



MODEL G0420
7" X 12" HORIZONTAL MITER
CUTTING METAL BANDSAW
OWNER'S MANUAL
(For models manufactured since 01/26)



COPYRIGHT © AUGUST, 2026 BY GRIZZLY INDUSTRIAL, INC.
**WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE
OR FORM WITHOUT THE WRITTEN APPROVAL OF GRIZZLY INDUSTRIAL, INC.**
#LS24006 PRINTED IN TAIWAN

V1.08.26

*****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.....	2	SECTION 5: ACCESSORIES.....	41
Contact Info	2	SECTION 6: MAINTENANCE.....	42
Manual Accuracy	2	Schedule	42
Identification.....	3	Cleaning & Protecting	42
Controls & Components.....	4	Lubrication	42
Machine Data Sheet	6	Cutting Fluid System Maintenance	44
SECTION 1: SAFETY.....	8	SECTION 7: SERVICE.....	46
Safety Instructions for Machinery	8	Troubleshooting	46
Additional Safety for		Adjusting Blade Tracking	49
Horizontal Metal Bandsaws	10	Squaring Blade to Table.....	50
SECTION 2: POWER SUPPLY	11	Adjusting Blade Guide Bearings.....	50
Converting Voltage to 230V	13	Adjusting Blade Brush	52
SECTION 3: SETUP.....	15	Adjusting Downfeed Stop Bolt	52
Needed for Setup.....	15	Adjusting Angle Stops.....	53
Unpacking	15	SECTION 8: WIRING.....	55
Inventory	16	Wiring Safety Instructions	55
Measuring Hardware	17	Wiring Overview.....	56
Site Considerations.....	19	Electrical Box Wiring Diagram (115V)	57
Lifting & Placing	20	Electrical Box Wiring Diagram (230V)	58
Assembly	21	Control Panel Wiring Diagram	59
Test Run.....	23	Motor Wiring Diagrams (115V)	60
Recommended Adjustments.....	24	Motor Wiring Diagrams (230V)	60
SECTION 4: OPERATIONS.....	25	Electrical Components.....	61
Operation Overview	25	SECTION 9: PARTS	63
Operation Tips	26	Cabinet & Base.....	63
Inspecting Workpieces.....	26	Bow & Motor	66
Selecting Blades	27	Labels & Cosmetics	68
Blade Breakage	28	WARRANTY & RETURNS.....	71
Blade Care & Break-In.....	29		
Changing Blade	29		
Tensioning Blade	31		
Chip Inspection Chart.....	32		
Adjusting Blade Guide Positions	33		
Adjusting Feed Rate	33		
Using Vise.....	34		
Cutting Angles.....	36		
Adjusting Work Stop	37		
Adjusting Blade Speed	37		
Blade Speed Chart	39		
Using Cutting Fluid System	40		

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

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.

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.

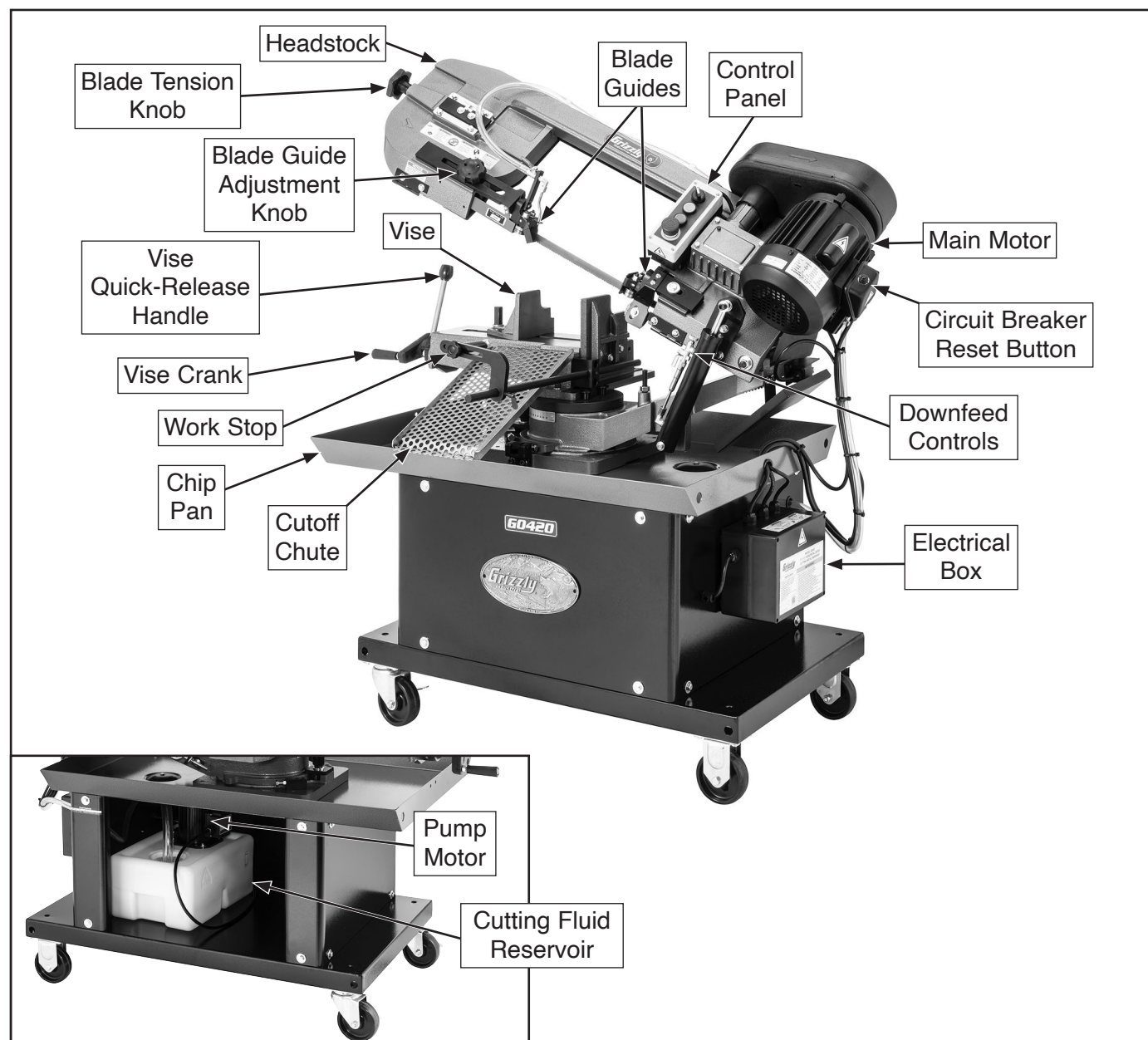
		MODEL GXXXX MACHINE NAME	
SPECIFICATIONS		 WARNING!	
Motor:	To reduce risk of serious injury when using this machine:		
Specification:	Manual before operation.		
Specification:	Safety glasses and respirator.		
Specification:	Correctly adjusted/setup and		
Weight:	power is connected to grounded circuit before starting.		
	4. Make sure the motor has stopped and disconnect		
	power before adjustments, maintenance, or service.		
	5. DO NOT expose to rain or dampness.		
	6. DO NOT modify this machine in any way.		
	7.		
	8.		
	9. ended.		
	10. Use of drugs or alcohol.		
	10. Maintain machine carefully to prevent accidents.		

Manufactured for Grizzly in Taiwan



Identification

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



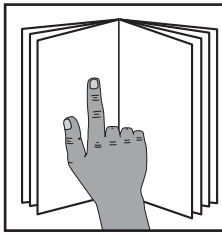
⚠ WARNING

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) Adjust upper guide to just clear workpiece.
- e) Properly support and secure workpiece with table, vise, or some type of support fixture.
- f) 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.

Headstock

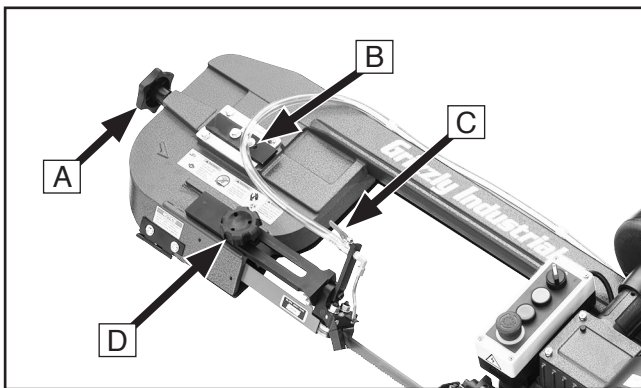


Figure 1. Headstock controls and components.

- A. Blade Tension Knob:** Increases or decreases blade tension.
- B. Blade Tracking Controls:** Adjusts front blade wheel tilt to move blade to or from wheel shoulder.
- C. Cutting Fluid Control Valve:** Adjusts cutting fluid flow rate onto blade.
- D. Blade Guide Adjustment Knob:** Adjusts front blade guide that supports blade. Position guide as close to workpiece as possible to prevent blade from twisting.

Downfeed

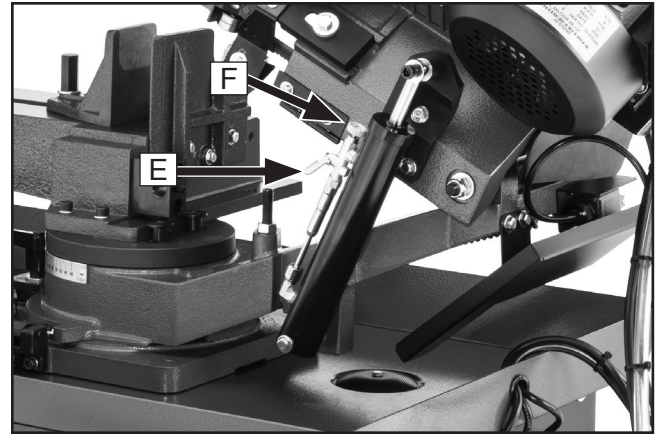


Figure 2. Downfeed speed components.

- E. Feed ON/OFF Valve:** Opens to lower headstock until it contacts downfeed stop bolt; closes to stop headstock from lowering.
- F. Feed Rate Dial:** Increases feed rate when turned clockwise, and decreases feed rate when turned counterclockwise.

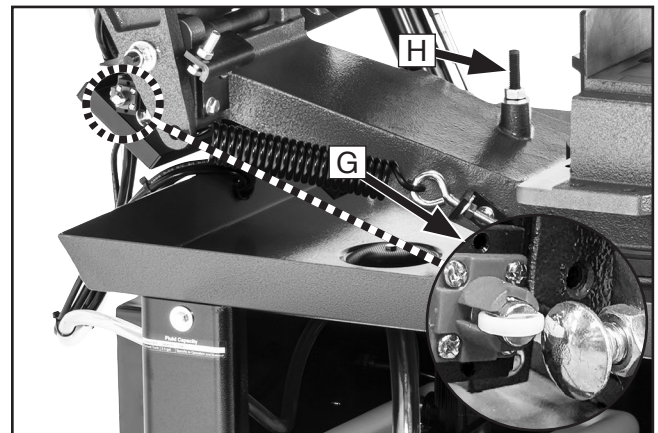


Figure 3. Downfeed stop components.

- G. Downfeed Limit Switch:** Turns machine **OFF** when headstock is fully lowered and cut is complete.
- H. Downfeed Stop Bolt:** Stops headstock from lowering farther than completion of cut.



Vise

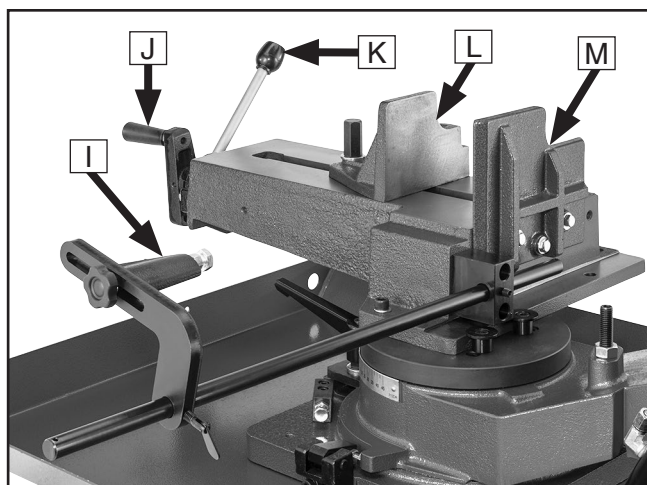


Figure 4. Vise controls and components.

- I. Work Stop:** Supports repetitive cutting operations.
- J. Vise Crank:** Adjusts movable vise jaw to secure workpiece.
- K. Vise Quick-Release Handle:** Push down to lock vise. Pull up to release vise.
- L. Movable Vise Jaw:** Holds workpiece against rear vise jaw during cutting operation.
- M. Rear Vise Jaw:** Helps hold workpiece in place.

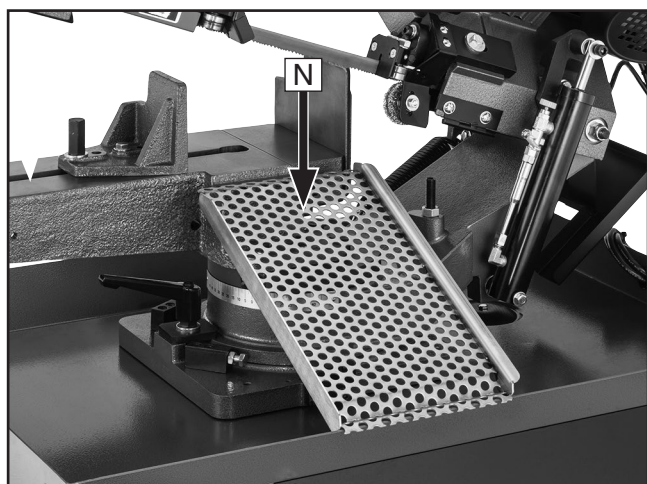


Figure 5. Cutoff chute.

- N. Cutoff Chute:** Directs cutoff pieces away from blade and into chip pan after cut.

Swivel

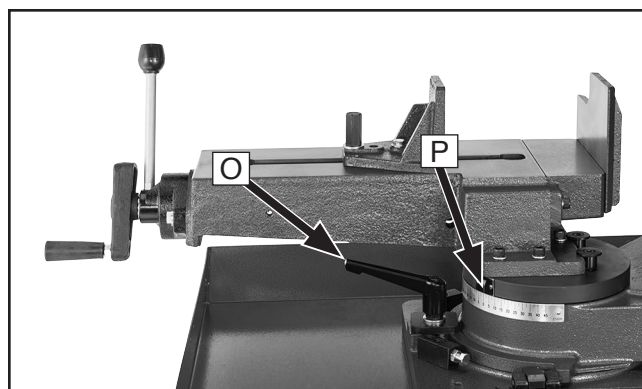


Figure 6. Swivel controls and components.

- O. Swivel Lock Handle:** Loosens to adjust blade angle in relation to vise. Tightens to lock blade angle setting.
- P. Angle Scale:** Shows angle of blade.

Electrical

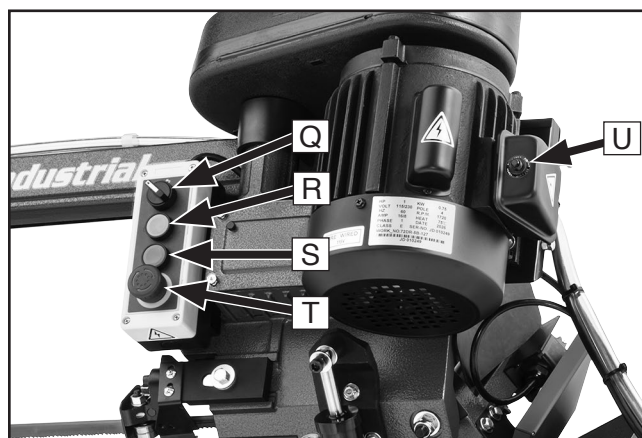


Figure 7. Electrical controls and components.

- Q. Coolant Pump Switch:** Rotate clockwise to turn coolant pump **ON**, rotate counterclockwise to turn coolant pump **OFF**.
- R. Motor ON Button:** Starts blade.
- S. Motor OFF Button:** Stops blade.
- T. Emergency Stop Button:** Stops all machine functions. Twist clockwise to reset.
- U. Circuit Breaker Reset Button:** Allows machine to be restarted after thermal overload protection has tripped. To reset, wait a few minutes for motor to cool, then press reset button. If button does not stay depressed, allow motor to cool longer, then try again.





MACHINE DATA SHEET

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

MODEL G0420 7" X 12" HORIZONTAL MITER CUTTING METAL BANDSAW

Product Dimensions:

Weight..... 441 lbs.
Width (side-to-side) x Depth (front-to-back) x Height..... 49 x 37-1/2 x 69 in.
Footprint (Length x Width)..... 39 x 25-1/2 in.
Space Required for Full Range of Movement (Width x Depth)..... 49 x 65 in.

Shipping Dimensions:

Type..... Wood Slat Crate
Content..... Machine
Weight..... 500 lbs.
Length x Width x Height..... 28 x 49 x 65 in.
Must Ship Upright..... Yes

Electrical:

Power Requirement..... 115V or 230V, Single-Phase, 60Hz
Prewired Voltage..... 115V
Full-Load Current Rating..... 16.48A at 115V, 8.23A at 230V
Minimum Circuit Size..... 20A at 115V, 15A at 230V
Connection Type..... Cord & Plug
Power Cord Included..... Yes
Power Cord Length..... 79 in.
Power Cord Gauge..... 14 AWG
Plug Included..... Yes
Included Plug Type..... 5-15 for 115V
Recommended Plug Type..... 6-15 for 230V
Switch Type..... ON BUTTON w/Automatic Shut-Off

Motors:

Main

Horsepower..... 1 HP
Phase..... Single-Phase
Amps..... 16/8A
Rated Speed..... 1720 RPM
Type..... TEFC Capacitor-Start Induction
Power Transfer Belt
Bearings..... Shielded & Permanently Lubricated
Centrifugal Switch/Contacts Type..... External

Coolant Pump

Horsepower..... 1/8 HP
Phase..... Single-Phase
Amps..... 0.48A/0.23A
Rated Speed..... 3400 RPM
Type..... Sealed Induction
Power Transfer Direct
Bearings..... Shielded & Permanently Lubricated



Main Specifications:

Operation Info

Blade Speeds.....	98, 164, 246, 328 FPM
Std. Blade Length.....	93 in.
Blade Length Range.....	3/4 in.
Std. Blade Width.....	3/4 in.

Cutting Capacities

Angle Cuts.....	0 - 45 deg. L/R
Vise Jaw Depth.....	9-3/4 in
Vise Jaw Height.....	4 in.
Max. Capacity Rectangular Height at 90 Deg.....	7 in.
Max. Capacity Rectangular Width at 90 Deg.....	12 in.
Max. Capacity Round at 90 Deg.....	7 in.
Max. Capacity Rectangular Height at 30 Deg.....	7 in.
Max. Capacity Rectangular Width at 30 Deg.....	6 in.
Max. Capacity Round at 30 Deg.....	7 in.
Max. Capacity Rectangular Height at 45 Deg.....	7 in.
Max. Capacity Rectangular Width at 45 Deg.....	4-1/4 in.
Max. Capacity Round at 45 Deg.....	5 in.
Max. Capacity Rectangular Height at -45 Deg.....	7 in.
Max. Capacity Rectangular Width at -45 Deg.....	4-1/4 in.
Max. Capacity Round at -45 Deg.....	5 in.

Construction

Table.....	Cast Iron
Upper Wheel.....	Cast Iron
Lower Wheel.....	Cast Iron
Body.....	Cast Iron
Base.....	Stamped Steel
Wheel Cover.....	Pre-formed Steel
Paint Type/Finish.....	Epoxy

Other

Wheel Size.....	11-1/2 in.
Blade Guides Upper.....	Ball Bearing
Blade Guides Lower.....	Ball Bearing
Coolant Capacity.....	2-1/2 gal.

Table Info

Table Size Length.....	16-1/2 in.
Table Size Width.....	7-1/2 in.
Floor To Cutting Area Height.....	26-1/2 in.

Other Specifications:

Country of Origin	Taiwan
Warranty	1 Year
Approximate Assembly & Setup Time	30 Min.
Serial Number Location	Machine ID Label
ISO 9001 Factory	Yes



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.



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



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



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



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 Horizontal 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.

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

HAND PLACEMENT. Never position hands or fingers in line with the cut or under bandsaw headstock while lowering or operating. Hands could be cut or crushed.

BLADE GUARD POSITION. Adjust blade guard as close to workpiece as possible before cutting to minimize operator exposure to unused portion of blade.

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

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

HOT SURFACES. Contact with hot surfaces from machine components, ejections of hot chips, swarf, and the workpiece itself can cause burns.

WORKPIECE HANDLING. Always properly support workpiece with table, vise, or some type of support fixture. Always secure workpiece in vise before cutting. Never hold the workpiece with your hands during a cut.

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

FIRE HAZARD. Use **EXTREME CAUTION** if cutting magnesium. Using the wrong cutting fluid could lead to chip fire and possible explosion.

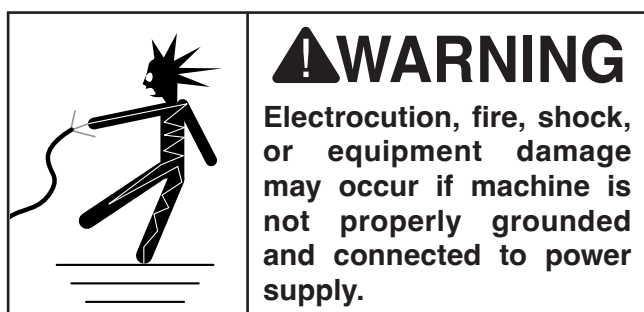
CUTTING FLUID SAFETY. Cutting fluids are poisonous. Always follow manufacturer's cutting-fluid safety instructions. Pay particular attention to contact, contamination, inhalation, storage and disposal warnings. Spilled cutting fluid invites slipping hazards.



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 115V 16.48A
Full-Load Current Rating at 230V 8.23A

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.

Circuit Information

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.*

Circuit Requirements for 115V

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 20 Amps
Plug/Receptacle NEMA 5-15

Circuit Requirements for 230V

This machine can be converted to operate on a power supply circuit that has a verified ground and meets the requirements listed below. (Refer to **Voltage Conversion** instructions for details.)

Nominal Voltage 208V, 220V, 230V, 240V
Cycle 60 Hz
Phase Single-Phase
Power Supply Circuit 15 Amps
Plug/Receptacle NEMA 6-15



Grounding 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.

For 115V operation: This machine is equipped with a power cord that has an equipment-grounding wire and a grounding plug (see following figure). The plug must only be inserted into a matching receptacle (outlet) that is properly installed and grounded in accordance with all local codes and ordinances.

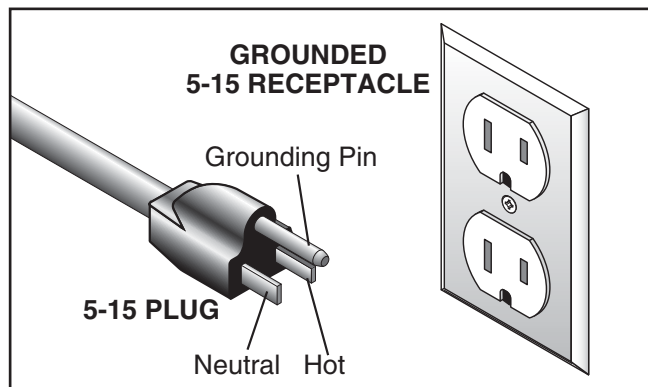
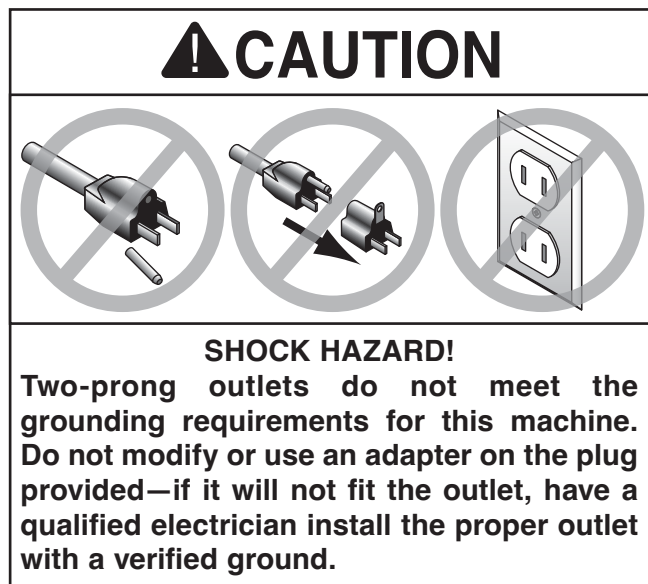


Figure 8. Typical 5-15 plug and receptacle.



For 230V operation: The plug specified under “Circuit Requirements for 230V” on the previous page has a grounding prong that must be attached to the equipment-grounding wire inside the included power cord. The plug must only be inserted into a matching receptacle (see following figure) that is properly installed and grounded in accordance with all local codes and ordinances.

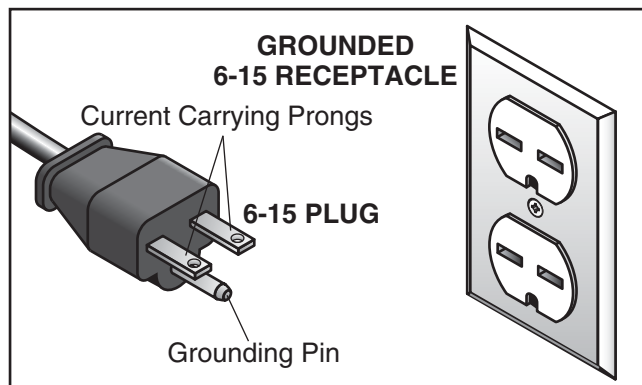


Figure 9. Typical 6-15 plug and receptacle.

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.

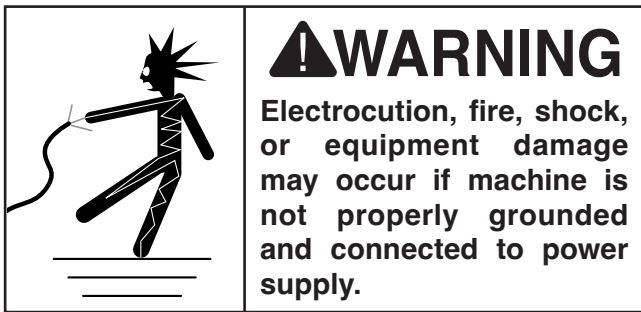
Extension cords cause voltage drop, which can damage electrical components and shorten motor life. Voltage drop increases as the extension cord size gets longer and the gauge size gets smaller (higher gauge numbers indicate smaller sizes).

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 (115V)..... 12 AWG
Minimum Gauge Size (230V) 14 AWG
Maximum Length (Shorter is Better).....50 ft.



Converting Voltage to 230V



The voltage conversion MUST be performed by an electrician or qualified service personnel.

The voltage conversion procedure consists of rewiring the main and coolant pump motors, replacing the circuit breaker, rewiring the transformer, and installing the correct plug. Wiring diagrams are provided in the wiring section starting on **Page 55**.

IMPORTANT: If the diagram included on either motor conflicts with the one on **Page 60**, the motor may have changed since the manual was printed. Use the diagram included on the applicable motor junction box cover instead.

Items Needed	Qty
Phillips Head Screwdriver #2	1
Wrench or Socket 7mm	1
Electrical Tape	As Needed
Wire Nut (14#AWG x 3)	1
Circuit Breaker 10A (P0420300-1X)	1
Plug 6-15	1
Wire Stripper	1
Flat Head Screwdriver 1/16" (or Smaller).....	1

To convert machine to 230V operation:

1. DISCONNECT MACHINE FROM POWER!
2. Cut off existing 5-15 plug.
3. Open main motor junction box.

4. Replace 18A circuit breaker with 10A circuit breaker (see **Figure 10**).
5. Remove (2) wire nuts shown in **Figure 10**.

