# **Owner's Manual & Safety Instructions**

**Save This Manual** Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.



When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

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### **AWARNING**

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Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

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### Specifications

Electrical Rating	120VAC / 60Hz / 12A
Motor No Load Speed	3400 RPM
Log Capacity	20.5" L x 10" Diameter
Hydraulic Fluid Capacity	3.4 Quarts (3.2 Liters)

WARNING SYMBOLS AND DEFINITIONS			
	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.		
	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.		
	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.		
	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.		
NOTICE CAUTION	Addresses practices not related to personal injury.		

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# **IMPORTANT SAFETY INFORMATION**

### **General Tool Safety Warnings**

### **AWARNING**

#### Read all safety warnings and instructions.

Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury. Save all warnings and instructions for future reference.

- 1. KEEP GUARDS IN PLACE and in working order.
- 2. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
- DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
- 4. KEEP CHILDREN AWAY. All visitors should be kept safe distance from work area.
- 5. MAKE WORKSHOP KID PROOF with padlocks, master switches, or by removing starter keys.

- 6. DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was designed.
- 7. USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.
- WEAR PROPER APPAREL. Do not wear loose clothing, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.

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- ALWAYS USE SAFETY GLASSES. Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses. DON'T OVERREACH. Keep proper footing and balance at all times.
- 10. MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- 11. DISCONNECT TOOLS before servicing; when changing accessories, such as blades, bits, cutters, and the like.
- 12. REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure switch is in off position before plugging in.

- 13. USE RECOMMENDED ACCESSORIES. Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
- 14. NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
- 15. CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function – check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
- 16. NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.

## Log Splitter Safety Warnings

For Your Own Safety Read Instruction Manual Before Operating Log Splitter.

- 1. DO NOT OPERATE WITH ANY GUARD DISABLED, DAMAGED, OR REMOVED. Keep guards in place and in good working order.
- 2. Wear ANSI-approved safety goggles under full face shield, heavy-duty work gloves and steel-toe work boots during use.
- 3. Crushing hazard. Never place hands or feet between the log and splitter wedge, or between the log and the ram during the forward or reverse stroke.
- 4. Never place hands or body near a hydraulic fluid leak or check for a leak with hands or other body parts. High-pressure fluid can be forced under the skin resulting in serious injury.
- 5. Never split a log that contains any foreign materials (nails, for example).
- 6. Do not use Splitter on logs longer than 20.5" or with a diameter greater than 10".
- Hold the rounded, bark side of logs when loading or positioning, never the ends. Never place hands or any body parts between a log and any part of the Log Splitter.
- 8. Never load or unload logs while the Ram is moving.
- 9. Do not attempt to split logs across the grain. Doing so will damage the Log Splitter and could cause pieces of log to be thrown, injuring the operator or bystanders.

- 10. Never attempt to split more than one log at a time. A piece of log can unexpectedly be thrown from the machine, causing severe personal injury.
- 11. Remove split logs away from the Log Splitter immediately. Split logs left near the Log Splitter are a tripping hazard.
- 12. The use of accessories or attachments not recommended by the manufacturer may result in a risk of injury to persons.
- 13. Set up and operate only on a flat, level, dry and solid surface with wheels chocked.
- 14. When servicing use only identical replacement parts.
- 15. Only use safety equipment that has been approved by an appropriate standards agency. Unapproved safety equipment may not provide adequate protection. Eye protection must be ANSI-approved and breathing protection must be NIOSH-approved for the specific hazards in the work area.
- 16. Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in serious personal injury. Industrial applications must follow OSHA guidelines.
- Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
- Avoid unintentional starting.
   Prepare to begin work before turning on the tool.

### Log Splitter Safety Warnings (continued)

- 19. This product is not a toy. Keep it out of reach of children.
- 20. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to heart pacemaker could cause pacemaker interference or pacemaker failure.
- 21. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.



