MODEL G0428
9" BENCHTOP BANDSAW
OWNER'S MANUAL
(For models manufactured since 05/26)



C ETL LISTED US
Intertek
5035679

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

⚠ WARNING!

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

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

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

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

⚠ WARNING!

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

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

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

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⚠WARNING

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

⚠CAUTION

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

INTRODUCTION

Contact Info

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

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

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

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

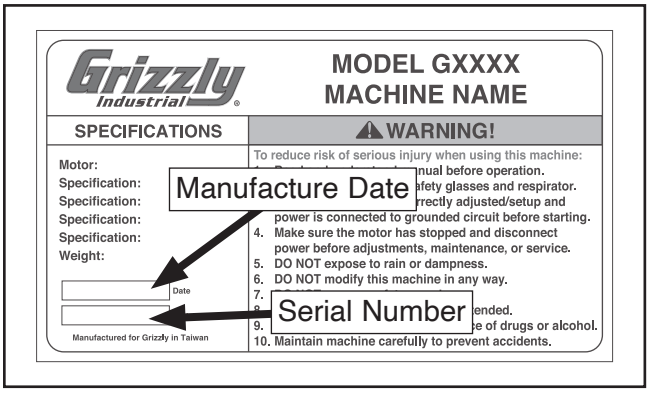
Manual Accuracy

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

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

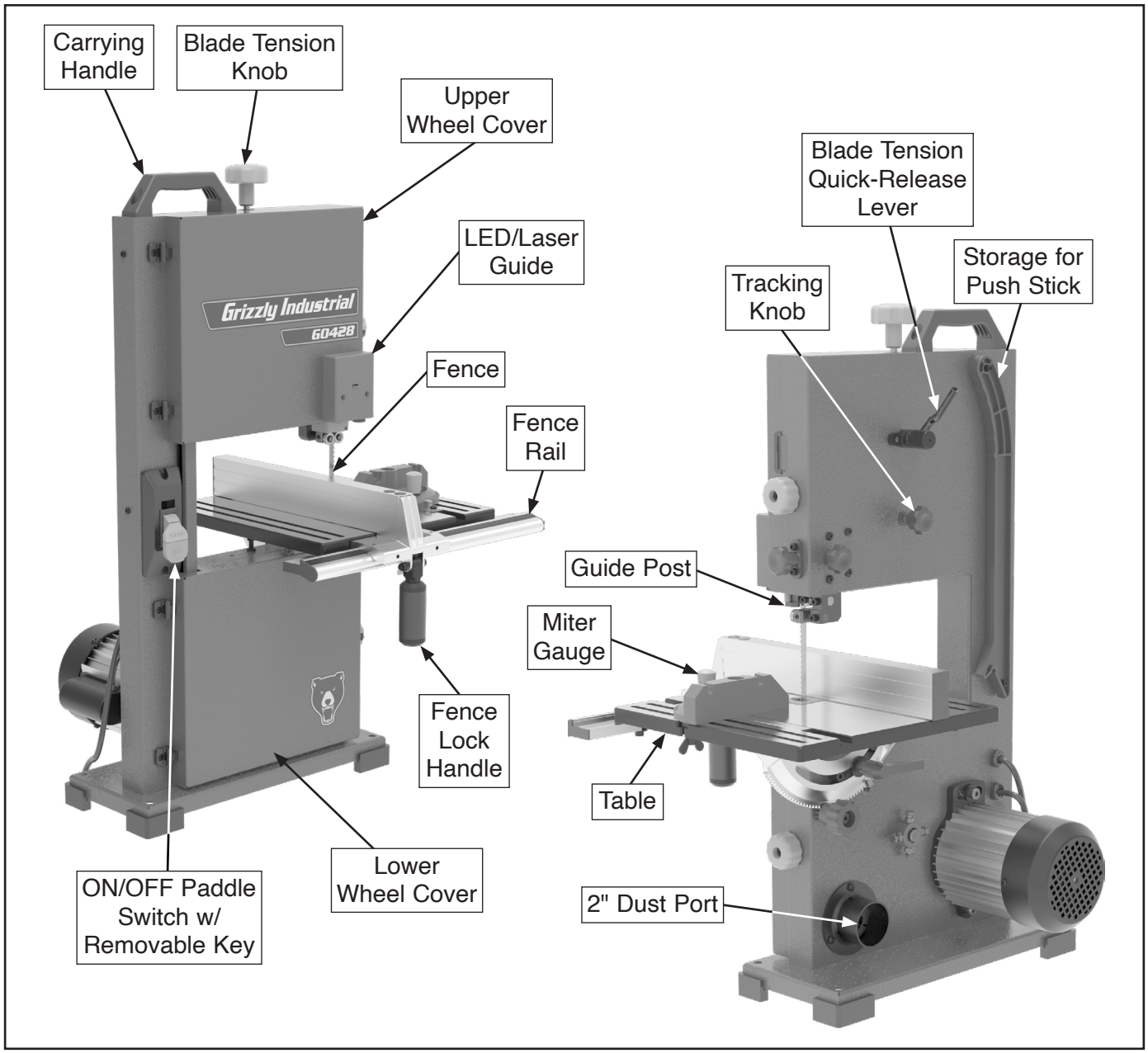
If you find this to be the case, and the difference between the manual and machine leaves you confused or unsure about something, check our website for an updated version. We post current manuals and manual updates for free on our website at **www.grizzly.com**.

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



Identification

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

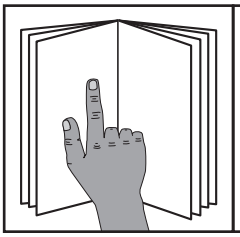


⚠WARNING

For Your Own Safety, Read Instruction Manual Before Operating Saw.

a) Wear eye protection.
b) Do not remove jammed cutoff pieces until blade has stopped.
c) Maintain proper adjustment of blade tension, blade guides, and support bearings.
d) Adjust upper blade guide to just clear workpiece.
e) Hold workpiece firmly against table.

Controls & Components



⚠WARNING

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

Refer to **Figure 1–Figure 6** and the following descriptions to become familiar with the basic controls and components of this machine. Understanding these items and how they work will help you understand the rest of the manual and stay safe when operating this machine.

Basic Controls & Components

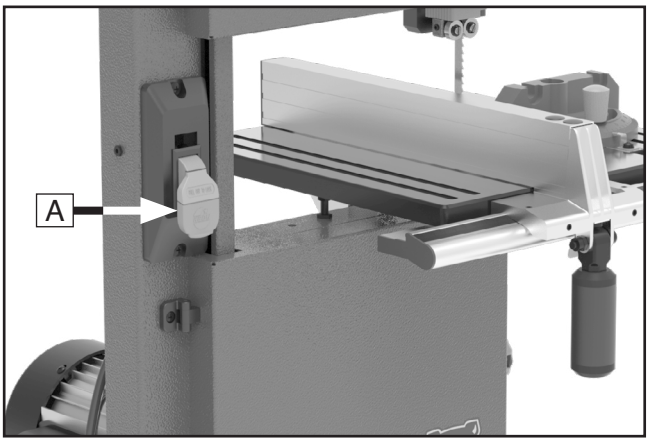


Figure 1. Basic controls and components.

A. ON/OFF Paddle Switch w/Removable Key: Turns machine ***ON*** and ***OFF***. Remove key to disable machine.

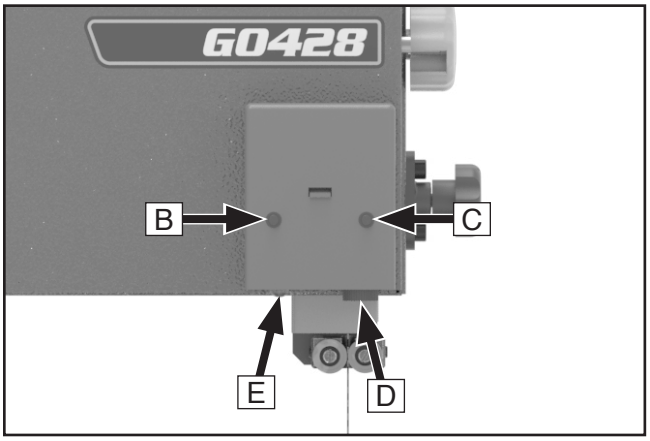


Figure 2. LED and laser guide components.

B. LED Work Light ON/OFF Button: Turns LED work light ***ON*** and ***OFF***.

C. Laser Guide ON/OFF Button: Turns laser guide ***ON*** and ***OFF***.

D. Laser Guide: Projects beam down length of blade and onto workpiece to help guide cut.

E. LED Work Light: Illuminates cutting area for better visibility.

Fence & Miter Gauge

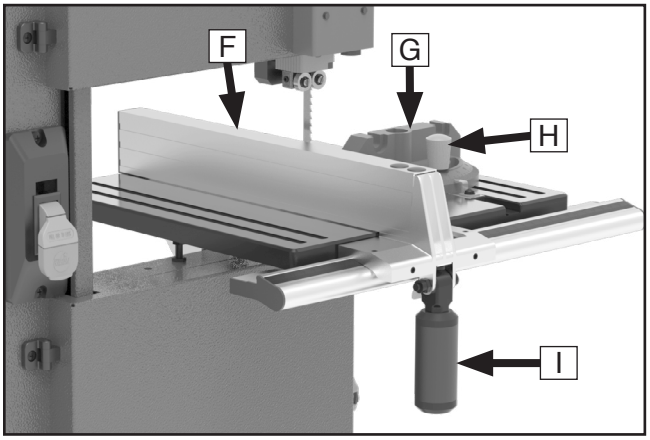


Figure 3. Fence and miter gauge controls.

F. Fence: Used for ripping and resawing. Distance from blade determines width of cut.

G. Miter Gauge: Used for cross cuts. Adjusts 60° left or right.

H. Miter Gauge Lock Knob: Secures angle position of miter gauge.

I. Fence Lock Handle: Secures fence position.

Guide Post

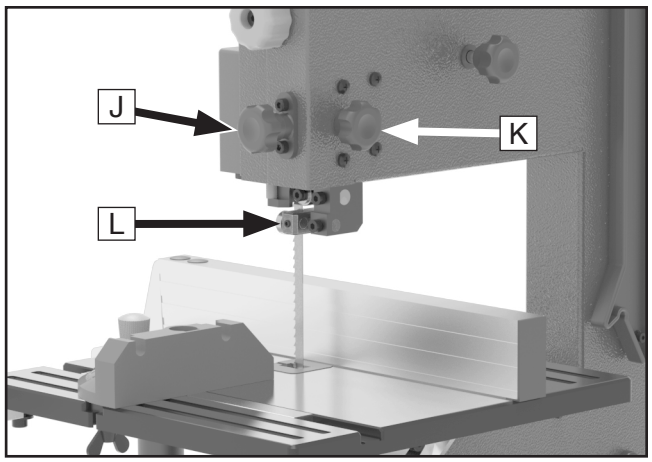


Figure 4. Guide post controls.

J. Guide Post Adjustment Knob: Rotates to adjust height of blade guides above workpiece.

K. Guide Post Lock Knob: Secures height of blade guides.

L. Upper Blade Guide: Supports blade above workpiece during operations.

Blade Tension & Tracking

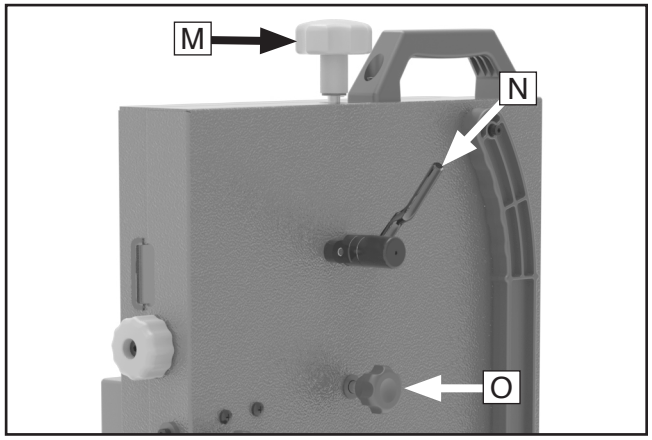


Figure 5. Blade tension and tracking controls.

M. Blade Tension Adjustment Knob: Rotates to adjust blade tension (refer to **Page 23** for more information).

N. Blade Tension Quick-Release Lever: Quickly releases blade tension when turned counterclockwise.

O. Tracking Knob: Rotates to adjust blade tracking (refer to **Page 20** for more information).

Table Tilt

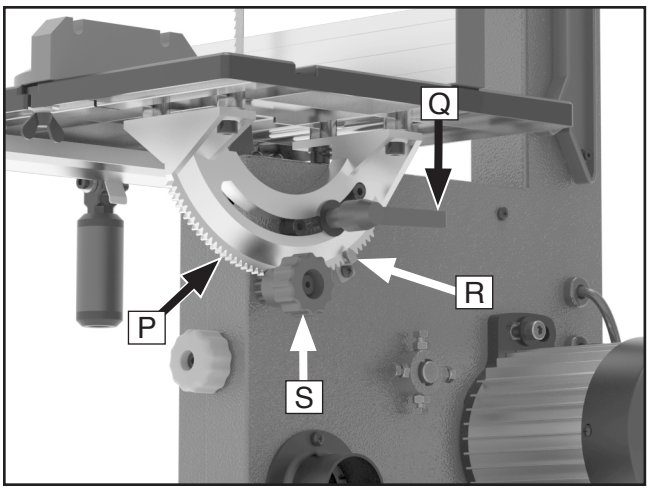


Figure 6. Table tilt controls.

P. Trunnion w/Table Tilt Scale: Functions as a tilting base for table. Graduated in degrees from 0°–45° for setting bevel angle.

Q. Table Tilt Lock Lever: Secures table tilt angle setting.

R. Table Tilt Indicator: Shows angle of table tilt.

S. Table Tilt Adjustment Knob: Rotates to adjust angle of table tilt.

MACHINE DATA SHEET

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

MODEL G0428 9" BENCHTOP BANDSAW - LOWES

Product Dimensions:

Weight	42 lbs.
Width (side-to-side) x Depth (front-to-back) x Height	21-1/2 x 18-1/2 x 30 in.
Footprint (Length x Width)	16 x 7 in.

Shipping Dimensions:

Type	Cardboard Box
Content	Machine
Weight	49 lbs.
Length x Width x Height	32 x 18 x 14 in.

Electrical:

Power Requirement	120V, Single-Phase, 60 Hz
Full-Load Current Rating	2.8A
Minimum Circuit Size	15A
Connection Type	Cord & Plug
Power Cord Included	Yes
Power Cord Length	80 in.
Power Cord Gauge	18 AWG
Plug Included	Yes
Included Plug Type	5-15
Switch Type	Paddle Safety Switch w/Removable Key

Motors:

Main

Horsepower	1/3 HP
Phase	Single-Phase
Amps	2.8A
Speed	1725 RPM
Type	ODP Induction
Power Transfer	Belt
Bearings	Shielded & Permanently Lubricated

Main Specifications:

Main Specifications

Bandsaw Size	9 in.
Max Cutting Width (Left of Blade)	9 in.
Max Cutting Width (Left of Blade) w/Fence	4-1/2 in.
Max Cutting Height (Resaw Height)	3-3/8 in.
Blade Speeds	2460 FPM

Blade Information

Standard Blade Length	62 in.
Blade Length Range	61-3/16 - 62 in.
Blade Width Range	1/8 - 3/8 in.
Type of Blade Guides	Ball Bearing
Guide Post Adjustment Type	Rack & Pinion
Has Quick-Release	Yes

Table Information

Table Length	11-3/4 in.
Table Width	11-3/4 in.
Table Thickness	5/8 in.
Table Tilt	0 - 45 deg.
Table Tilt Adjustment Type	Rack & Pinion
Floor-to-Table Height	13 in.
Fence Locking Position	Front
Fence is Adjustable for Blade Lead	Yes
Miter Gauge Included	Yes

Miter Gauge Information

Miter Angle	0 - 60 deg. L/R
Miter Gauge Slot Type	Straight Slot
Miter Gauge Slot Width	5/8 in.
Miter Gauge Slot Height	1/4 in.

Construction Materials

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

Other Related Information

Wheel Diameter	9-1/2 in.
Wheel Width	5/8 in.
Number of Dust Ports	1
Dust Port Size	2 in.
Has Work Light	Yes
Light Socket Type	3V LED
Maximum Bulb Wattage	0.5W
Has Laser Guide	Yes
Laser Classification	Class II
Laser Wavelength	650nm
Laser Maximum Output	0.7mW

Other Specifications:

Country of Origin	Taiwan
Warranty	1 Year
Approximate Assembly & Setup Time	30 Minutes
Serial Number Location	Machine ID Label
Certified by a Nationally Recognized Testing Laboratory (NRTL)	Yes

Features:

Adjustable Wheel Alignment
Rack & Pinion Table Tilt
Ball-Bearing Blade Guides
Extruded Aluminum Rip Fence with Camlock Handle
Brush to Prevent Build-Up of Dust/Pitch on Lower Blade Wheel
Laser Guide
Carrying Handle for Easy Portability
2" Dust Port
LED Worklight

SECTION 1: SAFETY

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

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

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

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

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

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

Safety Instructions for Machinery

⚠WARNING

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

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

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

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

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

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

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

⚠WARNING

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Additional Safety for Bandsaws

⚠WARNING

Serious cuts, amputation, or death can occur from contact with the moving saw blade during operation or if blade breakage occurs. Serious injury or death can also occur from getting fingers, hair, or clothing entangled in moving parts if the machine is operated while the doors are open. To reduce this risk, anyone operating this machine MUST completely heed the hazards and warnings below.

HAND PLACEMENT. Placing hands or fingers in line with blade during operation may result in serious injury if hands slip or workpiece moves unexpectedly. Do not position fingers or hands in line with blade, and never reach under table while blade is moving.

SMALL/NARROW WORKPIECES. If hands slip during a cut while holding small workpieces with fingers, serious personal injury could occur. Always support/feed small or narrow workpieces with push sticks, push blocks, jig, vise, clamping fixture.

BLADE SPEED. Cutting workpiece before blade is at full speed could cause blade to grab workpiece and pull hands into blade. Allow blade to reach full speed before starting cut. DO NOT start machine with workpiece contacting blade.

FEED RATE. To avoid risk of workpiece slipping and causing operator injury, always feed stock evenly and smoothly.

BLADE CONDITION. Dull blades require more effort to perform cut, increasing risk of accidents. Do not operate with dirty, dull, cracked or badly worn blades. Inspect blades for cracks and missing teeth before each use. Always maintain proper blade tension and tracking while operating.

CLEARING JAMS AND CUTOFFS. Always stop bandsaw and disconnect power before clearing scrap pieces that get stuck between blade and table insert. Use brush or push stick, not hands, to clean chips/cutoff scraps from table.

BLADE CONTROL. To avoid risk of injury due to blade contact, always allow blade to stop on its own. DO NOT try to stop or slow blade with your hand or the workpiece.

GUARDS/COVERS. Blade guards and covers protect operator from moving bandsaw blade. The wheel covers protect operator from getting entangled with rotating wheels or other moving parts. ONLY operate bandsaw with blade guard in proper position and wheel covers completely closed.

BLADE REPLACEMENT. To avoid mishaps that could result in operator injury, make sure blade teeth face down toward table and blade is properly tensioned and tracked before operating.

UPPER BLADE GUIDE SUPPORT. To reduce exposure of operator to blade and provide maximum blade support while cutting, keep upper blade guides adjusted to just clear workpiece.

CUTTING TECHNIQUES. To avoid blade getting pulled off wheels or accidentally breaking and striking operator, always turn bandsaw ***OFF*** and wait for blade to come to a complete stop before backing workpiece out of blade. DO NOT back workpiece away from blade while bandsaw is running. DO NOT force or twist blade while cutting, especially when sawing small curves. This could result in blade damage or breakage.

WORKPIECE SUPPORT. To maintain maximum control and reduce risk of blade contact/breakage, always ensure adequate support of long/large workpieces. Always keep workpiece flat and firm against table/fence when cutting to avoid loss of control. If necessary, use a jig or other workholding device.

WORKPIECE MATERIAL. This machine is intended for cutting natural and man-made wood products, and laminate covered wood products. This machine is NOT designed to cut metal, glass, stone, tile, etc.

