



Model: Pru-28

User Manual

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1 INTRODUCTION

1.1 Reading the Use and Maintenance Manual

Before working on the equipment, carefully read and understand this Use and Maintenance Manual in order to safeguard the operator and to avoid damaging the machine. These instructions describe how to operate the equipment safely, economically and in compliance with the current safety regulations. Following these instructions helps avoid dangerous situations, reduces repair costs and down-time and extends the life-span of the machine. This manual is to be kept legible and in good condition. The operating and maintenance staff must have it at hand, so that it can be read whenever needed.

1.2 Symbols and operators' competence levels

All operations herein described must be performed by qualified personnel and in compliance with the Manufacturer's manual. Each procedure is accompanied by an icon which indicates the necessary operator's qualification. The indication to identify the personnel qualifications are given below.



Personnel who can install, operate, adjust, clean, repair, transport the equipment and carry out its routine maintenance.



Personnel with mechanic skills, capable of installing, servicing and/or repairing the product and of operating it even when all its safety devices are partially or totally off. He cannot carry out interventions on the electric/electronic system.



Electric/electronic maintenance technicians

Personnel with specific electric/electronic skills capable of performing installation, extraordinary maintenance and/or repairs and of operating the product even when the safety and protective systems are partially or fully disabled. This person is not qualified to perform mechanical interventions.

AUTHORISED SERVICE POINTS

These are the centres authorised by the Manufacturer to repair the products.



Precautions to be taken in order to safeguard the operators and bystanders in the work area.



Precautions to be taken in order to avoid problems with the equipment and to operate it in compliance with the current safety regulations.

1.3 Compliance certificate

All the products marketed in the European Union (EU) must fully comply with the European Council Directive 2006/42/EC. The compliance certificate is supplied by the Manufacturer with the Use and Maintenance Manual.

1.4 Receiving the product

When receiving the product, make sure:

- the product has not been damaged during transport;
- If problems arise, please contact the Manufacturer's Service Department with detailed information.

1.5 Warranty

For the general warranty conditions, please contact company WhatsApp +1 616 378 6511, or send an e-mail to: service@swansofttools.com

Please visit www.swansoft.eu to activate 2 years warranty.



For warranty claims, according to the above-mentioned points, it is necessary to enclose the properly filled-in warranty card and the corresponding purchase proof with date of purchase (invoice or any other document with legal value).

2 SAFETY WARNINGS

2.1 Warnings



The Manufacturer declines all responsibilities if the precautions below are not taken.

The accomplishments concerning working environment safety and health regulations indicated by the current laws (Dir. 2003/10/EC, Dir. 2002/44/EC and Legislative Decree no. 81/2008) have to be carried out either by the end-user or by the employer: supplying the adequate personal protective equipment, informing about working risks, health surveillance, etc.

The over-exposure to the vibrations may cause neurovascular lesions to people suffering from circulatory disorders. In case of symptoms which could be referred to over-exposure, contact a specialist. These symptoms can be torpor, loss of sensitivity, sharp pains, itching, strength reduction or loss, complexion discoloration or structural modifications of its surface. This usually happens to one's hands, wrists and fingers.

2.1.1 Results of the tests made according to the Laws

ELECTROMAGNETIC COMPATIBILITY LEVEL

The equipment complies with the electromagnetic compatibility directive EMC 2014/30/UE

2.2 General warnings



Do not use the tool indoor or in case of potentially explosive environment.



