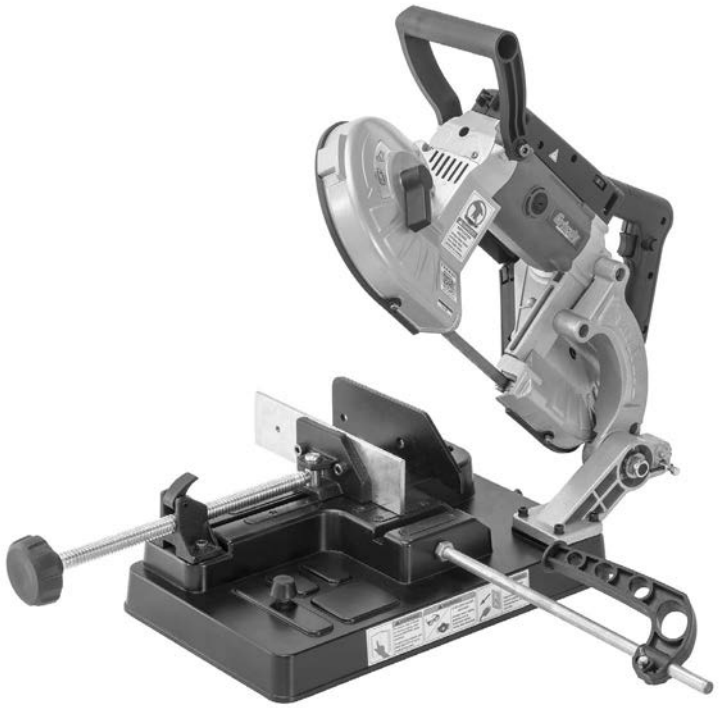
MODEL T34441
4-1/2" PORTABLE METAL-CUTTING BANDSAW w/STAND

OWNER'S MANUAL

(For models manufactured since 05/25)



#CS23590 PRINTED IN CHINA V1.05.25

******Keep for Future Reference******

⚠ 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.

Table of Contents

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

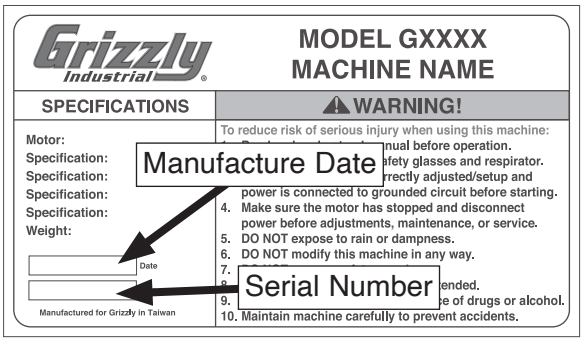
Manual Accuracy

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**.

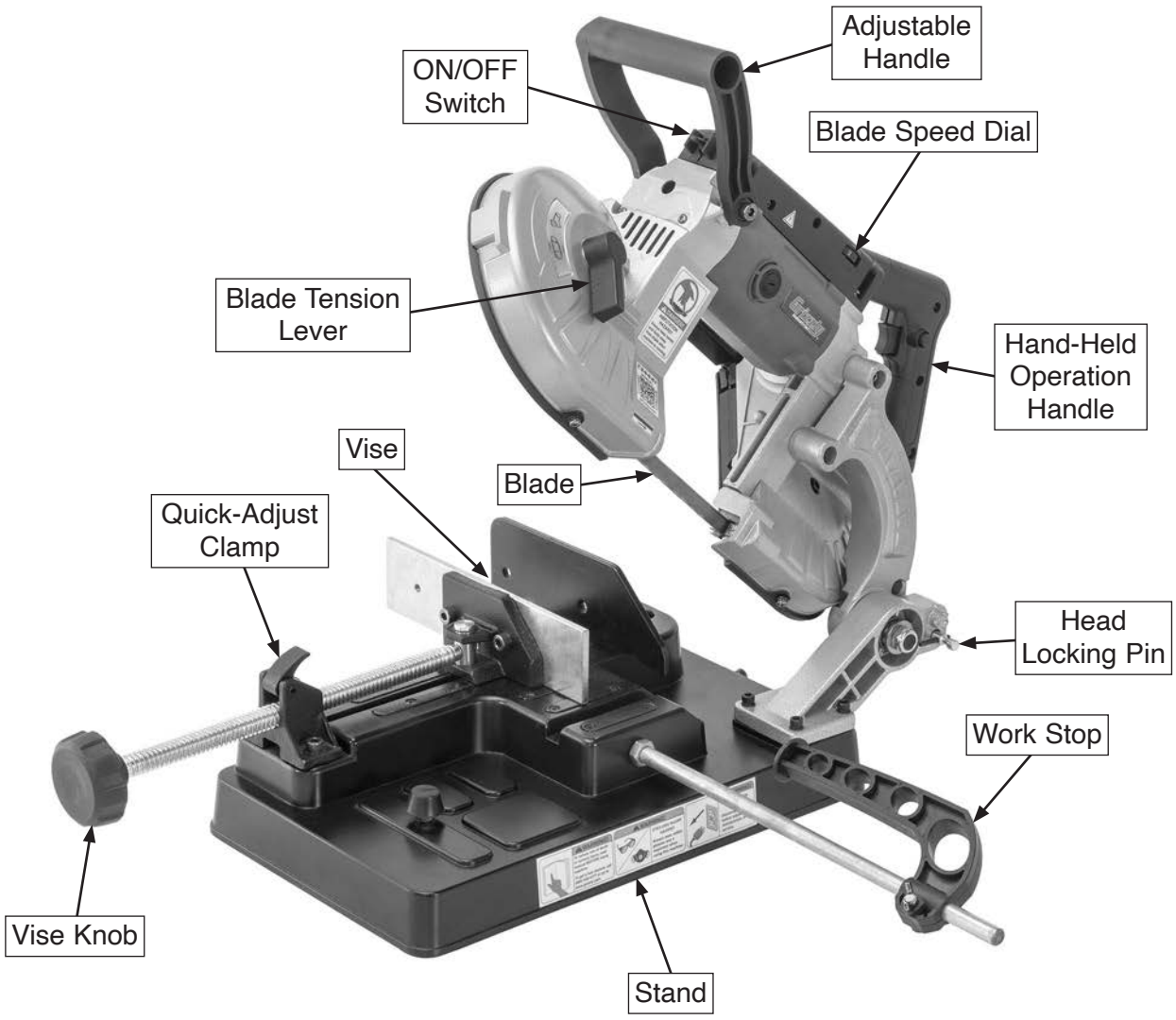
If you find this to be the case, and the difference between the manual and machine leaves you confused or unsure about something, check our website for an updated version. We post current manuals and manual updates for free on our website at **www.grizzly.com**.

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.



Identification

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

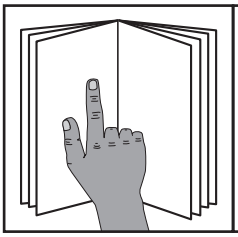


⚠WARNING

For Your Own Safety Read Instruction Manual Before Operating Saw

a) Wear eye protection and respirator.
b) Do not remove jammed cutoff pieces until blade has stopped.
c) Maintain proper adjustment of blade tension, blade guides, and support bearings.
d) Properly support and secure workpiece with table, vise, or some type of support fixture. Never hold workpiece with hands during cut.

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.

Power Controls

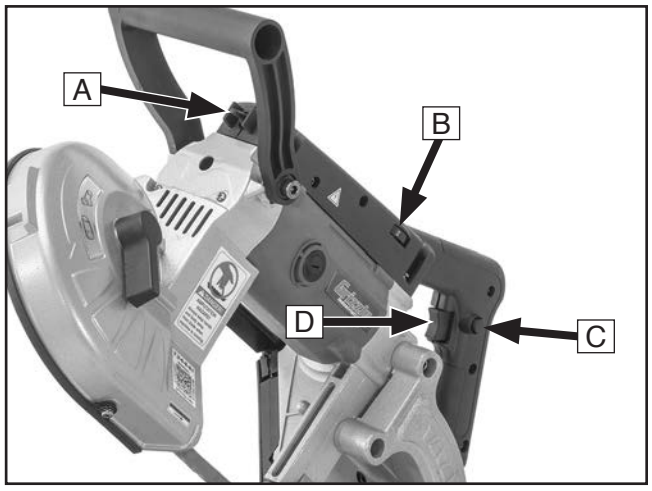


Figure 1. Power controls.

A. ON/OFF Switch: Turns machine power ***ON*** and ***OFF***. When bandsaw is installed on stand, this switch is used to start/stop blade.

B. Blade Speed Dial: Adjusts blade speed from 136–278 FPM. Turn dial to higher numbers for higher speeds; turn to lower numbers for lower speeds.

C. Trigger Lock Button: Locks trigger in ON position. To disengage, press and release trigger switch.

D. Trigger Switch: Starts blade when pressed; stops blade when released. When bandsaw is removed from stand, this switch is used to start/stop blade.

Bandsaw

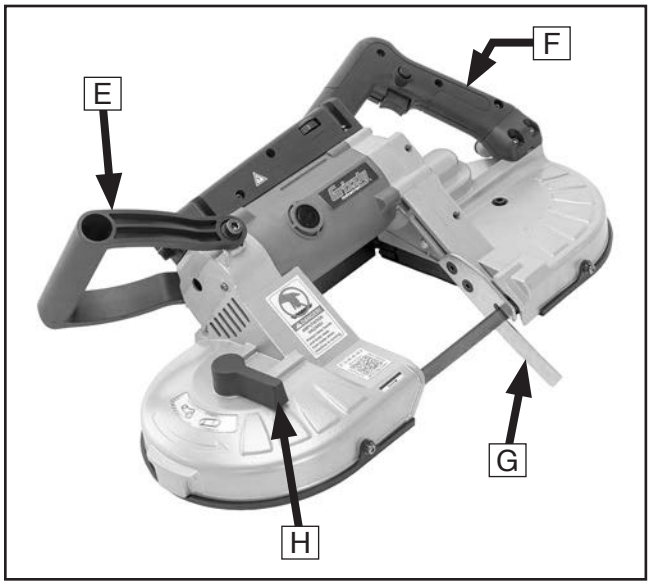


Figure 2. Bandsaw controls.

E. Adjustable Handle: Provides holding point for front of bandsaw. When bandsaw is installed on stand, handle is used to control downfeed.

F. Hand-Held Operation Handle: Provides holding point for rear of bandsaw and houses hand-held blade power controls.

G. Guide Plate: Provides support and helps guide straight cuts when bandsaw is removed from stand. Adjust plate as close to blade as operation will allow.

H. Blade Tension Lever: Applies and releases blade tension.

Stand

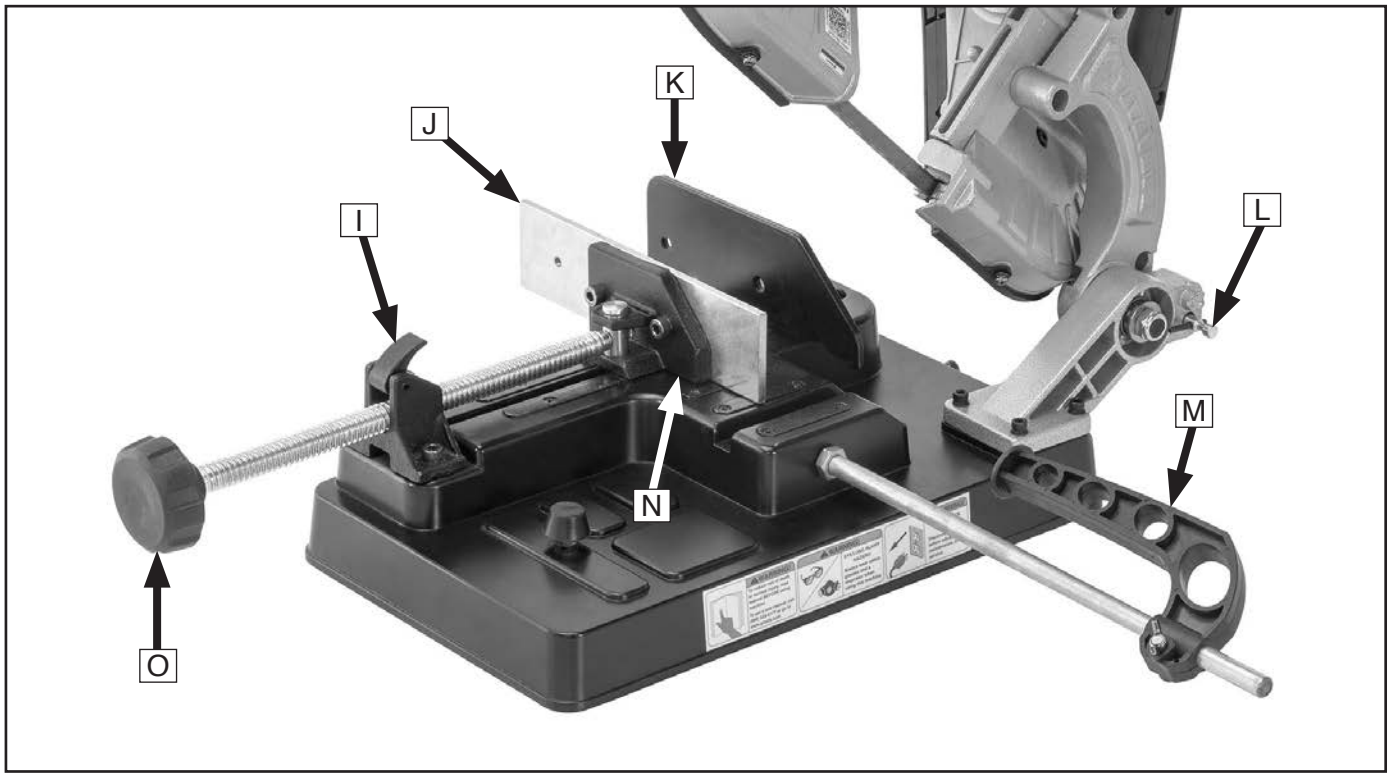


Figure 3. Stand components.

I. Quick-Adjust Clamp: Engages to secure leadscrew for precise vise knob adjustment; disengages to quickly adjust vise jaw width.

J. Vise Support Plate: Provides additional support for small workpieces.

K. Fixed Vise Jaw: Helps hold workpiece during stand cutting operations and adjusts workpiece angle between 0°–45° relative to blade.

L. Head Locking Pin: Locks bandsaw in vertical or horizontal position on stand. Pull out and turn pin 90° to disengage lock.

M. Work Stop: Adjusts to support repetitive cutting operations.

N. Floating Vise Jaw: Secures workpiece against fixed jaw.

O. Vise Knob: Adjusts floating vise jaw.

MACHINE DATA SHEET

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

MODEL T34441
4-1/2" PORTABLE METAL-CUTTING BANDSAW W/STAND

Product Dimensions:

Weight	29 lbs.
Width (side-to-side) x Depth (front-to-back) x Height	26-1/2 x 25 x 14-1/2 in.
Footprint (Length x Width)	17-1/2 x 11 in.
Space Required for Full Range of Movement (Width x Depth x Height)	26-1/2 x 41 x 24-1/2 in.

