reported that vibrations from hand-held tools may contribute to a condition called Raynaud's Syndrome in certain individuals. Symptoms may include tingling, numbness and blanching of the fingers, usually apparent upon exposure to cold. Hereditary factors, exposure to cold and dampness, diet, smoking and work practices are all thought to contribute to the development of these symptoms. There are measures that can be taken by the operator to possibly reduce the effects of vibration:

- Keep your body warm in cold weather. When operating the unit wear gloves to keep the hands and wrists warm. It is reported that cold weather is a major factor contributing to Raynaud's Syndrome.
- After each period of operation, exercise to increase blood circulation.
- Take frequent work breaks. Limit the amount of exposure per day.
- Protective gloves available from professional chainsaw retailers are designed specifically for chainsaw use which give protection, good grip and also reduce the effect of handle vibration. These gloves should comply with EN381-7 and must be CE marked.

If you experience any of the symptoms of this condition, immediately discontinue use and see your doctor about these symptoms.

WARNING
Injuries may be caused, or aggravated, by prolonged use of a tool. When using any tool for prolonged periods, ensure you take regular breaks.

GENERAL SAFETY RULES
WARNING! Read all instructions Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term "power tool" in all of the warnings listed below refers to your mains operated (corded) power tool or battery operated (cordless) power tool.

SAVE THESE INSTRUCTIONS

1) WORK AREA

a) Keep work area clean and well lit. Cluttered and dark areas invite accidents.

b) Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust. Power tools create sparks which may ignite the dust or fumes.

c) Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

2) ELECTRICAL SAFETY

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

b) Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators. There is an increased risk of electric shock if your body is earthed or grounded.

c) Do not expose power tools to rain or wet conditions. Water entering a power tool will increase the risk of electric shock.

d) Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts. Damaged or entangled cords increase the risk of electric shock.

e) 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.

f) If operating a power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply. Use of an RCD reduces the risk of electric shock.

3) PERSONAL SAFETY

a) Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.

b) Use personal protective equipment. Always wear eye protection. Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.

c) Avoid accidental starting. Ensure the switch is in the off position before plugging in. Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.

d) Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

e) Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.

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

g) If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of these devices can reduce dust related hazards.

4) POWER TOOL USE AND CARE

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

b) Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

c) Disconnect the plug from the power source before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.

d) Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.

e) Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tools operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.

IMPORTANT SAFETY INSTRUCTIONS

f) Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

g) Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from intended could result in a hazardous situation.

5) SERVICE

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

ADDITIONAL GENERAL SAFETY WARNINGS
Some regions have regulations that restrict the use of the product. Check with your local authority for advice.

Never allow children or people unfamiliar with the instructions to use the product. Local regulations may restrict the age of the operator.

Ensure before each use that all controls and safety devices function correctly. Do not use the power tool if the “off” switch does not stop the motor.

Wear full eye and hearing protection, strong sturdy gloves as well as head protection while operating the product; use a face mask if operation is dusty.

Do not wear loose fitting clothing, short trousers or jewellery of any kind.

Secure long hair so it is above shoulder level to prevent entanglement in moving parts.

Beware of thrown, flying or falling objects; keep all bystanders, children, and animals at least 15 m away from work area.

Do not operate in poor lighting. The operator requires a clear view of the work area to identify potential hazards.

Use of hearing protection reduces the ability to hear warnings (shouts or alarms). The operator must pay extra attention to what is going on in the working area.

Operating similar tools nearby increases both the risk of hearing injury and the potential for other persons to enter your working area.

Keep firm footing and balance. Do not overreach. Overreaching can result in loss of balance and can increase the risk of kickback.

Keep all parts of your body away from any moving part.

Inspect the machine before each use. Check for correct operation of all controls including the chain brake.

Check for loose fasteners, make sure all guards, and handles are properly and securely attached. Replace any damaged parts before use.

Do not modify the machine in any way or use parts and accessories which are not recommended by the manufacturer.

If you need to use an extension cable ensure it is suitable for outdoor use and has a current capacity sufficient to supply your tool, check it before every use for damage, always uncoil it during use because coiled cables can overheat.

WARNING
If the machine is dropped, suffers heavy impact or begins to vibrate abnormally, immediately stop the machine and inspect for damage or identify the cause of the vibration.

