



**MODEL T28959**  
**ELECTRIC CHAINSAW**  
**SHARPENER**  
**OWNER'S MANUAL**

*(For models manufactured since 02/19)*



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## **WARNING!**

**This manual provides critical safety instructions on the proper setup, operation, maintenance, and service of this machine/tool. Save this document, refer to it often, and use it to instruct other operators.**

**Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution, or death.**

**The owner of this machine/tool is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, cutting/sanding/grinding tool integrity, and the usage of personal protective equipment.**

**The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.**



## **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, cement and other masonry products.**
- **Arsenic and chromium from chemically-treated lumber.**

**Your 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.**

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# INTRODUCTION

## Contact Info

We stand behind our machines! If you have questions or need help, contact us with the information below. Before contacting, make sure you get the **serial number** and **manufacture date** from the machine ID label. This will help us help you faster.

Grizzly Technical Support  
1815 W. Battlefield  
Springfield, MO 65807  
Phone: (570) 546-9663  
Email: techsupport@grizzly.com

We want your feedback on this manual. What did you like about it? Where could it be improved? Please take a few minutes to give us feedback.

Grizzly Documentation Manager  
P.O. Box 2069  
Bellingham, WA 98227-2069  
Email: manuals@grizzly.com

## Manual Accuracy

We are proud to provide a high-quality owner's manual with your new machine!

We made every effort to be exact with the instructions, specifications, drawings, and photographs in this manual. Sometimes we make mistakes, but our policy of continuous improvement also means that **sometimes the machine you receive is slightly different than shown in the manual.**

If you find this to be the case, and the difference between the manual and machine leaves you confused or unsure about something, check our website for an updated version. We post current manuals and manual updates for free on our website at [www.grizzly.com](http://www.grizzly.com).

Alternatively, you can call our Technical Support for help. Before calling, make sure you write down the **Manufacture Date** and **Serial Number** from the machine ID label (see below). This information is required for us to provide proper tech support, and it helps us determine if updated documentation is available for your machine.

		MODEL GXXXX MACHINE NAME	
SPECIFICATIONS		▲ WARNING!	
Motor:		To reduce risk of serious injury when using this machine:	
Specification:		1. Read manual before operation.	
Specification:		2. Wear safety glasses and respirator.	
Specification:		3. Make sure safety glasses and respirator are properly adjusted/setup and	
Weight:		4. power is connected to grounded circuit before starting.	
		5. Make sure the motor has stopped and disconnect power before adjustments, maintenance, or service.	
		6. DO NOT expose to rain or dampness.	
		7. DO NOT modify this machine in any way.	
		8. Make sure power is disconnected.	
		9. Do not use while under the influence of drugs or alcohol.	
		10. Maintain machine carefully to prevent accidents.	
		Manufactured for Grizzly in Taiwan	

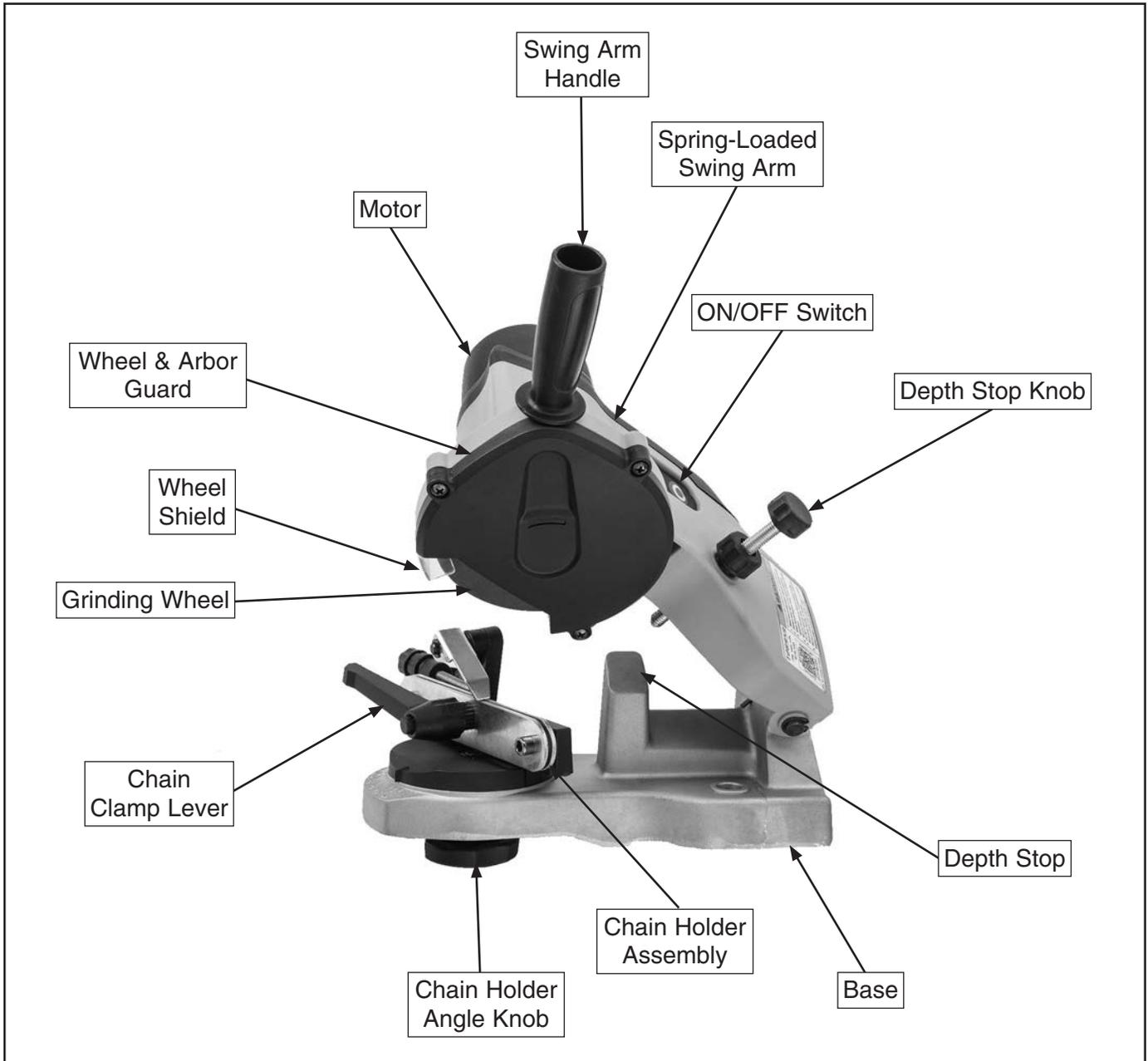
Manufacture Date

Serial Number



# Identification

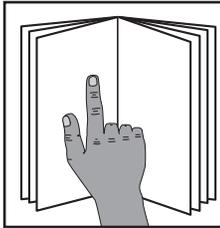
Become familiar with the names and locations of the controls and features shown below to better understand the instructions in this manual.



	<p><b>! WARNING</b> To reduce your risk of serious injury, read this entire manual <b>BEFORE</b> using machine.</p>
--	---



# Controls & Components



## **!WARNING**

To reduce your risk of serious injury, read this entire manual **BEFORE** using machine.

Refer to the following figures and descriptions to become familiar with the basic controls and components of this machine. Understanding these items and how they work will help you understand the rest of the manual and minimize your risk of injury when operating this machine.

## Chain Holder Assembly

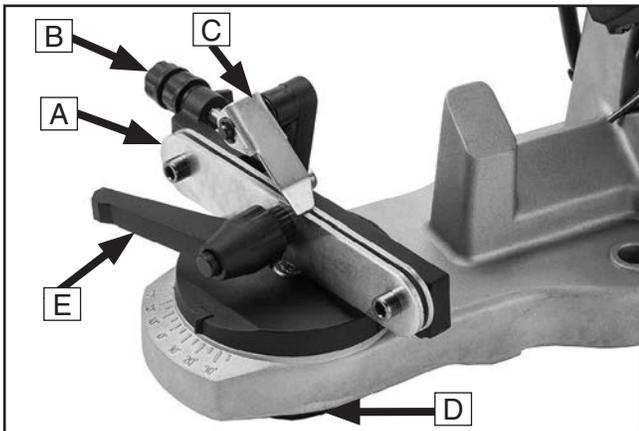


Figure 1. Chain holder assembly.

- A. **Clamp Plates:** Hold chain in place.
- B. **Guide Adjustment Controls:** Controls how much to move chain in advancement guide.
- C. **Advancement Guide:** Helps guide chain to next sharpening position.
- D. **Chain Holder Angle Knob:** Loosen to change angle of chain holder assembly. Tighten to lock angle in position.
- E. **Chain Clamp Lever:** Tightens clamp plates.

## Depth Stop Assembly

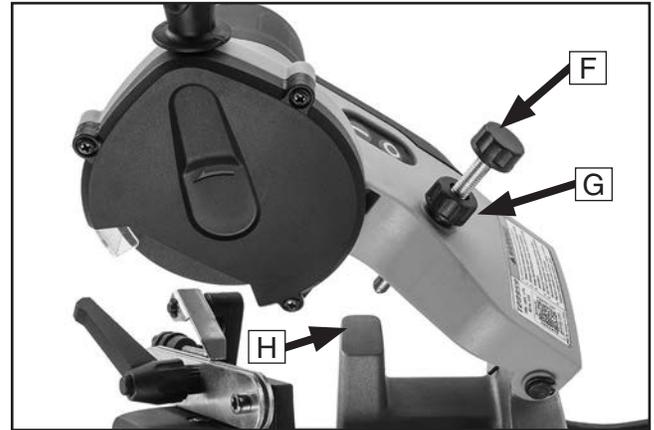


Figure 2. Depth stop assembly.

- F. **Depth Stop Knob Bolt:** Rotate clockwise to reduce cutting depth. Rotate counterclockwise to increase cutting depth.
- G. **Depth Stop Jam Nut:** Locks depth knob bolt in place.
- H. **Depth Stop:** Stops the sharpener at pre-determined depth based on depth knob bolt setting.

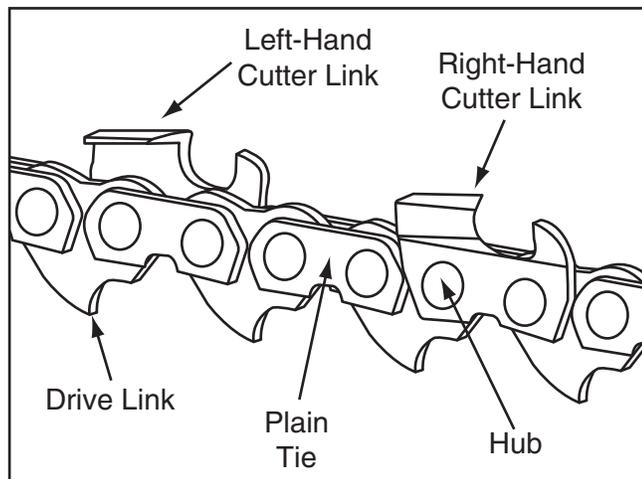


# Chainsaw Terminology

Refer to the following descriptions and illustrations to better understand the chainsaw terminology used in this manual.

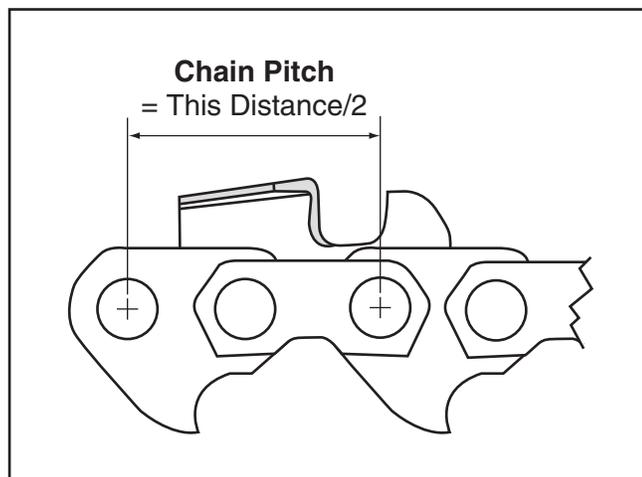
**Chain Component Identification:** The cutter links illustrated in **Figure 3** do the actual cutting, while the lower tangs of the drive links keep the chain riding in the guide bar.

