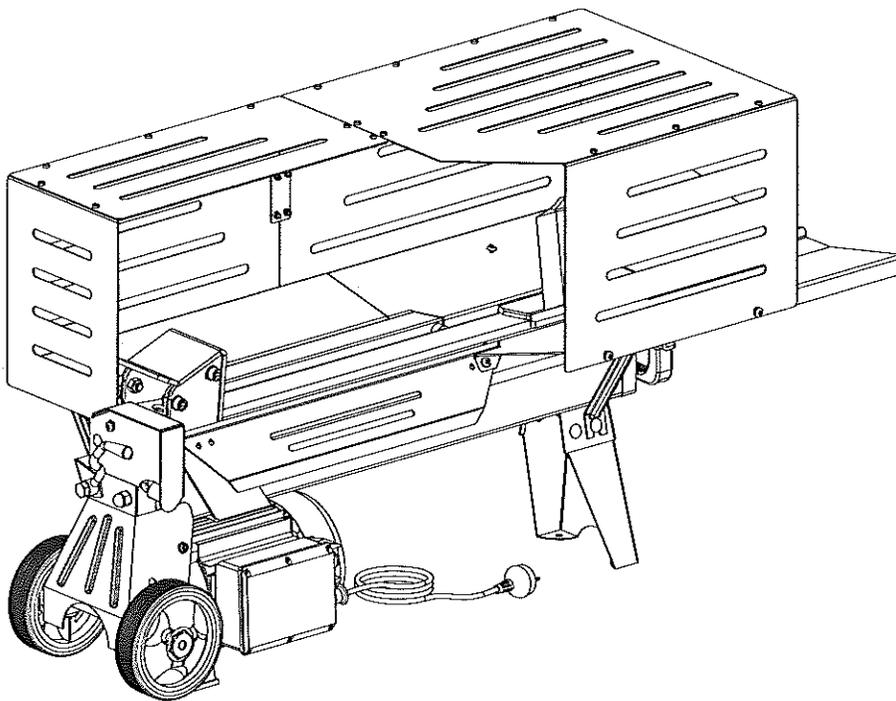


# LAWNFLITE

## Log Splitter LS52200EH LS72300EH

### Operator's Manual



Before operating this appliance, please ensure that you read & understand all the instructions that apply to it, as failure to comply with these instructions may result in personal injury, injury to other persons, and also increase the risk of fire. Please ensure that any replacement parts or accessories used with this appliance are correctly and/or securely fitted before use.

Please retain these instructions for constant reference.

Made For E.P.Barrus OX26 4UR

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## INTRODUCTION

Your new log splitter will more than satisfy your expectations. It has been manufactured under stringent quality standards to meet superior performance criteria. You will find your new unit easy and safe to operate, and with proper care, it will give you many years of dependable service.



**Carefully read through this entire operator's manual before using your new log splitter. Take special care to heed the cautions and warnings.**

## ENVIRONMENTAL



Recycle unwanted materials instead of disposing of them as waste. All tools, hoses and packaging should be resorted, taken to the local recycling center and disposed of in an environmentally safe way.

## SYMBOLS

The rating plate on your machine may show symbols. These represent important information about the product or instructions on its use.



Read these instructions in full before using the machine.



Wear safety footwear!



Wear protective gloves!



Wear eye protection!  
Wear hearing protection!



Do not remove or tamper with any protection or safety devices.



Dispose of the used oil in an environment-friendly way.



Do not use in the rain.



Danger! Keep clear of moving parts!



Do not remove jammed logs with your hands.



Warning! Stay clear of moving parts!



Before starting any repair maintenance or cleaning, always disconnect the power.



Keep bystanders away from the working area.

## SAFETY

### Safety Warnings & Instructions

#### • UNDERSTAND YOUR LOG SPLITTER

Read and understand the owner's manual and labels affixed to the log splitter. Learn its application and limitations as well as the specific potential hazards peculiar to it.

#### • DRUGS, ALCOHOL AND MEDICATION

Do not operate the log splitter while under the influence of drugs, alcohol, or any medication that could affect your ability to use it properly.

#### • AVOID DANGEROUS CONDITIONS

Put the log splitter on a 72-85 cm high, stable, flat, and level work bench where there is plenty of room for handling, and help the operator stay alert. Bolt the log splitter to the work surface if it tends to slip, walk, or slide.

Keep your work area clean and well lit. Cluttered areas invites injuries.

Do not use the log splitter in wet or damp areas or expose it to rain.

Do not use it in areas where fumes from paint, solvents or flammable liquids pose a potential hazard.

#### • INSPECT YOUR LOG SPLITTER

Check your log splitter before turning it on. Keep guards in place and in working order. Form a habit of checking to see that keys and adjusting wrenches are removed from tool area before turning it on. Replace damaged, missing or failed parts before using it.

#### • DRESS PROPERLY

Do not wear loose clothing, gloves, neckties or jewelry (rings, wrist watches). They can be caught in moving parts.

Protective electrically non conductive gloves and non-skid footwear are recommended when working. Wear protective hair covering to contain long hair, preventing it from get caught in machinery.

#### • PROTECT YOUR EYES AND FACE

Any log splitter may throw foreign objects into the eyes. This can cause permanent eye damage. Always wear safety goggles. Everyday eyeglasses have only impact resistant lenses. They are not safety glasses.

Do not put the log splitter on the ground for operations. This is awkward operating position means that the operator has to bring his face close to the machine, and thus risks being struck by wood chips or debris.

#### • EXTENSION CORDS

Improper use of extension cords may cause inefficient operation of the log splitter which can result in overheating. Be sure the extension cord is no longer than 10m and its diameter is no less than 2.5mm<sup>2</sup> to allow sufficient current flow to the motor.

Avoid use of free and inadequately insulated connections. Connections must be made with protected material suitable for outdoor use.

- **AVOID ELECTRICAL SHOCK**

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.

Ground the log splitter. Prevent body contact with grounded surfaces: pipes, radiators, ranges, and refrigerator enclosures.

Never open the pushbutton box on the motor. Should this be necessary, contact a qualified electrician.

Make sure your fingers do not touch the plug's metal prongs when plugging or unplugging the log splitter.

- **KEEP VISITORS AND CHILDREN AWAY**

The log splitter must be always operated by one person only. Other people should keep a safe distance from the work area, especially when the log splitter is under operations. Never use another person to help you with freeing a jammed log.

- **INSPECT YOUR LOG**

Make sure there are no nails or foreign objects in logs to be split. The ends of the logs must be cut square. Branches must be cut off flush with the trunk.

- **DON'T OVERREACH**

Floor must not be slippery.

Keep proper footing and balance at all times.

Never stand on log splitter. Serious injury could occur if the tool is tipped or if the cutting tools are unintentionally contacted. Do not store anything above or near the log splitter where anyone might stand on the tool to reach them.

- **AVOID INJURY FROM UNEXPECTED ACCIDENT**

Always pay full attention to the movement of the log pusher.

Do not attempt to load the log on until the log pusher has stopped.

Keep hands out of the way of all moving parts.

- **PROTECT YOUR HANDS**

Keep your hands away from splits and cracks which open in the log; They may close suddenly and crush or amputate your hands.

Do not remove jammed logs with your hands.

- **DON'T FORCE TOOL**

It will do a better and safer job at its design rate. Never try to split logs larger than those indicated in the specifications table. This could be dangerous and may damage the machine.

Don't use log splitter for a purpose for which it was not intended.

- **NEVER LEAVE TOOL RUNNING UNATTENDED**

Don't leave tool until it has come to a complete stop.

- **DISCONNECT POWER**

Unplug when not in use, before making adjustments, changing parts, cleaning, or working on the log splitter. Consult technical manual before servicing.

- **PROTECT THE ENVIRONMENT**

Take used oil to an authorized collection point or follow the stipulations in the country where the log splitter is used.

Do not discharge into drains, soil or water.

- **MAINTAIN YOUR LOG SPLITTER WITH CARE**

Keep the log splitter clean for best and safest performance.

- **MAKE THE WORKSHOP CHILDPROOF**

Lock the shop. Disconnect master switches. Store the log splitter away from children and others not qualified to use it.