Any damage should be properly repaired or replaced by an authorised service centre.

The operation of any tool 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 Wide Vision Safety Mask for use over eye glasses or standard safety glasses with side shields.

DESCRIPTION

1. Chain
2. Guide bar
3. Front hand guard/Chain brake
4. Front handle
5. Chain lubricant cap
6. Trigger release
7. Rear handle
8. Spiked bumper
9. Cord retainer
10. On/off trigger
11. Chain lubricant measurement gauge
12. Sprocket cover
13. Chain tensioner adjustment ring
14. Guide bar locking knob
15. Guide bar cover

SAFETY DEVICES

LOW KICK-BACK SAW CHAIN
A low-kick-back saw chain helps to reduce the possibility of a kickback event.

The rakers (depth gauges) ahead of each cutter can minimize the force of a kick-back reaction by preventing the cutters from digging in too deeply. Only use replacement guide bar and chain combinations recommended by the manufacturer.

As saw chains are sharpened, they lose some of the low kickback qualities and extra caution is required. For your safety, replace saw chains when cutting performance decreases.

SPIKED BUMPER
The integral bumper spike may be used as a pivot when making a cut. It helps to keep the body of the chainsaw steady while cutting. When cutting, push the machine forward until the spikes dig into the edge of the wood, then by moving the rear handle up or down in the direction of the cutting line it can help ease the physical strain of cutting.

GUIDE BARS
Generally, guide bars with small radius tips have somewhat lower potential for kick-back. You should use a guide bar and matching chain which is just long enough for the job.

Longer bars increase the risk of loss of control during sawing. Regularly check the chain tension. When cutting smaller branches (less than the full length of the guide bar) the chain is more likely to be thrown off if the tension is not correct.

CHAIN BRAKE
Chain brakes are designed to quickly stop the chain rotating. When the chain brake lever/hand guard is pushed towards the bar, the chain should stop immediately. A chain brake does not prevent kick-back. It only lowers the risk of injury should the chain bar contact the operator's body during a kick-back event. The chain brake should be tested before each use for correct operation in both the run and brake positions.

UNPACKING

CAUTION. This packaging contains sharp objects. Take care when unpacking. Remove the machine, together with the accessories supplied, from the packaging. Check carefully to ensure that the machine is in good condition and account for all the accessories listed in this manual. Also make sure that all the accessories are complete.

If any parts are found to be missing, the machine and its accessories should be returned together in their original packaging to the retailer. Do not throw the packaging away, keep it safe throughout the guarantee period, then recycle if possible, otherwise dispose of it by the proper means. Do not let children play with empty plastic bags due to the risk of suffocation.

ASSEMBLY

PACKING CONTENTS
- Chainsaw
- Chain
- Guide bar
- Guide bar cover
- Operator's manual.

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 connect to power supply until assembly is complete. Failure to comply could result in accidental starting and possible serious personal injury.

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

ASSEMBLY

ASSEMBLING SAW CHAIN AND GUIDE BAR
Disconnect the mains plug. Wear protective gloves.

Unscrew the guide bar locking knob (1) and remove the sprocket cover (2), Fig.1.

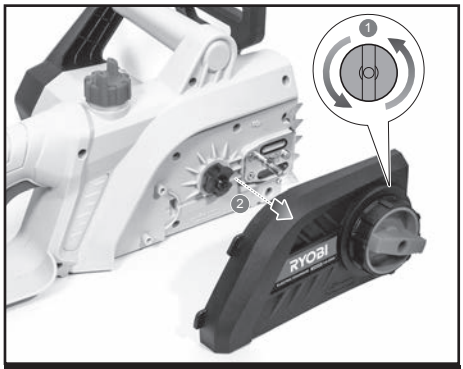

Fig. 1

The saw chain should face in the direction of chain rotation. If they face backwards, turn the loop over.

Place the chain drive links into the bar groove, Fig.2.

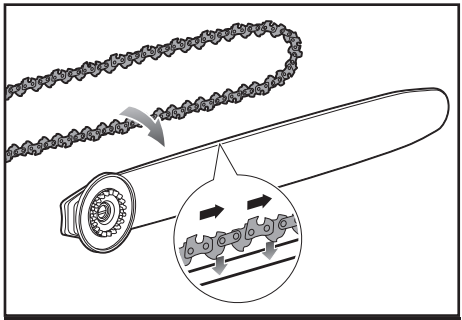

Fig. 2

Position the chain so there is a loop at the back of the bar.

