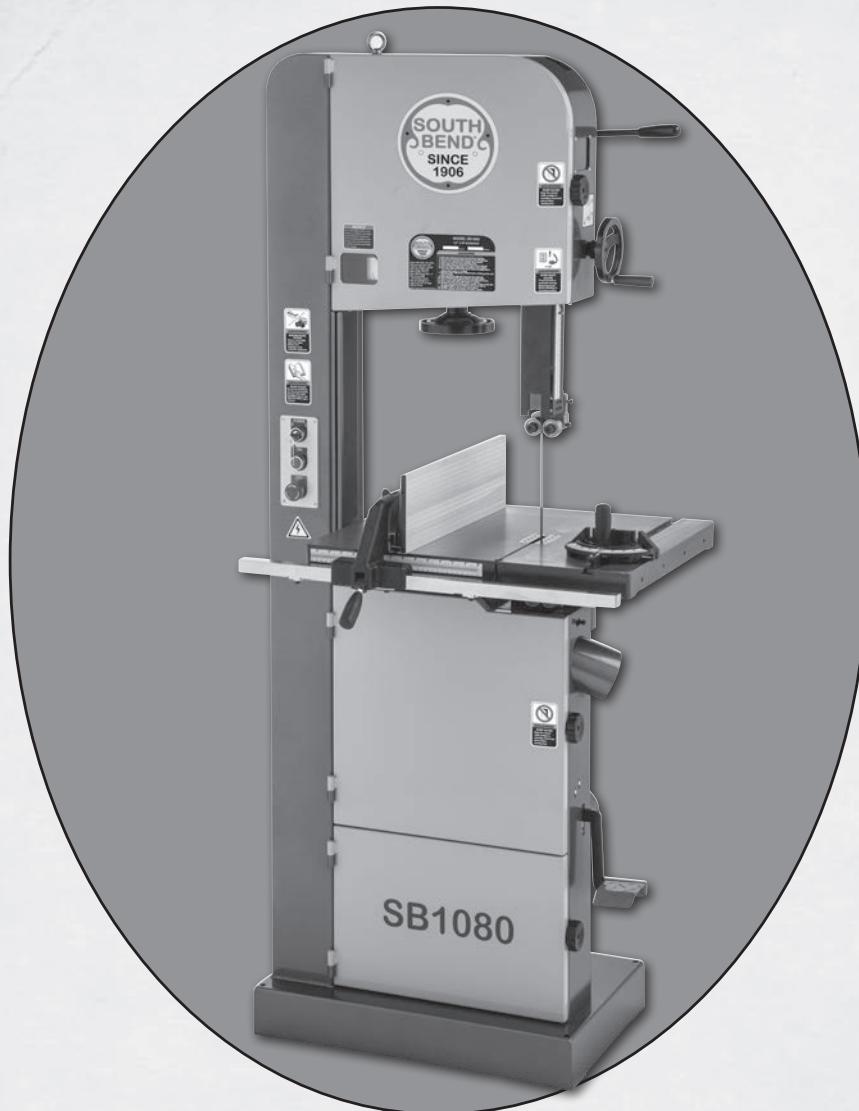


# 16" 3 HP BANDSAW

## MODEL SB1080



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

### OWNER'S MANUAL

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# South Bend Tools®

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*A Tradition of Excellence*



# Scope of Manual

This manual helps the reader understand the machine, how to prepare it for operation, how to control it during operation, and how to keep it in good working condition. We assume the reader has a basic understanding of how to operate this type of machine, but that the reader is not familiar with the controls and adjustments of this specific model. As with all machinery of this nature, learning the nuances of operation is a process that happens through training and experience. If you are not an experienced operator of this type of machinery, read through this entire manual, then learn more from an experienced operator, schooling, or research before attempting operations. Following this advice will help you avoid serious personal injury and get the best results from your work.

# Manual Feedback

We've made every effort to be accurate when documenting this machine. However, errors sometimes happen or the machine design changes after the documentation process—so the manual may not exactly match your machine. If a difference between the manual and machine leaves you in doubt, contact our customer service for clarification.

We highly value customer feedback on our manuals. If you have a moment, please share your experience using this manual. What did you like about it? Is there anything you would change to make it better? Did it meet your expectations for clarity, professionalism, and ease-of-use?

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# Updates

For your convenience, any updates to this manual will be available to download free of charge through our website at:

**[www.southbendtools.com](http://www.southbendtools.com)**

# Customer Service

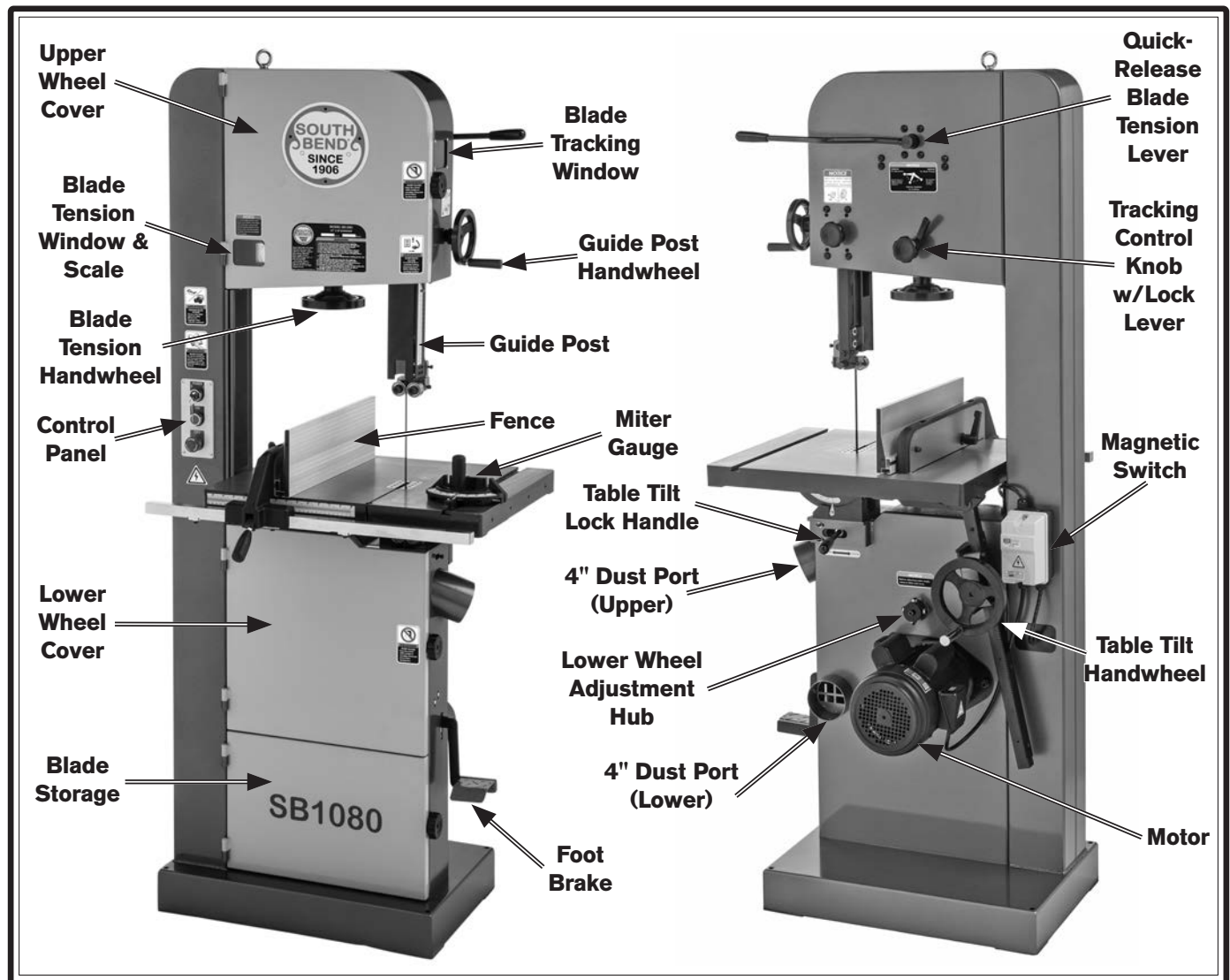
We stand behind our machines. If you have any service questions, parts requests or general questions about your purchase, feel free to contact us.

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# Identification

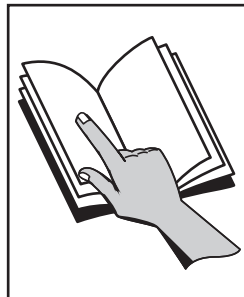


## **⚠ CAUTION**

**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 thrust bearings.**
- d) **Adjust upper guide to just clear workpiece.**
- e) **Hold workpiece firmly against table.**

# Description of Controls & Components

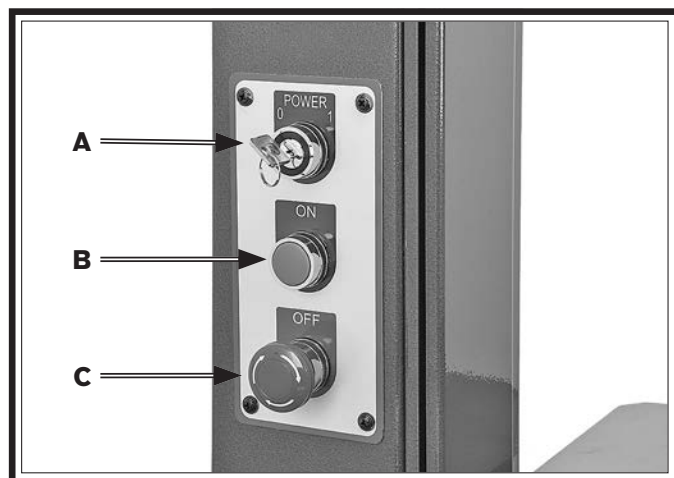


## ⚠️ WARNING

To reduce the risk of serious injury when using this machine, read and understand this entire manual before beginning any operations.

Refer to **Figures 1–10** and the following descriptions to become familiar with the basic controls and components used to operate this machine.

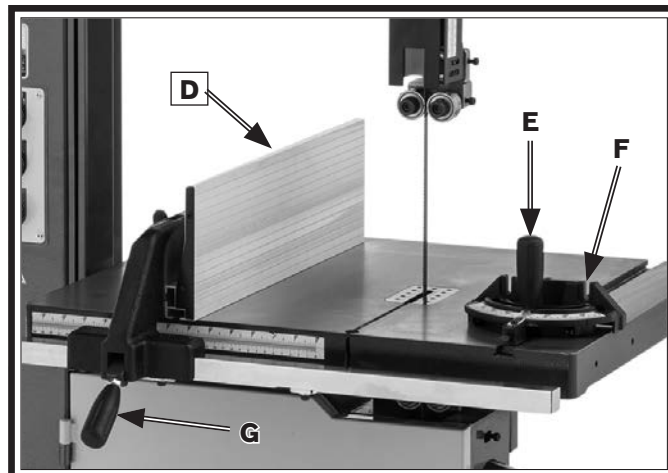
## Control Panel



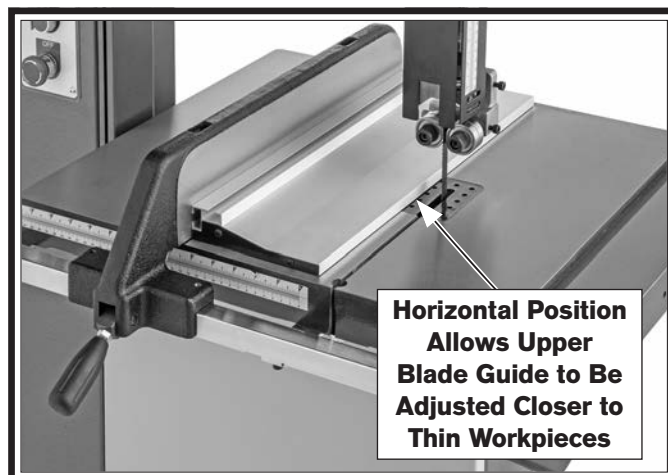
**Figure 1. Control panel.**

- A. Master Power Key Switch:** Turns incoming power *ON* and *OFF*. Requires key.
- B. ON Button:** Turns motor *ON* when pressed.
- C. Emergency Stop/Reset Button:** Turns motor *OFF* when pressed. Motor will not start until switch is reset. Twist clockwise to reset.

## Fence & Miter Gauge



**Figure 2. Fence and miter gauge controls.**



**Figure 3. Fence mounted in horizontal position.**

- D. Fence:** Used for ripping or resawing. Distance from blade determines width of cut. Can be used in vertical position (as shown in **Figure 2**) for normal workpieces, or in horizontal position (as shown in **Figure 3**) for thin workpieces.
- E. Miter Gauge Lock Knob:** Secures angle position of miter gauge.
- F. Miter Gauge:** Typically used for cross cuts. Can be adjusted from 0°–60° left or right, and has stops at 45°L, 90°, and 45°R.
- G. Fence Lock Handle:** Secures fence position.



## Guide Post

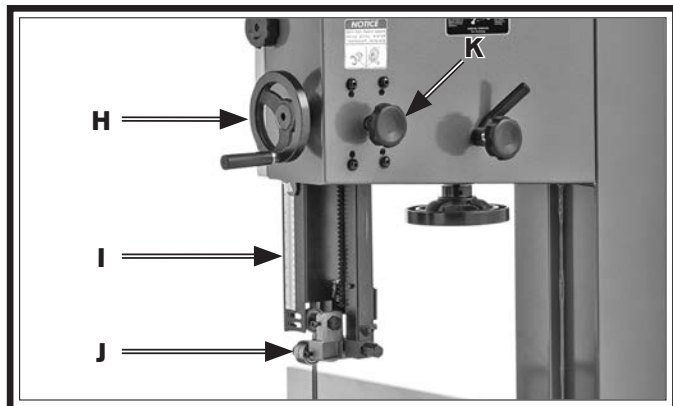


Figure 4. Guide post controls.

- H. Guide Post Handwheel:** Adjusts height of guide post above workpiece, using a rack-and-pinion system.
- I. Guide Post w/Scale:** Houses upper blade guides and support bearing, and shields operator from upper portion of blade. Adjusts up or down as necessary to position upper blade guides/support bearing as close as possible to workpiece for maximum cutting accuracy and minimum blade exposure to operator. Scale on side of guide post indicates height of upper blade guide above table.
- J. Upper Blade Guide & Support Bearing:** Support blade above workpiece during operations.
- K. Guide Post Lock Knob:** Secures guide post in position after adjustment.

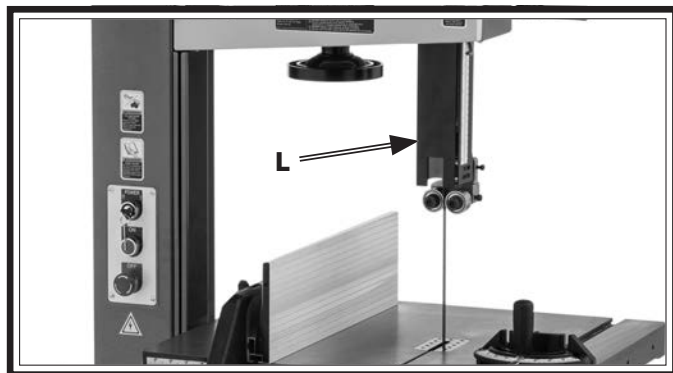


Figure 5. Hinge-open blade cover.

- L. Hinge-Open Blade Cover:** Opens for blade changes and upper blade guide adjustments (refer to **Pages 25–26**).

## Blade Tension & Tracking

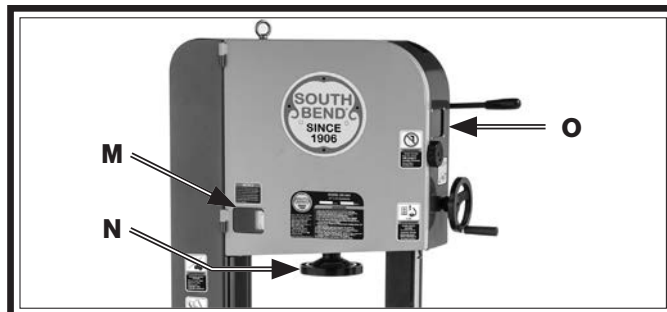


Figure 6. Blade tension handwheel, tension scale, and tracking window.

- M. Blade Tension Scale:** Displays blade tension using numbers 1–8. For reference purposes only—after you have found the proper tension for the particular blade installed.
- N. Blade Tension Handwheel:** Increases/decreases blade tension (refer to **Page 23** for more information).
- O. Blade Tracking Window:** Allows monitoring/adjustment of blade tracking without requiring wheel cover to be open (refer to **Page 20** for more information).

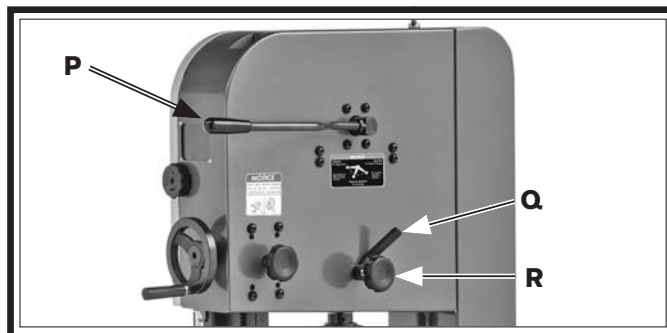


Figure 7. Blade tracking controls and blade tension quick-release lever.

- P. Blade Tension Quick-Release Lever:** Quickly releases blade tension to speed up blade changes and prevent unnecessary wear on blade and saw components when not in use. Move UP to quickly release blade tension. Move DOWN to re-tension blade.
- Q. Tracking Control Lock Lever:** Secures position of blade tracking control knob.
- R. Tracking Control Knob:** Adjusts tilt position of upper wheel to set/control blade tracking (refer to **Page 20** for more information).

## Table Tilt

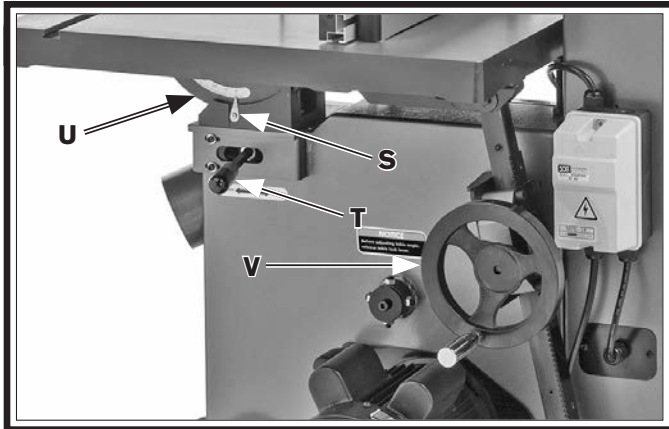


Figure 8. Table tilt controls.

- S. Table Tilt Indicator:** Shows table tilt angle.
- T. Table Tilt Lock Lever:** Secures table tilt position on trunnion. Must be loosened before table tilt can be adjusted.
- U. Trunnion w/Table Tilt Scale:** Functions as a tilting base for table. Graduated in degrees from 5° left–45° right for setting bevel angle.
- V. Table Tilt Handwheel:** Adjusts angle of table tilt using a rack-and-pinion system.

## Lower Wheel Adjustment

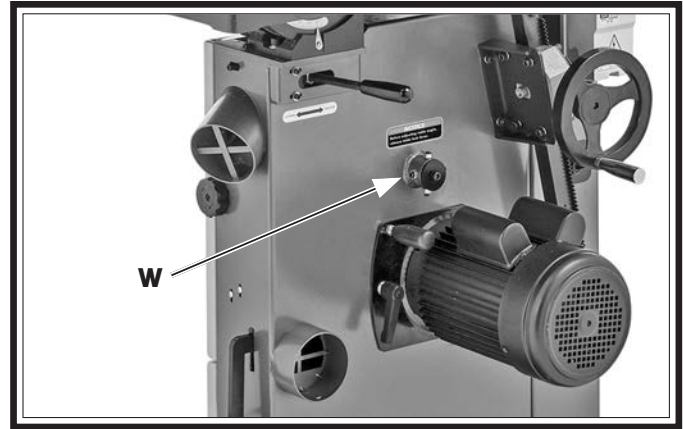


Figure 9. Lower wheel adjustment controls.

- W. Lower Wheel Adjustment Hub:** Adjusts position of lower wheel to upper wheel if coplanar adjustments become necessary (refer to **Page 59** for more information).

**Note:** *The wheels are factory-set to be coplanar, so we strongly recommend that you avoid making adjustments here unless it becomes absolutely necessary.*

## Foot Brake



Figure 10. Location of foot brake.

- X. Foot Brake:** Stops blade wheels and turns motor **OFF**.

**IMPORTANT:** *After the foot brake is pressed, the machine can be restarted by pressing the ON button. The Emergency Stop button does not have to be reset.*



# Model SB1080 16" 3 HP Bandsaw

### Product Dimensions

Weight..... 476 lbs.  
 Width (side-to-side) x Depth (front-to-back) x Height..... 33 x 36 x 79-1/2 in.  
 Footprint (Length x Width)..... 27 x 18 in.

### Shipping Dimensions

Type..... Wood Crate  
 Content..... Machine  
 Weight..... 558 lbs.  
 Length x Width x Height..... 34 x 29 x 84 in.  
 Must Ship Upright..... Yes

### Electrical

Power Requirement..... 230V, Single-Phase, 60 Hz  
 Full-Load Current Rating..... 12A  
 Minimum Circuit Size..... 15A  
 Connection Type..... Cord & Plug  
 Power Cord Included..... Yes  
 Power Cord Length..... 6 ft.  
 Power Cord Gauge..... 14 AWG  
 Plug Included..... Yes  
 Included Plug Type..... 6-20  
 Switch Type..... Magnetic Switch w/Overload Protection

### Motors

#### Main

Horsepower..... 3 HP  
 Phase..... Single-Phase  
 Amps..... 12A  
 Speed..... 1720 RPM  
 Type..... TEFC Capacitor-Start Induction  
 Power Transfer ..... Belt  
 Bearings..... Shielded & Permanently Lubricated  
 Centrifugal Switch/Contacts Type..... External

### Main Specifications

#### Main Specifications

Bandsaw Size..... 16 in.  
 Max Cutting Width (Left of Blade)..... 15-3/4 in.  
 Max Cutting Width (Left of Blade) w/Fence..... 13 in.  
 Max Cutting Height (Resaw Height)..... 14 in.  
 Blade Speeds..... 3500 FPM



**Blade Information**

Standard Blade Length.....	131-1/2 in.
Blade Length Range.....	130-1/2 - 131-1/2 in.
Blade Width Range.....	1/8 - 1 in.
Type of Blade Guides.....	Dual Ball Bearings
Guide Post Adjustment Type.....	Rack & Pinion
Has Quick-Release.....	Yes

**Table Information**

Table Length.....	25-5/8 in.
Table Width.....	20-7/8 in.
Table Thickness.....	2 in.
Table Tilt.....	Left 5, Right 45 deg.
Table Tilt Adjustment Type.....	Rack & Pinion
Floor-to-Table Height.....	41 in.
Fence Locking Position.....	Front
Fence is Adjustable for Blade Lead.....	Yes
Resaw Fence Attachment Included.....	Yes
Miter Gauge Included.....	Yes

**Construction Materials**

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

**Other Related Information**

Wheel Diameter.....	16 in.
Wheel Width.....	1-1/2 in.
Number of Dust Ports.....	2
Dust Port Size.....	4 in.
Compatible Mobile Base.....	D2057A

**Other**

Country of Origin .....	Taiwan
Warranty .....	2 Years
Approximate Assembly & Setup Time .....	1 Hour
Serial Number Location .....	Machine ID Label
ISO 9001 Factory .....	Yes

**Features**

14" Resaw Capacity  
 Ball-Bearing Blade Guides  
 Foot-Operated Brake System  
 Quick-Change Blade Release/Tensioner  
 Micro-Adjusting Rack & Pinion Table Tilt  
 Cast-Iron Fence with 2-Position Extruded Aluminum Resaw Fence  
 Storage Area for Extra Blades and Miter Gauge (When Not In Use)  
 Computer-Balanced Cast-Iron Wheels with South Bend Initials  
 Blade Tension Indicator  
 Cast-Iron Table Trunnion



# Understanding Risks of Machinery

Operating all machinery and machining equipment can be dangerous or relatively safe depending on how it is installed and maintained, and the operator's experience, common sense, risk awareness, working conditions, and use of personal protective equipment (safety glasses, respirators, etc.).