- **The product is for a non-intensive use only (for plantings with a maximum area of 3/4 hectares).**
- Use the tool only with the accessories indicated by the Manufacturer.
- Use the tool only from the ground, working in a stable and safe position.
- Always use adequate clothing as called for by the job. Wear protective goggles and verify that your clothes are fitting to the body. Do not wear ties, necklaces or belts or keep loose long hair which may get caught in the moving parts. Use anti-sliding shoes and antiperforation gloves.
- Wear a noise-abatement headset.
- Do not operate, service or repair the tool if you are under the influence of medicines, alcohol or drugs which could impair your alertness or co-ordination.
- Only well trained and qualified personnel - who have read the use and maintenance manual carefully - are allowed to use the tool. The safety course must be administered by the employer.
- Entrust or lend the tool only to people who are familiar with the instructions for use or trained by personnel authorized by the employer.
- Keep the tool out of the reach of children, as well as of people with disabilities or untrained in its use and keep it away from animals.
- The operator is the only responsible for injuries caused to other people or for damages caused to their belongings.
- Do not use the tool when you are in an unstable position or off balance, on slipping surfaces (i.e. hills or wet grass) or wherever there is no possibility of maintaining a stable balance (i.e. steep slopes).
- Never use the tool while standing on a ladder.
- Never cut branches which are close to electric wires.
- Before any routine maintenance operations, read the Use and Maintenance Manual carefully. For any maintenance operation which is not indicated in this manual, please contact one of the Service Points authorized by the Manufacturer.
- Use the tool just for the purposes described in par. "Product description". Any other use may cause injuries.
- Remove the battery (9) before any maintenance operation.
- Keep this manual with care and read it before any tool use.
- Keep in perfect conditions all the danger and safety indications stickers.
- Do not use petrol, solvents or other aggressive products to clean the tool.
- Avoid working in bad weather conditions, such as in case of fog, rain, strong wind, hail storm, snow or ice.
- Do not cut branches in bundles. Cut one branch at a time.
- Be careful when cutting taut branches. They could cause a loss of tool control.
- Before operating the shear, check that the blade tightening adjusting tools have been removed. Any tool left on the rotating parts of the shear could cause injuries.
- When operating the shear, keep your hands away from the cutting area. Never put your hands under the branches for any reason. When cutting branches, check that there is nothing around which could get damaged.
- Inhaling oil mist or wood dust could cause irritation or intoxication of the operator's breathing system. In case of prolonged problems, please contact a specialized doctor.

- Leakage of liquid from the battery could cause injuries to the operator. Do not touch the battery fluid. In case of contact, rinse abundantly with clean water. If the liquid comes into contact with the eyes, thoroughly rinse with clean water and immediately contact a specialized doctor.



Carefully read the following instructions. Failure to follow them could cause electric shocks, fire or serious damages.

2.2.1 Safety at the workplace

- Use the shear only in good visibility conditions. A dark work area could cause accidents. Do not make cuts in low light conditions, such as in the dark in closed or open environments, at night, at sunset, at dawn, with dust / sand in the air that prevents clear visibility from less than 2 meters. To check whether the visibility is acceptable, put the tool at 2 meters with visible labels, which must be clearly read.
- Do not use the shear in an explosive, flammable or damp environment.
- Keep children, bystanders or animals at a safe distance before operating the shear, in order to avoid dangers or injuries. When determining the safety distance, assess the risk of taut branches being thrown at people, objects or animals. Under normal conditions of tension, 5 meters is the adequate safety distance from the ends of the branches.

2.2.2 Electric safety

- The supplied battery charger needs a socket which is compatible with its amperage and power supply voltage. Do not modify either the plug or the socket.
- Before, during or after its use, do not leave the shear in the rain or water, in humid environments or in any other damp condition, in order to avoid the risk of electric shocks or short circuits.
- Keep the shear away from heat, oil, solvents, sharp edges and moving parts.

2.3 Use

- Use the tool only for the purposes described in par "Product description". Any other use could cause injuries and is expressly forbidden by the Manufacturer.
- Do not use the tool if it is damaged, wrongly adjusted or not completely assembled.
- Always leave the shear with the blade group (1-2) closed.
- Wear protective glasses or a visor, safety shoes, anti-vibration gloves and a noise-abatement headset.
- Keep a safe and stable working position, which guarantees a perfect balance (i.e. flat and dry surfaces).
- The switched-on LED light (7) indicates that the tool is working.
- Do not leave the tool in the rain. Keep it in a dry place.
- Do not use a battery charger other than that supplied by the Manufacturer. Neglecting this requirement can cause serious damages to the tool and to the user.
- When a shear is not operated, remove its battery and store it in a clean and dry place.