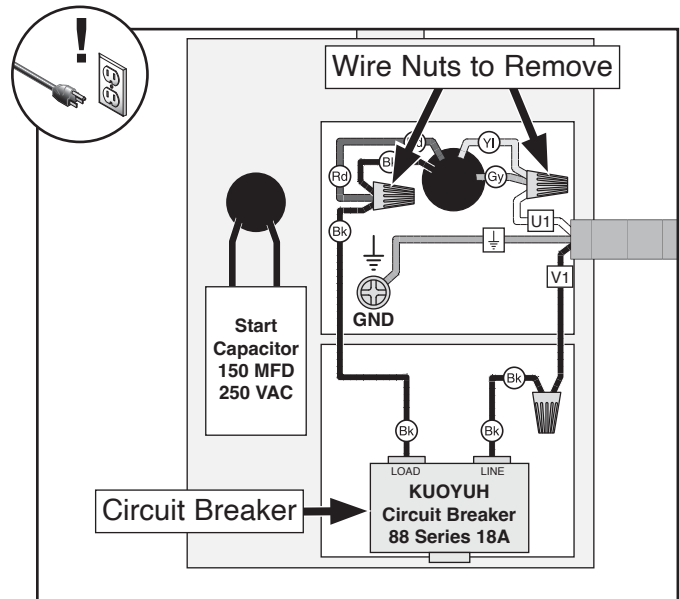


Figure 10. Main motor wired for 115V.

6. Twist red and gray wires together, and secure with a wire nut (see **Figure 11**).
7. Twist U1 and yellow wires together and secure with wire nut (see **Figure 11**).
8. Twist two remaining loose black wires together and secure with wire nut (see **Figure 11**).

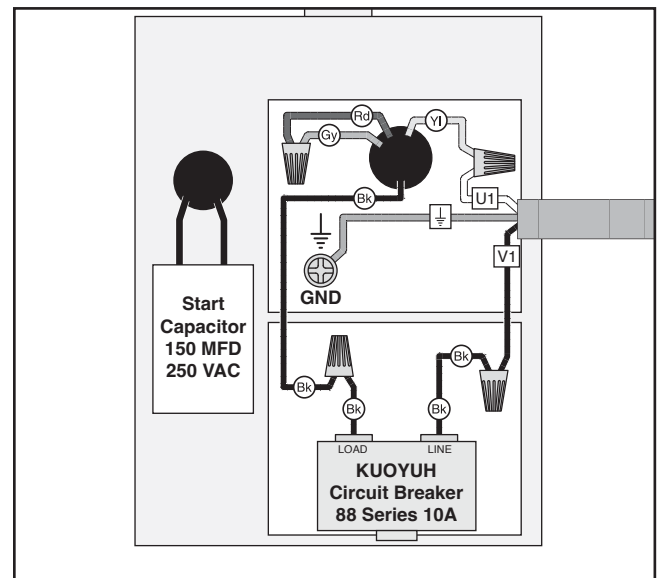


Figure 11. Main motor wired for 230V.



9. Close and secure main motor junction box.
10. Open coolant pump motor junction box.
11. Remove (4) terminal nuts (see **Figure 12**).
12. Remove and discard jumper shown in **Figure 12**.

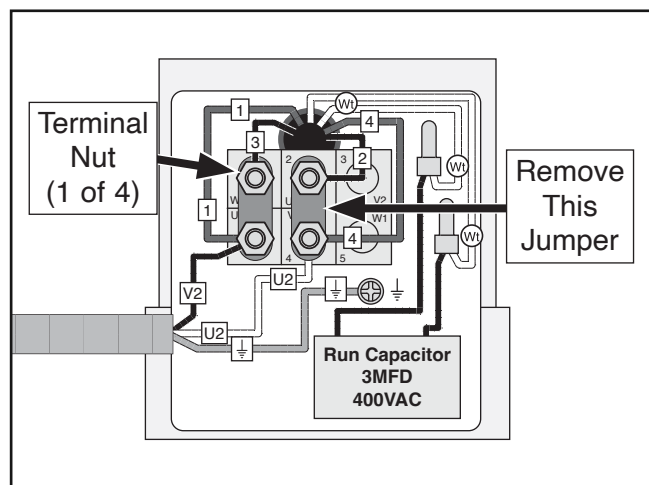


Figure 12. Pump motor wired for 115V.

13. Rotate remaining jumper across W2 and U2 terminals and secure, then re-install (2) remaining terminal nuts (see **Figure 13**).

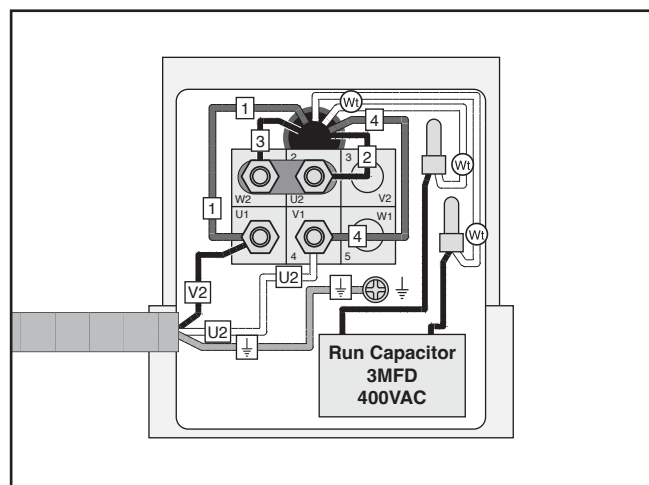


Figure 13. Pump motor wired for 230V.

14. Close and secure coolant pump motor junction box.
15. Open electrical box.

16. Change overload relay trip setting from 20A to 15A (see **Figure 14**).

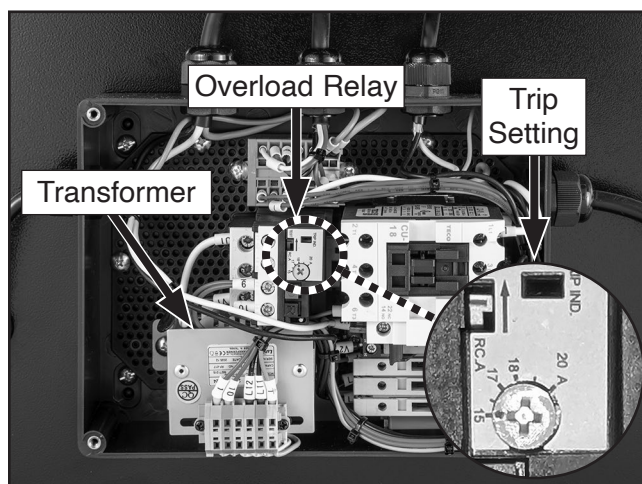


Figure 14. Location of transformer and overload relay in electrical box.

17. On terminal block on transformer (see **Figure 15**), move wire L12 one terminal to the left (see **Figure 15**).

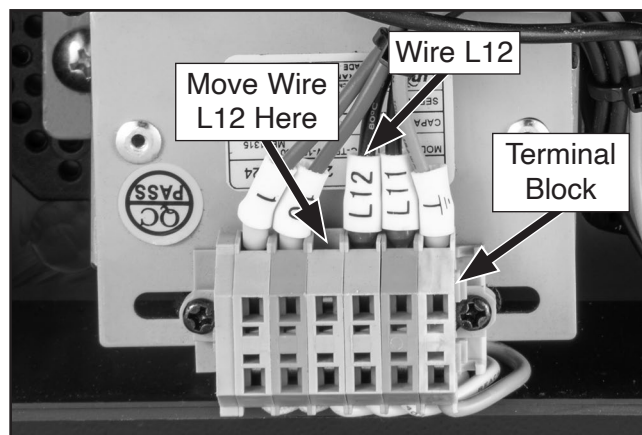
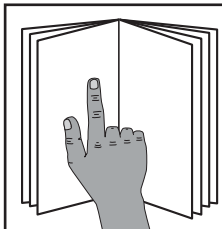


Figure 15. Rewiring transformer for 230V.

18. Close and secure electrical box.
19. Install 6-15 plug on end of power cord according to instructions and wiring diagrams provided by plug manufacturer. If plug manufacturer did not include instructions, see wiring of NEMA 6-15 plug on **Page 58**.

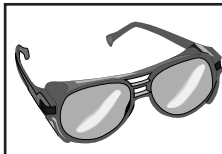


SECTION 3: SETUP



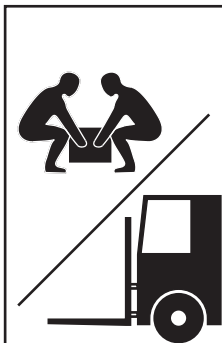
!WARNING

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



!WARNING

Wear safety glasses during the entire setup process!



!WARNING

HEAVY LIFT!

Straining or crushing injury may occur from improperly lifting machine or some of its parts. To reduce this risk, get help from other people and use a forklift (or other lifting equipment) rated for weight of this machine.

Needed for Setup

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

Description	Qty
• Additional Person	1
• Safety Glasses (for each person).....	1
• Lifting Straps (Rated for at least 625 lbs.)	2
• Lifting Equipment (Rated for at least 625 lbs).....	1
• Round Steel Rod Stock $\frac{3}{4}$ " x 48"	2
• Phillips Head Screwdriver #2	1
• Hex Wrench 4mm.....	1
• Wrench or Socket 10mm	1
• Cleaner/Degreaser	As Needed
• Disposable Rags	As Needed
• Disposable Gloves	As Needed
• Cutting Fluid	2 $\frac{1}{2}$ Gallons

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.

Inventory (Figure 16)	Qty
A. Horizontal Metal Bandsaw (Not Shown).....	1
B. Cutoff Chute	1
C. Work Stop Rod	1
D. Fixed Casters 4"	2
E. Locking Swivel Casters 4"	2
F. Extension Block	1
G. Pulley Cover	1
H. Pulley Cover Collar	1
I. Work Stop	1

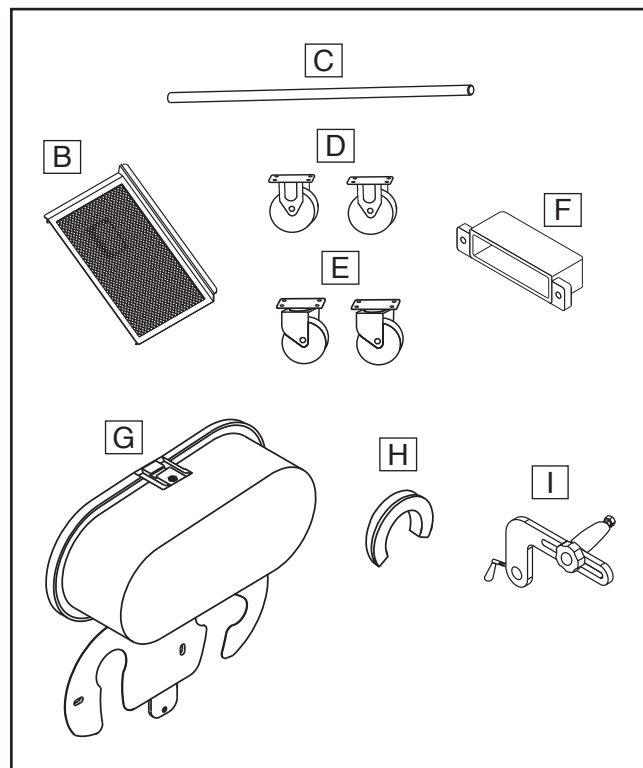


Figure 16. Inventory items.

Fasteners (Figure 17)	Qty
J. Hex Bolts M6-1 x 20	12
K. Fender Washers 6mm	12
L. Cap Screws $\frac{3}{8}$ "-16 x $1\frac{1}{4}$ "	2
M. Lock Washers $\frac{3}{8}$ "	2
N. Knob Bolt $\frac{1}{4}$ "-20 X $\frac{1}{2}$ "	1

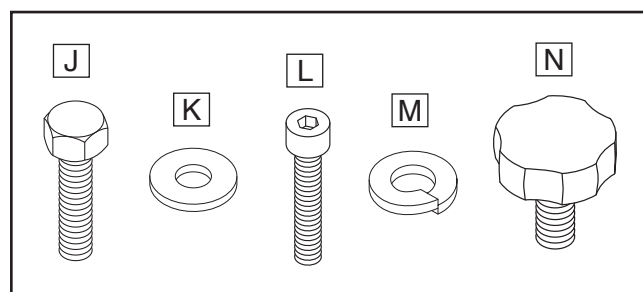


Figure 17. Fastener inventory (one of each shown).

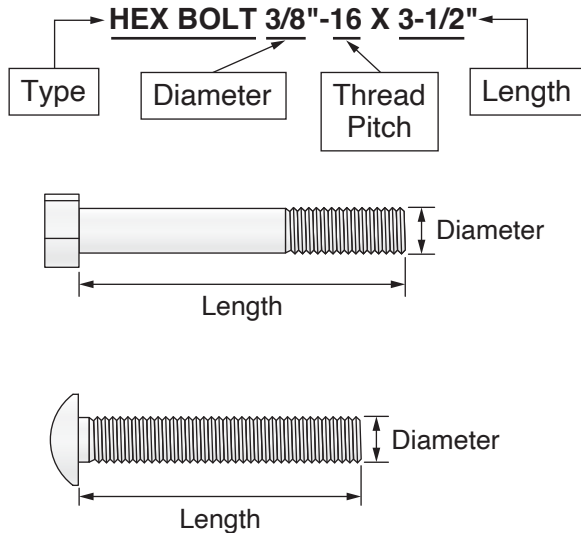


Measuring Hardware

Use this page to understand how hardware is measured in this manual.

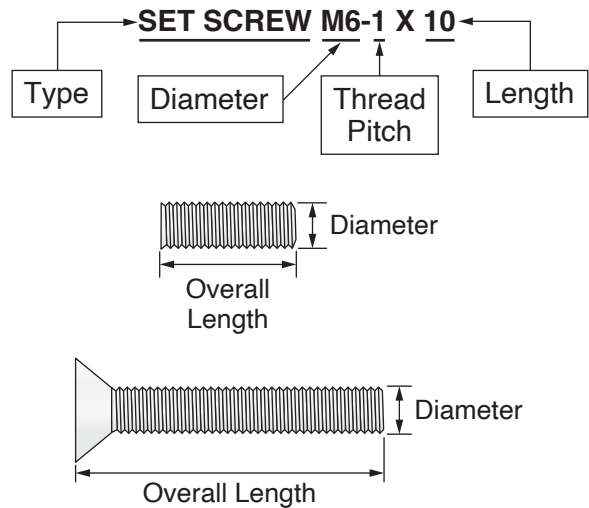
Bolts & Screws

Most bolts and screws are measured by the outside diameter of the threads, thread pitch, and the length from under the head to the opposite end:

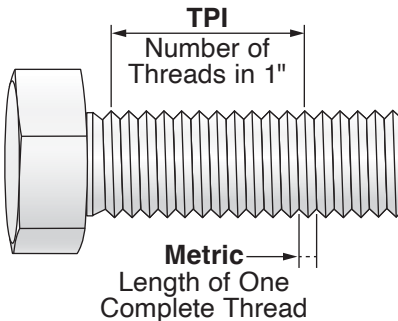


Flat Head & Set Screws

Flat head and set screws are measured by the outside diameter of the threads, thread pitch, and overall length of the fastener. These fasteners are often meant to sit flush with the adjoining surface:



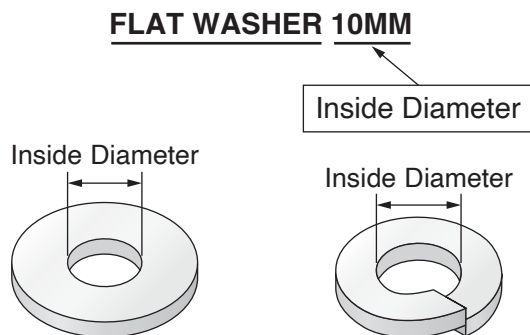
Thread pitch is the distance from the tip of one thread to the tip of the next thread. For US Standard threads, pitch is measured in threads per inch (TPI). Metric thread pitch is the length of one complete thread.



Note: Grizzly Industrial does not typically list a thread pitch for thread-forming screws and bolts, such as tap screws, wood screws, and lag bolts.

Washers

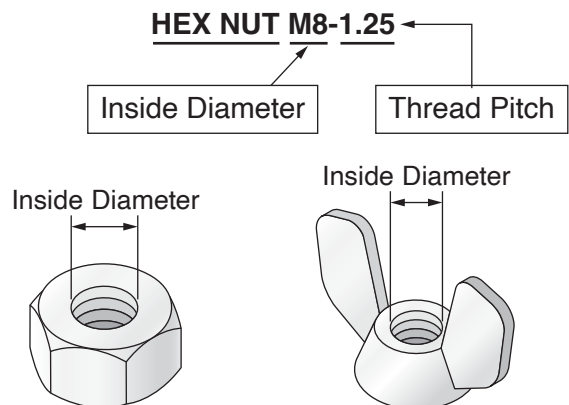
Common washers are measured by their inside diameter.



Note: Specialized washers may list the inside diameter, outside diameter, and the thickness.

Nuts

Nuts are measured by the inside diameter of the threads and the thread pitch.



Cleanup

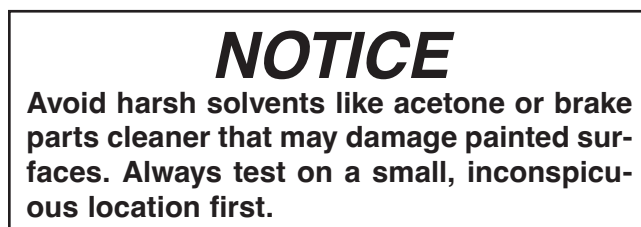
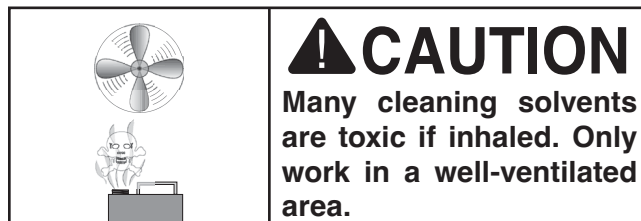
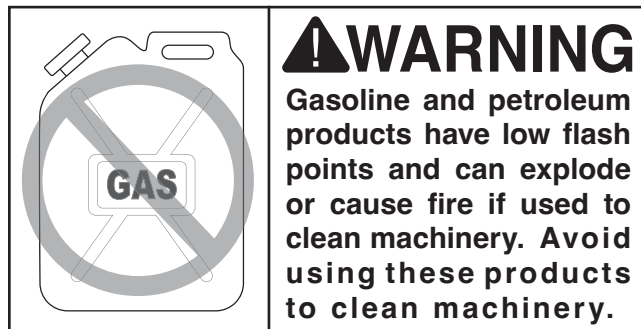
The unpainted surfaces of your machine are coated with a heavy-duty rust preventative that prevents corrosion during shipment and storage. This rust preventative works extremely well, but it will take a little time to clean.

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.

Basic steps for removing rust preventative:

1. Put on safety glasses and disposable gloves.
2. Coat rust preventative with liberal amount of cleaner/degreaser (WD•40 works well), then let it soak for 5–10 minutes.
3. Wipe off surfaces. If cleaner/degreaser is effective, 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 a rag.
4. Repeat **Steps 2–3** as necessary until clean, then coat all unpainted surfaces with quality metal protectant to prevent rust.



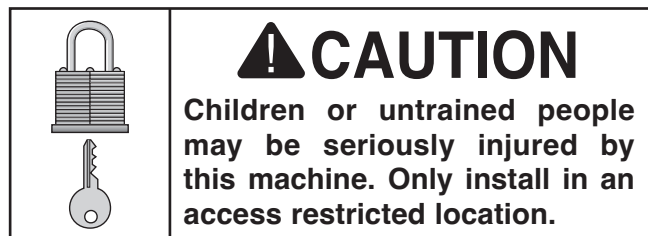
Site Considerations

Weight Load

Refer to the **Machine Data Sheet** for the weight of your machine. Make sure that the surface upon which the machine is placed will bear the weight of the machine, additional equipment that may be installed on the machine, and the heaviest workpiece that will be used. Additionally, consider the weight of the operator and any dynamic loading that may occur when operating the machine.

Space Allocation

Consider the largest size of workpiece that will be processed through this machine and provide enough space around the machine for adequate operator material handling or the installation of auxiliary equipment. With permanent installations, leave enough space around the machine to open or remove doors/covers as required by the maintenance and service described in this manual. **See below for required space allocation.**



Physical Environment

The physical environment where the machine is operated is important for safe operation and longevity of machine components. For best results, operate this machine in a dry environment that is free from excessive moisture, hazardous chemicals, airborne abrasives, or extreme conditions. Extreme conditions for this type of machinery are generally those where the ambient temperature range exceeds 41°–104°F; the relative humidity range exceeds 20%–95% (non-condensing); or the environment is subject to vibration, shocks, or bumps.

Electrical Installation

Place this machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure to leave enough space around machine to disconnect power supply or apply a lockout/tagout device, if required.

Lighting

Lighting around the machine must be adequate enough that operations can be performed safely. Shadows, glare, or strobe effects that may distract or impede the operator must be eliminated.

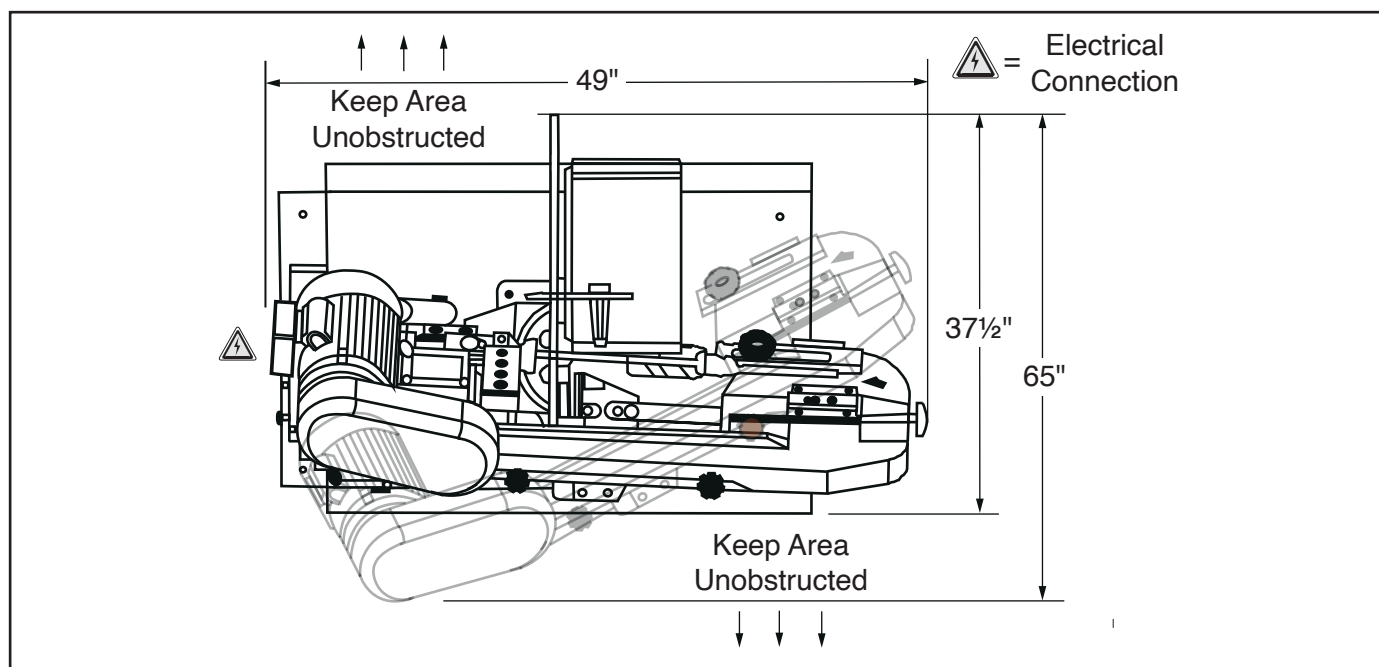
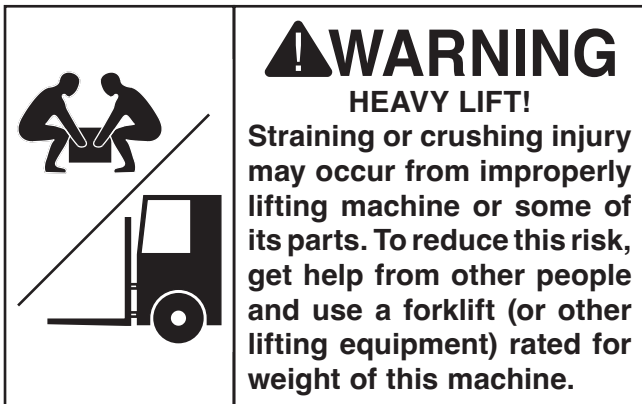


Figure 18. Minimum working clearances.



Lifting & Placing



DO NOT attempt to lift or move this machine without using the proper lifting equipment (such as a forklift or hoist) and the necessary assistance from other people. Each piece of lifting equipment must be rated for **at least 625 lbs.** to support dynamic loads that may be applied while lifting. Refer to **Needed for Setup** on **Page 15** for a complete list of required equipment.

The machine configuration requires two pieces of rod stock to be installed in the chip pan and the lifting straps secured to the ends (see **Figure 19**).

IMPORTANT: The rod stock must be at least $\frac{3}{4}$ " in diameter and 48" long. Otherwise, it may not be sturdy enough to properly support the weight of the machine.

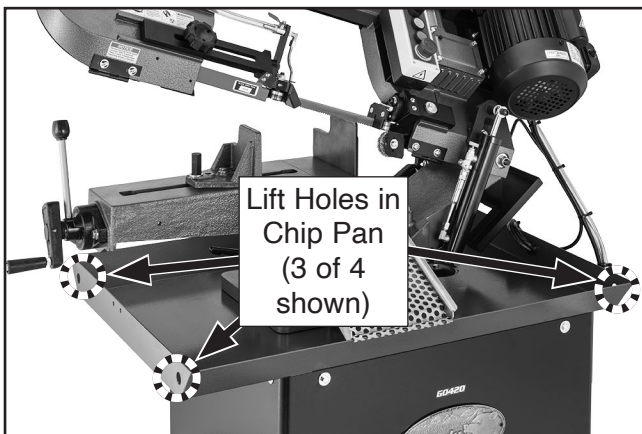


Figure 19. Location of holes in chip pan.

To lift and place machine:

1. Move crate to desired location.

2. Remove crate top and sides and any blocks around machine base, then unbolt machine from shipping pallet.
3. Insert (1) round steel rod stock through (2) lifting holes on each side of chip pan (see **Figure 20**).
4. Attach lifting straps to steel rod stock and power lifting equipment (see **Figure 20**).

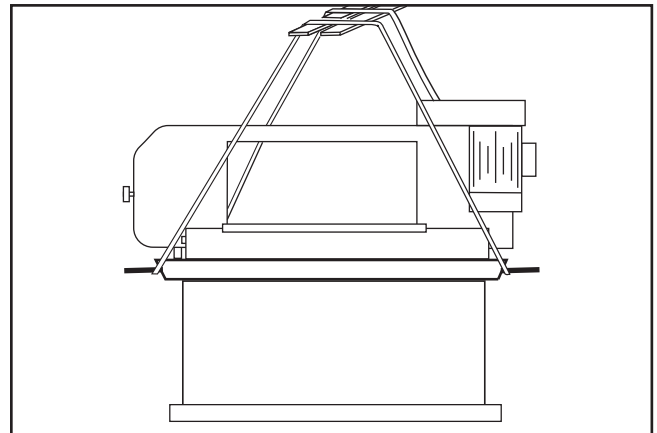


Figure 20. Lifting straps connected to steel rod stock.

5. With help from additional person, use lifting equipment to raise machine just enough to clear shipping pallet, then remove pallet.
6. Install (2) fixed casters on one end of stand and secure with (6) M6-1 x 20 hex bolts and 6mm fender washers (see **Figure 21**).
7. Install (2) swivel casters on opposite end of stand and secure with (6) M6-1 x 20 hex bolts and 6mm fender washers (see **Figure 21**).

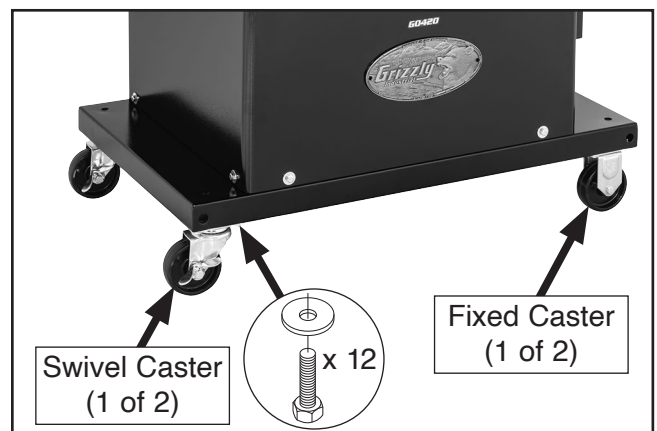


Figure 21. Casters installed on stand.



8. Lock swivel casters after installation so machine will not roll around during assembly.
9. Lower machine to floor and remove bar stock and lifting equipment.