The plain ties connect the links together as they move and pivot on the rivets.



**Figure 3.** Chain component identification.

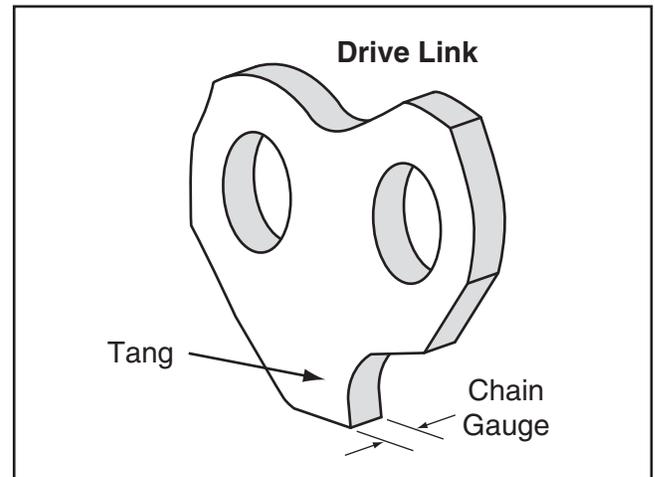
**Chain Pitch:** The distance between any three consecutive rivet centers divided by 2 is known as the chain pitch (see **Figure 4**).



**Figure 4.** Chain pitch.

The chain pitch is the same for all links in the chain. The smallest chain pitches for handheld chainsaws are commonly  $\frac{1}{4}$ ",  $\frac{3}{8}$ ", and 0.325."

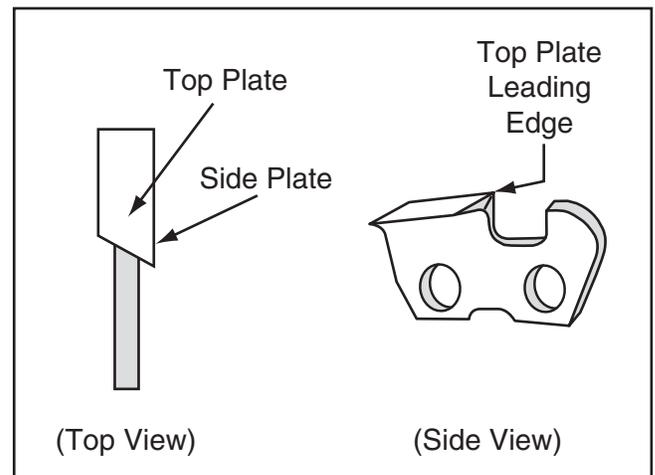
**Chain Gauge:** The chain gauge is the thickness of the drive link tang (see **Figure 5**) where it fits into the guide bar groove. The guide bar groove must match the width of the chain gauge.



**Figure 5.** Chain gauge.

**Top Plate:** The amount of rake from the top plate to the side plate is generally  $25^{\circ}$ – $35^{\circ}$ . This forms the leading edge of the cut (see **Figure 6**).

**Top Plate Leading Edge:** The top plate leading edge (see **Figure 6**) is a chisel-like downward bevel on the underside of the top plate that usually is  $60^{\circ}$ . This edge removes wood chips from the kerf.

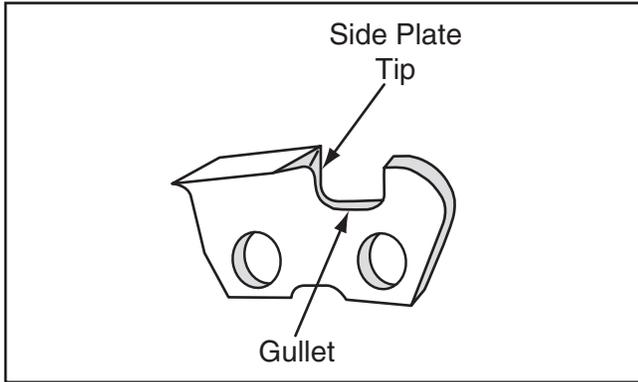


**Figure 6.** Cutter link top plate.



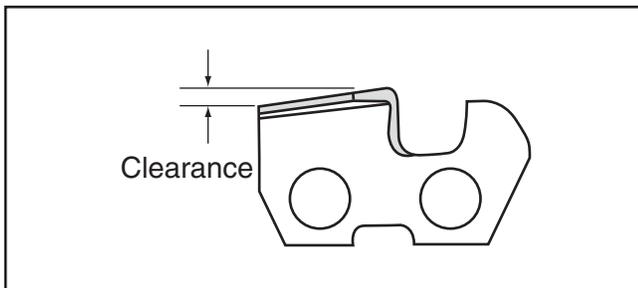
**Side Plate Tip:** The ground angle of the side plate is instrumental in forming the cutting point between the side and top plates. This angle is typically 60° (see **Figure 7**).

**Gullet:** The gullet (see **Figure 7**) provides a space for the wood chips so they can be removed by the top plate.



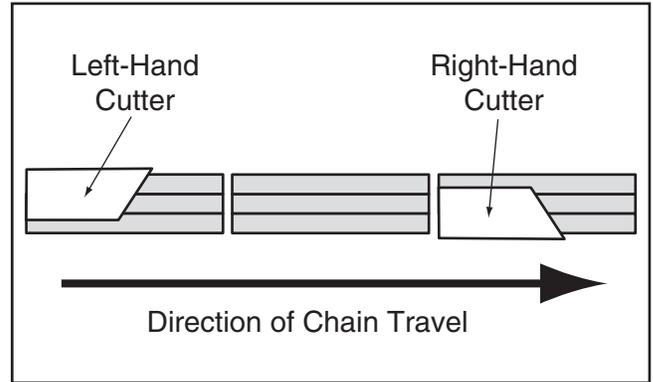
**Figure 7.** Side plate leading edge and gullet.

**Clearance:** This is the amount that the top plate angles down from the top plate leading edge to the rear of the cutter link (see **Figure 8**). Clearance allows the cutter link to pivot up into the wood and then down again.



**Figure 8.** Clearance.

**Left- & Right-Hand Cutters:** Chainsaws have left- and right-hand cutter links that together make the cut. The sharpener must be set up differently when sharpening left- and right-hand cutters (see **Figure 9**), because the angles on the cutters are reversed. It is important to clearly identify the orientation of the cutter before sharpening it.



**Figure 9.** Identification of left- and right-hand cutters.





# MACHINE DATA SHEET

Customer Service #: (570) 546-9663 · To Order Call: (800) 523-4777 · Fax #: (800) 438-5901

## MODEL T28959 ELECTRIC CHAINSAW SHARPENER

### Product Dimensions:

Weight ..... 6 lbs.  
Width (side-to-side) x Depth (front-to-back) x Height ..... 11 x 13-1/2 x 12 in.  
Footprint (Length/Width) ..... 9-1/2 x 5 in.

### Shipping Dimensions:

Type ..... Cardboard Box  
Content ..... Machine  
Weight ..... 7 lbs.  
Length x Width x Height ..... 11 x 8 x 7 in.  
Must Ship Upright ..... No

### Electrical:

Power Requirement ..... 120V, Single-Phase, 60 Hz  
Full-Load Current Rating ..... 0.6A  
Minimum Circuit Size ..... 15A  
Connection Type ..... Cord & Plug  
Power Cord Included ..... Yes  
Power Cord Length ..... 6 ft.  
Power Cord Gauge ..... 18 AWG  
Included Plug Type ..... 1-15  
Switch Type ..... ON/OFF Push Button

### Motor:

#### Main

Horsepower ..... 72W (1/10 HP)  
Phase ..... Single-Phase  
Amps ..... 0.6A  
Speed ..... 5000 RPM  
Type ..... Universal  
Power Transfer ..... Direct  
Bearings ..... Sealed & Permanently Lubricated

### Main Specifications:

#### Operation Info

Chain Pitch ..... 1/4, 0.325, 3/8, 0.404 in.  
Chain Gauge Capacity ..... 0.050 - 0.070 in.  
Vise Angles ..... 0-30 deg. L/R  
Wheel Type ..... Abrasive  
Wheel Material ..... Corundum, 100 Grit  
Wheel Dimensions ..... 4-1/4 in. Dia. x 3/16 in. Thick  
Wheel Speed ..... 5000 RPM  
Wheel Bore Max. Diameter ..... 7/8 in.  
Max. Wheel Diameter ..... 4-1/4 in.  
Max. Wheel Thickness ..... 3/16 in.



# SECTION 1: SAFETY

## For Your Own Safety, Read Instruction Manual Before Operating This Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures. Always use common sense and good judgment.

**⚠ DANGER** Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

**⚠ WARNING** Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

**⚠ CAUTION** Indicates a potentially hazardous situation which, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

**NOTICE** Alerts the user to useful information about proper operation of the machine to avoid machine damage.

## Safety Instructions for Machinery

### ⚠ WARNING

**OWNER'S MANUAL.** Read and understand this owner's manual **BEFORE** using machine.

**TRAINED OPERATORS ONLY.** Untrained operators have a higher risk of being hurt or killed. Only allow trained/supervised people to use this machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make your workshop kid proof!

**DANGEROUS ENVIRONMENTS.** Do not use machinery in areas that are wet, cluttered, or have poor lighting. Operating machinery in these areas greatly increases the risk of accidents and injury.

**MENTAL ALERTNESS REQUIRED.** Full mental alertness is required for safe operation of machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.

**ELECTRICAL EQUIPMENT INJURY RISKS.** You can be shocked, burned, or killed by touching live electrical components or improperly grounded machinery. To reduce this risk, only allow qualified service personnel to do electrical installation or repair work, and always disconnect power before accessing or exposing electrical equipment.

**DISCONNECT POWER FIRST.** Always disconnect machine from power supply **BEFORE** making adjustments, changing tooling, or servicing machine. This prevents an injury risk from unintended startup or contact with live electrical components.

**EYE PROTECTION.** Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are **NOT** approved safety glasses.



# WARNING

**WEARING PROPER APPAREL.** Do not wear clothing, apparel or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to reduce risk of slipping and losing control or accidentally contacting cutting tool or moving parts.

**HAZARDOUS DUST.** Dust created by machinery operations may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with each workpiece material. Always wear a NIOSH-approved respirator to reduce your risk.

**HEARING PROTECTION.** Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

**REMOVE ADJUSTING TOOLS.** Tools left on machinery can become dangerous projectiles upon startup. Never leave chuck keys, wrenches, or any other tools on machine. Always verify removal before starting!

**USE CORRECT TOOL FOR THE JOB.** Only use this tool for its intended purpose—do not force it or an attachment to do a job for which it was not designed. Never make unapproved modifications—modifying tool or using it differently than intended may result in malfunction or mechanical failure that can lead to personal injury or death!

**AWKWARD POSITIONS.** Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.

**CHILDREN & BYSTANDERS.** Keep children and bystanders at a safe distance from the work area. Stop using machine if they become a distraction.

**GUARDS & COVERS.** Guards and covers reduce accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged, and working correctly BEFORE operating machine.

**FORCING MACHINERY.** Do not force machine. It will do the job safer and better at the rate for which it was designed.

**NEVER STAND ON MACHINE.** Serious injury may occur if machine is tipped or if the cutting tool is unintentionally contacted.

**STABLE MACHINE.** Unexpected movement during operation greatly increases risk of injury or loss of control. Before starting, verify machine is stable and mobile base (if used) is locked.

**USE RECOMMENDED ACCESSORIES.** Consult this owner's manual or the manufacturer for recommended accessories. Using improper accessories will increase the risk of serious injury.

