

DRAPER[®]

INSTRUCTIONS FOR 30cc Petrol 4-in-1 Garden Tool

Stock No.31088

Part No.GTP6

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS PRODUCT.



DRAPER[®]

GENERAL INFORMATION

These instructions accompanying the product are the original instructions. This document is part of the product, keep it for the life of the product passing it on to any subsequent holder of the product. Read all these instructions before assembling, operating or maintaining this product.

This manual has been compiled by Draper Tools describing the purpose for which the product has been designed, and contains all the necessary information to ensure its correct and safe use. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself.

All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product.

Whilst every effort has been made to ensure the accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.

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Service

Allow only persons who understand the manuals of the Engine and the Tools to operate your power tool.

To receive maximum performance and satisfaction from your power tool, it is important that you read and understand the maintenance and safety precautions, before using your power tool.

Contact your dealer or the distributor for your area if you do not understand any of the instructions in the manual.



DECLARATION OF CONFORMITY

We:

Draper Tools Ltd.,
Hursley Road,
Chandler's Ford,
Eastleigh, Hampshire.
SO53 1YF
England.

Declare under our sole responsibility that the product:

Stock No:- **31088.**

Part No:- **GTP6.**

Description:- **4 in 1 Petrol Multi-tool.**

To which this declaration relates is in conformity with the following directive(s)

2004/108/EC, 97/68/EC, 2006/42/EC, 2000/14/EC.

A handwritten signature in black ink, appearing to read "John Draper". The signature is fluid and cursive, with the first name "John" and the last name "Draper" clearly distinguishable.

J.N. Draper
Chairman

21/02/2013



GUARANTEE

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, please return the complete tool to your nearest distributor or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF England.

Telephone Sales Desk: (023) 8049 4333 or Product Helpline (023) 8049 4344.

A proof of purchase must be provided with the tool.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee period covering parts/labour is 12 months from the date of purchase except where tools are hired out when the guarantee period is ninety days from the date of purchase. The guarantee is extended to 24 months for parts only. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

Note: If the tool is found not to be within the terms of warranty, repairs and carriage charges will be quoted and made accordingly.

This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.


Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the guarantee period.

Please note that this guarantee is an additional benefit and does not affect your statutory rights.

Draper Tools Limited.

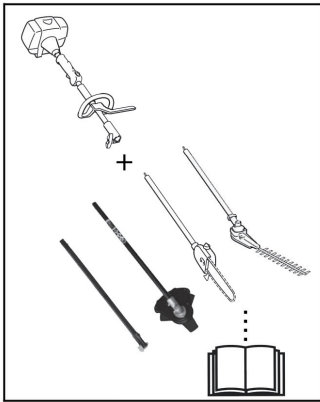
1 OUTLINE

1.1 Introduction:

 Noise emission information in accordance with the German Equipment and Product Safety Act (GPSG) and the EC Machine Directive: The noise level at the workplace may exceed 80 dB (A). In this case, noise protection measures for the operator are required (e.g., wearing of ear protection). Please do also consider any local regulations concerning noise protection !

Warning!

Because this power tool is a high-speed workingtool, some special safety precautions must be observed to reduce the risk of personal injury. Careless or im-proper use may cause serious or even fatal injury.



The Engine and Tools can be optional combined to produce a power tool. In this instruction manual the functional unit formed by the Engine and Tool is referred to as the power tool. Always read and make sure you understand the manual before starting and using your machine. Keep the manual in a safe place for later reference.

1.2 Guide to Using this Manual

Pictograms

All the pictograms attached to the machine are shown and explained in this manual. The operating and handing instructions are supported by illustrations.

Symbols in text

The individual steps or procedures described in the manual may be marked in different ways:

A bullet marks a step or procedure without direct reference to an illustration.


A description of a step or procedure that refers directly to contain item numbers illustration. Example:


Loosen the screw (1)


Lever (2) ...


In addition to the operating instructions, this manual may contain paragraphs that require your special atten-

tion. Such paragraphs are marked with the symbols described below:


 Warning where there is a risk of an accident or personal injury or serious damage to property.


 Caution where there is a risk of damaging the machine or its individual components.

 Note or hint which is not essential for using the machine, but may improve the operator's understanding of the situation and result in better use of the machine.

 Note or hint on correct procedure in order to avoid damage to the environment.

1.3 Safety Precautions and Working Techniques

 Because this engine is a high-speed, power tool, Tool is a high-speed, fastcutting power tool with sharp cutting blades, special safety precautions must be observed to reduce the risk of personal injury. It is important that you read, fully understand and observe the following safety precautions warning. Read the instruction manuals and the safety precautions of your Engine and Tool periodically. Careless or improper use may cause serious or fatal injury.

 Have your dealer show you how to operate your power tool. Observe all applicable local safety regulations, standards, and ordinances.

Warning!

Do not lend or rent your engine&tool without the instruction manuals. Be sure that anyone using it understands the information contained in the manual.

Minors should never be allowed to use this engine & tool. Bystanders, especially children, and animals should not be allowed in the area where it is in use.

To reduce the risk of injury to bystanders and damage to property, never let your power tool run unattended. When it is not in use (e.g. during a work break), shut it off and make sure that unauthorized person do not use it. Most of these safety precautions and warnings apply to the use of all tools.

Warning!

Engine and Tool instruction manual for a description of the controls and the function of the parts of your model.

Safe use of a Engine&Tool involves

1. the operator
2. the engine & tool
3. the use of engine & tool.

THE OPERATOR

Physical Condition

You must be in good physical condition and mental health and not under the influence of substance (drugs, alcohol, etc.) which might impair vision, dexterity or judgement. Do not operate this machine when you are fatigued.

Warning!

Be alert – if you get tired, take a break. Tiredness may result in loss of control. Working with any power tool can be strenuous. If you have any condition that might be aggravated by strenuous work, check with your doctor before operating this machine.

Warning!

Prolonged use of a power tool (or other machines) exposing the operator to vibrations may produce whitefinger disease (Raynaud's phenomenon) or carpal tunnel syndrome.

Warning!

Prolonged use of a power tool (or other machines) exposing the operator to vibrations may produce whitefinger disease (Raynaud's phenomenon) or carpal tunnel syndrome.

These conditions reduce the hand's ability to feel and regulate temperature, produce numbness and burning sensations and may cause nerve and circulation damage and tissue necrosis.

All factors which contribute to white-finger disease are not known, but cold weather, smoking and diseases or physical conditions that affect blood vessels and blood transport, as well as high vibration levels and long periods of exposure to vibration are mentioned as factors in the development of whitefinger disease. In order to reduce the risk of whitefinger disease and carpal tunnel syndrome, please note the following:

- Wear gloves and keep your hands warm.
- Keep the AV system well maintained. A power tool with loose components or with damaged or worn AV buffers will tend to have higher vibration levels.
- Maintain a firm grip at all times, but do not squeeze the handles with constant, excessive pressure. Take frequent breaks.

All the above-mentioned precautions do not guarantee that you will not sustain whitefinger disease or carpal tunnel syndrome. Therefore, continual and regular users should closely monitor the continual of their hands and fingers. If any of the above symptoms appear, seek medical advice immediately.

Warning!

The ignition system produces an electromagnetic field of a very low intensity. This field may interfere with some pacemakers. To reduce risk of serious or fatal injury, persons with a pacemaker should consult their physician and the pacemaker manufacturer before operating this tool.

Proper Clothing

Warning!

To reduce the risk of injury, the operator should wear proper protective apparel.

Warning!



Power tool noise may damaged your hearing. Wear sound barriers (ear plugs or ear muffs) to protect your hearing. Continal and regular users should have their hearing checked regularly.

Be particularly alert and cautios when wearing hearing protection because your ability to hear warnings (shouts, alarms, etc.) is restricted.



To reduce the risk of injury to your eyes never operate your power tool unless wearing goggles or properly fitted protective glasses with adequate top and side protection complying with your applicable national standard. To reduce the risk of injury to your face Sunray recommends that you also wear a face shield or face screen over your goggles or protective glasses



Always wear gloves when handling the machine and attachment. Heavy-duty, nonslip gloves improve your grip and help to protect your hands.



Clothing must be sturdy and snug-fitting, but allow complete freedom of movement. Wear long pants made of heavy material to help protect your legs. Do not wear shorts, sandals or go barefoot.



Avoid loose-fitting jackets, scarfs, neckties, jewelry, flared or cuffed pants, unconfined long hair or anything that could become caught on branches, brush or the moving parts of the unit. Secure hair so it is above shoulder level.



Good footing is very important. Wear sturdy boots with nonslip soles. Steel-toed safety boots are recommended.



Wear an approved safety hard hat to reduce the risk of injury to your head when there is a danger of head injuries.



Guaranteed acoustic capacity level LWA 112 dB(A)

THE ENGINE & TOOL

For illustrations and definitions of the power tool parts see the chapter on "Main Parts and Control."

Warning!

If this tool is subjected to unusually high loads for which it was not designed (e.g. heavy impact or a fall), always check that it is in good condition before continuing work. Check in particular that the fuel safety divce working properly. Do not continue operating this machine if it is damaged. In case of doubt, have checked by your servicing dealer.

THE USE OF THE ENGINE & TOOL

2 ENGINE

Transporting the engine

Warning!

Transporting the engine

Always switch off the engine and make sure the working tool has stopped before putting a power transporting your power tool in properly secure it to prevent turnover, fuel spillage and damage to the power tool.

Fuel

Your engine uses an oil-gasoline mixture for fuel (see the chapter on "Fuel" of your instruction manual).

Warning!



Gasoline is an extremely flammable fuel. If spilled and ignited by a spark or other ignition source, it can cause fire and serious burn injury or property damage. Use extreme caution when handling gasoline or fuel mix. Do not smoke or bring any fire or flame near the fuel or the engine. Note that combustible fuel vapor may escape from the fuel system.

Fueling Instructions

Warning!

Fuel your engine in well-ventilated areas, outdoors. Always shut off the engine and allow it to cool before refueling. Gasoline build up inside the fuel tank depending on the fuel used, the weather conditions and the tank venting system.

In order to reduce the risk of burns and other personal injury from escaping gas vapor and fumes, remove the fuel filler cap on your engine allow any pressure build-up in the tank to release slowly. Never remove the fuel filler cap while the engine is running. Select bare ground for fueling and move at least 10 feet (3 m) from the fueling spot before starting the engine. Wipe off any spilled fuel before starting your machine.

Warning!

Check for fuel leakage while refueling and during operation. If fuel leakage is found, do not start or run the engine until the leak is fixed and any spilled fuel has been wiped away. Take care not to get fuel on your clothing. If this happens, change your clothing immediately. Different models may be equipped with different fuel caps. If the fuel has overflowed, do not attempt to start the motor.

Instead, the tool must be moved away from the petrol-soaked area before startup.

Cap with grip

Warning!

In order to reduce the risk of fuel spillage and fire from an improperly tightened fuel cap, correctly position and tighten the fuel cap in the fuel tank opening.

Screw cap

! Warning!



Unit vibrations can cause an improperly tightened fuel filler cap to loosen or come off and spill quantities of fuel.

In order to reduce the risk of fuel spillage and fire, tighten the fuel filler cap by hand as securely as possible.

Before Starting

Warning!

Always check your engine for proper condition and operation before starting, particularly the throttle trigger, throttle trigger interlock, stop switch and working tool. The throttle trigger (if applicable) must move freely and always spring back to the idle position. Never attempt to modify the controls or safety devices.

Warning!

Never use a power tool that is damaged or not properly maintained.

Check that the spark plug boot is securely mounted on the spark plug. A loose boot may cause arcing that could ignite combustible fumes and cause a fire. Keep the handles clean and dry at all times; it is particularly important to keep them free of moisture, pitch, oil, grease or resin in order for you to maintain a firm grip and properly control your engine.

Starting

Start the engine at least 10 feet (3 meters) from the fueling spot, outdoors only.

Place the power tool on firm ground or other solid surface in an open area. Maintain good balance and secure footing.

Warning!

Your engine is a one-person machine. Do not allow other persons in the general work area, even when starting.

To reduce the risk of injury from loss of control, do not attempt to "drop start" your power tool.

When you pull the starter grip, do not wrap the starter rope around your hand. Do not let the grip snap back, but guide the starter rope to rewind it properly. Failure to follow this procedure may result in injury to your hand or fingers and may damage the starter mechanism.

Important Adjustments

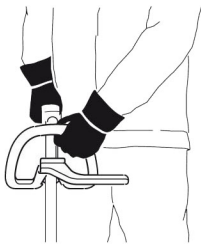
Warning!

