MODEL G0621X
14" WOOD/METAL BANDSAW
OWNER'S MANUAL
(For models manufactured since 12/20)

#TR12108 PRINTED IN TAIWAN V3.01.21

⚠ WARNING!

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

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

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

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

⚠ WARNING!

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:

- **Lead from lead-based paints.**
- **Crystalline silica from bricks, cement and other masonry products.**
- **Arsenic and chromium from chemically-treated lumber.**

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

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INTRODUCTION

Contact Info

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

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

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

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

Machine Description

This bandsaw features a variable speed drive which allows the operator to slow the blade down for cutting metal and speed the blade up for cutting wood.

A 3-phase motor is used with a power inverter to provide variable speed capabilities on a single-phase power source.

Additionally, this bandsaw features ball bearing blade guides, a solid one-piece frame, cast iron wheels, and a quick-release blade tensioning system.

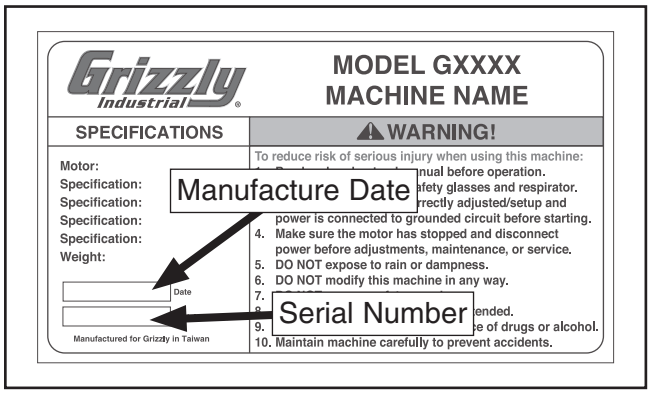
Manual Accuracy

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

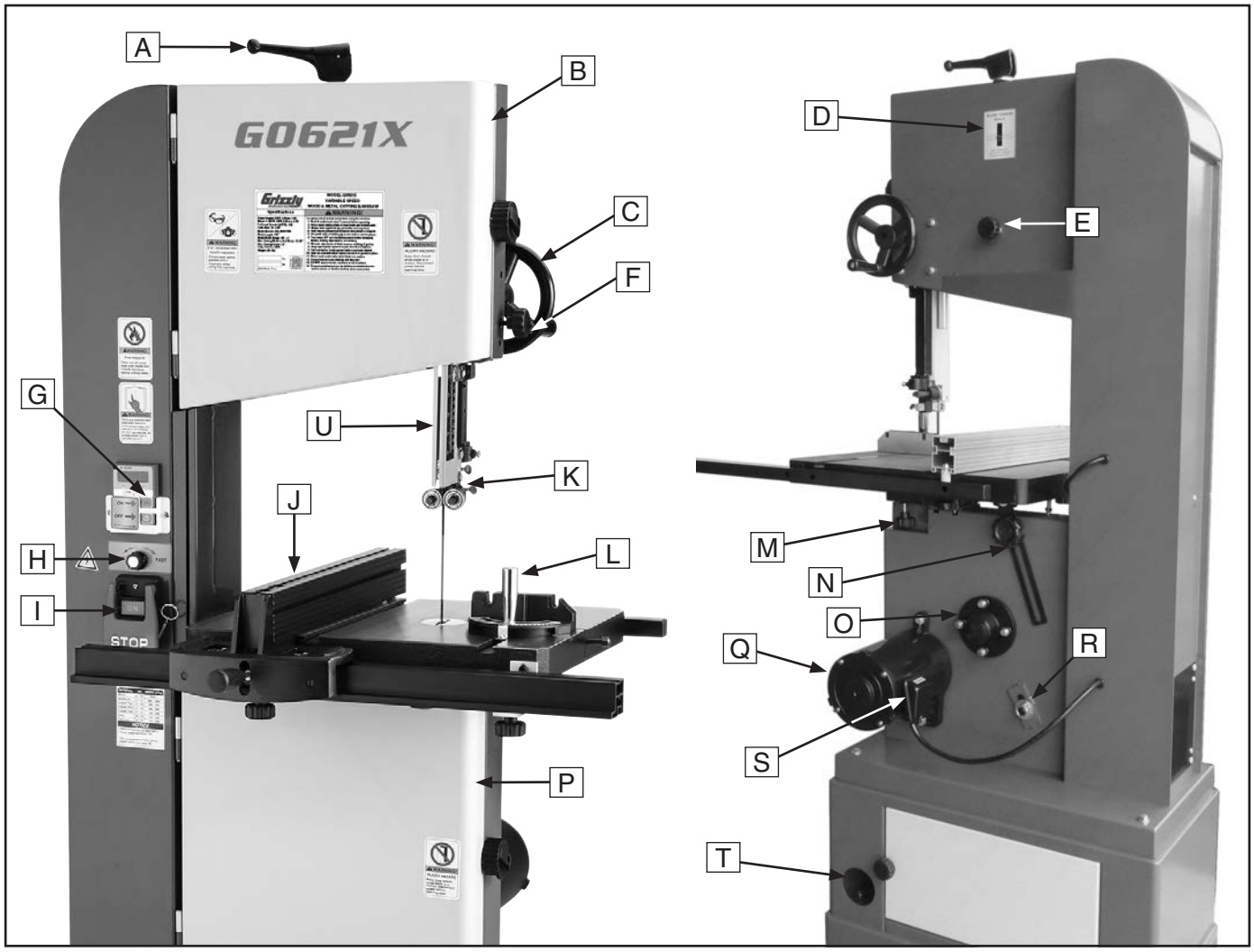
We made every effort to be exact with the instructions, specifications, drawings, and photographs in this manual. Sometimes we make mistakes, but our policy of continuous improvement also means that **sometimes the machine you receive is slightly different than shown in the manual**.

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

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



Identification



A. Blade Tension Handle
B. Upper Wheel Cover
C. Blade Guide Elevation Handwheel
D. Blade Tension Scale
E. Blade Tracking Knob
F. Blade Guide Elevation Lock Knob
G. Motor Switch
H. Speed Dial
I. Power Switch
J. Fence
K. Upper Blade Guide Assembly
L. Miter Gauge
M. Table Tilt Lock Knob (1 of 2)
N. Rear Table Support Lock Knob
O. Lower Wheel Adjustment Hub
P. Lower Wheel Cover
Q. Motor
R. Belt Tension Lock Nut
S. Motor Junction Box
T. Dust Hose Access Hole
U. Blade Guard

MACHINE DATA SHEET

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

MODEL G0621X 13-1/2" 1-1/4 HP 3-PHASE VERTICAL WOOD/METAL BANDSAW

Product Dimensions:

Weight	248 lbs.
Width (side-to-side) x Depth (front-to-back) x Height	30 x 30 x 72-1/2 in.
Footprint (Length x Width)	27 x 15 in.

Shipping Dimensions:

Carton #1

Type	Cardboard Box
Content	Machine
Weight	236 lbs.
Length x Width x Height	58 x 29 x 18 in.
Must Ship Upright	Yes

Carton #2

Type	Cardboard Box
Content	Stand
Weight	41 lbs.
Length x Width x Height	28 x 17 x 16 in.

Electrical:

Power Requirement	220V, Single-Phase, 60 Hz
Full-Load Current Rating	13A
Minimum Circuit Size	15A
Connection Type	Cord & Plug
Power Cord Included	Yes
Power Cord Length	6 ft.
Power Cord Gauge	16 AWG
Plug Included	No
Recommended Plug Type	6-15
Switch Type	ON/OFF Push Button Switch w/Large Shut-Off Paddle
Inverter (VFD) Type	Rhymebus RM6S2 200V
Inverter (VFD) Size	1 HP

Motors:

Main

Horsepower	1.25 HP
Phase	3-Phase
Amps	4.8A
Speed	1725 RPM
Type	TEFC Induction
Bearings	Sealed & Permanently Lubricated

Main Specifications:

Main Specifications

Bandsaw Size	14 in.
Max Cutting Width (Left of Blade)	13-1/2 in.
Max Cutting Width (Left of Blade) w/Fence	11-7/8 in.
Max Cutting Height (Resaw Height)	10 in.
Blade Speeds	Variable, 150 – 3000 FPM

Blade Information

Standard Blade Length	108 in.
Blade Length Range	107 – 108 in.
Blade Width Range	1/8 – 1 in.
Type of Blade Guides	Ball Bearing
Guide Post Adjustment Type	Rack & Pinion
Has Quick-Release	Yes

Table Information

Table Length	20 in.
Table Width	16 in.
Table Thickness	1-3/4 in.
Table Tilt	Left 5, Right 45 deg.
Table Tilt Adjustment Type	Manual
Floor-to-Table Height	38-1/2 in.
Fence Locking Position	Front
Fence is Adjustable for Blade Lead	Yes
Resaw Fence Attachment Included	No
Miter Gauge Included	Yes

Construction Materials

Table	Precision-Ground Cast Iron
Trunnion	Cast Iron
Fence	Aluminum
Base/Stand	Pre-Formed Steel
Frame/Body	Pre-Formed Steel
Wheels	Computer-Balanced Cast Iron
Tire	Rubber
Wheel Cover	Pre-Formed Steel
Paint Type/Finish	Powder Coated

Other Related Information

Wheel Diameter	14 in.
Wheel Width	1-1/4 in.
Number of Dust Ports	1
Dust Port Size	2.5 in.
Compatible Mobile Base	D2058A

Other Specifications:

Country of Origin	Taiwan
Warranty	1 Year
Approximate Assembly & Setup Time	1-1/2 Hours
Serial Number Location	ID Label on Center of Upper Wheel Cover

SECTION 1: SAFETY

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

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

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

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

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

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

Safety Instructions for Machinery

⚠WARNING

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

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

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

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

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

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

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

⚠WARNING

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Additional Safety for Wood/Metal Bandsaws

⚠WARNING

Serious injury or death can occur from getting fingers, hair, or clothing entangled in rotating or moving parts. Workpieces can be ejected by saw, striking operator or bystanders. Long-term respiratory damage can occur from breathing metal dust created while cutting. 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 fingers or thumbs in line with the cut. Hands could be crushed in vise or from falling machine components.

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.

WORKPIECE HANDLING. Always support the workpiece with table, vise, or some type of support fixture. Flag long pieces to avoid a tripping hazard. Never hold the workpiece with your hands during a cut.

LOSS OF STABILITY. Unsupported workpieces may jeopardize machine stability and cause the machine to tip and fall, which could cause serious injury.

POWER INTERRUPTION. Unplug machine after power interruption. Machines without magnetic switches can start up after power is restored.

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

CUTTING FLUID SAFETY. 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.

ATTENTION TO WORK AREA. Never leave a machine running and unattended. Pay attention to the actions of others in the area to avoid unintended accidents.

MAINTENANCE/SERVICE. All inspections, adjustments, and maintenance are to be done with the power OFF and the plug pulled from the outlet. Wait for all moving parts to come to a complete stop.

HEARING PROTECTION & HAZARDS. Noise generated by blade and workpiece vibration, material handling, and power transmission can cause permanent hearing loss over time and interfere with communication and audible signals.

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

SECTION 2: POWER SUPPLY

Availability

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

⚠WARNING

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

Full-Load Current Rating

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

Full-Load Current Rating (w/VFD).....13 Amps

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

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

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

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

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.

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

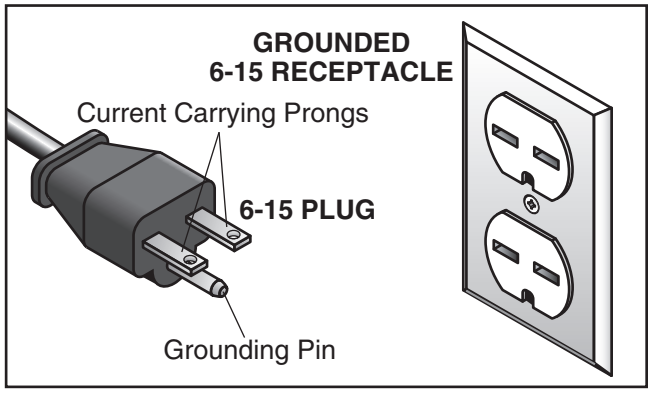
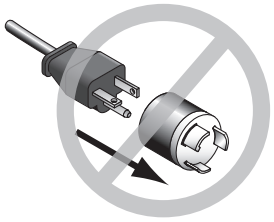


Figure 1. Typical 6-15 plug and receptacle.

⚠CAUTION



No adapter should be used with plug. If plug does not fit available receptacle, or if machine must be reconnected for use on a different type of circuit, reconnection must be performed by an electrician or qualified service personnel, and it must comply with all local codes and ordinances.

⚠WARNING

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

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 tool 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

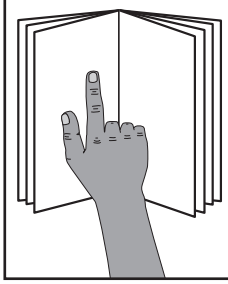
We do not recommend using an extension cord with this machine. If you must use an extension cord, only use it if absolutely necessary and only on a temporary basis.

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 .....14 AWG
Maximum Length (Shorter is Better).....50 ft.

SECTION 3: SETUP

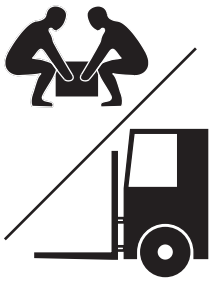


⚠WARNING

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

⚠WARNING

Wear safety glasses during the entire setup process!



⚠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 are needed to complete the setup process, but are not included with your machine.

Description	Qty
• Safety Glasses	1
• Cleaner/Degreaser (**Page 14**)	As Needed
• Disposable Shop Rags	As Needed
• Forklift	1
• Additional People	1
• Straightedge 4'	1
• Screwdriver Phillips #2	1
• Screwdriver Flat Head #2	1
• Dust Collection System	1
• Dust Hose 4"	1
• Hose Clamps 4"	2

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.

Main Components (Figure 2)	Qty
A. Bandsaw Unit	1
B. 6" Handwheel	1
C. Handwheel Handle	1
D. Miter Gauge	1
E. Table	1
F. Scale	1
G. Table Insert	1
H. Stand Door Knob 5/16"-18 x 1"	1
I. Dust Port 2½"	1
J. Table Trunnion Knobs 3/8"-16	2
K. Rear Rail	1
L. Front Rail	1
M. Front Rail L-Brackets	2
N. L-Bracket Knobs 5/16"-18 x 5/8"	2
O. Fence Assembly	1
P. Stand Assembly	1

Fasteners and Tools (not shown)	Qty
• Rubber Feet (Stand)	4
• Hex Bolts 5/16"-18 x 1" (Feet)	4
• Flat Washers 5/16" (Feet)	4
• Hex Nuts 5/16"-18 (Feet)	4
• Hex Bolts 5/16"-18 x 3" (Stand/Bandsaw)	4
• Flat Washers 5/16" (Stand/Bandsaw)	8
• Hex Nuts 5/16"-18 (Stand/Bandsaw)	4
• Hex Bolt 3/8"-16 x 3½" (Positive Stop)	1
• Hex Nut 3/8"-16 (Positive Stop)	1
• Cap Screws 1/4"-20 x 5/8" (Front Rail)	2
• Front Rail T-Slot Nuts (Front Rail)	2
• Cap Screws 1/4"-20 x 5/8" (Rear Rail)	2
• Phlp Hd Screws 10-24 x 1/4" (Dust Port)	4
• Hex Wrenches 3, 5, 8mm	1 each
• Flat Wrench 12/14mm	1
• Lock Nut 5/16"-18 (Stand Guard)	1

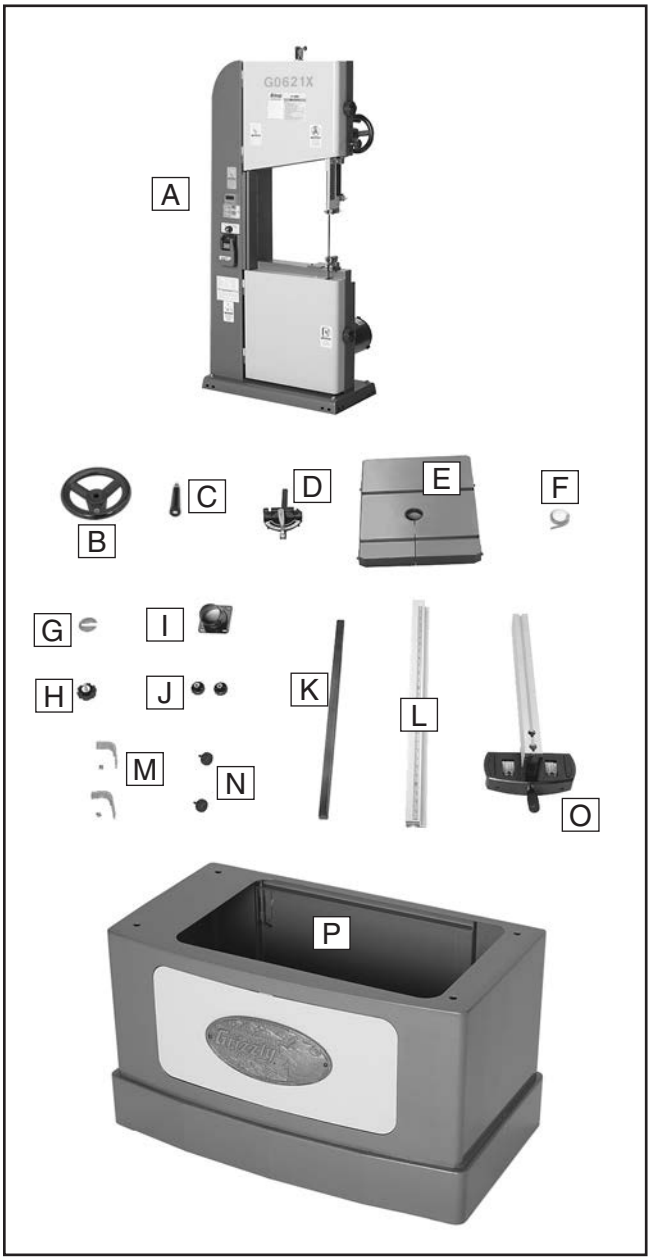


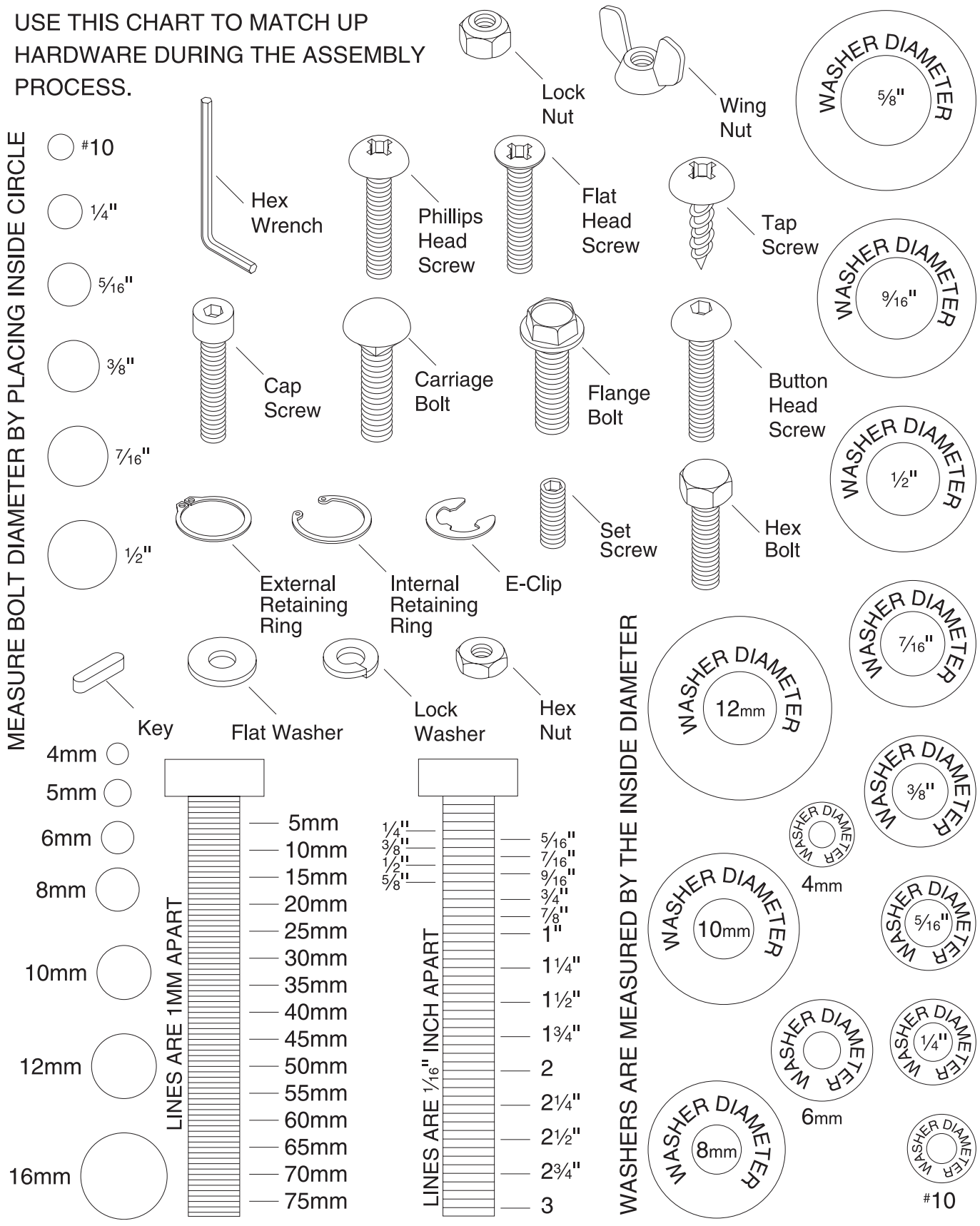
Figure 2. Main components inventory.

