

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.

20c

**CHICAGO  ELECTRIC
POWER TOOLS**

63803

ELECTRIC CHAIN SAW SHARPENER



Visit our website at: <http://www.harborfreight.com>
Email our technical support at: productsupport@harborfreight.com

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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No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools. Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. Tools required for assembly and service may not be included.

⚠ WARNING





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

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CHICAGO ELECTRIC[®] POWER TOOLS

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.
 DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
 WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE CAUTION	Addresses practices not related to personal injury.

IMPORTANT SAFETY INFORMATION

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.

- KEEP GUARDS IN PLACE and in working order.
- REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
- 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.
- KEEP CHILDREN AWAY. All visitors should be kept safe distance from work area.
- MAKE WORKSHOP KID PROOF with padlocks, master switches, or by removing starter keys.
- DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was designed.
- USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.

**Table A: 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.	

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.

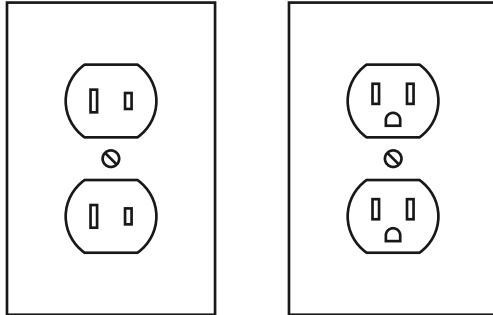
Grounding Instructions



⚠️ WARNING

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

110-120 VAC 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 Tool 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. 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.
15. 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.
16. Industrial applications must follow OSHA guidelines.
17. Maintain labels and nameplates on the tool. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
18. Avoid unintentional starting. Prepare to begin work before turning on the tool.
19. 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.
20. 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.

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. Use tools with the lowest vibration when there is a choice between different processes.
4. Include vibration-free periods each day of work.
5. Grip workpiece as lightly as possible (while still keeping safe control of it). Let the tool do the work.
6. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.



SAVE THESE INSTRUCTIONS.

Specifications

Electrical Rating	120VAC / 60Hz / 0.5A
Motor No Load Speed	5,000 RPM
Saw Chain Pitch	1/4" and 3/8"
Arbor Size	7/8"
Vise Capacity	0.05" to 0.067"
Max. Accessory Diameter	4-1/4" (108mm)
Max. Wheel Thickness	1/8"
Mounting Hardware	2x1/4" Bolts and Nuts (sold separately)

Setup - Before 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 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.

Mounting

Note: The Sharpener must be mounted on a horizontal surface.

1. Position the Sharpener on the mounting surface so that the mounting stop butts up against the vertical edge of the surface.
2. Using the Base as a template, mark locations of mounting holes.
3. Drill pilot holes appropriate for the proper hardware (sold separately), described under Specifications on page 5, at the marked locations.
4. Align mounting holes with pilot holes, then secure the Base with the hardware.

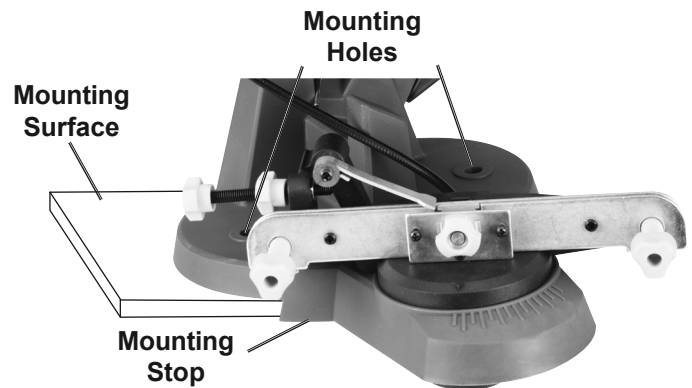


Figure A

Attaching the Vise

1. Slide the bolt on the bottom of the Vise assembly through the hole on the Base. Secure from underneath with the Angle Adjustment Knob.
2. Remove the Clamp Lock Nut from the Vise Cable
3. Push the Vise Cable through the hole in the Clamp Plate and secure with Clamp Lock Nut.