## Special Warnings & Instructions

- The splitting operation of the machine is designed to be activated by one person. While there is the possibility that additional operators could be working with the machine (e.g. for loading and unloading), only one operator should activate splitting operations;
- The machine shall not be used by children;
- Description of functional tests of the machine;
- The installation and maintenance requirements including a list of those devices e.g. two-hand control device which should be verified, how frequently the verification shall be carried out and by what method;
- Do not remove jammed logs with your hands. Never use another person to help you with freeing a jammed log. Lower the wedge until the log is split open.
- Only qualified person can assemble the machine.

## Specifications

Model Number		LS52200EH	LS72300EH
Motor		220-240V -50Hz, 2200W, S3 25%, 9.6A	230V -50Hz, 2300W, S6 40%, 10.3A
Log Size Capacity	Dia.	50-250 mm	
	Length	200-520 mm	
Maximum Force		5 Ton	7 Ton
Hydraulic Pressure		20.6 Mpa	24.2 Mpa
Hydraulic Oil Capacity		3.5 L	
Noise Pressure Level (LpA)		78.8 dbA under no load; 89.8 dbA under full load	
Vibration		< 2.5 m/s <sup>2</sup>	
Overall Sizes	Length	116 cm	
	Width	42.5 cm	
	Height	61.0 cm	
Weight		55 kg	60 kg

\* S6 40%, continuous operation periodic duty: time of one load cycle is 10 minutes, operation time at constant load is 4 minutes, operation time at no-load is 6 minutes.

\* S3 25%, Intermittent periodic duty: time of one load cycle is 10 minutes, operation time at constant load is 2.5 minutes, de-energized and at rest is 7.5 minutes.

\* The diameter of the log is indicative – a small log can be difficult to split when it has knobs or a particularly tough fiber. On the other hand, it may not be difficult to split logs with regular fibers.

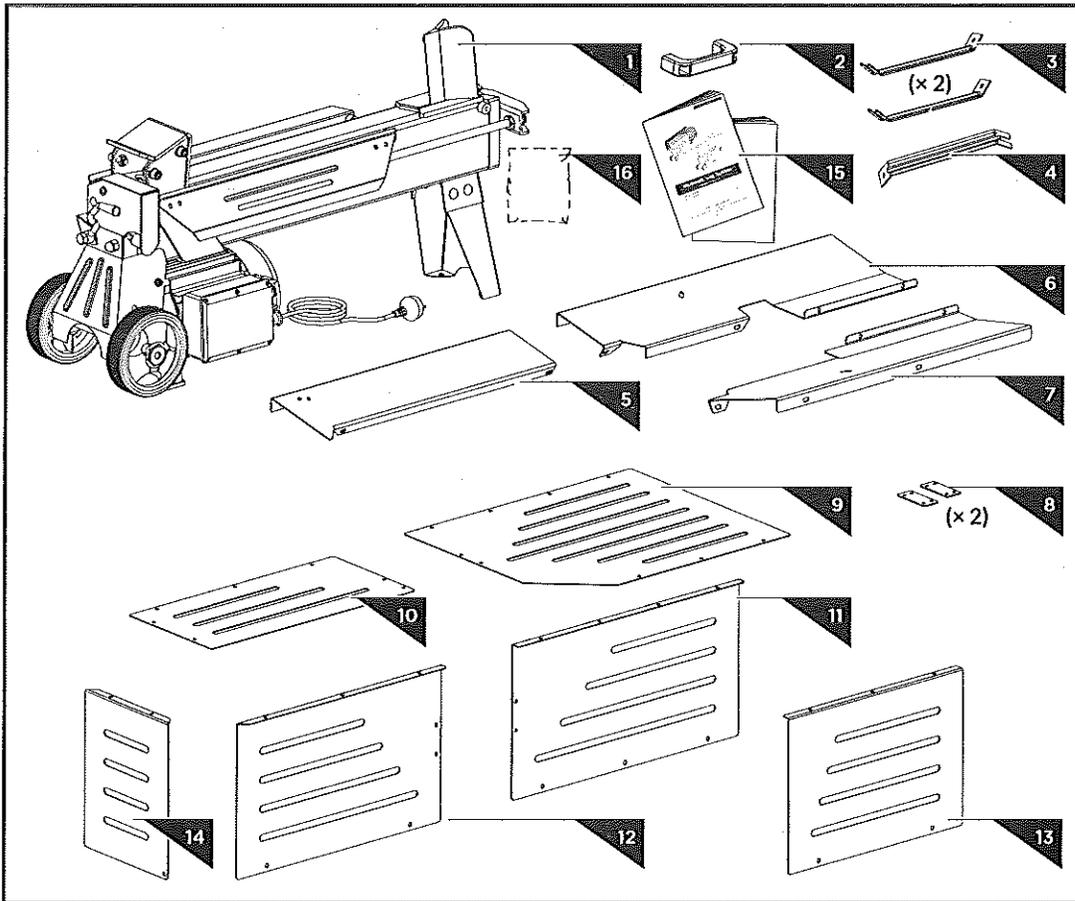
## ELECTRICAL REQUIREMENTS

**For model LS72300EH**, connect the main leads to a standard 230V±10% (50Hz±1%) electrical supply which has protection devices of under-voltage, over-voltage, over-current as well as a residual current device (RCD) which maximum residual current rated at 0.03A.

**For model LS52200EH**, connect the main leads to a standard 220-240V±10% (50Hz±1%) electrical supply which has protection devices of under-voltage, over-voltage, over-current as well as a residual current device (RCD) which maximum residual current rated at 0.03A.

**For all models**, if machine installs BSI approved plug or SEV approved plug, the degree of protection of the plug and socket combination should be IP44 at least.

# CONTENTS SUPPLIED



1. Log Splitter Frame
2. Transport Handle
3. Support Strut 1 (2 pair)
4. Support Strut 2
5. Guard Bottom Plate
6. Log Tray 1
7. Log Tray 2
8. Plate connector (2 pair)
9. Top Guard Plate 1
10. Top Guard Plate 2
11. Rear Guard Plate 1
12. Rear Guard Plate 2
13. Front Guard Plate
14. Left Guard Plate
15. Operator's Manual

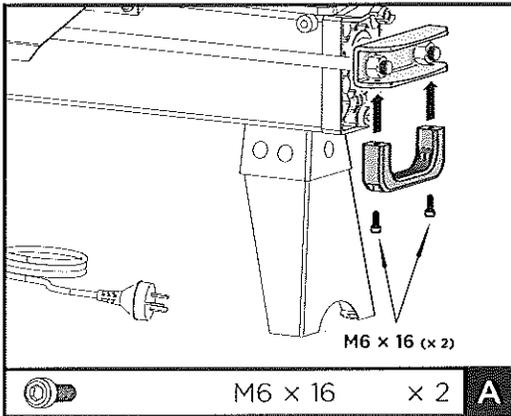
16. Hardware Bag, including

	M6 x 16	x 2	<b>A</b>
	M6 x 12	x 1	<b>B</b>
	M6 x 12	x 2	
	M6 x 12	x 1	<b>C</b>
	M6 x 12	x 1	
	M6 x 12	x 1	<b>D</b>
	M6 x 12	x 1	
	M6 x 12	x 2	<b>E</b>
	M6 x 12	x 8	<b>F</b>
	M5 x 12	x 20	<b>G</b>

# ASSEMBLY

## Lifting Handle

Mount the lifting handle to the U bracket with two M6×16 bolts.

