



LS 2441 SDS

GB Original operating instructions
Electric chainsaw

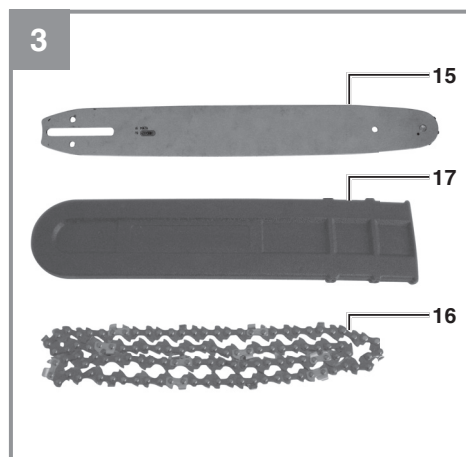
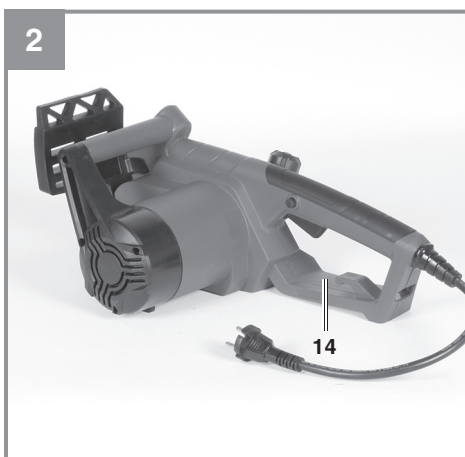
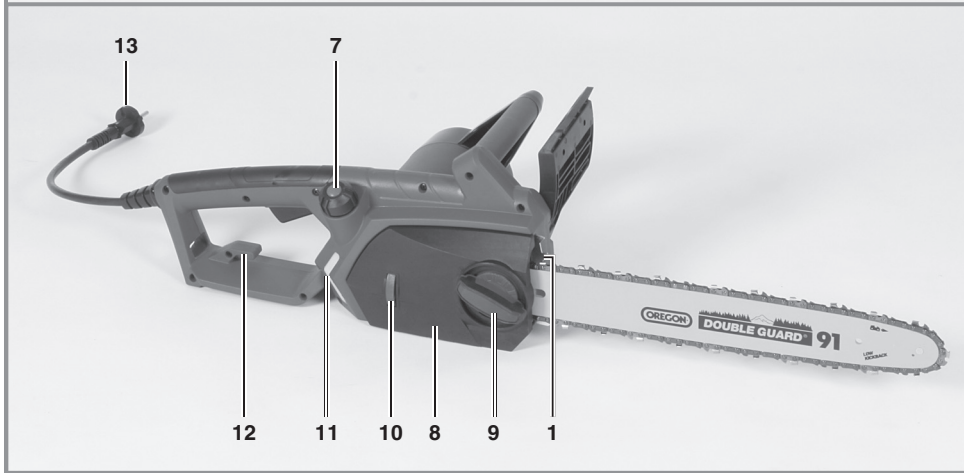
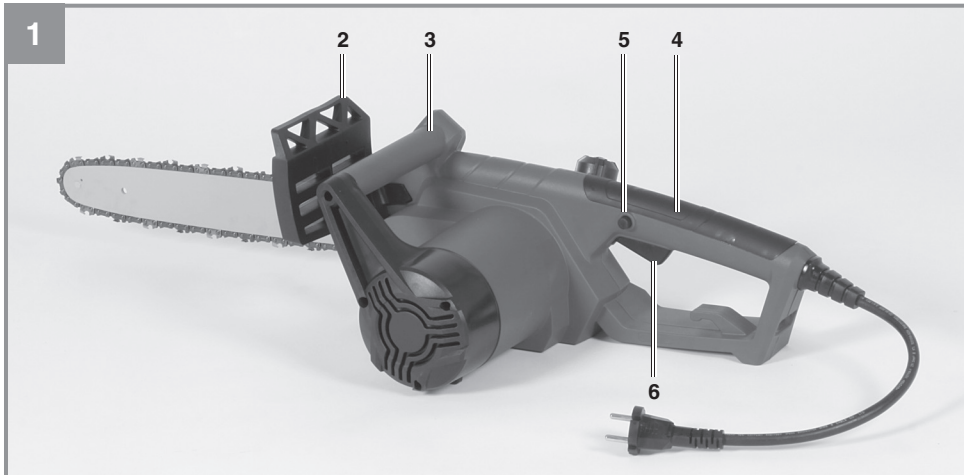
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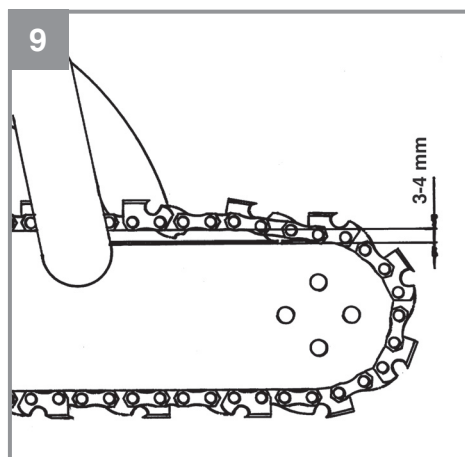
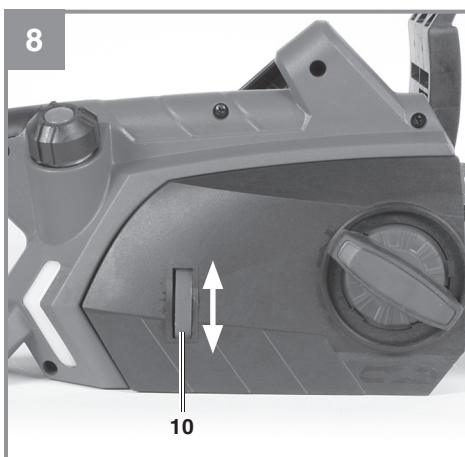
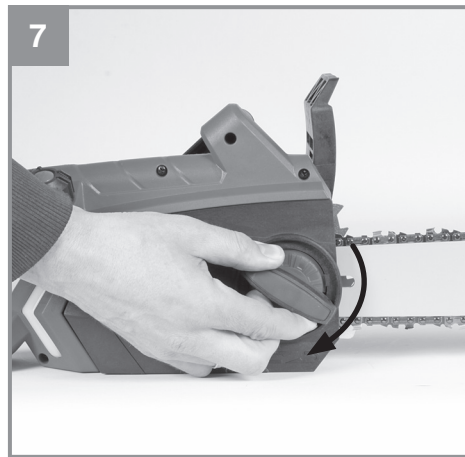
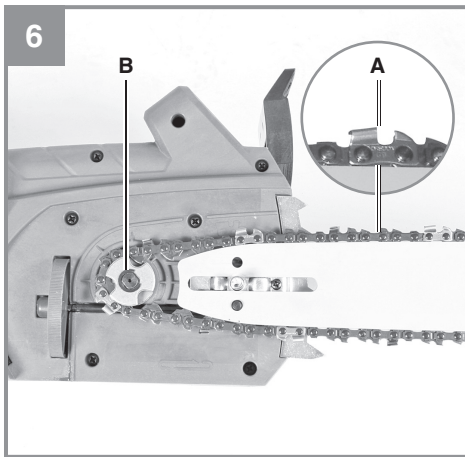
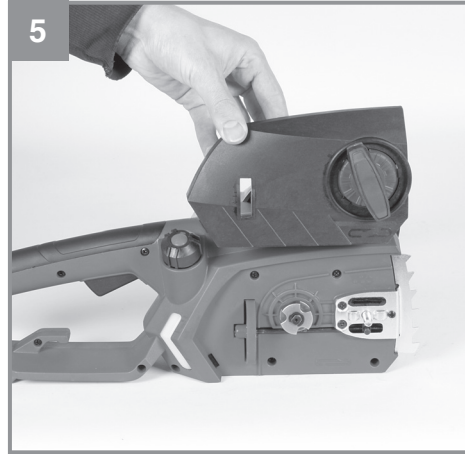