NOTICE

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

Hardware Recognition Chart

USE THIS CHART TO MATCH UP HARDWARE DURING THE ASSEMBLY PROCESS.



Cleanup

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

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

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

Before cleaning, gather the following:
- Disposable rags
- Cleaner/degreaser (WD•40 works well)
- Safety glasses & disposable gloves
- Plastic paint scraper (optional)

Basic steps for removing rust preventative:

1. Put on safety glasses.

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

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

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

⚠WARNING

Gasoline and petroleum products have low flash points and can explode or cause fire if used to clean machinery. Avoid using these products to clean machinery.

⚠CAUTION

Many cleaning solvents are toxic if inhaled. Only work in a well-ventilated area.

NOTICE

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

T23692—Orange Power Degreaser
A great product for removing the waxy shipping grease from the ***non-painted*** parts of the machine during clean up.

Figure 3. Model T23692 Industrial Orange Power Cleaner/Degreaser

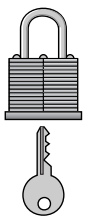
Site Considerations

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.**



⚠CAUTION

Children or untrained people may be seriously injured by this machine. Only install in an access restricted location.

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.

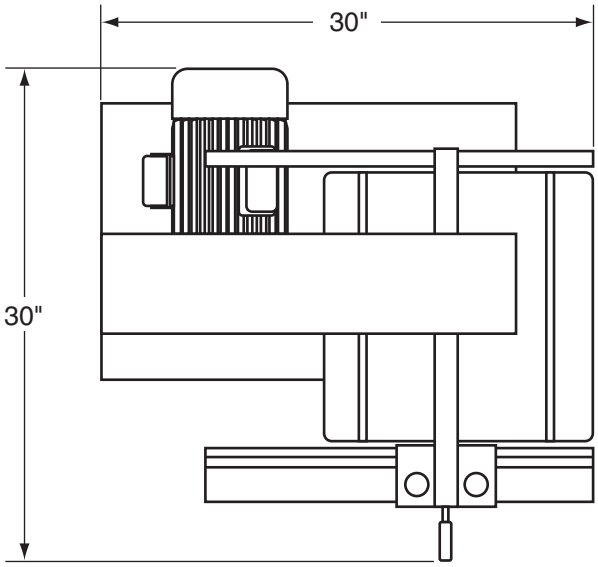


Figure 4. Minimum working clearances.

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 the bandsaw:

1. Install the rubber feet into the bottom of the cabinet stand, as shown in **Figure 5**, with the four 5/16"-18 x 1" hex bolts, four 5/16" flat washers, and four 5/16"-18 hex nuts.

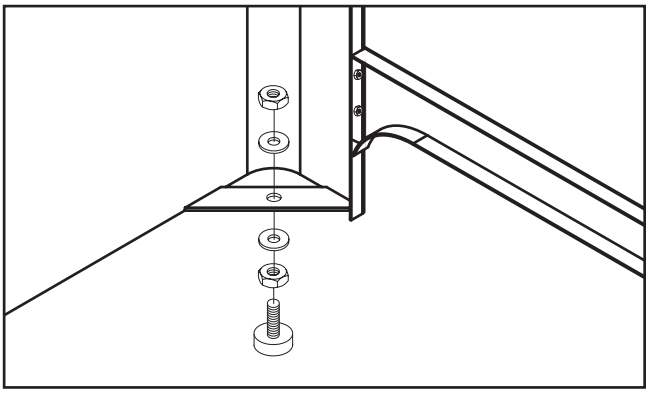
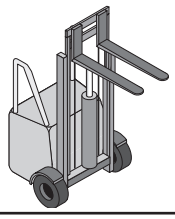


Figure 5. Rubber foot order of installation.



⚠CAUTION

The bandsaw is heavy and awkward to lift. Use a forklift or other powered lifting aid.

2. Using a forklift or other powered lifting aid, place the bandsaw on top of the stand.

3. Align the mounting holes on the bandsaw base with those in the stand.

4. Secure the bandsaw to the stand with the four 5/16"-18 x 3" hex bolts, eight 5/16 flat washers, and four 5/16"-18 hex nuts (see **Figure 6**).

Figure 6. Bandsaw mounted to stand.

5. Thread a 3/8"-16 hex nut half way up the positive stop bolt (Hex Bolt 3/8"-16 x 3½").

6. Thread the positive stop bolt into the trunnion base so it is installed as shown in **Figure 7**.

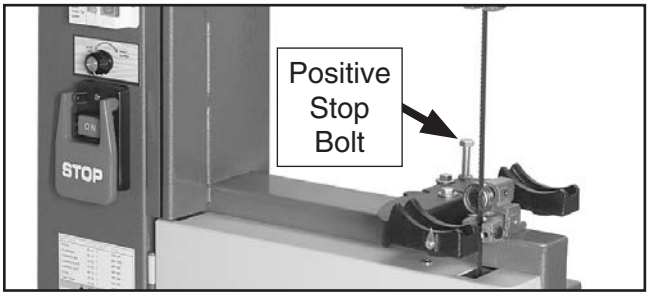


Figure 7. Positive stop bolt installed.

7. Remove the table pin from the table.

8. Fit the table around the blade and rest the table trunnions on the trunnion base, making sure the trunnion bolts extend through the bottom of the trunnion base.

9. Thread the two table trunnion knobs onto the trunnion bolts, as illustrated in **Figure 8**.

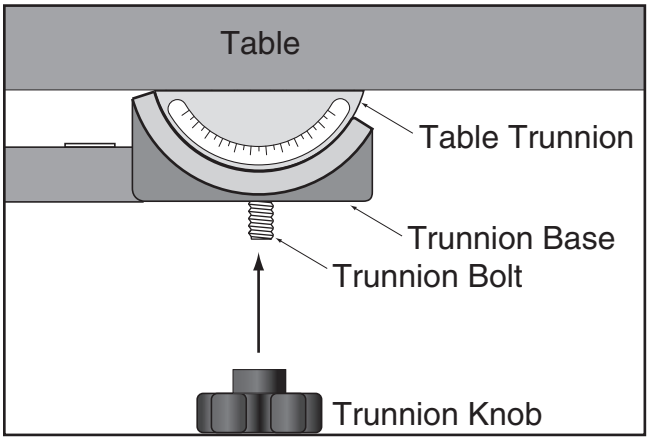


Figure 8. Table installation on trunnion base.

10. Place the table insert in the center of the table, so it sits flush with the table top surface.

11. Insert the pin into the end of the table slot.

12. Attach the rail brackets to the front of the table with the two M6-1 x 16 cap screws, as shown in **Figure 9**.

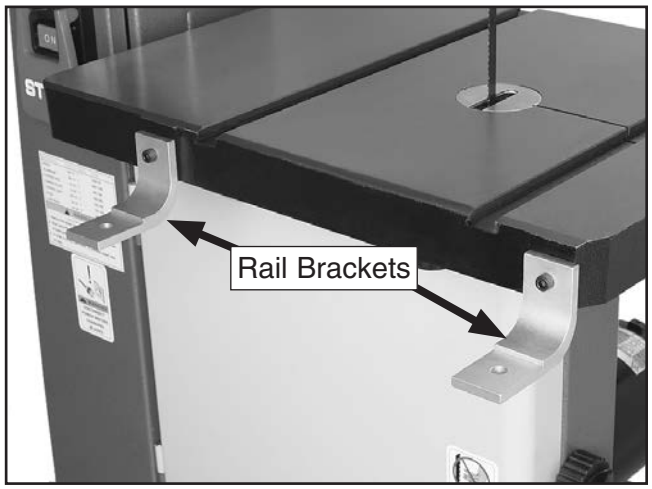


Figure 9. Rail brackets attached to table.

13. Slide the front rail nuts into the T-slot on the underside of the front rail.

14. Fasten the front fence rail to the rail brackets with the two rail bracket knobs, as shown in **Figure 10**, going into the front rail nuts.

Figure 10. Fastening front fence rail.

15. Fasten the rear fence rail to the back of the bandsaw with two ¼"-20 X ⅝" cap screws, as shown in **Figure 11**.

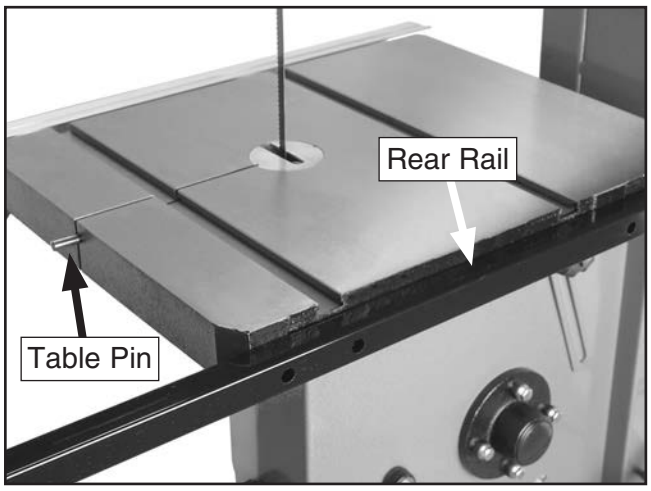


Figure 11. Rear fence rail attached to table.

16. Pull the fence handle up and place the fence on the front fence rail, as shown in **Figure 12**.

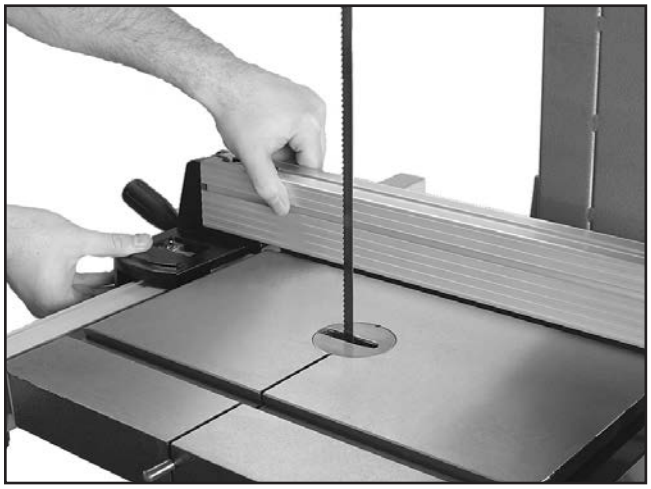


Figure 12. Example of installing fence onto rails.

17. Push the fence handle down to lock the fence in position.

18. Use the tilt bracket knob to secure the table tilt bracket to the bandsaw body, as shown in **Figure 13**. Tighten the hex nut on the tilt bracket knob against the tilt bracket to secure it in place.

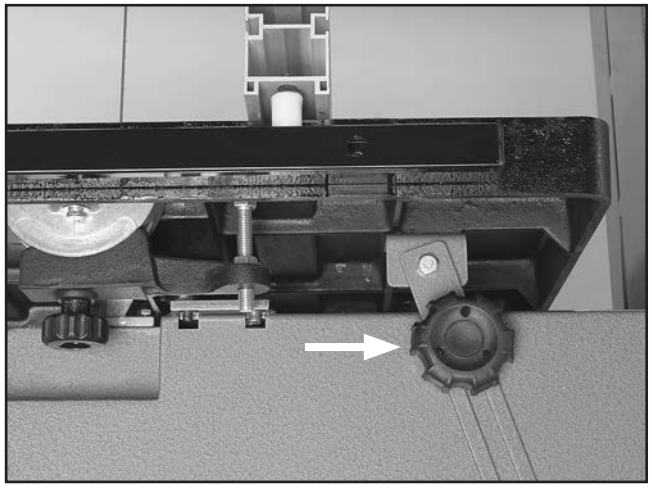


Figure 13. Knob securing table tilt bracket.

19. Thread the handle into the handwheel, then tighten the hex nut against the handwheel to secure it in place.

20. Install the 6" handwheel, as shown in **Figure 14**, by placing it on the shaft and tightening the set screw in the handwheel.

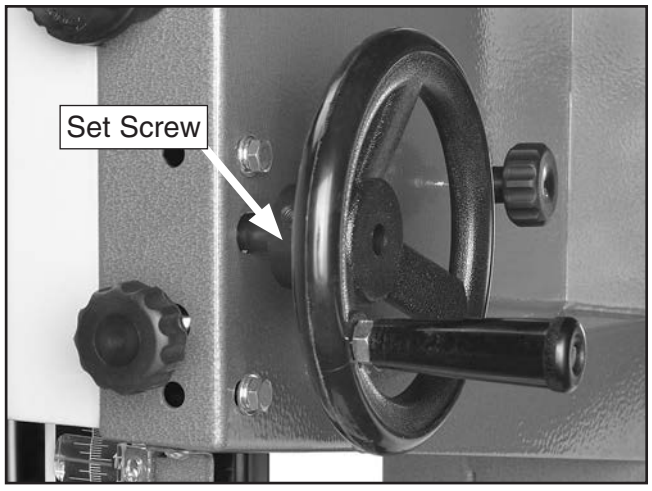


Figure 14. 6" Handwheel installed.

21. Slide the fence against the blade.

22. Use a sharp pencil to mark the fence rail where the fence scale indicator is pointing. This mark will indicate where to align the 0" mark when you install the scale.

23. Remove the fence from the front rail.

24. Carefully install the scale on the front fence rail, as shown in **Figure 15**, so the 0" mark on the scale lines up with the pencil mark made in **Step 22**.

Figure 15. Scale installed on front fence rail.

25. Install the dust port, as shown in **Figure 16**, with the four 10-24 x ¼" Phillips head screws.

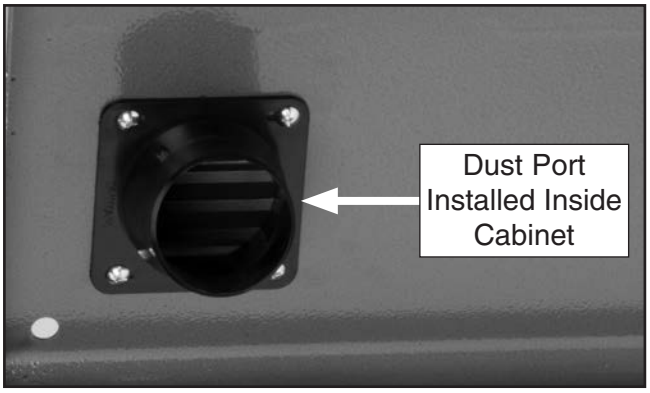


Figure 16. Dust port installation.

Dust Collection

⚠CAUTION

This saw creates substantial amounts of fine dust while operating. Failure to use a vacuum system can result in respiratory illness.

Connect this machine to a shop vacuum rather than a dust collector. Most dust collectors are not designed to capture metal shavings and doing so may lead to a fire. If you are in doubt about the capabilities of your shop vacuum or dust collector, refer the owner's manual before connecting it to this machine.

To connect a vacuum hose:

1. Fit the 2½" dust hose over the dust port, as shown in **Figure 17**, and secure in place with a hose clamp.

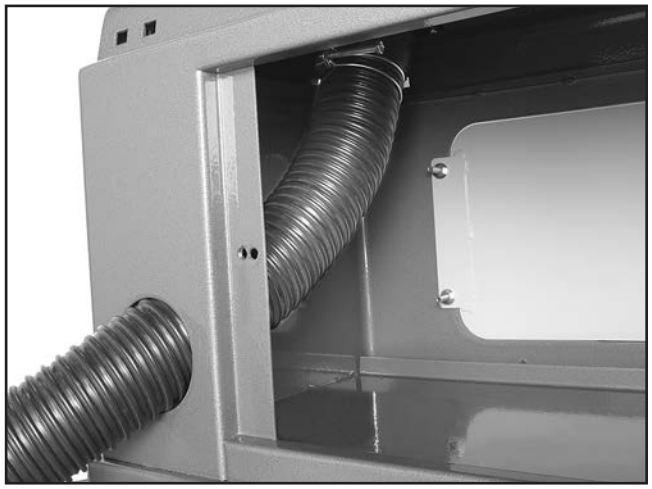


Figure 17. Dust hose attached to dust port.

2. Tug the hose to make sure it is snug.

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

3. Close stand door and fasten it shut with the stand door knob.

Blade Tracking

"Blade Tracking" refers to how the blade rides on the wheels. When tracking correctly, the blade rides in the center of the rim part of the wheels.

Blade tracking is primarily controlled by adjusting the upper wheel tilt. Tracking the blade in this manner is referred to as "Center Tracking," because you tilt the wheel until the blade rides in the center.

Another way to track the blade is known as "Coplanar Tracking." Coplanar tracking involves aligning the wheels so they are parallel and aligned (see **Wheel Alignment** on **Page 45**). When wheels are coplanar, vibration and heat are reduced during operation.

The wheels on the Model G0621X are factory aligned, so center tracking is the only adjustment that needs to be performed during setup.

To center track the blade:

1. DISCONNECT BANDSAW FROM POWER!

2. Adjust the upper/lower blade guides and support bearings away from the blade.

3. Open the upper wheel cover.

4. Adjust the blade tension by matching the size of the installed blade with the equivalent mark on the blade tension scale (located on the back of the bandsaw).

5. Spin the upper wheel by hand at least three times and watch how the blade rides on the crown of the wheel. Refer to **Figure 18** for an illustration of this concept.

   —If the blade rides on the peak of the upper wheel crown, then the bandsaw is already tracked properly and no additional adjustments are needed. Skip to **Step 9**.

   —If the blade does not ride in the peak of the upper wheel crown, then continue with the next step.

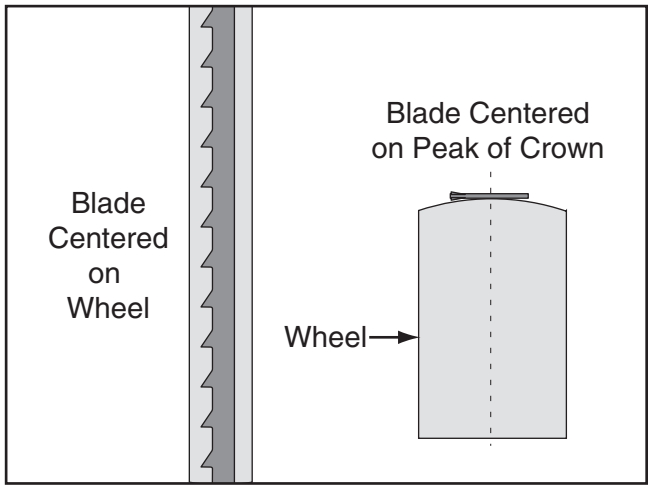


Figure 18. Center tracking profiles.

