

VARI 432HB / 522HB BRUSHCUTTER

**INSTRUCTIONS FOR USE,
MAINTENANCE AND SPARE PARTS
(TRANSLATION OF THE ORIGINAL INSTRUCTIONS FOR USE)**



READ CAREFULLY THIS MANUAL BEFORE ANY USE



**WARNING: LOOK FOR THIS SYMBOL TO POINT OUT IMPORTANT
SAFETY PRECAUTIONS.**

SECURITY RULES:**Before starting**

This brushcutter is only made for cutting grass, bush, arborescent shrub, and clumps. Any other use of the brushcutter unmentioned in this manual could involve danger for your personal security.

- Read carefully the security advises in this manual before any use of the machine. Store this manual securely in order to be able to have it at hands in case of problem.
- The brushcutter you just bought has to be used only for the cutting of grass, bushes and clumps.
- The brushcutter must be only used by adult and competent people who have been correctly trained on its functioning and working by qualified person or by your local dealer.
- As the user of the brushcutter, you are responsible toward any person or any object that could be inside the working area.
- All people, animals and delicate property must be kept at least 15 meters away from the machine and the area of working.
- While working, try to be always in the best conditions, you should not use alcohol, drugs or medicine that could lessen your attention.
- The machine must be operated only under conditions of good visibility and in natural daylight.
- Always wear adequate clothes and adequate protections such as: closed working shoes or high boots with non-slipping soles, protecting helmet and gloves. Always use protecting glasses or face shields and in order to protect your ears from high noises, use head plugs. Tight your hair as it is not reaching your shoulders.
- **Never use cutting devices other than those supplied by the manufacturer, and use only original spare parts supplied by the manufacturer. Never unset all security devices, this could be dangerous for your security.**
- Always use cutting tools in good conditions. Do not use broken, worn-out, deformed, dented or cracked cutting tools.
- Never start and/or use the machine in a closed area or inside a structure, as there is some risk of intoxication due to exhaust gas. Mix and handle the fuel in the open air only, far away from all sources of heat, sparks or flames with the engine switch off. Refrain from smoking while handling or mixing the fuel. And do not use telephone.
- Make sure that all security devices and/or protection devices are in good operating conditions. All maintenance, repair and component replacement operations must always be done with the engine switched off and all rotating cutting devices stopped.
- Be aware of prolonged vibrations effects. We recommend stopping working and taking some short pauses from time to time.
- Chopped grass and shrubs sprayed into the air can cause allergy reactions.

Security pictograms

1. Warning, Danger, Caution



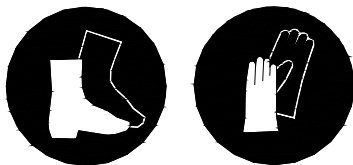
2. Read documentation and safety instructions which are provided in this user manual.



3. During the use of the machine, use protective equipment to protect the hearing and eyesight. Wear a protective helmet.



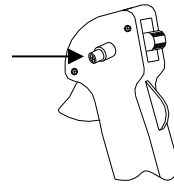
4. Wear security shoes as well as gloves.



5. Beware, do not put hands and feet near to the rotating parts. Always stay at a safe distance from the cutting devices.



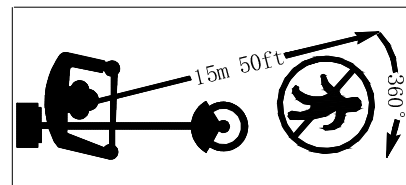
6. Push the red button on the right handle for the starting.



7. Beware of the possible projection of objects.



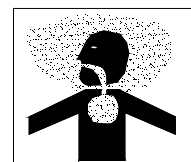
8. Warning: people, animals, objects damageable can't be in a diameter of 15 meters around the working zone.