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 fasteners securing shipping bracket, then store shipping bracket for future use (see **Figure 22**).

Note: Bracket helps maintain bow alignment during shipping. Store bracket in case you need to move or ship machine later.

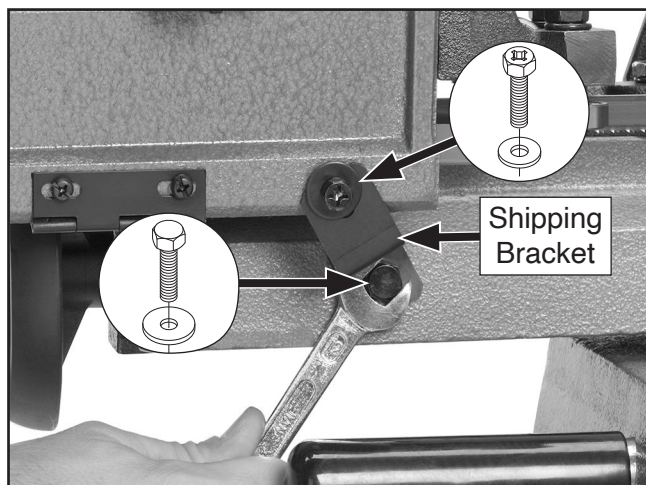


Figure 22. Example of shipping bracket in place.

2. Slide collar into interior of pulley cover until it clicks to secure (see **Figure 23**).

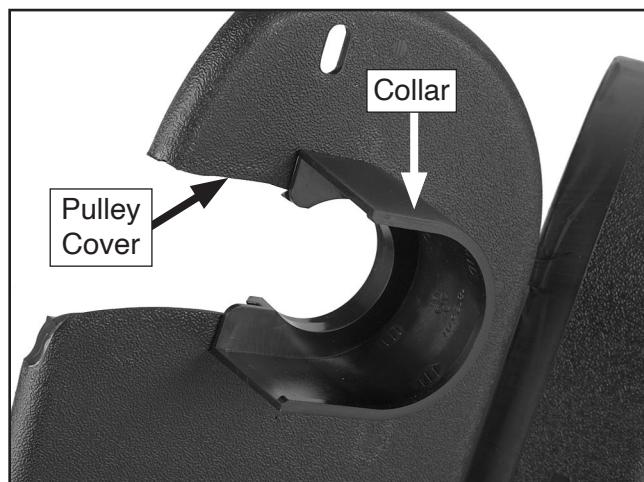


Figure 23. Collar installed.

3. Remove (2) pre-installed hex bolts, lock washers, and fender washers from pulley area (see **Figure 24**).

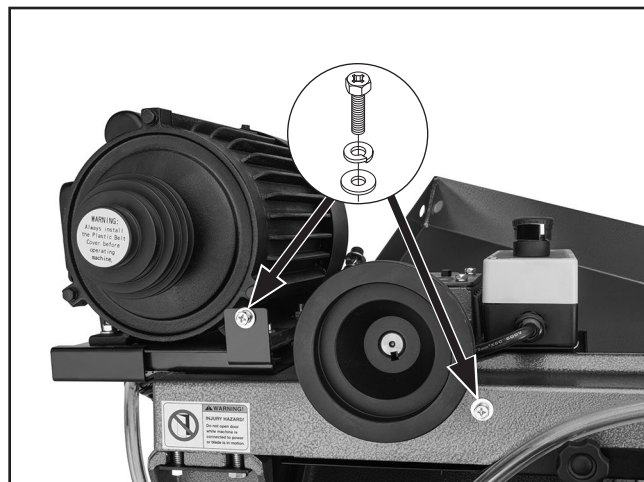


Figure 24. Location of pulley cover fasteners.



4. Slide pulley cover over pulleys (see **Figure 25**).
5. Align (2) holes in pulley cover with (2) holes from fasteners removed in **Step 3**, then use fasteners to secure pulley cover (see **Figure 25**).

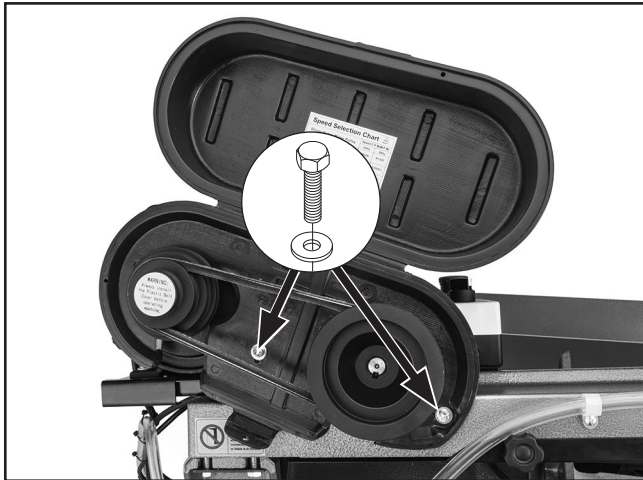


Figure 25. Pulley cover installed.

6. Close pulley cover lid and secure with $\frac{1}{4}$ "-20 x $\frac{1}{2}$ " knob bolt (see **Figure 26**).



Figure 26. Pulley cover secured.

7. Perform **Steps 1–3 of Using Cutting Fluid System** on **Page 40** to fill cutting fluid reservoir with cutting fluid.

8. Insert work stop rod into work stop set block (see **Figure 27**).
9. Tighten set screw in work stop set block to secure work stop rod (see **Figure 27**).
10. Slide work stop onto rod, position as needed, and tighten thumb screw to secure work stop (see **Figure 27**).

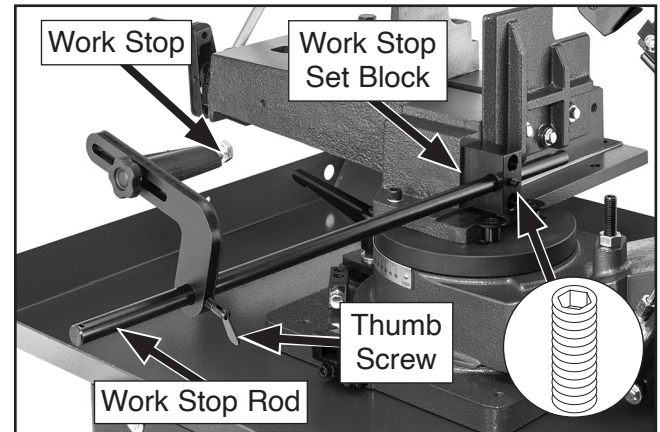


Figure 27. Work stop installed.

11. Install cutoff chute by placing V-shaped end on edge of chip pan and resting other end on vise table (see **Figure 28**).

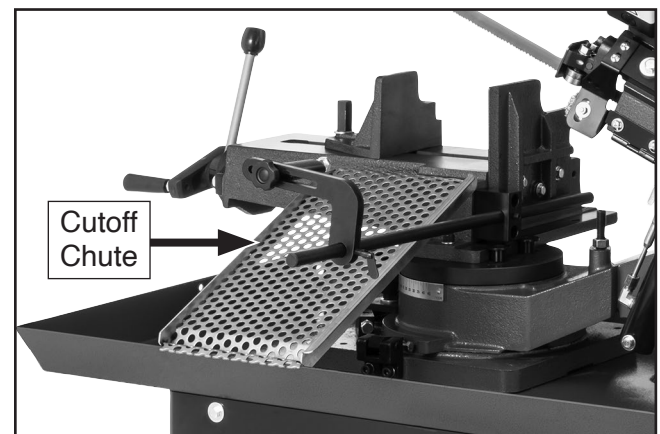


Figure 28. Cutoff chute installed.



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 main motor powers up and runs correctly,
- 2) the Emergency Stop button works correctly,
- 3) the cutting fluid system works correctly, and
- 4) the downfeed limit switch 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. Press Emergency Stop button (see **Figure 29**).
3. Move coolant pump ON/OFF switch to OFF position (see **Figure 29**).

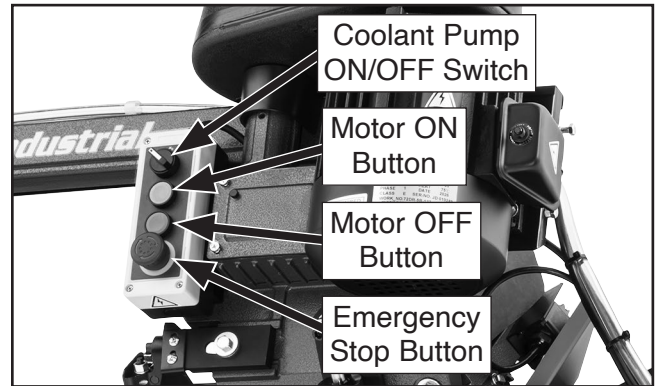


Figure 29. Control panel controls.

4. Verify cutting fluid tank is filled (see **Page 40**).

NOTICE

NEVER run coolant pump without cutting fluid in reservoir or when cutting fluid is low. You will overheat pump and void warranty!

5. Open cutting fluid control valve (see **Figure 30**).

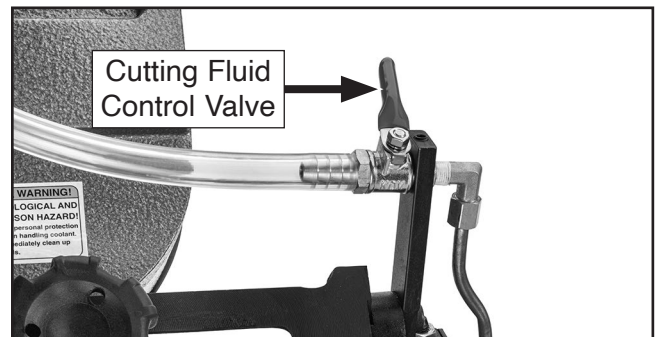


Figure 30. Location of cutting fluid control valve.

6. Raise headstock about halfway, then close feed ON/OFF valve to lock headstock in place (see **Figure 31**).

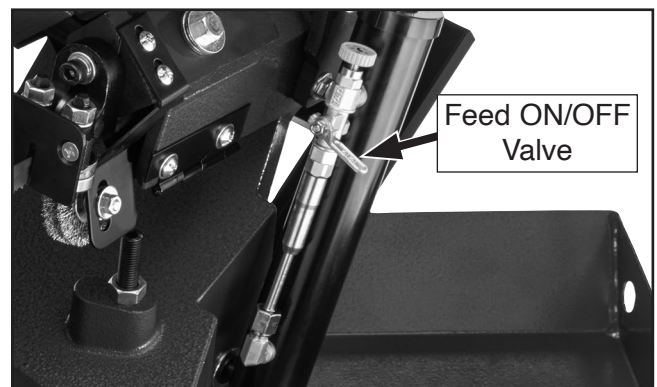


Figure 31. Feed ON/OFF valve.



7. Connect machine to power supply.
8. Twist Emergency Stop button clockwise so it pops out. This resets switch so machine can start (see **Figure 32**).



Figure 32. Resetting Emergency Stop button.

9. Press motor ON button (see **Figure 29** on **Page 23**) to start blade and verify motor operation.

Motor should run smoothly and without unusual problems or noises.

10. Rotate coolant pump ON/OFF switch to ON position (see **Figure 29** on **Page 23**) to start coolant pump and verify pump operation.

Cutting fluid should flow through nozzle, through blade guide, and onto blade.

11. Press Emergency Stop button to stop blade and coolant pump.

12. WITHOUT resetting Emergency Stop button, try to start machine by pressing motor ON button and moving coolant pump switch to ON position. Blade and pump should not start.

- If blade and pump do not start, safety feature of Emergency Stop button is working correctly.
- If blade and/or pump do start, immediately turn them **OFF** and disconnect power. Safety feature of Emergency Stop button is NOT working properly and must be corrected before further using machine. Contact Tech Support.

13. Reset Emergency Stop button.

14. Close cutting fluid valve.

15. Press motor ON button to start blade.

16. Open feed ON/OFF valve to fully lower headstock. Headstock should lower until blade is just below vise table and blade should stop.

— If headstock lowers until blade is just below vise table, and blade stops, downfeed limit switch is functioning correctly. Congratulations! Test Run is complete.

— If headstock lowers until blade is just below vise table but blade *does not* stop, downfeed limit switch is not adjusted correctly. Refer to **Adjusting Downfeed Stop Bolt** on **Page 52** before proceeding with operations.

— If headstock stops lowering before reaching vise table or cuts into vise table, downfeed limit bolt needs to be adjusted. Refer to **Adjusting Downfeed Stop Bolt** on **Page 52** before proceeding with operations.

Recommended Adjustments

The adjustments listed below have been performed at the factory. However, because of the many variables involved with shipping, we recommend that you at least verify the following adjustments to ensure accurate cutting results.

- Blade Tension **Page 31**
- Blade Tracking **Page 49**
- Blade Squareness **Page 50**
- Blade Guide Bearings **Page 50**

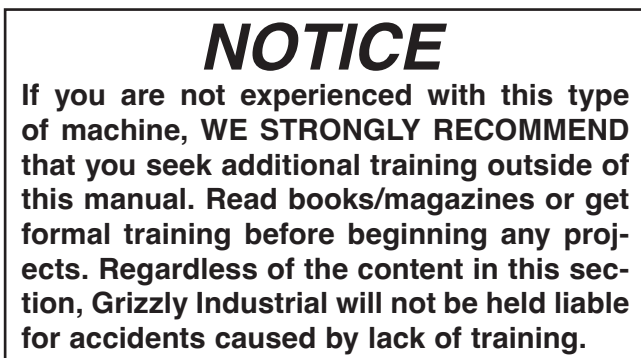
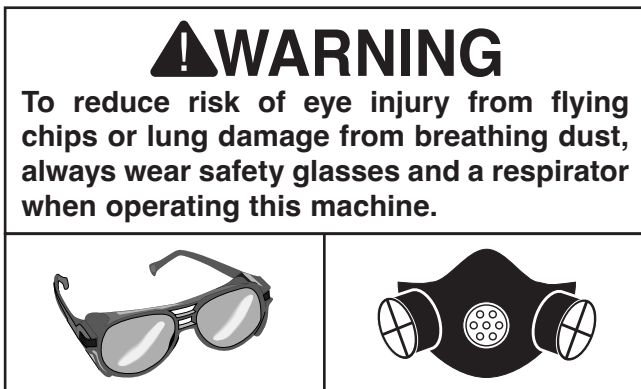


SECTION 4: OPERATIONS

Operation Overview

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

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



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

1. Examines workpiece to make sure it is suitable for cutting.
2. Puts on safety glasses and respirator.
3. Installs correct blade for workpiece material and verifies blade is tensioned correctly, then adjusts blade speed according to workpiece material.
4. Sets up work stop or vise table extension if needed for operation.
5. Raises headstock, then closes feed ON/OFF valve to lock headstock in position.
6. Adjusts blade angle and vise position as desired.
7. Securely clamps workpiece in vise. Ensures workpiece is stable and cutting area is free of obstructions.
8. Adjusts blade guides as close to workpiece as possible.
9. Ensures machine has adequate amount of correct cutting fluid, then opens cutting fluid control valve.
10. Starts machine and waits for blade to reach full speed.
11. Turns coolant pump **ON**.
12. Opens feed ON/OFF valve and adjusts feed rate dial to lower headstock at desired speed.
13. Watches headstock lower and blade contact workpiece, inspecting chips and adjusting feed rate as necessary to complete cut.
14. Allows blade to come to complete stop, then raises headstock and 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.

NOTICE

Loosen blade tension while bandsaw is not in use to prolong blade life.

Tips for cutting:

- Use work stop to quickly and accurately cut multiple pieces of stock to same length.
- Clamp material firmly in vise jaws to ensure a straight cut through the material.
- Allow blade to reach full speed before engaging workpiece. Never start a cut with blade in contact with workpiece, and do not start a cut on a sharp edge.
- Support long workpieces so they will not fall when cut. Flag long ends to alert passers-by of potential danger.
- Position blade guides as close as possible to workpiece to minimize side-to-side blade movement.
- Use cutting fluid when possible to increase blade life.
- Chips should be curled and silvery. If the chips are thin and powder-like, increase your feed rate (refer to the **Chip Inspection Chart** on **Page 32**).
- Burned chips indicate a need to reduce blade speed.
- Wait until blade has completely stopped before removing workpiece from vise, and avoid touching cut end—it could be very hot!

Inspecting Workpieces

Some metal workpieces are not safe to cut with a metal cutting bandsaw; instead, a different tool or machine should be used.

Before cutting, inspect the material for any of the following conditions and take the 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 forces 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 with the vise should not be cut on 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 gasses 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 during a 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.



Selecting Blades

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

Blade Terminology

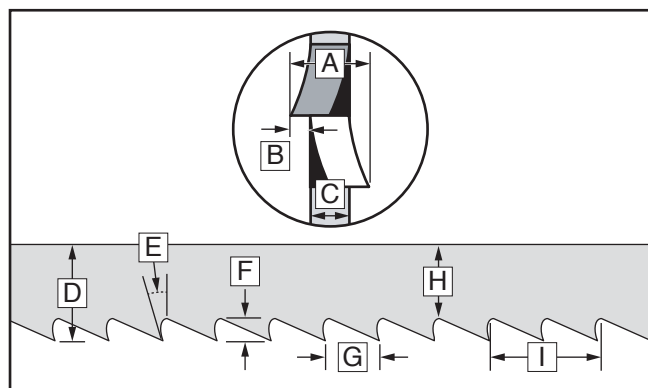


Figure 33. Bandsaw blade terminology.

- 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 brand of bandsaw and the distance between the wheels.

Model	Blade Length
G0420.....	93"

Blade Width

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

Model	Blade Width
G0420.....	$\frac{3}{4}$ "

Tooth Type

The most common tooth types are described as follows, and illustrated in **Figure 34**.

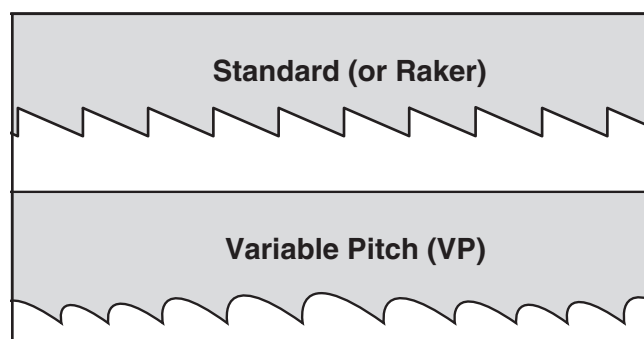


Figure 34. Bandsaw blade tooth types.

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/ High-Speed Steel (HSS) blades. However, for exact specifications of bandsaw blades that are correct for your 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 35**, 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.
5. The TPI range is represented by a "/" between numbers. For example, 3/4 TPI is the same as 3–4 TPI.
6. The "Cutting Speed Rate Recommendation" chart, which is located on the machine just below the Blade Pitch Chart, offers guidelines for various metals, given in feet per minute (FPM). Refer to **Blade Speed Chart on Page 39** for further details.

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 or adjustment of the blade guides.
- Feeding blade through the workpiece too fast.
- Dull or damaged teeth.
- Improperly-tensioned blade.
- Blade guides set too far away from workpiece. Adjust the blade guides as close to workpiece as possible.
- 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.

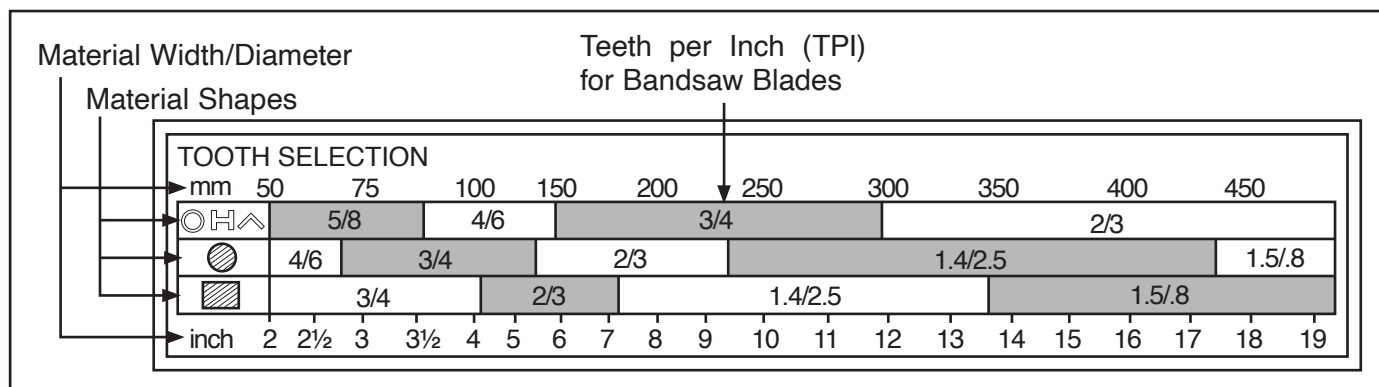


Figure 35. General guidelines for blade selection and speed chart.



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, feed pressure, and blade speed (refer to the **Blade Speed Chart** on **Page 39**), and pay attention to the chip characteristics (refer to the **Chip Inspection Chart** on **Page 32**). Keep your 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 32** 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.
2. Reduce feed pressure by half for first 50–100 inches of material cut.
3. To avoid twisting blade when cutting, adjust feed pressure when total width of blade is in cut.

Changing Blade

Blades should be changed when they become dull, damaged, or when you are cutting material that requires a blade of a certain type or tooth count.

A list of optional replacement blades is listed under **ACCESSORIES** on **Page 41**. We recommend keeping several sets of blades on hand to avoid downtime and to be properly prepared to cut different types of material.

Items Needed	Qty
Metal Brush or Shop Vacuum	1
Phillips Head Screwdriver #2	1
Leather Gloves	1 Pr.
Replacement Blade	1

To change blade:

1. DISCONNECT MACHINE FROM POWER!
2. Raise headstock to its full height, and close feed ON/OFF valve to keep it from lowering.
3. Move front blade guide (see **Figure 36**) as far right (when facing the front of the machine) as it will go (see **Adjusting Blade Guide Positions** on **Page 33**), then clean out all chips and shavings caught inside blade guide with brush or shop vacuum.

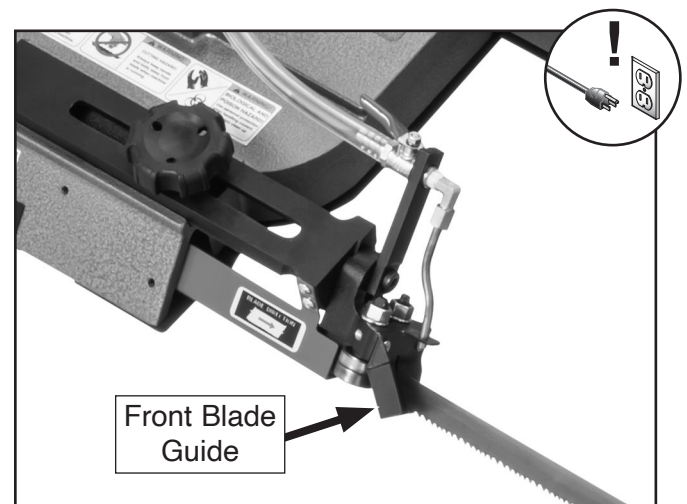


Figure 36. Location of front blade guide.



4. Remove (2) knobs and flat washers (see **Figure 37**), then open blade cover.

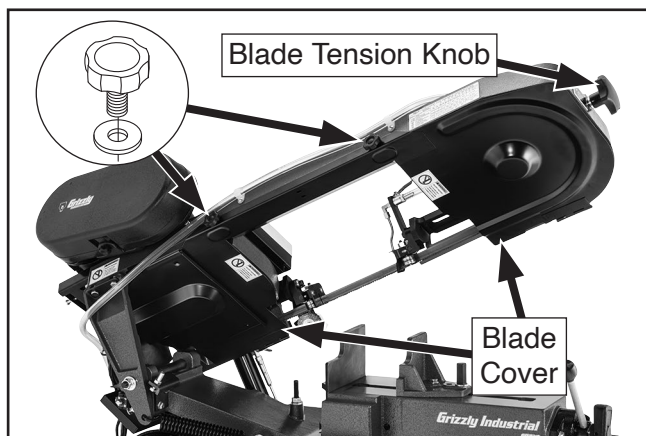


Figure 37. Blade cover fasteners and blade tension knob.

5. Remove (2) Phillips head screws (see **Figure 38**) to remove front blade guard.

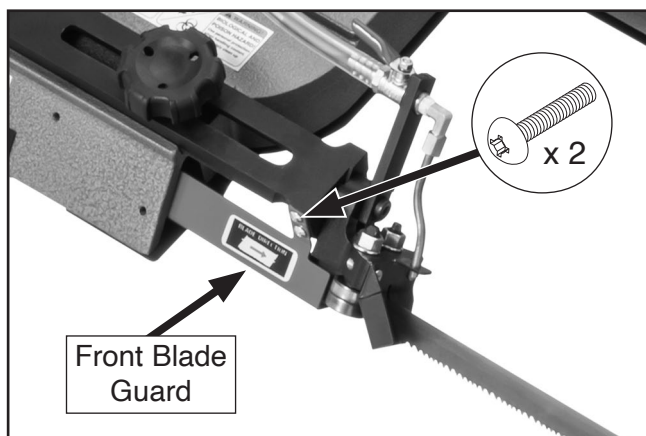


Figure 38. Front blade guard and screws.

6. Remove (2) screws (see **Figure 39**) to remove blade brush assembly.

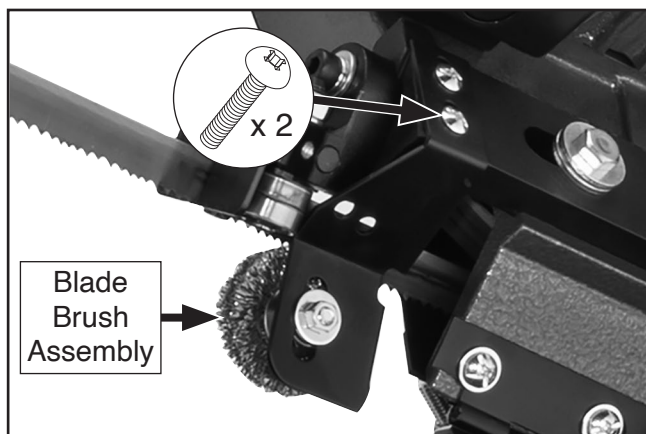


Figure 39. Location of blade brush assembly.

7. Release blade tension by turning blade tension knob counterclockwise (see **Figure 37**).

⚠ CAUTION

Before proceeding with the next step, wear gloves to protect your hands while handling and installing the blade.

8. Remove blade, beginning at top of blade wheels.

Note: If blade guide bearings prevent you from removing blade, refer to **Adjusting Blade Guide Bearings** on **Page 50** to adjust them out of the way.

9. Insert new blade through blade guides and blade guide bearings (see **Figure 40**), then position it around bottom wheel.

10. Keep blade around bottom wheel and between blade guides with one hand, then slip blade around top wheel with other hand (see **Figure 40**).

Tip: You can use a block of wood to tap on the blade to help fully seat it.

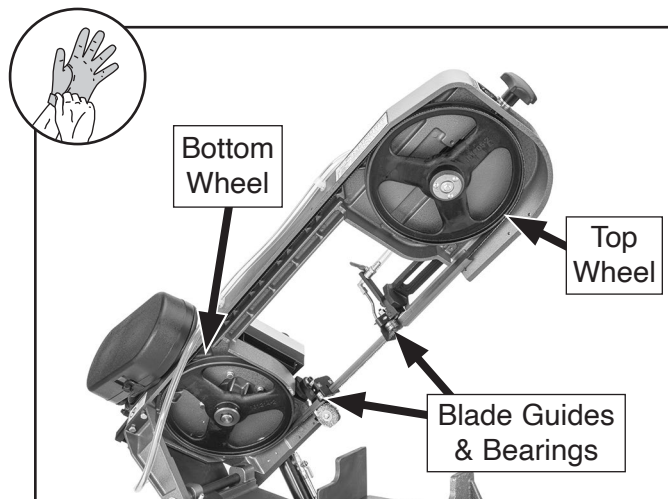


Figure 40. Example of blade around wheels and through blade guides.

Note: It is possible to flip blade inside out, in which case blade will be installed in wrong direction. Check to make sure blade teeth are facing the same direction as blade travel (see **Figure 41**).