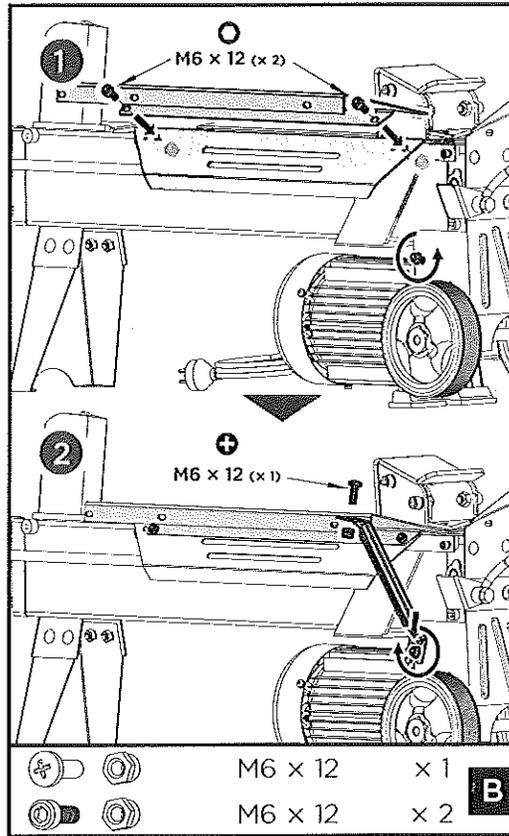


## Log Tray

1. Mount the guard bottom plate to rear guiding plate and secure with two M6×12 socket head cap screws and locknuts.

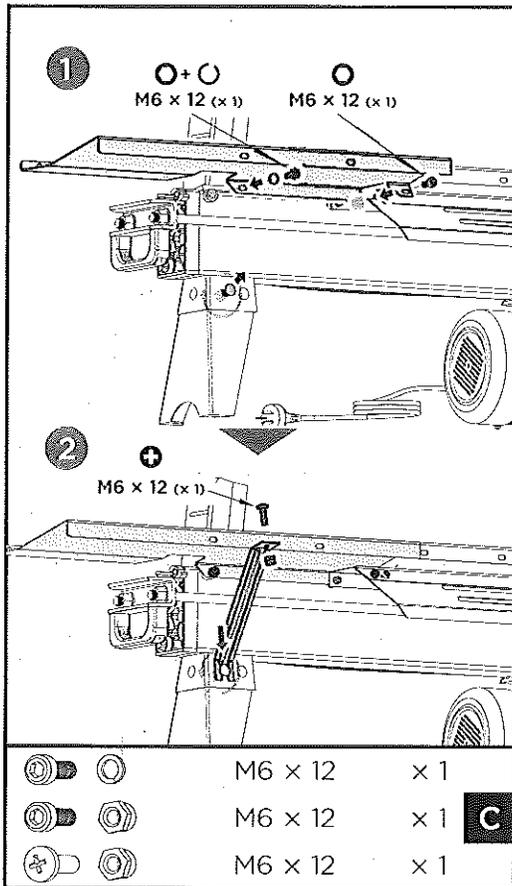
Loosen the socket head cap screw and big washer on the wheel bracket, insert the open end of support strut 2 between the big washer and wheel bracket and tighten screw.

Connect the upper end of support strut 2 to the guard bottom plate with cross recessed pan head screw M6×12 and locknut M6 and then tighten it.

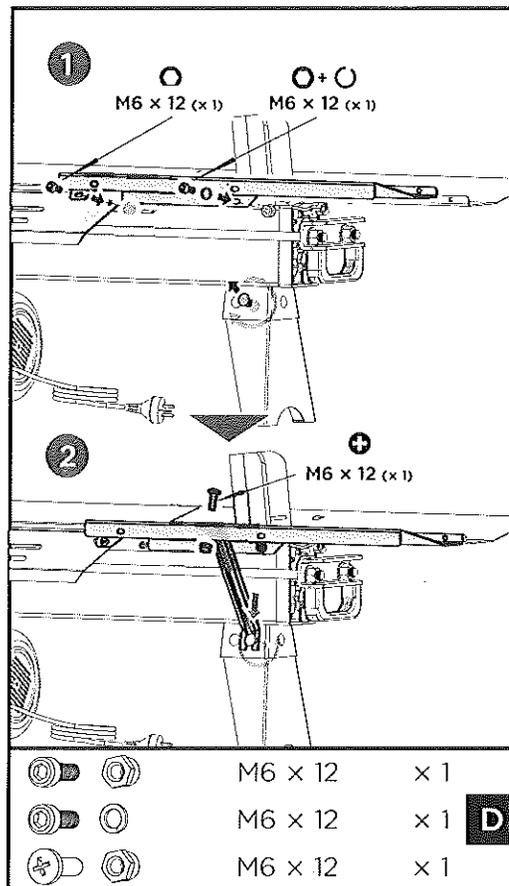


2. Align the two mounting holes of the log tray 1 to the holes on rear side of the splitter. Insert one socket head cap screw M6×12 and spring washer 6 into the mounting hole on left side and the other socket head cap screw M6×12 and locknut M6 on right side and securely tighten both.

Loosen the cup head bolt and nut on left side of the front leg, insert the open end of support strut 1 onto the bolt and then tighten the nut. Connect the upper end of support strut 1 to the log tray 1 with cross recessed pan head screw M6x12 and locknut M6 and then tighten it.



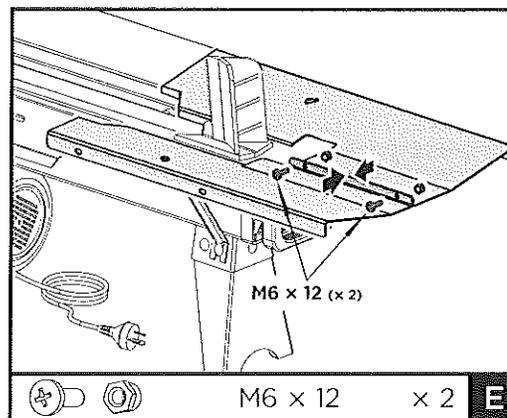
Connect the upper end of support strut 1 to the log tray 2 with cross recessed pan head screw M6x12 and locknut M6 and then tighten it.



3. Align the two mounting holes of the log tray 2 to the holes on front side of the splitter. Insert one socket head cap screw M6x12 and spring washer 6 into the mounting hole on right side and the other socket head cap screw M6x12 and locknut M6 on left side and securely tighten both.

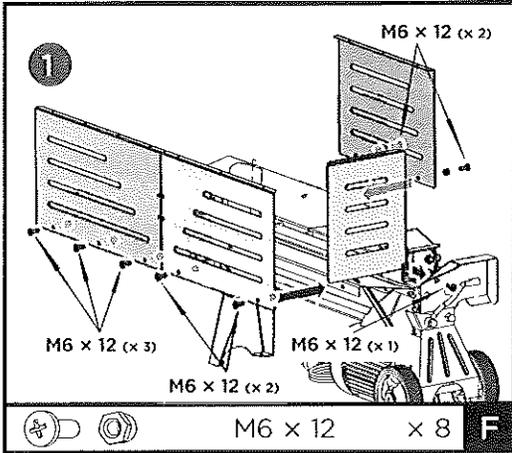
Loosen the cup head bolt and nut on right side of the front leg, insert the open end of support strut 1 onto the bolt and then tighten the nut.

