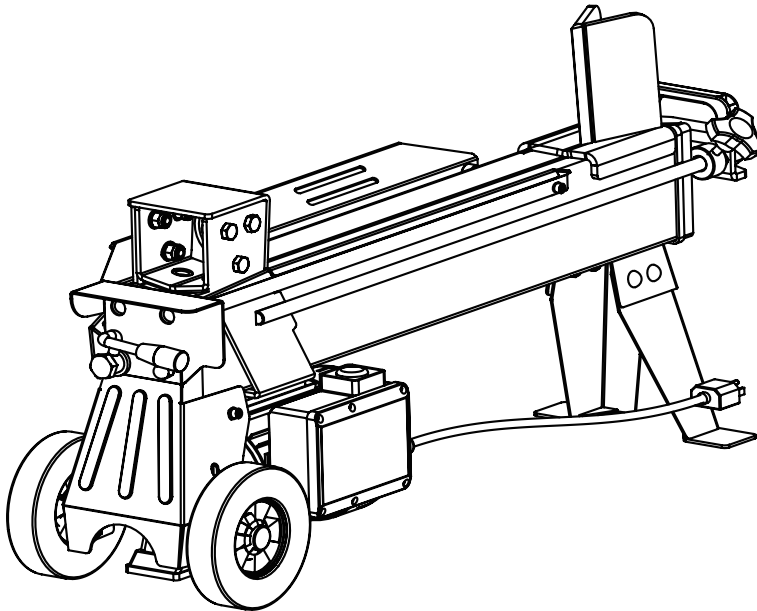


# ***BILT HARD***

Using tips:  
Video on Youtube



## **FOR YOUR SAFETY**

**READ AND UNDERSTAND THE ENTIRE MANUAL  
BEFORE OPERATING MACHINE**

SKU: TLA-0104

Both model number and serial number may be found on the main label.  
You should record both of them in a safe place for future use.

**Save This Manual for Future Reference**

Customer Support: (888) 680-2849, [inquiry@bilthardusa.com](mailto:inquiry@bilthardusa.com)

**LOG SPLITTER – Owner's Manual**

# SAFETY WARNINGS & CAUTIONS

## SAFETY WARNINGS & INSTRUCTIONS

SYMBOL AFFIXED TO THE MACHINE

### • 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 60 - 75cm 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 lighted. 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.



### • 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 section 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.

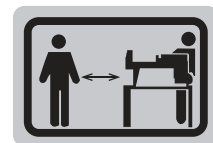
Ground the log splitter. Prevent body contact with grounded surfaces: pipes, radiators, ranges, and refrigerator enclosures.

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

Mark 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 let another people to help you with freeing 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 of 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 is 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 you 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.

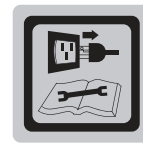
Don't use log splitter for a purpose for which it was not intended.

**• 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.

## TABLE OF CONTENTS

Safety Warnings & Cautions .....	2
Application Conditions .....	5
Specifications .....	5
Electrical Requirements .....	5
Set up and Preparation for Operation .....	6
Wiring Diagram .....	7
Plumbing Diagram .....	7
Log Splitter Operation .....	8
Freeing a Jammed Log .....	9
Replacing Hydraulic Oil .....	10
Sharpening Wedge .....	10
Trouble Shooting .....	11
Parts Schematic .....	12
Parts List .....	13



## 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 less than 50% at 40°C. It can be stored or transported under ambient temperatures between -25°C and 55°C.

## SPECIFICATIONS

		<b>TLA-0104</b>
<b>Model Number</b>		ELS106D
<b>Motor</b>		120V-60Hz 15A
<b>Log Capacity</b>	<b>Diameter *</b>	1.97-9.84inch
	<b>Length</b>	20.47inch
<b>Splitting Force</b>		6.5t
<b>Hydraulic Pressure</b>		24MPa
<b>Hydraulic Oil</b>		3.4L
<b>Overall Size</b>	<b>Length</b>	36.59inch
	<b>Width</b>	9.84inch
	<b>Height</b>	18.24inch
<b>Weight</b>		45.5kg

\* 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 even if its diameter exceeds the max. Figures indicated above.