6. Loosen the lock nut on the blade tracking knob threads so the blade tracking knob will rotate for adjustments.

7. Spin the upper wheel with one hand and rotate the blade tracking knob with the other hand to make the blade ride in the center of the bandsaw wheel tire.

8. When the blade consistently rides in the center of the wheel, tighten the tracking control lock nut.

9. Close the upper wheel cover.

Note: *For the best performance from your saw, regularly maintain proper blade tracking.*

NOTICE

Changes in the blade tension may change the blade tracking.

Test Run

Once assembly is complete and you have performed the **Blade Tracking** steps on **Page 19**, test run the machine before continuing with the remainder of the adjustments.

If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop the machine immediately, then review **Troubleshooting** on **Page 40**.

If you still cannot remedy a problem, contact our Tech Support at (570) 546-9663 for assistance.

⚠WARNING

Wear safety glasses during the entire test run process. Failure to comply may result in serious personal injury.

To test run the machine:

1. Read the **Safety** section beginning on **Page 6** and read **Basic Controls** on **Page 26**.

2. Connect the machine to the power source.

3. Turn the speed dial counterclockwise as far as it will go.

4. Lift the STOP paddle on the power switch and press the STOP button all the way in (this resets the safety mechanism on the STOP switch).

5. Turn the power ***ON*** by pressing the green ON button above the STOP paddle. The digital display should light up. If not, make sure the power STOP switch has been reset; otherwise, check the electrical connections and power source.

6. Press the ON button located on the motor control switch, then slowly turn the speed dial clockwise.

7. Listen to and watch for abnormal noises or actions. The machine should run smoothly with little or no vibration or rubbing noises.

   —Strange or unusual noises must be investigated and corrected before operating the machine further. Always turn ***OFF*** the machine and disconnect it from power before investigating or correcting potential problems.

Tensioning Blade

A properly tensioned blade is essential for making accurate cuts and is a prerequisite for making many bandsaw adjustments. The blade tension is adjusted by rotating the blade tension lever.

To tension the bandsaw blade:

1. Make sure you have performed the **Test Run** instructions on the previous page and you are certain that the blade is tracking properly.

2. With blade tension lever in the down (engaged) position, adjust the blade tension until the mark on the blade tension scale matches the size of blade installed on the bandsaw.

   Note: *Because each blade is different and all blades stretch, this scale can only be considered as a general guide.*

3. Turn the bandsaw ***ON***.

4. Release the tension one quarter of a turn at a time. When the bandsaw blade starts to flutter, stop decreasing the tension.

5. Now, slowly increase the tension until the blade stops fluttering, then tighten the tension one more quarter of a turn.

6. Turn the bandsaw OFF and read the tension gauge. Use the reading as a guide when tensioning that blade in the future.

   Note: *Do not rely on this measurement for long periods of time because the blade will stretch with use.*

NOTICE

To reduce blade stretching, remove the tension from the blade when not in use.

NOTICE

After blade tension and tracking are set correctly, properly adjust the upper/lower support bearings and guide-block assemblies into position before operating machine.

Adjusting Blade Support Bearings

The support bearings are positioned behind the blade near the blade guides and prevent the blade from pushing backward during cutting operations. Proper adjustment of the support bearings helps you make accurate cuts and prevents the blade teeth from coming in contact with the blade guides while cutting. If this happens, the blade "tooth set" can be ruined, which will greatly reduce the blade's ability to make good cuts.

There are support bearings on the upper and lower blade guide assemblies. Both adjust in the same manner. The following instructions refer to the upper support bearings.

IMPORTANT: To ensure best results while cutting, make sure the blade is tracking and tensioned correctly before performing this procedure.

To adjust support bearing:

1. DISCONNECT MACHINE FROM POWER!

2. Loosen support bearing thumb screw (see **Figure 19**).

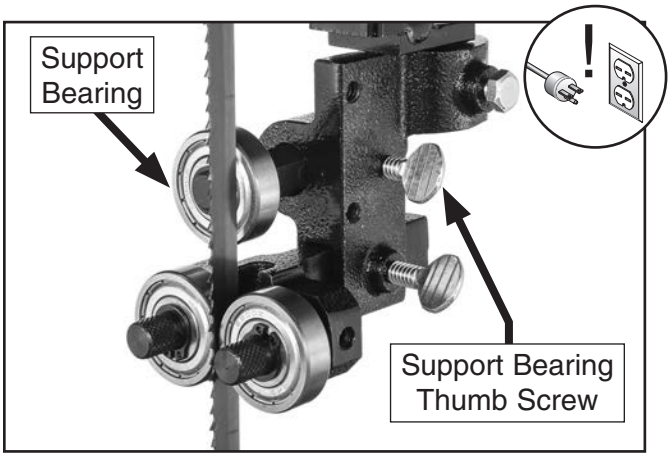


Figure 19. Upper support bearing assembly and controls.

3. Position support bearing approximately 0.016" away from back of blade, as illustrated in **Figure 20**.

   Note: *The main purpose of this adjustment is to prevent the blade from being pushed backward far enough that the blade guides will contact (and ruin) the "tooth set" of the blade during cutting operations.*

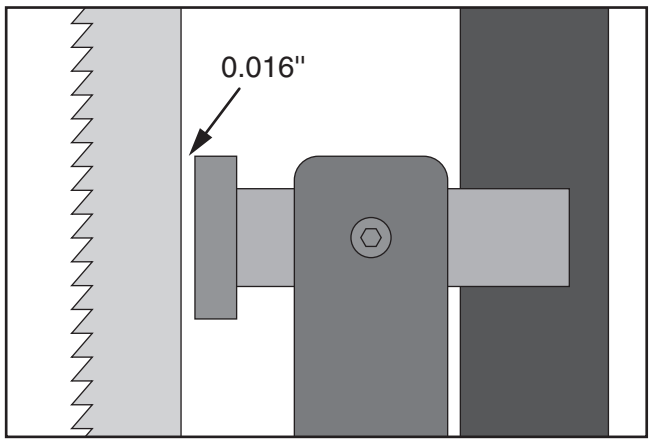


Figure 20. Bearing positioned approximately 0.016" away from back of blade.

4. Tighten thumb screw to lock support bearing in place.

NOTICE

Whenever changing a blade or adjusting tension and tracking, the upper and lower blade support bearings must be re-adjusted before cutting operations.

Adjusting Blade Guide Bearings

The blade guide bearings can be adjusted left-to-right, as well as front-to-back, relative to the blade. Properly adjusted blade guide bearings provide side-to-side support, from just behind the gullets to the back of the blade, to help keep the blade straight while cutting.

There are blade guide bearings on the upper and lower blade guide assemblies. Both adjust in the same manner. The following instructions refer to the upper guide bearings.

Important: Make sure the blade is tracking and tensioned correctly before performing this procedure (see **Tensioning Blade** on **Page 21**).

To adjust blade guides:

1. DISCONNECT MACHINE FROM POWER!

2. Loosen guide block thumb screw shown in **Figure 21**, then position guide bearings just behind blade gullets, as illustrated in **Figure 22**. Retighten screw to secure setting.

   Note: *The guide bearings should be positioned behind the gullets a distance equal to that of the support bearing behind the blade (see **Page 21**).*

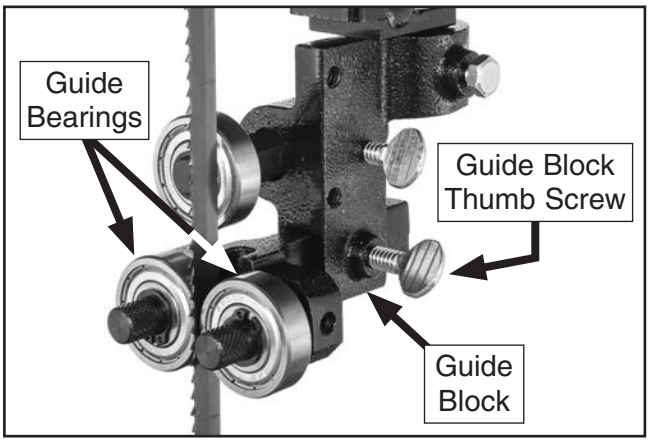


Figure 21. Upper guide bearing components.

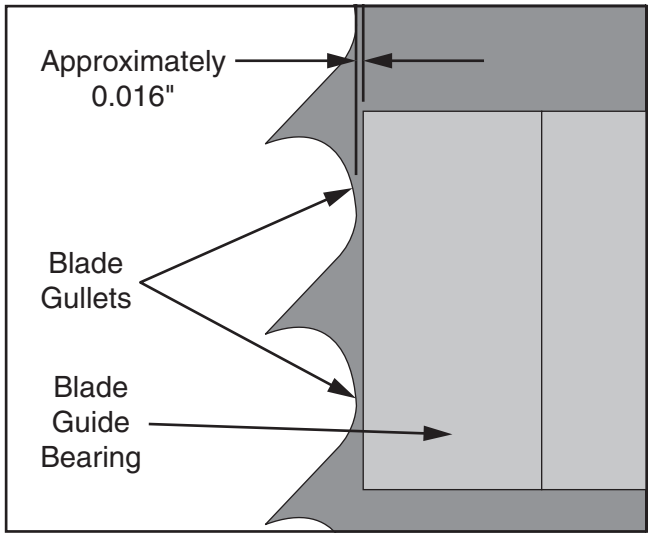


Figure 22. Blade guide bearing positioned just behind blade gullets.

Note: *With wider blades, it may not be possible to bring the guide bearings just behind the blade gullets. Position them as far forward as possible without allowing the guide bearing housing to touch the back of the blade.*

NOTICE

Blade teeth are angled out slightly, protruding wider than the blade thickness; this is known as blade "tooth set" (see Figure 23). If angled out parts of the teeth contact guide bearings during operation, they will get bent inward, ruining the tooth set. Therefore, the support bearing must be set to prevent teeth from contacting guide bearings during operation (refer to Page 21 for details).

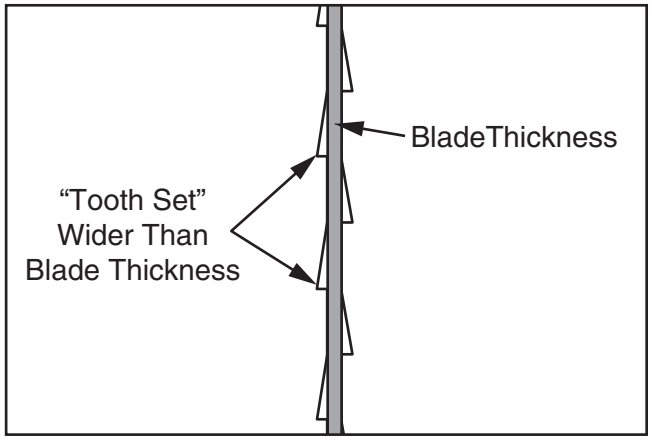


Figure 23. Illustration of blade "tooth set."

3. Loosen both guide bearing adjustment set screws (see **Figure 24**), then position guide bearings so they are close to—but not quite touching—sides of blade.

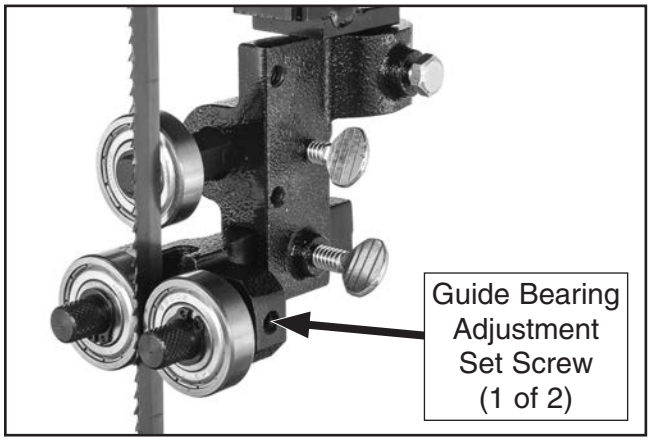


Figure 24. Location of upper guide bearing adjustment set screws.

Note: *When the blade guide bearings are properly adjusted, they should only rotate during cutting operations, or when the blade is deflected to the left or right (see* ***Figure*** **25***).*

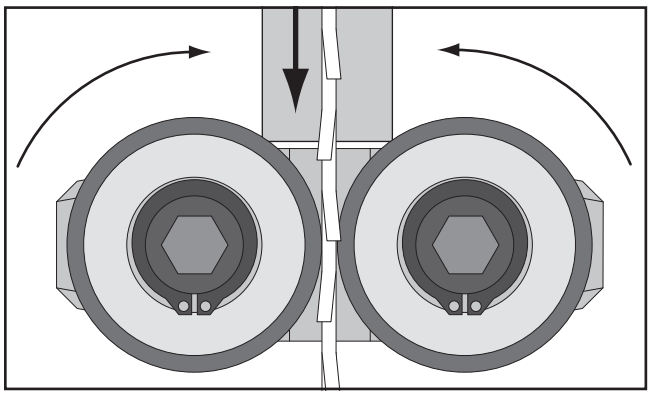


Figure 25. Blade guide bearings rotating during cutting operation.

4. Retighten set screws to secure settings. Rotate blade by hand to check the setting, and, if necessary, repeat **Steps 3–4**.

NOTICE

Whenever changing blade or adjusting blade tension or tracking, the guide bearings must be re-adjusted before resuming operation to ensure proper blade support.

Adjusting Positive Stop

An adjustable positive stop allows the table to easily return to 90˚ after tilting.

To set the positive stop 90˚ to the blade:

1. Make sure the blade is correctly tensioned as described in the **Tensioning Blade** instructions on **Page 21**.

2. DISCONNECT BANDSAW FROM POWER!

3. Loosen the two plastic knobs that secure the table to the trunnions.

4. Loosen the hex nut that locks the positive stop bolt in place.

5. Raise the upper blade guide assembly and place a 6" machinist's square or try-square on the table next to the side of the blade as illustrated in **Figure 26**. Adjust the positive stop bolt to raise or lower the table until the table is 90˚ to the blade.

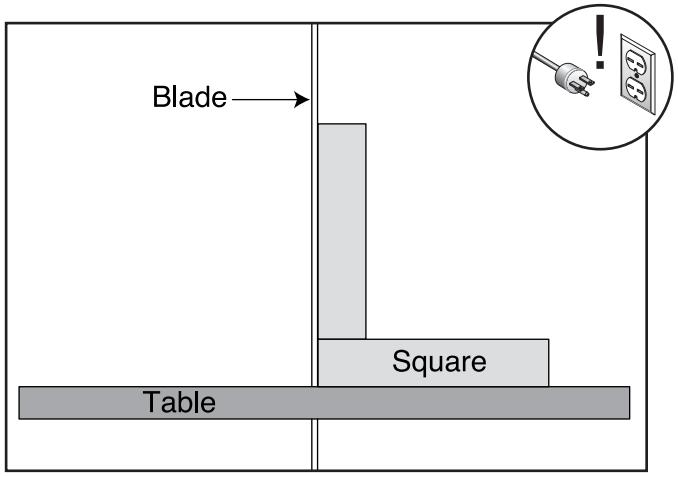


Figure 26. Squaring table to blade.

6. Secure the plastic knobs and lock the positive stop bolt by tightening the hex nut against the casting. *Ensure that the bolt does not turn by holding it with another wrench while tightening the hex nut.*

Setting Table Tilt Scale to 0˚

The pointer on the table tilt scale must be calibrated in order for the scale reading to be accurate.

To calibrate the pointer on the table tilt scale:

1. Make sure the blade is tensioned/tracking correctly and that the table is 90˚ to the blade (this procedure should be already completed with the **Adjusting Positive Stop** instructions).

2. Loosen the pointer screw.

3. Align the tip of the pointer with the 0˚ mark on the table tilt scale.

4. Tighten the pointer screw.

Aligning Table

To ensure cutting accuracy when the table is first installed, the table should be aligned so the miter slot is parallel to the bandsaw blade. *This procedure works best with a ¾" blade.*

To align the miter slot parallel to the bandsaw blade:

1. Make sure the blade is tracking properly and that it is correctly tensioned.
2. DISCONNECT BANDSAW FROM POWER!
3. Loosen the trunnion bolts that secure the trunnions to the table.
4. Place an accurate straightedge along the blade. The straightedge should lightly touch both the front and back of the blade (the flat part only) without touching the blade teeth.
5. Use a fine ruler to gauge the distance between the straightedge and the miter slot. The distance you measure should be the same at both the front and back ends of the miter slot.
6. Adjust the table as needed until the distance between the blade and miter slot is equal at both ends.
7. Tighten the trunnion bolts.

Aligning Fence

To ensure cutting accuracy, the fence must be parallel with the miter slot.

To align the fence parallel with the miter slot:

1. If the fence is mounted on the left-hand side of the blade, remove it and remount it on the right-hand side of the blade.
2. Adjust the fence face parallel with the edge of the miter slot.
3. Loosen the two cap screws that mount the front rail to the table.
4. Place shims between the front rail and the table as necessary to make the fence parallel with the miter slot.

   Note: *Shim stock works well for this, but small pieces of paper can also work in a pinch.*
5. Tighten the front rail mounting bolts.

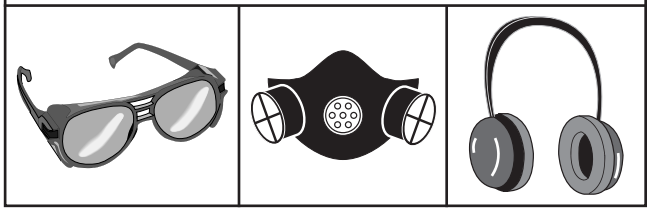
NOTICE

Adjusting the fence parallel to the miter slot does not guarantee straight cuts. The miter slot may need to be adjusted parallel to the side of the blade. Refer to the Aligning Table instructions.

SECTION 4: OPERATIONS

⚠WARNING

Damage to your eyes, lungs, and ears could result from using this machine without proper protective gear. Always wear safety glasses, a respirator, and hearing protection when operating this machine.



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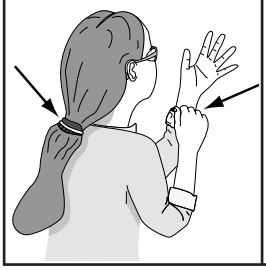


Loose hair and clothing could get caught in machinery and cause serious personal injury. Keep loose clothing and long hair away from moving machinery.

NOTICE

If you have never used this type of machine or equipment before, WE STRONGLY RECOMMEND that you read books, trade magazines, or get formal training before beginning any projects. Regardless of the content in this section, Grizzly Industrial will not be held liable for accidents caused by lack of training.

Basic Controls

Motor Switch: Starts and stops the motor. Only works after the power switch has been reset and turned ***ON***.

Speed Dial: Adjusts the speed of the blade, which is displayed in FPM on the digital display.

Power Switch: Turns power ON/OFF to the motor switch. OFF button must be reset (by pushing it all the way in) before power will turn ***ON*** again.

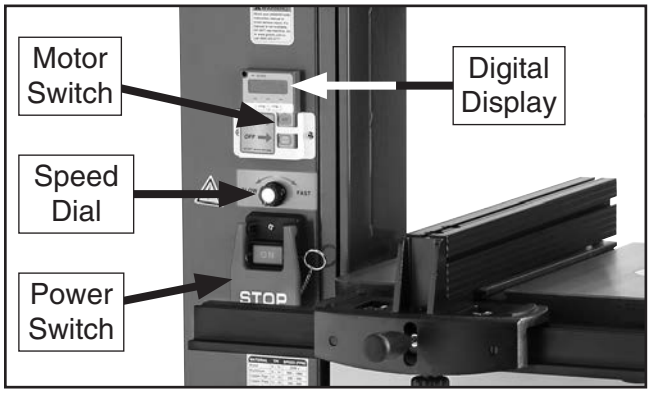


Figure 27. Motor, speed, and power controls.

Blade Tension Handle: Increases/decreases blade tension when rotated. Quickly releases blade tension when pivoted up.