4. Connect log tray 1 and log tray 2 with two M6x12 screws and locknuts.

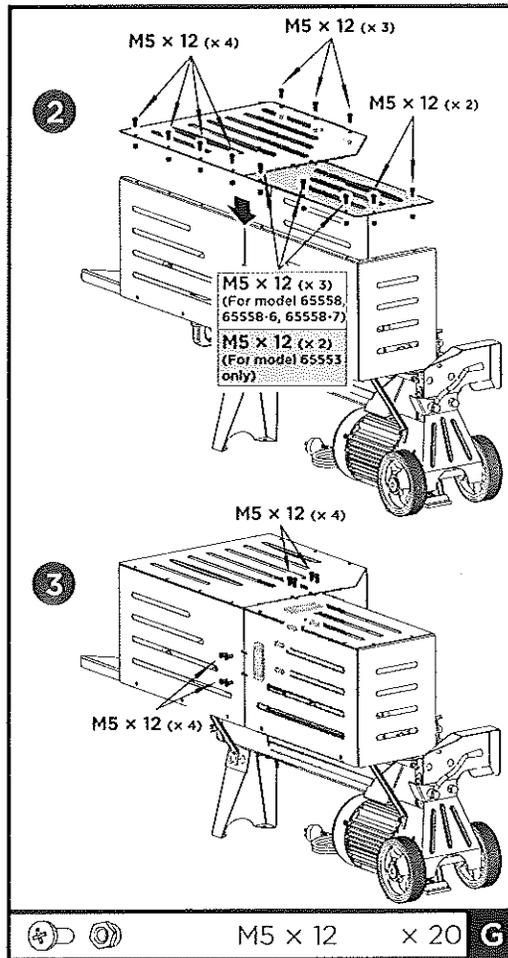


## Steel Guard Assembly

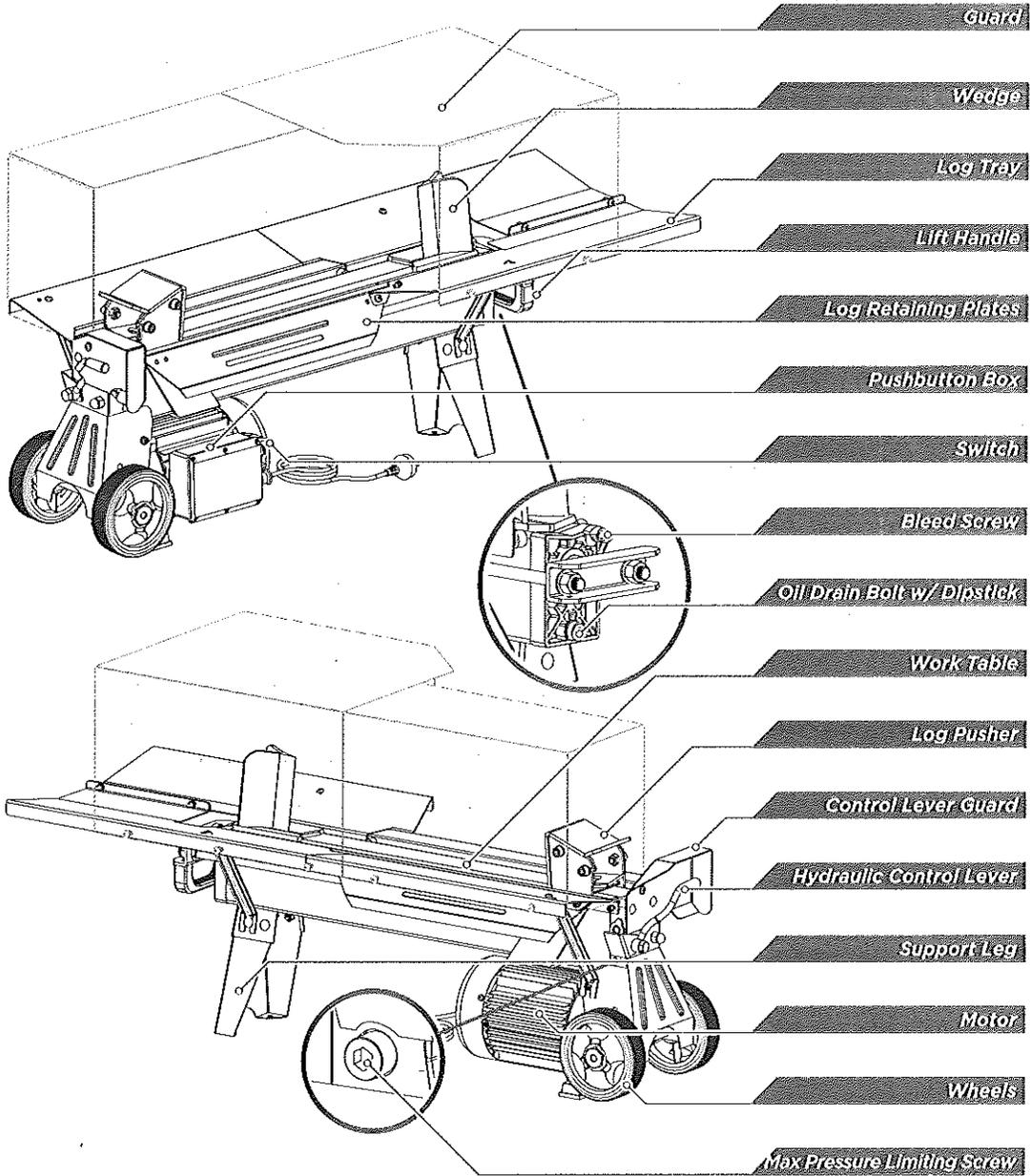
1. Attach the front guard plate, left guard plate and two rear guard plates to the log tray and bottom plate with M6x12 bolts and nuts.



2. Mount the two top guard plates to the vertical plates with M5x12 bolts and nuts.
3. Connect two top guard plates / rear guard plates with the plate connectors and M5x12 bolts and nuts.

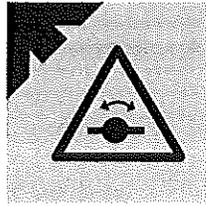


# KNOW YOUR MACHINE



## Bleed Screw

Before operating the log splitter, the Bleed Screw should be loosened by some rotations until air can go in and out of the oil tank smoothly.



Air flow thru the Bleed Screw hole should be detectable whilst the log splitter is under operation.

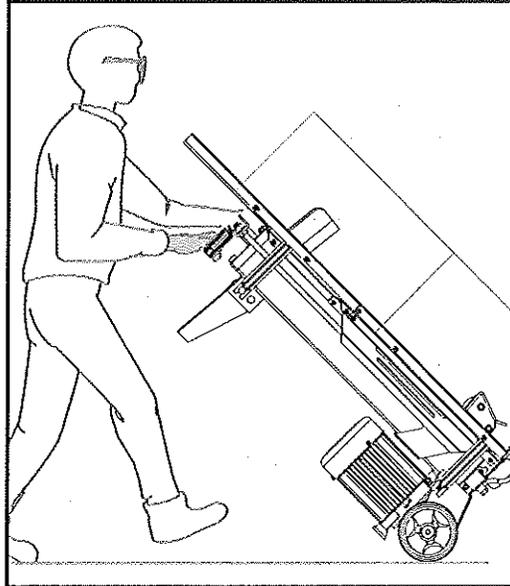
Before moving the log splitter, make sure the Bleed Screw is tightened to avoid oil leaking from this point.



**Failure to loosen the bleed screw will keep the sealed air in hydraulic system being compressed after being decompressed. Such continuous air compression and decompression will blow out the seals of the hydraulic system and cause permant damage to the log splitter.**

## TRANSPORT

The log splitter is equipped with 2 wheels for minor moving. To move the log splitter to the work site.



**Do not transport the log splitter with wood loaded!**

## Max Pressure Limiting Screw

Max pressure was set before the log splitter ex work and the max pressure limiting screw is sealed with glue to ensure the log splitter works under pressure no more than 4(5/6/7) tons. The setting was done by qualified mechanic with professional instruments.

Unauthorized resetting will cause the hydraulic pump fail to output enough splitting pressure or **RESULT IN SERIOUS INJURY AS WELL AS DAMAGE TO THE MACHINE**.



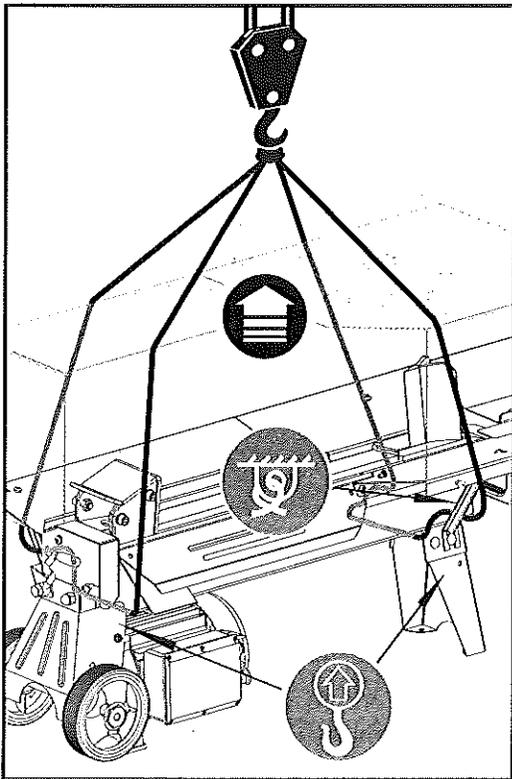
**DO NOT ADJUST THE MAX PRESSURE LIMITING SCREW !**

## DELIVERING LOG SPLITTER TO WORK SITE

The log splitter is equipped with 2 wheels for minor moving. To move the log splitter to the work site. Grip the handle to tilt the log splitter slightly after making sure the oil tank cover is tightened.