Shipping Dimensions:

Type	Cardboard Box
Content	Machine
Weight	42 lbs.
Length x Width x Height	25 x 16 x 21 in.
Must Ship Upright	Yes

Electrical:

Power Requirement	120V, Single-Phase, 60 Hz
Full-Load Current Rating	10A
Minimum Circuit Size	15A
Connection Type	Cord & Plug
Power Cord Included	Yes
Power Cord Length	87 in.
Power Cord Gauge	18 AWG
Plug Included	Yes
Included Plug Type	5-15
Switch Type	Toggle ON/OFF w/Trigger Switch

Motors:

Main

Horsepower	1 HP
Phase	Single-Phase
Amps	6A
Speed	22,000 RPM
Type	Universal (Brush)
Power Transfer	Direct
Bearings	Sealed & Permanently Lubricated

Main Specifications:

Operation Information

Blade Speeds	136 - 278 FPM
Std. Blade Length	44-7/8 in.
Std. Blade Width	1/2 in.

Cutting Capacities

Cutting Height	4-7/16 in.
Angle Cuts	0 - 45 deg.
Vise Jaw Depth	7-1/2 in.
Vise Jaw Height	2-3/8 in.
Max. Throat Capacity Height	4-7/16 in.
Max. Throat Capacity Width	4-5/16 in.
Max. Capacity Rectangular Height at 90 Deg.	4-7/16 in.
Max. Capacity Rectangular Width at 90 Deg	3-5/8 in.
Max. Capacity Round at 90 Deg	4-5/16 in.
Max. Capacity Rectangular Height at 30 Deg.	2-3/8 in.
Max. Capacity Rectangular Width at 30 Deg	2-3/8 in.
Max. Capacity Round at 30 Deg	2-3/4 in.
Max. Capacity Rectangular Height at 45 Deg.	1-5/8 in.
Max. Capacity Rectangular Width at 45 Deg	1-5/8 in.
Max. Capacity Round at 45 Deg	1-7/8 in.

Construction

Upper Wheel	Cast Aluminum
Lower Wheel	Cast Aluminum
Tire	Rubber
Body	Cast Aluminum
Stand	Cast Aluminum
Wheel Cover	Plastic
Paint Type/Finish	Powder Coated

Table Info

Table Size Length	13 in.
Table Size Width	8-1/4 in.
Floor To Cutting Area Height	3-1/2 in.

Other

Wheel Size	6-5/16 in.
Blade Guides Upper	Ball Bearing
Blade Guides Lower	Ball Bearing

Other Specifications:

Country of Origin	China
Warranty	1 Year
Approximate Assembly & Setup Time	45 Minutes
Serial Number Location	Machine ID Label
ISO 9001 Factory	Yes

Features:

Hand-Held Portable Bandsaw w/Carrying Case
Stand w/Adjustable Vise and Work Stop
Variable-Speed Blade Control (136 - 278 FPM)
Vise Support Plate for Small Workpieces

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 loose clothing, gloves, neckties, 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 Portable Metal Bandsaws

⚠WARNING

Serious injury or death can occur from getting fingers, hair, or clothing entangled in rotating or moving parts or making direct contact with the moving blade. To minimize risk of injury, anyone operating this machine MUST completely heed hazards and warnings below.

PREVENT ACCIDENTAL STARTUP. Ensure ON/OFF toggle switch is in OFF position *and* trigger switch is disengaged after every operation. If either switch is accidentally engaged when moving or adjusting machine, this will prevent blade from starting and causing personal injury.

BLADE CONDITION. Do not operate with dull, cracked, or badly worn blade. Inspect blades for cracks and missing teeth before each use.

BODY PLACEMENT. Never position body parts in line with cut or under blade while lowering or operating. Body parts could be cut or crushed.

ENTANGLEMENT HAZARDS. Do not operate saw without blade covers in place. Loose clothing, jewelry, long hair and work gloves can be drawn into working parts.

BLADE REPLACEMENT. When replacing blades, disconnect machine from power, wear work gloves to protect hands and safety glasses to protect eyes.

HOT SURFACES. Skin contact with hot machine components, ejections of hot chips, swarf, and workpiece itself can cause burns. Allow these components to cool or put on gloves before handling.

WORKPIECE HANDLING. Always properly support workpiece with table, vise, or some type of support fixture. Always secure workpiece in vise before cutting with stand. Never hold workpiece with hands during a cut. Allow blade to reach full speed before starting cut.

UNSTABLE WORKPIECES. Avoid cutting workpieces that cannot be properly supported or clamped in vise or jig, because they can unexpectedly move while cutting. This can cause operator to lose their balance or draw operator's hands into blade, causing serious personal injury. Examples are chains, cables, round or oblong-shaped workpieces, and workpieces with internal or built-in moving or rotating parts, etc.

FIRE HAZARD. Use EXTREME CAUTION if cutting magnesium. Using water-based cutting fluid could lead to metal chip fire and possible explosion.

CUTTING FLUID SAFETY. Cutting fluids are poisonous. Always follow manufacturer's cutting-fluid safety instructions. Pay particular attention to contact, contamination, inhalation, storage and disposal warnings. Spilled cutting fluid invites slipping hazards. Research any new workpiece material before cutting and to ensure you are using correct cutting fluid for workpiece material.

⚠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.

⚠WARNING

Electrocution, fire, shock, or equipment damage may occur if machine is not properly grounded and connected to power supply.

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 ..... 10 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
Plug/Receptacle ..... NEMA 5-15

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.*

Grounding & Plug Requirements

This machine MUST be grounded. In the event of certain malfunctions or breakdowns, grounding reduces the risk of electric shock by providing a path of least resistance for electric current.

This machine is equipped with a power cord that has an equipment-grounding wire and a grounding plug. Only insert plug into a matching receptacle (outlet) that is properly installed and grounded in accordance with all local codes and ordinances. DO NOT modify the provided plug!

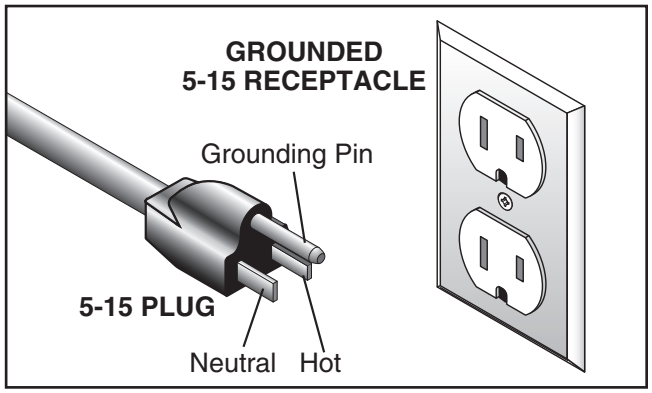
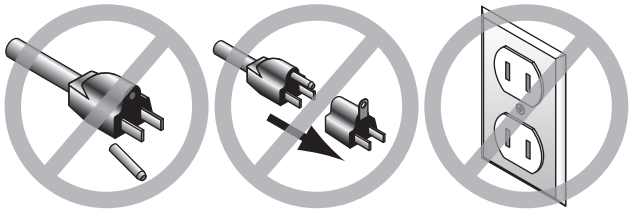


Figure 4. Typical 5-15 plug and receptacle.

⚠CAUTION



SHOCK HAZARD!

Two-prong outlets do not meet the grounding requirements for this machine. Do not modify or use an adapter on the plug provided—if it will not fit the outlet, have a qualified electrician install the proper outlet with a verified ground.

Improper connection of the equipment-grounding wire can result in a risk of electric shock. The wire with green insulation (with or without yellow stripes) is the equipment-grounding wire. If repair or replacement of the power cord or plug is necessary, do not connect the equipment-grounding wire to a live (current carrying) terminal.

Check with a qualified electrician or service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the machine is properly grounded. If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.

Extension Cords

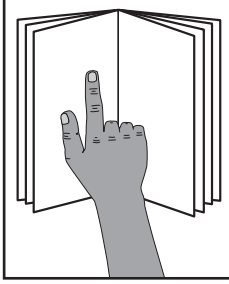
We do not recommend using an extension cord with this machine. If you must use an extension cord, only use it if absolutely necessary and only on a temporary basis.

Extension cords cause voltage drop, which can 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).

Any extension cord used with this machine must be in good condition and contain a ground wire and matching plug/receptacle. Additionally, it must meet the following size requirements:

Minimum Gauge Size.....16 AWG
Maximum Length (Shorter is Better).....50 ft.

SECTION 3: SETUP



⚠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!

⚠WARNING

Wear safety glasses during the entire setup process!

Needed for Setup

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

Description	Qty
• Safety Glasses (for each person)	1 Pr.
• Cleaner/Degreaser	As Needed
• Disposable Rags	As Needed
• Disposable Gloves	As Needed
• Mounting Hardware	As Needed
• Hex Wrench 4mm	1

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.*

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.

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.

Main Inventory (Figure 5)	Qty
A. Bandsaw Carrying Case	1
B. Bandsaw	1
C. Stand	1
D. Work Stop	1
E. Work Stop Rod	1
F. Vise Support Plate	1
G. Carbon Motor Brushes (Spare)	2

Fasteners & Tools (Figure 5)	Qty
H. Cap Screws M8-1.25 x 25	2
I. Cap Screws M8-1.25 x 16	2
J. Flat Washers 8mm	2
K. Hex Nut M12-1.75	1
L. Hex Wrench 6mm	1

Note: *The 6mm hex wrench is stored inside the bandsaw adjustable handle.*

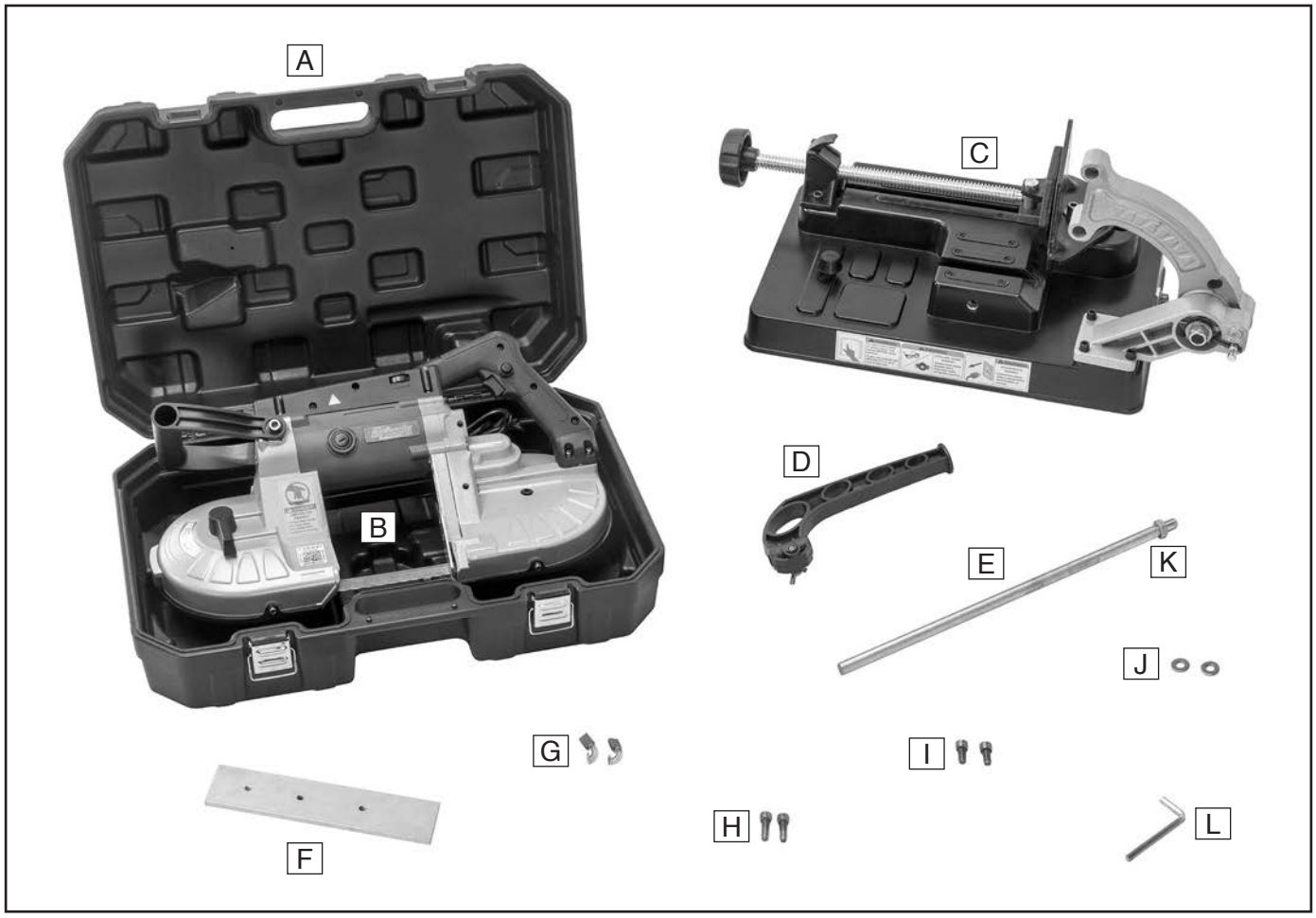


Figure 5. Inventory.

Cleanup

The unpainted surfaces of your machine are coated with a heavy-duty rust preventative that prevents corrosion during shipment and storage. This rust preventative works extremely well, but it will take a little time to clean.

Be patient and do a thorough job cleaning your machine. The time you spend doing this now will give you a better appreciation for the proper care of your machine's unpainted surfaces.

There are many ways to remove this rust preventative, but the following steps work well in a wide variety of situations. Always follow the manufacturer's instructions with any cleaning product you use and make sure you work in a well-ventilated area to minimize exposure to toxic fumes.

Before cleaning, gather the following:

- Disposable rags
- Cleaner/degreaser (WD•40 works well)
- Safety glasses & disposable gloves
- Plastic paint scraper (optional)

Basic steps for removing rust preventative:

1. Put on safety glasses.

2. Coat the rust preventative with a liberal amount of cleaner/degreaser, then let it soak for 5–10 minutes.

3. Wipe off the surfaces. If your cleaner/degreaser is effective, the rust preventative will wipe off easily. If you have a plastic paint scraper, scrape off as much as you can first, then wipe off the rest with the rag.

4. Repeat **Steps 2–3** as necessary until clean, then coat all unpainted surfaces with a quality metal protectant to prevent rust.

NOTICE

Avoid harsh solvents like acetone or brake parts cleaner that may damage painted surfaces. Always test on a small, inconspicuous location first.

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.

