

# *Grizzly* **Industrial, Inc.**®

## **MODEL T27417 OSCILLATING EDGE BELT & SPINDLE SANDER OWNER'S MANUAL**



  
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226766

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OR FORM WITHOUT THE WRITTEN APPROVAL OF GRIZZLY INDUSTRIAL, INC.**  
#WK17887 PRINTED IN CHINA

V1.01.16



## **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	
Specification:		4. Make sure power is connected to grounded circuit before starting.	
Weight:		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	

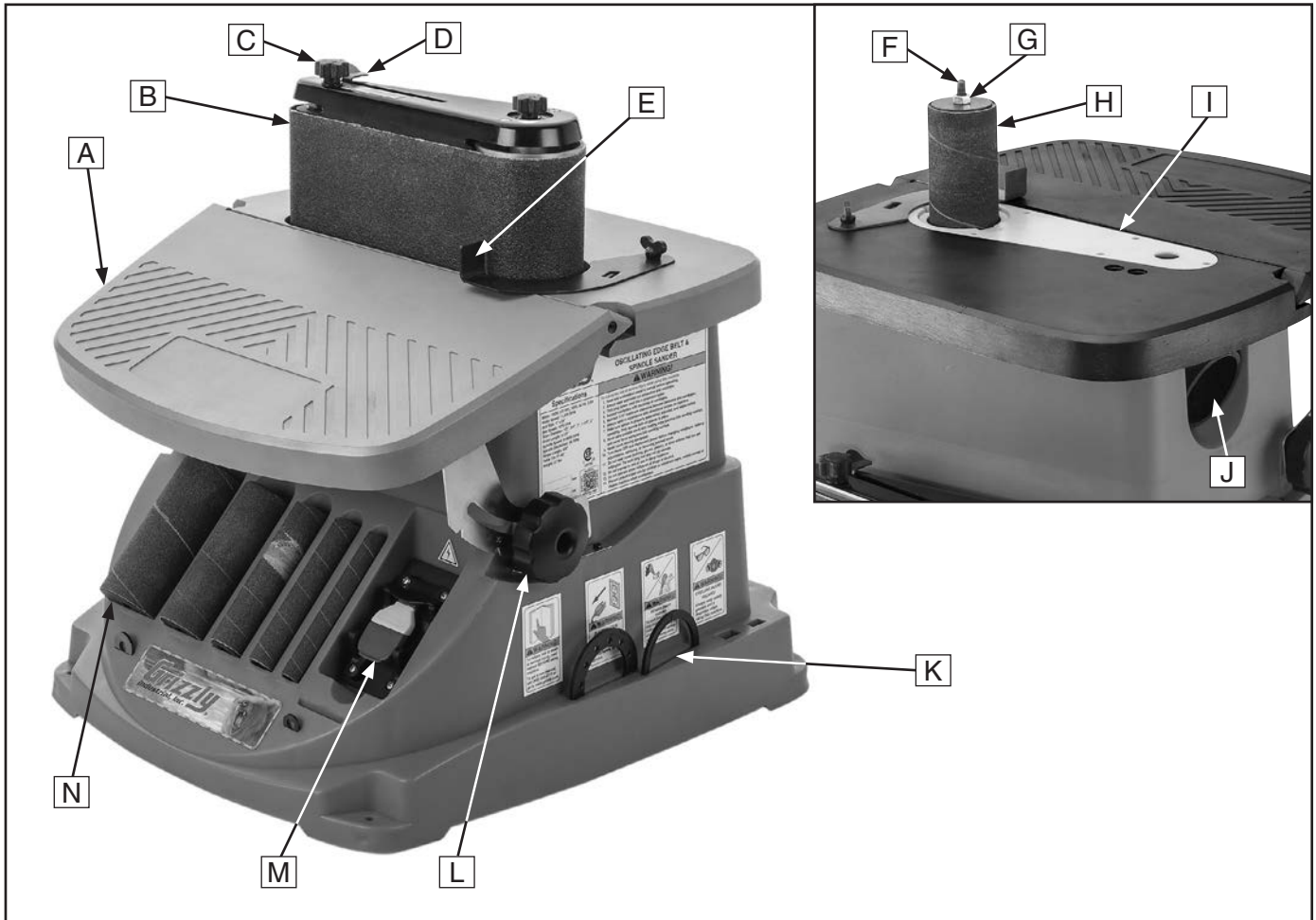
Manufacture Date

Serial Number



# Identification

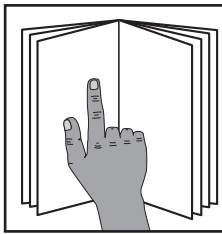
Become familiar with the names and locations of the controls and features shown below to better understand the instructions in this manual.



- |   |   |
|---|---|
| A. Work Table                             | H. Sanding Drum w/Sleeve                |
| B. Edge-Sanding Attachment w/Sanding Belt | I. Table Insert                         |
| C. Belt Tracking Control Knob             | J. Dust Port                            |
| D. Belt Tensioning Lever                  | K. Throat Plate Storage Area            |
| E. Backstop                               | L. Table Tilt Lock Knob                 |
| F. Spindle                                | M. ON/OFF Paddle Switch w/Disabling Key |
| G. Spindle Nut                            | N. Sanding Drum Storage Area            |



# Controls & Components

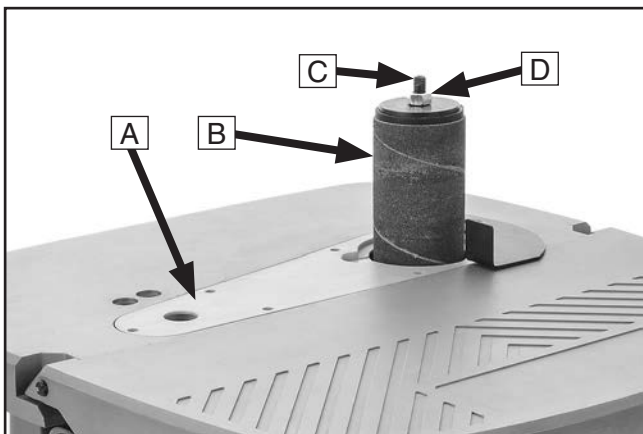


## **!WARNING**

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

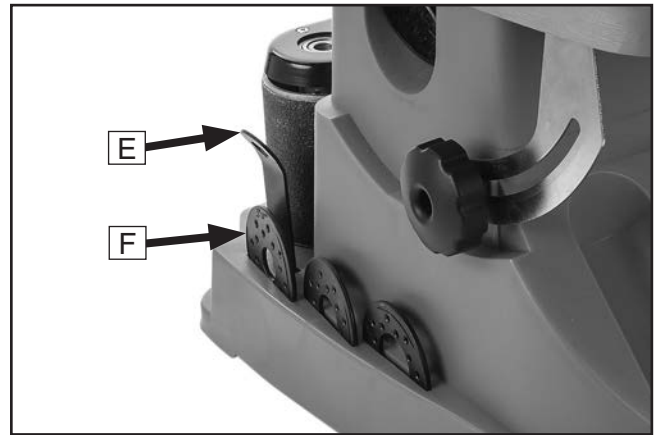
Refer to **Figures 1–5** and the following descriptions to become familiar with the basic controls and components of this machine. Understanding these items and how they work will help you understand the rest of the manual and stay safe when operating this machine.

### Spindle Sander



**Figure 1.** Location of spindle sanding components.

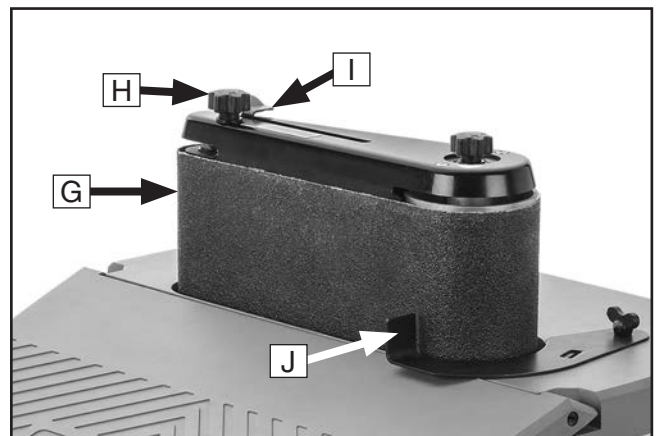
- A. Table Insert:** Covers opening in table when spindle sanding. Used in conjunction with provided throat plates.
- B. Sanding Drum w/Sleeve:** Installs on spindle for spindle sanding operations. Model T27417 comes with five 80-grit sanding drums with matching sleeves (1/2", 3/4", 1, 1 1/2", and 2").
- C. Spindle:** Rotates sanding drum or drives edge-sanding attachment when machine is turned **ON**.
- D. Spindle Nut:** Secures sanding drum to spindle.



**Figure 2.** Spindle nut wrench and throat plates.

- E. Spindle Nut Wrench:** Used for securing spindle nut on sanding drum.
- F. Throat Plates:** Install onto table insert around sanding drum. Designed to reduce risk of pinching injuries.

### Edge Sander

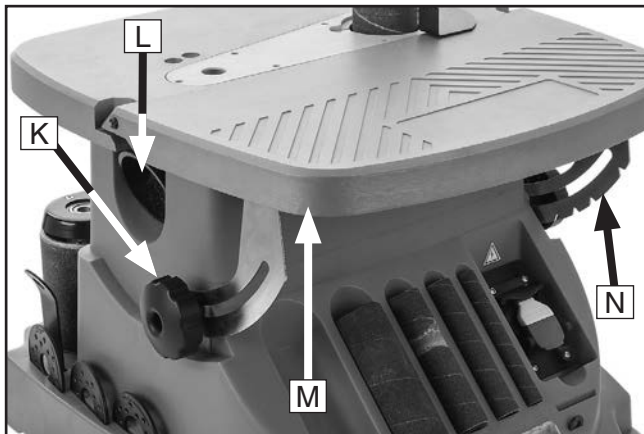


**Figure 3.** Location of edge-sanding controls & components.

- G. Edge-Sanding Attachment w/Sanding Belt:** Slides onto spindle and into table opening for edge-sanding operations.
- H. Belt Tracking Control Knob:** Adjusts alignment of sanding belt (refer to **Page 21** for more information).
- I. Belt Tensioning Lever:** Tensions sanding belt when moved all the way to the left. Releases tension for removing/replacing belt when moved all the way to the right.
- J. Backstop:** Supports workpiece during edge or end sanding operations.



## Table & Dust Port



**Figure 4.** Location of table components and dust port.

- K. Table Tilt Lock Knob (1 of 2):** Tighten to secure table tilt setting.
- L. Dust Port:** Connects to dust collection system (not included).
- M. Work Table:** Supports workpiece during sanding operation. Table tilts for bevel sanding.
- N. Table Tilt Stop Bracket:** Detents provide positive stops for convenient positioning of table at 45°, 30°, 22.5°, 15°, and 0°.

## Power Controls



**Figure 5.** Location ON/OFF paddle switch.

- O. ON/OFF Paddle Switch w/Disabling Key:** Turns motor **ON** and **OFF**. Remove yellow key to disable switch.





# MACHINE DATA SHEET

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

## MODEL T27417 OSCILLATING EDGE BELT AND SPINDLE SANDER

### Product Dimensions:

Weight..... 27 lbs.  
Width (side-to-side) x Depth (front-to-back) x Height..... 16-1/2 x 18-1/2 x 18-1/2 in.  
Footprint (Length x Width)..... 18-1/2 x 16-1/2 in.

### Shipping Dimensions:

Type..... Cardboard Box  
Content..... Machine  
Weight..... 32 lbs.  
Length x Width x Height..... 21 x 19 x 19 in.  
Must Ship Upright..... Yes

### Electrical:

Power Requirement..... 120V, Single-Phase, 60 Hz  
Full-Load Current Rating..... 3.5A  
Minimum Circuit Size..... 15A  
Connection Type..... Cord & Plug  
Power Cord Included..... Yes  
Power Cord Length..... 7 ft.  
Power Cord Gauge..... 18 AWG  
Plug Included..... Yes  
Included Plug Type..... 1-15  
Switch Type..... Paddle Safety Switch w/Removable Key

### Motors:

#### Main

Type..... Universal  
Horsepower..... 450W (1/2 HP)  
Phase..... Single-Phase  
Amps..... 3.5A  
Speed..... 11,500 RPM  
Power Transfer ..... Belt Drive  
Bearings..... Sealed & Permanently Lubricated

### Main Specifications:

#### Belt Sander Info

Sanding Belt Width..... 4 in.  
Sanding Belt Length..... 24 in.  
Sanding Belt Speed..... 1575 FPM  
Table Length..... 16-3/4 in.  
Table Width..... 16-1/4 in.  
Table Thickness..... 1/8 in.  
Table Tilt..... 0 – 45 deg.  
Table-to-Floor Height..... 13-1/4 in.  
Belt Tension Release Type..... Quick-Release Lever  
Platen Type..... Steel  
Platen Length..... 6-1/8 in.  
Platen Width..... 4 in.