**UNATTENDED OPERATION.** To reduce the risk of accidental injury, turn machine **OFF** and ensure all moving parts completely stop before walking away. Never leave machine running while unattended.

**MAINTAIN WITH CARE.** Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. A machine that is improperly maintained could malfunction, leading to serious personal injury or death.

**DAMAGED PARTS.** Regularly inspect machine for damaged, loose, or mis-adjusted parts—or any condition that could affect safe operation. Immediately repair/replace BEFORE operating machine. For your own safety, DO NOT operate machine with damaged parts!

**MAINTAIN POWER CORDS.** When disconnecting cord-connected machines from power, grab and pull the plug—NOT the cord. Pulling the cord may damage the wires inside. Do not handle cord/plug with wet hands. Avoid cord damage by keeping it away from heated surfaces, high traffic areas, harsh chemicals, and wet/damp locations.

**EXPERIENCING DIFFICULTIES.** If at any time you experience difficulties performing the intended operation, stop using the machine! Contact our Technical Support at (570) 546-9663.



# Additional Safety for Chainsaw Sharpeners

## **WARNING**

Serious injury or death can occur from getting fingers, hair, or clothing entangled in rotating or moving parts. Workpieces can be ejected by sharpener, striking operator or bystanders. To minimize risk of injury, anyone operating this machine **MUST** completely heed hazards and warnings below.

**READ AND FOLLOW** all safety instructions in the chainsaw owner's manual.

**CHAIN INSPECTION.** Always visually inspect each chain component for severe wear or damage before sharpening or re-installing it on the chainsaw. If in doubt, do not sharpen or use the chain until the parts or the chain can be replaced.

**PERSONAL PROTECTIVE EQUIPMENT.** Always wear leather gloves when handling the chain. To protect yourself from flying particles, put on safety glasses and respirator before beginning the sharpening operation.

**GRINDING WHEEL INSPECTION.** To avoid the grinding wheel breaking apart during operation, always inspect it and perform the ring test before using. If in doubt as to the condition of the wheel, **DO NOT** use it!

**TOP PLATE LENGTH.** If the length of the cutter top plate from the leading edge to the rear of the cutter link is less than ¼" after sharpening, there is a high risk that this link will break during the cutting operation. Always inspect the cutter after sharpening and replace it or the chain if in doubt.

**CHAIN SPECIFICATIONS.** If the chain is incorrectly sharpened, the links could break during use and send flying debris at the operator or bystanders. Always make sure the sharpener setup agrees with the chain manufacturer's specifications.

**VOLATILE/FLAMMABLE MATERIALS.** The grinding wheel produces sparks when sharpening the chain that could cause volatile materials to catch fire or explode. Never use flammable materials to clean the chain (such as gasoline, kerosene, or mineral spirits) and never operate the sharpener near volatile or flammable materials.

## **WARNING**

Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to decrease the risk of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

## **CAUTION**

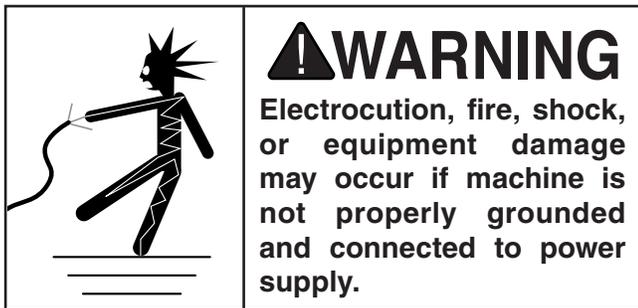
No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.



# SECTION 2: POWER SUPPLY

## Availability

Before installing the machine, consider the availability and proximity of the required power supply circuit. If an existing circuit does not meet the requirements for this machine, a new circuit must be installed. To minimize the risk of electrocution, fire, or equipment damage, installation work and electrical wiring must be done by an electrician or qualified service personnel in accordance with all applicable codes and standards.



## Full-Load Current Rating

The full-load current rating is the amperage a machine draws at 100% of the rated output power. On machines with multiple motors, this is the amperage drawn by the largest motor or sum of all motors and electrical devices that might operate at one time during normal operations.

### Full-Load Current Rating at 120V ... 0.6 Amps

The full-load current is not the maximum amount of amps that the machine will draw. If the machine is overloaded, it will draw additional amps beyond the full-load rating.

If the machine is overloaded for a sufficient length of time, damage, overheating, or fire may result—especially if connected to an undersized circuit. To reduce the risk of these hazards, avoid overloading the machine during operation and make sure it is connected to a power supply circuit that meets the specified circuit requirements.

## **! WARNING**

**Serious injury could occur if you connect machine to power before completing setup process. DO NOT connect to power until instructed later in this manual.**

## 120V Circuit Requirements

This machine is prewired to operate on a power supply circuit that has a verified ground and meets the following requirements:

Voltage..... 120V  
Cycle.....60 Hz  
Phase..... Single-Phase  
Power Supply Circuit ..... 15 Amps

A power supply circuit includes all electrical equipment between the breaker box or fuse panel in the building and the machine. The power supply circuit used for this machine must be sized to safely handle the full-load current drawn from the machine for an extended period of time. (If this machine is connected to a circuit protected by fuses, use a time delay fuse marked D.)

## **! CAUTION**

**For your own safety and protection of property, consult an electrician if you are unsure about wiring practices or electrical codes in your area.**

**Note:** *Circuit requirements in this manual apply to a dedicated circuit—where only one machine will be running on the circuit at a time. If machine will be connected to a shared circuit where multiple machines may be running at the same time, consult an electrician or qualified service personnel to ensure circuit is properly sized for safe operation.*



## Polarized Plug

This tool is double-insulated and therefore does not have a grounding wire or plug. The two-pronged, NEMA 1-15 plug has a polarized end; this means that one prong (the neutral connector) is wider than the other (the hot connector). Polarized plugs must be used only with polarized receptacles. Do not attempt to plug this machine into a non-polarized receptacle. If a polarized receptacle is not available, a qualified electrical technician will have to install one before the machine can be plugged in.

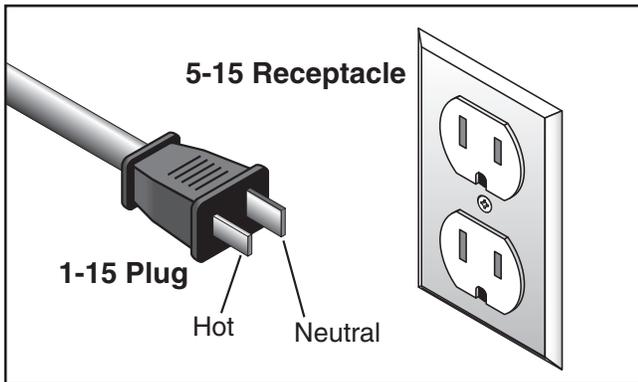


Figure 10. Typical 1-15 plug and receptacle.

## Extension Cords

When using extension cords, make sure the cords are rated for outdoor use. Outdoor use cords are marked with a "W-A" or a "W" to signify their rating. Always check to make sure that the extension cords are in good working order and free of any type of damage, such as exposed wires, cuts, creased bends, or missing prongs.

Extension cords cause voltage drop, which may damage electrical components and shorten motor life. Voltage drop increases as the extension cord size gets longer and the gauge size gets smaller (higher gauge numbers indicate smaller sizes). When using extension cords, always choose the shortest cord possible, with the greatest-sized gauge.

Below is a list of minimum gauge sizes needed for running this tool at different lengths:

25 Feet.....	16AWG
50 Feet.....	14AWG
100 Feet.....	12AWG
Over 100 Feet.....	Not Recommended



# SECTION 3: SETUP

## Unpacking

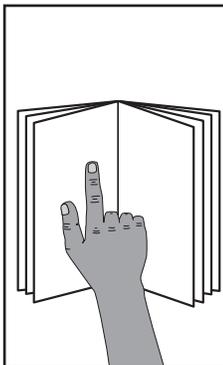
This machine was carefully packaged for safe transport. When unpacking, separate all enclosed items from packaging materials and inspect them for shipping damage. ***If items are damaged, please call us immediately at (570) 546-9663.***

**IMPORTANT:** Save all packaging materials until you are completely satisfied with the machine and have resolved any issues between Grizzly or the shipping agent. ***You MUST have the original packaging to file a freight claim. It is also extremely helpful if you need to return your machine later.***

## Needed for Setup

The following items are needed, but not included, for the setup/assembly of this machine.

Description	Qty
• Safety Glasses .....	1
• Mounting Hardware (Page 15) ... As Needed	



### **!WARNING**

This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!

## Inventory

The following is a list of items shipped with your machine. Before beginning setup, lay these items out and inventory them.

If any non-proprietary parts are missing (e.g. a nut or a washer), we will gladly replace them; or for the sake of expediency, replacements can be obtained at your local hardware store.

Box 1 (Figure 11)	Qty
A. Sharpener.....	1
B. Swing Arm Handle .....	1
C. Depth Stop Knob.....	1
D. Chain Holder Assembly.....	1

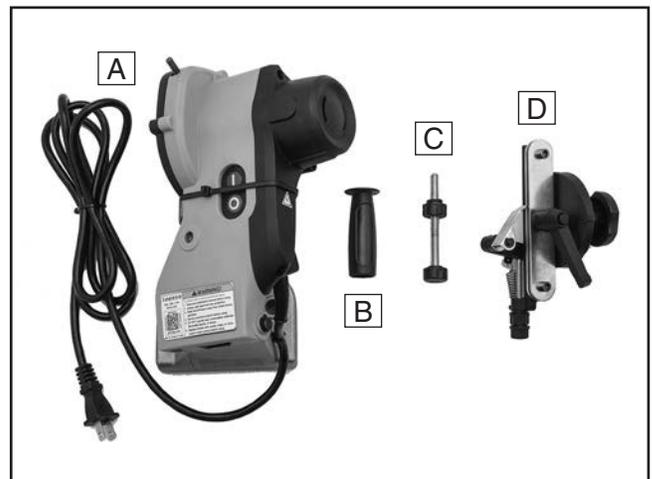


Figure 11. T28959 Inventory.

### **NOTICE**

If you cannot find an item on this list, carefully check around/inside the machine and packaging materials. Often, these items get lost in packaging materials while unpacking or they are pre-installed at the factory.



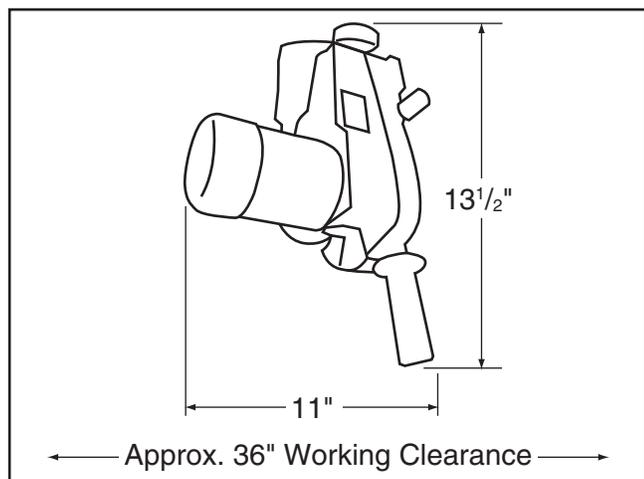
# Site Considerations

## Workbench Load

Refer to the **Machine Data Sheet** for the weight and footprint specifications of your machine. Some workbenches may require additional reinforcement to support the weight of the machine and workpiece materials.

## Placement Location

Consider anticipated workpiece sizes and additional space needed for auxiliary stands, work tables, or other machinery when establishing a location for this machine in the shop. Below is the minimum amount of space needed for the machine.