#### **Grounding Instructions**

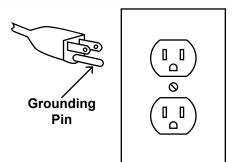


### **A**WARNING

TO PREVENT ELECTRIC SHOCK AND DEATH FROM INCORRECT GROUNDING WIRE CONNECTION READ AND FOLLOW THESE INSTRUCTIONS:

### 110-120 VAC Grounded Tools: Tools with Three Prong Plugs

- In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.
- Do not modify the plug provided if it will not fit the outlet, have the proper outlet installed by a qualified electrician.
- Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipmentgrounding conductor to a live terminal.
- 4. Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.
- 5. Repair or replace damaged or worn cord immediately.



125 VAC 3-Prong Plug and Outlet (for up to 125 VAC and up to 15 A)

- This tool is intended for use on a circuit that has an outlet that looks like the one illustrated above in 125 VAC 3-Prong Plug and Outlet. The tool has a grounding plug that looks like the plug illustrated above in 125 VAC 3-Prong Plug and Outlet.
- 7. The outlet must be properly installed and grounded in accordance with all codes and ordinances.
- 8. Do not use an adapter to connect this tool to a different outlet.

# Extension Cords

- Grounded tools require a three wire extension cord. Double Insulated tools can use either a two or three wire extension cord.
- As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. (See Table A.)
- 3. The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. (See Table A.)
- 4. When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required. (See Table A.)
- 5. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size. (See Table A.)
- If you are using an extension cord outdoors, make sure it is marked with the suffix "W-A" ("W" in Canada) to indicate it is acceptable for outdoor use.

- 7. Make sure the extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
- 8. Protect the extension cords from sharp objects, excessive heat, and damp or wet areas.

TABLE A: RECOMMENDED MINIMUM WIREGAUGE FOR EXTENSION CORDS* (120/240 VOLT)					
NAMEPLATE AMPERES	EXTENSION CORD LENGTH				
(at full load)	25´	50´	75´	100´	150´
0 – 2.0	18	18	18	18	16
2.1 – 3.4	18	18	18	16	14
3.5 – 5.0	18	18	16	14	12
5.1 – 7.0	18	16	14	12	12
7.1 – 12.0	18	14	12	10	-
12.1 – 16.0	14	12	10	-	-
16.1 – 20.0	12	10	-	-	-
* Based on limiting the line voltage drop to five volts at 150% of the rated amperes.					

### Symbology

	Double Insulated
V	Volts
2	Alternating Current
Α	Amperes
n <sub>0</sub> xxxx/min.	No Load Revolutions per Minute (RPM)
(internet internet in	Read the manual before set-up and/or use.
	WARNING marking concerning Risk of Eye Injury. Wear ANSI-approved

safety goggles with side shields.

WARNING marking concerning Risk of Facial Injury from flying debris. Wear ANSI-approved full face shield.
WARNING marking concerning Risk of Foot Injury. Wear steel-toe work boots.
WARNING marking concerning Risk of Hand Injury. Wear heavy-duty work gloves.
WARNING marking concerning Risk of Electric Shock. Properly connect power cord to appropriate outlet.
WARNING marking concerning Crushing Hazard. Keep hands and feet away from moving parts.

# A SAVE THESE INSTRUCTIONS.

#### Setup - Before Use:



Read the <u>ENTIRE</u> IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

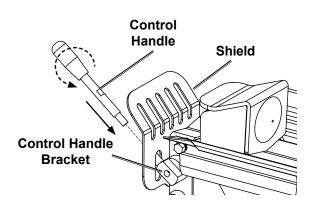
### 

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION: Release the Power Switch of the tool off and unplug the tool from its electrical outlet before performing any procedure in this section.

