

Electric Chainsaw Sharpener

68221 Electric Chainsaw Sharpener

WARNING

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



When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-800-444-3353 as soon as possible.

Visit our website at: <http://www.harborfreight.com>

Specifications

Electrical Input	120 V~ / 60 Hz / 8.5 A (Rated)
RPM	4200
Spindle Diameter	7/8"
Cutter Head Angle (Bevel)	28°
Vise Capacity	0.5" to .8"
Table/Vise Angles	35° Left to Right
Wheel Dimensions	1/8" Thick x 4-1/4" Diameter

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.

Important Safety Information

In this manual, on the labeling, and all other information provided with this product:



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.

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury.

CAUTION

CAUTION, without the safety alert symbol, is used to address practices not related to personal injury.

General Tool Safety Warnings



WARNING 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. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
3. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
4. 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.
5. KEEP CHILDREN AWAY. All visitors should be kept safe distance from work area.
6. MAKE WORKSHOP KID PROOF with padlocks, master switches, or by removing starter keys.
7. DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was designed.
8. USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.

RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS (120 VOLT)

NAMEPLATE AMPERES (at full load)	EXTENSION CORD LENGTH			
	25'	50'	100'	150'
0 – 6	18	16	16	14
6.1 – 10	18	16	14	12
10.1 – 12	16	16	14	12
12.1 – 16	14	12	Do not use.	

TABLE A

9. **USE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table A shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

10. **WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, 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.

11. **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.

12. **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.

13. **DON'T OVERREACH.** Keep proper footing and balance at all times.

14. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

15. **DISCONNECT TOOLS** before servicing; when changing accessories, such as blades, bits, cutters, and the like.

16. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in off position before plugging in.

17. **USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.

18. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.


19. **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.

20. **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.

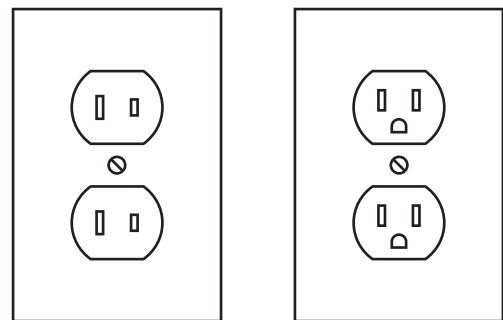
21. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF.** Don't leave tool until it comes to a complete stop.

Grounding Instructions

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



110-120 V~ Double Insulated Tools: Tools with Two Prong Plugs



Outlets for 2-Prong Plug

1. To reduce the risk of electric shock, double insulated equipment has a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install the proper outlet. Do not change the plug in any way.
2. Double insulated tools may be used in either of the 120 volt outlets shown in the preceding illustration. (**See Outlets for 2-Prong Plug.**)

Grinder Safety Warnings

For Your Own Safety Read Instruction Manual Before Operating Grinder

1. Wear eye protection.
2. Use grinding wheel suitable for speed of grinder.
3. Replace cracked wheel immediately.
4. Always use guards and eye shields.
5. Do not overtighten wheel nut.
6. Use only flanges furnished with the grinder.
7. Adjust distance between wheel and work rest to maintain 0.125 inch or less separation as the diameter of the wheel decreases with use.
8. Frequently clean grinding dust from beneath grinder.
9. Wear a full face shield over ANSI-approved safety goggles during use.
10. Do not grind with side of wheel unless wheel is specifically designed for that type of grinding.
11. **DO NOT OPERATE WITH ANY GUARD DISABLED, DAMAGED, OR REMOVED. Moving guards must move freely and close instantly.**
12. The use of accessories or attachments not recommended by the manufacturer may result in a risk of injury to persons.
13. When servicing use only identical replacement parts.
14. This machine is designed to sharpen chainsaw chains. Do not attempt to sharpen any other tools, and do not attempt to grind any other objects.
15. Do not depress the spindle lock when starting or during operation.
16. 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.
17. 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.
18. Industrial applications must follow OSHA guidelines.
19. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
20. Avoid unintentional starting. Prepare to begin work before turning on the tool.
21. 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.
22. **WARNING:** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities, contains chemicals known [to the State of California] to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead-based paints
 - Crystalline silica from bricks and cement or other masonry products
 - Arsenic and chromium from chemically treated lumberYour risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles. (California Health & Safety Code § 25249.5, *et seq.*)
23. **WARNING:** Handling the cord on this product will expose you to lead, a chemical known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling. (California Health & Safety Code § 25249.5, *et seq.*)
24. 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.

