

English



OPERATOR'S MANUAL

Chain Saw

Type: ZMDC501



www.tuv.com
ID 1419044731



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Please read the operator's manual carefully and make sure you understand the instructions before using the machine.

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KEY TO SYMBOLS

Symbols on the machine

WARNING! Chain saws can be dangerous! Careless or incorrect use can result in serious or fatal injury to the operator or others.



Please read the operator's manual carefully and make sure you understand the instructions before using the machine.



Always wear:

Approved protective helmet.
Approved hearing protection.
Protective goggles or a visor.



This product is in accordance with applicable EC directives.



Noise emission to the environment according to the European Communities' Directive. The machine's emission is specified in the Technical data chapter and on the label.



Always wear protective clothing gloves goggles helmet earplugs when using.



Avoid chain contact with the body



Danger beware of kickback.



Maximum length of the guide bar.



Belt protective gloves when using this equipment



Chain brake, activated



Chain brake, not activated



Chain oil fill.



Direction of chain rotation



Chain tension direction



Minimum mark of oil pot



Do not expose to rain.



Press the activation button before use



Symbols on battery and battery charger

Warning! Careless or wrong use of the charger may cause serious or fatal injury to the user or others.



The product must be recycled properly.



Do not expose the battery pack to high temperature or fire.



Please use it at - 10 °C - 50 °C.



Use and store battery charger only indoors.



Double insulation



Symbols in operation manual

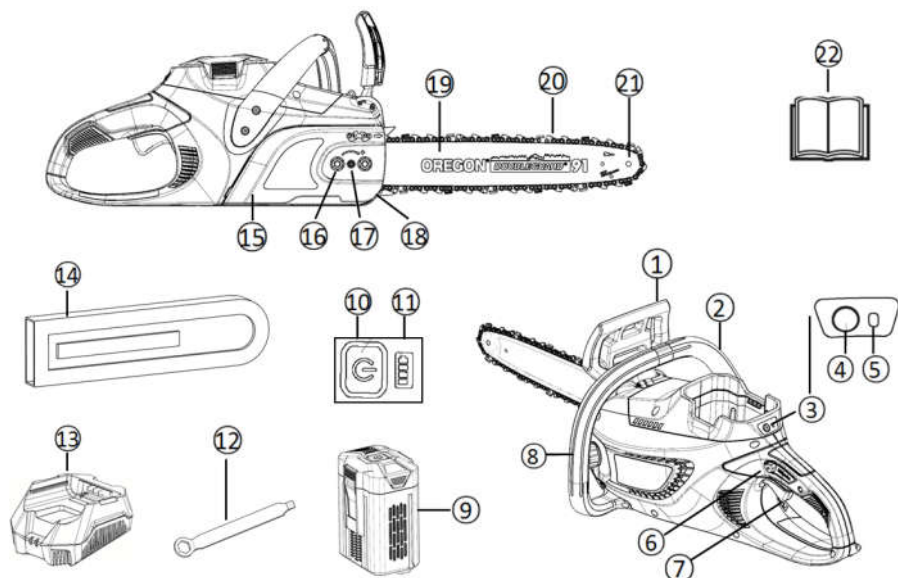
Turn the machine on and off by pressing the activation button.



In order to prevent the machine from opening abnormally due to accidental touch, please unplug the battery pack during inspection or maintenance



WHAT IS WHAT



1、Front hand guard

2、Handle

3、Keypad

4、Start/stop button

5、LED

6、Power trigger lockout

7、Power trigger

8、Oil bottle cap

9、Battery pack

10、Battery button

11、Power indicator

12、Wrench

13、Battery charger

14、Guide sleeve

15、Guide cover

16、Bolt

17、Pin

18、Chain catcher

19、Bar

20、Chain

21、sprocket

22、Operator's manual

GENERAL SAFETY PRECAUTIONS

General power tool safety warnings



Warning! Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and serious injury.

Important!! 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

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

2) Electrical safety

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

3) Personal safety

- Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury.
 - Use personal protective equipment. Always wear eye protection. Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
 - Prevent unintentional starting. Ensure the switch is in the OFF-position before connecting to power source and/ or battery pack, picking up or carrying the tool. Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.
 - Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
 - Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
 - Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.
 - If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.
- ### 4) Power tool use and care
- Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.
 - Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
 - Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of starting the power tool accidentally.
 - Store idle power tools out of the reach of children and do not allow persons unfamiliar

GENERAL SAFETY PRECAUTIONS

with the power tool or these instructions to operate the power tool. Power tools are dangerous in the hands of untrained users.

- Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool is operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed. Use of the power tool for operations different from those intended could result in a hazardous situation.

5) Battery tool use and care

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

6) Service

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

7) Chain saw safety warnings

- Keep all parts of the body away from the saw chain when the chain saw is operating. Before you start the chain saw, make sure the saw chain is not contacting anything. A moment of inattention while operating chain saws may cause entanglement of you clothing or body with the saw chain.
- Always hold the chain saw with your right hand on the rear handle and your left hand on the front handle. Holding the chain saw with a reversed hand configuration increases the

risk of personal injury and should never be done.

- Hold the power tool by insulated gripping surface only, because the saw chain may contact hidden wiring. Saw chain contacting a “live” wire may make an exposed metal parts of the power tool “live” and could
- Wear safety glasses and hearing protection. Further protective equipment for head, hands, legs and feet is recommended. Adequate protective clothing will reduce personal injury by flying debris or accidental contact with the saw chain.
- Do not operate a chain saw in a tree. Operation of chain saw while up a tree may result in personal injury.
- Always keep proper footing and operate the chain saw only when standing on fixed, secure and level surface. Slippery or unstable surfaces such as ladders may cause a loss of balance or control of the chain saw.
- When cutting a limb that is under tension be alert for spring back. When the tension in the wood fibers is released the spring loaded limb may strike the operator and/or throw the chain saw out of control.
- Use extreme caution when cutting brush and saplings. The slender material may catch the saw chain and be whipped forward toward you or pull you off balance.
- Carry the chain saw by the handle with the chain saw switched off and away from your body. When transporting or storing the chain saw always fit the guide bar cover. Proper handling of the chain saw will reduce the likelihood of accidental contact with the moving saw chain.
- Follow instruction for lubricating, chain tensioning and changing accessories. Improperly tensioned or lubricated saw
- chain may either brake or increase the chance of kickback.
- Keep handles dry, clean and free from oil and grease. Greasy, oily handles are slippery causing loss of control.
- Cut wood only. Do not use chain saw for purposes not intended. For example: do not use chain saw for cutting plastic, masonry or nonwood building materials. Use of the chain saw for operations different than intended could result in a hazardous situation.
- We strongly recommend that first time users practice sawing logs on a saw horse or cradle.

GENERAL SAFETY PRECAUTIONS

8) 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 your cutting jobs free from accident or injury. Kickback is a result of tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below:

- Maintain a firm grip, with thumbs and fingers encircling the chain saw handles, with both hands on the saw and position your body and arm to allow you to resist kickback forces. Kickback forces can be controlled by the operator, if proper precautions are taken. Do not let go of the chain saw
- Do not overreach and do not cut above shoulder height. This helps prevent unintended tip contact and enables better control of the chain saw in unexpected situations
- Only use replacement bars and chains specified by the manufacturer. Incorrect replacement bar 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.

9) Before using a new chain saw

- Please read this manual carefully
- Fully charge the battery before using it the first time. See instructions under the heading Charging the battery.
- Check whether the cutting equipment is properly installed and adjusted, please refer to the installation of cutting parts and lubrication under the heading content.
- Add lubricating oil. If has not enough to reach the chain chain lubricating oil, do not use a chain saw. Please refer to the installation of cutting parts and lubrication under the heading content.
- Long-term exposure to noise can result in

permanent hearing impairment. So always use approved hearing protection



Warning! In any case, tools cannot be modified without the permission of the manufacturer. Use original accessories. Unauthorized modifications and accessories can cause serious personal injury or even death.



Warning! If it is used carelessly or improperly, chainsaw is a dangerous tool, which can cause serious or even fatal injury. It is very important to read and understand the instruction manual.



Warning! Long term inhalation of chain saw oil mist and sawdust will cause harm to health.



Warning! Electromagnetic field will be generated during the operation of the tool. In some cases, these magnetic fields can interfere with the activity of medical implants. To reduce the risk of serious or fatal injury, we recommend that people with medical implants consult their doctor or medical implant manufacturer before using the chainsaw



Warning! Children are prohibited from using tools. Because the tools are easy to start, if the children are not under the full monitoring of the guardian, they have the ability to start the machine. This means there is a risk of serious personal injury. Therefore, make sure that the battery pack is separated from the tool without close monitoring of the tool

IMPORTANT !

GENERAL SAFETY PRECAUTIONS

You should only use the saw with the bar and chain combinations we recommend in the chapter technical data.

Never use the machine if you are fatigued, while under the influence of alcohol or drugs, medication or anything that could affect your vision, alertness, coordination or judgement.

Wear personal protective equipment. See instructions under the "Personal protective equipment" heading. Do not modify this product or use it if it appears to have been modified by others.

Never use a machine, battery or battery charger that is faulty. Carry out the checks, maintenance and service instructions described in this manual. Some maintenance and service measures must be carried out by trained and qualified specialists. See instructions under the heading Maintenance. Never use any accessories other than those recommended in this manual. See instructions under the headings Cutting equipment and Technical data.

