



说明书材质要求：105g 有光铜版纸	说明书成品尺寸：105*143mm
Black（单色印刷）	
折叠方式：骑马钉	备注：
特别注意：此页内容不印刷	

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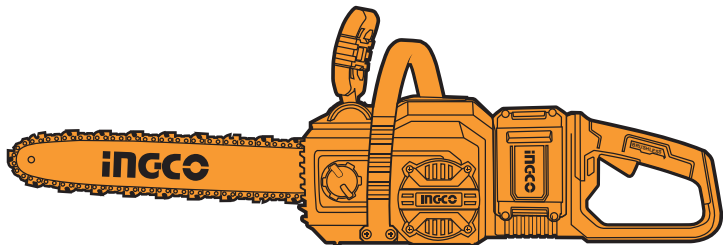
更改记录	1. 改新版			1. 更新公司名、地址			1. 更新品名，更新线稿		
	0623.V02	2023.6.29	CH	0923.V03	2023.9.28	CH	0125.V04	2025.1.6	QQY
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INGCO

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PRODUCT MANUAL

CORDLESS CHAIN SAW



CGSLI40148 UCGSLI40148 CGSLI40148xy UCGSLI40148xy
CGSLI40168 UCGSLI40168 CGSLI40168xy UCGSLI40168xy
x (blank, 1, 2, 3, 4, 5, 6, 7, 8, 9, E, S, A, M)
y (blank, -1, -2, -3, -4, -5, -6, -7, -8, -9, E, S, A, M)



GENERAL POWER TOOL SAFETY WARNINGS

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

Save all warnings and instructions for future reference.

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

1) Work area safety

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

2) Electrical safety

- a) **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.** *Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.*
- c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** *Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.*
- d) **Remove any adjusting key or wrench before turning the power tool on.** *A wrench or a key left attached to a rotating part of the power tool may result in personal injury.*
- e) **Do not overreach. Keep proper footing and balance at all times.** *This enables better control of the power tool in unexpected situations.*
- f) **Dress properly. Do not wear loose clothing or jewellery. Keep your hair and clothing away from moving parts.** *Loose clothes, jewellery or long hair can be caught in moving parts.*
- g) **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** *Use of dust collection can reduce dust-related hazards.*
- h) **Do not let familiarity gained from frequent use of tools allow you to become complacent and ignore tool safety principles.** *A careless action can cause severe injury within a fraction of a second.*

4) Power tool use and care

- a) **Do not force the power tool. Use the correct power tool for your application.** *The correct power tool will do the job better and safer at the rate for which it was designed.*
- b) **Do not use the power tool if the switch does not turn it on and off.** *Any power tool that cannot be controlled with the switch is dangerous and must be repaired.*
- c) **Disconnect the plug from the power source and/or remove the battery**

pack, if detachable, from the power tool before making any adjustments, changing accessories, or storing power tools. *Such preventive safety measures reduce the risk of starting the power tool accidentally.*

- d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** *Power tools are dangerous in the hands of untrained users.*
- e) **Maintain power tools and accessories. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** *Many accidents are caused by poorly maintained power tools.*
- f) **Keep cutting tools sharp and clean.** *Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.*
- g) **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** *Use of the power tool for operations different from those intended could result in a hazardous situation.*
- h) **Keep handles and grasping surfaces dry, clean and free from oil and grease.** *Slippery handles and grasping surfaces do not allow for safe handling and control of the tool in unexpected situations.*

5) Battery tool use and care

- a) **Recharge only with the charger specified by the manufacturer.** *A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.*
- b) **Use power tools only with specifically designated battery packs.** *Use of any other battery packs may create a risk of injury and fire.*
- c) **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another.** *Shorting the battery terminals together may cause burns or a fire.*
- d) **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** *Liquid ejected from the battery may cause irritation or burns.*

- e) **Do not use a battery pack or tool that is damaged or modified.** *Damaged or modified batteries may exhibit unpredictable behaviour resulting in fire, explosion or risk of injury.*
- f) **Do not expose a battery pack or tool to fire or excessive temperature.** *Exposure to fire or temperature above 130 °C may cause explosion.*
- g) **Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions.** *Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.*

6) Service

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

BATTERY TOOL SAFETY WARNINGS

Save these instructions.

CAUTION!

only use genuine original batteries.

Use of non-genuine batteries, or batteries that have been altered, may result in the battery bursting causing fires, personal injury, and damage. It will also void the warranty for the tool and charged and dark areas invite accidents.

Battery tool use and care

- a) **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- b) **Use power tools only with specifically designated battery packs.** Use of any other battery packs may create a risk of injury and fire.
- c) **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws, or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.
- d) **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water.** If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.
- e) **Do not use a battery pack or tool that is damaged or modified.** Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.
- f) **Do not expose a battery pack or tool to fire or excessive temperature.** Exposure to fire or temperature above 130°C may cause explosion.
- g) **Follow all charging instructions and do not charge the battery pack or tool outside the temperature range specified in the instructions.** Charging improperly or at temperatures outside the specified range may damage the battery and increase the risk of fire.

Tips for maintaining maximum battery life

1. **Charge the battery cartridge before completely discharged.** Always stop tool operation and charge the battery cartridge when you notice less tool power.