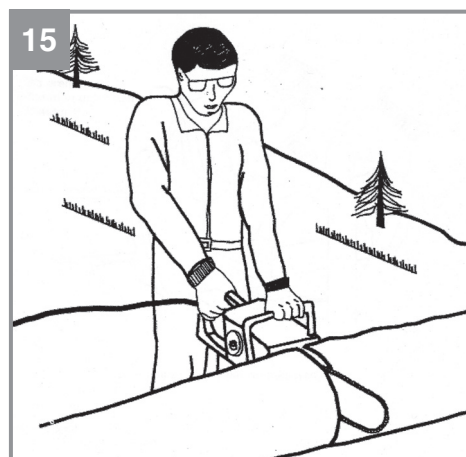
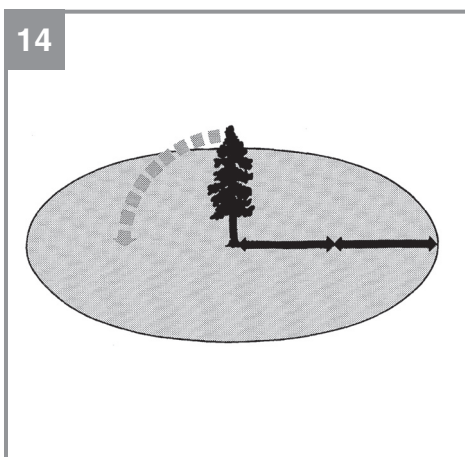
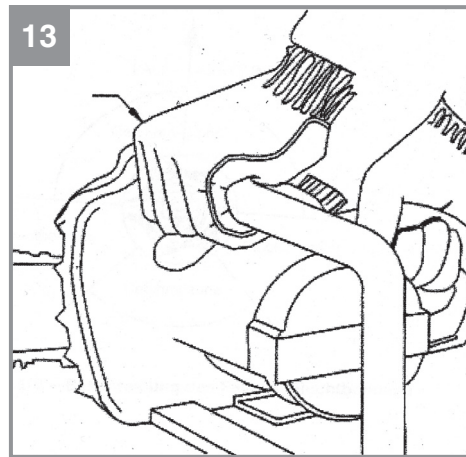
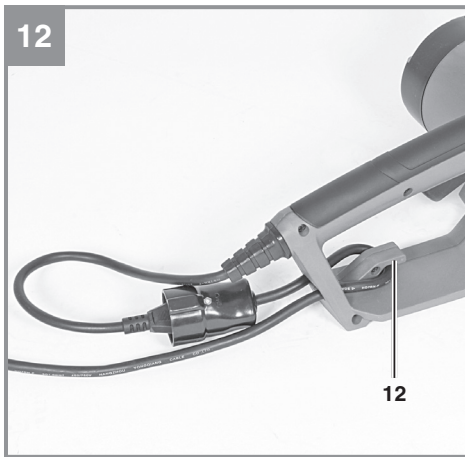
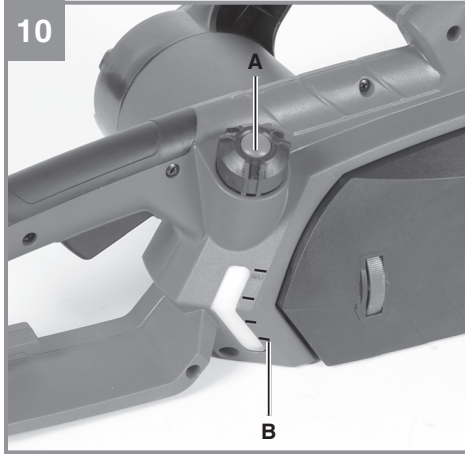
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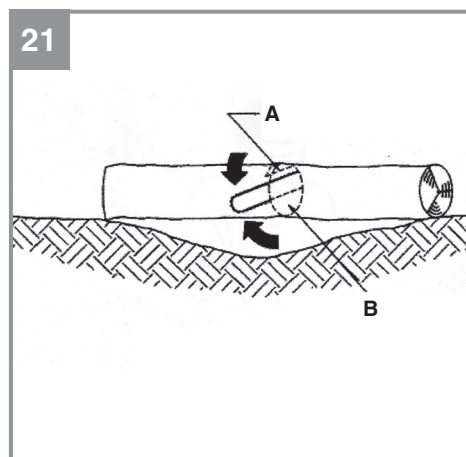
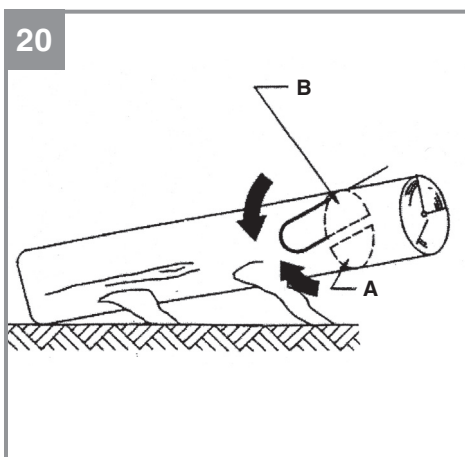
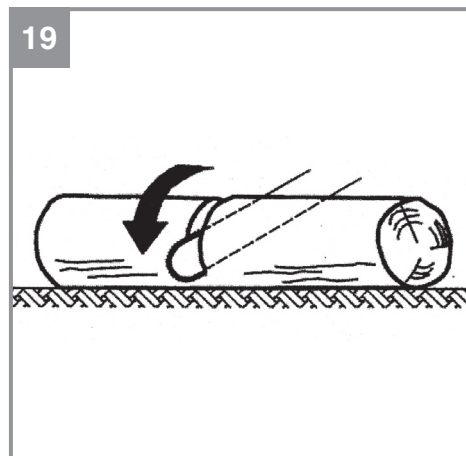
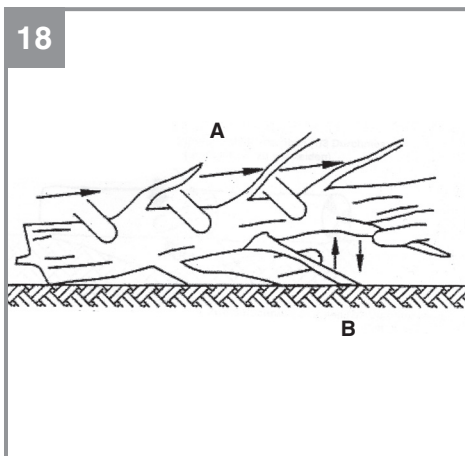