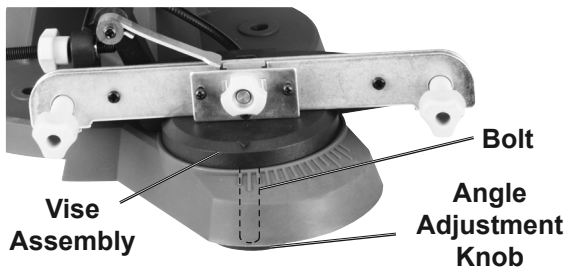


Figure B

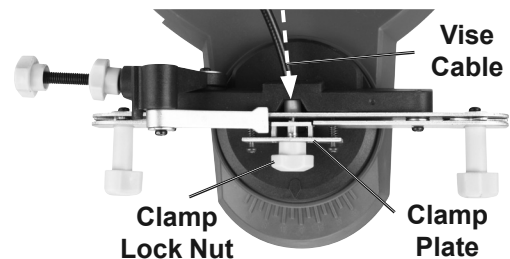
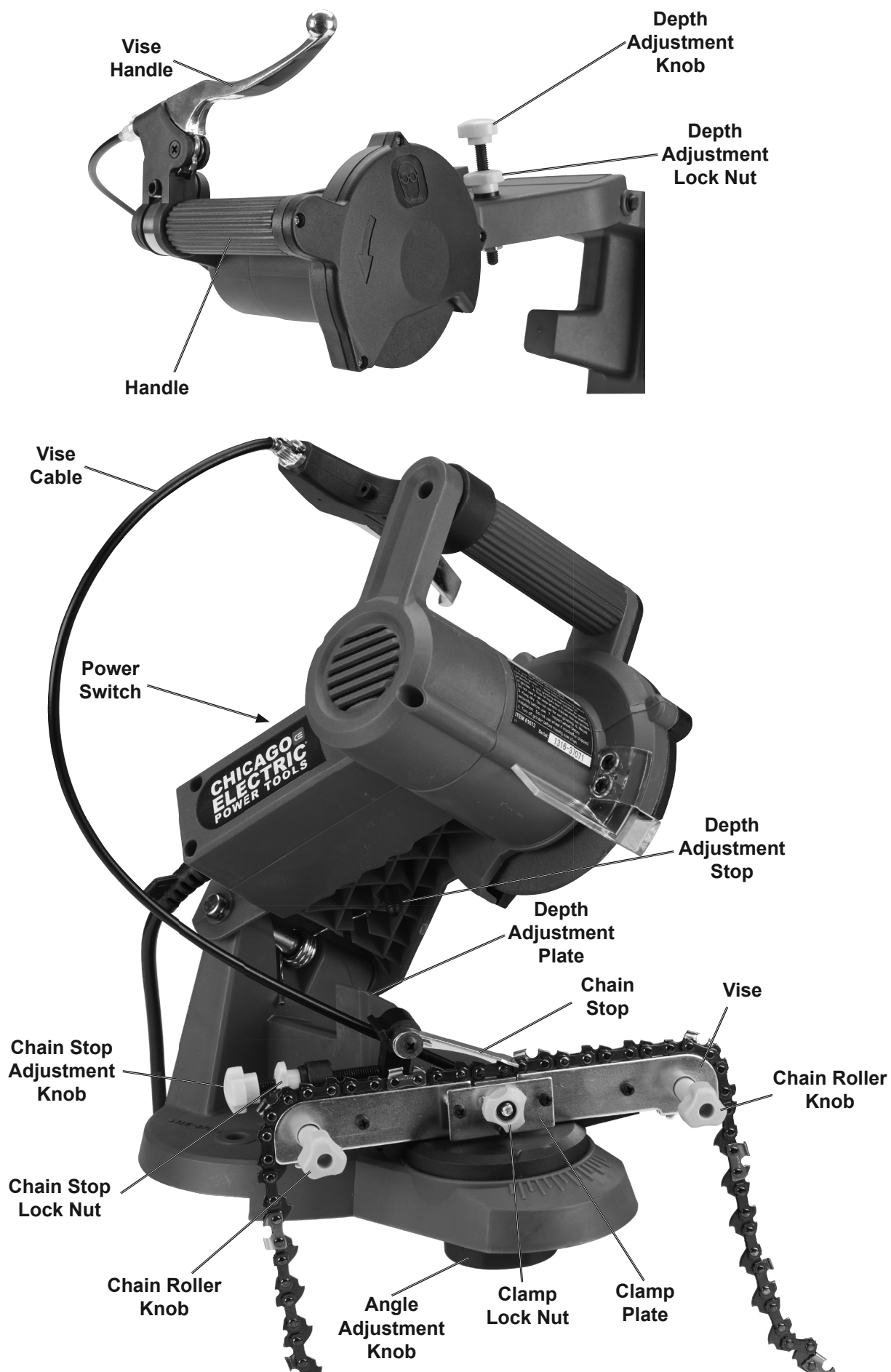


