



OPERATOR / PARTS MANUAL

Cordless Grass and Shrub Shear

Warning! Read through the operating instructions carefully and observe the instructions contained herein. Familiarize yourself with the machine, its correct use and the safety devices by means of these operating instructions.

8510



⚠️ WARNING

CALIFORNIA Proposition 65 Warning

Battery post, terminals, wiring insulation, and related accessories contain lead and lead compounds, chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.

WASH HANDS AFTER HANDLING.

IMPORTANT MESSAGE

Thank you for purchasing this Mantis product. You have purchased a world class product, one of the best designed and built anywhere.

This machine comes with an Operator / Parts Manual. The useful life and good service you receive from this machine depends to a large extent on how well you read and understand this manual. Treat your machine properly, lubricate and adjust it as instructed, and it will give you many years of reliable service.

Your safe use of this Mantis product is one of our prime design objectives. Many safety features are built in, but we also rely on your good sense and care to achieve accident-free operation. For best protection, study the manuals thoroughly. Learn the proper operation of all controls. Observe all safety precautions. Follow all instructions and warnings completely. Do not remove or defeat any safety features. Make sure those who operate this machine are as well informed and careful in its use as you are.

Mantis designs and builds its equipment to serve many years in a safe and productive manner. For longest life, use this machine only as directed in the manuals, keep in good repair and follow safety warnings and instructions. You'll always be glad you did.

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This Operator / Parts Manual is part of the machine. Suppliers of both new and second-hand machines must take sure that this manual is provided with the machine.

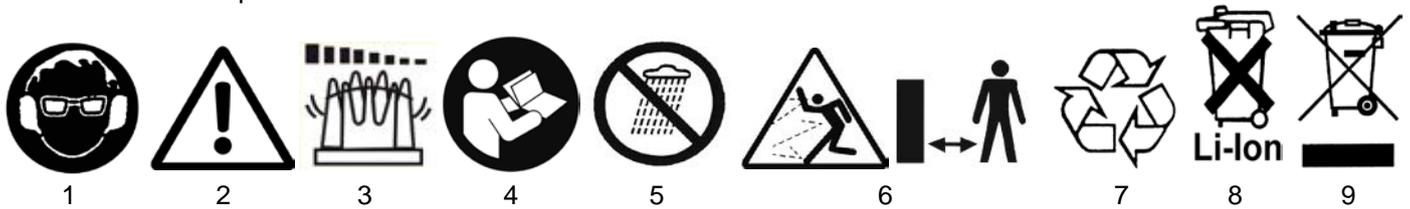
INTRODUCTION TO THE OPERATING INSTRUCTIONS

These Operating Instructions are intended to facilitate your becoming acquainted with the machine and using it in accordance with the regulations. The Operating Instructions contain important information on how to use the machine safely, correctly and economically. Observing this information will help increase the reliability and working life of the machine. The Operating Instructions must always be at hand when the machine is being used.

They must be read and observed by every person dealing with the machine, whether operating, servicing or transporting it. In addition to the Operating Instructions and the applicable rules of the prevention of accidents valid in the country of use and on site, the generally recognized rules on working safely and correctly must be observed as well as the accident prevention rules of the relevant professional associations.

SAFETY SIGNS AND INTERNATIONAL SYMBOLS

These Operating Instructions describe safety symbols and international symbols and pictographs that may be applied to the device. Read the Operating Instructions to familiarize with all information concerning safety, assembly, operation, maintenance and repair.



- 1 Use protective means for eyes and ears!
- 2 Caution! Warning symbols with information on damage and injury prevention.
- 3 The cutting tool continues to run after the device is switched off.
- 4 Attention! If you do not adhere to the instructions and safety measures described in the Operating Instructions severe injuries may occur. Read the Operating Instructions before you start and operate this device.
- 5 This electric machine must not be exposed to rain or wet conditions.
- 6 Keep third persons out of the danger zone.
- 7 Old batteries should be recycled!
- 8 Battery contains lithium ! Do not dispose of as household refuse !
- 9 Attention: Environmental Protection! This device may not be disposed of with general/household waste. Dispose of only at a designated collection point.

TECHNICAL SPECIFICATIONS

Cordless Grass and Shrub Shear	Mantis 8510
Battery voltage/operation voltage	3.6 V/DC
Battery type	1.5 Ah / 5.4Wh / lithium-ion
Operating time	approx 40 min.
Operation output	6 W
Cutting movements	1000 per min * / 2000 per min **
Cutting width *	3.15"
Cutting length **	6.30"
Cutting thickness **	0.32"

Battery charger

Voltage	120 V~ / 60 Hz
Charging voltage	3.6 V DC
Charging current	350 mA
Charging time	approx 4 hours

Technical changes are reserved.