### For a Long Distance Transport

Fasten the log splitter at the positions with bundling marks after lifting it into the truck, to avoid free movement of the log splitter.



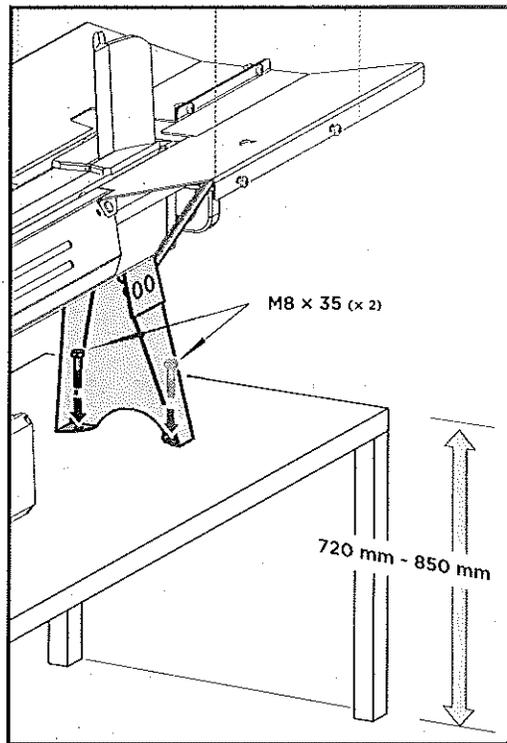
**If using a crane, lay hoist sling at the lifting point. Never try to lift the log splitter at the Handle.**

## SPLITTER OPERATION

### Application Conditions

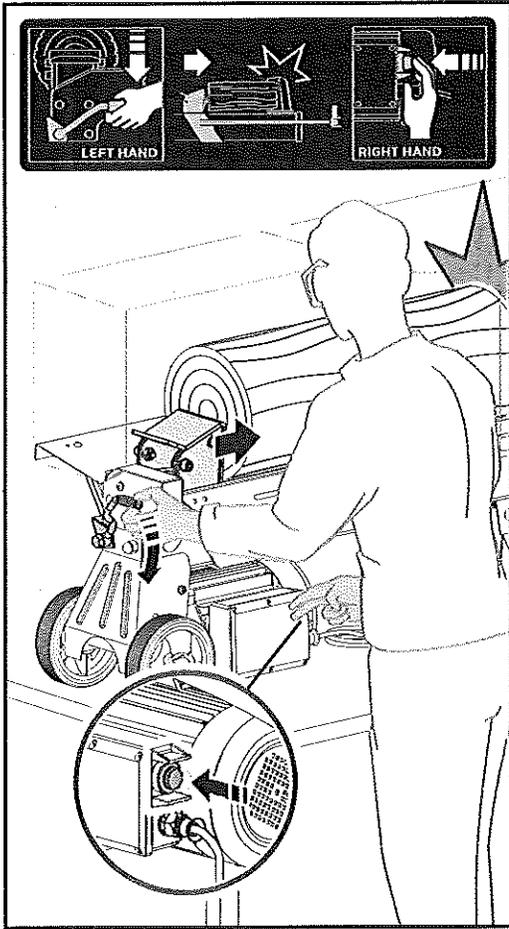
This log splitter is a home use model. It is designed for operating under ambient temperatures between +5°C and 40°C and for installation at altitudes no more than 1000m above M.S.L. The surrounding humidity should be less than 50% at 40°C. It can be stored or transported under ambient temperatures between -25°C and 55°C.

Before operation, put the log splitter on a 72-85 cm high, stable, flat, and level work bench. Fix the support leg using two bolts M8 × 35(A) on the hard groundwork.



### Splitting - Two Hands Operation

This log splitter is equipped with "ZHB" control system that requires to be operated by both hands of the user-Left hand controls the hydraulic control lever while right hand controls the pushbutton switch. The log splitter will freeze upon absence of either hand. Only after both hands release the controls, the log pusher starts to return backward to the starting position.

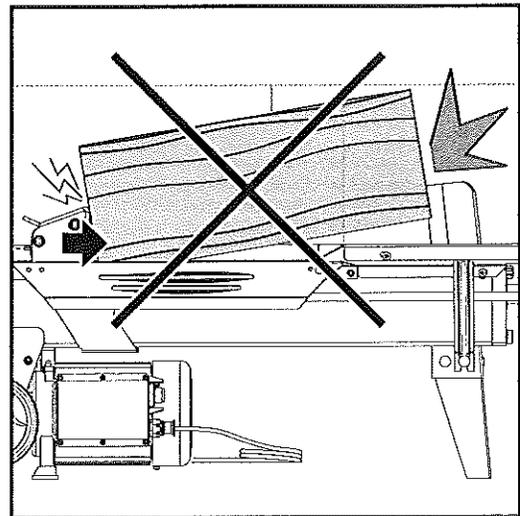
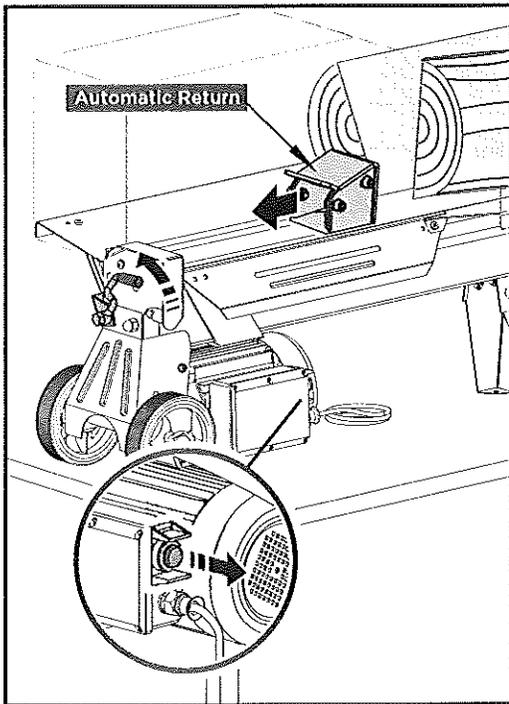


Trigger type lock-out device is adopted to avoid accidental Hydraulic Control Lever pushdown. To operate the Hydraulic Control Lever, draw the Trigger backward with the index finger before pushing the Hydraulic Control Lever forward.

**Never force the log splitter for more than 5 seconds by keeping pressure on it to split excessively hard wood.**

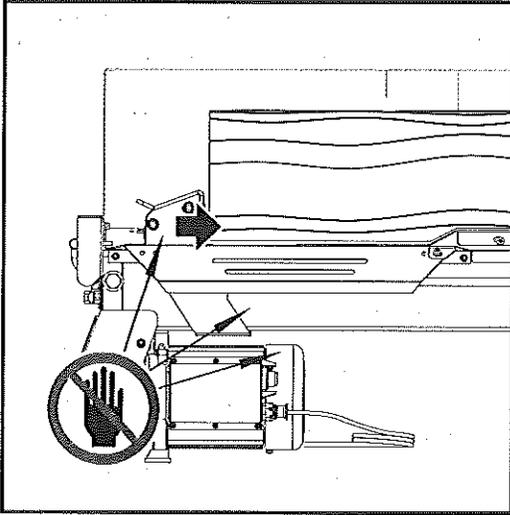
After this time interval, the oil under pressure will be overheated and the machine could be damaged. For such extremely hard log, rotate it by 90° to see whether it can be split in a different direction. In any case, if you are not able to split the log, this means that its hardness exceeds the capacity of the machine and thus that log should be discarded to protect the log splitter.

Always set logs firmly on the log retaining plates and work table. Make sure logs will not twist, rock or slip while being split. Do not force the blade by splitting the log on the upper part. This will break the blade or damage the machine.