SECTION 2: POWER SUPPLY

Availability

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



⚠WARNING

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

Full-Load Current Rating

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

Full-Load Current Rating at 120V .... 2.8 Amps

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

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

⚠WARNING

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

120V Circuit Requirements

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

Nominal Voltage 110V, 115V, 120V
Cycle ..... 60 Hz
Phase ..... Single-Phase
Power Supply Circuit ..... 15 Amps

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

⚠CAUTION

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

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

Grounding & Plug Requirements

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

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

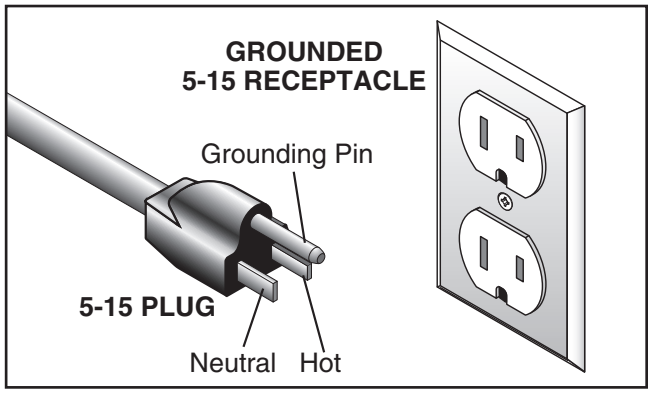
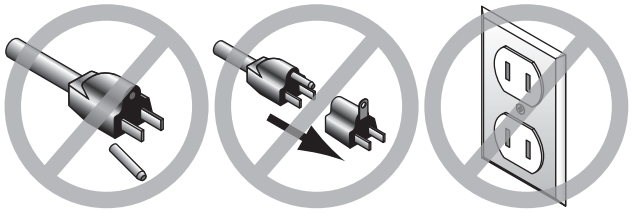


Figure 7. Typical 5-15 plug and receptacle.

⚠CAUTION



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

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

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

Extension Cords

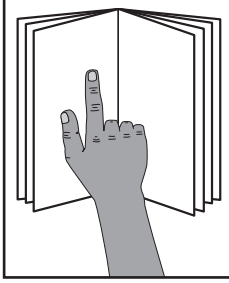
We do not recommend using an extension cord with this machine. If you must use an extension cord, only use it if absolutely necessary and only on a temporary basis.

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

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

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

SECTION 3: SETUP



⚠WARNING

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



⚠WARNING

Wear safety glasses during the entire setup process!

Unpacking

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

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

Needed for Setup

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

Description	Qty
• Safety Glasses	1
• Small Machinist's Square	1
• Work Gloves (Pair)	1
• Feeler Gauge 0.016"	1
• Flat Head Screwdriver ¼"	1
• Phillips Head Screwdriver #2	1
• Hex Wrenches 3, 6mm	1 Ea.
• AA Batteries	2
• Straightedge	1
• Ruler	1
• Dust Collection System	1
• Dust Hose 2"	1
• Hose Clamps 2"	2
• Optional Mounting Hardware..	(see **Page 16**)

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.

Inventory (Figure 8)	**Qty**
A. Bandsaw (Not Shown)	1
B. Table Assembly	1
C. Fence	1
D. Miter Gauge	1
E. Hex Wrenches 2.5, 4, 5mm	1 Ea.
F. Open-End Wrench 10 x 12mm	1
G. Rubber Feet	4
H. Table Tilt Lock Lever	1
I. Flat Washer 8mm (P0428023)	1

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.

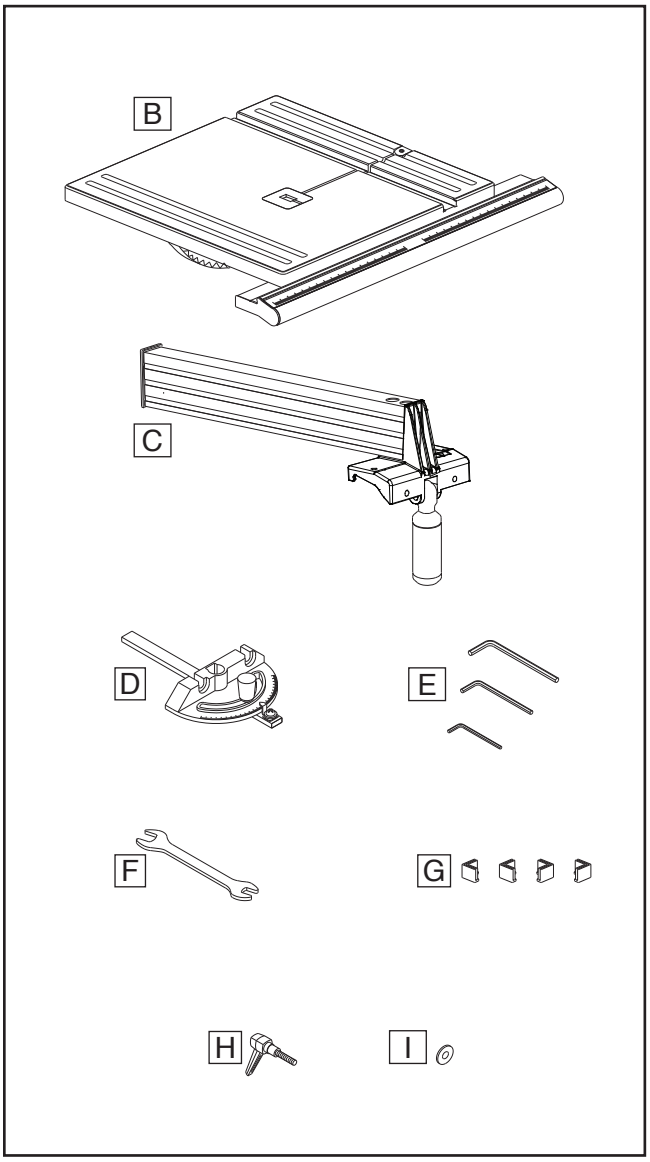


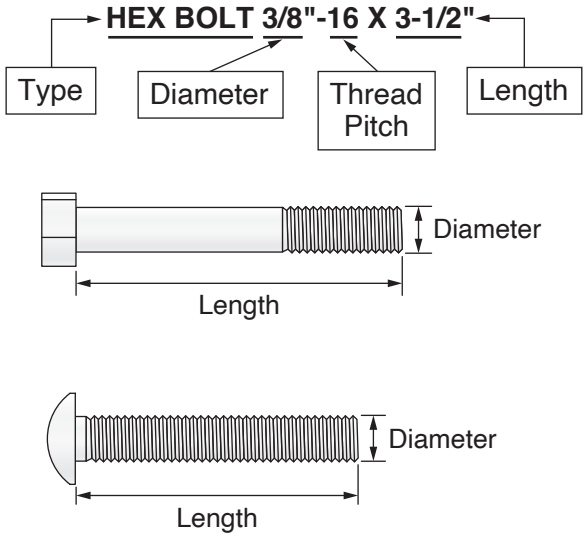
Figure 8. Inventory.

Measuring Hardware

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

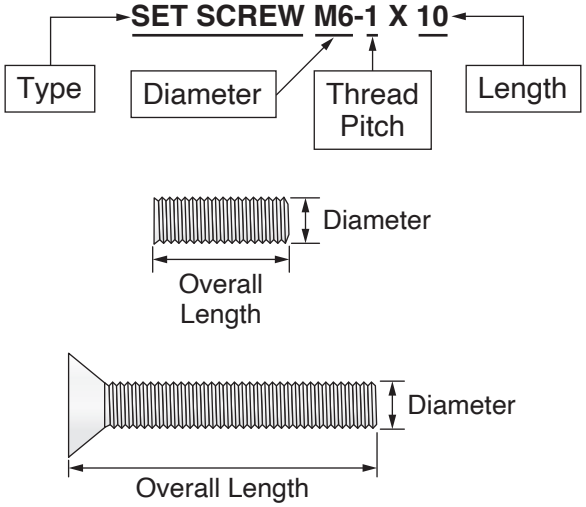
Bolts & Screws

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

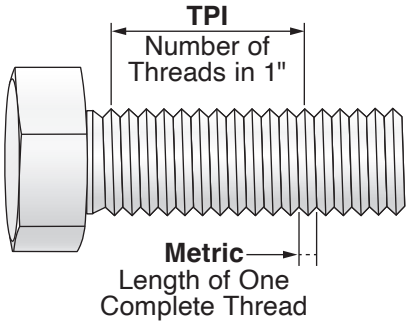


Flat Head & Set Screws

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



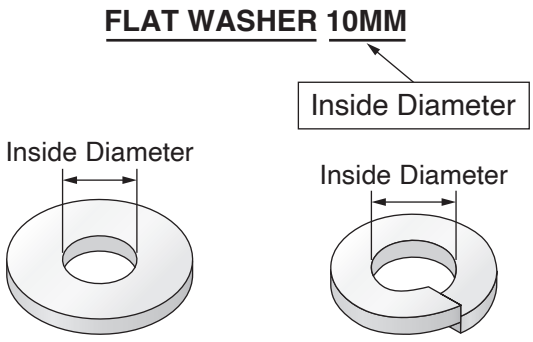
Thread pitch is the distance from the tip of one thread to the tip of the next thread. For US Standard threads, pitch is measured in threads per inch (TPI). Metric thread pitch is the length of one complete thread.



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

Washers

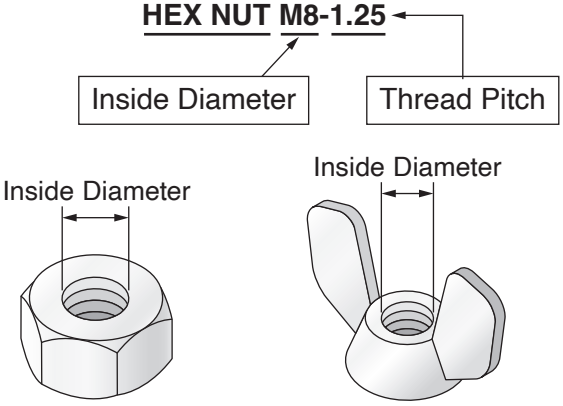
Common washers are measured by their inside diameter.



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

Nuts

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



Site Considerations

Workbench Load

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

Placement Location

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

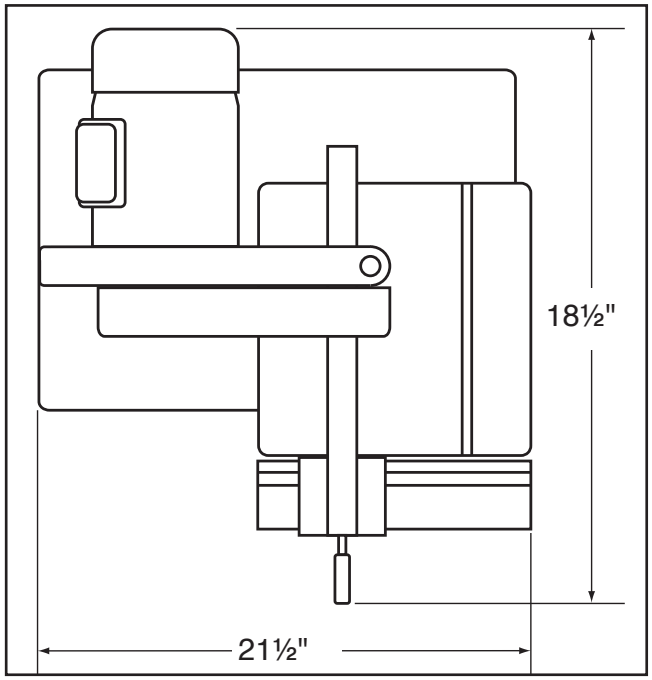
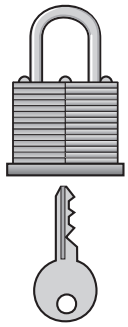


Figure 9. Minimum working clearances.



⚠CAUTION

Children and visitors may be seriously injured if unsupervised around this machine. Lock entrances to the shop or disable start switch or power connection to prevent unsupervised use.

Bench Mounting

Number of Mounting Holes 4
Diameter of Mounting Hardware Needed .. ⅜"

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

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

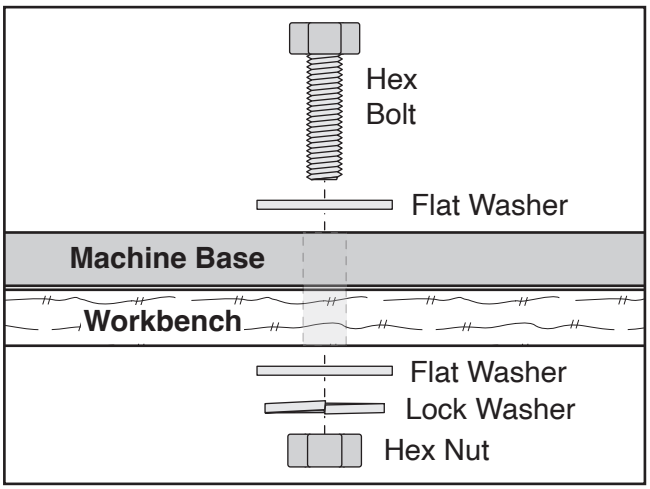


Figure 10. "Through Mount" setup.

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

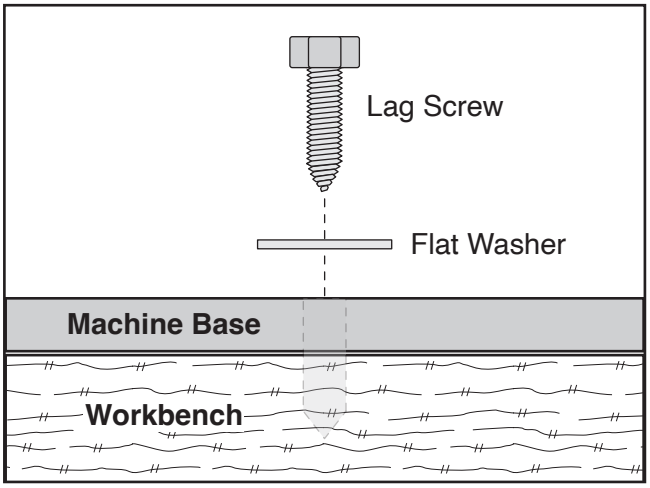


Figure 11. "Direct Mount" setup.

Assembly

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



⚠CAUTION

LACERATION HAZARD! Bandsaw blades and some sheet metal parts are sharp. Wear heavy leather gloves while handling to reduce risk of being cut.

To assemble machine:

1. Attach (4) rubber feet to bandsaw base (see **Figure 12**). Simply press rubber feet onto corners of base.

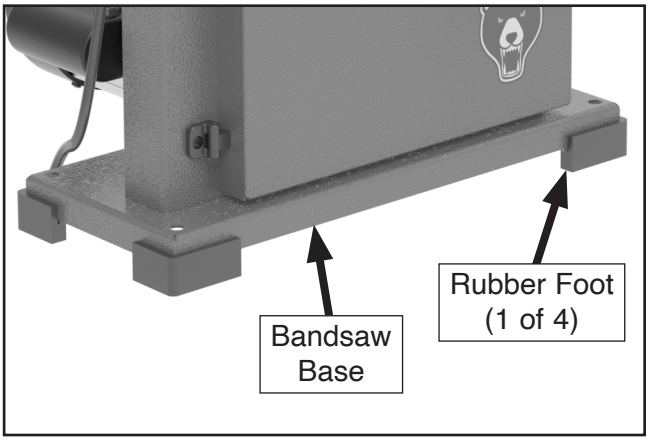


Figure 12. Rubber feet attached to base.

2. Loosen scale indicator screw and position indicator facing down (see **Figure 13**), then remove table tilt adjustment knob (see **Figure 13**).

   Note: *Table tilt adjustment knob is secured with a shoulder bolt and spring.*

3. Turn guide post adjustment knob (see **Figure 13**) counterclockwise to raise guide post all the way up.

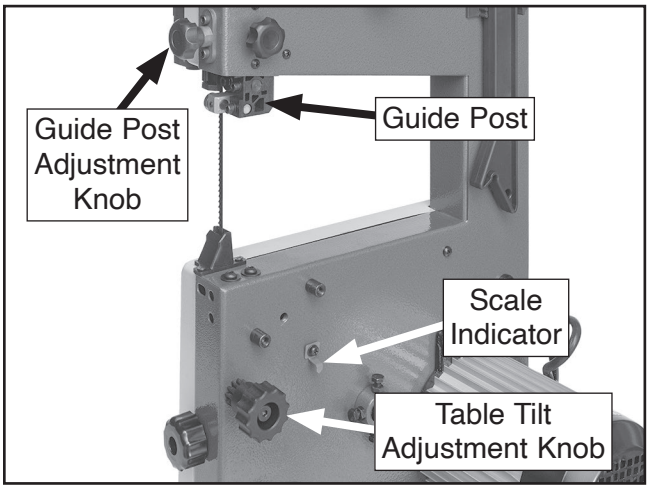


Figure 13. Location of table controls that must be removed or adjusted.

4. Remove table insert, wing bolt, lock washer, flat washer, and D-nut from table assembly (see **Figure 14**). Note how fasteners secure to table assembly for re-installation later.

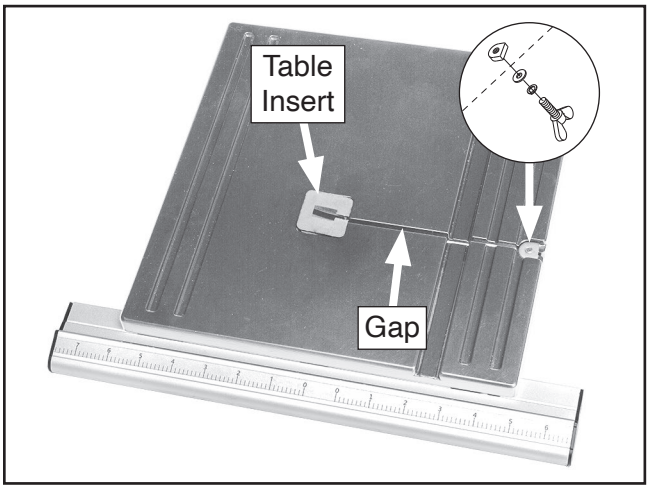


Figure 14. Table components.

5. Using gap in table (see **Figure 14** on **Page 17**), slide table assembly around blade and rotate assembly 90°. Position assembly as shown in **Figure 15**.

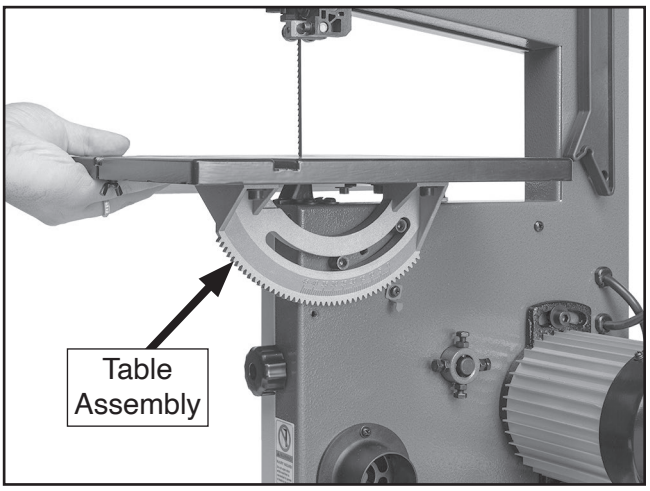


Figure 15. Example of table assembly positioned on saw.

6. Install table tilt lock lever, 8mm flat washer, and components removed in **Step 2** (see **Figure 16**). DO NOT fully tighten yet.