* Grass trimmer ** Shrub trimmer

 **Attention: Noise protection! Please observe the local regulations when operating your device.**

INTENDED USE

 **Application note:**
The cordless grass and shrub shear can not and should not replace your hedge shears.

They are exclusively designed to trim and cut back ornamental shrubs and brushwood with a low wood thickness. Any other use is not deemed appropriate and the manufacturer/ supplier is not liable for damages resulting from such use.

If required, the shrub trimmer may be easily turned into a grass trimmer by replacing the assembled shearing blade with the one provided with your package.

GENERAL SAFETY INFORMATION FOR POWER TOOLS

⚠ WARNING Read all safety warnings and all instructions! Failure to follow the safety 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 battery-operated (cordless) power tool.

1) Work Area Safety

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

2) Electrical Safety

- a) **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with grounded power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
- b) **Avoid body contact with grounded surfaces, such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is grounded.
- c) **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
- d) **Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the charger. Keep cord away from heat, oil, sharp edges or moving parts.** Damaged or entangled cords increase the risk of electric shock.
- e) **If operating a power tool in a damp location is unavoidable, use a GFCI (ground fault circuit interrupt) supply.** Use of an GFCI reduces the risk of electric shock.

3) Personal Safety

- a) **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
- b) **Use personal protective equipment. Always wear eye protection.** Protective equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
- c) **Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carry-**

ing the tool. Carrying power tools with your finger on the switch or energising power tools that have the switch on invites accidents.

- d) **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
- e) **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
- f) **Dress properly. Do not wear loose clothing or jewelry. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewelry or long hair can be caught in moving parts.
- g) **If devices are provided for the connection of dust extraction and collection, ensure these are connected and properly facilities used.** Use of dust collection can reduce dust-related hazards.

4) Power Tool Use and Care

- a) **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
- b) **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
- c) **Disconnect the plug from the power source 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.
- d) **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.** Power tools are dangerous in the hands of untrained users.
- e) **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation.** If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
- f) **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
- g) **Use the power tool, accessories and tool bits etc. in accordance with these instructions, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

5) Battery Tool Use and Care

- a) **Recharge only with the charger specified by the manufacturer.** A charger that is suitable for one type of battery pack may create a risk of fire when used with another battery pack.

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

6) Service

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

Safety Instructions for Grass and Shrub Shear:

- Keep all parts of your body away from the cutting blades. Do not try to remove debris with the tool running. Do not try to hold material to be cut off with your hand. Remove debris that is stuck between the blades only with the tool being switched off! *When working with hedge trimmers even a short moment of inattentiveness may result in severe injury.*
- Carry the hedge trimmer at the handle with the cutting blades standing still. Always put on the protection cover when transporting or storing the hedge trimmer. *Careful handling reduces the risk of injury through the cutting blades.*
- Only hold the power tool on the insulated handle surfaces, because the cutting blade can come into contact with concealed power lines. *If the cutting blade comes into contact with an energized line, device parts can become energized and cause an electric shock.*
- Before starting work, search the hedge for concealed objects, e.g. wire, etc. *Pay careful attention to ensure that the cutting tool does not come into contact with wire or other metal objects.*