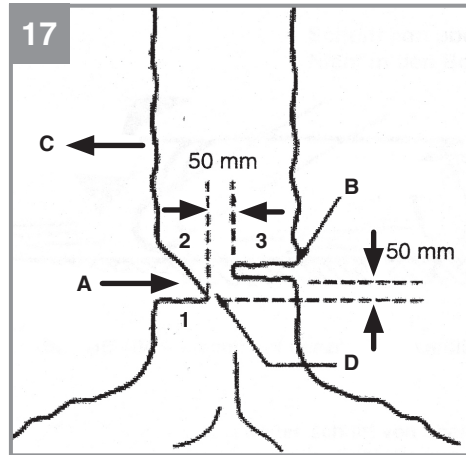
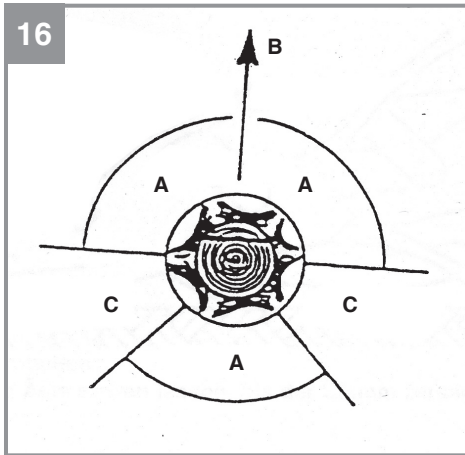
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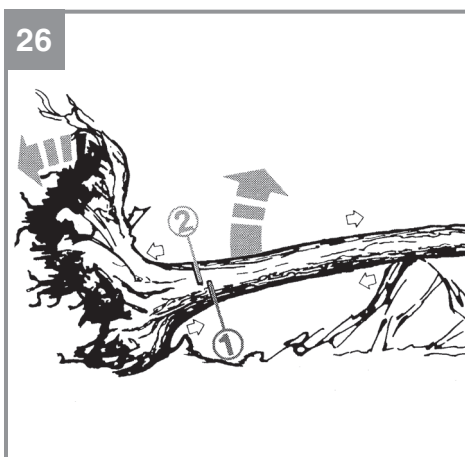
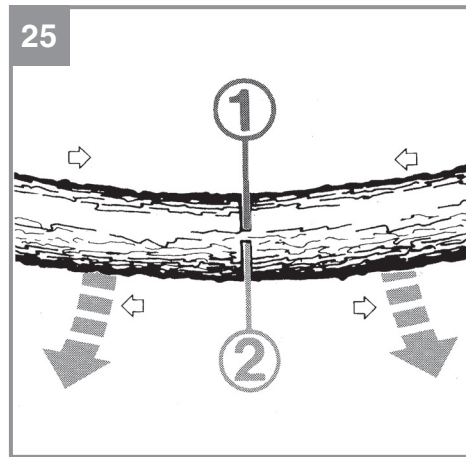
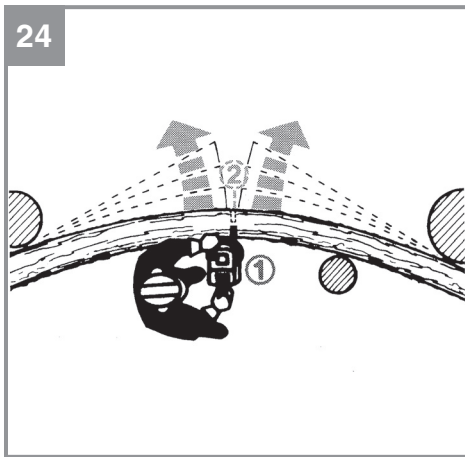
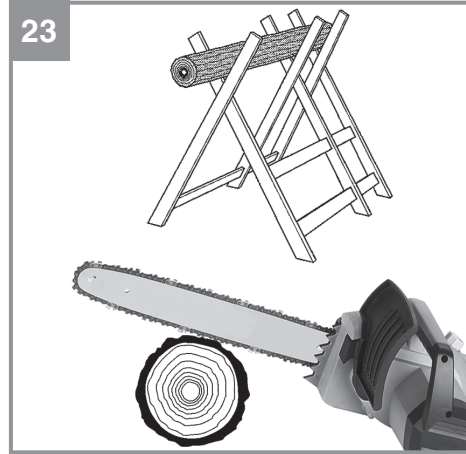
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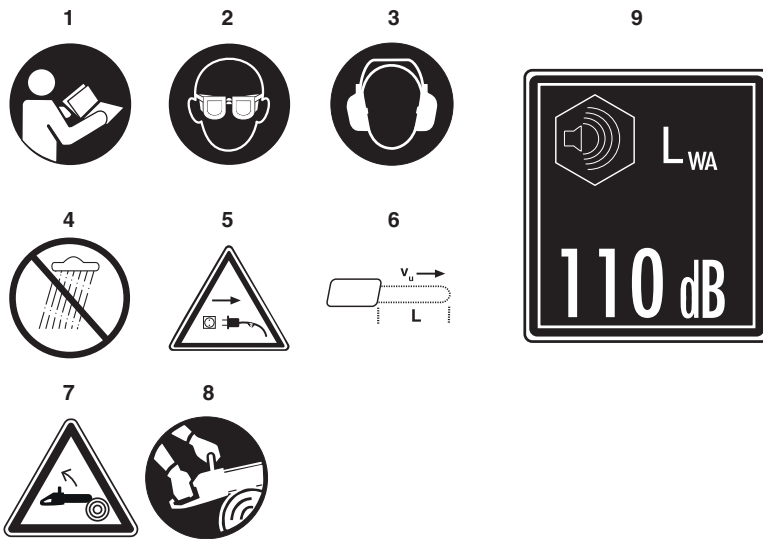