2. **Never recharge a fully charged battery cartridge.** Overcharging shortens the battery service life.
3. **Charge the battery cartridge with room temperature at 10°C-40°C (50°F-104°F).** Let a hot battery cartridge cool down before charging it.
4. **Charge the battery cartridge if you do not use it for a long period (more than six months).**

Important safety instructions for battery cartridge

1. **Before using battery cartridge, read all instructions and cautionary markings on battery charger, battery, and) product using battery.**
2. **Do not disassemble battery cartridge.**
3. **If operating time has become excessively shorter, stop operating immediately.** It may result in a risk of overheating, possible burns and even an explosion.
4. **If electrolyte gets into your eyes, rinse them out with clear water and seek medical attention right away.** It may result in loss of your eyesight.
5. **Do not short the battery cartridge:**
 - a) Do not touch the terminals with any conductive material.
 - b) Avoid storing battery cartridge in a container with other metal objects such as nails, coins, etc.
 - c) Do not expose battery cartridge to water or rain.
 - d) A battery short can cause a large current flow, overheating, possible burns and even a breakdown.
6. **Do not store the tool and battery cartridge in locations where the temperature may reach or exceed 50°C (122°F).**
7. **Do not incinerate the battery cartridge even if it is severely damaged or is completely worn out.** The battery cartridge can explode in a fire.
8. **Be careful not to drop or strike battery.**
9. **Do not use a damaged battery.**
10. **Follow your local regulations relating to disposal of battery.**

THE SYMBOLS IN INSTRUCTION MANUAL

	Read the instruction manual before using.
	CE conformity.
	Safety alert. Please only use the accessories supported by the manufacturer.
	Wear safety glasses, hearing protection and dust mask.
	Wear head protection
	Be ware of pruning saw kickback and avoid contact with bar tip
	Do not expose to rain
	Wear protective gloves
	Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or retailer for recycling advice.
	Charging the battery only below 40°C

	Always recycle batteries.
	Do not destroy battery by fire.
	Do not expose battery to water
	Li-Ion battery. This product has been marked with a symbol relating to 'separate collection' for all battery packs and battery pack. It will then be recycled or dismantled in order to reduce the impact on the environment. Battery packs can be hazardous for the environment and for human health since they contain hazardous substances.
	Tip contact can cause the guide bar to move suddenly upward and backward, which can cause serious injury
	Contact of the guide bar tip with any object should be avoided
	Always use two hands when operating the Chainsaw
	This product must be deposited at an appropriate recycling facility
	Fail-safe transformer
	Use and store battery charger only indoors.

ADDITIONAL SAFETY WARNING

Chainsaw safety warnings

1. **Keep all parts of the body away from the saw chain when the pruning saw is operating. Before you start the pruning saw, make sure the saw chain is not contacting anything.** A moment of inattention while operating pruning saws may cause entanglement of your clothing or body with the saw chain.
2. **Always hold the pruning saw with your right hand on the rear handle and your left hand on the front handle.** Holding the pruning saw with a reversed hand configuration increases the risk of personal injury and should never be done.
3. **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
4. **Wear safety glasses protection. Further protective equipment for hearing, head, hands, legs and feet is recommended.** Adequate protective clothing will reduce personal injury by flying debris or accidental contact with the saw chain.
5. **Do not operate a pruning saw in a tree, on a ladder, from a rooftop, or any unstable support.** Operation of a pruning saw in this manner could result in serious personal injury.
6. **Always keep proper footing and operate the pruning saw only when standing on fixed, secure and level surface.** Slippery or unstable surfaces may cause a loss of balance or control of the pruning saw.
7. **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 pruning saw out of control.
8. **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.
9. **Carry the pruning saw by the front handle with the pruning saw switched off and away from your body. When transporting or storing the pruning saw, always fit the guide bar cover.** Proper handling of the pruning saw will reduce the likelihood of accidental contact with the moving saw chain.
10. **Follow instructions for lubricating, chain tensioning and changing the**

bar and chain. Improperly tensioned or lubricated chain may either break or increase the chance for kickback.

11. **Cut wood only. Do not use pruning saw for purposes not intended. For example: do not use pruning saw for cutting metal, plastic, masonry or non-wood building materials.** Use of the pruning saw 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 pruning saw user, you should take several steps to keep your cutting jobs free from accident or injury.

Kickback is the result of pruning saw misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below:

1. **Maintain a firm grip, with thumbs and fingers encircling the pruning saw handles, with both hands on the saw and position your body and arm to allow you to resist kickback forces.** Kickback forces can be controlled by the operator, if proper precautions are taken. Do not let go of the pruning saw.
2. **Do not overreach and do not cut above shoulder height.** This helps prevent unintended tip contact and enables better control of the pruning saw in unexpected situations.
3. **Only use replacement bars and chains specified by the manufacturer.** Incorrect replacement guide bars and saw chains may cause chain breakage and/or kickback.
4. **Follow the manufacturer's sharpening and maintenance instructions for the saw chain.** Decreasing the depth gauge height can lead to increased kickback.

RESIDUAL RISKS

Even with the intended use of the appliance there is always a residual risk, which cannot be prevented.

According to the type and construction of the appliance the following potential hazards might apply: Contact with exposed saw teeth of the saw chain (cutting hazards)

Access to the rotating saw chain (cut-ting hazards)

Unforeseen, abrupt movement of the guide bar (cutting hazards)

Flung out of parts from the saw chain (Cutting / injection hazards)

Flung out of parts of the work piece

Skin contact with the oil. Loss of hearing, if no required ear protection used during work.

