



HYDRAULIC LOG SPLITTER

Translation of the original operation manual

HOS-5N



IMPORTANT NOTICE!

Log splitters with 5 t splitting force are mainly used in the private sector. For ecological reasons, always place the hydraulic log splitter on a firm, dense base to prevent contamination of the ground.

ATTENTION! As a matter of principle, the venting screw on the oil tank must always be loosened before the machine is put into operation. This enables the hydraulic tank to be ventilated and de-aerated.

Both the model number and serial number can be found on the nameplate on the machine. You should keep both numbers safe so that you can refer to them in the future. This manual explains the functions and applications of the machine.

FOR YOUR SAFETY

**Read through the user manual before commissioning.
Safety and warning instructions must be observed!**

Overview

- 1. Preface**
 - 1.1 Information on the user manual
 - 1.2 Limitation of liability
 - 1.3 Machine designation
 - 1.4 Copyright protection
 - 1.5 Reservations
- 2. Intended use**
- 3. Environment**
- 4. Safety**
 - 4.1 Warning instructions
 - 4.2 Safety instructions
 - 4.3 Personal protective equipment (PPE)
 - 4.4 Residual dangers and protective measures
 - 4.5 Behaviour in an emergency
- 5. Used warning and information symbols**
- 6. Machine overview**
- 7. Technical data**
 - 7.1 Electrical requirement
- 8. Scope of delivery**
- 9. Assembly**
- 10. Transport and storage**
 - 10.1 Safety instructions for transport
 - 10.2 Transport and storage
- 11. Installation**
- 12. Hydraulics**
- 13. Drive types**
 - 13.1 Electric drive
- 14. Commissioning**
 - 14.1 Work preparation
- 15. Operation**
 - 15.1 Splitting
 - 15.2 Setting the splitting length
 - 15.3 Faulty placement
 - 15.4 Loosening jammed splitting material
 - 15.5 Instructions on splitting
 - 15.5 Stop splitting
- 16. Control work**
 - 16.1 Screwings
 - 16.2 Oil level
 - 16.3 Splitting wedge
 - 16.4 Lubricating all moving metal parts as required
- 17. Maintenance and repair work**
 - 17.1 Operating materials
 - 17.2 Checking oil level, hydraulic oil
 - 17.3 Sharpening splitting wedge
 - 17.4 Cleaning the work surface
 - 17.5 Storage
- 18. Disposal**
 - 18.1 Decommissioning
 - 18.2 Disposal of electrical equipment
 - 18.3 Disposal of lubricants
- 19. Circuit diagram 230V**
- 20. Troubleshooting**
- 21. Warranty / Guarantee / Customer Service**
- 22. EC Declaration of conformity**
- 23. Components HOS-5N**

1. Preface

Read the entire text of the operation manual before assembly and commissioning. Use these instructions to familiarise yourself with the machine, its correct use as well as the safety instructions.

1.1 Information on the user manual

This user manual provides important instructions on the use of the hydraulic log splitter, model HOS-5N. A prerequisite for safe working is the correct observance of all specified safety instructions and handling instructions. In addition, the local accident prevention regulations and general safety regulations applicable to the area of use of the machine, must be observed.

1.2 Limitation of liability

We have made every effort to inform you as comprehensively as possible about accident prevention when operating the machine, but accept no liability for incomplete information about listed danger points and sources.

The manufacturer accepts no liability for damage due to:

- Non-compliance with the user manual
- Improper use of the machine
- Improper assembly, commissioning, operation and maintenance of the machine
- Operating the machine with defective safety installations or improperly installed or non-functioning safety and protective devices
- Failure to observe the instructions in the user manual regarding transport, storage, function, operation, maintenance and care of the machine
- Unauthorised structural changes to the machine
- Inadequate monitoring of machine parts subject to wear and tear
- Improperly performed repairs
- Disaster situations caused by foreign bodies and act of God

1.3 Machine designation

The designation machine replaces the trade name of the object to which this user manual - see cover sheet - refers.

1.4 Copyright protection

All documents are protected by copyright. A passing on and duplication of documents, also in extracts, as well as communications of the contents to third parties are not permitted, as far as not expressly agreed.

1.5 Reservations

Information on technical data, dimensions and illustrations of the machine, as well as changes in safety standards, are subject to further development and are therefore not binding for the delivery in every case.

Errors in printing and wording reserved.

2. Intended use

The log splitter HOS5-N is intended for private use in the home and garden. The machine is intended exclusively for the following application:

- Splitting wood that has just been cut and does not exceed the dimensions according to the technical data.
- Woods may only be split lying in the direction of the grain.

The machine is designed for operation by 1 person only. Never allow two or more people to work on the same machine.

The machine must not be used without the log guide plates and protective device.

The safety, working and maintenance instructions from the manufacturer, as well as the dimensions specified in the technical data must be observed.

Any other use is contrary to the intended use. Unintended use, modifications to the machine or the use of parts that have not been tested and approved by the manufacturer can cause unforeseeable damage!



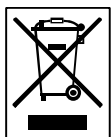
WARNING!

Possible misuse

- Safety installations must not be dismantled or bypassed.
- Use of non-approved accessories.
- Splitting wood containing metal parts such as nails, wire, etc. is prohibited.
- Operation in potentially explosive atmospheres is not permitted.
- The machine must not be operated for commercial purposes.

Persons who are not familiar with the user manual, children, young people as well as persons under the influence of alcohol, drugs or medication must not operate the machine.

3. Environment



Please recycle waste material and do not dispose of it as waste. All tools, hoses and packaging must be sorted, taken to the local recycling depot and disposed of in an environmentally friendly manner.

The site of operation must be protected against contamination with leaking operating materials. Used or residual operating materials must be recycled in accordance with the environmental protection regulations in force at the site of operation.



Ask your local waste disposal authority about the possibilities of environmentally friendly and proper disposal.

4. Safety

This section provides a comprehensive overview of all important safety aspects, for adequate protection of the operator, as well as for safe and trouble-free operation.

Failure to comply with the guidelines and safety instructions in this manual may result in considerable hazards.

4.1 Warning instructions

Warning instructions are identified by symbols in this user manual. The safety instructions are introduced by signal words expressing the extent of the hazard.

The instructions must be observed at all times in order to avoid accidents, personal injury and damage to property.



DANGER!

Failure to follow this manual may result in death and / or life-threatening injury.



WARNING!

Failure to follow this manual may result in death and / or serious injury.



CAUTION!

Failure to follow these instructions may result in minor or moderate injury.



IMPORTANT NOTICE!

Failure to follow this manual may result in damage to the motor or other property.

4.2 Safety instructions



WARNING!

Familiarise yourself with the machine. Proper training is a prerequisite for safe operation of this machine. Incorrect operation or operation by untrained personnel may present a danger.

Read the operation manual for this machine carefully and observe the labels affixed to the machine. Familiarise yourself with the application and restrictions, as well as the specific, potential dangers associated with it.

Also familiarise yourself with the control panels and their proper use. Learn how to stop the machine and turn it off quickly. Inexperienced operators must be instructed by personnel familiar with the machine. Only then are they allowed to operate the machine.

In addition to the work safety instructions in this user manual, the safety, accident prevention and environmental protection regulations valid for the area of application of the machine, as well as the road traffic regulations, must be observed.

Responsibility of the user

The user must make the user manual available to the operator and ensure that the operator has read and understood it. The user manual must be handed over at the same time. In addition, he must train the personnel at regular intervals and inform them about the dangers involved in handling the machine.

Furthermore, the user is responsible for ensuring that the machine is always in technically perfect condition.

Responsibility of the operator

Only trained persons may start, operate and switch off the machine. The operator must be trained in the correct operation of the machine and be familiar with the necessary safety devices. Inadequately informed operators can endanger themselves and other persons through improper use.

First-time users should be instructed by the seller in order to familiarise themselves with the characteristics of the machine, its intended use and the necessary safety devices.

Operating personnel



WARNING!

Persons who are not familiar with the user manual, children, young people under the age of 18 as well as persons under the influence of alcohol, drugs or medication must not operate the machine. Young people from the age of 16 may use the machine under the supervision of a trained person.