To reduce the risk of personal injury from loss of control or contact with the running working tool, do not use a power tool with incorrect idle adjustment. At correct idle speed, the working tool should not move.

During Operation

Holding and controlling the power tool

Always hold the unit firmly with both hands on the handles while you are working. Wrap your fingers and thumbs around the handles.



Your right hand should grip the rear handle. This also applies to left-handers.

Working conditions

Operate and start your power tool only outdoors in a well ventilated area. Operate it under good visibility and daylight conditions only. Work carefully.

Warning!



As soon as the engine is running, this product generates toxic exhaust fumes containing chemicals (such as unburned hydrocarbons and carbon monoxide) known to cause respiratory problems, cancer, birth defects, or other reproductive harm. Some of the gases (e.g. carbon monoxide) may be colorless and odorless. To reduce the risk of serious or fatal injury/illness from inhaling toxic fumes, never run the machine indoors or in poorly ventilated locations.

The muffler and other parts of the engine (e.g. fins of the cylinder, spark plug) become hot during operation and remain hot for a while after stopping the engine.

To reduce risk of burns do not touch the muffler and other parts while they are hot.

To reduce the risk of fire and burn injury, keep the area around the muffler clean. Remove excess lubricant and all debris such as pine needles, branches or leaves. Let the engine cool down sitting on concrete, metal, bare ground or solid wood (e.g. the trunk of a felled tree) away from any combustible substances.

Never modify your muffler. The muffler could be damaged and cause an increase in heat radiation or sparks, thereby increasing the risk of fire and burn injury. You may also permanently damage the engine.

Catalytic converter

! Warning!



The engine is equipped with a catalytic converter, which is designed to reduce the exhaust emissions of the engine by a chemical process in the muffler. Due to this process, the muffler does not cool down as rapidly as conventional mufflers when the engine returns to idle or is shut off.

To reduce the risk of fire and burn injuries, the following specific safety precautions must be observed.

! Warning!

Since a muffler with a catalytic converter cools down less rapidly than conventional mufflers, always set your power tool down in the upright position and never locate it where the muffler is near dry brush, grass, wood chips or other combustible materials while it is still hot.

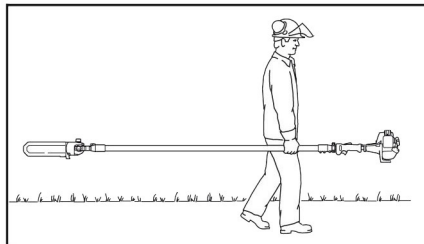
An improperly mounted or damaged cylinder housing or a damaged / deformed muffler shell may interfere with the cooling process of the catalytic converter. To reduce the risk of fire or burn injury, do not continue work with a damaged or improperly mounted cylinder housing or a damaged/ deformed muffler shell.

Your catalytic converter is furnished with screens designed to reduce the risk of fire from the emission of hot particles. Due to the heat from the catalytic reaction, these screens will normally stay clean and need no service or maintenance.

3 POLE CHAIN SAW

Transporting the Power Tool

! Warning!



This power tool should be carried only in a horizontal position. Grip the shaft in a manner that the machine is balanced horizontally. Keep the hot muffler away from your body and the cutting attachment behind you. Accidental acceleration of the engine can cause the chain to rotate and cause serious injuries.

Always switch off the engine and fit the scabbard over the cutting attachment before transporting the power tool over long distances. When transporting it in a vehicle, properly secure it to prevent turnover, fuel spillage and damage to the unit.

Before Starting

Take off the chain guard (scabbard) and inspect the chain saw for proper condition and operation. (See the maintenance chart near the end of the instruction manuals.)

Always check your power tool for proper condition and operation before starting, particularly the throttle trigger, throttle trigger interlock, stop switch and cutting attachment. The throttle trigger must move freely and always spring back to the idle position. Never attempt to modify the controls or safety devices.

Never operate your power tool if it is damaged, improperly adjusted or maintained, or not completely or securely assembled.

Keep the handles clean and dry at all times; it is particularly important to keep them free of moisture, pitch, oil, fuel mix, grease or resin in order for you to maintain a firm grip and properly control your power tool. For proper assembly of the bar and chain follow the procedure described in the chapter "Mounting the Bar and Chain" of your instruction manual.

Chain, guide bar and sprocket must match each other in gauge and pitch.

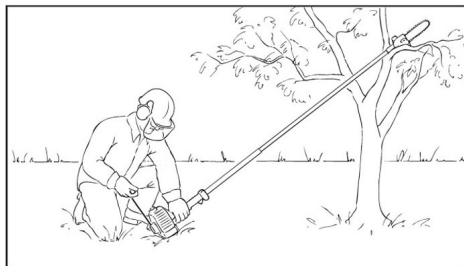
Proper chain tension is extremely important. In order to avoid improper setting, the tensioning procedure must be followed as described in your manual. Always make sure the hex nut(s) for the sprocket cover is (are) tightened securely after tensioning the chain. Check chain tension once more after having tightened the nut(s). Never start the chain saw with the sprocket cover loose. Adjust carrying harness and hand grip to suit your size before starting work.

Starting

To reduce the risk of fire and burn injuries, start the engine at least 10 feet (3 meters) from the fueling spot, outdoors only.

Start and operate your pole pruner without assistance.

For specific starting instructions, see the appropriate section of your Engine manual. Proper starting methods reduce the risk of injury.



Place the saw trimmer on firm ground or other solid surface in an open area or, in the alternative, as shown in the above picture. Maintain good balance and secure footing.

To reduce the risk of injury from loss of control be absolutely sure that the guide bar and chain are clear of you and all other obstructions and objects, including the ground.

With the engine running only at idle, attach the power tool to the spring hook of your harness (see appropriate chapter of this manual).

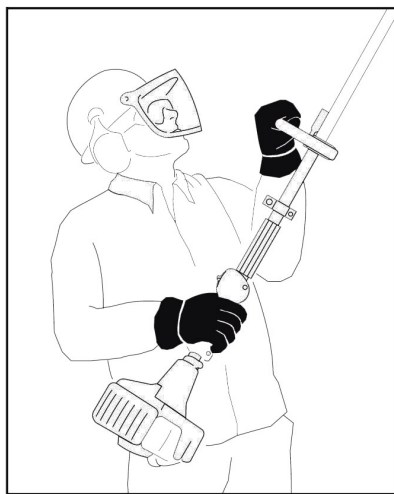
Important Adjustments

Proper chain tension is very important at all times. Check it at regular intervals (whenever the pole pruner is shut off). If the chain becomes loose while cutting, switch off the engine and then tighten. Never try to tighten the chain while the engine is running.

During Operation

Holding and controlling the power tool

Always hold the unit firmly with both hands on the handles while you are working. Wrap your fingers and thumbs around the handles.



Place your left hand on front handle and your right hand on rear grip and throttle trigger. Left handers should follow these instructions too. Keep your hands in this position to have your pole pruner under control at all times.

Never attempt to operate your power tool with one hand. Loss of control of the power tool resulting in serious or fatal injury may result.

In order to properly control your chain saw always maintain good balance and a firm foothold. Never work on a ladder, in a tree or on any other insecure support. Never hold the machine above shoulder height. Do not over-reach. When working at a height above 15 feet (4.5 m) use a lift bucket.

Special care must be taken in slippery conditions (wet ground, snow) and in difficult, overgrown terrain. Watch for hidden obstacles such as tree stumps, roots, rocks, holes and ditches to avoid stumbling. For better footing, clear away fallen branches, scrub and cuttings. Be extremely cautious when working on slopes or uneven ground.

Take extreme care in wet and freezing weather (rain, snow, ice). Put off the work when the weather is windy, stormy or rainfall is heavy.

Working conditions

Operate and start your power tool only outdoors in a well ventilated area. Operate it under good visibility and daylight conditions only. Work carefully.

Warning!

If the vegetation being cut or the surrounding ground is coated with a chemical substance (such as an active

pesticide or herbicide), read and follow the instructions and warnings that accompanied the substance at issue.



As soon as the engine is running, this product generates toxic exhaust fumes containing chemicals, such as unburned hydrocarbons (including benzene) and carbon monoxide, that are known to cause respiratory problems, cancer, birth defects, or other reproductive harm. Some of the gases (e.g. carbon monoxide) may be colourless and odourless. To reduce the risk of serious or fatal injury/illness from inhaling toxic fumes, never run the machine indoors or in poorly ventilated locations. If exhaust fumes become concentrated due to insufficient ventilation, clear obstructions from work area to permit proper ventilation before proceeding and/or take frequent breaks to allow fumes to dissipate before they become concentrated. Inhalation of certain dust, especially organic dusts can cause susceptible persons to have an allergic reaction. Substantial or repeated inhalation of dust and other airborne contaminants, in particular those with a smaller particle size, may cause respiratory or other illnesses. Control dust at the source where possible.

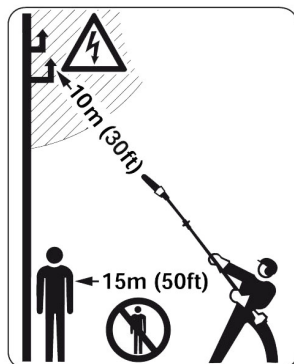
Use good work practices, such as operating the unit so that the wind or operating process directs any dust raised by the power tool away from the operator. When the inhalation of dust cannot be substantially controlled, i.e., kept at or near the ambient (background) level, the operator and any bystanders should wear a respirator for the type of dust encountered. Breathing asbestos dust is dangerous and can cause severe or fatal injury, respiratory illness or cancer. The use and disposal of asbestos-containing products have been strictly regulated by OSHA and the Environmental Protection Agency. If you have any reason to believe that you might be cutting asbestos, immediately contact your employer or a local OSHA representative.

Warning!

This power tool has a large range. In order to reduce the risk of personal or even fatal injury to bystanders from falling objects or inadvertent contact with the moving chain of your power tool always keep bystanders at least 50 feet (15 m) away when the power tool is running.

Warning!

Even though bystanders should be kept away from the running saw, never work alone. Keep within calling distance of others in case help is needed. Stop the engine immediately if you are approached.



Danger!



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. Maintain a clearance of at least 50 feet (15 m) between the chain saw (including any branches it is contacting) and any electrical line carrying live current. Before working with less clearance, contact your electric utility and make sure the current is turned off.

Operating instructions

Warning

To reduce the risk of cut injuries, keep hands and feet away from the saw chain. Never touch a moving chain with your hand or any other part of your body. The saw chain continues to move for a short period after the throttle trigger is released (inertia effect).

Accelerating the engine while the chain is blocked increases the load and will cause the clutch to slip continuously. This may result in overheating and damage to important components (e.g. clutch, polymer housing components) – which can then increase the risk of injury from the chain moving while the engine is idling.

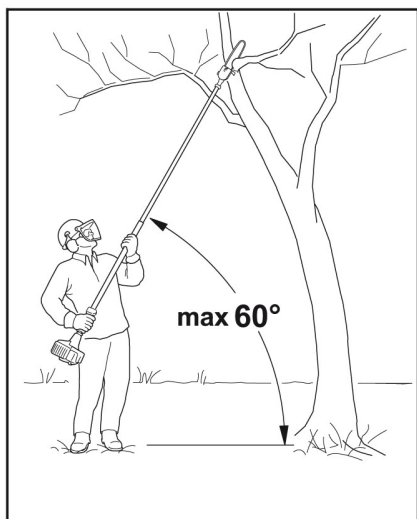
If the chain becomes clogged, always turn off the engine and make sure the chain has stopped before cleaning.

Make sure that the saw chain does not touch any foreign materials such as rocks, fences, nails and the like. Such objects may be flung off and injure the operator or bystanders, or damage the saw chain.

Prior to limbing, clear the working area from interfering limbs and brush. Then, establish an escape area away from where the cut limbs can fall, and remove all obstacles. Keep work area clear – move away fallen limbs. Place all tools and equipment at a safe distance from the branches being limbed, but not in the escape area.

Always observe the general condition of the tree. Look for decay and rot in the trunk and branches. If it is rotted inside, it could snap and fall toward the operator while being cut. Also look for broken or dead branches which could vibrate loose and fall on the operator. If branch is thick or heavy, make a shallow relief cut on the bottom of the branch before cutting down from the top to help prevent splitting of the branch.

To reduce the risk of severe or even fatal injury from falling objects do not cut vertically above your body. Hold the chain saw at an angle of not more than 60° from the horizontal level (see picture). Objects may fall in unexpected directions. Do not stand directly underneath the limb being cut!



