

## WARNING CORDLESS CHAINSAW SAFETY

Any piece of equipment can be dangerous if not operated properly. **YOU** are responsible for the safe operation of this equipment. The operator must carefully read and follow any warnings, safety signs and instructions provided with or located on the equipment. Do not remove, defeat, deface, or render inoperable any of the safety devices or warnings on this equipment. If any safety devices or warnings have been removed, defeated, defaced, or rendered inoperable, **DO NOT USE THIS EQUIPMENT!!!**

**⚠ WARNING:** This product can expose you to chemicals including naphthalene and chromium from petroleum products on the chain which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65warnings.ca.gov](http://www.P65warnings.ca.gov)

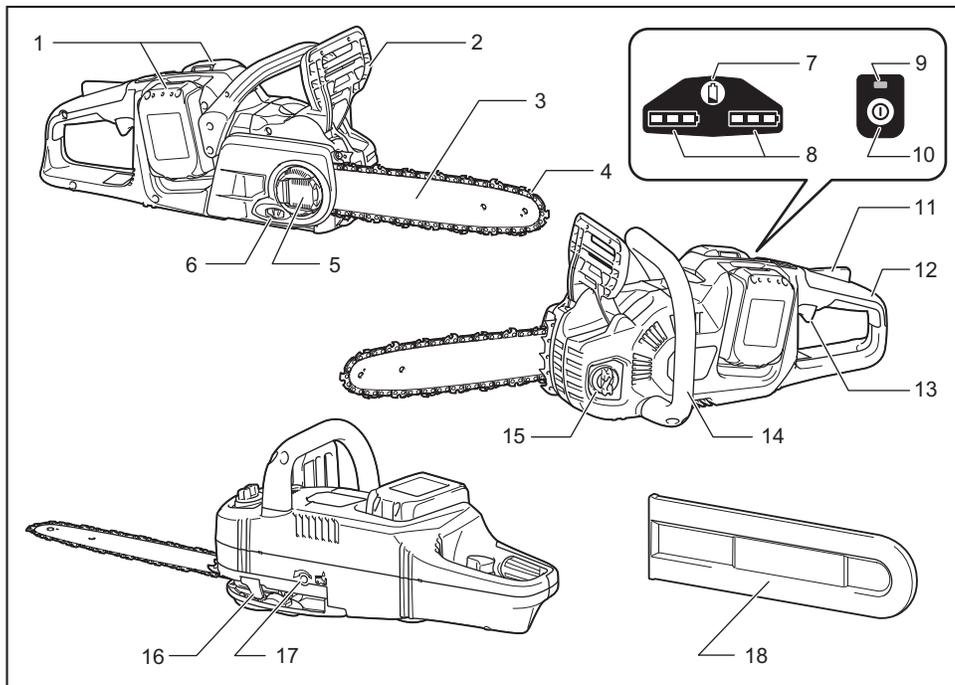
**⚠ WARNING:** Lithium-ion Batteries and/or products that contain Lithium-ion Batteries can expose you to chemicals including cobalt lithium nickel oxide, and nickel, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to [www.P65warnings.ca.gov](http://www.P65warnings.ca.gov)

If the person receiving this handout will not be the user of the equipment, forward these instructions to the operator. If there is any doubt as to the operation or safety of the equipment,

**DO NOT USE!! CALL A TOOL SHED IMMEDIATELY!!!**

**FAILURE TO FOLLOW THESE INSTRUCTIONS COULD RESULT IN INJURY OR DEATH**

### PARTS DESCRIPTION



1	Battery cartridge	2	Front hand guard	3	Guide bar
4	Saw chain	5	Lever	6	Adjusting dial
7	Check button	8	Capacity indicator	9	Main power lamp
10	Main power switch	11	Lock-off lever	12	Rear handle
13	Switch trigger	14	Front handle	15	Oil tank cap
16	Chain catcher	17	Adjusting screw (for oil pump)	18	Guide bar cover

# SAFETY WARNINGS

## General power tool safety warnings

**⚠WARNING:** Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

### Save all warnings and instructions for future reference.

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

#### Work area safety

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

#### Electrical Safety

1. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
2. **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.
3. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
4. **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.
5. **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.
6. **If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.** Use of a GFCI reduces the risk of electric shock.

#### Personal Safety

1. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
2. **Use personal protective equipment. Always wear eye protection.** Protective equipment such as a dust mask, non-skid safety shoes, hard hat or hearing protection used for appropriate conditions will reduce personal injuries.

3. **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.** Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.
4. **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.
5. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
6. **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewellery or long hair can be caught in moving parts.
7. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of dust collection can reduce dust-related hazards.

#### Power tool use and care

1. **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.
2. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
3. **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.
4. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
5. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
6. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
7. **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

#### Battery tool use and care

1. **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.
2. **Use power tools only with specifically designed battery packs.** Use of any other battery packs may create a risk of injury and fire.

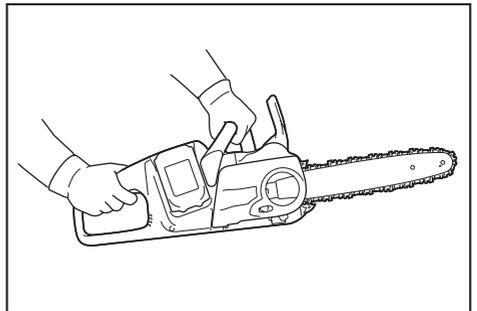
3. **When battery pack is not in use, keep it away from other metal objects, like paper clips, coins, keys, nails, screws or other small metal objects, that can make a connection from one terminal to another.** Shorting the battery terminals together may cause burns or a fire.
4. **Under abusive conditions, liquid may be ejected from the battery; avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery may cause irritation or burns.