Figure C

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 performing any procedure in this section.

TO PREVENT SERIOUS INJURY:

DO NOT OPERATE WITH ANY GUARD DISABLED, DAMAGED, OR REMOVED.

Installing the Grinding Wheel

1. The Grinding Wheel **MUST** be:
 - rated to at least 5,000 RPM.
 - no larger than 4-1/4" in diameter.
 - fitted with a 7/8" round arbor hole.
 - 1/8" thick or less.
 - dry and clean.
 - proven undamaged by inspection and by the ring-test explained below.
2. Remove Grinding Wheel Cover.
3. Remove the Outer Flange by turning it *counterclockwise*, then remove the Grinding Wheel.

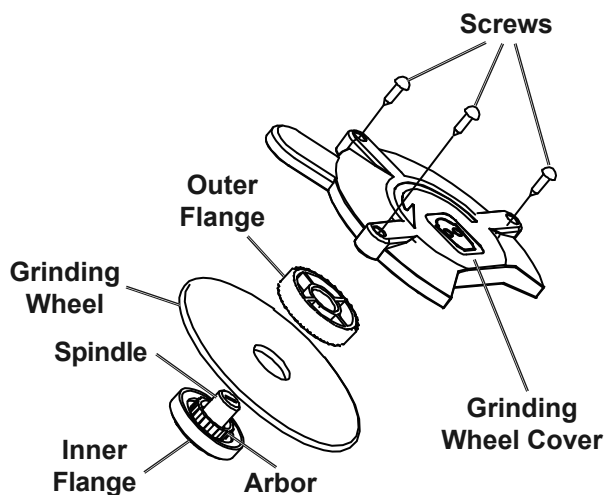
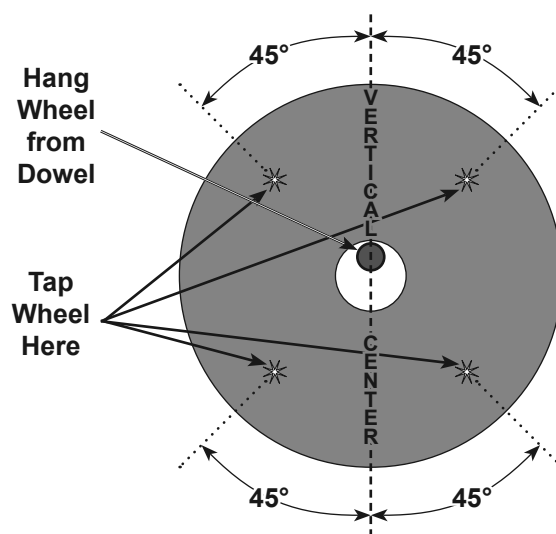


Figure D

4. Closely inspect the wheel before mounting. Perform a ring-test on the wheel (unless wheel is smaller than 4" or is an unusual shape) as follows:
 - a. Suspend wheel using a dowel or finger through the arbor hole.