**Spindle Sander Info**

Sanding Drum Diameters..... 3/4, 1, 1-1/2, 2 in.  
Sanding Drum Length..... 4-1/2 in.  
Spindle Speed..... 0 – 2000 RPM  
Spindle Oscillation..... 58 OPM  
Stroke Length..... 5/8 in.  
Spindle Shaft Diameter..... 1/2 in.  
Number of Table Inserts..... 5  
Included Sanding Sleeve Grit Size..... 80  
Table Tilt..... 0 – 45 deg.

**Construction Materials**

Base..... Plastic  
Table..... Cast Aluminum

**Other Related Info**

Number of Dust Ports..... 1  
Dust Port Size..... 1-1/2 in.

**Other Specifications:**

Country of Origin ..... China  
Warranty ..... 1  
Approximate Assembly & Setup Time ..... 15 Minutes  
Serial Number Location ..... Machine ID  
ISO 9001 Factory ..... Yes  
Certified by a Nationally Recognized Testing Laboratory (NRTL) ..... Yes

**Features:**

Combines the Advantages of Edge Belt and Spindle Sanding All in One Tool  
Quickly Convert from Belt to Spindle with Included Spindle Nut Wrench  
Tilting Table w/ Detents at 0, 15, 22.5, 30, and 45 Degrees  
5 Sanding Sleeves with Matching Inserts: 1/2", 3/4", 1", 1-1/2", and 2"  
4 Sanding Drums: 3/4", 1", 1-1/2", and 2"  
On-Board Storage for Accessories




# 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** This symbol is used to alert the user to useful information about proper operation of the machine.

## 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 Spindle/Edge Sanders

## WARNING

Serious injury or death can occur from fingers, clothing, jewelry or hair getting entangled in rotating spindle or other moving components. Abrasion injuries can occur from touching rotating sanding drum with bare skin. Workpieces thrown by drum can strike operator or bystanders with moderate force, causing impact injuries. Long-term respiratory damage can occur from using sander without proper use of a respirator. To reduce the risk of these hazards, operator and bystanders **MUST** completely heed the hazards and warnings below.

**HAND PLACEMENT.** Rotating sanding drums/belts can remove a large amount of flesh in a few seconds. Always keep hands away from drum/belt during operation. Never touch moving drum on purpose. Use a brush to clean table of sawdust and chips.

**FEEDING WORKPIECE.** Forcefully jamming workpiece into sanding surface could cause workpiece to eject back at operator or damage machine. Always allow spindle to reach full speed. Firmly hold workpiece with both hands and ease it against spindle using light pressure.

**FEED DIRECTION.** Feeding workpiece incorrectly can cause it to be thrown from machine, allowing your hands to slip into the rotating drum or striking yourself or bystanders. To reduce these risks, feed workpiece against direction of rotation, and never sand tapered or pointed stock with point facing feed direction.

**SANDING SLEEVE/BELT CONDITION.** Worn or damaged sanding sleeves/belts can tear apart and become entangled in spindle or other moving parts, resulting in subsequent injuries from operator loss of workpiece control. Replace worn or damaged sanding sleeves/belts promptly.

**SANDING DUST.** Sanding creates large amounts of dust and flying chips that can lead to eye injury or serious respiratory illness. Reduce your risk by always wearing approved eye and respiratory protection when using sander. Never operate without adequate dust collection system in place and running. However, dust collection is not a substitute for using a respirator.

**AVOIDING ENTANGLEMENT.** DO NOT wear loose clothing, gloves, or jewelry, and tie back long hair. Keep all guards in place and secure.

**WORKPIECE INSPECTION.** Nails, staples, knots, or other imperfections in workpiece can be dislodged and thrown from sander at high rate of speed into operator or bystanders, or cause damage to sanding sleeves, drum, or belts. Never sand stock that has embedded foreign objects or questionable imperfections.

**TABLE INSERTS.** A pinch point for fingers and workpieces exists in the gap between table and oscillating drum or belt. Always use table insert that fits closest to diameter of installed drum to keep this gap as small as possible and reduce risk of injury.

**POWER DISCONNECT.** An accidental startup while changing sleeves can result in entanglement or abrasion injuries. Always disconnect machine from power source before changing sanding sleeve to avoid this risk.

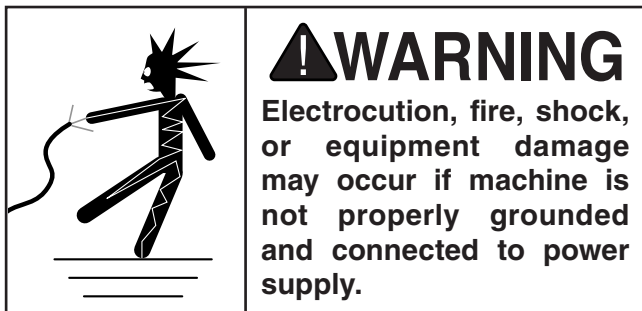
**WORKPIECE INTEGRITY.** Sanding fragile workpieces can result in loss of control, resulting in entanglement, impact injuries, or damage to the sanding sleeve, drum, or belt. Only sand solid workpieces that can withstand power sanding forces. Make sure shape of workpiece is properly supported; avoid sanding workpieces without flat bottom surfaces unless some type of jig is used to maintain support and control when sanding force is applied.



# 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 ... 3.5 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:

**Nominal Voltage** ..... 110V, 115V, 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**

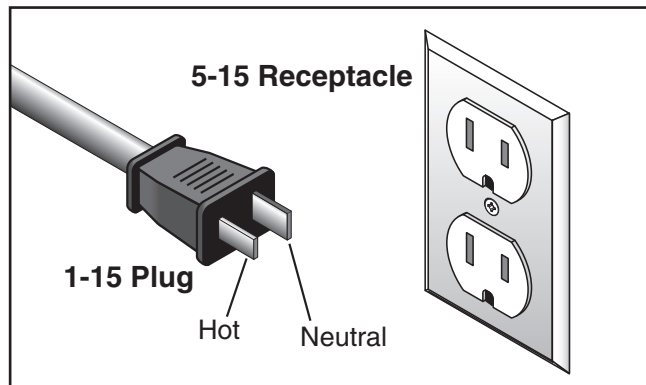
**For your own safety and protection of property, consult an electrician if you are unsure about wiring practices or electrical codes in your area.**

**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 6.** 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:

<b>25 Feet</b> .....	<b>16 AWG</b>
<b>50 Feet</b> .....	<b>14 AWG</b>

**Note:** *We do not recommend using extension cords longer than 50 feet.*



# 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
• Screwdriver Phillips #2 .....	1
• Screwdriver Flat Head #2.....	1
• Dust Collection System .....	1
• Dust Hose 1½" .....	1
• Hose Clamps 1½" .....	2

## 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.

Loose Inventory (Figure 7)	Qty
A. Edge-Sanding Attachment .....	1
B. 80-Grit Sanding Belt 4" x 24" .....	1
C. Spindle Nut Wrench: 13mm .....	1
D. Sanding Drums: ¾", 1", 1½", 2" .....	1 Ea.
E. 80-Grit Sanding Sleeves: ½", ¾", 1", 1½", 2" .....	1 Ea.
F. Throat Plates ½", ¾", 1", 1½", 2" .....	1 Ea.
G. Table Insert.....	1
H. Spindle Washers: ⅝" OD, ⅞" OD, 1¼" OD .....	1 Ea.
I. Hex Nut: M8-1.25.....	1
J. Edge-Sanding Attachment Knob.....	1

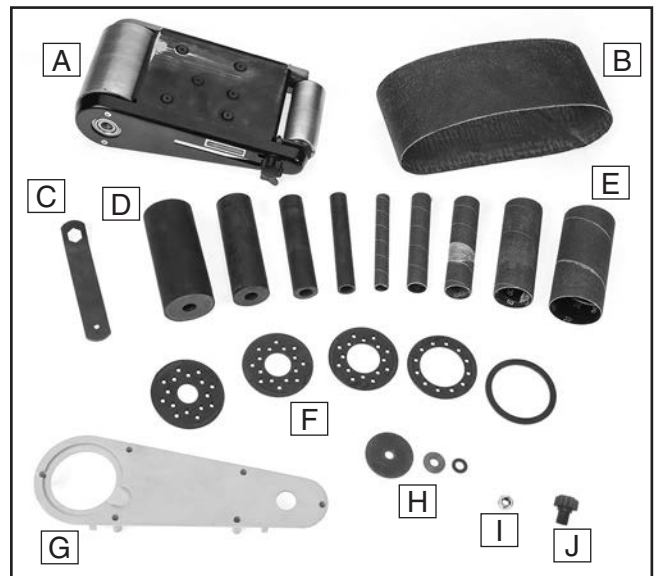


Figure 7. Model T27417 loose inventory.



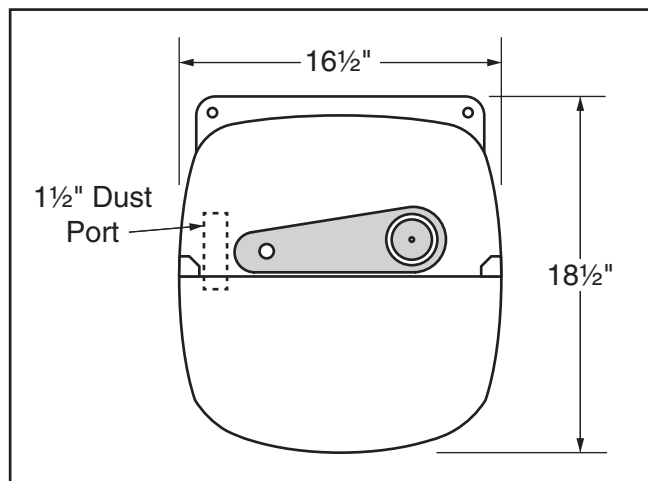
# Site Considerations

## 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 8.** Minimum working clearances.

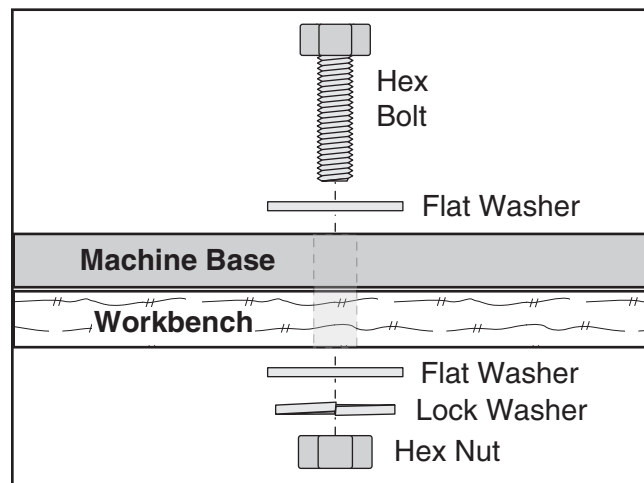
	<p><b>⚠ CAUTION</b></p> <p>Children and visitors may be seriously injured if unsupervised around this machine. Lock entrances to the shop or disable start switch or power connection to prevent unsupervised use.</p>
--	--

# Bench Mounting

**Number of Mounting Holes ..... 4**  
**Diameter of Mounting Hardware Needed .. 1/4"**

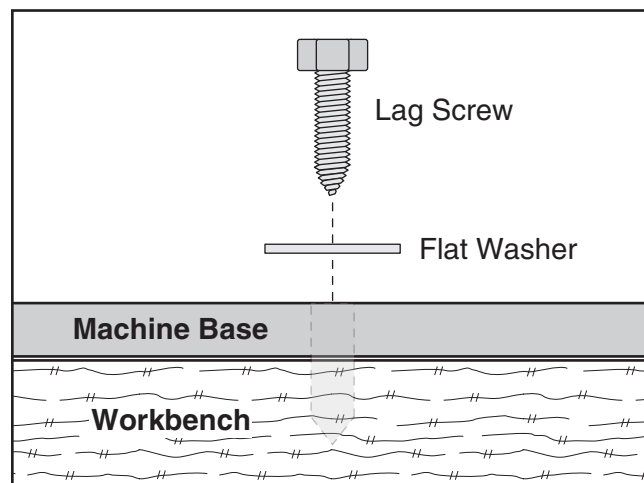
The base of this machine has mounting holes that allow it to be fastened to a workbench or other mounting surface to prevent it from moving during operation and causing accidental injury or damage.

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 9.** "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 10.** "Direct Mount" setup.