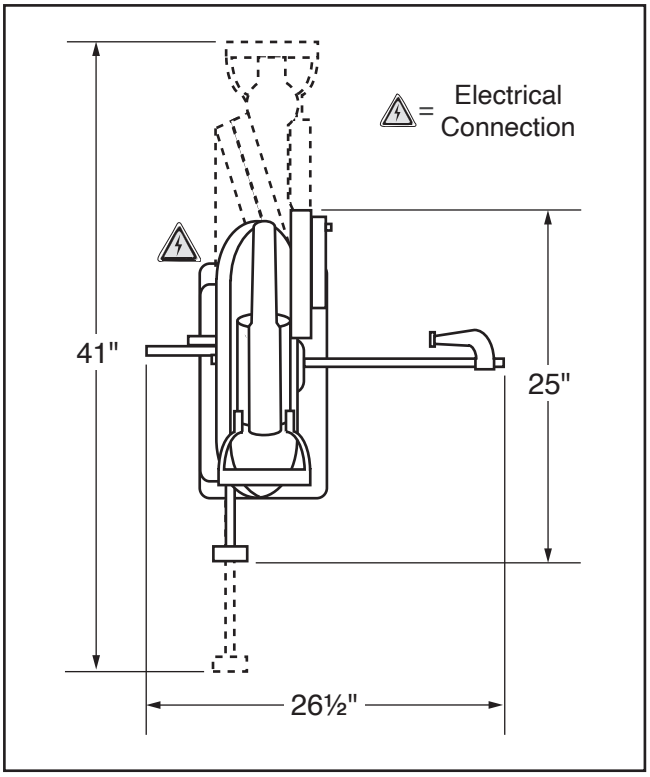
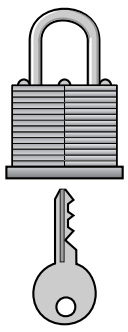


Figure 6. Minimum working clearances.



⚠CAUTION

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.

Bench Mounting

Number of Mounting Holes 1
Dia. of Mounting Hardware Needed ..... 5/16"

The stand of this machine has a bracket with a mounting hole that allows the stand 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 a hole is drilled all the way through the workbench—and a hex bolt, washers, and a hex nut are used to secure the machine stand in place.

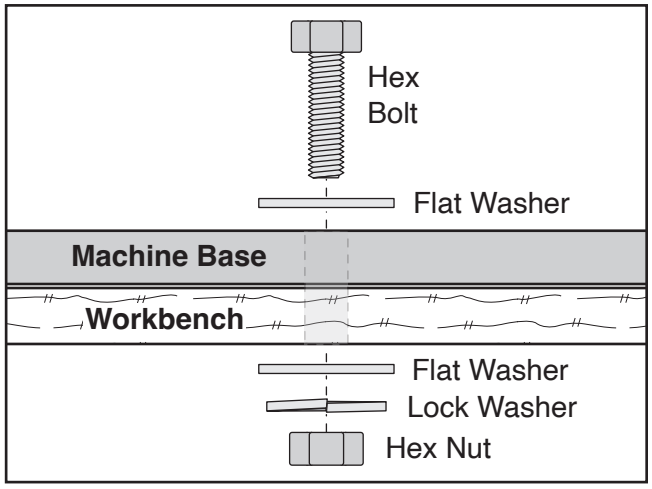


Figure 7. "Through Mount" setup.

Another option is a "direct mount" (see example below) where the stand is secured directly to the workbench with a lag screw and washer.

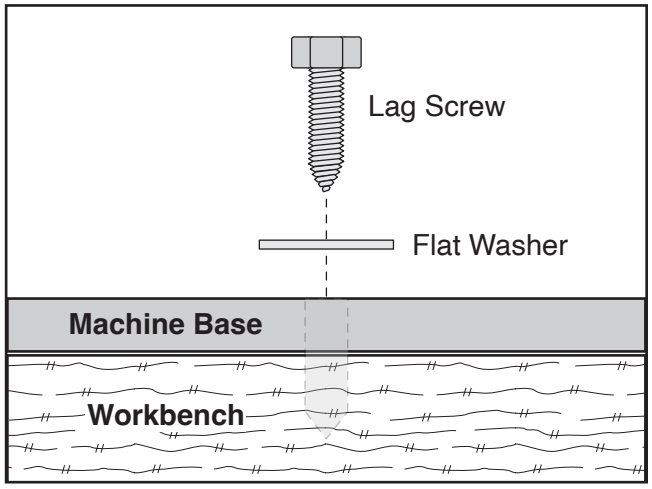


Figure 8. "Direct Mount" setup.

Assembly

The machine must be fully assembled before it can be operated. Before beginning the assembly process, refer to **Needed for Setup** and gather all listed items. To ensure the assembly process goes smoothly, first clean any parts that are covered or coated in heavy-duty rust preventative (if applicable).

To assemble machine:

1. Remove (2) screws shown in **Figure 9** to remove guide plate from bandsaw.

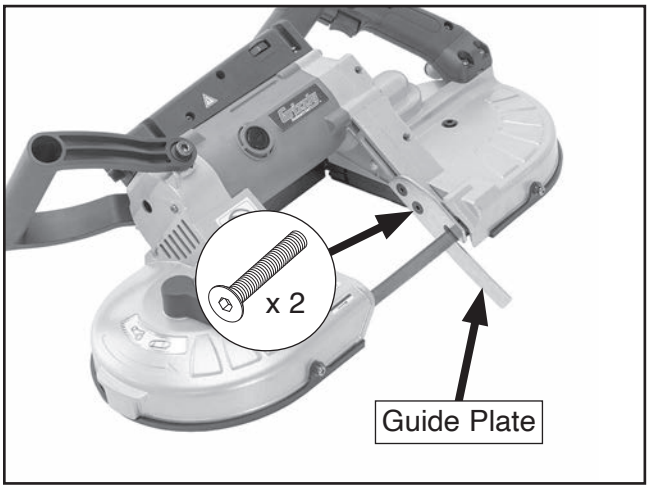


Figure 9. Guide plate and screws.

2. Attach bandsaw to stand with (2) M8-1.25 x 25 cap screws and 8mm flat washers (see **Figure 10**).

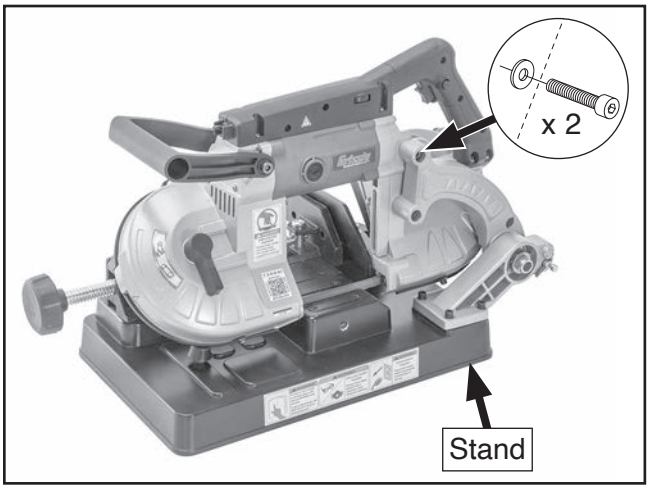


Figure 10. Bandsaw attached to stand.

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.

⚠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. Adjust blade speed dial (see **Figure 11**) to "1."

3. Move ON/OFF switch (see **Figure 11**) down to OFF position.

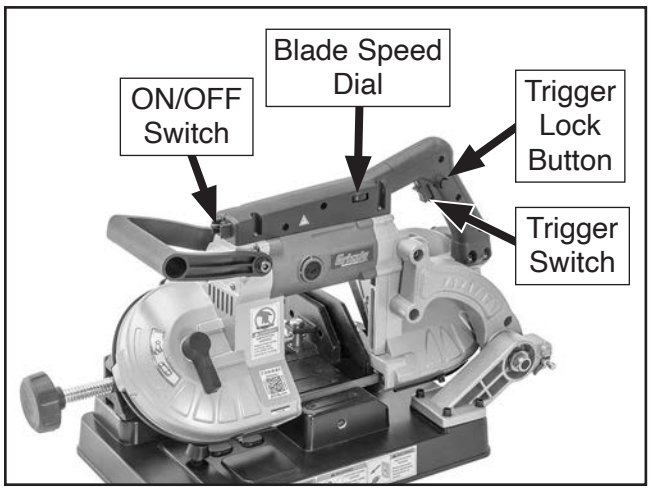


Figure 11. Location of power controls.

4. Connect machine to power supply.

5. Press trigger switch, then lock it in place by pressing trigger lock button (see **Figure 11**).

6. While keeping fingers and hands away from blade, move ON/OFF switch up to ON position to start blade. Motor should run smoothly and without unusual problems or noises.

7. Slowly rotate blade speed dial back and forth to test variable-speed function.

8. Move ON/OFF switch down to OFF position and wait for blade to come to a complete stop.

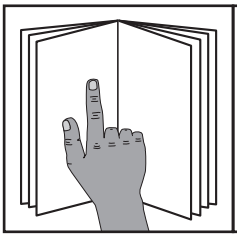
9. Press and release trigger switch to disengage trigger lock button and prevent accidental startup of machine.

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.

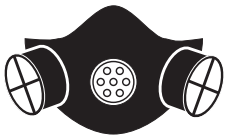


⚠WARNING

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.

Typical Operation with Stand

For mobile workpieces and more precise cuts, keep the bandsaw installed on the included stand to use it as a horizontal bandsaw.

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

1. Puts on safety glasses.
2. Examines workpiece to make sure it is suitable for cutting and, if necessary, changes blade for workpiece material.
3. Raises bandsaw to vertical position and locks it in place with head locking pin.
4. Adjusts vise angle as desired.
5. Securely clamps workpiece in vise, and ensures workpiece is stable and cutting area if free of obstructions.
6. Sets up work stop if needed for operation.
7. Sets proper blade speed for workpiece material.
8. Puts on respirator.
9. Presses trigger switch and locks it in ON position.
10. Holds adjustable handle and disengages head locking pin.
11. Connects machine to power, uses ON/OFF switch to start blade, and allows it to reach full speed.
12. Slowly lowers adjustable handle to lower blade into workpiece until cut is complete.
13. Uses ON/OFF switch to stop blade, allows blade to come to complete stop, then disengages trigger switch to prevent accidental startup.
14. Removes workpiece.

Typical Operation without Stand

For stationary workpieces, or rough cuts, remove the bandsaw from the included stand to use it as a portable bandsaw.

To complete a typical operation without the stand, the operator does the following:

1. Puts on safety glasses.

2. Examines workpiece to make sure it is suitable for cutting and, if necessary, changes blade for workpiece material.

3. Securely clamps workpiece in vise, or otherwise ensures workpiece is stable and cutting area if free of obstructions.

4. Adjusts guide plate as close to blade as operation will allow.

5. Sets proper blade speed for workpiece material.

6. Puts on respirator.

7. Connects machine to power.

8. Picks up bandsaw, holding adjustable handle with non-dominant hand and hand-held operation handle with dominant hand.

9. Presses guide plate against workpiece, but does not touch blade to workpiece.

10. Moves ON/OFF switch to ON position, then presses trigger switch to start blade.

11. Allows blade to reach full speed, then slowly moves bandsaw to advance blade into workpiece and complete cut.

12. Releases trigger switch to stop blade, allows blade to come to complete stop, then moves ON/OFF switch to OFF position to prevent accidental startup.

13. Sets down bandsaw.

14. Removes workpiece.

Operation Tips

The following tips will help you safely and effectively operate your bandsaw, and help you get the maximum life out of your saw blades.

Tips for cutting:

- Use stand with work stop to quickly and accurately cut multiple pieces of stock to the same length.
- Clamp workpiece firmly in stand vise jaws to ensure a straight cut through the material.
- Allow blade to reach full speed before engaging workpiece. Never start a cut with the blade in contact with the workpiece, and do not start a cut on a sharp edge.
- Chips should be curled and slivery. If the chips are thin and powder-like, increase your feed rate.
- Burned chips indicate a need to reduce your blade speed.
- Wait until blade has completely stopped before setting down portable bandsaw or removing workpiece from vise. Avoid touching the cut end of a workpiece—it could be very hot!
- Support long workpieces so they will not fall when cut. Flag long ends to alert passers-by of potential danger.
- Install and use the guide plate for all hand-held bandsaw operations to help keep cuts straight.
- Use cutting fluid when possible to increase blade life.

NOTICE

Loosen blade tension at end of each day to prolong blade life.

Workpiece Inspection

Before cutting, inspect the material for any of the following conditions and take necessary precautions:

- ***Small or Thin Workpieces:*** Small or thin workpieces may be damaged during cutting—avoid cutting these workpieces if possible. If you must cut a small or thin workpiece, attach it to or clamp it between larger scrap pieces that will both support the workpiece through the cut. Some thin sheet metals will not withstand the force from this bandsaw during cutting. Instead, use a shear, nibblers, or sheet metal nippers to cut these pieces.

- ***Unstable Workpieces:*** Workpieces that cannot be properly supported or stabilized should not be cut with this bandsaw. Examples are chains, cables, workpieces with internal or built-in moving or rotating parts, etc.

- ***Material Hardness:*** Always factor in the hardness of the metal before cutting it. Hardened metals will take longer to cut, may require lubrication, and may require a different type of blade in order to efficiently cut them.

- ***Tanks, Cylinders, Containers, Valves, Etc.:*** Cutting into containers that are pressurized or contain gases or liquids can cause explosions, fires, caustic burns, or machine damage. Avoid cutting any of these types of containers unless you have verified that the container is empty and it can be properly supported throughout the cut.

- ***Magnesium:*** Pure magnesium burns easily. Cutting magnesium with a dull blade can create enough friction to ignite the small magnesium chips. Avoid cutting magnesium if possible.

Converting Bandsaw

The stand helps achieve precise cuts on workpieces that can be installed in the vise, like a typical benchtop horizontal bandsaw. However, if you remove the bandsaw from the stand, the Model T34441 converts into a hand-held portable bandsaw.

Tool Needed	Qty
Hex Wrench 6mm	1

Converting to Portable Bandsaw

1. DISCONNECT MACHINE FROM POWER!

2. Disengage head locking pin and fully lower bandsaw so it rests on stand.

3. Remove (2) cap screws and flat washers shown in **Figure 12** to remove bandsaw from stand.

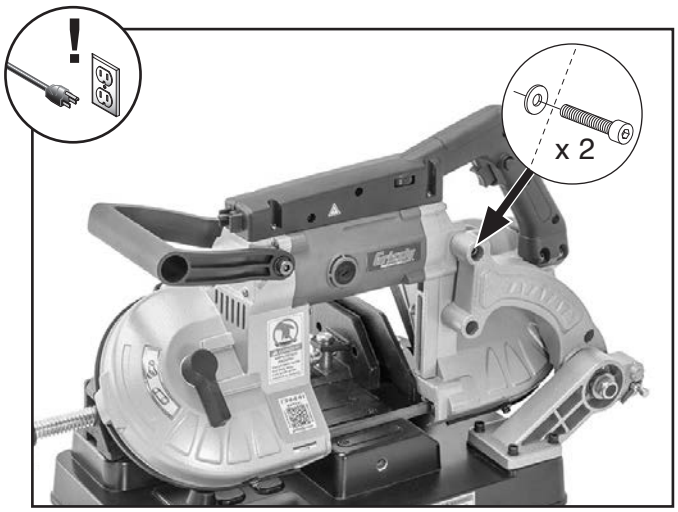


Figure 12. Location of bandsaw mounting fasteners.