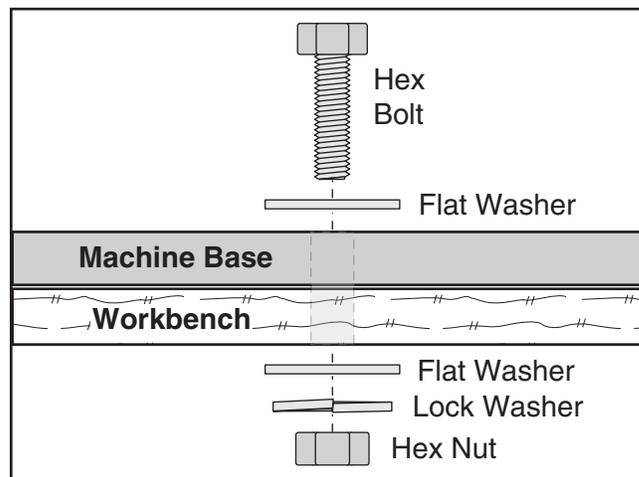
**Figure 12.** Minimum working clearances.

	<p><b>⚠ CAUTION</b></p> <p>Children and visitors may be seriously injured if unsupervised around this machine. Lock entrances to the shop or disable start switch or power connection to prevent unsupervised use.</p>
--	--

# Bench Mounting

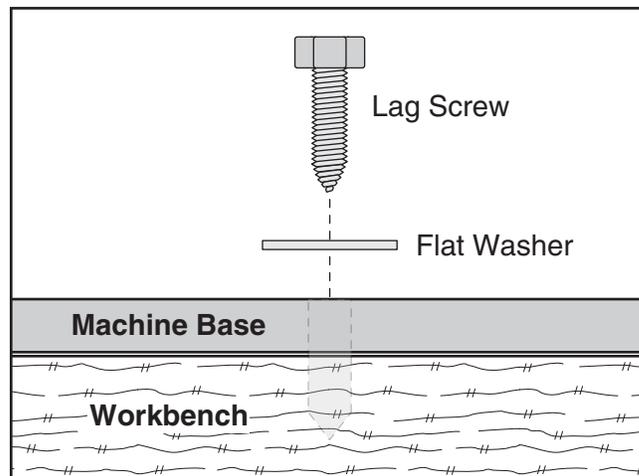
The base of this machine has two holes for mounting it to a workbench. Because of the forces applied to the machine during operation, you **MUST** securely mount it to a workbench to prevent it from tipping or shifting during operation. Any unexpected movement could result in injury or property damage.

The strongest mounting option is a "Through Mount" (see example below) where holes are drilled all the way through the workbench—and hex bolts, washers, and hex nuts are used to secure the machine in place.



**Figure 13.** "Through Mount" setup.

Another option is a "direct mount" (see example below) where the machine is secured directly to the workbench with lag screws and washers.



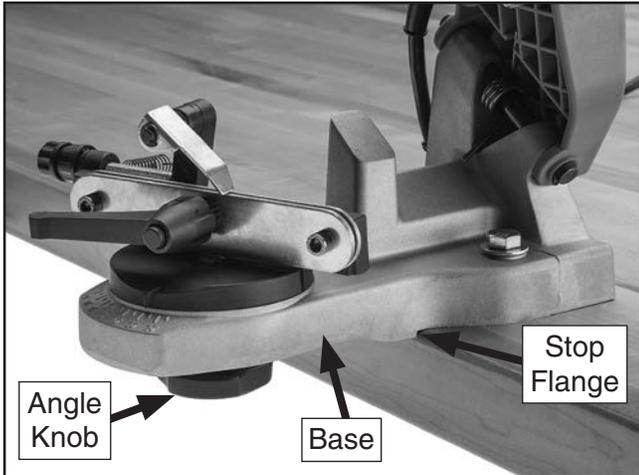
**Figure 14.** "Direct Mount" setup.



Number of Mounting Holes ..... 2  
Diameter of Mounting Hardware Needed .. 3/8"

**To mount the sharpener:**

1. Place base flat on workbench, slide it back until stop flanges (see **Figure 15**) hit front of the workbench.



**Figure 15.** Stop flange against the workbench.

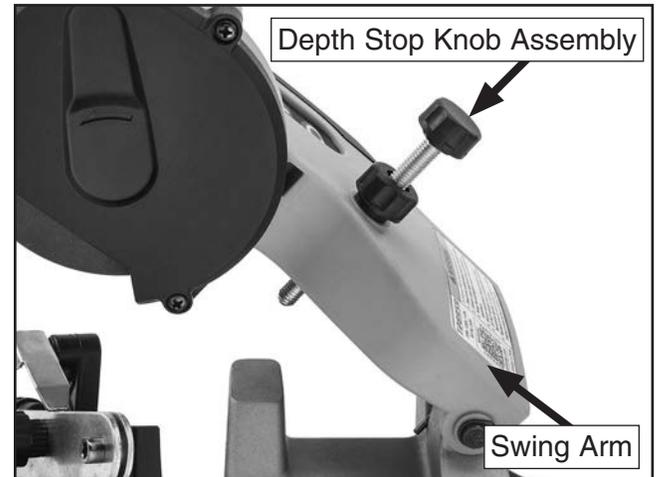
2. Mark mounting hole locations and move base to side.
3. Drill holes in workbench surface.
4. Re-position base over holes and use appropriate hardware to securely mount base to workbench using Through Mount or Direct Mount techniques (see **Figures 13 and 14** on **Page 14**).

# Assembly

The Model T28959 is shipped partially assembled. Perform the following procedure to complete the assembly.

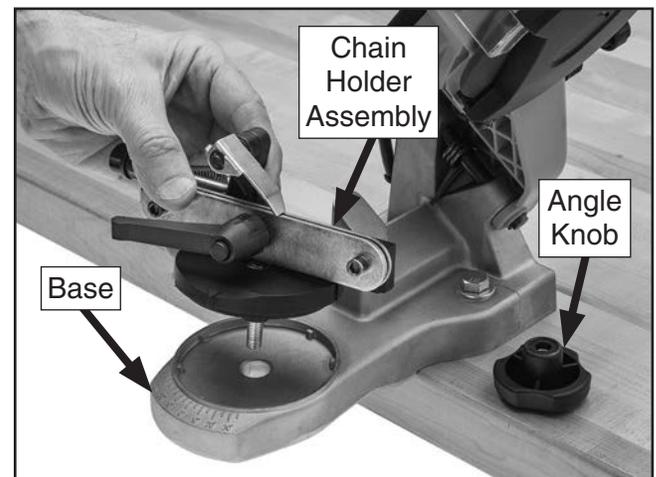
**To assemble the sharpener:**

1. Thread depth stop knob assembly into hole on swing arm (see **Figure 16**).



**Figure 16.** Depth stop knob assembly.

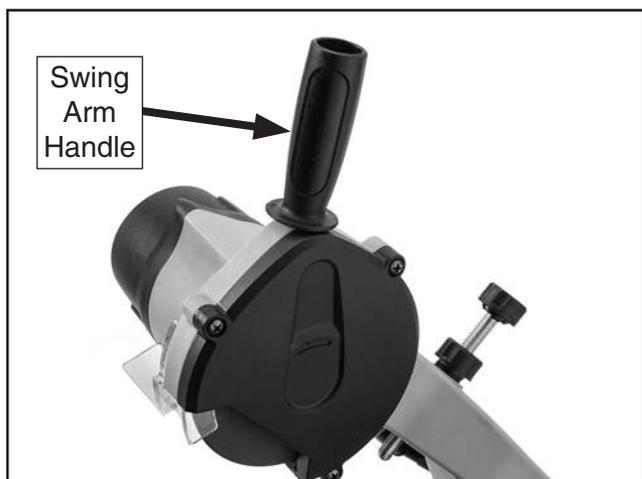
2. Remove angle knob from chain holder assembly (see **Figure 17**).
3. Attach chain holder assembly to base (see **Figure 17**).
4. Secure chain holder assembly to base with angle knob (see **Figure 17**).



**Figure 17.** Attaching chain holder assembly to base.



5. Thread swing arm handle onto bolt on swing arm (see **Figure 18**).



**Figure 18.** Swing arm handle attached.

## Test Run

Once assembly is complete, test run the machine to ensure it is properly connected to power and safety components are functioning correctly.

If you find an unusual problem during the test run, immediately stop the machine, disconnect it from power, and fix the problem **BEFORE** operating the machine again. The **Troubleshooting** table in the **SERVICE** section of this manual can help.

The Test Run consists of verifying the following: 1) The motor powers up and runs correctly.

### **!WARNING**

**Serious injury or death can result from using this machine BEFORE understanding its controls and related safety information. DO NOT operate, or allow others to operate, machine until the information is understood.**

### **!WARNING**

**DO NOT start machine until all preceding setup instructions have been performed. Operating an improperly set up machine may result in malfunction or unexpected results that can lead to serious injury, death, or machine/property damage.**

#### To test run machine:

1. Clear all setup tools away from machine.
2. Connect machine to power supply.
3. Turn machine **ON**, verify motor operation, and then turn machine **OFF**.

The motor should run smoothly and without unusual problems or noises.

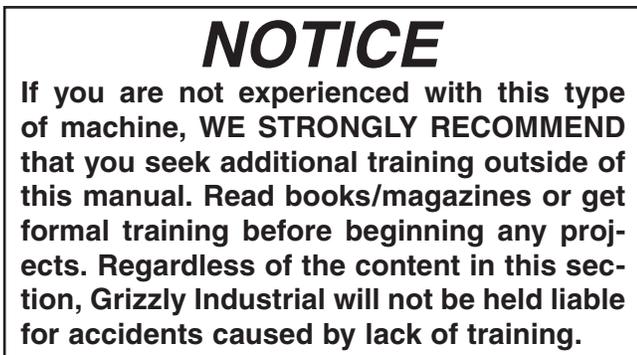
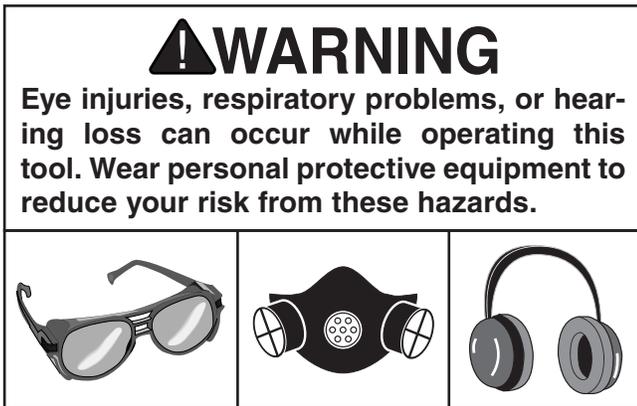


# SECTION 4: OPERATIONS

## Operation Overview

The purpose of this overview is to provide the novice machine operator with a basic understanding of how the machine is used during operation, so the machine controls/components discussed later in this manual are easier to understand.

Due to the generic nature of this overview, it is **not** intended to be an instructional guide. To learn more about specific operations, read this entire manual, seek additional training from experienced machine operators, and do additional research outside of this manual by reading "how-to" books, trade magazines, or websites.



To complete a typical operation, the operator does the following:

1. Removes chain from chainsaw.
2. Cleans chain with a non-flammable cleaner to remove any oil, dirt, and grime, then uses compressed air to thoroughly dry chain.
3. Examines chain to make sure it is suitable for sharpening. Checks for damaged broken, or excessively worn cutter links.
4. Positions chain in chain holder assembly.
5. Secures chain in chain holder assembly by tightening chain clamp lever.
6. Adjusts chain holder assembly, if necessary, to desired angle.
7. Secures chain holder assembly angle by tightening chain holder knob.
8. Adjusts depth stop bolt as needed.
9. Checks infeed and outfeed sides of machine to make sure workpiece can safely pass all the way through grinding wheel without interference.
10. Puts on safety glasses, respirator, and hearing protection.
11. Starts sharpener.
12. Slowly pulls handle down towards chain and keeps hands and fingers out of the grinding wheel's path and away from wheel.
13. Stops machine when operation is complete.