The machine is only designed for the operation by 1 person! Never allow two or more persons to operate and load the machine.

The presence of children or other persons in the working area during splitting is prohibited. Watch out for animals too.

The machine may only be operated outdoors and not in closed rooms.

The operator is liable for all damages to third parties and their property.

Workspace

Working with the machine requires a high level of attention.

- Ensure good visibility and lighting conditions at the workplace. **Poor lighting can significantly increase the risk of injury!**
- A level and tread-proof area with sufficient freedom of movement is required for working.
- Do not leave split wood in the working area, **risk of tripping!**
- In bad weather and on uneven terrain constant attention must be paid to secure footing, **danger of slipping!**

The workplace around the log splitter and / or the traffic routes required for the delivery and removal of the wood must be procured and maintained in such a way that safe working is possible.

Operation

For machines without a base frame, operation is only permitted on a flat, stable work table with a minimum height of 75 cm. The unit must be firmly screwed to the table.

Never put a damaged machine into operation!

Only work when in good physical condition.

Carry out all work calmly and prudently.

Never leave the machine running unattended.

The machine is equipped with a mechanical two-hand control. **Before each operation, check the two-hand control.**

Do not reach into the running machine during the function test of the splitting stroke.

Never work without protective devices. The effectiveness of the safety and protective devices must not be inadmissibly influenced or cancelled.

The drive must be switched off immediately in the event of noticeable changes in the behaviour of the machine.

Factory settings (e.g. hydraulic valve, hydraulic lever) must not be changed.

Regularly check the screw connections and the oil level.



WARNING!

Hydraulic fluids under pressure can be dangerous!

Always make sure that the hose line:

- is not damaged or worn out;
- has been correctly mounted or installed.

Avoid injuries.

- Never touch pressurised hydraulic hoses or hose lines.
- Never search for leaks with bare hands; wear protective goggles and clothing!
- Never check hose assemblies in hazardous areas or in areas where machinery is running.
- Always remember that certain hydraulic fluids are highly flammable.

If you receive pressurised hydraulic fluid under the skin (injection), seek medical attention immediately.

End of work

During repair or maintenance work, as well as when leaving the workplace, the power supply must be disconnected by pulling out the mains plug. Interrupting the power supply only by releasing the push button is not sufficient!



WARNING!

Repair, set-up, maintenance and cleaning work, as well as transporting the machine, may only be carried out when the drive is switched off and the tool is at a standstill. In the event of a malfunction, operation must always be switched off.

Use only original – LUMAG – spare parts and accessories. The use of other spare parts and accessories may increase the risk of accidents. Any liability for damages resulting from this is excluded.



DANGER!

There is a danger to life in case of contact with live components! Switched-on electrical components can make uncontrolled movements and cause serious injuries.

The drive of the machine must be switched off during changeover work.



DANGER!

Work on the electrical equipment may only be carried out by qualified electricians.

Never use faulty connection cables. **Before each operation, check the power supply.**

Machines with electric drives must not be operated in the rain, as this could cause the switch and / or the electric motor to malfunction!

4.3 Personal protective equipment (PPE)

When handling the machine, it is essential to wear personal protective equipment (PPE) to minimise any risk to the operator. The following protective measures must be observed:

- Tight-fitting **work clothes** that do not hinder movement. It is mainly used to protect against being caught by moving parts.
- **Noise protection devices** such as hearing protectors, capsules, etc. to protect against hearing damage.
ATTENTION! Noise can be harmful to health. If the permissible noise level of 80 dB(A) is exceeded, hearing protection must be worn.
- **Mouthguard** to protect against respiratory diseases, to retain fine dust or particles.

- **Safety goggles with side protection** to protect eyes from dust or splinters.
- **Work gloves** made of strong leather, to protect against sharp edges, splinters or excessive vibration.
- **Safety shoes or boots** with steel caps to protect against uneven, sharp-edged surfaces or falling objects. The safety footwear also ensures a safe stand.
- **Safety helmet** to protect the head from falling parts and swinging loads. It can also prevent injury in confined situations.

4.4 Residual dangers and protective measures



WARNING!

Disabling, modifying, blocking, dismantling, modifying or attaching any parts to the safety and protective devices of the machine is strictly prohibited and may result in serious and / or fatal injuries if not observed.

Mechanical residual dangers

Crushing, shearing

Risk of injury (crushing or severing) to body parts by the splitting wedge or if the splitting material is not properly guided or supported.

→ Always use the two-hand control. Do not interfere with the splitting process. Never work on the machine in pairs.

Risk of injury due to jammed splitting material.

→ Only knock out jammed wood. Wood is under a lot of tension when it is removed, your fingers can be crushed in the splitting crack.

→ Beware of falling wood, which can injure your feet.

→ Pay attention to bystanders!

Injuries in general

When working with dry wood, a sudden split can result in serious injuries. Pieces of wood can fall away during the splitting process and injure your feet.

→ Do not interfere with the splitting process.

→ Keep a sufficient safety distance.

→ Operate the machine calmly and carefully.

→ When handling the machine, it is essential to wear personal protective equipment (PPE).

Neglecting ergonomic principles

Negligent use of personal protective equipment (PPE)

Careless use or omission of personal protective equipment can result in serious injury.

→ Wear the prescribed protective equipment.

Insufficient local lighting

Poor lighting poses a high safety risk.

→ Always ensure sufficient lighting at the workplace.

Human behaviour, misbehaviour

→ Always concentrate during work.

Residual danger can never be excluded.

Electrical residual dangers

Direct or indirect electrical contact

Touching live parts when electrical or defective components are open or electrical connection cables which are not properly connected can lead to injuries.

→ Have defective cables or plugs replaced by a specialist.

→ Disconnect the mains plug before maintenance work.

→ Only use the machine on a connection with a residual current circuit breaker (RCCB).

Thermal residual dangers

Burns, chilblains

Touching hot surfaces can cause burns.

→ Allow the motor to cool down. Always ensure that the motor is adequately ventilated.

Noise hazard

Hearing damage

Prolonged, unprotected work with the machine can lead to hearing damage.

→ Always wear hearing protection.

Hazard due to materials and other substances

Contact, inhalation

Ejected objects or liquids can cause damage to health.

→ When splitting, mechanical particles can injure their eyes. Always wear safety goggles!

→ Hydraulic oils are toxic. Supply fresh air after inhalation of mist or vapours. After eye contact, rinse thoroughly (at least 10 minutes) with water, then consult an ophthalmologist.

Fire, explosion

Fire and slip hazard due to spilled hydraulic fluid.

→ Smoking, fire and open light are prohibited during operation!

→ Clean up spilled liquid immediately with oil binding agent and dispose of according to regulations.

Other hazards

Slipping, tripping or falling of persons

On unstable and uneven surfaces, tripping can cause you harm.

→ Watch out for obstacles in the working area. Always make sure you have a secure footing and wear safety shoes.

4.5 Behaviour in an emergency

In the event of an accident, initiate the appropriate first aid measures and request qualified medical assistance as soon as possible.

When requesting assistance, provide the following information:

where it happened - what happened - how many injured persons - what type of injury - who reports!

5. Warning and information symbols used

There are symbols on the machine that represent important information about the product and instructions for use.



ATTENTION!

This is about your safety. The symbol indicates a danger, warning or caution.



Read these instructions completely before using the machine.



Wear safety shoes.



Wear protective gloves.



Wear eye protection.



Wear hearing protection.



Never remove or tamper with protective or safety devices.



Keep bystanders, pets and livestock away from the working area.



Caution! Moving machine parts. Avoid injuries that can occur due to the movements of the pressure plate.



Danger of cutting and crushing! Never touch dangerous areas when the pressure plate is moving.



Never remove jammed splitting material with your hands.



Danger of slipping and tripping!

Keep your working area clean! Disorder can result in accidents.



Only with electric drive:

Warning of dangerous electrical voltage.