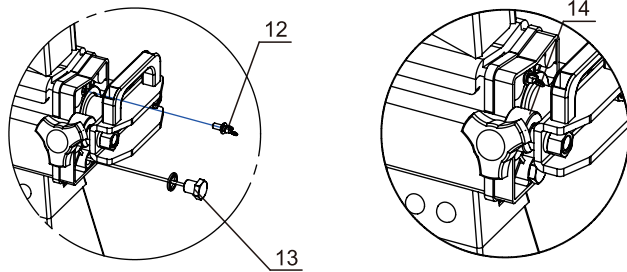
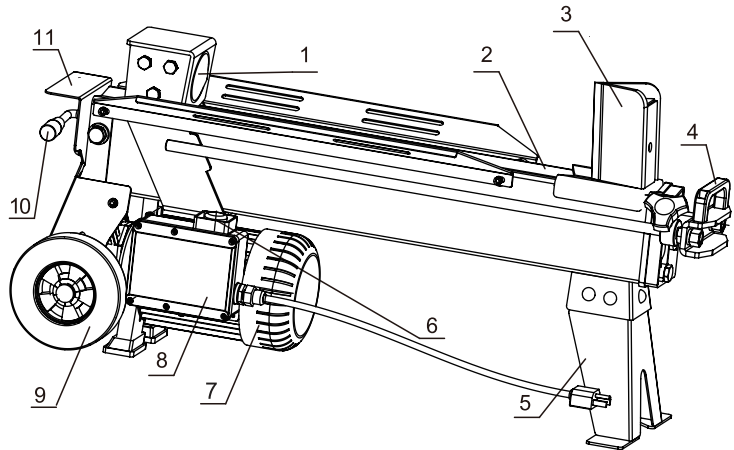
## ELECTRICAL REQUIREMENTS

Connect the main leads to a standard 120V±10% (60Hz±1Hz) 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.

# SET UP AND PREPARATION FOR OPERATION

1. Bolt the Support Leg to the Log Splitter, lift the log splitter by the handles at both ends and place it on a 60 – 75cm high, stable, flat and level work surface.
2. Familiarize yourself with the controls and features of this log splitter in the illustrations.

1. Log Pusher
2. Work Table
3. Wedge
4. Lift Handle
5. Support Leg
6. Switch
7. Motor
8. Pushbutton Box
9. Wheels for Minor Moving ONLY.
10. Hydraulic Control Lever
11. Control Lever Guard
12. Bleed Screw
13. Oil Drain Bolt w/ Dipstick
14. Adjusting Locker



**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 during the log splitter is under operations.**

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



***FAILED 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.***

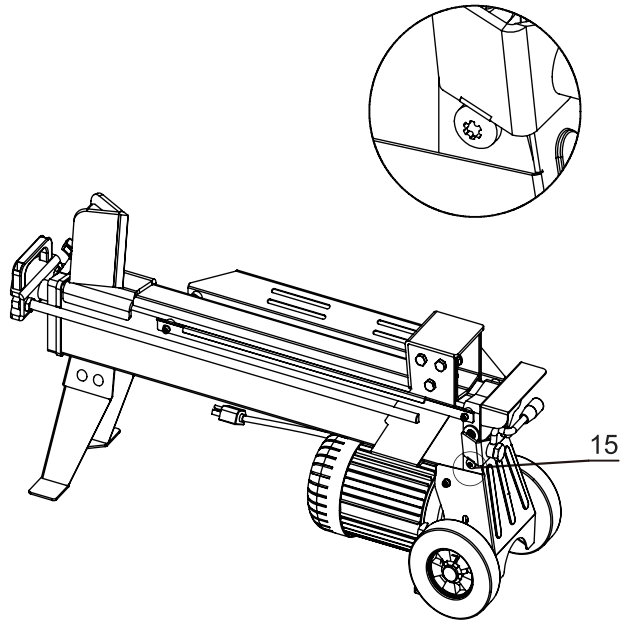
## 15. Max Pressure Limiting Screw



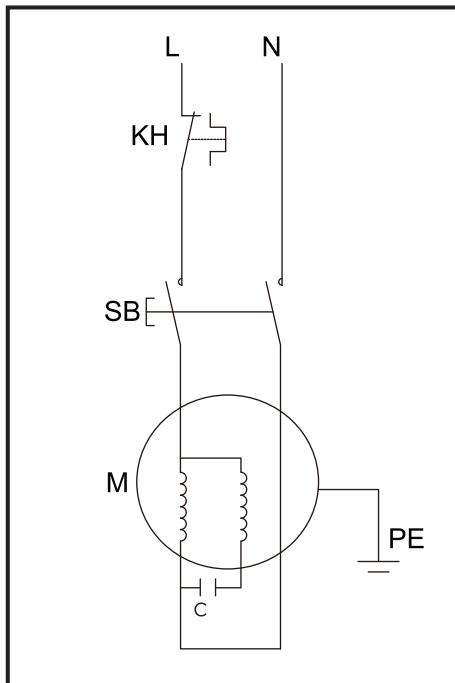
**DO NOT ADJUST THE MAX PRESSURE LIMITING SCREW!**