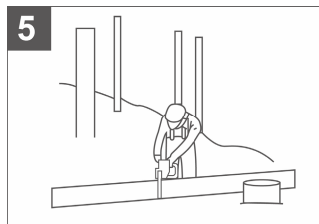
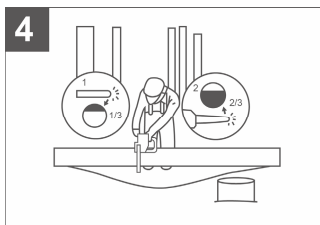
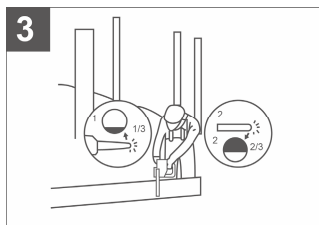
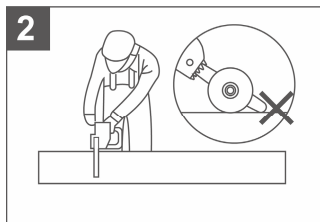
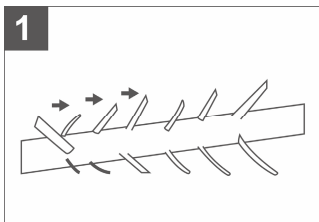
Safety warnings for battery pack

1. **Do not dismantle, open or shred cells or battery pack.**
2. **Do not short-circuit a battery pack. Do not store battery packs haphazardly in a box or drawer where they may short-circuit each other or be short-circuited by conductive materials.** When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
3. **Do not expose battery pack to heat or fire. Avoid storage in direct sunlight.**
4. **Do not subject battery pack to mechanical shock.**
5. **In the event of battery leaking, do not allow the liquid to come into contact with the skin or eyes. If contact has been made, wash the affected area with copious amounts of water and seek medical advice.**
6. **Seek medical advice immediately if a cell or battery pack has been swallowed.**
7. **Keep battery pack clean and dry.**
8. **Wipe the battery pack terminals with a clean dry cloth if they become dirty.**
9. **Battery pack needs to be charged before use. Always refer to this instruction and use the correct charging procedure.**
10. **Do not maintain battery pack on charge when not in use.**

11. **After extended periods of storage, it may be necessary to charge and discharge the battery pack several times to obtain maximum performance.**
12. **Battery pack gives its best performance when it is operated at normal room temperature (20°C+5 °C).**
13. **When disposing of battery packs, keep battery packs of different electrochemical systems separate from each other.**
14. **Recharge only with the charger specified by the manufacturer. Do not use any charger other than that specifically provided for use with the equipment.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
15. **Do not use any battery pack which is not designed for use with the equipment.**
16. **Keep battery pack out of the reach of children.**
17. **Retain the original product literature for future reference.**
18. **Remove the battery from the equipment when not in use.**
19. **Dispose of properly.**
20. **Do not mix cells of different manufacture, capacity, size or type within a device.**
21. **Do not remove battery pack from its original packaging until required for use.**
22. **Observe the plus (+) and minus (-) marks on the battery and ensure correct use.**

Save these instructions

Instructions concerning the proper techniques for limbing and cross-cutting



1. Limbing a tree

Limbing is removing the branches from a fallen tree. When limbing leave larger lower limbs to support the log off the ground. Remove the small limbs in one cut as illustrated in Figure 1. Branches under tension should be cut from the bottom up to avoid binding the pruning saw.

2. Bucking a log

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

When the log is supported along its entire length as illustrated in Figure 2, it is cut from the top (over- buck), avoid contacting ground as this will greatly reduce the chain sharpness.

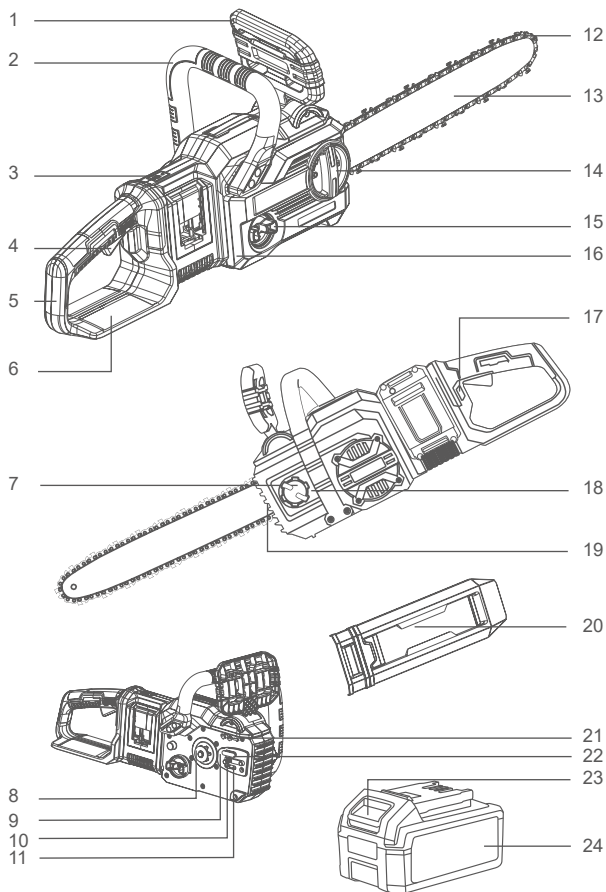
When the log is supported on one end, as illustrated in Figure 3, cut 1/3 the diameter from the underside (under- buck) (1). Then make the finished cut by over- bucking (2) to meet the first cut.