CAUTION! Always wear protective glasses or a face visor to reduce the risk of injury from thrown objects. A chain saw is capable of throwing objects, such as wood chips, small pieces of wood, etc, at great force. This can result in serious injury, especially to the eyes.

Warning! Using faulty cutting equipment or wrong guides and chains will increase the risk of rebound! Please use only the combination of guide plate and chain recommended by us according to the chapter of technical parameters, and follow the document instructions



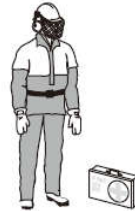
Always use common sense

It is not possible to cover every conceivable situation you can face when using a chain saw. Always exercise care and use your common sense. Avoid all situations which you consider to be beyond your capability. If you still feel uncertain about operating procedures after reading these instructions, you should consult an expert before continuing. Do not hesitate to contact your dealer or us if you have any questions about the use of the chain saw. We will willingly be of service and provide you with advice as well as help you to use your chain saw both efficiently and safely.

Personal protective equipment



Warning! Most chain saw accidents happen when the chain touches the operator. You must use approved personal protective equipment whenever you use the machine. Personal protective equipment cannot eliminate the risk of injury but it will reduce the degree of injury if an accident does happen. Ask your dealer for help in choosing the right equipment.



Always wear:

- Approved protective helmet
- Hearing protection
- Protective goggles or a visor
- Gloves with saw protection
- Trousers with saw protection
- Boots with saw protection, steel toe-cap and non-slip sole.
- Always have a first aid kit nearby.

Generally clothes should be close-fitting without restricting your freedom of movement.



Important! Sparks can come from the bar and chain or other sources. Always have fire extinguishing tools available if you should need them. Help prevent forest fires.

GENERAL SAFETY PRECAUTIONS

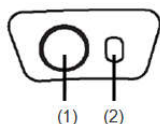
Machine's safety equipment



Warning! Never use a machine with defective safety components. Safety equipment must be inspected and maintained See instructions under the heading Checking, maintaining and servicing chainsaw safety equipment.

1) Keypad

Make sure the machine is switched on or off when the activate/deactivate button (1) is pressed and held(>1 sec.).The green LED (2) is lit or turned off.



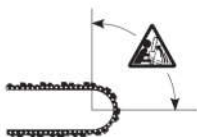
2) Automatic switch off functionality

The machine is equipped with an automatic shutdown feature that deactivates the machine if not used. The machine will deactivate after 1 minute.

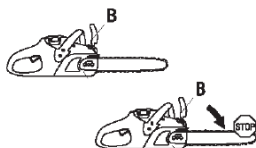
3) Chain brake and front hand guard

Your chain saw is equipped with a chain brake that is designed to stop the chain if you get a kickback. The chain brake reduces the risk of accidents, but only you can prevent them if the chain break the buzzer alarm.

Take care when using your saw and make sure the kickback zone of the bar never touches any object.

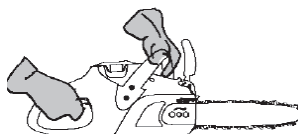


The chain brake can either be activated manually (by your left hand). The brake is applied when the front hand guard is pushed forwards.



The front hand guard is not designed solely to activate the chain brake. Another important feature is that it reduces the risk of your left hand hitting the chain if you lose grip of the front

handle.



Use the chain brake as a “parking brake” when starting and when moving over short distances, to reduce the risk of moving chain accidentally hitting your leg or anyone or anything close by.



To release the chain brake pull the front hand guard backwards, towards the front handle.



The way the chain brake is activated, either manually or automatically by the inertia release mechanism, depends on the force of the kickback and the position of the chain saw in relation to the object that the kickback zone of the bar strikes.



If the kickback is less violent or the kickback zone of the bar is closer to you the chain brake will be activated manually by the movement of your left hand.



In the felling position the left hand is in a position that makes manual activation of the chain brake impossible. With this type of grip, that is when the left hand is placed so that it cannot affect the movement of the front hand

GENERAL SAFETY PRECAUTIONS

guard, the chain brake can only be activated by the inertia action.



Will my hand always activate the chain brake during a kickback?

No. It takes a certain force to move the hand guard forward. If your hand only lightly touches the front guard or slips over it, the force may not be enough to trigger the chain brake. You should also maintain a firm grip of the chain saw handles while working. If you do and experience a kickback, your hand may never leave the front handle and will not activate the chain brake, or the chain brake will only activate after the saw has swung around a considerable distance. In such instances, the chain brake might not have enough time to stop the saw chain before it touches you.

There are also certain positions in which your hand cannot reach the front hand guard to activate the chain brake; for example, when the saw chain is held in felling position.

Will my inertia activated chain brake always activate during kickback in the event of a kickback?

No. First your brake must be in working order. Second the kickback must be strong enough to activate the chain brake. If the chain brake is too sensitive it would activate all the time which would be a nuisance.

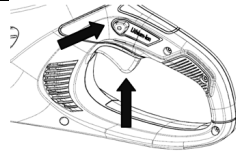
Will my chain brake always protect me from injury in the event of a kickback?

No. First, the chain brake must be in working order to provide the intended protection. Second, it must be activated during the kickback as described above to stop the saw chain. Third, the chain brake may be activated but if the bar is too close to you the brake might not have enough time to slow down and stop the chain before the chain saw hits you.

Only you and proper working technique can eliminate kickback and its danger.

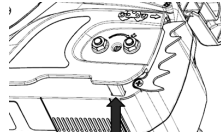
4) Throttle trigger lockout

The power trigger lockout is designed to prevent accidental operation of the power trigger. When you press the power trigger lockout, it releases the power trigger, when you release the handle, the power trigger and the power trigger lockout both move back to its original position.



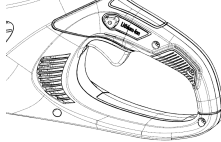
5) Chain catcher

The chain catcher is designed to catch the chain if it snaps or jumps off. This should not happen if the chain is properly tensioned and if the bar and chain are properly serviced and maintained.



6) Rear handle

Apart from protecting your hand if the chain jumps or snaps, the right hand guard stops branches and twigs from interfering with your grip on the rear handle.



WARNING! Overexposure to vibration can lead to circulatory damage or nerve damage in people who have impaired circulation. Contact your doctor if you experience symptoms of overexposure to vibration. Such symptoms include numbness, loss of feeling, tingling, pricking, pain, loss of strength, changes in skin color or condition. These symptoms normally appear in the fingers, hands or wrists. These symptoms may be increased in cold temperatures.

The safety of the battery pack and charger

This section describes the battery and battery charger safety for your battery product.

Only use Zomax original battery for Zomax products and only charge them in an original battery charger from Zomax. The batteries are software encrypted.

GENERAL SAFETY PRECAUTIONS

1) Battery safety

The rechargeable Zomax battery, are exclusively used as a power supply for the relevant Zomax cordless appliances. To avoid injury, the battery must not be used as a power source for other devices.



Warning! Protect the battery from direct sunlight, heat or open flame. There is a risk the battery may explode if it is thrown into an open fire. There is a risk of burns and chemical burns.

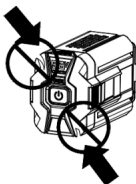


Warning! Avoid all skin contact with battery acid. Battery acid may cause skin irritation, burns or corrosive injuries. If you get acid in your eyes, do not rub but flush your eyes with plenty of water for at least 15 minutes and then see a doctor. You must wash any exposed skin with copious amounts of water and soap in case of incidental contact.



Warning! Never connect the battery terminals to keys, coins, screws or other metal as this may short-circuit the battery. Never insert objects into the battery's air vents. Unused batteries must be kept away from metal objects such as nails, coins, jewellery. Do not try to disassemble or crush the battery.

- Use the battery in surroundings where temperatures are between -15°C and 45°C
- Do not expose the battery to microwaves or high pressure.
- Never clean the battery or the battery charger with water. See also instructions under the Maintenance heading.
- Store the battery out of reach of children.
- Protect the battery from rain and wet conditions.



2) Battery charger safety

Only use Zomax Chargers for charging the Zomax replacement battery.



Warning! The following can reduce the risk of electric shock or short circuit: It is forbidden to insert objects into the vent; Don't disassemble the charger The output and input terminals of the charger shall not contact with metal objects; The charger shall be charged with qualified and intact socket



Warning! Do not use the battery charger close to corrosive or flammable materials. Do not cover the battery. Pull out the plug to the battery charger in the event of smoke or fire. Remember the risk of fire.

- Check the connection wire of charger regularly to ensure it is intact.
- Do not use the power cord on the charger to lift and handle the charger.
- Keep all power and extension cords away from water, oil and sharp corners. Make sure that the cables are not trapped in doors, fences or similar places.
- Do not wash with water
- If the power cord is damaged, it must be replaced by the manufacturer, service outlets or people with similar skills to avoid danger.
- The charger is only for indoor use and storage; when charging, it must be placed in a well ventilated and dry environment.
- Children can't play with chargers as toys. Because the small parts on the charger are swallowed, there is a fatal danger.
- Do not use the charger when there are drugs, drugs or alcohol that affect your judgment or when you are tired or sick.

Do not charge:

- Non-rechargeable batteries in the battery charger or use them in the machine.
- The battery in the battery charger outdoors.
- The battery in the rain or in wet conditions.
- The battery in direct sunlight.

INSTALLATION AND LUBRICATION OF CUTTING PARTS

Installing cutting parts



Warning! Remove the battery pack before installing, repairing and checking the tools



Warning! Wear gloves when operating the chain saw

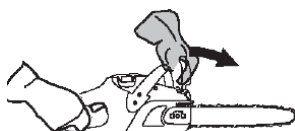


Warning! A loose chain may come off the guide plate and cause serious or fatal injury.