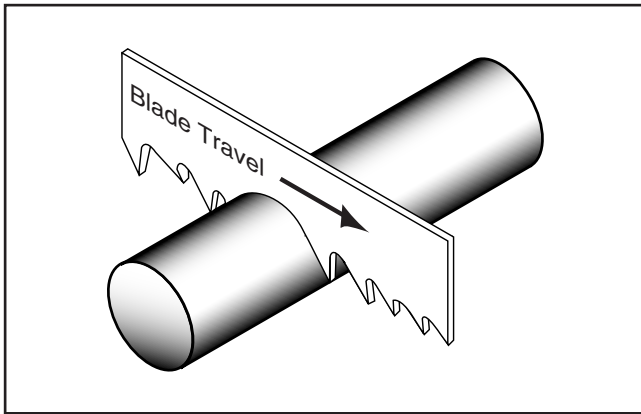


Figure 41. Blade cutting direction.

11. Adjust blade guide bearings against blade (see **Adjusting Blade Guide Bearings** on **Page 50**).
12. When blade is around both wheels, adjust position so back of blade is against wheel shoulder (see **Figure 42**).
13. Apply a light amount of tension to hold blade in place. Work around blade to adjust position so back of blade is against shoulder of wheels, as shown in **Figure 42**.

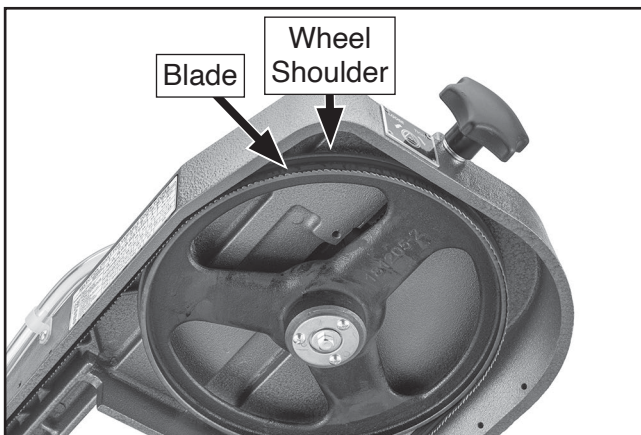


Figure 42. Blade installed on wheel.

14. Perform **Tensioning Blade** procedure.
15. Install blade brush and adjust it to blade, as instructed in **Adjusting Blade Brush** on **Page 52**.
16. Install front blade guard, then install blade cover. Ensure guard does not touch blade.

Tensioning Blade

Proper blade tension is essential to avoid blade vibration, twist, or slippage on the wheels. A correctly tensioned blade provides long blade life, straight cuts, and efficient cutting.

The Model G0420 features a blade tension indicator to assist you with blade tensioning. Three major signs that you do not have proper blade tension are: 1) the blade stalls in the cut and slips on the wheels, 2) the blade frequently breaks, and 3) the bandsaw does not make straight cuts.

NOTICE

Loosen blade tension while bandsaw is not in use to prolong blade life.

To tension blade:

1. DISCONNECT MACHINE FROM POWER!
2. Turn blade tension knob clockwise to tension blade until blade tension guide indicator is in green zone (see **Figure 43**).

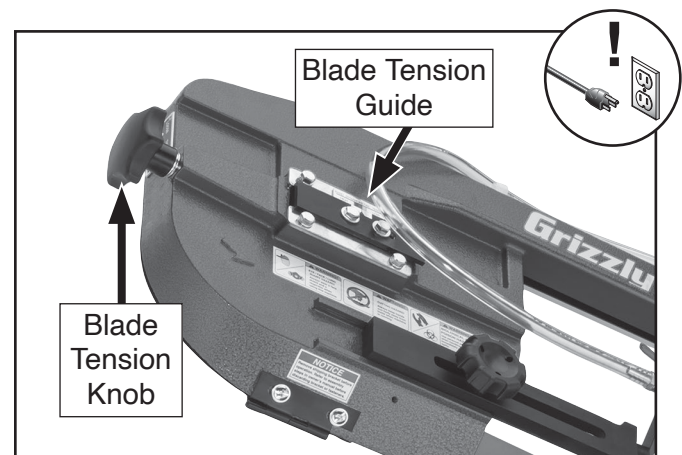


Figure 43. Location of blade tension handle knob and guide.

3. To fine tune blade tension, use a blade tensioning gauge, like one found on **Page 41**. Follow instructions included with your gauge and blade manufacturer's recommendations on blade tension.



Chip Inspection Chart

The best method for choosing the cutting speed and downfeed rate for a cutting 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 chip inspection chart below to evaluate chip characteristics and determine whether to adjust downfeed rate/pressure, blade speed, or both.

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 44. Chip inspection chart.



Adjusting Blade Guide Positions

The blade guides should be as close to the workpiece as possible during cutting operations. This will help ensure straight cuts by keeping the blade from twisting and drifting off the cut line.

To adjust the upper blade guide, loosen the guide guide knob (see **Figure 45**) and slide the upper blade guide as close to the workpiece as possible, then tighten the knob.

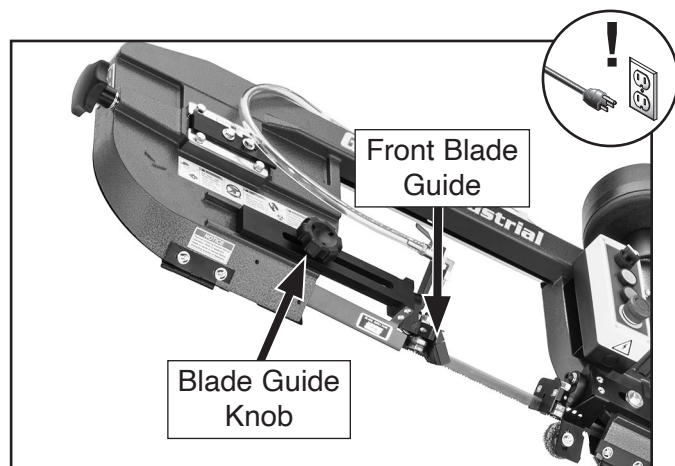


Figure 45. Location of blade guide knob.

To adjust the rear blade guide, loosen the hex bolt shown in **Figure 46** and slide the rear blade guide as close to the workpiece as possible, then tighten the hex bolt. The rear blade guide has a wire brush that makes contact with the blade to help clear away chips and extend blade life (see **Figure 46**).

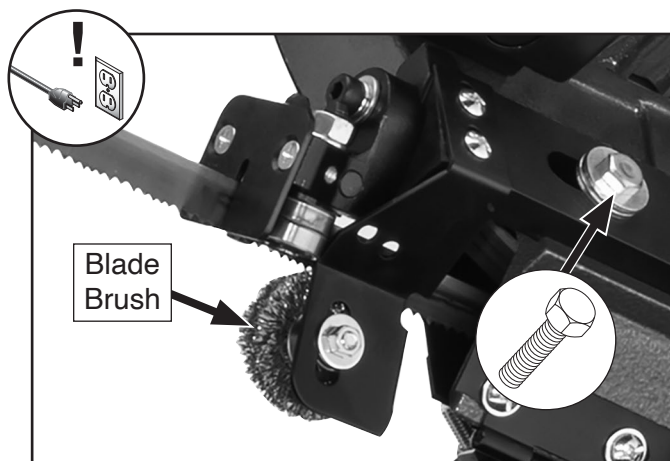


Figure 46. Rear blade guide adjustment components and blade brush.

Adjusting Feed Rate

The speed at which the saw blade will cut through a workpiece is determined by blade type, feed rate, and feed pressure. The feed rate is controlled by the feed ON/OFF valve and the feed pressure tension spring.

Note: If a lubricant is used on the cut, the feed rate can be increased by approximately 15%.

During operation, pay attention to the chips being produced from the cut and compare them to the **Chip Inspection Chart** on **Page 32** to properly set the downfeed rate.

Tool Needed	Qty
Wrench 14mm	1

To adjust feed rate:

1. DISCONNECT MACHINE FROM POWER!
2. Raise headstock to maximum height to remove spring tension and close feed ON/OFF valve (see **Figure 47**) to lock headstock in place.

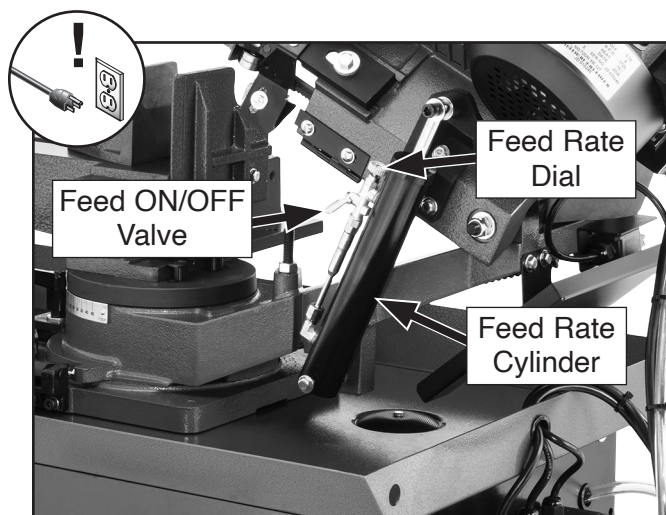


Figure 47. Location of feed rate components.



- Adjust nut shown in **Figure 48** to adjust feed pressure tension spring. Nut should be tight enough to remove play but not enough to apply tension to spring.

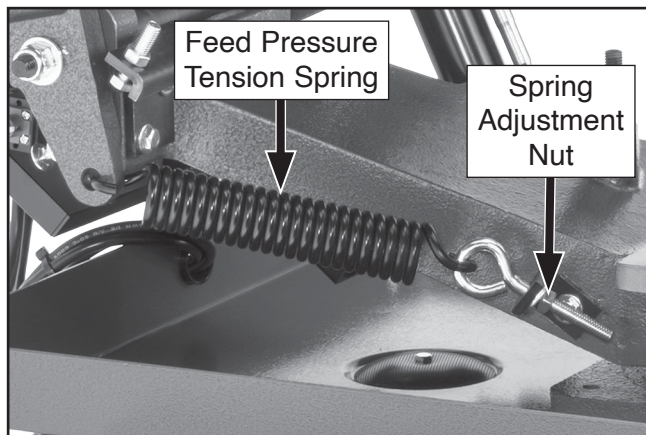


Figure 48. Spring adjustment components.

Note: Spring adjustment is an initial setting. Fine-tune feed pressure with this adjustment, according to operation. Increasing spring tension will reduce feed pressure.

- Clamp workpiece in vise.
- Open feed ON/OFF valve to lower headstock until it is a few inches above workpiece, then close valve (see **Figure 47** on **Page 33**). Valve is open when it is parallel to feed rate cylinder, and closed when it is perpendicular to cylinder.
- Connect machine to power.
- With correct blade and blade speed selected, start blade and coolant pump, then open feed ON/OFF valve. Slowly rotate feed rate dial counterclockwise until blade begins cutting.
- Observe chips that exit cut, and adjust feed rate according to chip characteristics.
 - If chips are tightly curled, warm, brown/black in color, there is too much downward pressure.
 - If chips are blue, blade speed is too high.
 - If chips are thin and powder-like, there is insufficient feed pressure. This will dull blade rapidly.

See **Chip Inspection Chart** on **Page 32**.

Using Vise

The vise can hold material up to 7 inches wide when miter cutting. When the headstock is adjusted to 0° and the vise table extension is installed, the width capacity increases to 12 inches.

Note: **Figure 49** shows the correct methods of holding different workpiece shapes.

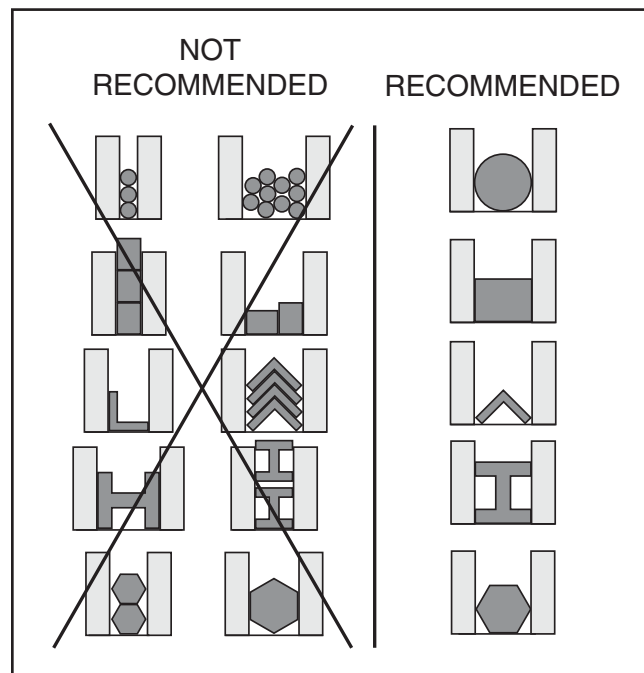


Figure 49. Example of workpiece holding options by material shape.

!WARNING

Moving blade can cause severe injury. Turn machine OFF, wait for blade to stop completely, and disconnect power before adjusting vise.

Clamping Workpiece

- DISCONNECT MACHINE FROM POWER!
- Move vise quick-release handle up (see **Figure 50**).
- Use vise crank to open vise jaws wide enough to accept workpiece (see **Figure 50**).



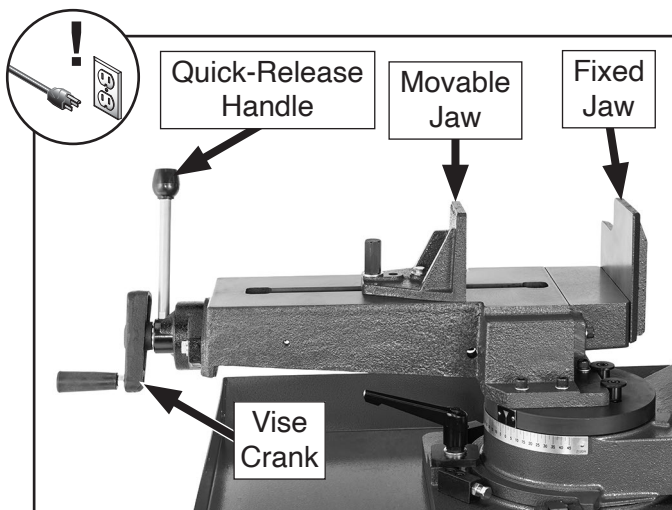


Figure 50. Vise assembly.

4. Place workpiece against fixed jaw, then use vise crank to adjust movable jaw until it contacts workpiece.
5. Move vise quick-release handle down. Ensure workpiece is clamped securely in jaws.

Moving Vise Table

When cutting angles to the left, the vise should be positioned to the right of the blade. When cutting angles to the right, the vise should be positioned to the left of the blade.

Tool Needed	Qty
Hex Wrench 8mm.....	1

To move vise table:

1. DISCONNECT MACHINE FROM POWER!
2. Raise and secure headstock.
3. Remove cap screw and flat washer holding vise table to swivel arm (see **Figure 51**).

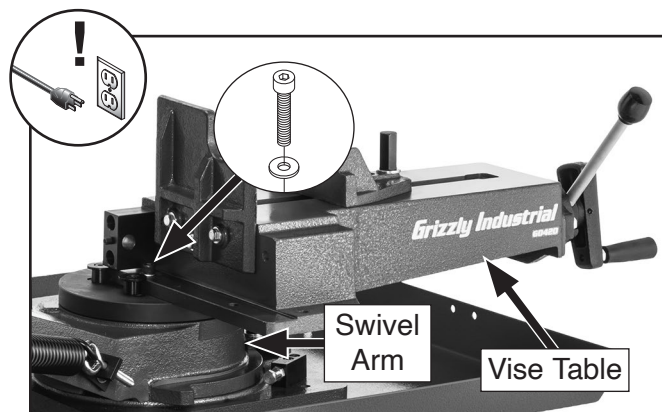


Figure 51. Location of cap screw holding vise table to swivel arm.

4. Slide vise table to opposite side of swivel arm.
5. Attach vise table to swivel arm using cap screw and flat washer removed in **Step 3**.

Installing Table Extension

The table extension is only suitable only for 90° cutting. Additionally, because they share the same hardware and mounting hole, the table extension block and work stop cannot be installed at the same time.

Tools Needed	Qty
Open End Wrench 12mm.....	1
Hex Wrench 5/16".....	1

To install table extension:

1. DISCONNECT MACHINE FROM POWER!
2. If installed, remove cutoff chute and remove work stop by unscrewing (2) cap screws in work stop set block (see **Figure 52**).

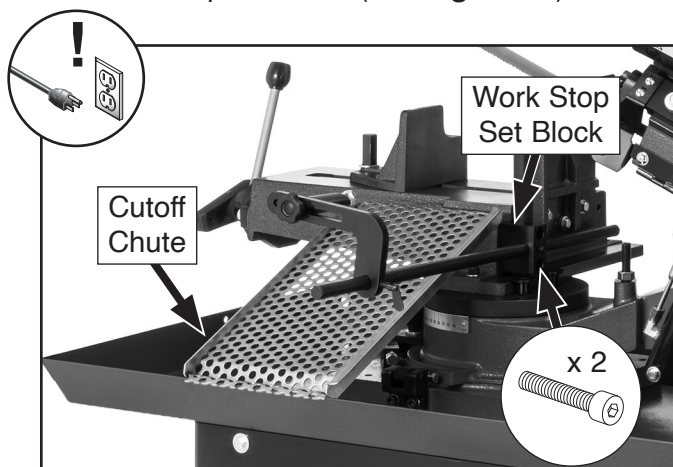


Figure 52. Cutoff chute and work stop removal components.



3. Remove (3) hex bolts and flat washers to remove fixed vise jaw from end of vise table (see **Figure 53**).

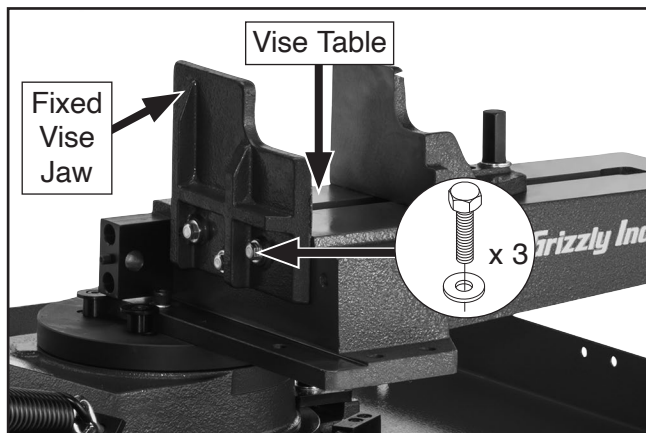


Figure 53. Vise table components.

4. Attach table extension block to vise table using (2) $\frac{3}{8}$ "-16 x $\frac{1}{2}$ " cap screws and $\frac{3}{8}$ " lock washers (see **Figure 54**).

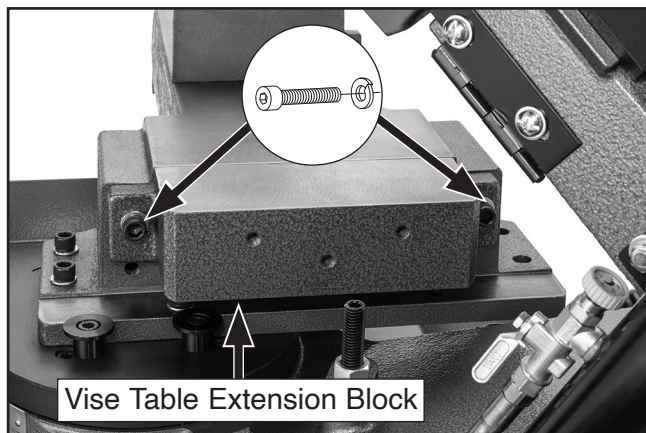


Figure 54. Vise table extension block installed.

5. Attach fixed vise jaw to table extension with fasteners removed in **Step 3** (see **Figure 55**).

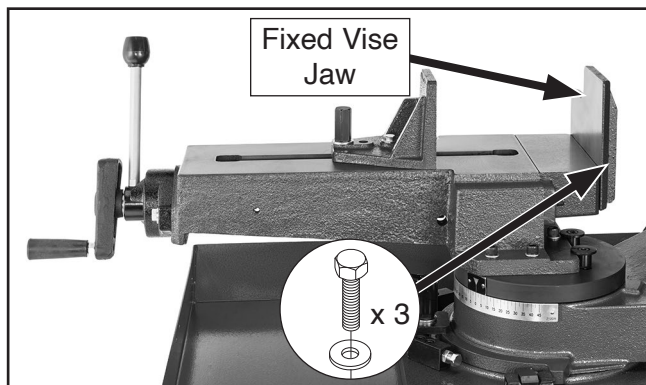


Figure 55. Fixed vise jaw installed.

Cutting Angles

The Model G0420 is equipped with a swivel headstock that allows you to make angle cuts up to 45° to the left or right.

To cut angles:

1. DISCONNECT MACHINE FROM POWER!
2. Raise headstock to highest position and lock into place by closing feed ON/OFF valve.
3. Loosen swivel lock handle (see **Figure 56**).

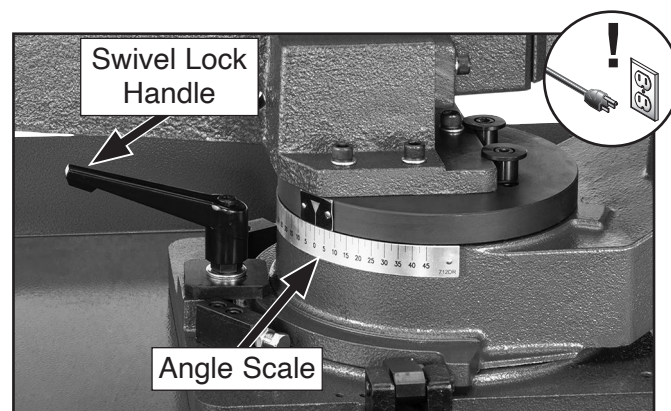


Figure 56. Swivel components.

4. Rotate headstock (see **Figure 57**) until angle scale on base displays desired angle (see **Figure 56**).

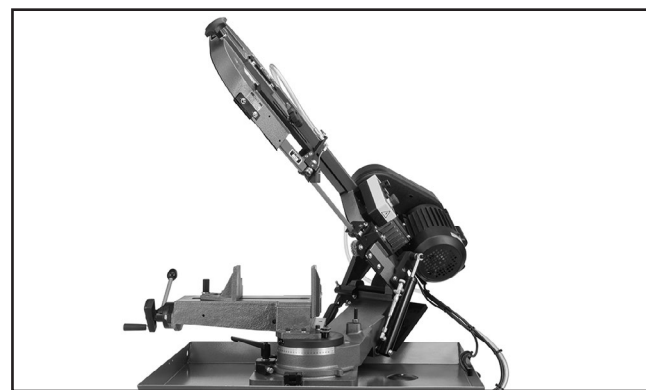


Figure 57. Example of rotated headstock.

5. Tighten swivel lock handle to secure position.
6. Refer to **Using Vise** on **Page 34** to position vise and workpiece as needed for angled cutting operation.



Adjusting Work Stop

The Model G0420 is equipped with a work stop for repetitive cutting operations. The work stop will need to be adjusted any time it is removed or the blade angle is adjusted.

Items Needed	Qty
Tape Measure.....	1
Pencil.....	1

Adjusting Work Stop

1. DISCONNECT MACHINE FROM POWER!
2. Measure and mark workpiece for cut.
3. Clamp workpiece in vise and adjust headstock to desired angle, aligning cutting line with cut mark.
4. Loosen thumb screw on work stop, slide work stop on rod to just touch workpiece edge, and tighten thumb screw to secure (see **Figure 58**).

Note: If work stop needs to be adjusted for workpiece width, loosen knob to align distance bracket with workpiece and tighten knob to secure.

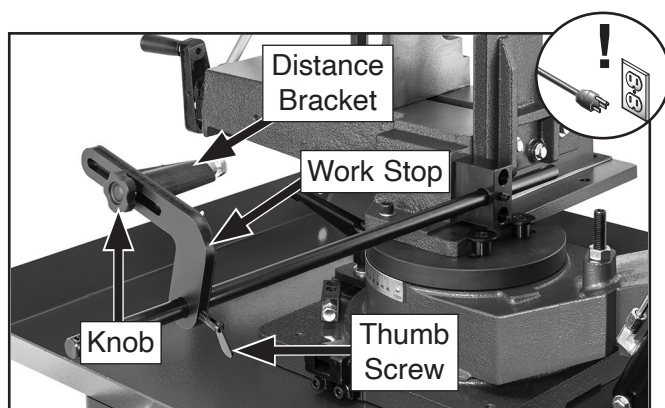


Figure 58. Location of work stop adjustment components.

Repositioning Work Stop

You can reposition the work stop to the other side of the vise.

Tool Needed	Qty
Hex Wrench 8mm	1

To reposition work stop:

1. DISCONNECT MACHINE FROM POWER!
2. Loosen thumb screw and remove work stop from rod (see **Figure 59**).
3. Loosen set screw in work stop set block and slide rod through to other side of machine (see **Figure 59**).

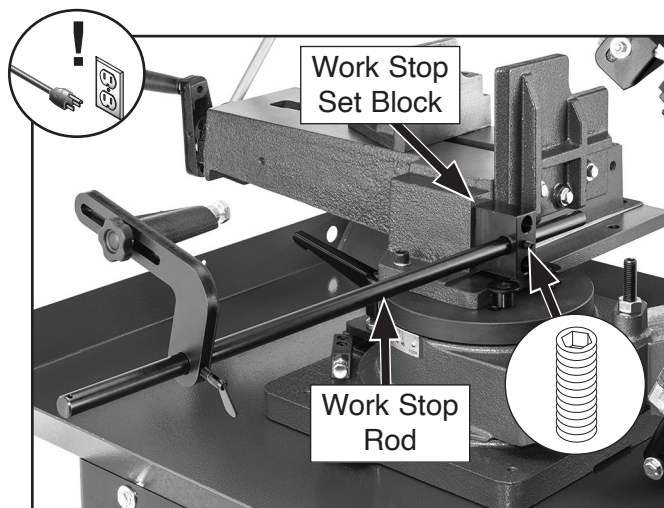


Figure 59. Location of work stop components to reposition.

4. Tighten set screw to secure work stop rod.
5. Re-install work stop so it faced blade and workpiece.

Adjusting Blade Speed

The Model G0420 is capable of blade speeds of 98, 164, 246, and 328 FPM (feet per minute). To adjust the speed, position the V-belt in the grooves of the pulleys that correspond to your desired speed setting.

Refer to **Blade Speed Chart** on **Page 39** for blade speed guidelines for various metals.

Items Needed	Qty
Wrench or Socket 1/2"	1
Replacement V-Belt (P0420211).....	As Needed
Open-End Wrench 1/2"	1



To change blade speed:

1. DISCONNECT MACHINE FROM POWER!
2. Determine recommended blade speed for your cut (refer to **Blade Speed Chart** on **Page 39**).
3. Open pulley cover.
4. Loosen hex bolts located underneath motor mount (see **Figure 60**).

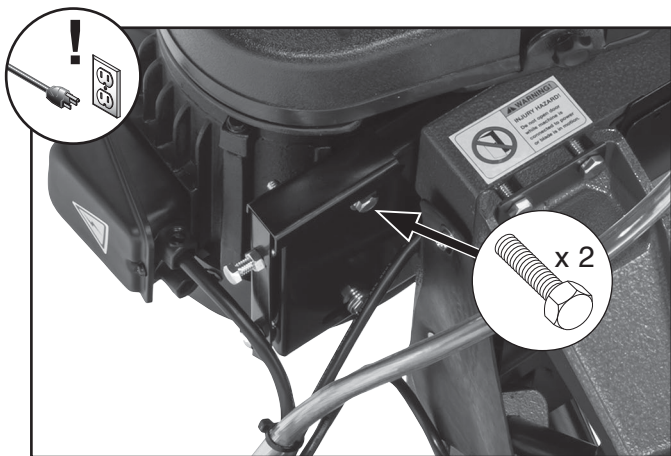


Figure 60. Location of motor mount hex bolts.

5. Loosen hex nuts on end of motor mount (see **Figure 61**), then tighten corresponding adjustment hex bolts to push motor toward wheel pulley and slacken V-belt.

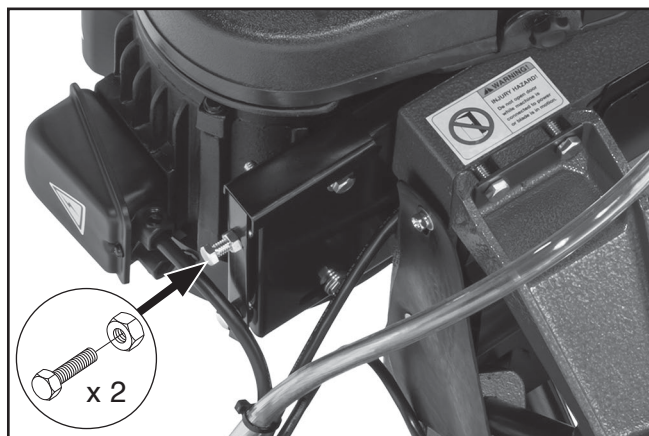


Figure 61. Location of motor mount adjustment hardware.