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 6.5 tons. The setting was done by qualified mechanic with professional instruments.

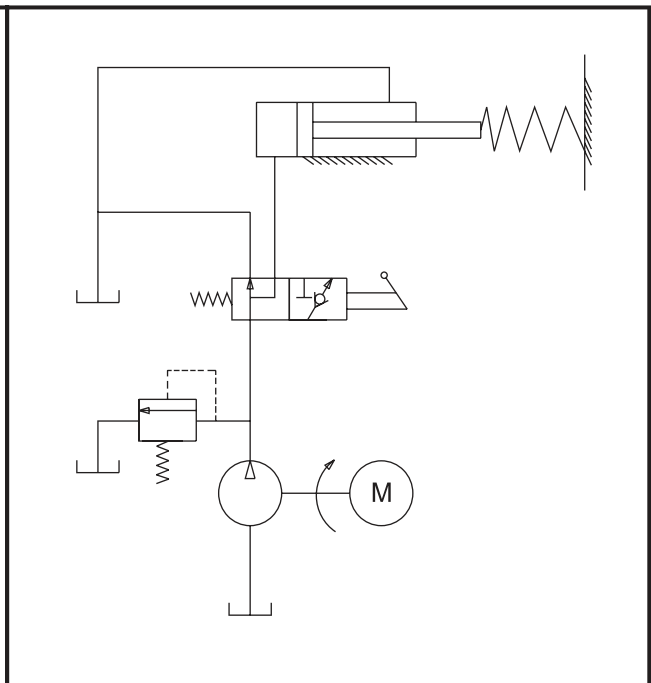
Unauthorized resetting will cause the hydraulic pump fail to output enough splitting pressure or **RESULT IN SERIOUS INJURY AS WELL AS DAMAGE TO THE MACHINE**.