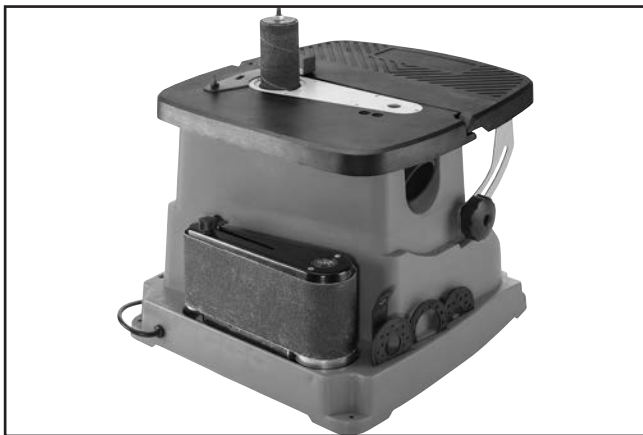


# Assembly

Place the spindle nut, table inserts, sanding drums and sleeves, spindle washers, edge-sanding attachment, and spindle nut wrench in the appropriate accessory slots beneath the table (see **Figures 11–12**). A sanding drum does not need to be installed until after the test run.



**Figure 11.** Assembled sander (front).



**Figure 12.** Assembled sander (rear).

# Dust Collection

## ⚠ CAUTION

This machine creates a lot of wood chips/dust during operation. Breathing airborne dust on a regular basis can result in permanent respiratory illness. Reduce your risk by wearing a respirator and capturing the dust with a dust collection system.

### Recommended CFM at Dust Port: 100 CFM

Do not confuse this CFM recommendation with the rating of the dust collector. To determine the CFM at the dust port, you must consider these variables: (1) CFM rating of the dust collector, (2) hose type and length between the dust collector and the machine, (3) number of branches or wyes, and (4) amount of other open lines throughout the system. Explaining how to calculate these variables is beyond the scope of this manual. Consult an expert or purchase a good dust collection "how-to" book.

### To connect dust collection system to machine:

1. Fit 1½" dust hose over dust port, as shown in **Figure 13**, and secure with a hose clamp.
2. Tug the hose to make sure it does not come off.

**Note:** A tight fit is necessary for proper performance.



**Figure 13.** Dust hose attached to dust port.



# 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
- 2) The switch-disabling key safety feature works 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**

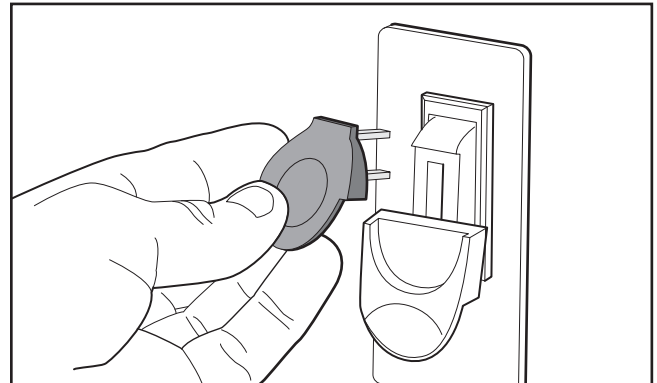
**DO NOT** start machine until all preceding setup instructions have been performed. Operating an improperly set up machine may result in malfunction or unexpected results that can lead to serious injury, death, or machine/property damage.

### 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.

4. Remove switch-disabling key, as shown in **Figure 14**.



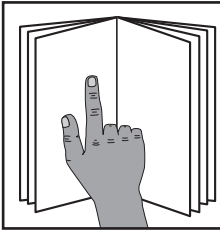
**Figure 14.** Removing switch key from paddle switch.

5. Try to start machine with paddle switch. The machine *should not* start.
  - If machine *does not* start, switch disabling feature is working as designed.
  - If machine *does start*, immediately stop machine. The switch disabling feature is not working correctly. This safety feature *must* work properly before proceeding with regular operations. Call Tech Support for help.

Congratulations! The test run is complete. The sander is ready for operation.



# SECTION 4: OPERATIONS

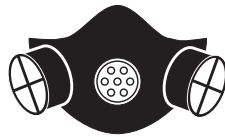


## **!WARNING**

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

## **!WARNING**

To reduce risk of eye injury from flying chips or lung damage from breathing dust, always wear safety glasses and a respirator when operating this machine.



## **NOTICE**

If you are not experienced with this type of machine, **WE STRONGLY RECOMMEND** that you seek additional training outside of this manual. Read books/magazines or get formal training before beginning any projects. Regardless of the content in this section, Grizzly Industrial will not be held liable for accidents caused by lack of training.

## Disabling Switch

The switch can be disabled by removing the key, as shown below. Disabling the switch in this manner can prevent unauthorized operation of the machine, which is important if it is not kept inside an access-restricted building or in a location where children may be present.

**IMPORTANT:** Disabling the switch only restricts its function. It is not a substitute for disconnecting machine from power when adjusting or servicing.

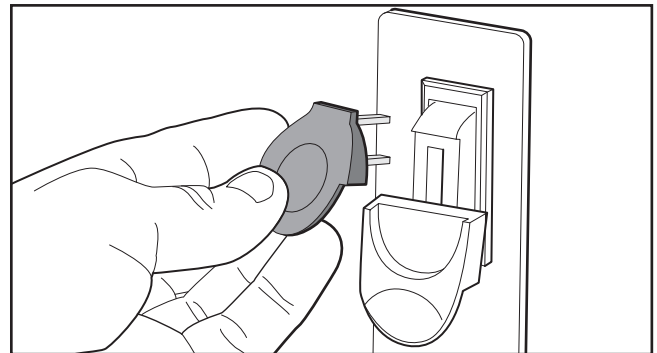


Figure 15. Disabling switch by removing key.

## **!WARNING**

Children or untrained people can be seriously injured by this machine. This risk increases with unsupervised operation. To help prevent unsupervised operation, always disable switch before leaving machine unattended. Make sure to place key in a well-hidden or secure location!



# Spindle Sanding

The Model T27417 comes with 1/2", 3/4", 1", 1 1/2", and 2" sanding sleeves for sanding a variety of different curves.

Spindle sanding is performed to sand inside curves and irregular shapes. The oscillating spindle moves up and down as it rotates to help create a smooth surface that accurately follows your layout line.

To use the spindle sander, you must first configure the machine for spindle sanding by installing the appropriate sanding drum/sleeve for your operation.

**Note:** The 1/2" sanding sleeve does not use a sanding drum, but mounts directly to the spindle shaft.

## Installing Sanding Drum/Sleeve

To ensure the workpiece is supported during spindle sanding operations, use the table insert and throat plate that matches the corresponding drum and sleeve (see table below). It is important to keep the gap between the throat plate and drum as small as possible to reduce the risk of a pinch injury.

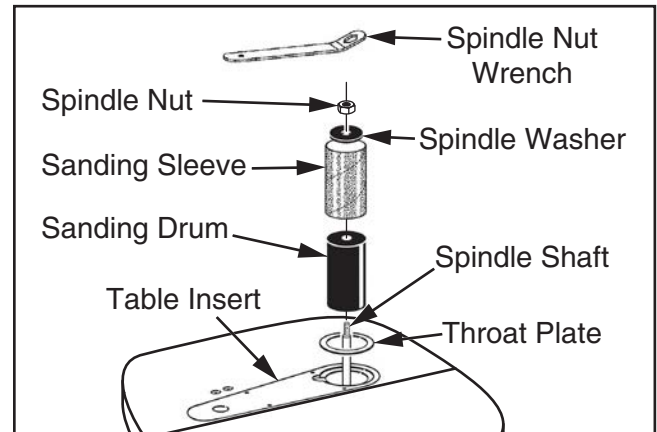
### To install sanding drum/sleeve:

1. DISCONNECT MACHINE FROM POWER!
2. Use table in **Figure 16** to select required size of components for sanding drum/sleeve size you have chosen.

Sanding Sleeve	Sanding Drum	Throat Plate	Spindle Washer
1/2"	N/A	1/2"	5/8"
3/4"	3/4"	3/4"	7/8"
1"	1"	1"	7/8"
1 1/2"	1 1/2"	1 1/2"	7/8"
2"	2"	2"	1 3/4"

**Figure 16.** Sanding drum/sleeve sizing table.

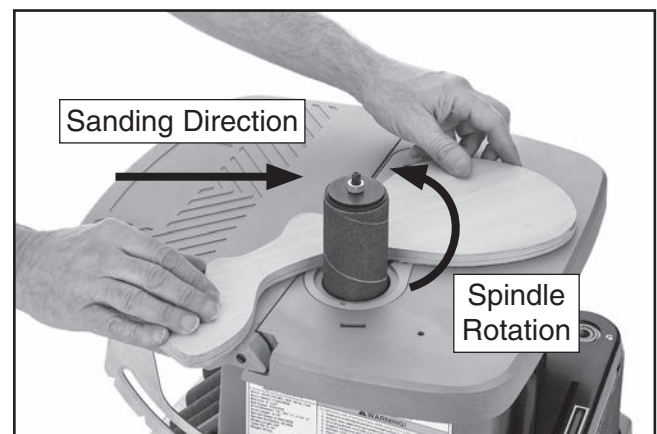
3. Place table insert in table opening, then install desired sanding drum on spindle shaft, followed by corresponding sanding sleeve and throat plate (see **Figure 17**).
4. Secure sanding drum with appropriate spindle washer and spindle nut (see **Figure 17**). Tighten nut until sanding drum places slight pressure on sanding sleeve.



**Figure 17.** Removal/installation order of spindle sanding components.

## Using Spindle Sander

1. Turn sander **ON** and allow it to reach full speed.
2. Use both hands to maintain control of workpiece, and guide it against rotation of spindle, as shown in **Figure 18**. **DO NOT** force workpiece against sanding sleeve. Allow the machine to do the work.



**Figure 18.** Spindle sanding attachment installed.

3. When you are finished, turn sander **OFF**.



# Changing/Replacing Sanding Drum/Sleeve

1. DISCONNECT MACHINE FROM POWER!
2. Remove spindle sanding components in reverse order of installation (see **Figure 17** on **Page 18**).
3. Clean openings for table insert, throat plates, and any other spindle areas as necessary. There should be no sawdust on ledge of table openings where table insert and throat plates are placed or these components will not sit flush with table.
4. Use sizing table on **Page 18** to select required size of components for sanding drum/sleeve size you have chosen.
5. Install spindle sanding components in correct order (see **Figure 17** on **Page 18**).
6. Secure sanding drum with appropriate spindle washer and spindle nut. Tighten until rubber sanding drum places slight pressure on sanding sleeve.

**Note:** The 1/2" sanding sleeve does not use a sanding drum, but mounts directly to the spindle shaft.

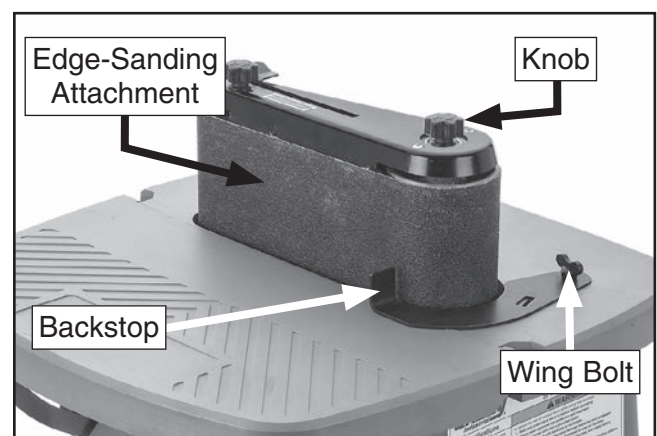
# Edge-Sanding

Edge-sanding is performed to sand straight lines or curves along the outside edge of a workpiece. The edge-sanding attachment moves up and down as the sanding belt moves across the workpiece. The backstop supports the workpiece during sanding, helping to prevent it from being ejected by the moving sanding belt (see **Figure 19**).

To use the edge sander, you must first configure the machine for edge-sanding by removing the spindle sanding components (if already installed) and then installing the edge-sanding attachment.

## Installing Edge-Sanding Attachment

1. DISCONNECT MACHINE FROM POWER!
2. If spindle sanding components are installed, remove them (refer to **Spindle Sanding** on **Page 18**).
3. Install edge-sanding attachment in sander body, as shown in **Figure 19**.
4. Secure edge-sanding attachment to spindle with edge-sanding attachment knob (see **Figure 19**).
5. Install backstop and secure with wing bolt (see **Figure 19**).



**Figure 19.** Edge-sanding attachment installed.



## Edge-Sanding Straight Lines

1. Turn sander **ON** and allow it to reach full speed.
2. Support workpiece against backstop (see **Figure 20**). Use both hands to maintain control of workpiece, and guide it against rotation of sanding belt. **DO NOT** force workpiece against sanding belt. Allow the machine to do the work.



**Figure 20.** Using edge-sanding attachment.

3. When you are finished, turn sander **OFF**.

## Edge-Sanding Outside Curves

1. Turn sander **ON** and allow it to reach full speed.
2. Use both hands to maintain control of workpiece, and slowly guide it against rotation of sanding belt. While maintaining downward pressure on workpiece against table, gently move workpiece along sanding belt (see **Figure 21**) until desired outside curve is achieved, then turn sander **OFF**.