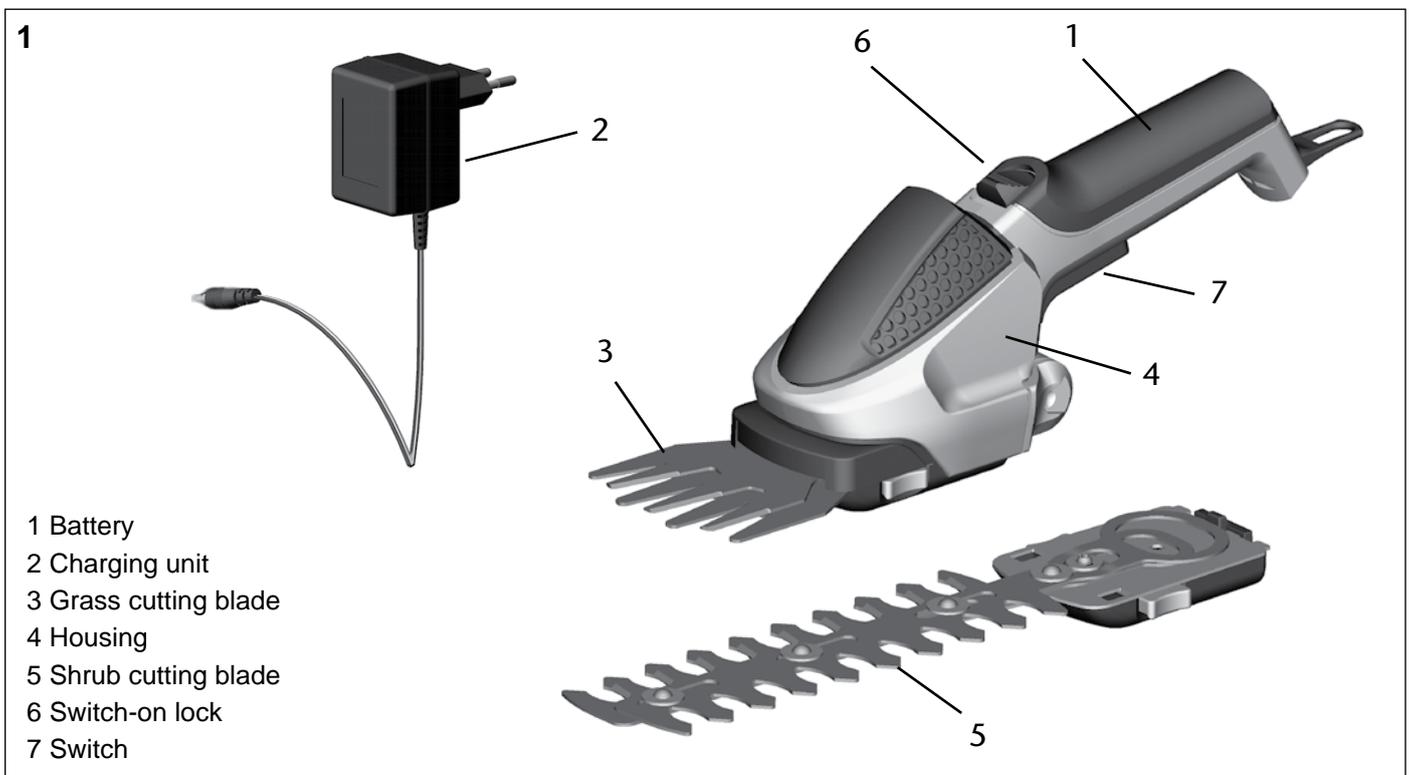
Grass Shears Safety Warning

- This appliance is not intended for use by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should not play with the appliance.
- This machine may cause serious injuries. Please read the instruction manual carefully as to the correct handling, the preparations, the maintenance and the proper use of the hedgetrimmer. Familiarize yourself with the machine before the first use and also have yourself introduced to practical use of the machine.

- The cutting tool continues to run after the device is switched off.
- Turn off power before cleaning.
- Beware! Keep your fingers away from the cutting area!
- Only switch on the device if your hands and feet are away from the cutting tools.
- Remove all debris from the working area before use and pay attention to such debris while working!
- Turn the machine off before transporting and wait until the blade stops moving. Maintenance and cleaning should be performed only when the machine is turned off.
- Children must never use this device!
- Never permit children or persons who are not familiar with the operating instructions to use this device.
- Statutory regulations can restrict the age of the operator.
- Be aware of third persons in the work area.
- Do not use the shears if other persons, children or domestic animals are nearby.
- Only use the shear in daylight or sufficiently bright artificial illumination.
- The clippers must be subjected to regular maintenance and checks. Damaged blades must be replaced as a pair. Professional repair is required if damage occurs due to impact.
- The trimmer should be regularly maintained by an accordingly authorized service point.
- Wear suitable working clothes, i.e. protective glasses, protective means for ears, non-slippery shoes and working gloves. Do not wear loose clothing which could be caught by the moving parts.
- After you finish using the clippers and before cleaning them, it is necessary to ensure that the machine cannot be accidentally turned on, such as by unlocking the switch.
- Check the cutting unit regularly for damage
- Never hold the clippers by the blades, you may run the risk of injury even when the clippers are not moving!
- Never touch moving blades in an attempt to remove debris or if the blades are blocked. Always switch off the device.
- Keep the machine away from children and store it in a safe place.
- When working with the shears, always take a stable standing position.
- Do not use shears with a damaged or excessively worn-out cutting part
- Ensure that all protective devices and handles are installed on the machine. Never try to put an incomplete machine in operation.
- Always use the protective part designed for the blade when transporting and storing the shears.
- Before starting the work, make yourself familiar with the surroundings and possible dangers which you may not hear because of the noise.