9. Guaranteed noise level.



10. Danger, risk of intoxication.



11. Hot surface, risk of burn.

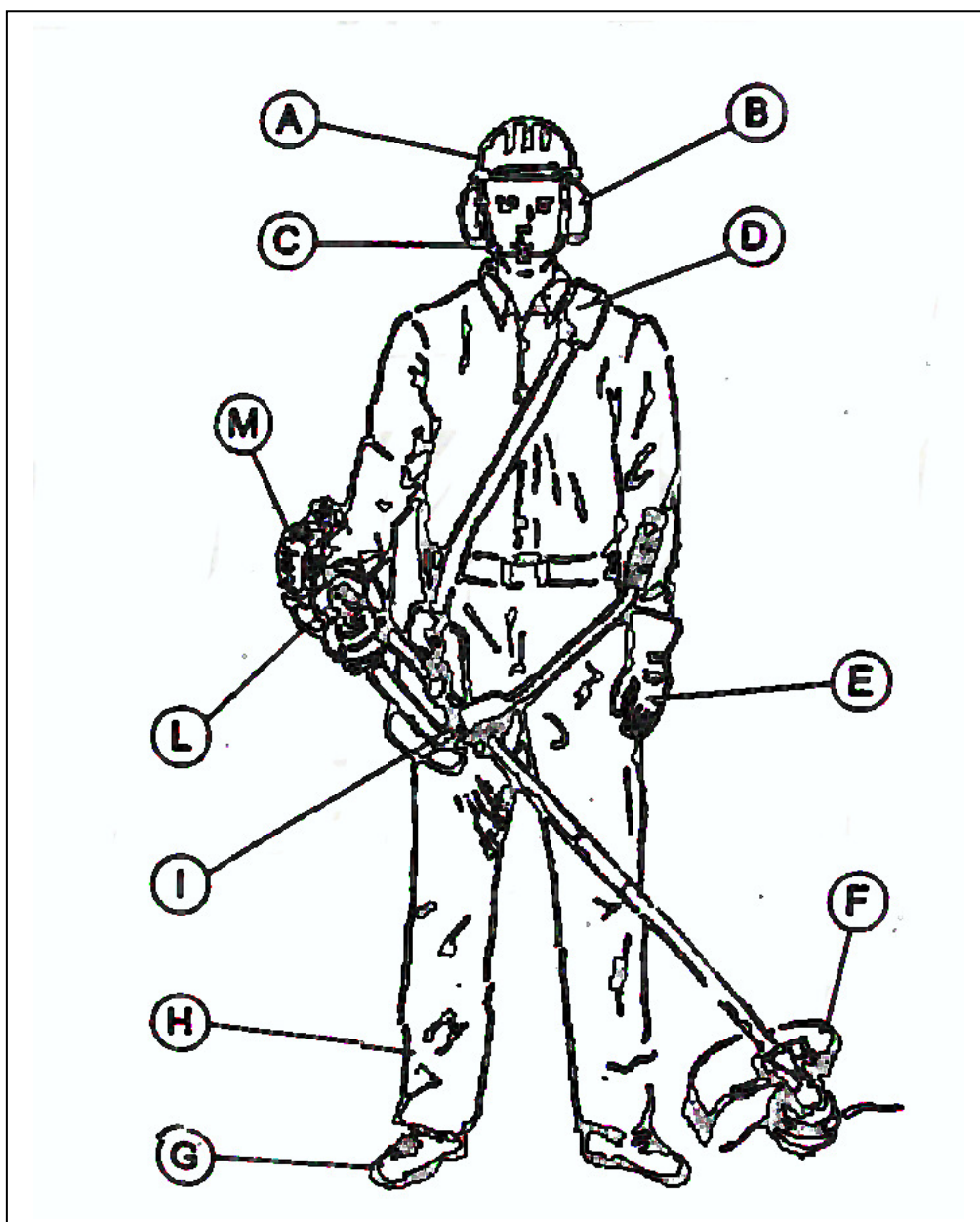


12. Danger, risk of fire or explosion.



Security pieces description.