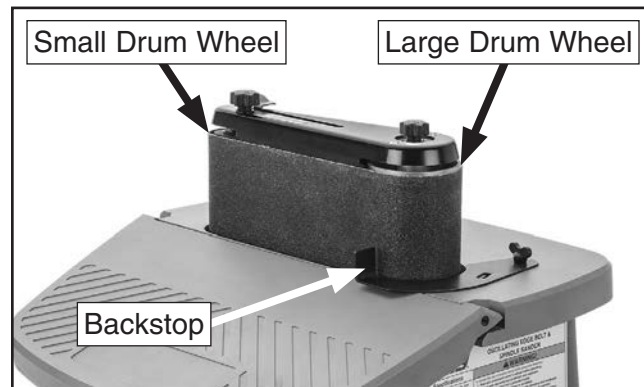


**Figure 21.** Sanding outside curve with edge-sanding attachment.

## Edge-Sanding Inside Curves

To edge sand inside curves, use the rounded surface of the large or small drum wheel (see **Figure 22**). To edge sand on the large drum wheel, you must first remove the backstop.

**Note:** *Edge-sanding inside curves on the Model T27417 requires that the table be set to 0°.*



**Figure 22.** Edge-sanding locations for sanding inside curves.

### To edge sand inside curves:

1. Set table tilt to 0° (refer to **Page 22**) and, if necessary, remove backstop.
2. Turn sander **ON** and allow it to reach full speed.
3. Use both hands to maintain control of workpiece, and slowly guide it against drum wheel portion of sanding belt (see **Figure 23**). While maintaining downward pressure on workpiece against table, gently move it along sanding belt until desired inside curve is achieved, then turn sander **OFF**.

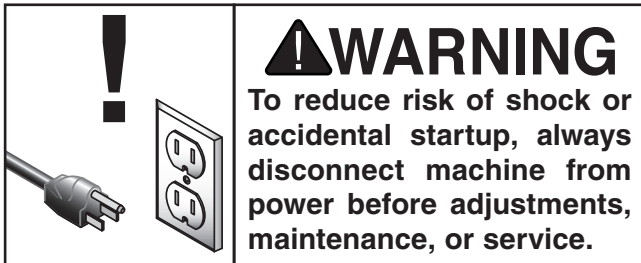


**Figure 23.** Edge-sanding inside curve.



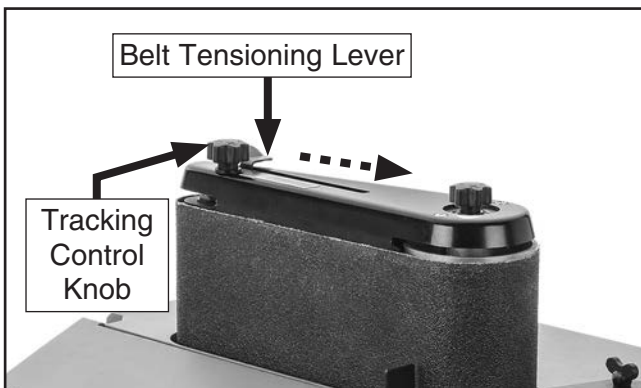
# Changing/Replacing Sanding Belt

The Model T27417 edge sander attachment accepts 4" x 24" sanding belts. These are available in a variety of grits through the Grizzly catalog. See **Accessories** on **Page 23**.



## To change/replace sanding belt:

1. DISCONNECT MACHINE FROM POWER!
2. Slide belt tensioning lever all the way to the right to release belt tension (see **Figure 24**).



**Figure 24.** Location of sanding belt changing and tracking control components.

3. Remove sanding belt.
4. Install a new or different belt, and then slide belt tensioning lever all the way to the left to tension belt.

# Adjusting Belt Tracking

The belt tracking needs to be adjusted any time you change or replace the sanding belt, or if the belt moves toward or away from the table during operations.

## To check and adjust sanding belt tracking:

1. Install edge-sanding attachment (refer to **Page 19**), then remove all tools from sander.
2. Connect machine to power source and turn **ON**, then immediately turn machine **OFF**. Sanding belt should be centered on drums and *not* move toward top or bottom of edge-sanding attachment.

— If sanding belt moves toward top of edge-sanding attachment, rotate tracking control knob (see **Figure 24**) counterclockwise  $\frac{1}{4}$ -turn.

— If sanding belt moves toward bottom of edge-sanding attachment, rotate tracking knob clockwise  $\frac{1}{4}$ -turn.

3. Turn machine **ON**, then immediately turn machine **OFF**. Sanding belt should be centered on drums and *not* move toward top or bottom of edge-sanding attachment. Belt is tracking properly and no further adjustments need to be made.

— If sanding belt *does* move toward top or bottom, repeat **Steps 3–5** until proper belt tracking is achieved.

**Note:** Listen for any unusual noises, vibrations, or rubbing while adjusting tracking. If anything sounds unusual, stop sander immediately. Disconnect machine from power source and find source of problem before operating further. If you cannot locate source of unusual noise or vibration, contact our service department for help.



# Bevel Sanding

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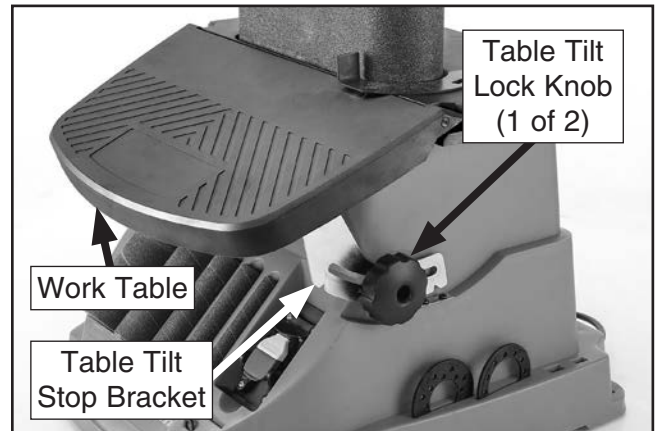
The work table on Model T27417 tilts from 0°–45° for sanding bevels on your workpiece. The table tilt stop bracket (see **Figure 25**) has detents for quickly setting the most common angles: 0°, 15°, 22.5°, 30°, and 45°.

**Note:** You can bevel sand using either the spindle sander or the edge-sanding attachment.

To bevel sand, set work table angle, use both hands to maintain control of workpiece, and slowly guide it against rotation of sanding surface until desired results are achieved, then turn sander **OFF**.

## Setting Work Table Angle

1. DISCONNECT MACHINE FROM POWER!
2. Install spindle sander or edge-sanding attachment.
3. Loosen both table tilt lock knobs (see **Figure 25**).



**Figure 25.** Location of table tilt components.

4. Tilt table to desired angle.

**Note:** The table will automatically snap into place at 0°, 15°, 22.5°, 30°, and 45°.

5. Tighten both lock knobs to secure setting.





# 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.

- H2499—Small Half-Mask Respirator
- H3631—Medium Half-Mask Respirator
- H3632—Large Half-Mask Respirator
- H3635—Cartridge Filter Pair P100

Wood dust has been linked to nasal cancer and severe respiratory illnesses. If you work around dust everyday, a half-mask respirator can be a lifesaver. Also compatible with safety glasses!



**Figure 26.** Half-mask respirator with disposable cartridge filters.

## Basic Eye Protection

- T20501—Face Shield Crown Protector 4"
- T20502—Face Shield Crown Protector 7"
- T20503—Face Shield Window
- T20451—"Kirova" Clear Safety Glasses
- T20452—"Kirova" Anti-Reflective S. Glasses
- H7194—Bifocal Safety Glasses 1.5
- H7195—Bifocal Safety Glasses 2.0
- H7196—Bifocal Safety Glasses 2.5



**Figure 27.** Assortment of basic eye protection.

## G0738—Hanging Air Filter, 3-Speed

This little remote-controlled unit finishes off the job that most dust collectors only start. Turn this filter on while you work and set the timer to run after you leave the shop. It will continue to clean the air of fine particles that might otherwise find a home where you don't want them.



**Figure 28.** G0738 Hanging Air Filter, 3-Speed.

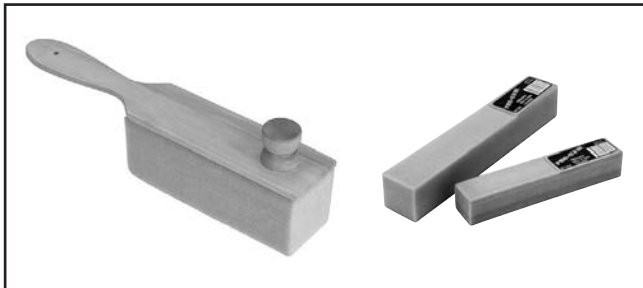
**order online at [www.grizzly.com](http://www.grizzly.com) or call 1-800-523-4777**



**PRO-STICK® Abrasive Surface Cleaners**

Extend the life of your sanding discs and sleeves!  
Choose the Pro-Stick® with a handle for greater control or without a handle for more usable area.

<u>Size</u>	<u>Model</u>
1½" X 1½" X 8½" .....	W1306
2" X 2" X 12" .....	W1307
1½" X 1½" X 9" w/Handle.....	W1308
2" X 2" X 11" w/Handle .....	W1309



**Figure 29.** PRO-STICK abrasive cleaners.

**Grizzly® Sanding Belts**

These tough aluminum-oxide 4" x 24" sanding belts are sold in a 10-pack.

- D1242—Sanding Belt 4" x 24" A/O 60-Grit
- D1243—Sanding Belt 4" x 24" A/O 80-Grit
- D1244—Sanding Belt 4" x 24" A/O 100-Grit
- D1245—Sanding Belt 4" x 24" A/O 120-Grit
- D1246—Sanding Belt 4" x 24" A/O 150-Grit
- D1247—Sanding Belt 4" x 24" A/O 180-Grit
- D1248—Sanding Belt 4" x 24" A/O 220-Grit



**Figure 30.** Grizzly® sanding belts.

**Grizzly® Sanding Sleeves**

These tough aluminum-oxide 4½" sanding sleeves are sold in a 3-pack.

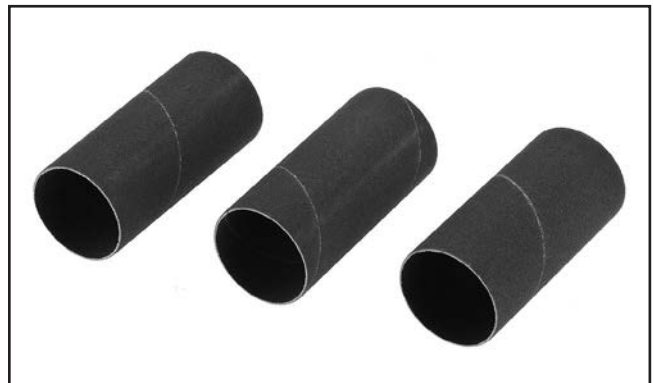
- H5430—Sanding Sleeve ½" A/O 60-Grit
- H5431—Sanding Sleeve ½" A/O 80-Grit
- H5432—Sanding Sleeve ½" A/O 100-Grit
- H5433—Sanding Sleeve ½" A/O 120-Grit
- H5434—Sanding Sleeve ½" A/O 150-Grit

- H5435—Sanding Sleeve ¾" A/O 60-Grit
- H5436—Sanding Sleeve ¾" A/O 80-Grit
- H5437—Sanding Sleeve ¾" A/O 100-Grit
- H5438—Sanding Sleeve ¾" A/O 120-Grit
- H5439—Sanding Sleeve ¾" A/O 150-Grit

- H5440—Sanding Sleeve 1" A/O 60-Grit
- H5441—Sanding Sleeve 1" A/O 80-Grit
- H5442—Sanding Sleeve 1" A/O 100-Grit
- H5443—Sanding Sleeve 1" A/O 120-Grit
- H5444—Sanding Sleeve 1" A/O 150-Grit

- H5445—Sanding Sleeve 1½" A/O 60-Grit
- H5446—Sanding Sleeve 1½" A/O 80-Grit
- H5447—Sanding Sleeve 1½" A/O 100-Grit
- H5448—Sanding Sleeve 1½" A/O 120-Grit
- H5449—Sanding Sleeve 1½" A/O 150-Grit

- H5450—Sanding Sleeve 2" A/O 60-Grit
- H5451—Sanding Sleeve 2" A/O 80-Grit
- H5452—Sanding Sleeve 2" A/O 100-Grit
- H5453—Sanding Sleeve 2" A/O 120-Grit
- H5454—Sanding Sleeve 2" A/O 150-Grit

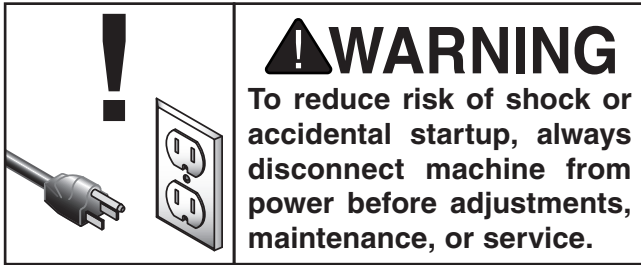


**Figure 31.** Grizzly® sanding sleeves.



# SECTION 6: MAINTENANCE

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## Schedule

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For optimum performance from your machine, follow this maintenance schedule and refer to any specific instructions given in this section.