When bucking on a slope always stand on the uphill side of the log, as illustrated in Figure 5. When “cutting through”, to maintain complete control release the cutting pressure near the end of the cut without relaxing your grip on the pruning 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 pruning saw. Always stop the motor before moving from tree to tree.

INTENDED USE

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

SPECIFICATIONS



- | | |
|-----------------------------------|---|
| 1. Chain brake lever (hand guard) | 13. Guide bar |
| 2. Front handle | 14. Chain cover lock knob |
| 3. Power button | 15. Chain tensioning knob |
| 4. On/off switch | 16. Chain cover |
| 5. Rear handle | 17. Lock-out button |
| 6. Rear hand guard | 18. Oil level window |
| 7. Oil filler cap | 19. Bumper spike |
| 8. Drive sprocket | 20. Bar and chain storage/
transportation cover (sheath) |
| 9. Bar pad | 21. Chain direction symbol |
| 10. Fastening bar hole | 22. Oil outlet |
| 11. Bar locating tabs | 23. Battery pack release button* |
| 12. Chain | 24. Battery pack* |

* Not all the accessories illustrated or described are included in standard delivery.

Technical specifications

Model No.	CGSLI40148xy UCGSLI40148xy x(blank,1,2,3,4,5,6,7,8,9,E,S,A,M) y(blank,-1,-2,-3,-4,-5,-6,-7,-8,- 9,E,S,A,M) 20V Max.	CGSLI40168xy UCGSLI40168xy x(blank,1,2,3,4,5,6,7,8,9,E,S,A,M) y(blank,-1,-2,-3,-4,-5,-6,-7,-8,- 9,E,S,A,M) 20V Max.
Voltage	40V max	40V max
Bar length	350mm(14")	400mm(16")
Chain speed	14.5m/s	14.5m/s
Chain pitch	3/8"	3/8"
Oil tank capacity	170 ml	170 ml
Chain gauge	0.043"	0.043"

Noise information

	14"	16"
A weighted sound power level	102dB	102dB
Guaranteed sound power level	104dB	104dB

Vibration information

Vibration total values (triax vector sum) determined according to EN 62841-1		
	14"	16"
Vibration emission value	5.3m/s ²	5.3m/s ²
Uncertainty K	1.5m/s ²	1.5m/s ²

The declared vibration and noise total value may be used for comparing one tool with another, and may also be used in a preliminary assessment of exposure.

WARNING!

The vibration and noise emissions during actual use of the power tool can differ from the declared value depending on the ways in which the tool is used especially what kind of work piece is processed dependent on the following examples and other variations on how the tool is used.

How the tool is used and the materials being cut or drilled.

The tool being in good condition and well-maintained. Using the correct accessory for the tool and ensuring it is sharp and in good condition.

The tightness of the grip on the handles and if any anti vibration accessories are used.

And the tool is being used as intended by its design and these instructions.

This tool may cause hand-arm vibration syndrome if its use is not adequately managed.

** WARNING!**

To be accurate, an estimation of exposure level in the actual conditions of use should also take account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle but not actually doing the job. This may significantly reduce the exposure level over the total working period. Helping to minimise your vibration and noise exposure risk.

Always use sharp chisels, drills and blades.

Maintain this tool in accordance with these instructions and keep well lubricated (where appropriate).

If the tool is to be used regularly then invest in anti-vibration and anti-noise accessories.

Plan your work schedule to spread any high vibration tool use across a number of days.

⚠ WARNING!

Only use original battery pack and battery charger as below for this power tool:

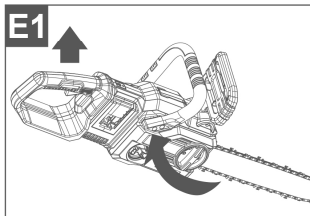
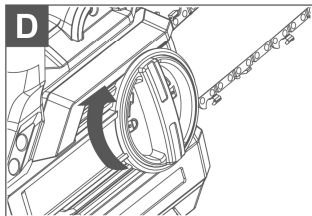
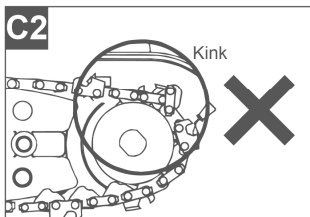
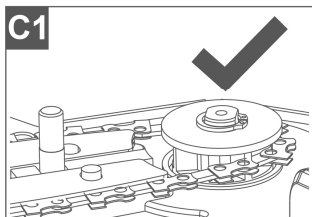
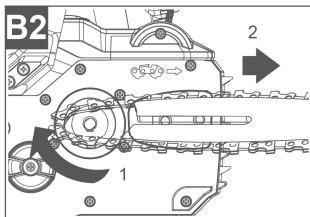
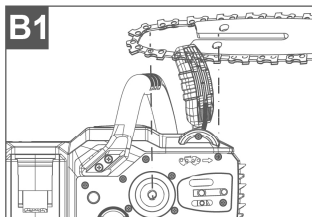
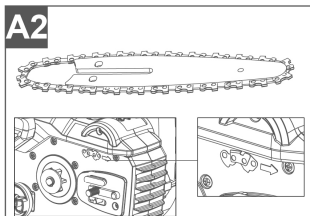
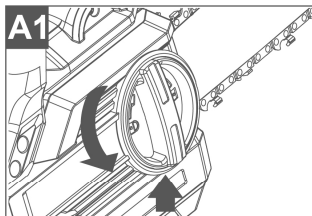
Product	Battery pack		
Model No.	Type	Rated voltage	Rated capacity
FBLI2001 FBLI2001xy	Lithium-Ion	18.5V d.c., 20V Max	2.0Ah
FBLI2002 FBLI2002xy			4.0Ah
FBLI2003 FBLI2003xy			5.0Ah