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Danger!

When using the equipment, a few safety precautions must be observed to avoid injuries and damage. Please read the complete operating instructions and safety regulations with due care. Keep this manual in a safe place, so that the information is available at all times. If you give the equipment to any other person, hand over these operating instructions and safety regulations as well. We cannot accept any liability for damage or accidents which arise due to a failure to follow these instructions and the safety instructions.

1. Safety regulations

General safety information for power tools

Warning!

Read all the safety information, instructions, illustrations and technical data provided on or with this power tool. Failure to adhere to the following instructions may result in electric shock, fire and/or serious injury.

Keep all the safety information and instructions in a safe place for future use.

The term „power tool“ used in the safety information and instructions refers to power tools operated from the mains power supply (with a power cable) and to battery operated power tools (without a power cable).

1. Workplace safety

- a) **Keep your work area clean and well lit.** Untidy or unlit work areas can result in accidents.
- b) **Do not use this power tool in an area where there is a risk of explosion and where there are inflammable liquids, gases or dust.** Power tools generate sparks that can ignite dust or vapors.
- c) **Keep children and other people away from the power tool while you are using it.** If you are distracted you may lose control of the power tool.

2. Electrical safety

- a) **The plug on the power tool must fit into the socket. The socket must not be modified in any way. Do not use adapter plugs together with power tools with a protective earth.** Unmodified plugs and matching sockets will reduce the risk of an electric shock.

- b) **Avoid body contact with earthed surfaces such as pipes, heating systems, stoves and refrigerators.** There is an increased risk of suffering an electric shock if your body is earthed.
- c) **Keep the power tool out of the rain and away from moisture.** The ingress of water into an electric power tool increases the risk of an electric shock.
- d) **Do not use the power cable for a purpose for which it is not designed, for example to carry the power tool, hang it up or to pull the plug out of the socket. Keep the power cable away from heat, oil, sharp edges and moving parts.** Power cables that are damaged or tangled increase the risk of an electric shock.
- e) **If you use an electric power tool outdoors, use only extension cables that are suitable for outdoor use.** The use of an extension cable which is suitable for outdoor use reduces the risk of an electric shock.
- f) **If you cannot avoid using the power tool in a damp location, use a residual current device (RCD) circuit breaker.** The use of a residual current device (RCD) circuit breaker will reduce the risk of suffering an electric shock.

3. Safety of persons

- a) **Be careful, watch what you are doing and be sensible and responsible when using an electric power tool. Never use the power tool if you are tired or under the influence of drugs, alcohol or medication.** One moment of inattention when using the electric tool can result in serious injuries.
- b) **Wear personal safety equipment and always wear safety goggles.** Wearing personal safety equipment such as dust masks, non-slip safety shoes, a helmet or ear plugs, depending on the type and application of the tool, reduces the risk of injury.
- c) **Make sure that the tool cannot start up accidentally. Ensure that the power tool is switched off before you connect it to the power supply and/or connect the battery pack, pick it up or carry it.** If you have your finger on the switch while carrying the power tool or if you connect the power tool to the power supply while it is switched on, this may cause accidents.
- d) **Remove all adjusting tools or wrenches before you switch on the power tool.** Any tool or wrench in a rotating part of the power

tool could cause injuries.

- e) **Avoid abnormal working postures. Make sure you stand squarely and keep your balance at all times.** This will enable you to control the power tool better in unexpected situations.
- f) **Wear suitable clothes. Never wear loose fitting clothes or jewelry. Keep hair and clothing away from moving parts.** Loose clothing, jewelry or long hair can be caught by moving parts.
- g) **If dust extraction devices and dust collection devices can be fitted, they must be connected and must be used correctly.** The use of a dust extractor can reduce the dangers posed by dust.
- h) **Do not allow yourself to be lulled into a false sense of security and do not ignore the safety regulations covering electric power tools, even if you are familiar with the power tool after having used it many times.** Carelessness can lead to serious injuries in just a fraction of a second.

4. Using and handling the power tool

- a) **Do not overload your power tool. Use the correct electric tool for the job in hand.** The correct tool will enable you to work better and more safely within the specific performance range.
- b) **Do not use an electric power tool if the switch is defective.** An electric power tool that cannot be switched on or off is dangerous and must be repaired.
- c) **Pull the plug out of the socket and/or remove the removable battery pack before making any adjustments to the tool, changing plug-in tool parts or putting the power tool down.** These precautions will prevent the power tool starting accidentally.
- d) **Keep unused electric tools out of the reach of children. Do not allow people who are not familiar with the power tool or who have not read these instructions to use the power tool.** Electric tools are dangerous if they are used by inexperienced people.
- e) **Look after power tools and plug-in tools with care. Check that moving parts function correctly and do not jam, and whether any parts are broken or damaged such that they adversely affect the function of the power tool. Have damaged parts repaired before you use the power**

tool. Many accidents are caused by poorly maintained electric tools.

- f) **Keep cutting tools sharp and clean.** Carefully maintained cutting tools with sharp cutting edges will jam less and are easier to control.
- g) **Use the power tool, plug-in tools, etc. as set out in these instructions. Take account of the conditions in your work area and the job in hand.** Using electric tools for purposes other than the one for which they are designed can result in dangerous situations.
- h) **Keep the handles and grip surfaces dry, clean and free from oil and grease.** If the handles and grip surfaces are slippery, it will not be possible to operate and control the power tool safely in unforeseen situations.

5. Service

- a) **Have your power tool repaired only by trained personnel using only genuine spare parts.** This will ensure that your power tool remains safe to use.

Special safety instructions for chainsaws

- **When the chainsaw is running make sure that you keep all parts of your body away from the chainsaw. Before starting up the chainsaw make sure that it is not touching anything.** When you are working with a chainsaw, a single moment of carelessness is all it takes for clothing or parts of your body to get caught by the chainsaw.
- **Always hold the chainsaw securely with your right hand on the rear handle and your left hand on the front handle.** Holding the chainsaw with your hands the other way round as your working position increases the risk of injury and is therefore not allowed.
- **Hold the chainsaw only by the insulated grip surfaces because the saw chain might hit concealed power cables or the tool's own power cable.** Contact between the saw chain and a live cable can also make the tool's metal parts live and result in an electric shock.
- **Wear eye protection. Other safety equipment for your hearing, head, hands, legs and feet is recommended.** Correct protective clothing reduces the risk of injury caused by catapulted chips or in the event of accidental contact with the chainsaw.
- **Never use the chainsaw up a tree or ladder or on a roof or an instable standing**

surface. You risk injuring yourself if you use it in such a way.