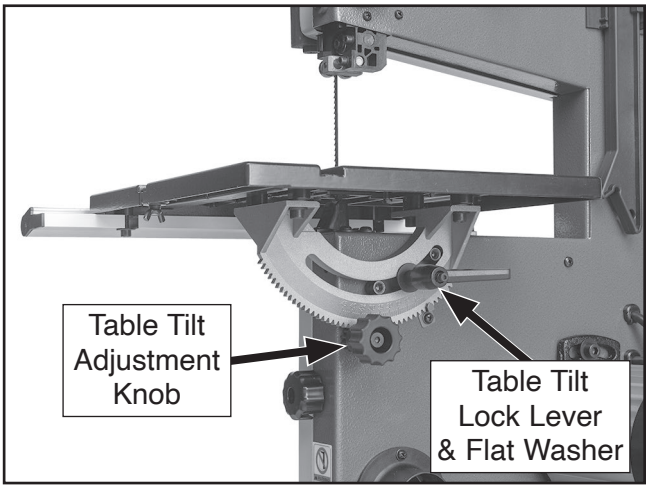


Figure 16. Example of table installed.

7. Place machinist's square flat on table, against side of blade (see **Figure 17**).

8. Use table tilt adjustment knob (see **Figure 16**) to tilt table until square is flat against side of blade, as illustrated in **Figure 17**.

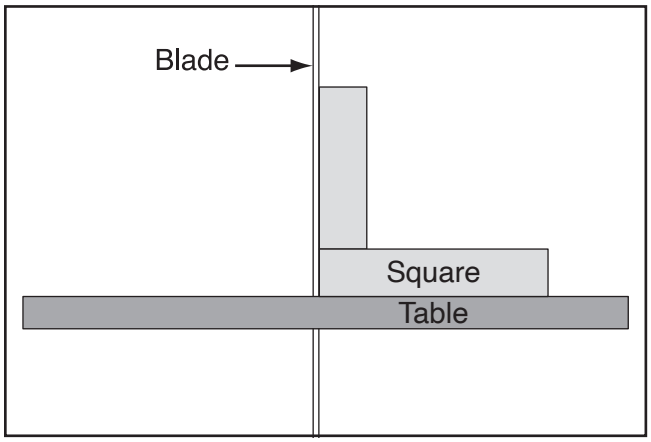


Figure 17. Using square to adjust table perpendicular to side of blade.

9. Tighten table tilt lock lever, then set scale indicator to "0" on table tilt scale and tighten screw (see **Figure 18**).

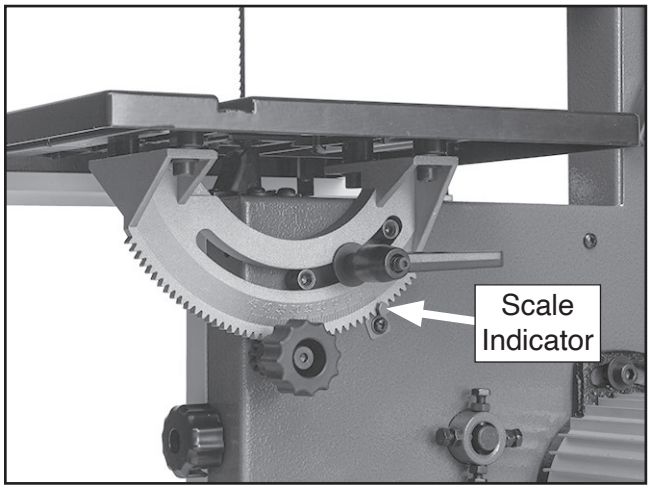


Figure 18. Example of scale indicator set to "0".

10. Install table insert, wing bolt, lock washer, flat washer, and D-nut removed in **Step 4** on table assembly.

11. Install fence on fence rail, as shown in **Figure 19**.

Note: *Fence lock handle (see **Figure 19**) needs to be in up position when installing fence onto fence rail. Once fence snaps onto fence rail, push lock handle down to secure fence in position.*

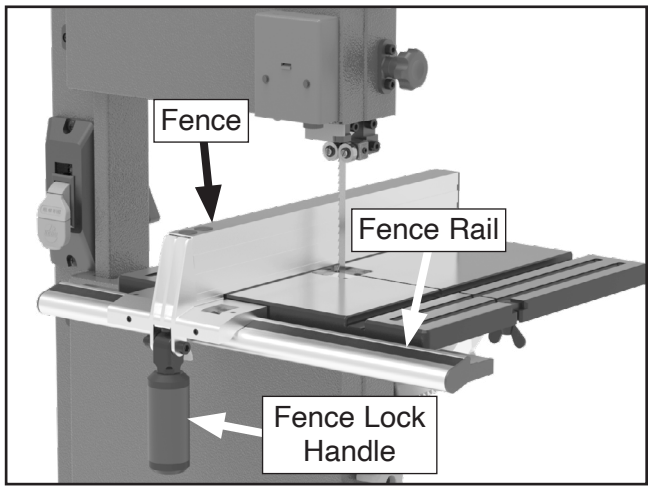


Figure 19. Fence installed on fence rail.

12. Remove LED/laser unit cover (see **Figure 20**) and install (2) AA batteries, matching positive and negative terminals.

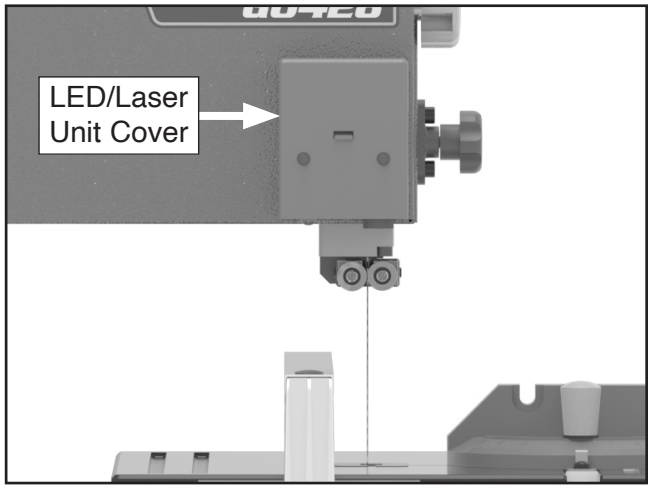


Figure 20. Location of LED/laser unit cover.

13. Install LED/laser unit cover.

Adjustment Overview

The bandsaw is one of the most versatile woodworking machines. However, it has multiple components that must be properly adjusted for the best cutting results.

For practical and safety reasons, some adjustments and test operations must be performed before performing other necessary adjustments. Below is an overview of all the adjustments and the order in which they should be performed:

1. Blade Tracking
2. Dust Collection
3. Test Run
4. Tensioning Blade
5. Adjusting Blade Support Bearings
6. Adjusting Blade Guide Bearings
7. Aligning Table
8. Aligning Fence

Blade Tracking

"Tracking" refers to how the blade rides on the bandsaw wheels. Proper tracking is important for maintaining bandsaw adjustments, achieving correct blade tension, and cutting accurately. Improper tracking reduces cutting accuracy, causes excess vibrations, and places stress on the blade and other bandsaw components. The shape of the wheels and the orientation of the wheels in relation to each other determine how the blade tracks.

Bandsaw wheels are either flat or crowned and both shapes track differently. The G0428 has crowned wheels. As the wheels spin, a properly tracking blade naturally tracks at the center of the wheel (see **Figure 21**).

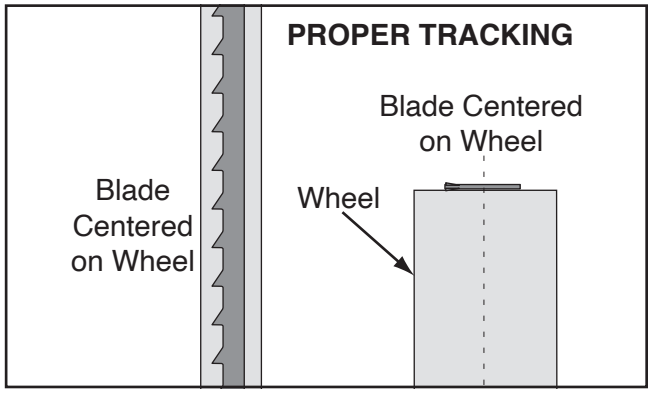


Figure 21. Blade centered on crown of wheel.

The bandsaw wheels must be aligned for optimal machine performance. Properly aligned wheels are parallel and coplanar (see **Figure 22**).

Improper blade tension and cutting practices can negatively affect blade tracking. Familiarizing yourself with the ideas and conditions described in **Figure 22** will help you recognize when your wheel alignment may need to be adjusted (refer to **Wheel Alignment** on **Page 45** for detailed instructions on adjusting the tracking).

The wheels on the G0428 were aligned at the factory, so center tracking is the only adjustment that needs to be performed when the saw is new. This adjustment is necessary before turning the saw on or performing other adjustments.

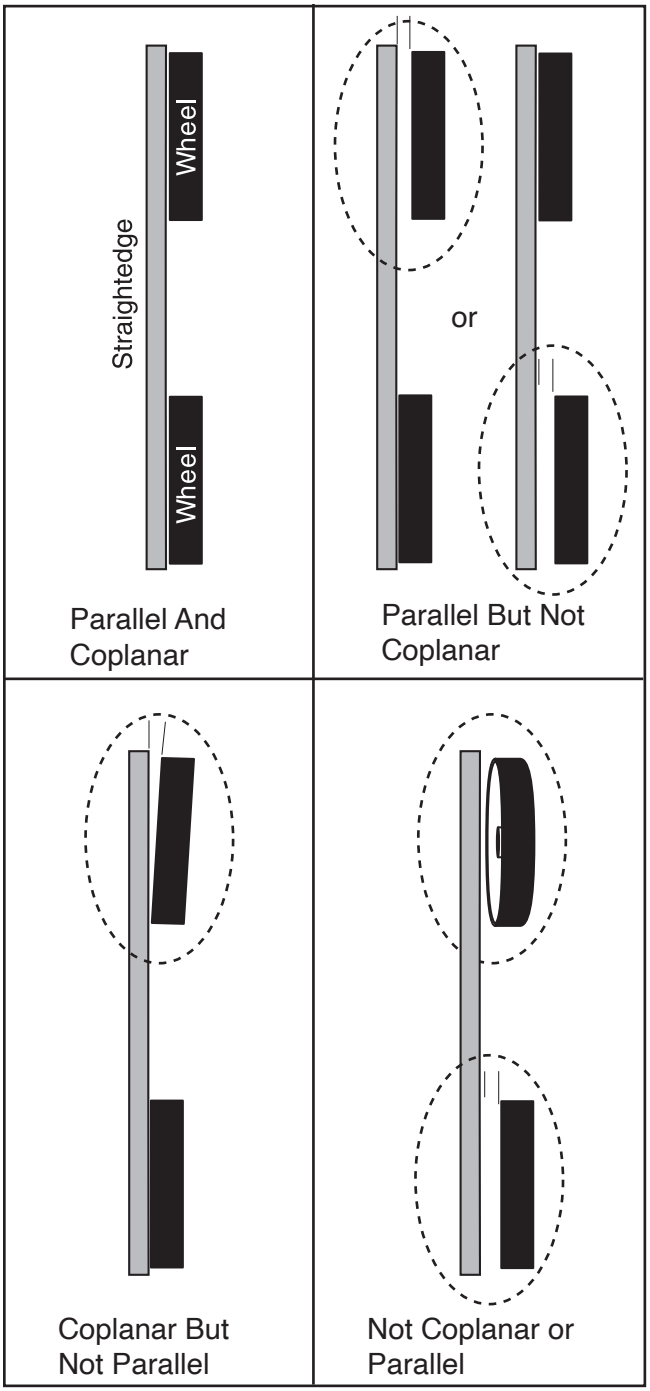


Figure 22. Wheel alignment and misalignment examples.

To adjust blade tracking:

1. DISCONNECT MACHINE FROM POWER!

2. Adjust upper and lower blade guides away from blade, and raise upper guides all the way up (refer to **Adjusting Blade Guide Bearings** on **Page 25** for detailed instructions).

Note: *When adjusting blade tracking for test run in this procedure, blade must have approximately same amount of tension as when under operating conditions. After test run is successfully completed, you will be instructed on how to more accurately tension blade for optimum results.*

3. Move quick-release lever all the way clockwise (as viewed from the rear of the machine) to apply tension to blade (see **Figure 23**).

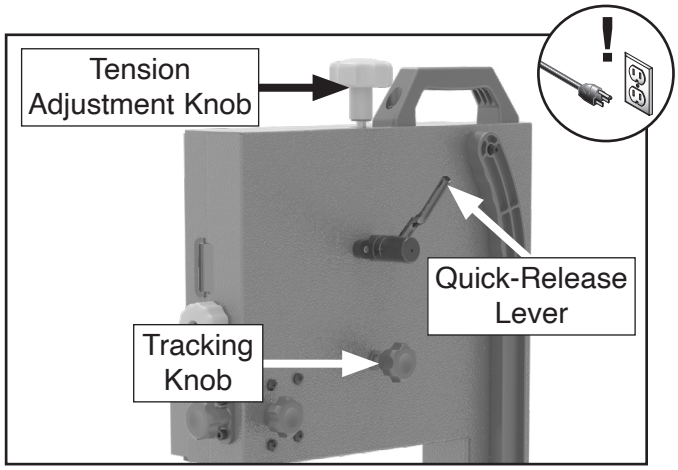


Figure 23. Blade tension and tracking controls.

4. Open upper wheel cover.

5. Push blade toward fence with moderate pressure to check if there is approximately ¼" deflection. If not, rotate tension adjustment knob as needed until blade is properly tensioned.

6. Rotate upper wheel by hand several times and watch how blade rides on wheel (see **Figure 21** on **Page 20** for an illustration of this concept).

   — If blade rides in center of upper wheel, it is properly tracking. Close and secure upper wheel cover then proceed to **Dust Collection**.

   — If blade does not ride in center of upper wheel, proceed to **Step 7**.

7. Spin upper wheel with one hand and slowly adjust tracking knob (see **Figure 23**) with other hand until blade consistently tracks in center of wheel, then close and secure upper wheel cover.

Dust Collection

⚠CAUTION

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

Recommended CFM at Dust Port: 100 CFM

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

To connect a dust collection hose:

1. Fit dust hose over 2" dust port, as shown in **Figure 24**, and secure it in place with a hose clamp.

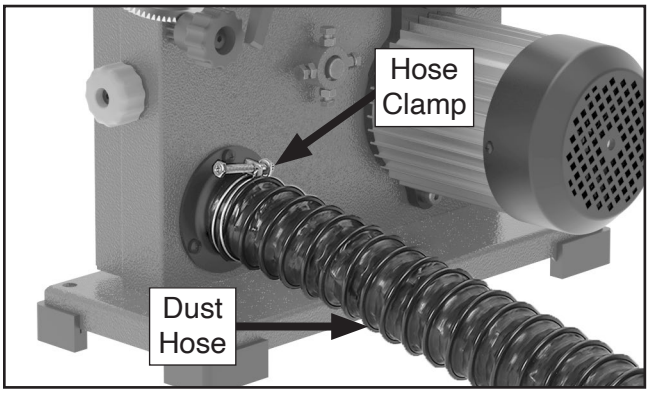


Figure 24. Example of 2" dust hose attached to dust port.

2. Gently pull hose to make sure it does not come off. A tight fit is necessary for proper performance.

Test Run

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

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

The test run consists of verifying the following: 1) The motor powers up and runs correctly, and 2) the switch disabling key disables the switch properly.

⚠WARNING

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

⚠WARNING

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

To test run machine:

1. Clear all setup tools away from machine.

2. Connect machine to power supply.

3. Turn machine ***ON***, verify motor operation, then turn machine ***OFF***.

   Motor should run smoothly and without problems or unusual noises.

4. Remove switch disabling key, as shown in **Figure 25**.

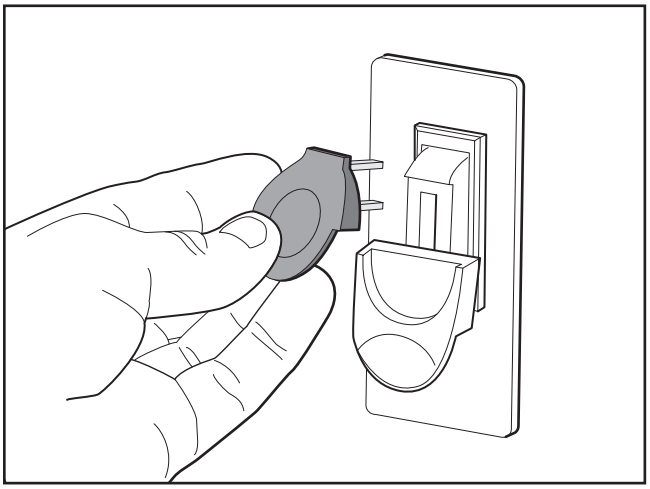


Figure 25. Removing key from paddle switch.

5. Try to start machine with paddle switch. Machine should not start.

   — If machine *does not* start, switch disabling feature is working correctly. Congratulations! Test run is complete.

   — If machine *does start*, immediately stop machine. Switch disabling feature is not working correctly. This safety feature must work properly before proceeding with regular operations. Call Tech Support for help.

Tensioning Blade

A properly tensioned blade is essential for making accurate cuts, maximizing blade life, and making other bandsaw adjustments. However, a properly tensioned blade will not compensate for cutting problems caused by excessive feed rate, hardness variations between workpieces, and improper blade selection.

Optimal cutting results for any type of workpiece are achieved through a combination of correct blade selection, proper blade tension, properly adjusted blade guides and other bandsaw components, and using an appropriate feed rate.

Improper blade tension is unsafe, produces inaccurate and inconsistent results, and introduces unnecessary wear on bandsaw components. Over-tensioning the blade increases the chance of the blade breaking or wheel misalignment. Under-tensioned blades wander excessively while cutting and will not track properly during operation.

The method used to tension the blade is often a matter of preference. This manual describes two methods: the flutter method and the deflection method. Either method will help you properly tension the blade. Experience and personal preference will help you decide which method you prefer.

Note: *Tensioning the blade before the **Test Run** was an approximate tension. The following procedures fine-tune the blade tension.*

The Flutter Method

Using the flutter method, you intentionally loosen the blade until it just passes the point of being too loose (when it begins to flutter). Then you gradually tighten the blade until proper tension is reached.

To tension bandsaw blade using flutter method.

1. DISCONNECT MACHINE FROM POWER!
2. Make sure blade is properly tracking as instructed in **Blade Tracking** section on **Page 20**.
3. Raise guide post all the way, and move upper and lower guide bearings away from blade.
4. Engage blade tension quick-release lever to apply tension to blade.
5. Connect bandsaw to power, then turn it ***ON***.
6. Using blade tension adjustment knob, slowly decrease blade tension until you see the blade start to flutter.
7. Slowly increase tension until blade stops fluttering, then tighten blade tension adjustment knob an additional ⅛ to ¼ turn.
8. DISCONNECT MACHINE FROM POWER!
9. Adjust blade guides as described in **Adjusting Blade Support Bearings** on **Page 24** and **Adjusting Blade Guide Bearings** on **Page 25.**

The Deflection Method

The deflection method is much more subjective than the flutter method. Each blade will deflect differently and every user will determine what "moderate pressure" means. The following are general guidelines for tensioning the blade with this method.

To tension bandsaw blade using deflection method:

1. DISCONNECT MACHINE FROM POWER!

2. Make sure blade is properly tracking as instructed in **Blade Tracking** section on **Page 20**.

3. Raise guide post all the way and move upper and lower guide bearings away from blade.

4. Engage blade tension quick-release lever to apply tension to blade.

5. Using moderate pressure, push center of the blade sideways with one finger.

   — If the blade deflects approximately ¼", it is properly tensioned. Proceed to **Step 6**.

   — If the blade deflects less than ¼", it is over-tensioned. Turn the blade tensioning knob counterclockwise two full turns and repeat **Step 5**.

   — If the blade deflects ¼" or more, the blade is not properly tensioned. Apply tension to the blade incrementally and repeat **Step 5** until properly tensioned.

6. Adjust blade guides as described in **Adjusting Blade Support Bearings** and **Adjusting Blade Guide Bearings** on **Page 25.**

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.

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. To access the lower support bearing, you must open the lower wheel cover (see **Identification** on **Page 3** for reference).

