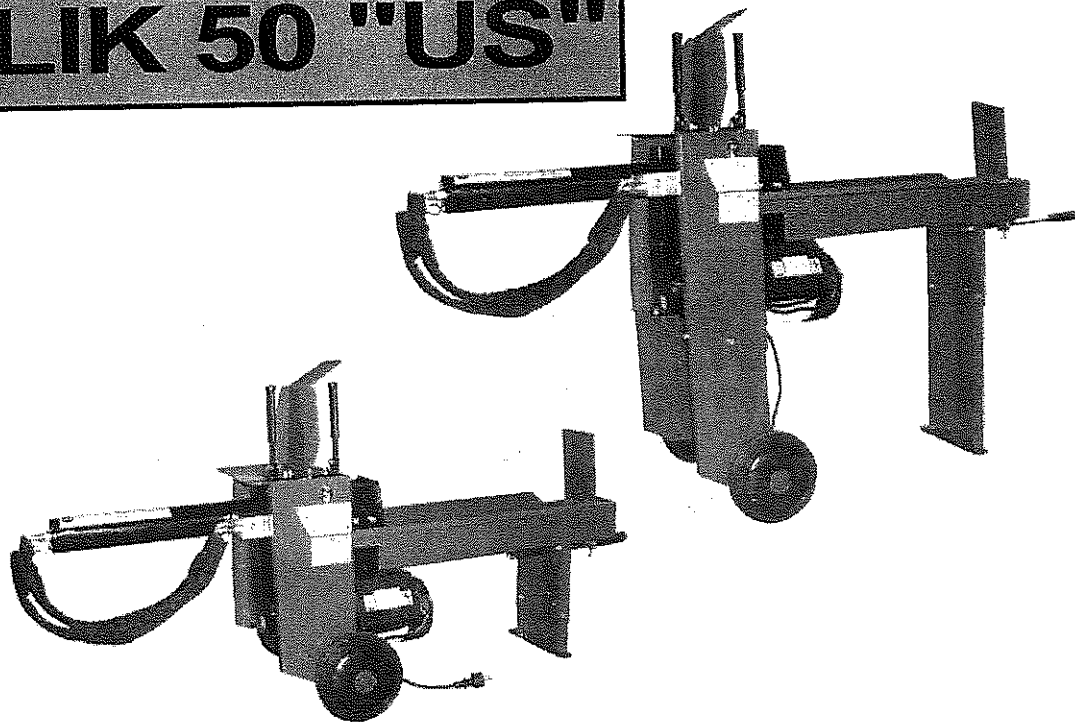


**BELL**®  
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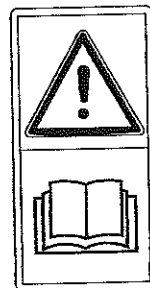
**SPACCALEGNA - LOGSPLITTER  
HOLZSPALTER - FENDEUSE DE BOIS**

**BOLIK 50 "US"**



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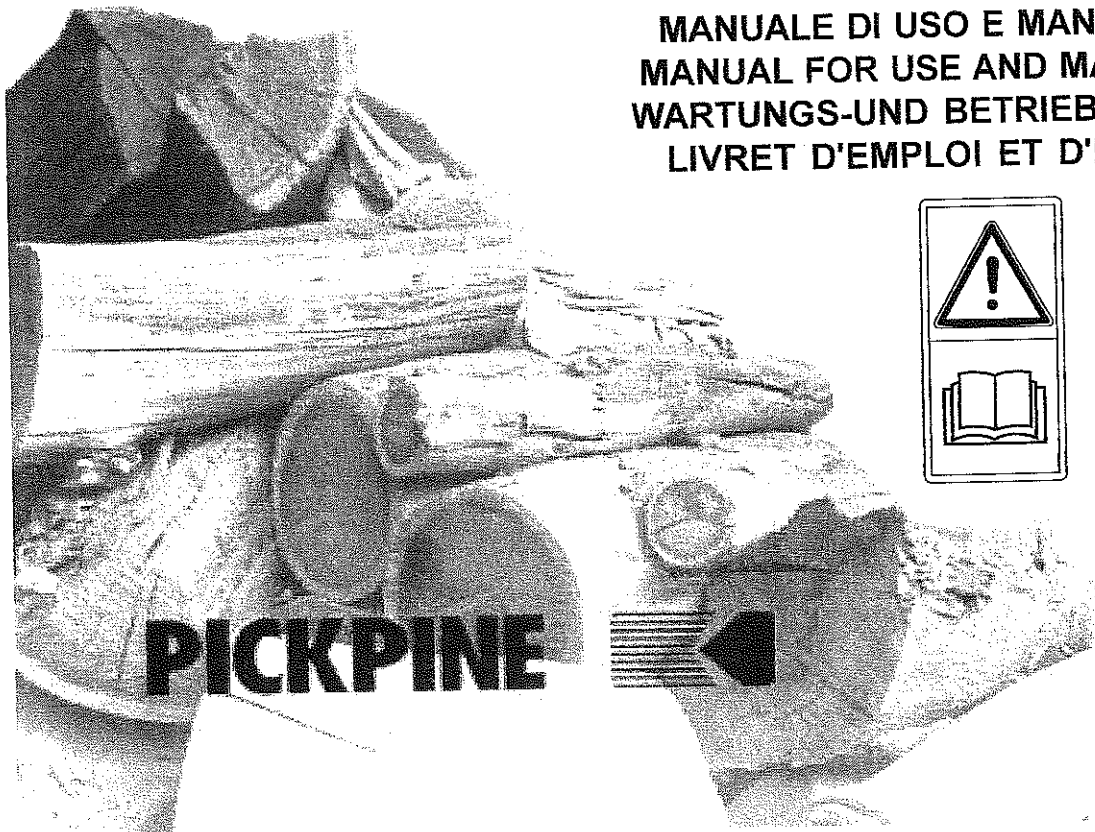
**MANUALE DI USO E MANUTENZIONE  
MANUAL FOR USE AND MAINTENANCE  
WARTUNGS-UND BETRIEBSANLEITUNG  
LIVRET D'EMPLOI ET D'ENTRETIEN**