Hold the chain in position on the bar and place the loop around the drive sprocket, Fig.3. Lower the bar so that the bolt goes through the hole in the attached chain tension assembly (3). You may need to rotate this assembly so the bolt and hole align. You may rotate this assembly again to apply some tension to the chain which will help keep it in place.

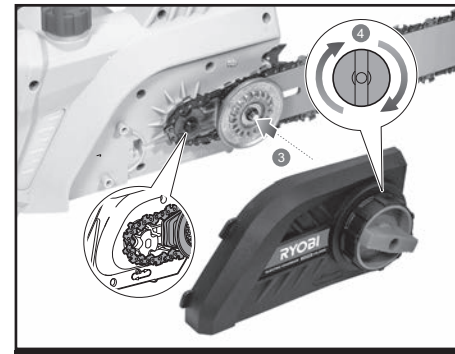

Fig. 3

Replace the sprocket cover and turn the guide bar locking knob until nearly tight, Fig.3 (4).

Turn the chain tension adjustment ring until the saw chain is properly tensioned, Fig.4. The guide bar must then be pushed upwards, check chain tension again, do not tension the chain too tight.

After the chain is well-tensioned, tighten the knob again.

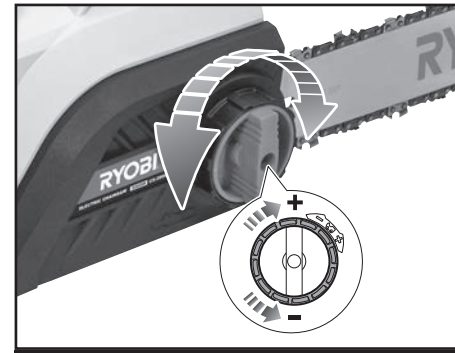

Fig. 4

ASSEMBLY

ADJUSTING THE CHAIN TENSION
Loosen the guide bar locking knob slightly by turning it counterclockwise.

To increase the chain tension, turn the chain tensioner adjustment ring clockwise and check the chain tension frequently. To reduce the chain tension, turn the chain tensioner adjustment ring counterclockwise and check the chain tension frequently.

The chain tension is correct when the gap between the cutter in the chain and the bar is between 3-4mm. Pull the chain in the middle of the lower side of the bar downwards (away from the bar) and measure the distance between the bar and the chain cutters, Fig.5.

Tighten the guide bar locking knob by turning it clockwise.

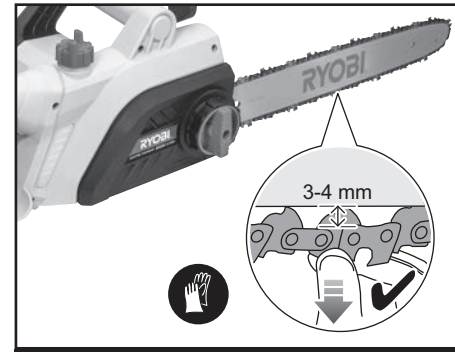

Fig. 5

ADDING CHAIN LUBRICATING OIL

WARNING. Never work without chain lubricant. If the saw chain is running without lubricant, guide bar and saw chain can be damaged. It is therefore essential to check the oil level in the oil level gauge frequently and every time before starting to use the chain saw.

CHAIN LUBRICANT
- Proper lubrication of the chain while in operation reduces the friction between the chain and the guide bar and assures a longer tool life. Use only special chain oil of a high quality for this purpose.
- Do not use any waste or reclaimed oil as this could cause various problems with the oil pump.

SAW CHAIN / BAR LUBRICATION
Adequate lubrication of the saw chain is essential at all times to minimize friction with the guide bar.

Never starve the bar and chain of oil. Running the saw with too little oil will decrease cutting efficiency, shorten saw chain life, cause rapid dulling of chain, and cause excessive wear of bar from overheating. Too little oil is evidenced by smoke, bar discolouration or pitch build-up. New chains/bars should be lubricated by hand before starting.

Clear surface around the oil cap to prevent contamination.

Unscrew and remove the cap from the oil tank, Fig.6.