#### Service

1. **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.
2. **Follow instruction for lubricating and changing accessories.**
3. **Keep handles dry, clean and free from oil and grease.**

### Cordless Chain saw safety warnings

1. **Keep all parts of the body away from the saw chain when the chain saw is operating. Before you start the chain saw, make sure the saw chain is not contacting anything.** A moment of inattention while operating chain saws may cause entanglement of your clothing or body with the saw chain.
  2. **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.
  3. **Hold the power tool by insulated gripping surfaces only, because the saw chain may contact hidden wiring.** Saw chains contacting a "live" wire may make exposed metal parts of the power tool "live" and could give the operator an electric shock.
  4. **Wear safety glasses 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.
  5. **Do not operate a chain saw in a tree.** Operation of a chain saw while up in a tree may result in personal injury.
  6. **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.
  7. **When cutting a limb that is under tension be alert for spring back.** When the tension in the wood fibres is released the spring loaded limb may strike the operator and/or throw the chain saw out of control.
  8. **Use extreme caution when cutting brush and saplings.** The slender material may catch the saw chain and be whipped toward you or pull you off balance.
9. **Carry the chain saw by the front handle with the chain saw switched off and away from your body. When transporting or storing the chain saw always fit the guide bar cover.** Proper handling of the chain saw will reduce the likelihood of accidental contact with the moving saw chain.
  10. **Follow instructions for lubricating, chain tensioning and changing accessories.** Improperly tensioned or lubricated chain may either break or increase the chance for kickback.
  11. **Keep handles dry, clean, and free from oil and grease.** Greasy, oily handles are slippery causing loss of control.
  12. **Cut wood only. Do not use chain saw for purposes not intended.** For example: do not use chain saw for cutting plastic, masonry or non-wood building materials. Use of the chain saw for operations different than intended could result in a hazardous situation.
  13. **Causes and operator prevention of kickback:** Kickback may occur when the nose or tip of the guide bar touches an object, or when the wood closes in and pinches the saw chain in the cut. Tip contact in some cases may cause a sudden reverse reaction, kicking the guide bar up and back towards the operator. Pinching the saw chain along the top of the guide bar may push the guide bar rapidly back towards the operator. Either of these reactions may cause you to lose control of the saw which could result in serious personal injury. Do not rely exclusively upon the safety devices built into your saw. As a chain saw user, you should take several steps to keep your cutting jobs free from accident or injury. Kickback is the result of tool misuse and/or incorrect operating procedures or conditions and can be avoided by taking proper precautions as given below:
    - Maintain a firm grip, with thumbs and fingers encircling the chain saw handles, with both hands on the saw and position your body and arm to allow you to resist kickback forces. Kickback forces can be controlled by the operator, if proper precautions are taken. Do not let go of the chain saw.



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

- Only use replacement bars and chains specified by the manufacturer. Incorrect replacement bars and chains may cause chain breakage and/or kickback.
  - Follow the manufacturer's sharpening and maintenance instructions for the saw chain. Decreasing the depth gauge height can lead to increased kickback.
14. **Before starting work, check that the chain saw is in proper working order and that its condition complies with the safety regulations. Check in particular that:**
- The chain brake is working properly;
  - The run-down brake is working properly;
  - The bar and the sprocket cover are fitted correctly;
  - The chain has been sharpened and tensioned in accordance with the regulations.
15. **Do not start the chain saw with the chain cover being installed on it.** Starting the chain saw with the chain cover being installed on it may cause the chain cover to be thrown out forward resulting in personal injury and damage to objects around the operator.

## SAVE THESE INSTRUCTIONS.

**⚠WARNING:** DO NOT let comfort or familiarity with product (gained from repeated use) replace strict adherence to safety rules for the subject product. MISUSE or failure to follow the safety rules stated in this instruction manual may cause serious personal injury.

## Symbols

The followings show the symbols used for tool.

V	volts
— — —	direct current
ft/min	feet per minute
	parts number of applicable saw chain and guide bar

## Important safety instructions for battery cartridge

1. **Before using battery cartridge, read all instructions and cautionary markings on (1) battery charger, (2) battery, and (3) product using battery.**
2. **Do not disassemble battery cartridge.**
3. **If operating time has become excessively shorter, stop operating immediately. It may result in a risk of overheating, possible burns and even an explosion.**
4. **If electrolyte gets into your eyes, rinse them out with clear water and seek medical attention right away. It may result in loss of your eyesight.**

5. **Do not short the battery cartridge:**
  - (1) **Do not touch the terminals with any conductive material.**
  - (2) **Avoid storing battery cartridge in a container with other metal objects such as nails, coins, etc.**
  - (3) **Do not expose battery cartridge to water or rain.**

A battery short can cause a large current flow, overheating, possible burns and even a breakdown.
6. **Do not store the tool and battery cartridge in locations where the temperature may reach or exceed 50 °C (122 °F).**
7. **Do not incinerate the battery cartridge even if it is severely damaged or is completely worn out. The battery cartridge can explode in a fire.**
8. **Be careful not to drop or strike battery.**
9. **Do not use a damaged battery.**
10. **The contained lithium-ion batteries are subject to the Dangerous Goods Legislation requirements.**

For commercial transports e.g. by third parties, forwarding agents, special requirement on packaging and labeling must be observed. For preparation of the item being shipped, consulting an expert for hazardous material is required. Please also observe possibly more detailed national regulations.