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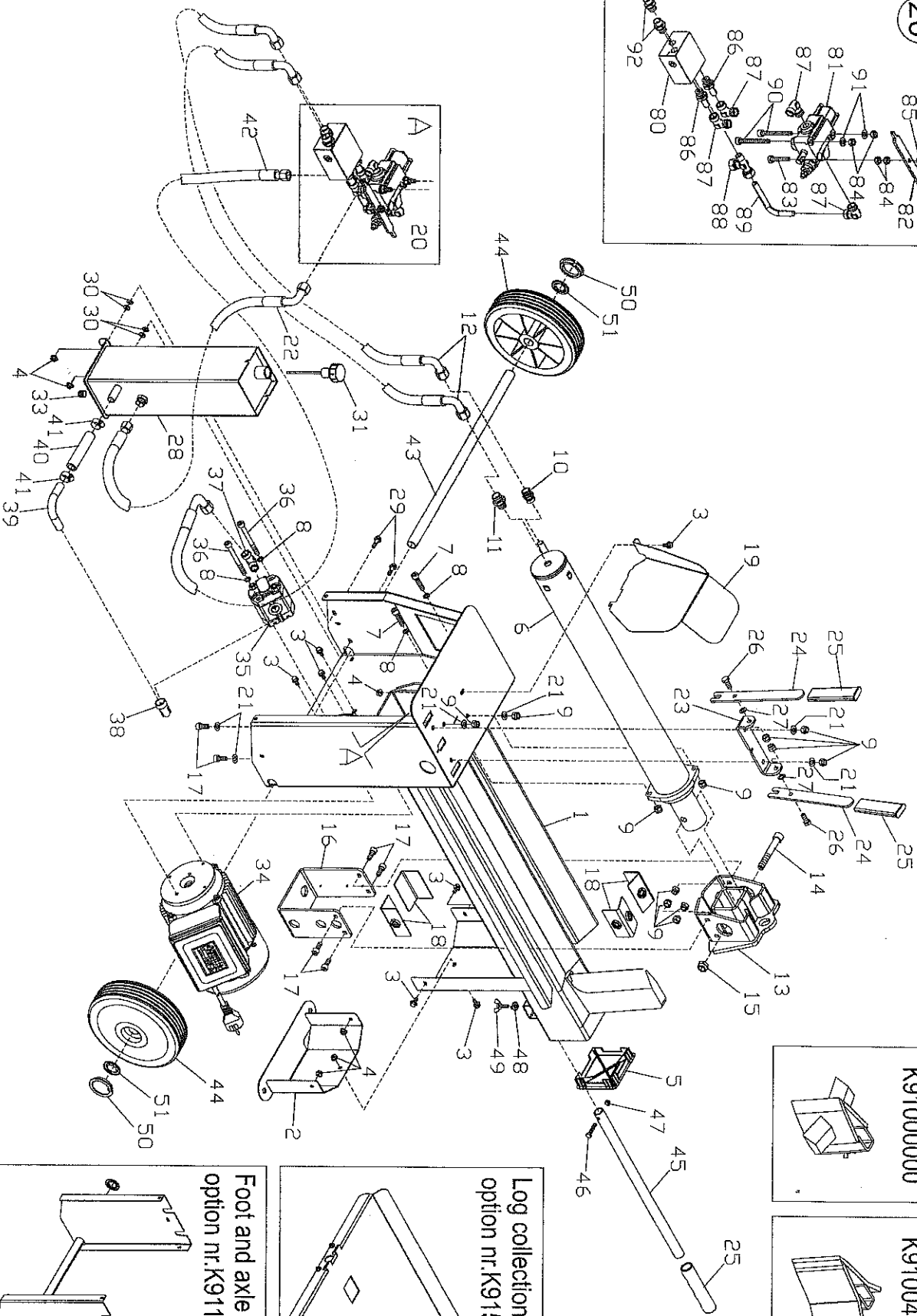
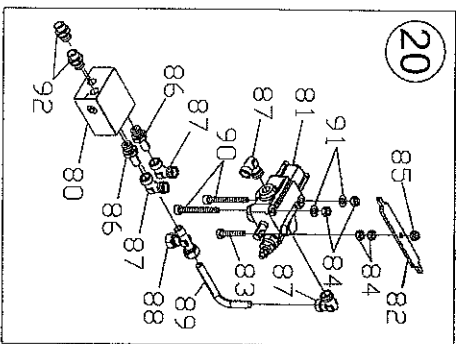


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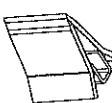




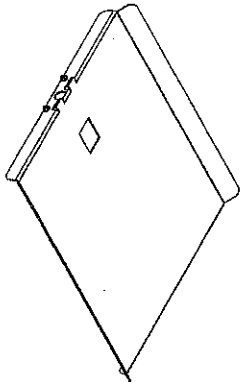
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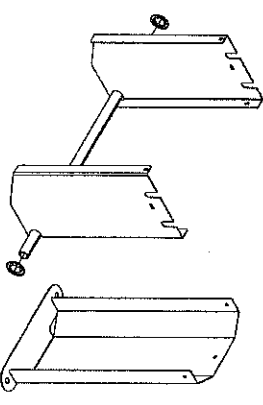
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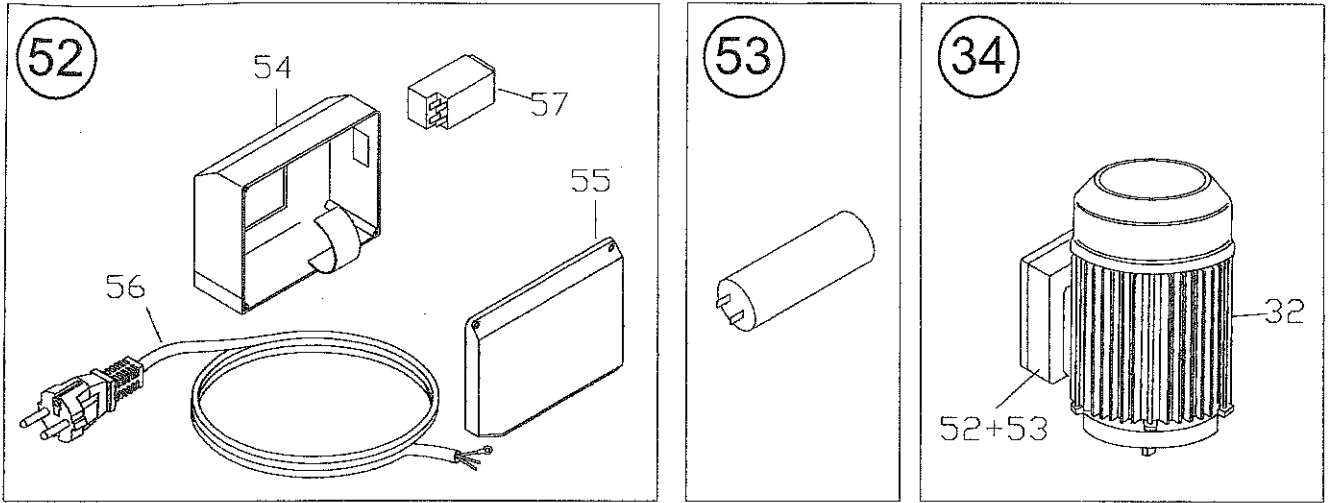


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Foot and axle extension  
option nr.K91150030