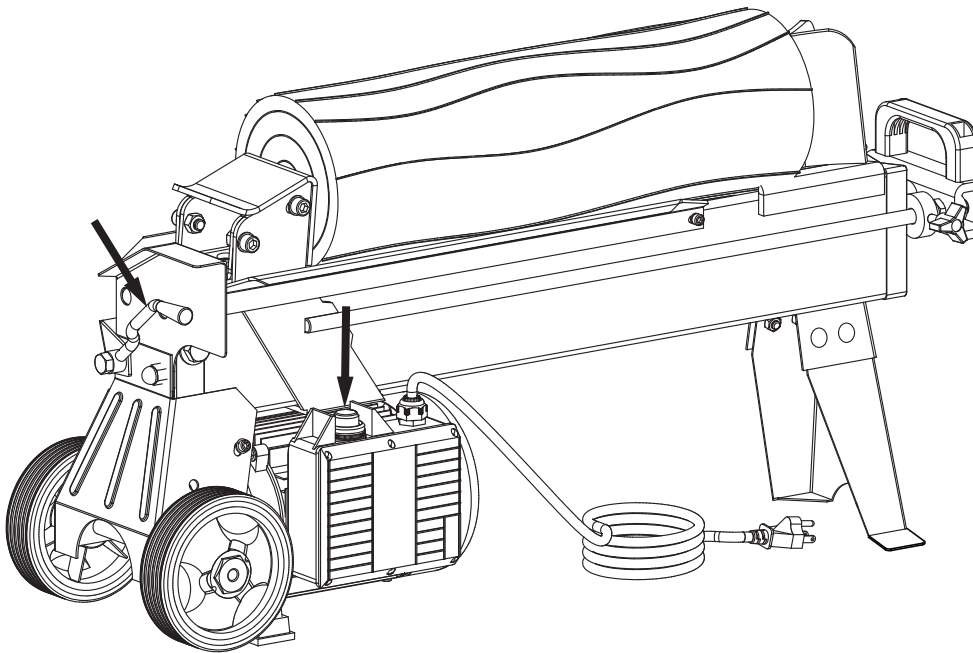
## WIRING DIAGRAM



## PLUMBING DIAGRAM



## LOG SPLITTER OPERATION



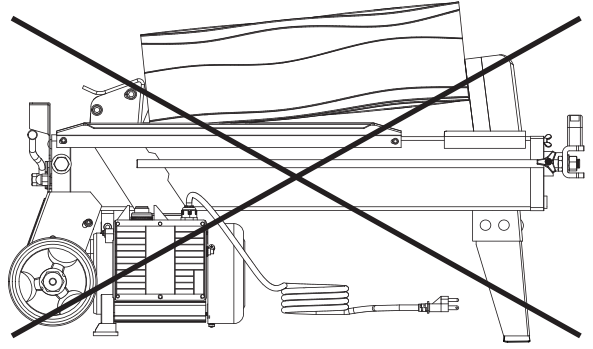
This log splitter is equipped with a “ZHB” control system that requires to be operated by both hands of the user. The left hand controls the hydraulic control lever, while the right hand controls the pushbutton switch. First push down and hold the pushbutton switch to start the motor, while continuing to hold down the pushbutton switch, press and hold the hydraulic control lever downward to engage the log pusher. The log push will freeze upon absence of either hand. Only after both hands release the controls will the log pusher start to return to the starting position.



**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.

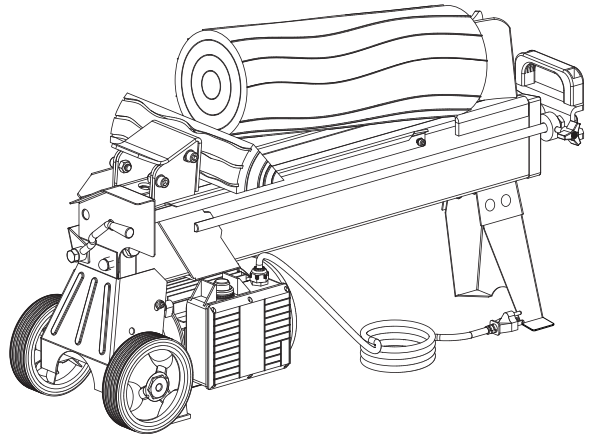


Break log in the direction of its growing grain. Do not place log across the log splitter for splitting. It may be dangerous and may seriously damage the machine.

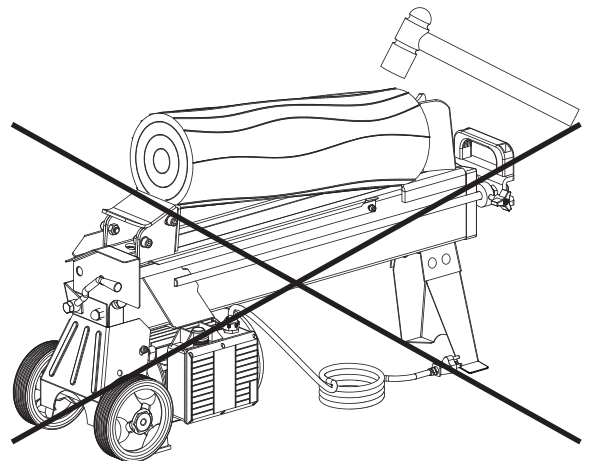
Do not attempt to split 2 pieces of logs at the same time. One of them may fly up and hit you.

## **FREING 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 accident.



## REPLACING HYDRAULIC OIL

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

- Make sure all moving parts stops 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 an 4 liters capacity container to drain the hydraulic oil off.
- Turn the log splitter on the 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 keep the log splitter vertically.
- Make sure the level of the refilled oil is just between 2 grooves around the Dipstick.
- Clean the Oil Drain Bolt before thread them back. Make sure they are tightened to avoid leakage before place the log splitter horizontally.