# How the Chain Cuts

Sharp chains cause wood chips to fall away from the chainsaw. A chip-free chainsaw bar guides the chain straight through the cut. Dull chains build up with wood chips, not allowing the chain to move smoothly around the bar. This causes cuts that are rough and not true. A dull chain also puts more strain on the motor.

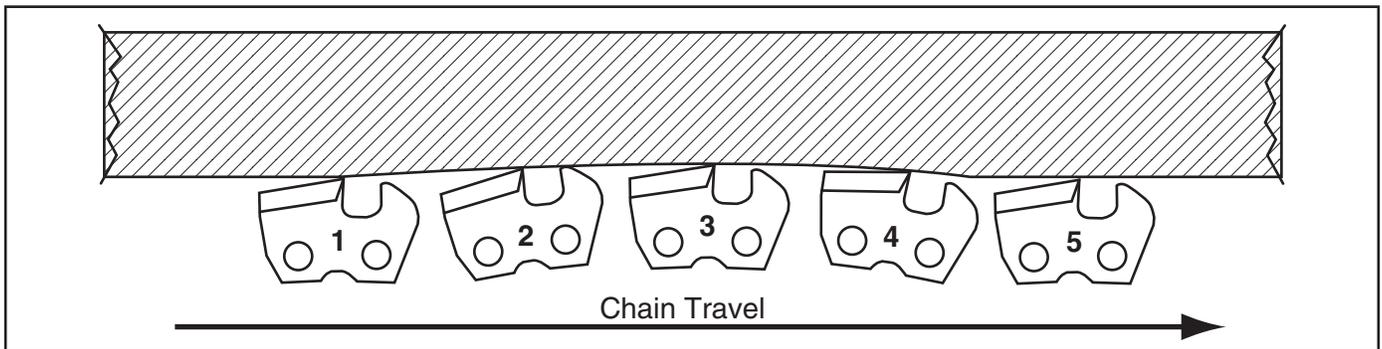
As illustrated in **Figure 19** below, when the cutting point at the top of the cutter moves against the wood (1), the front of the cutter pivots up until the depth gauge meets the wood (2), which forces the cutter to pivot even farther into the wood (3) to make the cut.

When the rear of the top plate meets the wood (4), it forces the cutter to continue pivoting forward and move out of the kerf, producing wood chips that are carried away by the top plate angle in the final position (5) to complete the cut.

The goal of this rocking motion is to allow the chainsaw to self-feed into the wood and do the work without requiring the operator to force the chain into the wood. This makes the job easier and reduces wear on the saw and chain.

Also important is the clearance angle amount. The downward slope of the top plate enables the cutter to move into the wood (2) and then forces it out again (3–4) to complete the cut.

Always use the chain manufacturer's specifications for the cutter specifications when sharpening the chain.



**Figure 19.** The self-feeding motion of the cutter link during a cutting operation.



# Grinding Wheel Selection

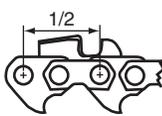
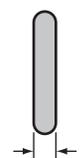
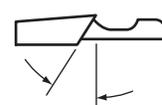
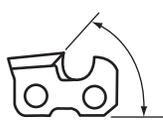
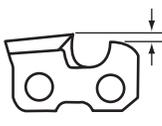
The grinding wheel supplied with the Model T28959 is specific to this sharpener. Refer to the specifications below when purchasing replacements.

Max. Wheel Diameter..... 4<sup>1</sup>/<sub>4</sub>"  
 Wheel Thickness Range ..... 1/8"-3/16"  
 Bore ..... 7/8"  
 Grit ..... 100  
 Material..... Corundum

We recommend that you always refer to the chain manufacturer's specifications when setting up the sharpener. However, you can use the chart in **Figure 20** as a general guide when selecting the proper grinding wheel for your chainsaw.

**⚠ WARNING**  
 Grinding wheels that break apart during operation can send high-speed debris at the operator or bystanders. **ALWAYS** visually inspect the grinding wheel and perform the ring test (see *Wheel Inspection & Ring Test* on the next page for detailed instructions) before mounting the wheel onto the sharpener. If there is visual damage or the wheel does not pass the ring test, **DO NOT** use it!

**NOTICE**  
 The Model T28959 is not designed to adjust the depth gauge setting, and it is beyond the scope of this manual to explain the many methods to perform this task.

					
Chain Pitch	Chain Gauge	Wheel Thickness	Top Plate & Chain Holder Angle	Top Plate Cutting Angle/ Wheel Tilt	Depth Gauge
1/4"	0.050"	1/8"	30°	60°	0.025"
0.325"	0.050"	1/8"	25°	60°	0.025"
0.325"	0.058"	1/8"	25°	60°	0.025"
0.325"	0.063"	1/8"	25°	60°	0.025"
3/8"	0.050"	1/8"	25°	60°	0.025"
3/8"	0.058"	1/8"	25°	60°	0.025"
3/8"	0.063"	1/8"	25°	60°	0.025"
0.404"	0.058"	3/16"	25°	60°	0.025"
0.404"	0.063"	3/16"	25°	60°	0.025"
0.404"	0.080"	3/16"	35°	60°	0.050"

**Figure 20.** Typical chainsaw sharpening specifications.



# Wheel Inspection & Ring Test

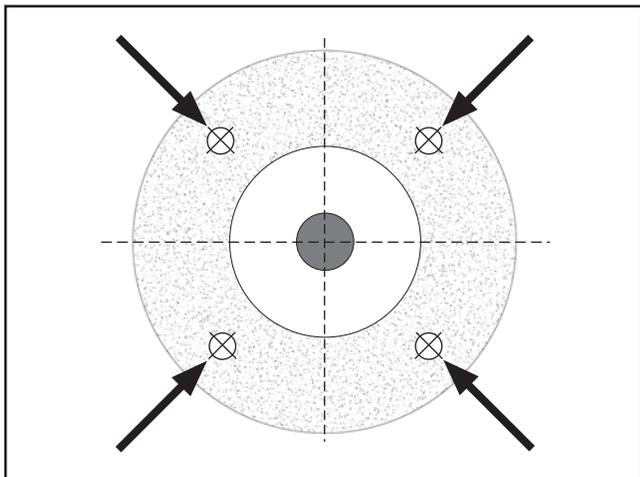
Do not assume that a grinding wheel is in sound condition just because it is new or looks okay. Often damage can occur in shipping, with age, or with exposure to moisture, and may not be visible. Inspect every wheel for damage before installation.

First, do a visual inspection. Look for any cracks, chips, nicks, or dents in the surface of the wheel. If you see any of these, DO NOT use the wheel.

Second, do a ring test. This test will give you an indication of any internal damage that may not be obvious during a visual inspection. If the wheel does not pass the ring test, DO NOT use the wheel.

## To perform a ring test:

1. Make sure the wheel you test is clean and dry to avoid false results.
2. If size permits, balance wheel with your finger in center hole, or hang the wheel with a piece of cord or string looped through bore.
3. At four spots on wheel shown in **Figure 21**, gently tap wheel with a non-metallic object, such as a wooden mallet.



**Figure 21.** Tapping locations for a ring test.

4. An undamaged wheel will emit a clear metallic ring or "ping" sound in each of the four spots. A damaged wheel will respond with a dull thud that has no clear tone.

— If you determine from the results of the ring test that the wheel is damaged, DO NOT USE IT!

# Installing Grinding Wheel

## **!WARNING**

**During operation, sparks and debris are thrown from the wheel and chain. To reduce the risk of operator injury from this material, ALWAYS make sure the wheel and arbor safety guards are correctly installed before connecting the sharpener to power!**

## Items Needed

Qty

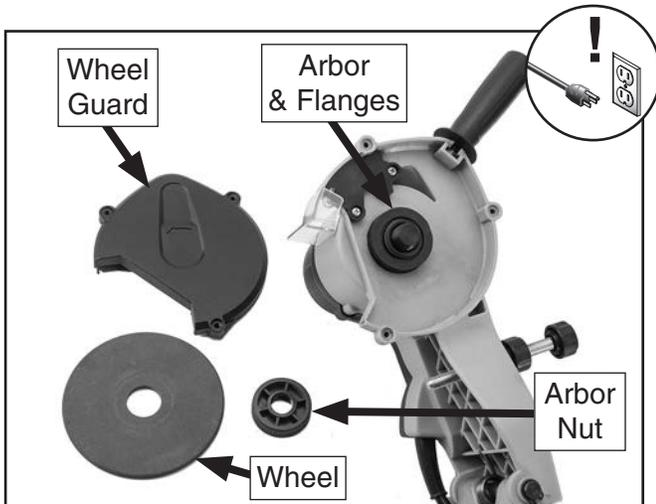
Phillips Screwdriver #2 ..... 1

## To install grinding wheel:

1. DISCONNECT MACHINE FROM POWER!
2. Select correct grinding wheel for chain (see **Grinding Wheel Selection** on **Page 19**).
3. Perform **Wheel Inspection & Ring Test**. If wheel does not pass visual inspection or ring test, DO NOT use it!



- Loosen (3) Phillips head screws to remove wheel guard (see **Figure 22**).



**Figure 22.** Safety guards removed.

- Remove arbor nut, then place grinding wheel on inner flange.
- Replace arbor nut, and tighten.

**⚠ WARNING**

**Over-tightening the arbor nut could cause the grinding wheel to crack and break apart during operation, which would send flying debris at the operator. DO NOT overtighten!**

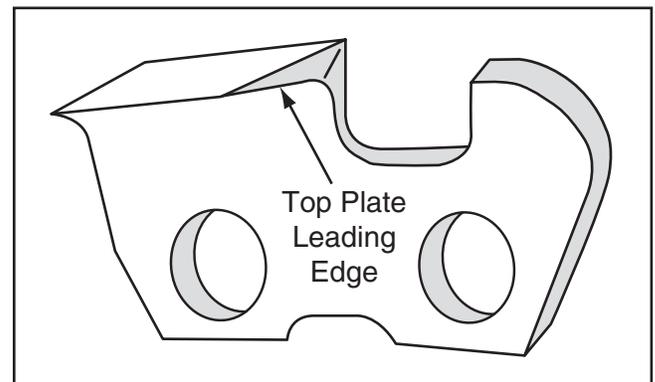
- Replace wheel guard and tighten screws (see **Figure 23**).



**Figure 23.** Grinding wheel and safety guard installed.

## Adjusting Top Plate Leading Edge

It is necessary to grind the correct angle into the top and side plates (see **Figure 24**) to form the top plate leading edge. This edge forces wood chips away from the kerf.



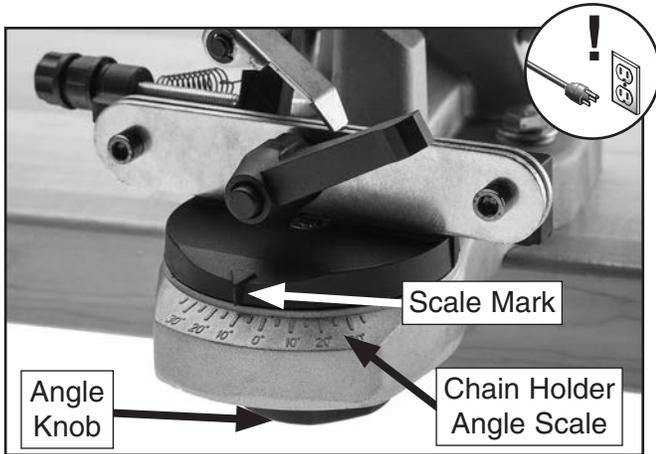
**Figure 24.** Top plate angle of a left-hand cutter.

The grinding wheel tilt and the scale on the base establish the top plate leading edge. The grinding wheel tilt is fixed at approximately 60°.

*Continued on next page* →



The chain holder angle scale on the front of the base (see **Figure 25**) has angle marks to the left and right of 0°. The angle marks on the *right* side of the scale are used when sharpening *left-hand* cutters (see **Left- & Right-Hand Cutters** on **Page 6**). The angle marks on the *left* side of the scale are used when sharpening *right-hand* cutters.