Model No. NOTE: x (blank, 1,2,3,4,5,6,7,8,9,E,S,A,M); y (blank, -1,-2,-3,-4,-5,-6,-7,-8,-9,E,S,A,M)

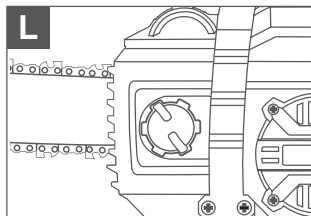
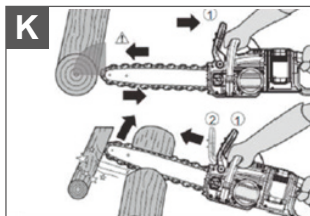
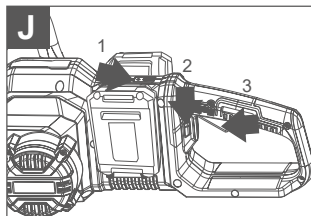
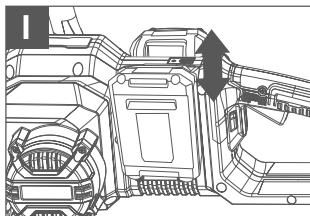
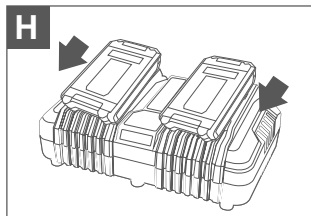
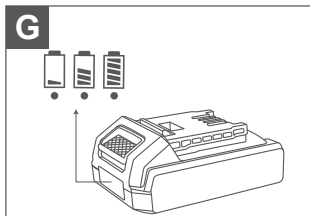
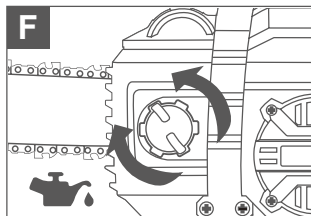
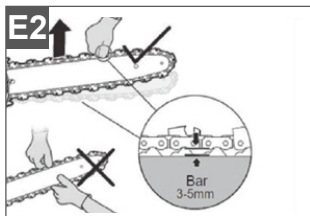
Product	Battery pack charger			
Model No.	Input power	Input voltage	Output rated voltage	Output rated current
FCLI2001 FCLI2001xy	50W	220-240V ~50/60Hz	20V d.c.	2A
UFCLI2001 UFCLI2001xy		110-120V ~50/60Hz		
FCLI20411 FCLI20411xy FCLI2034 FCLI2034xy	105W	220-240V ~50/60Hz	21V d.c.	4A
UFCLI20411 UFCLI20411xy UFCLI2034 UFCLI2034xy		110-120V ~50/60Hz		

Model No. NOTE: x (blank, 1,2,3,4,5,6,7,8,9,E,S,A,M); y (blank, -1,-2,-3,-4,-5,-6,-7,-8,-9,E,S,A,M)

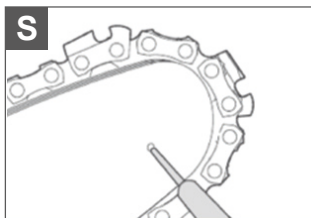
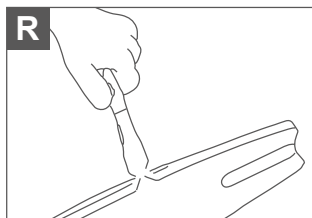
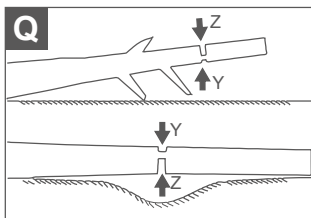
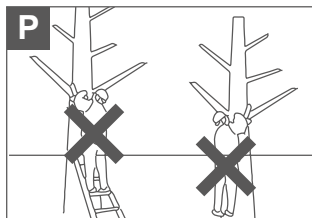
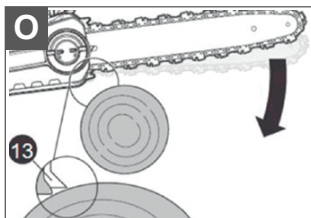
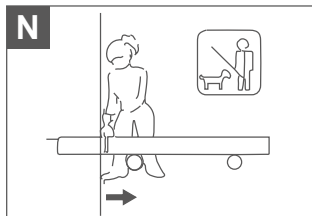
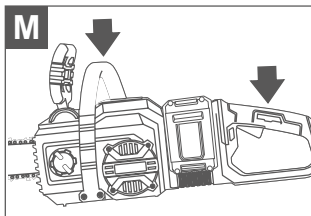
OPERATION PICTURE



OPERATION PICTURE



OPERATION PICTURE



OPERATION

Assembly

WARNING

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

1. Chain and guide bar assembly

1. Unpack all parts carefully. Remove the Housing- Cover by turning the Housing- Cover Knob in a counter- clockwise direction. (See Figure. A1)
2. Place the pruning saw on a solid, level surface.
3. Use only genuine manufacturer Chains or those recommended for Guide Bar.
4. Slide the chain in the slot around the guide bar. Ensure the chain is in correct running direction by comparing it to the chain icon on the guide bar. Ensure the bar tensioning plate is facing outward. (See Figure A2)
5. Fit the Chain onto the Drive Sprocket, so that the Fastening Bar Bolt and the Bar Locating Tab on the Bar Pad fit into the keyway of the opening on the Guide Bar. (See Figure. B1, B2)
6. Assure all parts are seated properly and hold chain and guide bar in a level position. Make sure the drive links are fully seated in the drive sprocket (See Figure C1), avoiding a kink as shown in Figure C2.