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

Items Needed	Qty
Hex Wrench 4mm	1
Feeler Gauge 0.016"	1

To adjust blade support bearings:

1. DISCONNECT MACHINE FROM POWER!

2. Loosen support bearing adjustment cap screw (see **Figure 26**).

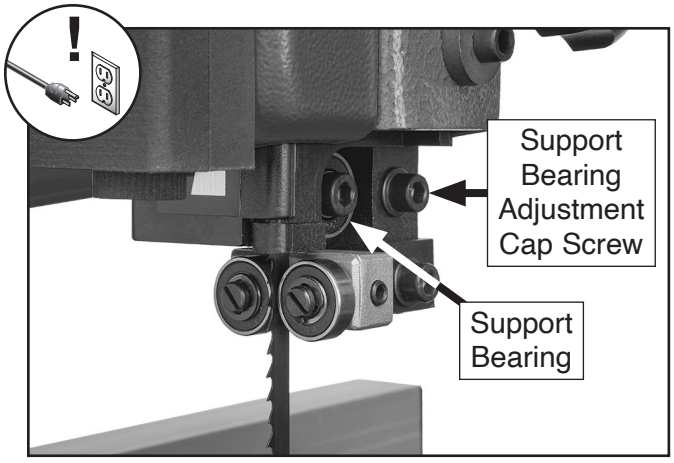


Figure 26. Upper support bearing controls.

3. Position support bearing approximately 0.016" away from the back of the blade, as illustrated in **Figure 27**. This can be measured with a feeler gauge.

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

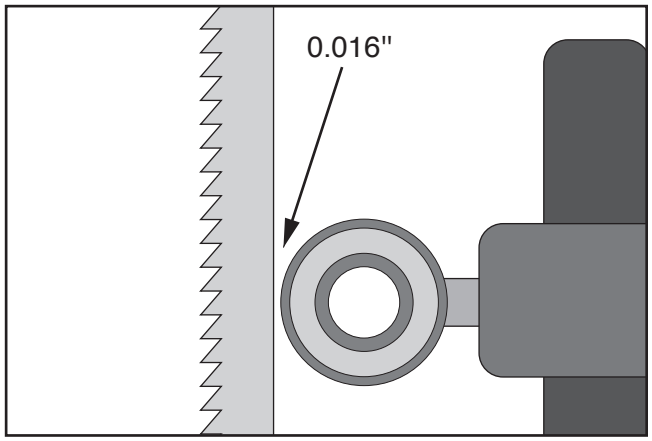


Figure 27. Bearing positioned 0.016" away from back of blade.

4. Tighten adjustment cap screw to lock support bearing in place.

   Note: *When securing adjustment of lower support bearing, make sure it is parallel to blade.*

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 23***).*

Tools Needed	**Qty**
Hex Wrenches 2.5, 4mm	1 Ea.
Flat Head Screwdriver ¼"	1

To adjust blade guides:

1. DISCONNECT MACHINE FROM POWER!

2. Loosen guide block cap screw shown in **Figure 28**, then laterally position guide bearings just behind blade gullets, as illustrated in **Figure 29** on **Page 26**, then tighten cap screw to secure setting.

   Note: *Guide bearings should be positioned behind gullets a distance equal to that of support bearing behind blade (see **Page 24** for reference).*

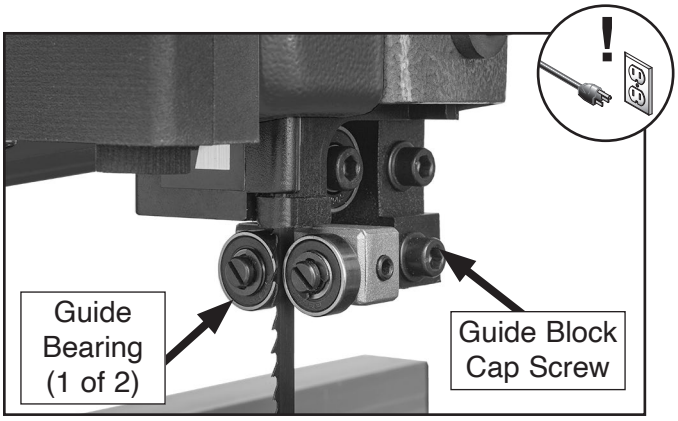


Figure 28. Upper guide bearing components.

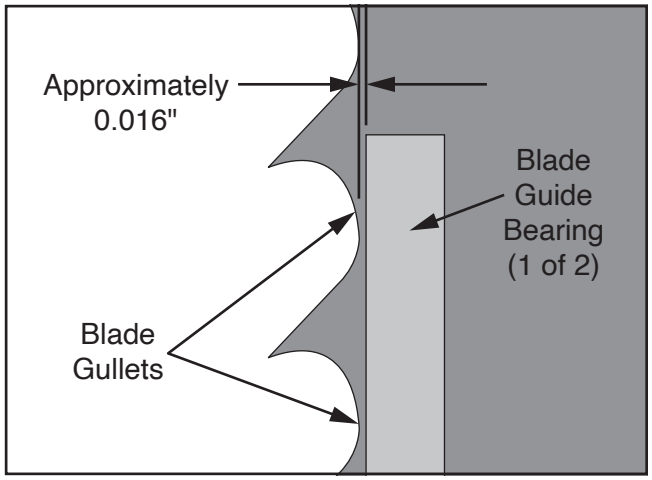


Figure 29. Blade guide bearing positioned just behind blade gullets.

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

NOTICE

Make sure that the blade teeth will not contact the guide bearings when the blade is against the rear support bearing during the cut.

3. Loosen guide bearing lock screws (see **Figure 30**).

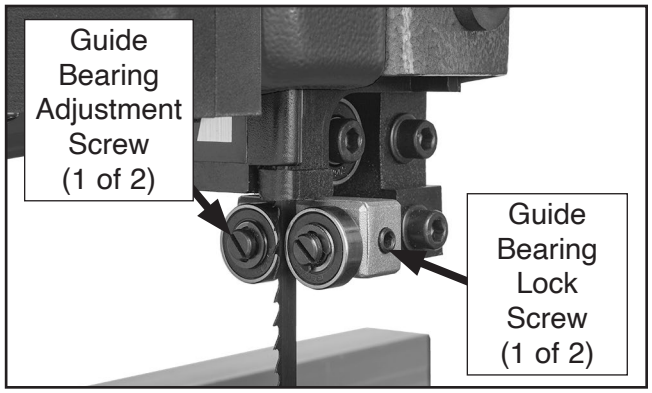


Figure 30. Location of guide bearing adjustment screws and lock screws.

4. Loosen both guide bearing adjustment screws (see **Figure 30**), then position guide bearings so they evenly and lightly touch sides of blade (see **Figure 31**) without deflecting it one way or the other.

Note: *When blade guide bearings are properly adjusted against blade, they should lightly rotate as blade moves.*

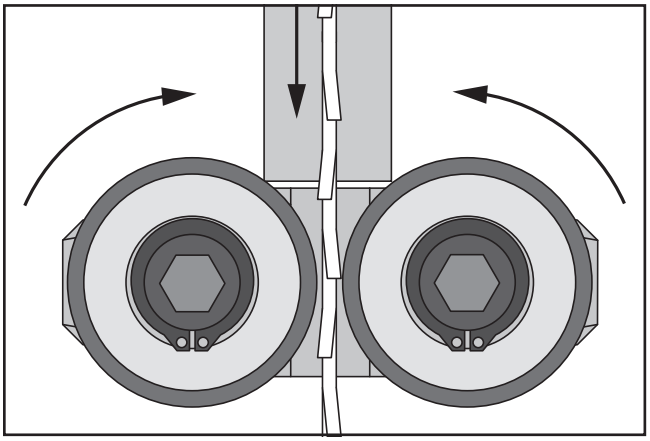


Figure 31. Blade guide bearings evenly and lightly touching sides of blade.

5. Tighten guide bearing lock screws.

6. Tighten cap screws to secure settings. Re-check setting after tightening.

NOTICE

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

Aligning Table

To ensure cutting accuracy, the table should be aligned so the miter slot is parallel to the bandsaw blade.

Items Needed	**Qty**
Precision Straightedge	1
Precision Ruler	1
Hex Wrench 6mm	1

To align table:

1. Make sure blade is tracking properly and correctly tensioned (refer to **Page 20** & **Page 23**).

2. DISCONNECT MACHINE FROM POWER!

3. Place straightedge along blade so it barely touches both front and back of blade without going across a tooth (see **Figure 32**).

4. Measure distance between straightedge and miter slot (see **Figure 32**). Distance should be same at front and back of table.

— If distance *is* same at front and back of table, no adjustment is necessary.

— If distance *is not* same at front and back of table, it must be adjusted. Proceed to **Step 5**.

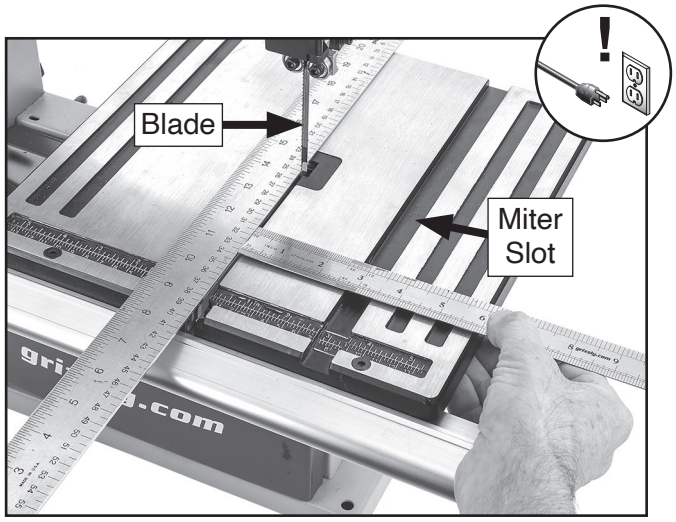


Figure 32. Example of placing a straightedge along blade and measuring to miter slot.

5. Loosen trunnion cap screws that secure table (see **Figure 33**).

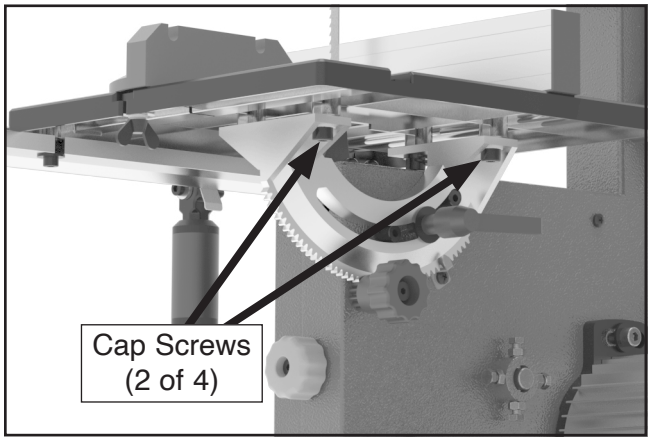


Figure 33. Location of trunnion cap screws.

6. Adjust table until distance between straightedge and miter slot is same at front and back of table.

7. Taking care not to move table, tighten trunnion cap screws, then repeat **Step 4** to verify adjustment.

Aligning Fence

To ensure cutting accuracy, the fence should be aligned parallel to the blade. This is achieved by aligning the fence to the miter slot.

Note: *Occasionally, even after aligning the fence, a symptom known as "blade lead" will develop, requiring the fence to be skewed slightly to compensate for the blade lead problem. Refer to* ***Blade Lead****, beginning on* ***Page 49*** *for more information.*

Tools Needed **Qty**
Hex Wrenches 3, 5mm.....1 Ea.

To align fence:

1. DISCONNECT MACHINE FROM POWER!

2. Make sure table is aligned with blade (see **Aligning Table** on **Page 27** for instructions).

3. Make sure fence is square to table (see **Fence-to-Table Squareness** on **Page 48** for instructions).

4. Install fence on right side of blade, aligned with edge of miter slot (see **Figure 34**), then lock it in place.

— If fence *is* parallel with miter slot, no adjustment is necessary.

— If fence *is not* parallel with miter slot, proceed to **Step 5**.

5. Remove (2) cover caps and loosen (2) fence adjustment cap screws (see **Figure 34**).

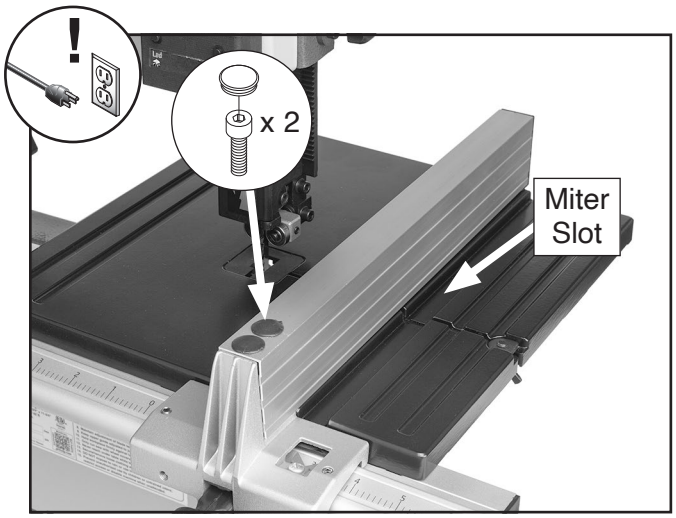


Figure 34. Location of cover caps and fence adjustment cap screws. Example shown.

6. Adjust fence parallel with miter slot, then tighten cap screws from **Step 5**.

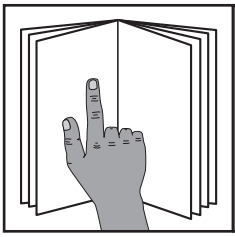
7. Install cover caps.

SECTION 4: OPERATIONS

Operation Overview

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

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



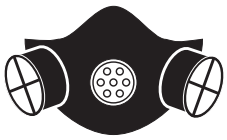
⚠WARNING

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

⚠WARNING

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





NOTICE

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

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

1. Examines the workpiece to make sure it is suitable for cutting.
2. Adjusts the table tilt, if necessary, to the correct angle of the desired cut.
3. If using the fence, adjusts it for the width of the cut and then locks it in place. If using the miter gauge, adjusts the angle and locks it in place.
4. Loosens the guide post lock knob, adjusts the upper blade guide height to just clear the workpiece (no more than ¼"), then re-tightens the guide post lock knob.
5. Checks to make sure the workpiece can safely pass all the way through the blade without interference from other objects.
6. Puts on safety glasses and a respirator.
7. Starts the dust collector and bandsaw.
8. If necessary, turns on laser guide.
9. Holds the workpiece firmly and flatly against both the table and fence (or miter gauge), and then pushes the workpiece into the blade at a steady and controlled rate until the cut is complete.

   The operator is very careful to keep fingers away from the blade and uses a push stick to feed narrow workpieces.
10. Turns off laser guide (if necessary) and stops the bandsaw.

A properly adjusted bandsaw can be safer to operate than most other saws and performs many types of cuts with ease and accuracy. 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

Here are some basic tips to follow when operating the bandsaw:

- Replace, sharpen, and clean blades often for best performance. Check guides, tension, and alignment settings periodically and adjust when necessary to keep the saw running in top condition.

- Use light and even pressure while cutting. Light feeding pressure makes it easier to cut straight and prevents undue friction or strain on the bandsaw components and the blade.

- Avoid twisting the blade when cutting around tight corners. Allow the blade to saw its way around the corners. Always use relief cuts when possible.

- Misusing the saw or using incorrect techniques (e.g. twisting the blade with the workpiece, incorrect feed rate, etc.) is unsafe and results in poor cuts.

Disabling Switch

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

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

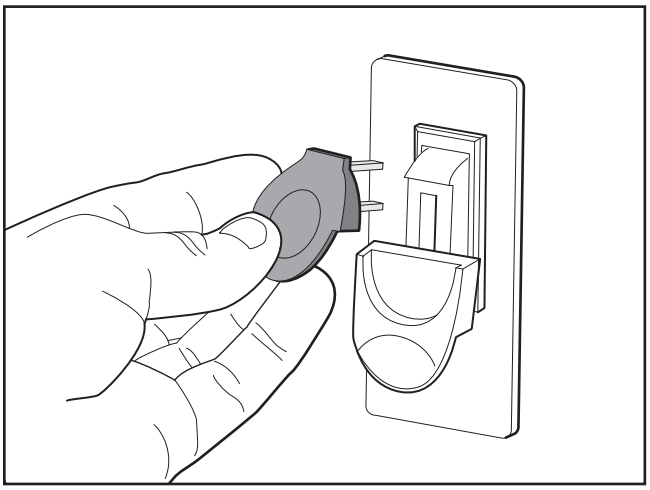


Figure 35. Disabling switch by removing key.

⚠WARNING

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

Workpiece Inspection

Some workpieces are not safe to cut or may require modification before they are safe to cut. **Before cutting, inspect all workpieces for the following:**

- ***Material Type:*** This machine is intended for cutting natural and man-made wood products, laminate covered wood products, and some plastics. Cutting drywall or cementitious backer board creates extremely fine dust and may reduce the life of the bearings. This machine is NOT designed to cut metal, glass, stone, tile, etc.; cutting these materials may lead to injury.

- ***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, cause kickback, 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 kickback and machine 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 blades, increases the risk of kickback, and yields poor results.

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

- ***Minor Warping:*** Workpieces with slight cupping can be safely supported if the cupped side is facing the table or the fence. On the contrary, a workpiece supported on the bowed side will rock during a cut and could cause kickback or severe injury.

Adjusting Upper Blade Guide Height

When cutting, the blade guides must always be positioned so they just clear (no more than ¼") the workpiece. The guide post, shown in **Figure 36**, allows the upper blade guide assembly to be quickly adjusted for height.

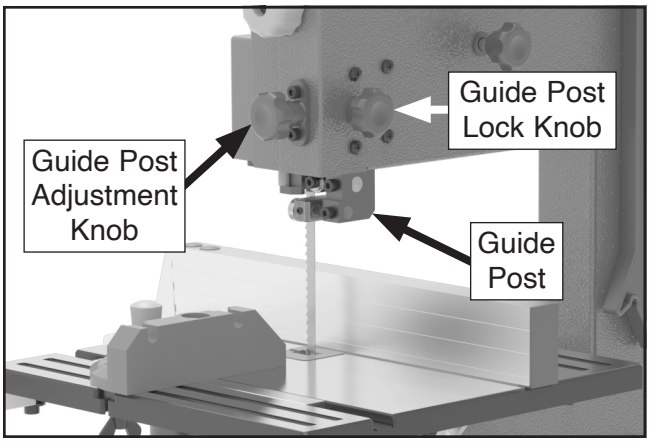


Figure 36. Guide post, lock, and control knobs.

To adjust height of upper blade guides:

1. DISCONNECT MACHINE FROM POWER!

2. Loosen guide post lock knob.

3. Using guide post adjustment knob, adjust height of the guide post so that blade guide assembly just clears workpiece by no more than ¼".

4. Tighten lock knob to secure setting.

Tilting Table

The table can be tilted to make angled or beveled cuts. A simple tilt scale is provided on the trunnion for a quick gauge (see **Figure 37**). For more accurate results use a protractor.

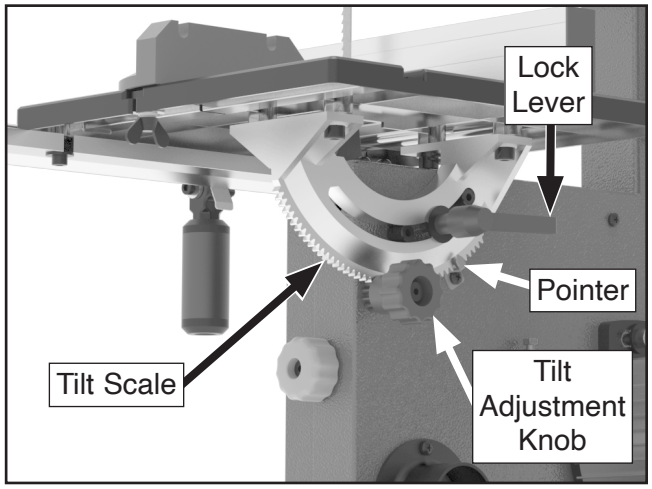


Figure 37. Table tilt controls.

To tilt table:

1. DISCONNECT MACHINE FROM POWER!
2. Loosen table lock lever shown in **Figure 37**.
3. Rotate tilt adjustment knob until table reaches desired angle, then tighten lock lever.