The owner of this machinery or equipment is ultimately responsible for its safe use. This responsibility includes proper installation in a safe environment, personnel training and usage authorization, regular inspection and maintenance, manual availability and comprehension, application of safety devices, integrity of cutting tools or accessories, and the usage of approved personal protective equipment by all operators and bystanders.

The manufacturer of this machinery or equipment will not be held liable for injury or property damage from negligence, improper training, machine modifications, or misuse. Failure to read, understand, and follow the manual and safety labels may result in serious personal injury, including amputation, broken bones, electrocution, or death.

The signals used in this manual to identify hazard levels are as follows:

 <b>DANGER</b>	<i>Death or catastrophic harm WILL occur.</i>	 <b>CAUTION</b>	<i>Moderate injury or fire MAY occur.</i>
 <b>WARNING</b>	<i>Death or catastrophic harm COULD occur.</i>	<b>NOTICE</b>	<i>Machine or property damage may occur.</i>

## Basic Machine Safety

**Owner's Manual:** All machinery and machining equipment presents serious injury hazards to untrained users. To reduce the risk of injury, anyone who uses THIS item MUST read and understand this entire manual before starting.

**Personal Protective Equipment:** Operating or servicing this item may expose the user to flying debris, dust, smoke, dangerous chemicals, or loud noises. These hazards can result in eye injury, blindness, long-term respiratory damage, poisoning, cancer, reproductive harm or hearing loss. Reduce your risks from these hazards by wearing approved eye protection, respirator, gloves, or hearing protection.

**Trained/Supervised Operators Only:** Untrained users can seriously injure themselves or bystanders. Only allow trained and properly supervised personnel to operate this item. Make sure safe operation instructions are clearly understood. If electrically powered, use padlocks and master switches, and remove start switch keys to prevent unauthorized use or accidental starting.

**Guards/Covers:** Accidental contact with moving parts during operation may cause severe entanglement, impact, cutting, or crushing injuries. Reduce this risk by keeping any included guards/covers/doors installed, fully functional, and positioned for maximum protection.

**Entanglement:** Loose clothing, gloves, neckties, jewelry or long hair may get caught in moving parts, causing entanglement, amputation, crushing, or strangulation. Reduce this risk by removing/securing these items so they cannot contact moving parts.

**Mental Alertness:** Operating this item with reduced mental alertness increases the risk of accidental injury. Do not let a temporary influence or distraction lead to a permanent disability! Never operate when under the influence of drugs/alcohol, when tired, or otherwise distracted.

**Safe Environment:** Operating electrically powered equipment in a wet environment may result in electrocution; operating near highly flammable materials may result in a fire or explosion. Only operate this item in a dry location that is free from flammable materials.

**Electrical Connection:** With electrically powered equipment, improper connections to the power source may result in electrocution or fire. Always adhere to all electrical requirements and applicable codes when connecting to the power source. Have all work inspected by a qualified electrician to minimize risk.

**Disconnect Power:** Adjusting or servicing electrically powered equipment while it is connected to the power source greatly increases the risk of injury from accidental startup. Always disconnect power **BEFORE** any service or adjustments, including changing blades or other tooling.

**Secure Workpiece/Tooling:** Loose workpieces, cutting tools, or rotating spindles can become dangerous projectiles if not secured or if they hit another object during operation. Reduce the risk of this hazard by verifying that all fastening devices are properly secured and items attached to spindles have enough clearance to safely rotate.

**Chuck Keys or Adjusting Tools:** Tools used to adjust spindles, chucks, or any moving/rotating parts will become dangerous projectiles if left in place when the machine is started. Reduce this risk by developing the habit of always removing these tools immediately after using them.

**Work Area:** Clutter and dark shadows increase the risks of accidental injury. Only operate this item in a clean, non-glaring, and well-lighted work area.

**Properly Functioning Equipment:** Poorly maintained, damaged, or malfunctioning equipment has higher risks of causing serious personal injury compared to those that are properly maintained. To reduce this risk, always maintain this item to the highest standards and promptly repair/service a damaged or malfunctioning component. Always follow the maintenance instructions included in this documentation.

**Unattended Operation:** Electrically powered equipment that is left unattended while running cannot be controlled and is dangerous to bystanders. Always turn the power **OFF** before walking away.

**Health Hazards:** Certain cutting fluids and lubricants, or dust/smoke created when cutting, may contain chemicals known to the State of California to cause cancer, respiratory problems, birth defects, or other reproductive harm. Minimize exposure to these chemicals by wearing approved personal protective equipment and operating in a well ventilated area.

**Difficult Operations:** Attempting difficult operations with which you are unfamiliar increases the risk of injury. If you experience difficulties performing the intended operation, **STOP!** Seek an alternative method to accomplish the same task, ask a qualified expert how the operation should be performed, or contact our Technical Support for assistance.

# Additional Bandsaw Safety

## 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, or some type of 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 the moving bandsaw blade. The wheel covers protect operator from getting entangled with rotating wheels or other moving parts. ONLY operate this bandsaw with blade guard in proper position and wheel covers completely closed.

**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 work-holding device.

## Preparation Overview

The purpose of the preparation section is to help you prepare your machine for operation. The list below outlines the basic process. Specific steps for each of these points will be covered in detail later in this section.

### The typical preparation process is as follows:

1. Unpack the machine and inventory the contents of the box/crate.
2. Clean the machine and its components.
3. Identify an acceptable location for the machine and move it to that location.
4. Level the machine and either bolt it to the floor or place it on mounts.
5. Assemble the loose components and make any necessary adjustments or inspections to ensure the machine is ready for operation.
6. Connect the machine to the power source.
7. Test run the machine to make sure it functions properly and is ready for operation.

### WARNING

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

## Required for Setup

The items listed below are required to successfully set up and prepare this machine for operation.

### For Lifting

- A forklift or other power lifting device rated for the weight of the machine.
- Lifting Strap or Chain (rated for at least 1000 lbs.)

### For Power Connection

- A power source that meets the minimum circuit requirements for this machine. (Refer to the **Power Supply Requirements** section for details.)
- A qualified electrician to ensure a safe and code-compliant connection to the power source.

### For Assembly

- Safety Glasses
- Oil Can with any General Machine Oil
- Blade Tension Tool
- Grease Gun with any NLGI#2 Grease
- Stiff Grease Brush
- Phillips Screwdriver #2
- Floor Mounting Hardware (As Needed)
- Hex Wrench 5mm
- Hex Wrench 6mm
- Combo Wrench 1/2" or Ratchet and 1/2" Socket



# Power Supply Requirements

## 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 applicable electrical codes and safety standards.



**!WARNING**  
**Electrocution or fire may occur if machine is not correctly grounded and attached to the power supply. Use a qualified electrician to ensure a safe power connection.**

## 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 Rating at 230V ..... 12 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 requirements in the following section.

## **!WARNING**

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

## 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 ..... 220V/230V/240V**
- Cycle ..... 60 Hz**
- Phase ..... Single-Phase**
- Circuit Rating ..... 15 Amps**
- Plug/Receptacle (included) ..... NEMA 6-20**

A power supply circuit includes all electrical equipment between the main breaker box or fuse panel in your building and the incoming power connections inside the machine. This circuit must be safely sized to handle the full-load current that may be 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 applicable electrical codes.**

**Note:** The circuit requirements in this manual are for a dedicated circuit—where only one machine will be running at a time. If this machine will be connected to a shared circuit where multiple machines will be running at the same time, consult a qualified electrician to ensure the circuit is properly sized.

## Grounding Requirements

This machine must be grounded! In the event of certain types of malfunctions or breakdowns, grounding provides a path of least resistance for electric current in order to reduce the risk of electric shock.

This machine is equipped with a power cord that has an equipment-grounding wire and a grounding plug (similar to the figure below). The plug must only be inserted into a matching receptacle (outlet) that is properly installed and grounded in accordance with all local codes and ordinances.

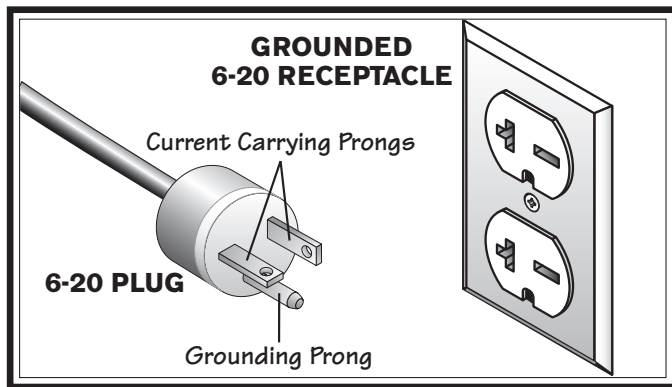


Figure 11. NEMA 6-20 plug and receptacle.

**⚠ CAUTION**

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

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 an electrician or qualified service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the tool is properly grounded.

If you ever notice that a cord or plug is damaged or worn, disconnect it from power, and immediately replace it with a new one.

## Extension Cords

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

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

Any extension cord used with this machine must contain a ground wire, match the required plug and receptacle listed in the **Circuit Requirements** for the applicable voltage, and meet the following requirements:

- Minimum Gauge Size.....12 AWG**
- Maximum Length (Shorter is Better) ....50 ft.**

# Unpacking

This item was carefully packaged to prevent damage during transport. If you discover any damage, please immediately call Customer Service at (360) 734-1540 for advice. You may need to file a freight claim, so save the containers and all packing materials for possible inspection by the carrier or its agent.

# Inventory

Inventory (Figure 12)	Qty
<b>A.</b> Bandsaw (Not Shown) .....	1
<b>B.</b> Standard Fence Assembly .....	1
<b>C.</b> Resaw Fence.....	1
<b>D.</b> Miter Gauge Assembly .....	1
<b>E.</b> Open-Ends Wrench 10/13mm .....	1
<b>F.</b> Open-Ends Wrench 17/19mm.....	1
<b>G.</b> Lifting Eye Bolt M10-1.5 x 20 .....	1
<b>H.</b> Moving Plate (Resaw Fence) .....	1
<b>I.</b> Flat Washer 8mm (Resaw Fence) .....	1
<b>J.</b> Resaw Fence Lock Handle M8-1.25 x 45 .....	1
<b>K.</b> Hex Wrench 6mm .....	1
<b>L.</b> Hex Wrench 5mm .....	1

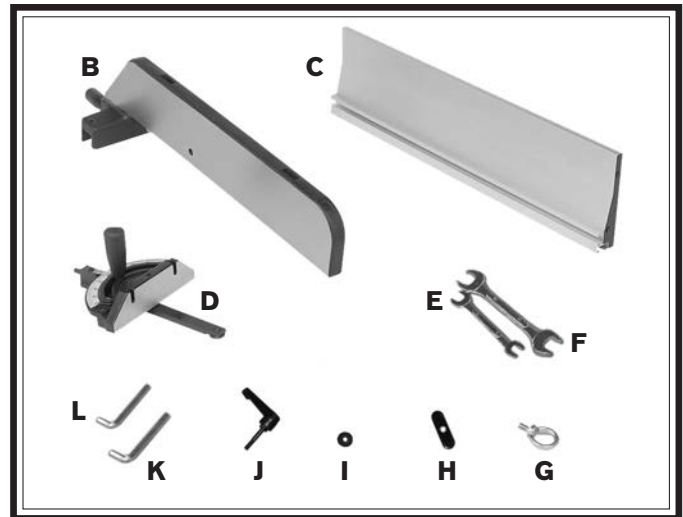


Figure 12. Loose inventory.

## NOTICE

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

## Cleaning & Protecting

The unpainted surfaces are coated at the factory with a heavy-duty rust preventative that prevents corrosion during shipment and storage. The benefit of this rust preventative is that it works very well. The downside is that it can be time-consuming to thoroughly remove.

Be patient and do a careful job when cleaning and removing the rust preventative. The time you spend doing this will reward you with smooth-sliding parts and a better appreciation for the proper care of the unpainted surfaces.

Although there are many ways to successfully remove the rust preventative, the following process works well in most situations.

### Before cleaning, gather the following:

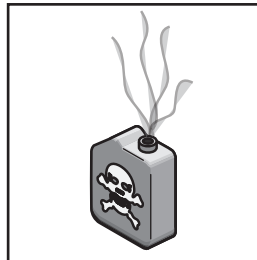
- Disposable rags
- Cleaner/degreaser (certain citrus-based degreasers work extremely well and they have non-toxic fumes)
- Safety glasses & disposable gloves

**Note:** Automotive degreasers, mineral spirits, or WD•40 can be used to remove rust preventative. Before using these products, though, test them on an inconspicuous area of a painted surface to make sure they will not damage it.



### ⚠ WARNING

Gasoline and petroleum products have low flash points and can explode or cause fire if used for cleaning. Avoid using these products to remove rust preventative.



### ⚠ CAUTION

Many cleaning solvents are toxic if inhaled. Minimize your risk by only using these products in a well ventilated area.

## NOTICE

**Avoid chlorine-based solvents, such as acetone or brake parts cleaner that may damage painted surfaces. Always follow the manufacturer's instructions when using any type of cleaning product.**

### Basic steps for removing rust preventative:

1. Put on safety glasses and disposable gloves.
  2. Coat all surfaces that have rust preventative with a liberal amount of your cleaner or degreaser and let them soak for a few minutes.
  3. Wipe off the surfaces. If your cleaner or degreaser is effective, the rust preventative will wipe off easily.
- Note:** To clean off thick coats of rust preventative on flat surfaces, such as beds or tables, use a PLASTIC paint scraper to scrape off the majority of the coating before wiping it off with your rag. (Do not use a metal scraper or it may scratch the surface.)
4. Repeat Steps 2–3 as necessary until clean, then coat all unpainted surfaces with a quality metal protectant or light oil to prevent rust.

### T23692—Orange Power Degreaser

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



Figure 13. T23692 Orange Power Degreaser.

# Location

## Physical Environment

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

## Electrical Installation

Place this machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure to leave access to a means of disconnecting the power source or engaging a lockout/tagout device.

## Lighting

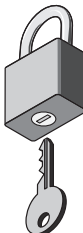
Lighting around the machine must be adequate enough to perform operations safely. Shadows, glare, or strobe effects that may distract or impede the operator must be eliminated.

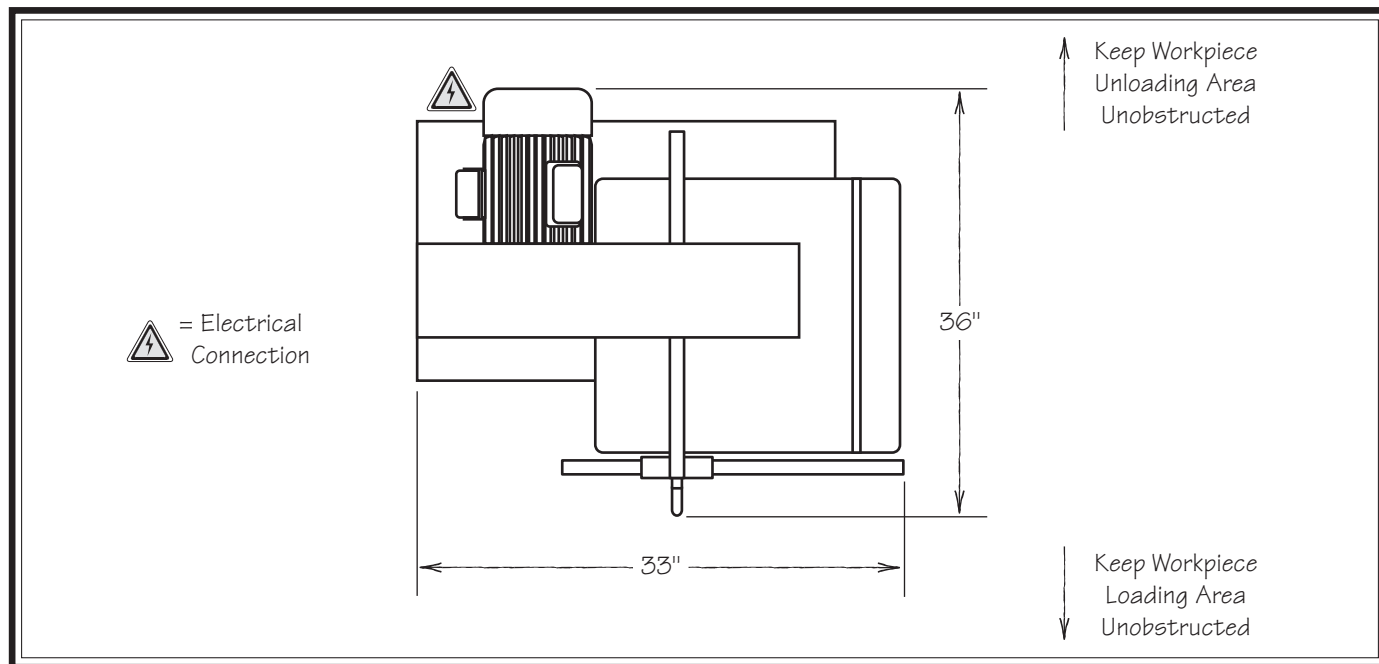
## Weight Load

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

## Space Allocation

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

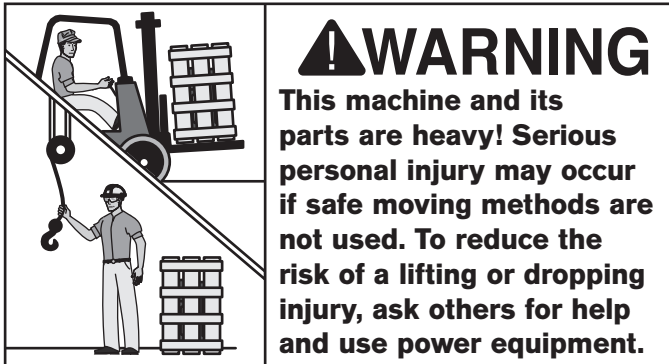
	<p><b>⚠ CAUTION</b>  <b>Children or untrained people may be seriously injured by this machine. Only install in an access restricted location.</b></p>
--	---



**Figure 14. Clearances.**



## Lifting & Moving



Special care should be taken when moving this bandsaw. To reduce your risk of injury or accidental damage, use one of the following methods to lift or move the bandsaw.

### Using Forklift & Eye Bolt

1. Use forklift to move crate to a prepared location, then remove care from shipping pallet.
2. Unbolt bandsaw from pallet.
3. Install eye bolt. Make sure it is threaded all the way in, then place lifting hook through eye bolt (see **Figure 15**) and lift bandsaw slowly with forklift just enough to clear pallet.

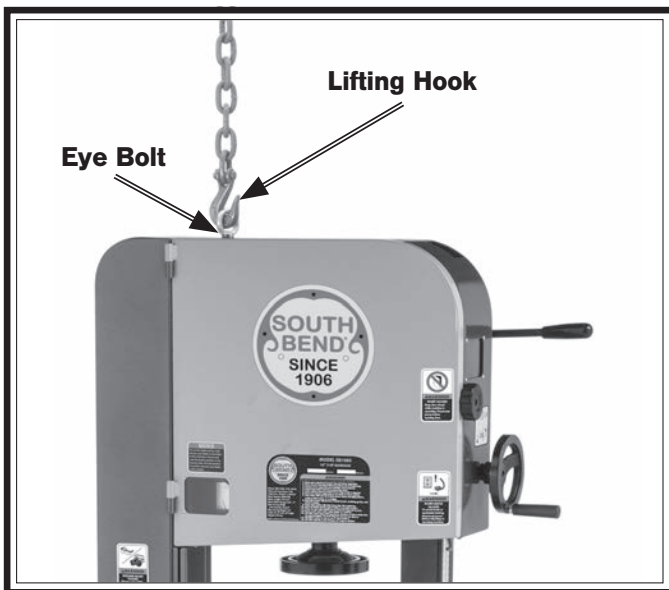


Figure 15. Lifting location.

### Using Forklift & Wood Blocks

1. Use forklift to move crate to prepared location, then remove crate from shipping pallet.
2. Unbolt bandsaw from pallet.
3. Carefully place forklift forks under bandsaw head. Insert a 1x4 block between head and left fork, and a 2x4 block between head and right fork so bandsaw remains relatively level when lifted, as shown in **Figure 16**.

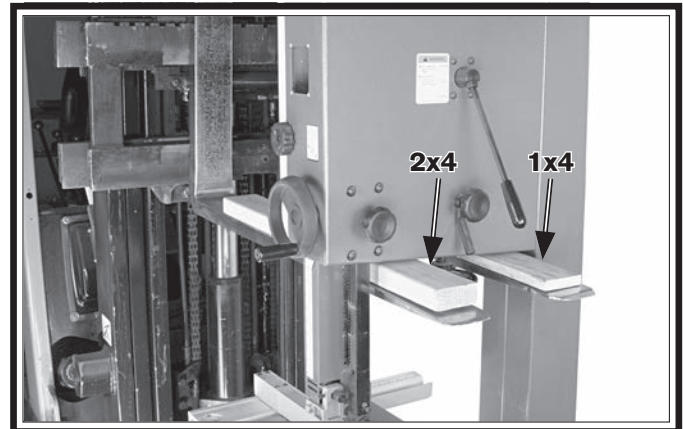


Figure 16. Example of lifting bandsaw with forklift and using wood blocks on forks.

4. Lift bandsaw off of pallet, remove pallet, then slowly lower bandsaw into position.

**Note:** If you are concerned about your forklift forks hitting the tension handwheel, remove handwheel before positioning forks, then re-install it after placing bandsaw in final location.

### Using Pallet Jack & Furniture Dolly

1. Use pallet jack to move crate to prepared location, then remove crate from shipping pallet.
2. Unbolt bandsaw from pallet.
3. With help of another person, carefully "walk" bandsaw (or use furniture dolly to move bandsaw) off of pallet and into position.