- b. Tap the flat side of the wheel with a light non-metallic object, such as a screwdriver handle, at a point 45° from the vertical center line on each side of the wheel and 1 – 2 inches from the edge of the wheel (see Illustration).
 - c. Rotate the wheel 90° and repeat the test until the entire wheel has been checked.
 - d. An undamaged wheel will give a clear tone. If cracked, there will be a dead sound and not a clear ring.
5. Place the Grinding Wheel on the Arbor, then thread the Outer Flange onto the Spindle. Wrench tighten only enough so that the wheel is securely held on the spindle.
 6. Replace the Grinding Wheel Cover.

⚠ WARNING: To prevent serious injury, do not overtighten flange. Overtightening can damage the wheel, causing wheel failure.

Workpiece 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. There must not be objects, such as utility lines, nearby that will present a hazard while working.
4. You must use personal safety equipment including, but not limited to, ANSI-approved eye protection. Wear heavy-duty gloves when handling the saw chain.
5. Before beginning work, provide for sparks and debris that will fly off the work surface.

General Operating Instructions

1. Unplug the Sharpener.
2. Refer to the saw chain's instructions to determine the sharpening angle.
3. With the angled cutting edges facing right, place the saw chain in the Vise, engaging the chain on the spokes of the Chain Wheels.

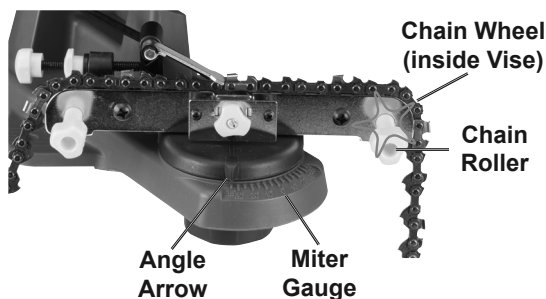


Figure E

4. Squeeze the Vise Handle to test clamping tension. Adjust the Clamp Lock Nut until the saw chain does not move while being clamped.
5. **Sharpening the right-hand cutters:**
 - a. Loosen the Angle Adjustment Knob, align the Angle Arrow to the correct angle to the **left** of 0 on the Miter Gauge, then tighten the Angle Adjustment Knob. See **Figure E**.
 - b. Turn the Chain Roller until the first right-hand cutter is in position. Then, engage the Chain Stop to keep saw chain from moving.
 - c. Pull down on the Handle to bring the Grinding Wheel into the Gullet, then make adjustments:
 - Turn the Chain Stop Adjustment Knob until the Grinding Wheel just grazes the cutting edge. Tighten the Chain Stop Lock Nut.
 - Turn the Depth Adjustment Knob until the Grinding Wheel is just above the bottom of the Gullet. Tighten the Depth Adjustment Lock Nut.

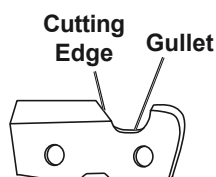


Figure F: Right-hand Cutter

- d. Plug in the Sharpener and turn it on.
- e. Allow the Sharpener to come up to full speed.
- f. Squeeze the Vise Handle and pull down on the Handle until the Grinding Wheel makes contact with and sharpens the cutting edge.

CAUTION! Turn the Sharpener off before moving chain.

- g. Turn the Chain Roller until the next cutter is in position. Turn the Sharpener on, then sharpen that cutter.
 - h. Continue until all of the cutters have been sharpened.
 - i. Turn off the Sharpener, then unplug it.
6. **Sharpening the left-hand cutters:**

Note: Leave the chain in the Vise.