### Daily Check

- Loose mounting bolts.
- Worn/damaged sanding sleeve/sanding belt.
- Worn or damaged wires.
- Any other unsafe condition.

### As Needed

- Clean/replace sanding sleeve/sanding belt.

### Monthly Check

- Drive belt tension, damage, or wear.

## Cleaning & Protecting

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Cleaning the Model T27417 is relatively easy. Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth. If any resin has built up, use a resin-dissolving cleaner to remove it.

## Cleaning Sanding Belt/Disc

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Using an abrasive belt/disc cleaner can prolong the life of a clogged sanding belt/disc, provided it is in otherwise good condition. See **Accessories** on **Page 24** for more details.

### To clean sanding belt/disc:

1. Turn machine **ON**.
2. Using backstop or work table as support, rub abrasive cleaner on sanding sleeve/sanding belt in continuous motion, covering entire surface of sleeve/belt until it is no longer clogged.
3. Turn machine **OFF**.

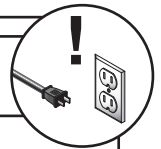


# SECTION 7: SERVICE

Review the troubleshooting and 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

### Motor & Electrical



Symptom	Possible Cause	Possible Solution
Machine does not start or a breaker trips.	<ol style="list-style-type: none"> <li>1. Switch disabling key removed.</li> <li>2. Incorrect power supply voltage or circuit size.</li> <li>3. Power supply circuit breaker tripped or fuse blown.</li> <li>4. Motor wires connected incorrectly.</li> <li>5. Wiring open/has high resistance.</li> <li>6. Motor brushes sticking, improperly installed, at fault.</li> <li>7. ON/OFF switch at fault.</li> <li>8. Motor at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Install switch disabling key (<b>Page 16</b>).</li> <li>2. Ensure correct power supply voltage and circuit size (<b>Page 11</b>).</li> <li>3. Ensure circuit is sized correctly and free of shorts. Reset circuit breaker or replace fuse.</li> <li>4. Correct motor wiring connections (<b>Page 34</b>).</li> <li>5. Check/fix broken, disconnected, or corroded wires.</li> <li>6. Remove/re-install brushes; replace (<b>Page 28</b>).</li> <li>7. Replace switch.</li> <li>8. Test/repair/replace.</li> </ol>
Machine stalls or is underpowered.	<ol style="list-style-type: none"> <li>1. Machine undersized for task.</li> <li>2. Workpiece material not suitable for machine.</li> <li>3. Sanding with too much pressure.</li> <li>4. Drive belt(s) damaged and slipping.</li> <li>5. Dust collection ducting problem, causing dust buildup.</li> <li>6. Motor overheated.</li> <li>7. Motor brushes sticking, improperly installed, at fault.</li> <li>8. Pulley/sprocket slipping on shaft.</li> <li>9. Motor bearings at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean sanding sleeve/belt (<b>Page 25</b>)/replace sanding sleeve (<b>Page 19</b>)/belt (<b>Page 21</b>); reduce feed rate/sanding depth.</li> <li>2. Only sand wood, and ensure moisture is below 20%.</li> <li>3. Reduce pressure of workpiece against sanding belt/spindle sleeve.</li> <li>4. Inspect/replace drive belt(s) (<b>Page 29</b>).</li> <li>5. Clear blockages, seal leaks, use smooth-wall duct, eliminate bends, close other branches.</li> <li>6. Clean motor, let cool, and reduce workload.</li> <li>7. Remove/re-install brushes; replace (<b>Page 28</b>).</li> <li>8. Replace loose pulley/shaft.</li> <li>9. Test/repair/replace.</li> </ol>
Machine has vibration or noisy operation.	<ol style="list-style-type: none"> <li>1. Sanding belt/sleeve out of balance or loose.</li> <li>2. Motor or component loose.</li> <li>3. Pulley loose.</li> <li>4. Machine incorrectly mounted to workbench.</li> <li>5. Motor bearings at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Ensure sanding sleeve (<b>Page 18</b>)/belt (<b>Page 21</b>) is properly installed.</li> <li>2. Inspect/replace damaged bolts/nuts, and retighten with thread-locking fluid.</li> <li>3. Re-align/replace shaft, pulley set screw, and key.</li> <li>4. Adjust feet; shim or tighten mounting hardware.</li> <li>5. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.</li> </ol>



Symptom	Possible Cause	Possible Solution
Sanding grains easily rub off belt or sleeve.	<ol style="list-style-type: none"> <li>1. Sanding belt/sleeve has been stored in an incorrect environment.</li> <li>2. Sanding belt/sleeve has been smashed or folded.</li> </ol>	<ol style="list-style-type: none"> <li>1. Store sanding belt/sleeve in a cool, dry area.</li> <li>2. Store sanding belt/sleeve <i>not</i> bent or folded.</li> </ol>
Deep sanding grooves or scars in workpiece.	<ol style="list-style-type: none"> <li>1. Sanding belt/sleeve too coarse for desired finish.</li> <li>2. Workpiece sanded across the grain.</li> <li>3. Too much sanding force on workpiece.</li> <li>4. Workpiece held still for too long against belt/sleeve.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use finer grit sanding sleeve (<b>Page 18</b>)/belt (<b>Page 21</b>).</li> <li>2. Sand with grain.</li> <li>3. Reduce pressure on workpiece while sanding.</li> <li>4. Keep workpiece moving while sanding.</li> </ol>
Sanding belt/sleeve clogs quickly.	<ol style="list-style-type: none"> <li>1. Too much pressure on sanding belt/sleeve.</li> <li>2. Sanding softwood.</li> <li>3. Sanding belt/sleeve worn or damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Clean sanding belt/sleeve, and then reduce pressure of workpiece against sanding belt/sleeve.</li> <li>2. Use different stock, or accept characteristics of stock and plan to clean/replace sanding belt/sleeve frequently.</li> <li>3. Replace sanding sleeve (<b>Page 19</b>)/belt (<b>Page 21</b>).</li> </ol>
Glazed sanding surface.	<ol style="list-style-type: none"> <li>1. Sanding wet stock.</li> <li>2. Sanding stock with high amount of residue.</li> </ol>	<ol style="list-style-type: none"> <li>1. Only sand dry stock with moisture content below 20%.</li> <li>2. Use different stock, or accept characteristics of stock and plan to clean/replace sanding belt/sleeve frequently.</li> </ol>
Burn marks on workpiece.	<ol style="list-style-type: none"> <li>1. Sanding grit too fine.</li> <li>2. Using too much pressure.</li> <li>3. Workpiece held still for too long against belt/sleeve.</li> <li>4. Sanding belt/sleeve clogged.</li> <li>5. Sanding belt/sleeve worn or damaged.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use coarser grit sanding belt/sleeve.</li> <li>2. Reduce pressure of workpiece against sanding belt/sleeve.</li> <li>3. Keep workpiece moving while sanding.</li> <li>4. Clean sanding belt/sleeve (<b>Page 25</b>).</li> <li>5. Replace sanding sleeve (<b>Page 19</b>)/belt (<b>Page 21</b>).</li> </ol>
Workpiece gets pulled out of your hand while edge-sanding.	<ol style="list-style-type: none"> <li>1. Not supporting workpiece against backstop.</li> </ol>	<ol style="list-style-type: none"> <li>1. Use backstop to support workpiece.</li> </ol>
Sanding belt comes off during operation.	<ol style="list-style-type: none"> <li>1. Belt tracking out of adjustment.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust belt tracking (<b>Page 21</b>).</li> </ol>



# Changing Motor Brushes

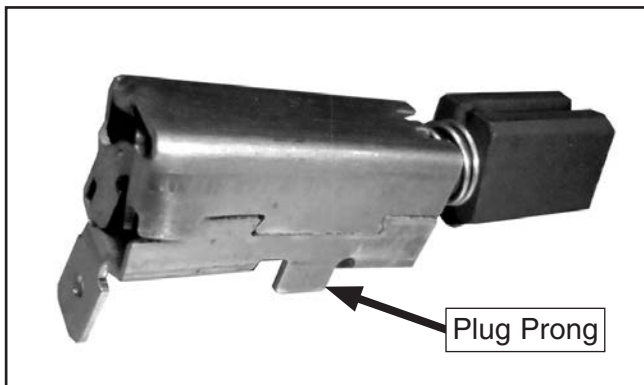
This sander has a permanent magnet motor that uses carbon brushes for operation. These brushes normally wear out over time and eventually need to be replaced.

Symptoms that the brushes have worn beyond their usable life may include a loss of power, inconsistent operation of the motor (motor cuts in and out inexplicably), or an inability of the motor to start.

If you are having trouble with the performance of the motor, first refer to **Troubleshooting on Page 22** to determine if the motor brushes must be replaced.

A pair of new brushes can be purchased from Grizzly by requesting part #PT27417136A. The replacement procedure can usually be done in about 15 minutes. When replacing the brushes, we recommend replacing them one at a time so you can keep track of which wire connects to each brush.

**Please note:** The brushes have a plug-type prongs (see **Figure 32**) that insert into the motor (similar to regular power plug). Take care when removing them to pull them out first instead of just up.

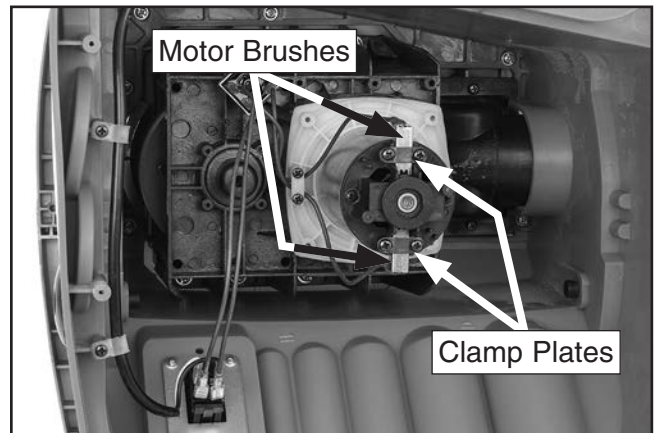


**Figure 32.** Motor brush assembly.

**Tools Required:** Qty  
Screwdriver Phillips #2..... 1

## To change motor brushes:

1. DISCONNECT MACHINE FROM POWER!
2. Turn machine on its side, and remove screws that secure base plate, then remove base plate to allow access to motor.
3. Loosen screws that secure clamp plate over one brush assembly (see **Figure 33**) but do not completely remove plate.
4. Disconnect wires attached to brush assembly. Gently pull brush assembly straight toward you and then upward to remove it.



**Figure 33.** Location of motor brushes and clamp plates.

5. Replace motor brush assembly, reconnect wire, and tighten clamp plate back in place.
6. Repeat these **Steps 3–5** with the other brush assembly.
7. Re-install and tighten base plate.



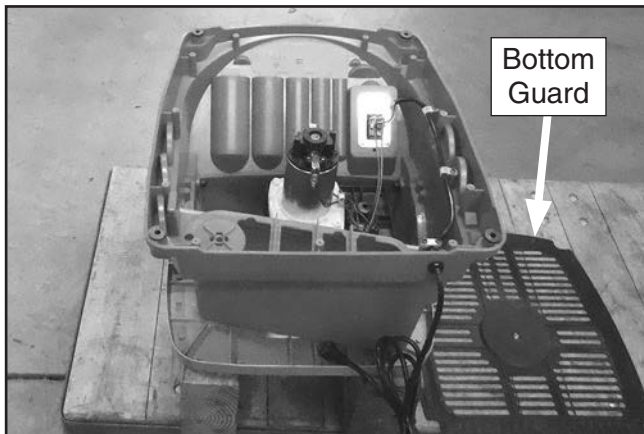
# Drive Belt Replacement

The following procedure details removal and replacement of the drive belts. Refer to the parts breakdown and list to aid in proper identification of parts referenced in the procedure.

Tools Required:	Qty
Screwdriver Phillips #2.....	1
Retaining Ring Pliers.....	1

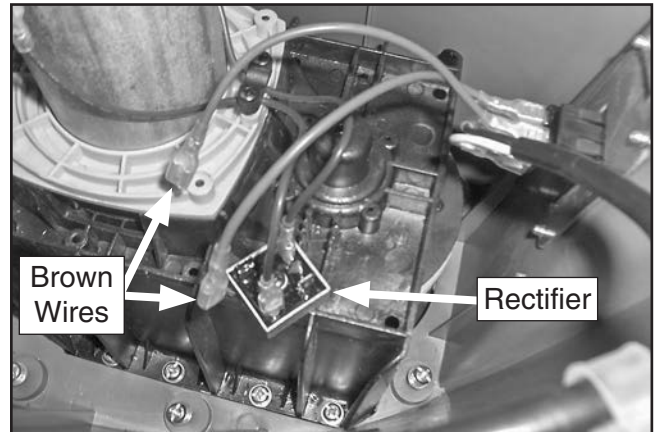
## To replace drive belts:

1. DISCONNECT MACHINE FROM POWER!
2. Remove all sanding attachments and backstop, then place sander upside down on blocks, ensuring proper clearance of spindle (#81).
3. Remove eleven M4 x 14 tap screws (#46) from bottom guard (#134) shown in **Figure 34**.