6. Position V-belt on pulleys for desired FPM (see **Figure 62**).

— If belt is cracked, frayed, or worn, remove it, then install a new belt.

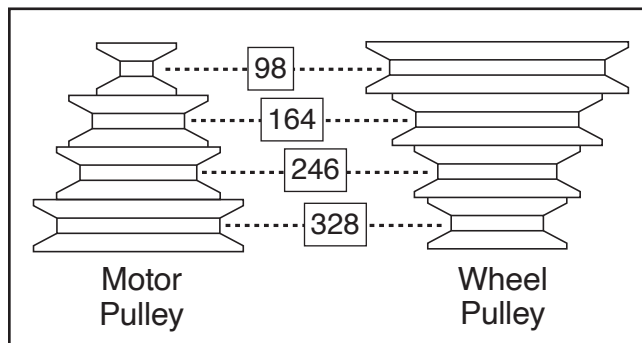


Figure 62. V-belt placement for FPM selection.

7. Adjust motor position with hex bolts from **Step 5** until there is approximately $\frac{1}{4}$ " belt deflection when moderate pressure is applied between pulleys (see **Figure 63**).

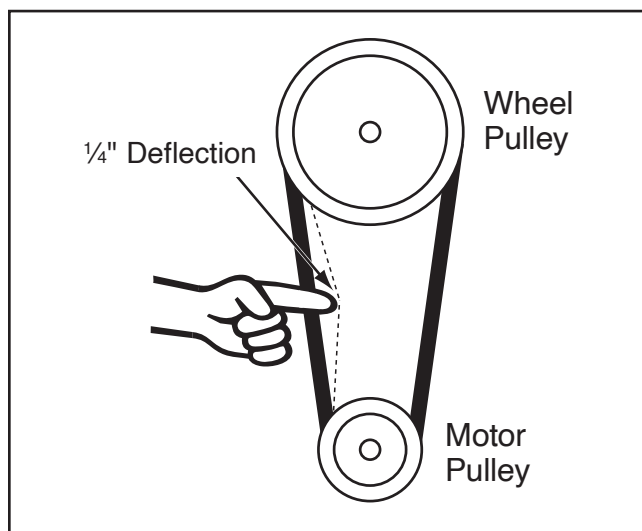


Figure 63. Checking belt deflection.

8. While holding hex bolts shown in **Figure 61**, adjust hex nuts against motor mount to secure.
9. Tighten hex bolts from **Step 4** to secure motor.
10. Close pulley cover and secure with knob.



Blade Speed Chart

The chart in **Figure 64** 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** on **Page 32** 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 64. Blade speed chart.

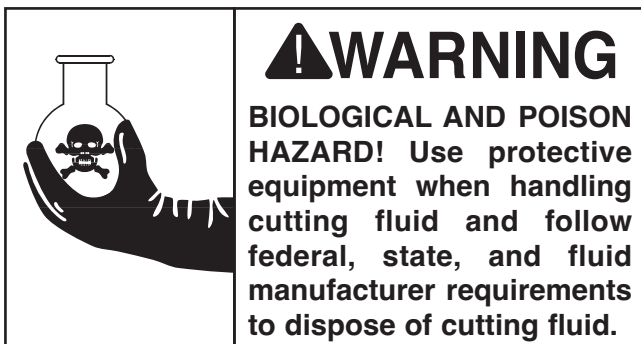


Using Cutting Fluid System

Cutting fluid lubricates cuts to extend the life of your blades by lowering the cutting temperature and washing away chips. Excessive flow at the cutting fluid nozzle will create a messy, unsafe work area; not enough fluid will heat the blade, loading up and breaking blade teeth.

Always follow all product warnings and contact the fluid manufacturer for unanswered questions. While simple in concept, consider the recommendations below to find and use the correct cutting fluid:

- For cutting low alloy, low carbon, and general-purpose category metals with a bi-metal blade—use water-soluble cutting fluid.
- For cutting stainless steels, high carbon, and high alloy metals, brass, copper and mild steels—use "Neat Cutting Oil" (commonly undiluted mineral oils) that have extreme pressure additives (EP additives).
- For cutting cast iron, cutting fluid is not recommended.
- For cutting magnesium, use only cutting fluid that is designed for cutting magnesium.



NOTICE

Keep chip screen clear so pump can recycle cutting fluid. NEVER operate pump with low or empty reservoir or you will over-heat pump and void warranty!

To use cutting fluid system:

1. DISCONNECT MACHINE FROM POWER!
2. Thoroughly clean and remove any foreign material that may have fallen inside reservoir (see **Figure 65**) during shipping.
3. Place drain tube in reservoir filter screen (see **Figure 65**).
4. Fill reservoir with cutting fluid to "High" mark on fluid level marker (see **Figure 65**).

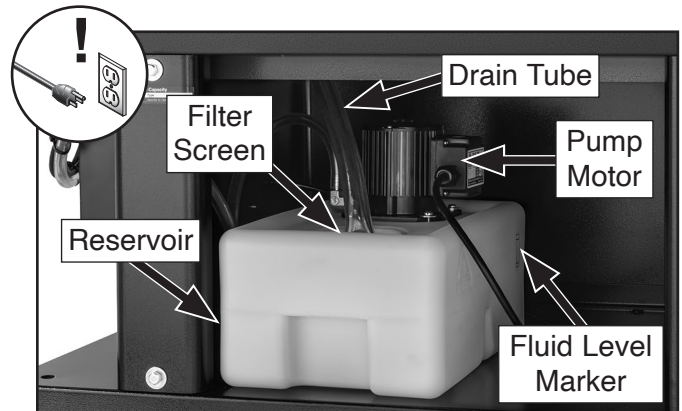


Figure 65. Cutting fluid system components.

5. Adjust cutting fluid flow at control valve (see **Figure 66**). Make sure pressure is not so high that it creates a slip hazard.

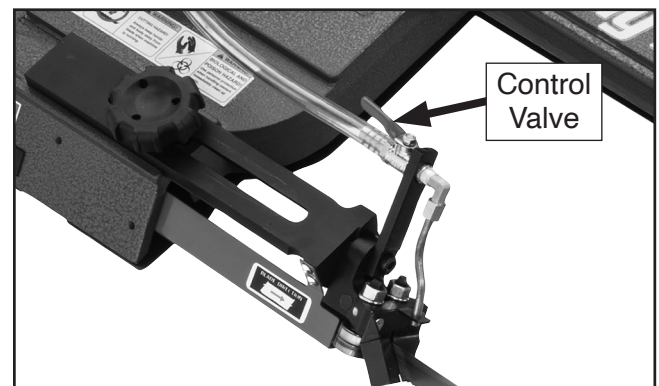


Figure 66. Location of cutting fluid control valve.

6. Connect machine to power and turn pump **ON** before making your cut.



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.

G5124—93" x $\frac{3}{4}$ " x .032" 10 TPI Raker
G5125—93" x $\frac{3}{4}$ " x .032" 14 TPI Raker
G5126—93" x $\frac{3}{4}$ " x .032" 18 TPI Raker
G5127—93" x $\frac{3}{4}$ " x .035" 4–6 Variable Pitch
G5128—93" x $\frac{3}{4}$ " x .035" 5–8 Variable Pitch
G5129—93" x $\frac{3}{4}$ " x .035" 6–10 Variable Pitch
G5130—93" x $\frac{3}{4}$ " x .035" 8–12 Variable Pitch
G5131—93" x $\frac{3}{4}$ " x .035" 10–14 Variable Pitch

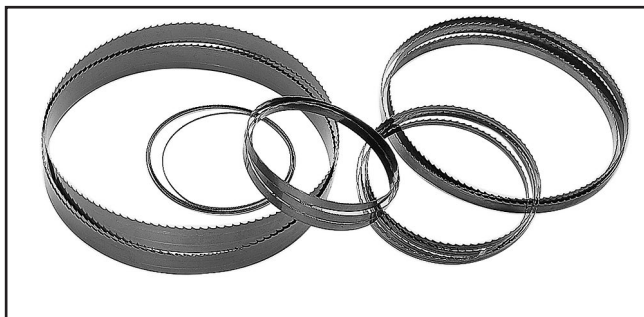


Figure 67. Metal-cutting blade assortment.

G5618—Deburring Tool w/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 68. G5618 Deburring Tool.

H5408—Lenox Blade Tensioning Gauge

The Blade Tensioning Gauge ensures long blade life, reduced blade breakage, and straight cutting by indicating correct tension. A precision dial indicator provides you with a direct readout in PSI.



Figure 69. H5408 Blade Tensioning Gauge.

H1414—Re-Li-On Cutting & Tapping Fluid

This cutting and tapping fluid is non-ozone depleting and is safe on aluminum and exotic alloys. The engineered formula provides lubrication during cutting and tapping.

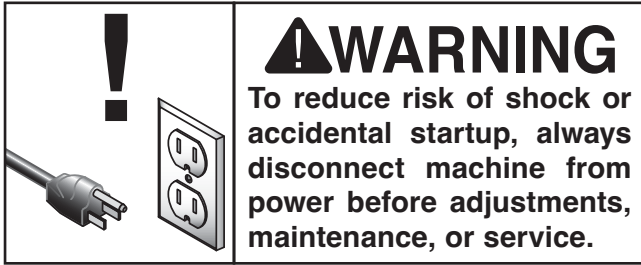


Figure 70. H1414 Re-Li-On Cutting Fluid.

order online at www.grizzly.com or call 1-800-523-4777



SECTION 6: MAINTENANCE



Schedule

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

Ongoing

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

- Loose mounting bolts.
- Damaged saw blade.
- Worn or damaged wires.
- Dirty or dry vise table, jaws, or slide.
- Dirty or low cutting fluid.
- Any other unsafe condition.

Weekly Maintenance

- Lubricate vise leadscrew.
- Check gearbox oil level.

Monthly Maintenance

- Check V-belt for correct tension, damage, or wear.
- Clean/vacuum dust buildup off motor.
- Clean metal chips from blade wheel areas.

Biannual (6-Month) Maintenance

- Change gearbox oil (after first 50 hours of use, then every 6 months).

Cleaning & Protecting

Cleaning the Model G0420 is relatively easy. Use a brush and a shop vacuum to remove chips and other debris from the machine. Keep the non-painted surfaces rust-free with regular applications of a high-quality rust preventative.

Periodically, remove the blade and thoroughly clean all metal chips or built-up grease from the wheel surfaces and blade housing.

Lubrication

An essential part of lubrication is cleaning the components before lubricating them. This step is critical because grime and chips build up on lubricated components over time, which makes them hard to move.

Clean all exterior components in this section with mineral spirits before lubricating.

NOTICE

Follow reasonable lubrication practices as outlined in this manual. Failure to do so could lead to premature failure of machine and will void warranty.



Vise Table, Jaws, & Slide

Lube Type..... SB1365 or ISO 68 Equivalent
 Lube Amount.....Thin Coat
 Lube Frequency..... Daily

Items Needed

Qty

Mineral Spirits..... As Needed
 Shop Rags..... As Needed
 Model SB1365 or ISO 68 Equiv..... As Needed

Keep the vise table surfaces, jaw surfaces, and slide (see **Figure 71**) rust-free and moving smoothly with regular applications of a quality way oil. Open and close the vise jaws and move the vise table assembly along the track slide to distribute the oil.

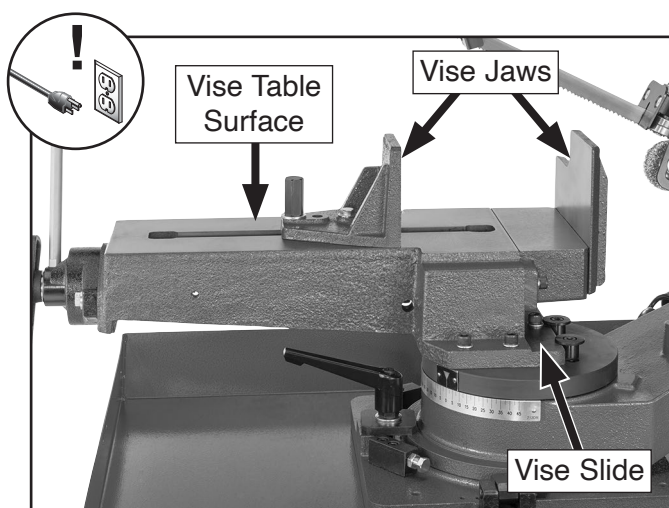


Figure 71. Vise table surface, jaws, and slide.

Vise Leadscrew

Lube Type..... Model G4682 or Dry Coating Lube
 Lube Amount.....Thin Coat
 Lube Frequency..... 40 hrs. of Operation

Items Needed

Qty

Mineral Spirits..... As Needed
 Stiff Brush..... 1
 Model G4682 or Dry Coating Lube ... As Needed

To lubricate vise leadscrew:

1. DISCONNECT MACHINE FROM POWER!
2. Use mineral spirits and brush to clean existing lubricant and debris off of vise leadscrew shown in **Figure 72**, then allow leadscrew to dry.

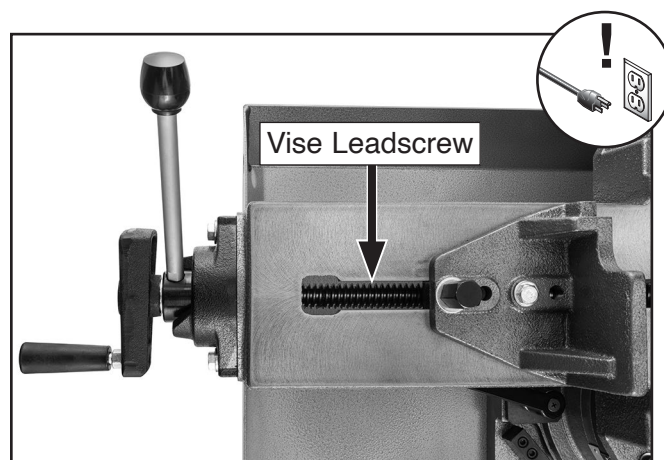


Figure 72. Location of vise leadscrew.

3. Apply thin coat of dry coating lube to exposed leadscrew threads, then move vise through its full range of motion several times to disperse lube along full length of leadscrew.

Gearbox

Lube Type..... Model T28042 or ISO 320 Equiv.
 Lube Amount..... As Needed
 Check Frequency Weekly
 Lube Frequency..... After 50 Hrs, Bi-annually

IMPORTANT: To maximize gearbox life, replace the oil after the first 50 hours of use.

After the first 50 hours of use, the fluid level of the gearbox should be checked weekly. Use an 8mm wrench to remove the vent plug shown in **Figure 73** to check the fluid level. If the oil is not visible when the plug is removed, slowly add just enough oil so you can see the oil level. Clean the vent plug threads, then wrap them with thread-sealing tape before replacing.

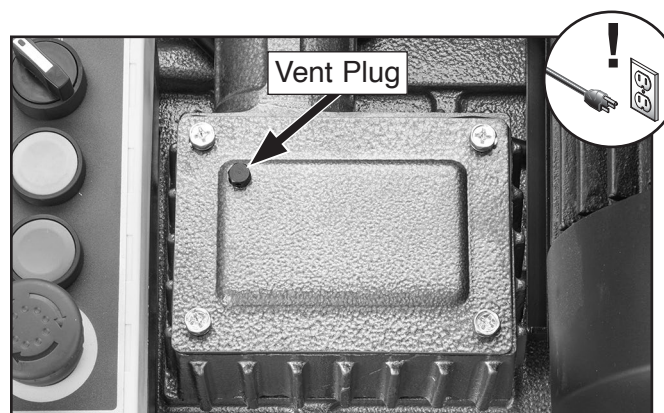


Figure 73. Location of gearbox vent plug.

As routine maintenance, the gearbox oil should be replaced every 6 months.



Items Needed	Qty
Disposable Gloves	As Needed
Shop Rags.....	As Needed
Phillips Hd. Screwdriver #2 or Wrench 10mm...	1
Mineral Spirits.....	As Needed
Wrench or Socket 8mm.....	1
Model T28042 or ISO 320 Equiv.	As Needed
Thread-Sealing Tape	As Needed

⚠ CAUTION

Oil can irritate skin. Wear disposable gloves when oil is exposed.

To replace gearbox oil:

1. DISCONNECT MACHINE FROM POWER!
2. With shop rags positioned to catch any oil run off, remove (4) hex bolts to remove gearbox cover (see **Figure 74**).

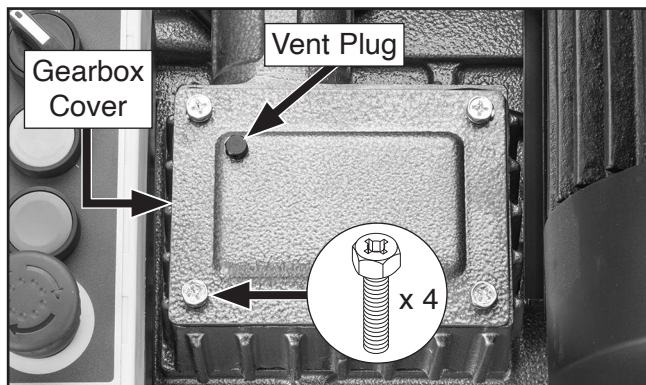


Figure 74. Gearbox components.

3. Use rags to absorb/remove oil in gearbox.
4. Clean gears and inside of box, then let gears dry.
5. Install gearbox cover removed in **Step 2**.
6. Remove vent plug (see **Figure 74**), then fill gearbox with oil until you can see it in vent plug hole.
7. Clean vent plug threads, then wrap threads with thread-sealing tape before replacing.

Cutting Fluid System Maintenance

The cutting fluid system consists of a reservoir, pump, and a hose with a valve. The pump pulls cutting fluid from the reservoir and sends it to the valve, which controls the flow of cutting fluid. As the cutting fluid leaves the work area, it drains through the machine cabinet, where the swarf and metal chips are screened out, and back into the reservoir.

Although most swarf from machining operations is screened out of the cutting fluid before it returns to the tank, small particles will accumulate in the bottom of the reservoir in the form of sludge. To prevent this sludge from being pulled into the pump and damaging it, the pump's intake is positioned above the bottom of the tank. This works well when the tank is regularly cleaned; however, if excess sludge is allowed to accumulate, the pump will inevitably begin sucking it up.

Hazards

As cutting fluid ages and gets used, dangerous microbes can proliferate and create a biological hazard. The risk of exposure to this hazard can be greatly reduced by replacing the old cutting fluid on a monthly basis, or as indicated by the manufacturer of the cutting fluid.

When working with the cutting fluid, minimize exposure to your skin, eyes, and lungs by wearing the proper PPE (Personal Protective Equipment), such as long waterproof gloves, protective clothing, splash-resistant safety goggles, and a NIOSH-approved respirator.

	⚠ WARNING BIOLOGICAL AND POISON HAZARD! Use protective equipment when handling cutting fluid and follow federal, state, and fluid manufacturer requirements to dispose of cutting fluid.
--	---



Adding Cutting Fluid

Items Needed	Qty
Safety Wear.....	See Hazards on Page 44
Cutting Fluid	As Needed
Clean Jug or Bucket.....	1
Disposable Shop Rags.....	As Needed

To add cutting fluid:

1. DISCONNECT MACHINE FROM POWER!
2. Mix cutting fluid according to cutting fluid manufacturer's specifications.
3. Pour cutting fluid through reservoir filter screen to fill reservoir (see **Figure 75**) until cutting fluid level reaches "H" mark on fill label (see **Figure 76**).

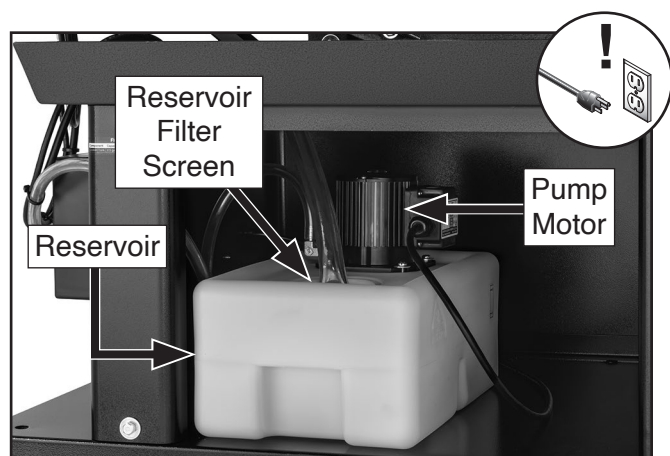


Figure 75. Cutting fluid tank components.

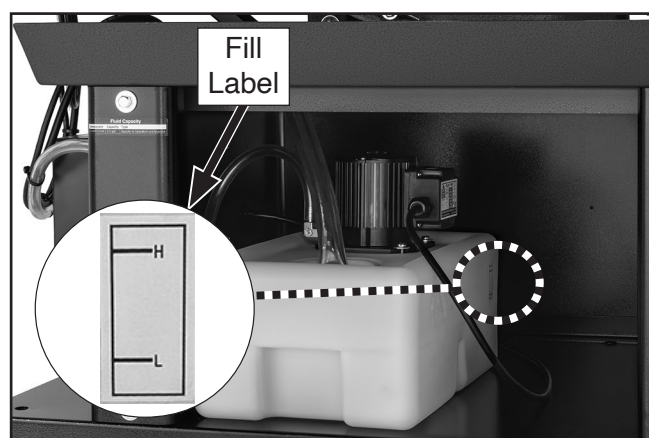


Figure 76. Cutting fluid reservoir fill label.

Changing Cutting Fluid

Items Needed	Qty
Safety Wear.....	See Hazards on Page 44
5-Gallon Drain Pan.....	1
Water Hose w/Spray Nozzle.....	1
Antibacterial Soap	As Needed
Disposable Shop Rags.....	As Needed
Clean Jug or Bucket.....	1
Cutting Fluid	2½ Gallons
Flathead Screwdriver ¼"	1

To change cutting fluid:

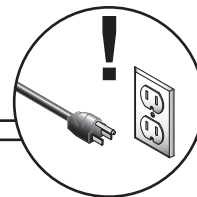
1. DISCONNECT MACHINE FROM POWER!
 2. Remove reservoir filter screen (see **Figure 75**), empty reservoir into drain pan, and dispose of cutting fluid per federal, state, and manufacturer's requirements.
- Tip:** Use a flathead screwdriver to pop reservoir filter screen out.
3. Thoroughly clean reservoir and submerged portion of pump with hot, soapy water, then rinse with clean water.
 4. Replace reservoir filter screen.
 5. Mix 2½ gallons of cutting fluid according to cutting fluid manufacturer's specifications, then pour cutting fluid through reservoir filter screen until cutting fluid level reaches "high" mark on fill label (see **Figure 76**).
 6. Place drain tube in reservoir.



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.	- Emergency Stop button depressed. - Downfeed limit switch engaged. - Motor circuit breaker tripped. - Incorrect power supply voltage or circuit size. - Power supply circuit breaker tripped or fuse blown. - Motor wires connected incorrectly. - Thermal overload relay has tripped. - Wiring broken, disconnected, or corroded. - Motor or motor bearings at fault.	- Rotate Emergency Stop button to reset. - Raise headstock/adjust downfeed limit switch. - Reset circuit breaker on motor (Page 5). - Ensure correct power supply voltage and circuit size (Page 11). - Ensure circuit is free of shorts. Reset circuit breaker (Page 5) or replace fuse for power supply. - Correct motor wiring connections (Page 55). - Reset relay. - Fix broken wires or disconnected/corroded connections (Page 55). - Replace motor.
Machine stalls or is underpowered.	- Motor wires connected incorrectly. - Plug/receptacle at fault/wired incorrectly. - Motor overheated, tripping machine circuit breaker. - Extension cord too long. - Centrifugal switch needs adjustment/contact points dirty. - Motor or motor bearings at fault.	- Correct motor wiring connections (Page 55). - Test for good contacts; correct wiring (Page 55). - Clean motor/let cool, and reduce workload. Reset breaker (Page 5). - Use shorter extension cord. - Adjust switch or clean points. - Replace motor.
Machine has vibration or noisy operation.	- Motor or component loose. - Motor mount loose/broken. - Centrifugal switch needs adjustment. - Motor bearings at fault.	- Replace damaged or missing bolts/nuts or tighten if loose. - Tighten/replace. - Adjust switch. - Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.



Operation

Symptom	Possible Cause	Possible Solution
Cutting fluid system not functioning.	1. Valve is closed. 2. Cutting fluid level is low. 3. Cutting fluid system is leaking. 4. Flow blocked or impeded. 5. Wiring broken, disconnected, or corroded. 6. Coolant pump or pump bearings at fault.	1. Open cutting fluid valve. 2. Check/fill cutting fluid level (Page 44). 3. Inspect/test for leaks/repair. 4. Make sure cutting fluid line(s) are not pinched or damaged. 5. Fix broken wires or disconnected/corroded connections (Page 55). 6. Replace.
Vibration when operating or cutting.	1. Workpiece loose. 2. Casters loose or unlocked. 3. Loose or damaged blade. 4. Machine component(s) loose. 5. Bent or dull blade. 6. V-belt worn, loose, pulleys misaligned or belt slapping cover. 7. Pulley loose. 8. Worn wheel bearing. 9. Wheels worn or incorrectly installed. 10. Wheel appears bent. 11. Gearbox at fault.	1. Use the correct holding fixture and re-clamp workpiece. 2. Lock or secure casters. 3. Tension blade (Page 31)/replace blade (Page 29). 4. Inspect/re-tighten component(s). 5. Replace blade (Page 29). 6. Inspect/replace belt (Page 45). Realign pulleys if necessary. 7. Secure pulley on shaft. 8. Check/replace wheel bearing. 9. Replace wheels; adjust blade tracking (Page 49). 10. Check/replace wheel/wheel bearing. 11. Rebuild gearbox; replace bad gears(s)/bearing(s).
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 29). 2. Grind weld down flush with blade. 3. Cut and re-weld blade, or replace blade (Page 29).
Cuts not square, intended angle is incorrect.	1. Loose workpiece. 2. Blade not square to table.	1. Tighten vise and secure workpiece (Page 34). 2. Adjust blade square to table (Page 50).
Blade dulls prematurely, or metal sticks to blade.	1. Blade improperly broken in. 2. Blade gullets loading up with chips. 3. Blade tension is too low. 4. Blade TPI too fine or coarse for material; teeth load up and overheat. 5. Incorrect cutting fluid mixture for workpiece/cut. 6. Inadequate feed pressure. 7. Incorrect feed rate/blade speed.	1. Replace blade (Page 29); complete blade break-in procedure (Page 29). 2. Use blade with larger gullets. (Page 27). 3. Increase blade tension (Page 31). 4. Use coarser-tooth or finer-tooth blade (Page 27); adjust feed rate (Page 33); adjust blade speed (Page 37); make sure blade brush works and is adjusted correctly (Page 52). 5. Use correct cutting fluid mixture. 6. Decrease headstock spring tension (see Page 33). 7. Adjust feed rate (Page 33), adjust blade speed (Page 37).



Operation (Cont.)

Symptom	Possible Cause	Possible Solution
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 tension/tracking requires adjustment. 6. Blade guide roller bearings require adjustment. 7. Blade weld failing.	1. Secure workpiece in vise (Page 34). 2. Raise bow, start blade, then lower blade into workpiece. 3. Use thinner blade/blade with smaller gullets (Page 27). 4. Use coarser-tooth blade (Page 27); adjust feed rate (Page 33); adjust blade speed (Page 37). 5. Adjust blade tension (Page 31), tracking (Page 49). 6. Adjust blade guide bearings (Page 50). 7. Cut and re-weld blade, or replace blade (Page 29).
Blade wears on one side or shows overheating.	1. Blade guides worn or mis-adjusted. 2. Blade not supported. 3. Dull/incorrect blade. 4. Blade is bell-mouthed.	1. Adjust blade squareness (Page 50)/blade guide bearings (Page 50), replace if necessary. 2. Move blade guides closer to workpiece (Page 33). 3. Replace blade (Page 29). 4. Replace blade (Page 29).
Blade keeps moving after cut complete.	1. Downfeed limit switch not engaged.	1. Adjust downfeed stop bolt (Page 52).
Blade tracks incorrectly or comes off wheels.	1. Feed rate too fast/wrong TPI. 2. Blade tension/tracking requires adjustment. 3. Blade guides need adjustment. 4. Blade is bell-mouthed.	1. Reduce feed rate (Page 33), decrease blade TPI (Page 27). 2. Adjust blade tracking (Page 49), tension (Page 31). 3. Adjust blade squareness (Page 50)/blade guide bearings (Page 50), 4. Replace blade (Page 29).
Cuts are crooked/ excessively rough.	1. Feed rate too fast, blade speed incorrect. 2. Blade too coarse or dull. 3. Blade not supported. 4. Blade guides/roller bearings out of adjustment. 5. Blade tension/tracking requires adjustment.	1. Reduce feed rate (Page 33), adjust blade speed (Page 37). 2. Replace blade (Page 29). 3. Move blade guide closer to workpiece (Page 33). 4. Adjust blade squareness (Page 50)/blade guide bearings (Page 50), 5. Adjust blade tension (Page 31), tracking (Page 49).
Blade cuts into table or does not fully cut through workpiece.	1. Downfeed stop bolt requires adjustment.	1. Adjust downfeed stop bolt (Page 52).
Cutting fluid system is pulling sludge from reservoir.	1. Cutting fluid level is low. 2. Cutting fluid needs to be changed/reservoir is dirty.	1. Check/fill cutting fluid level (Page 44). 2. Clean and change cutting fluid (Page 44).