2.4 Maintenance



Before performing any maintenance operations or adjustments on the mechanical parts of the equipment, put on heavy-duty work shoes, protective gloves and goggles.

- Routine maintenance and repairs can be carried out only by an **operator** with the necessary physical and intellectual qualifications, as defined by the employer.
- Special maintenance (such as disassembling the gear motor or the main board) and repairs can be carried out only by a **qualified mechanic**.
- Before any maintenance or adjustment operations, disconnect the tool from its battery
- Keep bystanders at least 2 meters away, when servicing or repairing the machine.
- Only **qualified mechanics** are authorised to inactivate the tool safety devices, if any, when special maintenance is to be performed. It is their responsibility to safeguard the operators and the machine and to re-activate the safety devices as soon as maintenance work has been completed.
- All maintenance procedures not dealt with in this manual are to be performed at Authorised Service Point.
- When maintenance or repairs have been completed, the machine can be started again only if duly authorised by the **qualified mechanic**. The service mechanic must make sure:
 - work has been completed;
 - the machine runs in a trouble-free manner;
 - the safety devices are activated;
 - no one is working on the machine.

3 SPECIFICATIONS

3.1 Product description

The product has been designed for cutting or pruning branches with a maximum diameter of 35mm, depending on the wood type, in orchards, vineyards, etc. It is battery operated and is composed of a blade, an anvil, a lithium battery, a battery charger, a toolbox and other components.

Easy to use, it has a performance being 8/10 times superior to the one of the hand shears. The pruning quality is much better than when the operation is carried out manually.



The tool has been designed and manufactured exclusively for the purposes mentioned above.

3.2 Parts supplied

- Electric pruning shear
- Lithium batteries
- Battery charger
- User manual
- Tool set

3.3 Intended use

The tool has been designed for cutting and pruning according to the above-described manners and limits.

Any different use is not allowed. A non-limiting example of different use is cutting objects made of metallic or rubber materials, fabrics, synthetics, meat or food, stones, pieces of cement, glass or glass compounds, carbon fiber.



- **Any other use must be considered improper and potentially dangerous for the operators' safety. This would make any warranty claims void.**
- **If it is not used for the purposes it was designed for, the tool may cause serious injuries to personnel and bystanders and damages to equipment and things.**

3.4 Tool composition

#	Denomination	Function
1	Movable blade	The cutting blade
2	Fixed blade	Holds back the branch
3	LCD screen	Displays remaining battery power and number of cuts
4	Trigger	Operates the shear
5	ON-OFF button / Battery indicator	Start/stop the shear / Shows how much battery power is left
6	Charge connectors	Connect the charger to the battery
7	LED light indicator	Shows the battery charge status
8	Battery release button	Allow to insert the battery into the shear or to remove it
9	Lithium battery	Allows to operate the shear
10	Battery charger	Charges the battery



3.5 Technical data


Technical data	PRU-28
Battery max. voltage	16.8 V
Li-Ion battery	2Ah
Battery weight	220g
Charge voltage	AC100V-240V
Charge duration	1.5-2 hours per battery
Autonomy when used	3-4 hours per battery
Max. power	850 W
Shear weight without battery	690 g
Max. cutting diameter	28mm
Battery working temperature	- 10° / +65°

3.6 Safety devices

- LED light (7) switched on: Indicates that the tool is electrically powered by the battery.

3.7 Error code explained in LCD screen

E1: overcurrent	E2: Bus voltage detection circuit fault	E3: Current sensor error
E4/E13: stall(gear is stuck)	E5: undervoltage	E6: overvoltage
E7: hardware overcurrent	E9: low power	E10: Phase loss (there is a broken wire)
E11: Stroke plate failure (Hall plate failure)	E12: Driver board over temperature	

 If there's something wrong with the scissor, please report the error code to seller for more details.