Watch for falling wood! As soon as the limbed branch starts to fall, step aside and keep a sufficient distance away from the falling wood.

Always pull the unit out of the cut with the chain running to reduce the possibility of pinching the cutting attachment. Don't put pressure on the pole pruner when reaching the end of a cut. The pressure may cause the bar and rotating chain to pop out of the cut or kerf, go out of control and strike some other object.

If the bar becomes pinched and caught in the branch so that the chain can no longer move, shut off the pole chain saw and carefully move the branch to open the pinch and release the bar.

Reactive forces

Reactive forces may occur any time the chain is rotating. The force used to cut wood can be reversed and work against the operator. If the rotating chain is suddenly stopped by contact with any solid object such as a branch or is pinched, the reactive forces may occur instantly. These reactive forces may result in loss of control, which, in turn, may cause personal injury. An under-

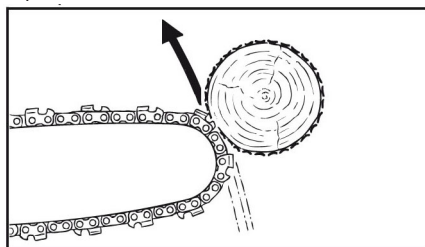
standing of the causes of these reactive forces may help you avoid the element of surprise and loss of control. Because of the design of the chain saw, the reactive forces experienced when working with it are generally not as severe as those encountered with a chain saw. Nevertheless, you should always maintain a proper grip and good footing to control the power tool when you experience such forces.

The most common reactive forces are:

- kickback,
- pushback,
- pull-in.

Kickback

Kickback may occur when the moving saw chain near the upper quadrant of the bar nose contacts a solid object or is pinched.



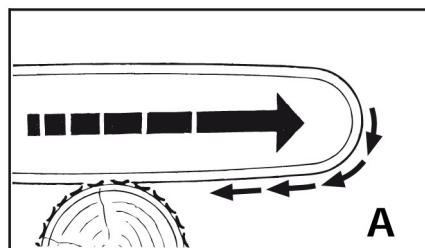
The reaction of the cutting force of the chain causes a rotational force on the chainsaw in the direction opposite to the chain movement. This may cause the bar to move upward.

To avoid kickback

The best protection from kickback is to avoid kickback situations:

1. Be aware of the location of the guide bar nose at all times.
2. Never let the nose of the guide bar contact any object. Do not cut limbs with the nose of the guide bar. Be especially careful near wire fences and when cutting small, tough limbs, which may easily catch the chain.
3. Cut only one limb at a time.

A = Pull-in



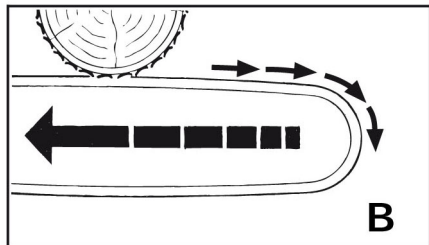
Pull-in occurs when the chain on the bottom of the bar is suddenly stopped when it is pinched, caught or encounters a foreign object in the wood. The reaction of

the chain pulls the saw forward. Pull-in frequently occurs when the chain is not rotating at full speed before it contacts the wood.

To avoid pull-in

1. Be alert to forces or situations that may cause material to pinch the chain at the bottom of the bar.
2. Always start a cut with the chain rotating at full speed.

B = Pushback



Pushback occurs when the chain on the top of the bar is suddenly stopped when it is pinched, caught or encounters a foreign object in the wood. The reaction of the chain may drive the saw rapidly straight back toward the operator. Pushback frequently occurs when the top of the bar is used for cutting.

To avoid pushback

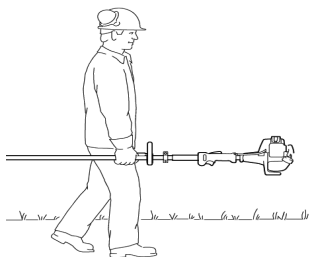
1. Be alert to forces or situations that may cause material to pinch the chain at the top of the bar.
2. Do not cut more than one limb at a time.
3. Do not twist the bar when withdrawing it from an underbuck cut because the chain can pinch.

4 THE POLE HEDGE TRIMMER

Transporting the Pole Hedge Trimmer

Warning!

To reduce the risk of injury from blade contact, never carry or transport your tool with the cutter blades moving.



It may be carried only in a horizontal position. Grip the shaft in a manner that the machine is balanced horizontally. Keep the hot muffler away from your body. Keep the cutting attachment behind you.

Always switch off the engine and fit the scabbard over the cutter blades before transporting the power tool

over long distances. When transporting it in a vehicle, properly secure it to prevent turnover, fuel spillage and damage to the unit.

On machines with an adjustable cutter bar: Make sure the cutter bar is secured in position.

Before Starting

Warning!

Always check your attachment for proper condition and operation before starting. Never attempt to modify the controls or safety devices.

Never use a engine that is damaged or not properly maintained. Keep the handles clean and dry at all times; it is particularly important to keep them free of moisture, pitch, oil, grease or resin in order for you to maintain a firm grip and properly control your engine.

The cutting tool must be properly tightened and in safe operating condition. Inspect for loose parts (nuts, screws, etc.) and for cracked, bent, warped or damaged blades. Regularly check the condition and tightness of the cutter blades – with the engine stopped!

Replace damaged cutter blades before using the power tool. Always keep blades sharp.

We recommend that you always spray the cutter blades with resin solvent before starting work - with the engine stopped!

Adjust carrying harness and hand grip to suit your size before starting work.

Starting

On machines with an adjustable cutter bar: Secure the cutter bar in the starting position as described in the chapter "Starting/Stopping the Engine." If this starting position is not the desired cutting position, you will then need to carefully adjust the machine to the desired position once the engine has returned to idle and the blades are no longer moving.

On machines with a defined transport position (cutter barfolded against the drive tube): Never start the machine in the transport position, since the blades are not engaged in that position and you therefore cannot visually check to see that they will be stopped at idle when you start to adjust the cutter bar to the desired cutting position (where the blades are engaged).

Start the engine at least 10 feet (3 meters) from the fueling spot, outdoors only.

For specific starting instructions, see the appropriate section of your power tool and attachment manuals. Place the power tool on firm ground or other solid surface in an open area. Maintain good balance and secure footing.

During Operation

Warning!

To reduce the risk of injury from blade contact, be absolutely sure that the cutting tool is clear of you and all other obstructions and objects, including the ground.

Once the engine has started, immediately blip the throttle trigger, which should release the starting throttle and allow the engine to slow down to idle.

With the engine running only at idle, attach the power tool to the spring hook of your harness (see appropriate chapter of this manual).

See also the Safety Precautions on Starting in the instruction manual of the power tool.

Warning!



Never attempt to operate your power tool with one hand. Loss of control of the power tool resulting in serious or fatal injury may result. To reduce the risk of cut injuries, keep hands and feet away from the cutting tool. Never touch a moving cutting tool with your hand or any other part of your body.

Do not overreach. Keep proper footing and balance at all times. Special care must be taken in slippery conditions (wet ground, snow) and in difficult, overgrown terrain. Watch for hidden obstacles such as tree stumps, roots and ditches to avoid stumbling. For better footing, clear away fallen branches, scrub and cuttings. Be extremely cautious when working on slopes or uneven ground. To reduce the risk of injury from loss of control, never work on a ladder, in a tree or any other insecure support. Never hold the machine above shoulder height.

Working conditions

Operate and start your power tool only outdoors in a well ventilated area. Operate it under good visibility and daylight conditions only. Work carefully.

Warning!

Familiarize yourself with the working area and pay attention to possible dangers which you might not be able to hear due to the noise of the machine.

Warning!

If the vegetation being cut or the surrounding ground is coated with a chemical substance (such as an active pesticide or herbicide), read and follow the instructions and warnings that accompanied the substance at issue.



As soon as the engine is running, this product generates toxic exhaust fumes containing chemicals, such as unburned hydrocarbons (including benzene) and carbon monoxide, that are known to cause respiratory problems, cancer, birth defects, or other reproductive harm.

Some of the gases (e.g. carbon monoxide) may be colourless and odourless. To reduce the risk of serious or fatal injury/illness from inhaling toxic fumes, never run the machine indoors or in poorly ventilated locations. If exhaust fumes become concentrated due to insufficient ventilation, clear obstructions from work area to permit proper ventilation before proceeding and/or take frequent breaks to allow fumes to dissipate before they be-

come concentrated. Inhalation of certain dust, especially organic dusts can cause susceptible persons to have an allergic reaction. Substantial or repeated inhalation of dust and other airborne contaminants, in particular those with a smaller particle size, may cause respiratory or other illnesses. Control dust at the source where possible.

Use good work practices, such as operating the unit so that the wind or operating process directs any dust raised by the power tool away from the operator. When the inhalation of dust cannot be substantially controlled, i.e., kept at or near the ambient (background) level, the operator and any bystanders should wear a respirator for the type of dust encountered. Breathing asbestos dust is dangerous and can cause severe or fatal injury, respiratory illness or cancer. The use and disposal of asbestos-containing products have been strictly regulated by OSHA and the Environmental Protection Agency. If you have any reason to believe that you might be cutting asbestos, immediately contact your employer or a local OSHA representative.

Operating instructions

Warning!

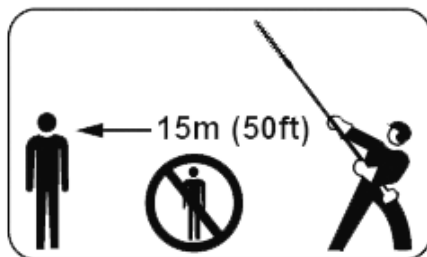
The cutter blades continue to move for a short period after the throttle trigger is released (flywheel effect).

Accelerating the engine while the blades are blocked increases the load and will cause the clutch to slip continuously. This may result in overheating and damage to important components (e.g. clutch, polymer housing components) - which can then increase the risk of injury from the blades moving while the engine is idling.

On units with an adjustable cutter bar: Carefully adjust the cutter bar to the desired cutting position. To reduce the risk of injury, never touch the blades while making adjustments.



Only adjust the cutter bar when the blade are no longer moving and the engine is turned off.



Warning!

The power tool has a large range. In order to reduce the risk of personal or even fatal injury to bystanders from falling objects or inadvertent contact with the moving cutter blades of your power tool always keep bystanders at least 50 feet (15 m) away when the power tool is running.

Stop the engine and cutting too immediately if you are approached.

Before you start work, examine the work area for stones, fence wire, metal or other solid objects which could damage the cutter blades. Take particular care when cutting next to wire fences. Do not touch the wire with the cutting blades. When working close to the ground, make sure that no sand, grit or stones get between the cutter blades.

Striking solid foreign objects such as stones, fence wire or metal could damage the cutting attachment and may cause blades to crack, chip or break. We do not recommend the use of your power tool when cutting in areas where the blades could contact such objects. Observe the cutting blades at all times—do not cut any areas that you cannot see. When cutting the top of a taller hedge, check the other side of the hedge frequently for bystanders, animals and obstructions.

Switch off the motor and pull out the spark plug connector

- if the behaviour of the tool noticeable changes
- to remove cut material which is jammed in the tool
- to check the cutter, if it has come into contact with stones, nails or other hard objects
- to rectify malfunctions
- when taking a break from work
- when leaving the hedge trimmer

Danger!



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.

If the cutting tool becomes clogged or stuck, always turn off the engine and make sure the cutting tool has stopped before cleaning. Grass, weeds, etc. should be cleaned off the cutting tool at regular intervals.

Check the cutting blades at regular short intervals during operation, or immediately if there is a noticeable change in cutting behavior:

- Shut off the engine.
- Wait until the cutting blades have come to a complete standstill.
- Check condition and tightness, look for cracks.
- Check sharpness.
- Replace damaged or dull cutting tools immediately, even if they have only superficial cracks.

Warning!

The gearbox become hot during operation. To reduce the risk of burn injury, do not touch the gear housing when it is hot.

After Finishing Work

Always clean dust and dirt off the machine – do not use any grease solvents for this purpose. Spray the blades

with resinsolvent. Start and run the engine briefly so that the solvent is evenly distributed.

5. BRUSHCUTTER & TRIMMER



WEAR HEAD, EYE AND EAR PROTECTORS

WARNING: Hurlled-away objects may lead to serious injuries of the eyes, excessive noise may result in deafness. Wear eye and ear protection devices when operating this device. Falling objects may cause serious injuries of the head; wear a head protection when operating this device.