# Anchoring to Floor

**Number of Mounting Holes** .....4  
**Diameter of Mounting Hardware**..... 3/8"

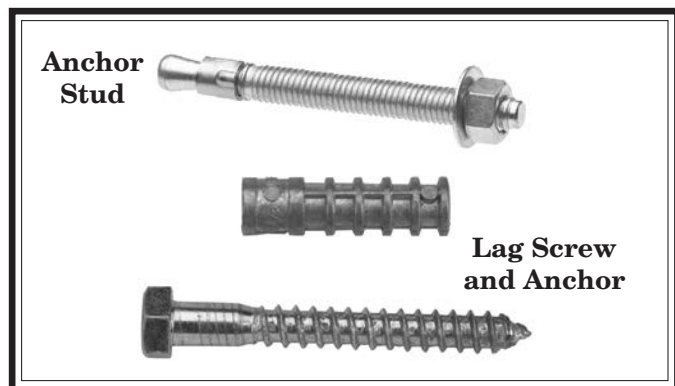
Anchoring machinery to the floor prevents tipping or shifting and reduces vibration that may occur during operation, resulting in a machine that runs slightly quieter and feels more solid.

If the machine will be installed in a commercial or workplace setting, or if it is permanently connected (hardwired) to the power supply, local codes may require that it be anchored to the floor.

If not required by any local codes, fastening the machine to the floor is an optional step. If you choose not to do this with your machine, we recommend placing it on machine mounts, as these provide an easy method for leveling and they have vibration-absorbing pads.

## Bolting to Concrete Floors

Lag screws and anchors, or anchor studs (**below**), are two popular methods for securing machinery to a concrete floor. We suggest you research the many options and methods for securing your machine and choose the best one for your specific application.



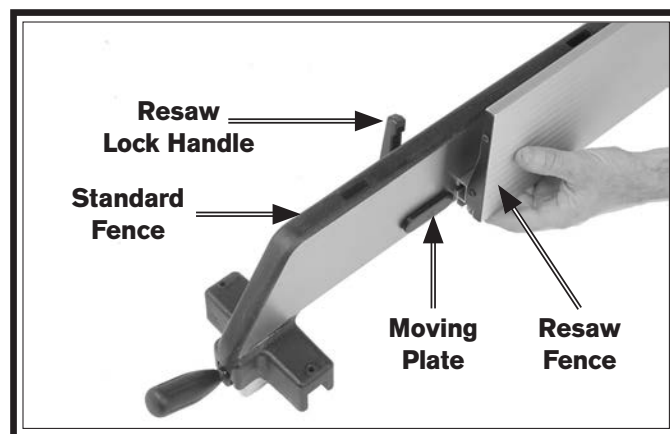
**Figure 17. Common types of fasteners for bolting machinery to concrete floors.**

# Assembly

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

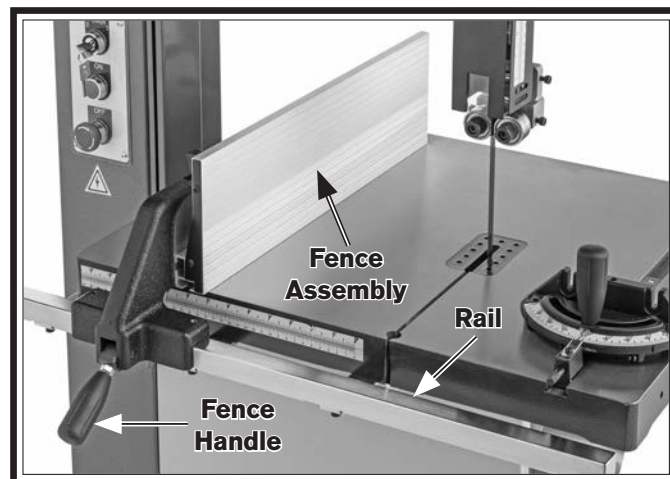
### To assemble bandsaw:

1. Install resaw fence lock handle, 8mm flat washer, and moving plate on standard fence (see **Figure 18**), then slide resaw fence over moving plate.



**Figure 18. Installing resaw fence.**

2. Tighten resaw lock handle.
3. Pull fence handle up and place fence assembly on rail (see **Figure 19**).
4. Push fence handle down to lock fence assembly in place (see **Figure 19**).



**Figure 19. Fence installed on table.**

## 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.

#### Minimum CFM at each Dust Port: 400 CFM

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

### To connect dust collection system to machine:

1. Fit a 4" dust hose over each dust port, and secure them in place with hose clamps (see **Figure 20**).



**Figure 20. Dust hoses attached.**

**Note:** For best results, connect free ends of hoses to a 4" Y fitting and secure with hose clamps, then connect fitting to your dust collection system. See **Accessories**, beginning on **Page 45**, for more information.

2. Tug hoses to make sure they do not come off.

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

## 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.

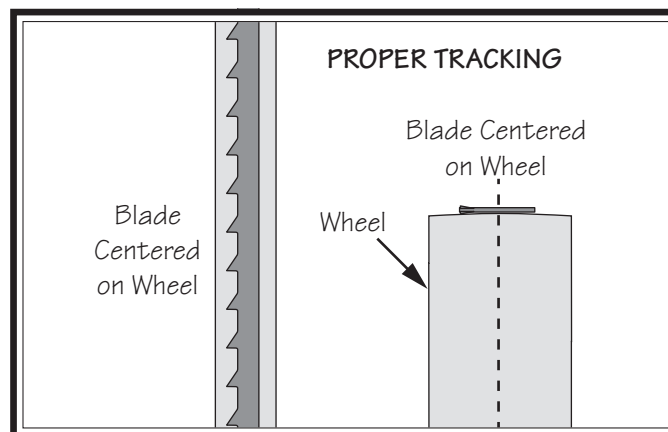
For practical and safety reasons, some adjustments and test operations must be performed before performing other necessary adjustments. Below is an overview of all the adjustments and the order in which they should be performed:

1. Initial Blade Tension/Tracking
2. Test Run
3. Tension Blade
4. Adjusting Blade Support Bearings
5. Adjusting Blade Guide Bearings
6. Table Tilt Calibration
7. Aligning Table
8. Aligning Fence

## Initial 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.

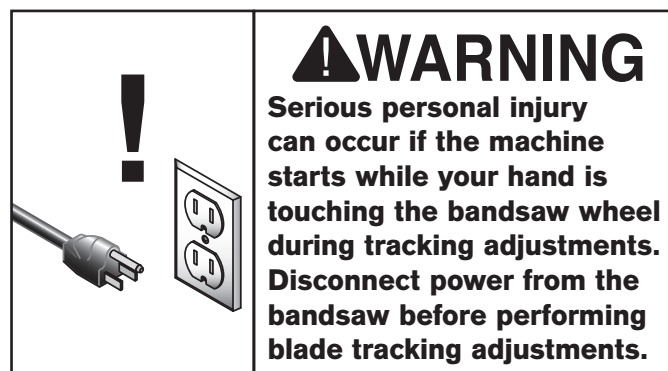
Bandsaw wheels are either flat or crowned and both shapes track differently. This bandsaw has crowned wheels. As the wheels spin, a properly tracking blade naturally tracks at the center of the wheel (see **Figure 21**).



**Figure 21. Blade centered on crown of wheel.**

Blade tracking is primarily affected by the tilt of the upper wheel, known as "center tracking." However, the alignment of both wheels plays an important part as well (see **Aligning Wheels** on **Page 57** for more details).

The wheels on this bandsaw were aligned at the factory, so center tracking is the only adjustment that needs to be checked/performed when the saw is new.





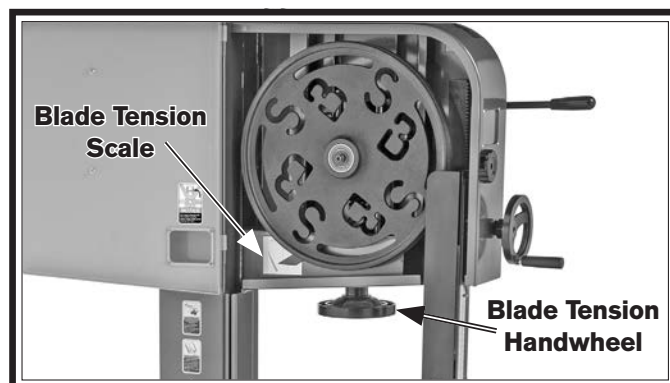
**To adjust blade tracking:**

1. DISCONNECT MACHINE FROM POWER!
  2. Adjust upper and lower blade guides away from blade, and raise upper guides approximately  $\frac{2}{3}$  of the way up (refer to **Adjusting Blade Guide Bearings** on **Page 26** for detailed instructions).
- Note:** *When adjusting blade tracking for test run, blade must have the 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 the blade for optimum results.*
3. Move blade tension quick-release lever down to apply tension to blade (see **Figure 22**).



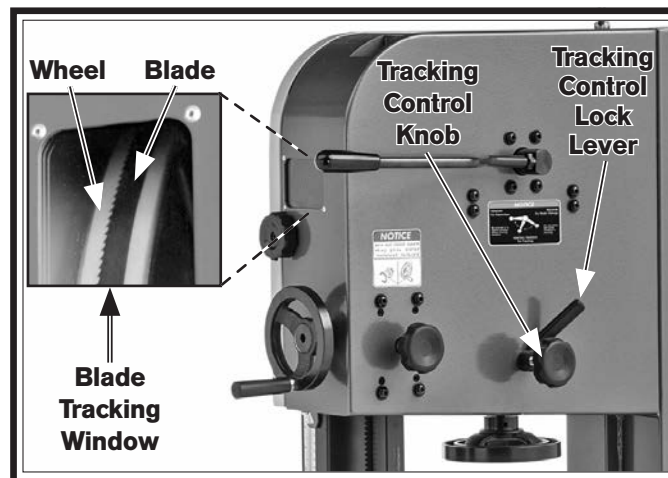
**Figure 22.** Blade tension quick-release lever in down position, applying tension to blade.

4. Open upper wheel cover (see **Figure 23**).
5. Rotate blade tension handwheel until tension scale (see **Figure 23**) is between 4 and 6. Rotate handwheel *clockwise* to increase blade tension. Rotate handwheel *counterclockwise* to decrease blade tension.



**Figure 23.** Blade tensioning controls.

6. Loosen tracking control lock lever on back of bandsaw (see **Figure 24**).
7. Rotate upper wheel by hand several times and watch how blade rides on wheel (see **Figure 24**).
  - If the blade consistently rides in the center of the upper wheel, it is tracking properly and no adjustments are necessary; proceed to **Step 9**.
  - If the blade does not consistently ride in the center of the upper wheel, it is not tracking properly; proceed to **Step 8**.
8. Adjust tracking control knob (see **Figure 24**) in small amounts and continue to rotate upper wheel by hand at the same time until blade consistently rides in center of bandsaw tire.



**Figure 24.** Blade tracking controls.

9. Tighten tracking control lock lever, and close and secure upper wheel cover.

**Note:** *For the best performance from your saw, regularly maintain proper tracking of the blade. Fine-tune tracking must be done with the bandsaw turned **ON**. Refer to **Page 25** for more information.*



## Test Run

After all preparation steps have been completed, the machine and its safety features must be tested to ensure correct operation. If you discover a problem with the operation of the machine or its safety components, do not operate it further until you have resolved the problem.

**Note:** Refer to **Troubleshooting** on **Page 62** for solutions to common problems. If you need additional help, contact our Tech Support at (360) 734-1540.

The test run consists of verifying the following:

- Motor powers up and runs correctly.
- Emergency Stop button works correctly.
- Foot brake pedal works correctly.

### **⚠️ WARNING**

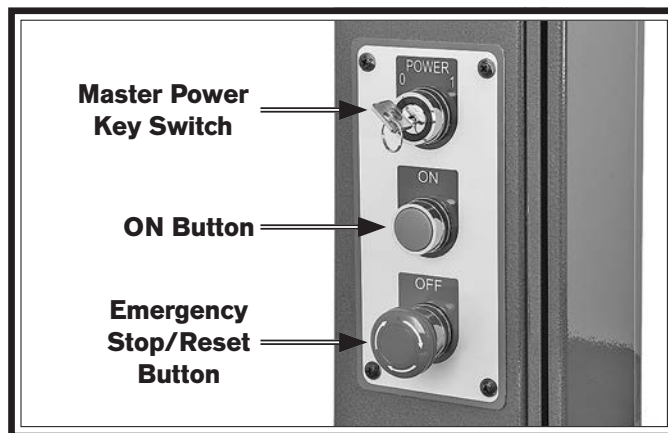
**Serious injury or death can result from using this machine BEFORE understanding its controls and related safety information. DO NOT operate, or allow others to operate, machine until the information is understood.**

### **⚠️ WARNING**

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

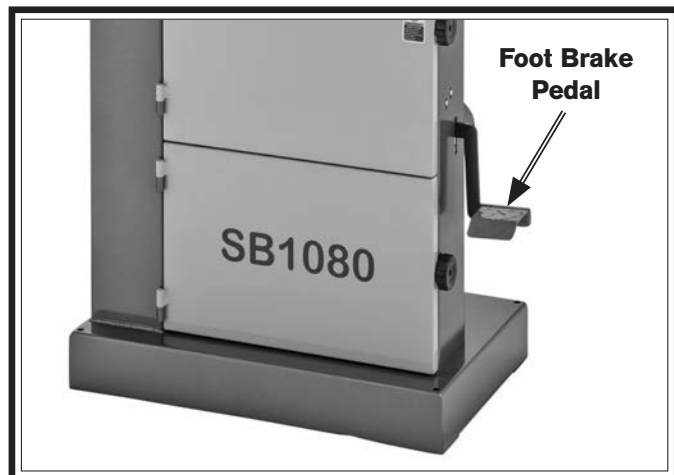
#### To test run machine:

1. Clear all setup tools away from machine.
2. Press Emergency Stop button in.
3. Connect machine to power by inserting power cord plug into a matching receptacle.
4. Insert key into Master Power Key Switch, then rotate switch to "1" position (see **Figure 25**). This turns incoming power **ON**.
5. Twist Emergency Stop button clockwise until it springs out (see **Figure 25**). This resets switch so machine can start.
6. Press ON button (see **Figure 25**) to turn machine **ON**. Verify motor starts up and runs smoothly without any unusual problems or noises.
7. Press Emergency Stop button to turn machine **OFF**.
8. **WITHOUT** resetting Emergency Stop button, try to start machine by pressing ON button. Machine should not start.
  - If the machine *does not* start, the safety feature of the Emergency Stop button is working correctly.
  - If the machine *does* start, immediately turn it **OFF**, disconnect power, and contact customer service for assistance. The safety feature of the Emergency Stop button is **NOT** working properly and must be replaced before further using the machine.



**Figure 25. Location of power controls for turning machine ON and OFF.**

9. Repeat **Steps 5–6** to turn machine **ON**.
10. Allow motor to reach full speed, then step on foot brake pedal (see **Figure 26**). Blade should stop moving and motor should turn **OFF**.



**Figure 26. Location of foot brake pedal.**

- If the blade stops moving and the motor turns **OFF**, the foot brake feature is working correctly. Congratulations! The Test Run is complete.
- If the blade does not stop moving, or the motor does not turn **OFF**, the foot brake feature is not working correctly. Turn machine **OFF**, disconnect power immediately, and contact customer service for assistance.

## 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:** *The tensioning done on 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 **Initial Blade Tracking** subsection on **Page 20**.
3. Raise guide post all the way, and move upper and lower guide bearings away from blade (refer to **Page 25** for more information).
4. Engage blade tension quick-release lever to apply tension to blade.
5. Connect bandsaw to power, then turn it **ON**.
6. Use blade tension handwheel to slowly decrease blade tension until you see blade start to flutter.
7. Slowly increase tension until blade stops fluttering, then tighten blade tension adjustment knob an additional  $\frac{1}{8}$  to  $\frac{1}{4}$  of a turn.
8. DISCONNECT MACHINE FROM POWER!
9. Adjust blade guides as described in **Adjusting Blade Support Bearings** and **Adjusting Blade Guide Bearings** on **Pages 25–26**.

## 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:

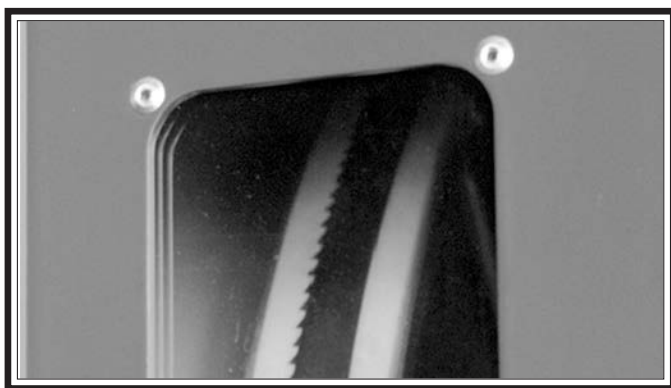
1. DISCONNECT MACHINE FROM POWER!
2. Make sure blade is properly tracking as instructed in **Initial Blade Tracking** subsection on **Page 20**.
3. Raise guide post all the way and move upper and lower guide bearings away from blade (refer to **Page 25** for more information).
4. Engage blade tension quick-release lever to apply tension to blade.
5. Using moderate pressure, push center of blade sideways.
  - If blade deflects approximately  $\frac{1}{4}$ ", it is properly tensioned. Proceed to **Step 6**.
  - If blade deflects less than  $\frac{1}{4}$ ", it is over-tensioned. Rotate blade tension handwheel counterclockwise two full turns and repeat **Step 5**.
  - If blade deflects  $\frac{1}{4}$ " or more, blade is not properly tensioned. Rotate blade tension handwheel clockwise to incrementally tension blade, and repeat **Step 5** until blade is properly tensioned.
6. Adjust blade guides as described in **Adjusting Blade Support Bearings** and **Adjusting Blade Guide Bearings** on **Pages 25–26**.

## Fine-Tune Tracking

During setup, the blade was tracked without the machine connected to power (refer to **Page 20**). In this procedure, the bandsaw is turned **ON** to perform fine tuning of the tracking. Make small changes with the blade tracking knob as you monitor the effect on the blade tracking.

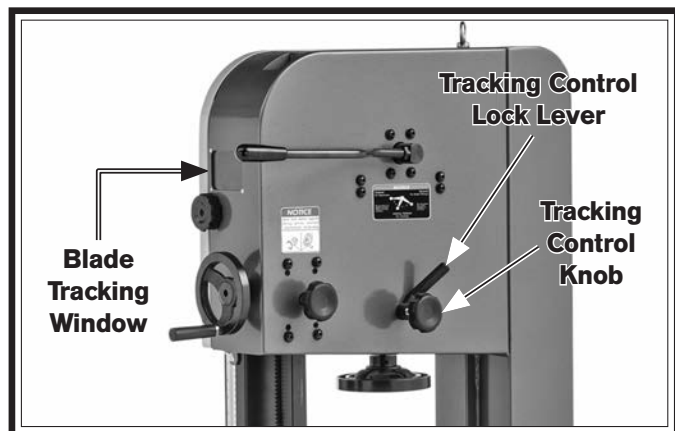
### To fine-tune blade tracking:

1. Close wheel covers and turn bandsaw **ON**.
2. Observe blade tracking path through clear tracking window on right edge of bandsaw (see **Figures 27–28**).



**Figure 27.** Example of blade, viewed through tracking window.

3. If necessary, loosen tracking control lock lever and use tracking control knob (see **Figure 28**) to adjust the blade so it tracks on the center of the wheel.
4. Tighten tracking control lock lever (see **Figure 28**) to secure setting, then turn machine **OFF**.



**Figure 28.** Fine-tune tracking controls.

## Adjusting Blade Support Bearings

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

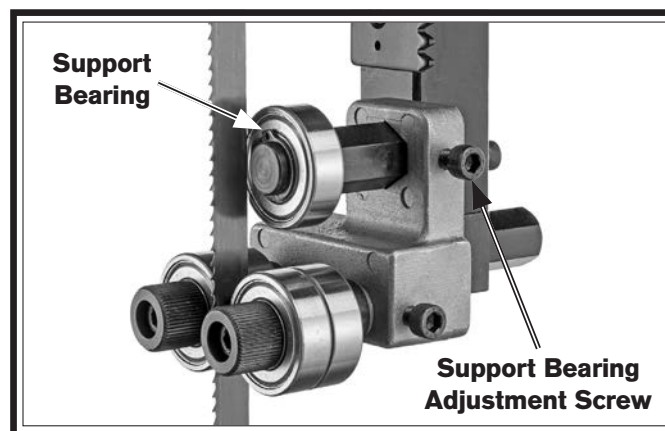
There are support bearings on the upper and lower blade guide assemblies. Both adjust in the same manner. The following instructions refer to the upper support bearings.

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

<b>Tools Needed</b>	<b>Qty</b>
Hex Wrench 5mm .....	1

### To adjust support bearing:

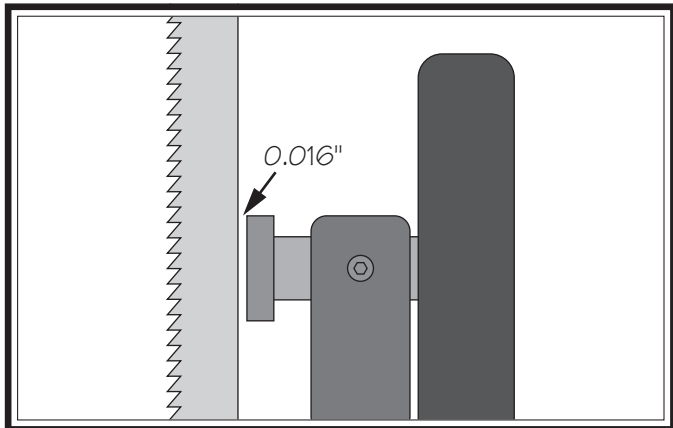
1. **DISCONNECT MACHINE FROM POWER!**
2. Loosen support bearing adjustment screw (see **Figure 29**).



**Figure 29.** Upper support bearing assembly and controls (guide post cover removed for clarity).

3. Position support bearing approximately 0.016" away from back of blade, as illustrated in **Figure 30**.

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



**Figure 30. Bearing positioned approximately 0.016" away from back of blade.**

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

## 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.

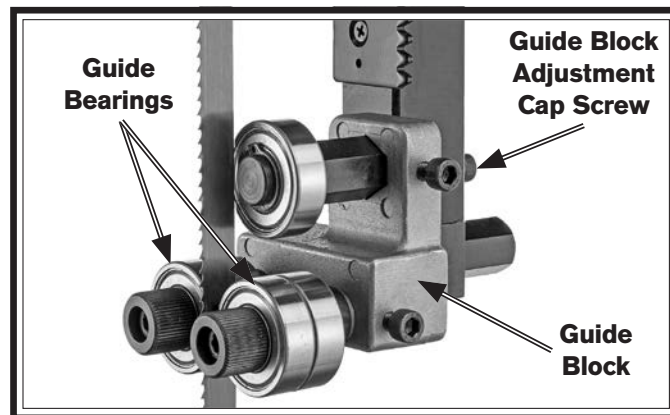
**IMPORTANT:** *Make sure the blade is tracking and tensioned correctly before performing this procedure (see **Tensioning Blade** on **Page 23**).*

<b>Tools Needed</b>	<b>Qty</b>
Hex Wrench 5mm .....	1

### To adjust blade guides:

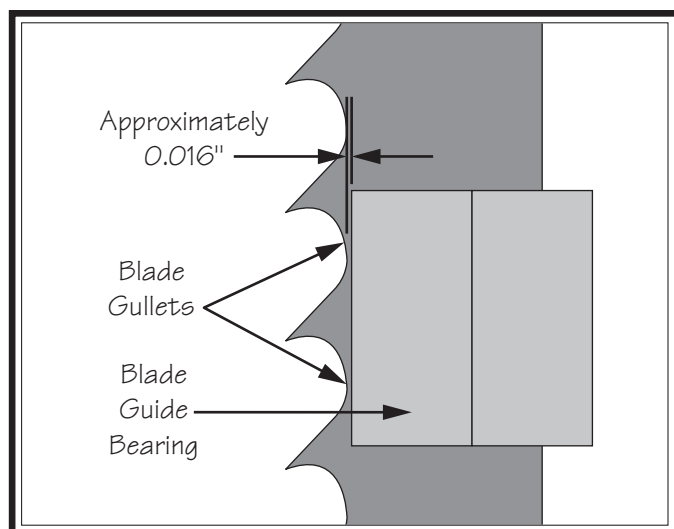
1. DISCONNECT MACHINE FROM POWER!
2. Loosen guide block adjustment cap screw shown in **Figure 31**, then position guide bearings just behind blade gullets, as illustrated in **Figure 32**. Retighten cap screw to secure setting.