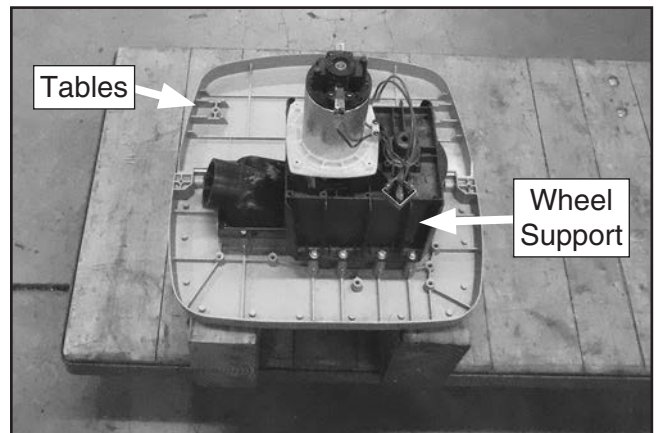
**Figure 34.** Sander turned upside down with bottom guard removed.

4. Remove two brown wires connected to rectifier (see **Figure 35**).



**Figure 35.** Wires removed from rectifier.

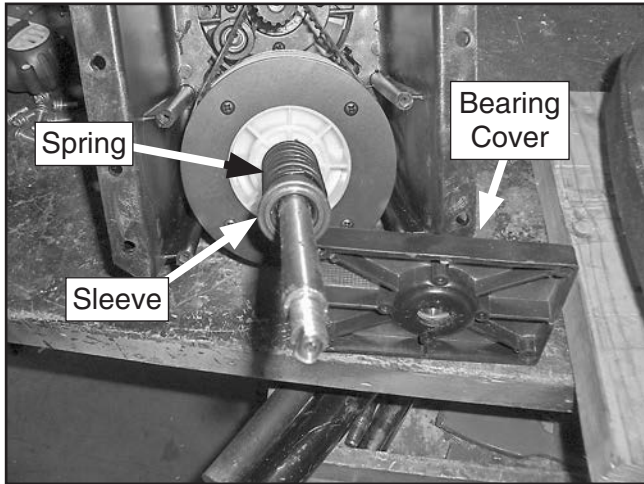
5. Remove nine M5-.8 x 12 Phillips head screws (#33), lock washers (#27), and flat washers (#21) that attach the base (#125) and table tilt brackets (#43 & #45) to the tables (#30 & #41), then remove table tilt lock knobs (#103).
6. Remove base (#125) from tables (#30 & #41) to expose wheel support (#55), as shown in **Figure 36**.



**Figure 36.** Housing base removed from cast-iron table.

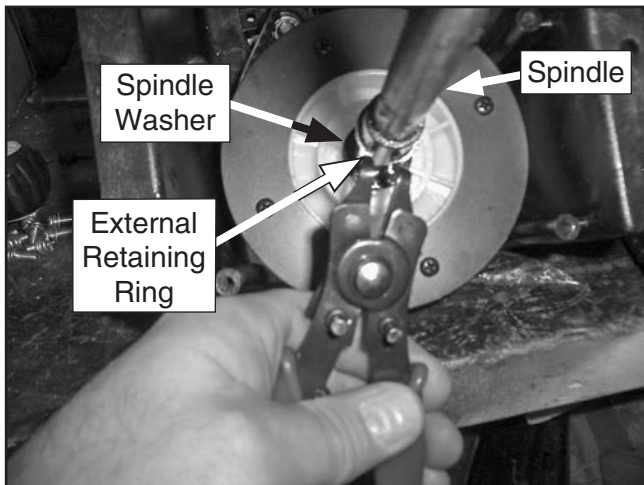


7. Remove eight M6-1 x 16 Phillips head screws (#32) that secure wheel support (#55) to fixed table (#30), then remove wheel support (#55).
8. Remove four M4 x 22 tap screws (#54) that secure bearing cover (#77), then remove cover (see **Figure 37**).



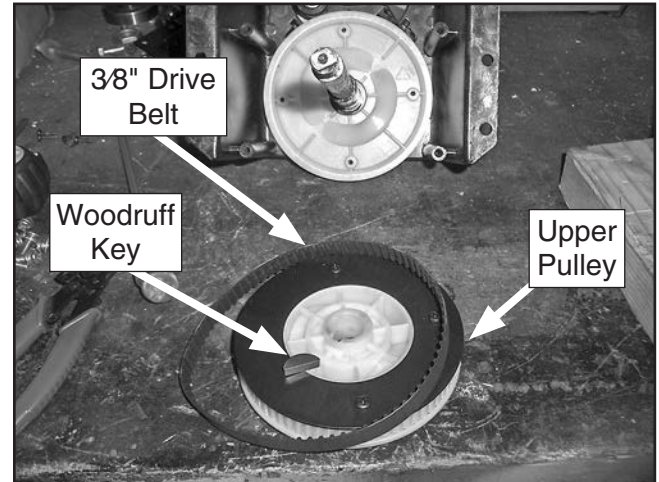
**Figure 37.** Bearing cover removed.

9. Remove upper bearing sleeve (#79) and compression spring (#80).
10. Remove 17mm external retaining ring (#84) and spindle washer (#85) from spindle (#81), as shown in **Figure 38**.



**Figure 38.** Removing external retaining ring and washer from spindle.

11. Remove  $\frac{3}{8}$ " drive belt (#88) and upper pulley (#90) assembly (see **Figure 39**) from spindle (#81), and put Woodruff key (#83) in safe place for re-assembly.

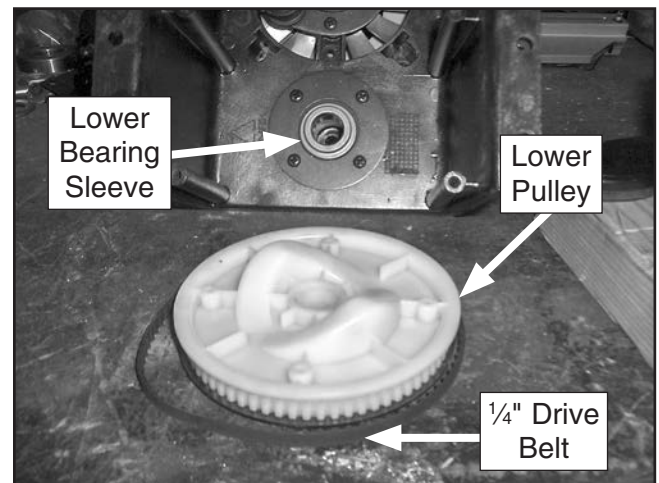


**Figure 39.**  $\frac{3}{8}$ " drive belt and upper pulley removed from spindle.

12. Remove spindle (#81) and lower pulley assembly (#87)

**Note:** Ensure the  $\frac{1}{4}$ " drive belt (#89) is clear of tension roller assembly (#52) during removal.

13. Make sure lower bearing sleeve (#91), shown in **Figure 40** behind lower pulley (#87) stays in place.
14. Remove  $\frac{1}{4}$ " drive belt (#89) (see **Figure 40**).

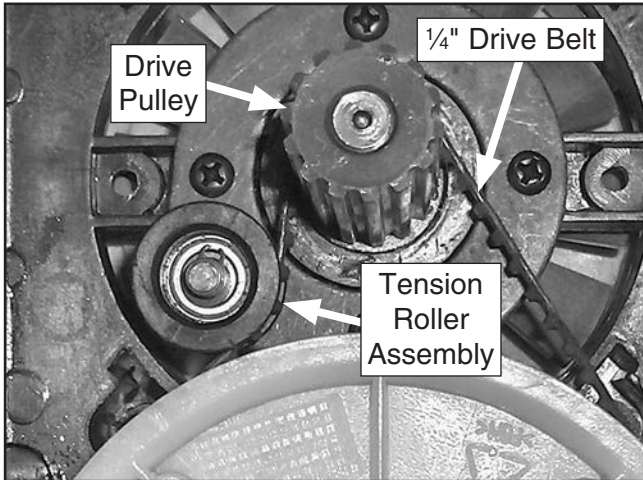


**Figure 40.** Location of lower bearing sleeve, with lower pulley and  $\frac{1}{4}$ " timing belt removed.





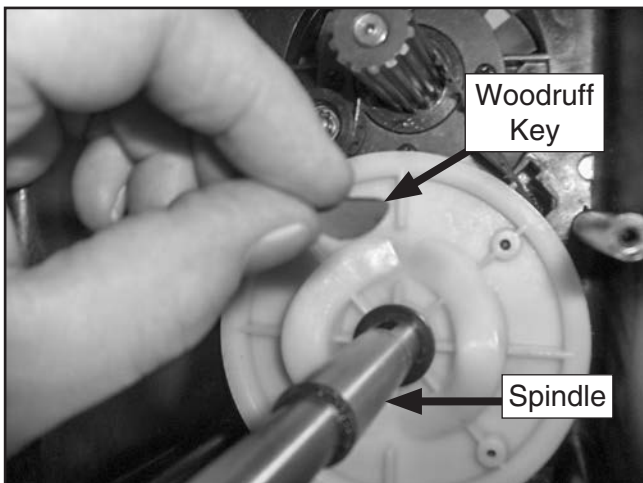
15. Install new 1/4" drive belt (#89) onto lower pulley assembly (#87).
16. Install 1/4" drive belt (#89) onto drive pulley (#61) with drive belt wrapped around proper side of the tension roller assembly (#52), as shown in **Figure 41**.



**Figure 41.** 1/4" drive belt installed onto drive pulley and tension roller assembly.

17. Install spindle (#81) with upper pulley (#90) and bearing sleeve.
18. Install Woodruff key (#83) into spindle (#81), as shown in **Figure 42**.

**Note:** A piece of clear tape can be used to ensure Woodruff key (#83) stays in place during re-assembly.

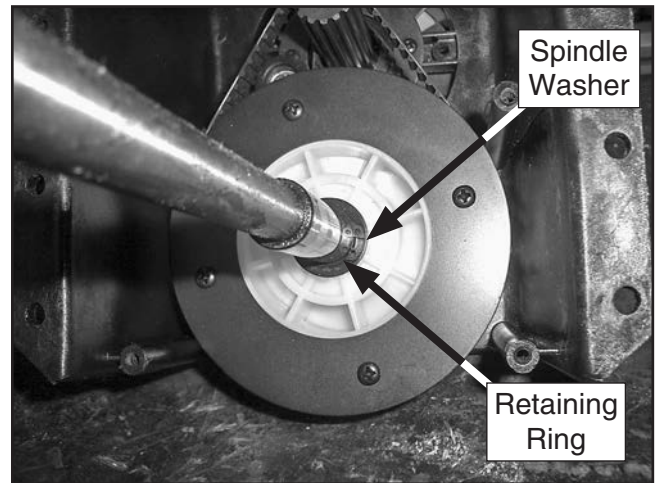


**Figure 42.** Installing Woodruff key into spindle.

19. Install new 3/8" drive belt (#88) onto upper pulley (#90).
20. Install upper pulley (#90) onto spindle (#81).
21. Slide 3/8" drive belt (#88) onto drive pulley (#61).

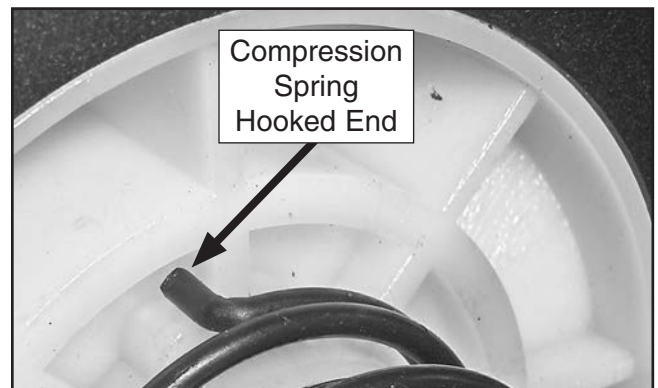
**Note:** Verify lower pulley (#87) and upper pulley (#90) are properly mated together, and that Woodruff key (#83) remains in place.

22. Install spindle washer (#81) and retaining ring (#84), as shown in **Figure 43**.



**Figure 43.** Spindle washer and retaining ring installed.

23. Install compression spring (#80), ensuring hooked end is locked into upper pulley (#90) shoulder, as shown in **Figure 44**.