- | | |
|---|--|
| A) Security helmet | H) Heavy duty work suit |
| B) Head-phones | I) Anti-vibrating support |
| C) Face shield against possible projections | L) Accelerator handle with stop switch |
| D) Harness | M) Engine with overheating protection |
| E) Gloves | |
| F) Cutting device protection | |
| G) Security shoes | |

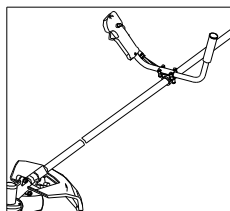


TECHNICAL CHARACTERISTICS

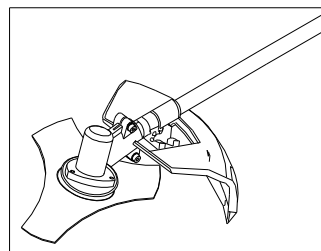
MODEL	BC431	BC521
TRADE NAME	VARI 432HB	VARI 522HB
Dry weight (without cutting tools and fuel)	7,1 kg	7,8 kg
Engine type	LH1E40F-5A	LH1E44F-5A
Fuel tank capacity (litres)	1,1 l	1,1 l
Blade diameter (mm)	255	255
Blade thickness (mm)	1,6	1,6
Number of teeth	3	3
Fixation hole diameter (mm)	25,4	25,4
Max. blade rotation speed (min ⁻¹)	8000	8000
Rotation direction (as seen from above)	left	left
Displacement (cm ³)	43	52
Power max. (HP)	1,7	1,9
Engine speed at max. power (min ⁻¹)	9500	9500
Shaft speed (min ⁻¹)	9500	9500
Idle speed engine level (min ⁻¹)	3000	3000
Fuel consumption (g/kWh)	480	580

ASSEMBLY

Before starting to work, make sure that all parts have been correctly assembled.

Mounting the handlebar

Put the handlebar with the accelerator and the STOP button into the metal handlebar holder. Make sure that your arms and wrists are flexed slightly in normal work position. Fix in the good position with the specific tool (4 screws). Make sure all the 4 screws are fastened.

Mounting the safety guard

Put the safety guard on the gear case from the lower side, so that it fits in the shape of the cover. Put the plastic holder from the upper side and fix it using two screws.

Harness

The harness provided is a model with foam and hip protection. It must be used with the hip protection on the right side.

Balance of the machine

Before any use, you must adjust the harness in order to balance the machine as follows: Put on the belt and hook to the machine.

-Adjust the position of the fixation on the tube of the machine, in order to obtain a

good balance between the rear and the front of the machine.

-If you use the machine with nylon head, you must adjust the belt in a way that the distance between the ground and the nylon head is in between 0 and 300 mm.

-If you use the 3-teeth blade, you must adjust the security harness in a way that the distance between the ground and the blade is between 100 and 300 mm.

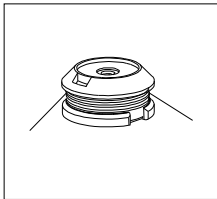
Tools types

Safe and economical operations require that you use the appropriate type of cutting tools.

The 3-teeth blade and the nylon head provided with the machine are good for the majority of uses. Use only original spare parts because those are specially made for your model by the manufacturer.

Never use steel wires or other materials.

Mounting the nylon head



Place the blade holder on the shaft, then screw on the nylon head on the central bolt (M8, left-handed thread) and tighten it rightly.

Insert a screwdriver into the hole on the side of the angle gearbox and in the blade holder to prevent the shaft from turning.

Make sure that the nylon head is completely and safely locked.

Mounting the three-teeth blade

Place the 3-teeth blade on the centring washer in the blade holder (with the writing up).

Put on the big washer in order to maintain the blade, insert a screwdriver into the hole on the side of the angle gearbox and in the blade holder to prevent the shaft from turning.

Put on the sliding cover, screw on the nut and tighten it rightly.

Tightening torque: 30 Nm.

Make sure that the blade is completely and safely locked.