	Venting the hydraulics! The hydraulic system must be carefully vented before and during commissioning.
	Disconnect the power supply before carrying out repairs, maintenance or cleaning.
	Keep hands and feet away from moving parts.
	The machine may only be operated by one person.
	Dispose of the used oil in an environmentally friendly manner.
	Lifting point for slings.
	Binding point

6. Machine overview

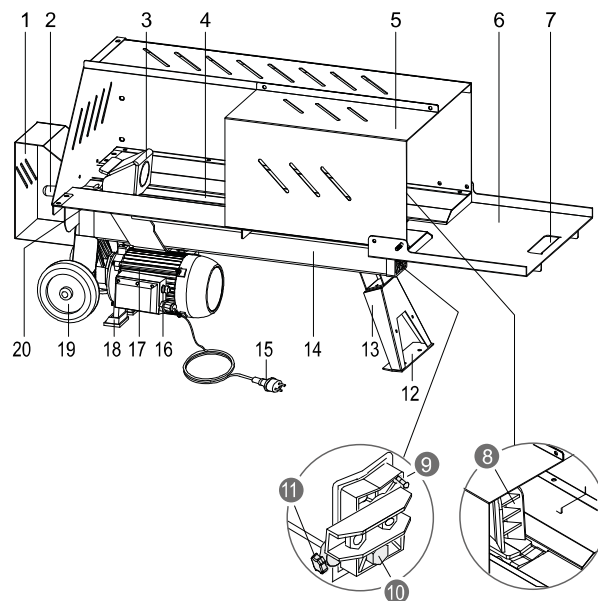


Fig. Part designation

- 1 Cover
- 2 Operating lever (to operate the splitting process)
- 3 Pressure plate (log pusher)
- 4 Work table (log guide)
- 5 Top guard
- 6 Separate storage
- 7 Transport handle
- 8 Splitting wedge
- 9 Venting screw
- 10 Oil drain bolt / dipstick
- 11 Hoist limiting ring
- 12 Mounting device for workbench / underframe
- 13 Support leg
- 14 Base frame and hydraulic tank
- 15 Mains plug
- 16 Operating push button (at the electric motor)
- 17 Electric motor (E-motor 230V)
- 18 Mounting device for workbench / underframe
- 19 Transport wheels
- 20 Pressure relief valve

7. Technical data

Model number	HOS-5N
Motor (230V ~50Hz)	S3 80%* IP54
Input power	1.5 kW
Splitting power	5 t
Splitting length max.	150~ 520 mm
Splitting \varnothing max.	50~ 250 mm
Hydraulic pressure	18.0 MPa
Hydraulic oil capacity max.	3.2 L (HLP46)
Sound pressure level	is below 85 dB(A)
Working speed	approx. 3.2 cm/s
Return speed	approx. 6.5 cm/s
Construction dimensions (installation dimension)	L / 1380 mm W / 465 mm H / 650 mm
Weight	59 kg

* Uninterrupted periodic operation:
operating mode S3, duty cycle 80%, playing time 10 min.

The motor may run for 4 minutes under load and must then stand still for 6 minutes, or at least idle. The motor must cool down, otherwise overheating would occur.

Conditions of use

This log splitter is designed to operate at an ambient temperature between +5°C and 40°C and at altitudes not exceeding 1000 m above sea level. Humidity should be below 50 % at 40°C. Storage or transport can take place at temperatures between -25°C and 55°C.

7.1. Electrical requirements



WARNING!

Work on the electrical installation and electrical equipment may only be carried out by qualified electricians.

AC motor

The HOS-5N log splitter may only be connected to a 230 volt mains supply with 50 Hz and 16 A fuse via the 3-pin mains connection cable.

The electrical supply must be equipped with protective devices against undervoltage, overvoltage, overcurrent, as well as a residual current circuit breaker (RCD) with a maximum residual current of 0.03 A.

The mains connection must be fused with 16 A.

Rubber cables for electrical connection must comply with EN60245 and be marked with the symbol H07RN. The labelling of cables is required by law.

Extension cables must have 3 conductors a minimum cross-section of 2.5 mm² and must not exceed a length of 10 metres.

Insulation damage often occurs on electrical connection cables.

Damaged and defective connection cables

Damaged insulation, bad contacts or overloads on electrical lines and connections are the most common causes of a fire started by the electrical system.

Damaged insulation occurs, for example, if the line is kinked, run over or crushed or if it is overaged. But grease, aggressive liquids, gases and vapours can also attack and damage insulation. A crushed conductor has a higher resistance, which leads to heating of the line at this point. Breaks in the insulation lead to leakage currents and short-circuit currents.

Such defective connection cables must not be used and are life-threatening due to the insulation damage!

Do not expose the plug connections to moisture.

Mains connection

Connect the power cable to the power supply

Motor protection switch



IMPORTANT NOTICE!

If the motor is overloaded, it switches off automatically. After a cooling time (varying in time), the motor can be switched on again.

The function of the motor protection switch must not be overridden. If the motor protection switch has switched off the machine, proceed as follows:

1. Disconnect the machine from the power supply.
2. Eliminate the cause of the overload.
3. After a cooling time of several minutes, reconnect the power and switch the machine on again.

8. Scope of delivery



CAUTION!

The machine must not be used until all parts have been fully assembled.

After unpacking, check the contents of the carton and / or transport box for

- completeness and
- possible transport damages.

Immediately notify the dealer or manufacturer of any complaints. Later complaints will not be accepted.

The machine is delivered partially disassembled. The scope of delivery can be found in the assembly instructions, see annex I.

If you have any questions or problems with the machine, please contact us. You can reach us by email:

info@lumag-maschinen.de or by telephone at +49 8571/92 556-0.

9. Assembly

Assemble the machine with the help of a second person.

The assembly instructions are enclosed with this user manual, see annex I.

10. Transport and storage

For easier transport over short distances, the machine is equipped with two wheels (19) and a lifting handle (7).



IMPORTANT NOTICE!

Before moving the machine, make sure that the venting screw (9) is tightened to prevent hydraulic oil from leaking.

10.1. Safety instructions for transport



WARNING!

Danger to life due to falling load!

Falling loads or parts of loads can kill people.

- Never stand under a suspended load.
- Do not enter the swivel area of lifting gears during operation.
- Always wear a safety helmet when working with a crane.



WARNING!

Risk of injury due to swinging transport goods!

Transport goods with an eccentric centre of gravity can swing out strongly when lifted and seriously injure people in the vicinity.

- Leave the swivel area of lifting gears wide open before lifting transport goods.
- Observe the transport instructions and symbols on the transport goods.
- Always wear a safety helmet when working with a crane.



ATTENTION!

Damage due to improper transport!

Improper transport can cause considerable damage to the goods being transported and to objects in the vicinity.

- Always exercise the greatest care and caution when loading, unloading and transporting goods within the company.
- Observe the instructions and symbols on the packaging.

- Always remove the transport lock during mounting.

Personnel

- Transport work without the aid of lifting or conveying equipment requiring supervision may be carried out by instructed personnel appointed by the operator.
- Transport work with the support of lifting or conveying equipment requiring supervision may only be carried out by instructed specialist personnel authorised to operate the equipment and appointed by the operator.

Personal protective equipment (PPE)

- Always wear during all transport work:
 - ▶ Protective clothing
 - ▶ Protective gloves
 - ▶ Non-slip safety shoes
- For all transport work with the aid of lifting or industrial trucks such as pulley blocks, cranes, forklift trucks, additionally wear
 - ▶ Industrial safety helmet

10.2. Transport and storage

The log splitter is packed safely and in an environmentally friendly manner for the expected transport conditions. The packaging protects the components from damage and corrosion until mounting begins.

- Do not remove the packaging and transport locks before mounting.
- Dispose of packaging material according to applicable local regulations.

The machine is heavy. Appropriate preparation is essential.

Two people or technical aids are required to lift it off the pallet.

Pallet transport with industrial truck

Transport goods on pallets can be transported with an industrial truck, e.g. forklift truck, under the following conditions:

- The industrial truck must be designed for the transport weight.
- The operator must be authorised to operate the industrial truck.

- Drive the forks of the forklift truck between or under the rails of the pallet until the forks protrude on the opposite side.
- Secure the pallet with the transport goods with tension belts so that the pallet with the transport goods cannot tip over, if necessary correct the position of the centre of gravity. The tension belts must also be adequately dimensioned.
- Lift the transport goods and transport them to the destination.