Break log in the direction of its growing grain. Do not place log across the log splitter for splitting. It may be dangerous and may seriously damage the machine.

Do not attempt to split 2 pieces of log at the same time. One of them may fly up and hit you.



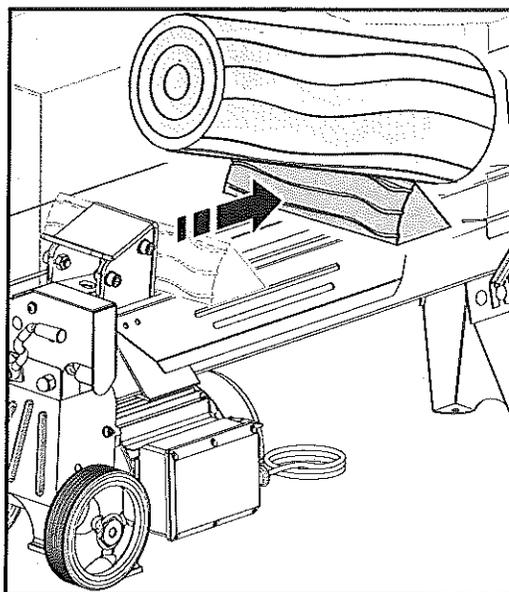
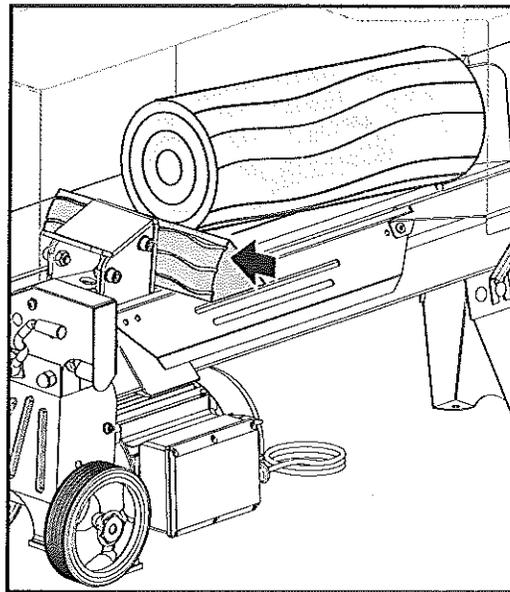
**DANGER!**



Keep your hands away from splitting area, live area and heating area while working!

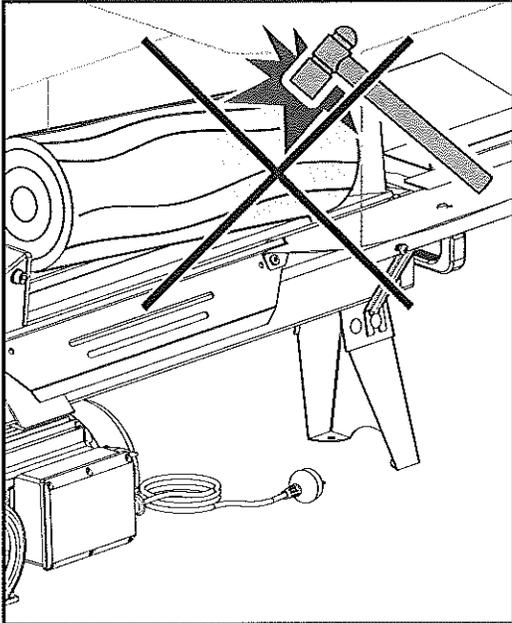
## FREEING A JAMMED LOG

- Release both controls.
- After the log pusher moves back and completely stops at its starting position, insert a wedge wood under the jammed log.
- Start the log splitter to push the wedge wood to go completely under the jammed one.
- Repeat above procedure with sharper slope wedge woods until the log is completely freed.





**Do not try to knock the jammed log off. Knocking about will damage the machine or may launch the log and cause an accident.**



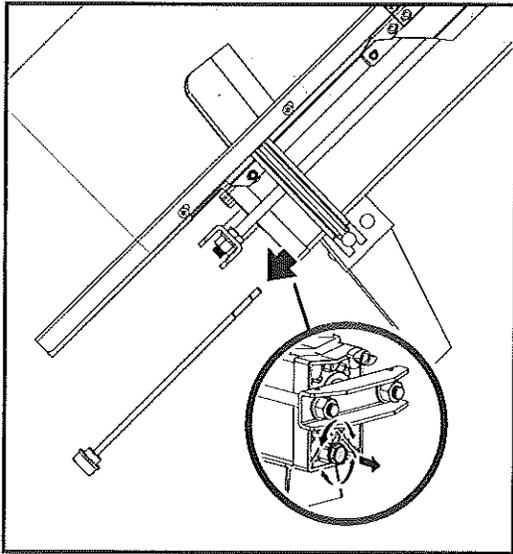
## REPLACING HYDRAULIC OIL

Replace the Hydraulic oil in the log splitter after every 150 hours of use. Take the following steps to replace it.

- Make sure all moving parts stop and the log splitter is unplugged.
- Unscrew Oil Drain Bolt with Dipstick to remove it.
- Turn the log splitter on the Support Leg side over a 4 liters capacity container to drain the hydraulic oil off.
- Turn the log splitter on the motor side.
- Refill fresh hydraulic oil at the volume as per the hydraulic oil capacity of a particular model indicated in above specifications table.
- Clean the surface of Dipstick on the Oil Drain Bolt and put it back into the oil tank while keeping the log splitter vertical.
- Make sure the level of the refilled oil is just between 2 grooves around the Dipstick.
- Clean the Oil Drain Bolt before threading them back. Make sure they are tightened to avoid leakage before placing the log splitter horizontally.

Following hydraulic oils or equivalent are recommend for the log splitter's hydraulic transmission system:

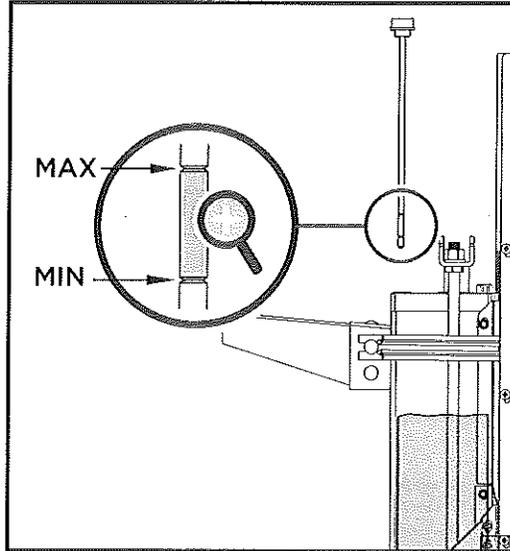
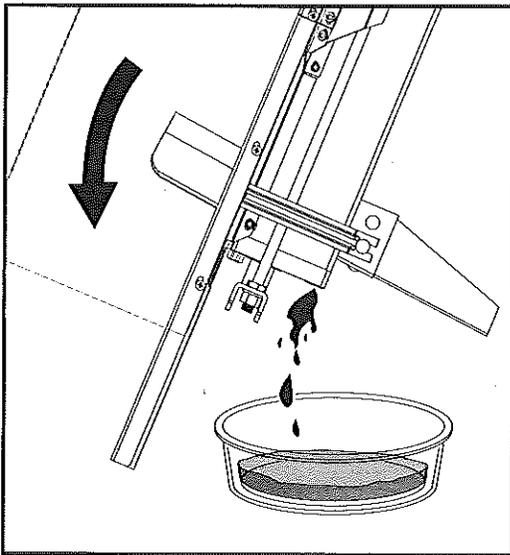
SHELL Tellus 22  
MOBIL DTE 11  
ARAL Vitam GF 22  
BP Energol HLP-HM 22



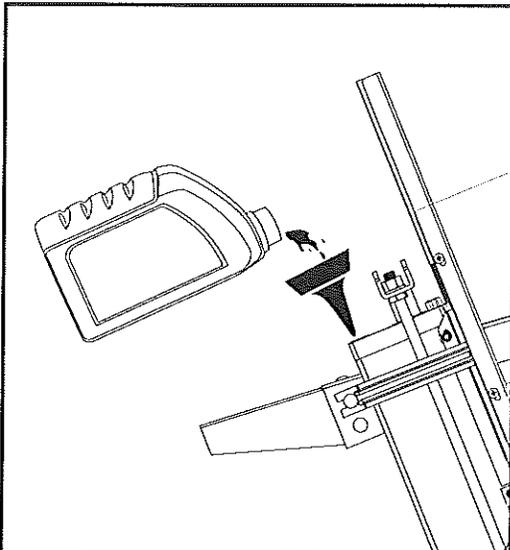
### Oil Level

Use a drain pan to aid in the removal of all used oil and particles.