**Note:** For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

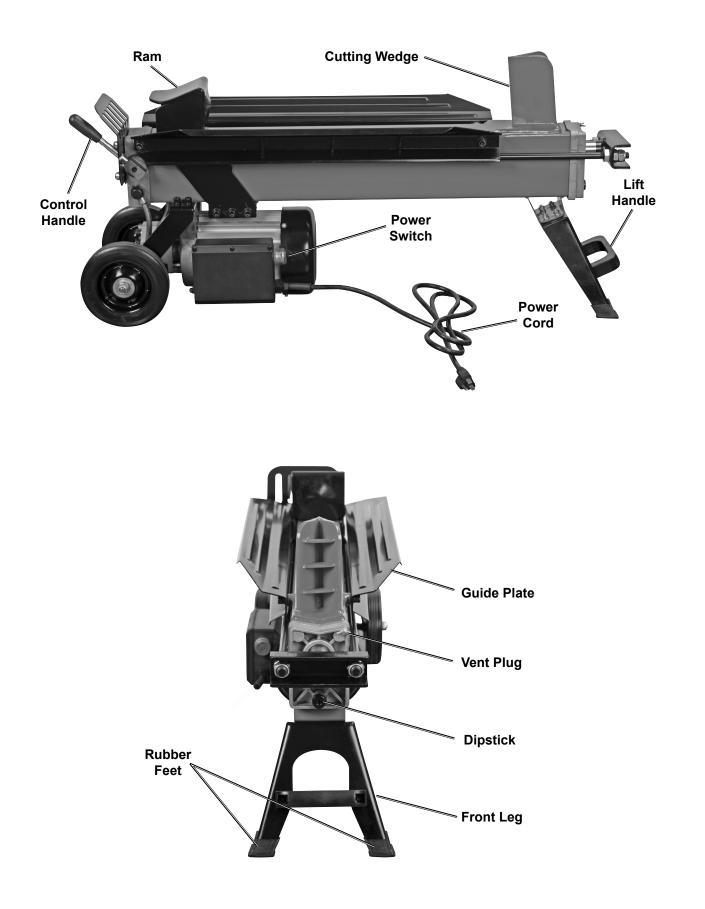
### Assembly

- 1. Insert the Control Handle through the slot in the Shield and into the shaft on the Control Handle Bracket.
- 2. Turn the Control Handle to tighten in place.



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### **Functions**



#### **Operating Instructions**



Read the <u>ENTIRE</u> IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

## **Tool Set Up**

### 

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION: Unplug the tool from its electrical outlet before performing any procedure in this section.

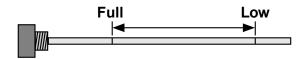
#### TO PREVENT SERIOUS INJURY:

DO NOT OPERATE WITH ANY GUARD DISABLED, DAMAGED, OR REMOVED. Keep guards in place and in good working order.

#### **Checking Hydraulic Fluid Level**

**IMPORTANT!** Before first use and before each use thereafter, check the hydraulic fluid level when fluid is cold. Operating without sufficient fluid in the reservoir can badly damage the pump.

- 1. Unplug the Power Cord.
- 2. Remove the Control Handle. Use the Lift Handle to raise the Log Splitter to a standing position on the wheel end of the unit.
- 3. Remove the Dipstick from the fluid reservoir.
- 4. Wipe off the Dipstick and thread it back into the fluid reservoir. Remove and check to make sure the fluid level is within the two marks on the Dipstick.



#### Figure A: Dipstick

- 5. If the fluid level is low, add AW32 hydraulic fluid (not included).
- If the fluid level is within the two marks, wipe the Dipstick clean and replace it in the fluid reservoir and tighten securely.
- 7. Use the Lift Handle to return the unit to its normal, horizontal operating position.
- 8. Replace Control Handle.
- 9. Plug in the Power Cord.
- 10. Remove Vent Plug.

#### Note: Two handed operation required.

- 11. Press and hold the Power Switch with one hand, then with the other hand, push down and release Control Handle several times to bleed air.
- 12. Replace Vent Plug.