Grinding Wheel Safety Warnings

1. Do not use a grinding wheel if it is chipped, cracked, or worn. Check if the wheel has cracks not visible to the human eye by hanging it up by the central hole and tapping it with a nonmetallic object (such as a screwdriver handle). If it is in good condition it will produce a metallic sound. A dull sound indicates a crack or break.
2. Only use grinding wheels that fit the Arbor (7/8"). Do not try to change or modify the mounting hole on a grinding wheel to make it fit. Grinding wheel replacements are available at Harbor Freight Tools.



SAVE THESE INSTRUCTIONS.

3. Do not use the Chainsaw Sharpener without the Grinding Wheel Cover in place.
4. Always test the Grinding Wheel by running it for a minute prior to contact with a chain.
5. Keep away from the wheel when it is turning, and make sure no one is standing close, in the line of the wheel rotation trajectory.
6. If the grinding wheel vibrates, turn off the machine immediately and check that it is mounted securely, and that it is not damaged.
7. Do not try to stop the grinding wheel with your hands, even if you are wearing safety gloves. The wheel will cut through gloves and your hand, causing serious injury.

Vibration Safety

This tool vibrates during use. Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibration-related injury:

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any medical or physical symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.
2. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.
3. Wear suitable gloves to reduce the vibration effects on the user.
4. Use tools with the lowest vibration when there is a choice between different processes.
5. Include vibration-free periods each day of work.
6. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.
7. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.

Instructions for Putting into Use



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

WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before assembling or making any adjustments to the tool.

Note: For additional information regarding the parts listed in the following pages, refer to *Parts List and Assembly Diagram* on page 12.

Assembly/Mounting

1. Use two 1/4" bolts (not included) to fasten the Bench Base (34) to the workbench, using the two mounting holes on the side of the Base. See Figure 1, below.

CAUTION! Verify that the workbench has a smooth, solid surface capable of supporting the weight of the Chainsaw Sharpener and the workpiece.

2. Once the Bench Base is installed to the workbench, slide the Bolt (59) on the Vise Base (44) through the mounting hole in the center of the Base.
3. Fasten the Vise Base in place by threading on the Angle Adjusting Knob (53) onto the Bolt. See Figure 1, below.
4. To adjust the angle of the Vise Base, loosen the Angle Adjusting Knob, maneuver the Vise Base to the desired angle, and then retighten the Bolt until the Vise Base is securely locked in place.