Transporting goods with lifting gear

Transport goods can be transported directly with a lifting gear under the following conditions:

- The lifting gear must be designed for the transport weight.
- The operator must be authorised to operate the lifting gear.
- Ropes, harnesses or multi-point hangers must only be used on the upper part of the machine (base frame). **Never hook the lifting gear onto the splitting wedge or lifting handle!**
- **Never transport the machine when it is loaded.**
- Slowly lift the goods to be transported and check that the goods are hanging horizontally, if necessary correct the position of the centre of gravity with the sling.
- Forward transport goods to the destination.

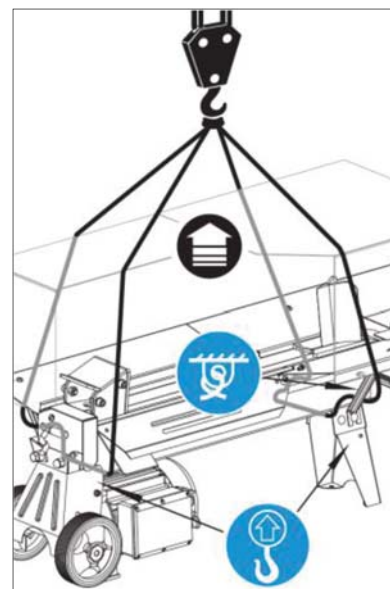


Fig. Transporting the machine with lifting gear

Forwarding to the place of work



WARNING!

For electrically driven machines: Always disconnect the mains plug before changing the location.

The log splitter can be transported very easily.

An axle with two wheels (19) is attached in the rear area. A lifting handle (7) is located at the front of the storage table of the machine.

1. Tighten the venting screw (9) so that no oil can leak out.
2. To move the machine over short distances, lift the log splitter slightly using the lifting handle (7) until the wheels touch the ground and pull.

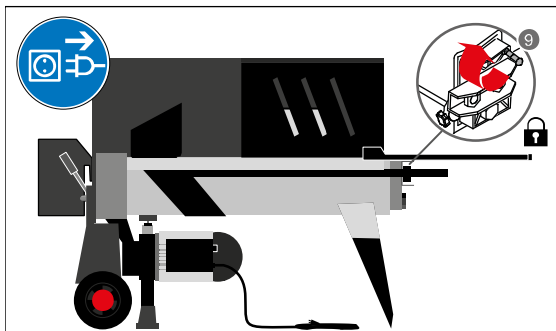


Fig. Tightening the venting screw

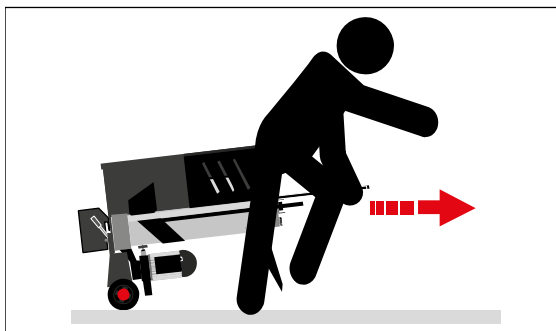


Fig. Forwarding to the place of work



CAUTION!

The machine must never be transported when loaded.

Storage conditions

Place or store the log splitter in a safe, dry and lockable room out of the reach of children. The machine must not be stored outdoors.

Storage temperature: +5°C to +45°C

Max. humidity: 60%

Before storing the machine for a longer period of time, clean and lubricate it thoroughly.

Store operating materials only in approved and labelled canisters. Do not make operating materials accessible to children.

11. Installation



ATTENTION!

The machine must never be placed on a firm and level surface and secured against slipping.

The workplace must be designed and maintained in such a way that safe working is possible.

Organise your working area. Plan the work in advance to save time and effort.

For transporting the machine to and from the site, it is necessary that the paths are free of tripping hazards. Adequate lighting of the workplace must be ensured.

Make sure that there is enough freedom of movements to work.

Place the machine level on a workbench or on the LUMAG base frame (available as an option) and fasten it. No-wooden boards, flat irons etc. may be placed underneath.

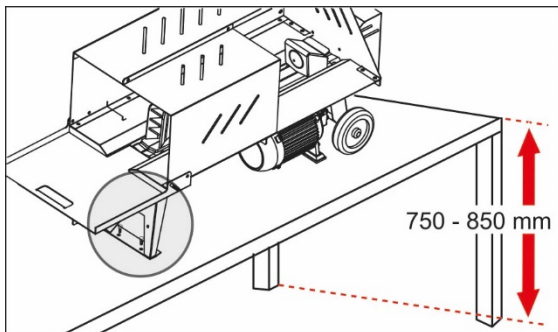


Fig. Attaching the machine to a workbench with two suitable screws

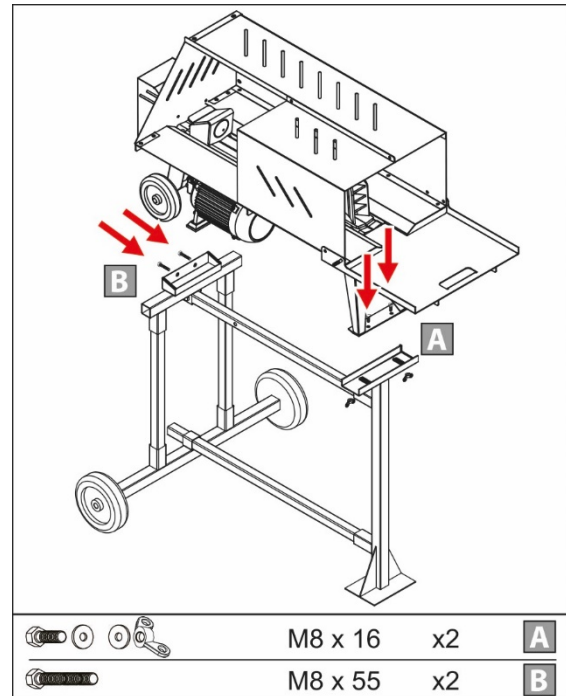


Fig. Attaching the machine on the LUMAG base frame (optional)



ATTENTION!

The working area must be kept free of wood residues and obstacles (tripping hazards). Slippery and smooth areas should be blunted. Never reach into the splitting area when the pressure plate is moving!

12. Hydraulics

Note on hydraulics

The hydraulic oil tank is located at the base frame of the log splitter. The oil tank is filled with hydraulic oil from the factory.



IMPORTANT NOTICE!

The hydraulic system is a closed system with oil tank, oil pump and a pressure relief valve (20). This must not be changed or manipulated.

At low temperatures – below 5°C – the oil in the hydraulic system is still very viscous. Working (splitting) immediately at such temperatures may cause damage to the hydraulic system. Therefore, at low temperatures, the splitter should first be operated at idle for some time so that the hydraulic oil can warm up.

If the oil is moved, such as with hydraulic machines, there is a risk of oil leaking.

So that there is no pressure in the hydraulic oil tank:

Loosen the venting screw (9) on the hydraulic oil tank by 3-4 turns so that air can escape during operation.

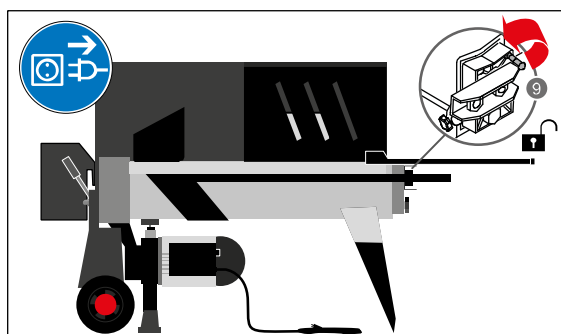


Fig. Loosening the venting screw

ATTENTION! Tighten the venting screw again after splitting so that no oil can leak out.

13. Drive types

13.1 Electric drive



WARNING!

Work on the electrical installation and electrical equipment may only be carried out by qualified electricians.

Switching the electric motor on / off

Press push button (16) (ON)

Release push button (16) (OFF)

The machine is equipped with a two-hand control. The left hand operates the hydraulic hand lever (2) while the right hand operates the push button (16).