**Figure 25.** Chain holder angle scale functions.

**Note:** Always refer to chain manufacturer's specifications when setting up sharpener. If information is not available, use chart on **Page 19**.

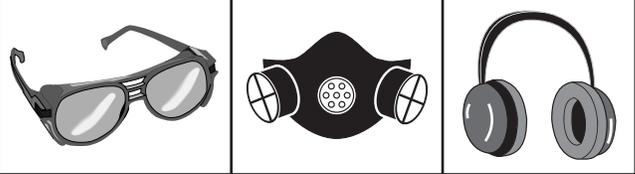
**To set up holder for top plate leading edge:**

1. DISCONNECT MACHINE FROM POWER!
2. Loosen chain holder angle knob (see **Figure 25**).
3. Rotate chain holder assembly to align mark with scale on base that matches chain, then re-tighten chain holder angle knob.

# Sharpening Operation

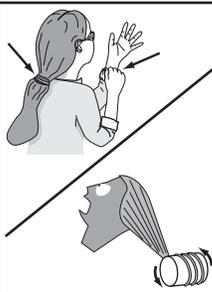
## ⚠ WARNING

Eye injuries, respiratory problems, or hearing loss can occur while operating this tool. Wear personal protective equipment to reduce your risk from these hazards.



## ⚠ WARNING

Keep hair, clothing, and jewelry away from moving parts at all times. Entanglement can result in death, amputation, or severe crushing injuries!



## ⚠ CAUTION

Chains are very sharp! Always wear leather gloves when handling and positioning chains. **DO NOT** wear gloves during sharpening operations.



In the following sharpening procedure, you adjust the sharpener settings to grind the correct angles for the chain, then sharpen each cutter link one at a time. Sharpen the right-hand cutters first and then sharpen the left-hand cutters.



Before using the sharpener, make sure it is fully assembled, secured to a workbench or stand, and the correct grinding wheel is installed.

#### To sharpen chain cutter links:

1. Clean chain with a non-flammable cleaner to remove oil, dirt, and grime, then use compressed air to thoroughly dry chain.
2. Visually inspect chain and replace any damaged links that could break during sharpening. If link replacement is not possible, replace chain.
3. Ensure all cutter top plates will be at least  $\frac{1}{4}$ " long after sharpening procedure is completed.

### **!WARNING**

If you suspect that any cutter top plate will be shorter than  $\frac{1}{4}$ " long after sharpening, replace that link or replace the chain to reduce risk of personal injury due to chain failure during cutting operations.

4. DISCONNECT MACHINE FROM POWER!

### **NOTICE**

Always refer to the chain manufacturer's specifications when setting up sharpener. If this information is not available, use Figure 20 on Page 19 as a general guide.

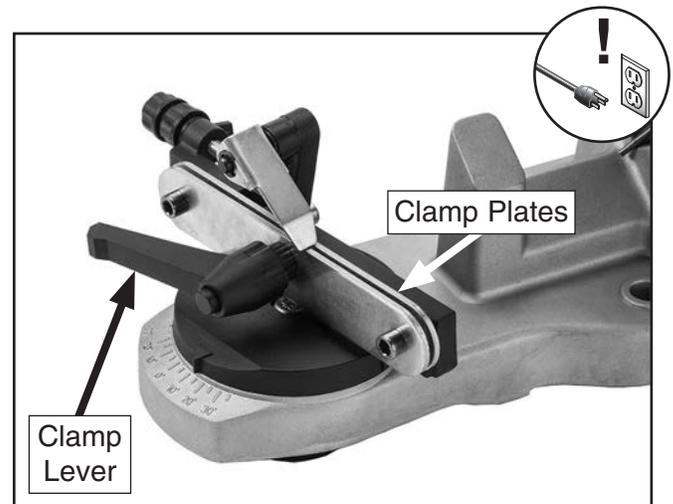
**Note:** These instructions begin by sharpening right-hand cutters.

5. Rotate chain holder counterclockwise (looking down on it) and align it with the correct rotation angle mark on the scale for the chain, as instructed in **Adjusting Top Plate Leading Edge** on **Page 21**. This setting determines top plate angle.

### **!WARNING**

If the grinding wheel fails during operation, the only thing between you and flying debris are the wheel and arbor safety guards. **ALWAYS** make sure the wheel and arbor safety guards are properly secured in place before connecting the machine to power!

6. Use clamp lever (see **Figure 26**) to set gap between clamp plates to match chain gauge.



**Figure 26.** Clamp lever and clamp plates.

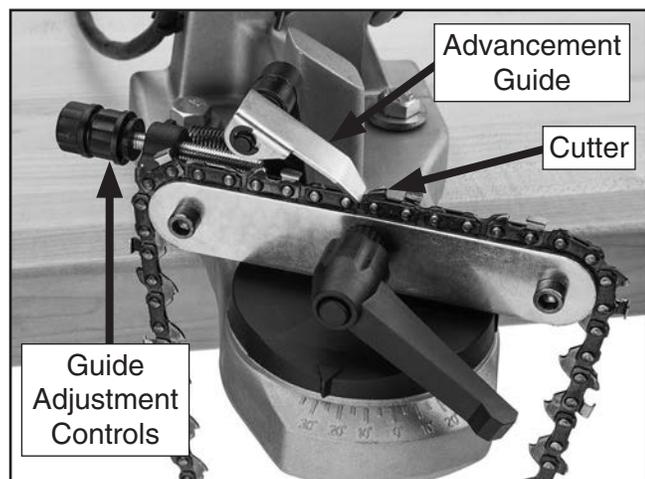
7. Locate cutter link with shortest top plate length and position chain with link under grinding wheel.

**Note:** If all top plates are approximately the same length, then start with any cutter. The goal is to have all top plates with equal length after sharpening to ensure they cut material equally during operation.

8. Use chalk or a marker to note the first link to be sharpened so that you will know when you are finished with that side of cutters.



- Position edge of advancement guide behind cutter to be sharpened, then pull chain left until guide catches and stops chain (see **Figure 27**).

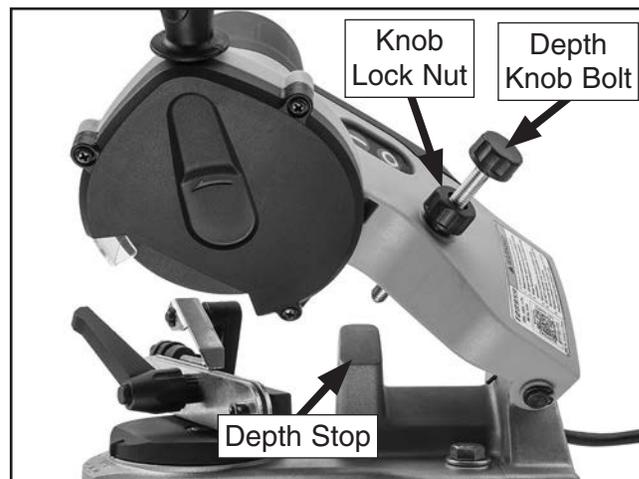


**Figure 27.** Advancement guide and controls.

**Note:** Attaining the proper setting for the advancement guide requires trial and error. This setting is critical to properly sharpen the cutters, so take the time to find the correct setting. The goal is to position the cutter in relation to the grinding wheel so that top plate angle, top plate cutting angle, and gullet angle will be correctly sharpened.

- With machine still disconnected from power, lower grinding wheel into the gullet.
  - If wheel matches gullet profile and is against top and side plates when completely lowered, advancement guide is properly set for now. Tighten knob lock nut on adjustment controls behind guide to secure setting.
  - If wheel hits top plate or depth gauge and does not completely lower into gullet, or it is not against top and side plates, adjust advancement guide until it successfully stops chain in proper position. Be sure to secure setting by tightening knob lock nut.
- Tighten clamp lever to firmly secure chain between chain holder clamp plates.

- Lower grinding wheel into cutter gullet until it stops, then thread depth knob bolt down until it reaches depth stop (see **Figure 28**).



**Figure 28.** Depth stop and controls.

**Note:** When adjusting depth knob bolt, sharpen angles that may be worn or damaged. Do not make gullet any deeper than necessary.

Also, taking deep cuts with the grinding wheel could burn the metal, which will damage the temper of the steel. Chain cutters that are overheated during sharpening become brittle and dull quickly. It is better to make a few light passes than one deep one!

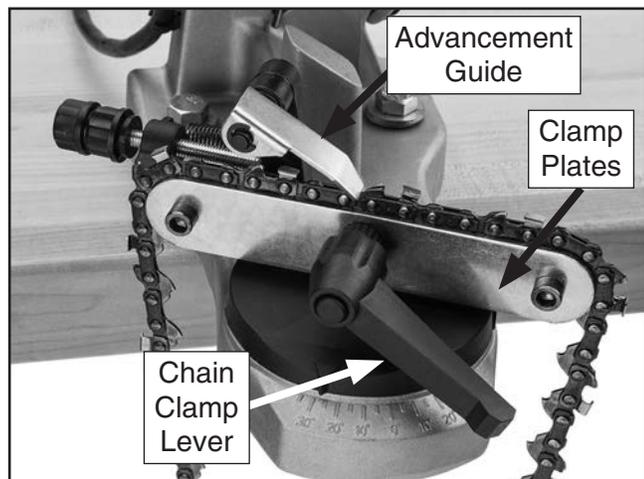
- Back depth knob bolt away from depth stop by a  $\frac{1}{4}$  turn, then tighten knob lock nut to secure setting (see **Figure 28**).
- Adjust advancement guide so that chain moves slightly to right. This will remove a small amount from top and side plates and provide sharpened angles.
- Connect sharpener to power, turn **ON**, and wait for grinding wheel to reach full speed.
- Using a slow and steady pace, lower grinding wheel into first cutter link until depth bolt hits stop, then let swing arm raise grinding wheel.

## **⚠ CAUTION**

**Do not touch grinding wheel while it is spinning. Serious injuries to fingers and hands will occur.**



17. Loosen clamp lever enough to release chain from clamp plates.
18. Carefully pull chain right until advancement guide falls behind next cutter link, then firmly pull chain left to seat the advancement guide against next cutter link (see **Figure 29**).



**Figure 29.** Advancement guide.

19. Re-tighten clamp lever and repeat **Steps 15–18** until all cutters for that side of chain have been sharpened.
20. Turn machine **OFF** and wait for grinding wheel to completely stop, then disconnect sharpener from power.
21. Release chain from clamp plates, then turn it around 180° to sharpen remaining cutters.
22. Rotate chain holder to align with angle marks on opposite side of rotation scale.
23. Verify sharpener settings, then repeat **Steps 14–19** for remaining cutters on chain.
24. Follow manufacturer's recommendation to clean and lubricate chain before re-installing.

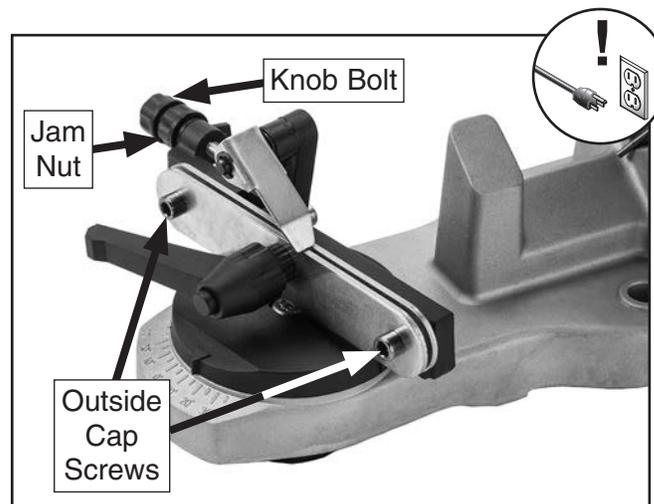
## Adjusting Clamp Plate Pressure

The pressure of the chain holder clamp plates can be adjusted.