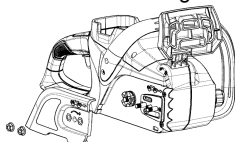
The more times a chain is used, the longer it will become. Therefore, it is necessary to adjust the tightness of the chain regularly to avoid relaxation. Every time the saw chain is used, it needs to be refilled with oil to check the tension of the chain.

Attention! A new chain has a running period and its tension should be checked more frequently.

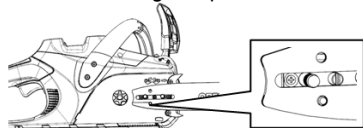
- Check that the chain brake is in disengaged position by moving the front hand guard towards the front handle.



- Undo nuts and remove the guide cover

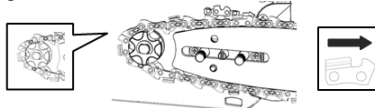


- Place the guide plate on the guide plate bolt. And make the tensioning pin pass through the circular hole of guide plate

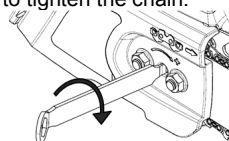


- Place the bar in its rearmost position. Place the chain over the drive sprocket and in the groove on the bar. Begin on the top side of the bar. Make sure that the edges of the

cutting links are facing forward on the top edge of the bar.



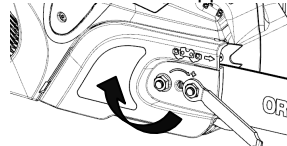
- Install the right cover and nut, pay attention not to tighten the nut, and turn the chain tension screw clockwise with the wrench provided to tighten the chain.



- When there is no slack at the bottom of the chain, pull the chain from the center of the guide plate, the chain lifting height is between 7 and 10 mm, and the chain can be easily turned by hand.



- Tighten the nut with the supplied wrench.



- When using a new chain, the tension of the chain must be checked frequently until the chain is tensioned. Check the chain tension regularly.

Lubrication of cutting parts



Warning! Poor lubrication of cutting equipment may cause the chain to snap, which could lead to serious, even fatal injuries.

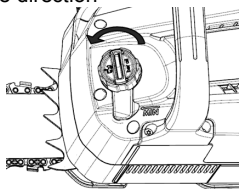


Warning! Never use waste oil! Using waste oil can be dangerous to you and damage the machine and environment.

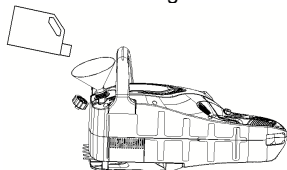
Chain oil must demonstrate good adhesion to the chain and also maintain its flow characteristics regardless of whether it is warm summer or cold winter weather.

INSTALLATION AND LUBRICATION OF CUTTING PARTS

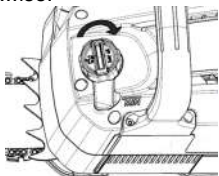
- Unscrew the oil can cover in a counter clockwise direction



- Insert the funnel into the inside of the oil pot and pour in the lubricating oil.



- Remove the funnel and tighten the oil can cover clockwise.



Instructions for adding lubricating oil:

- This chain saws have an automatic chain lubrication system.
- The saw chain oil tank is designed to last approximately two battery charges. However, this safety feature requires that you use the right sort of chain oil (if the chain oil is too thin it will last shorter time)
- It is important to use oil of the right grade (suitable viscosity range) to suit the air temperature.
- In temperatures below 0°C some oils become too viscous. This can overload the oil pump and result in damage to the oil pump components.

Checking chain lubrication

Check the chain lubrication every third battery charge. Aim the tip of the bar at a light coloured surface about 20 cm (8 inches) away. After 1 minute running at 3/4 throttle you should see a distinct line of oil on the light surface.



Check the chain lubrication every battery charge.

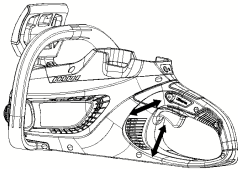
STARTING AND STOPPING

Before starting

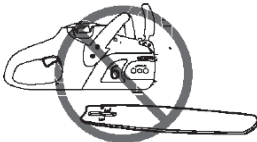


Warning! Never start a chain saw unless the bar, chain and all covers are fitted correctly. Otherwise the drive sprocket can come loose and cause personal injuries. Make sure you have a secure footing and that the chain cannot touch anything. Keep people and animals well away from the working area.

- Before inserting the battery into the machine, always check to see that the power trigger actuates properly and returns to the “off” position when released.



- It is forbidden to use the chain saw when the guide plate chain is not assembled normally.



- Observe your surroundings and make sure that there is no risk of people or animals coming into contact with the cutting equipment

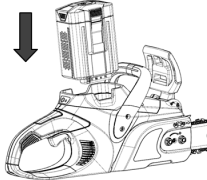


- Always hold the saw with both hands. The right hand should be on the rear handle, and the left hand on the front handle. All people, whether right or left handed, should use this grip

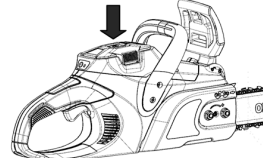


1) Starting

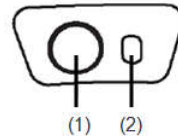
- Insert the battery in the machine. The battery should slide easily into the battery holder on the machine. If the battery does not slide in easily, it is not being inserted correctly



- Press down on the battery. You will hear a click as the battery locks itself into place.

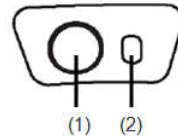


- Press and hold the start button (>1 sec.) until the green LED is lit.

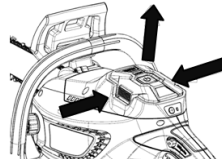


2) Stopping

- Press and hold the start button (>1 sec.) until the green LED is went out



- To remove the battery, withdraw it from the machine while pressing the battery release buttons on the battery.



Note! To avoid involuntary start up, the battery must always be removed when the machine is not in use or is unsupervised.

WORKING TECHNIQUES

Before use:

- Check that the chain brake works correctly and is not damaged.
- Check that the rear right hand guard is not damaged.
- Check that the power trigger lockout works correctly and is not damaged.
- Check that the keypad works correctly and is not damaged.
- Check that all handles are free from oil.
- Check that all parts of the chain saw are tightened correctly and that they are not damaged or missing.
- Check that the chain catcher is in place and not damaged.
- Check the chain tension.
- Check that the battery is fully charged and securely attached in the chain saw.
- Check that the saw chain stops moving when the power trigger is released.

General working instructions

This section describes basic safety rules for using a chain saw. This information is never a substitute for professional skills and experience. If you get into a situation where you feel unsafe, stop and seek expert advice. Contact your chain saw dealer, service agent or an experienced chain saw user. Do not attempt any task that you feel unsure of!

Before using a chain saw you must understand the effects of kickback and how to avoid them. See instructions under the heading How to avoid kickback. Before using a chain saw you must understand the difference between cutting with the top and bottom edges of the bar. See instructions under the headings How to avoid kickback and Machine's safety equipment. Wear personal protective equipment. See instructions under the "Personal protective equipment" heading.

1) Basic safety rules

1. Look around you:

- To ensure that people, animals or other things cannot affect your control of the machine.
- To make sure that none of the above might come within reach of your saw or be injured by falling trees.

CAUTION! Follow the instructions above, but do

not use a chain saw in a situation where you cannot call for help in case of an accident.

2. Do not use the machine in bad weather, such as dense fog, heavy rain, strong wind, intense cold, etc. Working in bad weather is tiring and often brings added risks, such as icy ground, lightning, unpredictable felling direction, etc.
3. Take great care when removing small branches and avoid cutting bushes (i.e. cutting many small branches at the same time). Small branches can be grabbed by the chain and thrown back at you, causing serious injury.
4. Make sure you can move and stand safely. Check the area around you for possible obstacles (roots, rocks, branches, ditches, etc.) in case you have to move suddenly. Take great care when working on sloping ground.
5. Take great care when cutting a tree that is in tension. A tree that is in tension may spring back to its normal position before or after being cut. If you position yourself incorrectly or make the cut in the wrong place the tree may hit you or the machine and cause you to lose control. Both situations can cause serious personal injury.
6. Before moving your chain saw deactivate it and lock the saw chain using the chain brake. Carry the chain saw with the bar and chain pointing backwards. Fit a guard to the bar before transporting the chain saw or carrying it for any distance
7. When you put the chain saw on the ground, lock the saw chain using the chain brake and ensure you have a constant view of the machine. Deactivate the machine and remove the battery before leaving your chain saw for any length of time.

Warning! Sometimes chips get stuck in the drive system causing the saw chain to jam. Always deactivate the machine and remove the battery before any cleaning.



2) General rules

1. If you understand what kickback is and how it happens then you can reduce or eliminate the element of surprise. By being prepared you reduce the risk. Kickback is usually quite mild,

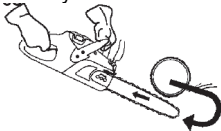
WORKING TECHNIQUES

but it can sometimes be very sudden and violent.