**Note:** *The guide bearings should be positioned behind the gullets a distance equal to that of the support bearing behind the blade (see **Page 25**).*



**Figure 31. Upper guide bearing components (guide post cover removed for clarity).**



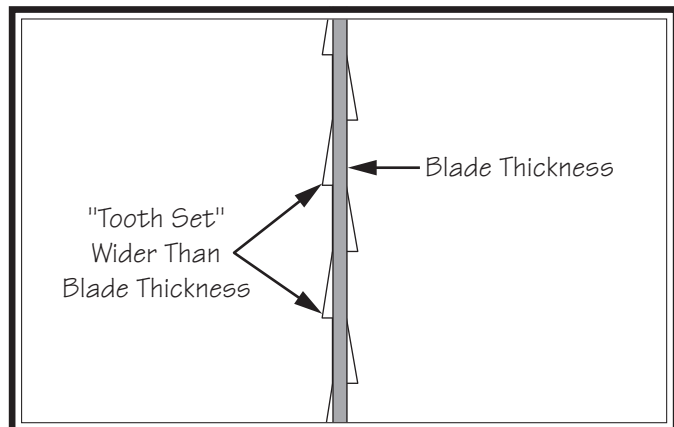


**Figure 32. Blade guide bearing positioned just behind blade gullets.**

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

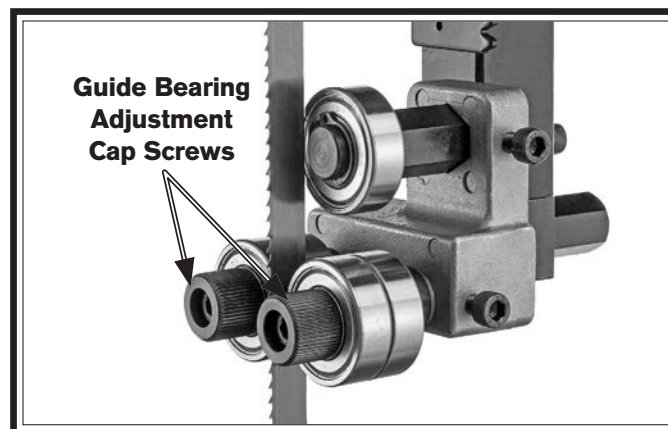
## NOTICE

Blade teeth are angled out slightly, protruding wider than the blade thickness; this is known as blade "tooth set" (see Figure 33). If angled out parts of the teeth contact guide bearings during operation, they will get bent inward, ruining the tooth set. Therefore, the support bearing must be set to prevent teeth from contacting guide bearings during operation (refer to Page 25 for details).



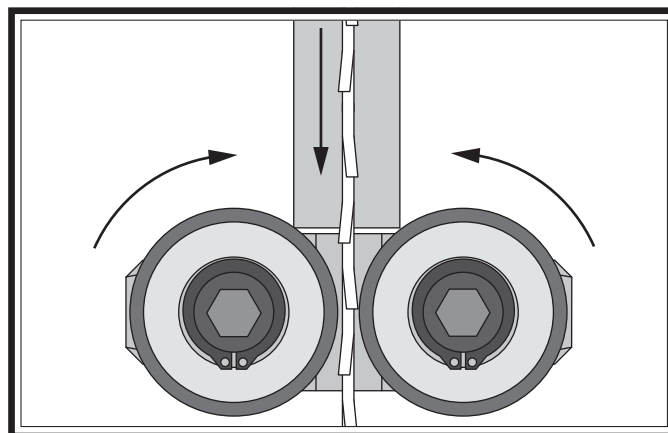
**Figure 33. Illustration of blade "tooth set."**

- Loosen both guide bearing adjustment cap screws (see **Figure 34**), then position guide bearings so they are close to—but not quite touching—sides of blade.



**Figure 34. Location of upper guide bearing adjustment cap screws (guide post cover removed for clarity).**

**Note:** When the blade guide bearings are properly adjusted, they should only rotate during cutting operations, or when the blade is deflected to the left or right (see **Figure 35**).



**Figure 35. Blade guide bearings rotating during cutting operation.**

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

## NOTICE

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

# Aligning Table

To ensure cutting accuracy, the table should be aligned so that the miter slot is parallel to the bandsaw blade, and that the table is perpendicular (front to back) to the blade. These procedures work best with a wide (3/4") blade installed.

### Tools Needed

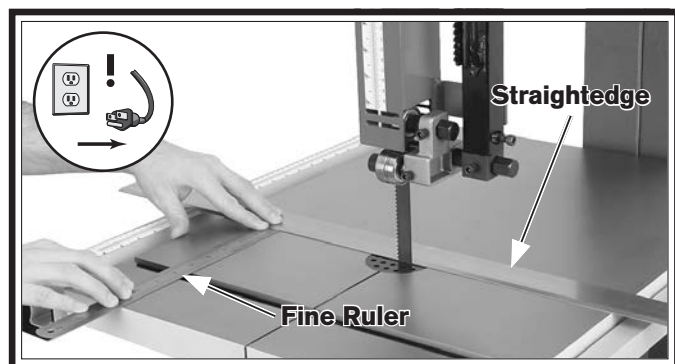
	Qty
Straightedge.....	1
Fine Ruler.....	1
Square.....	1
Wrench or Socket 13mm.....	1

## Adjusting Miter Slot Parallelism

1. Make sure blade is tracking properly and that it is correctly tensioned (refer to **Pages 20 & 23**).
2. **DISCONNECT MACHINE FROM POWER!**
3. Place an accurate straightedge along blade so that it lightly touches both front and back of blade without going across a tooth (see **Figure 36**).
4. Use a fine ruler to measure distance between straightedge and miter slot (see **Figure 36**). Distance should be the same at front and back of table.

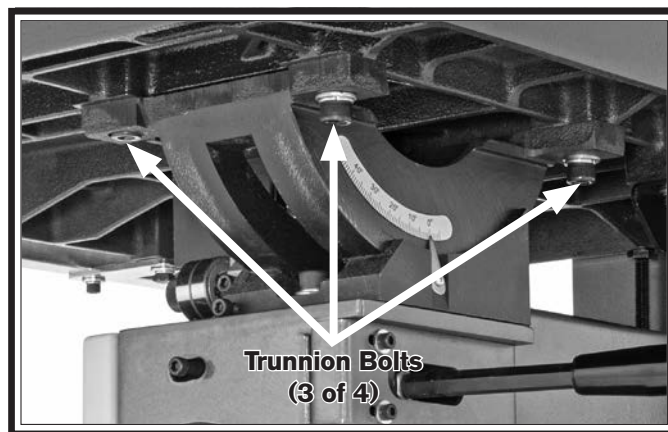
— If the distance *is* the same at the front and back of the table, no adjustment is necessary; proceed to **Adjusting Table Perpendicular to Blade** on **This Page**.

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



**Figure 36. Checking miter slot parallelism.**

5. Loosen trunnion bolts that secure table (see **Figure 37**).



**Figure 37. Location of trunnion bolts.**

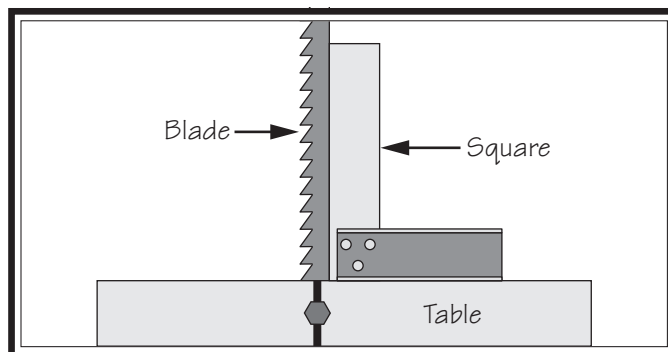
6. Adjust table until distance between straightedge and miter slot is the same at front and back of table.
7. Retighten trunnion bolts, then repeat **Step 4** to verify adjustment.

## Adjusting Table Perpendicular to Blade

1. **DISCONNECT MACHINE FROM POWER!**
2. Place a square on table and against back of blade, as illustrated in **Figure 38**. Table should be perpendicular to back of blade.

— If the table *is* perpendicular to the back of the blade, no adjustment is necessary; proceed to **Aligning Fence** on **Page 29**.

— If the table *is not* perpendicular to the back of the blade, you must shim the table; proceed to **Step 3**.



**Figure 38. Squaring back of blade and table.**

3. Determine which trunnion is on low side of table, then remove two trunnion bolts (see **Figure 37**) from low trunnion.
4. Insert a shim, such as a thin washer, between table and low trunnion at each mounting location.
5. Re-install and tighten trunnion bolts, then repeat **Step 2** to verify adjustment.
5. Mount fence on right side of blade and even with the miter slot, as shown in **Figure 39**.
  - If the fence face *is* even with the miter slot from front to back, no further adjustment is necessary.
  - If fence face *is not* even with miter slot along its length, continue with this procedure.

## Aligning Fence

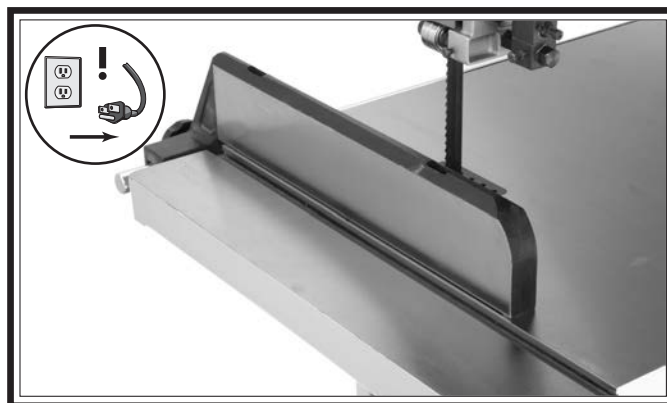
To ensure cutting accuracy, the fence should be aligned parallel with the blade. This is achieved by aligning the fence to the miter slot *after* miter slot parallelism is properly adjusted, as instructed on **Page 28**.

**Note:** Occasionally, even after aligning the fence, a symptom known as "blade lead" can happen, which may require the fence to be skewed slightly to compensate for the blade lead. Refer to **Blade Lead** beginning on **Page 52** for more information on blade lead causes and skewing the fence.

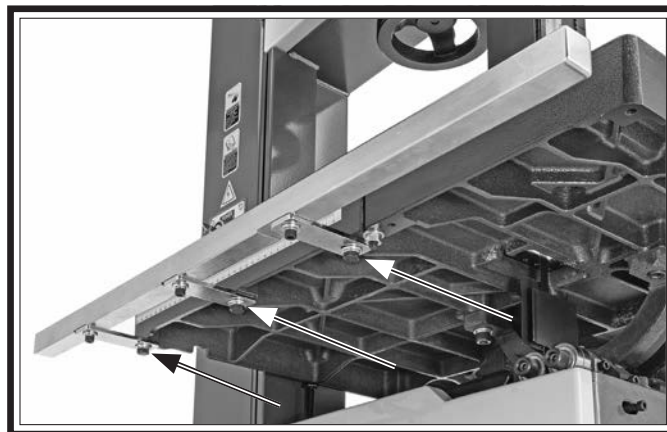
Tools Needed	Qty
Hex Wrench 6mm .....	1

### To align fence:

1. DISCONNECT MACHINE FROM POWER!
2. Make sure table is aligned with blade (see **Adjusting Miter Slot Parallelism** on **Page 28** for detailed instructions).
3. If attached, remove resaw fence.
4. Mount fence on right side of blade and even with the miter slot, as shown in **Figure 39**.
  - If the fence face *is* even with the miter slot from front to back, no further adjustment is necessary.
  - If fence face *is not* even with miter slot along its length, continue with this procedure.
6. Loosen cap screws that secure fence rail to table (see **Figure 40**).
7. With fence locked onto rail, shift fence by hand until fence is even with miter slot along its entire length, then tighten rail cap screws.
8. Slide fence along the entire length of the rail to ensure it does not bind against the table.
  - If fence *does* bind against table, loosen rail cap screws and pull rail away from table, then repeat **Steps 7-8**.



**Figure 39. Fence even with the miter slot.**



**Figure 40. Location of fence rail cap screws.**

# Calibrating Fence Pointer

After the fence is properly aligned with the table, the fence pointer must be calibrated to ensure quick and accurate positioning of the fence.

Items Needed	Qty
Phillips Head Screwdriver.....	1

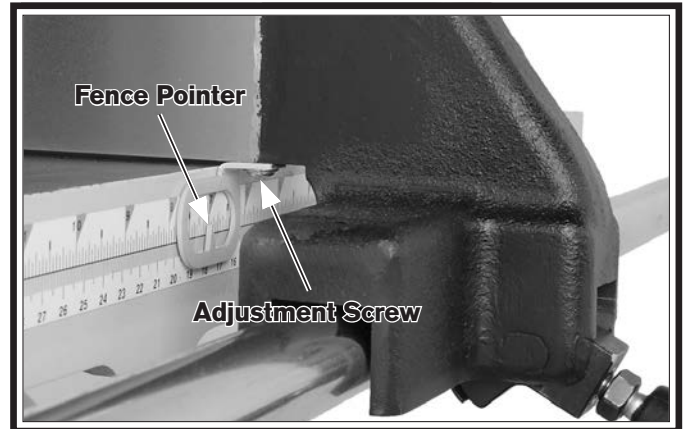
## To calibrate fence pointer:

1. Make sure blade is properly tensioned (see **Page 23**).
2. DISCONNECT MACHINE FROM POWER!
3. Position fence against left side of blade so it is touching the blade without applying pressure to it (see **Figure 41**), then lock fence in place.



**Figure 41. Fence against the blade.**

4. Loosen pointer adjustment screw shown in **Figure 42**, set pointer in line with "0" mark on scale, then re-tighten screw.



**Figure 42. Fence pointer.**

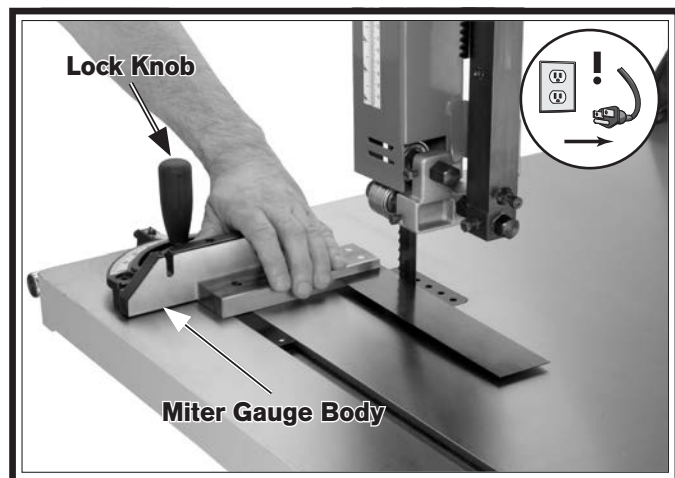
## Aligning Miter Gauge

The miter gauge needs to be calibrated to the blade when it is first mounted in the miter slot.

Tools Needed	Qty
Phillips Screwdriver #2 .....	1
Square.....	1

### To align miter gauge:

1. Make sure blade is properly tensioned (**Page 23**) and tracking correctly (**Page 25**).
2. DISCONNECT MACHINE FROM POWER!
3. Place one edge of square against face of miter gauge and other edge of square against blade side, as shown in **Figure 43**.



**Figure 43. Example of squaring miter gauge to blade.**

**Note:** Make sure square does not go across a blade tooth when performing this step.

- If square rests flush and evenly against both miter gauge face and blade side, then no adjustments are necessary.
  - If square *does not* rest flush and evenly against both miter gauge face and blade side, the miter gauge must be calibrated; proceed to **Step 4**.
4. Loosen lock knob on miter gauge and adjust face flush with edge of square.
  5. Tighten lock knob, and verify square rests flush and evenly against both miter gauge face and blade side.
- Note:** Sometimes the tightening procedure can affect the adjustment.
6. Loosen screw that secures angle pointer, adjust pointer to 0° mark on scale, then retighten screw to secure setting.

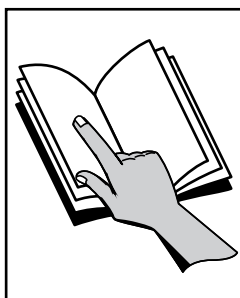


## Operation Overview

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 they can more easily understand the controls discussed later in this manual.

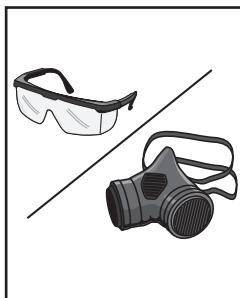
**Note:** Due to the generic nature of this overview, it is not intended to be an instructional guide for performing actual machine operations.

To learn more about specific operations and machining techniques, seek training from people experienced with this type of machine, and do additional research outside of this manual by reading "how-to" books, trade magazines, or websites.



### **!WARNING**

To reduce the risk of serious injury when using this machine, read and understand this entire manual before beginning any operations.



### **!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.

### **!WARNING**

Untrained users have an increased risk of seriously injuring themselves with this machine. Do not operate this machine until you have understood this entire manual and received proper 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 table tilt, if necessary, to correct angle of desired cut.
3. If using fence, adjusts it for width of cut and then locks it in place. If using miter gauge, adjusts angle and locks it in place.
4. Loosens guide post lock knob, adjusts upper blade guide height to just clear the workpiece (no more than 1/4"), then retightens guide post lock knob.
5. Checks to make sure workpiece can safely pass all the way through blade without interference from other objects.
6. Puts on safety glasses and respirator.
7. Starts dust collector and bandsaw.
8. Holds workpiece firmly and flatly against both table and fence (or miter gauge), and then pushes workpiece into blade at a steady and controlled rate until cut is complete.  
  
Operator is very careful to keep fingers away from blade and uses a push stick to feed narrow workpieces.
9. Stops bandsaw.

## Basic Functions of a 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, reduces blade lead, 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.

## Workpiece Inspection

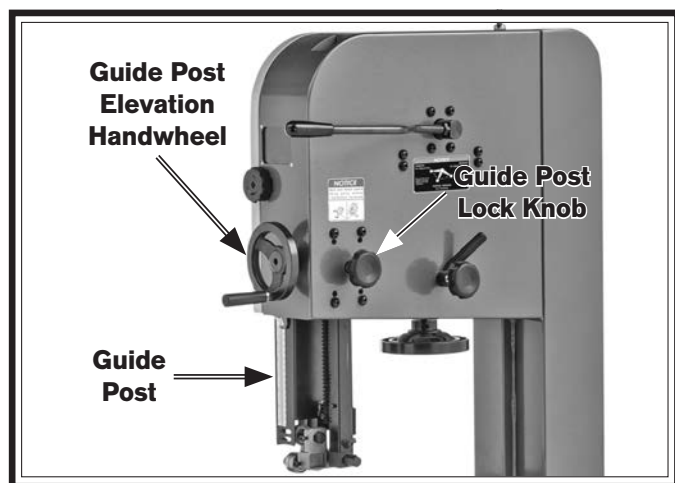
Some workpieces are not safe to cut or may require modification before they are safe to cut.

**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 with a bandsaw 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 often dangerous to cut because they can be unstable and 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.

## Setting Upper Blade Guide Height

When cutting, the blade guides must always be positioned so they just clear (no more than  $\frac{1}{4}$ " ) the workpiece. The guide post, shown in **Figure 44**, allows the upper blade guide assembly to be quickly adjusted for height.



**Figure 44.** Location of guide post, elevation handwheel, and lock knob.

### To adjust height of upper blade guides:

1. DISCONNECT MACHINE FROM POWER!
2. Loosen guide post lock knob.
3. Use guide post elevation handwheel to adjust height of guide post so that blade guide assembly just clears (no more than  $\frac{1}{4}$ " ) workpiece.
4. Retighten lock knob to secure setting.

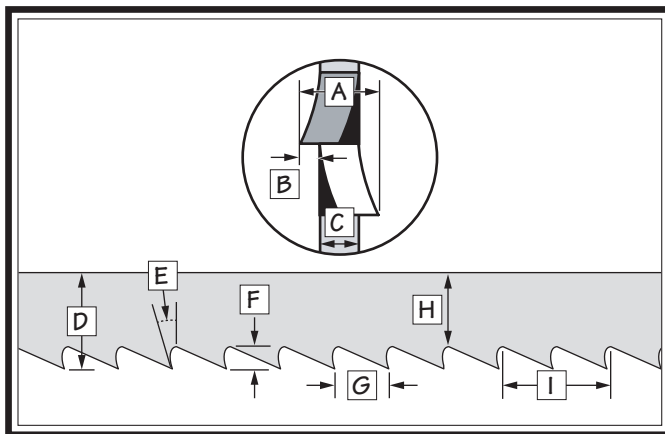
## **⚠**WARNING

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 may result in serious personal injury or property damage.

## Blade Selection

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

### Blade Terminology



**Figure 45.** Bandsaw blade components.

- A. Kerf:** The amount of material removed by the blade during cutting.
- B. Tooth Set:** The amount each tooth is bent left or right along the blade.
- C. Gauge:** The thickness of the blade.
- D. Blade Width:** The widest point of the blade measured from the tip of the tooth to the back edge of the blade.
- E. Tooth Rake:** The angle of the tooth face from a line perpendicular to the length of the blade.
- F. Gullet Depth:** The distance from the tooth tip to the bottom of the curved area (gullet).
- G. Tooth Pitch:** The distance between tooth tips.
- H. Blade Back:** The distance between the bottom of the gullet and the back edge of the blade.
- I. TPI:** The number of teeth per inch measured from gullet to gullet.