4 TOOL INSTALLATION AND STARTING

4.1 Tool starting

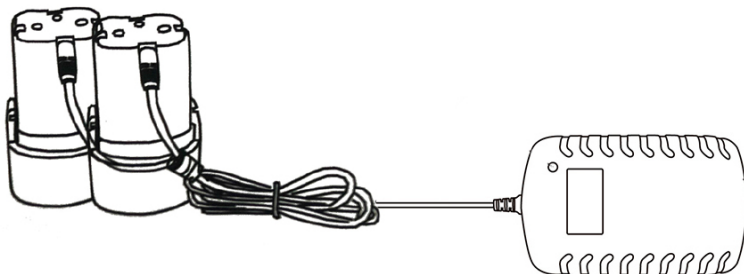
- Plug the battery (9) into its seat in the shear body.
- Switch the shear on by means of the ON-OFF button (5). When first using the tool, the display switches on and the audible alarm emits just one beep.
- Press the trigger two times. The blades will open automatically. In case of failure, the blades will not open. Store the tool and contact an Authorized Service Point.
- Normal pruning: Press the trigger to close the blades and release it to open them again.
- Blade group closing position: Keep the trigger pressed. 3 long beeps indicate that the shear is in stop position.
- In order to check the shear for proper functioning, before using it, press and release the trigger without carrying out cuts, to close and open the blades. Repeat the operation more times.
- If not used, the shears will automatically switch off after 10 minutes



**Do not work on trees or stairs, as it is extremely dangerous.
Before starting to work with the tool, wear suitable protective clothing.**

4.2 Battery charging

Connect the battery (9) to the battery charger (6) and the plug of the charger to the socket. Avoid using electrical extension cables, as they are a source of electrical risks. The battery charger LED light (7) becomes red while charging. When the battery is charged up, the LED light (7) becomes green.



During long periods of inactivity of the shear, it is recommended to charge the battery every 1 months, so as not to compromise its lifespan.



Use only the charger supplied with the shear. A different one with other specifications could cause fires.

4.2.1 Warnings during and after the charge

- While recharging the charger and the battery become warm.
- To make a battery reach its maximum capacity, about 5 charging and discharging cycles are necessary if it is new battery or if it has not been used for a long period.
- Do not charge the battery at a room temperature below 0°C (32°F) or above 45°C (113°F).
- Do not recharge a previously charged battery after few minutes of use, so as not to reduce its performance.
- Do not use a damaged battery.
- Do not disassemble either the battery or the battery charger.
- When the battery is not assembled on the shear, keep it away from conductive metal objects, in order to avoid short circuit risks.
- Do not cause a short circuit of the battery.
- Do not store the battery near heat sources, indoors or in a potentially explosive atmosphere. The battery could explode or generate a fire.
- Do not charge the battery in damp rooms or outdoors.
- Do not use or charge the battery close to heat sources or in the direct sunlight.
- When the battery charge decreases, the shear cutting performance decreases as well
- Do not leave the battery in the rain and store it in a dry place.
- Do not put the shear, the battery or the charger into any liquids.
- Do not insert nails, do not hammer or step on or throw or cause any other damage to the battery.
- Do not carry out welding on the battery.
- Do not reverse the polarity of the connections or excessively discharge the battery.
- Do not connect the battery to car chargers or cigarette lighter sockets.
- Do not use the battery for devices which are other than those indicated by the Manufacturer.
- Do not come into direct contact with lithium battery cells.
- Do not put the battery into microwaves or containers with high temperatures or high pressures.
- Do not use the battery in case of fluid loss.
- Do not use the battery in an electrostatic environment
- Do not use the battery if it is corroded, visibly deformed or unpleasantly smelly.
- If your skin or clothes come in contact with the battery fluid, rinse them immediately with water.
- Keep the battery fully charged when the shear is not used for long periods.
- Always disconnect the charger from the electrical network when the batteries are charged up.
- Always disconnect the batteries from the charger after recharging.

4.3 Packing and transport

The unit is packaged by the Manufacturer and sent to the dealer in a carton box.