- **Always maintain a steady standing position and only use the chainsaw when you are standing on firm, safe and flat ground.** A slippery or instable surface can cause you to lose your balance or control over the chainsaw.
- **When cutting through a branch which is under tension, take into account how it will spring back once the cut has been made.** Once the tension in the wood fibers is released, the tensioned branch could hit the operator and/or seize control of the chainsaw.
- **Take special care when cutting undergrowth and young trees.** The thin material can become caught in the saw chain and whip back towards you or make you lose your balance.
- **Carry the chainsaw by the front handle with the chainsaw switched off and the chain facing away from the body. Always fit the protective cover when transporting the chainsaw or putting it into storage.** Careful handling of the chainsaw reduces the likelihood of accidental contact with the saw chain while it is running.
- **Follow the instructions for lubrication, chain tension and replacement of the guide rail and chain.** A chain which is not properly tensioned or lubricated can either break or increase the risk of kickback.
- **Keep the handles dry, clean and free from oil and grease.** Greasy or oily handles are slippery and will result in loss of control.
- **Saw only wood. Do not use the chainsaw to perform any work for which it is not intended. Example: Do not use the chainsaw to cut metal, plastic, brickwork or building materials which are not made of wood.** Use of the chainsaw to perform any work other than that for which it is intended can create dangerous situations.
- **Do not attempt to fell a tree unless you have a clear understanding of the risks involved and how to avoid them.** The user or other persons could be seriously injured by a falling tree.

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.

More important information:

- Use an earth-leakage circuit breaker with a trip current of 30 mA or less.
- Position the power cable such that it cannot be caught by branches or the like during sawing.
- We recommend that first-time users should at least practice cutting roundwood (logs) on a sawing trestle or similar.
- Do not use the chainsaw without lubrication and top it up in good time before the tank is empty.
- Use only recommended lubricants.

Residual risks

Even if you use this electric power tool in accordance to instructions, certain residual risks cannot be eliminated. The following hazards may arise in connection with the equipment's construction and layout:

- Cut injuries if no safety clothing is used.
- Lung damage if no suitable protective dust mask is applied.
- Damage to hearing if no suitable ear protection is applied.
- Health damage caused by hand-arm vibrations if the equipment is used over a longer period or is not properly guided and maintained.

Warning! The electric power tool generates an electromagnetic field during operation. Under certain circumstances this field may actively or passively impede medical implants. To reduce the risk of serious or fatal injuries, we recommend persons with medical implants to consult their doctor and the manufacturer of the medical implant prior to using the equipment.

Do not lose this safety information.

Explanation of the symbols on the machine (Fig. 27):

1. Read the operating instructions.
2. Wear safety goggles.
3. Wear ear protectors.
4. Never expose the device to rain.
5. If the cable is damaged or cut, disconnect the power plug from the mains immediately.
6. Maximum cutting length / chain speed
 v_c : 15 m/s
7. Kick-back might result in fatal injuries from cuts.
8. Always hold the chainsaw firmly with both hands.
9. Guaranteed sound power level

2. Layout and items supplied

2.1 Layout (Fig. 1-3)

1. Claw stop
2. Front hand guard
3. Front handle
4. Rear handle
5. Safety lock-off
6. ON/OFF switch
7. Oil tank cover

8. Chain wheel cover
9. Fixing screw for the chain wheel cover
10. Chain tensioning screw
11. Chain oil fill level indicator
12. Cable strain-relief clamp
13. Power cable
14. Rear hand guard
15. Cutter rail
16. Saw chain
17. Cutter guard

2.2 Items supplied

Please check that the article is complete as specified in the scope of delivery. If parts are missing, please contact our service center or the sales outlet where you made your purchase at the latest within 5 working days after purchasing the product and upon presentation of a valid bill of purchase. Also, refer to the warranty table in the service information at the end of the operating instructions.

- Open the packaging and take out the equipment with care.
- Remove the packaging material and any packaging and/or transportation braces (if available).
- Check to see if all items are supplied.
- Inspect the equipment and accessories for transport damage.
- If possible, please keep the packaging until the end of the guarantee period.

Danger!

The equipment and packaging material are not toys. Do not let children play with plastic bags, foils or small parts. There is a danger of swallowing or suffocating!

- Original operating instructions
- Safety instructions

3. Proper use


The chainsaw is intended for felling trees and for cutting trunks, branches, wooden beams, boards etc. and can be used for cross cuts and longitudinal cuts. It is not suitable for cutting any materials other than wood.

The equipment is to be used only for its prescribed purpose. Any other use is deemed to be a case of misuse. The user / operator and not the manufacturer will be liable for any damage or inju-

ries of any kind caused as a result of this.

Please note that our equipment has not been designed for use in commercial, trade or industrial applications. Our warranty will be voided if the machine is used in commercial, trade or industrial businesses or for equivalent purposes.

4. Technical data

Mains voltage: 220-240 V ~ 50/60 Hz
 Power rating: 2400 W
 Idling speed: 7800 rpm
 Cutter rail length: 406 mm
 Cutting length, max.: 375 mm
 Cutting speed at rated rpm: 15 m/s
 Oil tank capacity: 150 ml
 Weight with cutter rail and chain: 5,6 kg
 Protection class: II / 

Danger!

Sound and vibration

Sound and vibration values were measured in accordance with EN 62841.

L_{pA} sound pressure level 93,8 dB(A)
 K_{pA} uncertainty 3 dB
 L_{WA} sound power level 107 dB(A)
 K_{WA} uncertainty 3 dB
 L_{WA} sound power level guaranteed 110 dB(A)

Wear ear-muffs.

The impact of noise can cause damage to hearing.

Total vibration values (vector sum of three directions) determined in accordance with EN 62841-1 and EN 62841-4-1.

Front Handle under load

Vibration emission value $a_h = 3.46 \text{ m/s}^2$
 K uncertainty = 1.5 m/s^2

Rear Handle under load

Vibration emission value $a_h = 5.89 \text{ m/s}^2$
 K uncertainty = 1.5 m/s^2

- The quoted total vibration value and the quoted noise emission value were measured in accordance with standardized test procedures and can be used to compare one electric tool with another.

- The quoted total vibration value and the quoted noise emission value can also be used to make an initial assessment of exposure.

Warning:

- The vibration and noise emission levels during actual use may vary from the values quoted, depending on the way in which the electric tool is used and, in particular, on the type of workpiece being processed.
- Try to keep the exposure to vibrations and noise as low as possible. Exposure to vibrations can be reduced by wearing gloves when using the tool, for example, and by limiting the amount of operating time. All stages of the operating cycle must be considered (for example, times in which the electric tools are switched off and times in which the tool is switched on but operates without load).

Keep the noise emissions and vibrations to a minimum.

- Only use appliances which are in perfect working order.
- Service and clean the appliance regularly.
- Adapt your working style to suit the appliance.
- Do not overload the appliance.
- Have the appliance serviced whenever necessary.
- Switch the appliance off when it is not in use.
- Wear protective gloves.

5. Before starting the equipment

Before you connect the equipment to the mains supply make sure that the data on the rating plate are identical to the mains data.

Warning!

Always pull the power plug before making adjustments to the equipment.

Caution: Do not connect the chainsaw to the power supply until it has been fully assembled and the chain tension has been adjusted. Always wear protective gloves when working on the chainsaw to protect yourself against injury.