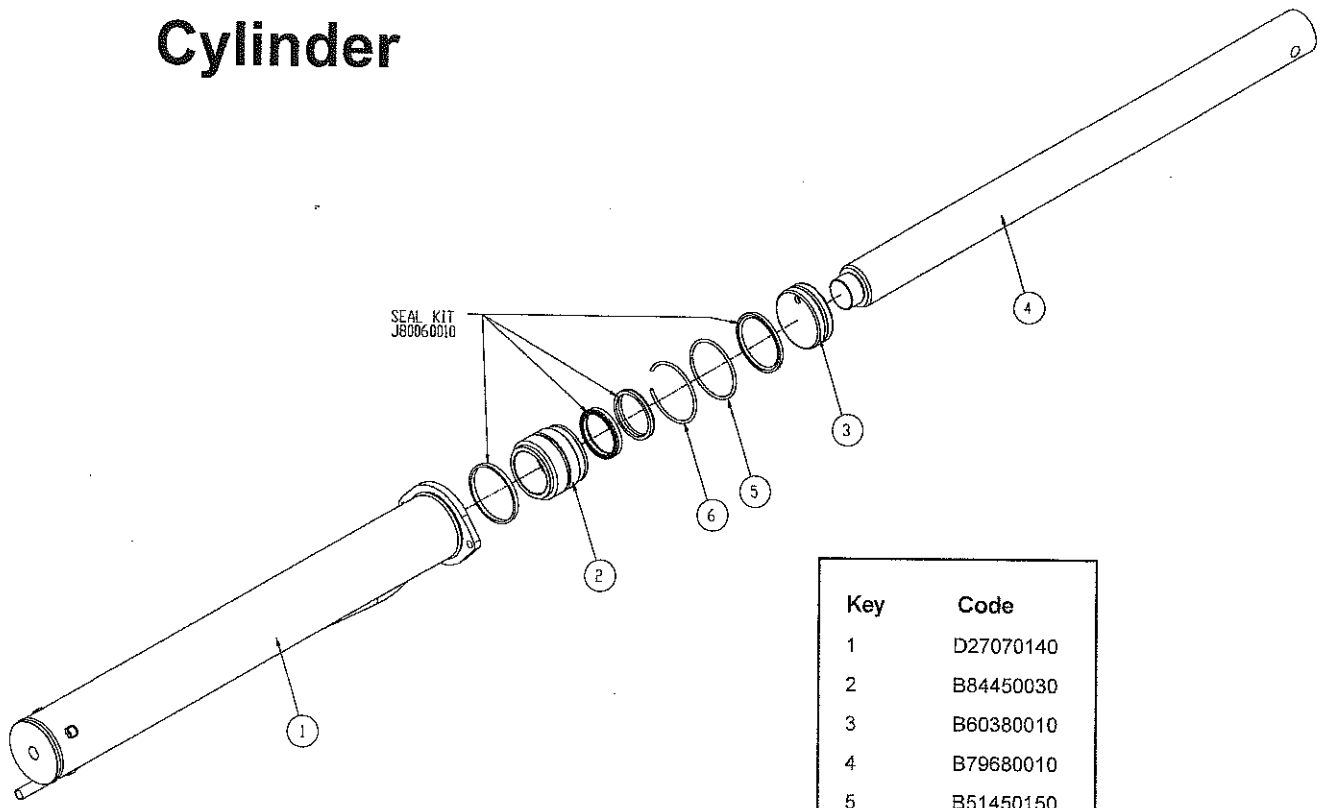


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# Cylinder

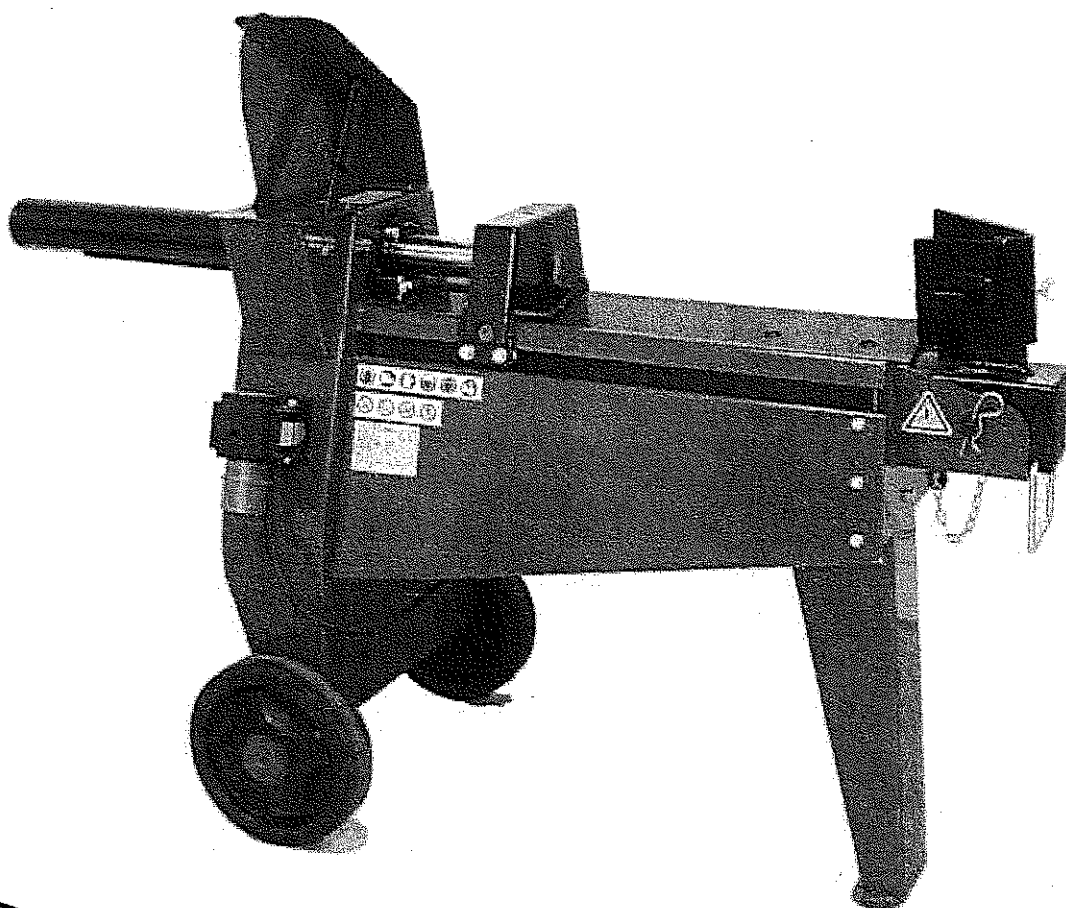


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6	B51450130



# MANUAL FOR USE AND MAINTENANCE

## BOLIK



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**WARNING**

When the machine is delivered, check for any missing parts and for any damage during transport. Any complaints must be forwarded immediately to the carrier and to the retailer. Any subsequent complaints will not be accepted.

## INTRODUCTION

BELL® log splitters have been designed and manufactured in compliance with the most recent European safety regulations with particular reference to the EN609 and UNI60204 standards.

The "ZHB" control systems have been designed and engineered so that the operator is forced to work in the safety area without any possibility of inserting hands or arms in dangerous areas.

Before transporting, installing or operating the machine, read all parts of this manual, paying particular attention to the specific safety regulations.

Operators who are unable to understand any of the languages in which this manual is written are responsible for asking the retailer to provide a manual in their own language.

The operator must also train any other person authorised to use the machine.

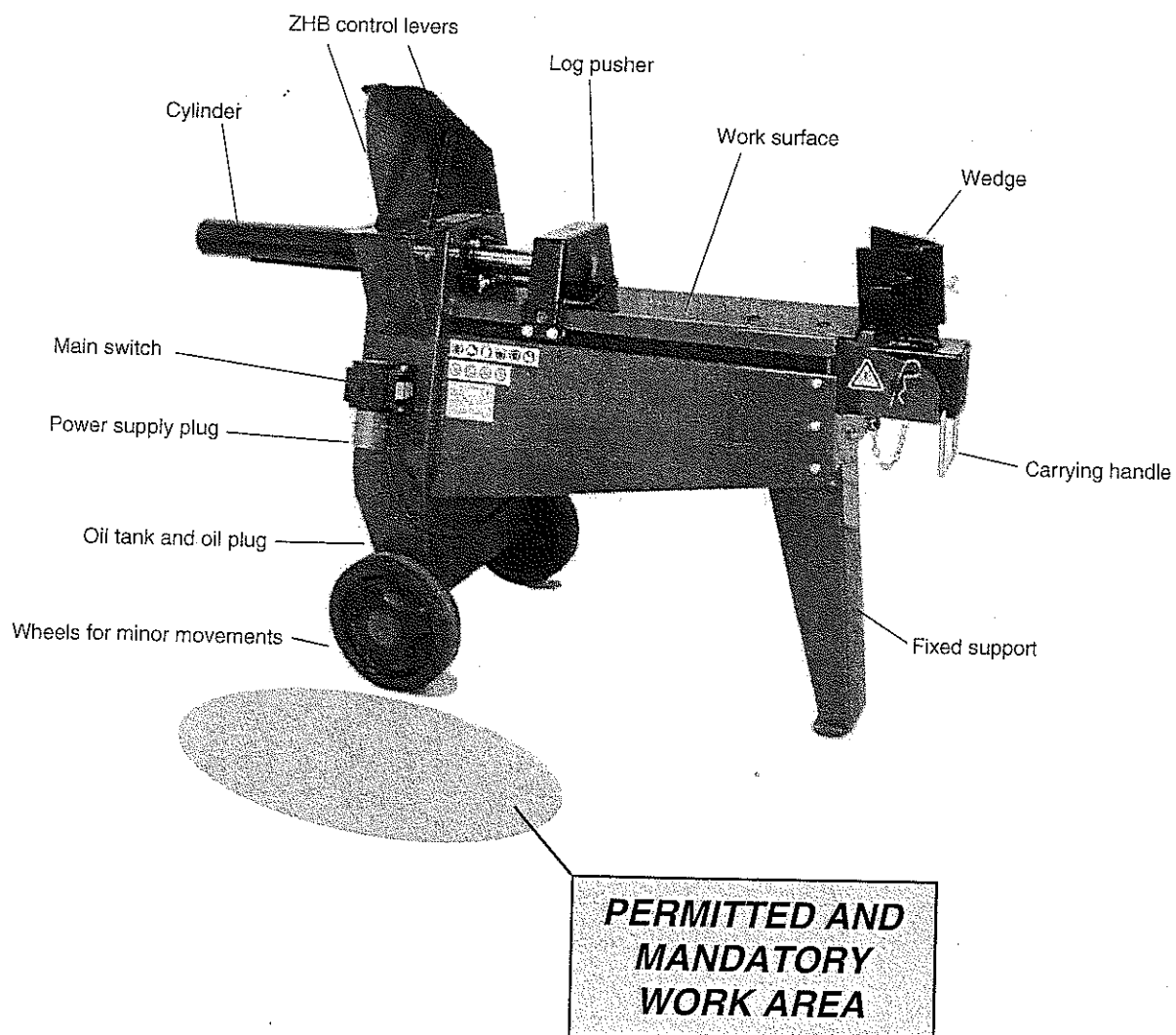
**Failure to comply in any way with these instructions, improper use of the machine, extraordinary maintenance operations not carried out by skilled, authorised personnel, removal of data plates or markings of any type, removal or tampering with the guards and safety mechanisms of the machine or any other action not expressly authorised that may impair the active and passive safety systems of the machine shall relieve the manufacturer of all and any liability and may result in serious injury and damage.**