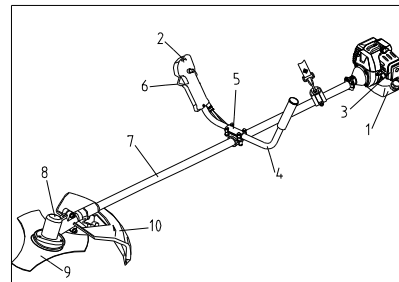
Make sure that all different parts of the cutting tool are securely fastened as above.



If the blade is not correctly positioned it can involve SERIOUS DAMAGE AND INJURY TO PERSONS AND PROPERTY.

MAIN PARTS OF THE BRUSHCUTTER:

1. Mixture tank.
2. Gas control with STOP button.
3. Carburettor / air filter.
4. Handlebar.
5. Handlebar holder.
6. Gas control lever.
7. Transmission axle.
8. Gearbox.
9. Cutting tool.
10. Safety guard.



Never use nylon heads and/or three-tooth blade other than those provided by the manufacturer. Always use tools in perfect condition, free of deformation, dents, broken or deformed teeth that could cause the breakage of the cutting tools.

In high-speed rotation, parts could be projected at very high speed and could

involve serious injury and damages to persons and properties.

The manufacturer declines all responsibility in case of faulty use of the machine.

BEFORE STARTING THE WORK

Before any work with the machine, make sure that the cutting tool has been perfectly assembled, tightened and correctly centred. Make sure that all nuts and screws are securely tightened. Make sure the safety guard protection is correctly assembled too.

Whenever it is possible, clean the working area from all foreign objects such as nails, metal wire, stones or broken glass that might be thrown or become tangled up in the cutting tools.



It is prohibited to start the machine in an enclosed area or in buildings. The breathing of exhaust gas can involve dangerous intoxication.



Whenever cutting toxic grass, pay special attention as the spraying of chopped grass and vegetal matters can lead to intoxication. Use appropriate protections for breathing.

STARTING OF THE ENGINE

FUEL: MIXTURE OF GASOLINE AND OIL ONLY

Use clean and fresh unleaded gasoline with minimum octane number 95 and 100% synthetic oil specially made for heavily stressed two stroke engines; mix the gasoline and the oil in a ratio recommended by the oil manufacturer.

By using synthetic oil specially made for two-stroke engines, it will reduce the

formation of ashes and carbon deposits in the spark plug, the piston, the muffler and in the cylinder as well as reducing emission of exhaust gas. Lubrication will be at best and it will give a longer life to your engine.

It is important to use exclusively good quality and fresh gasoline, use as well only branded oil. You must use the mixture during the three weeks that follow its preparation.



You must absolutely do the mixture gasoline / oil before you put it into the fuel tank. In order to obtain a good mixture, put the oil into the jerry can after the gasoline. You must do this operation in an open area away from any lights, while the engine is turned off and far apart from any flames or sparkles, you must not smoke and don't use the telephone. Shake up the mixture in the jerry can and the engine fuel tank before any use.

You can now proceed with the filling of the fuel tank, unscrew the cap of the fuel tank and put the mixture gasoline/oil using a fuller, be careful not to spill any mixture around and/or on your clothing, if that should happen, wipe the spilling with a clean rag.

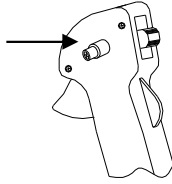
Start the engine at least three meters away from the area where the fuel tank had been filled up in order to avoid any risks of potential fire.



Never fill up the gasoline tank while the engine is hot.