4. Install guide plate (see **Using Guide Plate** on **Page 28**).

Converting to Horizontal Bandsaw

1. DISCONNECT MACHINE FROM POWER!

2. Remove guide plate (see **Using Guide Plate** on **Page 28**).

3. Attach bandsaw to stand with (2) M8-1.25 x 25 cap screws and 8mm flat washers (see **Figure 12**).

Selecting Blades

Selecting the right blade for the cut requires a knowledge of various blade characteristics.

Blade Terminology

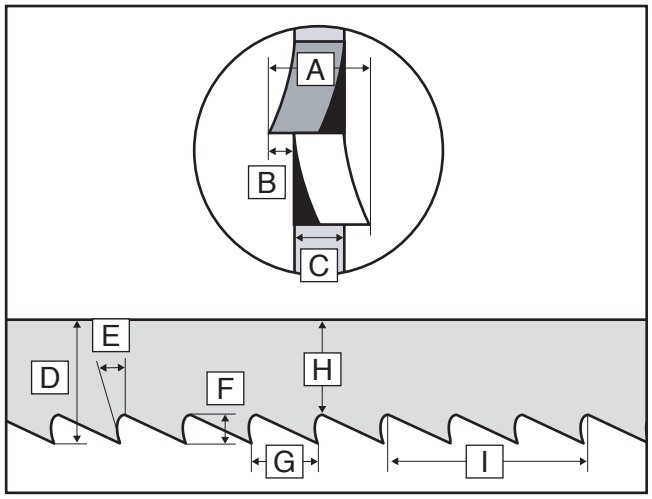


Figure 13. Bandsaw blade terminology.

A. Kerf: Amount of material removed by blade during cutting.

B. Tooth Set: Amount each tooth is bent left or right from blade.

C. Gauge: Thickness of blade.

D. Blade Width: Widest point of blade measured from tip of tooth to back edge of blade.

E. Tooth Rake: Angle of tooth face from line perpendicular to length of blade.

F. Gullet Depth: Distance from tooth tip to bottom of curved area (gullet).

G. Tooth Pitch: Distance between tooth tips.

H. Blade Back: Distance between bottom of gullet and back edge of blade.

I. Blade Pitch or TPI: Number of teeth per inch measured from gullet to gullet.

Blade Length

Measured by the blade circumference, blade lengths are usually unique to the bandsaw model and the distance between the wheels.

Model	Blade Length
T34441	44⅞"

Blade Width

Measured from the back of the blade to the tip of the blade tooth (the widest point).

Model	Blade Width
T34441	½"

Tooth Type

The most common tooth types are described as follows, and illustrated in **Figure 14**.

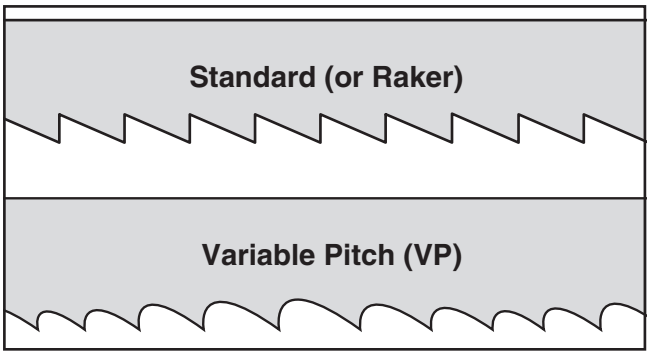


Figure 14. Bandsaw blade tooth types.

Standard or Raker: Equally spaced teeth set at "0" rake angle. Recommended for all purpose use.

Variable Pitch (VP): Varying gullet depth and tooth spacing, "0" rake angle, excellent chip removing capacity, and smooth cutting.

Blade Pitch (TPI)

The chart below is a basic starting point for choosing teeth per inch (TPI) for variable pitch blades and standard raker set bi-metal blades/ HSS blades. However, for exact specifications of bandsaw blades that are correct for the operation, contact the blade manufacturer.

To select correct blade pitch:

1. Measure material thickness. This measurement is distance from where each tooth enters workpiece to where it exits workpiece.

2. Refer to "Material Width/Diameter" row of blade selection chart in **Figure 15**, and read across to find workpiece thickness you need to cut.

3. Refer to "Material Shapes" row and find shape of material to be cut.

4. In applicable row, read across to right and find box where row and column intersect. Listed in the box is minimum TPI recommended for variable tooth pitch blades.

   The TPI range is represented by a "/" between numbers. For example, 3/4 TPI is the same as 3–4 TPI.

   For a chart that offers guidelines for various metals, given in feet per minute (FPM), refer to **Page 24**.

Blade Breakage

Many conditions may cause a bandsaw blade to break. Some of these conditions are unavoidable and are the natural result of the stresses placed on the bandsaw; other causes of blade breakage are avoidable.

The most common causes of avoidable blade breakage are:

- Faulty alignment of the blade guides.
- Feeding blade through the workpiece too fast.
- Dull or damaged teeth.
- Improperly tensioned blade.
- Using a blade with a lumpy or improperly finished braze or weld.
- Leaving the blade tensioned when not in use.
- Using the wrong blade pitch (TPI) for the workpiece thickness. The general rule of thumb is to have no fewer than three teeth in contact with the workpiece when starting a cut and at all times during cutting.

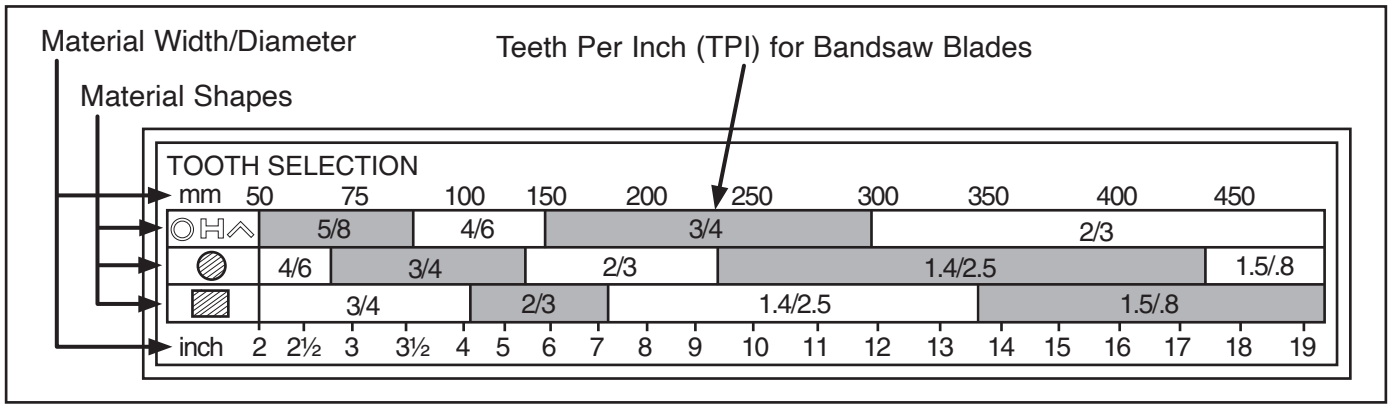


Figure 15. General guidelines for blade selection and speed chart.

Blade Care & Break-In

Blade Care

To prolong blade life, always use a blade with the proper width, set, type, and pitch for each application. Maintain the appropriate feed rate and blade speed (refer to the **Blade Speed Chart** on **Page 24** and the **Chip Inspection Chart** on **Page 25**), and pay attention to the chip characteristics. Keep blades clean, since dirty or gummed-up blades pass through the cutting material with much more resistance than clean blades, causing unnecessary heat.

Blade Break-In

The tips and edges of a new blade are extremely sharp. Cutting at too fast of a feed rate or too slow of a blade speed can fracture these tips and edges, quickly dulling the blade. Properly breaking in a blade allows these sharp edges to wear without fracturing, thus keeping the blade sharp longer. Below is a typical break-in procedure. For aftermarket blades, refer to the manufacturer's break-in procedure to keep from voiding the warranty.

Use the **Chip Inspection Chart** on **Page 25** as a guide to evaluate the chips and ensure that the optimal blade speed and feed rate are being used.

To properly break in new blade:

1. Choose correct speed for blade and material type (see **Blade Speed Chart** on **Page 24**).

2. Reduce feed rate by half for first 50–100 in^2 of material cut. Increase feed rate when chips become straight and thin or powdery.

3. To avoid twisting blade when cutting, adjust feed rate when total width of blade is in cut.

Changing Blade Speed

The Model T34441 blade speed can be adjusted between 136–278 FPM. Refer to the chart on **Page 24** for cutting speed recommendations by material type.

Turn the blade speed dial shown in **Figure 16** to a value between 1 and 6 to adjust blade speed. "1" represents the minimum blade speed while "6" represents the maximum.

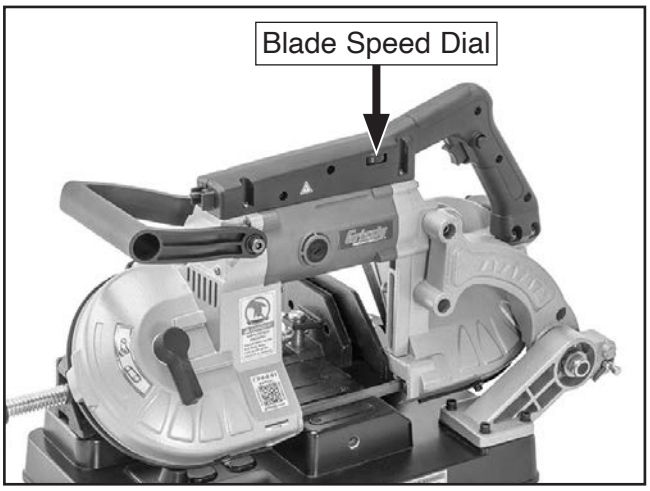


Figure 16. Location of blade speed dial.

Once the blade contacts the workpiece, use the **Chip Inspection Chart** on **Page 25** to help determine if the blade speed or downfeed rate need adjustment.

Blade Speed Chart

The chart in **Figure 17** offers blade speed guidelines for various metals, given in feet per minute (FPM) and meters per minute (M/Min). Choose the closest available speed on the machine, then adjust the feed rate as necessary, using the appearance of the chips produced as a guide. Refer to the **Chip Inspection Chart** that follows for recommendations on adjusting feed rate or blade speed based on the appearance of the chips produced.

Material	Speed FPM (M/Min)	Material	Speed FPM (M/Min)	Material	Speed FPM (M/Min)	Material	Speed FPM (M/Min)
Carbon Steel	196~354 (60) (108)	Tool Steel	203 (62)	Alloy Steel	111~321 (34) (98)	Free Machining Stainless Steel	150~203 (46) (62)
Angle Steel	180~220 (54) (67)	High-Speed Tool Steel	75~118 (25) (36)	Mold Steel	246 (75)	Gray Cast Iron	108~225 (33) (75)
Thin Tube	180~220 (54) (67)	Cold-Work Tool Steel	95~213 (29) (65)	Water-Hardened Tool Steel	242 (74)	Ductile Austenitic Cast Iron	65~85 (20) (26)
Aluminum Alloy	220~534 (67) (163)	Hot-Work Tool Steel	203 (62)	Stainless Steel	85 (26)	Malleable Cast Iron	321 (98)
Copper Alloy	229~482 (70) (147)	Oil-Hardened Tool Steel	203~213 (62) (65)	CR Stainless Steel	85~203 (26) (62)	Plastics & Lumber	220 (67)

Figure 17. Blade speed chart.

Chip Inspection Chart

The best way to choose the cutting speed and feed rate for an operation is to inspect the chips created by the cut. These chips are indicators of what is commonly referred to as the "chip load." Refer to the chart below to evaluate chip characteristics and determine whether to adjust feed rate/pressure and blade speed.

Chip Appearance	Chip Description	Chip Color	Blade Speed	Feed Rate/ Pressure	Other Actions
	Thin & Curled	Silver	Good	Good	
	Hard, Thick & Short	Brown or Blue	Increase	Decrease	
	Hard, Strong & Thick	Brown or Blue	Increase	Decrease	
	Hard, Strong, Curled & Thick	Silver or Light Brown	Good	Decrease Slightly	Check Blade Pitch
	Hard, Coiled & Thin	Silver	Increase	Decrease	Check Blade Pitch
	Straight & Thin	Silver	Good	Increase	
	Powdery	Silver	Decrease	Increase	
	Coiled, Tight & Thin	Silver	Good	Decrease	Check Blade Pitch

Figure 18. Chip inspection chart.

Changing Blade

Blades should be changed when they become dull, damaged, or when cutting materials that require a blade of a certain type or tooth count.

Items Needed	Qty
Phillips Head Screwdriver #2	1
Safety Glasses	1 Pr.
Metal Brush or Shop Vacuum	1
Open-End Wrench 10mm	1
Leather Gloves	1 Pr.

To change blade:

1. DISCONNECT MACHINE FROM POWER!

2. Install bandsaw on stand (see **Converting to Horizontal Bandsaw** on **Page 20**).

3. Turn blade tension lever (see **Figure 19**) 180° clockwise to release blade tension.

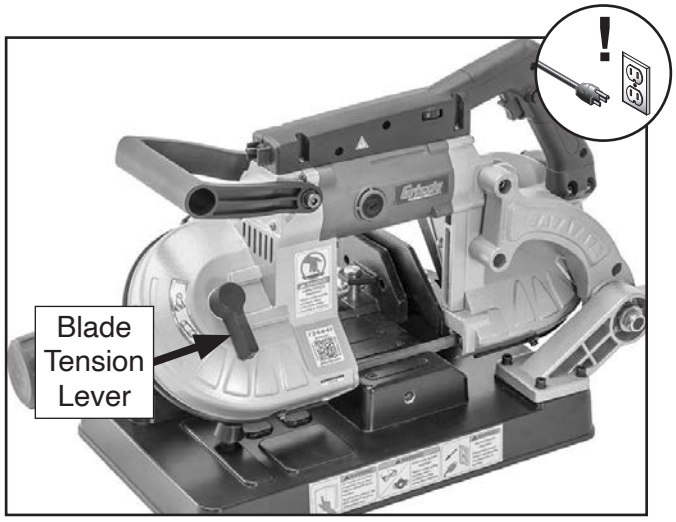


Figure 19. Location of blade tension lever.

4. Raise bandsaw to vertical position and lock it in place with head locking pin.

⚠WARNING

De-tensioned blade can flex/move unexpectedly. Wear safety glasses while adjusting or installing blades.