If the machine is tampered with in any way by unauthorised personnel, the guarantee is automatically null and void. This manual is an integral part of the machine and must accompany it even in the case of transfer of ownership.

## 1 - DESCRIPTION OF THE MACHINE

The BOLIK horizontal, transportable logsplitter is equipped with its own electric motor. The various parts of the machines are shown in fig.1.

Fig.1 Machine parts



### 1.1 - Symbols used

Standard graphic symbols are used on all machines in order to ensure complete safety of all parts of the log splitter. As these symbols are very important, read the information below attentively.



it is obligatory to read the machine's use and maintenance manual in full before using the machine.



in normal conditions of use, our machines may expose the operator daily to noise levels lower than or equal to 85 dB(a). it is therefore obligatory to wear ear defenders.



it is obligatory to wear safety footwear at all times to provide protection against the risk of logs accidentally falling on feet.



it is obligatory at all times to wear gloves which protect the hands against chips and splinters which may be produced during work.



it is obligatory at all times to wear a helmet which protects the hands against chips and splinters which may be produced during work.



it is obligatory at all times to wear goggles or a visor which protects the hands against chips and splinters which may be produced during work.



it is forbidden to remove or tamper with the protection devices and safety devices.



it is forbidden to carry out any maintenance work or to renew parts on the machine when it is running.



it is forbidden to smoke near the machine and in the work area.

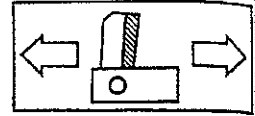


it is forbidden to stand in the range of action of the machine. apart from the operator, no other person or animal may be present within a radius of 5 metres from the machine.



Dumping of used oil in the environment is forbidden. The oil must be disposed of according to current legislation in the country where this operation is carried out.

Warning: direction of rotation of the wedge.  
Never touch the wedge or the supporting arm when in movement.



Danger of cutting or crushing of the hand: never touch hazardous areas while the wedge is moving.



Warning: never remove a log trapped in the wedge with your hands.



Warning: voltage as indicated on the rating plate



## 2 - TECHNICAL DATA

BOLIK TECHNICAL DATA				
	<i>BOLIK 50 E</i>	<i>BOLIK 50 T</i>	<i>BOLIK 100 E</i>	<i>BOLIK 100 T</i>
Lenght (mm)	1430	1430	1940	1940
Widht (mm)	540	540	540	540
Height (mm)	1040	1040	1040	1040
Weight (kg)	98	98	104	104
Max force (tons.)	7	8	7	8
Log capacity (mm)	550	550	1040	1040
Hydraulic oil capacity (lt.)	4,5	4,5	4,5	4,5
Total oil capacity (lt.)	6,2	6,2	6,2	6,2
Supply	230V 50Hz Single-phase	230V 50Hz 3-ph. 400V 50Hz 3-ph.	230V 50Hz Single-phase	230V 50Hz 3-ph. 400V 50Hz 3-ph.
Absorption	13,5A	230V 3-ph.: 11,5A 400V 3-ph.: 6,7A	13,5A	230V 3-ph.: 11,5A 400V 3-ph.: 6,7A
Power	3Hp - 2,2kW	4Hp - 3kW	3Hp - 2,2kW	4Hp - 3kW

Noise  $\leq$  85 dB(A) measured at the height of the operator's ear in the working position with the log splitter in operation

- The ears must be suitably protected (ear defenders).

### Recommended oils

We recommend use of the following oils for the hydraulic cylinder:

SHELL TELLUS T22

ARAL VITAM GF22

SP ENERGOL HCP22

MOBIL DTE11 or equivalent

**DO NOT USE OTHER GRADE OILS.**

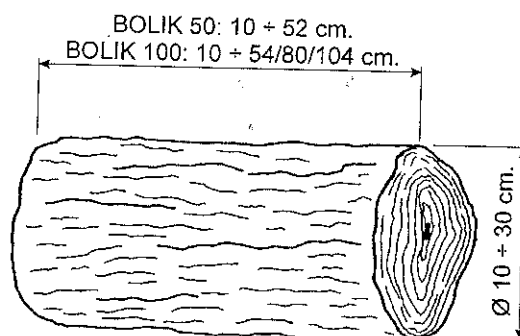


Fig.2 Maximum size of the log to be split

### 3 - SAFETY

The information given in the chapter is extremely important for safety purposes. It describes possible hazards tied to use of the machine and instructions for correct use of this to avoid injury or damage.

**WARNING:** The BELL Mod. BOLIK log splitter has been designed and manufactured to split logs of the sizes recommended on page 5 only. Use of the machine for any other purpose shall be considered improper and the manufacturer shall not be liable for any injuries or damage to be ascribed to improper use of the machine.

The operator must work in the position shown in fig. 1 only and operate the machine drive control with both hands without using other makeshift systems and without tampering with the ZHB control.

When the machine is working, persons and animals must be kept at a distance of at least 5 meters from the machine.

**NEVER ATTEMPT TO TAMPER WITH THE PROTECTIONS OF THE LOG SPLITTER OR TO OPERATE THE MACHINE WITHOUT THESE. FAILURE TO COMPLY WITH THE INSTRUCTIONS GIVEN IN THIS CHAPTER MAY RESULT IN SERIOUS INJURY OR DAMAGE TO PERSONS, THINGS AND TO THE MACHINE.**