## Blade Dimensions

Length Range ..... 130½"–131½"  
 Width Range..... ⅛"–1"

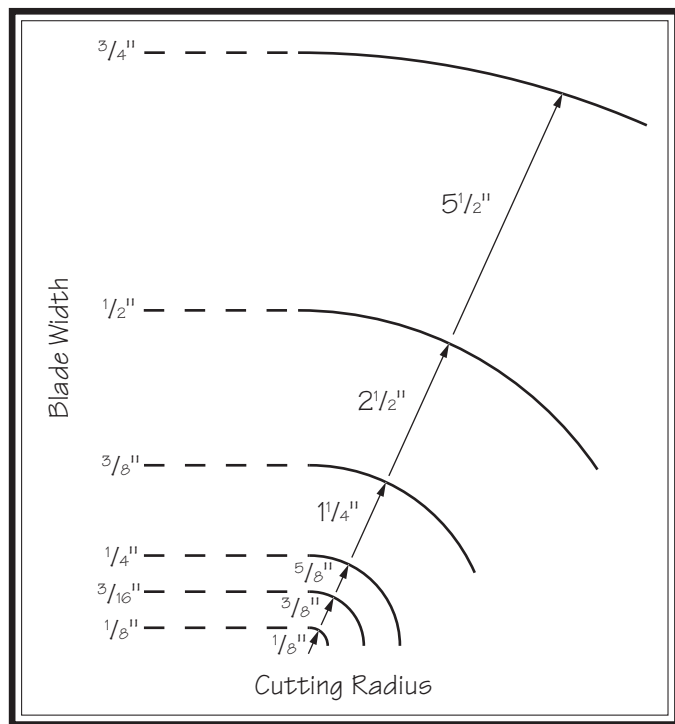
## Blade Length

Measured by the blade circumference, blade lengths are specific to each bandsaw. They are determined by the wheel diameter and distance between the wheels. Blades will vary slightly even in the same length because of how they are welded. Refer to the **Accessories** section later in this manual for blade replacements from South Bend.

## 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.

- **Curve Cutting:** Use the chart in **Figure 46** 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 (refer to **Cutting Curves** on **Page 43** for more information).

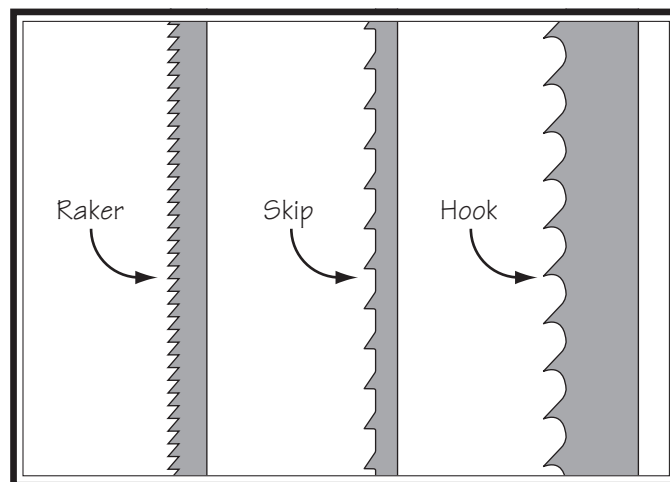


**Figure 46. Recommended cutting radius per blade width.**

- **Straight Cutting:** Use the largest width blade that you own. Large blades excel at cutting straight lines and are less prone to wander (known as blade lead—refer to **Page 52** for more information on blade lead).

## Tooth Style

**Figure 47** illustrates the three main blade tooth styles:



**Figure 47. Main blade tooth styles.**

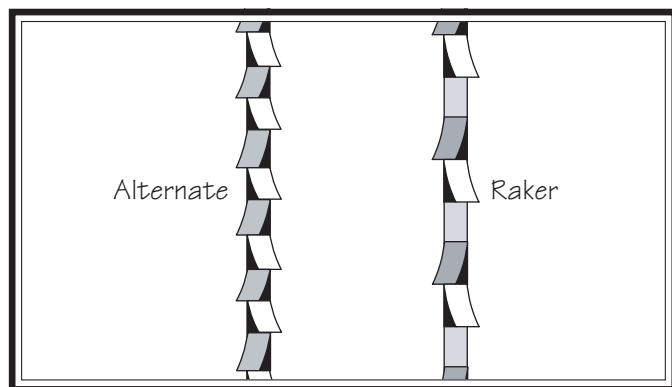
- **Raker:** Considered to be the standard because the tooth size and shape are the same as the tooth gullet. The teeth on raker blades usually are very numerous, have no angle, and produce cuts by scraping the material. As a result, smooth cuts can be achieved without cutting fast or generating more 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 two teeth in the material at all times. Use fine-pitched blades on harder woods and coarse-pitched blades on softer woods.

## Tooth Set

Two common tooth sets for wood bandsaw blades are alternate and raker. Each different type of tooth set removes material in a different manner, leaving cuts with different characteristics (see **Figure 48**).



**Figure 48. Common woodcutting bandsaw blade tooth sets.**

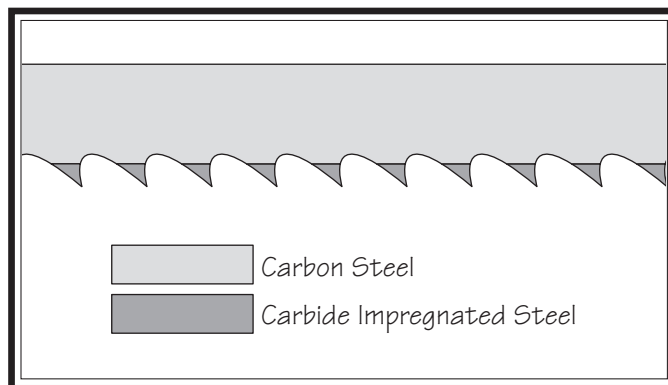
- **Alternate:** An all-purpose arrangement where the teeth are bent evenly left and right of the blade.
- **Raker:** Three teeth in a recurring group—one bent left, one bent right, and then one that is not bent. The raker set is ideal for most contour cuts.

## Blade Material

Bandsaw blades must meet two requirements: flexibility and hardness. The flexibility of a blade allows it to travel on the wheel as a band, while hardness allows the teeth to cut and hold an edge. Modern materials technology has allowed bandsaw blades to meet these requirements in various ways.

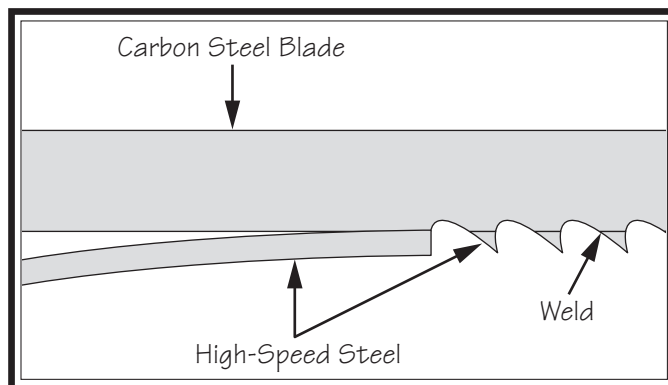
**Carbon Steel:** These blades are differentially heat treated to provide hard teeth that will hold an edge, and yet be flexible in the back.

**Carbide Tooth:** Extremely hard carbide is either welded onto or impregnated into the carbon steel blades, providing superior edge-holding characteristics (see **Figure 49**).



**Figure 49. Carbide-tooth blade composition.**

**Bi-metal Blade:** A strip of high-speed tool steel is precision welded to a flexible carbon blade, then teeth are ground into the blade to provide good edge-holding qualities for blades taking a lot of abuse (see **Figure 50**).























**Figure 50. Bi-metal blade composition.**



# Blade Selection Chart

Use the blade selection chart below as a general guide when selecting a blade for your operation.

Cutting Operation	Blade Width		
	Narrow (1/8"-1/4")	Medium (3/16"-1/2")	Wide (1/2"-1")
Resawing			 <b>C</b>
Ripping Thin Stock			 <b>M</b>
Ripping Thick Stock			 <b>C</b>
Ripping Round Stock		 <b>M</b>	 <b>M</b>
Crosscutting Thin Stock			 <b>F</b>
Crosscutting Thick Stock			 <b>M</b>
Crosscutting Round Stock		 <b>F</b> <b>M</b>	 <b>F</b> <b>M</b>
Miter Cut			 <b>F</b> <b>M</b>
Tenons		 <b>M</b>	 <b>M</b>
Sharp Curves	 <b>F</b>		
Gradual Curves		 <b>F</b> <b>M</b>	

Key					
Tooth Type			Tooth Pitch (Teeth Per Inch or TPI)		
					
Hook	Raker	Skip	Fine (14-32 TPI)	Medium (4-12 TPI)	Coarse (2-4 TPI)

# Blade Care & Break-In      Blade Breakage

## Blade Care

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

Be sure to select blades with the proper width, set, type, and pitch for each application. Using the wrong blade will produce unnecessary heat and shorten the life of the 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.

## Blade Break-In

The tooth tips and edges of a new blade are extremely sharp, and cutting at too fast of a feed rate fractures the beveled edges of the teeth and causes premature blade wear.

### To properly break in a new blade:

1. Choose correct speed for blade and material of operation.
2. Reduce feed pressure by half for first 50–100 in<sup>2</sup> of material cut.
3. To avoid twisting blade when cutting, adjust feed pressure when total width of blade is in cut.

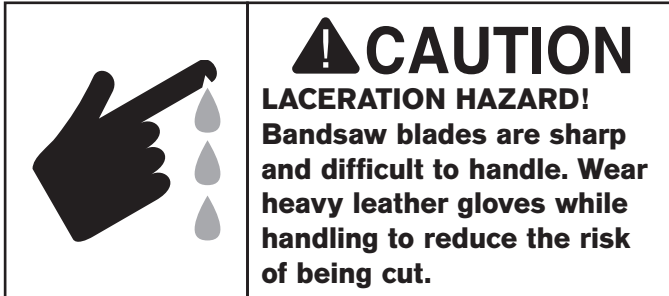
Many conditions may cause a bandsaw blade to break. Blade breakage is unavoidable in some cases, since it is the natural result of the peculiar stresses that bandsaw blades are subjected to.

Blade breakage is also due to avoidable circumstances. Avoidable blade breakage is most often the result of poor care or judgement on the part of the operator when mounting or adjusting the blade or support guides.

### The most common causes of blade breakage are:

- Faulty alignment or adjustment of the blade guides.
- Forcing or twisting a wide blade around a short radius.
- Feeding the workpiece too fast.
- Dull or damaged teeth.
- Over-tensioned blade.
- Upper blade guide assembly set too high above the workpiece. Adjust the top blade guide assembly so that there is approximately  $\frac{1}{8}$ "– $\frac{1}{4}$ " between the bottom of the assembly and the workpiece.
- Using a blade with a lumpy or improperly finished braze or weld.
- Leaving the blade tensioned when not in use.
- Using the wrong pitch (TPI) for the workpiece thickness. The general rule of thumb is to have no less than two teeth in contact with the workpiece at all times during cutting.

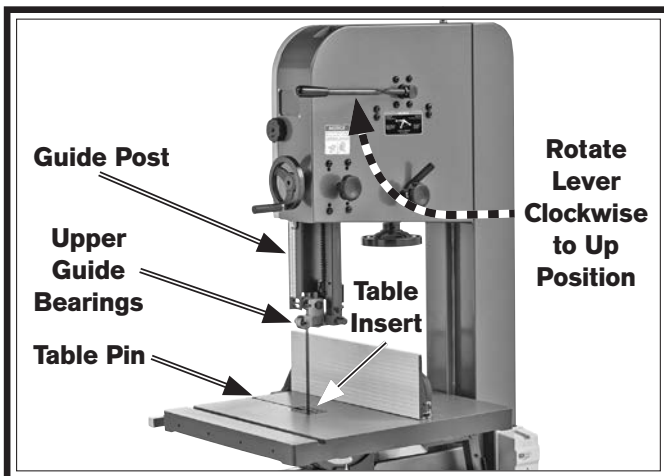
## Changing Blade



Blade changes entail removing the existing blade, installing the new blade, then properly adjusting the blade tension, tracking, and guides.

### Removing Blade

1. DISCONNECT MACHINE FROM POWER!
2. Release blade tension by rotating blade tension quick-release lever (see **Figure 51**) clockwise to up position.
3. Remove table insert and table pin. Adjust upper and lower guide bearings as far away as possible from blade (see **Figure 51**).



**Figure 51. Blade changing controls.**

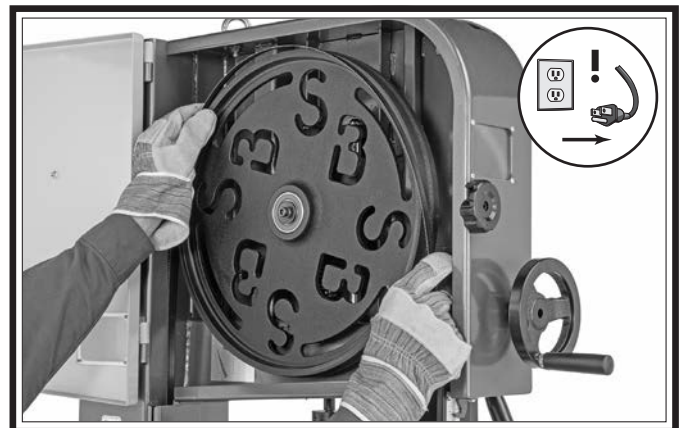
4. Open upper and lower wheel covers and blade cover on guide post, then with gloved hands, slide blade off of both wheels.
5. Rotate blade 90° and slide it through slot in table to remove it.

### Installing Blade

1. DISCONNECT MACHINE FROM POWER!
2. Slide blade through table slot, ensuring teeth are pointing down toward front of table.

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

3. Slip blade through blade guides, and mount it on upper and lower wheels (see **Figure 52**).



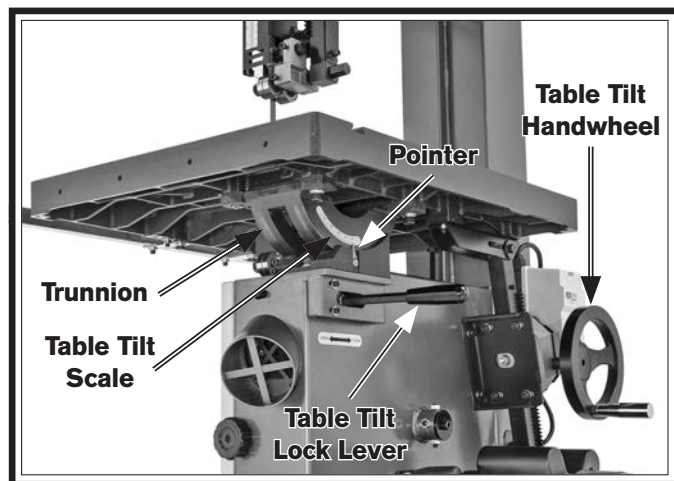
**Figure 52. Example of placing blade on upper wheel.**

4. Rotate blade tension quick-release lever counterclockwise to down position.
5. Adjust blade tension (refer to **Page 23**) and blade tracking (refer to **Page 25**).
6. Adjust upper/lower guide bearings and support bearings (refer to instructions beginning on **Page 25**).
7. Close and secure wheel covers and guide post blade cover, and re-install table insert and table pin.
8. If necessary, adjust blade tension quick-release lever (refer to **Page 53** for more information).

## Tilting Table

The table can be tilted from 5° left–45° right to make beveled cuts. A table tilt scale with pointer is provided on the trunnion, and a positive stop is provided for quickly returning the table back to 0° from a right-tilt setting (see **Figure 53**).

**Note:** *The tilt scale on the trunnion serves as a guide only. For more accurate results use a bevel gauge or protractor to set the desired table tilt relative to the blade.*



**Figure 53.** Table tilt controls.

### Tilting Table

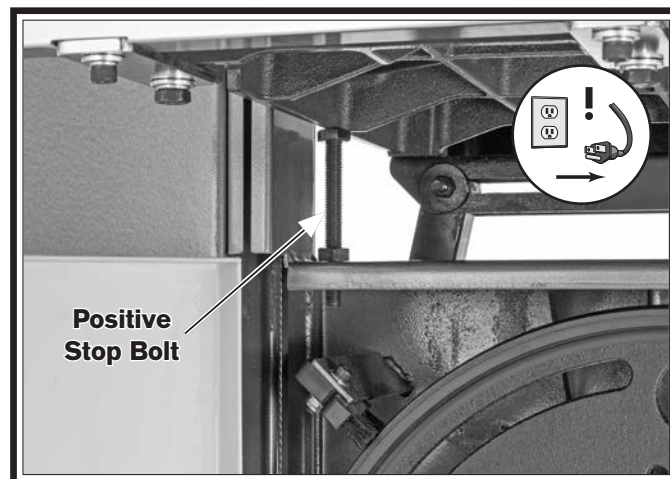
1. DISCONNECT MACHINE FROM POWER!
2. Loosen table tilt lock lever (see **Figure 53**).
3. Rotate table tilt handwheel until table reaches desired angle, then retighten lock lever.

### Using Positive Stop

The positive stop allows you to quickly return the table to 0 from a right-tilt setting. The positive stop is adjustable, allowing for calibration, or if desired, minor deviations from 0.

#### To use positive stop:

1. DISCONNECT MACHINE FROM POWER!
2. Loosen table tilt lock lever (see **Figure 53**).
3. Use handwheel to tilt table to desired angle, then secure position by tightening table tilt lock lever (see **Figure 54**).
4. Loosen jam nut on stop bolt (see **Figure 54**) and turn bolt until it just touches bottom of table.



**Figure 54.** Location of positive stop bolt.

5. Tighten jam nut to secure stop bolt setting.

**Note:** *It is always a good idea to check the table tilt scale and make sure the positive stop is calibrated.*

## Checking/Calibrating Positive Stop

### Tools Needed

Qty

Wrench or Socket 17mm..... 1

Machinist's Square ..... 1

### To check/calibrate positive stop:

1. Correctly set blade tension and raise guide post all the way up.
2. DISCONNECT MACHINE FROM POWER!
3. Loosen table tilt lock lever, and use table tilt handwheel to raise table (see **Figure 55**).

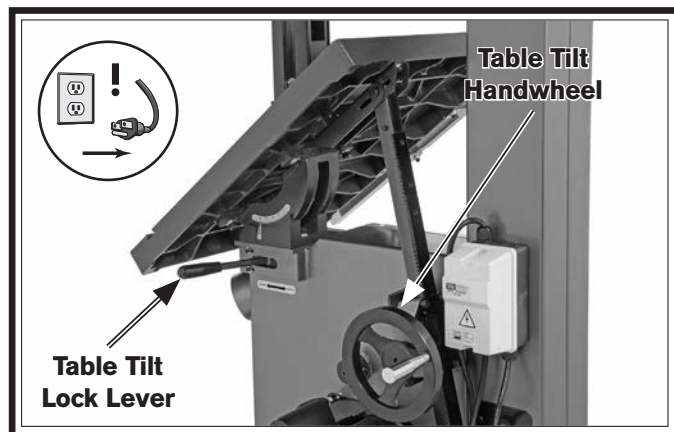


Figure 55. Table tilted up.

4. Open both wheel covers, use a 17mm wrench to loosen the positive stop jam nut shown in **Figure 56**, then lower positive stop bolt so it will not interfere with table tilt in the following steps.

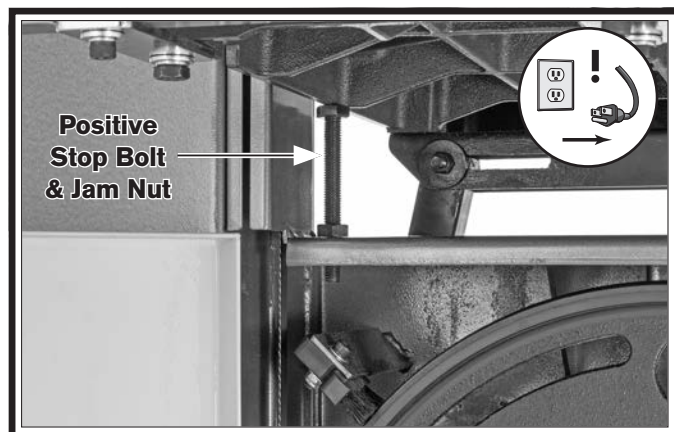


Figure 56. Positive stop bolt and jam nut.

5. Lower table and place a machinist's square flat on table against the side of the blade, as illustrated in **Figure 57**.

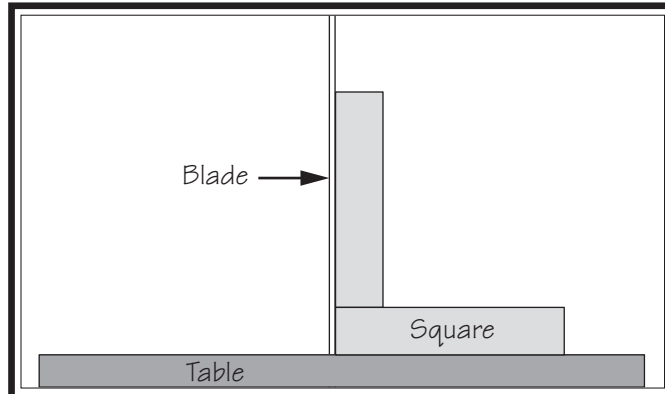


Figure 57. Squaring table to the blade.

6. Use table tilt handwheel to adjust table square to blade, then tighten tilt lock lever.
7. Adjust positive stop bolt up until it just touches table, then re-tighten jam nut to hold it in place.
8. Re-check table to make sure it is square to the blade. If necessary, repeat this procedure until you are satisfied.
9. Loosen screw on table tilt scale pointer, but do not remove it (see **Figure 58**).

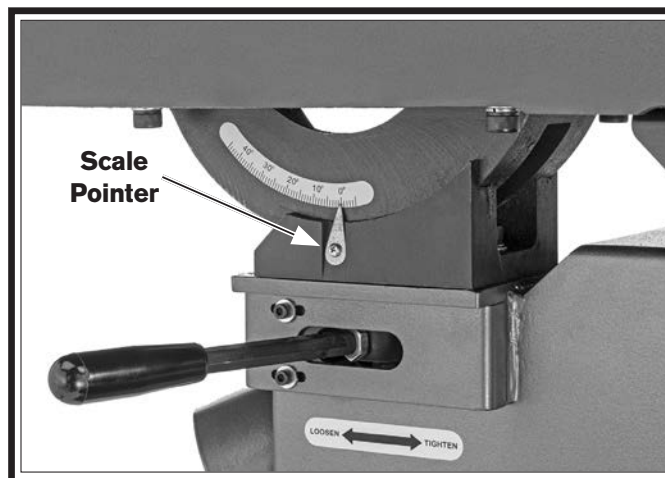


Figure 58. Table tilt scale pointer.

10. Align pointer tip with zero on scale, then re-tighten screw.
11. Close and secure both wheel covers before beginning operation.



## 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 come to full speed. Slowly feed workpiece into blade until blade is completely through workpiece. **Figure 59** shows an example of a ripping operation.

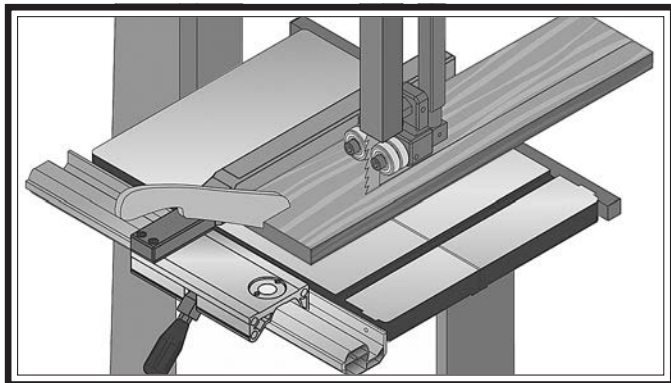


Figure 59. Example of a ripping operation.