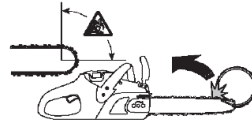
2. Always hold the chain saw firmly with your right hand on the rear handle and your left hand on the front handle. Wrap your fingers and thumbs around the handles. You should use this grip whether you are right-handed or left-handed. This grip minimizes the effect of kickback and lets you keep the chain saw under control. Do not let go of the handles!
3. Most kickback accidents happen during limbing. Make sure you are standing firmly and that there is nothing in the way that might make you trip or lose your balance.
4. Lack of concentration can lead to kickback if the kickback zone of the bar accidentally touches a branch, nearby tree or some other object. Have control over the work piece. If the pieces you intend to cut are small and light, they can jam in the saw chain and be thrown towards you. Even if this does not need to be a danger, you may be surprised and lose control of the saw. Never saw stacked logs or branches with out first separating them. Only saw one log or one piece at a time. Remove the cut pieces to keep your working area safe.
5. Never use the chain saw above shoulder height and try not to cut with the tip of the bar. Never use the chain saw one-handed!



6. You must have a steady stance in order to have full control over the chain saw. Never work standing on a ladder, in a tree or where you do not have firm ground to stand on.
7. Always use fast cutting speed, i.e. full throttle.
8. Take great care when you cut with the top edge of the bar, i.e. when cutting from the underside of the object. This is known as cutting on the push stroke. The chain tries to push the chain saw back towards the user. If the saw chain is jamming, the saw may be pushed back at you.



9. Follow the instructions on sharpening and maintaining your bar and chain. When you replace the bar and chain use only combinations that are recommended by us.



Basic cutting technique



Warning! Never use a chain saw by holding it with one hand. A chain saw is not safely controlled with one hand. Always have a secure, firm grip around the handles with both hands.

There are five important factors you should consider before making a cut:

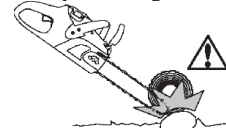
1. Make sure the cutting equipment will not jam in the cut.



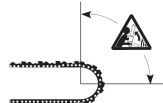
2. Make sure the object you are cutting will not split.



3. Make sure the chain will not strike the ground or any other object during or after cutting.



4. Is there a risk of kickback?



5. Do the conditions and surrounding terrain affect how safely you can stand and move about?

WORKING TECHNIQUES



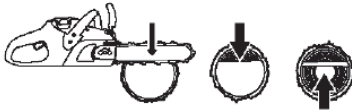
Warning! If the saw chain jams in the cut: deactivate the machine! Do not try to pull the machine free. If you do you may be injured by the saw chain when the machine suddenly brakes free. Use a lever to open up the cut and free the machine.

Cutting logs on the ground

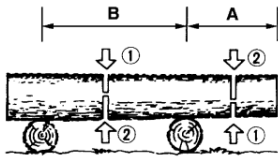
The log is lying on the ground. There is little risk of the chain jamming or the object splitting. However there is a risk that the chain will touch the ground when you finish the cut.

If it is possible (can you turn the log?) stop cutting about 2/3 of the way through the log.

Turn the log and finish the cut from the opposite side.



Cut the padded log

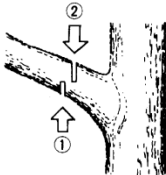


In area A, saw 1/3 from the bottom to the top, and then saw down from the top;

In area B, saw 1/3 down from the top and then up from the bottom.

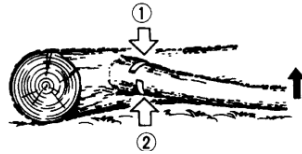
Pruning techniques of branches

Cut from the bottom first, then from the top to the bottom. Make sure you can stand and move safely. Work on the left side of the trunk. Get as close as possible to the chain saw for maximum control.



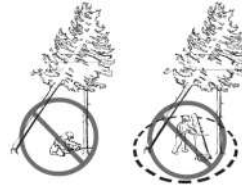
Cutting fallen branches

First find out the bending direction of the branch, cut from the bending side, and then saw from the opposite side to the end.



Freeing a "trapped tree"

It is very dangerous to remove a trapped tree and there is high accident risk. Never try to fell the tree that is trapped.



The safest method is to use a winch.

- Tractor-mounted
- Portable

Cutting trees and branches under tension

Preparations:

Work out which side is in tension and where the point of maximum tension is (i.e. where it would break if it was bent even more).



Decide which is the safest way to release the tension and whether you are able to do it safely. In complicated situations the only safe method is to put aside your chain saw and use a winch.

General advice:

Position yourself so that you will be clear of the tree or branch when the tension is released.



Make one or more cuts at or near the point of maximum tension. Make as many cuts of sufficient depth as necessary to reduce the tension and make the tree or branch break at the point of maximum tension.



WORKING TECHNIQUES

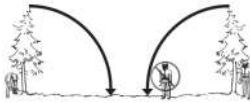
It is forbidden to cut trees or branches under tension. If you have to cut across branches, cut 2 to 3 notches. Notches are 1 inch apart and 1 to 2 inches deep.



Important!! It takes a lot of experience to fell a tree . Inexperienced users of chain saws should not fell trees. Do not attempt any task that you feel unsure of !

Safe distance

The safe distance between a tree that is to be felled and anyone else working nearby is at least 2 1/2 tree lengths. Make sure that no-one else is in this "riskzone" before or during felling.



The fall of the tree shall not threaten any person, hit any facility cable or cause any other property damage. If the tree does touch the facility cable, the company concerned shall be informed immediately.

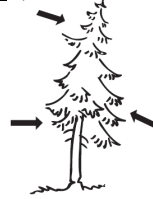
In the maintenance of trees above the ground, the safety of the working area must be ensured and marked with signs, tapes or similar ways.

Felling direction

The aim is to fell the tree in a position where you can limb and cross-cut the log as easily as possible. You want it to fall in a location where you can stand and move about safely. Once you have decided which way you want the tree to fall, you must judge which way the tree would fall naturally.

Several factors affect this:

- Lean of the tree
- Bend
- Wind direction
- Arrangement of branches
- Obstacles within the reach of the tree: for example, other trees, power lines, roads and buildings.
- Look for signs of damage and rot in the stem, this makes it more probable that the tree will break and start to fall before you expect it to.
- Weight of snow



You will find that you have to make this tree fall in its natural direction, because it is impossible and dangerous to try to make it fall in other directions.

Another important factor will not affect the falling direction of the tree, but will affect your safety. It is to ensure that the tree is not damaged or dead, and may break and hit you when cutting.

The main point is to avoid letting this tree fall to another tree. Removing a trapped tree is very dangerous and has a high risk of accidents.

Important!! During critical felling operations, hearing protectors should be lifted immediately when sawing is completed so that sounds and warning signals can be heard.

Clear the tree trunk and plan the back route in advance

It is relatively safer to cut the branches below the shoulder on the trunk, cut them from top to bottom, and then clean them up



Remove any undergrowth from the base of the tree and check the area for obstacles (stones, branches, holes, degrees away from the intended felling direction.)



1. Danger Area
2. line of withdrawal
3. Direction of collapse

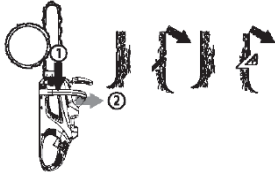
WORKING TECHNIQUES



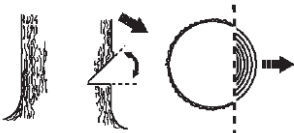
Warning! Unless you have special training we advise you not to fell trees with a diameter larger than the bar length of your saw!

Logging can be done by three cuts. By arranging these cutting points correctly, you can control the landing direction well.

1. First cut a section obliquely downward in the direction you want the tree to fall.



2. The directional cuts should run 1/3 of the diameter through the trunk and the angle between the top cut and bottom cut should be 45°.

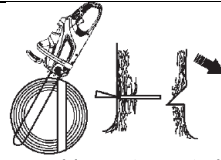


3. The felling cut is made from the opposite side of the tree and it must be perfectly horizontal. Stand on the left of the tree and cut on the pull stroke. Make the felling back cut about 3-5 cm (1.5-2 inches) above the bottom directional cut.



Set the spiked bumper (if one is fitted) just behind and above the felling hinge. Use full throttle and advance the chain/bar slowly into the tree. Make sure the tree does not start to move in the opposite direction to your intended felling direction. Drive a wedge or breaking bar into the cut as soon as it is deep enough.

Finish the felling cut parallel with the directional cut line so that the distance between them is at least 1/10 of the trunk diameter. The uncut section of the trunk is called the felling hinge.



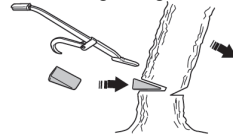
You can use hinges to control the direction in which trees fall.



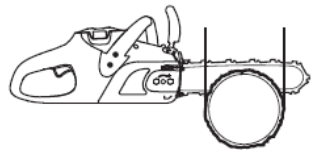
All control over the felling direction is lost if the felling hinge is too narrow or non-existent, or if the directional cuts and felling cut are badly placed.



When the felling cut and directional cut are complete the tree should start to fall by itself or with the aid of a felling wedge or breaking bar.



We recommend that you use a bar that is longer than the diameter of the tree, so that you can make the felling cut and directional cuts with single cutting strokes. See instructions under the heading Technical data section to find out which lengths of bar are recommended for your saw.



WORKING TECHNIQUES

How to avoid kickback



Warning! Kickback can happen very suddenly and violently; kicking the chain saw, bar and chain back at the user. If this happens when the chain is moving it can cause very serious, even fatal injuries. It is vital you understand what causes kickback and that you can avoid it by taking care and using the right working technique.

What is kickback?

The word kickback is used to describe the sudden reaction that causes the chain saw and bar to jump off an object when the upper quadrant of the tip of the bar, known as the kickback zone, touches an object.