5. Remove (4) Phillips head screws, lock washers, and flat washers shown in **Figure 20** to remove blade covers.

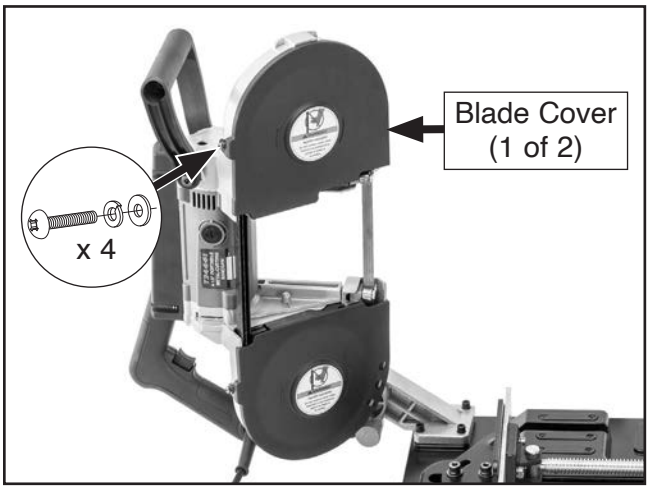


Figure 20. Location of blade covers and screws.

6. Clean out all chips from blade compartment with brush and shop vacuum.

7. Loosen blade guides (refer to **Adjusting Blade Guide Bearings** on **Page 36** for detailed instructions).

⚠CAUTION

Blades are dangerous. To reduce risk of injury, wear leather gloves when handling saw blades.

8. Remove old blade from blade wheels and slip it out of bearing blade guides (see **Figure 21**).

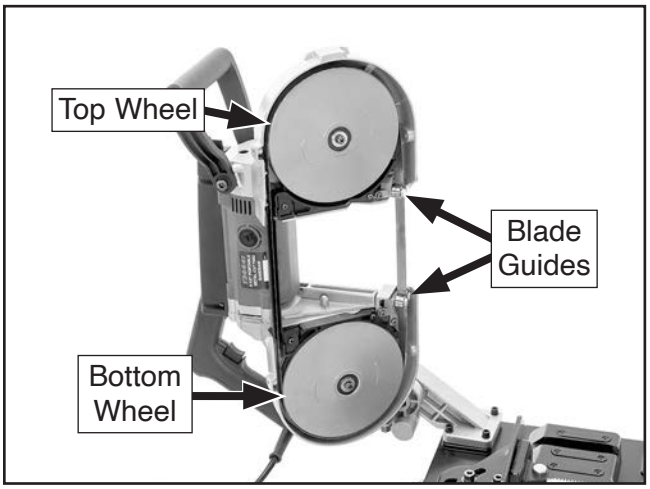


Figure 21. Blade positioned around blade wheels.

9. Insert new blade through both bearing blade guides, then position it around bottom wheel.

Tip: *After blade is inserted in blade guides, tighten blade guides to make it easier to install blade around wheels.*

10. Keeping blade around bottom wheel and between bearing blade guides, install blade around top wheel.

Note: *It is sometimes possible to flip blade inside out, in which case blade will be installed in wrong direction. After installing, check to make sure blade teeth face same direction as blade travel (see **Figure 22**). Some blades will have a directional arrow as a guide.*

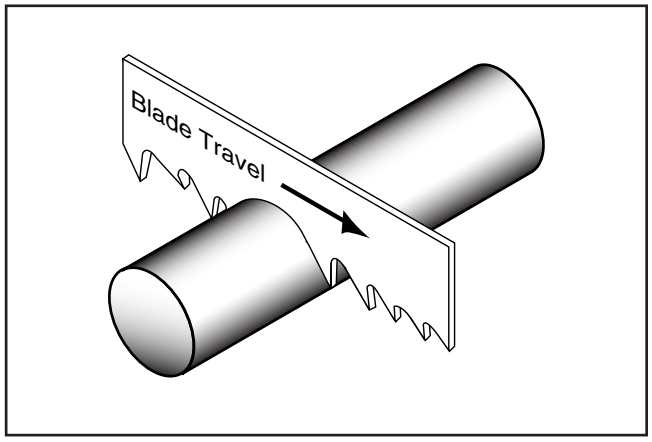


Figure 22. Example of blade cutting direction.

11. Turn blade tension lever slightly counterclockwise to apply a light amount of tension to hold blade in place. Work your way around blade to adjust blade position so blade is centered on wheels (see **Figure 23**).

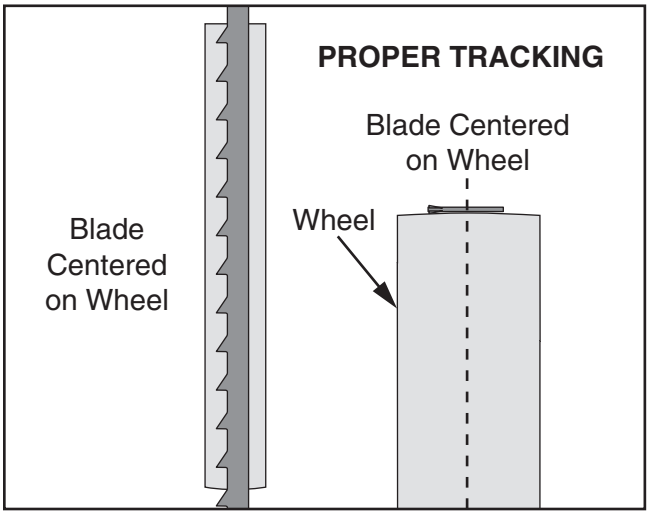


Figure 23. Example of blade centered on wheels.

12. Turn blade tension lever all the way counterclockwise to tension blade.

13. Tighten bearing blade guides (see **Adjusting Blade Guide Bearings** on **Page 36**).

14. Install blade covers.

Using Guide Plate

The guide plate should only be used during hand-held cutting operations when the bandsaw is removed from the stand. Adjust the guide plate as close to the blade as possible so it can provide a flat surface to press against the workpiece and guide the cut (see **Figure 24**). This helps keep cuts straight by preventing you from drifting off of the cutting line.

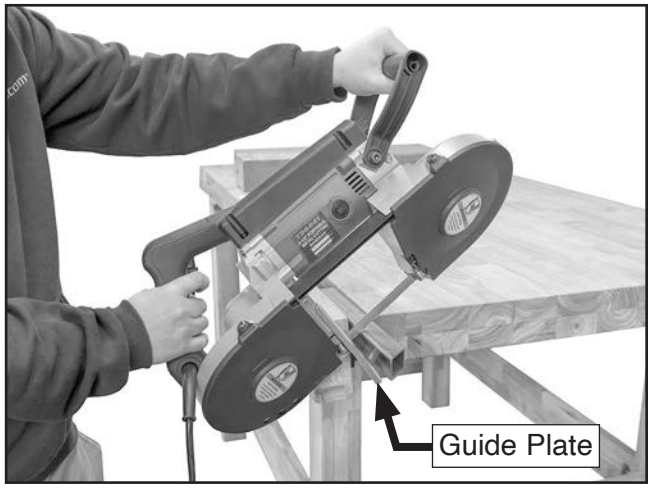


Figure 24. Guide plate guiding cut.

The guide plate is held in place with two M6-1 x 18 flat head cap screws, as shown in **Figure 25**. To adjust the plate for cuts with minimal height clearance, loosen the two screws shown in **Figure 25**, adjust the plate up until it is out of the way, then tighten the screws to secure.

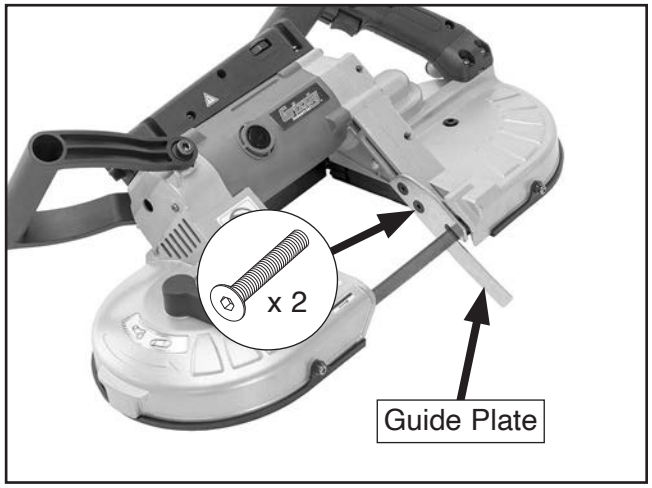


Figure 25. Guide plate screws.

Using Stand Vise

The vise on the Model T34441 stand adjusts from 90°–45° in relation to the blade and has a quick-adjust clamp that allows for quick adjustments of the floating vise jaw.

Note: *The correct methods of holding different workpiece shapes are shown in* ***Figure 26****.*

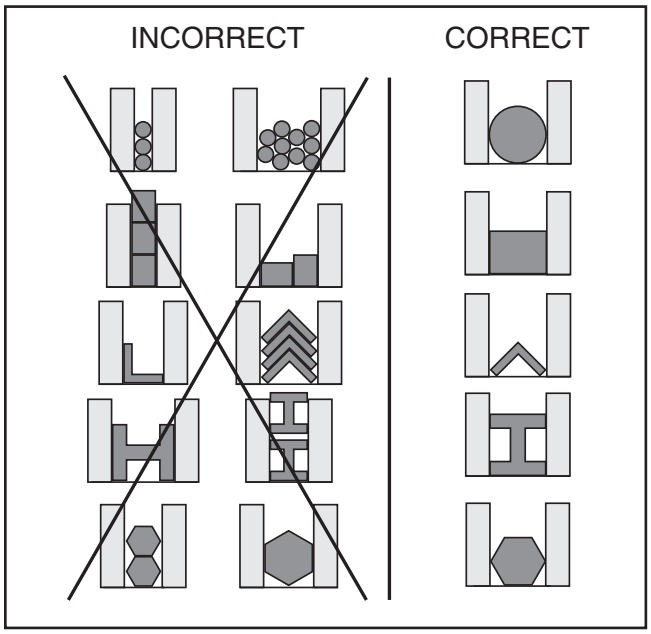


Figure 26. Workpiece holding options by material shape.

⚠WARNING

To avoid serious injury, always turn machine *OFF* and allow blade to come to complete stop before adjusting vise!

Tool Needed	**Qty**
Hex Wrench 6mm	1

To use stand vise:

1. DISCONNECT MACHINE FROM POWER!
2. Raise bandsaw to vertical position and lock it in place with head locking pin.

3. Lift quick-adjust clamp to release leadscrew, then use vise knob to move floating vise jaw away from fixed vise jaw (see **Figure 27**).

4. Loosen (2) cap screws shown in **Figure 27**.

5. Align fixed vise jaw with desired angle on angle scale (see **Figure 27**), then tighten cap screws from **Step 4**.

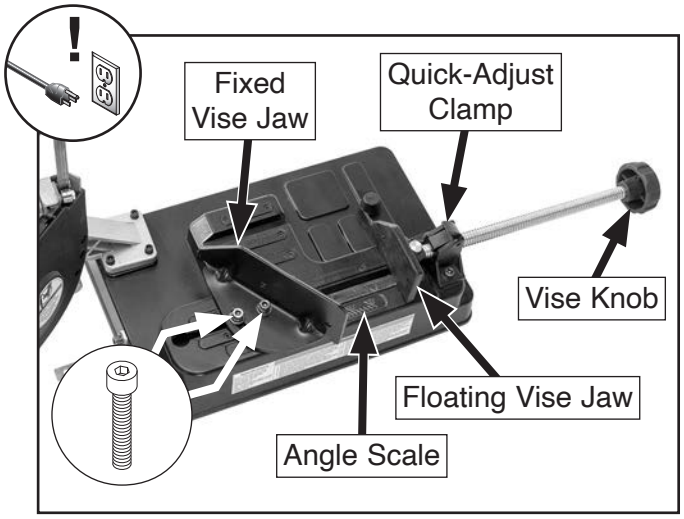


Figure 27. Vise jaw adjustment components.

Note: *To precisely adjust fixed vise jaw 90° to blade (0° on angle scale), lower bandsaw to horizontal position and use machinist's square to square vise jaw to blade (see **Figure 28**).*

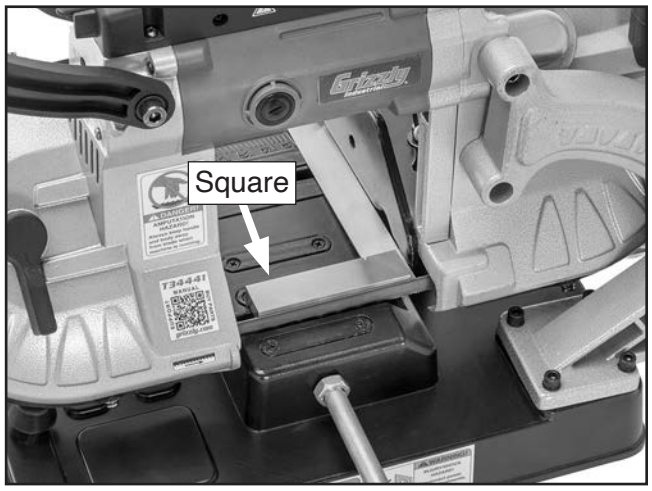


Figure 28. Squaring fixed vise jaw to blade.

6. Place workpiece against fixed vise jaw, move floating vise jaw until it contacts workpiece, then push quick-adjust clamp down against leadscrew.

7. Turn vise knob clockwise to secure workpiece in vise jaws (see **Figure 29**).

Figure 29. Workpiece secured in vise jaws.

8. Disengage head locking pin and move bandsaw through its full range of motion to make sure bandsaw or blade will not contact vise during operation.

9. Lift bandsaw to vertical position, then proceed with operation.

Using Stand Work Stop

The Model T34441 stand is equipped with a work stop for repetitive cutting operations. The work stop will need to be adjusted any time it is removed or repositioned.

Tool Needed	Qty
Open-End Wrench 19mm	1

To use stand work stop:

1. DISCONNECT MACHINE FROM POWER!
2. Raise bandsaw to vertical position and lock it in place with head locking pin.
3. Secure workpiece in vise.
4. Thread M12-1.75 hex nut onto work stop rod, thread rod into stand, then tighten hex nut against stand to secure (see **Figure 30**).
5. Slide work stop onto work stop rod, adjust work stop against workpiece, then tighten wing nut to secure (see **Figure 30**).

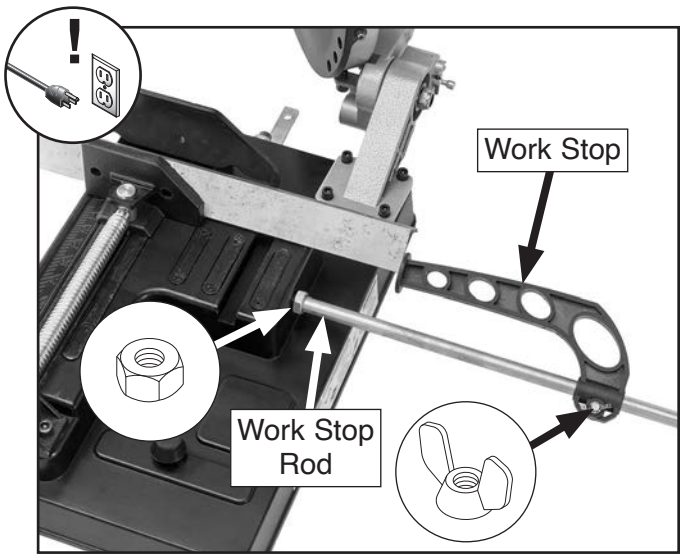


Figure 30. Example of work stop adjusted to workpiece.