Pour oil into the oil tank and monitor the oil level gauge. Ensure that no dirt enters the oil tank while filling. The manufacturer recommends you use only Ryobi chainsaw lubricating oil. (Available from your authorised Ryobi service centre)

Put the oil cap back on and tighten it up. Wipe away any spillage.

One full oil tank will enable you to use the saw for 20-40 minutes.


Fig. 6

OPERATION

CONNECTING TO A POWER SUPPLY
This product is designed with a power cable retainer that prevents the extension cord from being pulled loose while using.

Form a loop with the end of the extension cord.

Insert loop portion of extension cord through the opening in the bottom of the rear handle and place over power cable retainer, Fig.7.

Slowly pull loop against power cable retainer until the slack is removed.

Plug product into extension cord.

NOTE: Failure to remove all excess cord slack from extension cord retainer could result in plug loosening from the receptacle.

NOTE: Use only approved outdoor extension cords.

NOTICE: Always use cord retainer to properly attach extension cord to the chainsaw. Failure to use cord retainer may result in damage to the chainsaw and/or extension cord.

Fig. 7

HOLDING THE CHAIN SAW
Always hold the chain saw with your right hand at the rear handle and your left hand at the front handle. Grip both handles with the thumbs and fingers encircling the handles. Ensure that your left hand is holding the front handle so that your thumb is underneath, Fig.8.

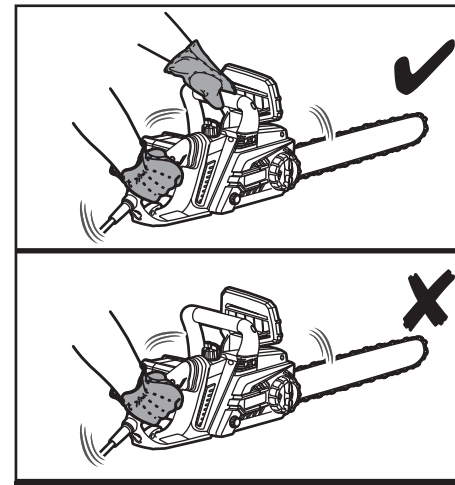

Fig. 8

STARTING THE CHAIN SAW
Connect to power outlet. Make sure the chain brake is in the run position by pulling back on the lever/handguard, Fig.8 (1).

To start the machine press the trigger release, Fig.8 (2), and then press the on/off trigger, Fig.8 (3).

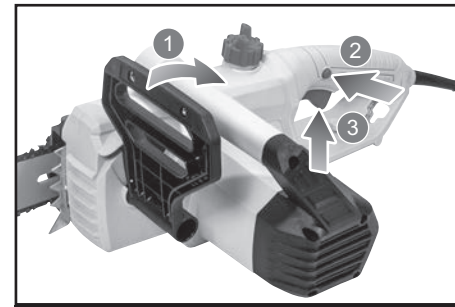

Fig. 9

OPERATION

CHECKING AND OPERATING CHAIN BRAKE
Engage the chain brake by rotating your left hand around the front handle. Allow the back of your hand to push the chain brake lever/hand guard toward the bar while the chain is rotating rapidly. Be sure to maintain both hands on the saw handles at all times.

Reset the chain brake back into the Run position by grasping the top of the chain brake lever/hand guard and pulling toward the front handle until you hear a click.

WARNING. If the chain brake does not stop the chain immediately, or if the chain brake will not stay in the run position without assistance, take the saw to an authorised service centre for repair prior to use.

OPERATION
The following section on the operation of the chain saw is a general guide only. The use of a chain saw by an inexperienced person can be extremely dangerous. If you are unsure, please seek the assistance of a professional or get suitable training before using the chain saw.

WARNING. Before every use check the operation of the chain break and oil pump.

BUCKING SPIKES
The chainsaw has bucking spikes (Fig.10-A) to assist with cutting and reduce the chance of kickback. Keep the bucking spikes touching the wood when cutting will help prevent any pinching or kick-back.

BUCKING
Bucking is cutting a log into lengths for easier handling. To saw a log lying on the ground, first saw halfway, then roll the log over and cut from the opposite side (Fig.11). To saw the end of a log supported off the ground, first saw up from the bottom one-third through the log then finish by sawing down from the top. To saw a log in the middle of two supports holding it off the ground, first saw down from the top one-third through the log then finish by sawing up from the bottom (Fig.12).When bucking on a slope, always stand on the uphill side.