Tape or mask off open contacts and pack up the battery in such a manner that it cannot move around in the packaging.
11. **Follow your local regulations relating to disposal of battery.**

## SAVE THESE INSTRUCTIONS.

**⚠CAUTION:** Only use genuine Makita batteries. Use of non-genuine Makita batteries, or batteries that have been altered, may result in the battery bursting causing fires, personal injury and damage. It will also void the Makita warranty for the Makita tool and charger.

## Tips for maintaining maximum battery life

1. **Charge the battery cartridge before completely discharged. Always stop tool operation and charge the battery cartridge when you notice less tool power.**
2. **Never recharge a fully charged battery cartridge. Overcharging shortens the battery service life.**
3. **Charge the battery cartridge with room temperature at 10 °C - 40 °C (50 °F - 104 °F). Let a hot battery cartridge cool down before charging it.**
4. **Charge the battery cartridge if you do not use it for a long period (more than six months).**

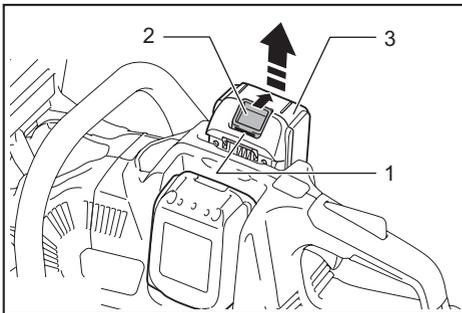
# FUNCTIONAL DESCRIPTION

**CAUTION:** Always be sure that the tool is switched off and the battery cartridge is removed before adjusting or checking function on the tool.

## Installing or removing battery cartridge

**CAUTION:** Always switch off the tool before installing or removing of the battery cartridge.

**CAUTION:** Hold the tool and the battery cartridge firmly when installing or removing battery cartridge. Failure to hold the tool and the battery cartridge firmly may cause them to slip off your hands and result in damage to the tool and battery cartridge and a personal injury.



► 1. Red indicator 2. Button 3. Battery cartridge

To remove the battery cartridge, slide it from the tool while sliding the button on the front of the cartridge.

To install the battery cartridge, align the tongue on the battery cartridge with the groove in the housing and slip it into place. Insert it all the way until it locks in place with a little click. If you can see the red indicator on the upper side of the button, it is not locked completely.

**CAUTION:** Always install the battery cartridge fully until the red indicator cannot be seen. If not, it may accidentally fall out of the tool, causing injury to you or someone around you.

**CAUTION:** Do not install the battery cartridge forcibly. If the cartridge does not slide in easily, it is not being inserted correctly.

**NOTE:** The tool does not work with only one battery cartridge.

**NOTE:** Pay attention to the position of your fingers when installing the battery. The button will be depressed unintentionally.

## Tool / battery protection system

The tool is equipped with a tool/battery protection system. This system automatically cuts off power to the motor to extend tool and battery life. The tool will automatically stop during operation if the tool or battery is placed under one of the following conditions.

### Overload protection

When the tool is operated in a manner that causes it to draw an abnormally high current, the tool automatically stops and the main power lamp will blink. In this situation, turn the tool off and stop the application that caused the tool to become overloaded. Then turn the tool on to restart.

### Overheat protection

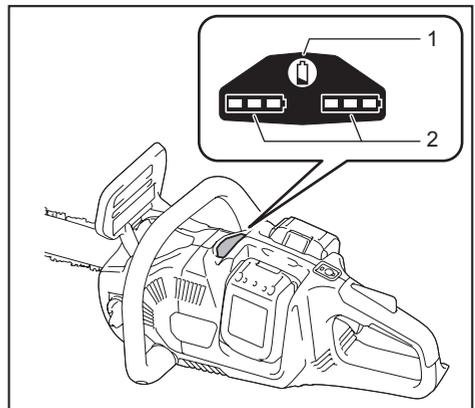
When the tool is overheated, the tool automatically stops and the capacity indicator lamp will blink as illustrated. In this situation, let the tool cool down before turning the tool on again.

Capacity indicator status			Status
 On	 Off	 Blinking	
			Overheated.

### Overdischarge protection

When the battery capacity becomes low, the tool stops automatically. If the product does not operate even when the switches are operated, remove the batteries from the tool and charge the batteries.

## Indicating the remaining battery capacity



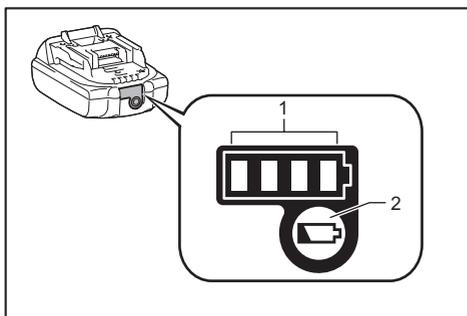
► 1. Check button 2. Capacity indicator

The remaining battery capacity is shown while you are pressing the check button. The capacity indicators correspond to each battery.