Remove oil drain plug to drain oil from the hydraulic transmission system. Examine oil for metal chips as a precaution to future problems.



**Read dipstick to determine the maximum and minimum of the oil level. Low oil can damage the oil pump. Overfilling can result in excessive temperature in the hydraulic transmission system.**



### SHARPENING WEDGE

This log splitter is equipped with a reinforced splitting wedge, which has a blade which is specially treated. After long periods of operation, and when required; sharpen the wedge using a fine-toothed file removing any burrs or flat spots on the edge.

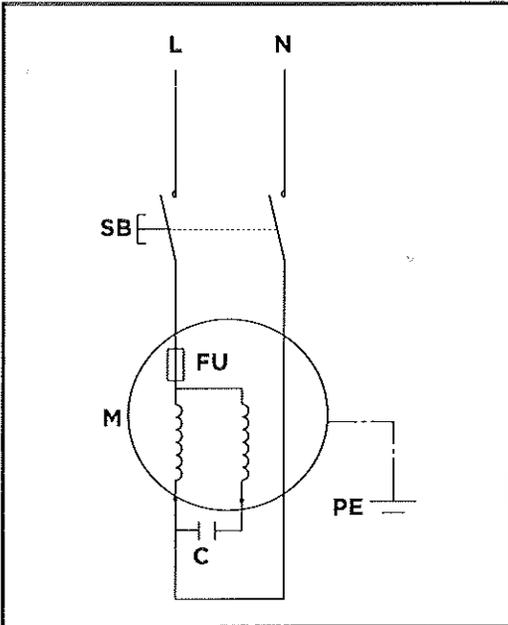
## TROUBLE SHOOTING

PROBLEM	PROBABLE CAUSE	REMEDY SUGGESTED
Fails to split logs	Log is improperly positioned	Refer to "Log Splitter Operation" section for perfect log loading.
	The sizes or hardness of the log exceeds the capacity of the machine	Reduce the log sizes before splitting it on the log splitter.
	Wedge cutting edge is blunt	Refer to "Sharpening Wedge" section to sharpen the cutting edge.
	Oil leaks	Locate leak(s) and contact the dealer.
	Unauthorized adjustment was made on Max. Pressure Limiting Screw. Lower max pressure rating was set.	Contact the dealer.
The log pusher moves jerkily, taking unfamiliar noise or vibrating a lot	Lack of hydraulic oil and excessive air in the hydraulic system.	Check oil level for possible oil refilling. Contact the dealer.
Oil leaks around cylinder ram or from other points	Air sealed in hydraulic system while operating.	Loosen Bleed Screw by 3 - 4 rotations before operating the log splitter.
	Bleed Screw is not tightened before moving the log splitter.	Tighten the Bleed Screw up before moving the log splitter.
	Oil Drain Bolt with Dipstick is not tight.	Tighten the Oil Drain Bolt with Dipstick.
	Hydraulic Control Valve Assembly and / or seal(s) worn	Contact the dealer