IMPORTANT NOTICE!

The push button does not engage. After actuation, the push button always returns to its initial position. The function behind it is only carried out as long as the button is pressed.



Fig. Two-hand control

The log splitter comes to a stop as soon as one hand is removed from the controls.



DANGER!

Danger to life due to electric shock! There is a danger to life in case of contact with live components. Switched-on electrical components can make uncontrolled movements and cause serious injuries.

ATTENTION!

Mains connection and extension cable must be 3-core (230V) and have a minimum cable cross-section of 2.5 mm². In addition, the cable extension should not exceed 10 m and should also have a

cable cross-section of at least 2.5 mm². The cable extension must be completely unwound.

The machine may only be operated via a mains supply protected by a residual current circuit breaker ≤ 30 mA.

The mains connection must be fused with 16 A.

During operation, no other consumers may be connected to the same circuit, as this may cause the fuse to blow and the circuit breaker to trip.

If the motor becomes too hot due to overload, it switches off automatically due to the built-in overload protection. The motor must not be switched on again until it has cooled down to a surface temperature of approx. 30°C (lukewarm).

Motor and push button must not be cleaned with a water hose, a high-pressure cleaner or similar equipment. There is a risk of electric shock and destruction. In addition, it is forbidden to use the hydraulic log splitter outdoors when it is wet!

14. Commissioning

Only operate the log splitter when it is installed in a stable position. In addition, the machine must be secured against slipping and tipping. Special care must be taken to ensure that the ground does not give way under the load of the machine. Always ensure a horizontal position during work.

Do not work alone, someone must be nearby (within calling distance) for emergencies.



WARNING!

During the splitting process and the return stroke of the pressure plate, the wood must not be held by helpers, otherwise there is a great risk of injury!

Carrying out of a visual check

Before each commissioning, the machine must be checked for external damage.

The hydraulic hoses and all joints on the hydraulic system must be checked to detect and eliminate any leaks.

All safety installations must be fitted to the machine. They must not be removed or rendered unusable.

Before starting work, check the hydraulic lever (2) for ease of movement and function.

Keep handles dry and clean.

The storage table and protective devices must always be firmly and securely attached to the machine.

If faults or defects occur, the machine must not be commissioned until these have been rectified.

ATTENTION! Whenever working on the machine, always wear the correct protective equipment, switch off the drive and disconnect the machine from the mains.

14.1 Work preparation

Recommended size of the splitting material

HOS-5N	
Splitting length max.	150~ 520 mm
Splitting Ø max.	50~ 250 mm



IMPORTANT NOTICE!

The diameter of the splitting material is only a guide value. The possible splitting performance depends on the type of wood, its length, growth and the number of branches it contains.



The machine is only designed for the operation by 1 person! Never allow two or more persons to operate and load the machine.

Checking the oil level

Check the level of hydraulic oil before initial commissioning and then regularly. Only refill hydraulic oil HLP 46. Make sure that no dirt, wood chips etc. get into the oil tank. See also... MAINTENANCE AND REPAIR WORK / check oil level, hydraulic oil (17.2)

Clean work surface

Clean the work surface regularly, especially when splitting resinous wood.

Lubricate moving metal parts

Apply a thin layer of spray grease to the sliding guide before operation to prolong the life of the sliding jaws. See also... CONTROL WORKS / lubricate all moving metal parts as required (16.4) MAINTENANCE AND REPAIR WORK / operating materials (17.1)

Install

Place the machine horizontally, on level, solid ground and secure it against slipping and tipping. When tilted towards the splitting wedge, there is a loss of splitting force.

Do not place the machine on the connection cable! Lay the connection cable in such a way that it cannot be kinked, crushed or damaged in any other way.

Venting the hydraulics

Loosen the venting screw (9) by 3-4 turns.



IMPORTANT NOTICE!

Tighten the venting screw (9) again after splitting to avoid unnecessary oil loss during transport.

Checking the two-hand control

The machine is equipped with a two-hand control. This serves to ensure that the operator cannot reach into the splitting area under any circumstances when working with the machine.

Before each use, check that the two-hand control of the machine, by releasing the hydraulic hand lever (2), stops the pressure plate (3) and does not independently return to its original position.

Only when both hands release the controls (2+16) does the pressure plate (3) automatically return to its original position.



Fig. Two-hand control: Pressure plate retracts

ACTION	RESULT
Operate both controls...	The two-hand control switches the directional valve and releases the oil flow to the working cylinder. The pressure plate moves.
When releasing one of the two controls...	Machine comes to a standstill and the pressure plate remains in the current position.
Release both controls...	Machine comes to a standstill and the pressure plate automatically returns to its original position.

15. Operation



IMPORTANT NOTICE!

At outside temperatures below 5°C, the hydraulic oil is in a viscous state. To avoid damage to the hydraulic system, the machine must be run at idle for at least 5 minutes at such temperatures so that the hydraulic system reaches its operating temperature. Otherwise, proper splitting operation is not guaranteed.

15.1 Splitting



CAUTION!

The machine may only be operated if no parts (e.g. protective plates) are missing or defective and if the connecting cable is not damaged.

1. Place the log lengthwise on the machine so that the splitting material is held by the log guide.

ATTENTION! Always split wood in the direction of the grain.

Never force a log to split by maintaining hydraulic pressure for several seconds. The pressurised oil would overheat and the machine could possibly be damaged.

2. Connect the mains plug to the mains.
3. Press the push button (16) on the electric motor with one hand and keep it pressed. Wait a few seconds for the motor to reach its final speed and for the pressure in the hydraulic pump to build up.
4. After the motor has reached its final speed, push the hydraulic lever (2) all the way down with your left hand. The pressure plate (3) presses the log against the splitting wedge (8). The log is split.

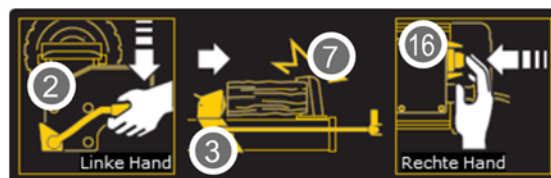


Fig. Two-hand control: Splitting

5. By releasing both controls, the pressure plate returns to its original position.
Only when the pressure plate is back in its original position may the split wood be removed from the table.
6. Before the next splitting operation, clean the work surface from wood residues and chips.
7. When leaving the log splitter, disconnect the machine from the mains.



WARNING!

No other persons are allowed in the working area of the machine.

15.2 Setting the splitting length

The machine is set to its max. splitting length upon delivery.

However, if you want to split wood the length of which is less than the total stroke, it makes sense to limit the stroke of the pressure plate (3).

The stroke length can be adjusted continuously.

Stroke limitation

1. To do this, press the hydraulic lever (2) and the push button (16) and move the pressure plate (3) until just before the splitting material.
2. Now first release only the push button, adjust the stroke limiting ring (11) to the desired length and tighten the clamping screw.
3. You can then release the hydraulic lever (2). The pressure plate now stops at the selected position.

When readjusting the max. splitting length, the stroke limiting ring (11) with the clamping screw must be loosened. Then the pressure plate can extend to its maximum length. Then tighten the clamping screw again.

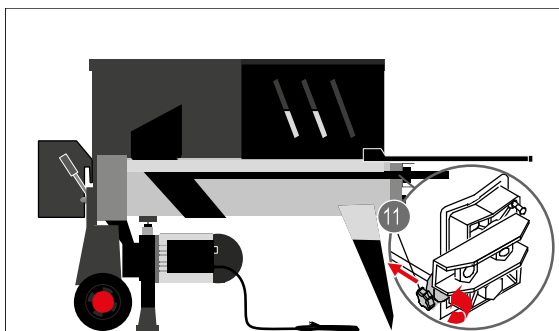


Fig. Stroke limitation

15.3 Faulty placement

Always lay the splitting material flat on the work surface! It must not be able to slip or be placed at an angle. The splitting wedge is overstressed if a splitting operation is not carried out on the entire “cutting edge” but only in the upper area.

Never split several logs at the same time! A log could be thrown out and hit you. High risk of injury!