Engine starting

To start the engine, proceed as follow:

1. Carefully proceed to all the different steps of preparation and fuel supply, push the red button on the right handle.



2. Press on the purge bulb under the carburettor 4 or 5 times, to allow the gasoline to arrive on the return fuel tank transparent gasoline pipe.
3. Move the starter lever of the carburettor in this position. 
4. With your left hand, grip the brushcutter (make sure that the machine is well-balanced and the handles are in suitable position for you) and with the right hand pull slowly the handle recoil starter until the pawls hook onto the flywheel.
5. Pull hardly 4 or 5 times the handle recoil starter until the starting, the red button return on <<OFF>> position when you push on the gas lever.
6. Release the starter lever after starting on this position .
7. **Never pull the recoil starter to its all length in order to avoid damages to the recoil starter.**

If the engine does not start, maybe the spark plug is wet. In this event, unscrew the spark plug, wipe and dry it and pull the recoil starter several times, without the spark plug in place, in order to clean and ventilate the combustion chamber.

IMPORTANT:

Whenever the engine is hot, all these operations are not necessary, pull only the recoil starter until the engine starts. The cutting device should not be in rotation at the idle speed of the engine.

Running-up

During the first ten hours of work, run the engine at a moderate rpm. We advise you, in any case, do not use your engine at high-speed as the different components must adjust one with the others during the running-up period. It is at the end of the running-up period that the engine will reach its maximum power.

After the two first hours of work, make a pause and check that all nuts and screws are securely fastened, tighten if necessary.

USE OF THE BRUSHCUTTER

Which protection to use with which cutting tool?

Always use the safety guard supplied with the brushcutter.

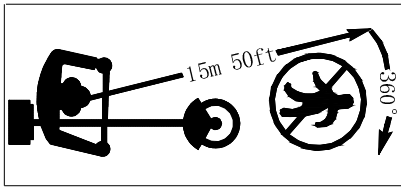
Use only the tools supplied by the manufacturer. All other blades and especially saw blades are FORBIDDEN.

This brushcutter is only made to cut grass, bushes, arborescent shrubs and clumps.

* Be sure that the weight of the machine is perfectly balanced between the engine and the cutting system. The cutting tool must be parallel to the ground.

* Operate a few accelerations, without reaching the max. rpm and without working to make sure that everything is working in good condition and regularly.

* Only when the nylon head or the 3-teeth blade is at complete stop, you can go to your working zone by carrying the machine in a way that the cutting tool is under your waist level and far from your body. Make sure there are no other people, animals or others within a 15 meters radius.



Place yourself in a well-balanced and stable position on both feet.

Grass cutting

Cut the grass, like if you were in a corridor of 1.5 meters wide, move step by step balancing the machine right and left, and vice-versa. Make sure at each step that you are still well balanced on your feet. If you are using the 3-teeth blade for the grass, always cut from right to left and leave a pile of cut grass on the left for later gathering.

If possible, remove stones, even small ones, piles of earth, small piece of wood or anything that could be hidden or poorly visible in the grass. If you hit a large object by accident, or if you block the cutting tool due to overloading, or overload of grass or stringy vegetal material wrapped in the cutting tool, you must: reduce the speed to the idle speed and disengage the clutch. Make sure that the cutting tool is stopped by pushing the stop button on the handle. Put the brushcutter on the ground and check that the cutting tool has not been damaged such as breakage of teeth for the blade, cracking. If necessary, change the cutting tool. If the tool is only wrapped by vegetal material, with your pair of gloves remove the vegetal materials and clean the cutting tool.

Always wear security gloves for this operation and push the security button to the <<STOP>> position.

When the 2 nylon wires are too short, accelerate the engine and hit the nylon head on the ground, the 2 nylon wires will automatically get out and be cut at the correct length. Repeat the operation if necessary.

Correct use of the 3-teeth blade



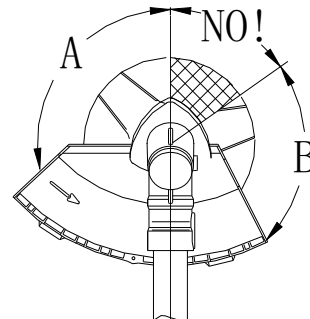
All the protection systems of the machine and the security parts must be in order during the use of the brushcutter.

The use of the 3-teeth blade can do dangerous kickbacks, if you don't respect those obligatory security standards.