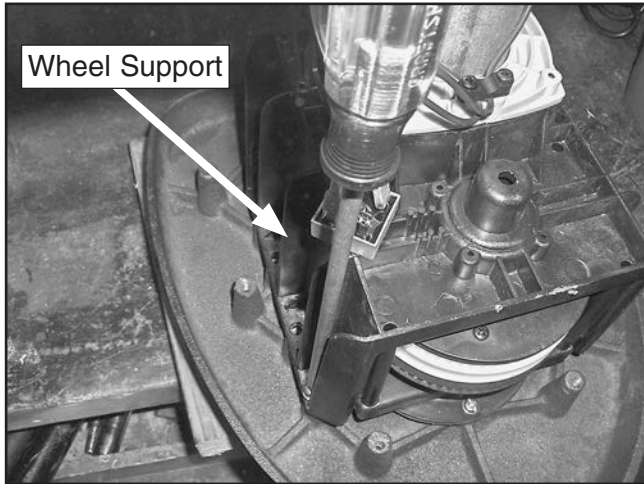


**Figure 44.** Hooked end of compression spring locked into upper pulley shoulder.



27. Install bearing sleeve (#79) into compression spring (#80).
28. Install bearing cover (#77).
29. Install wheel support (#55), as shown in **Figure 45**.

30. Re-install base (#125) onto tables (#30 & #41), then re-install table tilt brackets (#43 & #45) and table tilt lock knobs (#103).
31. Re-connect two brown wires to rectifier (refer to **Figure 35** on **Page 29**), then re-install bottom guard (#134).



**Figure 45.** Installing wheel support.



# 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.













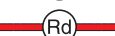

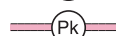
**CAPACITORS/INVERTERS.** Some capacitors and power inverters store an electrical charge for up to 10 minutes after being disconnected from the power source. To reduce the risk of being shocked, wait at least this long before working on capacitors.

**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 	



# T27417 Wiring Diagram

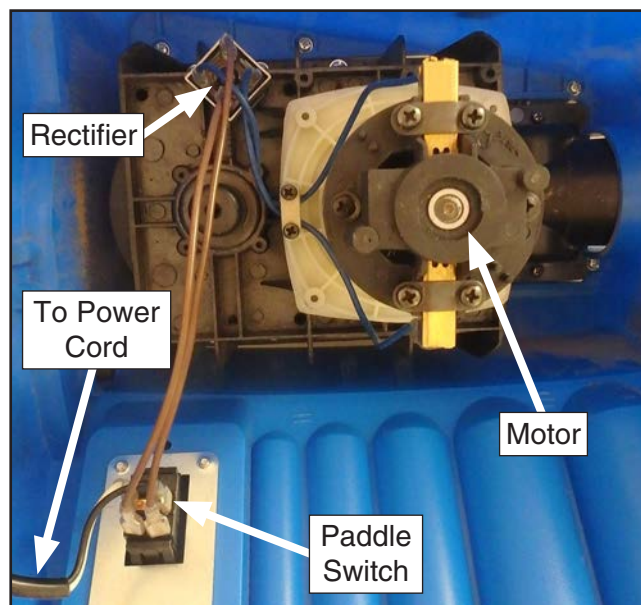
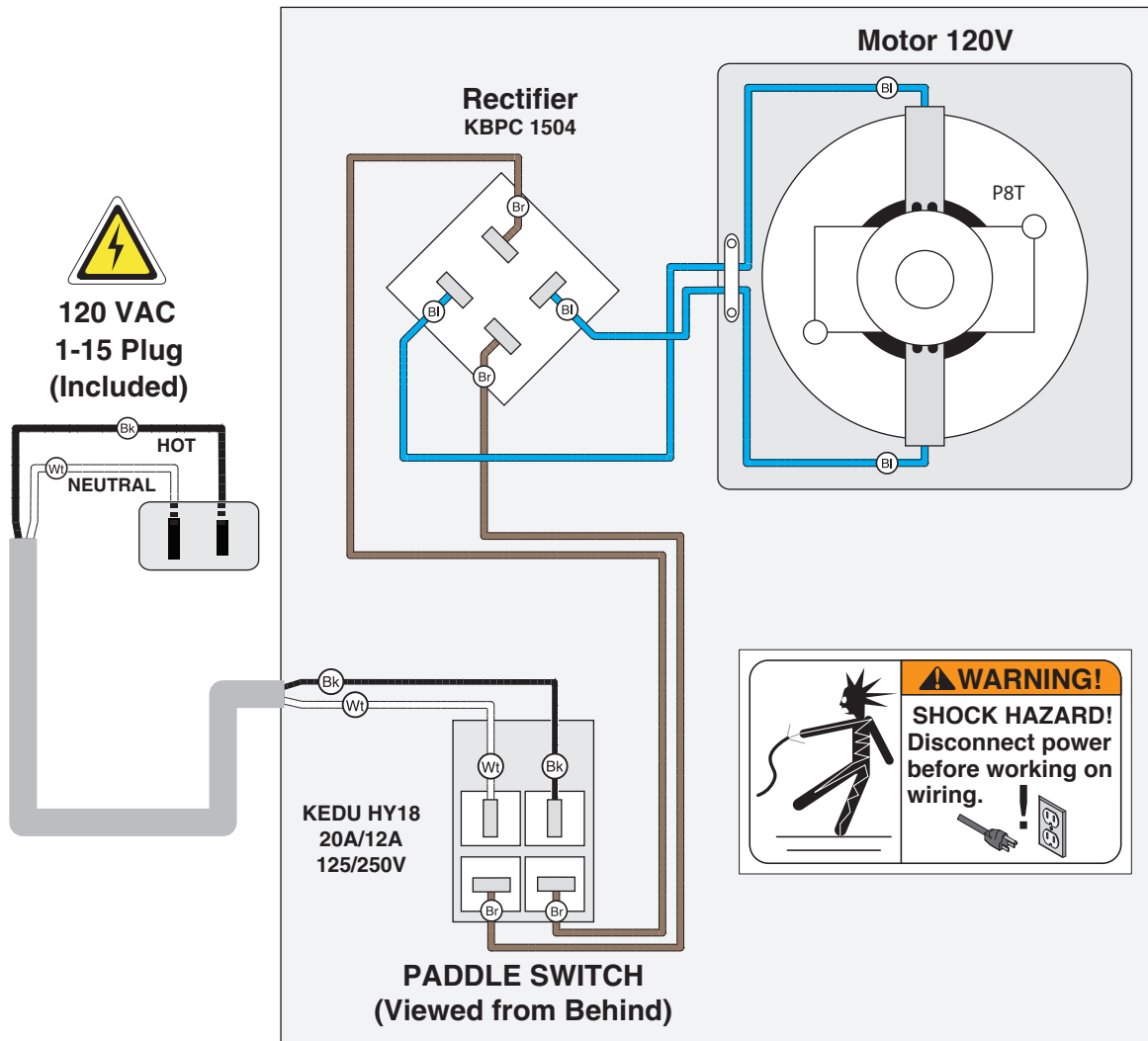


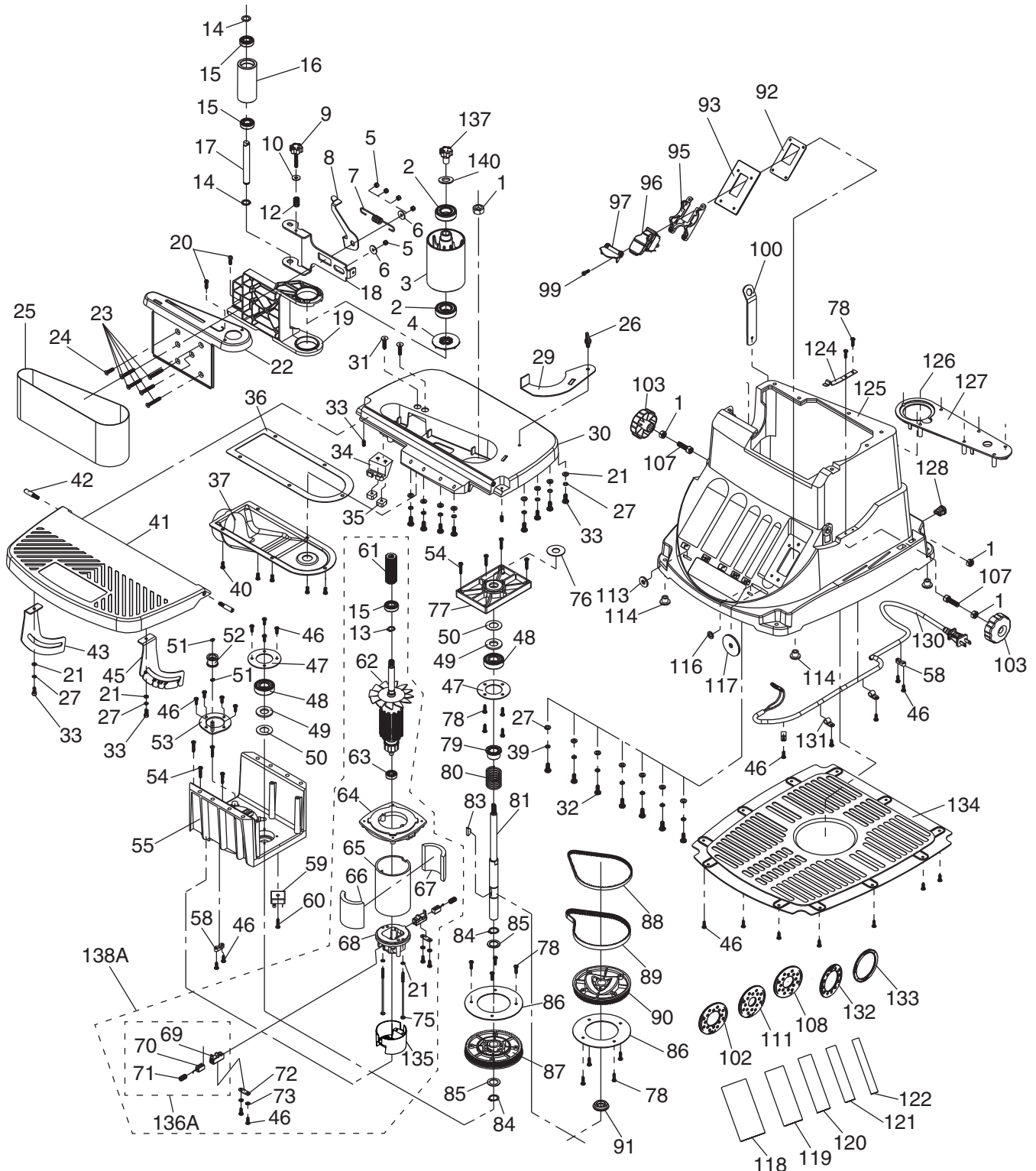
Figure 46. Wiring components viewed from below.



# 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	PT27417001	HEX NUT M8-1.25
2	PT27417002	BALL BEARING 6004ZZ
3	PT27417003	DRUM WHEEL 3" X 4", ALUMINUM
4	PT27417004	SPINDLE WASHER 13MM
5	PT27417005	LOCK NUT M5-.8
6	PT27417006	FLAT WASHER 5MM
7	PT27417007	EXTENSION SPRING
8	PT27417008	BELT TENSION ARM
9	PT27417009	KNOB BOLT M5-.8 X 35
10	PT27417010	RUBBER WASHER 6MM
12	PT27417012	COMPRESSION SPRING 1 X 11 X 37
13	PT27417013	FLAT WASHER 14MM
14	PT27417014	EXT RETAINING RING 12MM
15	PT27417015	BALL BEARING 6001ZZ
16	PT27417016	DRUM WHEEL 1.5" X 3.375", ALUMINUM
17	PT27417017	DRUM AXLE 12 X 100MM
18	PT27417018	DRUM CARRIAGE
19	PT27417019	DRUM WHEEL HOUSING
20	PT27417020	PHLP HD SCR M4-.7 X 16
21	PT27417021	FLAT WASHER 5MM
22	PT27417022	BELT HOUSING COVER
23	PT27417023	FLAT HD SCR M5-.8 X 35
24	PT27417024	FLAT HD SCR M5-.8 X 20
25	PT27417025	SANDING BELT 4" X 24" 80-GRIT
26	PT27417026	WING BOLT M6-1 X 14
27	PT27417027	LOCK WASHER 5MM
29	PT27417029	BACKSTOP
30	PT27417030	FIXED TABLE
31	PT27417031	FLAT HD CAP SCR M6-1 X 25
32	PT27417032	PHLP HD SCR M6-1 X 16
33	PT27417033	PHLP HD SCR M5-.8 X 12
34	PT27417034	DRUM HOUSING SUPPORT
35	PT27417035	SQUARE NUT M6-1
36	PT27417036	DUST PORT GASKET
37	PT27417037	DUST PORT 1-1/2"
39	PT27417039	LOCK WASHER 6MM
40	PT27417040	PHLP HD SCR M5-.8 X 20
41	PT27417041	TILTING TABLE
42	PT27417042	TABLE TILT PIN M6-1 X 14, 8 X 25
43	PT27417043	TABLE TILT BRACKET (LEFT)
45	PT27417045	TABLE TILT STOP BRACKET (RIGHT)
46	PT27417046	TAP SCREW M4 X 14
47	PT27417047	UPPER BEARING SUPPORT
48	PT27417048	BALL BEARING 6203ZZ
49	PT27417049	FELT RING