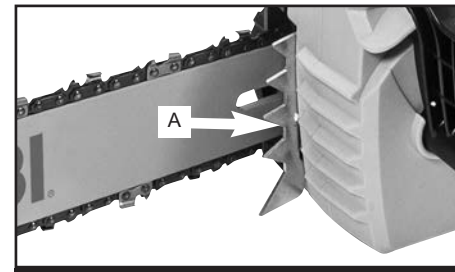

Fig. 10

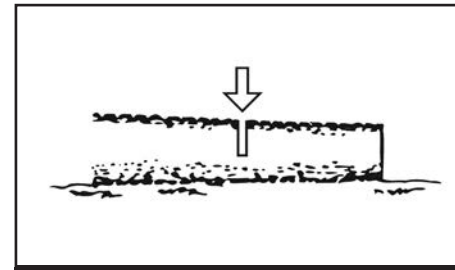
Fig. 11

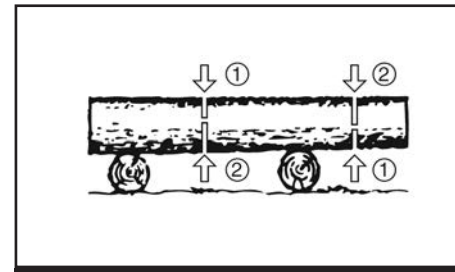

Fig. 12

WARNING. Be careful that the chain does not cut into the ground when bucking as this causes rapid dulling of the chain.

OPERATION

LIMBING

Limbing is the process of removing the branches from a fallen tree. Check the direction in which a branch will bend before cutting it. Always cut on the opposite side to the bending direction so that the guide bar is not pinched in the cut. For large limbs that cannot be removed in one cut, make an initial cut from the bent side and finish by sawing from the opposite direction (Fig.19). Do not remove limbs that are supporting the fallen tree on the ground until the tree has been cut into lengths.

WARNING. Always keep a well balanced stance. Do not stand on the log. Be alert to the fact that the log may roll over. When working on a slope, always stand on the uphill side of the log.

PRUNING

Pruning is the removal of a limb or branch from a standing tree.

WARNING. Do not use an unstable foothold or ladder. Do not overreach. Do not saw above shoulder height. Always use both hands to hold the saw. First cut up from the bottom and finish down from the top, Fig.14.

FELLING

Felling is the term for cutting down a tree. Small trees up to 6-7 inches (15-18cm) in diameter are usually cut in a single cut. Larger trees require notch cuts. Notch cuts determine the direction the tree will fall.

WARNING. Do NOT fell trees unless you have received the appropriate training.

A retreat path (Fig.15- A) should be planned and cleared as necessary before cuts are started. The retreat path should extend back and diagonally to the rear of the expected line of fall, as illustrated.

NOTE: Direction of fall (Fig.21-B) is controlled by the notching cut. Before any cuts are made, consider the location of larger branches and natural lean of the tree to determine the way the tree will fall.