KEEP OTHER PERSONS ON A DISTANCE

Take care that no other persons are standing within a radius of 15m around your working area. This particularly applies to children.



WARNING SYMBOL

May be used in connection with other symbols or pictographs. Points to danger, warnings or reasons for particular carefulness.



POSITION OF THE HANDLE

Direction of arrow shows how to install the handle. Always keep the right position, you must never remain under the required distance!



DANGER OF INJURY !

Beware of hurled-away objects.



MAXIMUM SPEED

The maximum speed of the cutting unit. The device must not be operated at a speed higher than this.



MAXIMUM SPEED

The maximum speed of the cutting unit. The device must not be operated at a speed higher than this.



Warning!

When using metal cutting tools (thicket blade) there is the danger of kickbacks if the tool gets in touch with some solid object



DANGER OF INJURY !

Warning! Do not put hands under the cover of the machine when it is running. **Caution!** Rotating electrical tool!

OPERATING ADVICE

If you are not familiar with the trimmer train the handling of the device with the engine not running (AUS / STOP). Always check the territory; solid objects as metal parts, bottles, stones etc. may be hurled away and cause serious injuries or permanently damage the device. Should you touch a solid object with the trimmer shut the engine off immediately and examine the trimmer for possibly existing damages. Do not use the device when it is damaged or shows sign of defects.

Always trim and cut with engine running in the higher speed range. Do not let the engine running in the higher speed range. Do not let the engine run at low speed at the beginning of or during the trimming.

Use the device for its provided purpose only i.e., trimming and cutting grass and weeds.

Never hold the cutting head higher than your knees during operation.

If working on a slope always stand with the cutting unit above you. Only work on sloping sites if you stand on firm ground.

USE OF TRIMMING

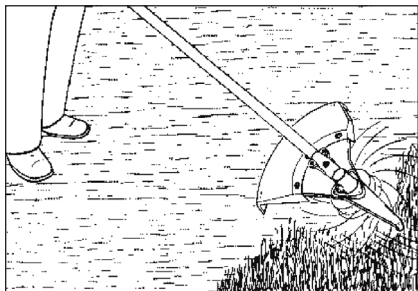
The trimmer - properly equipped with protection cover and cutting head - trims high grass, brushwood and weeds at places that are difficult to access along fences, walls, foundations and around tree trunks. The trimmer may also be used for cutting down to the ground (e.g., clean-out works in the garden and in broken, thickly covered areas).

Swing the trimmer in sickle-like movements from side to side. Always hold the cutting head parallel to the ground. Examine the territory and determine the desired cutting height. Lead and hold the cutting head in the desired height to achieve an even cutting result.



TIGHT TRIMMING

Lead the trimmer straight with a slight angle in forward direction so that it moves just over the ground. Always trim away from your body, never lead it towards the operator.



TRIMMER AT FENCES AND FOUNDATIONS

To trim at fences, posts, stone walls and foundations lead the device slowly and carefully without letting the cutting cord touch any obstacles. If the cutting tool encounters any solid obstacle (stone, wall, log etc.) there is the danger of a kickback and higher wear and tear of the cutting cord.

TRIMMING AROUND TREE TRUNKS

Lead the trimmer carefully and slowly around tree trunks so that the cutting cord does not touch the bark. Cut around trees from left to right. Capture grass and weeds with tip of the cord and slightly tilt the cutting head in forward direction.

THE USE OF BRUSHCUTTER

When mowing away, you capture the whole vegetation down to the ground. To do so tilt the cutting head to the left with an angle of 30 degrees. Adjust the handle to the desired position. Be aware of the higher danger of injuries for the operator, surrounding persons and animals, and the danger of damages to property through hurled-away objects.

CUTTING WITH THE CUTTING BLADE

When cutting with the cutting blade, always wear protection goggles, face protection, protection cloths, and use the shoulder strap.

SCYTHING

Guide the device with the thicket blade like a scythe to cut rank growth, felled grass and brushwood. Do not use the thicket blade for stronger woods.

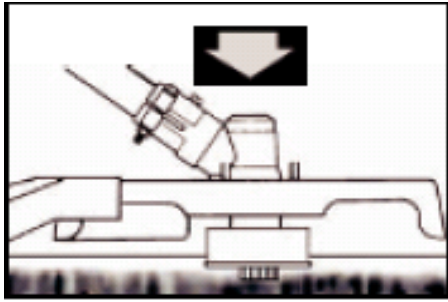
IF THE CUTTING DEVICE GOT STUCK

Shrubs and trees may jam the cutting blade and cause the blade to stop. Avoid the blade from getting stuck by cutting through appropriate undergrowth and brushwood from changing sides. If the cutting blade should, however, get stuck stop the engine immediately. Hold the device up and avoid that the cutting blade deformed by bending or even breaks when you push the brushwood to be cut away from the cutting blade.

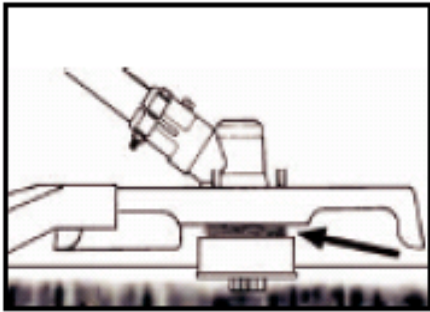
AVOIDING KICKBACKS

When using metal cutting tools (thicket blade) there is the danger of kickbacks if the tool gets in touch with some solid object (tree trunks, branches, stones etc.) If this should happen, the device is "kicked" or thrown back against the turning direction of the tool. This may lead to the loss of control over the tool and to the danger of injury for the operator and people nearby!

To extend the cutting cord let the engine run at full throttle and bump the cutting head on the ground. The cord is automatically extend. The cutter at the protection cover cuts the cord to the required length!

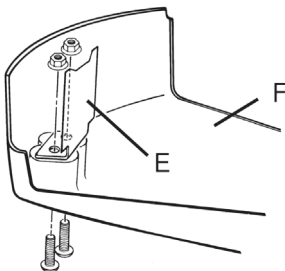


Regularly remove any remainders of grass and weed to avoid an overheating of the shaft tube. Remainders of grass and weeds get caught under the protection cover avoiding a sufficient cooling of the shaft tube. Remove the remainders carefully with a screwdriver or a similar tool.



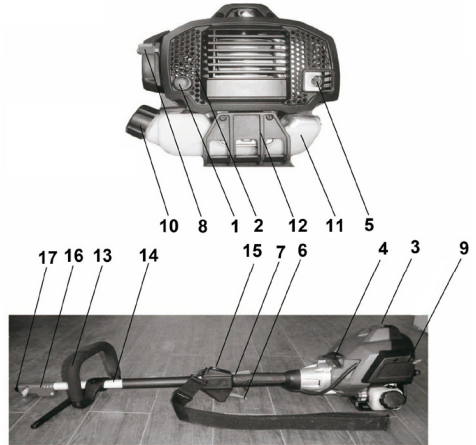
SHARPENING THE CORD CUTTER

Remove the cutter (E) from the the protection cover (F). Put the cutter into a vice and fix it firmly. Sharpen the cutter using a flat file. File with care and keep the sharpening angle. Always file in a one direction only.



2 ENGINE

Main Parts and Controls



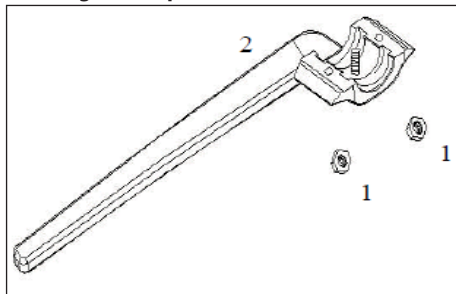
- 1 = Fuel Pump
- 2 = Carburetor Adjusting Screw
- 3 = Spark Plug Boot
- 4 = Starter Grip
- 5 = Muffler
- 6 = Throttle Trigger
- 7 = Throttle Trigger
- 8 = Choke Lever
- 9 = Air Filter Cover
- 10 = Fuel Filler Cap
- 11 = Fuel Tank
- 12 = Machine Support
- 13 = Loop Handle
- 14 = Drive Tube
- 15 = Stop Switch
- 16 = Coupling Sleeve
- 17 = Wing Screw

Definitions

- 1. Fuel Pump
Provides additional fuel feed for a cold start.
- 2. Carburetor Adjusting Screw
For tuning the adling speed.
- 3. Spark Plug Boot
Connects the spark plug to the ignition lead.
- 4. Starter Grip
The grip of the pull starter, which is the device to start the engine.
- 5. Muffler
(with spark arrestor) Reduces exhaust noises and diverts exhaust gases away from operator.
- 6. Throttle Trigger
Controls the speed of the engine.

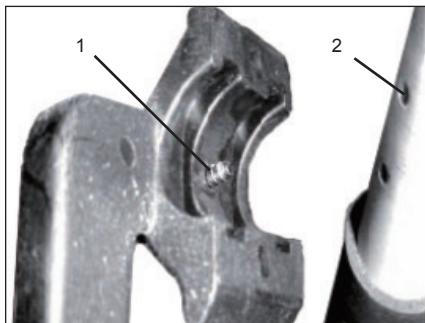
7. Throttle Trigger
Interlock Must be depressed before the throttle trigger can be activated.
8. Choke Lever
Eases engine starting by enriching mixture.
9. Air Filter Cover
Encloses and protects the air filter.
10. Fuel Filler Cap
For closing the fuel tank.
11. Fuel Tank
For fuel mixture consisting of gasoline and oil.
12. Machine Support
For resting machine on the ground.
13. Loop Handle
For easy control of the machine.
14. Drive Tube
Encloses and protects the drive shaft between the engine and gearhead.
15. Stop Switch
Switches the engine ignition system off and stops the running of the engine.
16. Coupling Sleeve
Connects the drive tube to the lower part of the drive tube (stub shaft).
17. Wing Screw
Secures the lower part of the drive tube (stub shaft).

Mounting the Loop Handle

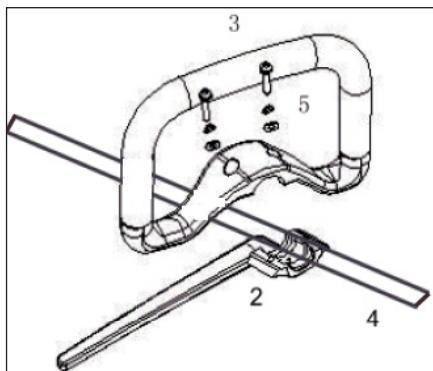


Loop handle with barrier bar

- Insert square nuts (1) in the barrier bar (2).



Position the screw (1) into the hole of the driver tube (2).
Note there have three holes follow your request.



- Place the barrier bar (2) and loop handle (3) and position them against the drive tube (4)
- Inset screws (5) in holes and screw them into the barrier as far as stop.
- Tighten down the screws firmly

Fuel

This engine is certified to operate on unleaded gasoline and the two-stroke engine oil at a mix ratio of 40:1. Your engine requires a mixture of high-quality gasoline and quality two-stroke air cooled engine oil.

Fuel with a lower octane rating may increase engine temperatures. This, in turn, increases the risk of piston seizure and damage to the engine. The chemical composition of the fuel is also important. Some fuel additives not only detrimentally affect elastomers (carburetor diaphragms, oil seals, fuel lines, etc.), but magnesium castings and catalytic converters as well. This could cause running problems or even damage the engine. For this reason we recommends that you use only nationally recognized high-quality unleaded gasoline!

Do not use BIA or TCW rated (two-stroke water cooled) mix oils or other mix oils that state they are for use in both water cooled and air cooled engines (e.g., outboard motors, snowmobiles, chainsaws, mopeds, etc.).

Take care when handling gasoline. Avoid direct contact with the skin and avoid inhaling fuel vapor. When filling at the pump, first remove the canister from your vehicle and place the canister on the ground before filling. Do not fill fuel canisters that are sitting in or on a vehicle. The canister should be kept tightly closed in order to avoid any moisture getting into the mixture. The machine's fuel tank and the canister in which fuel mix is stored should be cleaned as necessary.

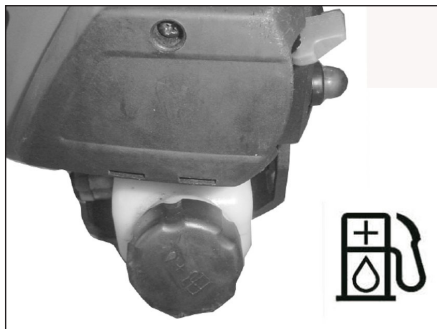
Fuel mix ages

Only mix sufficient fuel for a few days work, not to exceed 3 months of storage. Store in approved fuel-canisters only. When mixing, pour oil into the canister first, and then add gasoline. Close the canister and shake it vigorously by hand to ensure proper mixing of the oil with the fuel.