#### 3.1 - General safety regulations

- The machine must always be used by one operator only.
- Nobody must be allowed to use the log splitter unless they have read the instruction manual and have been instructed in the regulations to follow for correct and safe use.
- The machine must be used by adults only. Use of the log splitter by apprentices of not less than 16 years of age must be supervised by an adult authorised to use the machine.
- Never wear loose, unbuttoned clothing which may become trapped in moving parts.
- Use a piece of cardboard or wood rather than hands to search for leaks. **Escaping fluid under pressure can penetrate the skin. IF INJURED BY ESCAPING FLUID, SEE A DOCTOR AT ONCE.**
- Do not move the log splitter while the motor is running.
- Do not work on sloping or slippery ground. position the machine in a flat area free from objects which may impede the freedom of movement of the operator.
- Check that the logs to be split are free from nails or wire, which may fly up or damage the machine. the ends of the logs must be cut square. branches must be cut off flush with the trunk.
- Never try to split logs larger than those indicated in fig. 2. This could be dangerous and may damage the machine.
- Break wood in the direction of the grain. do not place wood across the log splitter and leave it in that position for splitting; it may be dangerous and may seriously damage the machine.
- Never attempt to cut two logs at once; one may fly up and hit you.
- If the log moves away from the blade, retract the ram or the blade and turn the log through 90°.
- Do not attempt to load the log in the log splitter while the ram is in motion. you could get trapped and injured.
- Keep your hands well away from any splits and cracks which open in the log; these may close suddenly and crush or amputate your fingers.
- Do not force the log splitter for more than 30 seconds by keeping the cylinder under pressure at the end of its stroke, or by persisting when a log does not split or gets stuck on the blade. Oil under pressure overheats very rapidly, damaging the pump.
- Never leave the machine unattended while it is running. If you leave the machine, even for a short time, remove the power supply or any possible cause of accidental start-up.
- The log splitter must never be used by an operator who is under the influence of alcohol, drugs, medicines, or who is tired. A clear mind is essential for safety.
- Never try to release a jammed log while the machine is running. The machine must be switched off during this operation.
- Never request the assistance of another person to help you remove a jammed log.
- Do not use machines if natural gas, petrol fumes or other inflammable vapours are present.
- Check that the electric circuit is adequately protected and that it corresponds with the power, voltage and frequency of the motor; check that there is a ground connection, and a regulation differential switch upstream.
- Use cables with a section of 2.5 mm<sup>2</sup>. Avoid use of free and inadequately insulated connections. Connections must be made with protected material suitable for outdoor use.
- Make sure that the machine and the cable never come in contact with water.
- To prevent accidental start-up, ensure that the switch is "off" before plugging in the power cable.
- Treat the power cable with care. do not attempt to move the machine by pulling the cable. do not yank the cable to unplug it; keep the cable away from excessive heat, oil and sharp objects.
- Never leave the machine unattended with the power supply "on". also disconnect the power cable when not in use, when carrying out maintenance work, when changing attachment or moving the machine.

## 4 - OPERATING THE MACHINE FOR THE FIRST TIME

If the motor does not run in the correct direction, invert two of the phases in the socket. Remove the plug from the log splitter. Insert a slotted screwdriver with a suitably sized wedge in the slot located in the connection inlet close to the electric motor as shown in figure 4. Exerting a slight pressure, turn the white wheel by 180°. This operation physically inverts the poles on the three-phase motor. Check that the motor runs in the correct direction as indicated by the arrow.

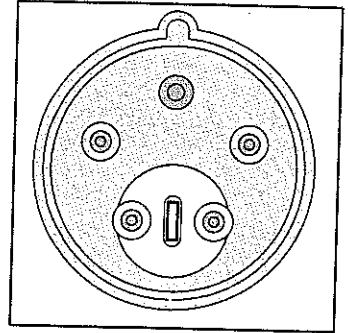


Fig.3 Inversion of the poles in the three-phase motor

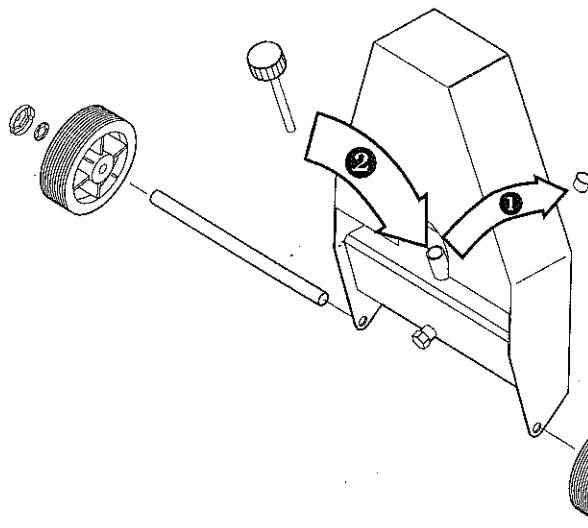
**Never open the box containing the switch, or open the terminal block on the motor, if it is necessary to do so, have these operations carried out by your electrician.**

If the fuses blow or the protection valve trips, this means that you are overloading the motor or the electrical installation is not correctly rated. Consult your electrician.

Never use the log splitter if it is not in perfect order or if it needs servicing. Before starting work, check correct functioning of all the safety devices (ZHB, switch-off button).

Before starting work, switch on the log splitter and let the oil warm up for a few minutes.

After 200 hours of use, clean the oil filter as explained on page 10 paragraph 6.1 before starting the machine.



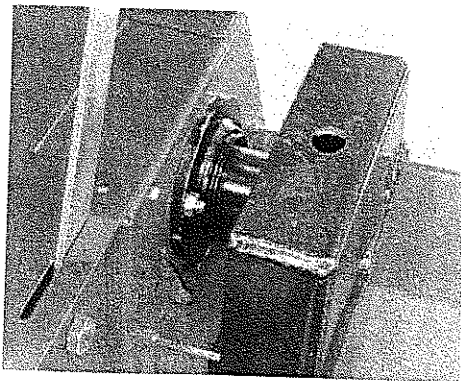
### 4.1 Unpacking and preparing the log splitter

Once the log splitter has been unpacked place the controls on a stand that can bear the weight and then insert the wheel axle into the holes (fig. 4a).

Fit the wheels onto the axle, fix them with the elastic washer supplied and close the hole with the cap supplied.

In the guard underneath the cylinder there is the oil cap. **BEFORE STARTING UP THE LOG SPLITTER**, remove the transparent oil sump cap and fit the cap with the rod supplied in the bag attached to the log cutter.

Fig.4a Preparing the log splitter



The logsplitter is supplied with the cylinder pushed back.

- Before starting the logsplitter, pull the cylinder out, push it against the body of the machine (picture 4/ b), and insert the two screws onto the chassis, in the cylinder's holes.
- Fix the cylinder by screwing the nuts on the screws without tightening too much

Fig.4/b fixing of the cylinder.

### 4.2 - Lighting

Lighting must be provided in the entire work area of the log splitter to ensure perfect visibility when operating the machine and during maintenance and adjustments. Even when working outdoors, there must be sufficient light to work safely. Working at times when insufficient light may result in poor visibility of the machine and its components (dawn, dusk, night) is forbidden.

**5 - USE**

**5.1- Adjusting the beam (BOLIK 100 model only)**

The **BOLIK 100** model has a telescopic beam which allows adjustment of the log pusher stroke at three different lengths: 57, 80 and 104 cm.  
To adjust the beam, proceed as follows:

- Extract the retainer spring (fig. 5) which secures the pin, located under the blade.
- Extract the pin from the other side (fig. 6).
- Pull or push the beam using the handle at its end, until the locking holes for insertion of the pin coincide at the point desired.
- Fit the pin back into the hole and fix it with the spring, making sure that the spring is firmly in place.

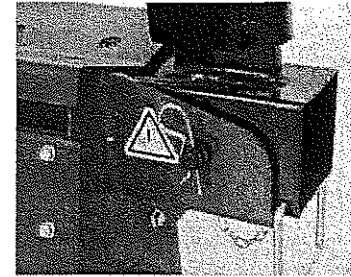


Fig. 5 Pin retainer spring



Fig. 6 Beam locking pin



**CAUTION:**

**NEVER USE THE SPLITTER WITHOUT THE PIN INSERTED IN THE BEAM, OR WITHOUT THE RETAINER SPRING IN THE PIN.  
BEFORE STARTING WORK, MAKE SURE THAT THE SPRING IS FIRMLY IN PLACE IN THE PIN.**

**5.2 - Use of the log splitter**

- Make sure that the switch/cut-out of the general power system and the switch of the machine are OFF.
- Connect the electric log splitter to the power system inserting the plug in the socket beside the electric motor.
- Never pass the power cable over the working plane, close to the wedge or anywhere where it may be damaged or severed.
- Set the main on/off switch and then switch on the log splitter pressing the switch in the green area.  
The log pusher will move automatically to the fully open position.
- Place the log on the work surface as shown in fig. 7. To ensure safety, the two sides of the log must be parallel.
- From the permitted position only (fig. 1, page 3), activate the levers of the ZHB control. The log pusher will be activated and the log will be split.  
The control levers enables you to manage the work speed and power to adapt to the type of wood to be split in the best way possible. If the wood is soft, pull the levers about halfway: the log pusher is activated faster but works with reduced thrust. If the wood is particularly hard or seasoned, pull the levers all the way: the log pusher is slower but has the maximum power, with greater possibility to break hard wood. The speed can be varied during the operation by simply raise or pull the levers.
- If the log does not split immediately, do not force the cylinder keeping this under pressure. Return the log pusher to the home position and try again starting from the beginning.
- Repeat the operation with the pieces obtained so as to split the log into several parts.