Kickback always occurs in the cutting plane of the bar. Normally the chain saw and bar are thrown back wards and upwards towards the user. However, the chain saw may move in a different direction depending on the way it was being used when the kickback zone of the bar touched the object.

Kickback only occurs if the kickback zone of the bar touches an object .



Warning! A majority of kickback accidents occur during limbing. Do not use the kickback zone of the guide bar. Be extremely cautious and avoid contacting the log, other limbs or objects with the nose of the guide bar. Be extremely cautious of limbs under tension. They can spring back toward you and cause loss of control resulting in injury.

Make sure that you can stand and move about safely. Work on the left side of the trunk. Work as close as possible to the chain saw for maximum control. If possible, let the weight of the chain saw rest on the trunk.

Keep the trunk between you and the chain saw as you move along the trunk.

General

The user must only carry out the maintenance and service work described in this Operator's Manual. More extensive work must be carried out by an authorized service workshop.

Checking, maintaining and servicing chain saw safety equipment

Note! All service and repair work on the machine demands special training. This is especially true of the machine's safety equipment. If your machine fails any of the checks described below we recommend that you take it to your service workshop.



Warning! Always remove the battery before any assembly, maintenance and/ or checking is done on the machine.

Important! Never clean the battery or the battery charger with water. Strong cleaning agents can damage the plastic.

Chain brake and front hand guard



Checking the front hand guard

- Make sure the front hand guard is not damaged and that there are no visible defects such as cracks.



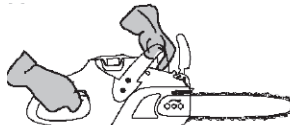
- Move the front hand guard forwards and back to make sure it moves freely and that it is securely anchored to the machine.



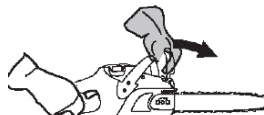
Checking the brake trigger

- Activate the chain saw. Make sure the saw chain does not touch the ground or any other object.

- Grasp the chain saw firmly, wrapping your fingers and thumbs around the handles.



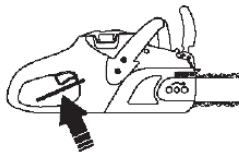
- Press the trigger all the way and activate the brake by pushing the left wrist forward on the front bezel. Don't release the trigger with your right hand. The chain saw should stop immediately.



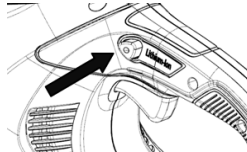
Power trigger lockout



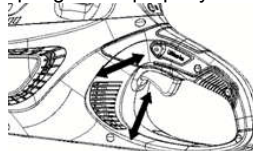
- Make sure that the power trigger is locked at the idle setting when the power trigger lockout is released.



- Press the power trigger lockout and make sure it returns to its original position when released.



- Check that the power trigger and power trigger lock out move freely and that the return springs work properly.

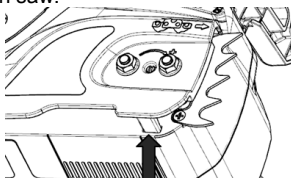


- Activate the chain saw and apply full power. Release the power trigger and check that the saw chain stops and remains stationary

Chain catcher

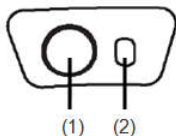


Check that the chain catcher is not damaged and is firmly attached to the body of the chain saw.



Keypad

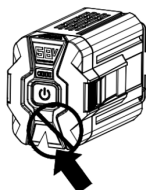
Activate the chain saw (green LED on) and make sure the chain saw deactivates when the start/stop button is pressed (green LED off).



Battery connectors



Make sure the battery pack is not damaged or incomplete, and there are no obvious defects, such as cracks.



Clean the battery and the machines battery compartment with a soft brush after use. Make sure all cooling slots and battery connectors are cleaned.



Battery charger



Make sure the battery charger and the power supply cord is not damaged or deformed and that there are no visible defects such as cracks.



Cooling system



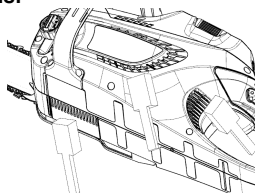
Important! A dirty or blocked cooling system results in overheating which causes damage to the machine.

To keep the working temperature as low as possible the machine is equipped with a cooling system.

The cooling system consists of:

1. Air inlet on the left side of the machine.
2. Fan on motor.
3. Exhaust port at the bottom of the machine.
4. Cooling holes at the rear of the machine.

Clean the cooling system with a brush once a week, more often in demanding conditions.



Lubricating system

MAINTENANCE



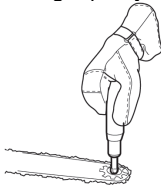
Warning! Poor lubrication of cutting equipment may cause the chain to snap, which could lead to serious, even fatal injuries.

Chain oil must demonstrate good adhesion to the chain and also maintain its flow characteristics regardless of whether it is warm summer or cold winter weather.

- All our chain saws have an automatic chain lubrication system. On some models the oil flow is also adjustable.
- Never use waste oil. This results in damage to the oil pump, the bar and the chain.
- It is important to use oil of the right grade (suitable viscosity range) to suit the air temperature.
- In temperatures below 0°C (32°F) some oils become too viscous. This can overload the oil pump and result in damage to the oil pump components.
- Contact your service agent when choosing chain oil.

Lubricating the front sprocket of guide plate

Each time the chain oil is injected, a special oil gun shall be used to lubricate the front gear of guide plate with high-quality bearing grease.



Checking chain lubrication

Check the chain lubrication every third battery charge. Aim the tip of the bar at a light coloured surface about 20 cm (8 inches) away. After 1 minute running at 3/4 throttle you should see a distinct line of oil on the light surface.



If the chain lubrication is not working:

- Check whether the oil hole channel on the guide plate is blocked. If it is blocked, please clean it.



- Check whether the groove edge of guide plate is clean, and clean it if necessary.



- Check whether the guide sprocket can rotate freely and whether the lubrication hole on the top sprocket is blocked. Clean and lubricate if necessary.



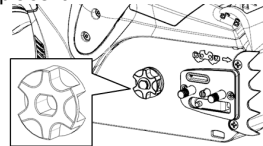
If the chain lubrication system is still not working after carrying out the above checks and associated measures you should contact your service agent.

Cutting system



Chain drive sprocket

The drive system drives the saw chain through a drive sprocket. Check the wear degree of the drive gear regularly. If the wear is severe, please replace it.

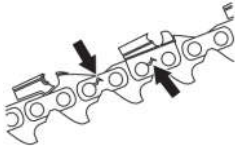


Chain



Routine inspection of chain:

MAINTENANCE



- Visible cracks in rivets and links.
 - Whether the chain is stiff.
 - Whether rivets and links are badly worn.
- Replace the saw chain if it exhibits any of the points above.

We recommend you compare the existing chain with a new chain to decide how badly the existing chain is worn.

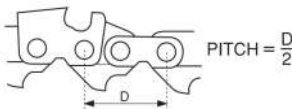
When the length of the cutting teeth has worn down to only 4 mm the chain must be replaced.

Terminology Relating to guides and chains

To maintain the safety features of the cutting equipment, you should replace a worn or damaged bar or chain with a bar and chain combinations recommended by Zomax.

Guide bar

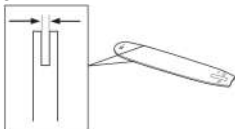
- Length (inches/cm)
- Number of teeth on bar tip sprocket (T).
- Chain pitch (inches). The spacing between the drive links of the chain must match the spacing of the teeth on the bar tip sprocket and drive sprocket.



- Number of drive links. The number of drive links is determined by the length of the bar, the chain pitch and the number of teeth on the bar tip sprocket.

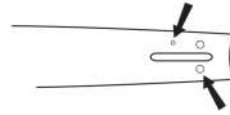


- Bar groove width (inches/mm). The groove in the bar must match the width of the chain drive links.



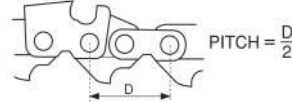
- Chain oil hole and hole for chain tensioner.

The bar must be matched to the chain saw design.

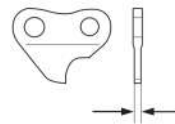


Saw chain

- Chain pitch (inches)



- Drive link width (mm/inches)



- Number of drive links.



Guide maintenance



Check regularly:

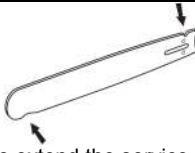
- Whether there are burrs on the edges of the bar. Remove these with a file if necessary.



- Whether the groove in the bar has become badly worn. Replace the bar if necessary.



- Whether the tip of the bar is uneven or badly worn. If a hollow forms on the underside of the bar tip this is due to running with a slack chain.



- In order to extend the service life of the guide plate, both the front and back sides of the guide plate should be used.

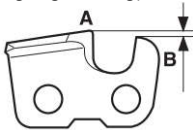


Sharpening chain



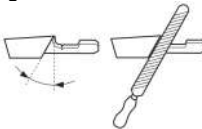
提示！禁止使用钝的链条。当使用变钝的链条时，会缩短链锯的使用寿命。

The cutting part of the chain is called the cutter and consists of a cutting tooth (A) and the depth gauge (B). The cutters cutting depth is determined by the difference in height between the two (depth gaugesetting).