**Periodically check oil level to ensure it is between 2 grooves around the Dipstick. Upon Lower oil level, oil refilling is required.**

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

SHELL Tellus 22

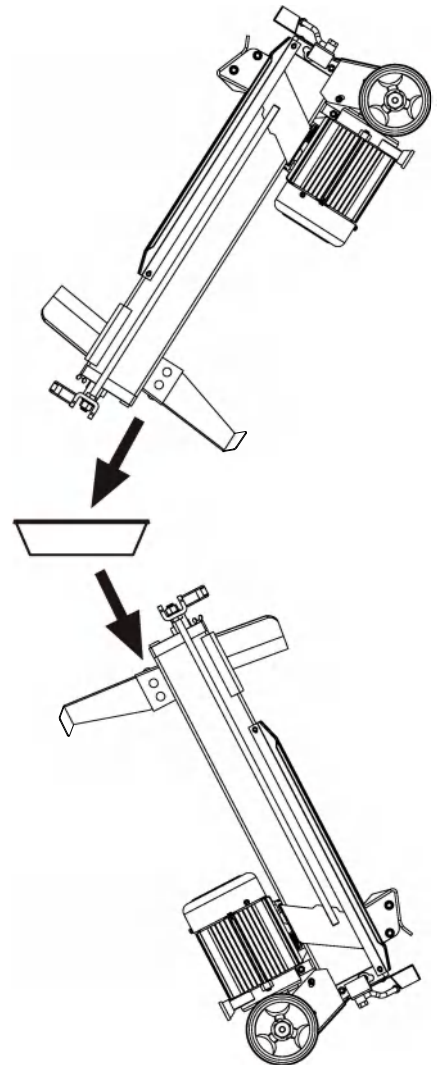
MOBIL DTE 11

ARAL Vitam GF 22

BP Energol HLP-HM 22

## SHARPENING WEDGE

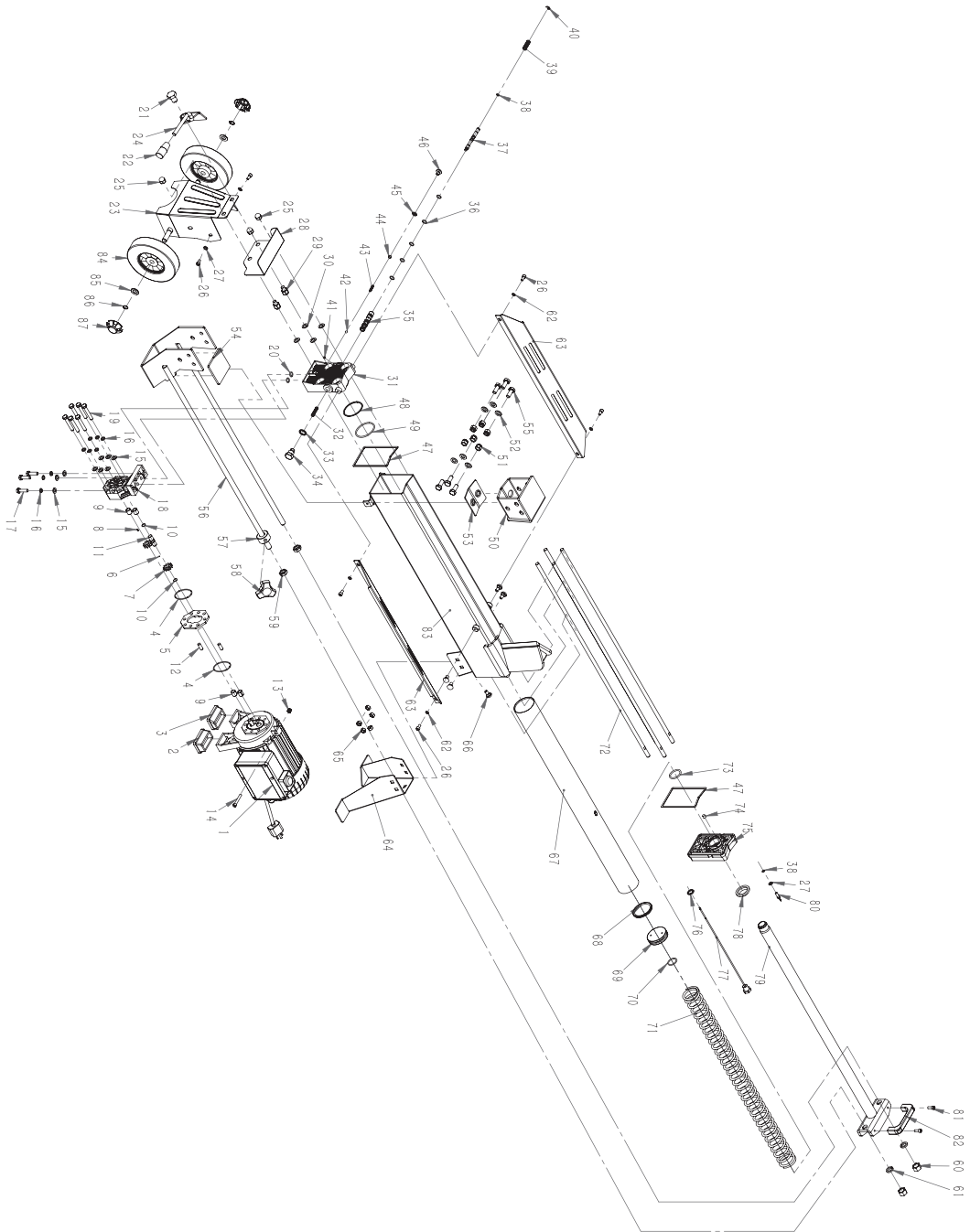
After using the log splitters for some time, sharpen the wedge of the log splitter using a fine-toothed file and smooth any burrs or crushed area along the cutting edge.