Choosing Blades

Blade Dimensions

Length Range.....$61\frac{3}{16}$–62"
Width Range.....$\frac{1}{8}$"–$\frac{3}{8}$"

Selecting the right blade requires a knowledge of the various blade characteristics to match the blade with the particular cutting operation.

Blade Length

Measured by the circumference, blade lengths are usually unique to the brand of your bandsaw and the distance between wheels. Blades of the same length will vary slightly because of how they are welded.

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.

Always pick the size of blade that best suits your application.

- **Curve Cutting:** Use the chart in **Figure 38** 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.

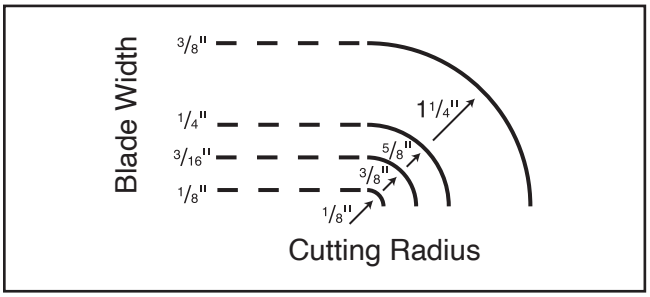


Figure 38. Recommended cutting radius per blade width.

- **Straight Cutting:** Use the largest width blade that you own. Large blades excel at cutting straight lines and are less prone to wander.

Tooth Style

Figure 39 illustrates the three main blade tooth styles:

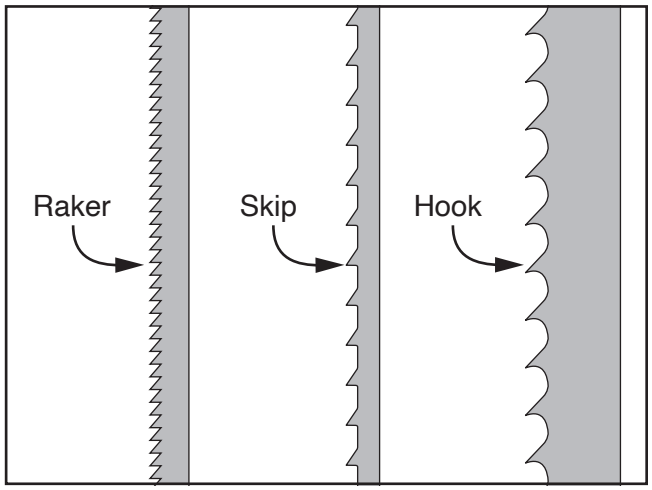


Figure 39. Main blade tooth styles.

- **Raker**: 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. As a result, smooth cuts can be achieved without cutting fast or generating more heat than other tooth types.

- **Skip**: 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 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

Measured as TPI (teeth per inch), tooth pitch determines the number of 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 thin piece of steel that is subjected to tremendous stresses when cutting. 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. Resin/pitch cleaners are excellent for cleaning dirty blades.

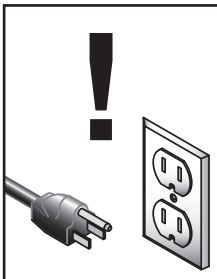
Blade Breakage

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 are subjected to. 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 blade guides.

The most common causes of blade breakage are:

- Faulty alignment/adjustment of the guides.
- Forcing/twisting a wide blade around a short radius.
- Feeding the workpiece too fast.
- Dull teeth or damaged tooth set.
- Over-tensioned blade.
- Upper 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 three teeth in the workpiece at all times.)

Changing Blade



⚠WARNING

Disconnect bandsaw from power BEFORE changing blade. Serious personal injury could occur if machine is started during this procedure.



⚠CAUTION

LACERATION HAZARD! Bandsaw blades are sharp and difficult to handle. Wear heavy leather gloves while handling to reduce the risk of being cut.

To change blade:

1. DISCONNECT MACHINE FROM POWER!

2. Move blade tension quick-release lever counterclockwise to release blade tension.

3. Remove miter gauge and fence from table.

4. Remove table insert, wing bolt, lock washer, flat washer, and D-nut from table (see **Figure 40**).

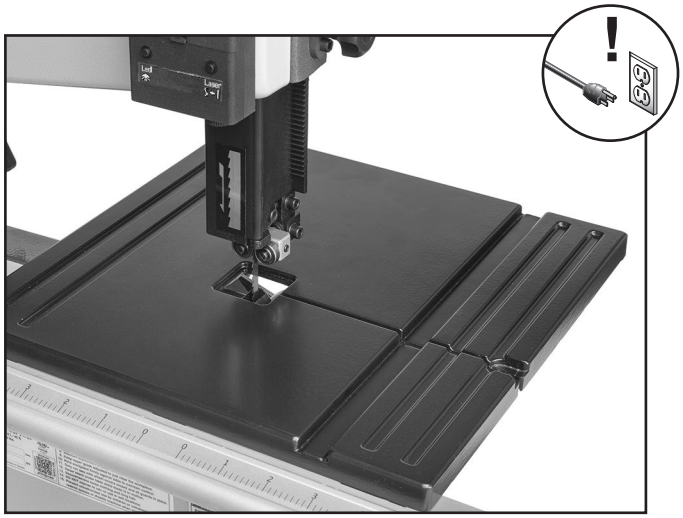


Figure 40. Example of table insert, wing bolt, lock washer, flat washer, and D-nut removed from table.

5. Open upper and lower wheel covers.

6. Adjust blade guide post all the way down, then pivot guide post door open (see **Figure 41**).

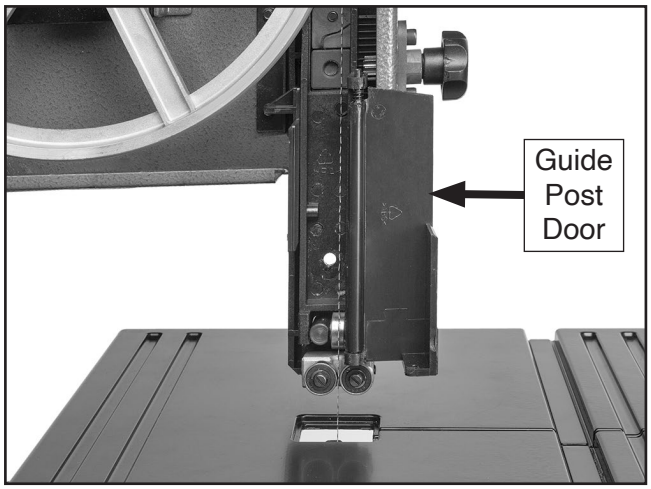


Figure 41. Guide post door pivoted open.

7. Adjust blade guide post all the way up, and move blade guides completely away from blade.

8. Put on heavy leather gloves.

9. Slip blade off wheels, slide it through table slot (see **Figure 42**), and remove it from machine.

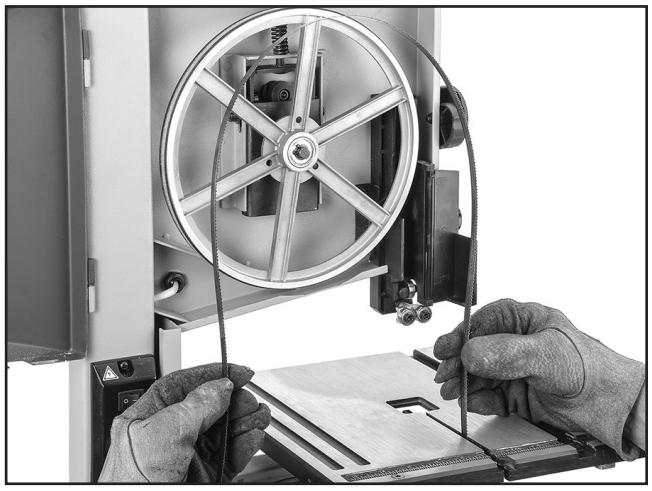


Figure 42. Example of removing blade.

10. Position new blade so teeth are facing you and pointing down in your right hand, then slide it through table slot.

Note: *If teeth will not point downward in any orientation, blade is inside out. Remove blade and twist it right-side out.*

11. Slip blade over wheels while making sure it is properly positioned between blade guards and guides.

12. Engage blade tension quick-release lever, then tension blade (see **Tensioning Blade** on **Page 23** for details).

13. Adjust blade tracking (see **Blade Tracking** on **Page 20**).

14. Adjust upper/lower support bearings and blade guides (see **Adjusting Blade Support Bearings** on **Page 24**).

15. Close guide post door and wheel covers, and install fence components removed in **Steps 3**.

16. Make sure fence is parallel to miter slot and, if necessary, adjust alignment (see **Aligning Fence** on **Page 28**).

Ripping

"Ripping" means cutting with the grain of the wood stock. For plywood and other processed wood, ripping simply means cutting down the length of the workpiece. Beveled rip cuts may be performed by tilting the table.

To make a rip cut:

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

2. Adjust blade guide assembly to proper height above workpiece.

3. After all safety precautions have been met, turn bandsaw ***ON*** and wait for it to reach full speed. Slowly feed workpiece into blade until blade is completely through workpiece. **Figure 43** shows an example of a ripping operation.

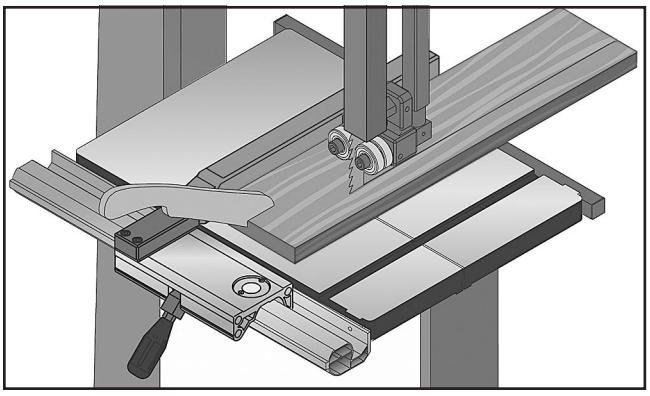


Figure 43. Example of a ripping operation.

⚠WARNING

ALWAYS use a push stick when ripping narrow pieces. Failure to follow this warning may result in amputation or laceration injuries!

⚠WARNING

NEVER place fingers or hands in the line of cut. If you slip, your hands or fingers may go into the blade and may be cut.

Crosscutting

Crosscutting is the process of cutting across the grain of wood. For plywood and other processed wood, crosscutting simply means cutting across the width of the material. Crosscuts can be 90° or angled using the miter gauge. Compound crosscuts are those where the miter is angled and the table tilted.

To make a crosscut:

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

2. Adjust blade guide assembly to correct height.

3. Adjust miter gauge to correct angle needed for cut.

4. Move fence out of the way. Place workpiece evenly against miter gauge, then line up mark with blade.

5. After all safety precautions have been met, turn bandsaw ***ON*** and wait for it to reach full speed. Slowly feed workpiece into blade until blade is all the way through workpiece. **Figure 44** shows an example of a crosscutting operation.

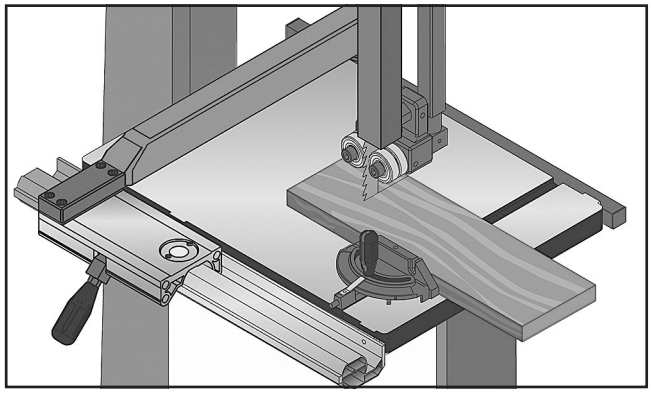


Figure 44. Example of a crosscutting operation with miter gauge.

Resawing

"Resawing" means cutting the thickness of a board into two or more thinner boards (see **Figure 45** for an example). The maximum height of a board that can be resawn is limited by the maximum cutting height of the bandsaw.

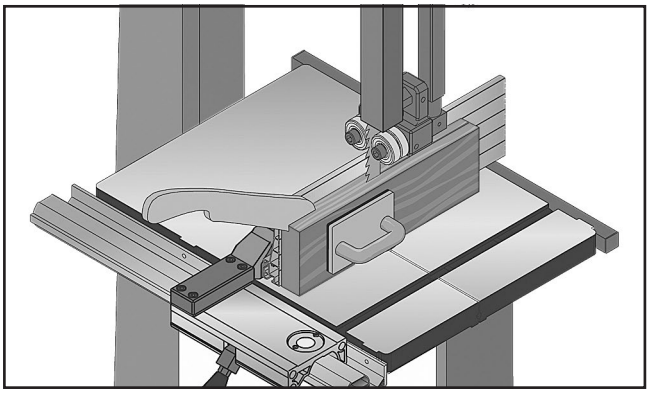


Figure 45. Example of a resawing operation.

One of the most important considerations for resawing is blade selection – a wide blade cuts straighter and is less prone to blade lead (see the **Blade Lead** section beginning on **Page 49** for more information).

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 TPI), because they offer larger gullet capacities for clearing sawdust, which reduces heat buildup and strain on the motor.

⚠WARNING

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

Cutting Curves

When cutting curves, simultaneously feed and turn the stock carefully so the blade follows the layout line without twisting. If curves are sharp or tight, use a narrower blade with more TPI (teeth per inch) and make relief cuts to avoid having to back the workpiece away from the blade.

Relief cuts reduce the chance of the blade being pinched or twisted. Relief cuts are cuts made through the waste portion of the workpiece and are stopped at the layout line, so when you're cutting along the layout line, waste wood is released from the workpiece, alleviating any pressure on the back of the blade. Relief cuts also make it easier to back the workpiece out once the saw blade has come to a stop, if needed.

Always make short cuts first, then proceed to the longer cuts.

NOTICE

The list below displays blade widths and the corresponding minimum cutting radii for those blade widths.

Width	Min. Radius
1/8"	1/8"
3/16"	3/8"
1/4"	5/8"
3/8"	1 1/4"

Stacked Cuts

One of the benefits of a bandsaw is its ability to cut multiple copies of a particular shape by stacking a number of workpieces together. However, before making stacked cuts, ensure that the table is perpendicular (90°) to the blade—otherwise, any error in this setting will be compounded in the workpieces.

To complete a stacked cut:

1. Align workpieces from top to bottom.

2. Secure all pieces together in a manner that will not interfere with cutting.

   Note: *Hot glue on the edges works well, as do brad nails through waste portion. Be careful not to cut into brads or you may break blade!*

3. Lay out shape to cut on face of top piece.

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

5. Cut stack of pieces as though you were cutting a single piece. Follow layout line with blade kerf on waste side of line (see **Figure 46** for example of stacked cut setup).

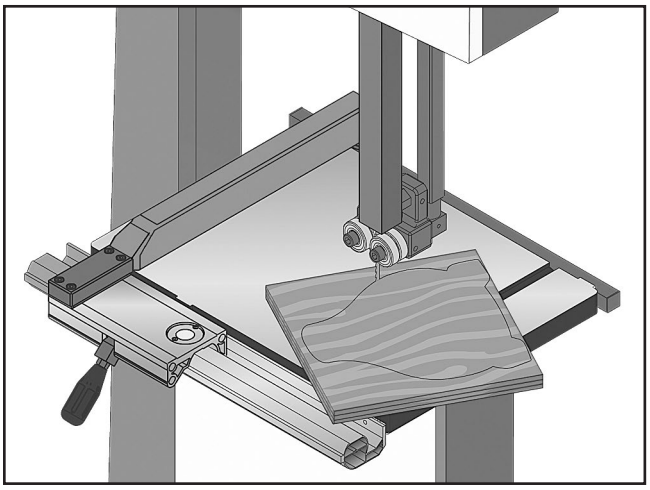
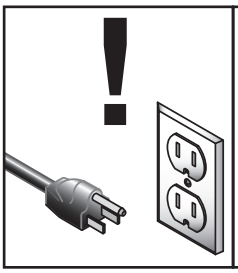


Figure 46. Example of stacked cut setup.

SECTION 5: 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 issues 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 belt for 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 & Lubricating

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

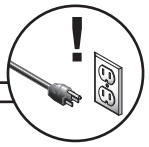
Once a month, remove the blade and thoroughly clean all built-up sawdust from the rubber tires on the wheels.

If the table becomes difficult to tilt, lubricate the trunnion gear and the slide in the trunnion base.

SECTION 6: SERVICE

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

Troubleshooting



Motor & Electrical

Symptom	Possible Cause	Possible Solution
Machine does not start or power supply breaker immediately trips after startup.	1. Switch disabling key removed. 2. Incorrect power supply voltage or circuit size. 3. Power supply circuit breaker tripped or fuse blown. 4. Motor wires connected incorrectly. 5. Wiring broken, disconnected, or corroded. 6. Motor or motor bearings at fault.	1. Install switch disabling key. 2. Ensure correct power supply voltage and circuit size. 3. Ensure circuit is free of shorts. Reset circuit breaker or replace fuse. 4. Correct motor wiring connections (**Page 51**). 5. Fix broken wires or disconnected/corroded connections (**Page 51**). 6. Test/repair/replace.
Machine stalls or is underpowered.	1. Motor wires connected incorrectly. 2. Extension cord too long. 3. Motor overheated. 4. Motor or motor bearings at fault.	1. Correct motor wire connections (**Page 51**). 2. Move machine closer to power supply; use shorter extension cord. 3. Clean motor, let cool, and reduce workload. 4. Test/repair/replace.
Machine has vibration or noisy operation.	1. Motor or machine component loose. 2. Motor fan rubbing on fan cover. 3. Motor mount loose/broken. 4. Motor bearings at fault.	1. Replace damaged or missing bolts/nuts or tighten if loose. 2. Fix/replace fan cover; replace loose/damaged fan. 3. Tighten/replace. 4. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.
LED/Laser guide does not illuminate.	1. Lens covered with dust. 2. Batteries dead.	1. Clean lens. 2. Replace batteries (**Page 50**).

Operation

Symptom	Possible Cause	Possible Solution
Machine has vibration or noisy operation.	1. Blade weld at fault/teeth broken. 2. Belt worn or loose. 3. Pulley loose. 4. Machine mounted incorrectly.	1. Replace blade (**Page 34**). 2. Inspect/replace belt (**Page 43**, **Page 44**). 3. Re-align/replace shaft, pulley set screw, and key. 4. Tighten mounting bolts; relocate/shim machine.

Operation (Cont.)

Symptom	Possible Cause	Possible Solution
Machine stalls or is underpowered.	1. Workpiece material not suitable for machine. 2. Feed rate/cutting speed too fast. 3. Dull blade. 4. Incorrect blade for task. 5. Workpiece crooked; fence loose or misadjusted. 6. Blade slipping on wheels. 7. Belt slipping. 8. Pulley/sprocket slipping on shaft.	1. Only cut wood/ensure moisture is below 20%. 2. Decrease feed rate/cutting speed. 3 Sharpen/replace blade (**Page 34**). 4. Use correct blade (**Page 32**). 5. Straighten or replace workpiece/adjust fence. 6. Adjust blade tension (**Page 23**). Clean tires/blade. 7. Clean oil/grease from belt. Tension (**Page 43**)/replace belt (**Page 44**); ensure pulleys are aligned. 8. Replace loose pulley/shaft.
Blade or teeth break/crack.	1. Workpiece not properly supported. 2. Blade tension incorrect. 3. Excessive feed rate/pressure. 4. Blade dull. 5. Blade incorrect for application. 6. Cutting corners too sharply. 7. Blade weld at fault. 8. Blade tracking wrong. 9. Blade guides adjusted too far forward. 10. Blade guide height in wrong position. 11. Wheel tires worn or incorrectly installed. 12. Fence or miter slot out of alignment with blade. 13. Bad bearings on wheels or guide bearings.	1. Properly support workpiece. 2. Adjust blade tension (**Page 23**). 3. Reduce feed rate/pressure. 4. Replace blade (**Page 34**). 5. Use correct blade for application (**Page 32**). 6. Use a wider arc on outside cuts, or use relief cuts to make tight inside cuts. 7. Replace blade (**Page 34**). 8. Adjust blade tracking (**Page 20**). 9. Adjust blade guides for correct blade support (**Page 24**). 10. Adjust upper blade guide so blade is as close to workpiece as possible (**Page 31**). 11. Replace or re-install tire. 12. Align table and fence with blade (**Page 27, Page 28**). 13. Replace wheels and/or guide bearings.
Blade slows, smokes, shows overheating or wears on one side.	1. Feed pressure too high. 2. Too much side pressure when feeding workpiece. 3. Blade has insufficient support. 4. Blade guides worn or misadjusted. 5. Dull or incorrect blade. 6. Blade not tensioned properly. 7. Blade installed backwards or inside out. 8. Blade contacting table insert. 9. Fence not parallel with blade. 10. Blade is bell-mouthed. 11. Wheels out of alignment.	1. Feed workpiece slower. 2. Feed workpiece straight into blade. 3. Adjust blade guide bearings to support blade (**Page 24, Page 25**). 4. Adjust/replace blade guide bearings. 5. Replace blade (**Page 34**). 6. Properly tension blade (**Page 23**). 7. Check blade installation; make sure teeth face front of machine and point down in table throat. Re-install blade if necessary (**Page 34**). 8. Adjust blade guide bearings to eliminate excess side pressure (**Page 25**). 9. Adjust fence parallel with blade (**Page 28**). 10. Replace blade (**Page 34**). 11. Adjust wheels so they are coplanar (**Page 45**).