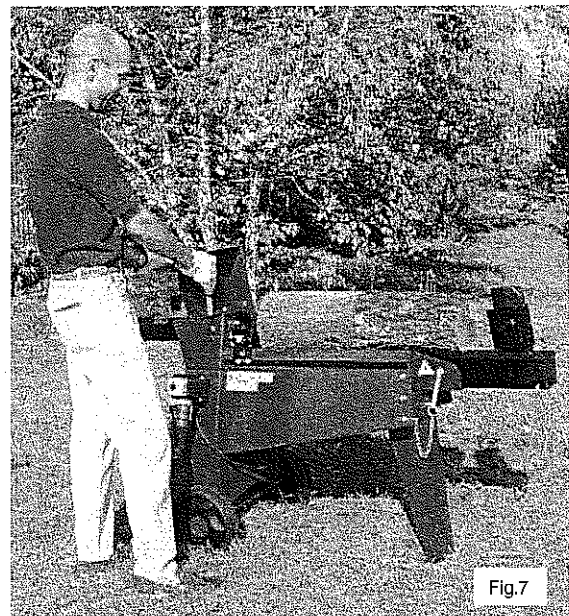


Fig.7

**Note:** If you release one of the levers, the machine will stop in its current position. If you release both levers, the log pusher will move to the fully open position.

- If you leave the log splitter unattended for long periods, always switch it off pressing the switch in the red area (off).
- On completing the work, switch off the log splitter by turning the switch/differential of the general power system to the "0" position (off) and then pull the out of the socket on the machine. Never yank the plug using the cable. Grasp the body of the plug and pull it firmly.

### 5.3 - Adjustment of wedge stroke

To save time, a system has been designed that makes it possible to adjust wedge stroke so that this can be set for short logs. In this way, the wedge travels for the distance required only. After checking the length of the longest logs to be split, regulate wedge stroke as follows:

- Unscrew the butterfly screw of the adjuster system (fig. 8) without removing it.
- Start the log splitter and bring the wedge to the position required. Release one of machine control levers so that the wedge does not return but stops in the position you have chosen.
- With your other hand, tighten the screw.

The log splitter will now re-locate in the point you have set.

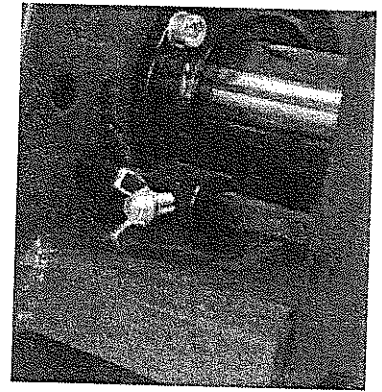


Fig. 8 Log pusher adjustment system

### 5.4- Moving the log splitter

To move the log splitter around, lift it using the handle provided on the end of the beam (fig. 9) and pull or push it along on its wheels.

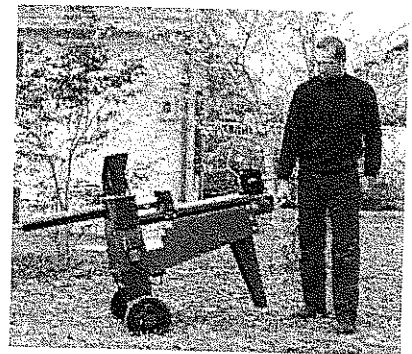


Fig. 9 Moving the log splitter

### 5.5 - Assembly and use of the 4-way wedge

The BOLIK log splitter can be equipped on request with a 4-way wedge to split a trunk into four logs with a single stroke.

The 4-way wedge (fig.10) must be assembled directly on the standard 2-way wedge. Position the 4-way wedge inserting it as far as it will go and tighten the butterfly screw to fasten it in place. This wedge is used in the same way as the 2-way wedge taking care, however, not to split very hard wood or wood with a large number of knots as the use of 2 wedges instead of 1 causes greater stress on the wedge.

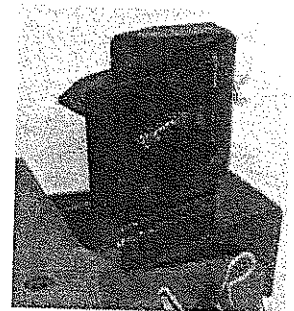


Fig.10 4 way wedge

**6 - ROUTINE MAINTENANCE**

This chapter describes routine maintenance, i.e. operations carried out by the operator, on the BOLIK log splitter to keep this in perfect working order and therefore reliable for continuous, long-term use.

All routine maintenance operations must be carried out with the machine off and in the case of log splitters with electric motor with the power cable disconnected.

**Any other maintenance operation not specifically envisaged in this manual must be carried out by authorised personnel only in that hazardous situations may arise for which the operator is not prepared.**

**In the case in which extraordinary maintenance or part replacement operations are not carried out by authorised personnel, the guarantee shall be immediately null and void and the manufacturer shall be relieved of any responsibility for injury to persons or animals or damage.**

**6.1 - Cleaning the oil filter**

Every 300 working hours, the hydraulic system oil filter must be thoroughly cleaned to keep it in perfect working order.

- Remove the screws which fix the guard protecting the hydraulic system (fig. 11).
- Undo the nut fixing the intake line (A, fig. 12).
- Remove the gasket (B, fig. 12) which retains the oil filter using a screwdriver with a blunt flat blade, pressing all around the circumference of the gasket (fig. 13) until the filter unit comes away from the chassis.
- Wash the filter with petrol and, if possible, blow it with compressed air.
- Replace the filter, still attached to the gasket, in the hole provided, then use a cross-head screwdriver to press fairly hard all round the surface of the gasket (fig. 14) until it has fitted into the sheet metal element.

It is extremely important to ensure that the sheet metal element fits into the groove in the gasket as shown in fig. 15; otherwise, oil will leak through the hole.

**NOTE:** For best results warm the gasket with an hair dryer before inserting.

**WARNING:**

**DO NOT USE SCREWDRIVERS WITH SHARPED BLADE OR BLADE LIKE CUTTERS OR KNIVES. THE GASKET IS MADE OF RUBBER AND YOU CAN CUT IT.**

- Return the hose to its place and tighten the fixing nut (A, fig. 14).
- Re-close the guard (fig. 11).