Adjusting Blade Tracking

The blade tracking has been properly set at the factory. The tracking will rarely need to be adjusted if the bandsaw is used properly, but verify tracking whenever you change blades or the **Troubleshooting** section on **Page 46** indicates a blade tracking problem.

Tools Needed	Qty
Wrench or Socket 1/2"	1
Hex Wrench 4mm.....	1

To adjust blade tracking:

1. DISCONNECT MACHINE FROM POWER!
2. Raise headstock to full height and close feed ON/OFF valve.
3. Open blade cover.
4. On blade tension guide, loosen, but do not remove, lower hex bolt (see **Figure 77**).

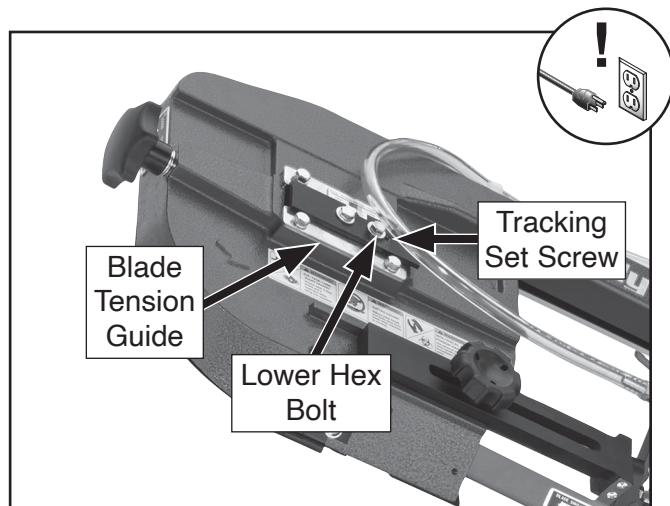


Figure 77. Blade tension components.

5. Relax blade tension.
6. Adjust tracking set screw (see **Figure 77**), then tighten hex bolt loosened in **Step 4**.

- Tightening set screw will move blade *closer* to shoulder of wheel (see **Figure 78**).
- Loosening set screw will move blade *away* from shoulder (see **Figure 78**).

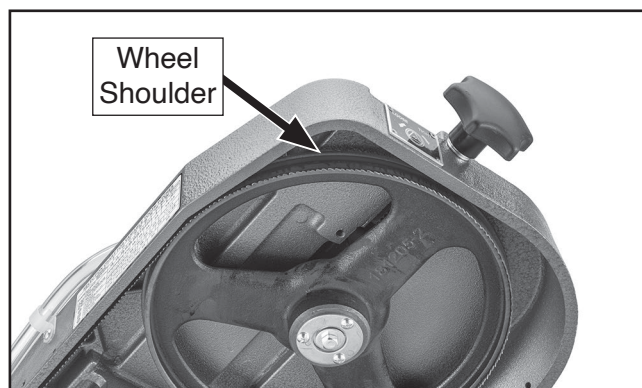


Figure 78. Location of wheel shoulder.

7. Tension blade.

!WARNING

Moving blade can easily cut body parts. Keep body parts away from blade and machine in following step to prevent personal injury.

8. Connect machine to power and turn machine **ON**.
 - If blade tracks along shoulder of wheel (without rubbing), blade is tracking properly and this adjustment is completed.
 - If blade walks away from shoulder of wheel or hits shoulder, turn machine **OFF**, DISCONNECT MACHINE FROM POWER, and repeat **Steps 4–8** until blade tracks properly.
9. Turn machine **OFF**.
10. Close blade cover.



Squaring Blade to Table

It is always a good idea during the life of your saw to check and adjust this setting. This adjustment will improve your cutting results and extend the life of your blade.

If the following adjustment does not fully square blade to table, blade guide bearings can also be adjusted. Proceed to **Adjusting Blade Guide Bearings**, if necessary.

Tools Needed	Qty
Machinist's Square	1
Hex Wrench 6mm.....	1

To square blade to table:

1. DISCONNECT MACHINE FROM POWER!
2. Fully lower headstock and adjust front blade guide out of the way.
3. Place square on table and against edge of blade (see **Figure 79**), checking different points along table between blade guides.
4. Loosen cap screw shown in **Figure 79** on blade guide assembly that needs adjustment, and rotate blade guide until blade is vertical to bed.

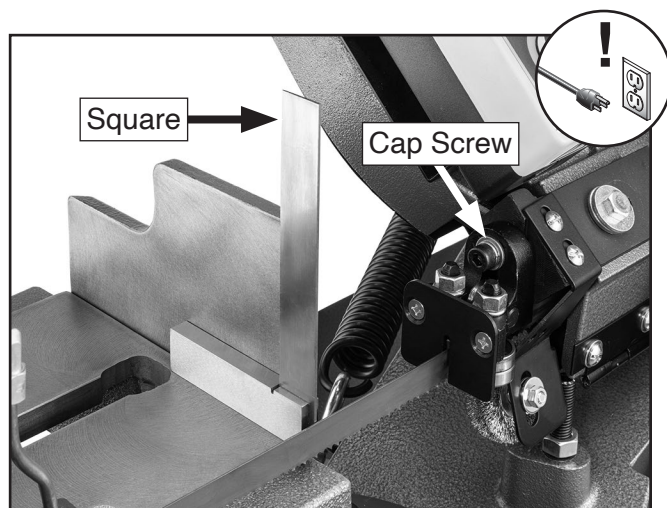


Figure 79. Squaring blade (rear blade guide shown).

- If front blade guide needs adjustment, remove (2) screws shown **Figure 80** to remove front blade guide guard, then swing cutting fluid nozzle out of the way to adjust squareness cap screw.

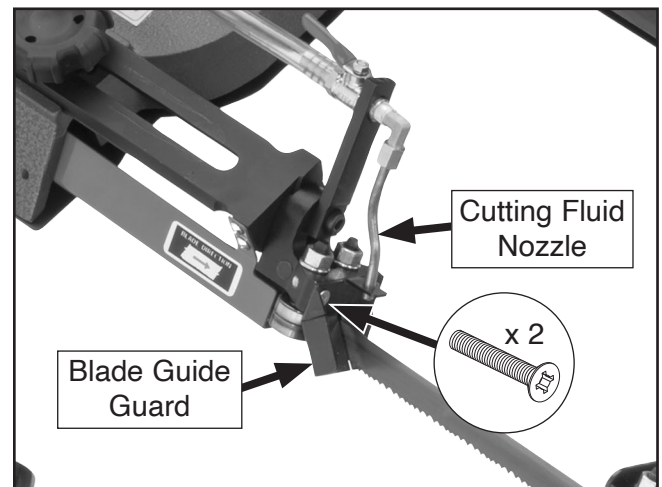


Figure 80. Location of front blade guide guard and cutting fluid nozzle.

Adjusting Blade Guide Bearings

The blade guide bearings must be properly adjusted to make square cuts. Two bearings on each assembly have an eccentric bushing that allows them to be adjusted in relation to the blade so the blade is square to the vise. Each bearing pair is secured in place by a hex nut and lock washer, as shown in **Figure 81**.

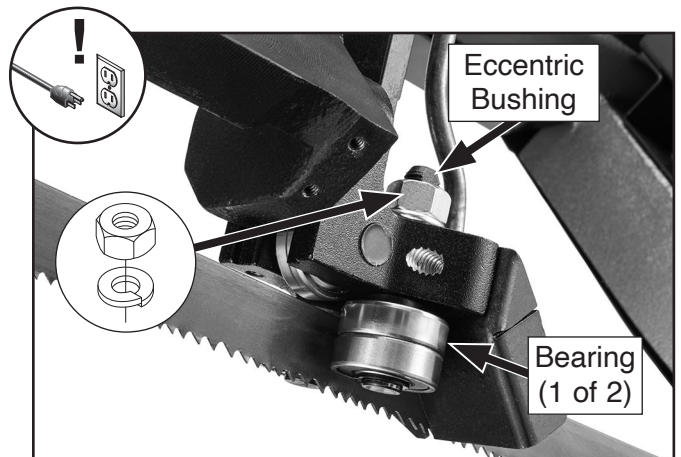


Figure 81. Blade guide bearing adjustment components.



Before adjusting the blade guide bearings, make sure you have squared the blade to the table as discussed in the previous section.

When the blade guides and tracking are adjusted correctly, these bearings will make light contact with the blade.

Tools Needed	Qty
Machinist's Square	1
Open-End Wrench 14mm.....	1
Wrench 6mm	1

To adjust blade guide bearings:

1. DISCONNECT MACHINE FROM POWER!
2. Adjust headstock angle to 0°.
3. Put square against face of vise and move it over to blade (see **Figure 82**).

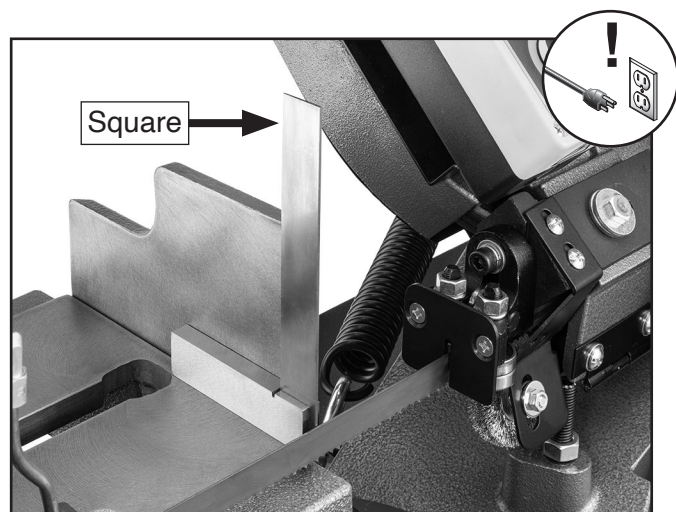


Figure 82. Checking blade squareness.

- If square does evenly touch face of vise and blade at the same time, no adjustments are necessary.
 - If square does not evenly touch face of vise and blade at the same time, proceed to **Step 4**.
4. Loosen hex nuts on eccentric bushings of bearings that need adjustment (see **Figure 83—Figure 84**).

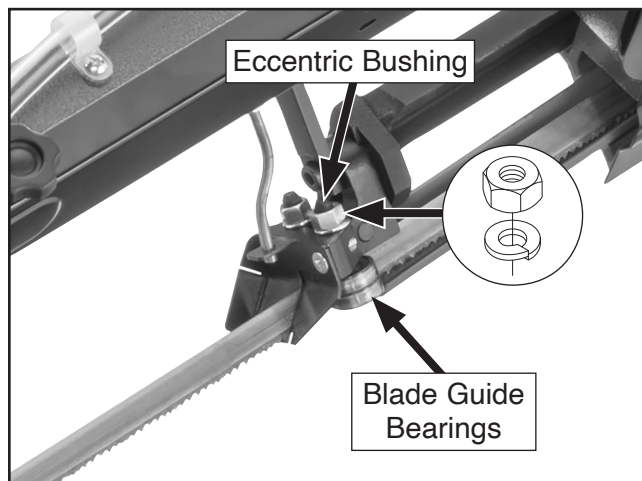


Figure 83. Front blade guide (rear view).

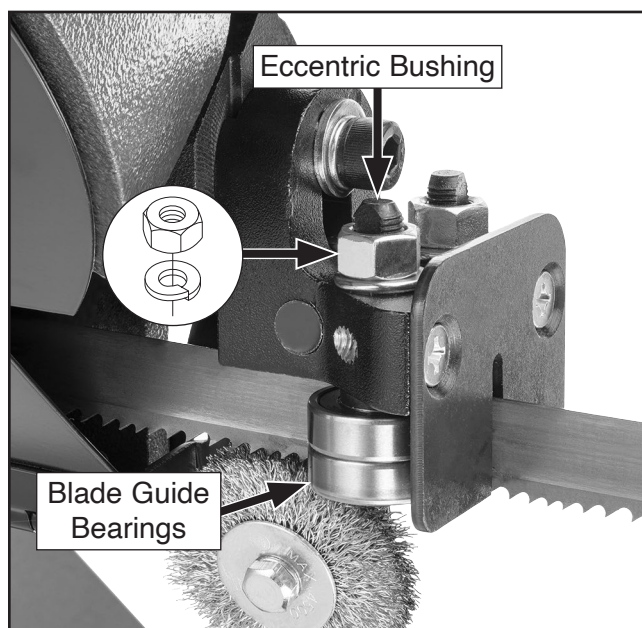


Figure 84. Rear blade guide (rear view).

5. Adjust eccentric bushings as necessary to force blade to be 90° to vise, then tighten hex nuts to secure.

Note: Since bearings twist blade into position, it is acceptable if there is 0.001"–0.002" gap between blade and front or back of bearing. Just 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.



Adjusting Blade Brush

The blade brush helps keep metal chip off the blade wheels. Use this section to install the brush correctly after installing a blade or adjusting the blade tracking.

This brush will wear over time and require adjustment when it no longer makes proper contact with the blade.

Tools Needed	Qty
Open-End Wrenches 10mm.....	2

To adjust blade brush:

1. DISCONNECT MACHINE FROM POWER!
2. Loosen hex nut shown in **Figure 85**.
3. Position brush **Figure 85** so blade extends $\frac{1}{8}$ " into bristles of brush, then tighten hex nut to secure.

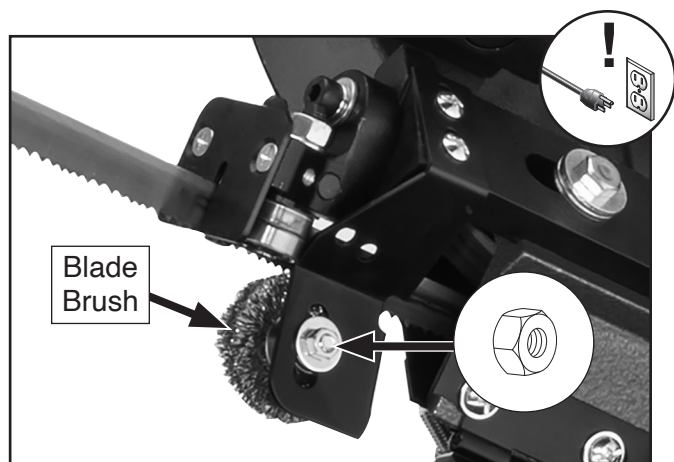


Figure 85. Location of blade brush and hex nut.

Adjusting Downfeed Stop Bolt

If the blade does not travel far enough to complete the cut, or the blade contacts the vise base, then the downfeed stop bolt will need to be adjusted. When the downfeed stop bolt is adjusted, the downfeed limit switch should be adjusted to match so the blade stops at the end of the cut.

Tools Needed	Qty
Wrench 19mm	1
Hex Wrench 6mm.....	1
Open-End Wrenches 8, 12mm	1 Ea.

To adjust downfeed stop bolt:

1. DISCONNECT MACHINE FROM POWER!
2. Lower headstock all the way. When headstock stops, blade teeth should be just below table surface, but not contacting vise base (see **Figure 86**).
 - If blade is above vise table, proceed to **Step 3**.
 - If blade contacts vise base, proceed to **Step 4**.

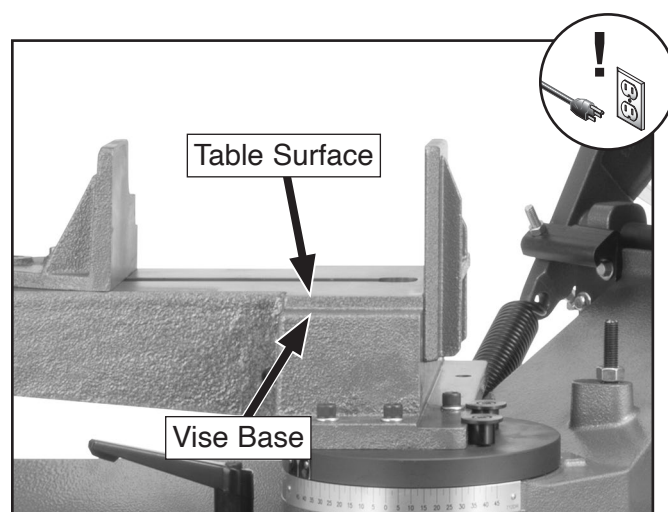


Figure 86. Blade teeth limits.

3. Loosen jam nut shown in **Figure 87**, then raise headstock enough so you can tighten downfeed stop bolt until blade teeth are just below vise table surface (but not contacting vise base).



4. Raise headstock enough so you can loosen downfeed stop bolt (see **Figure 87**) until headstock contacts bolt when blade teeth are just below vise table surface (but not contacting vise base).

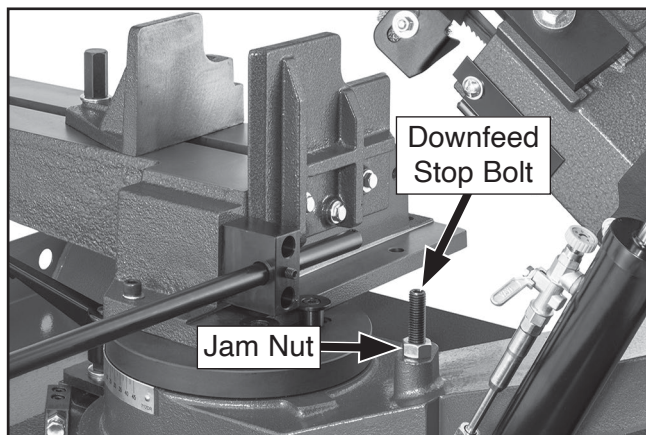


Figure 87. Location of downfeed stop bolt and jam nut.

5. Tighten jam nut, without turning downfeed stop bolt, to secure.
6. Lower headstock all the way to check adjustment.
 - If bolt needs further adjustment, repeat **Step 2**.
 - If adjustment is correct, proceed to **Step 7**.
7. Loosen jam nut and adjust carriage bolt until it presses against switch, then tighten jam nut to secure (see **Figure 88**).

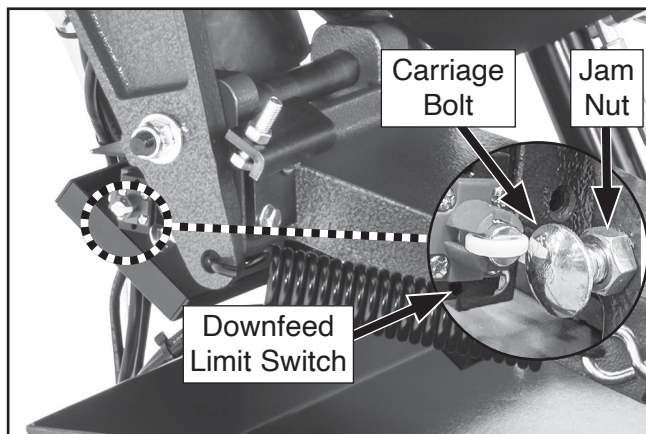


Figure 88. Downfeed limit switch components

Adjusting Angle Stops

The swivel arm is equipped with three angle stops to provide quick adjustments to 0°, 45° to the left, and 45° to the right. If cuts made using these stops are not sufficiently accurate, the stops need to be adjusted.

Tools Needed	Qty
Wrenches 12mm.....	2
Wrenches 14mm.....	3

To adjust angle stops:

1. DISCONNECT MACHINE FROM POWER!
2. Adjust headstock to the right.
3. Flip 0° angle stop bolt down (see **Figure 89**).
4. Adjust headstock until it contacts stop bolt (see **Figure 89**).

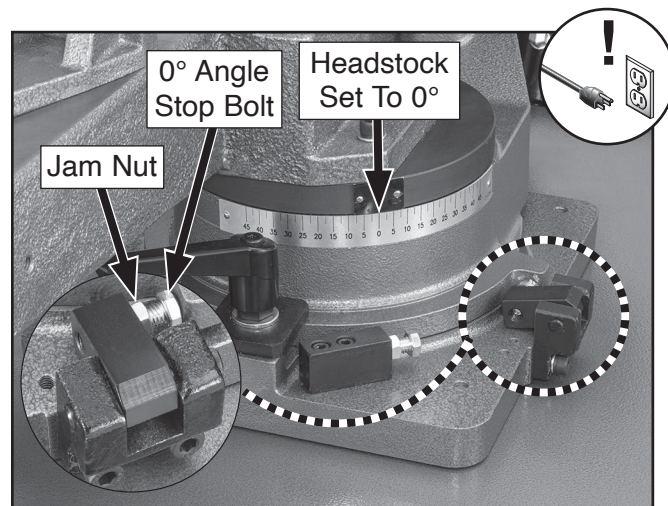


Figure 89. Location of 0° angle stop components.

- If scale displays 0°, stop does not require adjustment. Proceed to **Step 8**.
- If angle indicator is *left of* 0°, move headstock until indicator points to 0°, then proceed to **Step 6**.
- If angle indicator is *right of* 0°, move headstock away from stop bolt so you have room to adjust it, then proceed to **Step 5**.



5. Loosen jam nut for 0° angle stop bolt, then tighten stop bolt so you can rotate headstock until indicator points at 0°.
6. Adjust stop bolt until it is snug against headstock base.
7. Tighten jam nut to secure.
8. Flip 0° angle stop up out of the way of swivel base.
9. Adjust headstock as far to the left as it will go.
 - If scale displays 45° (see **Figure 90**), stop does not require adjustment. Proceed to **Step 11**.
 - If scale does not display 45°, proceed to **Step 10**.
10. Loosen jam nut, adjust 45° left stop bolt until it is snug against headstock base and scale is at 45°, then tighten jam nut (see **Figure 90**).

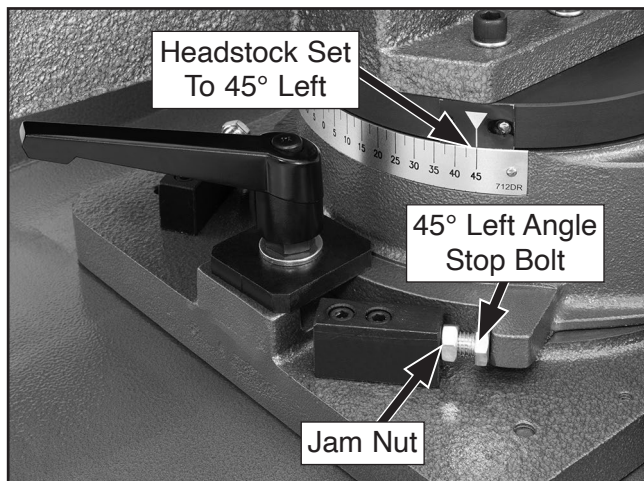


Figure 90. Location of 45° left angle stop components.

11. Adjust headstock as far to the right as it will go.
 - If scale displays 45°, stop does not require adjustment (see **Figure 91**).

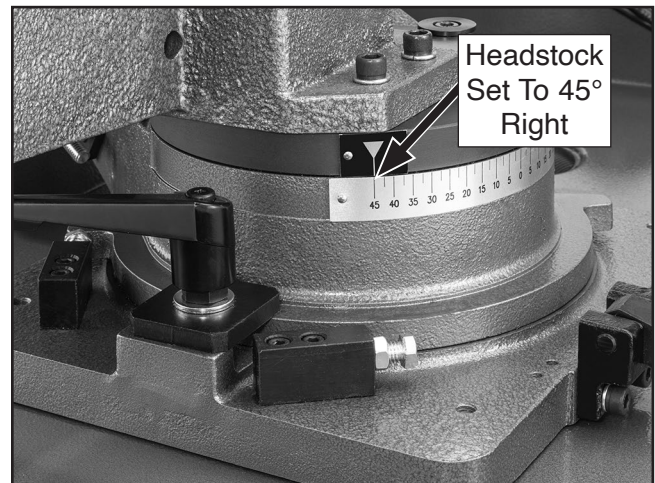


Figure 91. Headstock adjusted 45° right.

- If scale does not display 45°, proceed to **Step 12**.

12. Loosen jam nut, adjust 45° right stop bolt until it is snug against headstock base and scale is at 45°, then tighten jam nut (see **Figure 92**).

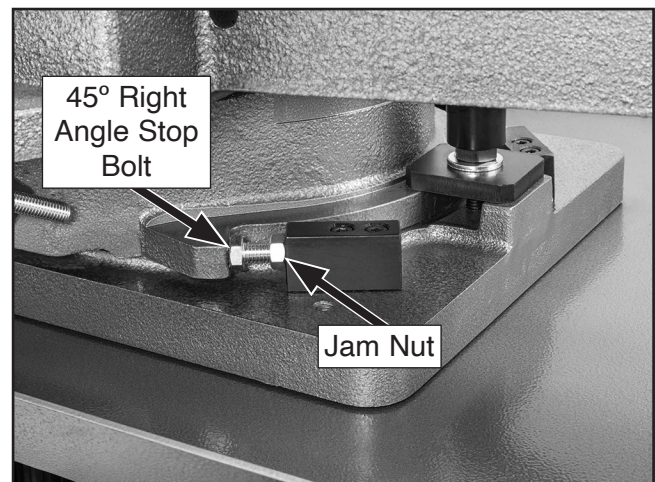


Figure 92. Location of 45° right angle stop components.



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

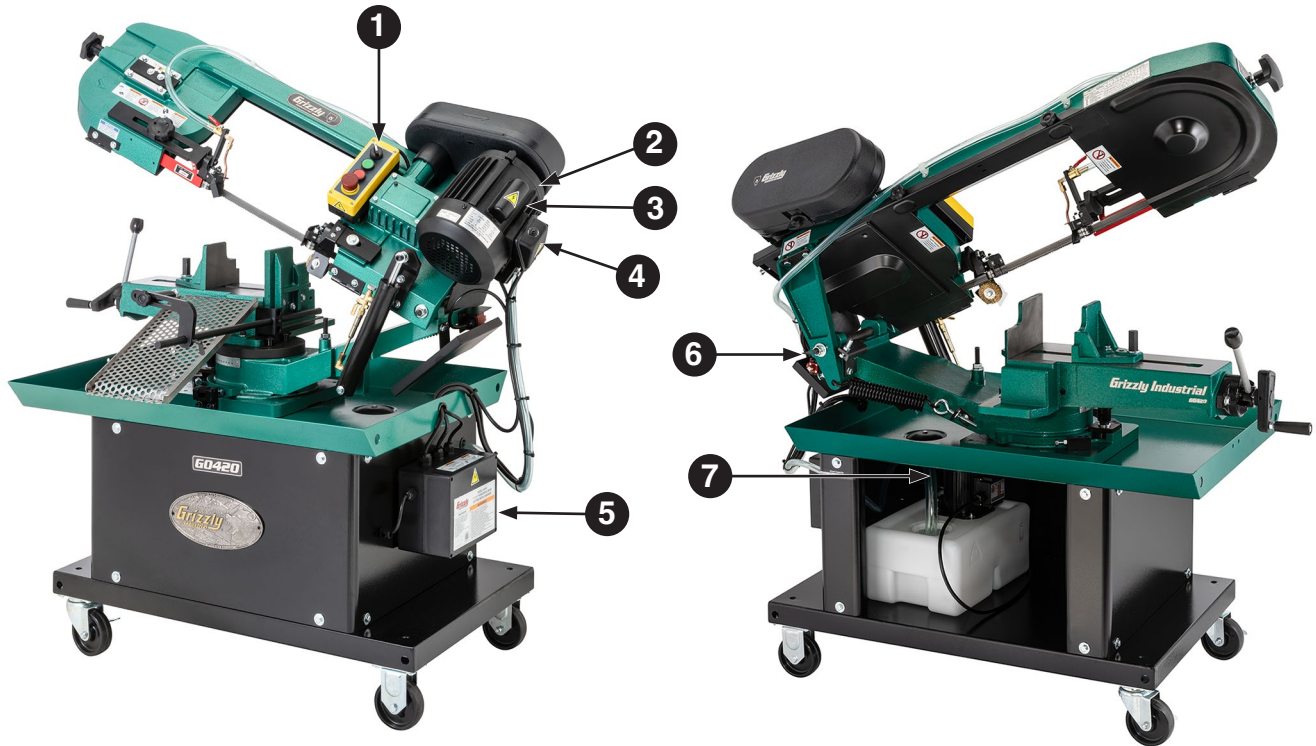
The photos and diagrams included in this section are best viewed in color. You can view these pages in color at www.grizzly.com.