Capacity indicator status			Remaining battery capacity
On	Off	Blinking	
			50% to 100%
			20% to 50%
			0% to 20%
			Charge the battery

## Indicating the remaining battery capacity

Only for battery cartridges with the indicator



► 1. Indicator lamps 2. Check button

Press the check button on the battery cartridge to indicate the remaining battery capacity. The indicator lamps light up for few seconds.

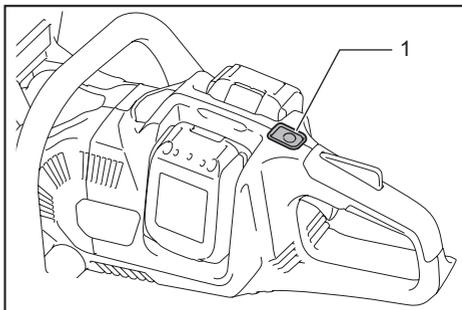
Indicator lamps			Remaining capacity
Lighted	Off	Blinking	
			75% to 100%
			50% to 75%
			25% to 50%
			0% to 25%
			Charge the battery.
			The battery may have malfunctioned.

**NOTE:** Depending on the conditions of use and the ambient temperature, the indication may differ slightly from the actual capacity.

## Main power switch

**⚠ WARNING:** Always turn off the main power switch when not in use.

To stand by the chain saw, press the main power switch until the main power lamp lights up. To turn off, press the main power switch again.



► 1. Main power switch

**NOTE:** The main power lamp blinks if the switch trigger is pulled under unoperable conditions. The lamp blinks if you

- turn on the main power switch while holding down the lock-off lever and the switch trigger;
- pull the switch trigger while the chain brake is applied;
- release the chain brake while holding down the lock-off lever and pulling the switch trigger.

**NOTE:** This chain saw employs the auto power-off function. To avoid unintentional start up, the main power switch will automatically shut down when the switch trigger is not pulled for a certain period after the main power switch is turned on.

## Switch action

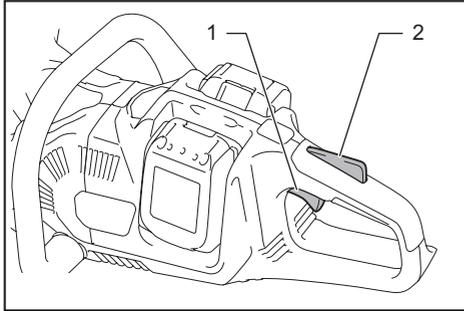
**⚠ WARNING:** For your safety, this tool is equipped with lock-off lever which prevents the tool from unintended starting. **NEVER** use the tool if it runs when you simply pull the switch trigger without pressing the lock-off lever. Return the tool to our authorized service center for proper repairs **BEFORE** further usage.

**⚠ WARNING:** **NEVER** tape down or defeat purpose and function of lock-off lever.

**⚠ CAUTION:** Before installing the battery cartridge into the tool, always check to see that the switch trigger actuates properly and returns to the "OFF" position when released.

**NOTICE:** Do not pull the switch trigger hard without pressing the lock-off lever. This can cause switch breakage.

To prevent the switch trigger from being accidentally pulled, a lock-off lever is provided. To start the tool, depress the lock-off lever and pull the switch trigger. Release the switch trigger to stop.



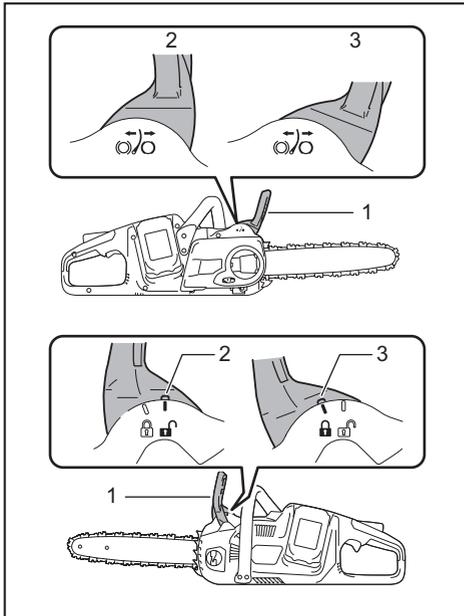
► 1. Switch trigger 2. Lock-off lever

## Checking the chain brake

**CAUTION:** Hold the chain saw with both hands when switching it on. Hold the rear handle with your right hand, the front handle with your left. The bar and the chain must not be in contact with any object.

**CAUTION:** Should the saw chain not stop immediately when this test is performed, the saw may not be used under any circumstances. Consult our authorized service center.

1. Press the lock-off lever, then pull the switch trigger. The saw chain starts immediately.
2. Push the front hand guard forwards with the back of your hand. Make sure that the chain saw comes to an immediate standstill.



► 1. Front hand guard 2. Unlocked position 3. Locked position

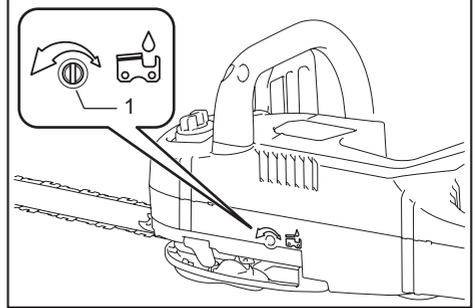
## Checking the run-down brake

**CAUTION:** If the saw chain does not stop within one second in this test, stop using the chain saw and consult our authorized service center.