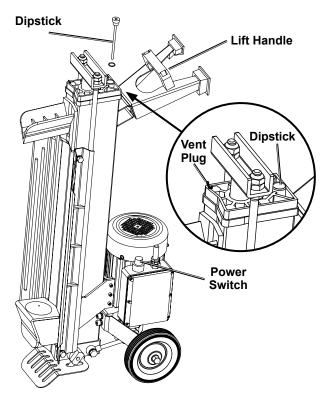


Figure B: Checking/Adding Fluid

### Workpiece and Work Area Set Up

- Designate a work area that is clean and well-lit. The work area must not allow access by children or pets to prevent distraction and injury.
- Route the power cord along a safe route to reach the work area without creating a tripping hazard or exposing the power cord to possible damage. The power cord must reach the work area with enough extra length to allow free movement while working.
- 3. There must not be objects, such as utility lines, nearby that will present a hazard while working.
- 4. Maximum log size for this Log Splitter is 20.5" long and 10" in diameter. Attempting to cut logs that exceed those measurements is dangerous and may damage the Log Splitter.
- 5. Use a chainsaw (not included) to cut logs square on each end before splitting. Log ends that are not cut square can slide out while splitting and cause a safety hazard or cause excessive force to Log Splitter components.
- Never split a log that contains any foreign materials (nails, for example). Do not use odd-shaped, uneven logs or logs that are knotted or curved.

### **General Operating Instructions**

- 1. Check the hydraulic fluid level; fill as necessary.
- 2. Place wheel chocks (not included) on each side of the wheels to keep the Log Splitter from moving.
- 3. Plug in the Power Cord.
- 4. Loosen the Vent Plug 5 complete turns.

**<u>NOTICE</u>**: To prevent risk of permanent equipment damage, loosen Vent Plug before operation. Operating the Log Splitter with the Vent Plug closed will cause pressure to build up in the hydraulic reservoir which could damage seals and affect normal operation.

5. Position log lengthwise in the direction of the grain between the Guide Plates. Place one end of log against the Cutting Wedge. The log must be stable so that it will split properly.

#### **Removing a Stuck Log**

A log that is too stringy or tough to split completely can become stuck on the Cutting Wedge if the Wedge becomes embedded in the log and the log doesn't completely split and separate. If this happens, follow the directions below.

- 1. Release the Control Handle and Power Switch to retract the Ram.
- 2. Unplug the Power Cord.
- 3. Remove the stuck log from the Cutting Wedge manually with a pry bar.

#### Note: Two handed operation required.

- 6. Press and hold the Power Switch with one hand, then with the other hand, push the Control Handle down to move the Ram forward into the log, driving it onto the Cutting Wedge, splitting the log.
- 7. Release the Control Handle and Power Switch to retract the Ram. Remove split log pieces, then load the next log.

**Note:** If difficulty is experienced splitting harder wood, do not keep pressure on the log by trying to force the Log Splitter. Release the Control Handle after five seconds to retract the ram and avoid damage to the tool.

- 8. Close the Vent Plug securely when finished or when moving the Log Splitter.
- 9. To prevent accidents, unplug Log Splitter from its electrical outlet, then clean and store the tool indoors out of children's reach.

**WARNING!** Be extremely careful when removing the log as pieces may fly off as they separate from the Wedge. Never attempt to remove a stuck log by using the hydraulic force of the Log Splitter, modifying the Log Splitter, or adding attachments to the Log Splitter. Personal injury could result from log or metal pieces flying out at high speed, or the Log Splitter could become damaged.

4. Do not attempt to re-split a stuck log once it has been removed from the Wedge. Manually split with a maul, or cut with a chainsaw.

#### Maintenance and Servicing



Procedures not specifically explained in this manual must be performed only by a qualified technician.

### AWARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION: Unplug the tool from its electrical outlet before performing any procedure in this section.

TO PREVENT SERIOUS INJURY FROM TOOL FAILURE: Do not use damaged equipment. If abnormal noise or vibration occurs, have the problem corrected before further use.

### **Cleaning, Maintenance, and Lubrication**

- 1. **BEFORE EACH USE,** inspect the general condition of the Log Splitter. Check for:
  - loose hardware
  - misalignment or binding of moving parts
  - · cracked or broken parts
  - · damaged electrical wiring
  - leaking hydraulic fluid (Do not check for leaks during operation.)
  - any other condition that may affect its safe operation.