Blade Guide Elevation Handwheel: Raises/lowers the upper blade guide assembly when rotated. The blade guide assembly should always be within 1" of the workpiece when cutting.

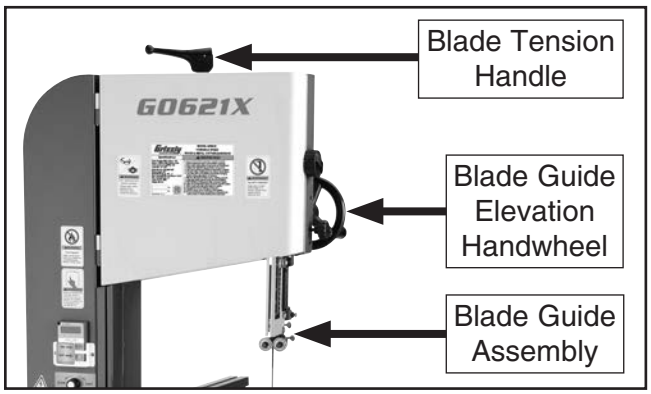


Figure 28. Blade tension/guide post controls.

Workpiece Inspection (Wood)

Some wood workpieces are not safe to cut or may require modification before they are safe to cut.

Before cutting wood, get in the habit of inspecting all workpieces for the following:

- ***Foreign Objects:*** Nails, staples, dirt, rocks and other foreign objects are often embedded in wood. While cutting, these objects can become dislodged and hit the operator or break the blade, which might then fly apart. Always visually inspect your workpiece for these items. If they can't be removed, do NOT cut the workpiece.

- ***Large/Loose Knots:*** Loose knots can become dislodged during the cutting operation. Large knots can cause blade damage. Choose workpieces that do not have large/loose knots or plan ahead to avoid cutting through them.

- ***Wet or "Green" Stock:*** Cutting wood with a moisture content over 20% causes unnecessary wear on the blade and yields poor results.

- ***Excessive Warping:*** Workpieces with excessive cupping, bowing, or twisting are dangerous to cut because they are unstable and can move unpredictably when being cut. DO NOT use workpieces with these characteristics!

- ***Minor Warping:*** Workpieces with slight cupping can be safely supported if the cupped side faces the table or fence. On the contrary, a workpiece supported on the bowed side will rock during a cut, leading to loss of control.

Overview

The bandsaw is one of the most versatile wood cutting tools in the shop. It is capable of performing the following types of cuts:

Straight Cuts

- Miters
- Angles
- Compound Angles
- Resawing
- Ripping
- Crosscutting

Irregular Cuts

- Simple and Complex Curves
- Duplicate Parts
- Circles
- Beveled Curves

Basic Cutting Tips

Follow these basic tips when operating the bandsaw:

- Keep the upper blade guide assembly adjusted to within 1" of the workpiece.

- Replace, sharpen, and clean blades as necessary. Make adjustments periodically to keep the saw running in top condition.

- Use light and even pressure while cutting. Light contact with the blade makes it easier to follow lines and prevents extra friction.

- Avoid twisting the blade when cutting around tight corners. Allow the blade to saw around the corners.

- Misusing the saw or using incorrect techniques is unsafe and results in poor cuts. Remember—the blade does the cutting with the operator's guidance.

- Never start a cut with the blade in contact with the workpiece, and do not start a cut on a sharp edge.

- When cutting metal, pay attention to the characteristics of the chips when cutting—they are good indicators of proper blade speed and feed rate. **Figure 29** shows the basic chip characteristics and what they mean.

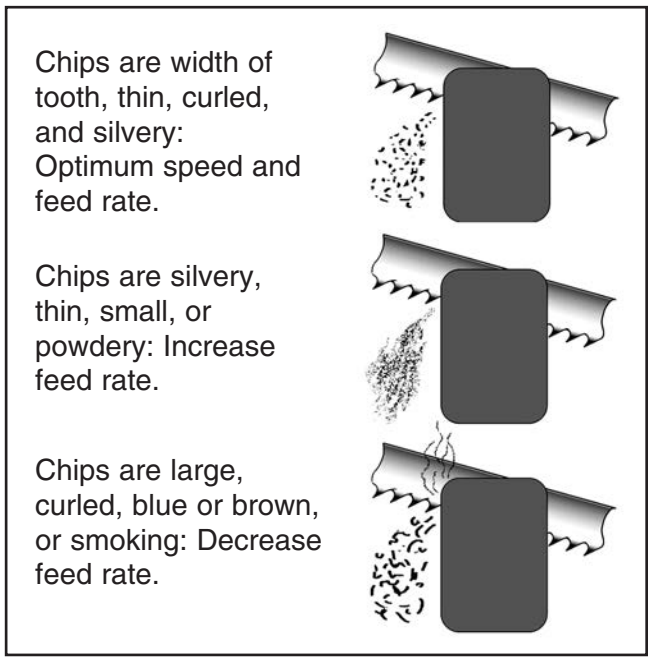


Figure 29. Reading chip characteristics.

Table Tilt

The bandsaw table tilts from -5˚ left to 45˚ right.

To tilt the table:

1. Loosen the two trunnion knobs underneath the table.

2. Tilt the table to the desired angle. (Refer to the angle gauge on the front table trunnion.)

3. Retighten both table-tunnion knobs.

NOTICE

The positive stop must be removed to move the table to the left.

Guide Post

The guide post (shown in **Figure 30**) connects the upper blade guide assembly to the bandsaw. The guidepost allows the blade guide assembly to move up or down to be as close to the workpiece as possible. In order to cut accurately and safely, the bottom of the blade guide assembly must be no more than 1" from the workpiece at all times—this positioning provides the greatest blade support and minimizes the amount of moving blade exposed to the operator.

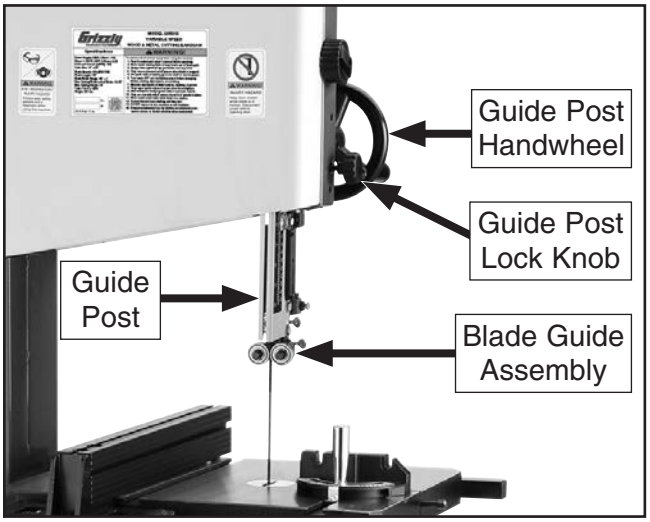


Figure 30. Guide post controls.

To adjust the blade guide assembly on the guide post (the bandsaw must be turned *OFF*):

1. Make sure that the blade tension, blade tracking, support bearing, and blade guides are adjusted correctly.

2. Loosen the guide post lock knob shown in **Figure 30**.

3. Raise/lower the guide post so the bottom of the blade guide assembly is less than 1" from the top of the workpiece.

4. Lock the guide post with the lock knob.

Ripping

When cutting wood, "Ripping" means cutting with the grain. For plywood or metal, ripping simply means cutting down the length of the workpiece.

To make a rip cut:

1. Adjust the fence to match the width of the cut on your workpiece, then lock the fence in place.

2. Adjust the blade guide assembly to less than 1" away from the workpiece.

3. After all safety precautions have been met, turn the bandsaw ***ON***. Slowly feed the workpiece into the blade and continue with the cut until the blade is completely through the workpiece. **Figure 31** shows a typical ripping operation.

   Note: *If you cut narrow pieces, use a push stick to protect your fingers.*

Figure 31. Typical ripping operation.

⚠WARNING

NEVER place fingers or hands in the line of cut. If you slip, your hands or fingers may go into the blade. ALWAYS use a push stick when ripping narrow pieces. Failure to follow these warnings may result in serious personal injury!

Crosscutting

"Crosscutting" means cutting across the grain of wood. For plywood or metal, crosscutting simply means cutting across the width of the workpiece.

To make a 90˚ crosscut:

1. Mark the workpiece on the edge where you want to begin the cut.

2. Adjust the blade guide assembly to to less than 1" away from the workpiece and make sure the miter gauge is set to 90°.

3. Move the fence out of the way. Place the workpiece evenly against the miter gauge.

4. Hold the workpiece against the miter gauge and align the mark with the blade.

5. After all safety precautions have been met, turn the bandsaw ***ON***. Slowly feed the workpiece into the blade and continue the cut until the blade is all the way through the workpiece. **Figure 32** shows a typical crosscutting operation.

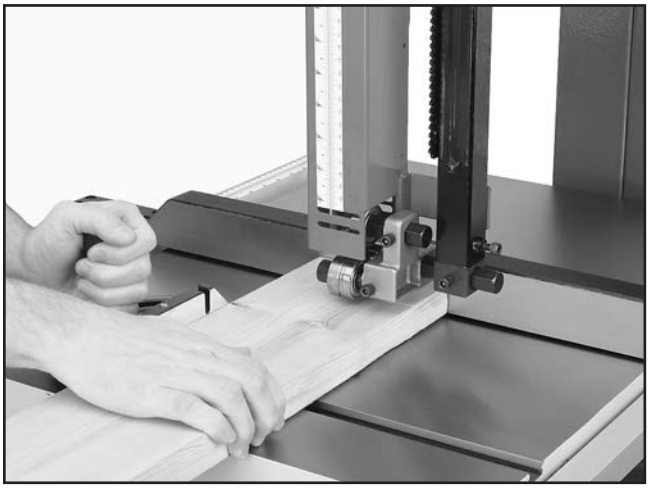


Figure 32. Typical crosscutting operation.

Resawing

"Resawing" (see **Figure 33**) means cutting the workpiece into two or more thinner workpieces.

One of the most important considerations for resawing is blade selection—a wide blade cuts straighter and is less prone to blade lead (see **Page 44** for more info on blade lead).

For most applications, use a blade with a hook or a skip tooth style. Choose blades with fewer teeth-per-inch (from 3 to 6), because they offer larger gullet capacities for clearing sawdust, reducing heat buildup and reducing strain on the motor.

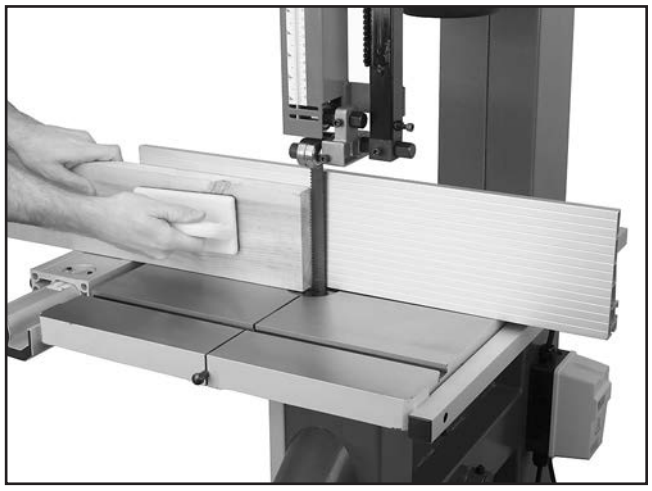


Figure 33. Typical resawing operation.

⚠WARNING

When resawing thin pieces, a wandering blade (blade lead) can tear through the side of the workpiece, exposing your hands to the blade teeth. Always use push blocks when resawing and keep your hands clear of the blade.

To resaw a workpiece:

1. Verify that the bandsaw is setup properly and that the table is perpendicular to the blade.

2. Use the widest blade your bandsaw will accept. **Note:** *The blade must also be sharp and clean.*

3. Adjust the fence to the desired width of cut, and lock it in place.

NOTICE

The scale on the front rail will NOT be accurate when using the resaw fence.

4. Support the ends of the board if necessary.

5. Turn the bandsaw ***ON***.

6. Using push paddles and a push stick, maintain workpiece pressure against the fence and table, and slowly feed the workpiece into the moving blade until the blade is completely through the workpiece (see **Figure 33**).

Cutting Curves

When cutting curves, simultaneously feed and turn the stock carefully so the blade follows the layout line without twisting. If a curve is so abrupt that it is necessary to repeatedly back up and cut a new kerf, use a narrower blade, a blade with more TPI (teeth per inch), or make more relief cuts.

Relief cuts are made through the waste portion of the workpiece and stop at the layout line. Relief cuts reduce the chance that the blade will be pinched or twisted during the cut.

The list below shows the minimum radius that can be cut by common blade widths.

Width	Radius
1/8"	1/8"
3/16"	3/8"
1/4"	5/8"
3/8"	1 1/4"
1/2"	2 1/2"
5/8"	3 3/4"
3/4"	5 1/2"

Figure 34. Blade width radii.

Stacked Cuts

One of the benefits of a bandsaw is its ability to cut multiple copies of a particular shape by stacking workpieces together and cutting them as one. Before making stacked cuts, ensure that both the table and the blade are properly adjusted to 90°; otherwise, any error will be compounded.

To complete a stacked cut:

1. Align your pieces from top-to-bottom to ensure that each piece has adequate scrap to provide a clean, unhampered cut.

2. Secure all the pieces together in a manner that will not interfere with the cutting. For wood, hot glue on the edges works well, as do brad nails through the waste portion. (Be careful not to cut into the brads or you may break the blade!)

3. On the face of the top piece, mark the shape you intend to cut.

4. Make relief cuts perpendicular to the outline of your intended shape in areas where changes in blade direction could cause the blade to bind.

5. Cut the stack of pieces as though you were cutting a single piece. Follow your layout line with the blade kerf on the waste side of your line as shown in **Figure 35**.

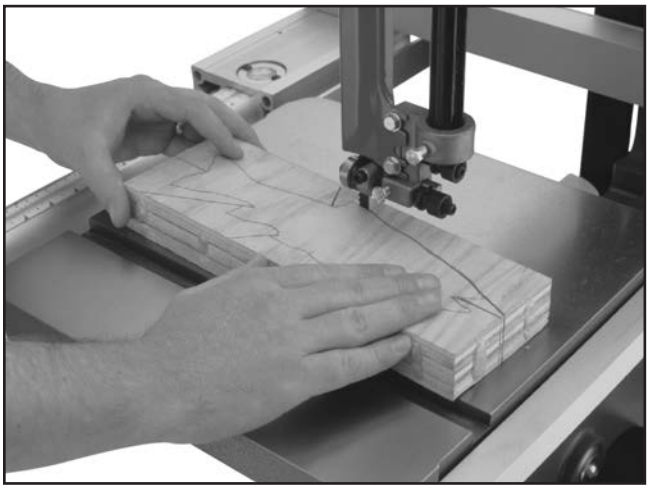


Figure 35. Typical stacked cut.

Blade Selection (Wood Cutting)

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

Blade Length

Measured by the circumference, blade lengths are usually unique to the brand of your bandsaw and the distance between wheels. The Model G0621X uses 108" long blades. Refer to **Page 37** for blade replacements.

Blade Width

Measured from the back of the blade to the tip of the blade tooth (the widest point), blade width is often the first consideration given to blade selection. Blade width dictates the largest and smallest curve that can be cut, as well as how accurately it can cut a straight line.

The Model G0621X uses blades from ⅛" to 1" in width. Always pick the size of blade that best suits your application.

- ***Curve Cutting:*** Use the chart in **Figure 34** to determine the correct blade for curve cutting. Determine the smallest radius curve that will be cut on your workpiece and use the corresponding blade width.

- ***Straight Cutting*****:** Use the largest width blade that you own. Narrow blades can cut tight curves (a small radius) but are not very good at cutting straight lines because they naturally wander (blade lead). Large blades excel at cutting straight lines and are less prone to wander.

Tooth Style

When selecting blades, another option to consider is the shape, gullet size, teeth set and teeth angle—otherwise known as “Tooth Style."

Figure 36 illustrates the three main categories of tooth style:

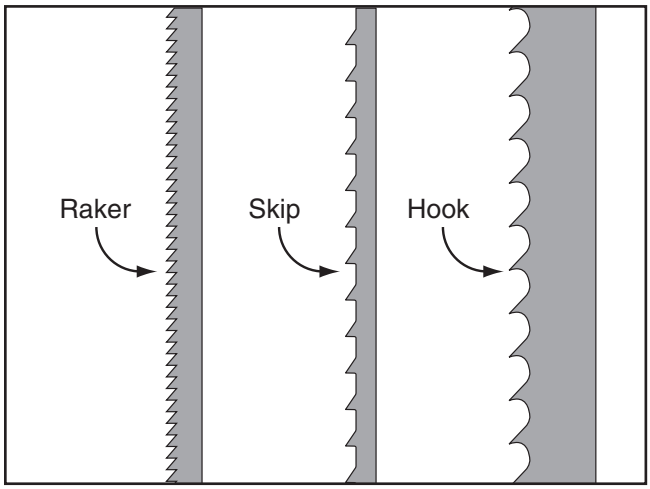


Figure 36. Raker, Skip & Hook tooth styles.

- ***Raker:*** This style is considered to be the standard because the tooth size and shape are the same as the tooth gullet. The teeth on raker blades usually are very numerous, have no angle, and produce cuts by scraping the material; these characteristics result in very smooth cuts, but do not cut fast and generate more heat than other types while cutting.

- ***Skip:*** This style is similar to a raker blade that is missing every other tooth. Because of the design, skip toothed blades have a much larger gullet than raker blades, and therefore, cut faster and generate less heat. However, these blades also leave a rougher cut than raker blades.

- ***Hook:*** The teeth on this style have a positive angle (downward) which makes them dig into the material, and the gullets are usually rounded for easier waste removal. These blades are excellent for the tough demands of resawing and ripping thick material.

Tooth Pitch

Usually measured as TPI (teeth per inch), tooth pitch determines the size/number of the teeth. More teeth per inch (fine pitch) will cut slower, but smoother; while fewer teeth per inch (coarse pitch) will cut rougher, but faster. As a general rule, choose blades that will have at least three teeth in the material at all times. Use fine pitched blades on harder woods and coarse pitched blades on softer woods.

Blade Care

A bandsaw blade is a delicate piece of steel that is subjected to tremendous strain. You can obtain longer use from a bandsaw blade if you give it fair treatment and always use the appropriate feed rate for your operation.

Be sure to select blades with the proper width, style, and pitch for each application. The wrong choice of blades will often produce unnecessary heat which will shorten the life of your blade.

A clean blade will perform much better than a dirty blade. Dirty or gummed up blades pass through the cutting material with much more resistance than clean blades. This extra resistance also causes unnecessary heat. Grizzly sells resin/pitch dissolving cleaners that are excellent for cleaning dirty blades.

Blade Breakage

Many conditions may cause a bandsaw blade to break. Blade breakage is unavoidable, in some cases, since it is the natural result of the peculiar stresses that bandsaw blades must endure. Blade breakage is also due to avoidable circumstances. Avoidable breakage is most often the result of poor care or judgement on the part of the operator when mounting or adjusting the blade or support guides.

The most common causes of blade breakage are:

- Faulty alignment/adjustment of the guides.
- Forcing or twisting a wide blade around a short radius.
- Feeding the workpiece too fast.
- Dull teeth or damaged tooth sufficient set.
- Overtensioned blade.
- Top blade guide assembly set too high above the workpiece.
- Using a blade with a lumpy or improperly finished braze or weld.
- Continuously running the bandsaw when not in use.
- Leaving blade tensioned when not in use.
- Using the wrong TPI for the workpiece thickness. (The general rule of thumb is 3 teeth in the workpiece at all times.)