Run the chain saw then release the switch trigger completely. The saw chain must come to a standstill within one second.

## Adjusting the chain lubrication

You can adjust the oil pump feed rate with the adjusting screw. The amount of oil can be adjusted using the universal wrench.



► 1. Adjusting screw

## ASSEMBLY

**CAUTION:** Always be sure that the tool is switched off and the battery cartridge is removed before carrying out any work on the tool.

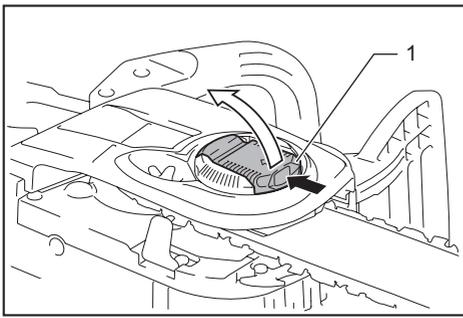
**CAUTION:** Do not touch the saw chain with bare hands. Always wear gloves when handling the saw chain.

## Removing or installing saw chain

**CAUTION:** The saw chain and the guide bar are still hot just after the operation. Let them cool down enough before carrying out any work on the tool.

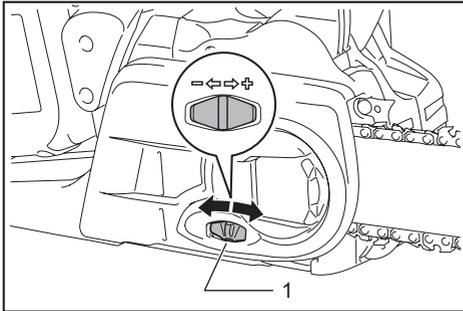
To remove the saw chain, perform the following steps:

1. Pull the lever up while pressing its edge.



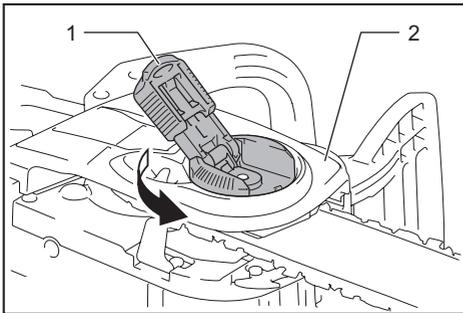
► 1. Lever

- Turn the adjusting dial to "-" direction to release the saw chain tension.



► 1. Adjusting dial

- Turn the lever counterclockwise until the sprocket cover comes off.

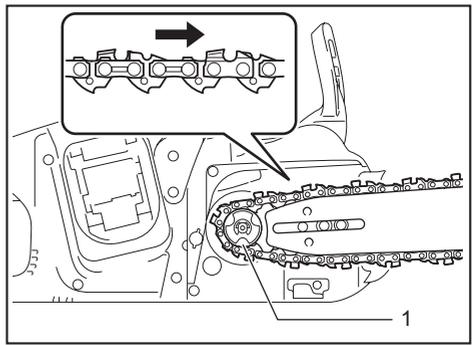


► 1. Lever 2. Sprocket cover

- Remove the sprocket cover then remove the saw chain and guide bar from the chain saw body.

To install the saw chain, perform the following steps:

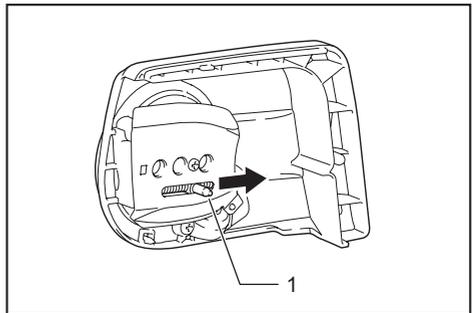
- Make sure the direction of the chain. The arrow mark on the chain shows the direction of the chain.
- Fit in one end of the saw chain on the top of the guide bar and the other end around the sprocket.



► 1. Sprocket

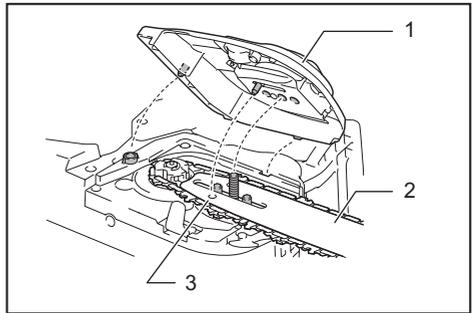
- Rest the guide bar in place on the chain saw.

- Turn the adjusting dial to "-" direction to slide the adjusting pin in the direction of arrow.



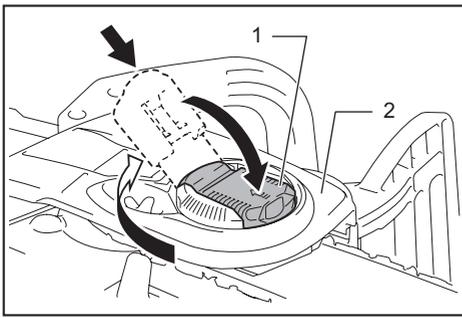
► 1. Adjusting pin

- Place the sprocket cover on the chain saw so that the adjusting pin is positioned in a small hole on the guide bar.