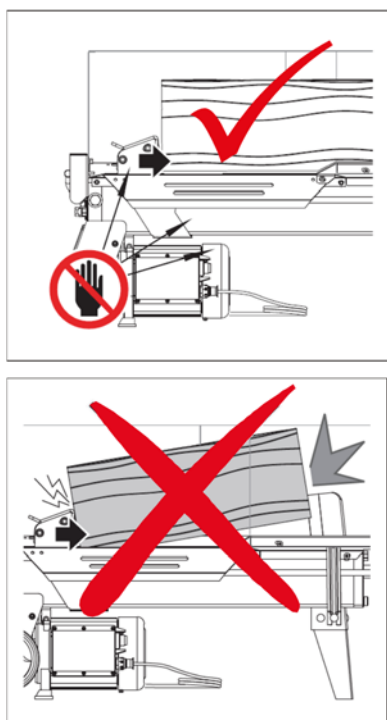


Fig. Faulty placement

15.4 Loosening jammed splitting material



WARNING!

Do not remove jammed splitting material with your hands! Never let other people help you remove jammed pieces of wood.

1. Release both controls (2+16) and let the pressure plate (3) return to its original position.
2. After the pressure plate has come to a complete stop in the starting position, place a log stop under the jammed splitting material.
3. Trigger the splitting process so that the pressure plate pushes the log completely under the jammed splitting material.
4. Repeat steps 1 to 3 with different logs (steeper angle) until the split material is still pushed out of the machine at the top.

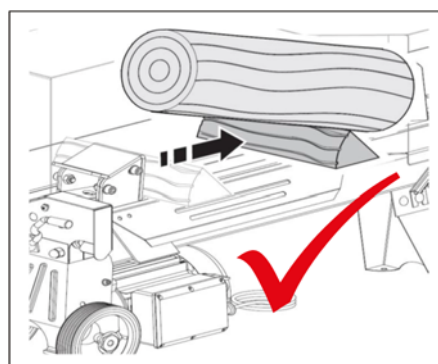
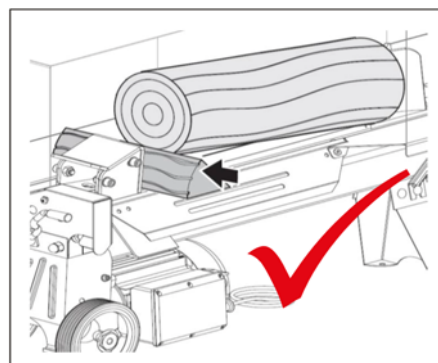
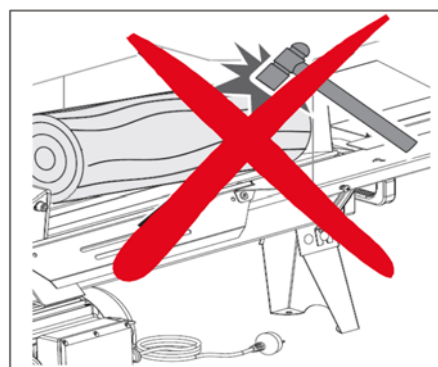


Fig. Loosening jammed splitting material

15.5 Instructions on splitting

The splitting material must have a straight cut surface.

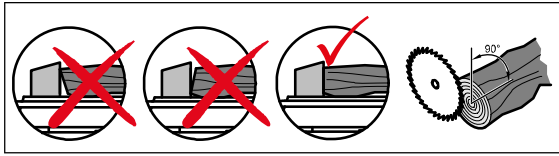


Fig. Splitting material

The work surface of the machine must be clean. Wood residues from previously split wood must be removed.

It is essential to ensure that the log is held by the log guide, otherwise there is a risk of injury from slipping splitting material!

The splitting process - after inserting the splitting material - may only be initiated by one person using both hands. Never reach into the splitting area when the pressure plate is moving!

ATTENTION! Wood can split open, use only debranched wood for splitting.

Make sure that the wood does not twist, wobble or slip when splitting. **Never maintain the pressure of the log splitter for longer than 5 seconds at a time!**

If a log cannot be split, it means that its hardness exceeds the capacity of the machine. In this case, turn the log 90° and try to split the wood in this way. If this does not work, the log should be sorted out for safety reasons and to protect the machine.

Always split the splitting material lying down in the direction of the grain!

Wear suitable gloves and safety shoes when splitting wood.



CAUTION!

Do not split fresh wood! Dry, seasoned wood is easier to split and will not wedge – as is so often the case with fresh wood.



WARNING!

Split the log in the direction of the grain! Only split straight sawn-off splitting material. The splitting material should rest

firmly on the work surface.

15.6 Stop splitting

1. Tighten the venting screw (9) again after splitting so that no oil can leak out.
2. Disconnect the machine from the power supply.
3. Lift the machine slightly by the lifting handle (7) until the wheels touch the ground and pull it to the desired place.

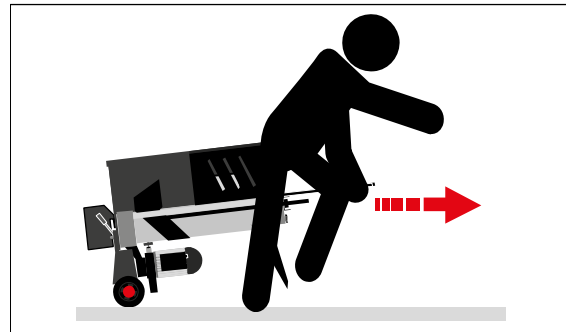
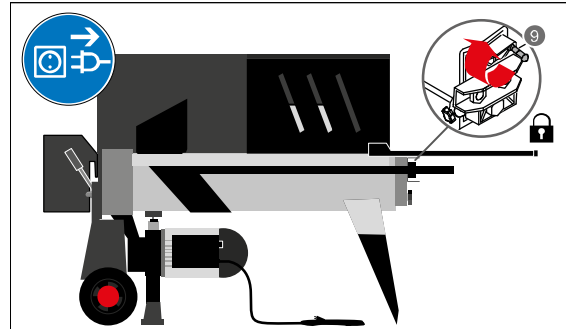


Fig. Stop splitting

16. Control work



Before all control work on the machine:

- Switch off the drive and
- in the case of electric motors, disconnect the machine from the power supply.
- Clean the machine of wood residues, chips and other contamination.

16.1 Screwings

After the first hour of operation, check all screws and nuts for tightness and retighten if necessary. Then regularly retighten and / or check all screws and nuts.

Replace lost screw connections.

Check all hydraulic screw connections and hoses after approx. 4 operating hours for tightness and firm seating. In case of leakage, retighten the screw connections in a depressurised state.

16.2 Oil level

Check the oil level regularly with the dipstick. Never operate the machine without oil and / or with too little hydraulic oil. Check the oil level with the pressure plate retracted. The machine must be in a vertical position.

16.3 Splitting wedge

If necessary, sharpen the splitting wedge with a suitable file.

16.4 Lubricating all moving metal parts as required.

Lubricate the sliding guide with commercially available spray grease. Do not use oil under any circumstances, as this can destroy the sliding jaws (= wearing part).

Check the hydraulic lever (2) for ease of movement, lubricate with oil if necessary.

17. Maintenance and repair work



Before all maintenance and repair work on the machine:

- Switch off the drive and
- in the case of electric motors, disconnect the machine from the power supply.
- Clean the machine of wood residues, chips and other contamination.

Never leave the machine running unattended.

Never work without protective devices. After maintenance work, refit all protective devices.

Use only original LUMAG spare parts. Other parts may cause unpredictable damage and injury.

Work on the electrical equipment may only be carried out by qualified electricians.

17.1 Operating materials



IMPORTANT NOTICE!

Lubricants used must comply with the operating material regulations of the operator and the stated specification. Consult the supplier if necessary.

The information regarding the filling quantities are approximate values.

Specification

Lubricant	Specification	Quantity
Hydraulic oil	HLP 46	3.2 l
Spray grease	Adhesive lubricant eco S402 (e.g. company Förch)	–
Maintenance oil	DW40	–

Lubrication schedule

No.	Assembly	Quantity	Lubricant
1	Sliding guide	as required	Fat
2	Hydraulic lever	as required	Oil

CONTROL WORK concerning point 16.4 must be observed.