Pay attention to the drawing below. When you cut a small tree always use the 3-teeth blade in the <<A>> circular position.

The <> circular position is acceptable only if you hold strongly the machine. It is not recommended.

The <<NO>> circular position is forbidden as it can produce dangerous incidents with danger for people, animals and things. Never use this position.



All protective devices of the machine as well as protection equipment must be maintained in good operation condition during the use.

The engine of the machine must be at complete stop during assembling, repair and cleaning operations.

Put the security button on the <<STOP>> position.

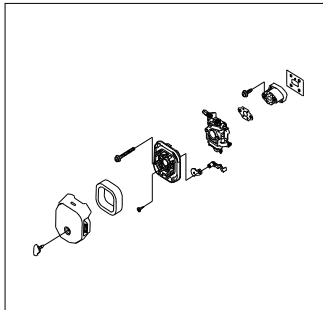
Brushcutters transmit vibrations to the user during the use. These vibrations can generate an increased tiredness. For this reason, we recommend taking regular pauses during work. The machine is equipped with an anti-vibrating device. We recommend as well that after a few hours of work, to take a pause (5-10 minutes) and leave the engine at idle rpm in order to let the engine cool down by the air current created by the flywheel.

MAINTENANCE

Carburettor adjustment

During a normal use, the carburettor may have some slight changes, especially, when there are some changes of working conditions and after many hours of work or because of variation of temperatures or pressures in the surrounding.

Carburettor adjustment at high speed



If the carburettor needs adjustment proceed as follow:

- Screw clockwise the yellow screw of the carburettor until it comes to the base, never force on it.
- From this position unscrew it by one and a half turn.
- Start the engine and accelerate at the maximum.
- Find the point where the engine is at the maximum rpm by screwing or unscrewing at around 1/8 of turn at each time.

- When you have founded the maximum rpm, unscrew of 1/4 of turn the screw, in order to increase the mixture gasoline.

Idle speed adjustment

- Screw or unscrew the butterfly screw until the engine is at around 2500 rpm.
- Those adjustments require a special tool control. If you don't have it, contact an approved after sale service.

For a correct adjustment, this operation must be done while the engine is hot.

Gearbox

Every 25 hours, grease the gearbox. Unscrew the lateral tap of the gearbox and put grease inside using a suitable tool. Use special gearbox grease that resist to high temperature.

Screw the tap tightly.



Be sure that the cutting tool is at complete stop while the engine is running at minimum.

Maintenance and storage after use

When you finish working, clean completely the brushcutter from any grass or dirt, make sure there is no grass material wrapped in the cutting tools and put the machine back in its packing, in order to avoid to injury yourself or other people during the transport.

Be aware not to hit or cut the fuel tank while you put it to the ground. Do not let the brushcutters fall down to the floor, it may damage the machine.

Whenever the machine is not used for over 1 month, proceed as follow:

- Empty completely the fuel tank from the mixture.
- Protect all engine metal parts from corrosion by provided those with a thin coat of oil.

- Remove the spark-plug, put some drops of oil in the cylinder then pull the recoil starter 2 to 3 times in order to distribute evenly the oil, put back the spark-plug.
- We recommend you, to start the engine during a few minutes every 60 days of inactivity.
- **Shake accurately the mixture in the fuel tank before any use, in order to re-mix the oil with the gasoline.**

- There is water in the mixture. Clean all the alimentation system.
- The air filter is dirty. Clean the air filter. Wash the foam with water and soap. Dry the foam, oil it, and replace it in the filter.
- There are carbon deposits in the cylinder exhaust pipe or the muffler. Clean or change the muffler.

PROBLEMS

Power loss or sudden stopping of the engine

- Check that the tank is not empty.
- The mixture does not reach to the carburettor. Clean or change the fuel filter in the fuel tank.

Bad quality cut

- Overloaded cutting due to too high grass or too thick for engine power.
- Wrapped vegetal material on the cutting tool.
- If blade is used: blade worn out or not sharp enough. Change the blade.