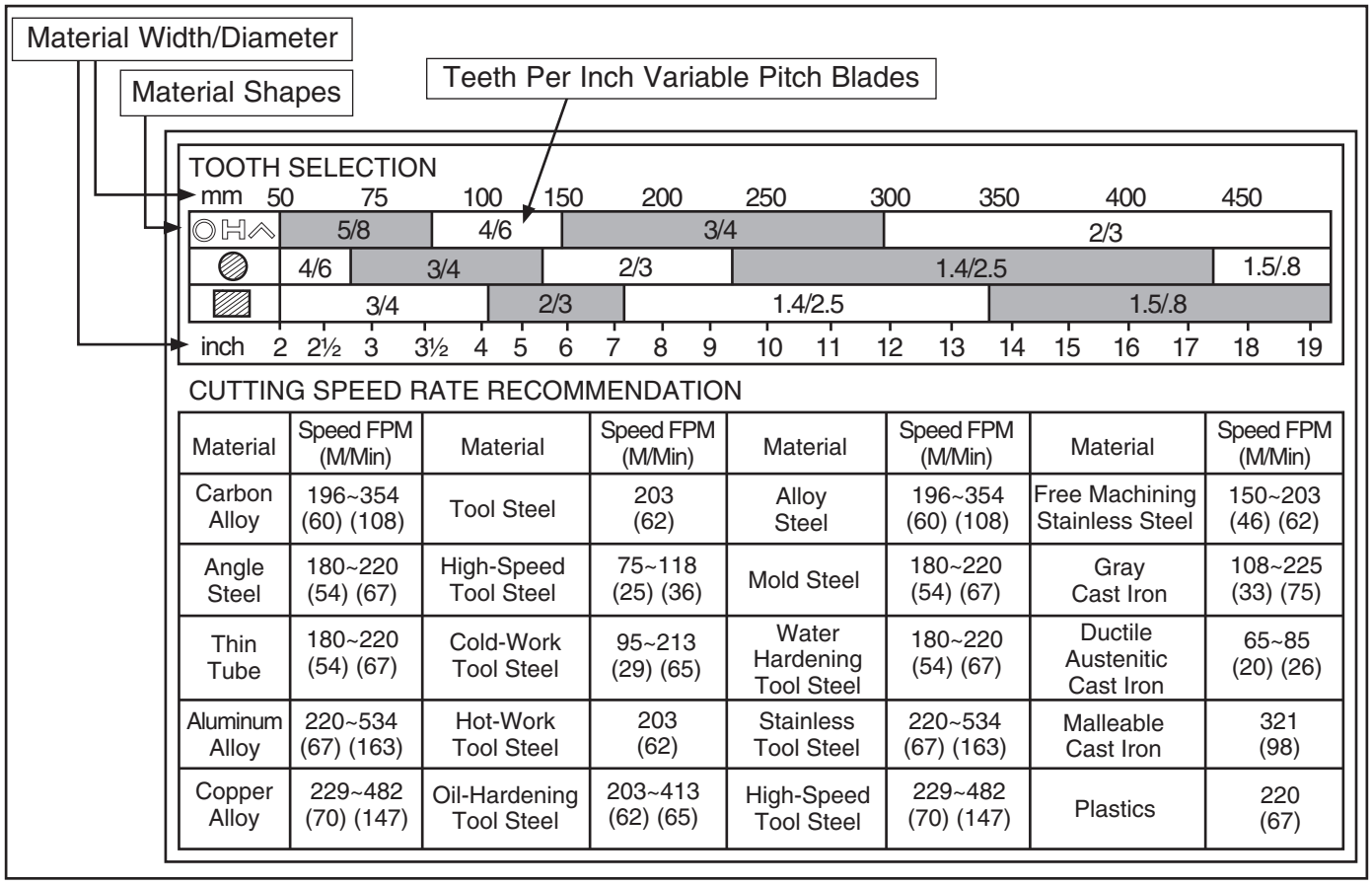
Blade Selection (Metal Cutting)

Selecting the right blade for the job depends on a variety of factors, such as the type of material being cut, hardness of the material, material shape machine capability, and operator technique.

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

To select the correct blade TPI:

1. Measure the material thickness. This measurement is the length of cut taken from where the tooth enters the workpiece, sweeps through, and exits the workpiece.
2. Refer to the "Material Width/Diameter" row of the blade selection chart in **Figure 37** and read across to find the workpiece thickness you need to cut.
3. Refer to the "Material Shapes" row and find the shape and material to be cut.
4. In the applicable row, read across to the right and find the box where the row and column intersect. Listed in the box is the minimum TPI recommended for the variable tooth pitch blades.
5. The "Cutting Speed Rate Recommendation" section of the charts offers guidelines for various metals, given in feet per minute (speed FPM) and meters per minute in parenthesis. Choose the speed closest to the number shown in the chart.

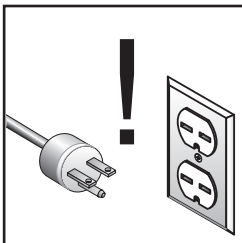


CUTTING SPEED RATE RECOMMENDATION

Material	Speed FPM (M/Min)	Material	Speed FPM (M/Min)	Material	Speed FPM (M/Min)	Material	Speed FPM (M/Min)
Carbon Alloy	196~354 (60) (108)	Tool Steel	203 (62)	Alloy Steel	196~354 (60) (108)	Free Machining Stainless Steel	150~203 (46) (62)
Angle Steel	180~220 (54) (67)	High-Speed Tool Steel	75~118 (25) (36)	Mold Steel	180~220 (54) (67)	Gray Cast Iron	108~225 (33) (75)
Thin Tube	180~220 (54) (67)	Cold-Work Tool Steel	95~213 (29) (65)	Water Hardening Tool Steel	180~220 (54) (67)	Ductile Austenitic Cast Iron	65~85 (20) (26)
Aluminum Alloy	220~534 (67) (163)	Hot-Work Tool Steel	203 (62)	Stainless Tool Steel	220~534 (67) (163)	Malleable Cast Iron	321 (98)
Copper Alloy	229~482 (70) (147)	Oil-Hardening Tool Steel	203~413 (62) (65)	High-Speed Tool Steel	229~482 (70) (147)	Plastics	220 (67)

Figure 37. Blade selection and speed chart.

Blade Changes



⚠WARNING

Always disconnect power to the machine when changing blades. Failure to do this may result in serious personal injury.

⚠CAUTION

All saw blades are dangerous and may cause personal injury. To reduce the risk of being injured, wear leather gloves when handling saw blades.

To replace the blade:

1. DISCONNECT BANDSAW FROM POWER!
2. Release the tension lever.
3. Remove the table insert and the table pin. Adjust the upper and lower guide blocks away from the blade.
4. Open the upper and lower wheel covers and slide the blade off both wheels.
5. Rotate the blade 90˚ and slide it through the slot in the table.
6. Slide the blade through the table slot, ensuring that the teeth are pointing down toward the table. *If the teeth will not point downward in any orientation, the blade is inside-out. Put on heavy gloves, remove the blade, and twist it rightside-out.*
7. Slip the blade through the guides, and mount it over the upper and lower wheels.
8. Apply tension.
9. Turn the tension knob until proper blade tension has been reached according to the blade thickness scale shown in **Figure 38**.

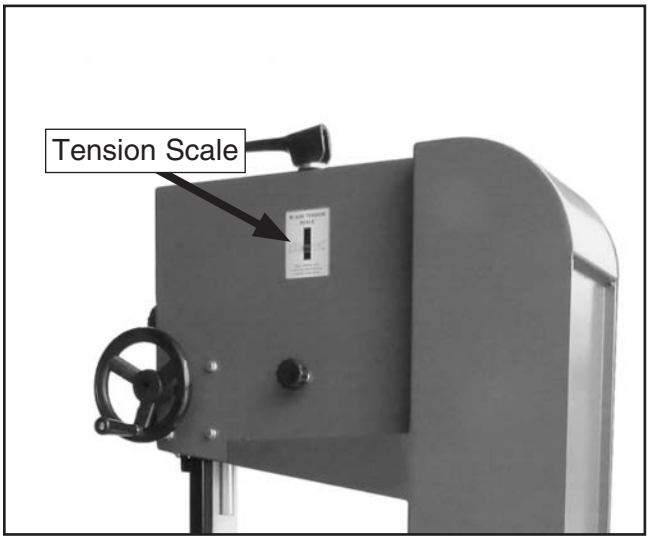


Figure 38. Tensioner adjustment.

10. Check and adjust the tracking (**Page 19**).
11. Adjust the upper/lower guide blocks and the support bearings (**Pages 21 & 23**).
12. Close the wheel covers.
13. Replace the table insert and table pin, being sure not to use excessive force when inserting the table pin.

Scale Calibration

You may need to recalibrate the fence scale after changing or adjusting the blade, or if the scale is not producing accurate cuts. Recalibrate the fence scale by adjusting the hairline indicator on the fence and testing your adjustment by cutting a piece of scrap wood.

To calibrate the scale:

1. Set the fence anywhere along the scale and locate a piece of scrap wood with at least one straight edge. *Joint the edge with a jointer (if needed) to make the edge straight.*

2. Hold the straight edge of the workpiece firmly against the fence, and feed the workpiece through the saw blade with a push stick.

3. Measure the width of the cut workpiece. The width of the workpiece should match the reading on the fence scale.

4. If the reading on the scale is not the same as the width of the cut workpiece, loosen the screws on the magnifying window (see **Figure 39**) and adjust it to match the width of the cut workpiece.

5. Tighten the screws; the scale is now correctly calibrated.

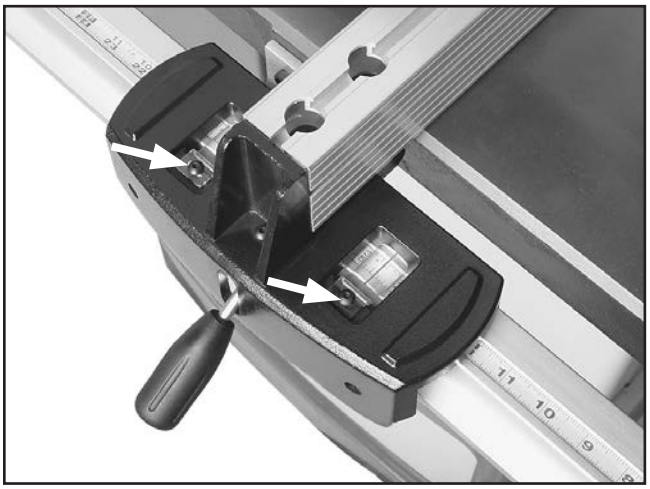


Figure 39. Scale calibration screws.

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.

T28000—"Bear Crawl" Mobile Base

We took years of input and months of testing and design to come out with the Grizzly "Bear Crawl Mobile Base. Its 1200 lb. capacity, steel and rubber heavy-duty ball bearing wheels, and toe flip-stops are only a few of the features that will make this mobile base a staple under your machines for years to come. Adjusts from 19" x 21" to 29-½" x 29-½"!

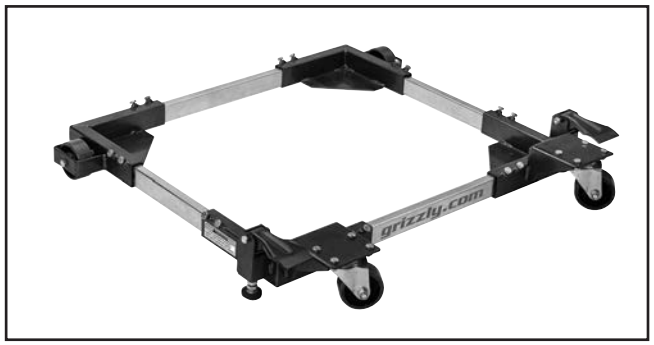


Figure 40. T28000 Bear Crawl Mobile Base.

Grizzly Bandsaw Blades

MODEL	LENGTH	WIDTH	TPI	GAUGE
H9736	108⅛"	1"	3-4 VP	0.032
H9737	108⅛"	1"	4-6 VP	0.032
H9738	108⅛"	1"	5-8 VP	0.032
H9739	108⅛"	1"	6-10 VP	0.032
H9740	108⅛"	1"	8-12 VP	0.032
H9741	108⅛"	1"	10-14 VP	0.032
H9956	108"	⅛"	14 Raker	0.025
H9957	108"	⅛"	18 Raker	0.025
H9958	108"	3/16"	4 Skip	0.025
H9959	108"	3/16"	10 Raker	0.025
H9960	108"	3/16"	14 Raker	0.025
H9961	108"	¼"	4 Hook	0.025
H9962	108"	¼"	6 Hook	0.025
H9963	108"	¼"	10 Raker	0.025
H9964	108"	¼"	14 Raker	0.025
H9965	108"	¼"	18 Raker	0.025
H9966	108"	⅜"	4 Hook	0.025
H9967	108"	⅜"	6 Hook	0.025
H9968	108"	⅜"	10 Raker	0.025
H9969	108"	⅜"	14 Raker	0.025
H9970	108"	½"	3 Hook	0.025
H9971	108"	½"	4 Hook	0.025
H9972	108"	½"	6 Hook	0.025
H9973	108"	½"	10 Raker	0.025
H9974	108"	½"	14 Raker	0.025
H9975	108"	¾"	3 Hook	0.032
H9976	108"	¾"	6 Hook	0.032
H9977	108"	¾"	10 Raker	0.032
H9978	108"	1"	2 Hook	0.035
H9979	108"	1"	6 Hook	0.035

Basic Eye Protection
T20501—Face Shield Crown Protector 4"
T20502—Face Shield Crown Protector 7"
T20503—Face Shield Window
T20451—"Kirova" Clear Saftey Glasses
T20452—"Kirova" Anti-Reflective S. Glasses
T20456—DAKURA Safety Glasses, Black/Clear

Figure 41. Basic eye protection.

Recommended Metal Protectants

G5562—SLIPIT® 1 Qt. Gel
G5563—SLIPIT® 12 Oz. Spray
G2870—Boeshield® T-9 4 Oz. Spray
G2871—Boeshield® T-9 12 Oz. Spray
H3788—G96® Gun Treatment 12 Oz. Spray
H3789—G96® Gun Treatment 4.5 Oz. Spray

Figure 42. Recommended products for protecting unpainted cast iron/steel part on machinery.

H2499—Small Half-Mask Respirator
H3631—Medium Half-Mask Respirator
H3632—Large Half-Mask Respirator
H3635—Cartridge Filter Pair P100
Wood dust has been linked to nasal cancer and severe respiratory illnesses. If you work around-dust everyday, a half-mask respirator can be a lifesaver. Also compatible with safety glasses!

Figure 43. Half-mask respirator with disposable cartridge filters.

T27555—Blade Welder 2.0 KVA
Produce high-quality welded bandsaw blades from bulk coils of band stock with these portable blade welders! Each unit features a blade shear, grinder, and welding/annealing station. Operates on 110V, 15A power supply. For ⅛"–½" blade widths.

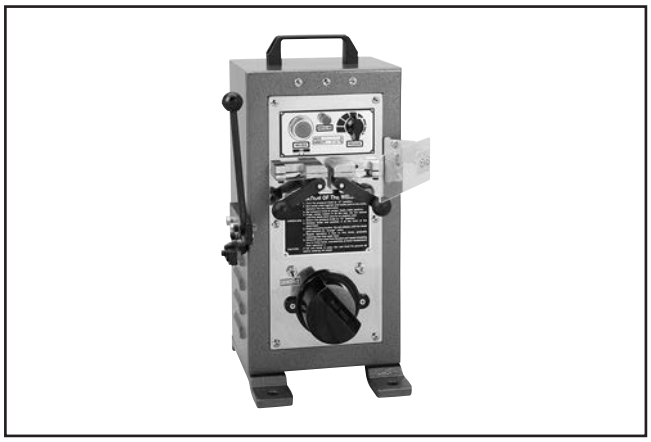
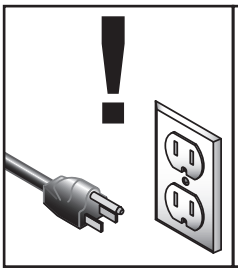


Figure 44. T27555 Blade Welder.

SECTION 6: MAINTENANCE



⚠WARNING

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

Schedule

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

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

- Loose mounting bolts.
- Damaged saw blade.
- Worn or damaged wires.
- Any other unsafe condition.

Monthly Check
- V-belt tension, damage, or wear.
- Remove blade and thoroughly clean all built-up sawdust from the rubber tires on the wheels.
- Clean/vacuum dust buildup from inside cabinet and off motor.

Cleaning

Vacuum excess wood chips and sawdust, and wipe off the remaining dust with a dry cloth. If resin has built up, use a resin dissolving cleaner to remove it.

Once a month, remove the blade and thoroughly clean all built-up sawdust from the rubber tires on the wheels.

Lubricating

Protect the unpainted cast iron surfaces on the table by wiping the table clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces. Keep tables rust-free with regular applications of general lubricants such as G96® Gun Treatment, SLIPIT®, or Boeshield® T-9 (see **Page 38**).

If the table becomes difficult to tilt, remove it and lubricate the trunnions and the slides in the trunnion base with a general lubricant.

Redressing Rubber Tires

As the bandsaw ages, the rubber tires on the wheels may need to be redressed if they harden or glaze over. Redressing the rubber tires improves blade tracking and reduces vibration/blade lead.

If the rubber tires become too worn, then blade tracking will become extremely difficult. At that point, redressing will no longer be effective and the rubber tires must be replaced.

To redress the rubber tires:

1. DISCONNECT BANDSAW FROM POWER!
2. Put on heavy leather gloves.
3. Remove the blade.
4. Clean any built-up sawdust from the rubber tires.
5. Hold 100-grit sandpaper against the rubber tire and rotate the wheel by hand. Only redress the rubber enough to expose a fresh rubber surface.

SECTION 7: SERVICE

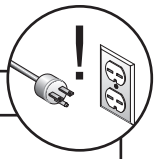
Review the troubleshooting and procedures in this section to fix or adjust your machine if a problem develops. If you need replacement parts or you are unsure of your repair skills, then feel free to call our Technical Support at (570) 546-9663.

Troubleshooting

Motor & Electrical

Symptom	Possible Cause	Possible Solution
Machine does not start or a breaker trips.	1. OFF button has not been reset.	1. Lift paddle and press OFF button down completely until it clicks.
	2. Plug/receptacle is at fault or wired incorrectly.	2. Test for good contacts; correct the wiring.
	3. Motor connection wired incorrectly.	3. Correct motor wiring connections.
	4. Wall fuse/circuit breaker is blown/tripped.	4. Ensure circuit size is suitable for this machine; replace weak breaker.
	5. Power supply switched OFF or is at fault.	5. Ensure power supply is switch on; ensure power supply has the correct voltage.
	6. Wiring is open/has high resistance.	6. Check for broken wires or disconnected/corroded connections, and repair/replace as necessary.
	7. Motor ON button or ON/OFF switch is at fault.	7. Replace faulty ON button or ON/OFF switch.
	8. Inverter/Controller box is at fault.	8. Inspect inverter/controller box; replace if faulty.
	9. Motor is at fault.	9. Test/repair/replace.
Machine stalls or is underpowered.	1. Feed rate/cutting speed too fast for task.	1. Decrease feed rate/cutting speed.
	2. Machine is undersized for the task.	2. Use sharp blade with lower TPI; reduce the feed rate/depth of cut.
	3. Blade is slipping on wheels.	3. Adjust blade tracking and tension to factory specifications.
	4. Motor connection is wired incorrectly.	4. Correct motor wiring connections.
	5. Plug/receptacle is at fault.	5. Test for good contacts; correct the wiring.
	6. Pulley/sprocket slipping on shaft.	6. Replace loose pulley/shaft.
	7. Motor is at fault.	7. Test/repair/replace.
Machine has vibration or noisy operation.	1. Motor or component is loose.	1. Inspect/replace stripped or damaged bolts/nuts, and re-tighten with thread locking fluid.
	2. Blade weld is at fault or teeth are broken.	2. Replace blade.
	3. Blade is at fault.	3. Replace warped, bent, or twisted blade; resharpen dull blade.
	4. V-belt worn or loose.	4. Inspect/replace belt.
	5. Pulley is loose.	5. Realign/replace shaft, pulley, setscrew, and key as required.
	6. Motor mount loose/broken.	6. Tighten/replace.
	7. Machine is incorrectly mounted or sits unevenly.	7. Tighten/replace anchor studs in floor; relocate/shim machine.
	8. Motor fan is rubbing on fan cover.	8. Replace dented fan cover; replace loose/damaged fan.
	9. Motor bearings are at fault.	9. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.