Items Needed	Qty
Hex Wrench 5mm.....	1

### To adjust clamp plate pressure:

1. **DISCONNECT MACHINE FROM POWER!**
2. Loosen (2) cap screws shown in **Figure 30**.
3. Loosen jam nut on knob bolt, then thread knob bolt in to force inner clamp toward outer clamp (see **Figure 30**).



**Figure 30.** Clamp plate components.

4. Re-tighten jam nut and outside cap screws.
5. Test clamping pressure of the plates with your chain. If necessary, repeat **Steps 2–4** until clamping pressure meets your needs.



# SECTION 5: ACCESSORIES

## **! WARNING**

Installing unapproved accessories may cause machine to malfunction, resulting in serious personal injury or machine damage. To reduce this risk, only install accessories recommended for this machine by Grizzly.

## **NOTICE**

Refer to our website or latest catalog for additional recommended accessories.

### **T28192—6.5-Ton Log Splitter**

This electric Log Splitter will make quick work of your log-splitting chores. Electric power means there are no worries about dangerous exhaust fumes, so you can work under cover in all types of weather. Features include auto-ram return, variable ram stroke adjustment, built-in wheels for easy mobility, and two-handed control for safe operation. If you heat with wood, you need one of these!



**Figure 31.** T28192 6.5-Ton Log Splitter.

- T20501—Face Shield Crown Protector 4"
- T20502—Face Shield Crown Protector 7"
- T20503—Face Shield Window
- T20452—"Kirova" Anti-Reflective S. Glasses
- T20451—"Kirova" Clear Safety Glasses
- T20456—"Dakura" Clear Safety Glasses



**Figure 32.** Eye protection assortment.

- H4978—Deluxe Earmuffs - 27dB
  - H4979—Twin Cup Hearing Protector - 29dB
  - T20446—Ear Plugs 200 Pair - 31dB
- Protect your hearing before its too late. Especially important if you or employees operate for hours at a time.

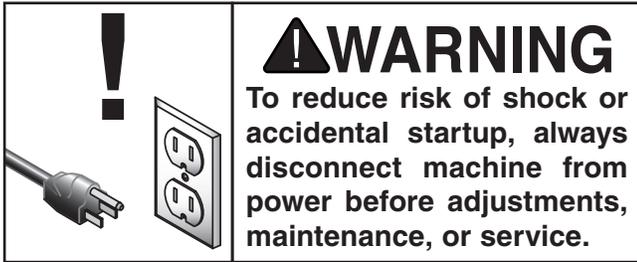


**Figure 33.** Hearing protection assortment.

**order online at [www.grizzly.com](http://www.grizzly.com) or call 1-800-523-4777**



# SECTION 6: MAINTENANCE



## Schedule

For optimum performance from this machine, this maintenance schedule must be strictly followed.

### Ongoing

To maintain a low risk of injury and proper machine operation, if you ever observe any of the items below, shut down the machine immediately and fix the problem before continuing operations:

- Loose mounting bolts.
- Damaged or worn grinding wheel.
- Loose lock knobs and bolts.
- Worn or damaged wires or switch.
- Any other unsafe condition.

## Cleaning & Protecting

Cleaning Model T28959 is relatively easy. Wipe off metal dust with dry cloth. If any oil has built up, use a degreaser to remove it.

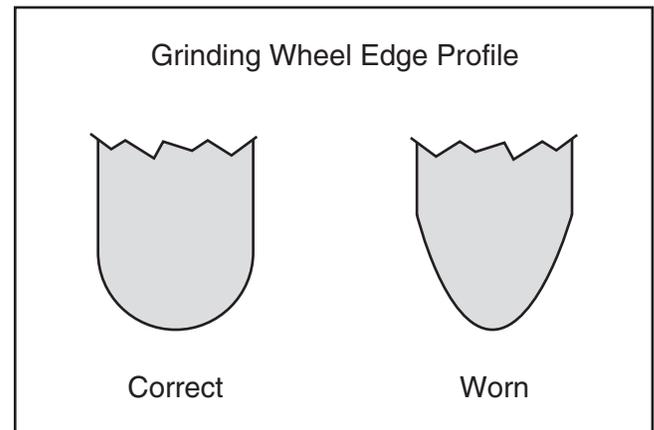
## Lubrication

There are not any parts on model T28959 that require lubrication by the end user.

The motor bearings were lubricated and permanently sealed at the factory and do not need any further attention unless they need replacement.

## Grinding Wheel

The edge profile and surface condition of the grinding wheel is critical in maintaining the proper shape of the top plate leading edge when sharpening. Replace the grinding wheel when the edge profile shows wear, as illustrated in **Figure 34**.



**Figure 34.** Grinding wheel edge profile.

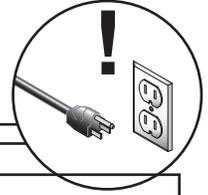
**Note:** Do not use a wheel dresser on the grinding wheel that comes with the Model T28959. Replace the wheel instead.



# SECTION 7: SERVICE

Review the troubleshooting procedures in this section if a problem develops with your machine. If you need replacement parts or additional help with a procedure, call our Technical Support. **Note:** *Please gather the serial number and manufacture date of your machine before calling.*

## Troubleshooting



Symptom	Possible Cause	Possible Solution
Machine does not start or a power-supply fuse/breaker trips immediately after startup.	<ol style="list-style-type: none"> <li>1. Plug/receptacle at fault/wired incorrectly.</li> <li>2. Power supply circuit breaker tripped.</li> <li>3. Wiring broken, disconnected, or corroded.</li> <li>4. Motor ON/OFF switch at fault.</li> <li>5. Circuit board at fault.</li> <li>6. Motor at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Test for good contacts; correct the wiring.</li> <li>2. Ensure circuit is sized correctly and free of shorts. Reset circuit breaker.</li> <li>3. Check/fix broken, disconnected, or corroded wires.</li> <li>4. Replace switch.</li> <li>5. Inspect/replace if at fault.</li> <li>6. Test/repair/replace.</li> </ol>
Machine stalls or is underpowered.	<ol style="list-style-type: none"> <li>1. Operation overloading motor.</li> <li>2. Motor overheated.</li> <li>3. Motor bearings at fault.</li> <li>4. Motor at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce feed rate; replace grinding wheel; make sure sharpener adjustments are correct for chain (see <b>Page 20</b>).</li> <li>2. Clean motor, let cool, and reduce workload.</li> <li>3. Test/repair/replace.</li> <li>4. Test/repair/replace.</li> </ol>
Machine has vibration or noisy operation.	<ol style="list-style-type: none"> <li>1. Motor or component loose.</li> <li>2. Grinding wheel at fault/arbor hole not round.</li> <li>3. Machine incorrectly mounted to workbench.</li> <li>4. Motor bearings at fault.</li> <li>5. Motor shaft bent.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace damaged bolts/nuts or tighten if loose.</li> <li>2. Replace grinding wheel (refer to <b>Page 20</b>).</li> <li>3. Tighten mounting hardware; use shims if necessary.</li> <li>4. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.</li> <li>5. Test with dial indicator and replace motor.</li> </ol>
Cutter edges burned or discolored; not being properly sharpened.	<ol style="list-style-type: none"> <li>1. Not using correct grinding wheel.</li> <li>2. Sharpener adjustments not correct.</li> <li>3. User placing grinding wheel against cutter too long or too hard during sharpening operation.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use the correct size and grit grinding wheel; inspect, replace wheel (see <b>Page 19</b>).</li> <li>2. Make sure sharpener adjustments are correct for chain (see <b>Page 19</b>).</li> <li>3. Raise the grinding wheel away from cutter as soon as depth bolt hits depth stop.</li> </ol>



# SECTION 8: WIRING

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Compare the manufacture date of your machine to the one stated in this manual, and study this section carefully.

If there are differences between your machine and what is shown in this section, call Technical Support at (570) 546-9663 for assistance BEFORE making any changes to the wiring on your machine. An updated wiring diagram may be available. **Note:** *Please gather the serial number and manufacture date of your machine before calling. This information can be found on the main machine label.*

## WARNING

### Wiring Safety Instructions

**SHOCK HAZARD.** Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!

**MODIFICATIONS.** Modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire. This includes the installation of unapproved after-market parts.

**WIRE CONNECTIONS.** All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.

**CIRCUIT REQUIREMENTS.** You MUST follow the requirements at the beginning of this manual when connecting your machine to a power source.

**WIRE/COMPONENT DAMAGE.** Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components.

**MOTOR WIRING.** The motor wiring shown in these diagrams is current at the time of printing but may not match your machine. If you find this to be the case, use the wiring diagram inside the motor junction box.

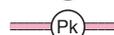
**CAPACITORS/INVERTERS.** Some capacitors and power inverters store an electrical charge for up to 10 minutes after being disconnected from the power source. To reduce the risk of being shocked, wait at least this long before working on capacitors.

**EXPERIENCING DIFFICULTIES.** If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (570) 546-9663.

#### NOTICE

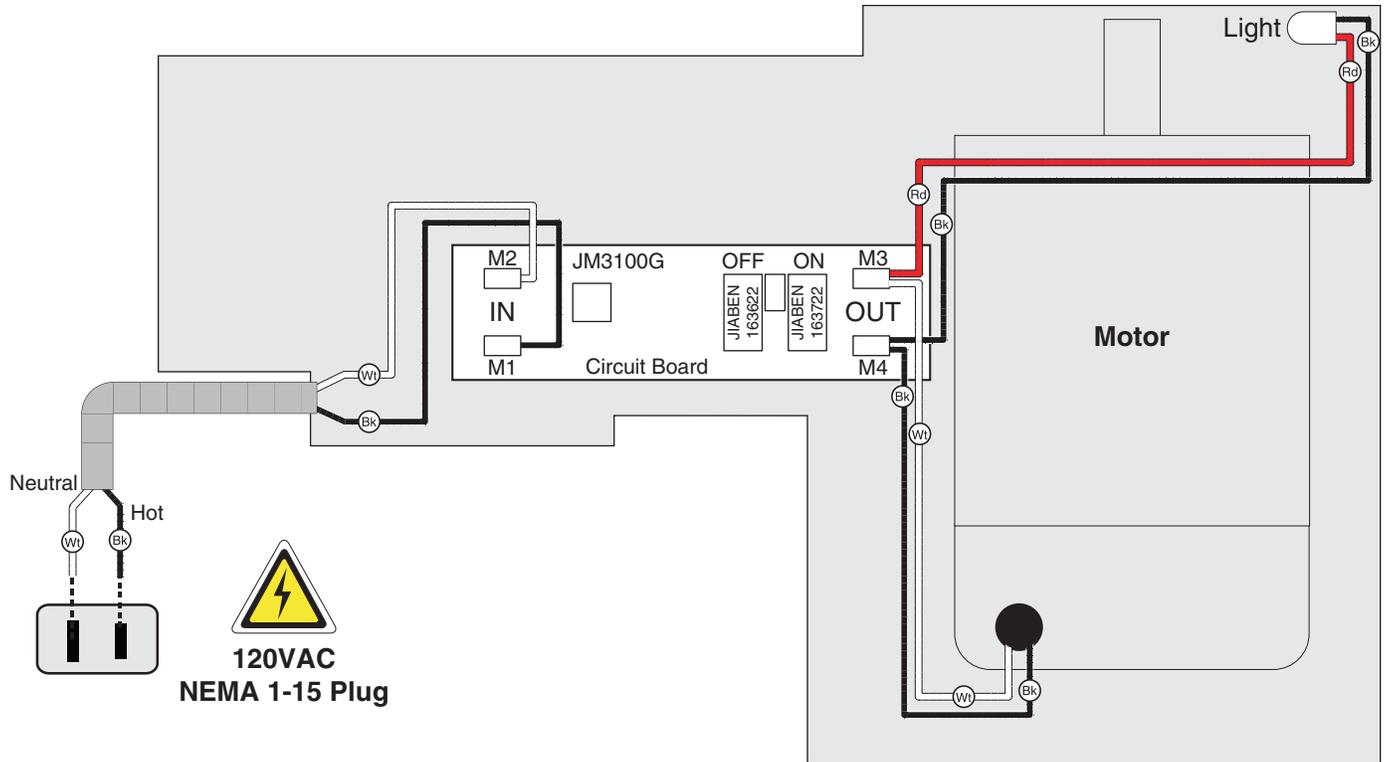
The photos and diagrams included in this section are best viewed in color. You can view these pages in color at [www.grizzly.com](http://www.grizzly.com).