If kink occurs, pick up on the chain at the guide bar just ahead of the kink and then pull the kink out.

NOTE

Chain should rotate freely and be free of kinks.

7. Fully tighten the chain tensioning knob by turning it clockwise, and check the correct tension in "Tension chain" part.
8. Fit the chain cover and tighten the chain cover by turning the chain cover lock knob clockwise, not tighten the chain cover tightly. (See Figure D)

2. Tensioning chain

NOTE

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

⚠ WARNING

- **Removing the battery pack before adjusting saw chain tension.**
 - **Cutting edges on chain are sharp. Use protective gloves when handling chain.**
 - **Maintain proper chain tension always. A loose chain will increase the risk of kickback. A loose chain may jump out of guide bar groove. This may injure operator and damage chain. A loose chain will cause chain, bar, and sprocket to wear rapidly.**
- a) Place the Chainsaw on any suitable flat surface.
 - b) Unscrew the chain cover lock knob a bit, then turn the chain tensioning knob clockwise until it is hand tight.
 - c) Tilt the saw forward (See Figure E1) where the guide bar tip is pushed in a downward direction. This will remove slack from the chain.
 - d) Fully tighten the chain cover lock knob by turning it clockwise. The correct chain tension is reached when the chain can be raised approx. Half the drive link depth from the guide bar in the center. This should be done by using one hand to raise the chain against the weight of the machine. (See Figure. E2)

⚠ NOTE

The chain is properly tensioned when it can be lifted off of the Guide Bar and the drive link is within the rail of the Guide Bar.

⚠ NOTE

The chain will stretch while cutting and lose proper tension. When the chain becomes loose, refer Steps a-d listed above.

Lubrication (see Figure F)**⚠ IMPORTANT**

The Chainsaw is not filled with oil. It is essential to fill with oil before use. Never operate the Chainsaw without chain oil or at an empty oil tank level, as this will result in extensive damage to the product.

Chain life and cutting capacity depend on optimum lubrication. Therefore, the chain is automatically oiled during operation.

Filling oil tank

WARNING

Removing the battery pack before filling the oil tank.

- Set Chainsaw on any suitable surface with oil filler cap facing upward.
- Clean area around the oil filler cap with cloth and unscrew the cap by turning it counter clockwise.
- Add bar and chain oil until tank is full.
- Avoid dirt or debris entering oil tank, lid oil filler cap and tighten by turning clockwise until hand tight.

IMPORTANT

To allow venting of the oil tank, small breather channels are provided between the oil filler cap and the strainer, to prevent leakage, and ensure machine is left in a horizontal position when not in use.

It is important to use only the recommended standard bar and chain oil (Grade: ISO VG32) to avoid damage to the Chainsaw. This can be found at the location where you purchased this saw or your local hardware store. Never use recycled/old oil. Use of non- approved oil will void the warranty.

Do not swallow. If swallowed, call a physician immediately. Keep out of reach of children.

Store away from heat or open flame.

Checking the automatic oiler

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

CAUTION

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

Operation

Important

It is important to use bar and chain lubricant that is formulated to perform over a wide temperature range with no dilution re- quired. This can be found at the location where you purchased this saw or your local hardware store.

Do not use dirty, used or otherwise contaminated oil.

Damage may occur to the bar or chain. Use of non-approved oil will void the warranty.

Do not swallow. If swallowed, call a physician immediately. Keep out of reach of children. Store away from heat or open flame.

1. Switch off the pruning saw and re- move the battery.
2. Place the pruning saw on a level surface with the Housing-Cover facing up.
3. Clean the Guide Bar and Chain with a soft brush or solvent.
4. Apply lubrication oil in area between Guide Bar and Chain. (See Figure. F)
5. Fit the battery. Switch on the pruning saw. Lubrication oil is evenly distributed over the chain. The saw chain is lubricated.

⚠ NOTE

It is essential to lubricate the chain before use and every 3-5minutes during cutting. Operating the chain saw without chain oil will result in damage to the chain saw.

Saw chain life and cutting capacity depend on optimum lubrication.

Operation

1. Before using your cordless tool

⚠ WARNING!

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

Your battery pack is uncharged and you must charge once before use.

The battery charger supplied is matched to the Li-ion battery installed in the machine. Do not use another battery charger.

2.Checking the battery charge condition (see Figure G)

The battery level can be known from the battery indicator light by pressing the button beside the lights.

3. Charging your battery pack (see Figure. H)

The Li-ion battery is protected against deep discharging. When the battery is empty, the machine is switched off by means of a protective circuit. Each battery must be fully charged before the first use.

In a warm environment or after heavy use, the battery pack may become too hot to permit charging. Allow time for the battery to cool down before recharging.

CAUTION

Always fully charge the two batteries at same time. More details can be found in charger's manual.

4. To remove or install battery pack (See Figure. I)

Depress the battery pack release button to remove the 2 battery packs from your tool. After recharging, insert the 2 battery packs into the battery ports. A simple push and slight pressure will be sufficient until the click is heard. Check to see if the battery is fully secured.