COLOR KEY

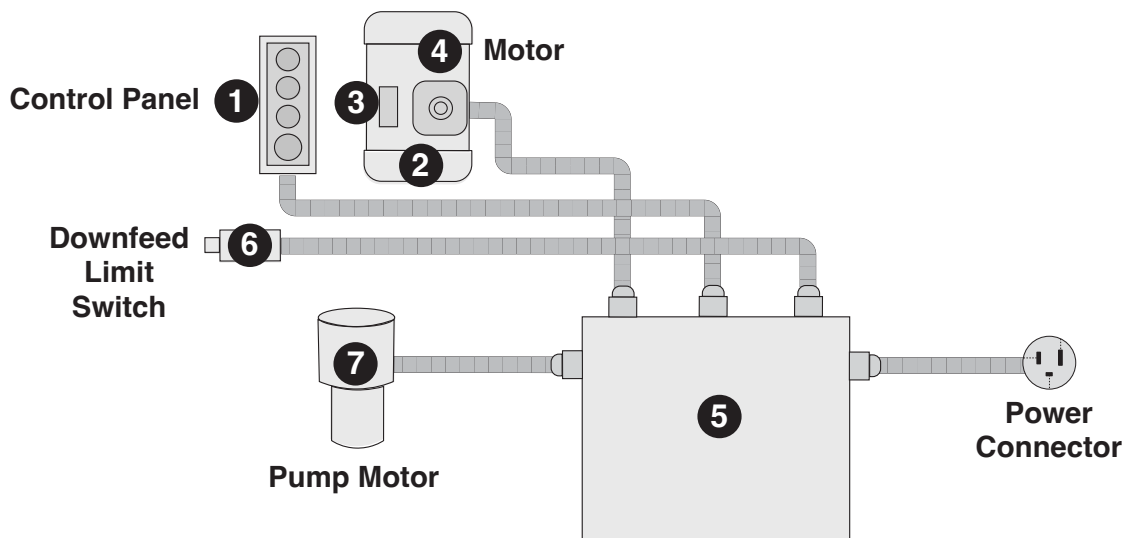
BLACK		BLUE		YELLOW		LIGHT BLUE	
WHITE		BROWN		YELLOW GREEN		BLUE WHITE	
GREEN		GRAY		PURPLE		TURQUOISE	
RED		ORANGE		PINK			



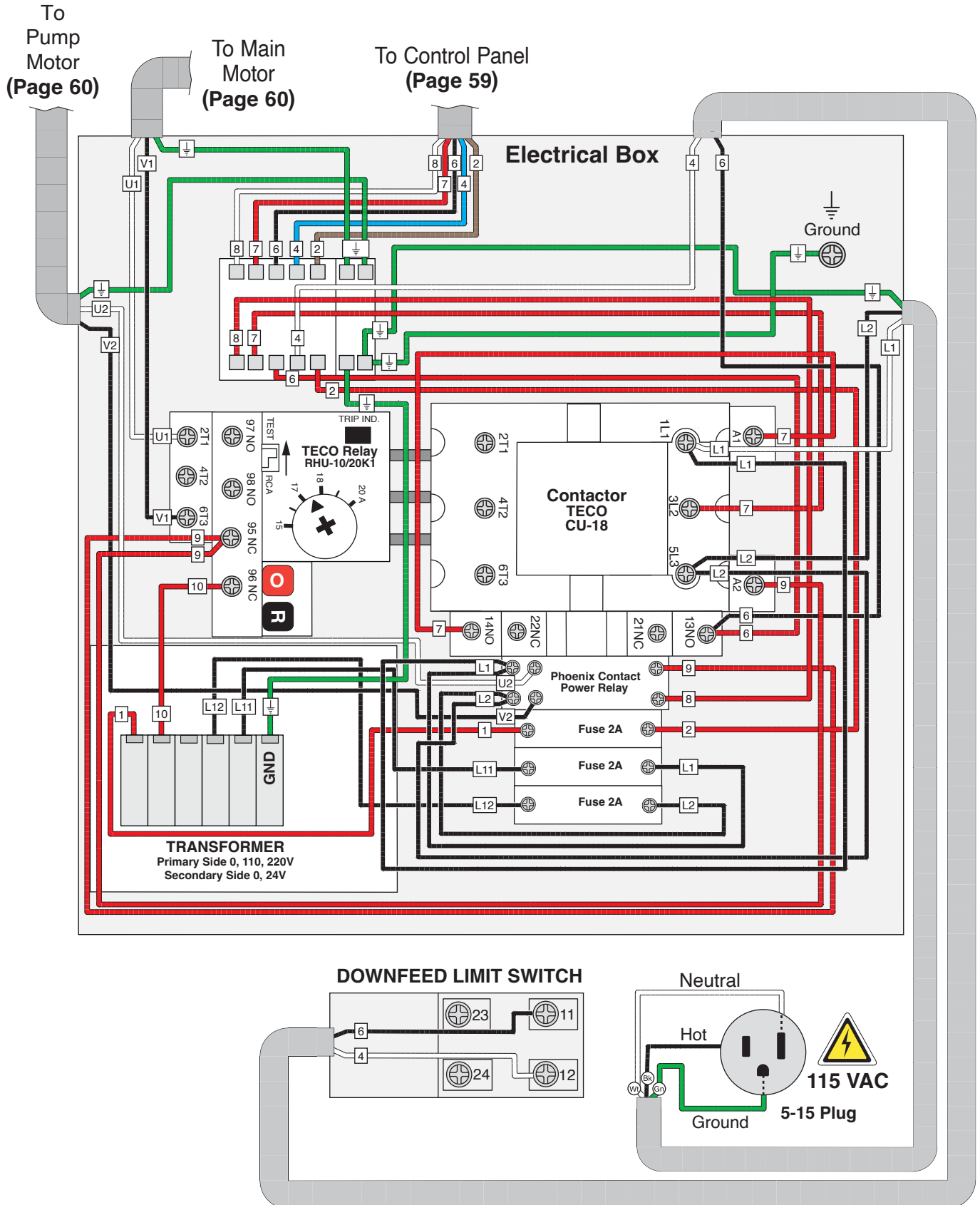
Wiring Overview



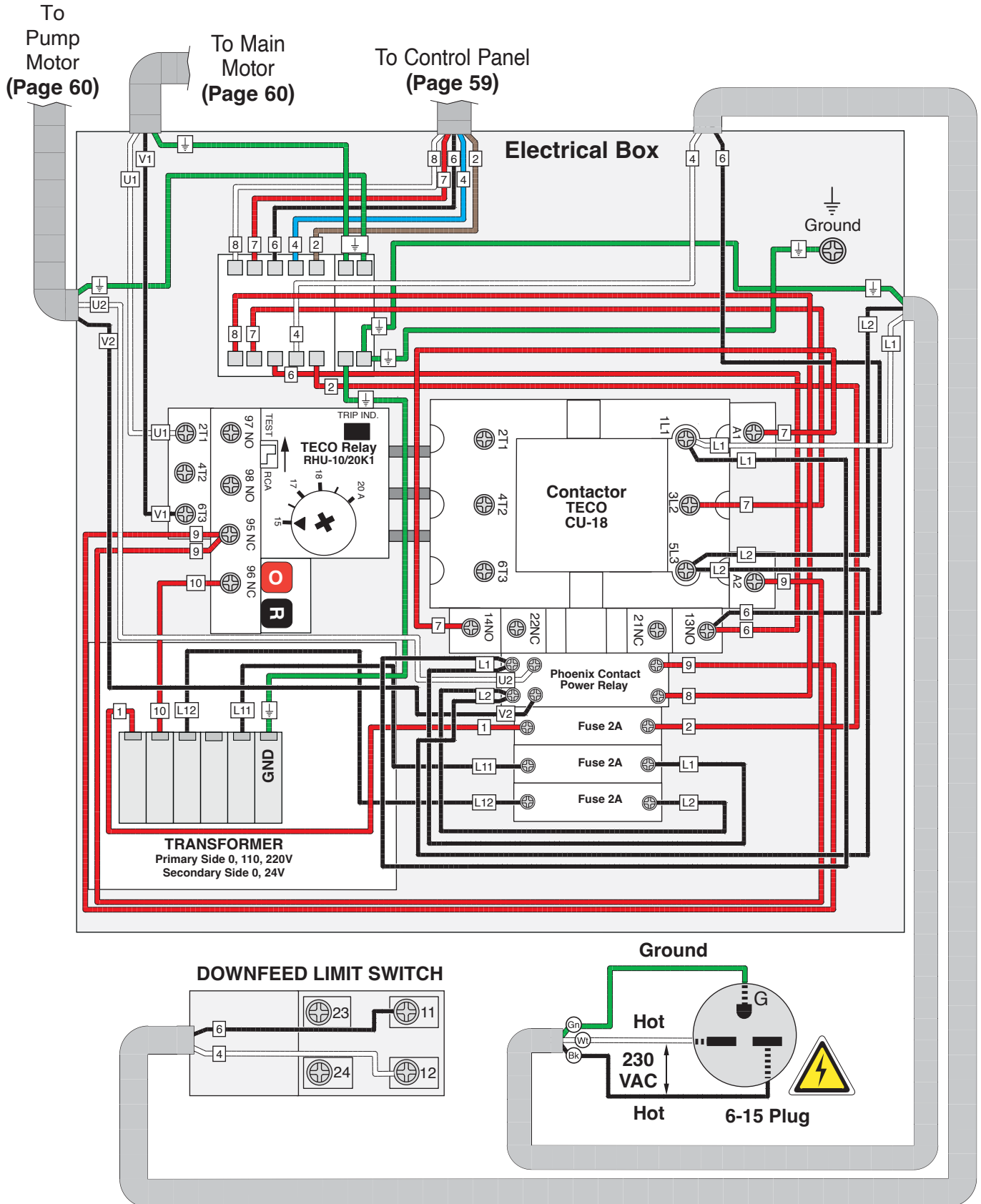
1	Control Panel (Page 59)	5	Electrical Box (Pages 57–58)
2	Main Motor (Page 60)	6	Downfeed Limit Switch (Pages 57–58)
3	Main Motor Start Capacitor (Page 60)	7	Pump Motor (Page 60)
4	Main Motor Circuit Breaker (Page 60)		



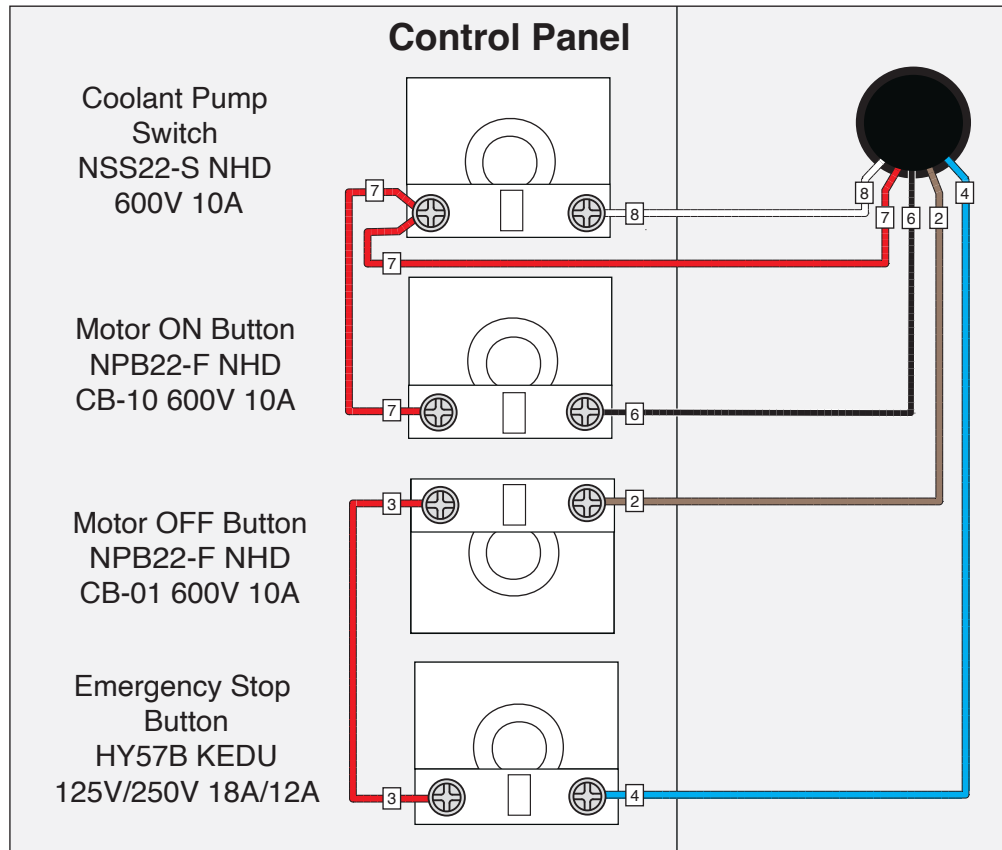
Electrical Box Wiring Diagram (115V)



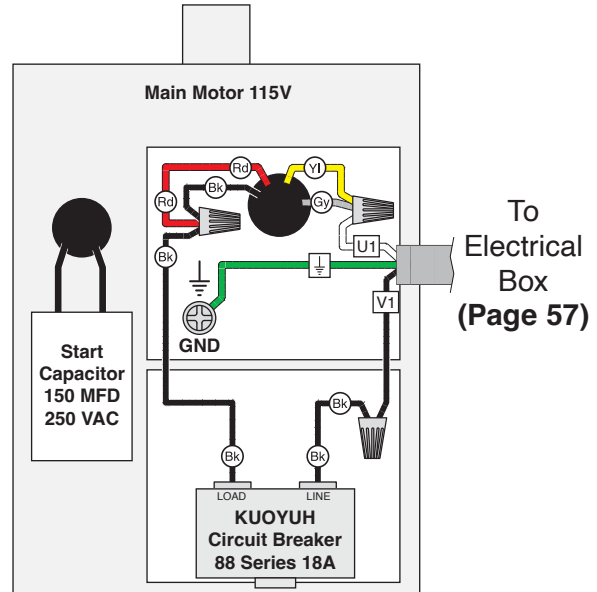
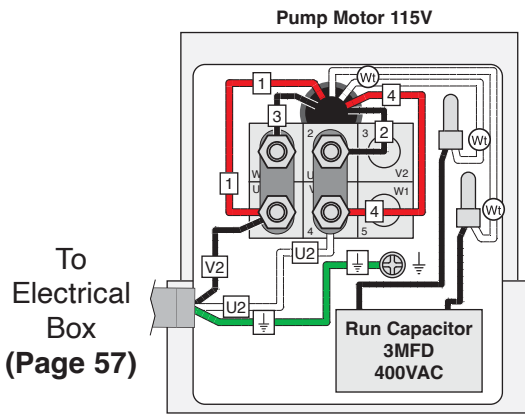
Electrical Box Wiring Diagram (230V)



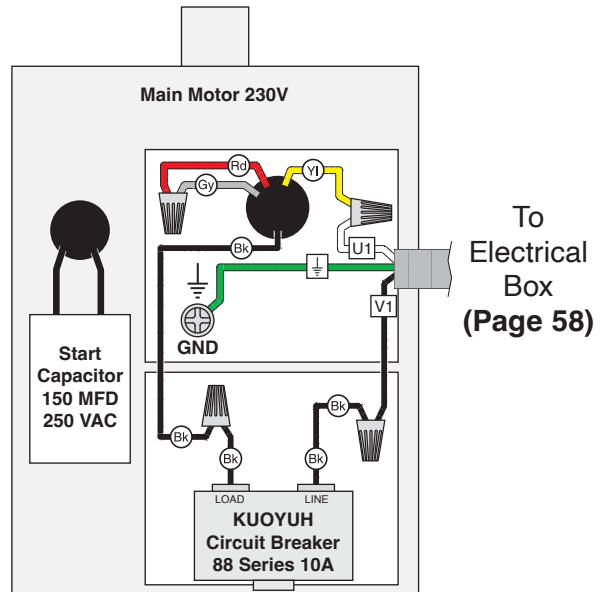
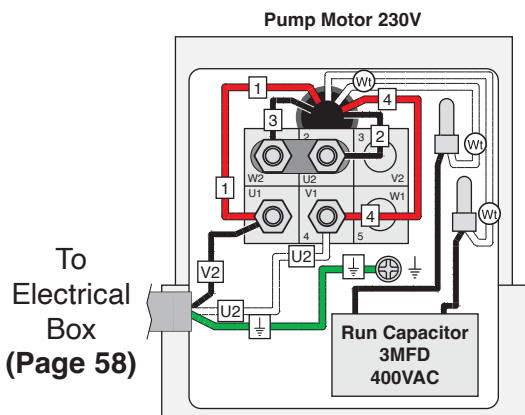
Control Panel Wiring Diagram



Motor Wiring Diagrams (115V)



Motor Wiring Diagrams (230V)



Electrical Components

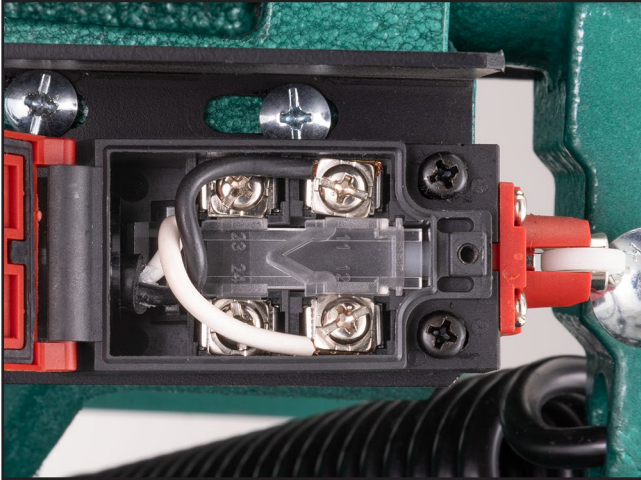


Figure 93. Downfeed limit switch wiring.

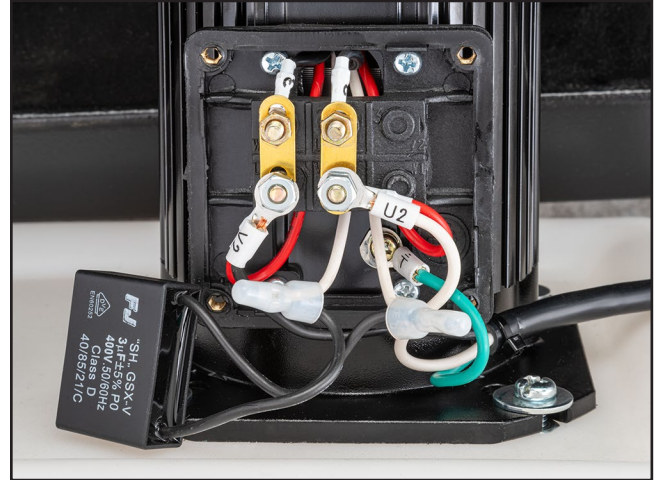


Figure 95. Coolant pump motor wiring (115V).



Figure 94. Main motor wiring (115V).

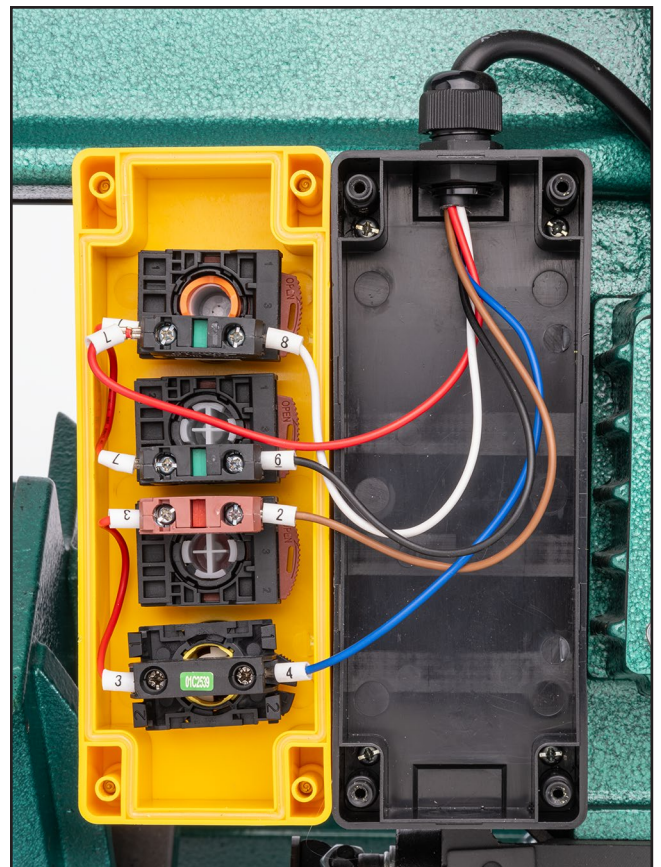


Figure 96. Control panel wiring.

Electrical Components (Cont.)

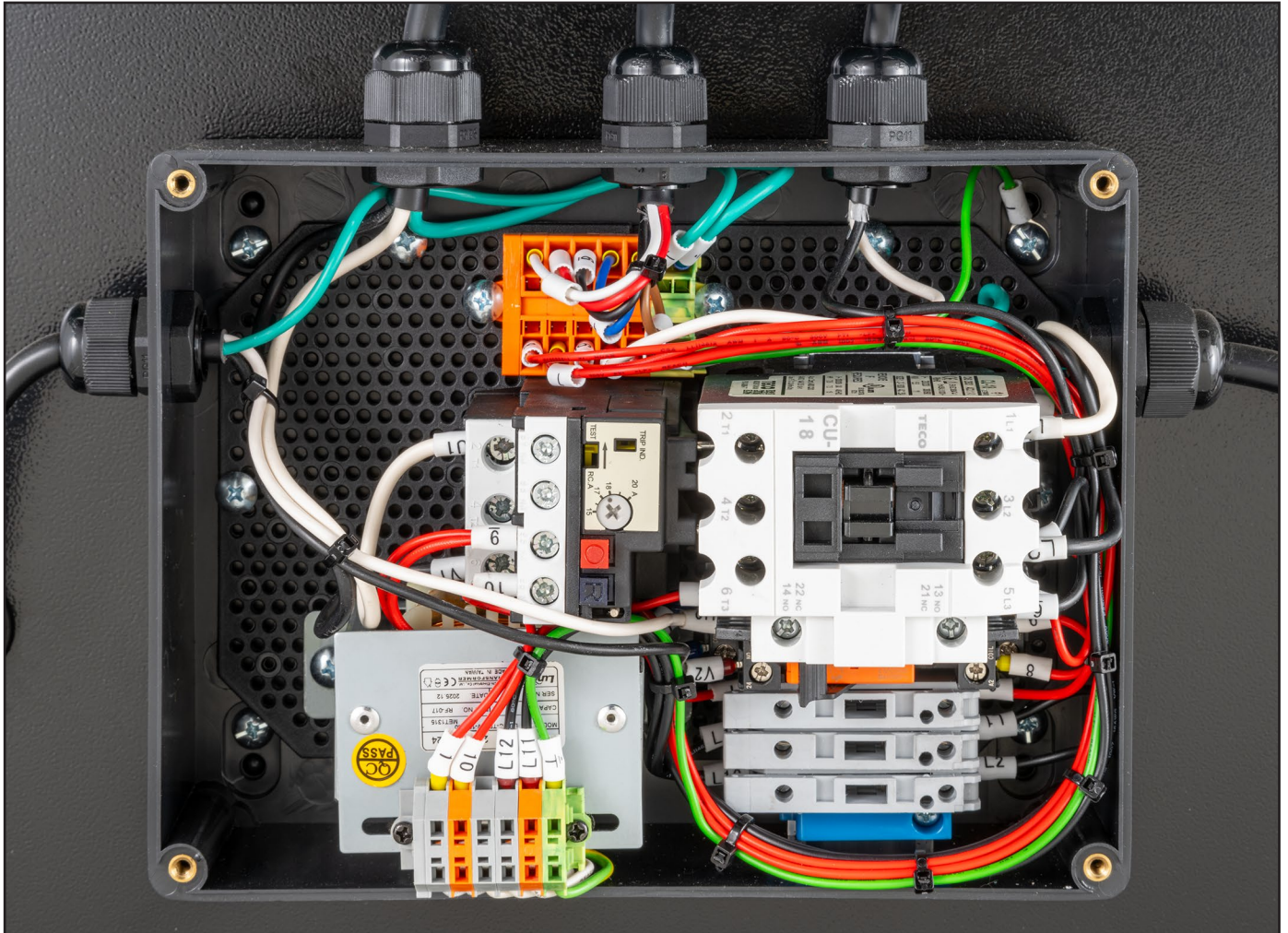


Figure 97. Electrical box wiring (115V).



Figure 98. Motor start capacitor wiring.