Using Vise Support Plate

The Model T34441 comes with a support plate that can be installed on the floating vise jaw to provide additional support for small workpieces.

To use the vise support plate, simply attach the plate to the floating vise jaw with the two included M8-1.25 x 16 cap screws, as shown in **Figure 31**.

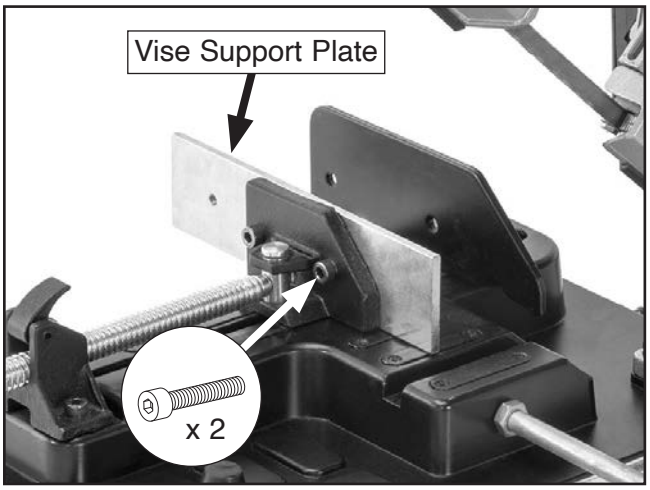


Figure 31. Vise support plate installed.

NOTICE

Some configurations of vise will bring vise plate into path of bandsaw downfeed. Always move bandsaw through its full range of motion to make sure bandsaw will not contact vise during operation.

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.

Raker Bi-Metal Blades
G9112—44⅞" x ½" x .025" 14 TPI
G9113—44⅞" x ½" x .025" 18 TPI
G9114—44⅞" x ½" x .025" 24 TPI

Variable Pitch Bi-Metal Blades
G9115—44⅞" x ½" x .025" 10–14 VP
G9116—44⅞" x ½" x .025" 14–18 VP

T30024—Powered Respirator Kit
Breathing metal dust could cause severe respiratory illnesses. This kit is a lightweight, comfortable, and easy-to-carry device for protecting the airway from small particulates.

Figure 32. T30024 Powered Respirator Kit.

G5618—Deburring Tool with Two Blades
The quickest tool for smoothing freshly machined metal edges. Comes with two blades—one for steel/aluminum and one for brass/cast iron.

Figure 33. G5618 Deburring Tool w/2 Blades.

T33881—Metal Stock Cart, 2200 Lb. Capacity
This cart is perfect for your working industrial shop thanks to its 11-gauge steel and 2,200 pound capacity. Keep your hefty pipe and other metal material at-hand with the convenience of portability. And with three load levels for your metal stock storage needs, this metal stock cart will reduce shop clutter and provide easy access to your material.

Figure 34. T33881 Metal Stock Cart.

H5503—Electric Sheet Metal Shear
This Electric Sheet Metal Shear features a ½ HP, 110V, 2500 RPM, 3.8 amp motor, a 360 degree adjustable swivel head, and variable speeds from 0 to 2500 SPM. Cuts up to 14 gauge in mild steel and 18 gauge in stainless, at up to 150 inches per minute.

Figure 35. Electric sheet metal shear.

T30299X—20V Angle Grinder Kit
A great tool for your home, shop, or job site. You can use it to remove rust and sharpen lawnmower and other tool blades with ease. By adding disks and attachments (sold separately) you can use to cut pipes, nails, rebar, rusted bolts, ceramics, or masonry and polish just about anything.

Figure 36. T30299X 20V Angle Grinder Kit.

G7060—Bench Vise w/Anvil 6"
This tough vise is ideal for all bench work applications. Large machined center slide keeps jaws aligned under maximum pressure. Other features include large screw, anvil face, and 0–90º swivel. 8" max opening. 6¼" hole spacing. 68 lbs.

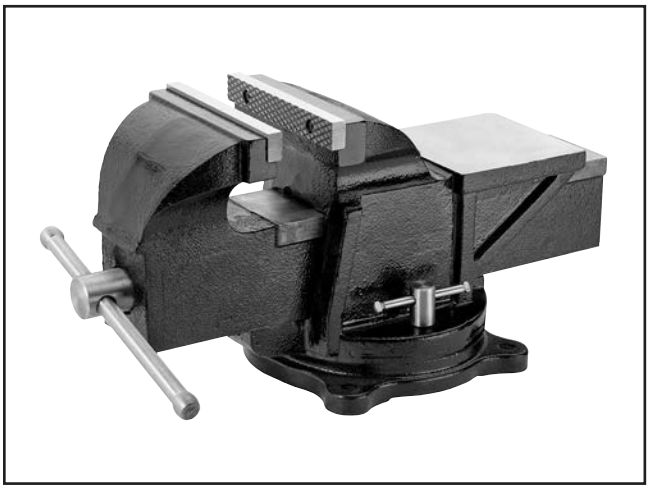
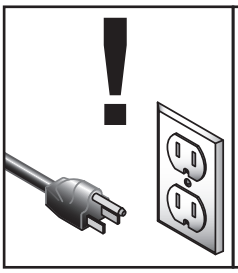


Figure 37. G7060 Bench Vise w/Anvil 6".

D2056—700 Lb. Capacity Shop Fox® Stand
A perfect stand for mounting your smaller machines on. Sturdy and rugged for everyday shop use.

Figure 38. D2056 Shop Fox® Stand.

SECTION 6: MAINTENANCE



⚠WARNING
To reduce risk of shock or accidental startup, always disconnect machine from power before adjustments, maintenance, or service.

Schedule

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

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

- Loose mounting bolts.
- Damaged or dull saw blade.
- Worn or damaged wires.
- Worn or damaged blade guide bearings.
- Buildup of metal chips inside blade covers.
- Any other unsafe condition.

Daily Maintenance
- Clean machine after each use.
- Release blade tension when machine is not in use.

Cleaning

Use a brush and shop vacuum to remove chips and other debris from the working surfaces. Periodically remove the blade and thoroughly clean all metal chips from wheel surfaces and blade housing.

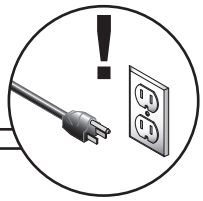
Lubrication

All bearings on the Model T34441 are sealed and permanently lubricated. Leave them alone until they need to be replaced.

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



Motor & Electrical

Symptom	Possible Cause	Possible Solution
Machine does not start, or power supply breaker immediately trips after startup.	1. ON/OFF switch is in OFF position or trigger switch is not engaged. 2. Incorrect power supply voltage or circuit size. 3. Power supply circuit breaker tripped or fuse blown. 4. Wiring broken, disconnected, or corroded. 5. Motor brushes worn out. 6. Motor or motor bearings at fault.	1. ON/OFF switch must be in ON position, and trigger switch must be engaged for blade to start. 2. Ensure correct power supply voltage and circuit size. 3. Ensure circuit is free of shorts. Reset circuit breaker or replace fuse. 4. Fix broken wires or disconnected/corroded connections (**Page 38**). 5. Replace motor brushes (**Page 37**). 6. Replace motor.
Machine stalls or is underpowered.	1. Motor brushes worn out. 2. Motor overheated. 3. Extension cord too long. 4. Motor or motor bearings at fault.	1. Replace motor brushes (**Page 37**). 2. Clean motor, let cool, and reduce workload. 3. Move machine closer to power supply; use shorter extension cord (**Page 12**). 4. Replace motor.
Machine has vibration or noisy operation.	1. Motor bearings at fault.	1. Test by rotating shaft; rotational grinding/loose shaft required bearing replacement.

Operation

Symptom	Possible Cause	Possible Solution
Vibration when operating/ cutting.	1. Stand incorrectly mounted to workbench. 2. Workpiece loose. 3. Component loose. 4. Loose, damaged, or worn blade. 5. Worn wheel bearing. 6. Wheels worn or incorrectly installed. 7. Wheel appears bent.	1. Shim or tighten mounting hardware. 2. Use correct holding fixture and reclamp workpiece. 3. Replace damaged or missing bolts/nuts or tighten if loose. 4. Tension/replace blade (**Page 26**). 5. Inspect/replace wheel bearing. 6. Replace wheels. 7. Inspect/replace wheel/wheel bearing.
Ticking sound when saw is running.	1. Blade teeth missing or broken. 2. Blade weld contacting blade guides. 3. Blade weld failing.	1. Inspect/replace blade (**Page 26**). 2. Grind weld down flush with blade. 3. Cut and reweld blade, or replace blade (**Page 26**).
Cuts not square, intended angle is incorrect.	1. Loose vise. 2. Blade not supported.	1. Tighten vise and secure workpiece (**Page 28**). 2. Ensure blade guide bearings are adjusted correctly; replace if worn.

Operation (Cont.)

Symptom	Possible Cause	Possible Solution
Machine or blade bogs down in cut.	1. Wrong workpiece material (metal). 2. Feed rate too fast; blade speed too low. 3. Material requires cutting fluid/lubrication. 4. Blade loading up. 5. Blade TPI incorrect. 6. Blade dull. 7. Blade not supported. 8. Blade slipping on wheels or not properly tensioned.	1. Use correct size/type of metal. 2. Reduce feed rate; increase blade speed (**Page 26**). 3. Use applicable cutting fluid/lubrication. 4. Install blade with fewer TPI/different style of teeth (**Page 21**). 5. Verify blade has at least (3) teeth contacting material at all times (**Page 21**). 6. Replace blade (**Page 26**). 7. Ensure blade guide bearings are adjusted correctly; replace if worn. 8. Clean wheels; tension blade (**Page 26**).
Blade dulls prematurely, or metal sticks to blade.	1. Blade improperly broken in. 2. Blade gullets loading up with chips. 3. Blade TPI too fine or coarse for material; teeth load up and overheat. 4. Incorrect cutting fluid mixture for workpiece/cut. 5. Incorrect feed rate/blade speed.	1. Replace blade (**Page 26**); complete blade break-in procedure (**Page 23**). 2. Use blade with larger gullets (**Page 21**). 3. Use coarser-tooth or finer-tooth blade (**Page 21**); adjust feed rate; adjust blade speed (**Page 23**). 4. Use correct cutting fluid mixture. 5. Adjust feed rate; adjust blade speed (**Page 23**).
Excessive blade breakage.	1. Workpiece loose. 2. Blade contacting workpiece when started. 3. Blade too thick/blade gullets too large. 4. Workpiece too coarse for blade. 5. Blade guide bearings need adjustment. 6. Blade weld failing.	1. Secure workpiece with vise or holding fixture. 2. Raise bandsaw, start blade, then lower blade into workpiece. 3. Use thinner blade/blade with smaller gullets (**Page 21**). 4. Use coarser-tooth or finer-tooth blade (**Page 21**); adjust feed rate; adjust blade speed (**Page 23**). 5. Adjust blade guide bearings (**Page 36**). 6. Cut and reweld blade, or replace blade (**Page 26**).
Blade wears on one side or shows overheating.	1. Blade guide bearings worn/need adjustment. 2. Dull/incorrect blade. 3. Incorrect cutting fluid mixture for workpiece/cut. 4. Blade is bell-mouthed.	1. Adjust blade guide bearings (**Page 36**). 2. Replace blade (**Page 26**). 3. Use correct cutting fluid mixture. 4. Replace blade (**Page 26**).
Blade comes off wheels.	1. Feed rate too fast/wrong TPI. 2. Blade guide bearings worn/need adjustment. 3. Blade is bell-mouthed.	1. Reduce feed rate/decrease blade TPI (**Page 21**). 2. Adjust blade guide bearings (**Page 36**). 3. Replace blade (**Page 26**).
Cuts are crooked/excessively rough.	1. Feed rate too fast; blade speed incorrect. 2. Blade is too coarse or dull. 3. Blade guide bearings worn/need adjustment.	1. Reduce feed rate; adjust blade speed (**Page 23**). 2. Replace blade (**Page 26**). 3. Adjust blade guide bearings (**Page 36**).

Adjusting Blade Guide Bearings

Uneven blade wear and crooked cuts, especially when the bandsaw is installed on the stand, may be the result of improperly adjusted blade guide bearings. Each blade guide assembly has an eccentric shaft that allows the distance between the blade guide bearings to be adjusted.

Tools Needed	**Qty**
Phillips Head Screwdriver #2	1
Open-End Wrench 10mm	1

To adjust blade guide bearings:

1. DISCONNECT MACHINE FROM POWER!

2. Install bandsaw on stand (see **Converting to Horizontal Bandsaw** on **Page 20**).

3. Raise bandsaw to vertical position and lock it in place with head locking pin.

4. Remove (4) Phillips head screws, lock washers, and flat washers shown in **Figure 39** to remove blade covers.

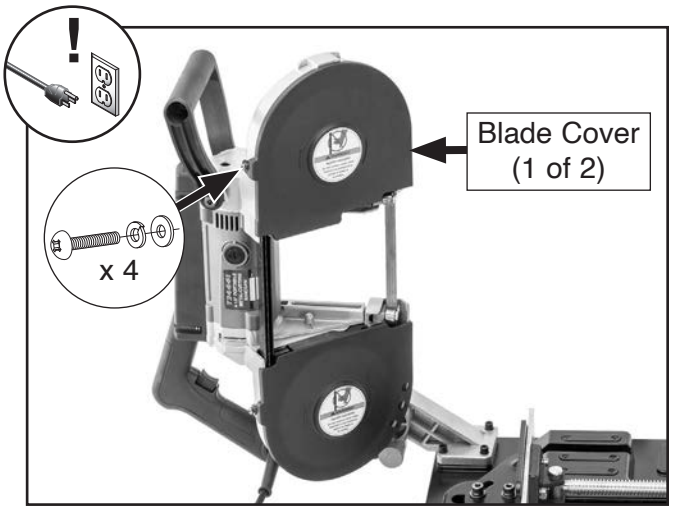


Figure 39. Location of blade covers and screws.

5. On each blade guide assembly, turn eccentric bolts to adjust distance between roller bearings (see **Figure 40**). Bearings should lightly contact blade or have a maximum clearance of 0.002".

   Note: *Since bearings twist blade into position, it is acceptable if there is a 0.001"–0.002" gap between blade and front or back of bearing. Make sure not to squeeze blade too tightly with bearings. After guide bearings are set, you should be able to rotate guide bearings (although they will be stiff) with your fingers.*

   Backing bearing (see **Figure 40**) on each blade guide assembly is not adjustable and should make light contact with blade.