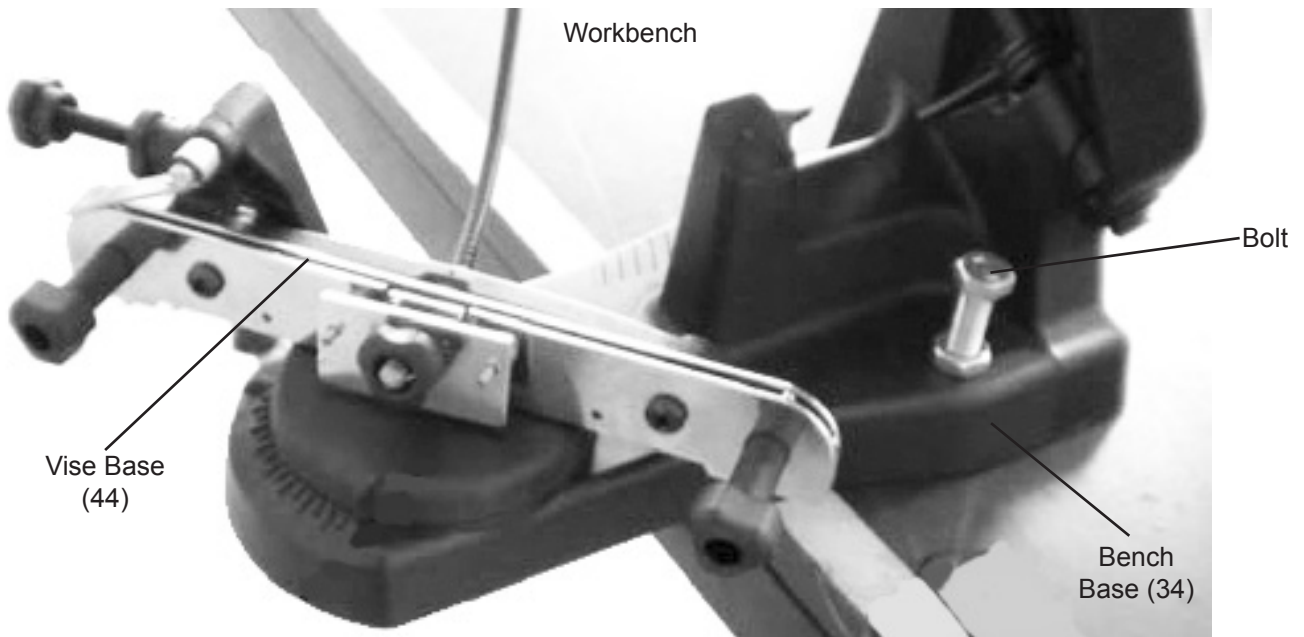


Figure 1

Mounting New Grinding Wheel

1. Raise the Upper Housing (15) and lock it in the up position by tightening the Lock Bolt (13). See Figure 2, below.
2. Remove the three Screws (20) holding the Grinding Wheel Cover (19) in place. Set Wheel Cover aside.