Gasoline	Oil
1L	25ml
5L	125ml

Dispose of empty mixing-oil canisters only at authorized disposal locations.

Fueling



Before fueling, clean the filler cap and the area around it to ensure that no dirt falls into the tank.

Always thoroughly shake the mixture in the canister before fueling your machine.



In order to reduce the risk of burns or other personal injury from escaping gas vapor and fumes, remove the fuel filler cap carefully so as to allow any pressure build-up in the tank to release slowly.



After fueling, tighten fuel cap as securely as possible by hand.

Starting / Stopping the Engine

Starting

- 1 Put the stop switch in the position '1'.



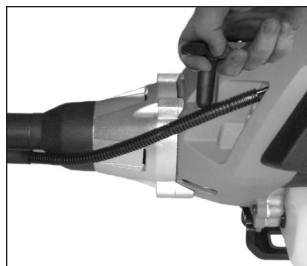
- 2 Slide the choke to position 'start'. This is not required in case of a warm start.



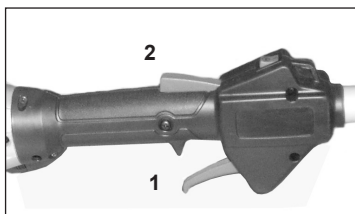
- 3 Push the fuel pump 6 times.



- 4 Push the starter rope 2-3 times, to start the motor it is required to evenly, quickly pull the rope.



- 5 Slide the choke to RUN position, slightly push the throttle trigger and pull the starter rope again until the motor starts running. To push the throttle trigger(1) it is necessary to first push the locking lever(2).



- 6 Let the motor idle for about 10 seconds to warm up.
- 7 If the motor does not start please repeat the upward steps.

Stopping

- 1 Release the throttle trigger. Let the engine idle. push the ignition switch to position "stop". The engine will now stop.



Operating Instructions

During break-in period

A factory new machine should not be run at high revs (full throttle off load) for the first three tank fillings. This avoids unnecessary high loads during the break-in period. As all moving parts have to bed in during the break-in period, the frictional resistances in the engine are greater during this period. power after about 5 to 15 tank fillings.

During operation

After a long period of full-throttle operation, allow engine to run for a while at idle speed so that the heat in the engine can be dissipated by flow of cooling air. This protects engine-mounted components (ignition, carburetor) from thermal overload.

After finishing work

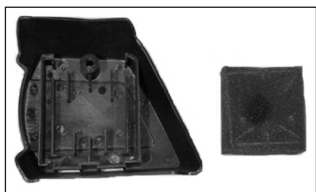
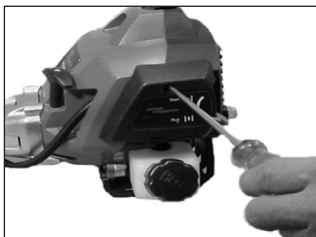
Wait for engine to cool down. Drain the fuel tank. Store themachine in a dry place. Check tightness of nuts and screws (not adjusting screws) at regular intervals and retighten as necessary.

Cleaning the Air Filter

Dirty air filters reduce engine power increase fuel consumption and make starting more difficult.

If there is a noticeable loss of engine power

- 1 Remove the fixing screw of the air filter cover



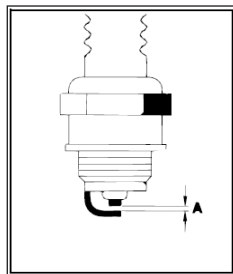
- 2 Clean the filter using soap and water

Never use petrol or benzene !

- 3 Let the Filter dry in the air.

- 4 Now put the filter in again proceeding the otherway round.

Checking the Spark Plug



Wrong fuel mix (too much engine oil in the gasoline), a dirty air filter and unfavorable running conditions (mostly at part throttle etc.) affect the condition of the spark plug. These factors cause deposits to form on the insulator nose which may result in trouble in operation.

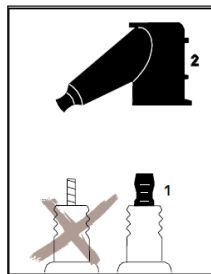
If engine is down on power, difficult to start or runs poorly at idling speed, first check the spark plug.

- Remove spark plug.
- Clean dirty spark plug.
- Check electrode gap (A) and readjust .
- Use only resistor type spark plugs of the approved range.

Rectify problems which have caused fouling of spark plug:

- Too much oil in fuel mix.
- Dirty air filter
- Unfavorable running conditions, e.g. operating at part load.

Fit a new spark plug after approx. 100 operating hours or earlier if the electrodes are badly eroded.



To reduce the risk of fire and burn injury, use only spark plugs authorized by Sunray. Always press spark plug boot (1) of the proper size. (Note: If terminal has de-tachable SAE adapter nut, it must be attached. (2) snugly onto spark plug terminal. A loose connection between spark plug boot and ignition wire connector in the boot may create arcing that could ignite combustible fumes and cause a fire.

Rewind Starter

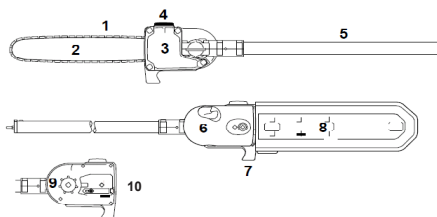
To help prolong the wear life of the starter rope, observe the following points:

- Pull the starter rope only in the direction specified.
- Do not pull the rope over the edge of the guide bushing.
- Do not pull out the rope more than specified since it might break.
- Do not let the starter grip snap back, guide it slowly into the housing. See also chapter "Starting / Stopping the Engine"!

Replace a damaged starter rope in good time or have it replaced by your Sunray dealer!

3 POLE CHAIN SAW

Parts and Controls



- 1 = Saw Chain
- 2 = Guide Bar
- 3 = Oil Tank
- 4 = Oil Filler Cap
- 5 = Drive tube
- 6 = Chain Sprocket Cover
- 7 = Hook
- 8 = Chain Guard (Scabbard)
- 9 = Chain Sprocket
- 10 = Chain Tensioner

Definitions

- 1. Saw Chain
A loop consisting of cutters, tie straps and drive links.
- 2. Guide Bar
Supports and guides the saw chain.
- 3. Oil Tank
Tank for chain lubricating oil.
- 4. Oil Filler Cap
For closing the oil tank.
- 5. Drive tube
Device to connect the engine with the gearbox.
- 6. Chain Sprocket Cover
Covers the sprocket.
- 7. Hook
For hooking machine to branch and pulling branches away.

- 8. Chain Guard (Scabbard)
Covers chain for transportation and during out-of-service periods.
- 9. Chain Sprocket
The toothed wheel that drives the saw chain.
- 10. Chain Tensioner
Permits precise adjustment of chain tension.

Using the Pole Pruner

Preparations:

- Wear suitable protective clothing and equipment – see „Safety Precautions“.
- Start the engine.
- Put on the shoulder strap.



Never throw cuttings into the household garbage can – they can be composted!



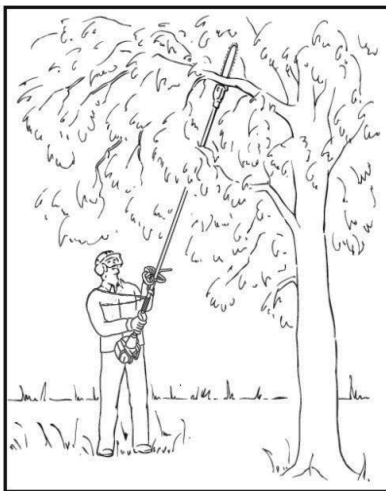
Never stand directly under the branch you are cutting – be wary of falling branches. Note that a branch may spring back at you after it hits the ground!

Cutting sequence

To allow branches a free fall, always cut the lower branches first. Prune heavy branches (large diameter) in several controllable pieces.

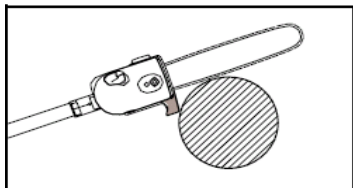
Working position

Hold the control handle with your right hand, and the drive tube with your left hand. Your left arm should be extended to the most comfortable position.



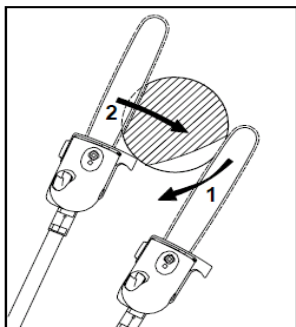
The shaft should always be held at an angle of 60° or less! The most convenient working position is a tool angle of 60°, but any lesser angle may be used to suit the situation concerned.

Cross-cutting

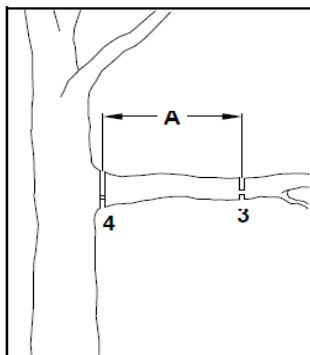


To avoid pinching the bar in the cut, position the cutting attachment with the hook against the branch and then perform the cross-cut from the top downwards.

Relieving cut

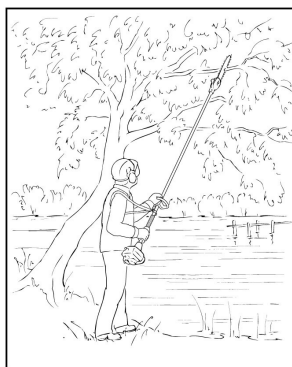


- To avoid tearing the bark on thick branches, always start by performing a relieving cut (1) on the underside of the branch.
- To do this, apply the cutting attachment and pull it in an arc across the bottom of the branch (see illustration).
- Locate the hook against the branch and then perform the cross-cut (2).



Flush-cutting thick branches

- If branch diameter is more than 4" (10 cm), first perform undercut (3) and then cross-cut at a distance (A) of about 8" (20cm) from the final cut. Then carry out the flush-cut (4), starting with a relieving cut and finishing with a cross-cut.

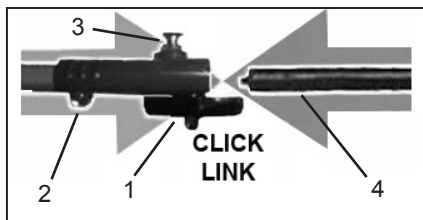


Cutting above obstacles

The unit's long reach makes it possible to prune branches that are overhanging obstacles, such as rivers or lakes. The tool angle in this case depends on the position of the branch.

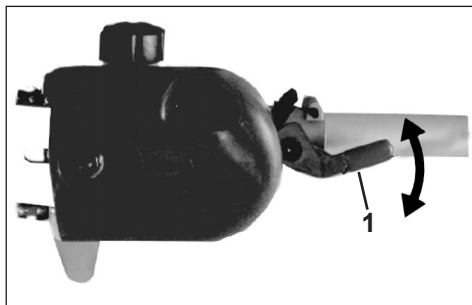
Mounting the Tool

Loosen wing screw (1) on the coupling sleeve (2), and pull the knob (3) and insert the driver tube (4) until the lock button secured in place. Screw down the wing screw (1).

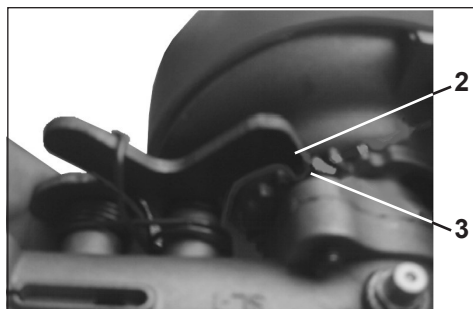


Operating the Tool (rotation model)

- ⚠ Only adjust the cutter bar when the chain are no longer moving and the engine is turned off.



When you need adjust the angle facilitating the operation, you can lever the position plate with clockwise.



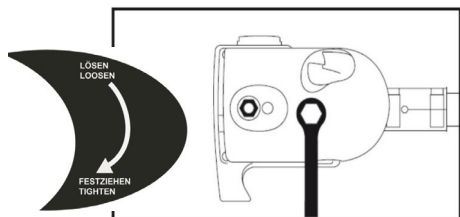
Push force on the lever plate (1) until out off the teeth (3), you can rotate the tools.