5.1 Assembly of the cutter rail and the saw chain

- Carefully unpack all parts and check that they are complete (Fig. 2-3).
- Undo the fixing screw of the chain wheel cover (Fig. 4).

- Take off the chain wheel cover (Fig. 5).
- Lay the chain as shown in the groove which runs around the cutter rail (Fig. 6/Item A).
- Insert the cutter rail and chain as shown in the mounting in the chainsaw (Fig. 6). At the same time guide the chain around the chain wheel (Fig. 6/ Item B).
- Attach the chain wheel cover and secure it with the fixing screw (Fig. 7). Caution: Do not fully tighten the fixing screw until after adjusting the chain tension (refer to point 5.2).

5.2 Tensioning the saw chain

Warning! Always disconnect the mains plug before performing any checks or adjustments. Always wear protective gloves when working on the chainsaw to protect yourself against injury.

- Undo the fixing screw of the chain wheel cover a few turns (Fig. 4).
- Adjust the chain tension with the chain tensioning screw (Fig. 8). Turning the screw clockwise increases the tension, turning it counter-clockwise decreases the chain tension. The saw chain is correctly tensioned if it can be lifted around 3-4 mm in the middle of the cutter rail (Fig. 9).
- Tighten the fixing screw of the chain wheel cover.

Danger! All of the chain links must lie properly in the guide groove of the cutter rail.

Notes on tensioning the chain:

The saw chain must be properly tensioned to ensure safe operation. You can tell that the chain tension is perfect if the saw chain can be lifted by around 3-4 mm in the middle of the cutter rail. As the saw chain heats up during cutting and thus changes in length, please check the chain tension every 10 minutes and adjust it again as required. This applies in particular to new saw chains. When you have finished working slacken the chain again, as the chain will shorten when it cools down. This will prevent the chain from being damaged.

5.3 Saw chain lubrication

Warning! Always disconnect the mains plug before performing any checks or adjustments. Always wear protective gloves when working on the chainsaw to protect yourself against injury.

Notice! Never operate the chain if it is not lubricated with saw chain oil. Use of the chainsaw without saw chain oil or if the oil level is below the "min" mark (Fig. 10/ Item B) will damage the

chainsaw.

Notice! Be aware of the temperature conditions: different lubricants with completely different viscosities are required at different ambient temperatures. At lower temperatures you will need low viscosity oils in order to achieve a sufficient lubricating film. However, if the same low viscosity oil is used during the summer it will become even thinner due to the ambient temperatures alone, and as a result the lubricating film could break down, causing the chain to overheat and become damaged. In addition, the chain oil would burn and produce unnecessary pollutants.

Filling the oil tank:

- Place the chainsaw on a flat surface.
- Clean the area around the oil tank cover (Fig. 10/Item A) and then clean the oil tank cover.
- Fill the tank with saw chain oil. In the process, make sure that no dirt enters the tank, as this could cause the oil nozzle to become blocked.
- Close the oil tank cover.

6. Operation

6.1 Connecting to the mains supply

- Connect the power cable to a suitable extension cable. Make sure that the extension cable is designed for the power rating of the chainsaw.
- Secure the extension cable as shown in Fig. 12 to protect it against pulling forces and accidental disconnection.
- Connect the extension cable to a professionally installed safety mains outlet with ground contact.

We recommend using a cable with a bright and highly visible color, e.g. red or yellow. This will reduce the risk of accidentally damaging it with the chainsaw.

6.2 Switching on/off

Switching on

- Hold the chainsaw by the handles with both hands as shown in Fig. 13 (thumbs under the handles).
- Press and hold the safety lock-off (Fig. 1/Item 5).
- Switch on the chainsaw at the ON/OFF

switch. You can then release the safety lock-off.

Switching off

Release the ON/OFF switch (Fig. 1/Item 6).

The integrated brake will bring the running chainsaw to a standstill within a very short space of time. Always disconnect the mains plug when you stop working, even if it is only for a short time.

Warning! Always carry the saw by the front handle. If the saw is plugged in and you carry it by the rear handle (which is where the switches are located), then there is a risk that you could accidentally press the safety lock-off and the ON/OFF switch at the same time, and the chainsaw could inadvertently start up.

6.3 Safety devices

Motor brake

The motor brakes the saw chain as soon as the ON/OFF switch (Fig. 1/Item 6) is released or the power supply is interrupted. This significantly reduces the risk of injury that would otherwise be present if the chain continued to run after being switched off or disconnected.

Chain brake

The chain brake is a safety mechanism which is triggered via the front hand guard (Fig. 1/Item 2). If kickback causes the chainsaw to suddenly jerk back then the chain brake trips and stops the saw chain in less than 0.1 seconds. You must check the operation of the chain brake on a regular basis. To do this, fold the hand guard (Fig. 1/Item 2) forward and briefly switch the chainsaw on. The saw chain must not start up. Pull back the front hand guard (Fig. 1/Item 2) until it engages to release the chain brake.

Danger! Never use the saw if the safety equipment is not working properly. Never try to repair safety related protection systems yourself – always have any work done by our service department or by a similarly qualified workshop.

Hand guard

The front hand guard (which also acts as the chain brake at the same time) (Fig. 1/Item 2) and the rear hand guard (Fig. 2/Item 14) protect against finger injuries resulting from contact with the saw chain if the chain breaks because it is overloaded.

7. Working with the chainsaw

7.1 Preparations

To ensure that you can work safely, check the following points before every use:

Condition of the chain saw

Inspect the chainsaw before the start of work for damage to the housing, the power cable, the saw chain and the cutter rail. Never use a chainsaw which is obviously damaged.

Oil container

Fill level of the oil container. Even while working, keep checking that sufficient oil is in the system. To avoid damaging the chainsaw, never run the saw if there is no oil in the system or if the oil drops below the "min" mark (Fig. 10/Item B). On average, a single filling will last around 15 minutes depending on the number of pauses in cutting and the loads involved.

Saw chain

Tension of the saw chain, condition of the cutting elements. The sharper the chainsaw, the easier and more controllable it is to operate the chainsaw. The same also applies to the chain tension. Again, while working also check the chain tension every 10 minutes in order to increase your safety. New saw chains in particular often tend to expand more.

Chain brake

Check the operation of the chain brake as described in the chapter "Safety devices" and then release it.

Safety clothing

Always wear appropriate tight-fitting safety clothing like special trousers which protect against cuts, protective gloves and safety shoes.

Hearing protection and protective goggles.

When felling trees or performing forest work, always wear a protective helmet with integral face and hearing protection. This will offer protection against falling branches and any branches if they spring back.