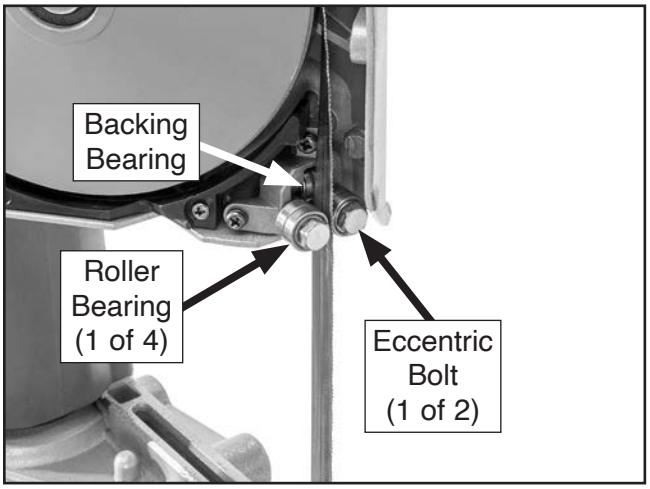


Figure 40. Blade guide assembly components (upper blade guide shown).

6. Install blade covers.

Replacing Motor Brushes

The motor uses carbon brushes to transmit electrical current inside the motor. These brushes are considered to be regular "wear items" or "consumables" that will need to be replaced during the life of the motor. The frequency of required replacement is often related to how much the motor is used and how hard it is pushed.

Replace the carbon brushes at the same time when the motor no longer reaches full power, or when brushes measure less than ½" (new brushes are ⅝" long). If your machine is used frequently, we recommend keeping an extra set of replacement brushes on-hand to avoid any downtime.

Items Needed	Qty
Flat Head Screwdriver ¼"	1
Replacement Brush Pair (PT34441003)	1

To replace motor brushes:

1. DISCONNECT MACHINE FROM POWER!

2. Remove (2) brush caps and worn brushes (see **Figure 41**) from motor.

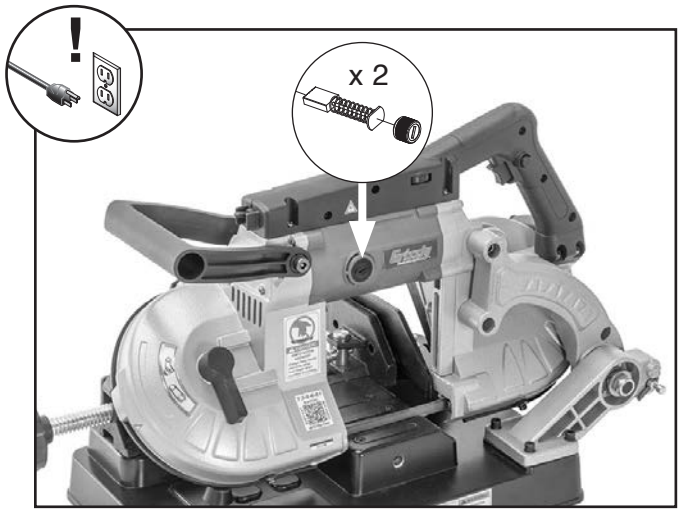


Figure 41. Location of brush caps.

3. Replace both motor brushes and install brush caps.

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 aftermarket 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.

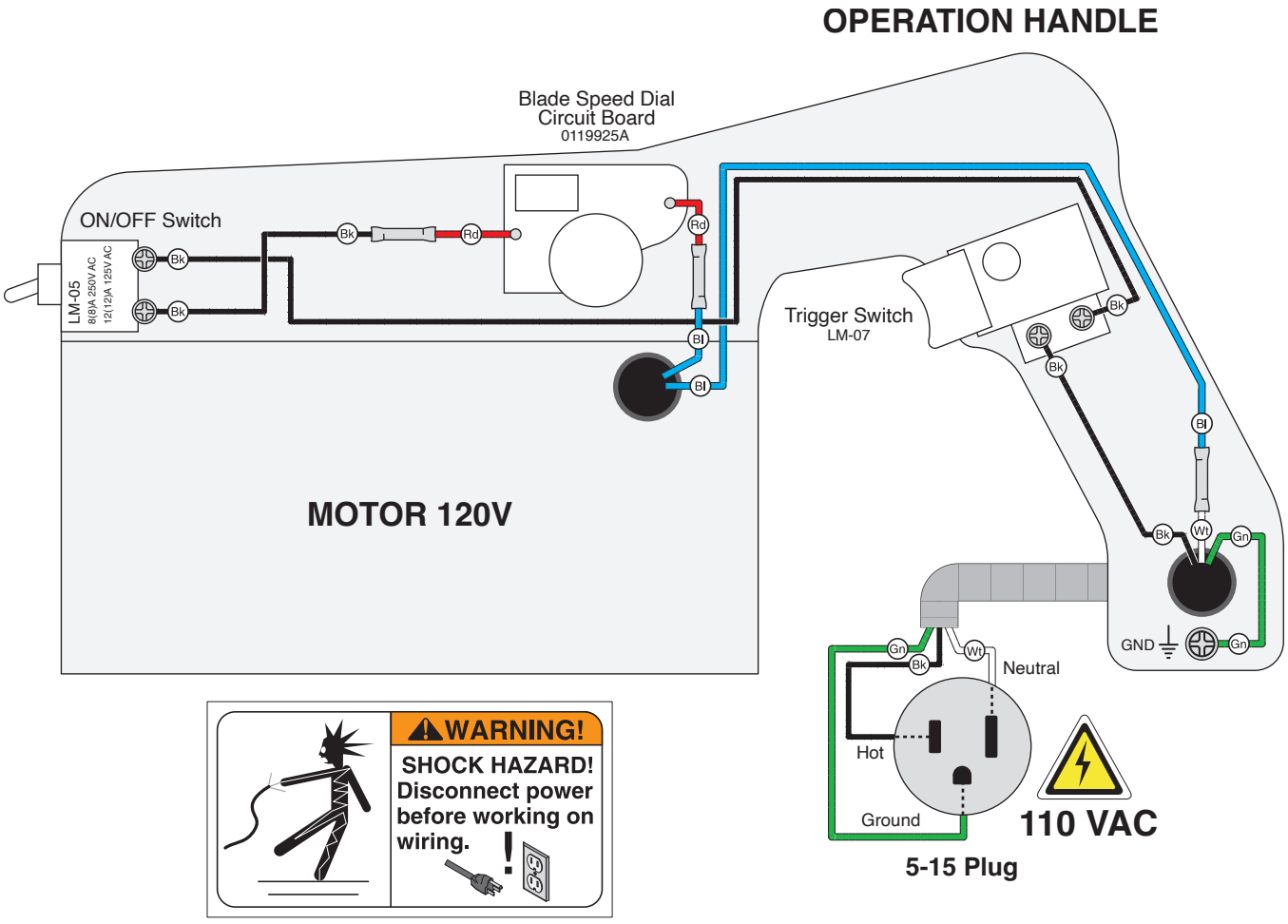
NOTICE

The photos and diagrams included in this section are best viewed in color. You can view these pages in color at www.grizzly.com.

COLOR KEY

BLACK	Bk	BLUE	Bl	YELLOW	Yl	LIGHT BLUE	Lb
WHITE	Wt	BROWN	Br	YELLOW GREEN	Yg	BLUE WHITE	Bw
GREEN	Gn	GRAY	Gy	PURPLE	Pu	TURQUOISE	Tu
RED	Rd	ORANGE	Or	PINK	Pk		

Wiring Diagram



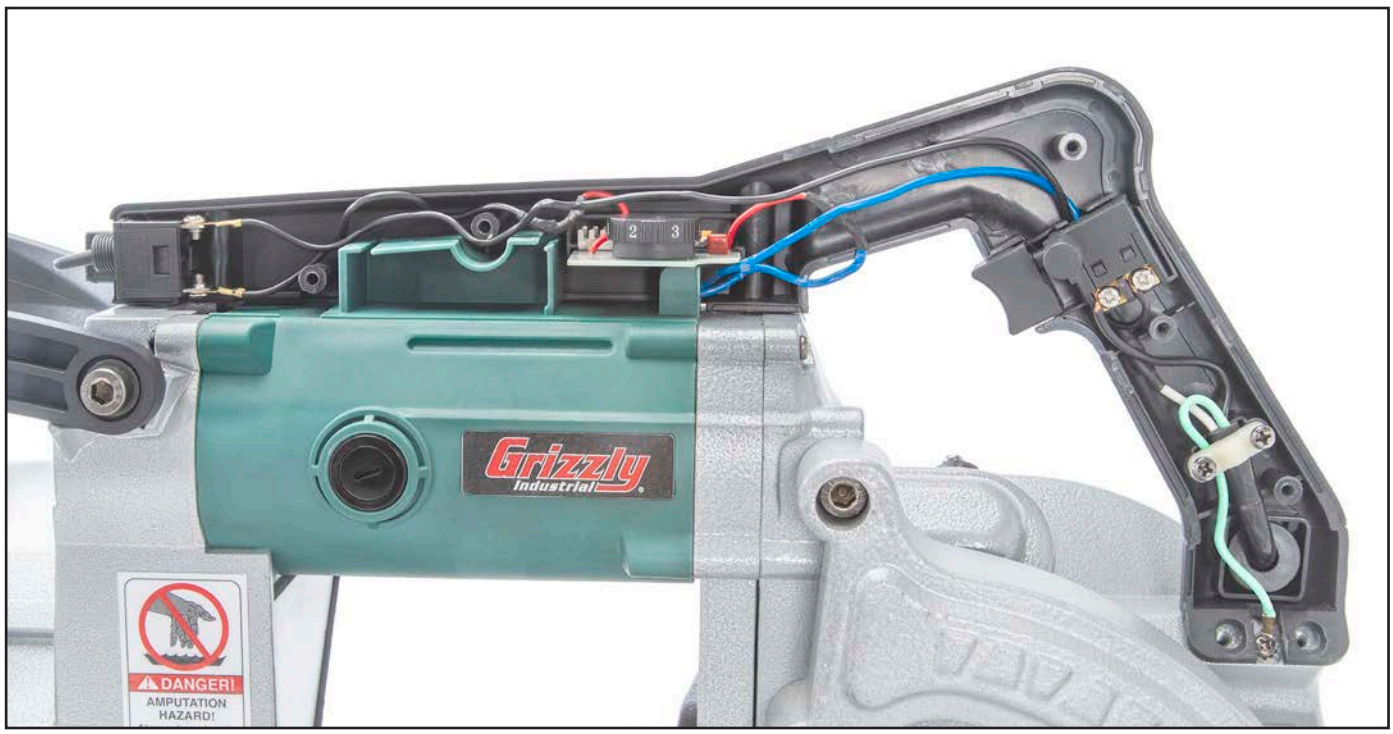
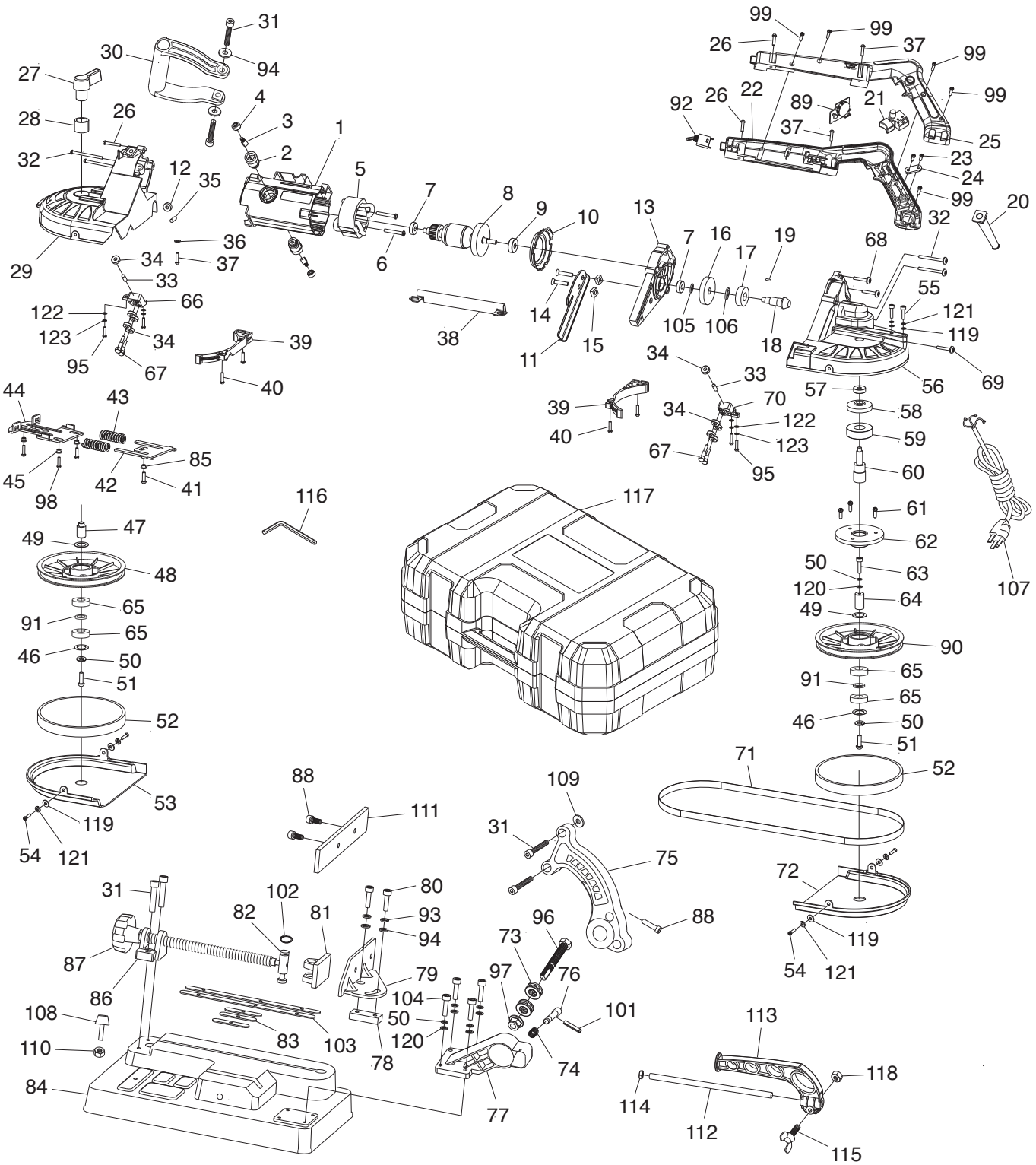


Figure 42. Machine wiring.

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** to check for availability.