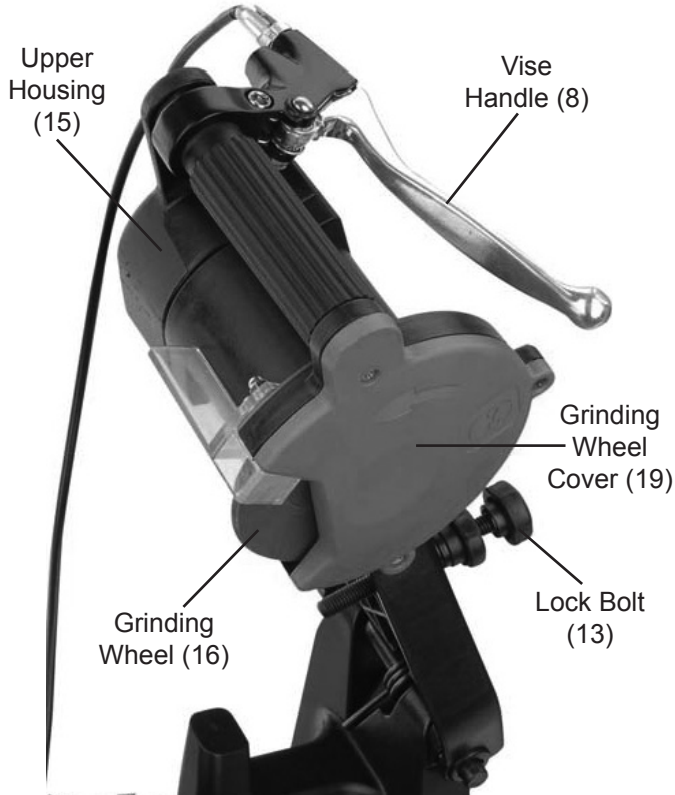


Figure 2

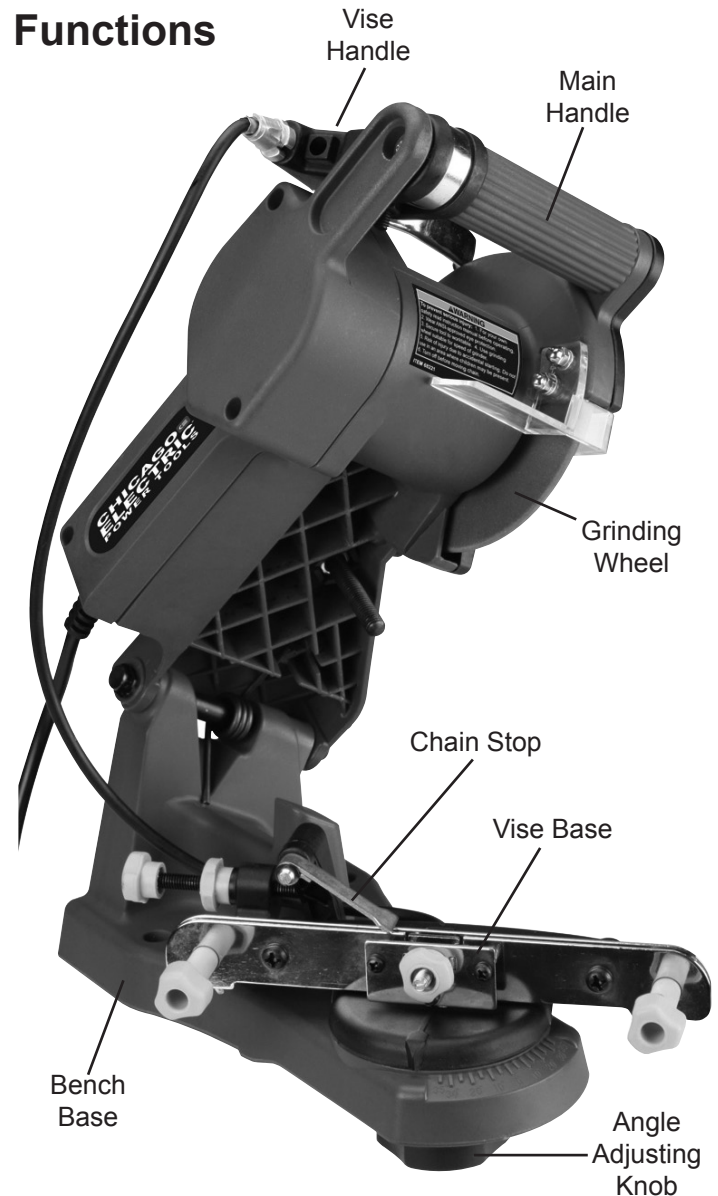
3. Unscrew the Lock Cap (18) and Wheel Screw (17) that hold the Grinding Wheel (16) in place.
4. Remove old Grinding Wheel and slide new Grinding Wheel onto the shaft, making sure it fits properly.

WARNING! Do not use a grinding wheel if it is chipped, cracked, or worn. Check if the wheel has cracks not visible to the human eye by hanging it up by the central hole and tapping it with a nonmetallic object (such as a screwdriver handle). If it is in good condition it will produce a metallic sound. A dull sound indicates a crack or break.

5. Replace the Lock Cap and Wheel Screw.
6. Replace the Grinding Wheel Cover.
7. Release the Lock Bolt and lower the Upper Housing.

WARNING! Do not operate the Chainsaw Sharpener without the Grinding Wheel Cover in place.

Functions



Operating Instructions



Read the **ENTIRE 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

WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:
Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before adjusting tool or installing accessories.

Work Piece and Work Area Set Up

1. 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.
2. 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. Secure loose work pieces using a vise or clamps (not included) to prevent movement while working.
4. There must not be objects, such as utility lines, nearby that will present a hazard while working.

5. Clean the chain saw before sharpening. Wash it with nonflammable solvent. Do not use gasoline.
6. Dry chain before sharpening.

General Operating Instructions

1. Lift the Chain Stop up and place the chain to be sharpened inside the slot along the center of the Vise Base. **NOTE:** Make sure the sharp edge is facing towards the right.
2. Turn the Transmission Shafts to secure the chain saw link in place along the Vise Base. See Figure 3, below.
3. Lower the Chain Stop so that is positioned on the chain tooth you want to start sharpening with.