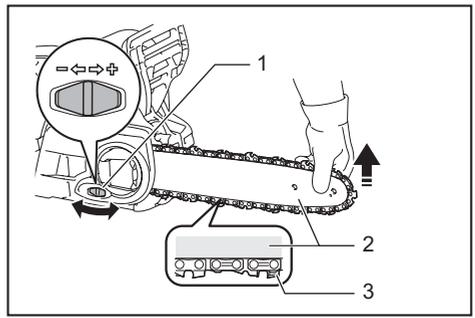


► 1. Sprocket cover 2. Guide bar 3. Hole

- Turn the lever clockwise fully and a quarter turn back to keep looseness for adjusting the chain tension.
- Turn the adjusting dial to adjust the chain tension.
- Turn the lever clockwise until the sprocket cover is secured then return it to the original position.



► 1. Lever 2. Sprocket cover



► 1. Adjusting dial 2. Guide bar 3. Saw chain

## Adjusting saw chain tension

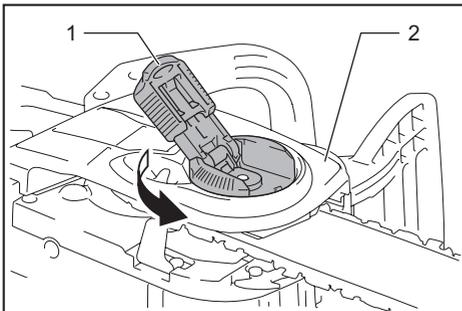
**⚠ CAUTION:** Carry out the procedure of installing or removing saw chain in a clean place free from sawdust and the like.

**⚠ CAUTION:** Do not tighten the saw chain too much. Excessively high tension of saw chain may cause breakage of saw chain, wear of the guide bar and breakage of the adjusting dial.

**⚠ CAUTION:** A chain which is too loose can jump off the bar and it may cause an injury accident.

The saw chain may become loose after many hours of use. From time to time check the saw chain tension before use.

1. Press and fully open the lever until it clicks. Turn it counterclockwise a little to loosen sprocket cover lightly.

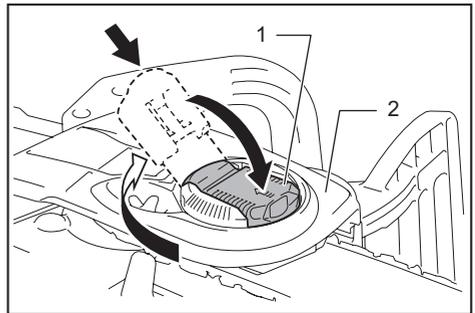


► 1. Lever 2. Sprocket cover

2. Lift up the guide bar tip slightly and adjust the chain tension. Turn the adjusting dial to the "-" direction to loosen, turn to the "+" direction to tighten. Tighten the saw chain until the lower side of the saw chain fits in the guide bar rail as illustrated.

3. Keep holding the guide bar lightly and tighten the sprocket cover. Make sure that the saw chain does not loose at the lower side.

4. Return the lever to the original position.



► 1. Lever 2. Sprocket cover

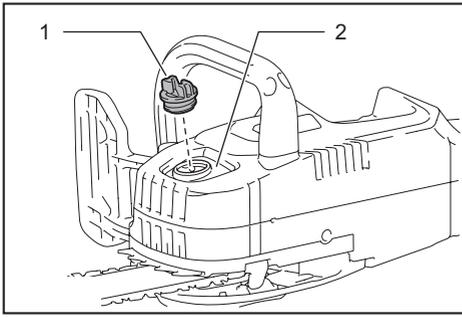
Make sure the saw chain fits snugly against the lower side of the bar.

## OPERATION

### Lubrication

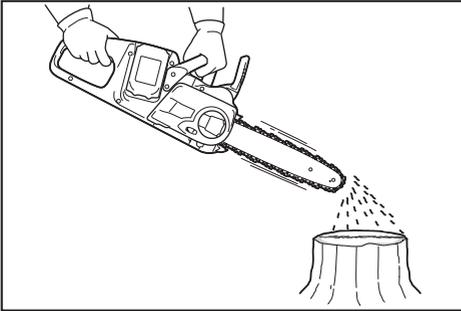
Saw chain is automatically lubricated when the tool is in operation. Check the amount of remaining oil in the oil tank periodically.

To refill the tank, lay the chain saw on its side and remove the oil tank cap. The proper amount of oil is 200 ml. After refilling the tank, make sure that the oil tank cap is tightened securely.



► 1. Oil tank cap 2. Oil tank (translucent)

After refilling, hold the chain saw away from the tree. Start it and wait until lubrication on saw chain is adequate.



**NOTICE:** When filling the chain oil for the first time, or refilling the tank after it has been completely emptied, add oil up to the bottom edge of the filler neck. The oil delivery may otherwise be impaired.

**NOTICE:** Use the saw chain oil exclusively for Makita chain saws or equivalent oil available in the market.

**NOTICE:** Never use oil including dust and particles or volatile oil.

**NOTICE:** When pruning trees, use botanical oil. Mineral oil may harm trees.

**NOTICE:** Before the cutting operation, make sure that the provided oil tank cap is screwed in place.

## WORKING WITH THE CHAIN SAW

**CAUTION:** The first time user should, as a minimum practice, do cutting logs on a saw-horse or cradle.

**CAUTION:** When sawing precut timber, use a safe support (saw horse or cradle). Do not steady the workpiece with your foot, and do not allow anyone else to hold or steady it.