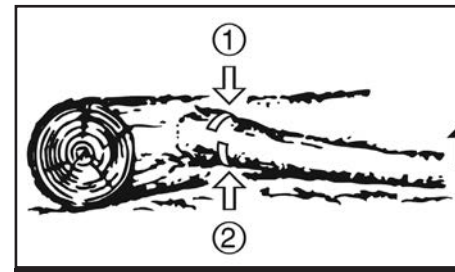

Fig. 13

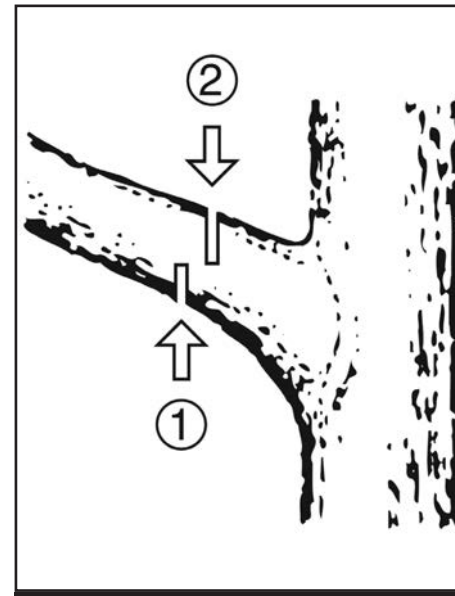

Fig. 14

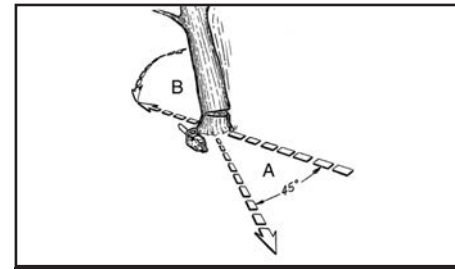

Fig. 15

OPERATION

GENERAL GUIDELINES FOR FELLING TREES
Normally felling consists of 2 main cutting operations, notching (Fig.16-C) and making the felling cut (Fig.16-D).

Start making the upper notch cut (Fig.16-C) on the side of the tree facing the felling direction (Fig.16-E).

Be sure you don t make the lower cut too deep intothe trunk.

The notch (Fig.16-C) should be deep enough to create a hinge (Fig.16-F) of sufficient width and strength. The notch should be wide enough to direct the fall of the tree for as long as possible.

Use wooden or plastic wedges (Fig .17-A) to prevent pinching the bar and chain (Fig.17-B) in the cut. Wedges also control felling.

When diameter of wood being cut is greater than the bar length, make 2 cuts as shown (Fig.18).

WARNING. Before making the final cut, always recheck the area for bystanders, animals or obstacles.

WARNING: Never saw completely through the trunk. Always leave a hinge (Fig.16-F). The hinge guides the tree. If the trunk is completely cut through, control over the felling direction is lost. Insert a wedge or felling lever in the cut well before the tree becomes unstable and starts to move. This will prevent the bar from binding in the felling cut if you have misjudged the falling direction. Make sure no bystanders have entered the range of the falling tree before you push it over.

WARNING: As the felling cut gets close to the hinge, the tree should begin to fall. When tree begins to fall, remove saw from cut, stop engine, put chain saw down, and leave area along retreat path.

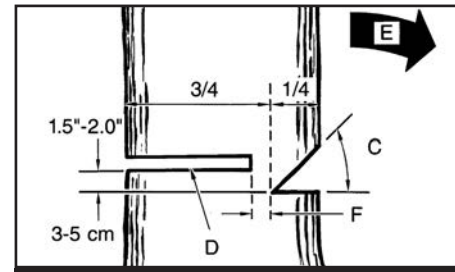

Fig. 16

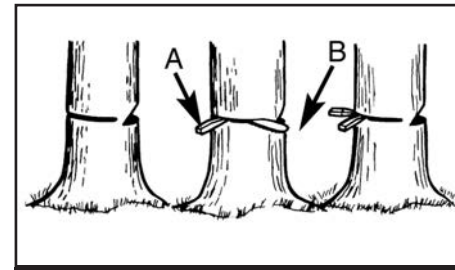

Fig. 17

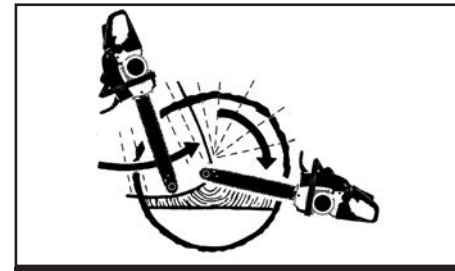
Fig. 18

MAINTENANCE

WARNING. Use only original manufacturer's replacement parts, accessories and attachments. Failure to do so can cause possible injury, poor performance and may void your warranty.

WARNING. Servicing requires extreme care and knowledge and should be performed only by a qualified technician. For service we suggest you return the product to your nearest authorized service center for repair.
When servicing, use only identical replacement parts.

WARNING. Disconnect from the power supply before adjustment, maintenance or cleaning. Failure to do so could result in serious personal injury.