The handling of loads must be carried out in compliance with the current workplace safety rules. Use the box for storing the tool for medium or long periods or for sending the packed product to a Service Point for repairs.

5 TOOL USE

5.1 Tool starting

Before operating the tool, always wear protective clothing.

- Hold the handle with one hand. With the other one press the ON/OFF button (5).
- The tool is ready for use.

5.1.1 Blade opening mode

Switch the scissors on and press the trigger twice: the blade is 100% open.

With the scissor on, keep the trigger pressed until a beep is heard: the blade is 70% open.

Return to 100% blade opening by keeping the trigger pressed until the beep is heard again, then switch the scissors off and on again

5.1.2 Progressive mode

In the progressive cutting control, the blade moves according to the depth of the trigger drive, that is, if the trigger is activated halfway, the blade moves progressively halfway through its opening.

To change the control mode, follow below procedure:

- Switch the scissor off.
- Press down the power button & the trigger at the same time.
- Do not release until you hear 3rd audible beeps.

Then you have changed from progressive cut control mode to normal cut control mode, that is, when the trigger is actuated the blade performs the cutting action, and when the trigger is released the blade opens.

5.1.3 Anti-cut mode

To activate this anti-cut function carry out the following operations:

- The shear must be turned off.
- Press and hold down the power button, do not release.
- After hearing two "beep", immediately press and hold the trigger at the same time.
- Do not release the power button & trigger until you hear the 3rd "beep" .

To deactivate this function, repeat the procedure above.

5.2 Stopping the shear

The shear must be switched off at the end of each work session, therefore:

- Close the blades.
- Put the ON/OFF button (5) in "OFF" position.
- Remove the battery.
- Carefully put the shear into its packaging.

5.2.1 Precautions for the use

- Do not cut either branches with a diameter 30 mm, or metals, stones or any object which is not a plant. When the blades get worn or damaged, replace them.
- Rinse the shear by means of a clean and dry cloth. Do not use any petrol or solvents.
- To rinse the shear, do not use abrasive degreasers or containing solvents to rinse the shear.
- For a proper shear operation follow the instructions. In case of damage do not use the shear, the battery and its charger.
- Do not use the shear when it does not work properly.
- Always remove the battery before any operation of adjustment or parts replacement or before storing it at the end of the work session. This allows to reduce the residual risks due to an involuntary tool activation.
- The blades must be closed when the shear does not work.
- The shear must be operated following the instructions and the way of use indicated in this manual, taking into consideration the environment and the kind of work to carry out. It is recommended not to use the pruning shears in case of poor psychophysical skills or in situations which are different from the indicated ones, as it could be very dangerous.
- After each use remove the residues from the blades and put the lubricant recommended by the Manufacturer. These operations guarantee that the blades are kept in good conditions, reduce wear and extend the lifespan of the shear as well as of the blades.

5.3 Storing the shear

- Keep the trigger pressed for few seconds until you hear 3 long beeps. The blades close and remain closed. Release the trigger.
- Switch the shear off and remove the battery.
- Recharge the battery before putting it into its box.
- Clean the shear and put it back with its components into its box.
- Store the shear in a dry place.
- For long periods of inactivity recharge the batteries not later than every 1 months.

5.4 Troubleshooting



All the following maintenance operations shall be carried out by a maintenance technician.

FAULT	CAUSE	REMEDY
The shear cannot complete the cut.	The branch diameter is over 35 mm or the wood is too hard.	Immediately release the trigger. The cutting blade will go back to its opening position.
The battery does not get completely recharged.	<ul style="list-style-type: none">• Degraded battery.• Faulty battery charger.• Unsuitable battery charger.	<ul style="list-style-type: none">• Check that the battery charger is the one supplied with the shear.• Replace the battery.• Replace the battery charger.
Electric/mechanical wrong functioning.	<ul style="list-style-type: none">• Motor overheating.• The shear makes noise.	Contact an Authorized Service Point.
The tool does not work.	Possible electronic or mechanical problem.	Contact an Authorized Service Point.