Main



Main Parts List

REF	PART #	DESCRIPTION
1	PT34441001	MOTOR HOUSING
2	PT34441002	BRUSH PORT
3	PT34441003	CARBON BRUSH (2-PC)
4	PT34441004	BRUSH CAP
5	PT34441005	STATOR
6	PT34441006	TAP SCREW M5 X 45
7	PT34441007	BALL BEARING 608ZZ
8	PT34441008	ROTOR
9	PT34441009	BALL BEARING 629-2RS
10	PT34441010	DEFLECTOR
11	PT34441011	GUIDE PLATE
12	PT34441012	BALL BEARING 686ZZ
13	PT34441013	COVER INNER
14	PT34441014	FLAT HD CAP SCR M6-1 X 18
15	PT34441015	SQUARE NUT M6-1
16	PT34441016	GEAR 43T
17	PT34441017	BALL BEARING 6202ZZ
18	PT34441018	GEAR SHAFT 11T
19	PT34441019	KEY 3 X 3 X 6 RE
20	PT34441020	CORD GRIP
21	PT34441021	TRIGGER SWITCH LM-07
22	PT34441022	OPERATION HANDLE RIGHT
23	PT34441023	TAP SCREW M4 X 14
24	PT34441024	WIRE CLAMP
25	PT34441025	OPERATION HANDLE LEFT
26	PT34441026	TAP SCREW M4 X 22
27	PT34441027	BLADE TENSION LEVER
28	PT34441028	SPACER 20 X 26 X 20MM
29	PT34441029	WHEEL HOUSING UPPER
30	PT34441030	ADJUSTABLE HANDLE
31	PT34441031	CAP SCREW M8-1.25 X 25
32	PT34441032	TAP SCREW M4 X 60
33	PT34441033	DOWEL PIN 6 X 16
34	PT34441034	BALL BEARING 696ZZ
35	PT34441035	DOWEL PIN 6 X 18
36	PT34441036	FLAT WASHER 4MM
37	PT34441037	PHLP HD SCR M4-.7 X 10
38	PT34441038	BLADE SLEEVE
39	PT34441039	BLADE WHEEL WEDGE
40	PT34441040	PHLP HD SCR M4-.7 X 16
41	PT34441041	PHLP HD SCR M5-.8 X 20
42	PT34441042	TENSION PLATE INNER
43	PT34441043	COMPRESSION SPRING 6 X 17 X 60
44	PT34441044	TENSION PLATE OUTER
45	PT34441045	FLANGED BUSHING
46	PT34441046	FLAT WASHER 6MM
47	PT34441047	IDLER WHEEL SHAFT
48	PT34441048	IDLER WHEEL
49	PT34441049	FLAT WASHER 30 X 34 X 1MM
50	PT34441050	LOCK WASHER 6MM
51	PT34441051	PHLP HD SCR M6-1 X 14
52	PT34441052	TIRE RUBBER

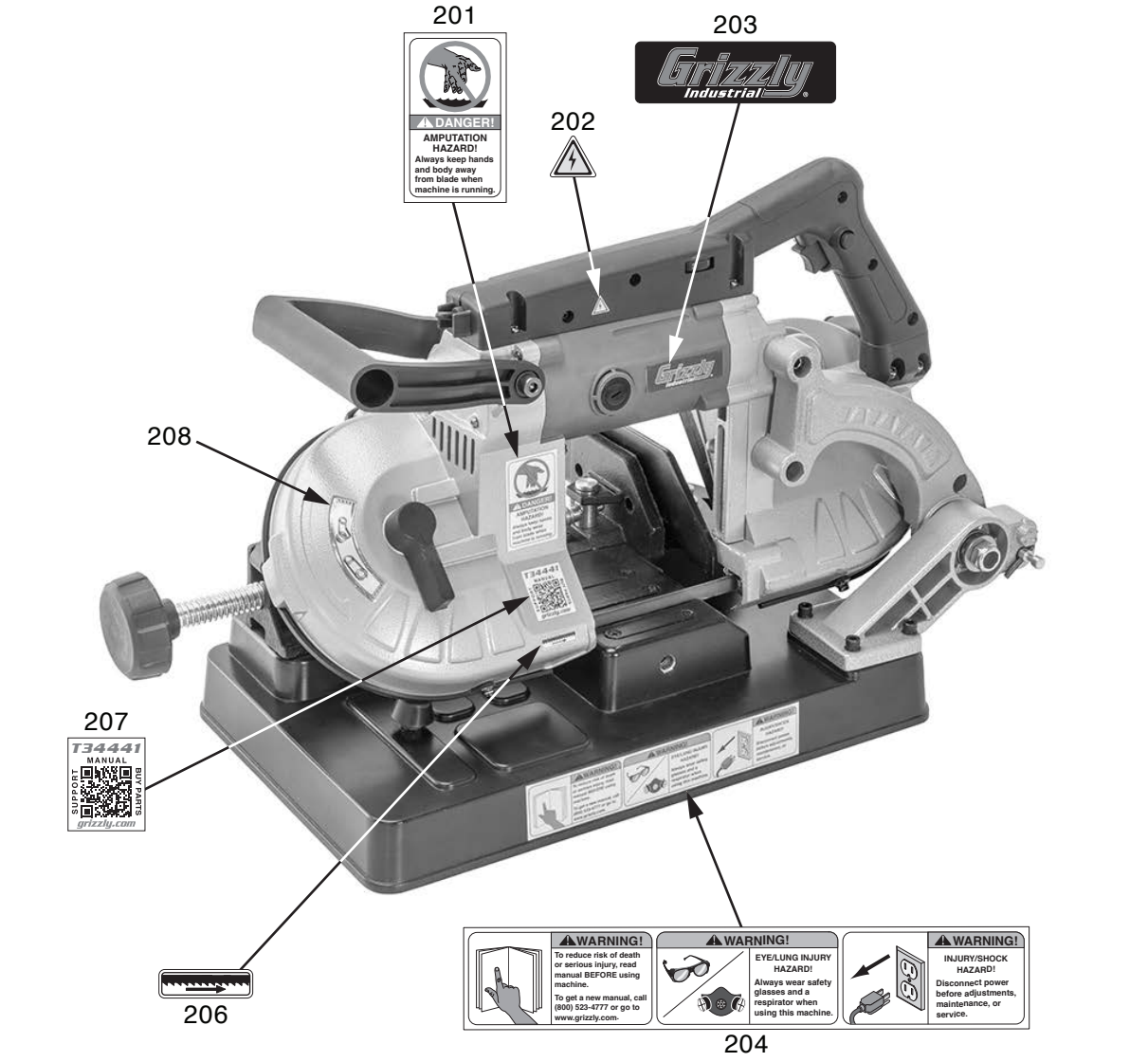
REF	PART #	DESCRIPTION
53	PT34441053	BLADE COVER UPPER
54	PT34441054	PHLP HD SCR M5-.8 X 10
55	PT34441055	CAP SCREW M5-.8 X 22
56	PT34441056	WHEEL HOUSING LOWER
57	PT34441057	BALL BEARING 627ZZ
58	PT34441058	GEAR 27T
59	PT34441059	BALL BEARING 6204ZZ
60	PT34441060	GEAR SHAFT 8T
61	PT34441061	PHLP HD SCR M5-.8 X 20
62	PT34441062	GEAR 43T
63	PT34441063	CAP SCREW M6-1 X 20
64	PT34441064	DRIVE SHAFT
65	PT34441065	BALL BEARING 6002-2RS
66	PT34441066	BLADE GUIDE FRAME UPPER
67	PT34441067	ECCENTRIC BOLT M5-.8 X 24
68	PT34441068	TAP SCREW M4 X 40
69	PT34441069	TAP SCREW M4 X 35
70	PT34441070	BLADE GUIDE FRAME LOWER
71	PT34441071	BLADE 44-7/8 X 1/2 X 0.025 14-18 TPI VP
72	PT34441072	BLADE COVER LOWER
73	PT34441073	THRUST BEARING 51201
74	PT34441074	COMPRESSION SPRING 0.75 X 12.5 X 24
75	PT34441075	PIVOT ARM
76	PT34441076	HEAD LOCKING PIN 4 X 28
77	PT34441077	PEDESTAL
78	PT34441078	VISE ANGLE BLOCK
79	PT34441079	VISE JAW FIXED
80	PT34441080	CAP SCREW M8-1.25 X 35
81	PT34441081	VISE JAW FLOATING
82	PT34441082	VISE PIVOT SHAFT
83	PT34441083	PRESS PLATE SMALL
84	PT34441084	STAND
85	PT34441085	FLANGED BUSHING
86	PT34441086	VISE SCREW MOUNT
87	PT34441087	VISE SCREW
88	PT34441088	CAP SCREW M8-1.25 X 16
89	PT34441089	BLADE SPEED DIAL ASSEMBLY
90	PT34441090	DRIVE WHEEL
91	PT34441091	SPACER 15 X 22 X 3MM
92	PT34441092	ON/OFF SWITCH LM-05
93	PT34441093	LOCK WASHER 8MM
94	PT34441094	FLAT WASHER 8MM
95	PT34441095	PHLP HD SCR M8-1.25 X 16
96	PT34441096	PIVOT BOLT M12-1.75 X 55
97	PT34441097	FLANGE NUT M12-1.75
98	PT34441098	PHLP HD SCR M5-.8 X 16
99	PT34441099	TAP SCREW M4 X 20
101	PT34441101	ROLL PIN 4 X 28
102	PT34441102	EXT RETAINING RING 14MM
103	PT34441103	PRESS PLATE LARGE
104	PT34441104	CAP SCREW M6-1 X 25
105	PT34441105	LOCK WASHER 10MM

Main Parts List (Cont.)

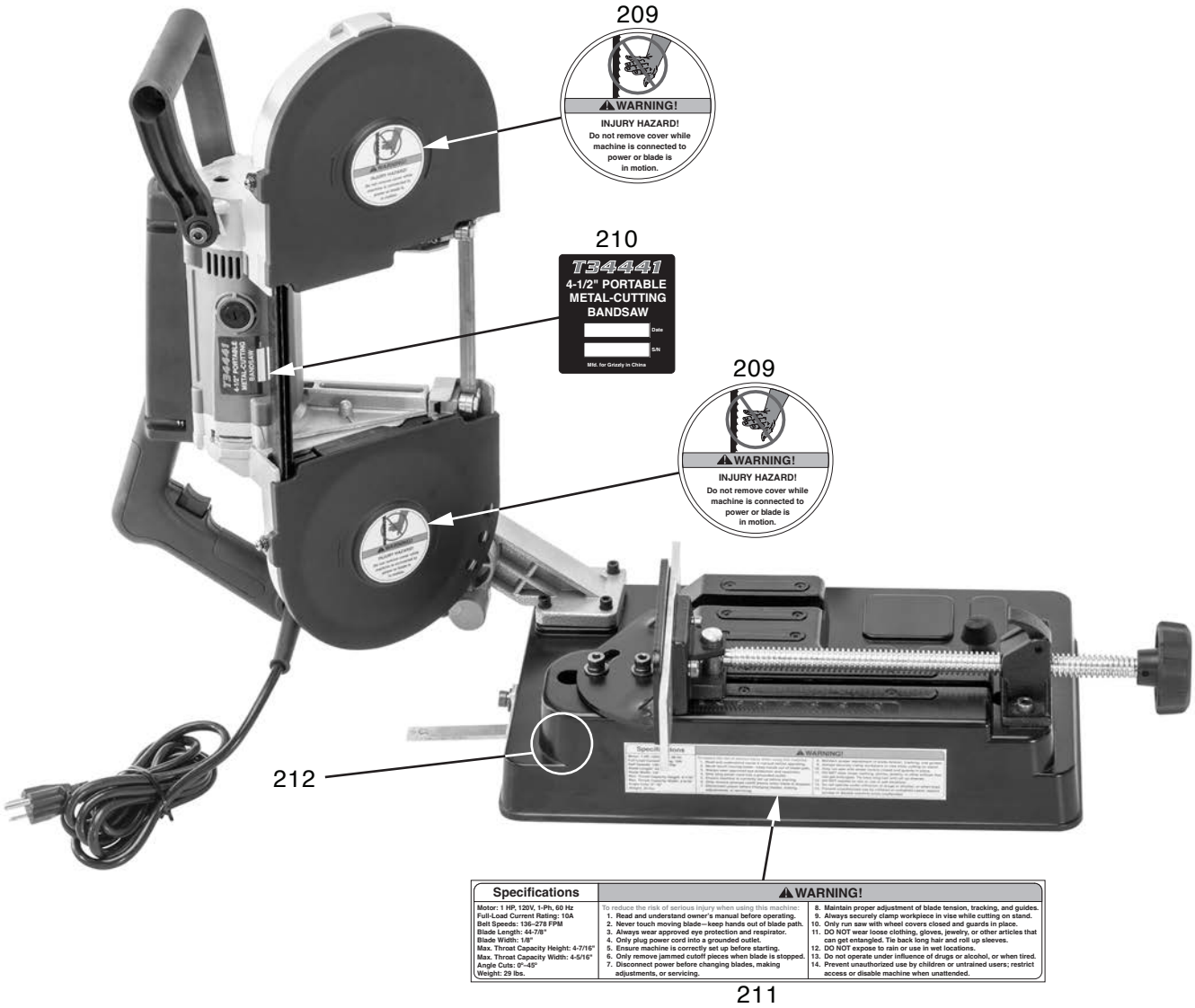
REF	PART #	DESCRIPTION
106	PT34441106	LOCK WASHER 14MM
107	PT34441107	POWER CORD 18G 3W 87" 5-15P
108	PT34441108	BUMPER M8-1.25 X 30 RUBBER
109	PT34441109	FLAT WASHER 8 X 19 X 2MM
110	PT34441110	HEX NUT M8-1.25
111	PT34441111	VISE SUPPORT PLATE
112	PT34441112	WORK STOP ROD
113	PT34441113	WORK STOP
114	PT34441114	HEX NUT M12-1.75

REF	PART #	DESCRIPTION
115	PT34441115	THUMB SCREW M6-1 X 25 WING
116	PT34441116	HEX WRENCH 6MM
117	PT34441117	CARRYING CASE
118	PT34441118	HEX NUT M6-1
119	PT34441119	FLAT WASHER 5MM
120	PT34441120	FLAT WASHER 6MM
121	PT34441121	LOCK WASHER 5MM
122	PT34441122	FLAT WASHER 8MM
123	PT34441123	LOCK WASHER 8MM

Labels & Cosmetics



Labels & Cosmetics (Cont.)



REF	PART #	DESCRIPTION
201	PT34441201	AMPUTATION HAZARD LABEL
202	PT34441202	ELECTRICITY LABEL
203	PT34441203	GRIZZLY LOGO SMALL
204	PT34441204	COMBO WARNING LABEL
205	PT34441205	GRIZZLY LOGO LARGE
206	PT34441206	BLADE DIRECTION LABEL

REF	PART #	DESCRIPTION
207	PT34441207	QR CODE LABEL
208	PT34441208	BLADE TENSION LABEL
209	PT34441209	DO NOT REMOVE LABEL
210	PT34441210	MACHINE ID LABEL
211	PT34441211	SPEC/WARNING LABEL
212	PT34441212	TOUCH-UP PAINT, GLOSSY BLACK

⚠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.

WARRANTY & RETURNS

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.

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.

In the event you need to use 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.

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.

For further information about the warranty, visit **https://www.grizzly.com/forms/warranty** or scan the QR code below to be automatically directed to our warranty page.

WARRANTY

grizzly.com