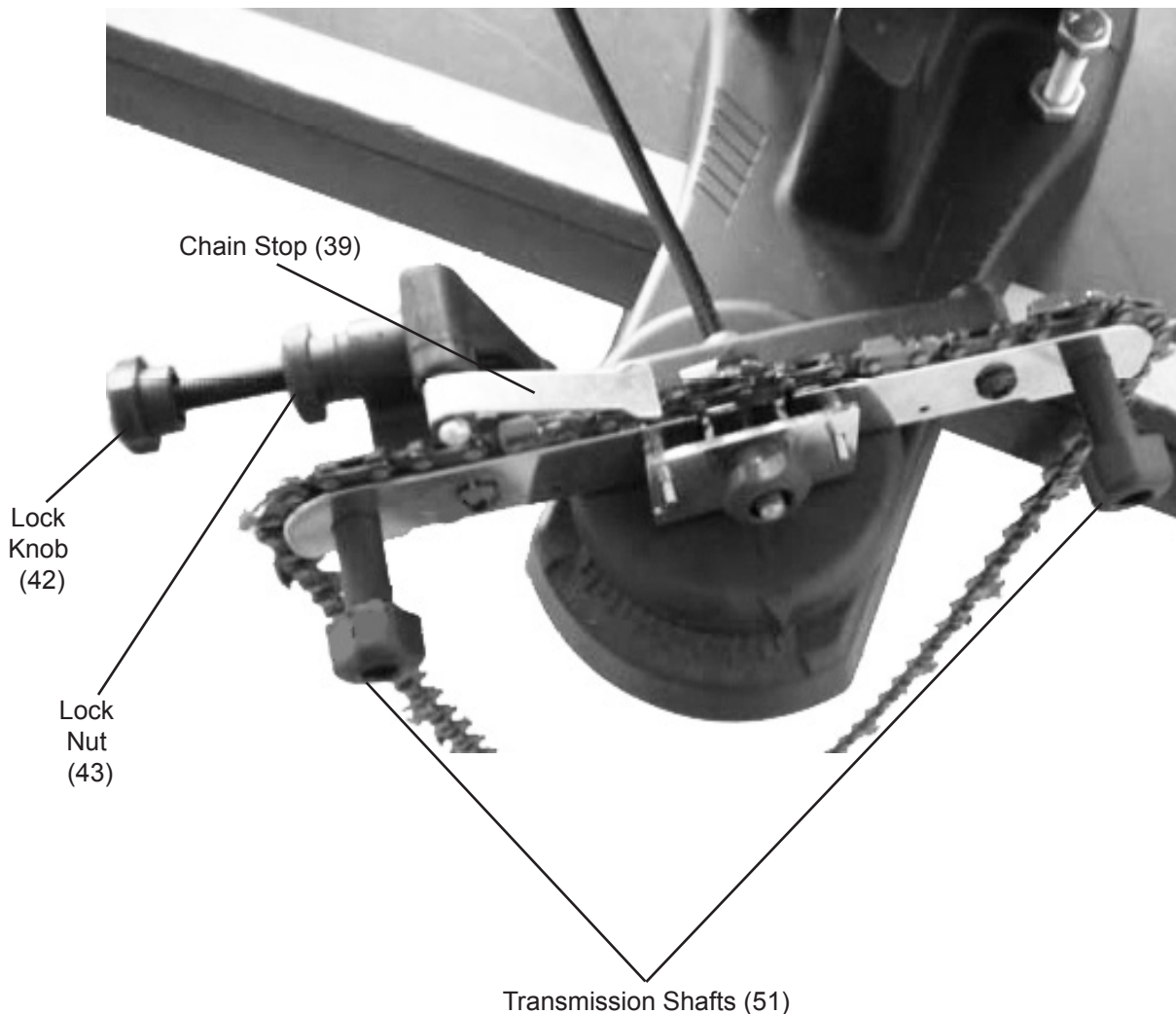


Figure 3

4. Use the Angle Adjusting Knob to rotate the tool's housing to match the degree of angle needed to sharpen the chain. Use the Angle Gauge on the base as reference.