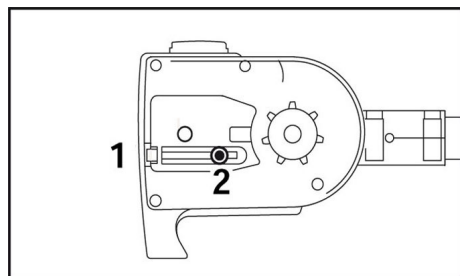
After fix the position, you can use it follow your request (for example, the thin trees, branches, lower brush-woods ...).

Attention: The lever (2) must engage certainly in the interlock (3)

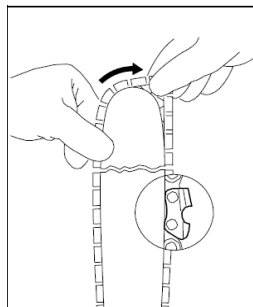
Mounting the Bar and Chain:



1 Unscrew nut and take off the sprocket cover.

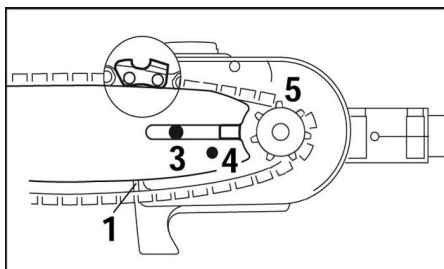


2 Turn tensioning screw (1) anticlockwise until the tensioning nut (2) butts against the left.



! The chain is very sharp – wear work gloves to protect hands from cuts.

3 Fit the chain – start at the bar nose.

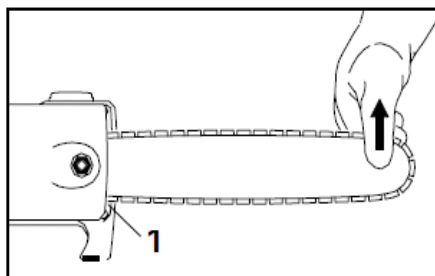


4 Fit guide bar over the stud (3). Engage peg of tensioner slide in locating hole (4) – place the chain over sprocket (5) at the same time.

5 Now turn tensioning screw (1) clockwise until there is very little chain sag on the underside of the bar – and the drive link tangs are located in the bar groove.

6 Refit the sprocket cover and screw on the nut only fingertight.

Tensioning the Saw Chain



Retensioning during cutting work:

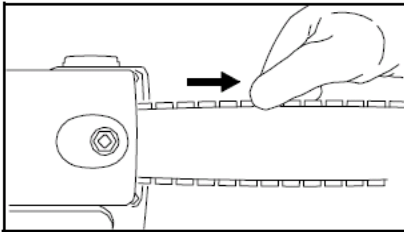
- Shut off the engine and then slacken the nut.
- Hold the bar nose up.
- Use screwdriver to turn the tensioning screw (1) clockwise until chain fits snugly against the underside of the bar.

Tighten down the nut firmly.

A new chain has to be retensioned more often than one that has been in use for some time – check chain tension frequently – see chapter „Operating Instructions / During Operation“.


- Check chain tension.

Checking Chain Tension





- Shut down the engine.
- Wear work gloves to protect hands.
- Chain must fit snugly against the underside of the bar and it must still be possible to pull the chain along the bar by hand.
- If necessary, retension the chain.

Chain Lubricant

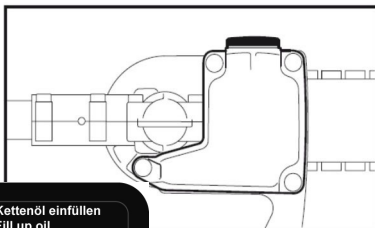
 For automatic and reliable lubrication of the chain and guide bar – **use only an environmentally compatible quality chain and bar lubricant with non-fling additive is recommended.**

The service life of the chain and guide bar depends on the quality of the lubricant. It is therefore essential to use only a specially formulated chain lubricant. If special chain lubricant is not available, you may – in an emergency – use an HD single grade or multigrade engine oil with a viscosity that suits the prevailing outside temperature.

 **Do not use waste oil!**
Medical studies have shown that renewed contact with waste oil can cause skin cancer. Moreover, waste is environmentally harmful!

 Waste oil does not have the necessary lubricating properties and is unsuitable for chain lubrication.

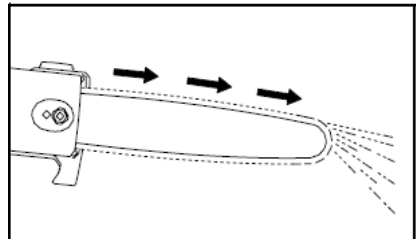
Filling Chain Oil Tank



- A full chain oil tank is sufficient for only half a tankful of fuel. Check the oil level regularly during cutting work. Never allow the oil tank to run dry!
- Thoroughly clean the filler cap and area around it so that no dirt can fall into the tank.
- Position the unit so that the filler cap faces up.


If the oil level in the tank does not go down, the reason may be a problem in the oil supply system: Check chain lubrication, clean the oilways, contact your servicing dealer for assistance if necessary.


Checking Chain Lubrication



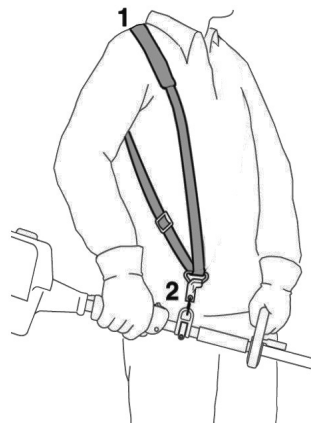
The saw chain must always throw off a small amount of oil.

- Always check chain lubrication and the oil level in the tank before starting work.

 Never operate your pruner without chain lubrication. If the chain is run dry, the whole cutting attachment will be irretrievably damaged within a very short time.

 Every new chain has to be broken in for about 2 to 3 minutes. After breaking in the chain, check chain tension and adjust if necessary – see chapter „Checking Chain Tension“.

Fitting the Harness

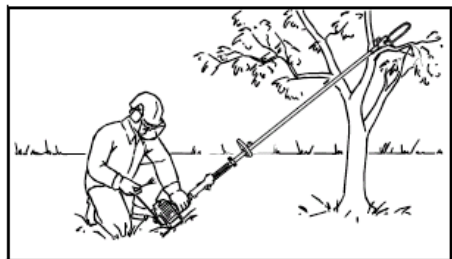


The type and style of harness depend on the market.


- Put on the shoulder strap (1).

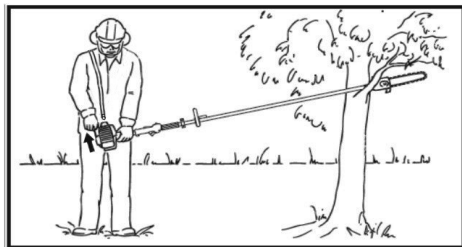
- Adjust the length of the strap so that the spring hook (2) is about a hand's width below your right hip.
- Never carry the belt diagonally across your shoulders and chest, but rather only on one shoulder, so that you can rapidly move away from the tool in case of danger.

Starting / Stopping the Engine



- Remove the chain guard (scabbard). Check that chain is not touching the ground or any other obstacles.
- Position the unit securely for starting: The powerhead must rest on the engine support. Place the hook on the cutting attachment on a raised support, e.g. a mound or branch (see illustration).
- Make sure you have a firm footing:
Press the unit firmly against the ground with your left hand on the fan housing. Your thumb should be under the fan housing.

 Do not stand or kneel on the drive tube.



Alternative method:

- Remove the chain guard. Hang the cutting attachment on a branch so that it is held by the hook.
- Hold the unit firmly with your left hand around the fan housing – your thumb under the fan housing.

The starting procedure is now as described in the Engine instruction manual.

Operating Instructions

During operation


Check chain tension frequently!

A new chain has to be tensioned more often than one that has been in use for some time.

Cold chain:


Tension is correct when the chain fits snugly against the underside of the bar and can still be pulled along the bar by hand. Retension if necessary – see chapter “Tensioning the Saw Chain”. Chain at operating temperature: The chain stretches and begins to sag. The drive links on the underside of the bar must not come out of the bar groove – the chain may otherwise jump off the bar.

Retension the chain – see chapter “Tensioning the Saw Chain”.

 Always slacken off the chain again after finishing work. The chain contracts as it cools down. If it is not slackened off, it may damage the gear shaft and bearings.

After finishing work

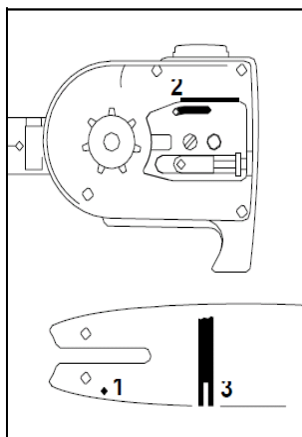
- Slacken off the chain if you have retensioned it at operating temperature during cutting work.

 The chain contracts as it cools down. If it is not slackened off, it may damage the gear shaft and bearings.

Storing for longer period:

See chapter „Storing the Machine“.

Taking Care of Guide Bar



Turn the bar over –

every time you sharpen the chain – and every time you replace the chain – this avoids one-sided wear, especially at nose and underside of the bar.

Regularly clean

1 = oil inlet hole

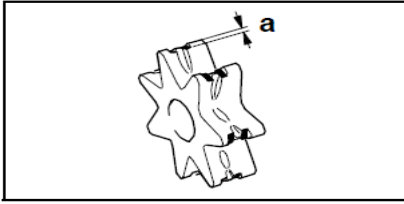
2 = oil passage

3 = bar groove

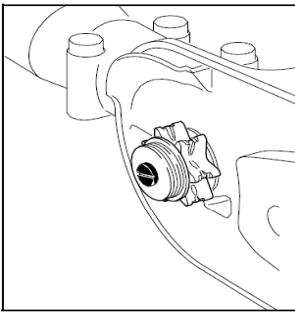
Checking and Replacing the Chain Sprocket

- Remove the chain sprocket cover, chain and guide bar.

Replace the chain sprocket:



- after using two chains or sooner
 - if the wear marks (dimension deeper than 0.02in (0.5mm) – the life of the a) on the sprocket are chain would otherwise be reduced.
- 💡 The service life of the chain sprocket is prolonged if it is used with two chains in rotation.



Maintaining and Sharpening Saw Chain

Correctly sharpened chain

A properly sharpened chain slices through wood effortlessly and requires very little feed pressure.

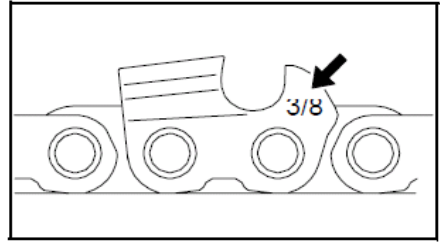
Do not work with a dull or damaged saw chain as it will increase the physical effort required, cause higher vibrations, produce unsatisfactory results and a higher rate of wear.

- Clean the chain.
- Check the chain for cracks in the links and damaged rivets.
- Replace any damaged or worn parts of the chain and match the new parts to the shape and size of the original parts by filing back as necessary.

⚠ It is necessary to comply with the angles and dimensions specified below. If the **sawchain is incorrectly sharpened** if the depth gauges are too low – there is an increased risk of kickback and resulting injury!

💡 The pruner's saw chain cannot be locked in place on the guide bar. Therefore, it is best to remove the chain from the bar and sharpen it on a workshop sharpening tool.

- Select the appropriate sharpening tools for the chain pitch. See „Specifications“ for the permitted chain pitches.



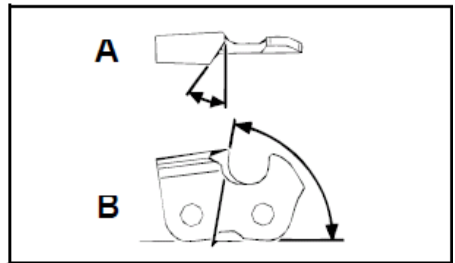
The chain pitch (e.g. 3/8") is marked on the depth gauge of each cutter.

Use only special saw chain files!

Other files have the wrong shape and cut.

Select the file diameter according to the chain pitch.