### **⚠️ WARNING**

**ALWAYS** use a push stick when ripping narrow pieces. Failure to follow these warnings 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 proper height above workpiece.
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 come to full speed. Slowly feed workpiece into blade until blade is all the way through workpiece. **Figure 60** shows an example of a crosscutting operation.

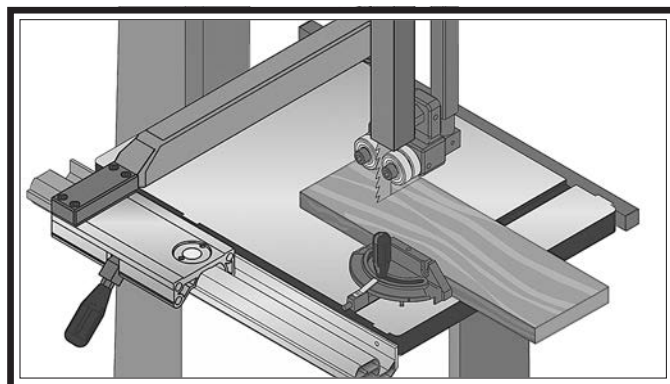


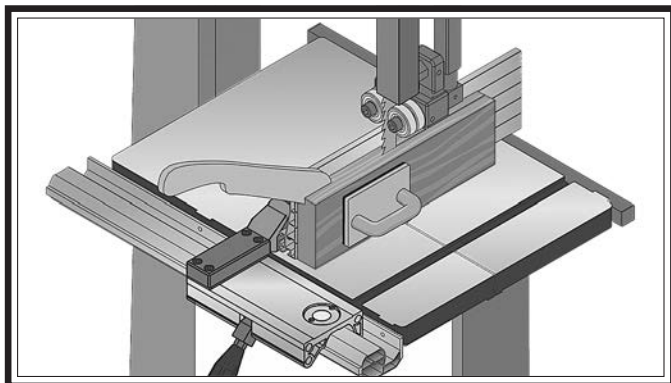
Figure 60. Example of a crosscutting operation with the miter gauge.

## Resawing

"Resawing" means cutting the thickness of a board into two or more thinner boards (see **Figure 61** for an example). The maximum height of a board that can be resawn is limited by the maximum cutting height of the bandsaw.

One of the most important considerations for resawing is blade selection—a wide blade cuts straighter and is less prone to blade lead (see **Blade Lead on Page 52** 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.



**Figure 61. Example of a resawing operation.**

### **⚠ WARNING**

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

## 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.

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

### **NOTICE**

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

<b>Width</b>	<b>Min. Radius</b>
1/8"	1/8"
3/16"	3/8"
1/4"	5/8"
3/8"	1 1/4"
1/2"	2 1/2"
5/8"	3 3/4"
3/4"	5 1/2"

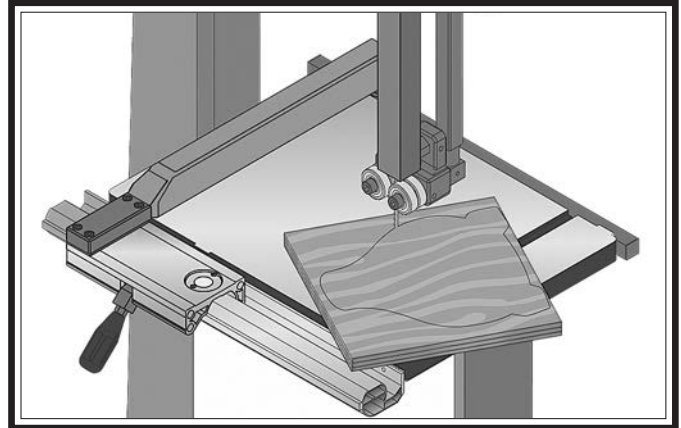
## Stacked Cuts

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. Hot gluing along edges works well, as does brad nailing through waste portion. (Be careful not to cut into brads or you may break blade!)
3. Lay out shape you intend 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 along your layout line as though you were cutting a single piece (see **Figure 62** for an example of a stacked cut setup).



**Figure 62.** Example of a stacked cut setup.

## Accessories

This section includes the most common accessories available for your machine, which are available through our exclusive dealer, **Grizzly Industrial, Inc.**, at [grizzly.com](http://grizzly.com).

### ⚠ WARNING

Installing unapproved accessories may cause machine to malfunction, resulting in serious personal injury or machine damage. To reduce this risk, only install accessories recommended by South Bend or Grizzly.

### NOTICE

Refer to Grizzly's website or latest catalog for additional recommended accessories.

#### 131½" Replacement Blades

Model	Width	TPI	Type	Gauge
H4803	⅛"	14	Raker	0.025
H8591	⅛"	14	Hook	0.025
H4804	¼"	6	Hook	0.025
H4805	¼"	18	Raker	0.025
H8592	¼"	4	Claw	0.025
H4806	⅜"	10	Raker	0.025
H8594	⅜"	4	Claw	0.025
H4807	½"	6	Hook	0.025
H8597	½"	10	Raker	0.025
T24785	½"	3	Hook	0.025
H4809	¾"	3	Hook	0.032
T25048	¾"	2/3	Claw	0.025
H8598	¾"	3	Thin	0.025
H4810	1"	6	Hook	0.035
H8599	1"	3	Claw	0.035
H4811	1"	2	Hook	0.035

#### SB1094—5 HP Cyclone Dust Collector

The Model SB1094 features a 5 HP motor, a whopping 2399 CFM of airflow capacity, and a 60-gallon collection capacity. It's packed with features like a built-in sound muffler, an automatic filter paddle brush for easy cleaning, a remote-controlled magnetic switch, and a quick-release lift handle for easy sawdust disposal.



Figure 63. SB1094 5 HP Cyclone Dust Collector.

#### D2057A—Heavy-Duty Mobile Base

This patented base is the most stable on the market with outrigger type supports. Adjusts from 20" x 20" to 29½" x 29½". 1000 lb. capacity. Weighs 47 lbs.

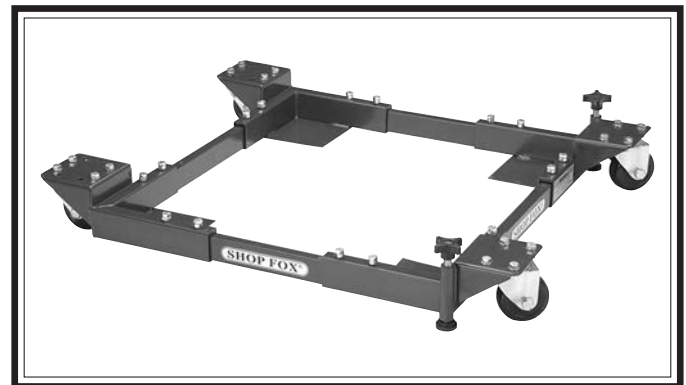


Figure 64. D2057A Mobile Base.

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

**T26544—LED Light with 40 lb. Mag Base and Flexible Arm**

This high-intensity LED worklight features a powerful magnetic base and a 9" flexible clamp arm, allowing you to mount this wherever you need light. It's also removable, doubling as a flashlight! This ultra-bright, zoomable light has three modes: high beam, low beam, and an emergency flash. The fish eye lens is 1x2000 zoom. Includes the LED light, base, and 3 AAA batteries.



**Figure 65. T26544 LED Light with 30 lb. Mag Base and Flexible Arm.**

**Recommended Metal Protectants**

**G5562—SLIPIT® 1 Qt. Gel**

**G5563—SLIPIT® 11 Oz. Spray**



**Figure 66. Recommended products for protecting unpainted cast iron/steel part on machinery.**

**D2272—Tilting Roller Stand**

Adjusts from 26" to 44", 0°-45°. 150 lb. capacity.

**D2273—Single Roller Stand**

Adjusts from 26 5/8" to 45". 250 lb. capacity.

**D2274—5 Roller Stand**

Adjusts from 26" to 44 5/8". 250 lb. capacity.

These super heavy-duty roller stands feature convenient hand knobs for fast height adjustment.



**Figure 67. Accessory roller stands.**

**T1213—Resaw Drift Bar**

The easiest way to compensate for blade drift is to scribe a cut line on the edge or face of your workpiece and use a drift bar mounted to your fence. The drift bar acts as a thickness gauge and adjusts the angle of cut with the scribed line. This resaw drift bar will fit on your existing extruded resaw fence, but it does require that a hole be drilled in the fence for mounting.

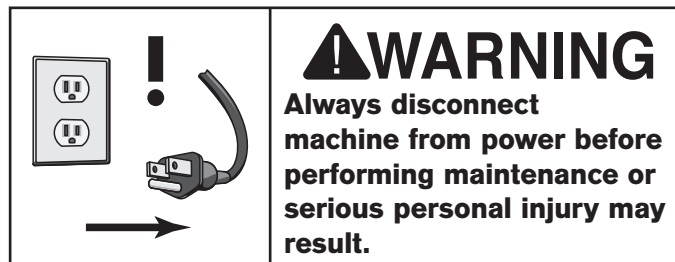


**Figure 68. T1213 Resaw Drift Bar.**

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



## Maintenance Schedule Cleaning & Protecting



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

### Ongoing

- Loose mounting bolts.
- Worn or damaged saw blade.
- Worn or damaged wires.
- Check/clean wheel brush.
- Clean/protect table surface.
- Check lubrication points.
- Any other unsafe condition.

### Monthly Check:

- V-belt tension, damage, or wear.
- Clean/vacuum dust build-up from inside cabinet and off motor.

## Wheel Brushes

The bandsaw is equipped with lower wheel brushes to keep saw dust from building up on the tire. The brushes should be checked daily and cleaned when they become dirty.

There are adjustment brackets that allow the brushes to be adjusted for bristle wear (refer to **Adjusting Wheel Brushes** on **Page 53** for detailed instructions).

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

Protect the unpainted cast-iron surfaces on the table by wiping it clean after every use—this ensures moisture from wood dust does not remain on bare metal surfaces. Keep the table rust-free with regular applications of products like SLIPIT® (see **Accessories** section for more details).

## Lubrication

An essential part of lubrication is cleaning the components before lubricating them. This step is critical because dust and chips build up on lubricated components, which makes them hard to move. Simply adding more grease to built-up grime will not result in smooth moving parts. Clean the components in this section with an oil/grease solvent cleaner or mineral spirits before applying lubrication.

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

### T26419–NLGI#2 Syn-O-Gen Synthetic Grease

Formulated with 100% pure synthesized hydrocarbon basestocks that are compounded with special thickeners and additive. Extremely low pour point, extremely high temperature oxidation, and thermal stability.



Figure 69. T26419 Syn-O-Gen Synthetic Grease.

**Items Needed**

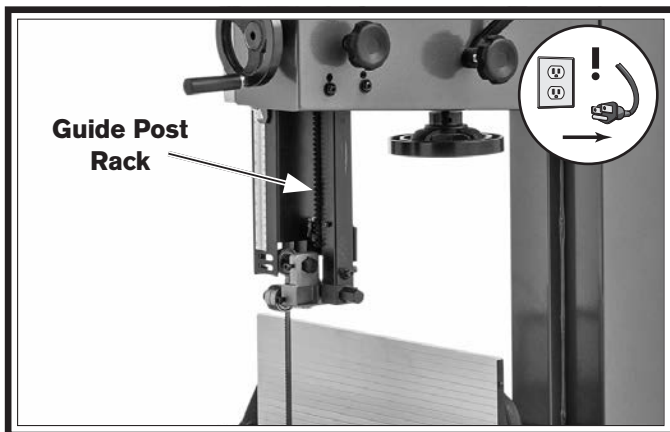
	<b>Qty</b>
Mineral Spirits .....	As Needed
Shop Rags .....	As Needed
Stiff Brush .....	1
Lubrication Type ... T26419 or NLGI#2 Equivalent	

**Guide Post Rack**

Lubrication Type... T26419 or NLGI#2 Equivalent  
 Amount ..... Thin Coat  
 Frequency ..... As Needed

**To lubricate guide post rack and pinion:**

1. DISCONNECT MACHINE FROM POWER!
2. Lower guide post all the way.
3. Use a rag and mineral spirits to wipe off any grease and sawdust build-up on rack (see **Figure 70**).



**Figure 70. Guide post rack exposed for lubrication.**

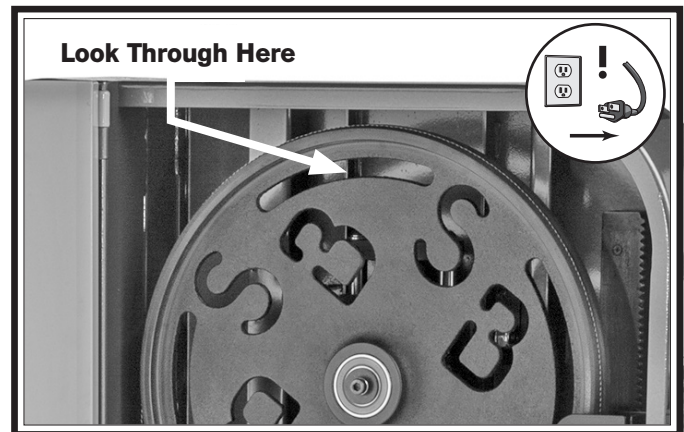
4. Apply a thin coat of lubricant to rack.
5. Move guide post up and down several times to distribute lubricant, then remove any excess grease to help reduce potential sawdust build-up.

**Blade Tension Adjustment Assembly**

Lubrication Type... T26419 or NLGI#2 Equivalent  
 Amount ..... Thin Coat  
 Frequency ..... As Needed

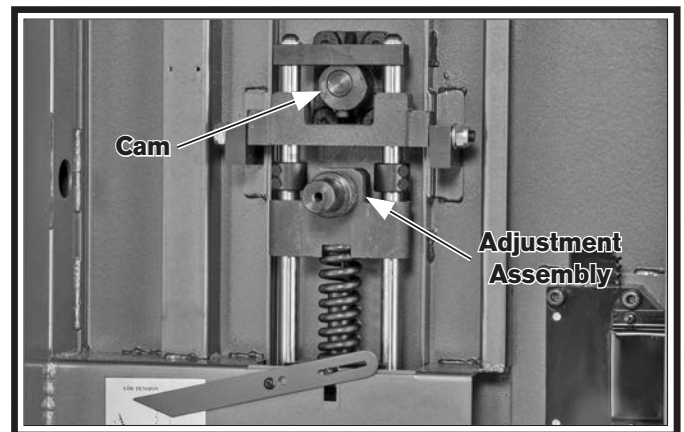
**To lubricate tension adjustment assembly:**

1. DISCONNECT MACHINE FROM POWER!
2. Open upper wheel cover and look through top of wheel (see **Figure 71**).



**Figure 71. Location of blade tension adjustment assembly.**

3. Use a rag and mineral spirits to wipe off any grease and sawdust build-up on blade tension adjustment assembly and tension lever cam (see **Figure 72**), then apply thin coat of lubricant to these areas.



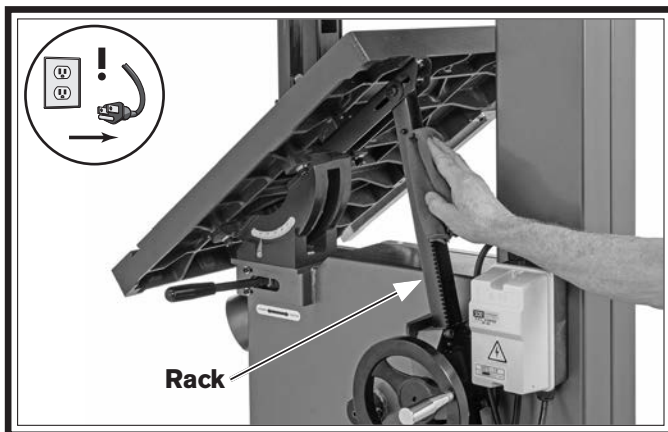
**Figure 72. Lubrication locations for tension adjustment assembly (wheel removed for clarity).**

## Table Tilt Rack and Pinion Assembly

Lubrication Type... T26419 or NLGI#2 Equivalent  
 Amount ..... Thin Coat  
 Frequency ..... As Needed

### To lubricate table tilt rack and pinion assembly:

1. DISCONNECT MACHINE FROM POWER!
2. With table perpendicular to blade, and using a rag and mineral spirits, wipe off all existing grease and sawdust buildup from rack.
3. Move table up to its maximum 45° angle and wipe off all existing grease and sawdust buildup from rack (see **Figure 73**).

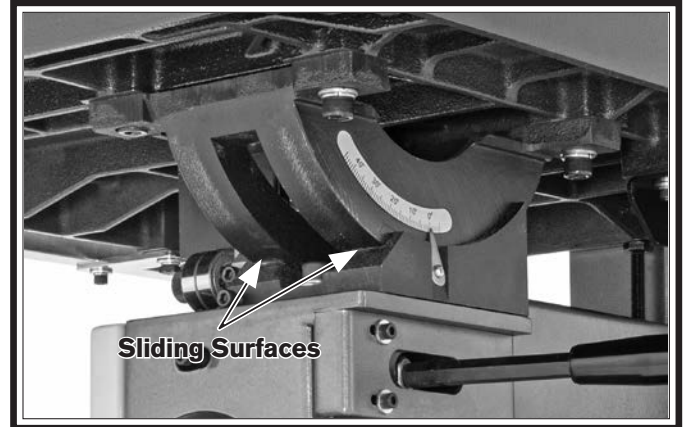


**Figure 73. Lubricating table tilt rack and pinion assembly.**

4. Apply a thin coat of multi-purpose NLGI#2 grease to rack.
5. Move table up and down several times to distribute grease, then wipe off any excess.

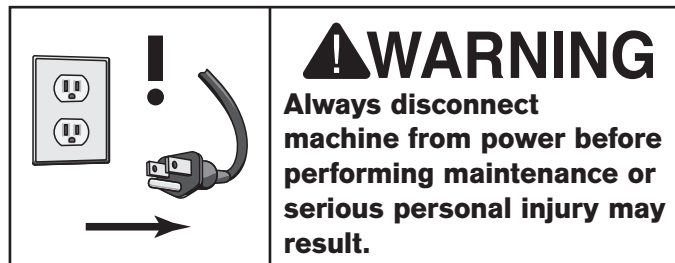
## Trunnions

The cast-iron trunnions (see **Figure 74**) produce a fine graphite powder over time that acts as a lubricant. We recommend not adding lubricant to the trunnions, which could make a sticky substance that would prevent smooth movement.



**Figure 74. Cast-iron trunnions produce their own lubricant.**

# Tensioning/Replacing V-Belt



## Tensioning/Replacing V-Belt

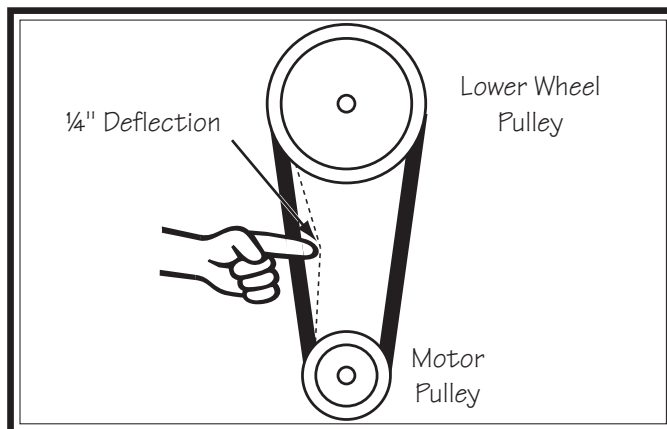
To ensure optimum power transmission from the motor to the blade, the V-belt must be properly tensioned, and free of cracks, fraying, and wear. Belt tension and condition should be checked at least every 3 months—more often if the bandsaw is used daily.

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

### To check/adjust V-belt tension:

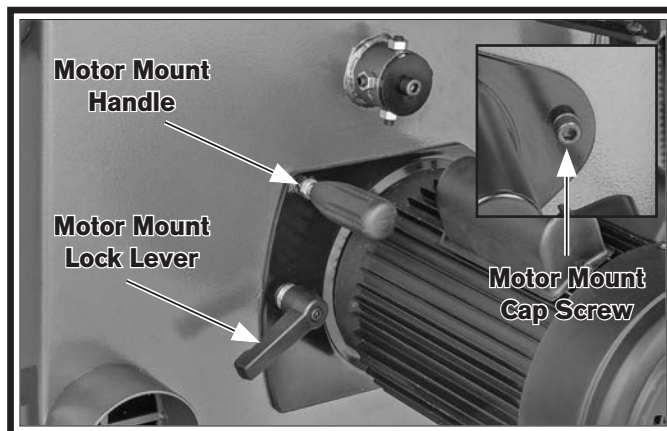
1. DISCONNECT MACHINE FROM POWER!
2. Open lower wheel cover.
3. Inspect V-belt; if it is cracked, frayed, or glazed, replace it (refer to **Replacing V-Belt** on **Page 51**).

4. Check V-belt tension by applying moderate pressure between pulleys (see **Figure 75**).
  - If V-belt deflection *is* approximately ¼", belt is correctly tensioned and no adjustment is necessary.
  - If deflection *is not* approximately ¼", V-belt is not correctly tensioned. Proceed to **Step 5**.



**Figure 75. V-belt deflection.**

5. Loosen motor mount cap screw and lock lever (see **Figure 76**).
6. Use motor mount handle (see **Figure 76**) to adjust motor position until V-belt is correctly tensioned.



**Figure 76. Location of V-belt tension controls.**

7. Retighten motor mount lock lever, then retighten cap screw to secure adjustment.



## Replacing V-Belt

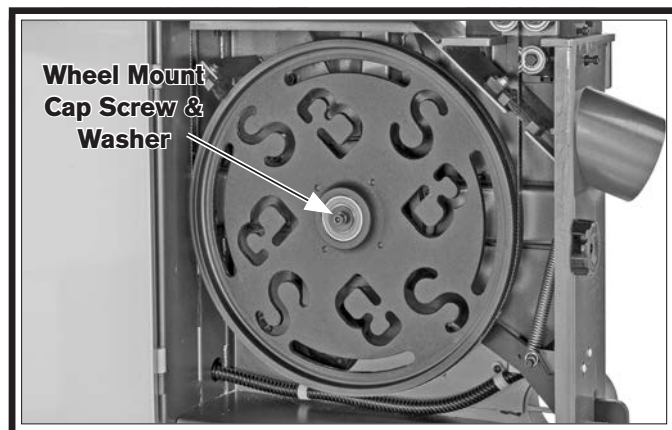
To replace the V-belt, you must remove the blade and the lower wheel. After re-installation, you must properly re-tension the V-belt.