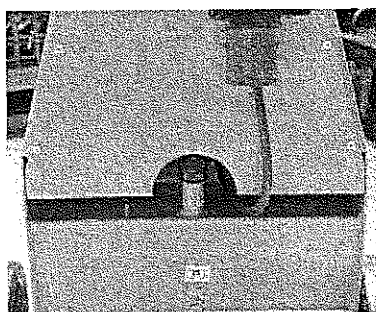


Fig.11 Guard

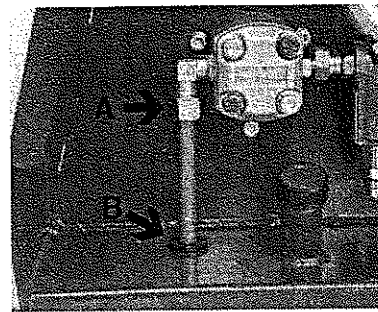


Fig.12 Intake line

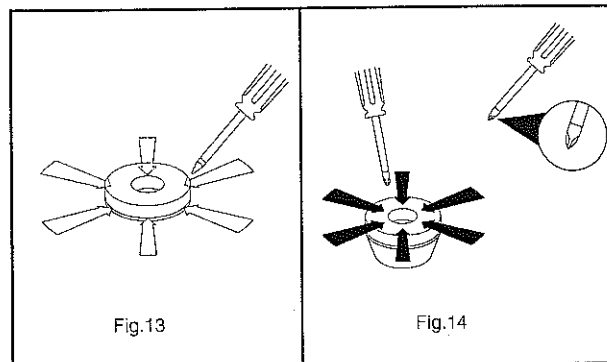


Fig.13

Fig.14

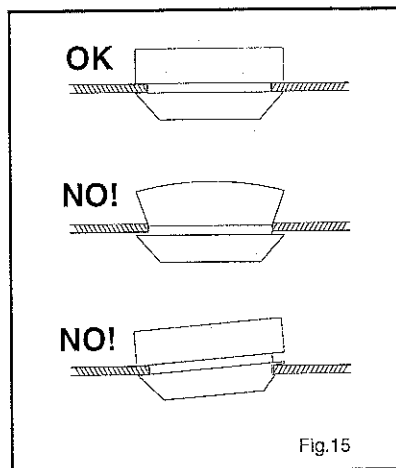


Fig.15

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## 6.2 - How to change the hydraulic oil

The spent oil must be replaced with new oil of the type indicated on page 5 every 600 hours of operation. To change the oil, proceed as follows.

- Make sure that the log pusher is fully retracted.
- Place a collection tray able to hold around 6 Kg litres of oil under the oil drainage dowel (fig.16).
- Unscrew the dowel (fig. 16) with a suitable allen wrench and let all the oil in the tank drain into the collection tray.  
Tilt the log splitter slightly to drain the oil tank completely.
- When the tank is completely empty, clean the drain outlet and cap with petrol, then screw the cap back into place, remembering to fit the sealing washer.

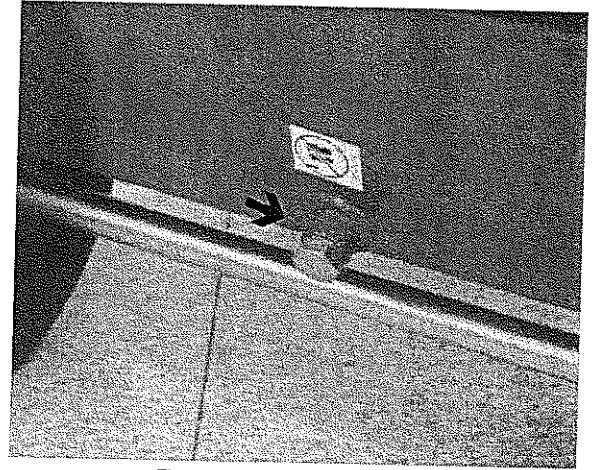


Fig.16 Oil drain cap

The oil tank capacity is about 5 litres of oil.

Remove the guard enclosing the hydraulic system by unscrewing the screws which fix it.

- Remove the oil cap (fig. 17) and fill the tank with suitable oil (the oils to be used are indicated on page 5), pouring in about 4 litres.
- Switch on the log splitter and put it into operation, running it through about 1/3 of the complete stroke.
- Completely retract the log pusher then add the rest of the oil and put the machine through two complete cycles to drive the air from the hydraulic circuit.
- Clean the oil filler inlet and replace the cap.

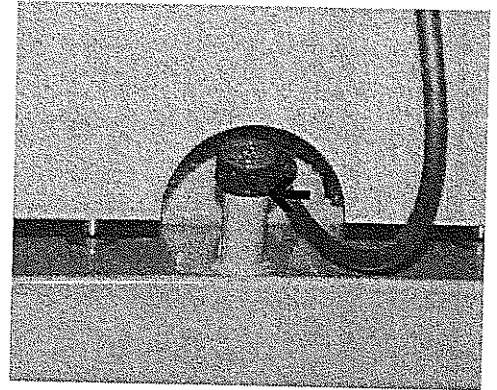


Fig.17 Oil filler cap



### WARNING:

**NEVER MIX OIL WITH GENERAL WASTE!**

**USED OIL MUST BE DISPOSED OF ACCORDING TO CURRENT REGULATIONS IN THE COUNTRY WHERE THE MACHINE IS USED.**

## 6.3 - Sharpening the wedge

After long periods of operation and when required, sharpen the wedge of the log splitter using a fine-toothed file and taking care to remove any burrs or crushed parts of the metal.

**7 - TROUBLESHOOTING**

Problems that may arise when using the log splitter and recommended remedies are given in the table below. In the case of operations carried out by unauthorised personnel, the guarantee will be immediately null and void and the manufacturer will be relieved of any responsibility for injury to persons and animals and damage.

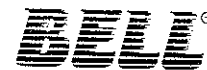
Problem	Probable cause	Corrective action
Log fails to split	Hydraulic pressure too low	Contact your dealer
	Oil leak	Locate the leak using a piece of card or wood. Contact your dealer
	Wedge do not cut	Sharpened the wedge, check for burrs or nicks, file if necessary
	Incorrect positioning of the log	Change the position of the log in relation to the wedge
	Log exceeds permitted dimensions	Try to cut a small part or use other means to reduce the size of the log
	Air in the circuit	Check oil level. Top up if necessary If problem remain contact your dealer
Rod advances jerkily or with strong vibrations	Unions not properly tight	Tighten unions
Oil leak from the unions, pump or cylinder	Seals worn	Contact your dealer

**DISMANTLING OF THE LOG SPLITTER**

The log splitter must be dismantled complying with all safety regulations, designed to prevent injury and damage.

All parts of the log splitter must be scrapped and disposed of according to current legislation where the machine is dismantled.

Pay particular attention when eliminating hydraulic oil which must not be disposed of in the environment in that it is highly pollutant and must be disposed of according to legal prescriptions.



**GUARANTEE**

The company BELL, referred to hereinafter as BELL, guarantees to the purchaser of every new BELL original product, purchased from a BELL authorized dealer, that the product shall remain free from any defects in materials or workmanship for a period of 360 days (12 months) from the original date of purchase or the date of first hire.

Spare parts installed on the product covered by this guarantee are guaranteed for 90 days (3 months) from the date of their repair or renewal. Such parts must be supplied free of charge to the user by a BELL dealer or distributor during normal working hours.

BELL reserves the right to inspect any product or part which has been substituted as defective. Substituted parts must therefore be kept available for 12 months.

It is expressly understood that BELL shall be under no obligation to provide labour or accept transport expenses.

BELL shall accept no responsibility for any damage, defect or costs deriving from repairs and/or modifications of a BELL product, effected by any person other than an authorized BELL representative.

This guarantee does not apply to commercial components covered by their own guarantee, such as internal combustion engines, diesel engines, etc..

This guarantee covers only defects arising during proper use of the machine. BELL shall accept no responsibility whatsoever if BELL components break while under guarantee for reasons such as:

- 1) Misuse, negligence, improper handling, abuse or accident.
- 2) Failure to carry out reasonable or necessary maintenance as prescribed in this manual (renewal of worn components such as slides, hydraulic oil, engine oil, gearbox oil; blade not sharpened, etc.)
- 3) The use of parts or accessories not manufactured, supplied or approved by BELL.

BELL does not provide further explicit or implied guarantees, other than those set forth herein. No representative or dealer is authorized to assume other responsibilities with regard to BELL products.

The duration of the implicit guarantees recognized by the law, including the commercial guarantees and conventions for particular purposes are limited in duration to the validity and duration of the explicit guarantee granted below.

BELL shall upon no account act as guarantor for loss of profit, whether direct or indirect, specific or deriving from any damage.

To validate this guarantee, the seller must complete and return within ten (10) days of the date of sale, or the date of hire, the guarantee registration card supplied with each unit sold.