Operation (Cont.)

Symptom	Possible Cause	Possible Solution
Finished workpieces are rough or show scoring.	1. Table surface not square to blade. 2. Blade overloaded and twists while cutting. 3. Blade TPI too coarse. 4. Blade loose and fluttering. 5. Blade tracking incorrect. 6. Blade has missing or bent teeth. 7. Blade has a faulty weld.	1. Adjust table position until blade and table are perpendicular (**Page 27**). 2. Decrease feed rate. 3. Use correct blade for material and type of cut (**Page 32**). 4. Increase blade tension as required (**Page 23**). 5. Adjust blade tracking (**Page 20**). 6. Replace blade (**Page 34**). 7. Replace blade (**Page 34**).
Table is hard to tilt.	1. Table tilt lock lever tightened. 2. Sawdust or pitch trapped between trunnion and base. 3. Metal burrs on trunnion.	1. Loosen table tilt lock lever (**Page 32**). 2. Remove sawdust or pitch. 3. Remove burrs.
Miter bar binds in miter slot.	1. Miter slot dirty or gummed up. 2. Miter bar bent.	1. Carefully clean miter slot. 2. Replace.
Blade tracks incorrectly, or comes off wheels.	1. Feed pressure too high. 2. Blade tension too loose. 3. Tracking is not adjusted properly. 4. Blade guides improperly adjusted. 5. Incorrect blade for bandsaw. 6. Blade is bell-mouthed, worn, or dull. 7. Wheels are not coplanar. 8. Wheel tire damaged or worn.	1. Feed workpiece slower. 2. Increase blade tension (**Page 23**). 3. Adjust tracking (**Page 20**). 4. Adjust blade guides (**Page 24, Page 25**). 5. Install correct blade (**Page 32**). 6. Install new blade (**Page 34**) and remove tension from blade when not in use. 7. Adjust wheel coplanarity (**Page 45**). 8. Replace wheel tires.
Cut is crooked or blade wanders (blade lead).	1. Feed pressure too high. 2. Blade tension too loose. 3. Blade dull or damaged. 4. Inadequate blade support. 5. Blade too narrow for cut type. 6. Blade tracking incorrect. 7. Table loose. 8. Fence or miter slot out of alignment with blade. 9. Blade guides or support bearing incorrectly adjusted. 10. Tooth set uneven or teeth sharper on one side than the other. 11. Wrong blade TPI. 12. Blade is following grain of wood.	1. Feed workpiece slower. 2. Increase blade tension (**Page 23**). 3. Replace blade (**Page 34**). 4. Adjust upper blade guide as close to workpiece as possible (**Page 31**). 5. Use wider blade. 6. Adjust blade tracking (**Page 20**). 7. Tighten table trunnion mounting bolts or tilt lock lever (**Page 32**). 8. Align table (**Page 27**) and fence (**Page 28**) with blade. 9. Adjust blade guide bearings and support bearing for correct blade support (**Page 24, Page 25**). 10. Replace blade (**Page 34**). 11. Use a blade with fewer TPI (**Page 32**). 12. Increase blade tension (**Page 23**).

Operation (Cont.)

Symptom	Possible Cause	Possible Solution
Blade dulls prematurely.	1. Wrong blade tooth type or TPI. 2. Improper feed pressure. 3. Blade is twisted. 4. Blade is slipping on wheel. 5. Guides hitting teeth.	1. Use blade with correct tooth type and TPI (**Page 32**). 2. Use correct feed pressure. 3. Replace blade (**Page 34**). 4. Increase blade tension (**Page 23**). Clean wheel tire. 5. Adjust blade guide bearings and support bearing (**Page 24, Page 25**).
Backside of blade deformation/ cracking.	1. Feed pressure too high. 2. Blade tension too high. 3. Incorrect blade guide alignment. 4. Guides are worn. 5. Blade tracking too far back and hitting lip of wheels.	1. Reduce feed pressure. 2. Adjust blade tension (**Page 23**). 3. Correct blade guide alignment (**Page 25**). 4. Replace guides. 5. Adjust tracking (**Page 20**).
Sawdust buildup inside cabinet.	1. Clogged dust port. 2. Blade brush under table is worn or misadjusted.	1. Clean dust port. 2. Inspect/replace blade brush.

Checking/Adjusting Belt Tension

To ensure optimum power transmission from the motor to the blade, the belt must be in good condition and operate under proper tension.

Belt tension should be checked at least every month—more often if the bandsaw is used daily. If the belt shows signs of cracks, fraying, or excessive wear, replace it as instructed in **Replacing Belt** on **Page 44**.

Tool Needed	Qty
Hex Wrench 6mm	1

Checking Belt Tension

1. DISCONNECT MACHINE FROM POWER!

2. Open lower wheel cover.

3. Check belt condition and deflection. The belt is properly tensioned if there is approximately ¼" deflection. Deflection is checked by pushing belt with moderate pressure, as shown in **Figure 47**, and noting how much it moves.

   — If the belt is not properly tensioned, perform the **Adjusting Belt Tension** procedure.

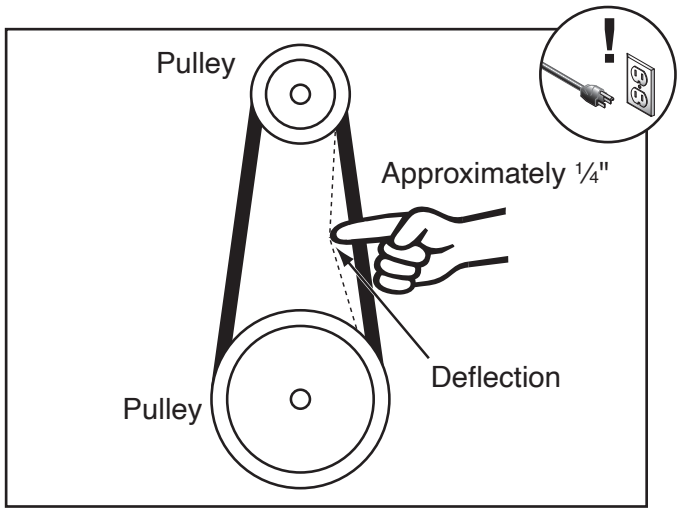


Figure 47. Checking belt tension.

Adjusting Belt Tension

1. DISCONNECT MACHINE FROM POWER!

2. Loosen motor mount cap screws shown in **Figure 48**.

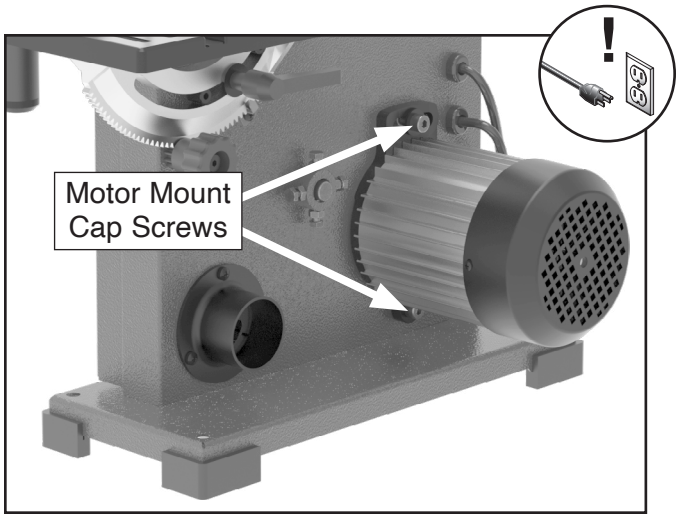


Figure 48. Location of motor mount cap screws used for adjusting belt tension.

3. Push motor to the right (as viewed from back of machine) until you feel moderate tension, then tighten both cap screws.

4. Check belt tension. If necessary, repeat **Steps 2–3** until there is approximately ¼" deflection in belt.

5. Close wheel cover.

Replacing Belt

Replace the belt if it shows signs of cracking, fraying, and excessive wear.

Items Needed	Qty
Hex Wrench 6mm	1
Retaining Ring Pliers	1
Heavy Leather Gloves (Pair)	1
Replacement Belt (P0428068)	1

To replace belt:

1. DISCONNECT MACHINE FROM POWER!

2. Put on heavy leather gloves and remove blade from machine (refer to **Changing Blade** on **Page 34**).

3. Loosen motor mount cap screws (see **Figure 49**).

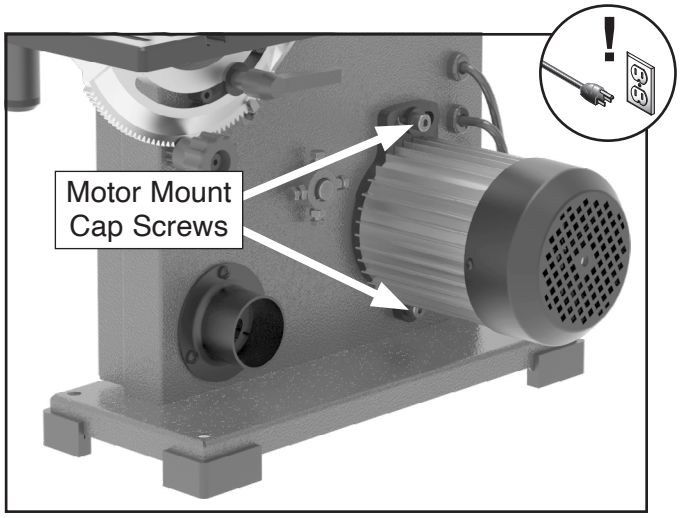


Figure 49. Location of motor mount cap screws used for adjusting belt tension.

4. Pivot motor to the left (as viewed from back of machine) to release belt tension.

5. Open lower wheel cover and remove belt from motor pulley.

6. Remove external retaining ring from lower wheel shaft (see **Figure 50**) and remove lower wheel.

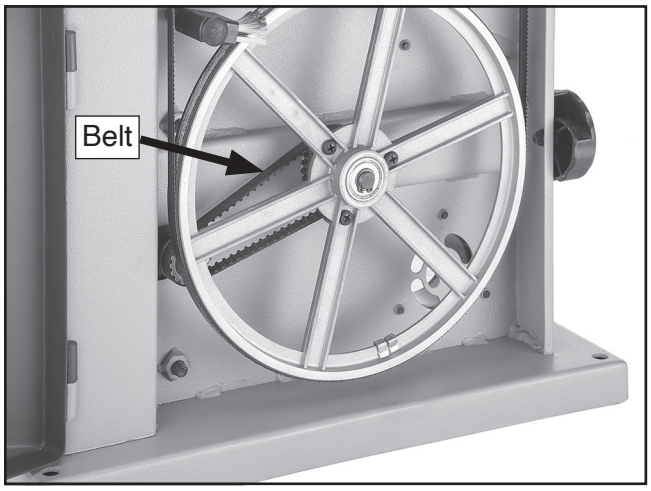


Figure 50. Example of belt change components inside lower wheel cover.

7. Install new belt on both pulleys, then install wheel and retaining ring.

8. Tension belt, as instructed in **Adjusting Belt Tension** on **Page 43**.

9. Install blade (see **Changing Blade** on **Page 34**).

Aligning Wheels

Wheel alignment is important for optimal performance from your bandsaw. Wheels are properly aligned when they are parallel with each other and in the same plane, or "coplanar" (see the illustration in the figure to the right).

When wheels are coplanar, the bandsaw is more likely to cut straight without wandering, and vibration, heat, and blade wear are considerably decreased.

Bringing the wheel into alignment may require a combination of shimming a wheel and adjusting the position of the lower wheel shaft.

Items Needed	**Qty**
Precision Straightedge 3'	1
Fine Ruler	1

Checking Wheel Alignment

1. DISCONNECT MACHINE FROM POWER!

2. Remove table and open upper and lower wheel covers.

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

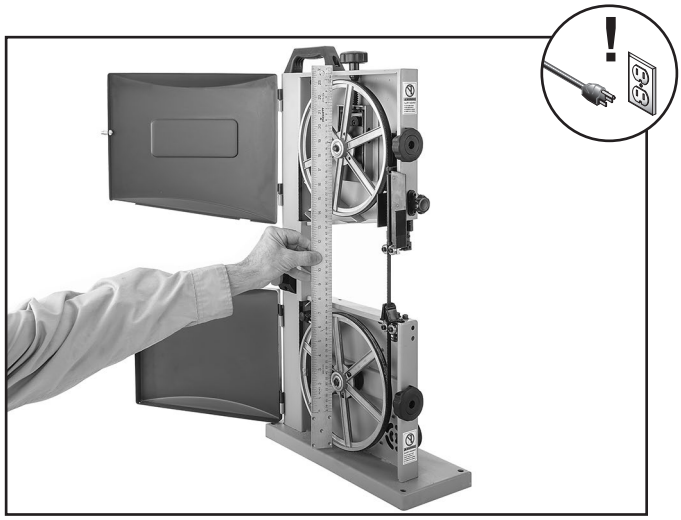


Figure 51. Example of checking if wheels are coplanar.

4. Check wheel alignment, and adjust tracking knob to bring both wheels into alignment as much as possible. If wheels cannot be adjusted coplanar, use **Figure 52** to determine how to proceed with alignment adjustments.

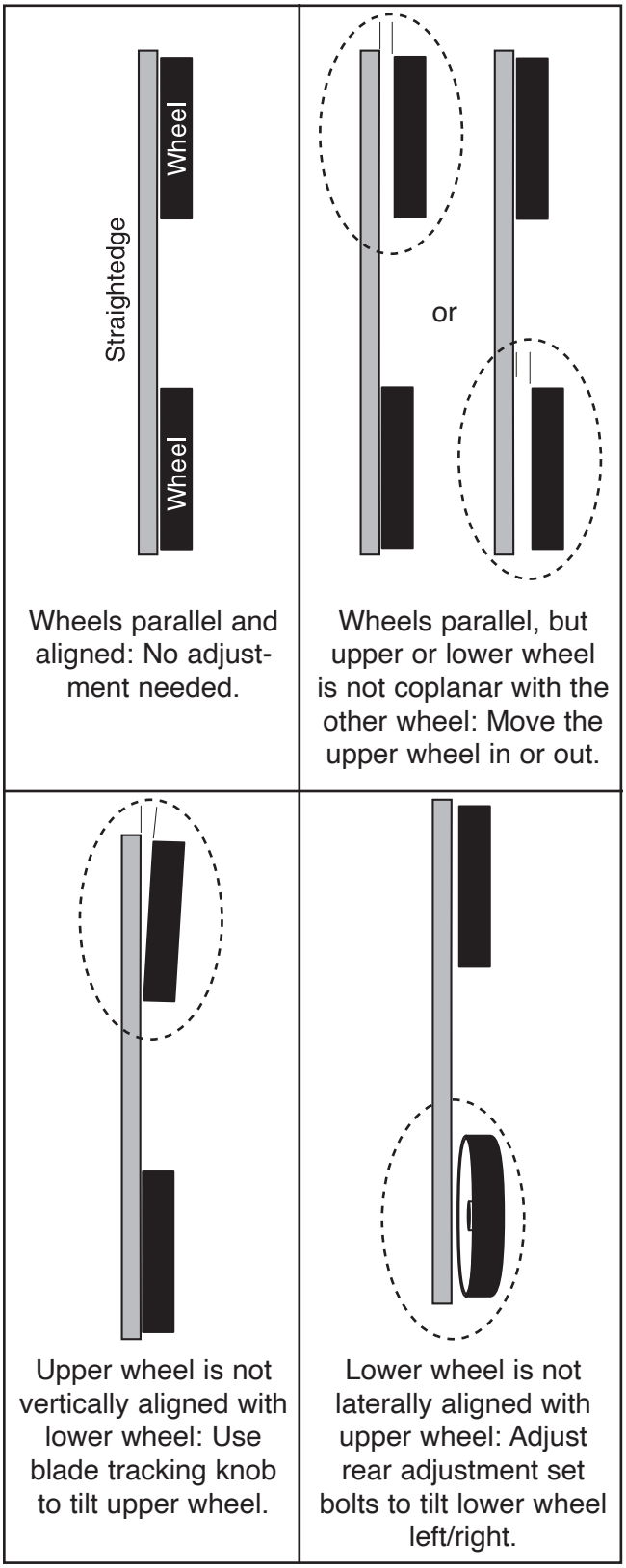


Figure 52. Wheel alignment illustration.

Shimming a Wheel

A wheel that is parallel with the other wheel, but is not coplanar, must be shimmed until it coplanar with the other wheel.

Tip: *Standard washers work well for shimming the wheel because they can easily be stacked to get the desired height.*

To shim a wheel:

1. DISCONNECT MACHINE FROM POWER!

2. Adjust upper wheel tracking so that it is parallel with lower wheel.

3. With straightedge touching both rims of wheel that does *not* need to be adjusted, measure planar distance away from other wheel with a fine ruler, as shown in **Figure 53**. This measurement is distance that non-coplanar wheel must be shimmed.

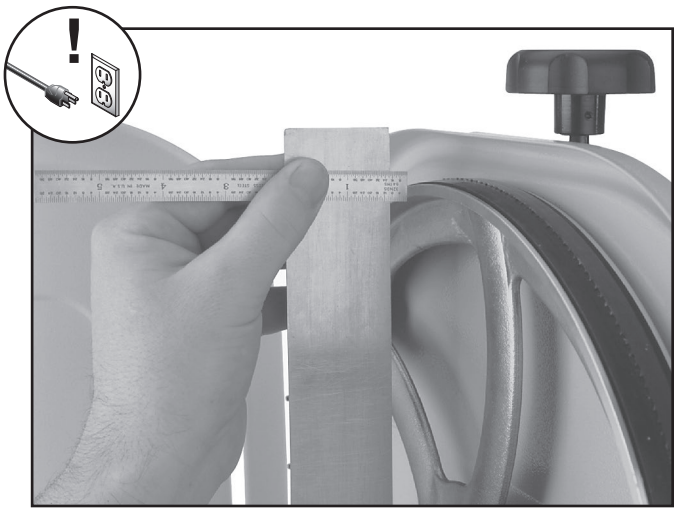


Figure 53. Example of measuring distance to shim wheel to be coplanar.

4. Remove blade.

5. Remove wheel to be shimmed. Place as many shims as necessary to correct gap measured in **Step 3** onto wheel shaft.

6. Install wheel and secure it in place.

7. Install blade and properly tension it.

8. Perform previous **Checking Wheel Alignment** procedure on **Page 45**. If necessary to make wheels parallel, repeat this procedure.

   Note: *The first time you get wheels coplanar, place mark on each wheel where you held straightedge, then use this position again in future if you need to repeat procedure. This assures repeated accuracy every time you adjust wheels.*

9. Close wheel covers.

Adjusting Lower Wheel Shaft Position

If the lower wheel is tilted laterally (side to side), perform the following procedure to make it coplanar with the upper wheel.