- a. Loosen the Angle Adjustment Knob, align the Angle Arrow to the correct angle to the **right** of 0 on the Miter Gauge, then tighten the Angle Adjustment Knob.
- b. Turn the Chain Roller until the first left-hand cutter is in position. Then, engage the Chain Stop.
- c. Follow instructions for **5. Sharpening the right-hand cutters:** beginning at c. and ending at i.

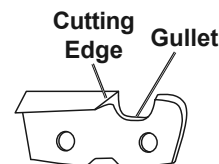


Figure G: Left-hand Cutter

7. Clean and oil the chain before reinstalling it on the chain saw.
8. To prevent accidents, turn off the tool and unplug the tool from its electrical outlet after use. Clean, then store the tool indoors out of children's reach.

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 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 tool. 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.
3. Periodically, wear ANSI-approved safety goggles and NIOSH-approved breathing protection and blow dust and grit out of the motor vents using dry compressed air.
4. Replace the Grinding Wheel once it has worn down to a diameter of 3".
5. **⚠️ WARNING! TO PREVENT SERIOUS INJURY: If the supply cord of this power tool is damaged, it must be replaced only by a qualified service technician.**

Accessory Storage and Handling

1. Handle accessories carefully to prevent dropping or bumping. Do not use wheels that have been dropped or bumped.
2. Store accessories in shelves, racks, boxes, or drawers. Keep storage area dry and above freezing. Any grinding or cut-off wheels exposed to humidity or freezing temperatures must not be used.

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 one with the proper diameter for its length and load. See Table A on page 3.
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 machine to work too fast. 2. Accessory dull or damaged. 3. Blocked motor housing vents. 4. Motor being strained by long or small diameter extension cord. 	<ol style="list-style-type: none"> 1. Allow machine to work at its own rate. 2. Keep cutting accessories sharp. Replace as needed. 3. Wear ANSI-approved safety goggles and NIOSH-approved dust mask/respirator while blowing dust out of motor using compressed air. 4. Eliminate use of extension cord. If an extension cord is needed, use one with the proper diameter for its length and load. See Table A on page 3.
 Follow all safety precautions whenever diagnosing or servicing the tool. Disconnect power supply before service.		

SAFETY

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PLEASE READ THE FOLLOWING CAREFULLY

SAFETY

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.

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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. Specify UPC 792363638036 when ordering parts.

SAFETY

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CHICAGO  ELECTRIC®
POWER TOOLS