7.2 Description of the correct procedures for basic use of the chainsaw

Felling a tree (Figs. 14-17)

If two or more persons are working at the same time on felling and cutting back then the minimum distance between the tree being felled and the tree being cut back should be at least twice the height of the tree being felled (Fig. 14). When felling trees, care must be taken to ensure that no other persons are endangered, no power supply lines are hit and no material damage is caused to equipment or property. In the event that a tree comes into contact with a power supply line, the responsible power supply company should be informed immediately.

When working with the saw on a slope, the operator of the chainsaw must be standing at a higher point on the slope than the tree being felled, as the tree will roll or slip downhill once it has been felled (Fig. 15).

Before felling the tree you must first plan and if necessary clear an escape route. This escape route must lead away diagonally in the opposite direction to the expected fall direction – this can be seen in Fig. 16 (A= danger zone, B= direction of fall, C= escape zone).

Before felling the tree you must take into account the natural inclination of the tree, the location of larger branches and the wind direction, as this will help you to correctly determine the direction in which the tree will fall.

Dirt, stones, loose bark, nails, staples and wire must be removed from the tree.

Making the felling notch (Fig. 17)

Cut a notch (A) at right angles to the fall direction to a depth of 1/3 of the tree diameter as shown in Fig. 17. First make the lower horizontal felling notch (1). This prevents the saw chain or the guide rail from becoming trapped when the second felling notch is made.

Making the felling cut (Fig. 17)

The felling cut should be positioned at least 50 mm above the horizontal felling notch. Make the felling cut (B) parallel to the horizontal felling notch. The felling cut should be cut to a depth which leaves a thin strip (felling hinge strip) (D) which can act as a hinge. This strip prevents the tree from rotating and falling in the wrong direction. Do not cut through the strip. When the felling cut gets close to the strip the tree should start to fall. If it becomes clear that the tree may well fall in a different direction to the desired fall direction (C) or it starts to lean back and traps the saw chain, interrupt the felling cut and insert wedges made of wood, plastic or aluminum to open out the cut and control the lean of the tree until it leans in the required direction.

When the tree starts to fall, remove the chainsaw from the cut, switch it off, place it on the ground and exit the danger zone via the planned escape route. Watch out for falling branches and take care not to trip.

Removing branches

Here we are talking about removing branches from the felled tree. When removing branches, leave any downward facing branches which are supporting the tree until the trunk of the tree has been cut up. Smaller branches should be removed as shown in Fig. 18 (A= cutting direction when removing branches, B= keep away from the ground! Supporting branches should be left until the trunk is cut up) in a single cut from the bottom to the top. Any branches which are under tension should be cut from the bottom to the top to prevent the saw from becoming trapped.

Cutting the tree trunk into lengths

Here we are looking at the process of cutting the felled tree into sections. Make sure you have a sure footing and distribute your body weight evenly onto both feet. If possible the trunk should be underlaid and supported with branches, beams or wedges. For easy cutting follow the simple instructions below.

If the full length of the tree trunk is evenly supported as shown in Fig. 19 then proceed by cutting from the top down. Take care not to cut into the ground in the process.

If the weight of the tree trunk is resting on one end as shown in Fig. 20, first cut through 1/3 of the trunk diameter from the underside (A) in order to prevent it from splintering. Make the second cut from the top (2/3 of the diameter) to the height of the first cut (B) (this prevents the chainsaw from being trapped).

If the weight of the tree trunk is resting on both ends as shown in Fig. 21, first cut through 1/3 of the trunk diameter from the top (A) in order to prevent it from splintering. Make the second cut from underneath (2/3 of the diameter) to the height of the first cut (B) (this prevents the chainsaw from being trapped).

When working with the saw on a slope, always position yourself at a higher point on the slope above the tree as shown in Fig. 15. In order to retain full control at the moment when the cut goes through, reduce pressure towards the end of the cut without releasing your firm grip on the handles of the chainsaw. Take care to ensure that the chainsaw does not touch the ground. After completing the cut, wait for the chain saw to come to a standstill before removing the chainsaw. Always switch off the motor of the chainsaw before moving from tree to tree.

7.3 Kickback

The term "kickback" describes what happens when the running chainsaw suddenly kicks upward and backward. Usually, this is caused by contact between the tip of the cutter rail and the workpiece or the saw chain becoming trapped. In the event of kickback, large forces occur suddenly and violently. As a result, the chainsaw usually reacts uncontrollably. This can often result in very serious injuries to the worker or persons in the vicinity. The risk of kickback is particularly great when performing cross cuts, angled cuts and longitudinal cuts, as it is not possible to use the claw stop on these cuts. You should therefore avoid these cuts as far as possible and take particular care when they are unavoidable.

The risk of kickback is at its greatest when the saw is positioned for a cut in the region of the tip of the cutter rail, as the leverage effect is greatest there (Fig. 22). It is therefore safest to position the saw flat and as close as possible to the claw stop before making the cut (Fig. 23).

Warning!

- Make sure that the chain tension is always correctly adjusted.
- Only use a chainsaw if it is in perfect working order.
- Only work with a saw chain that has been properly sharpened in accordance with the instructions.
- Never operate the saw above shoulder height.
- Never cut with the upper edge or the tip of the sword.
- Always hold the chainsaw firmly with both hands.
- Whenever possible, use the claw stop as a leverage point.

Cutting wood which is under tension

Special care is required when cutting wood which is under tension. Wood which is under tension from which it is released by cutting may in some cases react completely unpredictably and uncontrollably. In the worst case this could result in extremely severe or even fatal injuries (Fig. 24-26). This type of work must only be performed by persons who have been specially trained.

8. Replacing the power cable

Danger!

If the power cable for this equipment is damaged, it must be replaced by the manufacturer or its after-sales service or similarly trained personnel to avoid danger.

9. Cleaning, maintenance and ordering of spare parts

Danger!

- Always disconnect the mains plug before cleaning the chainsaw.
- Never immerse the unit in water or other liquids in order to clean it.
- Store the chainsaw in a safe and dry place out of the reach of children.

9.1 Cleaning

- Regularly clean the clamping mechanism by blowing it out with compressed air or cleaning it with a brush. Do not use tools for cleaning.
- Keep the handles free of grease so that you can maintain a firm grip.
- Clean the device as required with a damp

cloth and, if necessary, mild washing up liquid.

- If the chainsaw is not to be used for an extended period of time then you should remove the chain oil from the tank. Briefly immerse the saw chain and the cutter rail in an oil bath and then wrap them in oil paper.

9.2 Carbon brushes

In case of excessive sparking, have the carbon brushes checked only by a qualified electrician.

Danger! The carbon brushes should not be replaced by anyone but a qualified electrician.

9.3 Maintenance

Replacing the saw chain and cutter rail

The cutter rail needs to be replaced if

- the guide groove of the cutter rail is worn;
- the nose sprocket in the cutter rail is damaged or worn.

Proceed as described in the section "Assembly of the cutter rail and the saw chain".