There are four adjustment bolts with hex nuts in the lower wheel bracket, shown in **Figure 54**, that adjust the wheel tilt from side-to-side and up-and-down.

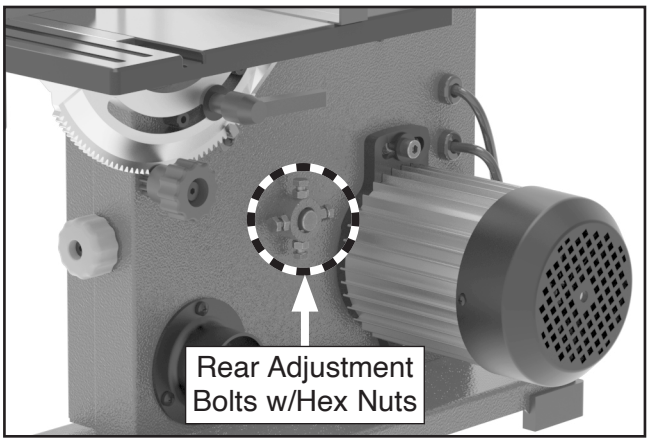


Figure 54. Location of rear lateral adjustment components.

IMPORTANT: *If you make a mistake during the following procedure, it can be very difficult to correct. Therefore, it is important to double check wheel alignment (see **Aligning Wheels** on **Page 45**), and troubleshoot all other possible solutions (see **Troubleshooting** on **Page 39**) prior to adjusting lower wheel shaft position.*

Items Needed	**Qty**
Precision Straightedge 3'	1
Open-End Wrench or Socket 10mm	1

To adjust lower wheel laterally:

1. DISCONNECT MACHINE FROM POWER!

2. Remove fence and table from machine.

3. Check wheels at **A** and **B** locations (see **Figure 55**). The wheels should align.

   — If the wheels do not align, they require lateral adjustment; proceed to **Step 4**.

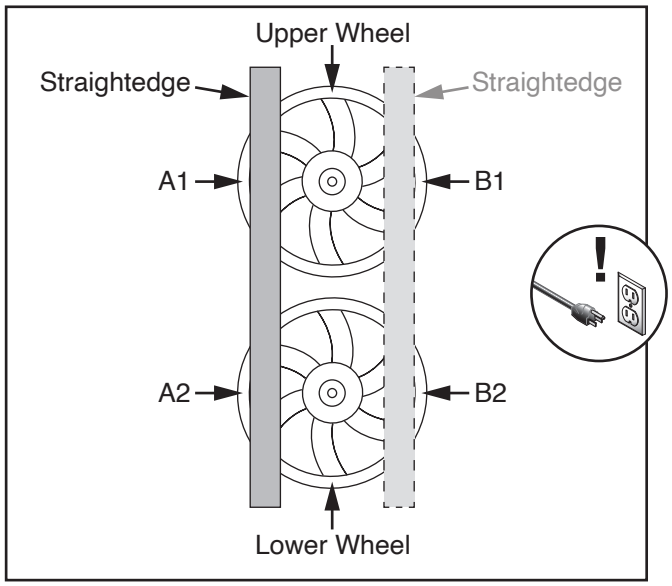


Figure 55. Example of using a straightedge to check lateral wheel alignment.

4. Mark upper and lower wheels with a pencil or marker at A1, A2, B1, and B2 locations indicated in **Figure 55**.

   Note: *Marking wheels ensures more accurate results in case there are irregularities in wheels.*

5. Loosen hex nuts on rear left and right adjustment bolts (see **Figure 56**).

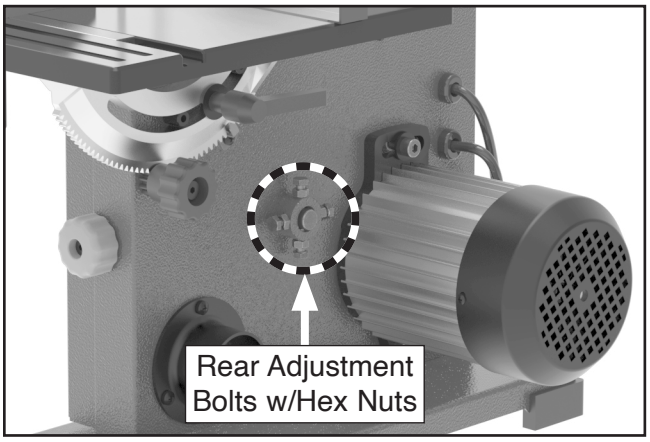


Figure 56. Location of rear lateral adjustment components.

6. Rotate left and right adjustment bolts until lower wheel is coplanar with upper wheel (see **Figure 57**).

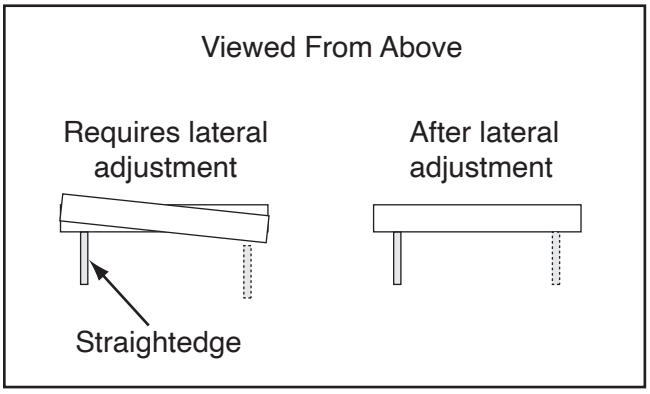


Figure 57. Before and after lateral wheel alignment (viewed from above).

7. Tighten hex nuts loosened in **Step 5**.

Adjusting Fence

The fence face must be square to the table in order to produce accurate cuts. The fence is adjustable with two set screws where the fence sits on the front rail (see **Figure 58**).

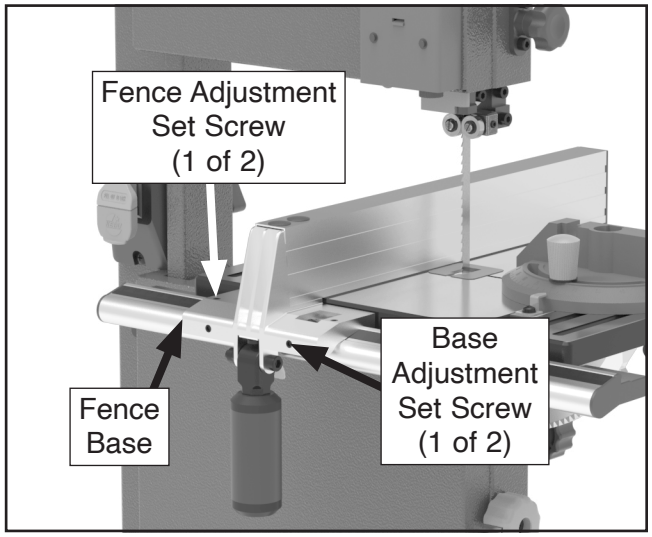


Figure 58. Location of fence and base adjustment components.

When the fence is secured on the rail with the fence handle, the fence should not move in order for a workpiece to be safely fed past the blade. If you notice any sloppiness or play in the fence when the fence handle has been tightened, adjust the fence base tightness.

Fence-to-Table Squareness

Tools Needed	Qty
90° Square	1
Hex Wrench 3mm	1

To adjust fence-to-table squareness:

1. DISCONNECT MACHINE FROM POWER!

2. Place square on table against face of fence (see **Figure 59**) to check if fence is square to table.

— If fence *is* square to table, no adjustment is required.

— If fence *is not* square to table, proceed to **Step 3**.

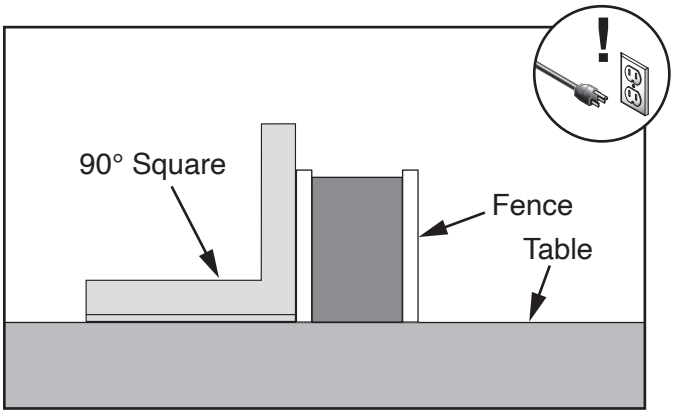


Figure 59. Example of checking fence squareness to table.

3. Adjust (2) fence adjustment set screws shown in **Figure 58** until fence is square to table.

4. Refer to **Aligning Fence** on **Page 28** to align fence to blade and miter slot before operating machine.

Fence Base Tightness

Tools Needed	Qty
Hex Wrench 3mm	1
Phillips Head Screwdriver #2	1

To adjust fence base tightness:

1. DISCONNECT MACHINE FROM POWER!

2. Lock fence in place on rail and attempt to move fence base (see **Figure 58**).

— If there *is not* movement, no adjustment is required.

— If there *is* movement, proceed to **Step 3**.

3. Evenly tighten (2) base adjustment set screws shown in **Figure 58** until fence base does not move.

Note: *If you have tightened base adjustment set screws and there is still movement in fence base, tighten (4) Phillips head screws on underside of base.*

Blade Lead

Bandsaw blades may wander off the cut line when sawing, as shown in **Figure 60**. This is called blade lead.

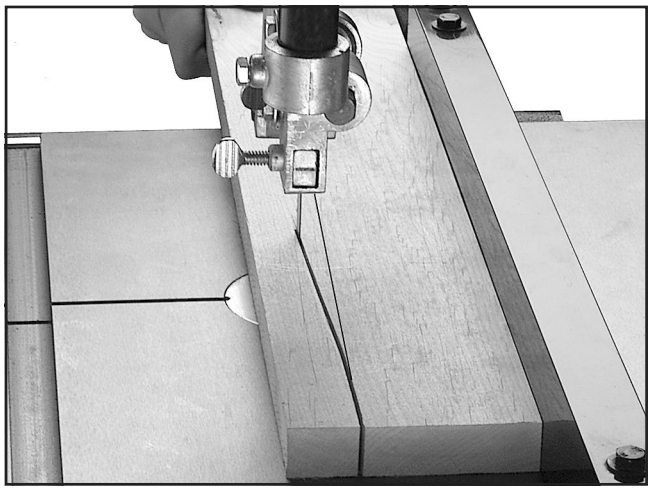


Figure 60. Example of blade lead.

Blade lead is usually caused by an overly fast feed rate, a dull or worn blade, or improper blade tension. If your blade is sharp/undamaged, properly tensioned, and you still have blade lead, perform the following procedures.

Items Needed	Qty
Hex Wrench 4mm	1
Wood Test Piece	1

Correcting Blade Lead

1. Make sure blade is properly tensioned and blade guides are adjusted correctly.
2. Make sure miter slot and fence are parallel to blade line (see **Aligning Table** on **Page 27** and **Aligning Fence** on **Page 28** procedures for detailed information).
3. Perform test cut with bandsaw, using less pressure when feeding workpiece through cut.

   — If there is still blade lead present, compensate for this condition by skewing the fence or shifting the table, as instructed in the following procedures.

Skewing Fence

1. Cut piece of scrap wood approximately ¾" thick x 3" wide x 17" long. On wide face of board, draw straight line parallel to long edge.
2. Slide fence out of way and cut along line halfway through board. Turn bandsaw ***OFF*** and wait for blade to stop. Do not move board.
3. Clamp board to bandsaw table, then slide fence over to board so it barely touches one end of board.
4. Loosen (2) fence adjustment cap screws, skew fence so that it is parallel with scrap piece, then tighten cap screws.
5. Remove clamp and move board to starting position, verifying it does not contact blade.
6. Finish cut using fence.

   — If blade lead is still present, repeat **Steps 1–5** until cutting results are satisfactory.

Adjusting Laser Guide

If the laser guide beam does not illuminate directly down the path of the blade, it needs adjustment.



⚠CAUTION

NEVER look directly into laser beam or eye injury could occur!

To adjust laser guide:

1. DISCONNECT MACHINE FROM POWER!

2. Turn laser guide ***ON***, then turn laser module thumb nut until beam illuminates directly down length of blade (see **Figure 61–Figure 62**).

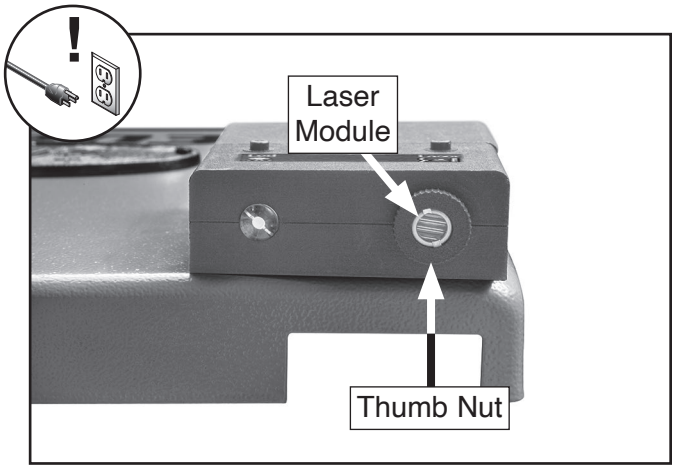


Figure 61. Laser module and thumb nut.

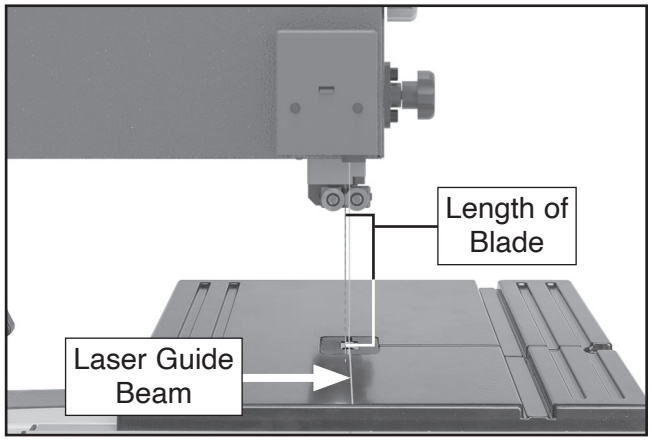


Figure 62. Laser guide components.

3. Turn laser guide ***OFF***.

Replacing LED/ Laser Guide Batteries

To replace the LED/laser guide batteries, simply open the LED/laser unit cover (see **Figure 63**) and replace the batteries, matching positive and negative terminals. Replace the cover when done.

Items Needed	**Qty**
AA Batteries	2

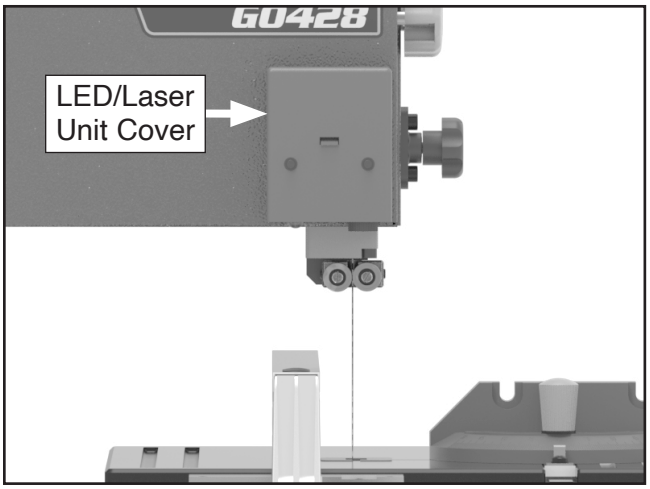


Figure 63. Location of LED/laser unit cover.

SECTION 7: WIRING

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

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

⚠WARNING
Wiring Safety Instructions

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

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

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

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

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

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

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

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

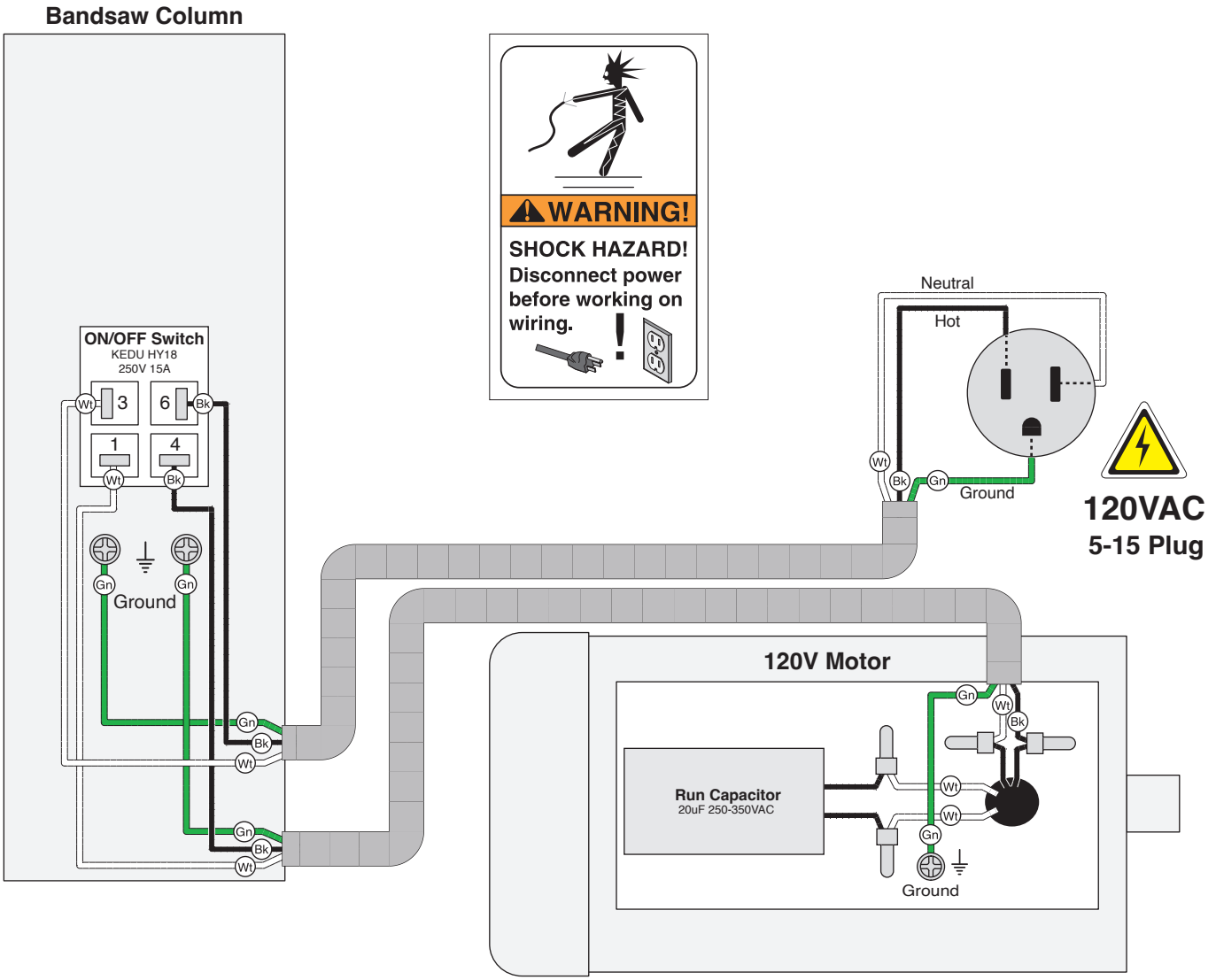
NOTICE

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

COLOR KEY

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

Wiring Diagram



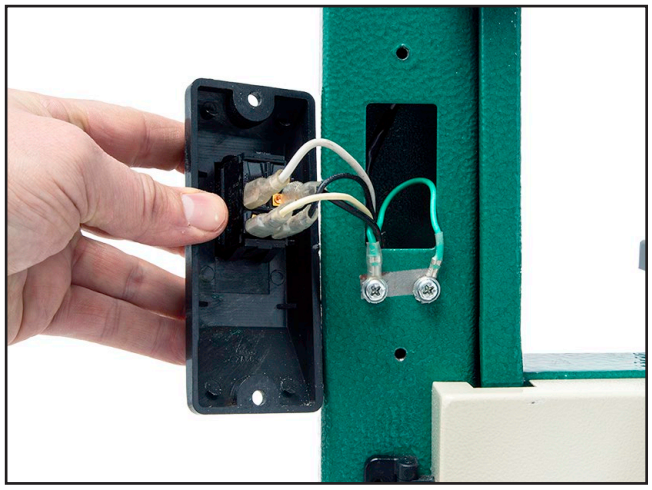


Figure 64. ON/OFF switch wiring.