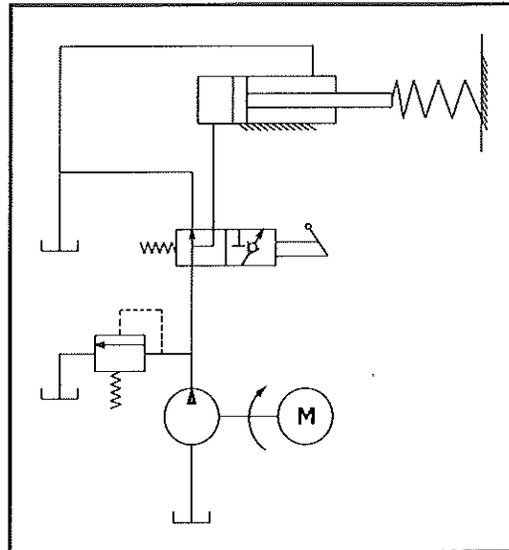


**ATTENTION: ALL REPAIR WORK MUST BE DONE BY A SPECIALIST FOR THIS PRODUCT.**

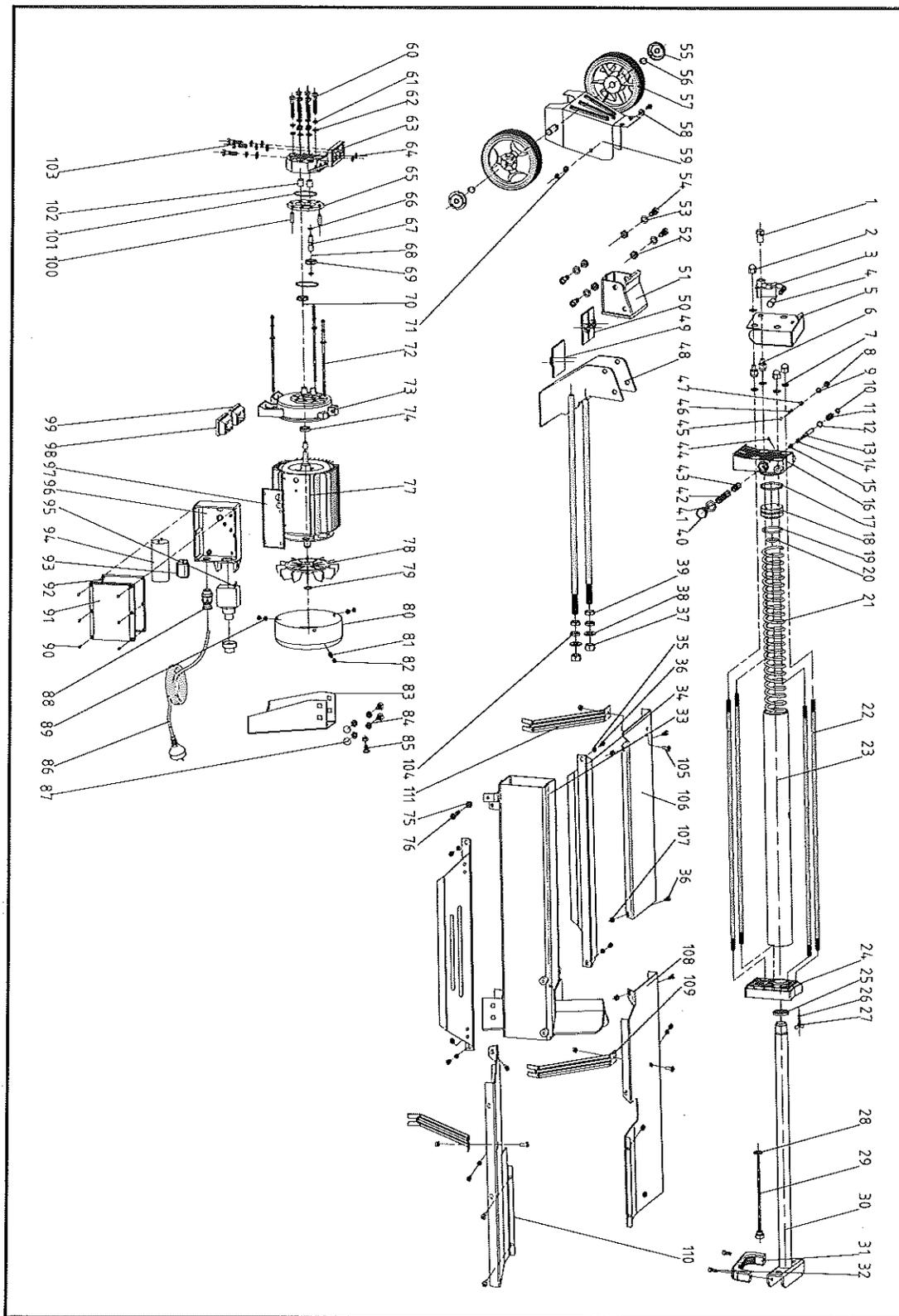
# WIRING DIAGRAM



# HYDRAULIC SYSTEM DIAGRAM



# PARTS SCHEMATIC



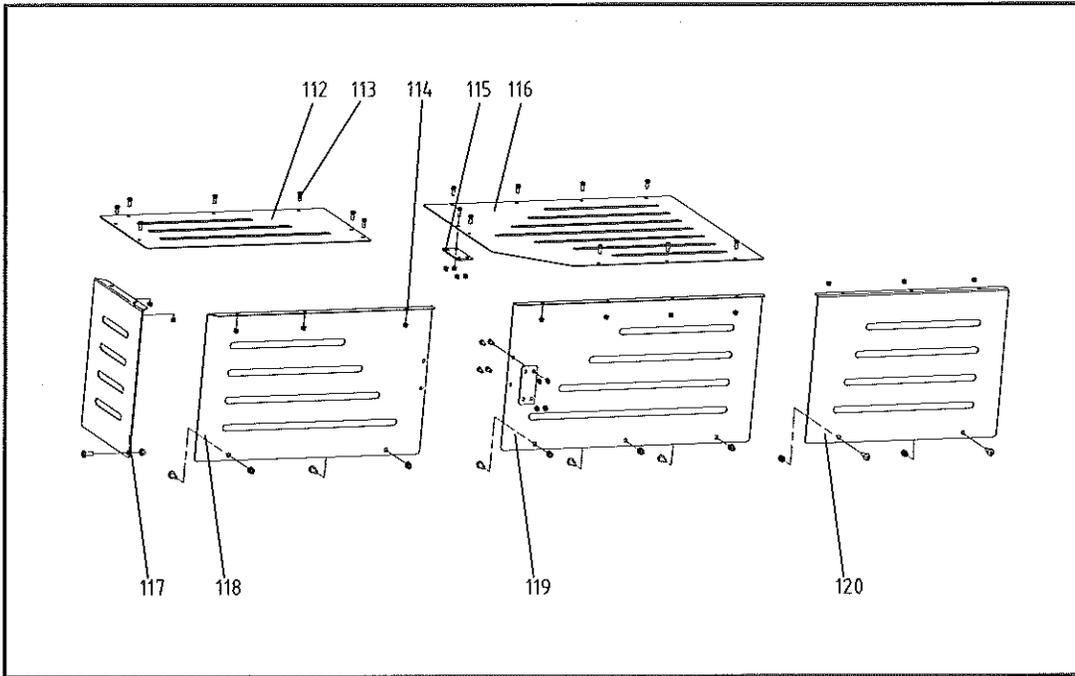
## Parts List

No.	Description	Q'ty
1	Lever Mount Nut	1
2	Cap Nut M10	3
3	Lever	1
4	Lever Knob	1
5	Lever Guard	1
6	Customized Nut	2
7	Copper Gasket 10	4
8	Safety Valve Bolt M8	1
9	O-ring 5.5x2	1
10	Snap Washer 6	1
11	Valve Retract Spring	1
12	O-ring 6x1.5	1
13	Valve Core Rod	1
14	Sliding Pressure Sensor Sleeve	1
15	Sliding Pressure Sensor Sleeve Spring	1
16	Alumium Cover ( Rear )	1
17	O-ring 50x2.65	1
18	Piston	1
19	Piston Ring 55	1
20	O-ring 32x3.5	1
21	Spring	1
22	Stud Bolt	4
23	Hydraulic Cylinder	1
24	Alumium Cover ( Front)	1
25	Piston Rod Seal 30	1
26	O-ring 7x1.9	1
27	Wing Bolt M5x12	1
28	Wahser Groupware 14	1
29	Dipstick	1
30	Piston Rod	1
31	Lift Handle	1
32	Screw M6x16	2
33	Frame Tube	1
34	Lead Plank	2
35	Spring Washer 6	6

No.	Description	Q'ty
36	Screw M6x12	12
37	Nut M14	2
38	Flat Wahser 14	2
39	Hexagon Thin Nut M14	2
40	Drain Plug	1
41	Wahser Groupware 16	1
42	Valve Sleeve	1
43	O-ring 10x2	5
44	Adjusting Screw M5x8	1
45	Steel Ball 6	1
46	Pressure Limited Valve Spring	1
47	Adjusting Screw M8x8	1
48	Log Pusher Connection Weldment	1
49	Plastic Insert 1	1
50	Plastic Insert 2	1
51	Log Pusher	1
52	Nut M10	4
53	Flat Wahser 10	5
54	Screw M10x25	4
55	Wheel Cap	2
56	Washer 14	2
57	Wheel	2
58	Big Flat Washer 6	1
59	Wheel bracket Weldment	1
60	Bolt M8x55	6
61	Spring Washer 8	9
62	Washer 8	9
63	Gear Pump Cover	1
64	O-ring 10.6x2.65	2
65	Gear Housing Plate	1
66	Circlip 10	2
67	Gear Shaft	1
68	Steel Ball 2.5	1
69	Pump Gear	2
70	Pin 2.5x4	1

No.	Description	Q'ty
71	Washer 6	1
72	Bolt M5x185	3
73	Motor Cover	1
74	Seal FB11x26x7	1
75	Nut M8	1
76	Screw M8x35	1
77	Motor	1
78	Motor Fan	1
79	Shaft Circlip A17	1
80	Shroud	1
81	Spring Washer 5	6
82	Screw M5x10	3
83	Leg	1
84	Nut M8	5
85	Bolt M8x12	3
86	Cable & Plug	1
87	Bolt M8x16	3
88	Cable Gland Strain Relief Connector	1
89	Washer 5	6
90	Screw M4x10	11

No.	Description	Q'ty
91	Switch Box Cover	1
92	Airproof Underlay	1
93	Connection Terminal	1
94	Capacitor	1
95	Switch	1
96	Switch Box	1
97	Waterproof Underlay	1
98	Motor Support Left Shoe	1
99	Motor Support Right Shoe	1
100	Pin 8x24	2
101	O-ring 46.2x1.8	2
102	Sliding Sleeve	4
103	Bolt M8x30	3
104	Spring Washer 14	2
105	Screw M6x12	13
106	Guard Bottom Plate	1
107	Locknut M6	17
108	Log Tray 1	1
109	Support Strut 1	2
110	Log Tray 2	1
111	Support Strut 2	1



### Steel Guard Parts List

No.	Description	Q'ty
112	Top Guard Plate 2	1
113	Screw M5x12	20
114	Locknut M5	20
115	Plate Connector	2
116	Top Guard Plate 1	1

No.	Description	Q'ty
117	Left Guard Plate	1
118	Rear Guard Plate 2	1
119	Rear Guard Plate 1	1
120	Front Guard Plate	1

# EC DECLARATION OF CONFORMITY

Declaration of conformity

Pursuant to the regulations of the following EC Directives:

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

**E P Barrus Ltd** hereby declares that the product:

**Machine type:** 5T / 7T Log Splitter

**Machine model:** LS52200EH / LS72300EH

**Mass in kg:** 55Kg / 60Kg

**Rated Power:** 2200W / 2300W S3 25%

**Cutting Capacity:** 520mm

Conforms to the main safety requirements of the EC Directives listed above.

This conformity is based on the following standards and normative documents:

- EN 60204-1:2006+A1:2009+AC:2010
- EN 609-1:2017
- EN 55014-1:2017
- EN 55014-2:2015
- EN 61000-3-2:2014
- EN 61000-3-11:2000

The responsible person, based within the EC, is identified below

Name: Mr. Phil Noble

Title: Technical Manager

Company: E P Barrus Ltd

Address: Launton Road, Bicester, Oxon, OX26 4UR

Signature:



Date: 2018-10-10