**CAUTION:** Secure round pieces against rotation.

**CAUTION:** Keep all parts of the body away from the saw chain when the motor is operating.

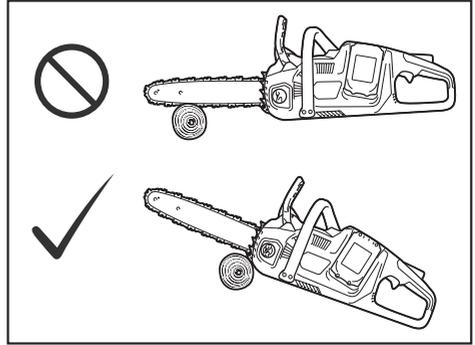
**CAUTION:** Hold the chain saw firmly with both hands when the motor is running.

**CAUTION:** Do not overreach. Keep proper footing and balance at all times.

**NOTICE:** Never toss or drop the tool.

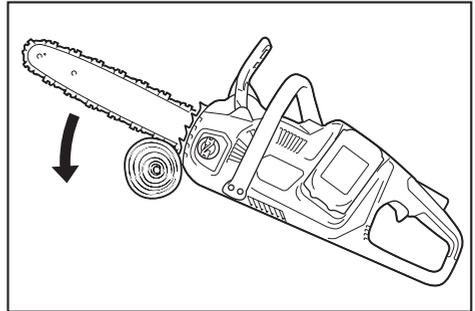
**NOTICE:** Do not cover the vents of the tool.

Bring the bottom edge of the chain saw body into contact with the branch to be cut before switching on. Otherwise it may cause the guide bar to wobble, resulting in injury to operator. Saw the wood to be cut by just moving it down by using the weight of the chain saw.



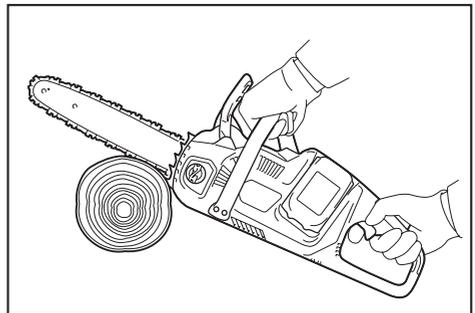
If you cannot cut the timber right through with a single stroke:

Apply light pressure to the handle and continue sawing and draw the chain saw back a little; then apply the spike bumper a little lower and finish the cut by raising the handle.



## Bucking

1. Rest the bottom edge of the chain saw body on the wood to be cut.

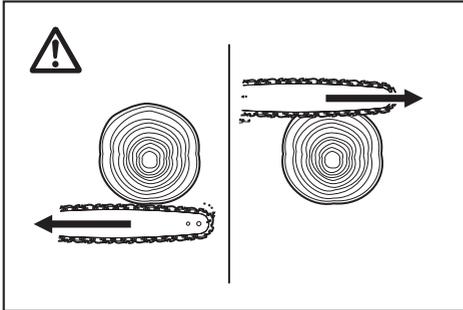


2. With the saw chain running, saw into the wood while using the rear handle to raise the saw and the front one to guide it. Use the spike bumper as a pivot.

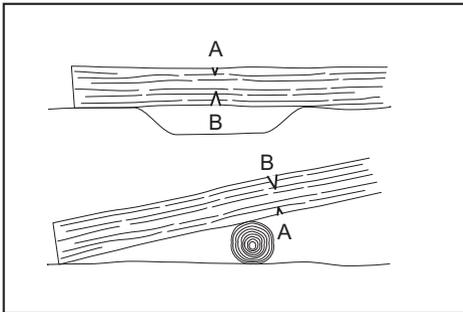
3. Continue the cut by applying slight pressure to the front handle, easing the saw back slightly. Move the spike bumper further down the timber and raise the front handle again.

**NOTICE:** When making several cuts, switch the chain saw off between cuts.

**CAUTION:** If the upper edge of the bar is used for cutting, the chain saw may be deflected in your direction if the chain becomes trapped. For this reason, cut with the lower edge, so that the saw will be deflected away from your body.



When you cut a wood under tension, cut the pressured side (A) first. Then make the final cut from the tensioned side (B). This prevents the bar from becoming trapped.



## Limbing

**CAUTION:** Limbing may only be performed by trained persons. A hazard is presented by the risk of kickback.

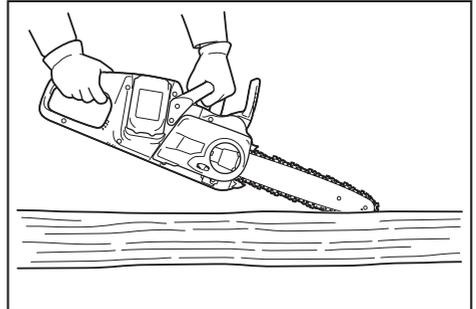
When limbing, support the chain saw on the trunk if possible. Do not cut with the tip of the bar, as this presents a risk of kickback.

Pay particular attention to branches under tension. Do not cut unsupported branches from below. Do not stand on the felled trunk when limbing.

## Burrowing and parallel-to-grain cuts

**CAUTION:** Burrowing and parallel-to-grain cuts may only be carried out by persons with special training. The possibility of kickback presents a risk of injury.