Parts List and Diagram

Parts List

SAFETY

SETUP

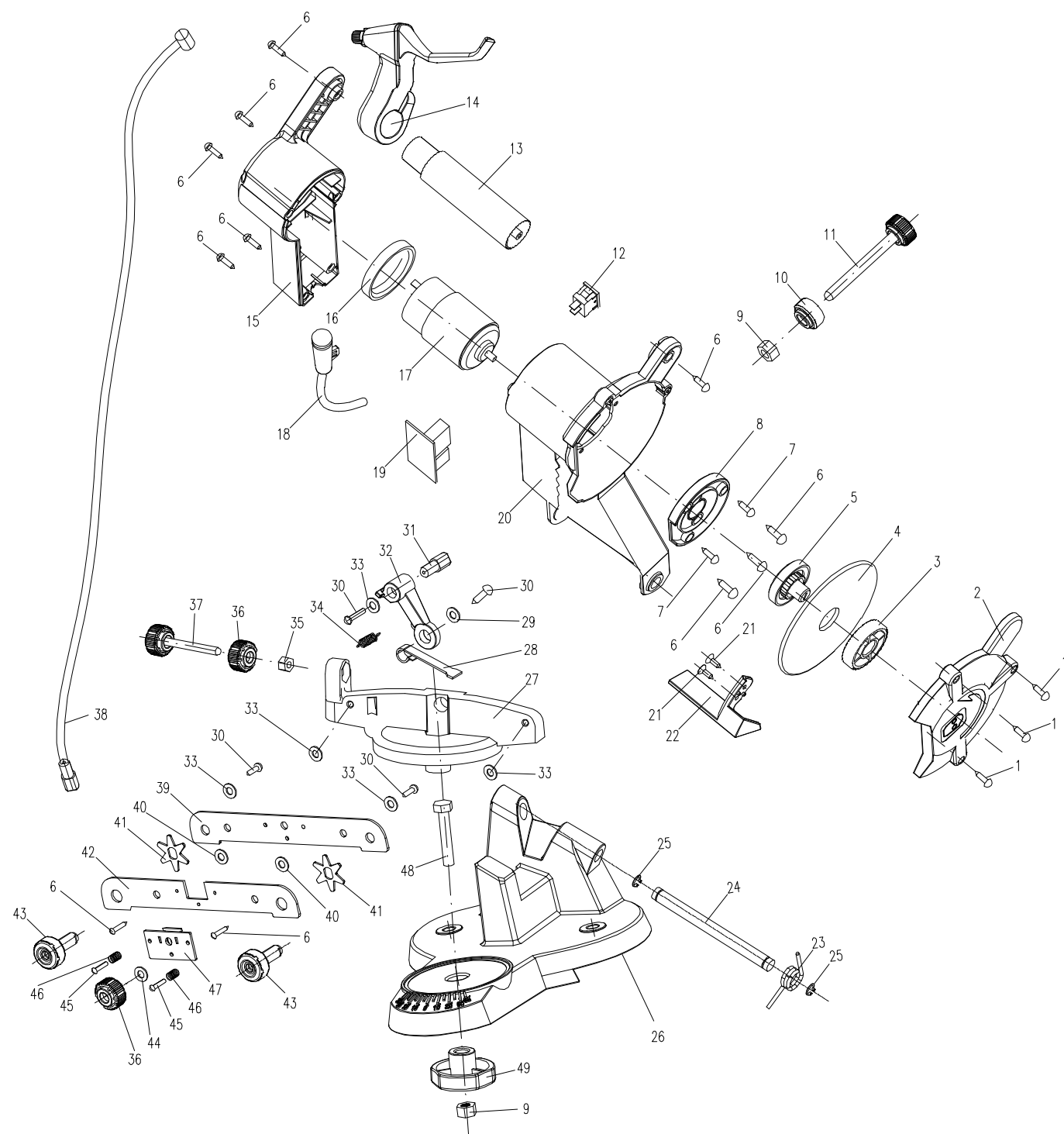
OPERATION

MAINTENANCE

Part	Description	Qty.
1	Screw	3
2	Grinding Wheel Cover	1
3	Outer Flange	1
4	Grinding Wheel	1
5	Inner Flange	1
6	Screw	11
7	Screw	2
8	Motor Cover	1
9	Nut	2
10	Depth Adjustment Lock Nut	1
11	Depth Adjustment Knob	1
12	Power Switch	1
13	Main Handle	1
14	Vise Handle	1
15	Back Motor Cover	1
16	Anti Vibration Ring	1
17	Motor	1
18	Power Cord	1
19	Circuit Panel	1
20	Motor Housing	1
21	Screw	2
22	Safety Guard	1
23	Torsion Spring	1
24	Pin	1
25	Circlip	2

Part	Description	Qty.
26	Base	1
27	Vise Base	1
28	Chain Stop	1
29	Washer	1
30	Screw	4
31	Shaft	1
32	Swing Arm	1
33	Washer	5
34	Torsion Spring	1
35	Nut	1
36	Lock Nut	2
37	Chain Stop Adjustment Knob	1
38	Vise Cable	1
39	Inner Vise Clamp	1
40	Washer	2
41	Chain Wheel	2
42	Outer Vise Clamp	1
43	Chain Roller	2
44	Washer	1
45	Screw	2
46	Spring	2
47	Clamp Plate	1
48	Bolt	1
49	Angle Adjustment Knob	1

Assembly Diagram



SAFETY

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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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