When you sharpen a cutting tooth there are four important factors to remember:

1. Filing angle



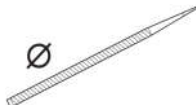
2. Cutting angle



3. File position

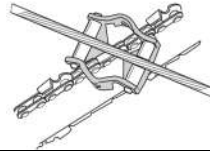


4. Round file diameter



It is very difficult to sharpen a chain

correctly without the right equipment. We recommend that you use our file gauge. This will help you obtain the maximum kickback reduction and cutting performance from your chain.



Warning! Departure from the sharpening instructions considerably increases the risk of kickback.

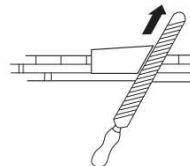
To sharpen cutting teeth you will need a round file and a file gauge. See instructions under the heading Technical data for information on the size of file and gauge that are recommended for the chain fitted to your chain saw.



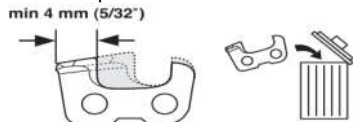
- Check that the chain is correctly tensioned. A slack chain will move sideways, making it more difficult to sharpen correctly.



- Always file cutting teeth from the inside face. Reduce the pressure on the return stroke. File all the teeth on one side first, then turn the chain saw over and file the teeth on the other side.

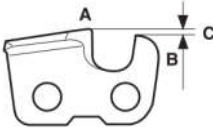


- File all the teeth to the same length. When the length of the cutting teeth is reduced to 4 mm (5/32") the chain is worn out and should be replaced.



General advice on adjusting depth gauge setting

When you sharpen the cutting tooth (A) the depth gauge setting (C) will decrease. To maintain optimal cutting performance the depth gauge (B) has to be filed down to achieve the recommended depth gauge setting. See instructions under the heading Technical data to find the correct depth gauge setting for your particular chain.



Warning! The risk of kickback is increased if the depth gauge setting is too large!

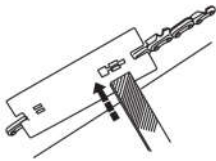


Adjustment of depth gauge setting

- The cutting teeth should be newly sharpened before adjusting the depth gauge setting. We recommend that you adjust the depth gauge setting every third time you sharpen the cutting teeth.
- You will need a flat file and a depth gauge tool. We recommend that you use our depth gauge tool to achieve the correct depth gauge setting and bevel for the depth gauge.



- Place the depth measuring tool on the chain. Detailed information about using the depth measurement tool will be found on the package of the depth measurement tool. The tip protruding from the depth gauge is filed with a file. When you no longer feel resistance, the setting of the depth gauge is correct



MAINTENANCE PLAN

The following is a list of the maintenance steps that must be performed on the machine. Most of the items are described in the Maintenance section.

Daily maintenance	Weekly maintenance	Monthly maintenance
Clean the outside of the machine.	File off any burrs from the edges of the bar.	Check the connections between the battery and the machine and also check the connection between battery and the battery charger.
Check that the components of the power trigger work safely. (Power trigger lockout and power trigger.)		Empty the oil tank and clean the inside.
Clean the chain brake and check that it operates safely. Make sure that the chain catcher is undamaged, and replace it if necessary.		Blow through the product and battery cooling slots gently with compressed air.
The bar should be turned daily for more even wear. Check the lubrication hole in the bar, to be sure it is not clogged. Clean the bar groove. If the bar has a sprocket tip, this should be lubricated.		
Check that the bar and chain are getting sufficient oil.		
Check the saw chain with regard to visible cracks in the rivets and links, whether the saw chain is stiff or whether the rivets and links are abnormally worn. Replace if necessary.		
Sharpen the chain and check its tension and condition. Check the drive sprocket for excessive wear and replace if necessary.		
Clean the machine's air inlet.		
Check that nuts and screws are tight.		
Check that the keypad works correctly and is not damaged.		

FAULT ANALYSIS

Keypad

LED display	Frequency	Possible reasons	Possible action
Flash every 0.5 second	2Hz	Undervoltage	Charging the battery pack
Two flashes in 0.5 seconds		Communication exception	Reseat the battery pack
Three flashes in 0.5 seconds		Battery pack over temperature	Use the battery pack after cooling down
Four flashes in 0.5 seconds		Battery pack damaged	Replace battery pack
Two flashes in 0.35 seconds	3Hz	Hall sensor failure	Contact your service agent
Three flashes in 0.5 seconds		Non-full-phase	
Four flashes in 0.35 seconds		Over current protection	Remove the chain saw from the cutting part and cut again
Five flashes in 0.35 seconds		Controller temperature protection	Use the machine after cooling

Battery pack

LED display	Possible reasons	Possible action
One green LED blinks	Undervoltage	Charge
All led flashing	Temperature deviation	Use battery pack at - 10 °C - 40 °C
	Over voltage	Check that the mains voltage corresponds with that stated on the rating plate on the machine.
Red LED flashing	Communication exception	Reseat the battery pack
Red LED lit	Battery Pack failure	Contact your service agent

Charger

LED display	Possible reasons	Possible action
Green and red lights flash alternately	Battery pack temperature protection	Use charger at 5-45 °C
Red LED flashing	Defective charger or battery pack	Try again to repeat this by removing and reinserting the battery pack. If the LED is still in the same state, try to charge another battery pack B (the battery pack B should be in good condition). If the battery pack B shows normal charging, the previous battery pack is defective. If the battery pack B is inserted and the LED light is still in the same state, the charger is defective. Whether the battery pack is defective or the charger is defective, please contact your dealer

TECHNICAL DATA

Parameter	
Motor type	DC brushless motor
No-load speed	7600 rpm/min Max. (58 V DC)
Maximum input power	2000 w Max. (58 V DC)
Adaptive sprocket	6T 、 3/8"
Oil yield	7 ~ 10 ml/min
Tank volume	200ml
Sound power level noise	< 101 dB(A)
Vibration	Rear handle ≤ 6.3 m/s ² , Front handle ≤ 4.9 m/s ²
Net weight (No battery, guides and chains)	3.82kg

Chain/bar for ZMDC501 (chain pitch: 3/8)				
Bar Lengths	DL Width	Drive Links	Guide Bar Type	Saw Chain Type
16"	.050	56DL	PO16-50NR (Hurricane)	56DL002 (Hurricane)
18"	.050	62DL	PO18-50NR (Hurricane)	62DL002 (Hurricane)

Approved batteries for ZMDC501				
Model	ZMLB5120	ZMLB5125	ZMLB5140	ZMLB5150
Capacity,AH	2.0	2.5	4.0	5.0
Voltage,V	58	58	58	58
Weight,kg	1.16	1.16	1.8	1.8

Approved battery charger for ZMDC501	
Model	ZMLC5120E
Input voltage, V	220~240
Frequency, Hz	50
Input current, A	1
Output voltage, V	58V DC
Output current, A	2

TECHNICAL DATA

The vibration emission during actual use of the power tool can differ from the declared total value depending on the ways in which the tool is used. Operators should identify safety measures to protect themselves that are based on an estimation of exposure in the actual conditions of use (taking account of all parts of the operating cycle such as the times when the tool is switched off and when it is running idle in addition to the trigger).

The checksum and software information are as follows:

Product	Type	Hardware Version	Software Version
CHAINSAW	ZMDC501	4.031.0051.29	GETL0128

EC DECLARATION OF CONFORMITY

EC DECLARATION OF CONFORMITY

Herewith we:

Manufacturer: By Zhejiang Zomax Garden Machinery Co., Ltd. for Jono & Johno

Address: 31 Carngham Road, Delacombe, Vic, 3356

17500 P. R. China declare that the machine/s

Designation: Chain saw

Model/Type: ZMDC501

correspond with the applicable EU directives

2006/42/EC, 2014/30/EU

and are manufactured in accordance with the following standards or standardized documents:

EN 60745-1:2009+A11,

EN 60745-2-13:2009+A1,

EN 55014-1:2006+A1+A2,

EN 55014-2:2015 Additionally confirmed by the Directive 2000/14/EC Noise emission:

Sound power level:

Measured: 98dB(A)

Guaranteed: 101dB (A)

Applied conformity assessment according to Annex VI/2000/14/EC and 2005/88/EC

The technical documentation is kept by our authorized representative

EUROMATE GmbH

Emil-Lux-Straße 1, D-42929 Wermelskirchen, Germany



OPERATOR'S MANUAL **BATTERY PACK**

Type: ZMLB5120

ZMLB5125

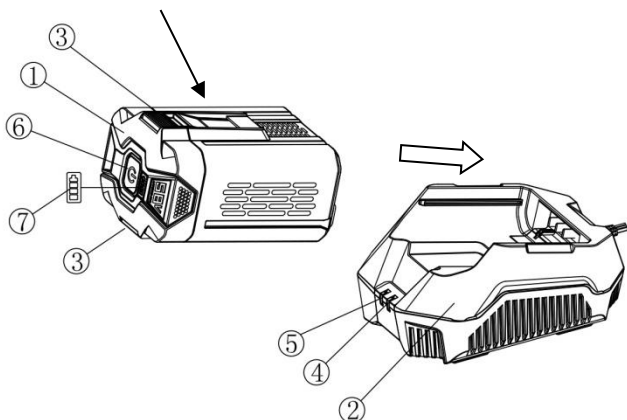
ZMLB5140

ZMLB5150



Jono & Johno, 31 Carngham Road, Delacombe, Vic, 3356

Please read the operator's manual carefully and make sure you understand the instructions before using the machine.