#### COLOR KEY

BLACK		BLUE		YELLOW		LIGHT BLUE	
WHITE		BROWN		YELLOW GREEN		BLUE WHITE	
GREEN		GRAY		PURPLE		TURQUOISE	
RED		ORANGE		PINK			



# Wiring Diagram



**NOTICE**

The motor wiring shown here is current at the time of printing, but it may not match your machine. Always use the wiring diagram inside the motor junction box.

**WARNING!**

**SHOCK HAZARD!**  
Disconnect power before working on wiring.

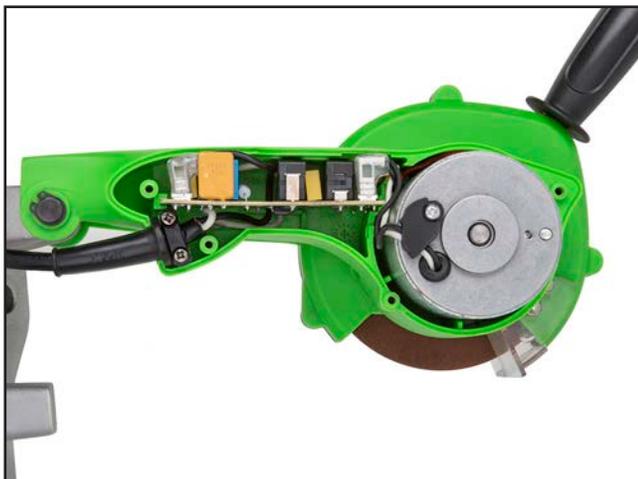


Figure 35. Wiring.

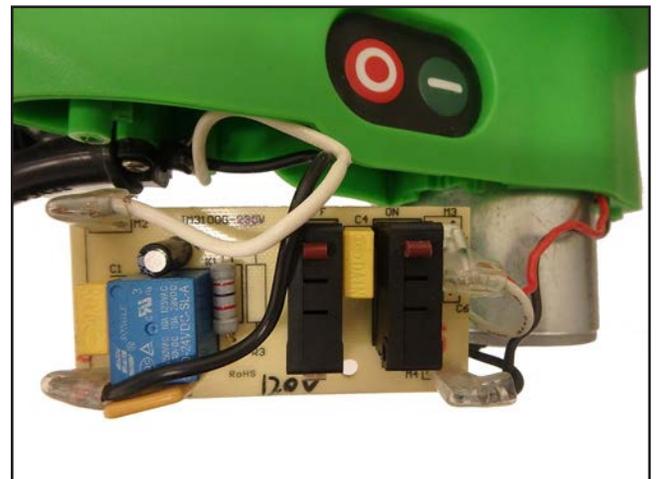


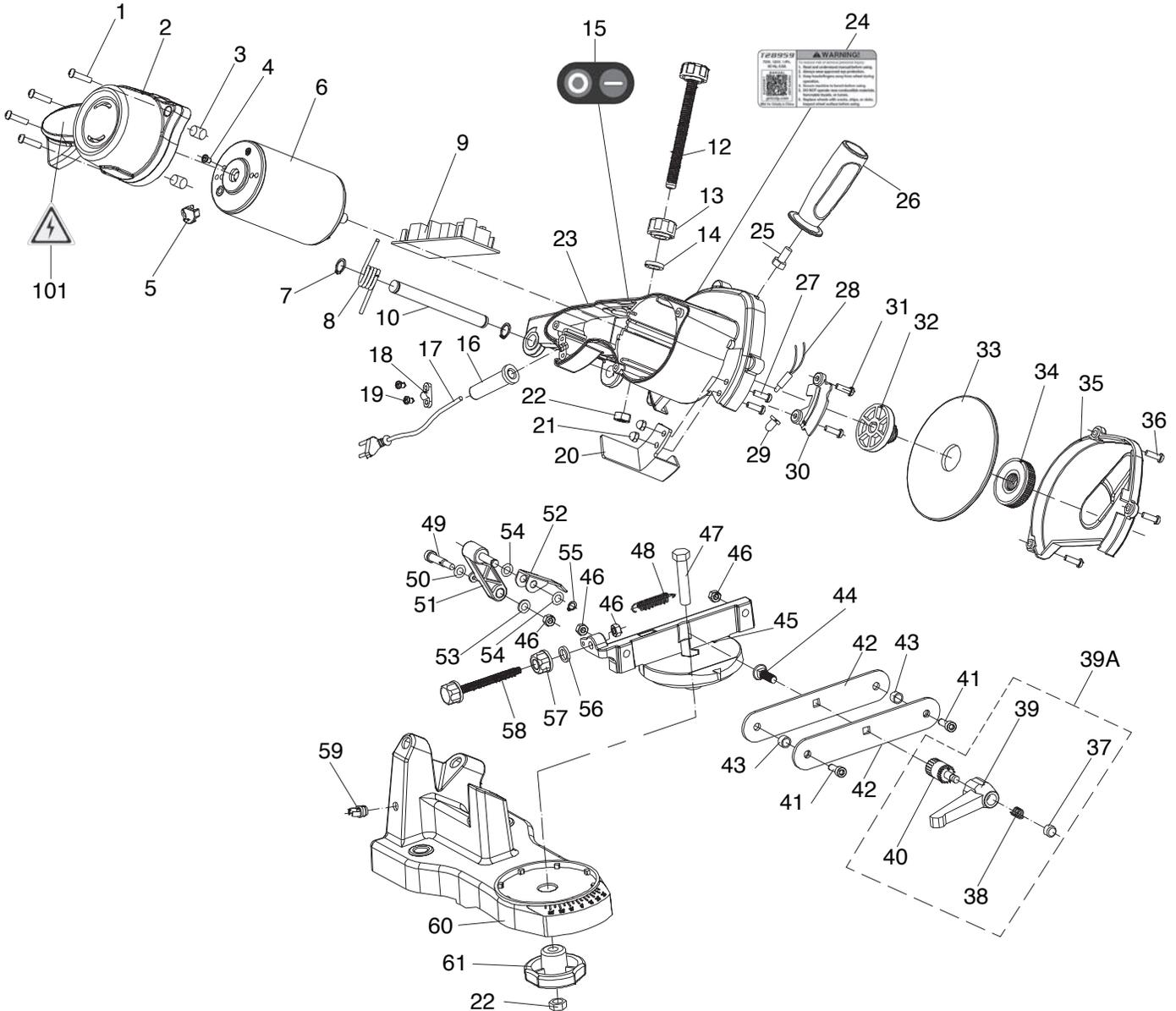
Figure 36. Circuit board.



# SECTION 9: PARTS

We do our best to stock replacement parts when possible, but we cannot guarantee that all parts shown are available for purchase. Call (800) 523-4777 or visit [www.grizzly.com/parts](http://www.grizzly.com/parts) to check for availability.

## Main



# Main Parts List

REF	PART #	DESCRIPTION
1	PT28959001	PHLP HD SCR M4-.7 X 16
2	PT28959002	MOTOR COVER
3	PT28959003	SPACER 4ID X 8OD X 7L RUBBER
4	PT28959004	PHLP HD SCR M4-.7 X 6
5	PT28959005	WIRE CLIP
6	PT28959006	MOTOR 72W 120V 1-PH
7	PT28959007	EXT RETAINING RING 10MM
8	PT28959008	TORSION SPRING
9	PT28959009	CIRCUIT BOARD 120V W/ON/OFF SWITCHES
10	PT28959010	SWING ARM PIN 10 X 102
12	PT28959012	KNOB BOLT M8-1.25 X 86, 6-LOBE, D22
13	PT28959013	KNOB M8-1.25, 6-LOBE, D22
14	PT28959014	WASHER 8 X 15 X 2MM RUBBER
15	PT28959015	SWITCH COVER (PLASTIC) ON/OFF
16	PT28959016	STRAIN RELIEF 8ID X 13OD X 39L
17	PT28959017	POWER CORD 18G 2W 72" 1-15P
18	PT28959018	POWER CORD CLAMP
19	PT28959019	TAP SCREW M4-.7 X 12
20	PT28959020	SPARK SHIELD
21	PT28959021	ACORN NUT M4-.7
22	PT28959022	HEX NUT M8-1.25
23	PT28959023	MOTOR HOUSING
24	PT28959024	MACHINE ID LABEL
25	PT28959025	HEX BOLT M6-1 X 18
26	PT28959026	HOLLOW HANDLE 24 X 78, M6-1
27	PT28959027	PHLP HD SCR M4-.7 X 12
28	PT28959028	LED BULB 120V
29	PT28959029	LED LENS
30	PT28959030	LED COVER
31	PT28959031	PHLP HD SCR M4-.7 X 8
32	PT28959032	ARBOR M16-2

REF	PART #	DESCRIPTION
33	PT28959033	GRINDING WHEEL 4-1/4" X 3/16" 100G
34	PT28959034	ARBOR NUT M16-2
35	PT28959035	WHEEL COVER
36	PT28959036	PHLP HD SCR M4-.7 X 14
37	PT28959037	SPRING CAP
38	PT28959038	COMPRESSION SPRING .75 X 7 X 10
39	PT28959039	ADJUSTABLE HANDLE 60L, M6-1
39A	PT28959039A	ADJUSTABLE HANDLE ASSEMBLY
40	PT28959040	ADJUSTABLE HANDLE PIN
41	PT28959041	CAP SCREW M6-1 X 20
42	PT28959042	CHAIN CLAMP PLATE
43	PT28959043	SPACER 6ID X 11OD X 2L
44	PT28959044	CARRIAGE BOLT M6-1 X 14
45	PT28959045	INDEXABLE ROTATING BASE
46	PT28959046	HEX NUT M6-1
47	PT28959047	HEX BOLT M8-1.25 X 40
48	PT28959048	EXTENSION SPRING 0.75 X 10 X 32
49	PT28959049	SHOULDER SCREW M6-1 X 8, 7 X 12
50	PT28959050	FLAT WASHER 6MM
51	PT28959051	CHAIN STOP GUIDE
52	PT28959052	CHAIN STOP
53	PT28959053	FLAT WASHER 6MM
54	PT28959054	FLAT WASHER 6MM BLK
55	PT28959055	E-CLIP 6MM
56	PT28959056	WASHER 6 X 14 X 2MM RUBBER
57	PT28959057	KNOB M6-1, 6-LOBE, D18
58	PT28959058	KNOB BOLT M6-1 X 60, 6-LOBE, D18
59	PT28959059	CABLE CLIP
60	PT28959060	BASE
61	PT28959061	KNOB M8-1.25, 3-LOBE, D50
101	PT28959101	ELECTRICITY LABEL

## WARNING

Safety labels help reduce the risk of serious injury caused by machine hazards. If any label comes off or becomes unreadable, the owner of this machine **MUST** replace it in the original location before resuming operations. For replacements, contact (800) 523-4777 or [www.grizzly.com](http://www.grizzly.com).



# WARRANTY & RETURNS

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Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly shall be tried in the State of Washington, County of Whatcom.

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 products.

To register the warranty, go to <https://www.grizzly.com/secureforms/warranty-card>, or scan the QR code below. You will be directed to the Warranty Registration page on Grizzly.com. Enter all applicable information for the product.



To take advantage of this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Number," which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

Thank you again for your business and continued support. We hope to serve you again soon.

# *grizzly.com*<sup>®</sup>

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