## 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

# PARTS SCHEMATIC





# PARTS LIST

no.	Description	Q'ty	no.	Description	Q'ty
1	Motor	1	45	Bonded Seal Washer M8	1
2	Right pad	1	46	Hex Head Screw M8×10	1
3	Left pad	1	47	Gasket	2
4	O Ring 46×2.4	2	48	Circlip	1
5	Gear Housing plate	1	49	O Ring54.4×3.1	1
6	Steel Ball φ2.5	1	50	Log Pusher	1
7	Gear	2	51	Lock Nut M10	6
8	Pin φ2.5×5	1	52	Flat Washer M10	6
9	Shaft Sleeve φ13*φ11*14	4	53	Upper Plastic Insert	1
10	Circlip 11	2	54	Lower Plastic Insert	1
11	Driven Gear Shaft	1	55	Flange Bolt M10×25	6
12	Alignment Pin φ8×20	2	56	Log Pusher Connection	1
13	Flange Lock Nut M6	1	57	pattern bolt	1
14	Flange Blot M6×40	1	58	limit nut	1
15	Flat Washer M8	9	59	Nut M14	2
16	Spring Washer M8	9	60	Nut M14 (thin)	2
17	Bolt M8×30	3	61	Spring Washer M14	2
18	Gear Pump Cover	1	62	Spring Washer M6	4
19	Bolt M8×50	6	63	Support Plate	2
20	O Ring 10×2.4	2	64	Front Support Leg	1
21	Handle Nut	1	65	Lock Nut <b>M8</b>	5
22	Plastic Handle	1	66	Cup Head Square Neck Bolts	5
23	Wheel Bracket	1	67	Hydraulic Cylinder	1
24	Plastic Handle	1	68	Rubber Gasket TF0600	1
25	Cap Nut M10	3	69	Piston	1
26	Screw M6×12	6	70	O Ring 23.6×2.65	1
27	Flat Washer M6	3	71	Return spring	1
28	Guide Plate	1	72	Stud Bolt	4
29	Nut	2	73	O Ring30×3.55	1
30	Copper Gasket 10	4	74	Felt Pad	1
31	Aluminum Cover(Rear)	1	75	Aluminum Cover(Front)	1
32	Valve Spring	1	76	Bonded Seal Washer M14	1
33	Bonded Seal Washer M16	1	77	Dipstick	1
34	Nut Plug	1	78	Dust Ring RJ30×42×5/10	1
35	Valve Sleeve	1	79	Piston Rod	1
36	O Ring 10.6×1.8	5	80	Nut M14	1
37	Valve spool	1	81	Screw M6×16	2
38	O Ring 5.6×1.8	2	82	Lift Handle	1
39	Valve Spring	1	83	Frame Tube	1
40	Snap Ring M6	1	84	Wheel	2
41	Set Screw M4×6	1	85	Flat Washer M12	2
42	Steel ball φ6	1	86	Snap Ring 12	2
43	Adjust spring	1	87	Wheel Cover	2
44	Set Screw M8×8	1			

## PLEASE READ THE FOLLOWING CAREFULLY

---

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS DOCUMENT AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

### Limited 90 Day Warranty

Our company makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.