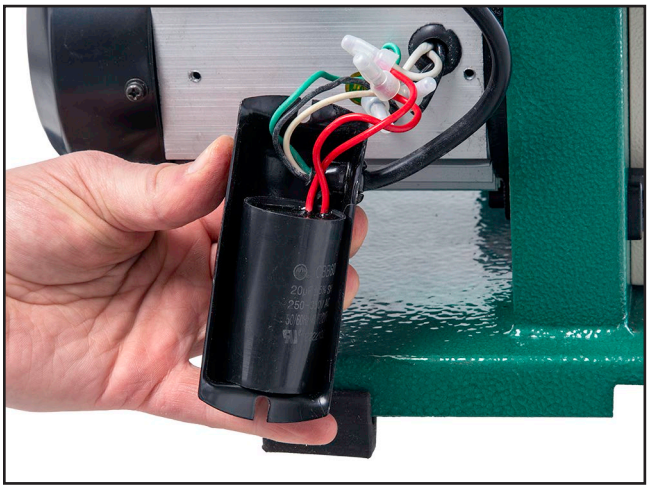
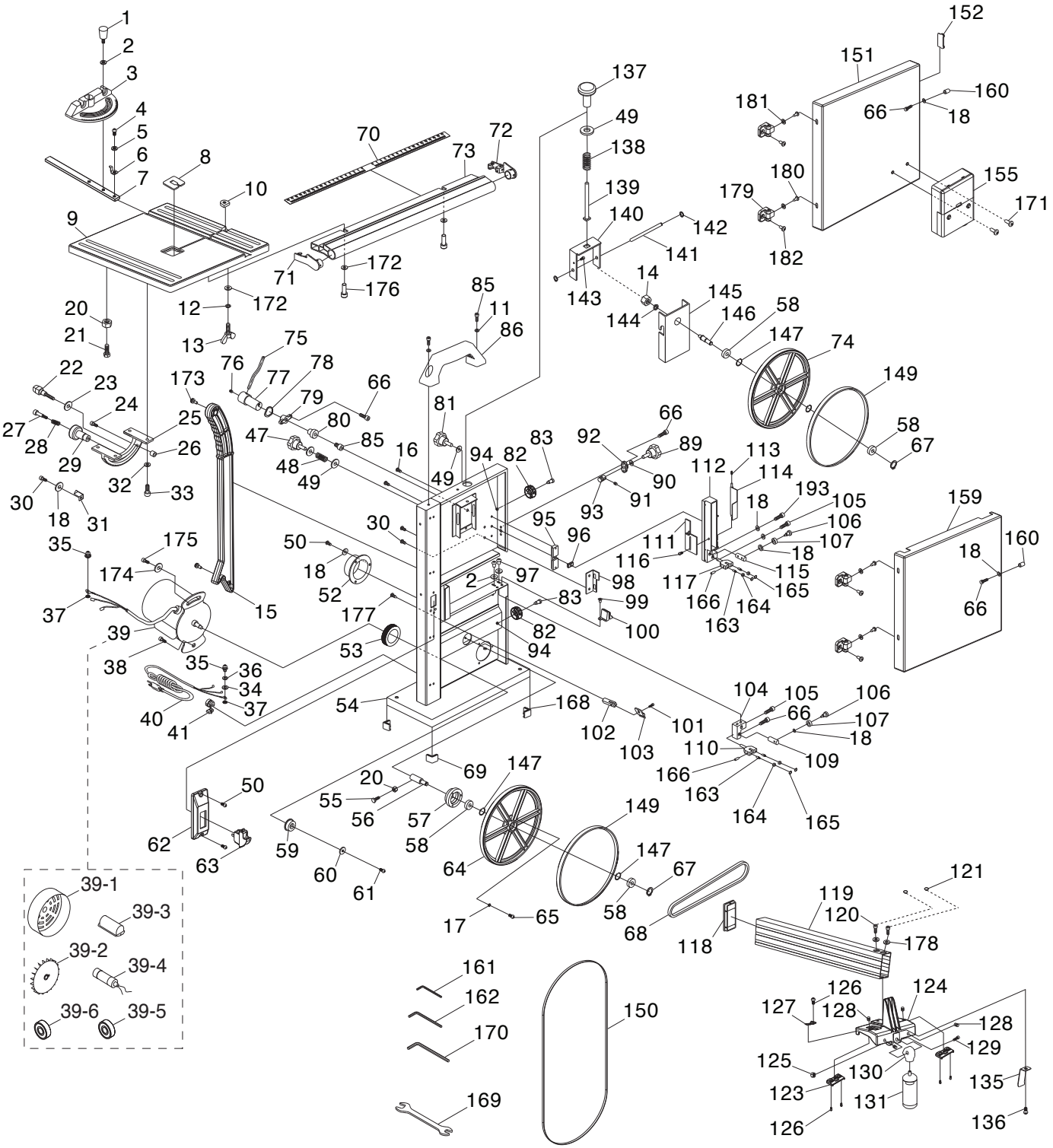


Figure 65. Motor and run capacitor wiring.

SECTION 8: 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



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Main Parts List

REF	PART #	DESCRIPTION
1	P0428001	KNOB BOLT M6-1 X 20
2	P0428002	FLAT WASHER 6 X 16 X 1.5MM
3	P0428003	MITER GAUGE BODY W/SCALE
4	P0428004	PHLP HD SCR M4-.7 X 6
5	P0428005	FLAT WASHER 4MM
6	P0428006	MITER GAUGE SCALE POINTER
7	P0428007	MITER BAR
8	P0428008	TABLE INSERT
9	P0428009	TABLE
10	P0428010	D-NUT M6-1
11	P0428011	FLAT WASHER 6MM
12	P0428012	FENDER WASHER 6MM
13	P0428013	WING BOLT M6-1 X 15
14	P0428014	HEX NUT M10-1.5
15	P0428015	PUSH STICK
16	P0428016	PHLP HD SCR M5-.8 X 12
17	P0428017	LOCK WASHER 5MM
18	P0428018	FLAT WASHER 5MM
20	P0428020	HEX NUT M6-1
21	P0428021	HEX BOLT M6-1 X 23
22	P0428022	ADJUSTABLE HANDLE M8-1.25 X 25
23	P0428023	FENDER WASHER 8MM
24	P0428024	CAP SCREW M6-1 X 14
25	P0428025	TRUNNION W/SCALE
26	P0428026	STANDOFF ROUND FF M6-1 X 14
27	P0428027	SHOULDER SCREW M5-.8 X 10, 8 X 35
28	P0428028	COMPRESSION SPRING 0.8 X 10 X 25
29	P0428029	GEARED KNOB 12T
30	P0428030	PHLP HD SCR M5-.8 X 8
31	P0428031	TABLE TILT SCALE POINTER
32	P0428032	FLAT WASHER 8MM
33	P0428033	CAP SCREW M8-1.25 X 14
34	P0428034	FLAT WASHER 5MM
35	P0428035	PHLP HD SCR M5-.8 X 8
36	P0428036	LOCK WASHER 5MM
37	P0428037	EXT TOOTH WASHER 5MM
38	P0428038	CAP SCREW M8-1.25 X 20
39	P0428039	MOTOR 1/3HP 120V 1-PH
39-1	P0428039-1	MOTOR FAN COVER
39-2	P0428039-2	MOTOR FAN
39-3	P0428039-3	CAPACITOR COVER
39-4	P0428039-4	R CAPACITOR 20M 250-350V 1-3/8 X 2-3/8
39-5	P0428039-5	BALL BEARING 6201ZZ, REAR
39-6	P0428039-6	BALL BEARING 6202ZZ, FRONT
40	P0428040	POWER CORD 18G 3W 80" 5-15P
41	P0428041	STRAIN RELIEF 1/2" SNAP-IN
47	P0428047	KNOB BOLT M8-1.25 X 14
48	P0428048	COMPRESSION SPRING 1 X 13 X 18
49	P0428049	FLAT WASHER 8MM
50	P0428050	PHLP HD SCR M5-.8 X 10
52	P0428052	DUST PORT 2"
53	P0428053	FOAM GASKET 8 X 5 X 120
54	P0428054	MACHINE BODY
55	P0428055	HEX BOLT M6-1 X 16

REF	PART #	DESCRIPTION
56	P0428056	WHEEL SHAFT, LOWER
57	P0428057	WHEEL PULLEY
58	P0428058	BALL BEARING 6000-2RS
59	P0428059	MOTOR PULLEY
60	P0428060	FENDER WASHER 5MM
61	P0428061	BUTTON HD CAP SCR M5-.8 X 8
62	P0428062	SWITCH MOUNTING PLATE
63	P0428063	PADDLE SWITCH 250V 15A KEDU HY18
64	P0428064	WHEEL, LOWER
65	P0428065	PHLP HD SCR M5-.8 X 16
66	P0428066	CAP SCREW M5-.8 X 10
67	P0428067	EXT RETAINING RING 10MM
68	P0428068	TIMING BELT
69	P0428069	RUBBER FOOT FRONT LEFT/REAR RIGHT
70	P0428070	FENCE SCALE
71	P0428071	FENCE RAIL CAP, LEFT
72	P0428072	FENCE RAIL CAP, RIGHT
73	P0428073	FENCE RAIL
74	P0428074	WHEEL, UPPER
75	P0428075	QUICK-RELEASE LEVER
76	P0428076	SET SCREW M5-.8 X 6
77	P0428077	QUICK-RELEASE ECCENTRIC SHAFT
78	P0428078	WAVY WASHER 16 X 21 X 0.3MM
79	P0428079	QUICK-RELEASE MOUNT BRACKET
80	P0428080	QUICK-RELEASE ECCENTRIC BUSHING
81	P0428081	KNOB BOLT M8-1.25 X 35
82	P0428082	DOOR LOCK CAM KNOB
83	P0428083	SHOULDER SCREW M5-.8 X 6, 8 X 12
85	P0428085	CAP SCREW M6-1 X 16
86	P0428086	CARRYING HANDLE
89	P0428089	KNOB W/SHAFT 6 X 22
90	P0428090	FLAT WASHER 6MM
91	P0428091	SET SCREW M4-.7 X 4
92	P0428092	KNOB BRACKET
93	P0428093	GEAR 10T
94	P0428094	LOCK NUT M5-.8
95	P0428095	UPPER BLADE GUIDE BLOCK
96	P0428096	SQUARE NUT M8-1.25
97	P0428097	BUTTON HD CAP SCR M6-1 X 8
98	P0428098	BLADE GUIDE LIMIT PLATE
99	P0428099	FLAT HD SCR M4-.7 X 8
100	P0428100	BLADE COVER, LOWER
101	P0428101	CAP SCREW M5-.8 X 10
102	P0428102	WHEEL BRUSH SEAT
103	P0428103	WHEEL BRUSH
104	P0428104	BLADE GUIDE BLOCK, LOWER
105	P0428105	CAP SCREW M5-.8 X 12
106	P0428106	SHOULDER SCREW M5-.8 X 10, 6 X 6
107	P0428107	BALL BEARING 606-2RS
109	P0428109	BLADE GUIDE ROD, LOWER
110	P0428110	BLADE GUIDE, LOWER
111	P0428111	BLADE GUIDE SLIDING COVER, UPPER
112	P0428112	BLADE GUIDE COVER, UPPER
113	P0428113	COMPRESSION SPRING 0.7 X 5 X 5

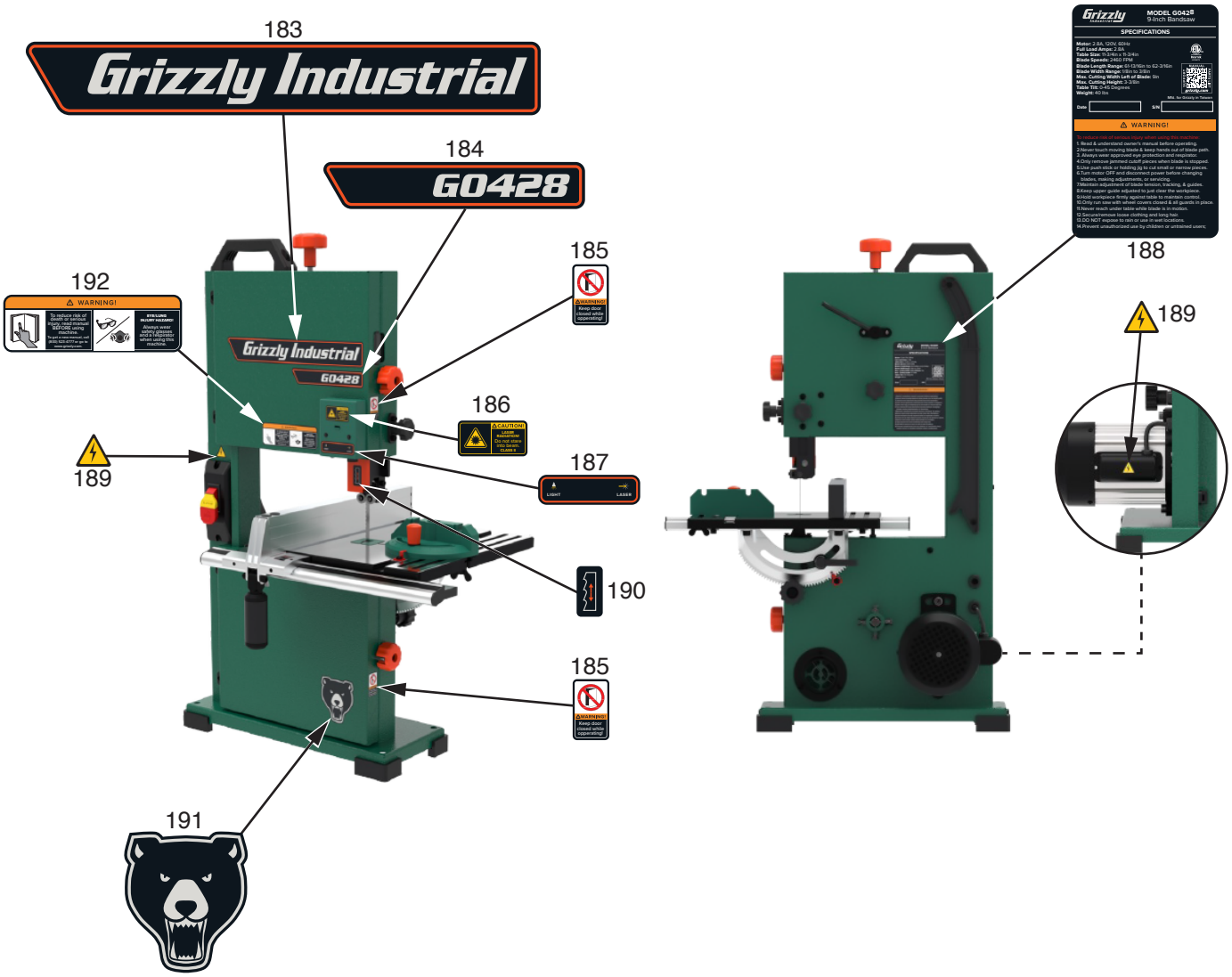
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Main Parts List (Cont.)

114	P0428114	BLADE GUIDE DOOR
115	P0428115	BLADE GUIDE ROD, UPPER
116	P0428116	TAP SCR M4-.7 X 10
117	P0428117	BLADE GUIDE, UPPER
118	P0428118	FENCE END CAP
119	P0428119	FENCE
120	P0428120	CAP SCREW M6-1 X 12
121	P0428121	FENCE HOLE PLUG
123	P0428123	FENCE BASE CLIP
124	P0428124	FENCE BASE
125	P0428125	LOCK NUT M6-1
126	P0428126	PHLP HD SCR M4-.7 X 6
127	P0428127	FENCE POINTER
128	P0428128	SET SCREW M6-1 X 12
129	P0428129	CAP SCREW M6-1 X 35
130	P0428130	FENCE HANDLE LOCKING CAM
131	P0428131	FIXED HANDLE 32 X 76, M6-1 X 12
135	P0428135	SPRING PLATE
136	P0428136	PHLP HD SCR M5-.8 X 6
137	P0428137	KNOB M8-1.25
138	P0428138	COMPRESSION SPRING 2.5 X 14 X 64
139	P0428139	CARRIAGE BOLT M8-1.25 X 80
140	P0428140	WHEEL ADJUSTMENT BRACKET
141	P0428141	QUICK-RELEASE PIVOT SHAFT 8 X 90
142	P0428142	EXT RETAINING RING 8MM PUSH-ON
143	P0428143	TAP SCREW M4.8 X 10
144	P0428144	LOCK WASHER 10MM
145	P0428145	WHEEL MOUNT PLATE
146	P0428146	WHEEL SHAFT, UPPER
147	P0428147	INT RETAINING RING 26MM
149	P0428149	TIRE 9-5/16"
150	P0428150	SAW BLADE 62" X 1/4" X 0.14" 6-TPI HOOK
151	P0428151	WHEEL COVER, UPPER
152	P0428152	BLADE VIEW WINDOW, PLASTIC
155	P0428155	LED/LASER UNIT

159	P0428159	WHEEL COVER, LOWER
160	P0428160	STANDOFF-SE-ROUND F M5-.8, 17
161	P0428161	HEX WRENCH 2.5MM
162	P0428162	HEX WRENCH 4MM
163	P0428163	BEARING SHAFT
164	P0428164	BALL BEARING 696-2RS
165	P0428165	E-CLIP 4MM
166	P0428166	SET SCREW M5-.8 X 5
168	P0428168	RUBBER FOOT FRONT RIGHT/REAR LEFT
169	P0428169	WRENCH 10 X 12MM OPEN-ENDS
170	P0428170	HEX WRENCH 5MM
171	P0428171	PHLP HD SCR M4-.7 X 10
172	P0428172	FENDER WASHER 6MM
173	P0428173	CAP SCREW M5-.8 X 25
174	P0428174	FLAT WASHER 8MM
175	P0428175	CAP SCREW M8-1.25 X 30
176	P0428176	CAP SCREW M6-1 X 20
177	P0428177	TAP SCREW M4 X 10
178	P0428178	FLAT WASHER 6MM
179	P0428179	WHEEL COVER HINGE
180	P0428180	TAP SCREW M3.5 X 10
181	P0428181	FLAT WASHER 4MM
182	P0428182	PHLP HD SCR M4-.7 X 8
183	P0428183	GRIZZLY INDUSTRIAL LABEL
184	P0428184	MODEL NUMBER LABEL
185	P0428185	DOOR CLOSED LABEL
186	P0428186	LASER RADIATION LABEL
187	P0428187	LASER CONTROL LABEL
188	P0428188	MACHINE ID LABEL
189	P0428189	ELECTRICITY LABEL
190	P0428190	BLADE SAFETY LABEL
191	P0428191	BEAR HEAD LABEL
192	P0428192	READ MANUAL COMBO LABEL
193	P0428193	CAP SCREW M5-.8 X 16
MANV2	P0428MANV2	MANUAL G0428 MFD-05.26+ V2.08.26

Labels & Cosmetics



REF	PART #	DESCRIPTION
183	P0428183	GRIZZLY INDUSTRIAL LABEL
184	P0428184	MODEL NUMBER LABEL
185	P0428185	DOOR CLOSED LABEL
186	P0428186	LASER RADIATION LABEL
187	P0428187	LASER CONTROL LABEL

REF	PART #	DESCRIPTION
188	P0428188	MACHINE ID LABEL
189	P0428189	ELECTRICITY LABEL
190	P0428190	BLADE SAFETY LABEL
191	P0428191	BEAR HEAD LABEL
192	P0428192	READ MANUAL COMBO LABEL

⚠WARNING

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

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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.

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

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

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

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



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