If you require spare parts or repair work it will be useful the followins informations:

**MODEL** .....

**SERIAL NUMBER** .....

**DATE OF PURCHASE** .....

**APPENDIX A - WIRING AND HYDRAULIC DIAGRAMS**

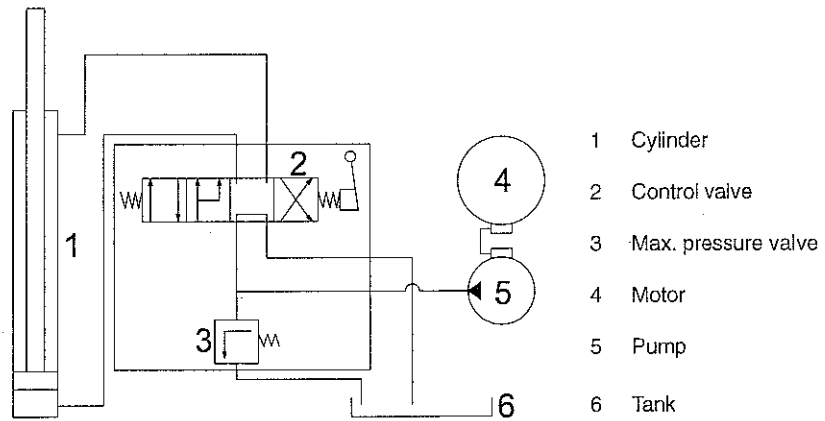


**WARNING**

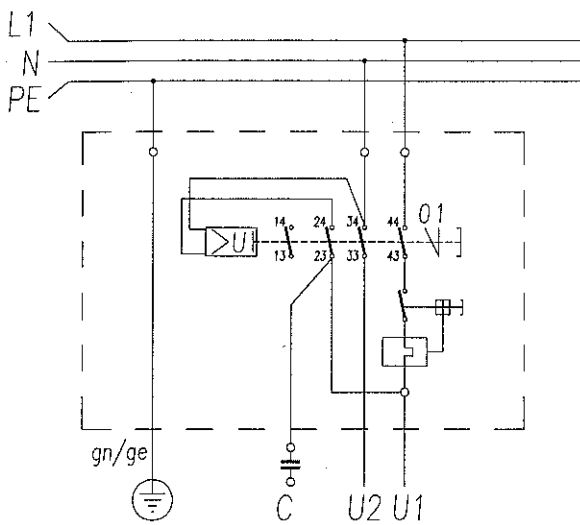
The following is reserved solely for the authorised personnel of the retailer.  
 The manufacturer declines any responsibility for damage or injury of any kind ensuing to persons, animals or objects due to improper or unauthorised use of this documentation.

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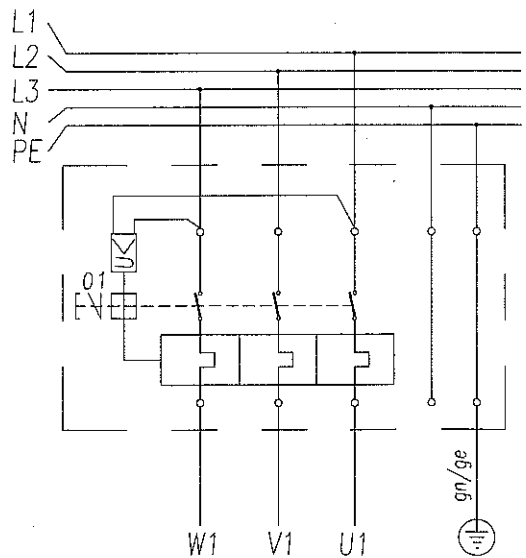
**HYDRAULIC DIAGRAM**



**SINGLE-PHASE ELECTRIC DIAGRAM**



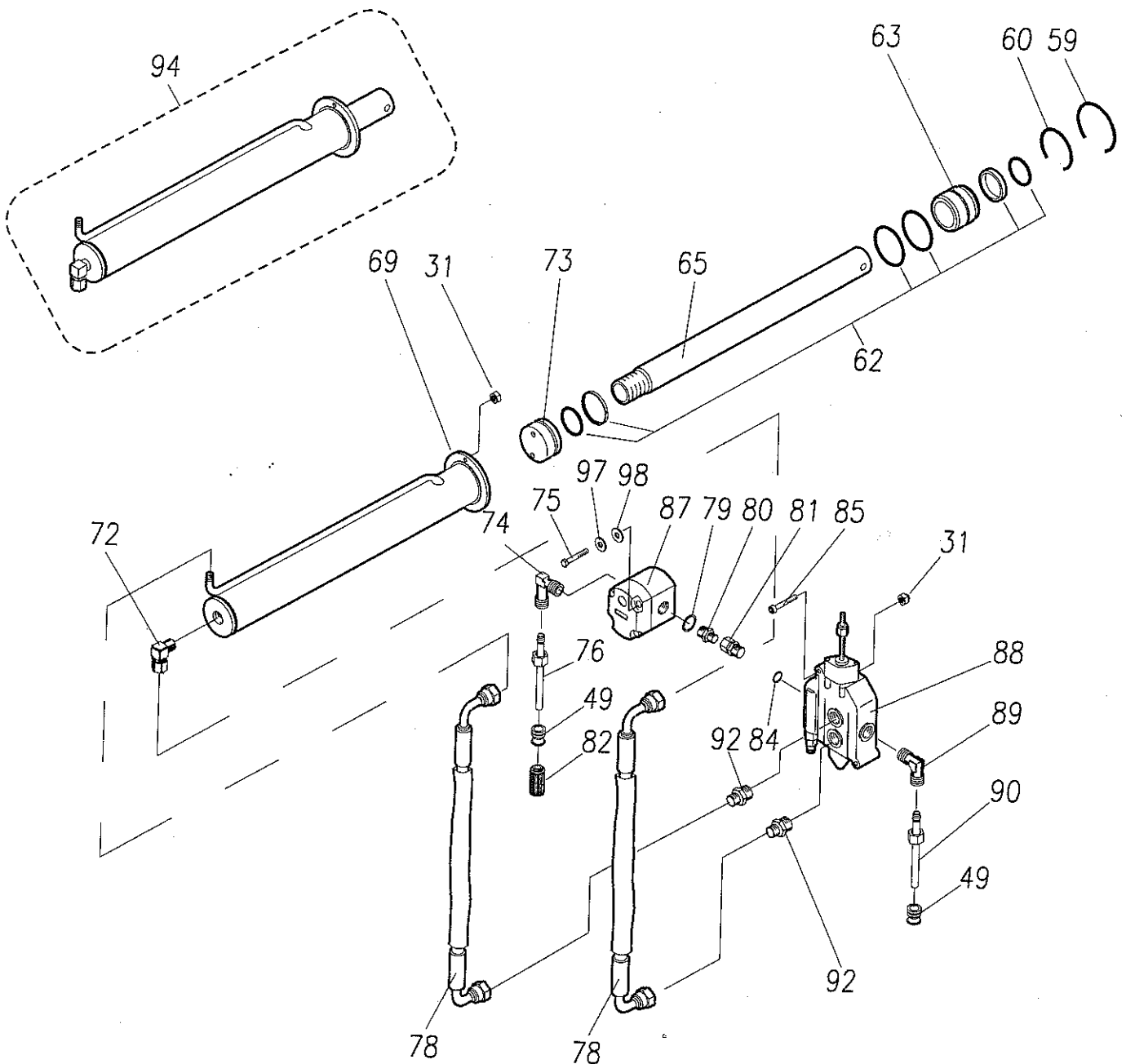
**THREE-PHASE ELECTRIC DIAGRAM**



### APPENDIX B - SPARE PARTS

Replacement of spare parts and therefore extraordinary maintenance of the machine must be carried out by the retailer's specialised and authorised personnel only. If any maintenance operations other than those expressly indicated in this handbook are carried out, the warranty will be immediately null and void and manufacturer shall be relieved of all and any responsibility with regard to accidents involving persons, animals or things.

Always order spare parts form your regular retailer remembering to indicate the machine model, the purchase date and the serial number as well as the code of the parts and the number required.



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