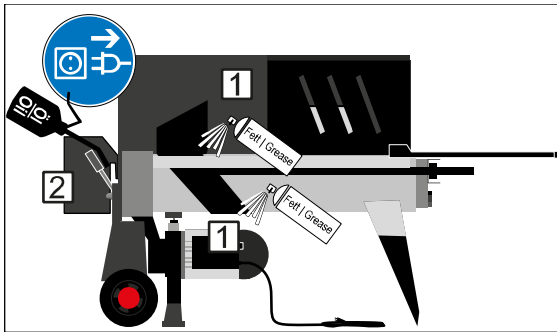


Fig. Lubrication plan

17.2 Checking oil level, hydraulic oil

The hydraulic system is a closed system with oil tank, oil pump and control valve. Never operate the machine without oil and / or with too little oil. If air enters the circuit due to lack of oil, the hydraulic pump may be damaged.



Hydraulic oil is harmful to the skin: **Wear protective gloves or use skin protection products.**



Discharged operating materials must be collected and stored in suitable containers. They must be disposed of in accordance with the applicable environmental protection regulations.

The oil level should be checked regularly. When refilling, be sure to use the correct type of oil.

We recommend hydraulic oil HLP 46.

The following hydraulic oils or equivalent oils of viscosity class HLP 46 are recommended for the hydraulic transmission system:

SHELL Tellus 22-46, Esso Nuto H46, DEA HD B46

Dirt and debris must not be allowed to enter the oil tank. Even slight contamination can cause considerable damage to the hydraulic system.



IMPORTANT NOTICE!

Check the hydraulic oil level always with the pressure plate retracted. The machine must be in a vertical position.



CAUTION!

A second person is required to raise and hold the machine.

Check oil level

1. Unscrew the oil dipstick (10) and wipe it with a clean lint-free cloth.
2. Insert the oil dipstick as far as it will go and pull it out again. The oil level must be between the min. and max. marks. If necessary, top up with hydraulic oil.
3. Check seal for damage and replace if necessary.
4. Screw in the oil dipstick and tighten only slightly to avoid damage to the thread of the cylinder cover.

An oil change is not necessary.



ATTENTION!

Hydraulic oil of viscosity class HLP 46 must be used for refilling.

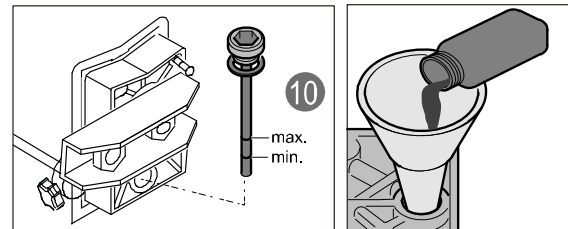


Fig. Oil level check



IMPORTANT NOTICE!

On the oil dipstick, the hydraulic oil must be between the upper mark (max.) and the lower mark (min.). If this is not the case, top up with hydraulic oil.

Too little oil can damage the oil pump and lead to excessive temperatures in the hydraulic system.



WARNING!

The hydraulic oil is under pressure! There is therefore a risk of injury from escaping hydraulic oil. The hydraulic hoses must be visually inspected regularly.

CONTROL WORK concerning point 16.1 / 16.2 must be observed.

17.3 Sharpening splitting wedge

The machine is equipped with a reinforced splitting wedge. After long operation and if necessary, you can sharpen the splitting wedge with a fine-toothed file and / or remove all edges or flat spots.

17.4 Cleaning the work surface

Clean the log guide regularly, especially when splitting resinous wood.

17.4 Cleaning

Clean the machine at regular intervals to ensure optimal functioning.

17.5 Storage

After finishing work, the machine should be thoroughly cleaned and lubricated.

Park the splitter under a tarpaulin in a dry, covered place. Strong sunlight can damage the surface of the hydraulic hoses, which can lead to premature wear and thus replacement.

18. Disposal

If the machine is no longer serviceable and is to be scrapped, it must be deactivated and dismantled, i. e. it must be brought into a condition in which it can no longer be used for the purposes for which it was designed.

Disposal of the machine must be carried out by trained personnel. The machine may only be disposed of in the designated and approved ways.

18.1 Decommissioning

Decommissioned machines must be taken out of service immediately in a professional manner in order to avoid later misuse and danger to persons or the environment.

Drain all environmentally hazardous operating materials from the old device and dispose of in an environmentally friendly manner. Oil residues must never be discharged into soil and waste water.

Block every moving machine part and disassemble the machine into its individual parts. Dispose of machine components at controlled disposal points.

Remove rubber and plastic parts from the machine and take them to a designated collection point

18.2 Disposal of electrical equipment

Electrical components belong to hazardous waste and must be disposed of separately from the machine. In the event of a fire on the electrical system of the device, use extinguishing agents that are approved for this purpose (e. g. powder extinguishers).

18.3 Disposal of lubricants

Disposal instructions are given in the product-specific data sheets. If necessary, consult your lubricant manufacturer.

19. Circuit diagram 230V

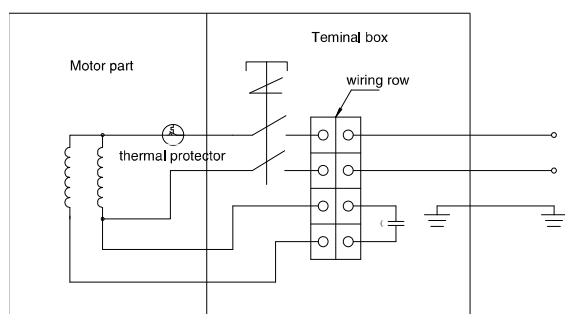


Fig. Circuit diagram 230V



WARNING!

Connections and repairs to the electrical equipment may only be carried out by a qualified electrician.

20. Troubleshooting



WARNING!

Any faults on the machine or motor requiring major intervention must always be repaired by your LUMAG workshop or authorised specialist workshops. The warranty becomes void in the event of improper intervention.

PROBLEM	POSSIBLE CAUSE	PROPOSED REMEDY
Electric motor does not start or switches off	Faulty supply line	Have the supply line checked by a specialist
	Cable (supply line) is defective	Have the cable checked by a specialist or replace it (cross-section 2.5 mm ²)
	Automatic circuit breaker has tripped	Supply line too weakly fused – use correct fuses (16 A “idle”)
	Motor is still in the cooling phase	Let motor cool down
Motor gets too hot	Cable cross-section (supply line) too small	Use cables with a larger cross-section
Hydraulic pump whistles, pressure plate does not move	Too little oil in the hydraulic system	Refill hydraulic oil
	Hydraulic oil is of inferior quality	Oil change
	Air in the hydraulic circuit	Open venting screw
	Machine is at an angle	Place machine horizontally
Pressure plate has no force	Too little oil in the hydraulic system	Refill hydraulic oil
	Machine is at an angle	Place machine horizontally
Pressure plate blocked	Knotty wood	Splitting wood from the trunk
	Trunk diameter is too large	Remove trunk
Pressure plate runs backwards	Air in the hydraulic circuit	Open venting screw
	Too little oil in the hydraulic system	Refill hydraulic oil
	Wood residues on the work surface	Clean the work surface

If these measures do not eliminate the fault or if faults occur which are not listed here, then have your machine checked by a specialist.

21. Warranty / Guarantee / Customer Service

WARRANTY

The statutory warranty period is given on the device. The seller must be notified immediately of any defects that can be proven to be due to material or assembly faults. Proof of purchase of the device must be provided by presenting the invoice and receipt when making a claim under the warranty.

The warranty is excluded with regard to parts if defects are caused by natural wear and tear, temperature, weather conditions, as well as defects resulting from negligent assembly, faulty connection, wrong fuel / fuel mixture, installation, operation, maintenance, lubrication or force.

Furthermore, no warranty is given for damage caused by unsuitable, abusive use of the machine, such as improper modifications or repair work carried out by the owner or third parties on his own responsibility, but also in the case of deliberate overloading of the machine.