REF	PART #	DESCRIPTION
50	PT27417050	RUBBER GASKET
51	PT27417051	SPINDLE WASHER
52	PT27417052	BEARING SLEEVE
53	PT27417053	LOWER BEARING SUPPORT
54	PT27417054	TAP SCREW M4 X 22
55	PT27417055	WHEEL SUPPORT
58	PT27417058	WIRE CLAMP
59	PT27417059	RECTIFIER KBPC1504
60	PT27417060	TAP SCREW M4 X 20
61	PT27417061	DRUM WHEEL
62	PT27417062	ROTOR
63	PT27417063	BALL BEARING 608ZZ
64	PT27417064	FAN SHROUD
65	PT27417065	FIELD ASSEMBLY
66	PT27417066	MAGNETIC SHOE (NORTH)
67	PT27417067	MAGNETIC SHOE (SOUTH)
68	PT27417068	ROTOR BASE
69	PT27417069	CARBON BRUSH HOLDER
70	PT27417070	CARBON BRUSH
71	PT27417071	CARBON BRUSH SPRING
72	PT27417072	CORD CLAMP
73	PT27417073	INT TOOTH WASHER 4MM
75	PT27417075	TAP SCREW M4 X 20
76	PT27417076	FLAT WASHER 6MM
77	PT27417077	BEARING COVER
78	PT27417078	TAP SCREW M4 X 16
79	PT27417079	BEARING SLEEVE (UPPER)
80	PT27417080	COMPRESSION SPRING
81	PT27417081	SPINDLE
83	PT27417083	WOODRUFF KEY 5 X 19
84	PT27417084	FLAT WASHER 17MM
85	PT27417085	WASHER 17.2 X 25.5 X 1.5MM
86	PT27417086	PULLEY PLATE
87	PT27417087	PULLEY (LOWER)
88	PT27417088	BELT 3/8" X 160XL
89	PT27417089	BELT 1/4" X 160XL
90	PT27417090	PULLY (UPPER)
91	PT27417091	BEARING SLEEVE (LOWER)
92	PT27417092	SWITCH PLATE, METAL
93	PT27417093	SWITCH PLATE, PLASTIC
95	PT27417095	SWITCH ORIENTATION PLATE
96	PT27417096	SAFETY PADDLE SWITCH
97	PT27417097	SWITCH SHIELD
99	PT27417099	PHLP HD SCR M4-.7 X 15



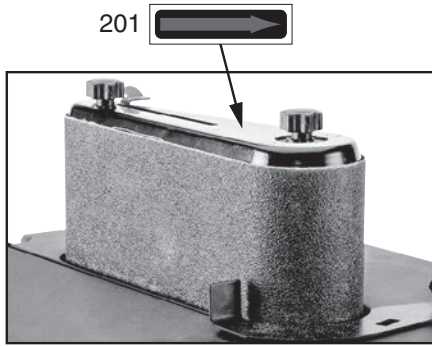
# Main Parts List (Cont.)

REF	PART #	DESCRIPTION
100	PT27417100	SPINDLE NUT WRENCH 13MM
102	PT27417102	THROAT PLATE 1" ID
103	PT27417103	STAR KNOB M8-1.25, 60MM OD
107	PT27417107	CAP SCREW M8-1.25 X 30
108	PT27417108	THROAT PLATE 3/4" ID
111	PT27417111	THROAT PLATE 1/2" ID
113	PT27417113	SPINDLE WASHER 8 X 20 X 3MM
114	PT27417114	RUBBER FOOT
116	PT27417116	SPINDLE WASHER 8 X 15 X 3MM
117	PT27417117	SPINDLE WASHER 8 X 46 X 3MM
118	PT27417118	SANDING SLEEVE 2", 80-GRIT
119	PT27417119	SANDING SLEEVE 1-1/2", 80-GRIT
120	PT27417120	SANDING SLEEVE 1", 80-GRIT
121	PT27417121	SANDING SLEEVE 3/4", 80-GRIT
122	PT27417122	SANDING SLEEVE 1/2", 80-GRIT

REF	PART #	DESCRIPTION
124	PT27417124	ANGLE PLATE BRACKET
125	PT27417125	BASE
126	PT27417126	PHLP HD SCR M5-.8 X 8
127	PT27417127	TABLE INSERT
128	PT27417128	STRAIN RELIEF 1/2" TYPE-1
130	PT27417130	POWER CORD 18G 2W 96" 1-15P
131	PT27417131	CORD CLAMP
132	PT27417132	THROAT PLATE 1.5" ID
133	PT27417133	THROAT PLATE 2" ID
134	PT27417134	BOTTOM GUARD
135	PT27417135	VENTED MOTOR COVER
136A	PT27417136A	BRUSH ASSEMBLY
137	PT27417137	KNOB M8-1.25, 18MM L (FEMALE)
138A	PT27417138A	MOTOR ASSEMBLY
140	PT27417140	FLAT WASHER 13MM



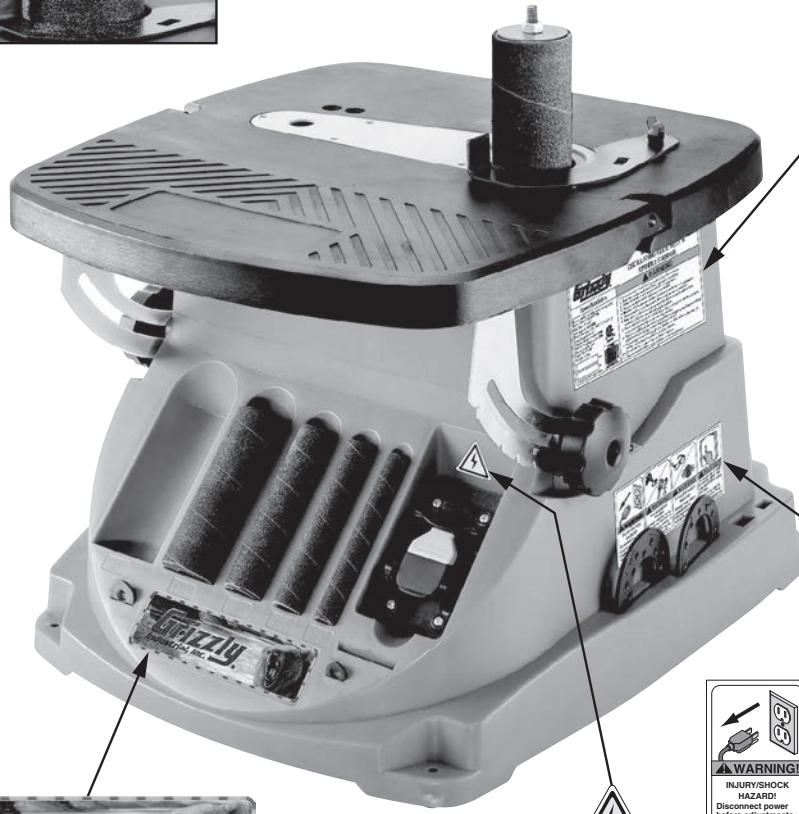
# Labels



201

202

<b>Grizzly Industrial</b>	
<b>MODEL T27417 OSCILLATING EDGE BELT &amp; SPINDLE SANDER</b>	
<b>Specifications</b>	<b>⚠ WARNING!</b>
Motor: 450W (1/2 HP), 120V, 60 Hz, 3.5A Motor Speed: 11,500 RPM Belt Size: 4" x 24" Belt Speed: 1575 FPM Drum Diameter: 1/2", 3/4", 1", 1-1/2", 2" Drum Length: 4-1/2" Spindle Speed: 0-2000 RPM Spindle Oscillation: 90° CPM Stroke Length: 5/8" Table Tilt: 0°-45° Weight: 27 lbs.	To reduce the risk of serious injury while using this machine: 1. Read and understand owner's manual before operating. 2. Always wear approved eye protection and respirator. 3. Support workpiece with backstop or worktable. 4. Maintain 1/16" maximum clearance between backstop and sandpaper. 5. Always sand in accordance with directional arrows on machine. 6. Make sure sander is properly assembled, adjusted, and stable before operating. Only operate with all guards in place. 7. Never sand pointed stock with leading edge pointing into sanding rotation, and never force workpiece into sanding surface, making adjustments, servicing, or removing jammed stock. 8. Turn motor OFF and disconnect power before changing sandpaper, making adjustments, servicing, or removing jammed stock. 9. Do not wear loose clothing, gloves, jewelry, or other articles that can get entangled. Tie back long hair and roll up sleeves. 10. Do not expose to rain or use in damp locations. 11. Prevent unauthorized use by children or untrained users.
Date: _____ SN: _____ Manufactured for Grizzly in China	



208



207

<p><b>⚠ WARNING!</b> <b>INJURY/SHOCK HAZARD!</b> Disconnect power before adjustments, maintenance, or service.</p>	<p><b>⚠ WARNING!</b> <b>ENTANGLEMENT HAZARD!</b> Tie back long hair, roll up long sleeves, and remove loose clothing, jewelry, or gloves to prevent getting caught in moving parts.</p>	<p><b>⚠ WARNING!</b> <b>EYEING INJURY HAZARD!</b> Always wear safety glasses and a respirator when using this machine.</p>	<p><b>⚠ WARNING!</b> To reduce risk of death or serious injury, read manual <b>BEFORE</b> using machine. To get a new manual, call (800) 523-4777 or go to <a href="http://www.grizzly.com">www.grizzly.com</a>.</p>
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209

REF	PART #	DESCRIPTION
201	PT27417201	BELT DIRECTION LABEL
202	PT27417202	MACHINE ID LABEL
207	PT27417207	ELECTRICITY LABEL

REF	PART #	DESCRIPTION
208	PT27417208	GRIZZLY INDUSTRIAL LOGO LABEL
209	PT27417209	COMBO WARNINGS 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 CARD

Name \_\_\_\_\_  
 Street \_\_\_\_\_  
 City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_  
 Phone # \_\_\_\_\_ Email \_\_\_\_\_  
 Model # \_\_\_\_\_ Order # \_\_\_\_\_ Serial # \_\_\_\_\_

The following information is given on a voluntary basis. It will be used for marketing purposes to help us develop better products and services. **Of course, all information is strictly confidential.**

1. How did you learn about us?

Advertisement       Friend       Catalog  
 Card Deck       Website       Other:

2. Which of the following magazines do you subscribe to?

<input type="checkbox"/> Cabinetmaker & FDM	<input type="checkbox"/> Popular Science	<input type="checkbox"/> Wooden Boat
<input type="checkbox"/> Family Handyman	<input type="checkbox"/> Popular Woodworking	<input type="checkbox"/> Woodshop News
<input type="checkbox"/> Hand Loader	<input type="checkbox"/> Precision Shooter	<input type="checkbox"/> Woodsmith
<input type="checkbox"/> Handy	<input type="checkbox"/> Projects in Metal	<input type="checkbox"/> Woodwork
<input type="checkbox"/> Home Shop Machinist	<input type="checkbox"/> RC Modeler	<input type="checkbox"/> Woodworker West
<input type="checkbox"/> Journal of Light Cont.	<input type="checkbox"/> Rifle	<input type="checkbox"/> Woodworker's Journal
<input type="checkbox"/> Live Steam	<input type="checkbox"/> Shop Notes	<input type="checkbox"/> Other:
<input type="checkbox"/> Model Airplane News	<input type="checkbox"/> Shotgun News	
<input type="checkbox"/> Old House Journal	<input type="checkbox"/> Today's Homeowner	
<input type="checkbox"/> Popular Mechanics	<input type="checkbox"/> Wood	

3. What is your annual household income?

\$20,000-\$29,000       \$30,000-\$39,000       \$40,000-\$49,000  
 \$50,000-\$59,000       \$60,000-\$69,000       \$70,000+

4. What is your age group?

20-29       30-39       40-49  
 50-59       60-69       70+

5. How long have you been a woodworker/metalworker?

0-2 Years       2-8 Years       8-20 Years       20+ Years

6. How many of your machines or tools are Grizzly?

0-2       3-5       6-9       10+

7. Do you think your machine represents a good value?       Yes       No

8. Would you recommend Grizzly Industrial to a friend?       Yes       No

9. Would you allow us to use your name as a reference for Grizzly customers in your area?

**Note:** We never use names more than 3 times.       Yes       No

10. Comments: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

CUT ALONG DOTTED LINE

FOLD ALONG DOTTED LINE

\_\_\_\_\_
\_\_\_\_\_
\_\_\_\_\_



Place Stamp Here



GRIZZLY INDUSTRIAL, INC.
P.O. BOX 2069
BELLINGHAM, WA 98227-2069



FOLD ALONG DOTTED LINE

Send a Grizzly Catalog to a friend:

Name \_\_\_\_\_
Street \_\_\_\_\_
City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

TAPE ALONG EDGES--PLEASE DO NOT STAPLE

# 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 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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