- Only use the spare sparts and accessories recommended by the manufacturer.
- Your power tool is not insulated against electric shock. To reduce the risk of electrocution, never operate this power tool in the vicinity of any wires or cables (power, etc.) which may be carrying electric current. Electricity can jump from one point to another by means of arcing. Higher voltage increases the distance electricity can arc. Electricity can also move through branches, especially if they are wet.

MAIN PARTS



BEFORE STARTING

INSTRUCTIONS FOR USE OF THE EQUIPMENT

- ⚠ Do not use the Grass and Shrub Shear in rain or for cutting wet hedges!
- ⚠ Gloves: Protective gloves must be worn when using the Grass and Shrub Shear.
- ⚠ **WARNING:** Read and understand this owner's manual before operating Grass and Shrub Shear. Make certain you read and understand all Safety Warnings of this manual. Improper use of this tool can result in severe injury or death from fire, electric shock, or body contact with moving parts.

CHARGING THE BATTERY

Safety Instructions:

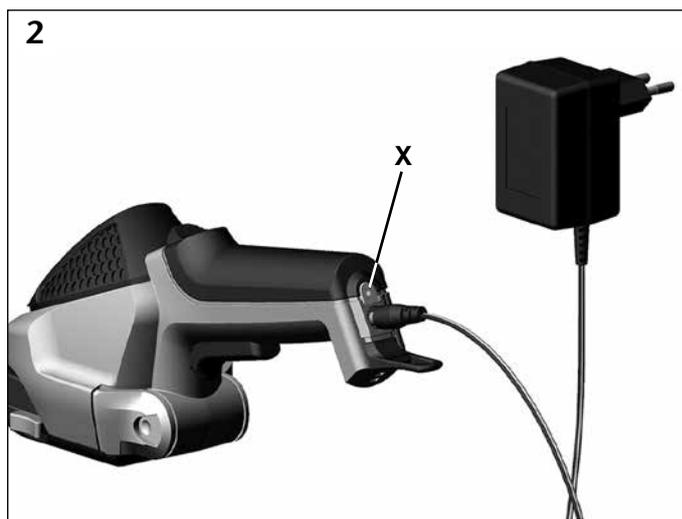
The tool is delivered with the lithium-ion battery charged. However, we recommend recharging the battery before the tool is operated for the first time.

- Use the included charging unit for charging the battery only. It is specially designed to match the tool's battery.
- Never use any other charging unit. This will result in fire and/or explosion hazard!
- Always keep the charging unit clear of rain or moisture. Hazard of electric shock!
- Never charge the battery outdoors. Only use the charger in dry areas.
- Never try to charge third-party batteries with this charging unit. This will result in fire and/or explosion hazard!
- Check the housing, plug and cable for damage before each use of the charging unit. Do not use the unit if you detect damage.
- Do not open the charging unit. In case of a defect, the charging unit must be replaced.
- The charging unit heats up during the charging process. Do not place the unit on a flammable surface or operate it in a flammable environment. Fire hazard!
- Never open the battery cells. Hazard of short circuits!
- In case of damage to the battery, hazardous vapours or fluids may escape. In case of accidental contact flush with water and seek medical advice immediately. The fluid may have irritating or caustic effects on the skin.
- Protect the battery from heat, intense insolation and fire. Explosion hazard!

Charging process:

To charge the battery connect the charging unit to an electrical socket. Then connect the plug of the charging cable to the charging socket of the grass and shrub shears or trimmer (Fig. 2)

The start of the charging process is indicated by the green control light (X) (Fig. 2) at the end of the handle. If the battery is completely empty the charging time is about 4 hours.



After the charging process has been completed, the electronic control automatically switches off the charging process. The green control light extinguishes thereby indicating the end of the charging process. It is not required to monitor the charging time.