Failure to follow the instructions in the manual could cause damage or injury.

6 MAINTENANCE

6.1 Routine maintenance

- Before carrying out any routine maintenance operation, put the ON/OFF button (5) in 'off' position and remove the battery (9) from the tool.
- All the maintenance operations which are not mentioned in this manual must be carried out at an Authorized Service Point.



Routine maintenance operations can be carried out by the operators.

6.2 Sharpening

Correct sharpening of the blade is essential to ensure:

- cut quality
- battery life
- durability of the mechanical parts and the motor
- durability of the blades

During the first day of use the burr that is created on the cutting edge of the blade must be removed often. The type and diameter of the wood being cut determines how often this must be done.

Hard wood with a large diameter: **after 15 minutes**, then every hour.

Soft wood with a small diameter: **after 30 minutes**, then every 2 hours.

(It is good practice to avoid cutting branches that are dry or with a large diameter during the first half hour of work)

After the first day of use, you will determine how often sharpening is required based on the condition of the blade. Light but frequent sharpening is recommended.

6.2.1 Replacing the blade

If the cutting blade (1) is worn or if the shear does not guarantee a clean cut after its sharpening, it is advisable to replace the blade group by following the steps mentioned below:



Before any maintenance operation switch off the shear and remove the battery.



Blade and anvil can be replaced separately. Do not worry about the blade positioning. It will put itself in the right position after switching on the shear at the end of the replacement.

6.3 Special maintenance



Any special maintenance operation, such as the replacement of the gear motor or of the main boards, must be carried out at an Authorized Service Point.



AUTHORIZED SERVICE POINT

It is the Service Point authorized by the Manufacturer for repairing the products.

6.4 Periodic maintenance table

MAINTENANCE	Routine maintenance				Special maintenance
	New blade (within the first 15 minutes)	Every hour	Every day	After 100 hours (about 200,000 cuts)	
Movable blade sharpening	X	X	X		At the end of each work season or at least once per year
Movable blade replacement				X	
Blades lubrication by means of lubricant, recommended by the Manufacturer			X		
Rack cleaning and lubrication.				X	
General overhaul at an Authorized Service Point.					

7 DISMANTLING THE TOOL WHEN NO LONGER USED

7.1 Disposal of exhaust materials

After having been installed and during use, the machine does not cause any environmental pollution. However, throughout its working life, some types of residual waste or exhaust materials, such as the lubricants for the mechanical components, are being produced in certain maintenance situations.

There are specific regulations in every Country as for the disposal of these materials and the environment protection. The Customer is required to be knowledgeable in the Laws in force in his own Country and to operate only while complying with these regulations, according to the indications in the product technical charts, which may be obtained from the Manufacturer.



The Laws in force about the disposal of mineral oils or greases used for the lubrication / maintenance operations must be followed.