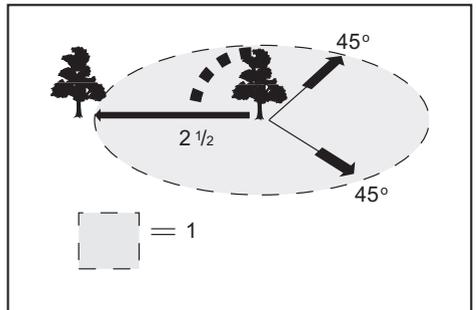
Perform parallel-to-grain cuts at as shallow an angle as possible. Take an extra caution when carrying out the cut as the spike bumper cannot be used.



## Felling

**CAUTION:** Felling work may only be performed by trained persons. The work is hazardous.

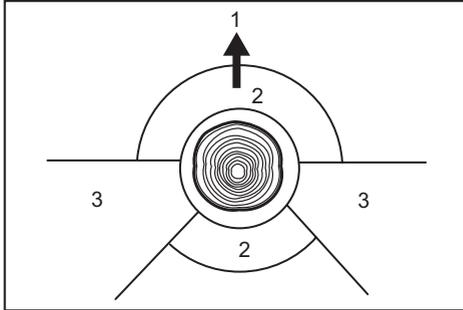
Observe local regulations if you wish to fell a tree.



► 1. Felling area

- Before starting felling work, ensure that:
  - Only persons involved in the felling operation are in the vicinity;
  - Any person involved has an unhindered path of retreat through a range of approximately 45° either side of the felling axis. Consider the additional risk of tripping over electrical cables;
  - The base of the trunk is free of foreign objects, roots and ranches;
  - No persons or objects are present over a distance of 2 1/2 tree lengths in the direction in which the tree will fall.
- Consider the following with respect to each tree:
  - Direction of lean;
  - Loose or dry branches;
  - Height of the tree;
  - Natural overhang;
  - Whether or not the tree is rotten.

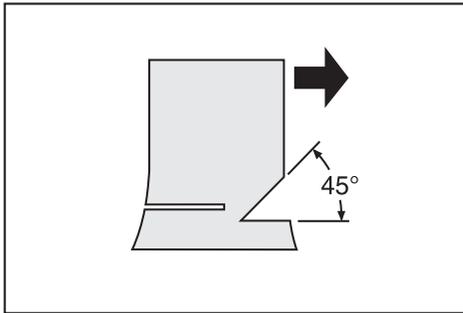
- Consider the wind speed and direction. Do not carry out felling work if the wind is gusting strongly.
- Trimming of root swellings: Begin with the largest swellings. Make the vertical cut first, then the horizontal cut.
- Stand to the side of the falling tree. Keep an area clear to the rear of the falling tree up to an angle of 45° either side of the tree axis (refer to the "felling area" figure). Pay attention to falling branches.
- An escape path should be planned and cleared as necessary before cuts are started. The escape path should extend back and diagonally to the rear of the expected line of fall as illustrated in figure.



- 1. Felling direction 2. Danger zone 3. Escape route

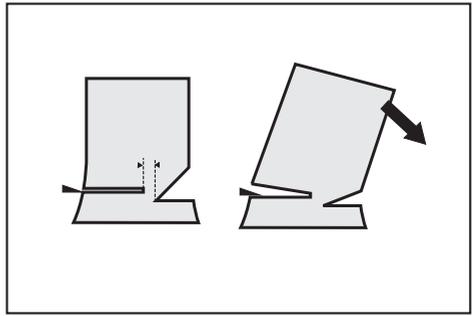
When felling trees, follow the procedures below:

1. Cut a scarf as close to the ground as possible. First make the horizontal cut to a depth of 1/5 - 1/3 of the trunk diameter. Do not make the scarf too large. Then make the diagonal cut.



**NOTE:** The scarf determines the direction in which the tree will fall, and guides it. It is made on the side towards which the tree is to fall.

2. Make the back cut a little higher than the base cut of the scarf. The back cut must be exactly horizontal. Leave approximately 1/10 of the trunk diameter between the back cut and the scarf. The wood fibers in the uncut trunk portion act as a hinge. Insert wedges into the back cut in time.

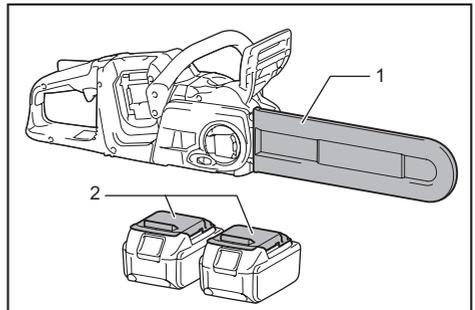


**⚠WARNING:** Do not cut right through the fibers under any circumstances. The tree will otherwise fall unchecked.

**NOTICE:** Only plastic or aluminum wedges may be used to keep the back cut open. The use of iron wedges is prohibited.

## Carrying tool

Before carrying the tool, always apply the chain brake and remove the battery cartridges from the tool. Then attach the guide bar cover. Also cover the battery cartridge with the battery cover.



- 1. Guide bar cover 2. Battery cover

## MAINTENANCE

**⚠CAUTION:** Always be sure that the tool is switched off and the battery cartridge is removed before attempting to perform inspection or maintenance.

**⚠CAUTION:** Always wear gloves when performing any inspection or maintenance.

**NOTICE:** Never use gasoline, benzene, thinner, alcohol or the like. Discoloration, deformation or cracks may result.