1.ZOMAX battery

2.ZOMAX charger

3.Release button

4.Red LED

5.Green LED

6.Battery power display button

7.Batterypower indicator

BATTERY HANDLING

SAVE THESE INSTRUCTIONS

Key to symbols

WARNING! Incorrect or careless use of charger can turn it into a dangerous tool that can cause serious or even fatal injury. It is extremely important that you read and understand the contents of the operator's manual.	
Please read the operator's manual carefully and make sure you understand the instructions before using the machine.	
Symbols on the product or its packaging indicate that this product cannot be handled as domestic waste. This product must be deposited at an appropriate recycling facility.	
Do not leave or store the battery charger outdoors in the rain or in wet conditions.	
Do not expose batteries to heat or fire.	
Please use and store the battery only in a temperature range between - 10°C and + 50°C.	

Battery Pack safety

This section describes the battery pack and battery charger safety for your product. (1) to (8) refer to the figure on page 2. Only use ZOMAX original battery packs for ZOMAX products and only charge them in an original battery charger from ZOMAX. The battery pack are software encrypted.

IMPORTANT SAFETY INSTRUCTIONS

The rechargeable ZOMAX® batteries, ZMLC51 are exclusively used as a power supply for the relevant ZOMAX® cordless appliances. To avoid injury, the battery must not be used as a power source for other devices. (1)

- Prevent unintentional starting. Ensure the switch is in the off-position before connecting to battery pack, picking up or carrying the appliance. Carrying the appliance with your

finger on the switch or energizing appliance that have the switch on invites accidents.

- Disconnect the battery pack from the appliance before making any adjustments, changing accessories, or storing appliance. Such preventive safety measures reduce the risk of starting the appliance accidentally.
- Recharge only with the charger specified by the manufacturer. A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.
- Use appliances only with specifically designated battery packs. Use of any other battery packs may create a risk of injury and fire.
- Do not short-circuit a battery pack. When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another. Shorting the battery terminals together may cause burns or a fire.
- Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help. Liquid ejected from the battery may cause irritation or burns.
- Do not use a battery pack or appliance that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.(g)
- Avoid storage in direct sunlight. Do not expose a battery pack or appliance to fire or excessive temperature. Exposure to fire or temperature above 130°C may cause explosion. The temperature of 130°C can be replaced by the temperature of 265°F.
- Follow all charging instructions and do not charge the battery pack or appliance outside of the temperature range specified in the instructions. Charging improperly or at temperatures outside of the specified range may damage the battery and increase the risk of fire.
- Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.
- Do not modify or attempt to repair the appliance or the battery pack (as applicable) except as indicated in the instructions for use and care.
-

BATTERY HANDLING

- Do not remove a battery pack from its original packaging until required for use.
 - Do not subject batteries to mechanical shock.
 - Observe the plus (+) and minus (-) marks battery pack and equipment and ensure correct use.
 - Do not use any battery pack which is not designed for use with the equipment.
 - Do not mix battery pack of different manufacture, capacity, size or type within a device.
 - Keep batteries out of the reach of children.
 - Always purchase the correct battery pack for the equipment.
 - Keep battery pack clean and dry.
 - Wipe the battery terminals with a clean dry cloth if they become dirty.
 - Batteries need to be charged before use. Always use the correct charger and refer to manufacturer's instruction or equipment manual for proper charging instructions.
 - Do not leave a battery pack on prolonged charge when not in use.
 - After extended periods of storage, it may be necessary to charge and discharge the battery pack several times to obtain maximum performance.
 - Retain the original product literature for future reference.
 - Use only battery pack in the application for which it was intended.
 - When possible, remove the battery pack from the equipment when not in use.
- **Zomax battery pack is only allowed to be charged by appropriate Zomax Charger (for voltage of 120V, 60HZ, please charge it by ZMLC5120U; For voltage of 220-240V, 50HZ, please charge it by ZMLC5120E or ZMLC5120A). Working temperature for charging will be 0-25°C, while the ideal temperature is 20~25°C.**
 - Put the battery pack in the battery charger. Make sure that the battery is connected to the battery charger. **(1), (2)**
 - The green charging light is lit when the battery pack is connected to the battery charger. **(4)**
 - When all LEDs are lit the battery is fully charged. **(7)**
 - Remove the battery pack from the battery charger.
 - Zomax battery pack is only allowed to be charged by appropriate Zomax appliance such as Zomax Li-Ion Chain saw, Zomax Li-Ion Blower, Zomax Li-Ion Trimmer, Zomax Li-Ion Lawn Mower, Zomax Li-Ion Pole Trimmer, Zomax Li-Ion Pole Saw, Zomax Li-Ion Hedge Trimmer.
 - When battery pack is connected with the appliance, the battery pack will be locked up by pack release buttons and machine enclosure. Press on the both release button at the same time, the battery pack will be unlocked and disconnected.(8)
 - Low voltage charging: If the battery pack has been stored with little to no charge for a long period of time, the charger will go into recovery mode, which will take 20 hrs to fully charge the battery. this will enhance the life of the battery. Once it is fully charged, the next charge will return to standard charging.

Operation

The battery pack LED light shows the battery pack capacity and if there are any problems with the battery pack. The battery pack capacity is displayed for 5 seconds after the machine is switched off the battery pack indicator button is pressed. The warning symbol on the battery pack is lit when an error has occurred. See fault codes.(6)

When all the LEDs are lit on the battery pack, it is fully charged. **(7)**

Regularly check that the battery charger and the battery pack are intact.

The battery pack must be charged before using it the first time.

NOTE !

The battery pack is only 30% SOC charged when delivered.

LED lights	Battery Pack
All LEDs are lit	Fully charged (75-100%).
LED 1, LED 2, LED 3 are lit.	The battery pack is 50%-75% charged
LED 1, LED 2, are lit.	The battery pack is 25%-50% charged.
LED 1 are lit.	The battery pack is 0%-25% charged
LED 1 flashes	The battery pack is empty. Charge the battery.

BATTERY HANDLING

Transport and storage

- Store the equipment in a lockable area so that it is out of reach of children and unauthorized persons.
- Store the battery pack and the battery charger in a dry, moisture-free and frost-free space.
- Store the battery pack and the battery charger where the temperature is between 5°C and 45°C and never indirect sunlight.
- Be sure to store the battery pack separate from the battery charger.
- Do not store the battery pack in places where static electricity can occur. Never store the battery pack in a metal box.
- **Caution:** IF long-term storage is necessary, **DON OT STORE A BATTERY PACK WHICH IS COMPLETELY DISCHARGED**. If the pack completely discharged, please charge the pack to LED 1, LED 2 are lit firstly. In the later process, it's required to charge the battery pack until LED 1, LED 2 are lit each time for every one or two months. This is helpful for prolonging battery shelf life.

Maintenance

LED display	Possible faults	Possible action
All LED ARE FLASH	Temperature deviation	Charge the battery in surroundings where temperatures are between 0 ~25°C, and discharge the battery in -15°C~75°C
	Over voltage	Check that the mains voltage corresponds with that stated on the rating plate on the machine.
	Under voltage	Remove the battery from the battery charger.
Red LED FLASH	Communication failed between battery pack and tools or charger	Remove the battery from the battery charger
RED LED LIT	Battery Pack failure	Contact your service agent

Make sure the battery pack and battery charger are clean and that the terminals on the battery pack and the battery charger are always clean and dry before the battery pack is placed in the battery charger.

Keep the battery pack guide tracks clean. Clean plastic parts with a clean and dry cloth.

Fault codes

Troubleshooting the battery and/or the battery charger during charging. (5), (6)

- The battery pack will not be charged if the battery temperature is over 75°C. In that case the battery charger will actively cool down the battery.
- If the LED on the battery charger is lit solid red, the battery charger requires a service.

Technical data

Item	ZMLB 5120	ZMLB 5125	ZMLB 5140	ZMLB 5150
Types of battery pack	Li-Ion	Li-Ion	Li-Ion	Li-Ion
Battery capacity ,Ah	2.0	2.5	4.0	5.0
Number of cell, pc	14	14	28	28
Voltage, V	58	58	58	58

Dispose of the battery pack, battery charger and machine

Symbols on the product or its packaging indicate that this product cannot be handled as domestic waste. It must instead be submitted to an appropriate recycling station for the recovery of electrical and electronic equipment.

By ensuring that this product is taken care of correctly, you can help to counteract the potential negative impact on the environment and people that can otherwise result through the incorrect waste management of this product. For more detailed information about recycling this product, contact your municipality, your domestic waste service or the shop from where you purchased the product.



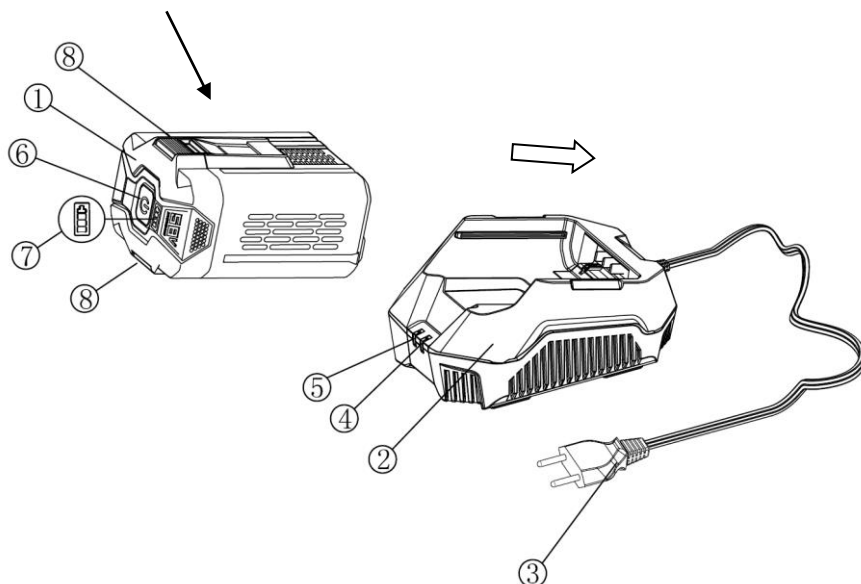
OPERATOR'S MANUAL
**BATTERY
CHARGER**

Type: ZMLC5120



Jono & Johno, 31 Carngham Road, Delacombe, Vic, 3356

Please read the operator's manual carefully and make sure you understand the instructions before using the machine.