- You may only make adjustments or repairs described in this manual. For other repairs, contact the authorized service agent.
- Consequences of improper maintenance may cause the chain brake and other safety features to not function correctly, thus increasing the potential for serious injury. Keep your chainsaw professionally maintained and safe.
- Sharpening the chain safely is a skilled task. Therefore the manufacturer strongly recommends that a worn or dull chain is replaced with a new one, available from your authorised Ryobi service centre.
- Follow instructions for lubricating and chain tension checking and adjustment.
- After each use, clean the product with a soft dry cloth.
- Check all nuts, bolts and screws at frequent intervals for security to ensure the product is in safe working condition. Any part that is damaged should be properly repaired or replaced by an authorized service centre.

REPLACING GUIDE BAR AND SAW CHAIN
Disconnect the product from its power supply. Wear protective gloves.

Unscrew the guide bar locking knob by turning it counterclockwise until the sprocket cover comes loose.

Remove the sprocket cover. Remove the bar and saw chain from unit.

To replace the bar with a new one, loosen the screw of the chain tension assembly. Mount the chain tension assembly on to the new bar and tighten the screw.

Put the new chain in the correct direction onto the bar and make sure that the drive links are aligned in the bar groove.

Attach the bar to the chain saw and loop the chain around the drive sprocket.

Replace the sprocket cover.

Adjust the chain tension. Refer to the "Adjusting the chain tension" section.

WARNING. Improper chain sharpening increases the potential of kick-back.

WARNING. Failure to replace or repair a damaged chain can cause serious injury.

WARNING. The saw chain is very sharp. Always wear protective gloves when performing maintenance to the chain.

INSPECTING AND CLEANING THE CHAIN BRAKE
Always keep the chain brake mechanism clean by lightly brushing the linkage free from dirt.

Always test the chain brake performance after cleaning.

Refer to "Operation - Checking and Operating Chain Brake" on page 13 for additional information.

MAINTENANCE

SHARPENING THE CHAIN SAW

WARNING. We advise you to have deep or important sharpening carried out by a service agent who is equipped with an electric sharpener.

When the chain penetrates into wood with difficulty, it needs to be sharpened as follows:

1. Put the chain under tension.
2. Fasten the bar in a vice so that the chain can slide (Fig.19)
3. File with forward strokes only until all the worn out parts of the cutting edge is removed.
4. Count the number of strokes given to the cutter as a reference basis and file away the same number of strokes on all other cutters.
5. If after sharpening a few times, the depth gauge protrudes from the template, you must reset its level using a flat file. (Fig.20)
6. Finally round off the depth gauge. (Fig.21)

GUIDE BAR

The guide bar is subjected to especially severe wear and tear at the nose and the bottom. To avoid one-sided wear and tear, turn the guide bar over every time you sharpen the chain.

1. When you have finished working, clean out the groove and the oil passages, with a special scraping hook. (Fig.22).
2. Periodically trim the sides of the rails using a flat file. If not done in the long run the “feathered edges” might break away and damage the bar. (Fig.23)