Cutting Operations



Symptom	Possible Cause	Possible Solution
Machine slows when operating.	1. Feeding workpiece too fast. 2. Blade is dull.	1. Reduce feed rate. 2. Replace blade (**Page 35**).
Ticking sound when the saw is running.	1. Blade weld contacting guide/support bearings (a light tick is normal). 2. Blade weld may be failing.	1. Use file or stone to smooth and round the back of the blade; slightly loosen the blade guides. 2. Inspect and replace blade if necessary (**Page 35**).
Blade contacting table insert.	1. Insert installed upside down or backwards. 2. Table improperly mounted or aligned.	1. Re-install insert a different way. 2. Align table (**Page 25**).
Vibration when cutting.	1. Loose or damaged blade. 2. Sawdust buildup on wheels.	1. Tighten or replace blade (**Page 35**). 2. Clean all sawdust from rubber tires on wheels.
Burn marks on the edge of the cut.	1. Too much side pressure when feeding workpiece; blade is binding. 2. Blade too wide for size of radius being cut.	1. Feed workpiece straight into the blade. See **Basic Cutting Tips** on **Page 27**. 2. Install a smaller width blade/increase blade tension. See **Page 35 or 21**.
Rough or poor quality cuts.	1. Feeding workpiece too fast. 2. Blade guides adjusted incorrectly.	1. Reduce feed rate. 2. Re-adjust all blade guides and support bearings.
Sawdust buildup inside cabinet.	1. Clogged dust port. 2. Low CFM (airflow) from the shop vacuum.	1. Clean out dust port. 2. Three options: —Check dust hoses for leaks or clogs. —Connect saw to a more powerful shop vacuum.
Blade wanders or doesn't cut straight.	1. Blade lead. 2. Sawdust buildup on wheels.	1. Refer to Blade Lead on **Page 44**. 2. Clean all sawdust from rubber tires on wheels.
Cuts are not square (vertically).	1. Table tilt is not adjusted to 0˚ or positive stop has moved out of adjustment. 2. Table tilt scale pointer is not calibrated. 3. Table is not square to the blade.	1. Adjust table tilt to 0˚; readjust positive stop if necessary (**Page 24**). 2. Calibrate table tilt scale pointer to 0˚ (**Page 24**). 3. Shim table (**Page 44**).

Miscellaneous

Symptom	Possible Cause	Possible Solution
Blade tension scale is grossly inaccurate.	1. The spring in the blade tension mechanism has lost its "spring." This is caused by not releasing the blade tension when not in use or frequently over-tensioning the bandsaw.	1. Replace spring in the blade tension mechanism, then take better care of the bandsaw by releasing tension when not in use and not over-tensioning the blade.
Wheel is noisy.	1. Wheel bearing is worn out. 2. Belt is too tight (lower wheel).	1. Replace the wheel bearing. 2. Check/loosen the belt tension (**Page 42**).
Blade does not track consistently, correctly, or at all.	1. Wheels are not coplanar or aligned with each other. 2. Rubber tires on wheels are worn out.	1. Adjust wheels to be coplanar/aligned with each other (**Page 45**). 2. Redress the rubber tires on the wheels (**Page 39**); replace the rubber tires on the wheels.

Servicing V-Belts

To ensure optimum power transfer from the motor to the blade, the V-belts must be in good condition and operate under proper tension. Check belt tension at least every 3 months—more often if the bandsaw is used daily. V-belts stretch with use and must be periodically re-tensioned.

Replace the V-belts if they are cracked, frayed, or excessively worn.

Accessing V-Belts

1. DISCONNECT BANDSAW FROM POWER!

2. Open the lower wheel cover.

3. Remove the bandsaw blade.

4. Remove the lower wheel by removing the hex bolt at the center of the wheel, then sliding the wheel off the shaft. (The hex nut has left handed threads, so you must turn it clockwise to loosen it.)

5. Take off the pulley cover plate by removing the six Phillips head screws. You now have access to the V-belts for inspection or service (see **Figure 45**).

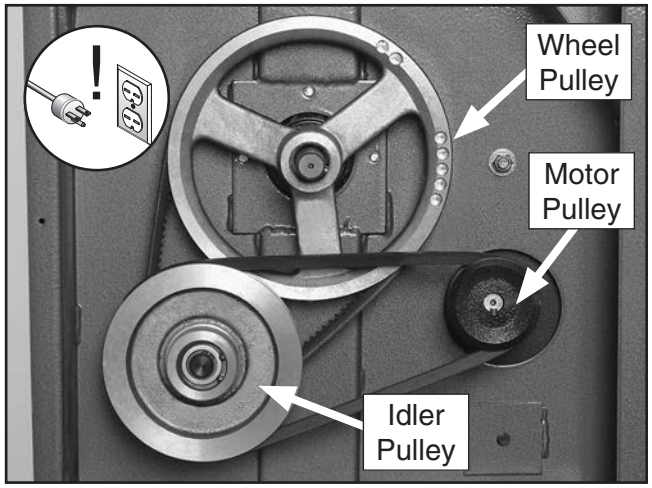


Figure 45. Pulleys and V-belts.

Checking V-Belts

1. Follow all previous instructions for **Accessing V-Belts**.

2. Push the center of each V-belt as illustrated in **Figure 46**, using moderate force. When tensioned correctly, the deflection should be about ¼".

   —If the deflection is more than ¼", then tension that V-belt (see **Page 43**) before doing **Step 4**.

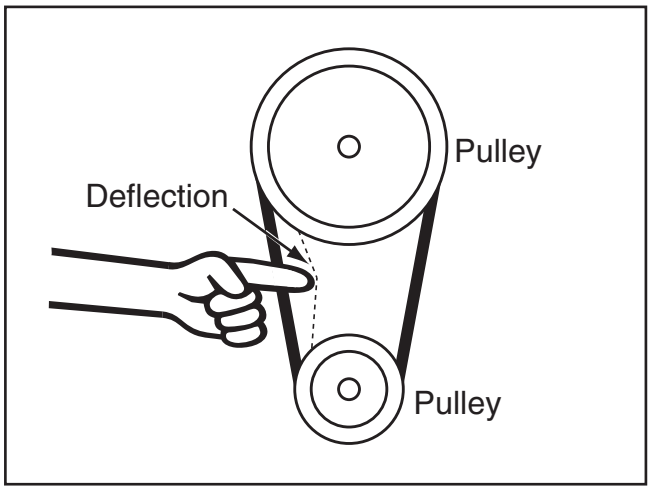


Figure 46. Belt deflection.

3. Use a flashlight to inspect the belt.

   —If a V-belt is cracked, frayed, or glazed, replace it as soon as convenient.

4. Replace the pulley cover, lower wheel, and blade; then close the lower wheel cover.

Tensioning/Replacing V-Belts

1. Follow all previous instructions for **Accessing V-Belts**.

2. Loosen the motor mount bolts shown in **Figure 47**.

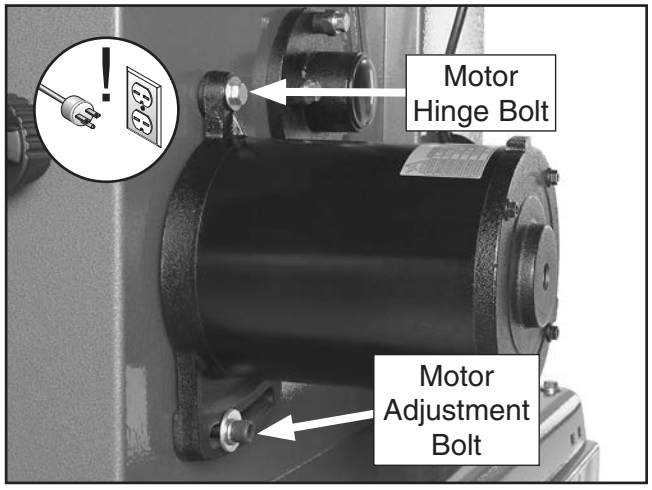


Figure 47. Motor mount bolts.

3. Loosen the idler pulley mounting nut behind the cap shown in **Figure 48**.

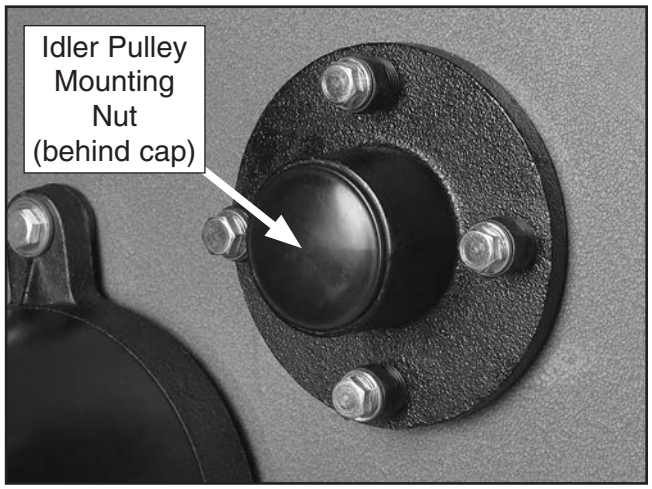


Figure 48. Location of idler pulley mounting nut.

—If you only need to retension the V-belts, skip to **Step 6**.

—If you need to replace the V-belts, continue with **Step 4**.

4. Pivot the motor and slide the idler pulley to loosen the V-belts.

5. Remove old V-belts and install the new V-belts.

6. Slide the idler pulley down to tighten the lower wheel V-belt, hold pressure on the idler pulley, then tighten the mounting nut.

7. Check the wheel pulley V-belt for correct tension. Retension if necessary before continuing.

8. Pivot the motor to tighten the motor V-belt, hold pressure on the motor, then tighten the motor adjustment bolt.

9. Check the motor V-belt for correct tension. Retension if necessary before continuing.

10. When the belt tension is correct, tighten the motor hinge bolt.

11. Replace the pulley cover, lower wheel, and blade; then close the lower wheel cover.

Shimming Table

To ensure accuracy when cutting stacked workpieces, the table should be 90˚ to the back of the blade as shown in **Figure 49**. If the table is not perpendicular to the back of the blade, the table needs to be shimmed.

Shims can be made of any durable object that can be sandwiched between the table and the trunnions. We recommend using shim washers or shim stock because of the wide range of available thicknesses. These items can be purchased at your local hardware store.

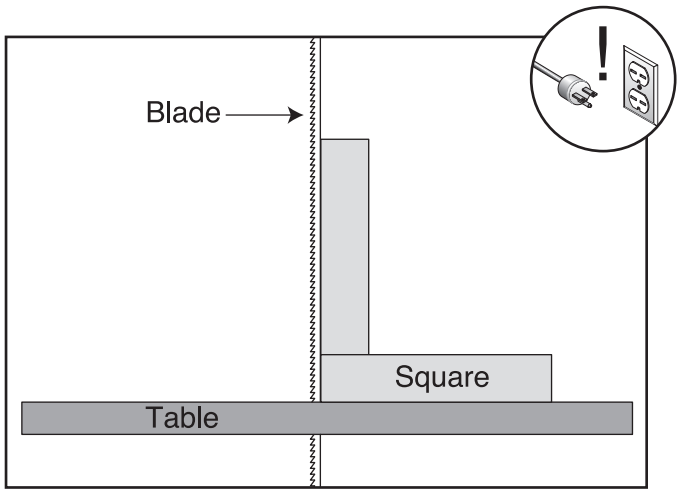


Figure 49. Squaring table to blade back.

To shim the table:

1. Make sure that the blade is tracking properly and that it is correctly tensioned.

2. DISCONNECT BANDSAW FROM POWER!

3. Loosen the trunnion bolts that secure the trunnions to the table.

4. Place shim stock between the table and the two trunnions to shim the table in the desired direction.

   Note: *Another way to shim the table is to add washers between the table and the trunnion.*

5. Follow the **Aligning Table** instructions on **Page 25** to complete this procedure.

Blade Lead

"Blade Lead" means that the blade does not cut straight when using the fence or miter gauge (see **Figure 50**). This is a common condition with all bandsaws. Worn or damaged blades may cause lead and replacing them will fix the problem. Still, if your bandsaw is setup correctly and lead occurs, compensate for it by skewing the fence.

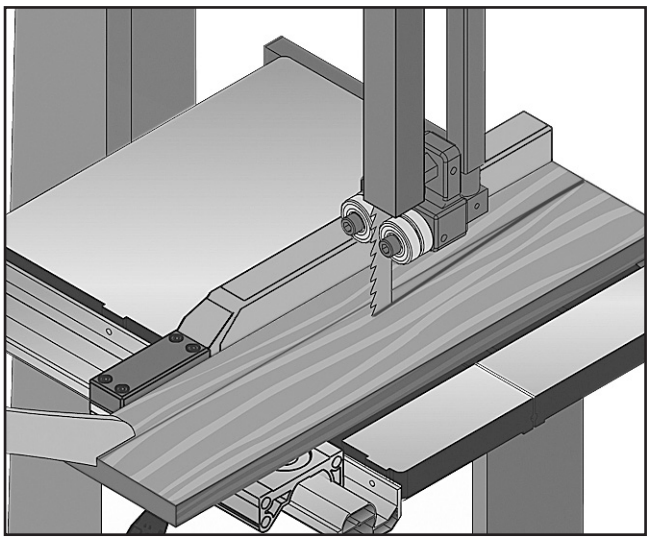


Figure 50. Blade leading away from line of cut.

To correct blade lead, do the following steps and make a test cut before skewing the fence:

1. Ensure that you have proper blade tension (refer to **Page 21**).

2. Ensure that the blade guides are adjusted correctly (refer to **Pages 21 & 23**).

3. Ensure that the miter slot or fence is parallel to the blade (refer to **Page 25**).

To skew your fence:

1. Cut a piece of scrap wood approximately ¾" thick x 3" wide x 17" long. On a wide face of the board, draw a straight line parallel to the long edge.

2. Slide the fence out of the way and cut free-hand along the line. Stop at the halfway point. Turn the bandsaw ***OFF*** and *wait for the blade to stop.*

3. Clamp the board to the bandsaw table without moving it. Now slide the fence over to the board so it barely touches one end of the board.

4. Loosen the two cap screws that mount the front rail to the table.

5. Place shims between the front rail and the table as necessary to make the fence parallel to the edge of the scrap piece.

   Note: *Shim stock works well for this, but small pieces of paper can also work in a pinch.*

To compensate for lead when making straight crosscuts with the miter gauge, you will need to shift the table:

1. Set the miter gauge to 90° and verify that the gauge body is square to the miter bar, using a 90° square.

2. On a scrap piece of wood, mark a line that is perpendicular to the front edge of the workpiece.

3. Starting where the line begins, cut the board by pushing it through the blade with the miter gauge.

4. Loosen the table mounting bolts, and shift the table to compensate for the blade lead.

5. Repeat **Steps 1 & 2** until the blade cuts straight when wood is pushed through with the miter gauge.

NOTICE

If the table is shifted, the fence will be affected since it is attached.

NOTICE

Lead adjustments will change when new blades are mounted on the saw.

Wheel Alignment

Wheel alignment, or "Coplanar Tracking," is one of the easiest ways to ensure you get optimal performance from your bandsaw. When wheels are aligned, or coplanar, the bandsaw cuts straighter. Vibration, heat, and blade wear are also considerably decreased because the blade is automatically balanced on the wheel.

Verifying Upper/Lower Wheels are Coplanar

1. DISCONNECT BANDSAW FROM POWER!

2. With the blade on and properly tensioned, hold a straightedge close to the center of both wheels. Make sure the straightedge fully extends across the wheels as shown in **Figure 51**.

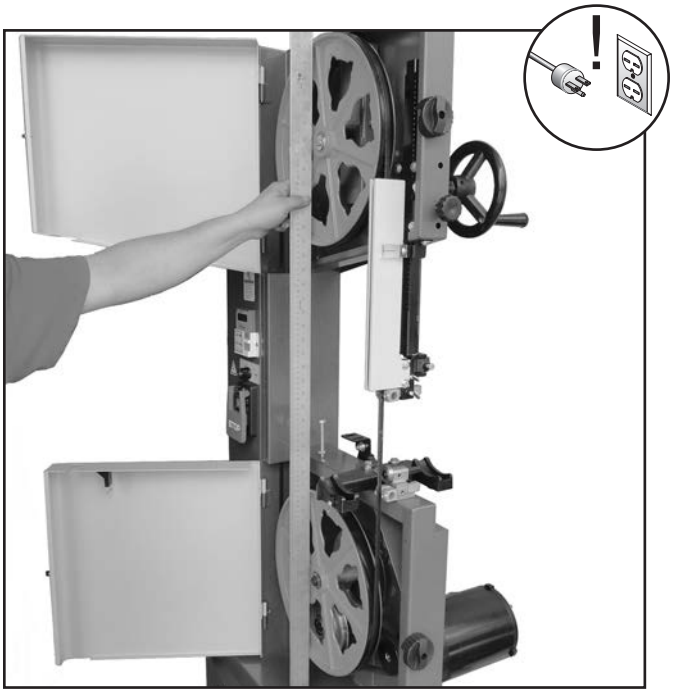


Figure 51. Checking wheel alignment with a straightedge.

—If the wheels are coplanar, the straightedge wil touch the top and bottom of the outside rims on each wheel.

—If the wheels are not coplanar, place the straightedge on the lower wheel first (ensuring that it touches both the top and bottom rim), then adjust the tracking knob to see how the upper wheel lines up with the straightedge.

—If the straightedge does not touch both wheels evenly, the upper wheel needs to be shimmed or the lower wheel needs to be adjusted.

Shimming Upper Wheel

1. DISCONNECT BANDSAW FROM POWER!

2. Adjust the tracking knob so the top wheel is parallel with the bottom wheel.

3. With the straightedge touching both points of the wheel that does not need to be adjusted, measure the distance away from the incorrect wheel with a fine ruler (see **Figure 52**). The distance measured with the ruler is the distance the wheel must be corrected.

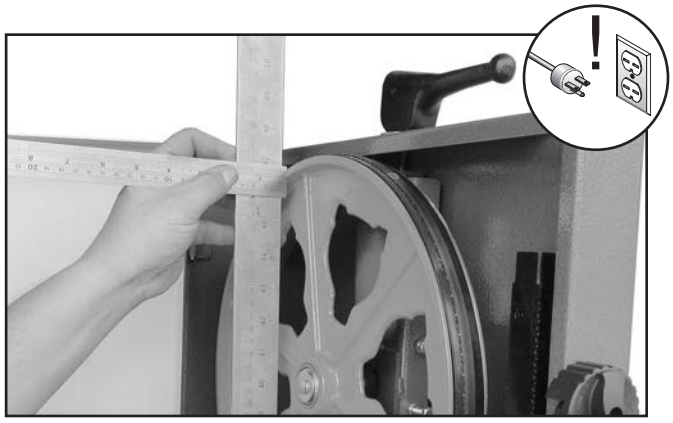


Figure 52. Measuring wheel difference.

4. Remove the blade from the saw, then remove the wheel that needs to be shimmed.

5. Determine how many shim washers you need and place them on the wheel shaft.

6. Replace the wheel, the original washers, and the securing nut.

7. Tighten the blade, then check the wheels. (Coplanar wheels may pull out of alignment when the blade is tightened.)

8. When the wheels are coplanar, place a mark on each wheel where you held the straightedge. This assures repeated accuracy every time you adjust your wheels.

   Note: *When wheels are properly coplanar, the blade may not be centered on the crown of the wheel, but it will be balanced. See* ***Figure 53*** *to better understand coplanarity.*

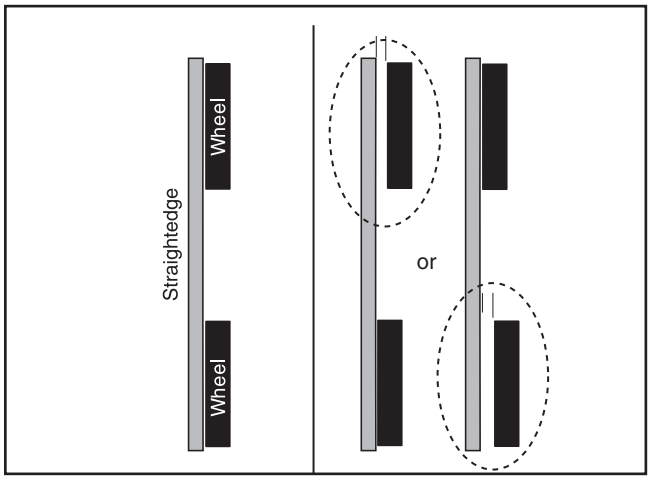


Figure 53. Coplanar diagram.