NOTE: Chains come in various sizes with varying degrees of sharpening angles. Check with your chain manufacturer's manual to determine what degree you need to sharpen at.

5. Once the proper angle is set, tighten the Angle Adjusting Knob.
6. Lower the Upper Housing so that the Grinding Wheel skims the chain tooth.
7. Tighten the Lock Bolt to lock the Upper Housing in this position.
8. Depending on the amount of chain material you wish to sharpen, tighten or loosen the Lock Knob. The Lock Knob has a Lock Nut which will determine how much material is removed during sharpening. Once you set the Lock Nut, fully tighten the Lock Knob. See Figure 4.

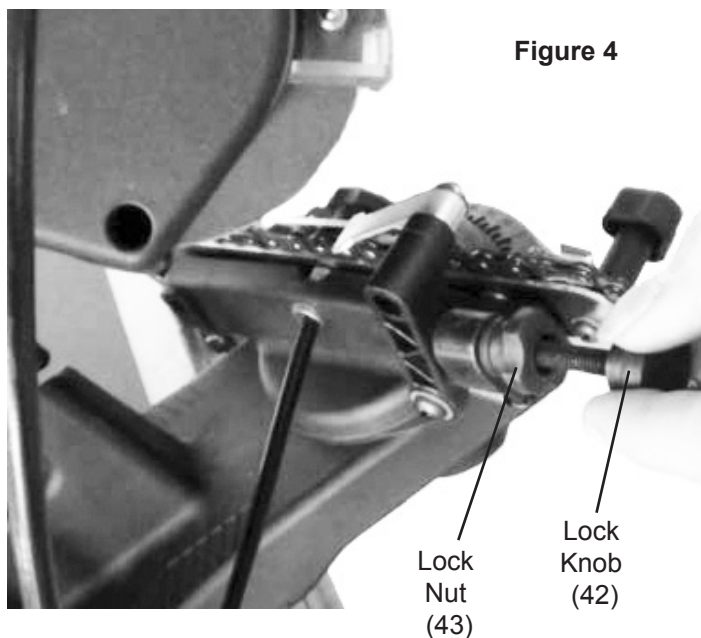


Figure 4

9. Once all adjustments have been made and the chain is secured, plug in the Chainsaw Sharpener and activate it by pressing the green power button.
10. Use the Main Handle to slowly guide the Grinding Wheel to the chain.

11. Be sure to grip the Vise Handle before letting wheel grind against chain.

NOTE: If you notice slight errors in your settings, turn off the unit and unplug before you make your adjustments.

NOTE: A good grind occurs when the contact between the Grinding Wheel and the teeth is gradual and smooth. Do not stop too long on any tooth.

12. After sharpening one tooth, turn off the machine. Slowly lift up the Upper Housing and release Vise Handle. Turn the Transmission Shafts to the right, positioning the next link in the Chain Stop.
13. Squeeze Vise Handle, lower Upper Housing and sharpen the next link. Repeat this process until all links set at this angle have been sharpened.
14. After sharpening all of the teeth set at the current angle, turn off the machine. Then loosen the Angle Adjusting Knob and reset the angle.
15. Lower the Upper Housing so that the Grinding Wheel skims the chain tooth and lock it in place. Repeat the above steps until all teeth at new angle setting have been sharpened.

WARNING! Turn off and unplug the tool before making any adjustments.

Maintenance and Servicing



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

⚠️ WARNING

TO PREVENT SERIOUS INJURY FROM ACCIDENTAL OPERATION:

Turn the Power Switch of the tool off and unplug the tool from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.

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 Chainsaw Sharpener. Check for loose hardware,

misalignment or binding of moving parts, cracked or broken parts, damaged electrical wiring, and any other condition that may affect its safe operation.