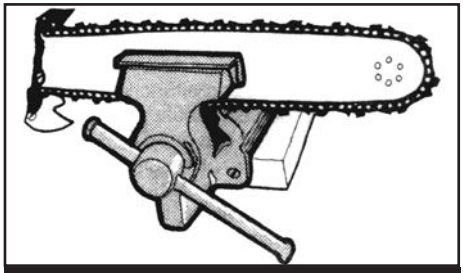

Fig. 19

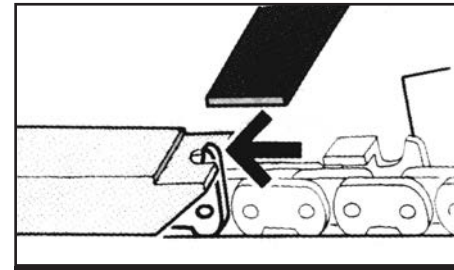

Fig. 20

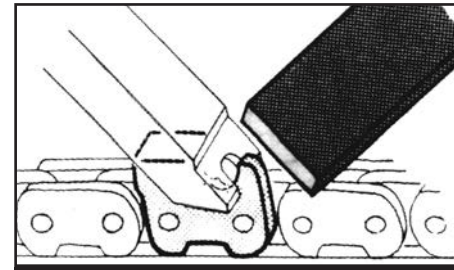

Fig. 21

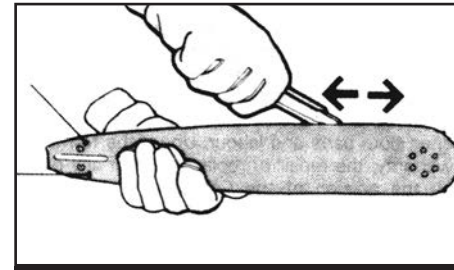

Fig. 22

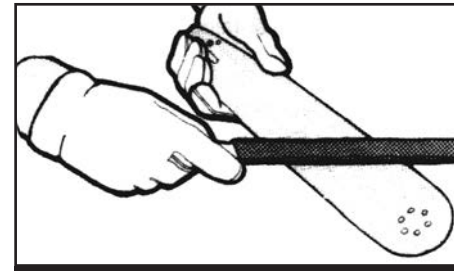

Fig. 23

MAINTENANCE

3. If one rail is higher than the other one, it is necessary to make it even with a flat file and then smooth them with a file or fine grain abrasive paper. (Fig.24)

CHAIN TENSION
Check the chain tension frequently and adjust as often as necessary to keep the chain snug on the bar, if the chain is pulled down with the fingers at the centre of the bar the gap between the chain and the bar should be 3 to 4mm.

NEW CHAINS
A new chain will need to be readjusted after as few as 5 cuts. This is normal during the break in period, future adjustments will be required less often.

OIL PASSAGES
Oil passages on the bar should be cleaned to ensure proper lubrication of the bar and chain during operation.

NOTE. The condition of the oil passages can be easily checked. If the passages are clear, the chain will automatically give off a spray of oil within seconds of starting the saw. Your saw is equipped with an automatic oiler system.

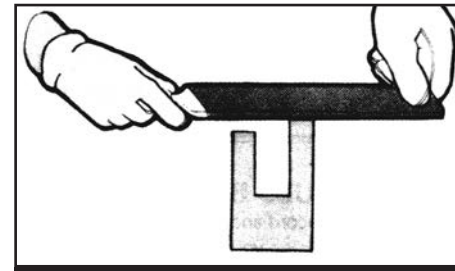

Fig. 24

MAINTENANCE SCHEDULE

Daily check	
Power cable for damge	Before each use
Bar lubrication	Before each use
Chain tension	Before each use and frequently
Chain sharpness	Before each use, visual check
For damaged parts	Before each use
For loose fasteners	Before each use
Chain brake function	Before each use
Inspect and clean	
Bar	Before each use
Complete saw	After each use
Chain brake	Every 5 hours of operation

SERVICE

Now that you have purchased your tool, should a need ever exist of repair or service, simply contact your nearest Ryobi Authorised Service Centre or other qualified service organistion. Be sure to provide all pertinent facts when you call or visit.

SYMBOLS

Some of the following symbols may be used on this product. Please study them and learn their meaning. Proper interpretation of these symbols will allow you to operate the product better and safer.

SYMBOL	NAME	DESIGNATION/EXPLANATION
	Safety Alert Symbol	Indicates danger, warning or caution. It means attention!!! Your safety is involved.
	Read Your Operator's Manual	Your manual contains special messages to bring attention to potential safety concerns as well as operating and servicing information. Please read all the information carefully to ensure satisfaction and safe use.
	Wear eye, hearing and head protection	Wear eye, hearing and head protection when operating this equipment.
	Loose clothing alert	Do not wear loose clothing or jewellery.
	Safety Alert: Kickback danger	Kickback is very dangerous and can result in serious injury. Always follow the instructions in this manual to reduce kickback.
	Electric shock precaution	Remove plug from the mains immediately if cable is damaged or cut.
	Wet conditions alert	Do not expose to wet or damp conditions.
	Two hands operation	Always use two hands to operate the machine.
	Gloves	Wear non-slip, heavy-duty gloves.
	Insulation Symbol	Double insulated for additional protection.
	Recycle Symbol	Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.
	CE Marking	Conforms to relevant safety standards.

SYMBOL	SIGNAL	MEANING
	**DANGER:**	Indicates an imminently hazardous situation, which, if not avoided, will result in death or serious injury.
	**WARNING**	Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.
	**CAUTION**	Indicates a potentially hazardous situation, which, if not avoided, may result in minor or moderate injury.
	CAUTION	(Without Safety Alert Symbol) Indicates a situation that may result in property damage.