Adjusting Lower Wheel

Only do this procedure if you cannot make the wheels coplaner with the tracking knob or by shimming the upper wheel. Make sure the upper wheel is adjusted as close as possible to being coplanar with the lower wheel before beginning. Do this procedure with the blade fully tensioned.

To adjust the lower wheel:

1. DISCONNECT BANDSAW FROM POWER!

2. Loosen the four hex bolts on the lower wheel adjustment hub (see **Figure 54**). These secure the wheel adjustment sleeves.

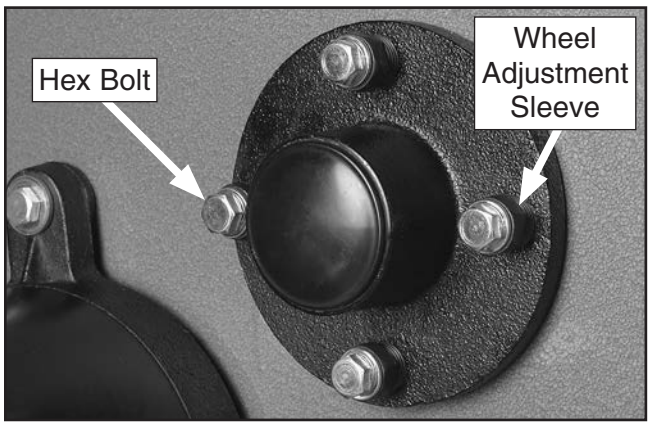


Figure 54. Wheel adjustment hub.

3. Rotate the wheel adjustment sleeves to move the lower wheel as necessary to make it coplaner with the upper wheel.

4. Tighten the hex bolts to secure the wheel adjustment sleeves in position.

SECTION 8: WIRING

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

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

⚠WARNING
Wiring Safety Instructions

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

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

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

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

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

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

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

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

NOTICE

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

COLOR KEY

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

Electrical Component Wiring

Figure 55. Motor junction box wiring.

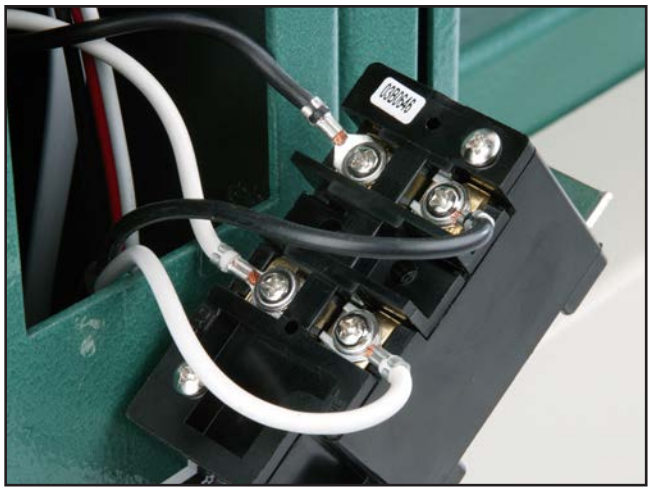


Figure 58. Power switch.

Figure 56. Motor switch.

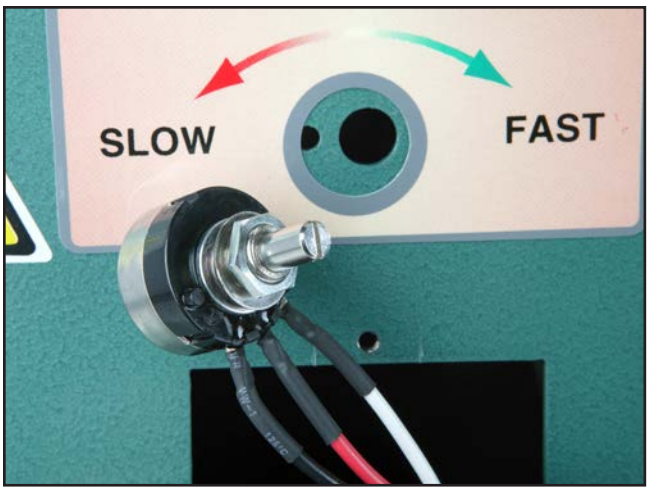


Figure 59. Variable speed dial.

Figure 57. Inverter terminal block (right side).

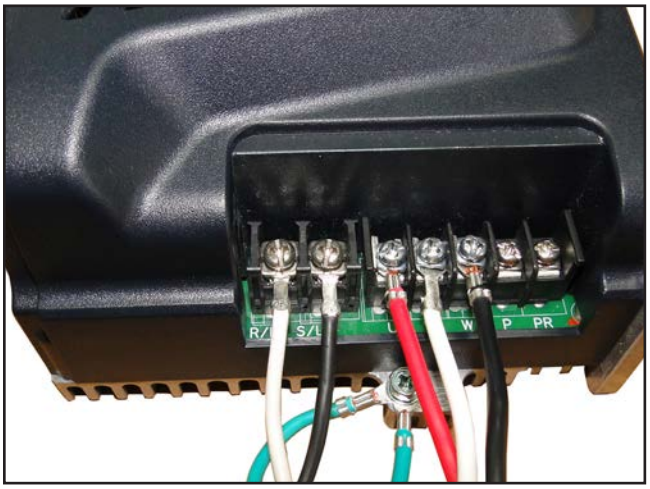
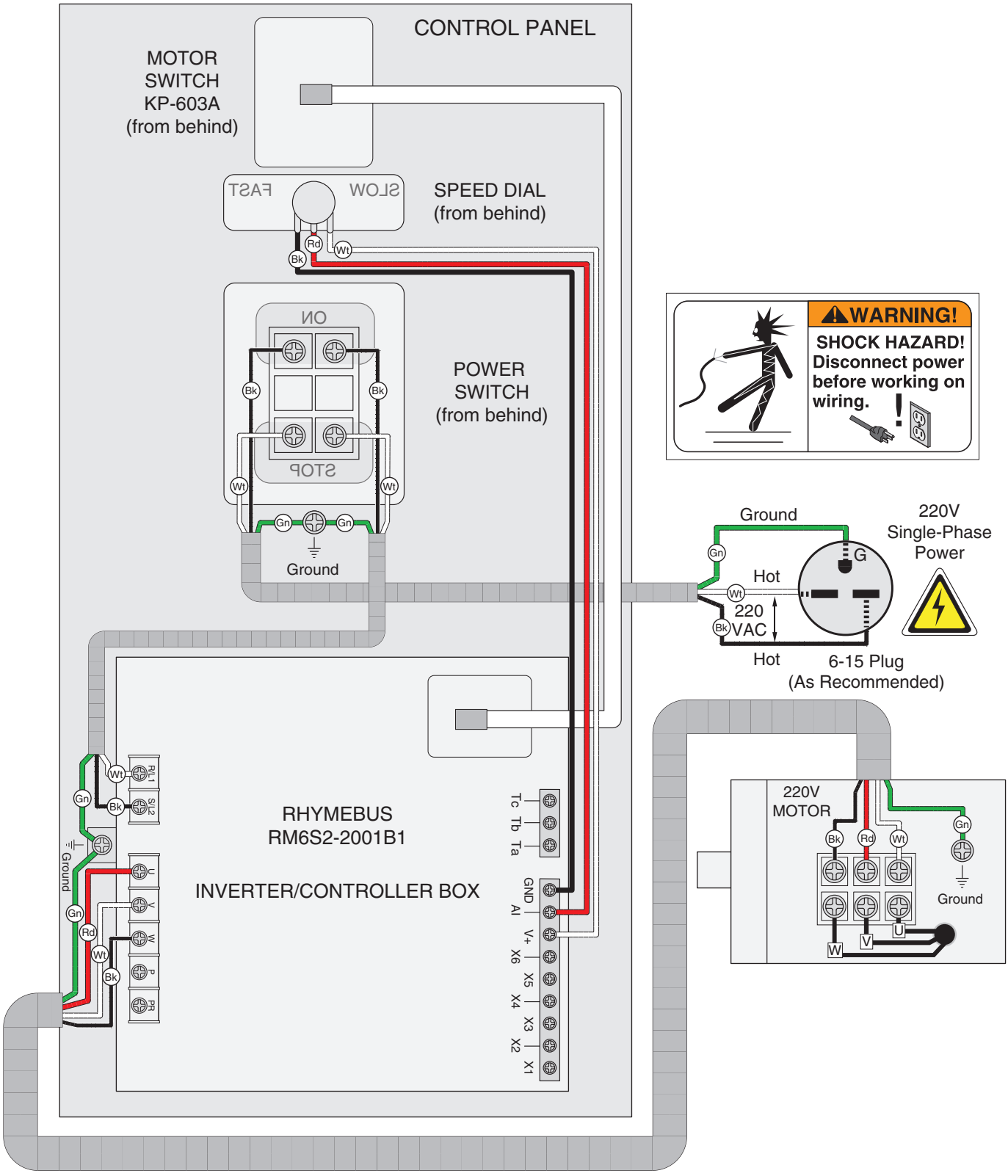


Figure 60. Inverter terminal block (left side).

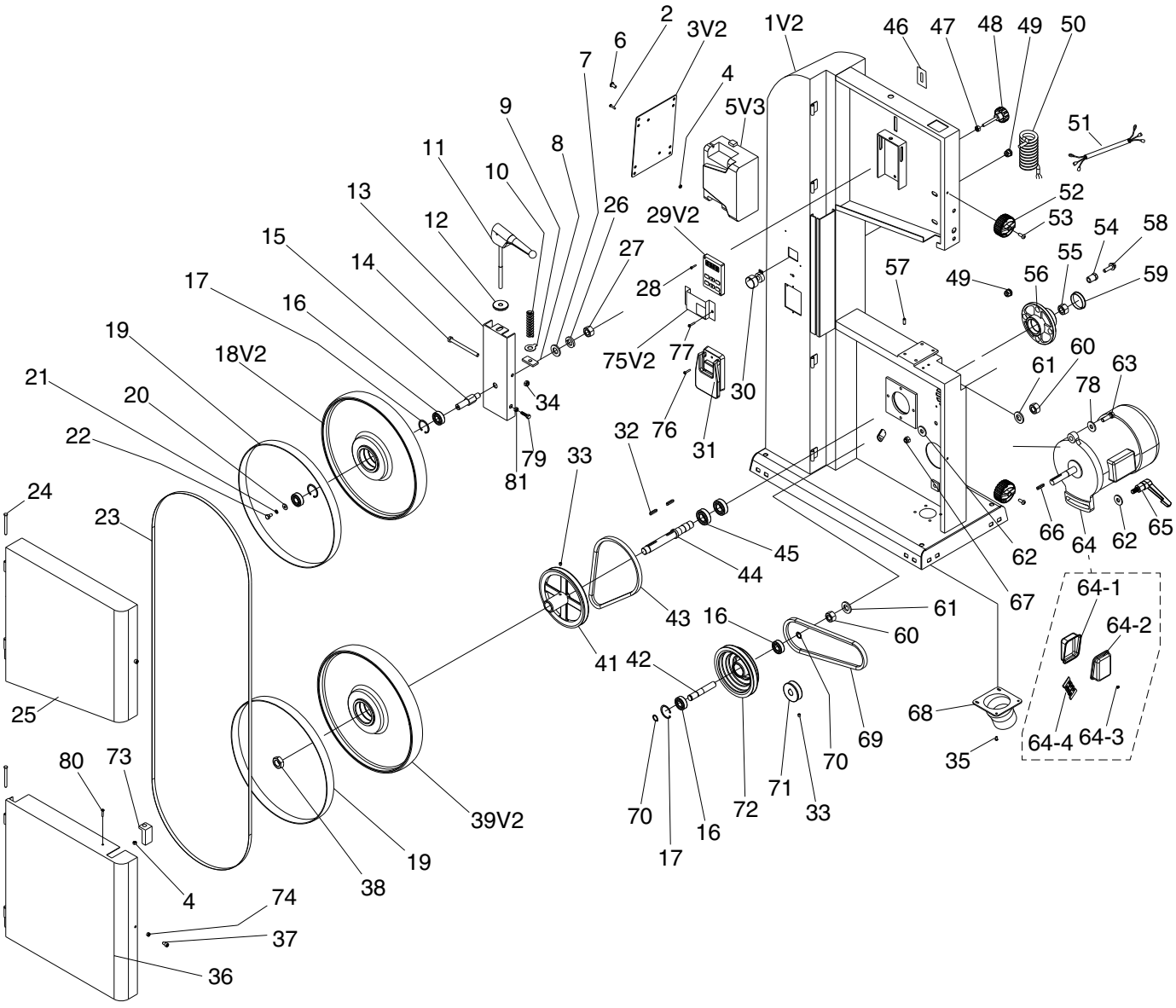
Wiring Diagram



SECTION 9: PARTS

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

Main



Main Parts List

REF	PART #	DESCRIPTION
1V2	P0621X001V2	BODY V2.12.20
2	P0621X002	PHLP HD SCR 10-24 X 3/4
3V2	P0621X003V2	CONTROLLER COVER PLATE V2.12.20
4	P0621X004	HEX NUT 10-24
5V3	P0621X005V3	INVERTER RHYME RM6S2 1-PH 200V V3.12.20
6	P0621X006	PHLP HD SCR 1/4-20 X 1/2
7	P0621X007	FLAT WASHER 1/2
8	P0621X008	TENSION NUT
9	P0621X009	BLADE TENSION POINTER
10	P0621X010	COMPRESSION SPRING
11	P0621X011	BLADE TENSION HANDLE
12	P0621X012	BLADE TENSION HANDLE WASHER
13	P0621X013	UPPER WHEEL BRACKET
14	P0621X014	HEX BOLT M8-1.25 x 110
15	P0621X015	UPPER WHEEL SHAFT
16	P0621X016	BALL BEARING 6202ZZ
17	P0621X017	INT RETAINING RING 35MM
18V2	P0621X018V2	UPPER WHEEL V2
19	P0621X019	TIRE
20	P0621X020	FLAT WASHER 1/4
21	P0621X021	LOCK WASHER 1/4
22	P0621X022	HEX BOLT 1/4-20 X 3/8
23	P0621X023	SAW BLADE 108" X 3/8" 6-TPI HOOK
24	P0621X024	HINGE PIN
25	P0621X025	UPPER WHEEL COVER
26	P0621X026	LOCK WASHER 1/2
27	P0621X027	HEX NUT 1/2-20
28	P0621X028	PHLP HD SCR M3-.5 X 18
29V2	P0621X029V2	INVERTER/CONTROLLER BOX V2.12.20
30	P0621X030	POTENTIOMETER COSMOS RV24YN B102
31	P0621X031	SWITCH W/LARGE STOP
32	P0621X032	KEY 5 X 5 X 25
33	P0621X033	SET SCREW 1/4-20 X 3/8
34	P0621X034	HEX NUT M8-1.25
35	P0621X035	PHLP HD SCR 1/4-20 X 1/2
36	P0621X036	LOWER WHEEL COVER
37	P0621X037	CAP SCREW 1/4-20 X 3/4
38	P0621X038	HEX NUT 3/4-16 (LH)
39V2	P0621X039V2	LOWER WHEEL V2
41	P0621X041	PULLEY
42	P0621X042	SHAFT
43	P0621X043	V-BELT A30

REF	PART #	DESCRIPTION
44	P0621X044	SHAFT
45	P0621X045	BALL BEARING 6004ZZ
46	P0621X046	BLADE TENSION SCALE
47	P0621X047	HEX NUT 5/16-18
48	P0621X048	KNOB 5/16-18 X 2
49	P0621X049	STRAIN RELIEF M15 TYPE-1 SNAP-IN
50	P0621X050	POWER CORD
51	P0621X051	MOTOR CORD
52	P0621X052	KNOB
53	P0621X053	CAP SCREW 1/4-20 X 3/4
54	P0621X054	ADJUSTMENT SLEEVE
55	P0621X055	HEX NUT 3/4-16
56	P0621X056	BEARING HOUSING
57	P0621X057	PIN 6MM
58	P0621X058	FLANGE BOLT 5/16-18 X 1-1/2
59	P0621X059	COVER
60	P0621X060	HEX NUT 5/8-11
61	P0621X061	FLAT WASHER 5/8
62	P0621X062	FLAT WASHER 3/8
63	P0621X063	HEX BOLT 3/8-16 X 2-1/2
64	P0621X064	MOTOR 1.25HP, 220V, 3-PHASE
64-1	P0621X064-1	JUNCTION BOX REAR COVER
64-2	P0621X064-2	JUNCTION BOX FRONT COVER
64-3	P0621X064-3	PHLP HD SCR 10-24 X 1/4
64-4	P0621X064-4	3-CIRCUIT TERMINAL BLOCK
65	P0621X065	ADJ HANDLE 3/8-16 X 1
66	P0621X066	KEY 5 X 5 X 30
67	P0621X067	HEX NUT 3/8-16
68	P0621X068	DUST PORT 2.5"
69	P0621X069	V-BELT A28
70	P0621X070	EXT RETAINING RING 15MM
71	P0621X071	MOTOR PULLEY
72	P0621X072	PULLEY
73	P0621X073	BRUSH
74	P0621X074	HEX NUT 1/4-20
75V2	P0621X075V2	SWITCH COVER V2.12.20
76	P0621X076	PHLP HD SCR M4-.7 x 18
77	P0621X077	PHLP HD SCR M4-.7 X 6
78	P0621X078	FLAT WASHER 3/8
79	P0621X079	HEX BOLT 1/4-20 X 3/4
80	P0621X080	PHLP HD SCR 10-24 X 1/4
81	P0621X081	HEX NUT 1/4-20