2. **AFTER USE**, wipe external surfaces of the tool with clean cloth. Keep Chainsaw Sharpener clean and free of dust, metal debris and dirt.
3. Check the Grinding Wheel before each use to make sure it isn't damaged. Do not use a grinding wheel if it is chipped, cracked or worn.
4. Check if the wheel has cracks not visible to the human eye by hanging it up by the central hole and tapping it with a non metal object (such as a screwdriver handle). If it is in good condition, it will produce a metallic sound. A dull sound indicates a crack or break in the wheel.
5. Replace the grinding wheel once it grinds down to a diameter of 3 inches.
6. **⚠️ WARNING!** If the supply cord of this power tool is damaged, it must be replaced only by a qualified service technician.

Troubleshooting

Problem	Possible Causes	Likely Solutions
Tool will not start.	<ol style="list-style-type: none"> 1. Cord not connected. 2. No power at outlet. 3. Tool's thermal reset breaker tripped (if equipped). 4. Internal damage or wear. (Carbon brushes or switch, for example.) 	<ol style="list-style-type: none"> 1. Check that cord is plugged in. 2. 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. 3. Turn off tool and allow to cool. Press reset button on tool. 4. Have technician service tool.
Tool operates slowly.	Extension cord too long or wire size too small.	Eliminate use of extension cord. If an extension cord is needed, use shorter/heavier gauge cord. See <i>Extension Cords</i> in <i>Grounding</i> section on page 5.
Performance decreases over time.	<ol style="list-style-type: none"> 1. Accessory dull or damaged. 2. Carbon brushes worn or damaged. 	<ol style="list-style-type: none"> 1. Keep cutting accessories sharp. Replace as needed. 2. Have qualified technician replace brushes.
Excessive noise or rattling.	Internal damage or wear. (Carbon brushes or bearings, for example.)	Have technician service tool.
Overheating.	<ol style="list-style-type: none"> 1. Forcing tool to work too fast. 2. Accessory misaligned. 3. Accessory dull or damaged. 4. Blocked motor housing vents. 5. Motor being strained by long or small diameter extension cord. 	<ol style="list-style-type: none"> 1. Allow tool to work at its own rate. 2. Check and correct accessory to fence and/or table alignment. 3. Keep cutting accessories sharp. Replace as needed. 4. Wear ANSI-approved safety goggles and NIOSH-approved dust mask/respirator while blowing dust out of motor using compressed air. 5. Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load. See <i>Extension Cords</i> in <i>Grounding</i> section on page 5.



Follow all safety precautions whenever diagnosing or servicing the tool. Disconnect power supply before service.

Parts List and Assembly Diagram

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.