Parts subject to wear and tear with a limited service life (e. g. V-belt, clutch, throttle cable, spark plug, air filter, battery, blades, hoses, wheels, tools and other aids), as well as all setting and adjustment work are excluded from the warranty.

GUARANTEE

LUMAG guarantees perfect quality and, without prejudice to the statutory warranty, provides a warranty in the event of material or manufacturing defects. The guarantee for LUMAG products is 24 months in the case of exclusively private use, and 12 months from the date of delivery in the case of commercial and / or professional use and / or leasing.

Guarantee claims must always be proven by the purchaser by means of the original purchase receipt. A copy of this must be enclosed with the guarantee application. Buyer's address and machine type must be clearly identifiable in the case of professional and / or commercial use. Without the original purchase receipt, we can only carry out the repair against payment.

Please do not return any equipment to us without a SERVICE NUMBER that you have received from our service department. If we receive devices unsolicitedly, we cannot accept and process them.

To request a SERVICE NUMBER, please contact our service team at:

info@lumag-maschinen.de

Please label the shipping carton clearly with the SERVICE NUMBER to ensure quick allocation.

Guarantee work is carried out exclusively by our LUMAG service workshop. Defects occurring within the guarantee period due to material or manufacturing defects shall be rectified by means of a repair, provided that they occurred despite proper operation and care of the device. In this case, we reserve the right to rectify the defect twice in the case of the same defect. If rectification fails or is impossible, the device can be exchanged for an equivalent device. If the exchange is also unsuccessful or impossible, there is the possibility of conversion.

Normal wear and tear, natural aging, improper use, as well as cleaning, maintenance and adjustment work are generally not covered by the guarantee (e. g. cutting device, air and fuel filter, spark plug and recoil starter, drive belt and the like). Due to operation and use, some components are subject to normal wear and tear, even when used as intended, and may need to be replaced in good time.

CUSTOMER SERVICE

For technical questions, information about our products and for spare parts orders, our service team is at your disposal as follows:

Service time: Monday to Thursday from 7.30 a.m. - 12.00 p.m. and 1.00 p.m. - 5.00 p.m.
Friday from 7.30 a.m. - 12.30 p.m.

Phone: +49 / 8571/92 556-0

Fax: +49 / 8571/92 556-19

Email: info@lumag-maschinen.de

22. CE Declaration of conformity

In accordance with the provisions of the EC Directives

Machinery Directive 2006/42/EC
EMC Directive 2014/30/EU

the company

LUMAG GmbH
Rudolf-Diesel-Straße 1a
D-84375 Kirchdorf a. Inn
Phone: +49 8571 / 92 556-0
Fax: +49 8571 / 92 556-19

explains that the product

Designation: Hydraulic log splitter
Type designation: HOS-5N

complies with the essential protection requirements of the above-mentioned EC directives. Conformity is based on the following standards:

EN 60204-1:2006/A1:2009+AC:2010
Safety of machinery - Electrical equipment of machines - Part 1: General requirements (IEC 60204-1:2005/A1:2008)

EN 609-1:2017
Agricultural and forestry machinery - Safety of log splitters - Part 1: Wedge splitters

EN 55014-1:2017
Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 1: Emission

EN 55014-2:2015
Electromagnetic compatibility - Requirements for household appliances, electric tools and similar apparatus - Part 2: Immunity

EN 61000-3-2:2014
Electromagnetic compatibility (EMC) - Part 3-2: Limits - Limits for harmonic currents (unit input current ≤ 16 A per conductor)

EN 61000-3-3:2013
Electromagnetic compatibility (EMC) - Part 3-3: Limits - Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current ≤ 16 A and not subject to conditional connection

Authorised representative for the compilation of technical documentation: Gabriele Denk

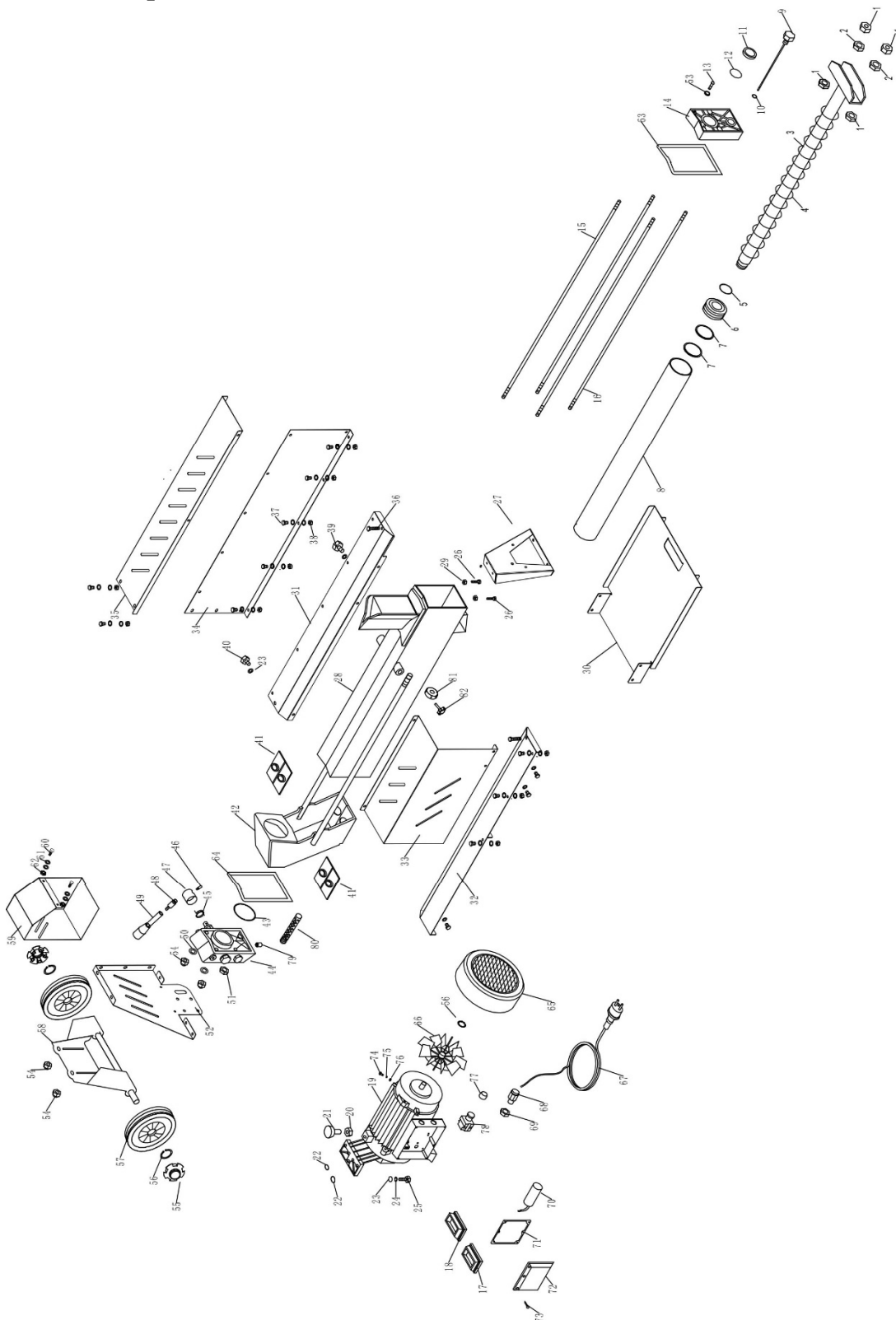
The declaration of conformity relates only to the machinery in the state in which it was placed on the market and does not take account of parts and / or operations carried out subsequently by the end user.

Kirchdorf, 26/11/2018 Christopher Weißenhorner, Managing Director

Place / date Distributor, authorised representative


Signature

23. Components HOS-5N



WARNING!

All repairs to the machine must be carried out by authorised qualified personnel. Have any necessary electrical work carried out only by an approved specialist.

Subject to change without notice!

Version HOS5N (01.19 D)

LUMAG dealer
can be found at www.lumag-maschinen.de

LUMAG GmbH
Rudolf-Diesel-Str. 1a
D-84375 Kirchdorf a. Inn
Germany
Internet: www.lumag-maschinen.de



/lumag.germany



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