- 2. **AFTER USE,** wipe external surfaces of the tool with clean cloth to remove any tree sap, dirt or hydraulic fluid.
- 3. Periodically as needed, use a fine-toothed file to smooth out any burrs, nicks or crushed areas and sharpen the cutting edge of the Wedge.
- 4. AWARNING! If the supply cord of this power tool is damaged, it must be replaced only by a qualified service technician.



### **Replacing Hydraulic Fluid**

Change the hydraulic fluid after every 100 hours of use.

- 1. Unplug the Power Cord.
- 2. Remove the Rubber Feet from the ends of the Front Leg.
- 3. Place the Front Leg of the tool in a five quart or greater capacity container. Raise the wheeled end of the Log Splitter using blocks and wheel chocks (not included), tilting the unit to approximately 30 degrees.

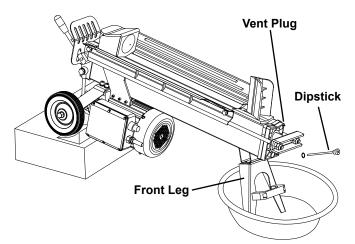


Figure C: Draining the Fluid Reservoir

4. Remove the Vent Plug, then remove the Dipstick and drain the fluid reservoir. Dispose of the old hydraulic fluid in accordance with local regulations.

- 5. After the old fluid has been drained, remove the Control Handle. Use the Lift Handle to raise the Log Splitter to a standing position on the wheel end of the unit. Refer to Figure B: Checking/Adding Fluid on page 8.
- 6. Refill the fluid reservoir with 3.4 quarts (3.2 liters) of fresh AW32 hydraulic fluid (not included).

**Note:** If AW32 hydraulic fluid is not available, Dextron II automatic transmission fluid may be used as a substitute. DO NOT mix Dextron II with AW32 hydraulic fluid—drain reservoir completely if substituting Dextron II.

- 7. Wipe off the Dipstick and thread it into the fluid reservoir. Remove and check to make sure the fluid level is within the two marks on the Dipstick. Refer to Figure A: Dipstick on page 8.
- 8. Replace the Dipstick and tighten securely.
- 9. Replace the Rubber Feet on the ends of the Front Leg.
- 10. Use the Lift Handle to return the unit to its normal, horizontal operating position.
- 11. Plug in the Power Cord.

#### Note: Two handed operation required.

- 12. Press and hold the Power Switch with one hand, then with the other hand, push down and release Control Handle several times to bleed air.
- 13. Replace the Vent Plug.
- 14. Unplug the Power Cord.

# Bleeding the Hydraulic System

Trapped air may accumulate in the fluid reservoir causing the Ram to move erratically or not at all, making it necessary to bleed the hydraulic system of excess air. To bleed the hydraulic system:

- 1. Unplug the Power Cord.
- 2. Remove the Control Handle before standing the tool upright. Use the Lift Handle to raise the Log Splitter to a standing position on the wheel end of the unit. Refer to Figure B: Checking/Adding Fluid on page 8.
- 3. Remove the Vent Plug, then remove the Dipstick.
- 4. Wipe off the Dipstick and thread it into the fluid reservoir. Remove and check the fluid level; add fluid as needed to bring fluid level within the two marks on the Dipstick. Refer to Figure A: Dipstick on page 8.

- 5. Replace the Dipstick and tighten securely.
- 6. Use the Lift Handle to return the unit to its normal, horizontal operating position.
- 7. Replace Control Handle.
- 8. Plug in the Power Cord.

#### Note: Two handed operation required.

- 9. Press and hold the Power Switch with one hand, then with the other hand, push down and release Control Handle several times to bleed air.
- 10. Replace the Vent Plug.
- 11. Unplug the Power Cord.