DECLARED NOISE AND VIBRATION VALUES

Brushcutter	A	B
VARI 432HB	$L_{WA} = 113 \text{ dB}$	$a_{hvd} = 6,86 \text{ m.s}^{-2}$
VARI 522HB	$L_{WA} = 113 \text{ dB}$	$a_{hvd} = 7,25 \text{ m.s}^{-2}$

Description:

A = guaranteed level of acoustic performance of the machine L_{WA} (according to Government Decree No. 9/2002 Gaz. Appendix No. 3, Part B, Point 25 and ČSN ISO 3744)

B = declared aggregate value of accelerated vibrations transmitted onto operator's hands/arms a_{hvd} (according to ČSN EN ISO 22867 and ČSN EN ISO 20643)

With respect to the fact that the declared levels of acoustic pressure A at operator's site exceed the value of 85 dB, it is necessary to use personal noise protective aids.

With respect to the exceeded recommended values of noise and vibrations, you are warned to observe the following instructions when working with the machine:

- Protect your hearing by using suitable protective aids specified in **CSN EN 352-1** (shell ear protectors) or **CSN EN 352-2** (plug ear protectors). Require the aids from your dealer.
- Working with the machine should be interrupted after max. 20 minutes for a minimum break of 10 minutes. During these breaks, the machine operator must not be exposed to the impact of another source of noise or vibrations.
- Machine operators should use working aids authorized to **CSN EN 166** or **CSN EN 1731** (tight-fitting garments, sturdy shoes, working gloves and protection glasses).

Guaranteed level of acoustic performance of the brushcutters $L_{WA} = 113 \text{ dB}$

The VARI 432HB and 522HB brushcutters are manufactured by Yongkang Linghang Machine Power Co., Ltd., No. 110, South Yuegui Road, Xicheng Street, Yongkang, Zhejiang, 321300, China

The importer and distributor is VARI, a.s., Opolanská 350, Libice nad Cidlinou 289 07, Czech Republic

WARNING

Using the engine with a gasoline/oil mixture that is not conforming to the requirements of the manufacturer will cancel the warranty.

Use the machine only with the cutting tools provided by the manufacturer.



The use of the brushcutter with a saw blade is strictly forbidden.

DISPOSAL OF PACKAGING AND MACHINE AFTER THE END OF SERVICE LIFE

After unpacking the machine, you are obliged to provide for the disposal of packaging material with taking into account the use of secondary raw materials according to national waste laws and regulations.

The following procedure is recommended for machine disposal after the end of its service life:

1. Dismount all parts from the machine that can still be used.
2. Dismount plastic machine parts and parts made of non-ferrous metals. The dismantled machine remainder and the dismantled parts are to be disposed according to national waste laws and regulations and with respect to the decrees of local town or municipal authorities.

INSTRUCTIONS FOR ORDERING SPARE PARTS

The following data are to be used for an easier identification when ordering the spare parts:

1. Machine type, engine type, machine serial number and year of manufacture;
2. Part number given by manufacturer and its name in the part list;
3. Number of ordered pieces separately for each item;
4. Precise address, telephone number, fax number or e-mail address;
5. Should you be uncertain about the correct identification of the component, send the damaged component either to the nearest service shop or to the dealer;
6. All components should be ordered in the nearest service shop or at your dealer's.

In the case of any confusion concerning the spare parts or technical issues, the commercial, customer-service or technical departments are prepared to answer all your inquiries.

CONTACT TO THE IMPORTER:

VARI, a.s.	phone: +420 325 637 276
Opolanská 350	fax: +420 325 607 264
289 07 Libice nad Cidlinou	e-mail: vari@vari.cz
CZECH REPUBLIC	internet: http://www.vari.cz

Edition 2023. The manufacturer reserves the right to introduce technical modifications and innovations, which do not affect the function and safety of the machine. These modifications may not necessarily be specified in this user manual. Printing errors reserved. © VARI, a.s.