Cabinet & Base Parts List

REF	PART #	DESCRIPTION
7	P0420007	FIXED BOLT 3/8-16 X 38
8	P0420008	FLAT WASHER 3/8
17	P0420017	CAP SCREW 3/8-16 X 1-1/2
23	P0420023	BUSHING 23 X 32 X 10.5MM
24	P0420024	PIVOT SHAFT
25	P0420025	HEX BOLT 5/16-18 X 1
26	P0420026	PIVOT BRACKET
27	P0420027	BRACKET WASHER
28	P0420028	HEX BOLT 3/8-16 X 1-1/4
31	P0420031	EXTENSION SPRING 6.5 X 37 X 307.5
32	P0420032	EYE BOLT, 3/4, 3/8-16 X 3
33	P0420033	SPRING BRACKET
34	P0420034	HEX BOLT 5/16-18 X 3/4
35	P0420035	FLAT WASHER 5/16
36	P0420036	HEX NUT 3/8-16
37	P0420037	FLAT WASHER 11/16
38	P0420038	THUMB SCREW 5/16-18 X 1-1/4
39	P0420039	SET SCREW 5/16-18 X 1/2
40	P0420040	WORK STOP ROD
41	P0420041	WORK STOP BRACKET
43	P0420043	HEX NUT 5/16-18
44	P0420044	CARRIAGE BOLT 5/16-18 X 1
50	P0420050	WORK STOP SET BLOCK
51	P0420051	CAP SCREW 3/8-16 X 1-1/2
52	P0420052	HEX BOLT M10-1.5 X 25
53	P0420053	HEX NUT M10-1.5
54	P0420054	WORK STOP
55	P0420055	FENDER WASHER 6MM
56	P0420056	KNOB BOLT M6-1 X 10
64	P0420064	HEX BOLT M6-1 X 20
65	P0420065	CHIP SCREEN
75	P0420075	PHLP HD SCR 10-24 X 3/8
78	P0420078	HOSE 5/8" X 8"
82	P0420082	COOLANT TANK
84	P0420084	PUMP 1/8 HP 115/230V 1-PH
85	P0420085	PHLP HD SCR 1/4-20 X 5/8
86	P0420086	FLAT WASHER 1/4
88	P0420088	PIPE-HOSE ADAPTER 3/8 PT 5/16"
89	P0420089	HOSE CLIP 5/8"
90	P0420090	HOSE 5/16" X 106"
91	P0420091	BALL VALVE 1/4 NPT, BARBED
97	P0420097	HYDRAULIC CYLINDER
99	P0420099	FLAT WASHER 5/16
100	P0420100	HEX BOLT 5/16-18 X 1
101	P0420101	CAP SCREW 3/8-16 X 2-1/2
102	P0420102	FENDER WASHER 3/8
123	P0420123	SWITCH BRACKET
125	P0420125	BUTTON HD CAP SCR 10-24 X 3/8
155	P0420155	LOCK NUT 1/2-12
157	P0420157	FLAT WASHER 1/2
186	P0420186	CONTACTOR TECO CU-18 115V
187	P0420187	RELAY TECO RHU 10/20K1 15-20A

REF	PART #	DESCRIPTION
188	P0420188	RELAY PHOENIX CONTACT POWER 6A
308	P0420308	LIMIT SWITCH CANLIE AZD-1122
313	P0420313	TERMINAL END BLOCK
342	P0420342	CYLINDER UPPER SUPPORT
349	P0420349	HEX BOLT 5/16-18 X 3/4
350	P0420350	FLAT WASHER 5/16
351	P0420351	FLAT WASHER 17.5 X 28 X 2MM
352	P0420352	FLAT WASHER 5/16
353	P0420353	HEX BOLT 5/16-18 X 3/4
355	P0420355	HEX NUT 3/8-16
356	P0420356	PIPE FITTING 1/4 NPT W/HOSE
360	P0420360	SWIVEL ARM
362	P0420362	SWIVEL BASE
363	P0420363	WISE BASE
364	P0420364	CAP SCREW 3/8-16 X 1-1/4
365	P0420365	FENDER WASHER 3/8
366	P0420366	CAP SCREW 3/8-16 X 1-1/2
367	P0420367	SET SCREW M12-1.75 X 70
368	P0420368	HEX NUT M12-1.75
371	P0420371	SWIVEL ARM COVER BASE
376	P0420376	FLAT WASHER 3/8, RUBBER
377	P0420377	FLAT WASHER 5/16
378	P0420378	HEX BOLT 5/16-18 X 3/4
382	P0420382	POSITIVE STOP BRACKET
385	P0420385	WISE JAW, REAR
386	P0420386	WISE JAW, FRONT
387	P0420387	SWIVEL ARM COVER
388	P0420388	CAP SCREW M8-1.25 X 20
389	P0420389	CAP SCREW 5/16-18 X 1
390	P0420390	CAP SCREW 3/8-16 X 1-1/4
391	P0420391	FENDER WASHER 3/8
392	P0420392	ANGLE INDICATOR PLATE
393	P0420393	RIVET 2 X 4MM NAMEPLATE, STEEL
394	P0420394	CYLINDER PIVOT ROD
395	P0420395	HEX BOLT 5/16-18 X 1
396	P0420396	HEX BOLT 3/8-16 X 1-1/4
397	P0420397	HEX NUT 3/8-16
398	P0420398	FLAT WASHER 5/16
399	P0420399	SWIVEL SCALE
400	P0420400	RIVET 2 X 4MM NAMEPLATE, STEEL
407	P0420407	CASTER, 4" FIXED
408	P0420408	CASTER, 4" SWIVEL, LOCKING
409	P0420409	FENDER WASHER 6MM
410	P0420410	HEX BOLT M6-1 X 20
411	P0420411	CUT-OFF CHUTE
413	P0420413	CHIP PAN
414	P0420414	STAND
415	P0420415	STAND BASE
427	P0420427	WISE BASE GUIDE BUSHING
429	P0420429	HEX BOLT 5/16-18 X 3/4
430	P0420430	FENDER WASHER 5/16
435	P0420435	FLAT WASHER 3/8



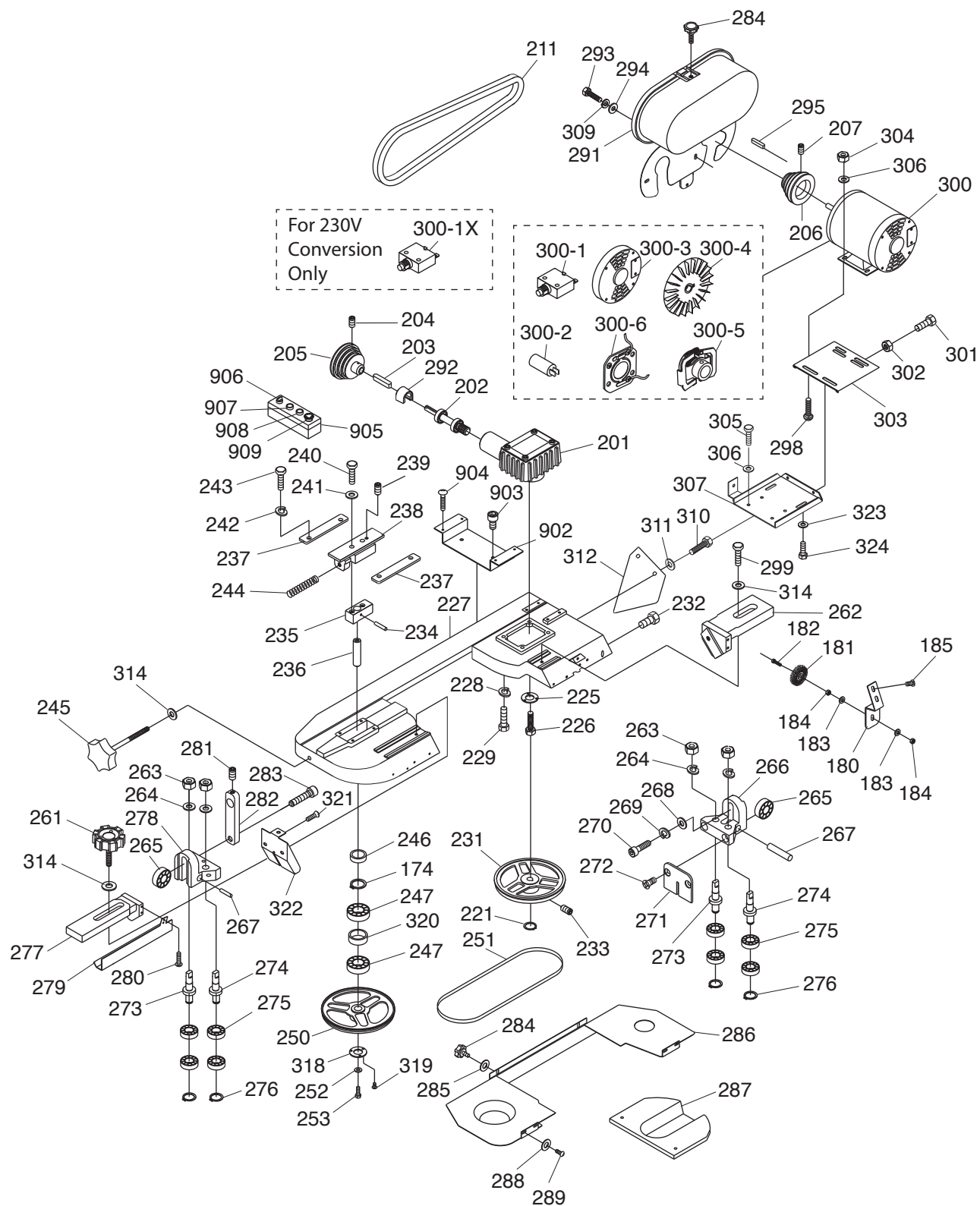
Cabinet & Base Parts List (Cont.)

REF	PART #	DESCRIPTION
436	P0420436	FLAT WASHER 5/16
437	P0420437	SWIVEL LOCK PLATE
438	P0420438	ADJUSTABLE HANDLE 3/8-16 X 1-7/16
439	P0420439	FENDER WASHER 3/8
440	P0420440	SPLASH TRAY
441	P0420441	HEX BOLT 5/16-18 X 1/2
443	P0420443	PIVOT STOP BRACKET
444	P0420444	HEX BOLT 5/16-18 X 1
445	P0420445	HEX NUT 5/16-18
446	P0420446	PIVOT STOP BLOCK
447	P0420447	CAP SCREW 5/16-18 X 1
448	P0420448	STOP BLOCK PIN 10MM
449	P0420449	CAP SCREW 1/4-20 X 1
450	P0420450	HEX BOLT 3/8-16 X 1
451	P0420451	HEX NUT 3/8-16
452	P0420452	SWIVEL STOP BLOCK
468	P0420468	EXTENSION BLOCK
469	P0420469	CAP SCREW 3/8-16 X 1-1/4
470	P0420470	LOCK WASHER 3/8
505	P0420505	LOCK WASHER 5/16
600	P0420600	REVOLVING HANDLE 3/8-16UNC
601	P0420601	WISE CRANK
602	P0420602	SET SCREW 5/16-18 X 1/2
603	P0420603	PRESS CLAMP
604	P0420604	FLAT WASHER 12MM
605	P0420605	HEX BOLT 3/8-16 X 1-1/4
606	P0420606	FLAT WASHER 3/8
607	P0420607	ROLL PIN 5 X 20

REF	PART #	DESCRIPTION
608	P0420608	PRESSURE SHAFT CAM
609	P0420609	STUD-UDE 1/2-13 X 7, 1/2, 7/8
610	P0420610	KNOB 1/2-12
611	P0420611	THRUST BEARING 51101
612	P0420612	FLAT WASHER 1/2
613	P0420613	COMPRESSION SPRING 3.2 X 31.5 X 34
614	P0420614	LEADSCREW ACME M20-5.08 X 490
615	P0420615	LEADSCREW NUT ACME M20-5.08
616	P0420616	FLAT WASHER 1/2
700	P0420700	PHLP HD SCR M5-.8 X 10
701	P0420701	STRAIN RELIEF 1/8-3/8
702	P0420702	STRAIN RELIEF 1/4-3/8
703	P0420703	STRAIN RELIEF 1/4-1/2
705	P0420705	TERMINAL BAR 5P M3.2 X 3 T3/16
706	P0420706	TERMINAL BAR 2P M3.2 X 2 T3/16
707	P0420707	TAP SCREW #10 X 3/8
708	P0420708	FUSE BLOCK NHD HTF-1
709	P0420709	DIN RAIL 35MM
710	P0420710	PHLP HD SCR M8-1.25 X 16
711	P0420711	PHLP HD SCR M4-.7 X 12
712	P0420712	FUSE 2A 250V 20MM GLASS
901	P0420901	ELECTRICAL CONTROL BOX
910	P0420910	POWER CORD 14G 3W 91" 5-15P
911	P0420911	PUMP CORD 18G 3W 51"
912	P0420912	MOTOR CORD 14G 3W 59-1/16"
913	P0420913	CONTROL CORD 18G 5W 59"
914	P0420914	LIMIT SWITCH CORD 18G 2W 63"



Bow & Motor



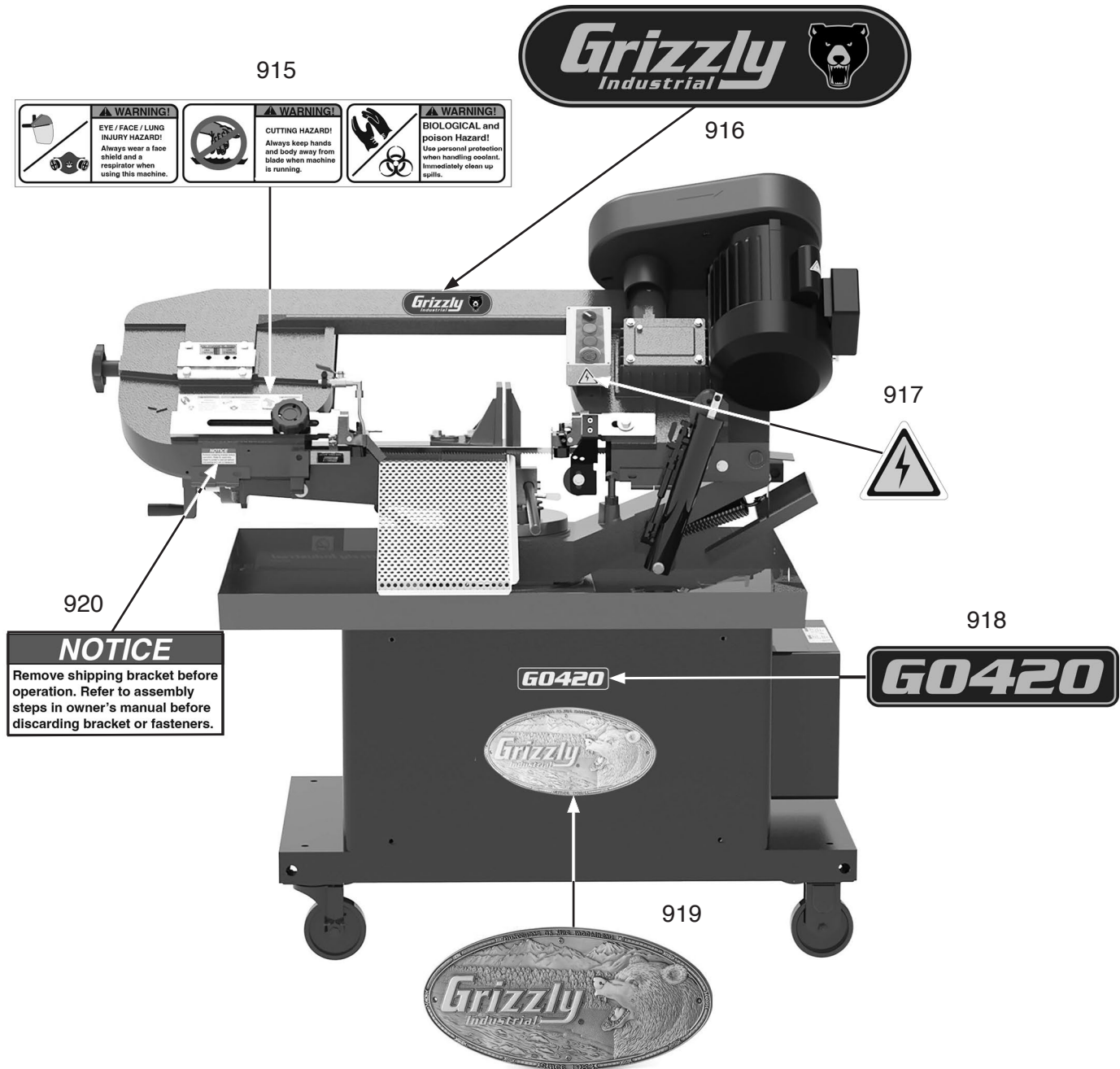
Bow & Motor Parts List

REF	PART #	DESCRIPTION
174	P0420174	EXT RETAINING RING 35MM
180	P0420180	BRUSH SUPPORT
181	P0420181	BRUSH
182	P0420182	HEX BOLT M6-1 X 30
183	P0420183	FENDER WASHER 6MM
184	P0420184	HEX NUT M6-1
185	P0420185	PHLP HD SCR M5-.8 X 8
201	P0420201	GEARBOX
202	P0420202	WORM GEAR SHAFT
203	P0420203	KEY 6 X 6 X 20 RE
204	P0420204	SPINDLE PULLEY
205	P0420205	SET SCREW M6-1 X 6
206	P0420206	MOTOR PULLEY
207	P0420207	SET SCREW M6-1 X 6
211	P0420211	V-BELT 3V 270
221	P0420221	INT RETAINING RING 25MM
225	P0420225	BEARING COVER
226	P0420226	HEX BOLT 10-24 X 3/8
227	P0420227	HEADSTOCK FRAME
228	P0420228	LOCK WASHER 3/8
229	P0420229	HEX BOLT 3/8-16 X 1-1/4
231	P0420231	DRIVE WHEEL
232	P0420232	HEX BOLT 5/16-18 X 3/4
233	P0420233	SET SCREW 1/4-20 X 5/16
234	P0420234	ROLL PIN 4 X 22
235	P0420235	SLIDING PLATE DRAW BLOCK
236	P0420236	IDLER WHEEL SHAFT
237	P0420237	SLIDING PLATE
238	P0420238	BLADE TENSION BLOCK
239	P0420239	SET SCREW 5/16-18 X 3/4
240	P0420240	HEX BOLT 5/16-18 X 1-5/8
241	P0420241	FLAT WASHER 5/16
242	P0420242	LOCK WASHER 5/16
243	P0420243	HEX BOLT 5/16-18 X 3/4
244	P0420244	COMPRESSION SPRING 2 X 10 X 115
245	P0420245	KNOB BOLT 3/8-16 X 5-7/16
246	P0420246	BUSHING 15.5 X 20 X 5MM
247	P0420247	BALL BEARING 6202ZZ
250	P0420250	IDLER WHEEL
251	P0420251	BLADE 0.032 X 3/4 X 93 VP (6-10 TPI)
252	P0420252	FENDER WASHER 6MM
253	P0420253	HEX BOLT 5/16-18 X 3/4
261	P0420261	KNOB 3/8-16 X 1-7/32
262	P0420262	GUIDE BRACKET, REAR
263	P0420263	HEX NUT M10-1.5
264	P0420264	LOCK WASHER 10MM
265	P0420265	BALL BEARING 6202ZZ
266	P0420266	BLADE GUIDE, REAR
267	P0420267	BEARING PIN 9MM
268	P0420268	FLAT WASHER 5/16
269	P0420259	LOCK WASHER 5/16
270	P0420270	CAP SCREW 5/16-18 X 1-1/4
271	P0420271	DEFLECTOR PLATE
272	P0420272	FLAT HD SCR 1/4-20 X 1/2
273	P0420273	GUIDE SHAFT
274	P0420274	ECCENTRIC SHAFT
275	P0420275	BALL BEARING 6000ZZ

REF	PART #	DESCRIPTION
276	P0420276	INT RETAINING RING 10MM
277	P0420277	ADJUSTABLE BRACKET, FRONT
278	P0420278	BLADE GUIDE, FRONT
279	P0420279	BLADE COVER, FRONT
280	P0420280	PHLP HD SCR 8-32 X 1/4
281	P0420281	SET SCREW 1/4-20 X 3/8
282	P0420282	BALL VALVE MOUNT
283	P0420283	CAP SCREW 5/16-18 X 1-1/4
284	P0420284	KNOB BOLT 1/4-20 X 1/2
285	P0420285	FLAT WASHER 1/4
286	P0420286	BLADE BACK COVER
287	P0420287	WHEEL COVER
288	P0420288	FLAT WASHER 1/4
289	P0420289	PHLP HD SCR 1/4-20 X 1/2
291	P0420291	PULLEY COVER
292	P0420292	SHAFT COVER
293	P0420293	HEX BOLT 1/4-20 X 1/2
294	P0420294	LOCK WASHER 1/4
295	P0420295	KEY 5 X 5 X 30
298	P0420298	CARRIAGE BOLT 1/4-20 X 1/2
299	P0420299	HEX BOLT 5/16-18 X 5/8
300	P0420300	MOTOR 1HP 115V/230V 60HZ 1-PH
300-1	P0420300-1	CIRCUIT BREAKER 18A KUOYUH MET2029F
300-1X	P0420300-1X	CIRCUIT BREAKER 10A KUOYUH MET2029C
300-2	P0420300-2	S CAPACITOR 150M 250V 1-3/8 X 2-5/8
300-3	P0420300-3	MOTOR FAN COVER
300-4	P0420300-4	MOTOR FAN
300-5	P0420300-5	CENTRIFUGAL SWITCH
300-6	P0420300-6	CONTACT PLATE
301	P0420301	HEX BOLT 3/8-16 X 1-1/2
302	P0420302	HEX NUT 3/8-16
303	P0420303	MOTOR MOUNT PLATE
304	P0420304	HEX NUT 1/4-20
305	P0420305	HEX BOLT 5/16-18 X 3/4
306	P0420306	FLAT WASHER 5/16
307	P0420307	MOTOR MOUNT BRACKET
309	P0420309	FLAT WASHER 1/4
310	P0420310	HEX BOLT 1/4-20 X 1/2
311	P0420311	FLAT WASHER 1/4
312	P0420312	DUST CURTAIN
314	P0420314	FENDER WASHER 3/8
318	P0420318	BEARING COVER
319	P0420319	FLAT HD SCR 10-24 X 3/8
320	P0420320	BUSHING 29ID X 35OD X 12L
321	P0420321	FLAT HD SCR 1/4-20 X 1/2
322	P0420322	CUTTING FLUID GUIDE
323	P0420323	FLAT WASHER 5/16
324	P0420324	HEX BOLT 5/16-18 X 1
902	P0420902	SWITCH BRACKET
903	P0420903	CAP SCREW 1/4-20 X 1/2
904	P0420904	BUTTON HD CAP SCR M6-1 X 12
905	P0420905	CONTROL PANEL
906	P0420906	PUMP SWITCH NHD NSS22-S
907	P0420907	ON BUTTON NHD NPB22-F10G
908	P0420908	OFF BUTTON NHD CB-01
909	P0420909	E-STOP BUTTON KEDU HY57B



Labels & Cosmetics



REF	PART #	DESCRIPTION
915	P0420915	COMBO WARNING LABEL
916	P0420916	GRIZZLY INDUSTRIAL LABEL
917	P0420917	ELECTRICITY LABEL

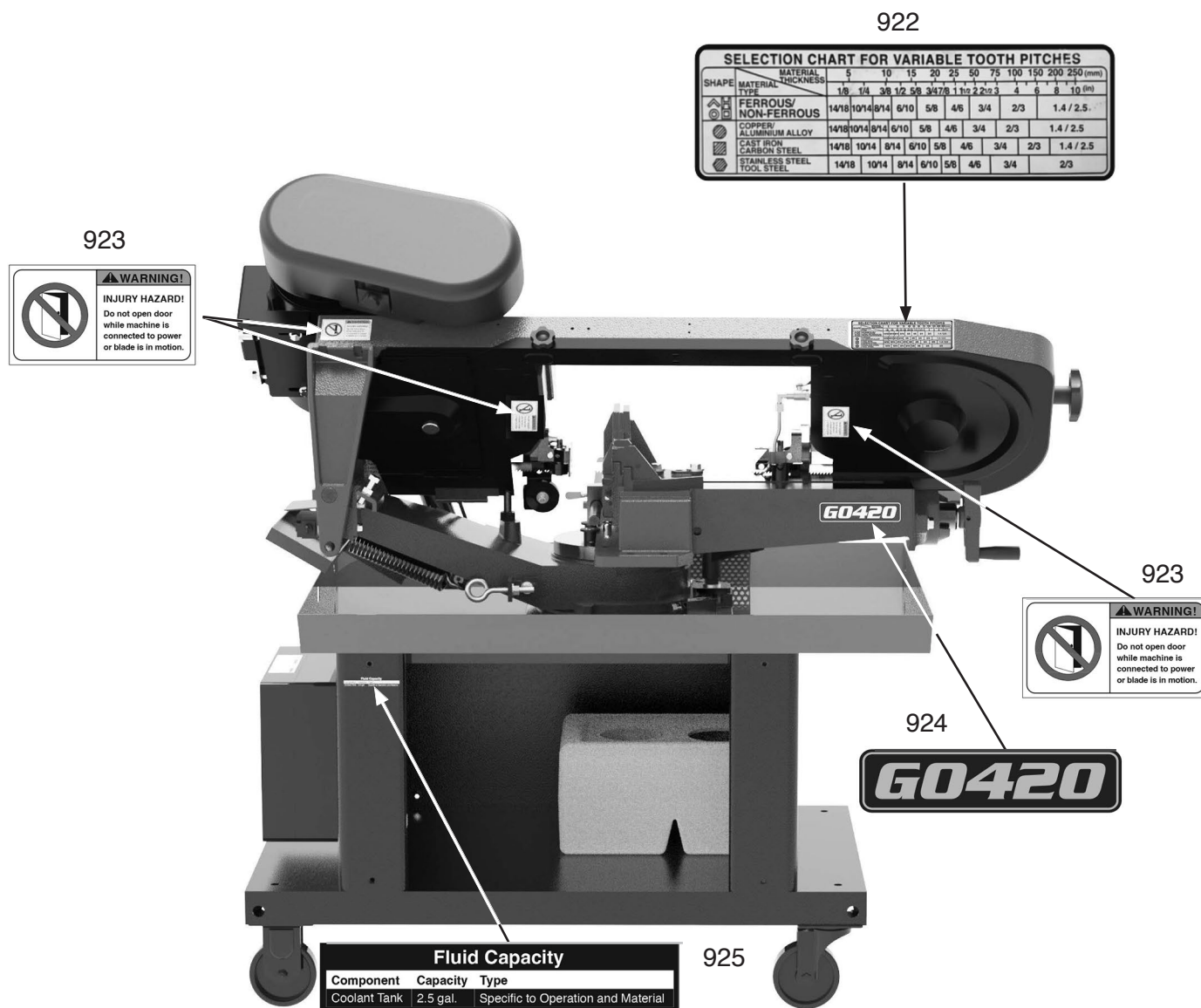
REF	PART #	DESCRIPTION
918	P0420918	MODEL NUMBER LABEL
919	P0420919	GRIZZLY NAMEPLATE-SMALL
920	P0420920	REMOVE SHIPPING BRACKET LABEL

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.



Labels & Cosmetics (Cont.)



REF	PART #	DESCRIPTION
922	P0420922	TOOTH PITCH CHART LABEL
923	P0420923	DO NOT OPEN DOOR LABEL

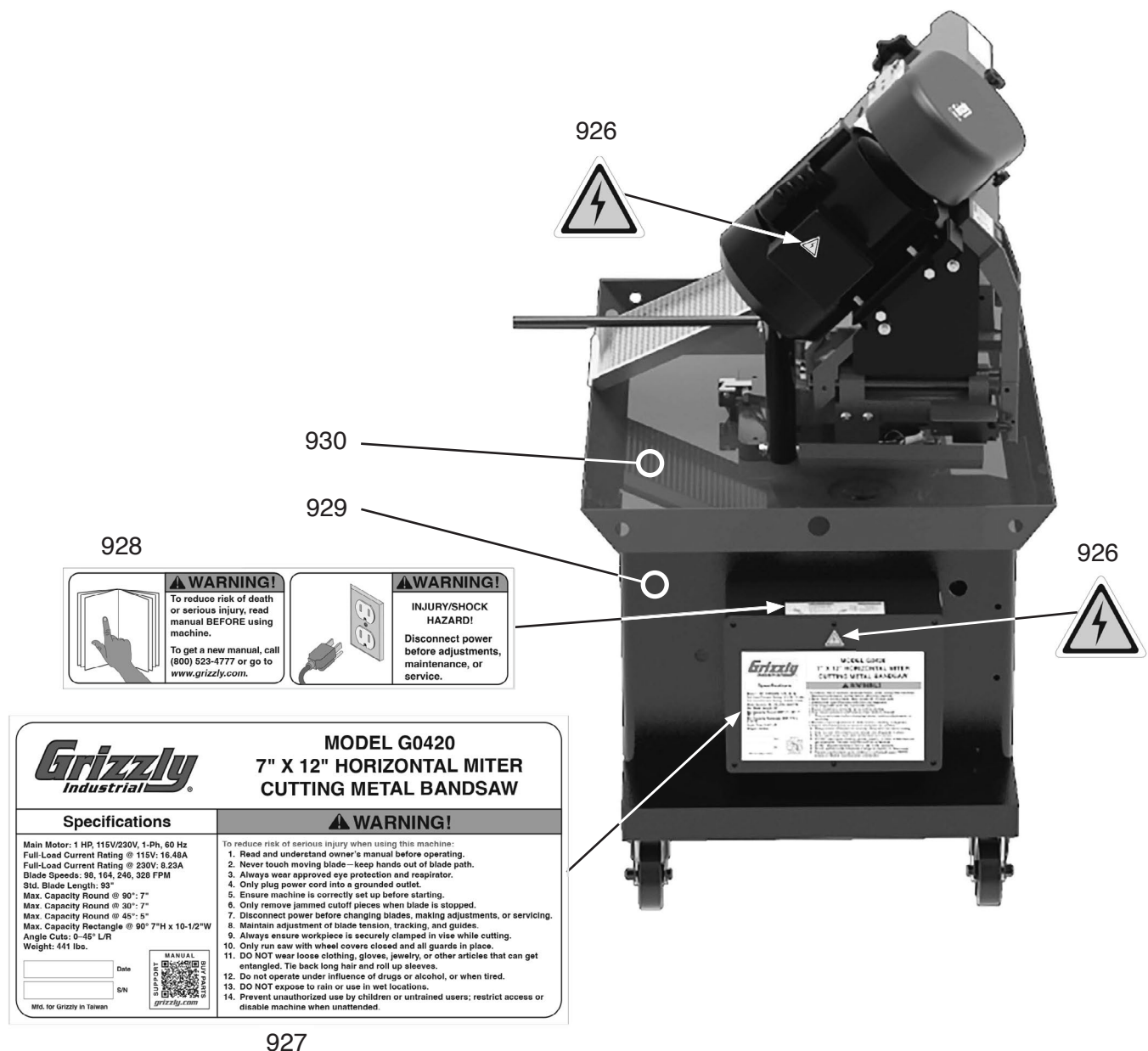
REF	PART #	DESCRIPTION
924	P0420924	MODEL NUMBER LABEL
925	P0420925	FLUID CAPACITY LABEL

! 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.



Labels & Cosmetics (Cont.)



REF	PART #	DESCRIPTION
926	P0420926	ELECTRICITY LABEL
927	P0420927	MACHINE ID LABEL
928	P0420928	COMBO WARNING LABEL

REF	PART #	DESCRIPTION
929	P0420930	TOUCH-UP PAINT, GRIZZLY BLACK
930	P0420929	TOUCH-UP PAINT, GRIZZLY GREEN

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.





Buy Direct and Save with Grizzly® – Trusted, Proven and a Great Value!
~Since 1983~

*Visit Our Website Today For
Current Specials!*

**ORDER
24 HOURS A DAY!
1-800-523-4777**