### Troubleshooting

Problem	Possible Causes	Likely Solutions
Tool will not start.	1. Power Cord not connected.	1. Check that Power Cord is plugged in.
	2. No power at outlet.	<ol> <li>Check power at outlet. If outlet is unpowered, turn off tool and check circuit breaker. If breaker is tripped, make sure circuit is right capacity for tool and circuit has no other loads.</li> </ol>
	<ol> <li>Tool's overload protection device has tripped to protect tool from damage.</li> </ol>	<ol> <li>Turn off and unplug tool and allow to cool for 1/2 hour, then restart. If problem is not solved, have qualified technician service tool.</li> </ol>
	<ol> <li>Internal damage or wear. (Carbon brushes or switch, for example.)</li> </ol>	4. Have qualified technician service tool.
Wood will not split, or splits	1. Log not positioned properly.	<ol> <li>Reposition log. Refer to General Operating Instructions on page 9.</li> </ol>
extremely slowly.	<ol> <li>The size or hardness of the log exceeds the machine's capacity.</li> </ol>	<ol> <li>Only split logs within the Log Capacity range show in Specifications on page 2. Capacity will be limited on hardwood logs and green lumber.</li> </ol>
	3. Cutting Wedge is dull.	<ol><li>Sharpen the Cutting Wedge. Refer to Maintenance and Servicing on page 10.</li></ol>
	4. Hydraulic fluid level is low.	4. Check fluid level and add fluid as needed.
	<ol> <li>Low maximum pressure rating adjustment was made on the Maximum Pressure Limiting Screw.</li> </ol>	<ol> <li>Have qualified technician adjust maximum pressure rating.</li> </ol>
Ram vibrates, moves erratically,	1. Log Splitter not on level ground.	<ol> <li>Reposition tool so it is level with both ends at same height.</li> </ol>
or does not	2. Hydraulic fluid level is low.	2. Check fluid level and add fluid as needed.
move.	<ol> <li>Excessive air trapped in the hydraulic system.</li> </ol>	<ol> <li>Bleed hydraulic system. Refer to Bleeding the Hydraulic System on page 11. Be sure Vent Plug is loose when operating tool.</li> </ol>
Fluid leaking from hydraulic	<ol> <li>Accumulated air is trapped in hydraulic system while operating.</li> </ol>	1. Loosen Vent Plug before operating tool.
system.	2. Tool moved with Vent Plug loosened.	2. Tighten Vent Plug before moving tool.
	3. Dipstick not tightened securely.	3. Tighten the Dipstick.
	<ol> <li>Hydraulic fittings and/or seals are worn.</li> </ol>	4. Have qualified technician service tool.

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Disconnect power supply before service.

## PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL 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.

#### Record Product's Serial Number Here:\_

Note: If product has no serial number, record month and year of purchase instead.

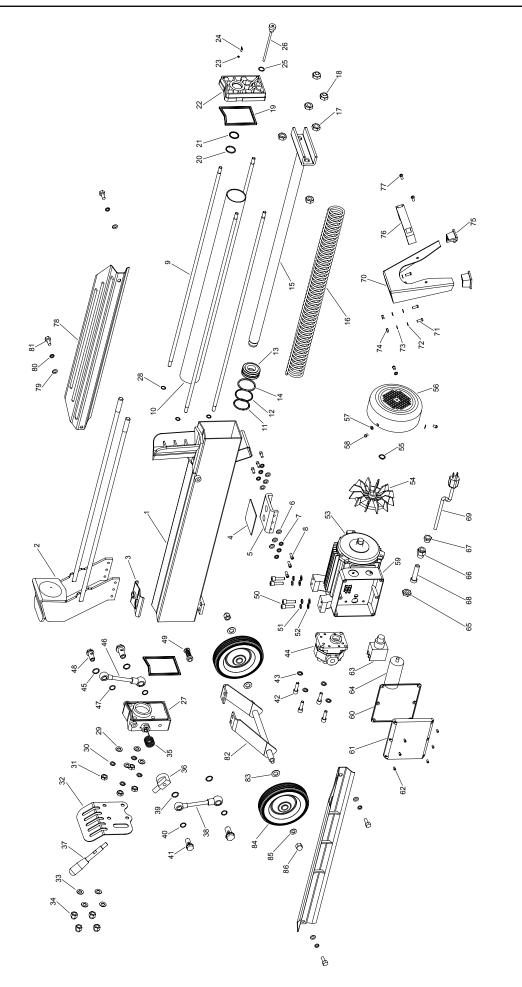
**Note:** Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