CAUTION

- **When removing the battery pack, hold it firmly to avoid dropping and injury.**
- **This machine will only run when 2 batteries are installed. It is recommended to use the same two batteries and charge the two batteries at the same time.**
- **When you use two batteries with different power, the machine will only run to the lower common denominator.**

5. Switching on and off (see Figure. J)

ATTENTION

Check the battery packs before using your cordless tool. Only use the battery pack listed in the accessories section.

For switching on the tool, press the power button firstly, then press the lock-out button, then fully press the on/ off switch and hold in this position. The lock-out button can now be released.

For switching off, release the on/off switch and power off the power button.

⚠ NOTE

The chain brake must be activated in order for the saw to be switched on.

6. Chain brake lever (See Figure. K)

The chain brake lever is a safety mechanism activated through the front hand guard, when kickback occurs.

Chain stops immediately.

The following function check should be carried out at regular intervals. Pull the front hand guard towards the operator (position 1)

To activate the chain brake, push front hand guard forwards (position 2).

⚠ NOTE

If the saw is unable to start, even though it is assembled properly and working with fully charged battery packs, then you should check if the chain brake lever is in the correct position (position 1).

7. Cutting**⚠ IMPORTANT**

Is the oil tank filled? Check the Oil Level Window prior to starting and regularly during operation (See Figure L). Refill oil when oil level is low.

Check recent replaced chain tension about every 10 minutes during operation.

- a) Installing the battery pack into the machine.
- b) Make sure section of log to be cut is not laying on the ground. This will keep the chain from touching the ground as it cuts through the log. Touching the ground while the chain is moving is dangerous and will dull the chain.
- c) Use both hands to grip saw. Always use left hand to grip front handle and right hand to grip rear handle. Use a firm grip. Thumbs and fingers must wrap around saw handles. (See Figure M)

Check recent replaced chain tension about every 10 minutes during operation.

- a) Installing the battery pack into the machine.
- b) The first-time user should, as a minimum, practice cutting logs on a saw-horse or cradle.
- c) Make sure section of log to be cut is not laying on the ground. This will keep the chain from touching the ground as it cuts through the log.
Touching the ground while the chain is moving is dangerous and will dull the chain.

- d) Use both hands to grip saw. Always use left hand to grip front handle and right hand to grip rear handle. Use a firm grip. Thumbs and fingers must wrap around saw handles. (See Figure M)
- e) Make sure your footing is firm. Keep feet-shoulder width apart. Distribute your weight evenly on both feet.
- f) When ready to make a cut, push the lock-out button completely in with the right thumb and squeeze the trigger. This will turn saw on. Releasing the trigger will turn the saw off. Make sure the saw is running at full speed before starting a cut.
- g) When starting a cut, slowly place moving chain against the wood. The wood should be as close to the saw body as possible. Hold saw firmly in place to avoid possible bouncing or skating (sideways movement) of saw.
- h) Guide the saw using light pressure and do not put excessive force on the saw, letting the saw do its work. The motor will overload and can burn out. It will do the job better and safer at the rate for which it was intended.
- i) Remove the saw from a cut with the saw running at full speed. Stop the saw by releasing the on/ off switch. Make sure the chain has stopped before setting by releasing the on/off switch. Make sure the chain has stopped before setting the saw down.
- j) Keep practicing on scrap logs in a secure working area until you are comfortable, using a fluid motion and a steady cutting rate.

Kickback safety devices on this saw

This saw has a low-kickback chain and reduced kickback Guide Bar. Both items reduce the chance of kickback. However, kickback can still occur with this saw.

The following steps will reduce the risk of kickback.

- Use both hands to grip saw while saw is running. Use firm grip. Thumbs and fingers must wrap around saw handles.
- Keep all safety items in place on saw. Make sure they work properly.
- Do not overreach or cut above shoulder height.
- Keep solid footing and balance at all times.
- Stand slightly to the left side of saw. This keeps your body from being in direct line with chain.
- Do not let Guide Bar nose touch anything when chain is moving.
- Never try cutting through two logs at same time. Only cut one log at a time.

- Do not bury the Guide Bar nose or try plunge cut (boring into wood using guide bar nose).
- Watch for shifting of wood or other forces that may pinch chain.
- Use extreme caution when reentering a previous cut.
- Use only the low-kickback chain and guide bar that were supplied with this Chainsaw or recommended.
- Never use a dull or loose chain. Keep chain sharp with proper tension.

How to use saw safely

- Use the Chainsaw only with secure footing.
- Hold the Chainsaw at the right-hand side of your body (See Figure N).
- The chain must be running at full speed before it makes contact with the wood.
- Use the bumper spikes to secure the saw onto the wood before starting to cut.
- Use the Bumper Spikes as a leverage point while cutting. (See Figure O)
- Do not operate the Chainsaw with arms fully extended, attempt to saw areas which are difficult to reach, or stand on a ladder while sawing (See Figure. P).

Never use the Chainsaw above shoulder height Cutting wood under tension (See Figure. P)

WARNING

When cutting a limb that is under tension, use extreme caution. Be alert for wood springing back. When wood tension is released, limb could spring back and strike operator causing severe injury or death.