1. Battery

2. Charger

3. Plug^①

4. Red LED

5. Green LED

6. Battery power display button

7. Battery power indicator

8. Release button

^① Plug type in the illustration is only for customer reference. Please refer to products sold locally as standard.

SAVE THESE INSTRUCTIONS

Key to symbols

WARNING! Incorrect or careless use of a charger can turn it into a dangerous tool that can cause serious or even fatal injury. It is extremely important that you read and understand the contents of the operator's manual.	
Please read the operator's manual carefully and make sure you understand the instructions before using the machine.	
Symbols on the product or its packaging indicate that this product cannot be handled as domestic waste. This product must be deposited at an appropriate recycling facility.	
Do not leave or store the battery charger outdoors in the rain or in wet conditions.	
Use and store battery charger only indoors.	
Please read the instructions for maintenance of the charger.	
The appliance meets the requirement of double insulation according to safety standards	
This product is in accordance with applicable EC directives.	

Battery pack and battery charger

This section describes the battery and battery charger safety for your battery product.

①②③④⑤⑥⑦⑧to refer to the figure on page 2.

Only use original battery pack for products and only charge them in an original battery ZMLC51 charger. The battery pack are software encrypted. Other types of batteries may burst causing personal injury and damage.

IMPORTANT SAFETY INSTRUCTIONS

The battery chargers are only used for charging of rechargeable battery pack.



WARNING! Minimise the risk of electric shock or short circuit as follows:

Do not try to dismantle the battery charger. Never connect the charger terminals to metal objects as this can short circuit the battery charger. Use approved and intact wall sockets.

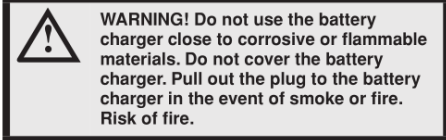
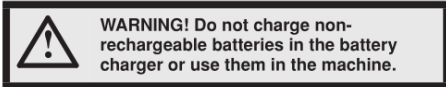


WARNING! This machine produces an electromagnetic field during operation. This field may under some circumstances interfere with active or passive medical implants. To reduce the risk of serious or fatal injury, we recommend persons with medical implants to consult their physician and the medical implant manufacturer before operating this machine. Do not use product when a thunderstorm is approaching.

- Inspect the product for damage before use.
- Regularly check that the battery charger connection wire is intact and that there are no cracks in it.
- Never carry the battery charger using the cord and never pull out the plug by pulling the cord.
- Keep all cables and extension leads away from water, oil and sharp edges. Make sure the cable is not jammed in doors, fences or the like. Otherwise it can cause the charger to become live.
- Never clean the battery or the battery charger with water.
- The appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory, or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

BATTERY CHARGER

- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- When charging, the charger must be placed in a well-ventilated area and under a roof to keep out moisture. Use and store battery charger only indoors.
- Don't let your children play with the charger. There is a risk of suffocation on small parts of the battery charger is swallowed.
- Don't use the charger while being under influence of medicine, drugs, alcohol, or while being exhausted, tired or ill.



- Use the battery charger only when the surrounding temperature is between 5 °C and 50°C. Use the charger in an environment which is well ventilated, dry and free from dust

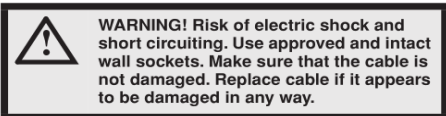
Do not use:

- a faulty or damaged battery charger
- The battery in the battery charger outdoors.

Do not charge:

- Or never use a faulty, damaged or deformed battery.
- The battery in the rain or in wet conditions.
- The battery in direct sunlight.

Operation



Connect the battery charger

- Use or store the battery charger in such way so that the risk of stumbling on the cable does not occur.
- Connect the battery charger to the voltage and frequency specified on the rating plate.

- Use provided cable with specific coil
- Always use residual current device (RCD) when using battery charger.

Connect the battery to the battery charger.

The battery must be charged before using it the first time.

The battery is only 30% charged when delivered.

NOTE!

- During charging monitor the charging process.
- Connect the battery to the battery charger. ① ②
- The green charging light on the charger is lit when the battery is connected to the battery charger. The battery will not be charged if the battery temperature is over 50°C ④
- When all LEDs are lit, the battery is fully charged. ⑦
- When the battery is fully charged, the battery charger will stop charging (switch to stand by). There are no restrictions on how long a battery can remain in the charger. Recommended is to remove the battery from the battery charger when the battery is fully charged.
- Pull out the plug. Never jerk the power supply cable to disconnect it from the wall socket. ③
- After using the battery over hundreds cycles, your battery maybe unbalance. To protect itself, the battery will start self-balance mode when charged over 57.4V. During this period, the charger green LED will flash at 0.5 Hz at half speed of normal flashing frequency. Do not interrupt, wait till the battery get fully charged, this will effectively prolong the battery life.
- Low voltage charging: If the battery pack has been stored with little to no charge for a long period of time, the charger will go into recovery mode, which will take 20 hrs to fully charge the battery. This will enhance the life of the battery. Once it is fully charged, the next charge will return to standard charging.

Transport and storage

- The Charger and the battery must be secured during transport.
- Store the equipment in a lockable area so that it is out of reach of children and unauthorized persons.

BATTERY CHARGER

- Store the battery and the battery charger in a dry, moisture-free and frost-free space.
- Store the battery charger where the temperature is between 0°C and 45°C and never indirect sunlight.
- Store the battery charger only in an enclosed and dry space.
- Be sure to store the battery separate from the battery charger.
- **Caution:** If long-term storage is necessary, **DO NOT STORE A BATTERY PACK WHICH IS COMPLETELY DISCHARGED**. If the pack completely discharged, please charge the battery pack until LED 1, LED 2 are lit firstly. In the later process, it's required to charge the battery pack until LED 1 ,LED 2 are lit each time for every one or two months. This is helpful for prolonging battery shelf life.

Maintenance

Make sure the battery and battery charger are clean and the terminals on the battery and the battery charger are always clean and dry before the battery is connected in the battery charger. Keep the battery guide tracks clean. Clean plastic part with a clean and dry cloth.

Fault codes

Troubleshooting the battery and/or the battery charger

During charging. ⑤, ⑥

If the LED on the battery charger is lit solid red, the Battery charger requires a service. ⑤

MODE		BATTERY PACK STATUS	GREEN LED	RED LED	CHARGER STATUS	TO BE OPERATED BY THE END USER
	Charging	Charging	Rapidly Flashing (1Hz)	Off	Normal charging	No further action until the battery pack was fully charged
		Balance	Slow Flashing (0.5Hz)	Off	Charging under self-balance mode	No further action until the charging mode was changed to normal charging
	Fully charged	Battery full	On	Off	End of charging	Disconnect the battery pack from the charger
	Evaluate	The battery pack surface is warm	Flashing	Flashing	The ambient temperature is too high and the battery charger stops charging	Move the battery pack and battery charger to a cooler ambient. The charger will continue to charge when the battery pack is cooled down.
		The battery pack surface is cold			The ambient temperature is too low and the battery charger stops charging	Move the battery pack and battery charger to a warmer ambient. The charger will continue to charge when the battery pack is warmed up.
		The battery pack surface is extremely hot			DANGER! The battery charger is charging a damaged battery pack.	Pull out the plug of the charger immediately and then move the battery pack and battery charger outside the room. Contact the after-sale service for further instruction.

BATTERY CHARGER

MODE		BATTERY PACK STATUS	GREEN LED	RED LED	CHARGER STATUS	TO BE OPERATED BY THE END USER
	Defective	The battery pack may be defective	Off	On	The battery charger may be defective	Try to repeat the conditions a second time by removing and reinstalling the battery pack. If the LED status repeats a second time, try charging a different battery. If a different battery charges normally, dispose of the defective pack (see battery pack operator's manual). If a different battery also indicates "Defective", the charger may be defective.

Disposal of the battery, battery charger and machine

Symbols on the product or its packaging indicate that this product cannot be handled as domestic waste. It must instead be submitted to an appropriate recycling station for the recovery of electrical and electronic equipment.

By ensuring that this product is taken care of correctly, you can help to counteract the potential negative impact on the environment and people that can otherwise result through the incorrect waste management of this product. For more detailed information about recycling this product, contact your municipality, your domestic waste service or the shop from where you purchased the product.

Technical data

Battery charger	ZMLC5120E
Mains Voltage, V	220~240
Frequency, Hz	50
input-current, A	1
Fuse, A	3.15

Battery	Cell (pcs)	Ah	charging period(min)	
			80%	100%
ZMLB5120	14	2	48	60
ZMLB5125	14	2.5	60	75
ZMLB5140	28	4	96	120
ZMLB5150	28	5	120	150