### Tools Needed

	Qty
Hex Wrench 6mm .....	1
Hex Wrench 8mm .....	1

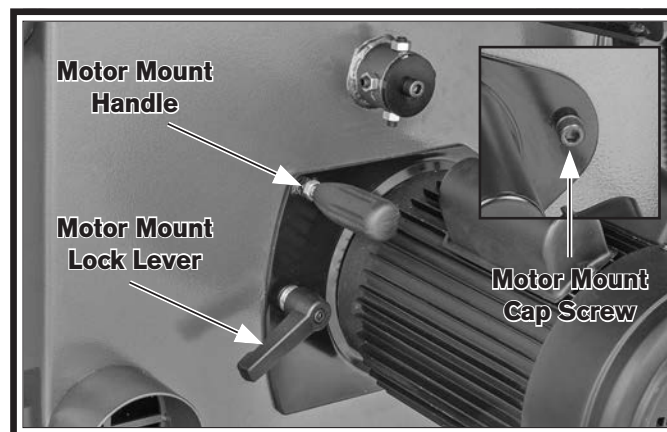
### To replace V-belt:

1. DISCONNECT MACHINE FROM POWER!
2. Open both wheel covers, and remove blade (refer to **Changing Blade** on **Page 39**).
3. Remove lower wheel mount cap screw and washer shown in **Figure 77**, then slide lower wheel with bearing off of shaft.



**Figure 77. Location of lower wheel mount cap screw and washer.**

4. Loosen motor mount cap screw and lock lever (see **Figure 78**).
5. Use motor mount handle (see **Figure 78**) to raise motor all the way, completely detensioning V-belt, then retighten lock lever to secure motor in UP position.



**Figure 78. Location of V-belt removal controls.**

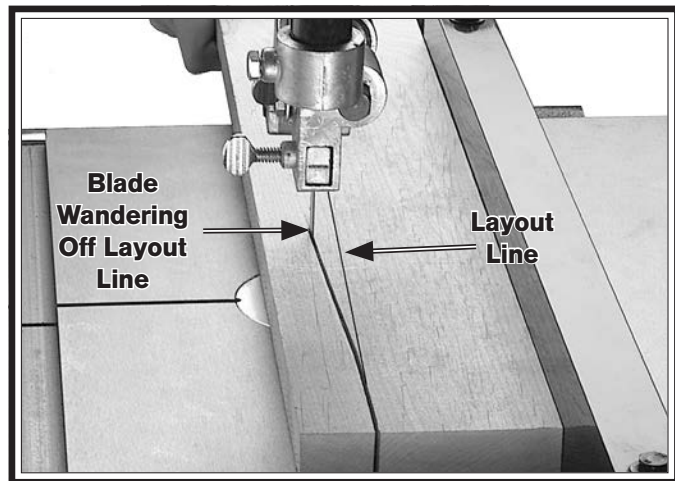
6. Slip old V-belt off of lower wheel and motor pulleys, then install new V-belt in its place.
7. Properly tension V-belt (refer to **Tensioning/Replacing V-belt** on **Page 50** for detailed instructions).
8. Re-install lower wheel with bearing and secure it with wheel mount cap screw and washer removed in **Step 3**.
9. Re-install blade (refer to **Changing Blade** on **Page 39**), and close and secure wheel covers.



# Blade Lead

Bandsaw blades may wander off of the layout line when sawing, as shown in **Figure 79**. This is called blade lead.

Blade lead is usually caused by excessive feed rate/pressure, a dull or abused blade, or improper blade tension. If your blade is sharp/undamaged, properly tensioned, and you are using light feeding pressure, and there is still blade lead, perform the following procedures.



**Figure 79. Example of blade lead.**

Items Needed	Qty
Wood Board 3/4" x 3" x 16" .....	1
Hex Wrench 5mm .....	1

### To correct blade lead:

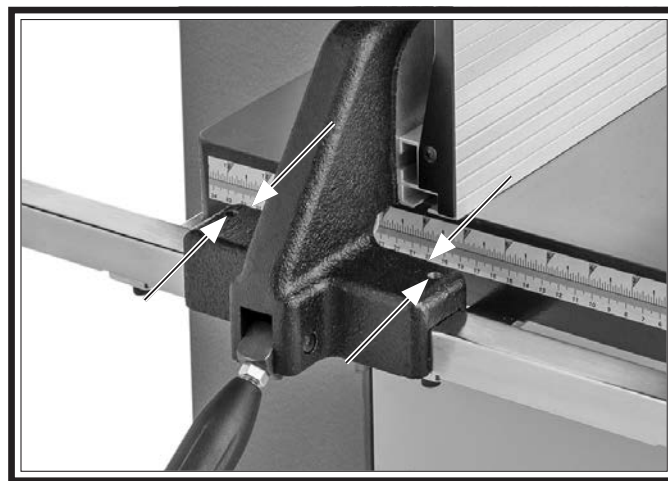
1. Make sure blade is properly tensioned and blade guides are adjusted correctly.
2. Make sure miter slot and fence are parallel to blade line (see **Aligning Table** and **Aligning Fence** procedures for detailed information).
3. Perform test cut with bandsaw, using less pressure when feeding workpiece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

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

### To skew fence:

1. Cut a straight and parallel wood board approximately 3/4" thick x 3" wide x 16" long.
 

**Tip:** *Cut your board out of a new piece of 3/4" plywood, using a tablesaw. The straight "factory edge" of the plywood will ensure accuracy during the following steps. Alternatively, you can use a jointer and tablesaw to straighten a piece of scrap wood.*
2. On wide face of board, draw a straight line parallel to long edge, similar to layout line shown in **Figure 79** on **This Page**.
3. Slide fence out of the way and cut along layout line halfway through board. Turn bandsaw **OFF** and wait for blade to stop. Do not move board.
4. Clamp board to bandsaw table, then slide fence over to board so it barely touches one edge of board.
5. Adjust the four fence set screws (see **Figure 80**) to skew the fence so that it is parallel with the wood board, contacting it evenly along its length.



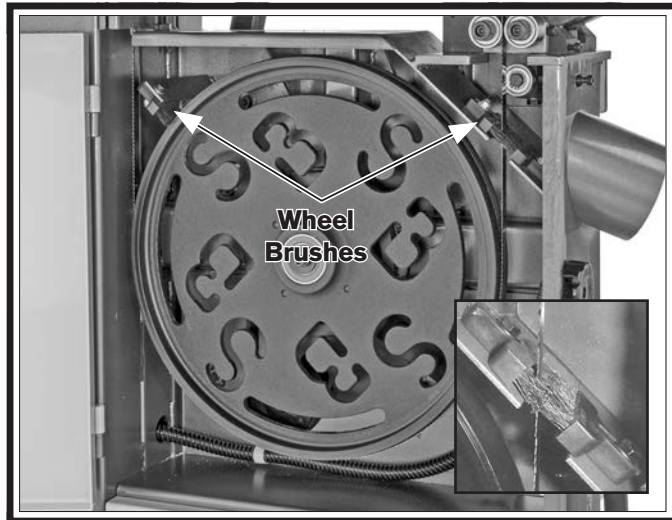
**Figure 80. Location of fence adjustment set screws.**

6. Finish cut using fence.
 

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

# Adjusting Wheel Brushes

The lower wheel has brushes (see **Figure 81**) that are designed to sweep sawdust off the tire and blade during operation. In order to work properly, the brushes must make firm contact with the tire and blades.



**Figure 81.** Location of wheel brushes.

Tools Needed	Qty
Wrench/Socket 10mm .....	2

### To adjust wheel brushes:

1. DISCONNECT MACHINE FROM POWER!
2. Open lower wheel cover.
3. Loosen hex bolts and lock nuts that secure wheel brushes in place (see **Figure 81**).
4. Adjust wheel brushes so they make firm, even contact with tire and blade without bending the bristles, then retighten hex bolts and cap screws to secure wheel brushes in place.

# Adjusting Quick-Release Lever

The blade tension quick-release lever was adjusted at the factory for use with the pre-installed blade. However, because blade lengths can vary by manufacturer, and because the tension spring can lose its "spring" after years of use, you may need to adjust the quick-release adjustment collars so the blade tension lever works correctly.

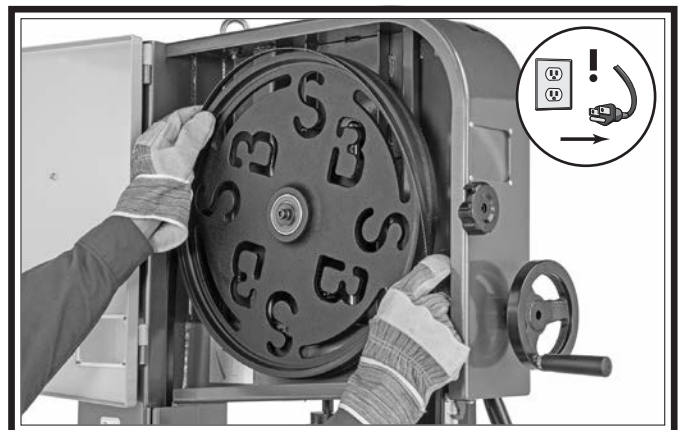
Tools Needed	Qty
Hex Wrench 5mm .....	1
Open-End Wrench 10mm .....	1

### To adjust blade tension quick-release lever:

1. Tension blade (refer to **Tensioning Blade**, beginning on **Page 23** for more information).
2. DISCONNECT MACHINE FROM POWER!
3. Rotate quick-release lever to RELEASE position.

**Note:** Refer to quick-release lever label on rear of machine for lever positions.

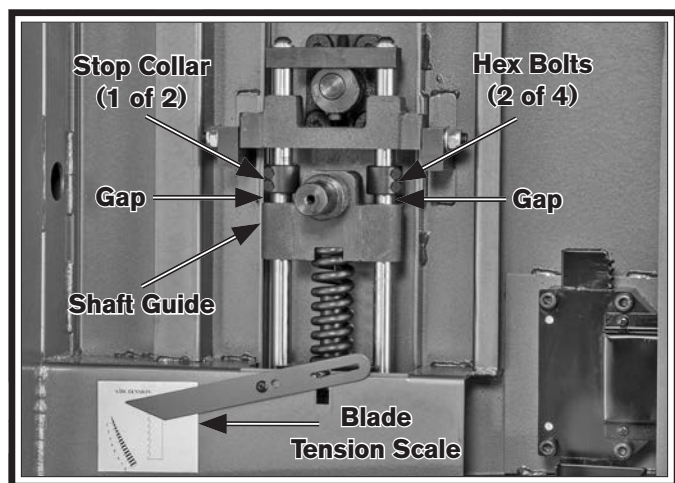
4. Open wheel covers, remove blade (see **Figure 82**), and remove upper wheel.



**Figure 82.** Removing blade and upper wheel to access blade tension lever components.

5. Rotate quick-release lever to TENSION position.

6. Loosen (4) hex bolts on stop collars (see **Figure 83**).
7. Turn blade tension handwheel until blade tension matches mark on blade tension scale (see **Figure 83**) for the appropriate blade width.
8. Position stop collars with a gap of approximately  $\frac{1}{8}$ "– $\frac{3}{16}$ " above upper wheel shaft guide, then tighten hex bolts loosened in **Step 4**.
9. Replace wheel, blade (refer to **Changing Blade on Page 39**), and close blade covers.



**Figure 83. Components for adjusting quick-release lever.**

## Adjusting Guide Post Parallelism

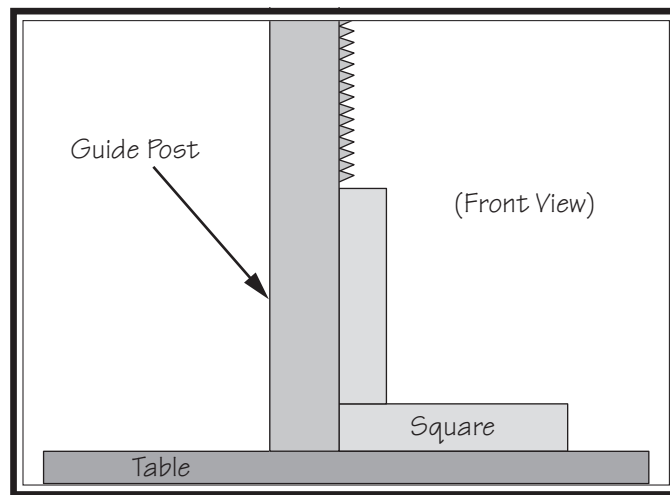
The guide post assembly should remain parallel with the blade front to back and side to side along its length of travel. If it does not, follow these instructions to adjust it.

**IMPORTANT:** Make sure the table is aligned with the blade from side to side and front to back before beginning these procedures (refer to **Aligning Table on Page 28** for detailed instructions).

Tools Needed	Qty
Machinist's Square.....	1
Small Ruler .....	1
Hex Wrench 4mm .....	1
Hex Wrench 5mm .....	1
Hex Wrench 8mm .....	1

### Checking/Adjusting Guide Post Parallel with Blade Side to Side

1. DISCONNECT MACHINE FROM POWER!
2. Loosen guide post lock knob, lower guide post to within 1" of table top, then tighten knob.
3. Place machinist's square on table next to right-hand side of guide post, as shown in **Figure 84**.



**Figure 84. Example of checking guide post squareness.**

— If there is no gap between square and guide post along its full length, no adjustments need to be made. Proceed to next procedure.

— If there is a gap between square and the guide post, guide post is not parallel to blade. Go to **Step 4**.

- Loosen each of the four cap screws  $\frac{1}{4}$ -turn (see **Figure 85**).



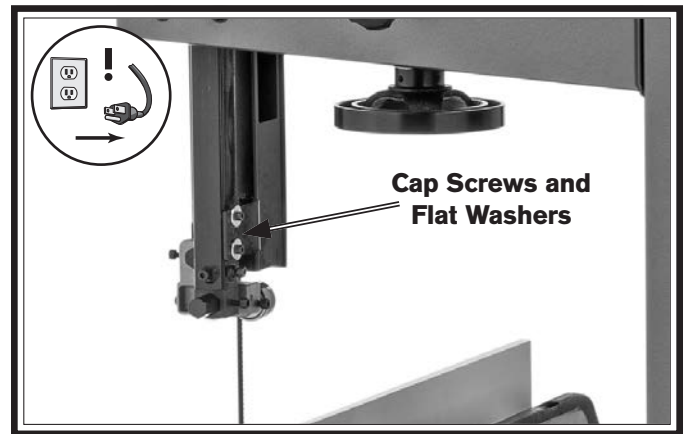
**Figure 85.** Guide post adjustment screws.

- Gently tap lower part of guide post in appropriate direction until there is no gap between square and guide post.
- Tighten cap screws shown in **Figure 85**.

## Checking/Adjusting Guide Post Parallel with Blade Front to Back

- DISCONNECT MACHINE FROM POWER!**
- Loosen guide post lock knob, lower blade guide assembly all the way down, then tighten lock knob.
- Remove (2) M5-.8 x 10 cap screws and 5mm flat washers that secure guide post guard, then carefully remove guard (see **Figures 86–87**).

**Note:** *It helps to rotate guard counterclockwise while removing it.*



**Figure 86.** Location of cap screws and flat washers that secure guide post guard.



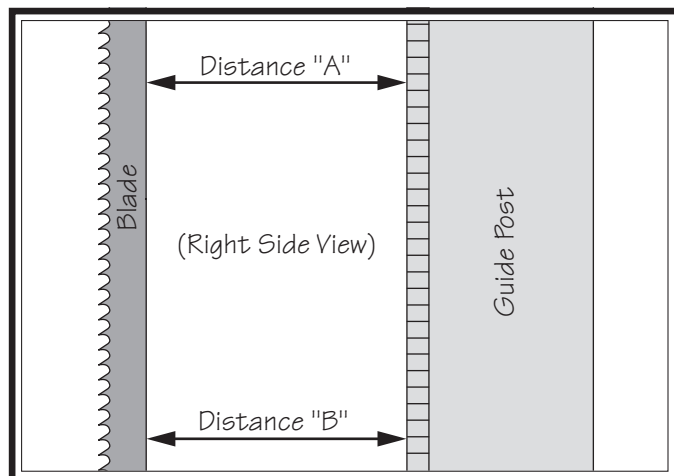
**Figure 87.** Example of guide post guard removed.



4. Measure distance "A" between upper front face of guide post rack back of blade (see **Figure 88**).
5. Measure distance "B" between bottom front face of guide post rack and back of blade (see **Figure 88**).

— If measurements taken in **Steps 4–5** are equal, no adjustments need to be made. Go to **Step 9**.

— If measurements taken in **Steps 4–5** are *not* equal, proceed to **Step 6**.



**Figure 88. Example of measuring distance between guide post rack and blade.**

6. Loosen four cap screws shown in **Figure 89**.
  - If guide post to blade distance is greater at *bottom* than at *top*, tighten two *upper* set screws shown in **Figure 89** an equal amount until guide post is parallel with blade.
  - If guide post to blade distance is greater at *top* than at *bottom*, tighten two *lower* set screws shown in **Figure 89** an equal amount until guide post is parallel with blade.



**Figure 89. Guide post parallelism adjustment screws.**

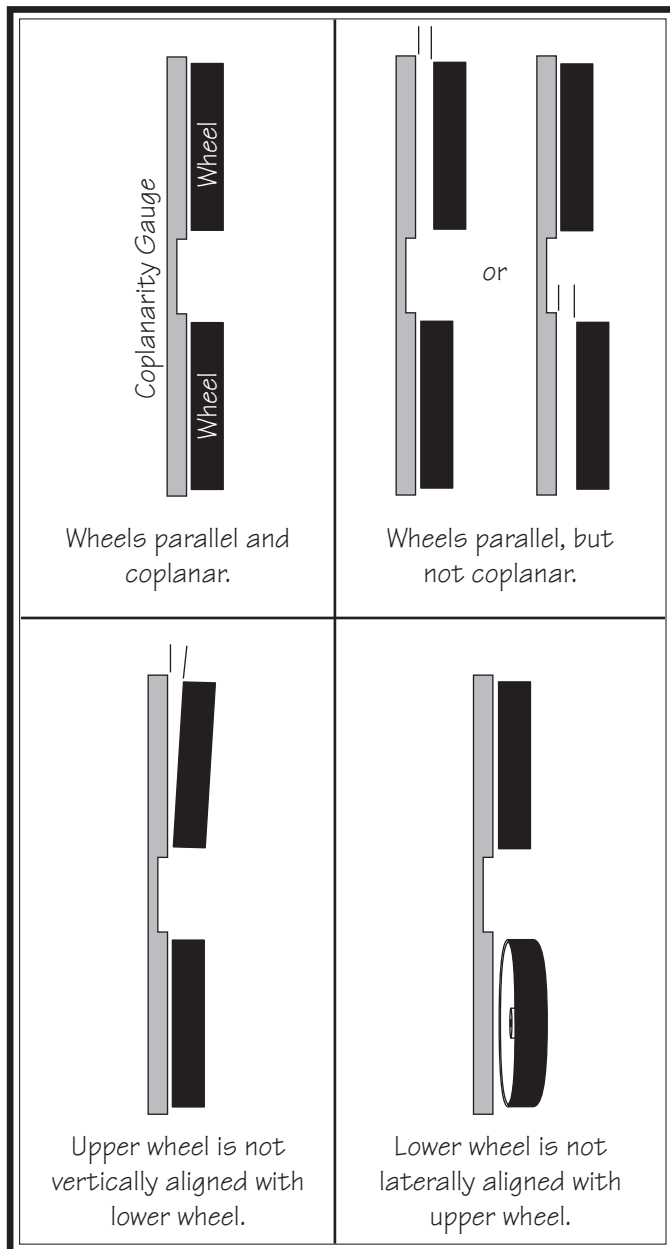
7. Tighten four cap screws shown in **Figure 89**, then repeat **Steps 4–5**.
  - If measurements *are* equal, proceed to **Step 9**.
  - If measurements are *not* equal, repeat **Steps 6–7** until guide post is parallel with blade.
8. Re-install guide post guard using screws removed in **Step 3**.
9. Rotate upper wheel by hand and make sure blade does not contact guide post guard. If it does, loosen cap screws from **Step 3**, adjust guard so that blade will not make contact with it, then retighten screws.



# Aligning Wheels

The following adjustment was performed at the factory and should not need to be performed again unless there is a wheel alignment problem, or one or more wheels are replaced.

When wheels are coplanar (see **Figure 90**), the bandsaw is more likely to cut straight without wandering; and vibration, heat, and blade wear are considerably decreased because the blade is automatically balanced on the wheel.



**Figure 90. Wheel alignment illustration.**

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

**Items Needed**

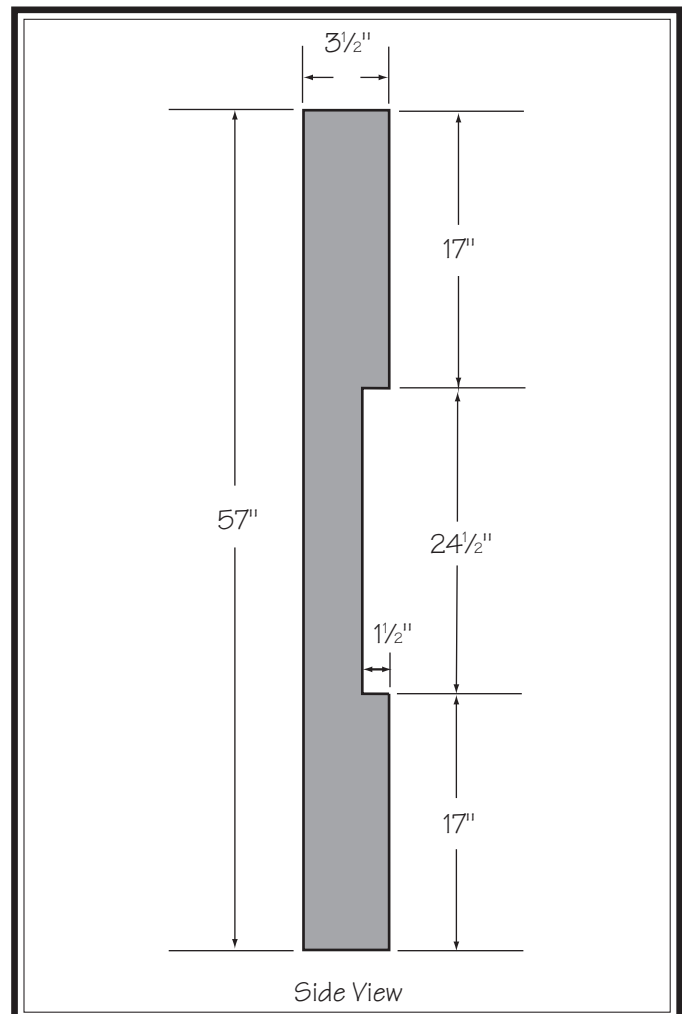
**Qty**

57" Long 2x4.....	1
Hex Wrenches 4 & 6 mm .....	1 Ea
Wrench 13mm .....	1
Tape Measure.....	1
Fine Ruler.....	1

## Checking Wheel Alignment

1. Make "Coplanarity Gauge" shown in **Figure 91**.

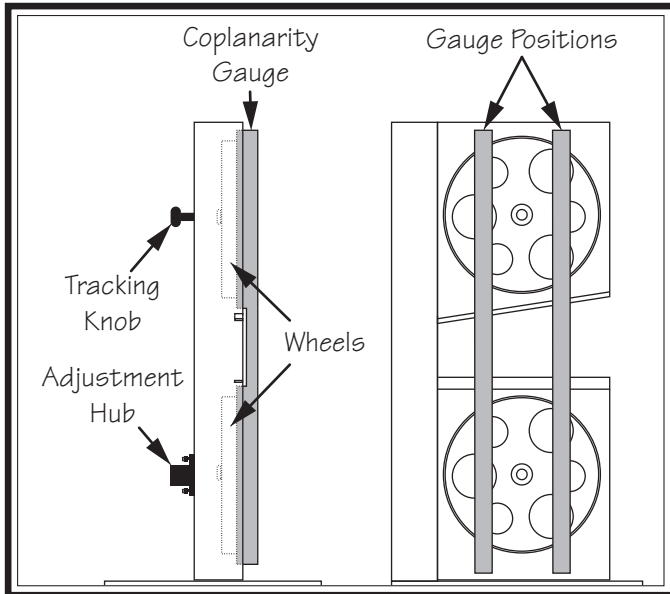
**Note:** For best results, straighten the 2x4 with a jointer before cutting. Alternatively, you can cut the gauge out of a new sheet of 1/2"-3/4" plywood using a tablesaw. The "factory edge" of the plywood will ensure a straight and parallel gauge.