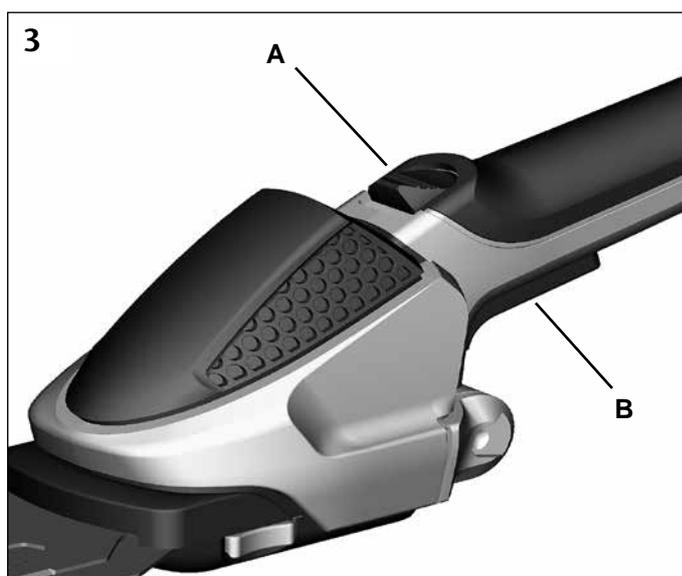
The charging unit and the handle of the tool heat up during the charging process. This is nothing unusual.

Pull the plug of the charging unit if it is not in use.

The tool must never be switched on during the charging process!

Recharge the battery every time you realise a considerable decrease of the tool's cutting performance. The battery additionally features an electronic total discharge protection that protects the battery from damage. This feature switches the battery off if the discharging threshold is reached. Do not switch the tool on afterwards and make sure to recharge the battery first.

SWITCHING THE TOOL ON/OFF



Slide the switch-on lock (A) (fig. 3) forward and push switch (B). After the tool has been switched on, you do not have to hold the switch-on lock (A) any longer.

To switch off just let go of the switch (B).

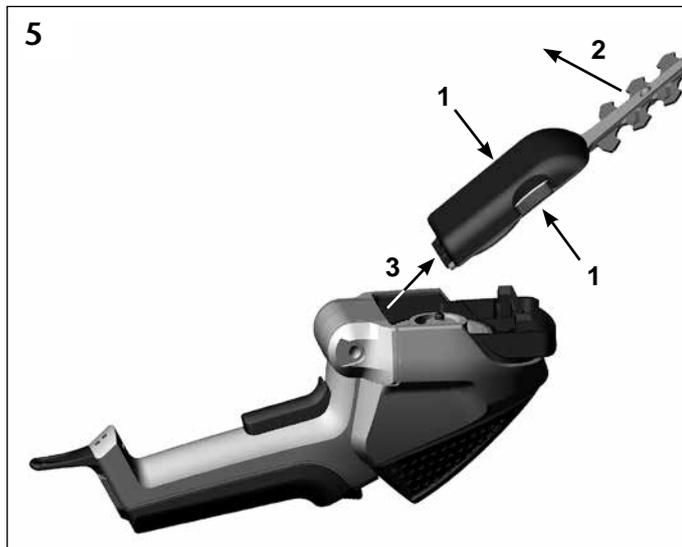
⚠ Attention! The blades will coast for a certain time after switch-off!

CHANGING THE SHEAR SYSTEMS



Put the included blade guard into the blade(s) and use protective gloves to protect yourself from injury.

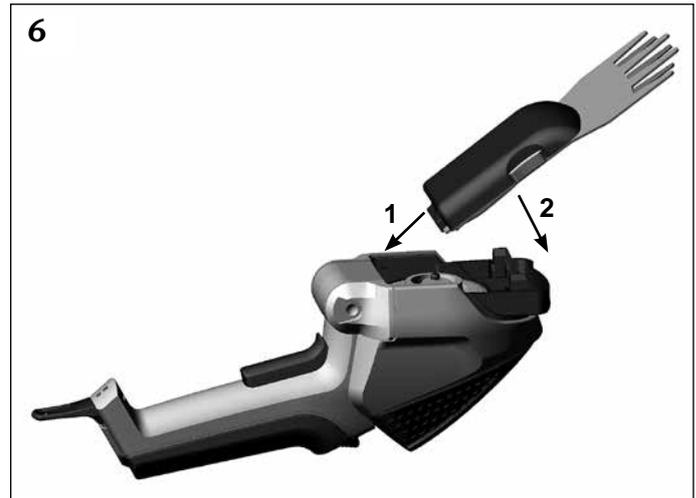
Push both lateral push buttons concurrently and remove the shearing blades (Fig. 5).



Remove any dirt from the gear area (if necessary).

Please slightly grease the drive area using commercial universal grease as described in the Maintenance section before putting the replacement shears in place (Fig. 7).