### Parts List and Diagram

### **Parts List**

Part	Description	Qty
1	Cutting Wedge	1
2	Ram Cap and Shaft	
3	Upper Cushion	1
4	Lower Cushion	1
5	Ram Base Plate	1
6	Flat Washer M8x1	6
7	Spring Washer M8x2.3	6
8	Inner Hex Bolt M8x15	6
9	Double-Screw Bolt M10x813	4
10	Cylinder Tube Ø55 x 743	1
11	Seal Ø55x3.1	
12	Seal Cover	
13	Piston Head	
14	O-Ring Ø50x3.5	1
15	Piston Shaft	
16	Retracting Spring	1
17	Nut M14	4
18	Lock Nut M14	
19	Paper Seal Ring	2 2 1
20	O-Ring Ø30 x 2.65	1
21	Dust Seal	1
22	Reservoir Cover	1
23	O-Ring Ø6x1	1
24	Vent Plug M4 x 10	1
25	Copper Seal Washer M14x1	1
26	Dipstick	1
27	Hydraulic Valve	1
28	O-Ring Ø14x2.4	4
29	Flat Washer M10 x 1	4
30	Spring Washer M10x2	4
31	Nut M10	4
32	Shield	1
33	Flat Washer M10x2	4
34	Snap Head Nut M10	4
35	Torsion Spring	1
36	Control Handle Bracket	1
37	Control Handle Lever Ø12.5X134	1
38	Fluid Tube Ø14/Ø10x100x1	1
39	O-Ring Ø18x1.9	2
40	Copper Seal Washer M14x1	2
41	Fluid Tube Screw M14x30	2
42	Inner Hex Bolt M8x20	4
43	Spring Washer M8x2.3	4

Part	Description	Qty
44	Hydraulic Pump	1
45	O-Ring Ø18 x 1.9	1
46	Fluid Suction Tube Ø14/Ø10x100x1	1
47	Copper Seal Washer M14X1	3
48	Fluid Tube Screw M14X30	2
49	Fluid Filter	1
50	Inner Hex Bolt M8x35	4
51	Spring Washer M8x2.3	4
52	Flat Washer M8x1	4
53	Electric Motor	1
54	Fan	1
55	Shaft Circlip Ø16	1
56	Fan Cover Ø162	1
57	Flat Washer M4 x 1	3
58	Phillips Head Screw M4 x 10	3
59	Outlet Box	1
60	Rubber Gasket	1
61	Outlet Box Cover	1
62	Phillips Head Screw M4 x 10	6
63	Power Switch	1
64	Capacitor 60uf	1
65	Power Cord Fastener Nut	1
66	Power Cord Fastener	1
67	Power Cord Fastener Bolt	1
68	Power Cord Sleeve	1
69	Power Cord	1
70	Front Leg	1
71	Phillips Head Screw M6x15	4
72	Flat Washer M6 x 1	8
73	Spring Washer M6x2	4
74	Nut M6	4
75	Rubber Foot	2 1
76	Lift Handle	
77	Phillips Head Screw M6x15	2 2
78	Guide Plate	2
79	Flat Washer M8x1	4
80	Spring Washer M8x2	4
81	Inner Hex Bolt M8x12	4
82	Wheel Frame	1
83	Flat Washer M17x2	2
84	Wheel	2
85	Flat Washer M10x1	2
86	Lock Nut M10	2



#### Limited 90 Day Warranty

Harbor Freight Tools Co. 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.



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