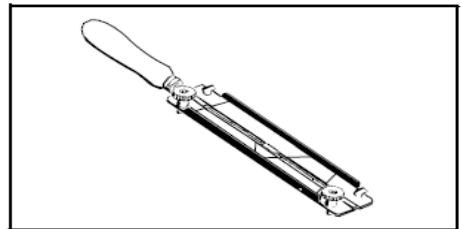
You must also observe the following angles when re-sharpening the chain cutters.



A = Filing angle

B = Side plate angle

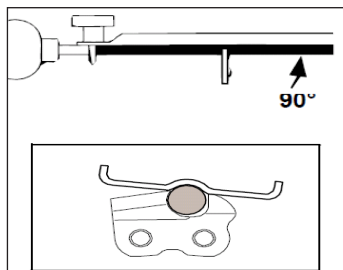
Furthermore, the angles must be the same on all cutters. If angles are uneven the chain will run roughly, not in a straight line, wear quickly and break prematurely.



As these requirements can be met only after sufficient and constant practice:

- Use a file holder

A file holder must be used for manual resharpening of saw chain. The correct filing angles are marked on the file holder.



- Hold the file guide bar) and file according to the angles marked on **horizontally** (at right angle to side of the file holder. Rest the file holder on the top plate and depth gauge.
- Always file from the inside to the outside of the cutter.
- The file only sharpens on the forward stroke – lift the file off the cutter on the backstroke.
- Avoid touching the tie straps and drive links with the file.
- Rotate the file at regular intervals while filing to avoid one-sided wear.
- Use a piece of hardwood to remove burrs from cutting edge.

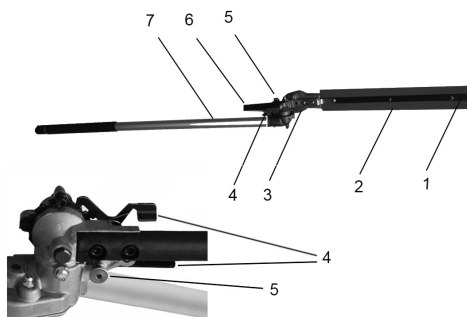
All cutters must be the same length. If the cutters are not the same length, they will have different heights. This makes the chain run roughly and increases the risk of breakage of the chain.

Store the Tools

- For periods of about 3 months or longer:
- Remove and clean the saw chain and guide bar and hedge trimmer, spray with corrosion inhibiting oil.
- If you use biological chain and bar lubricant completely fill the chain oil tank.
- If the Tool is stored separately, fit the protective cap on the drive tube to avoid dirt getting into the coupling.
- Store the machine in a dry, high or locked location – out of the reach of children and other unauthorized persons.

4 Description of Pole Hedge Trimmer

Main Parts



- 1 Cutting blades
- 2 Blade scabbard
- 3 Blade drive gear
- 4 Adjusting lever
- 5 Safety handle
- 6 Adjusting handle
- 7 Drive tube

Definitions

- 1 Cutting Blades
Steel blades for cutting hedges and shrubs.
- 2 Blade Scabbard
Covers and protects cutting blades when hedge cutter is not in use.
- 3 Blade Drive Gear
Converts rotary movement of angle drive into reciprocating movement.
- 4 Adjusting Lever
Used to set cutter bar to the required angle.
- 5 Safety handle
Device use to protect adjusting blade angle.
- 6 Adjusting handle
Device use to adjusting the blade angle.
- 7 Drive Tube (Boom)
Encloses and protects the drive shaft between the coupling sleeve and gearbox.

Mounting and adjusting

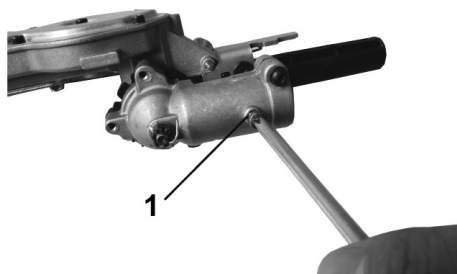
Mounting

The hedge trimmer head (1) and shaft part (2) are separate in the carton, you must mount them together before use.



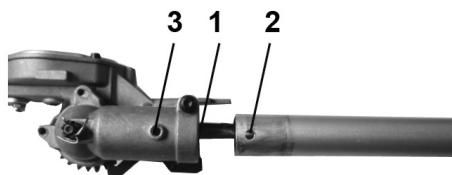
Step 1

Unscrew the bolt (1) from the hedge trimmer head.



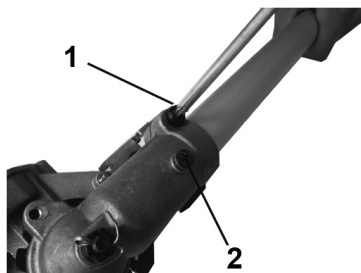
Step 2

Insert the shaft to the hole (1) of the hedge trimmer head. You can run the shaft until the hole (2) of the shaft is shown from the hole (3).



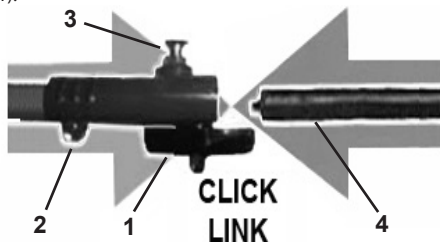
Step 3

Screw down bolt 1 and 2.




Step 4

Loosen wing screw (1) on the coupling sleeve (2), and pull the knob (3) and insert the driver tube (4) until the lock button is secured in place. Screw down the wing screw (1).

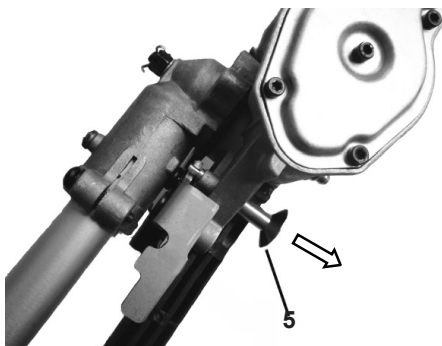
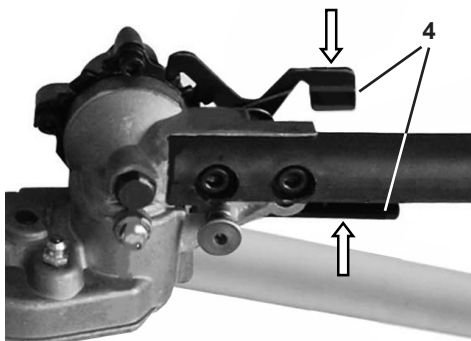


Adjusting angle

 Only adjust the cutter bar when the blades are no longer moving and the engine is turned off.

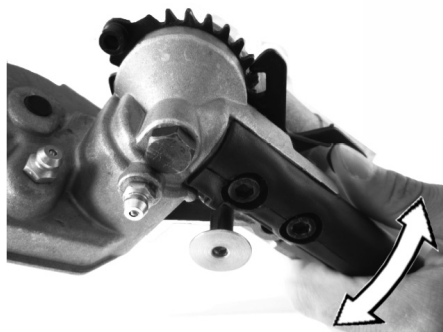
Step 1

Push down the two adjusting lever, then pull out the safety handle along the arrow (shown in the picture).

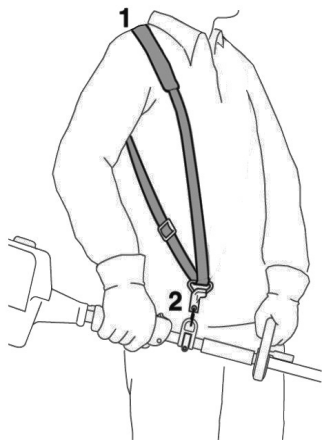


Step 2

You can run the adjusting handle you need. The safety handle will lock up automatic.



Fitting the Harness



The type and style of harness depend on the market.

- Put on the shoulder strap (1).
- Adjust the length of the strap so that the spring hook (2) is about a hand's width below your right hip.
- Never carry the belt diagonally across your shoulders and chest, but rather only on one shoulder, so that you can rapidly move away from the tool in case of danger.

Using the Machine

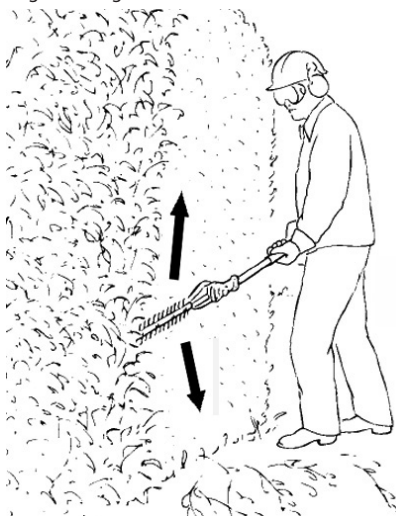
Do not use your power scythe attachment during other people's rest periods.

Preparations

Always wear a harness.

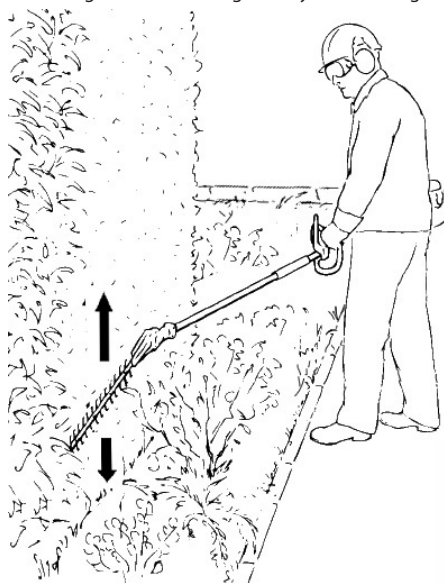
- **Vertical cut (with straight cutter bar)**

Large working radius even without additional aids



- **Vertical cut (with angled cutter bar)**

Cutting without standing directly next to hedge



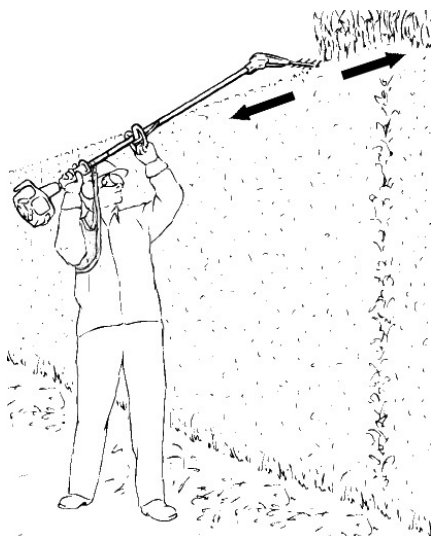
- **Horizontal cut (with straight cutter bar)**

Cutting without standing directly in front of the hedge - large working radius



- **Overhead cut (with angled cutter bar)**

Hold the hedge cutter above your head and swing it in an arc to make maximum use of its reach.



Any working position above head height is tiring. To minimize the risk of accidents, work in such positions for short periods only. Set angle of adjustable cutter bar to maximum so that the unit can be held in a lower, less tiring position (with harness) while still providing adequate vertical reach.

- **Horizontal cut (with angled cutter bar)**

Cutting close to the ground from a standing position, e.g. low shrubs



Do not throw cuttings in the rubbish bin (garbage can) -they can be composted

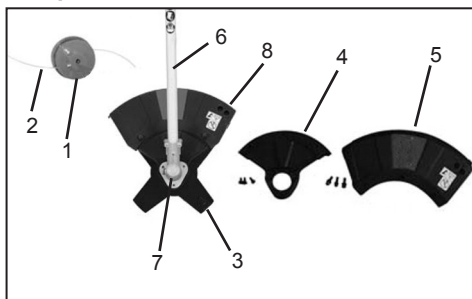
Store the Tools

- Remove the tool – clean and inspect it.
- Always clean and oil the blades after prolonged use of the hedge trimmer. This will greatly affect the life of the equipment. Damaged cutting units must be properly repaired immediately. Clean the shearing blades with a dry cloth or – in case of heavier dirt – with a brush. **Attention: Danger of injury!** Oiling of the blades should ideally be carried out using an environmentally friendly lubricant. Then put the shears in their case with the cutting blades first.
- If the Tool is stored separately, fit the protective cap on the drive tube to avoid dirt getting into the coupling.
- Store the machine in a dry, high or locked location – out of the reach of children and other unauthorized persons.
- During transport and storage of the tool, the blade guard must be attached.
- Do not store the tool and fuel can where petrol vapours could come into contact with a naked flame or sparks (e.g. not next to a cooker, oven or hot water boiler with a pilot light). Always allow the tool to cool down before putting into storage.