Table & Blade Guides

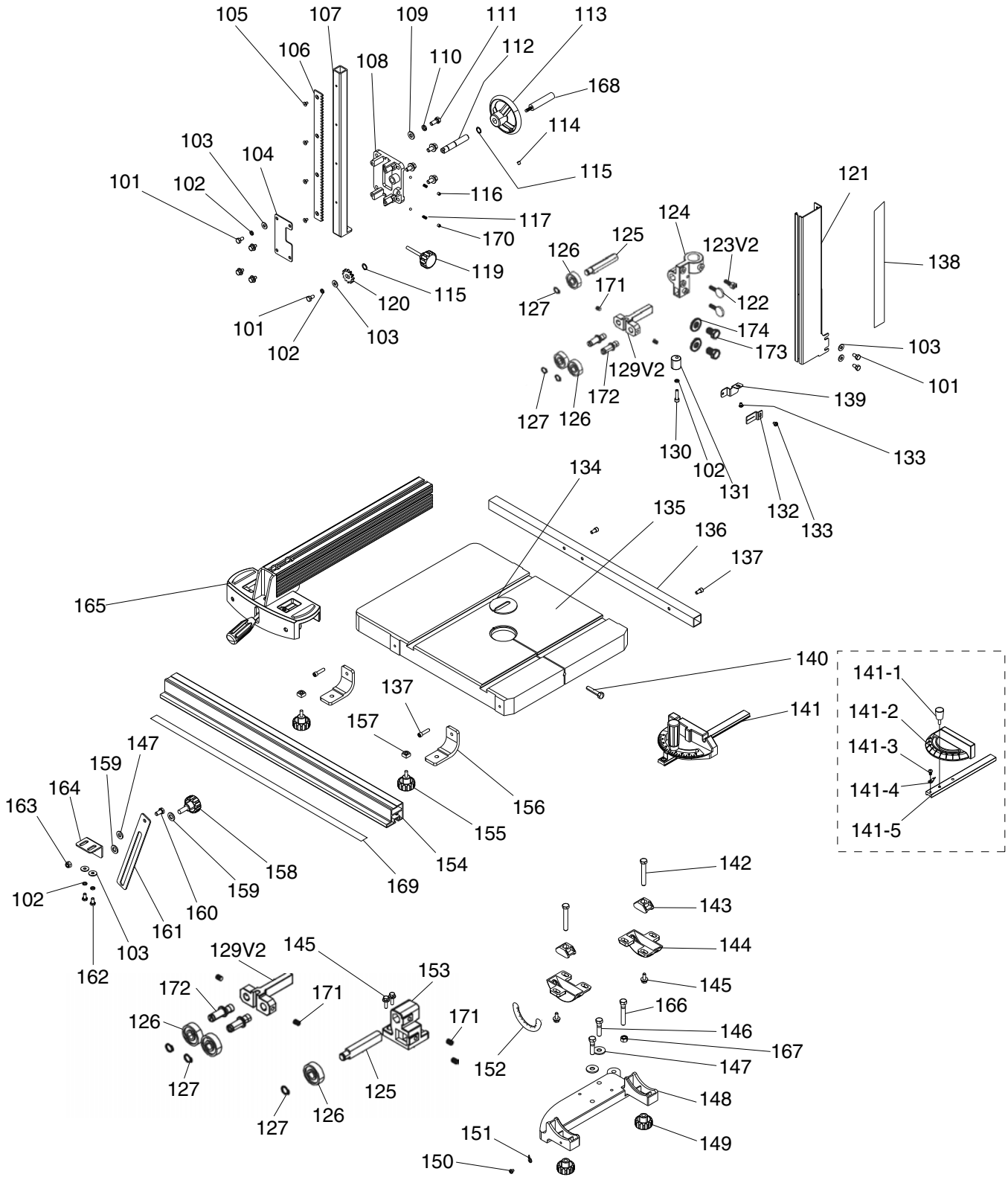
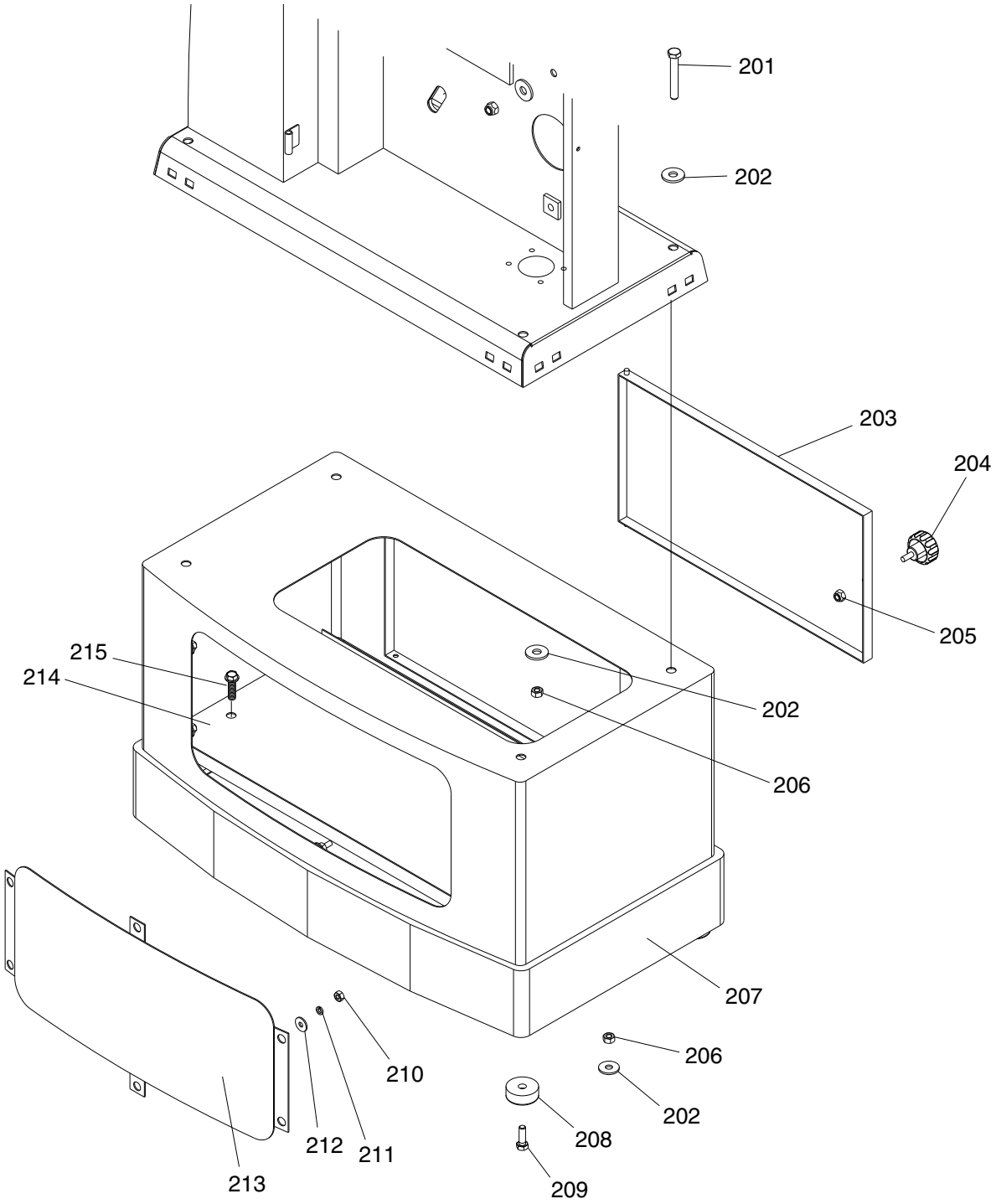


Table & Blade Guides Parts List

REF	PART #	DESCRIPTION
101	P0621X101	HEX BOLT 1/4-20 X 3/8
102	P0621X102	LOCK WASHER 1/4
103	P0621X103	FLAT WASHER 1/4
104	P0621X104	GUIDE BAR COVER
105	P0621X105	FLAT HD CAP SCR M5-.8 X 8
106	P0621X106	RACK
107	P0621X107	GUIDE BAR
108	P0621X108	BRACKET
109	P0621X109	FLAT WASHER 5/16
110	P0621X110	LOCK WASHER 5/16
111	P0621X111	HEX BOLT 5/16-18 X 5/8
112	P0621X112	PINION SHAFT
113	P0621X113	HANDWHEEL
114	P0621X114	SET SCREW 5/16-18 X 3/8
115	P0621X115	EXT RETAINING RING 13MM
116	P0621X116	BALL
117	P0621X117	COMPRESSION SPRING
118	P0621X118	THUMB SCREW 1/4-20 X 1/2
119	P0621X119	KNOB 5/16-18 X 2
120	P0621X120	PINION GEAR
121	P0621X121	BLADE GUARD
122	P0621X122	THUMB SCREW 1/4-20 X 3/4
123V2	P0621X123V2	HEX BOLT 1/4-20 X 1/2
124	P0621X124	UPPER GUIDE BRACKET
125	P0621X125	SUPPORT BEARING SHAFT
126	P0621X126	BALL BEARING 6200ZZ
127	P0621X127	EXT RETAINING RING 10MM
128	P0621X128	BLADE GUIDE BLOCK
129V2	P0621X129V2	BLADE GUIDE HOLDER V2.07.17
130	P0621X130	CAP SCREW 1/4-20 X 7/8
131	P0621X131	ECCENTRIC GUIDE POST
132	P0621X132	GUIDE POST POINTER
133	P0621X133	PHLP HD SCR 10-24 X 1/2
134	P0621X134	TABLE INSERT
135	P0621X135	TABLE
136	P0621X136	REAR FENCE RAIL
137	P0621X137	CAP SCREW 1/4-20 X 1 V1
137	P0621X137	CAP SCREW 1/4-20 X 1 V1
138	P0621X138	GUIDE POST SCALE
139	P0621X139	POINTER PLATE

REF	PART #	DESCRIPTION
140	P0621X140	TABLE PIN
141	P0621X141	MITER GAUGE ASSY
141-1	P0621X141-1	MITER GAUGE HANDLE 5/16"
141-2	P0621X141-2	MITER GAUGE BODY
141-3	P0621X141-3	PHLP HD SCR 10-24 X 1/4
141-4	P0621X141-4	MITER GAUGE POINTER
141-5	P0621X141-5	MITER GAUGE BAR
142	P0621X142	HEX BOLT 3/8-16 X 2-1/2
143	P0621X143	CLAMP SHOE
144	P0621X144	TRUNNION
145	P0621X145	FLANGE BOLT 1/4-20 X 3/4
146	P0621X146	HEX BOLT 5/16-18 X 1-1/4
147	P0621X147	FLAT WASHER 5/16
148	P0621X148	TRUNNION BASE
149	P0621X149	KNOB 3/8-16
150	P0621X150	PHLP HD SCR 10-24 X 1/4
151	P0621X151	TABLE TILT POINTER
152	P0621X152	TABLE TILT SCALE
153	P0621X153	LOWER GUIDE BRACKET
154	P0621X154	FRONT FENCE RAIL
155	P0621X155	KNOB 5/16-18 X 5/8
156	P0621X156	RAIL BRACKET
157	P0621X157	SQUARE NUT
158	P0621X158	KNOB 3/8-16 X 1
159	P0621X159	FLAT WASHER 3/8
160	P0621X160	HEX BOLT 5/16-18 X 1
161	P0621X161	ANGLE ADJUSTMENT BAR
162	P0621X162	HEX BOLT 1/4-20 X 1/2
163	P0621X163	LOCK NUT 5/16-18
164	P0621X164	ADJUSTMENT BAR BRACKET
165	P0621X165	COMPLETE FENCE ASSY
166	P0621X166	HEX BOLT 3/8-16 X 1-1/2
167	P0621X167	HEX NUT 3/8-16
168	P0621X168	HANDWHEEL HANDLE
169	P0621X169	FENCE SCALE
170	P0621X170	SET SCREW 1/4-20 X 3/8
171	P0621X171	SET SCREW 1/4-20 X 1/4
172	P0621X172	BEARING SHAFT
173	P0621X173	HEX BOLT 1/4-20 X 3/8
174	P0621X174	FLAT WASHER 1/4

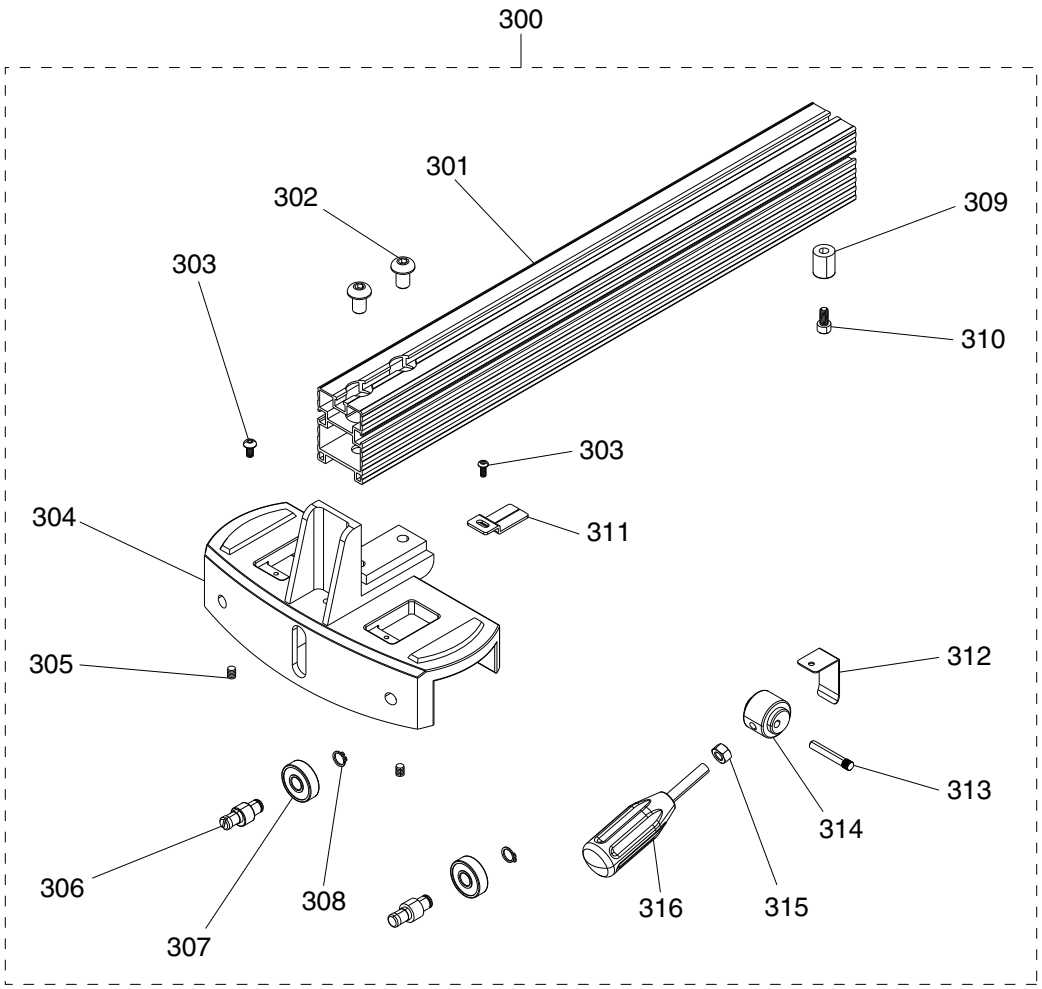
Stand



REF	PART #	DESCRIPTION
201	P0621X201	HEX BOLT 5/16-18 X 3
202	P0621X202	FLAT WASHER 5/16
203	P0621X203	STAND GUARD
204	P0621X204	KNOB 5/16-18 X 1
205	P0621X205	LOCK NUT 5/16-18
206	P0621X206	HEX NUT 5/16-18
207	P0621X207	STAND
208	P0621X208	FOOT

REF	PART #	DESCRIPTION
209	P0621X209	HEX BOLT 5/16-18 X 1
210	P0621X210	HEX NUT 1/4-20
211	P0621X211	LOCK WASHER 1/4
212	P0621X212	FLAT WASHER 1/4
213	P0621X213	STAND INSET PLATE
214	P0621X214	CABINET BOTTOM PLATE
215	P0621X215	FLANGE BOLT 1/4-20 X 3/4

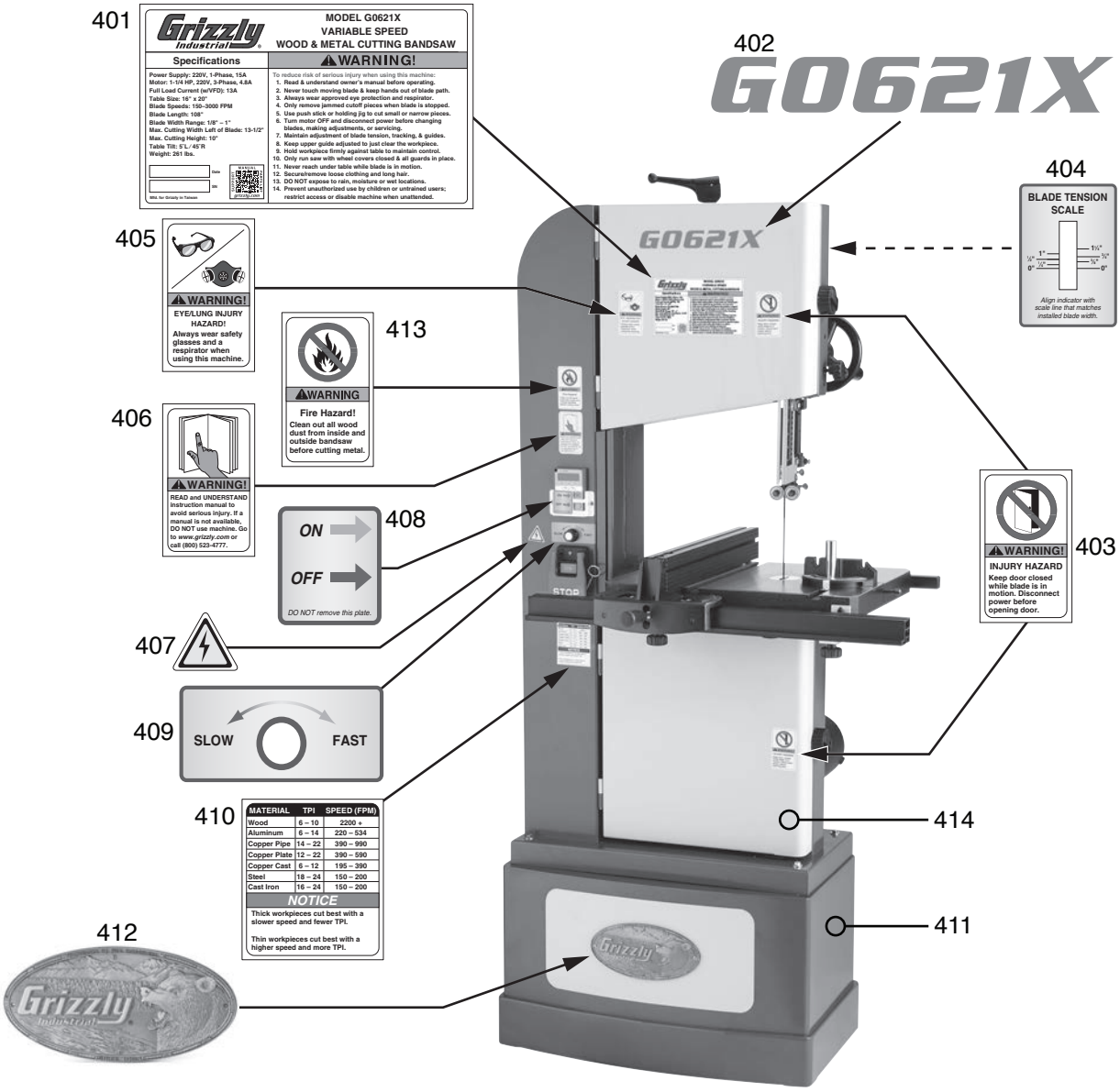
Fence



REF	PART #	DESCRIPTION
300	P0621X300	COMPLETE FENCE ASSY
301	P0621X301	FENCE BODY
302	P0621X302	BUTTON HD CAP SCR M10-1.5 X 16
303	P0621X303	PHLP HD SCR M5-.8 X 10
304	P0621X304	FENCE BASE
305	P0621X305	SET SCREW 1/4-20 X 3/8
306	P0621X306	ECCENTRIC SHAFT
307	P0621X307	BALL BEARING 6200 ZZ
308	P0621X308	INT RETAINING RING 10MM

REF	PART #	DESCRIPTION
309	P0621X309	RUNNER
310	P0621X310	CAP SCREW M6-1 X 16
311	P0621X311	FENCE POINTER
312	P0621X312	PLATE
313	P0621X313	PIN
314	P0621X314	LOCK MECHANISM
315	P0621X315	HEX NUT M8-1.25
316	P0621X316	FENCE HANDLE M8-1.25

Labels & Cosmetics



REF	PART #	DESCRIPTION
401	P0621X401	MACHINE ID LABEL
402	P0621X402	MODEL NUMBER LABEL
403	P0621X403	DOOR CLOSED LABEL
404	P0621X404	BLADE TENSION LABEL
405	P0621X405	GLASSES/RESPIRATOR LABEL
406	P0621X406	READ MANUAL LABEL
407	P0621X407	ELECTRICITY LABEL

REF	PART #	DESCRIPTION
408	P0621X408	MOTOR SWITCH ON/OFF LABEL
409	P0621X409	SPEED DIAL LABEL
410	P0621X410	CUTTING CHART LABEL
411	P0621X411	TOUCH-UP PAINT, GRIZZLY GREEN
412	P0621X412	GRI ZZLY LOGO PLATE
413	P0621X413	FIRE HAZARD LABEL
414	P0621X414	TOUCH-UP PAINT, GRIZZLY PUTTY

⚠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.

To take advantage of this warranty, you must register it at **https://www.grizzly.com/forms/warranty**, or you can scan the QR code below to be automatically directed to our warranty registration page. Enter all applicable information for the product.

WARRANTY

grizzly.com