Checking the automatic chain lubrication

You should check the operation of the automatic chain lubrication system on a regular basis in order to guard against overheating and the associated damage to the cutter rail and the saw chain. To do this, point the tip of the cutter rail towards a smooth surface (board, section of a cut tree) and allow the chainsaw to run.

If an increasing oil trace becomes evident during this process then the automatic chain lubrication system is working properly. If no clear oil trace is evident then please refer to the corresponding instructions in "Troubleshooting". If the information contained there still fails to remedy the situation then please contact our service department or another similarly qualified workshop.

Danger! Do not actually touch the surface with the tip of the cutter rail when performing this test. Keep a safe distance (approx. 20 cm).

Sharpening the saw chain

Effective working with the chainsaw is only possible if the saw chain is in good condition and sharp. This also reduces the risk of kickback. The saw chain can be re-sharpened by any dealer. Do not attempt to sharpen the saw chain yourself unless you have the necessary special tools and experience.

9.4 Ordering replacement parts:

Please quote the following data when ordering replacement parts:

- Type of machine
- Article number of the machine
- Identification number of the machine
- Replacement part number of the part required

10. Notes on environmental protection / disposal

The equipment is supplied in packaging to prevent it from being damaged in transit. The raw materials in this packaging can be reused or recycled. The equipment and its accessories are made of various types of material, such as metal and plastic. Never place defective equipment in your household refuse. The equipment should be taken to a suitable collection center for proper disposal. If you do not know the whereabouts of such a collection point, you should ask in your local council offices.

11. Storage

Store the equipment and accessories out of children's reach in a dark and dry place at above freezing temperature. The ideal storage temperature is between 5 and 30 °C. Store the electric tool in its original packaging.

12. Troubleshooting

Danger!

Before troubleshooting, switch off the tool and disconnect the mains plug.

The table below contains a list of fault symptoms and explains what you can do to remedy the problem if your tool fails to work properly. If the problem still persists after working through the list then please contact your nearest service workshop.

Cause	Fault	Remedy
Chainsaw does not work at all	<ul style="list-style-type: none"> - Quick stop brake has been triggered - No power supply - Defective mains outlet - Power extension cable damaged - Defective fuse 	<ul style="list-style-type: none"> - Pull the hand protection back to the normal position - Check the power supply - Try an alternative source of electrical power, replace if necessary - Check the cable and replace as required - Replace the fuse
Chainsaw operates intermittently	<ul style="list-style-type: none"> - Power cable damaged - Loose connection (external) - Loose connection (internal) - ON/OFF switch defective 	<ul style="list-style-type: none"> - Consult a specialist workshop - Consult a specialist workshop - Consult a specialist workshop - Consult a specialist workshop
Saw chain dry	<ul style="list-style-type: none"> - No oil in the tank - Oil tank cap breather blocked - Oil outlet blocked 	<ul style="list-style-type: none"> - Fill up with oil - Clean the oil tank cap - Clear the oil outlet
Chain brake does not work	<ul style="list-style-type: none"> - Problem with the switch mechanism in the front hand guard 	<ul style="list-style-type: none"> - Consult a specialist workshop
Chain/guide rail hot	<ul style="list-style-type: none"> - No oil in the tank - Oil tank cap breather blocked - Oil outlet blocked - Blunt chain 	<ul style="list-style-type: none"> - Fill up with oil - Clean the oil tank cap - Clear the oil outlet - Re-sharpen or replace the chain
Chainsaw juddering, vibrating or not sawing properly	<ul style="list-style-type: none"> - Chain tension too loose - Blunt chain - Worn chain - Saw teeth pointing in the wrong direction 	<ul style="list-style-type: none"> - Adjust the chain tension - Re-sharpen or replace the chain - Replace the chain - Reinstall the saw chain with the teeth facing in the correct direction

Service information

We have competent service partners in all countries named on the guarantee certificate whose contact details can also be found on the guarantee certificate. These partners will help you with all service requests such as repairs, spare and wearing part orders or the purchase of consumables.

Please note that the following parts of this product are subject to normal or natural wear and that the following parts are therefore also required for use as consumables.

Category	Example
Wear parts*	Cutter bar, carbon brushes
Consumables*	Saw chain
Missing parts	

* Not necessarily included in the scope of delivery!

In the event of defects or faults, please register the problem on the internet at www.isc-gmbh.info. Please ensure that you provide a precise description of the problem and answer the following questions in all cases:

- Did the equipment work at all or was it defective from the beginning?
- Did you notice anything (symptom or defect) prior to the failure?
- What malfunction does the equipment have in your opinion (main symptom)?
Describe this malfunction.

LAWN STAR (PTY) LTD.**WARRANTY CARD****LS 2441 SDS****Please read carefully**

This card is required for warranty repair claims. Please fill in this card and keep it in a safe place, stapled to the original proof of purchase. The original proof of purchase (i.e. receipt, invoice, docket, etc.) must show the original date of purchase and clearly identify the product.

WITHOUT THIS CARD AND ORIGINAL PROOF OF PURCHASE, ANY WARRANTY BECOMES NULL AND VOID.

Make:.....Serial No:.....Date of Purchase:.....
Model:.....

PURCHASER

NAME:
ADDRESS:
PHONE :

PURCHASED FROM

NAME :
ADDRESS:
PHONE:

LIMITED DOMESTIC USE WARRANTY

Lawn Star (Pty) Ltd. guarantees this unit to be free from defects in material and workmanship. If any such defect should become apparent during a period of

12 MONTHS

from the date of the original purchase, we undertake to repair this unit free of charge or replace this unit with a factory reconditioned unit at our discretion. This does not prejudice your rights in terms of the Consumer Protection Act.

Transport costs to our service centre and back to the owner, should such costs occur, will be carried by the owner of the unit.

The repaired or replaced unit will be covered by this warranty for the remainder of the original warranty period.

This warranty covers only the original purchaser of this unit.

This warranty becomes invalid if:

- the unit has been used for rental purposes;
- damage has been caused by misuse, abuse, accident or normal wear and tear;
- spares and accessories other than specified by Lawn Star are used with this unit;
- the unit has been opened, altered or otherwise tampered with;

The chain, bar, sprocket, brake wheel and coil are wearing parts and are not covered by Warranty.

PLEASE READ AND UNDERSTAND THE INSTRUCTION MANUAL BEFORE YOU OPERATE THIS UNIT.

LAWN STAR (PTY) LTD.

For service and warranty repairs please contact your nearest Service Agent listed below:

CUSTOMER CARE : 0860-LAWNSTAR

HEAD OFFICE : 98 Bofors Circle, Epping 2 South, Cape Town
PO Box 496, Parow, 7499

Tel: 021-535-5249

Fax: 021-535-4624

NAMIBIA : Tel: 061- 232-475

Fax: 061- 242-139

BOTSWANA : +267-318-6851

ZIMBABWE : +263-4-486 192/646

For more information visit: www.lawnstar.co.za



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