CAUTION: All maintenance work which is not detailed in these instructions must be performed by an authorised repair shop. In order to guarantee consistent and proper operation, only ORIGINAL SPARE PARTS may be used.

5 BRUSH CUTTER AND TRIMMER

Main parts and Control

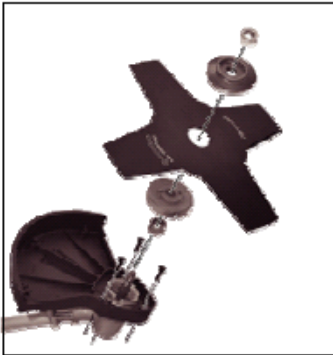


- 1 = Cord cutting head
- 2 = Cutting cord
- 3 = Cutting blade
- 4 = Protective shield for metal blade
- 5 = Protective shield for cutting cord
- 6 = Shaft
- 7 = Gear housing
- 8 = Cut off blade

Definition

1. cord cutting head
use to cut grass
2. cutting cord
use to cut grass
3. cutting blade
use to cut frutex
4. protective shield for metal blade
protect the user away from danger
5. protective shield for cutting cord
protect the user away from danger
6. shaft
connect the gear housing and the coupling sleeve
7. gear housing
transfer the power to cutting unit
8. cut off blade
cut off the cord

Mounting the brush cutter



Step 1:
put the metal protection cover on the gear box and align it according to the mounting bores. inset the screws as shown and tighten them firmly.



Warning!

Make sure that all components are mounted and assembled correctly and all screws are properly tightened.

Step 2:

Remove the spilt pin from the end of the drive shaft



Step 3:

Insert an Allen Key into the hole on the side of the lower retaining flange to prevent the gear from turning. Use the included wrench to unscrew the nut turning it clockwise.



Step 4:

Remove the upper retaining flange.

Mount the blade as shown. Put the flange with its flat surface onto the cutting blade.



Step 5:

Use the included wrench to tighten the nut turning it anticlockwise.

Secure the screw with the spilt pin again.



Make sure to unblock the gear again by removing the Allen Key from the bore on the side of retaining flange.

Mounting the trimmer

Step:

Mount the protection shield extension as shown in figure using the 3 included screws nuts and washers.

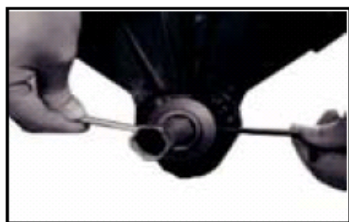
When operating the device in connection with the nylon line cutting head, the plastic protection cover must always be installed to cut the nylon cutting line to the correct length and to protect the operator.



Remove the split pin from the end of the drive shaft



Insert an Allen Key into the hole on the side of the lower retaining flange to prevent the gear from turning. Use the included wrench to unscrew the nut turning it clockwise.



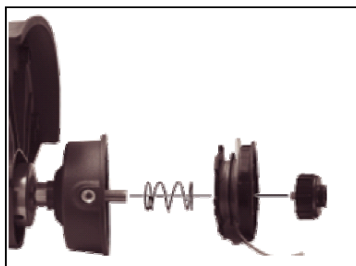
Remove the upper retaining flange.

Make sure to keep the nut, split pin and upper retaining flange. These parts will be required to mount the metal blade!

Screw the cutting head onto the thread by turning it anticlockwise and fasten it hand-tight.



Please make sure that the line spool is properly seated in the spool housing, the spring is located under the line spool, and the line ends are led to the outside through both eyelets.



Replacing the cutting cord

Remove the screw by turning it clockwise.



Remove the coil and spring from the spindle.

Remove the remaining cutting cord.

Fold a 5 m x 2,2 mm cord in half. Put the loop end into the slot of the spool. The slot is located in the centre wall that divides the two cord chambers from each other.



Roll both halves of the cord concurrently around the spool. The wrapping direction is engraved in the spool:

“Wind Cord”. Make sure that the cord is always tensioned and that each half of the cord stays in the proper separate spool housing. Roll up the cord until 15 cm of cord remain at each end.



Lead each cord end through the openings at the respective opposite side of the coil.



Lead the spring over the spindle and thread the cord ends through the eyelets in the housing.

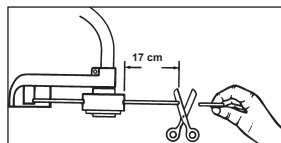


Lead the coil into the housing while pulling the cord ends through the eyelets. Make sure that the spring is positioned correctly in relation to the coil and housing.

When the coil sits in its correct position in the housing, push it firmly into the housing so that the spring is tensioned. Firmly pull at both ends of the cord so that the cord cannot be pinched between the coil and housing. Maintain the spring tension through continuous pressure on the coil in the housing and fix the screw by turning it anticlockwise. Fasten the screw fingertight only.



Cut the cord to about 17 cm to avoid excessive load to the engine during the starting and warm-up phase .



Store the Brushcutter

- Follow all aforementioned maintenance instructions.
- Thoroughly clean the trimmer and grease the mental parts.
- Run the engine until the carburetor is dry - this helps prevent the carburetor diaphragms stickingtogethe.
- Store the devices in a cool, dry place where it is protected from open flames and sources of heat as flow heaters, oil-fired boilers etc.
- During transport and storage of the tool, the blade guard must be attached.
- Do not store the tool and fuel can where petrol vapours could come into contact with a naked flame or sparks (e.g. not next to a cooker, oven or hot water boiler with a pilot light). Always allow the tool to cool down before putting into storage.

CAUTION: All maintenance work which is not detailed in these instructions must be performed by an authorised repair shop. In order to guarantee consistent and proper operation, only ORIGINAL SPARE PARTS may be used.

6 706 MM EXTENSION SHAFT



To reach a high position, you can add an extension shaft between the main body and add-on attachment.

Note: The Brushcutter can't use the extension shaft.

When use chain saw to cut high branches,the falling twigs and saw dust may hurt youe face and hands.Always wear helmets with visor and protective gloves to prevent damage to your view and skin. Tight fitting clothingand safety boots should also be worn to prevent injury.

7 MAINTENANCE

Maintenance Chart

ENGINE


Please note that the following maintenance intervals apply for normal operating conditions. If your daily working time is longer than normal or working conditions are difficult (very dusty work area, etc.), shorten the specified intervals accordingly.		before starting work	after finishing work or daily	after each refueling stop	when required
Complete machine	Visual inspection (condition, fuel and other leaks)	x		x	
	Clean		x		
Control handle	Check operation	x		x	
Air filter/Clean	Clean				x
	Replace by a servicing dealer				x
Fuel tank	Clean				x
Carburetor	Check idle adjustment – working tool must not move	x		x	
	Readjust idle				x
Spark plug	Readjust electrode gap				x
	Replace after about 100 operating hours				x
Cooling inlets	Inspect		x		
	Clean				x
Spark arrestor* in muffler	Check		x		
	Have cleaned or replaced 1)				x
Accessible screws and nuts (not adjusting screws)	Retighten				x
Safety labels	Replace				x

POLE CHAIN SAW

Please note that the following maintenance intervals apply for normal operating conditions only. If your daily working time is longer than normal or cutting conditions are difficult (very dusty work area, resin-rich wood, tropical wood etc.), shorten the specified intervals accordingly.		before starting work	after finishing work or daily	after each refueling stop	when required
Chain lubrication	Check	x			
Saw chain	Check, also check sharpness	x		x	
	Check chain tension	x		x	
	Sharpen				x
Guide bar	Check (wear, damage)	x			
	Clean and turn over				x
	Deburr				x
	Replace				x

Pole Hedge Trimmer

Please note that the following maintenance intervals apply for normal operating conditions. If your daily working time is longer than normal or working conditions are difficult (very dusty work area, etc.), shorten the specified intervals accordingly.		before starting work	after finishing work or daily	after each refueling stop	yearly	if problem	if damaged	as required
Complete machine	Visual inspection (condition, fuel and other leaks)	x		x				
	Clean		x					
Control handle	Check operation	x		x				
Cutting blades	visual inspection		x				x	
	Sharpen							x
Gearbox lubrication	Check		x					
	Top up							x

 **CAUTION:** Never attempt to use an incomplete machine or one which an unauthorised alteration has been implemented. All maintenance work which is not detailed in these instructions must be performed by an authorised repair shop. In order to guarantee consistent and proper operation, only ORIGINAL SPARE PARTS may be used.

Store the Engine

For periods of about 3 months or longer:

- Drain and clean the fuel tank in a well ventilated area.
- Dispose fuel properly in accordance with local environmental requirements.
- Empty the fuel tank and screw the tank cap back on.
- Let the engine idle until it stops to free the carburettor from fuel.
- Let the engine cool down (about 5 minutes)
- Remove the spark plug using a spark plug wrench.
- Fill a tea spoon of pure 2-stroke oil into the combustion chamber. Pull the starter rope several times slowly to distribute the oil inside the engine. Put the spark plugback in.
- Thoroughly clean the machine - pay special attention to the cylinder fins and the air filter.
- Remove the tool – clean and inspect it.
- Store the machine in a dry, high or locked location- out of the reach of children and other unauthorized persons.

8. REFERENCE

Specifications: Pole Chain Saw, Pole hedge trimmer, Brush Cutter / Grass Trimmer GTP6

Motor

Engine output	kW	1,0
Engine type		2-stroke
Cubic capacity	cm ³	30
Fuel	lubricated petrol	40:1
Tank volume	ml	600
Maximum engine speed	min ⁻¹	10.500
Idling speed	min ⁻¹	3.000
Max. speed of the cutting tool	min ⁻¹	8.500
Fuel consumption	kg/h	0.38
Weight	kg	4,9

Pole chain saw

Chain speed	m/sec	21
Cutting length	" / mm	8 / 203
Chain type		Oregon 91PJ033X
Toothing		7T - 3/8" P
Oil tank volume	ml	150
Noise level	dB (A)	102 [K=3,0 dB(A)]
Vibration - full throttle	m/s ²	13,254 [K=1,5 m/s ²]
Vibration - idling speed	m/s ²	6,954 [K=1,5m/s ²]

Pole hedge trimmer

Blade length	mm	430
Cutting length	mm	400
Cutting blade diameter	mm	20
Idling speed	min ⁻¹	2.500
Work angle		-90° bis +60°
Noise level	dB (A)	102 [K=3,0 dB(A)]
Vibration - full throttle	m/s ²	17,4 [K=1,5 m/s ²]
Vibration - idling speed	m/s ²	6,954 [K=1,5m/s ²]

Brush Cutter / Grass Trimmer

Cutting diameter (blade)	cm	23
Cutting diameter (nylon line)	cm	43
Cord diameter	mm	2,2
Overall cord length	m	2 x 2,5
Cord extension		Tap'n go
Noise level	dB (A)	94,5 [K=3,0 dB(A)]
Vibration - full throttle	m/s ²	9,9 [K=1,5 m/s ²]
Vibration - idling speed	m/s ²	3,2 [K 1,5 m/s ²]
measured acoustic capacity level	dB (A)	109,7 [K 3,0 dB(A)]
guaranteed acoustic capacity level	dB (A)	112

Technical changes reserved.

The Pole chain saw are manufactured in accordance with the provisions of EN ISO 11680-1 and fully comply with the provisions of the German Equipment and Product Safety Act.

The brush cutter are manufactured in accordance with the provisions of EN ISO 11806-1:2011 and fully comply with the provisions of the German Equipment and Product Safety Act.

Notice: The vibration value indicated was determined with a standardized tool and can be used to make comparisons with other petrol equipment as well as temporary estimates of the load through the vibrations.

WARNING! The vibration value may vary according to the usage of the machine and its fitted equipment, and be higher than the one indicated. Safety measures must be established to protect the user and must be based on the load estimate generated by the vibrations in real usage conditions. In this regard, all the operational cycle phases must be taken into consideration, such as switching off or idle running.

Warning: Prolonged exposure to vibrations can cause injuries and neurovascular disorders (also called "Renaud's syndrome" or "white hand"), especially to people suffering from circulation disorders. The symptoms can regard the hands, wrists and fingers and are shown through loss of sensitivity, torpor, itching, pain and discolouring of or structural changes to the skin. These effects can be worsened by low ambient temperatures and/or by gripping the handgrips excessively tightly. If the symptoms occur, the length of time the machine is used must be reduced and a doctor consulted.

When working with the device, a certain level of noise cannot be avoided. Noisy work should be scheduled for hours, during which it is allowed by statute or other local regulations. Adhere to any applicable rest times and limit your working time to the necessary minimum time. For your personal protection and the protection of people nearby, suitable hearing protection must be worn.

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