LIST OF SPARE PARTS

The spare part list is not a part of these instructions for use. The latest version of the catalogue can be downloaded from our internet site. If you have no access to the internet, ask your dealer to get it for you.

EC DECLARATION OF CONFORMITY¹

We herewith declare

that the following machine complies with the appropriate basic safety and health requirements of the EC Directive based on its design and type, as brought into circulation by us. The measured and guaranteed sound power values were determined in accordance with the Directive 2000/14/EC, Appendix VII.

In case of alteration of the machine, not agreed by us, this declaration will lose its validity.

Description: Brushcutter
Type: BC431
Test report No.: 14717945001, 14716662001, 14716662002,
TCF(17)-120102-ND

Applicable EC Directives:

EC Directive of Machinery 2006/42/EC
EC Directive 2014/30/EU Electromagnetic Compatibility
EC Directive 2000/14/EC Noise Emission
EC Directive 2002/88/EC Emission of Pollutants

Applicable Harmonized Standards:

EN ISO 12100:2010
EN ISO 11806-1:2011
EN ISO 3744:2010
ISO 22868:2011
EN ISO 14982:2009

Measured level of acoustic power of the machine L_{WA} : 109,65 dB

Guaranteed level of acoustic power of the machine L_{WA} : 113 dB

Declared aggregate value of accelerated vibrations transmitted onto operator's hands/arms a_{hvd} : 6,86 $m.s^{-2}$

Technical documents kept by:

Beself Brands SL, C/Blanquers 7-8, 43800 Valls, Spain
VAT No. B65114373

Name of Company: ZheJiang Linghang Machinery & Electron Co.,Ltd

Address: No. 110, South Yuegui Road, Xicheng Street,
Yongkang, Zhejiang, P.R.C.
Phone: (579) 8721 8059
Fax: (579) 8721 8539

Name / Title: Elaine Yao
Manager

浙江领航机电有限公司
ZHEJIANG LINGHANG MACHINERY & ELECTRON CO., LTD



Signature:

Place / Date: Yongkang / 29.12.2017

¹ Text of the original Declaration of conformity issued by the manufacturer in English language.

We herewith declare

that the following machine complies with the appropriate basic safety and health requirements of the EC Directive based on its design and type, as brought into circulation by us. The measured and guaranteed sound power values were determined in accordance with the Directive 2000/14/EC, Appendix VII.

In case of alteration of the machine, not agreed by us, this declaration will lose its validity.

Description: Brushcutter
Type: BC521
Test report No.: 14717945001, 14716662001, 14716662002,
TCF(17)-120103-ND

Applicable EC Directives:

EC Directive of Machinery 2006/42/EC
EC Directive 2014/30/EU Electromagnetic Compatibility
EC Directive 2000/14/EC Noise Emission
EC Directive 2002/88/EC Emission of Pollutants

Applicable Harmonized Standards:

EN ISO 12100:2010
EN ISO 11806-1:2011
EN ISO 3744:2010
ISO 22868:2011
EN ISO 14982:2009

Measured level of acoustic power of the machine L_{WA} : 109,65 dB

Guaranteed level of acoustic performance of the machine L_{WA} : 113 dB

Declared aggregate value of accelerated vibrations transmitted onto operator's hands/arms a_{hvd} : 7,25 m.s⁻²

Technical documents kept by:

Beself Brands SL, C/Blanquers 7-8, 43800 Valls, Spain
VAT No. B65114373

Name of Company: ZheJiang Linghang Machinery & Electron Co.,Ltd

Address: No. 110, South Yuegui Road, Xicheng Street,
Yongkang, Zhejiang, P.R.C.
Phone: (579) 8721 8059
Fax: (579) 8721 8539

Name / Title: Elaine Yao
Manager

浙江领航机电有限公司
ZHEJIANG LINGHANG MACHINERY & ELECTRON CO., LTD



Signature:

Place / Date: Yongkang / 29.12.2017