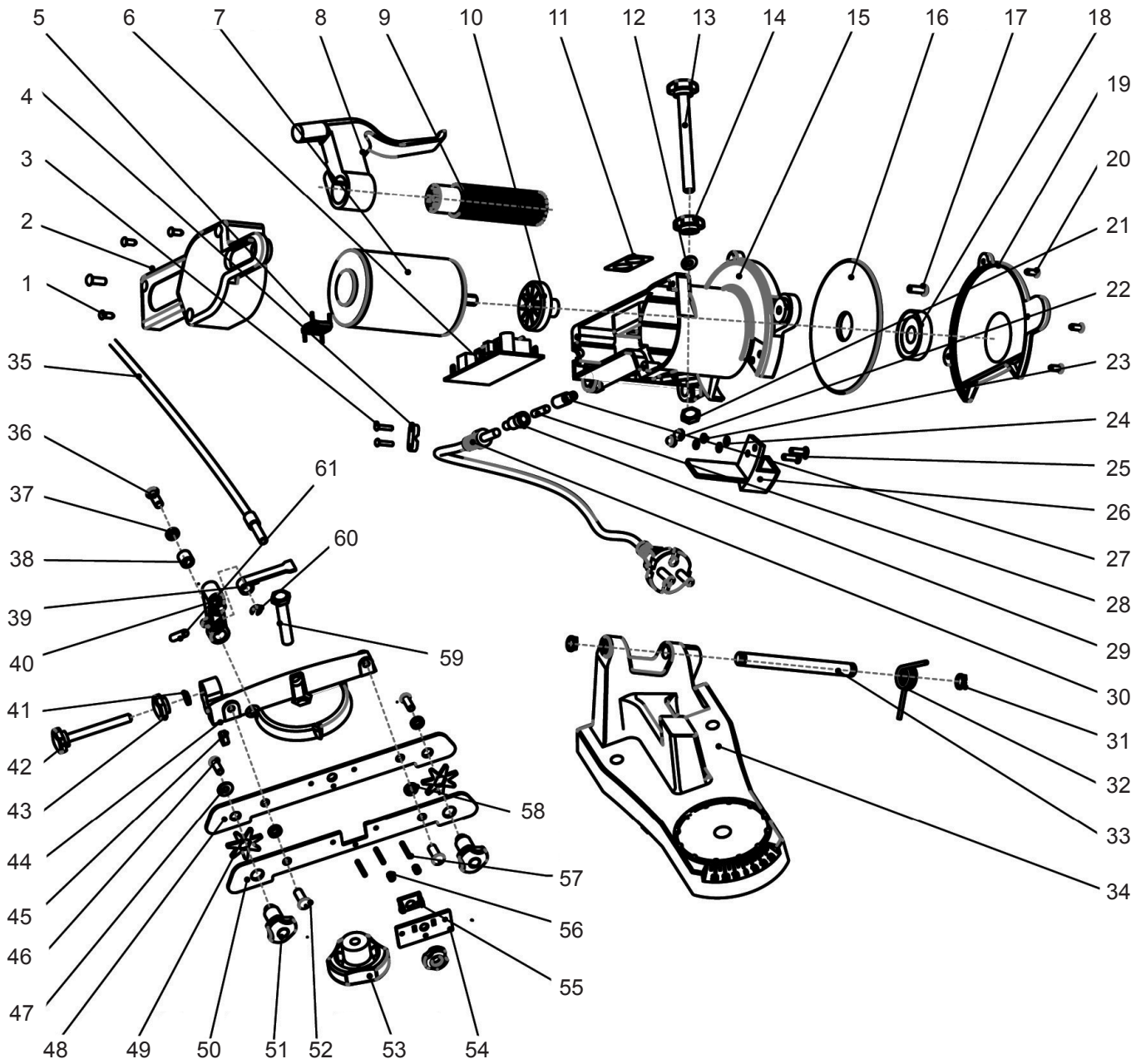
Parts List

Part	Description	Qty.
1	Screw	3
2	Back Cover	1
3	Screw	2
4	Pressure Panel	1
5	Inductor	1
6	Circuit Panel	1
7	Motor	1
8	Vise Handle	1
9	Main Handle	1
10	Lower Valves	1
11	Switch Plate	1
12	Cushion	1
13	Lock Bolt	1
14	Nut	1
15	Upper Housing	1
16	Grinding Wheel	1
17	Wheel Screw	2
18	Lock Cap	1
19	Grinding Wheel Cover	1
20	Screw	3
21	Nut	1
22	Nut	2
23	Spring Washer	2
24	Mat	2
25	Screws	2
26	Gauge Cover	1
27	Inner Fuse Sheath	1
28	Fuse	1
29	Outer Fuse Sheath	1
30	Power Cord	1
31	Snap Spring	2

Part	Description	Qty.
32	Torsion Spring	1
33	Pin Roll	1
34	Bench Base	1
35	Draw Line	1
36	Screw	1
37	Mat	3
38	Steel Tube	1
39	Chain Stop	1
40	Swing Arm	1
41	Cushion	1
42	Lock Knob	1
43	Lock Nut	2
44	Vise Base	1
45	Nut	1
46	Screw	2
47	Mat	2
48	Inner Clamping Piece	1
49	Chain Wheel	2
50	Outer Clamping Piece	1
51	Transmission Shaft	2
52	Screw	2
53	Angle Adjusting Knob	1
54	Outer Panel	1
55	Inner Panel	1
56	Spring	3
57	Central Pin	3
58	Mat	2
59	Bolt	1
60	Snap Spring	1
61	Draw Spring	1

Parts List and Assembly Diagram

Assembly Diagram



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.

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.

**CHICAGO  ELECTRIC®
POWER TOOLS**

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