Lead the cutting blades with the rear holding toe into the housing of the grass shears as shown in (Fig. 6) and lock the click system in place by strongly pushing on the blade base plate.



The position of the eccentric drive does not have to be considered when changing the blades. When the device is switched on, the gear eccentric unit automatically engages into the appropriate relief in the shearing blade. The device is now ready for operation.

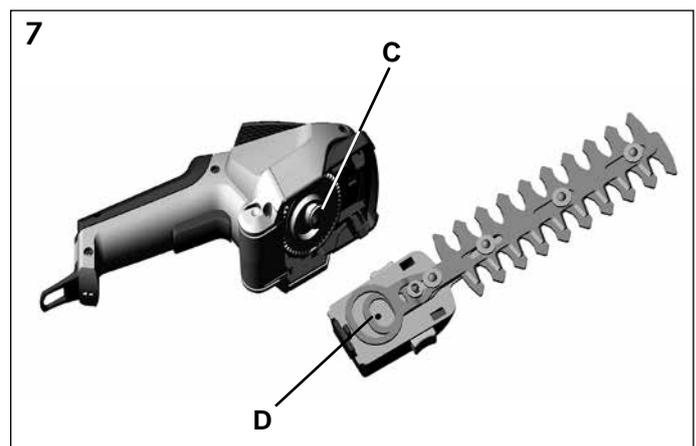
HINTS FOR YOUR WORK WITH THE TOOL

The shrub trimmer cuts ornamental shrubs and light undergrowth or bushes.

The grass shears allow for clean cuts of lawn edges or lawn areas that are difficult to access.

⚠ As the device is operated with one hand please be careful not to move the other hand near the running cutting tools.

MAINTENANCE (Fig. 7)



Clean the blade from any crushed plants and dirt. The blades should be detached at least once a season for the removal of debris. Lubricate the (C) pinion and the (D) back of the blade with a light oil. Do not lubricate the motor and other parts. Should the blade become dull after a long period of use, a spare part can be ordered.

Warning! The leading edges of the blades must be oiled to ensure proper lubrication. Use an environmentally friendly, standard oil. If the leading edges are not oiled, blade durability may be adversely affected.

If the cutting tools have become dull after long use please replace them with original spare parts.

Clean the device using only a brush or cloth. Do never wash down the device with water and do never dip the device into water.

Apply protective spray to the blades after each use.

Replace blunt blades.

Always put on the blade guard after use.

Examine the tool for obvious defects and have it repaired in an authorised service shop if required.

STORAGE

Always store the tool in a dry, clean place outside the reach of children. Make sure that the place of storage is frost-free.

ENVIRONMENTAL PROTECTION



Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling center and disposed of in a manner which is compatible with the environment.



When the rechargeable batteries are no longer required, they must be disposed of in an environmentally protective way. Run the battery completely down and then remove it from the tool.



Li-Ion

The rechargeable battery contain Lithium-ion (Li-ion). They are recyclable. Take them to your local recycling center to be disposed of properly. Do not incinerate Li-ion battery as they may explode when exposed to fire. Do not attempt to open the battery packs.



LIMITED WARRANTY

MANTIS extends this limited warranty against defects in material and workmanship for a period of two (2) years from the date of purchase by the original purchaser.

MANTIS will repair or replace, at its option, any part or parts of the product found to be defective in material or workmanship during the warranty period. Warranty repairs and replacements will be made without charge for parts or labor. All parts replaced under warranty will be considered as part of the original product, and any warranty on the replaced parts will expire coincident with the original product warranty. If you think your MANTIS ELECTRIC CHAINSAW is defective in material or workmanship, you must send it, along with your proof of purchase (sales receipt) to:

Mantis
1028 Street Road
Southampton, PA 18966

You are responsible for pickup and delivery charges; the product must be returned to us postage paid.

MANTIS assumes no responsibility in the event that the product was not assembled or used in compliance with any assembly, care, safety, or operating instructions contained in the Owner's Manual or accompanying the product. This limited warranty does not cover damages or defects due to normal wear and tear, lack of reasonable and proper maintenance, failure to follow operating instructions or owner's manual, misuse, lack of proper storage or accidents [or routine maintenance parts and service]. This limited warranty shall not be effective if your MANTIS ELECTRIC CHAINSAW has been subjected to negligence or has been repaired or altered by anyone other than an authorized dealer or authorized service center.

You must maintain your MANTIS ELECTRIC CHAINSAW by following the maintenance procedures described in the owner's manual. Such routine maintenance, whether performed by you or a dealer, is at your expense.

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