When sawing logs supported on both ends, start the cut from above(Y) about 1/3 of the diameter into the log (over buck) and then finish the cut (Z) from below, in order to avoid contact of the Chainsaw with the ground. When sawing logs supported on only one end, start the cut from below (Y) about 1/3 of the diameter into the log (under buck) and finish the cut from above (Z) in order to avoid log splitting or jamming of the Chainsaw (See Figure Q).

Saw maintenance

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

WARNING

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

1. Remove the battery pack

- When not in use
- Before moving from one place to another
- Before servicing
- Before changing accessories or attachments, such as saw chain and guard

2. Inspect Chainsaw before and after each use.

Check saw closely if guard or other part has been damaged. Check for any damage that may affect operator safety or operation of saw. Check for alignment or binding of moving parts. Check for broken or damaged parts. Do not use Chainsaw if damage affects safety or operation. Have damage repaired by authorized service center.

3. Maintain chainsaw with care.

- Never expose saw to rain or direct moisture.
- Keep chain sharp, clean, and lubricated for better and safer performance.
- Follow steps outlined in this manual to sharpen chain.
- Keep handles dry, clean, and free of oil and grease.
- Keep all screws and nuts tight.

4. When servicing, use only identical replacement parts.

5. When not in use, always store chainsaw

- in a high or locked place, out of children's reach
- in a dry place
- with bar and chain cover in place

Bar maintenance

To maximize bar life, the following bar maintenance is recommended.

The bar rails that carry the chain should be cleaned before storing the tool or if the bar or chain appear to be dirty.

The rails should be cleaned every time the chain is removed.

To clean the Bar rails

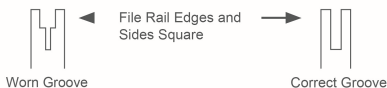
- Remove chain cover and bar and chain. (see section assembly)
- Using a wire brush, screwdriver or similar tool, clear the residue from the inner groove of the bar (See Figure R).
- Make sure to clean oil passages thoroughly.

Conditions which require chain and guide bar maintenance

- Saw cuts to one side or at an angle.
- Saw has to be forced through the cut.
- Inadequate supply of oil to the bar and chain.

Check the condition of the guide bar each time the chain is sharpened. A worn guide bar will damage the chain and make cutting difficult.

After each use, remove the battery pack, clean all sawdust from the guide bar and sprocket hole. When rail top is uneven, use a flat file to restore square edges and sides.



Replace the guide bar when the groove is worn, the guide bar is bent or cracked, or when excess heating or burring of the rails occurs. If replacement is necessary, use only the guide bar specified for your saw in the repair parts list or on the decal located on the Chainsaw.

Replacing Bar & Chain

Replace chain when cutters are too worn to sharpen or when chain stops. Only use replacement chain noted in this manual.

Inspect guide bar before sharpening chain. A worn or damaged guide bar is unsafe. A worn or damaged guide bar will damage chain. It will also make cutting harder.

Sharpening saw chain

WARNING

Remove the battery pack before servicing. Severe injury or death could occur from electrical shock or body contact with moving chain. Cutting edges on chain are sharp. Use protective gloves when handling chain.

Keep chain sharp. Your saw will cut faster and more safely. A dull chain will cause undue sprocket, Guide Bar, chain, and motor wear. If you must force chain into wood and cutting creates only sawdust with few large chips, chain is dull.

Lubricate sprocket

WARNING

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

NOTE

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

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

Environmental protection



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

MAINTENANCE&MALFUNCTIONS

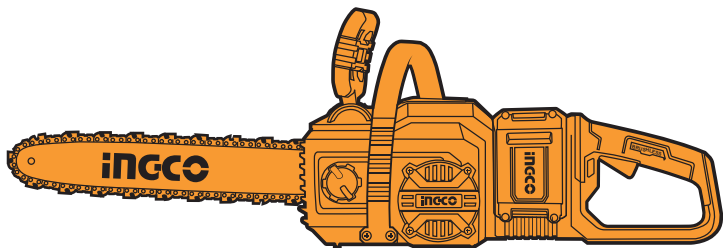
Troubleshooting table

The following table gives checks and actions that you can perform if your machine does not operate correctly. If these do not identify/remedy the problem, contact your service agent.

WARNING

Switch off and remove the battery pack before investigating fault.

Symptom	Probable causes	Possible Cause
Chainsaw fails to operate	• Low battery charge. • Chain brake not in the proper position	• Charge both the battery packs. • Check to see if the chain brake is in position 1 • Refer to chain brake for details
Chainsaw operates intermittently	• Over heating • Applying too much pressure while cutting. • Loose connection. Internal wiring defective. • On/Off switch defective.	• Place the machine in a cool, ventilated place to cool it down. • Applying relatively less pressure while cutting. • Contact service agent. • Contact service agent. • Contact service agent
Dry chain	• No oil in reservoir. • Vent in oil filler cap clogged. • Oil passage clogged.	• Refill oil. • Clean cap. • Clean oil passage outlet.
Kickback Brake/ Run Down Brake	Brake does not stop chain.	Contact service agent.
Chain/chain bar over-heats	• No oil in reservoir. • Vent in oil filler cap clogged. • Oil passage clogged. • Chain is over tensioned • Dull chain	• Refill oil. • Clean cap. • Clean oil passage outlet. • Adjust chain tension. • Sharpen chain or replace
Chainsaw rips, vibrates, does not saw properly	• Chain tension too loose. • Dull chain. • Chain worn out. • Chain teeth are facing in the wrong direction.	• Adjust chain tension. • Sharpen chain or replace. • Replace chain. • Reassemble with chain in correct direction.



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