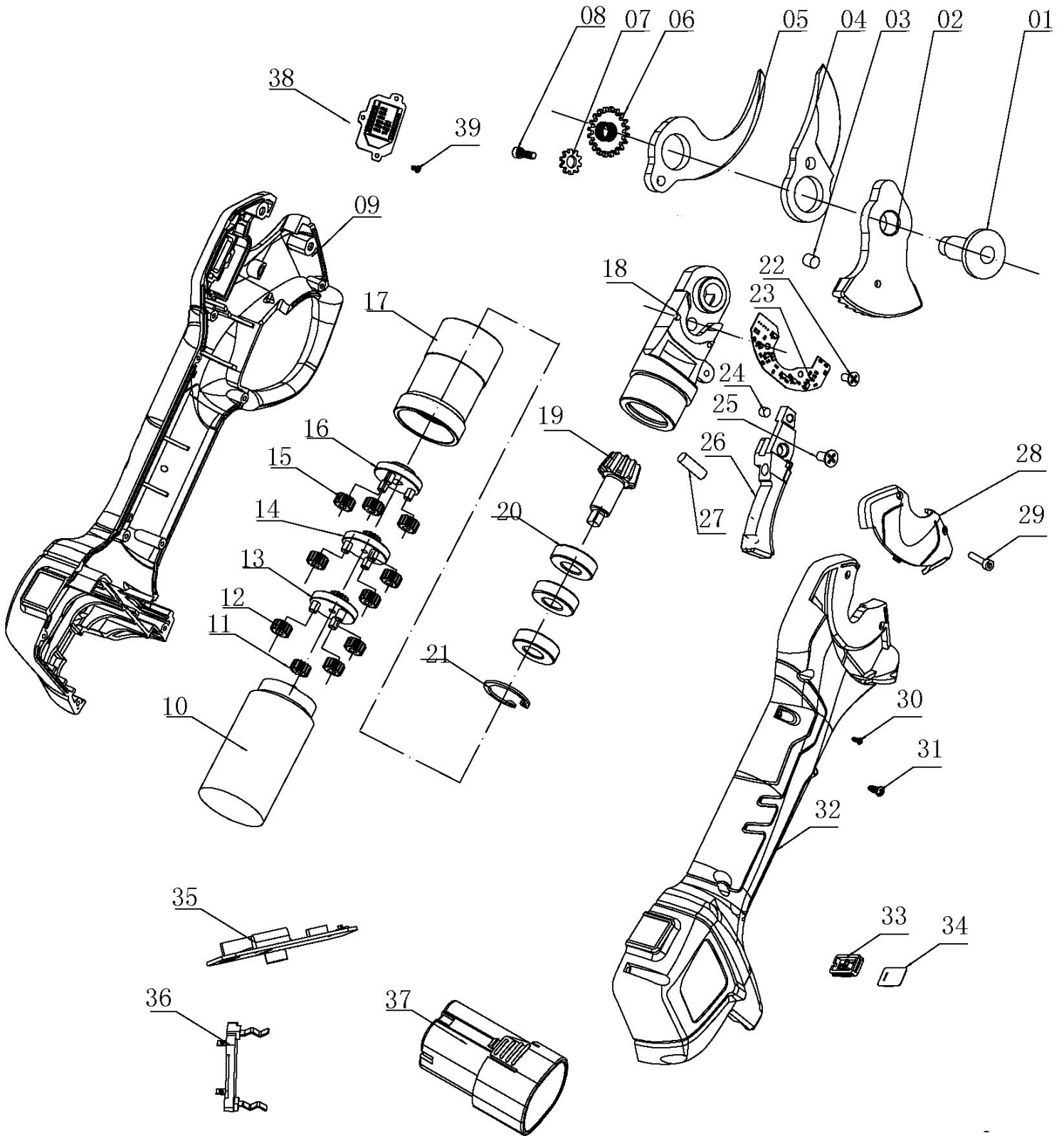
More information about the disposal of oils and other substances can be found in the safety chart of the substances.

The steps employed in the disposal of toxic waste including the collecting, transporting, processing (transformation for recycling), as well as the deposit and the dumping onto the ground are all usual activities of common interest and are subject to the following general principles:

- a) Any risks of injuries or dangers for the health and safety of any individual and of the community have to be avoided.
- b) Compliance with any and all hygienic-sanitary requirement and avoidance of any air, water, ground and underground pollution have to be guaranteed.

Compliance with efficient and economical principles in order to save and recycle energy and materials shall be promoted.

Exploded View



KEEP CARD

Purchase item Product Number

Purchase date Warranty period

Customer name Phone

Street address

Zip code



WARRANTY CARD

Purchase item Product Number

Purchase date Warranty period

Seller name

Seller Tel

Street address

Remarks:

- This warranty card only can be applicable to the product model of the warranty service.
- Dropped in water or man-made damage is not the scope of warranty
- Please keep this card, Present this warranty card and valid invoice when damaged.
- This card shall be valid from the date when it is signed by the seller

After-Sales Services Record

No.	Date	Location of Maintenance	Root Cause and Take the Action	Signature by Repair & Maintenance Personnel	Confirmed by Customer
1					
2					
3					
4					
5					



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