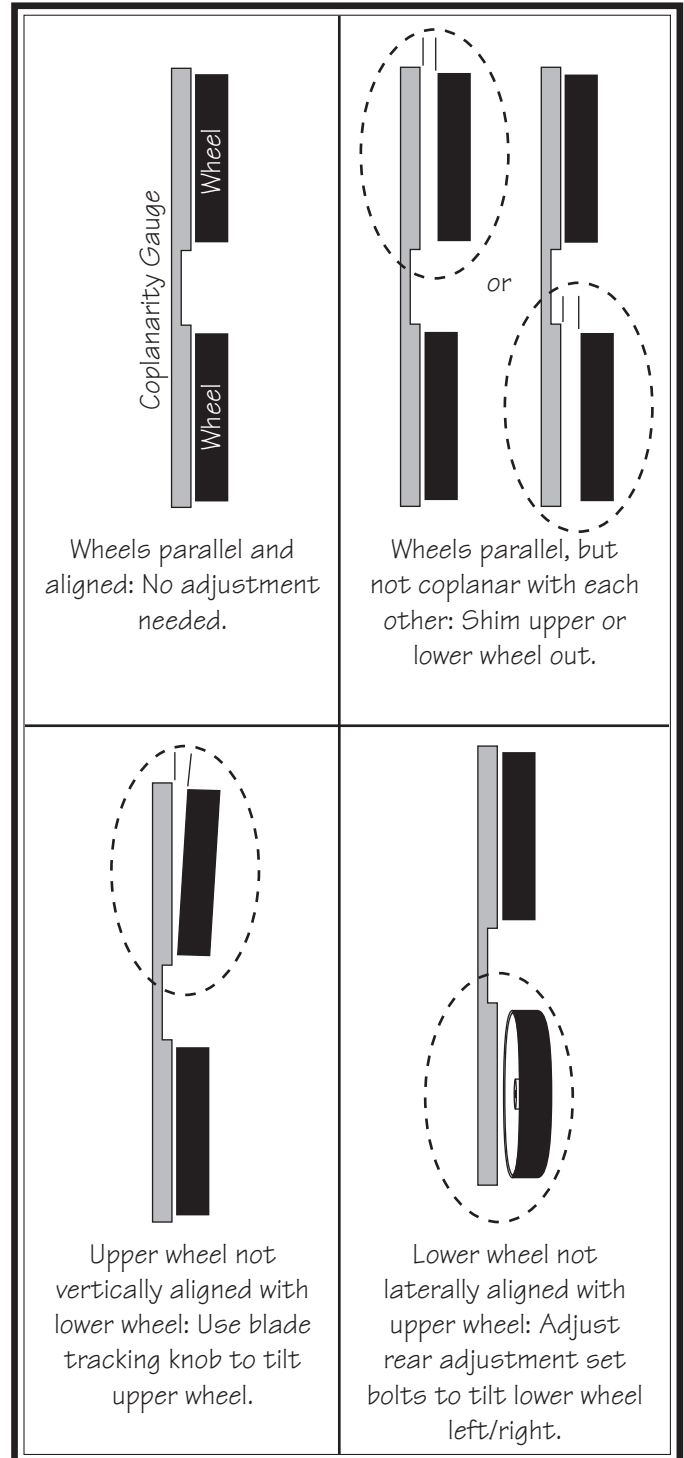
**Figure 91. Dimensions of coplanarity gauge.**

2. DISCONNECT MACHINE FROM POWER!
3. Remove blade (refer to **Changing Blade** on **Page 39**), remove table, then re-install and properly tension blade (refer to **Tensioning Blade** beginning on **Page 23**).
4. Place coplanarity gauge up against both wheels in positions shown in **Figure 92**. Make sure gauge fully extends across rims of both wheels.

5. 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 93** to determine how to proceed with alignment adjustments.



**Figure 92. Illustration of using coplanarity gauge to check wheel alignment.**



**Figure 93. Wheel alignment illustration with solutions to misalignment problems.**

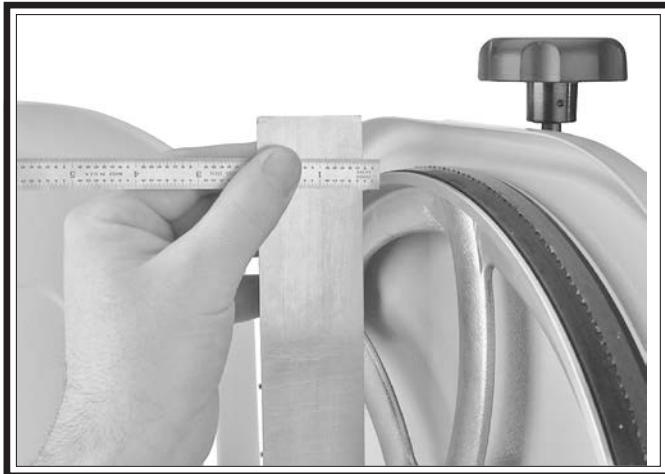
## Shimming a Wheel

When the wheels are parallel but not coplanar, one of the wheels must be shimmed out to bring it into the same plane as 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 coplanarity gauge touching both rims of wheel that does not need to be shimmed out, measure distance away from other wheel with a fine ruler (see **Figure 94**). The distance measured with ruler is distance this wheel must be shimmed.



**Figure 94. Generic example photo of measuring the distance to shim a wheel to make it coplanar with other wheel.**

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. Re-install and secure wheel.
7. Re-install blade (refer to **Changing Blade** on **Page 39**) and properly tension and track blade.

8. Perform previous **Checking Wheel Alignment** procedure, beginning on **Page 57**, and adjust wheels as necessary make them parallel and coplanar.

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

— If no further adjustments are necessary, remove blade, re-install table, and then re-install blade.

— If the lower wheel is tilted in relation to the upper wheel, proceed to **Adjusting Lower Wheel Shaft Position**.

## Adjusting Lower Wheel Shaft Position

If the lower wheel is tilted in relation to the upper wheel, perform the following procedure to make it coplanar with the upper wheel.

There are four adjustment bolts with hex nuts in the lower wheel adjustment hub, shown in **Figure 95**. These adjust the wheel tilt from side to side and up and down.

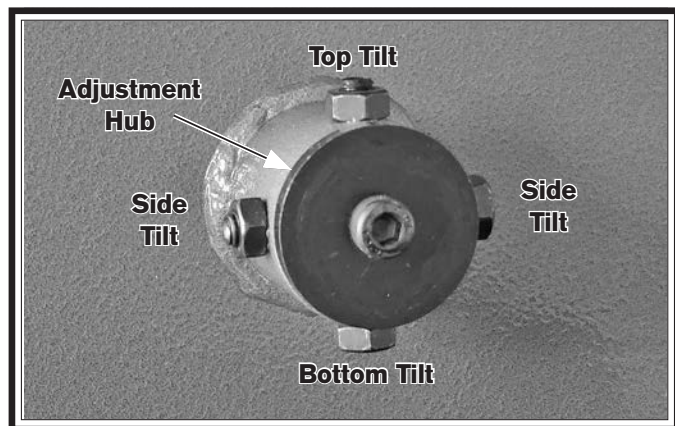
**Note:** *If you make a mistake during the following procedure, it can be very difficult to correct. Therefore, it is important to double check wheel alignment (see **Page 57**), and troubleshoot all other possible solutions (see **Troubleshooting**) prior to adjusting the lower wheel shaft position.*



**Figure 95. Location of rear adjustment components.**

**To adjust lower wheel shaft position:**

1. DISCONNECT MACHINE FROM POWER!
2. Loosen jam nuts on lower wheel adjustment hub (see **Figure 96**).



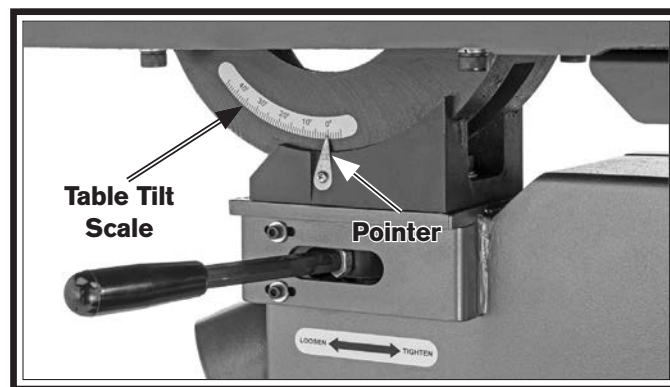
**Figure 96. Lower wheel adjustment controls.**

3. Loosen one tilt adjustment set screw, then tighten opposing set screw approximately an equal amount.
4. Check wheels with coplanarity gauge, and repeat **Step 3** as needed until lower wheel is parallel and coplanar with upper wheel.
5. Tighten jam nuts to lock tilt adjustment set screws in position.
6. Perform previous **Checking Wheel Alignment** procedure, beginning on **Page 57**, and adjust wheels as necessary to make them parallel and coplanar.
7. When wheels are parallel and coplanar, remove blade, re-install table, and then re-install blade.

## Calibrating Table Tilt Scale Pointer

The table tilt scale pointer (see **Figure 97**) was calibrated at the factory. However, after prolonged use the pointer may shift, requiring adjustment.

**Note:** *The table tilt scale functions as a basic guide only. For high-precision cuts, use a protractor or bevel gauge to set the angle of table tilt.*

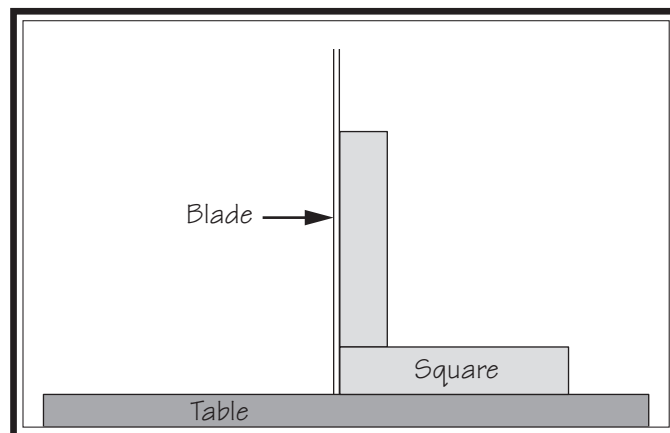


**Figure 97. Location of table tilt scale and pointer.**

Tools Needed	Qty
Machinist's Square.....	1
Phillips Screwdriver #2 .....	1

**To calibrate table tilt scale pointer:**

1. DISCONNECT MACHINE FROM POWER!
2. Place one edge of square on table and other edge of square against blade side, as shown in **Figure 98**.



**Figure 98. Adjusting table perpendicular to blade (side to side).**

- Adjust table tilt (refer to **Tilting Table**, beginning on **Page 40** for more information) until square rests flush and evenly against *both* table *and* blade side.

**Note:** *Make sure square does not go across a blade tooth when performing this step.*

- Loosen Phillips head screw that secures table tilt pointer (see **Figure 97**), adjust pointer to "0" on scale, then retighten screw.

## Replacing Brake Shoe

The brake shoe needs to be replaced if one or more of the following conditions are met:

- If the bandsaw takes noticeably longer to stop when the foot brake is pushed.
- The foot brake makes metal-to-metal grinding sounds.
- The thickness of the brake shoe pad measures 1mm or less.

### Components and Hardware Needed

Replacement Brake Shoe (Part PSB1080119)..... 1

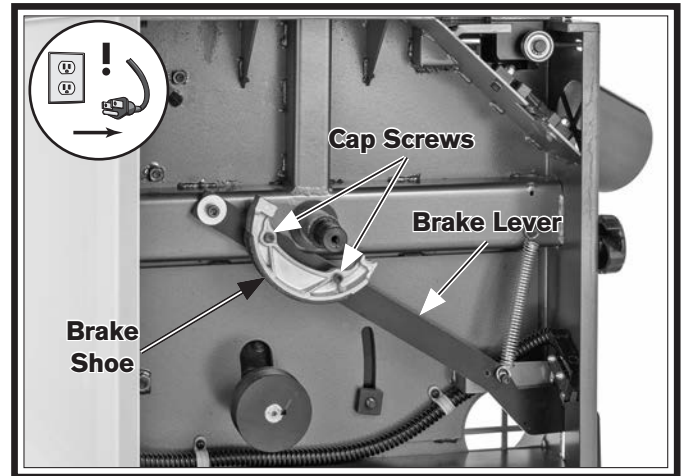
### Tools Needed

	<b>Qty</b>
Hex Wrench 5mm .....	1
Hex Wrench 6mm .....	1
Wrench 10mm .....	1
Wrench 17mm .....	1

### To replace brake shoe:

- DISCONNECT MACHINE FROM POWER!
- Remove lower wheel and V-belt (refer to **Steps 1-6** in **Replacing V-Belts** on **Page 51**).

- Remove cap screws, lock washers, and bushings that secure brake shoe to brake lever, then remove brake shoe (see **Figure 99**).



**Figure 99. Lower wheel removed to expose brake shoe components.**

- Install new brake shoe using cap screws, lock washers, and bushings removed in **Step 3**.
- Re-install V-belt and lower wheel.
- Tension V-belt (refer to **Tensioning/ Replacing V-belt** on **Page 50**).
- Re-install, tension, and track blade, then adjust upper and lower blade guides and support bearings as needed (refer to **Changing Blade** on **Page 39**).
- Close wheel covers.



If you need replacement parts, or if you are unsure how to do any of the solutions given here, feel free to call us at (360) 734-1540.

## Motor & Electrical

Symptom	Possible Cause	Possible Solution
Machine does not start or a breaker trips immediately upon startup.	<ol style="list-style-type: none"> <li>1. Emergency Stop button depressed/ at fault.</li> <li>2. Incorrect power supply voltage or circuit size.</li> <li>3. Power supply circuit breaker tripped or fuse blown.</li> <li>4. Motor wires connected incorrectly.</li> <li>5. Wiring open/has high resistance.</li> <li>6. ON/OFF switch at fault.</li> <li>7. Start capacitor at fault.</li> <li>8. Thermal overload relay has tripped.</li> <li>9. Contactor not energized/has poor contacts.</li> <li>10. Centrifugal switch at fault.</li> <li>11. Motor at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Rotate button head to reset. Replace.</li> <li>2. Ensure correct power supply voltage and circuit size.</li> <li>3. Ensure circuit is sized correctly and free of shorts. Reset circuit breaker or replace fuse.</li> <li>4. Correct motor wiring connections (<b>Page 67</b>).</li> <li>5. Check/fix broken, disconnected, or corroded wires.</li> <li>6. Replace switch.</li> <li>7. Test/replace.</li> <li>8. Reset; contact tech support if relay frequently trips.</li> <li>9. Test all legs for power/replace.</li> <li>10. Adjust/replace centrifugal switch if available.</li> <li>11. Test/repair/replace.</li> </ol>
Main motor stalls or is underpowered.	<ol style="list-style-type: none"> <li>1. Dull blade.</li> <li>2. Workpiece material not suitable for machine, or machine undersized.</li> <li>3. Belt slipping; oil/grease on belt.</li> <li>4. Feed rate/cutting speed too fast.</li> <li>5. Blade slipping on wheels.</li> <li>6. Motor overheated.</li> <li>7. Motor wired incorrectly.</li> <li>8. Plug/receptacle at fault.</li> <li>9. Run capacitor at fault.</li> <li>10. Pulley/sprocket slipping on shaft.</li> <li>11. Contactor not energized/has poor contacts.</li> <li>12. Centrifugal switch at fault.</li> <li>13. Motor bearings at fault</li> </ol>	<ol style="list-style-type: none"> <li>1. Sharpen/replace blade (<b>Page 39</b>).</li> <li>2. Only cut wood—ensure moisture is below 20%. Use correct blade/reduce feed rate or depth of cut.</li> <li>3. Clean/tension/replace belt (<b>Page 50</b>).</li> <li>4. Decrease feed rate/cutting speed.</li> <li>5. Increase blade tension (<b>Page 23</b>); ensure proper blade size.</li> <li>6. Allow motor to cool, reset thermal overload relay if necessary, and reduce depth of cut.</li> <li>7. Wire motor correctly (<b>Page 67</b>).</li> <li>8. Test for good contacts/correct wiring.</li> <li>9. Test/repair/replace.</li> <li>10. Replace loose pulley/shaft.</li> <li>11. Test all legs for power/replace.</li> <li>12. Adjust/replace centrifugal switch if available.</li> <li>13. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.</li> </ol>

**Motor & Electrical (Cont.)**

Symptom	Possible Cause	Possible Solution
Machine has vibration or noisy operation.	<ol style="list-style-type: none"> <li>1. Motor or component loose.</li> <li>2. Blade at fault.</li> <li>3. V-belt worn or loose.</li> <li>4. Motor fan rubbing on fan cover.</li> <li>5. Motor mount loose/broken.</li> <li>6. Pulley loose.</li> <li>7. Machine incorrectly mounted.</li> <li>8. Motor bearings at fault.</li> <li>9. Centrifugal switch is at fault.</li> </ol>	<ol style="list-style-type: none"> <li>1. Inspect/replace damaged bolts/nuts, and retighten with thread locking fluid.</li> <li>2. Replace warped/bent/broken blade; replace/resharpen dull blade (<b>Page 39</b>).</li> <li>3. Inspect/replace belt (<b>Page 50</b>).</li> <li>4. Fix/replace fan cover; replace loose/damaged fan.</li> <li>5. Tighten/replace.</li> <li>6. Re-align/replace shaft, pulley set screw, and key.</li> <li>7. Tighten mounting bolts; relocate/shim machine.</li> <li>8. Test by rotating shaft; rotational grinding/loose shaft requires bearing replacement.</li> <li>9. Replace.</li> </ol>

**Operating Machine**

Symptom	Possible Cause	Possible Solution
Blade or teeth break/crack.	<ol style="list-style-type: none"> <li>1. Blade tension is incorrect.</li> <li>2. Blade is incorrect for application.</li> <li>3. Excessive feed rate/pressure.</li> <li>4. Cutting corners too sharply.</li> <li>5. Blade is dull/weld at fault.</li> <li>6. Blade is tracking incorrectly.</li> <li>7. Blade guides/support bearings not adjusted properly, allowing guides to hit blade teeth.</li> <li>8. Wheel tires worn or incorrectly installed.</li> <li>9. Fence or miter slot out of alignment with blade.</li> <li>10. Bad blade-guide bearings.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust blade tension (<b>Page 23</b>).</li> <li>2. Use correct blade for application (<b>Page 34</b>).</li> <li>3. Reduce feed rate/pressure.</li> <li>4. Use a wider arc on outside cuts, or use relief cuts to make tight inside cuts.</li> <li>5. Replace blade (<b>Page 39</b>).</li> <li>6. Adjust blade tracking (<b>Page 25</b>).</li> <li>7. Adjust blade guides/support bearings properly, so guides cannot contact teeth during operation (<b>Page 25</b>).</li> <li>8. Replace or re-install tire.</li> <li>9. Align table miter slot and fence with blade (<b>Page 28</b>).</li> <li>10. Replace blade guide bearings.</li> </ol>
Blade or teeth break/crack.	<ol style="list-style-type: none"> <li>1. Blade contacting table insert.</li> <li>2. Blade guides are worn or misadjusted.</li> <li>3. Blade installed backwards.</li> <li>4. Too much side pressure when feeding workpiece.</li> <li>5. Wheels are out of alignment.</li> <li>6. Dull, bell-mouthed, or incorrect blade.</li> <li>7. Fence not parallel with blade.</li> <li>8. Table top surface is not parallel or square to blade.</li> <li>9. V-belt loose or slipping.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust blade guides to eliminate any side pressure (<b>Page 26</b>); properly align table (<b>Page 28</b>).</li> <li>2. Adjust upper blade guides as close to workpiece as possible.</li> <li>3. Check blade rotation. Re-install blade if necessary (<b>Page 39</b>).</li> <li>4. Feed workpiece straight into blade.</li> <li>5. Adjust wheels to be coplanar (<b>Page 57</b>).</li> <li>6. Replace blade (<b>Page 39</b>).</li> <li>7. Adjust fence parallel with blade (<b>Page 29</b>).</li> <li>8. Adjust/shim table/trunnion position until blade and table are parallel and square (<b>Page 28</b>).</li> <li>9. Tighten V-belt. Replace if worn or oily. (<b>Page 50</b>).</li> </ol>

**Operating Machine (Cont.)**

<b>Symptom</b>	<b>Possible Cause</b>	<b>Possible Solution</b>
Finished workpieces are rough or show scoring.	<ol style="list-style-type: none"> <li>1. Blade is overloaded and twists.</li> <li>2. Blade TPI is too coarse.</li> <li>3. Blade is loose and fluttering.</li> <li>4. Blade tracking is incorrect.</li> <li>5. Blade has missing/bent teeth, or faulty weld.</li> </ol>	<ol style="list-style-type: none"> <li>1. Decrease feed rate; ensure proper TPI (<b>Page 34</b>).</li> <li>2. Use correct blade for material and speed of cut (<b>Page 34</b>).</li> <li>3. Adjust blade tension as required (<b>Page 23</b>).</li> <li>4. Adjust blade tracking (<b>Page 25</b>).</li> <li>5. Replace blade (<b>Page 39</b>).</li> </ol>
Table is hard to tilt.	<ol style="list-style-type: none"> <li>1. Table tilt lock lever is engaged.</li> <li>2. Sawdust or pitch trapped between trunnion and base.</li> <li>3. Metal burrs on trunnion.</li> </ol>	<ol style="list-style-type: none"> <li>1. Disengage table tilt lock lever (<b>Page 40</b>).</li> <li>2. Remove table and clean trunnion sliding surfaces free of sawdust or pitch.</li> <li>3. Remove burrs.</li> </ol>
Table does not tilt to 45 or 0 degrees.	<ol style="list-style-type: none"> <li>1. Table tilt scale pointer not calibrated.</li> <li>2. Positive stop not set correctly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Calibrate table tilt scale pointer (<b>Page 60</b>).</li> <li>2. Adjust positive stop (<b>Page 40</b>).</li> </ol>
Blade tracks incorrectly or comes off wheels.	<ol style="list-style-type: none"> <li>1. Tracking is not adjusted properly.</li> <li>2. Wheels are not coplanar.</li> <li>3. Blade tension too loose.</li> <li>4. Blade guides/support bearings improperly adjusted.</li> <li>5. Feeding workpiece too fast.</li> <li>6. Incorrect blade for operation.</li> <li>7. Blade is bell-mouthed, worn, or dull.</li> <li>8. Rubber tire or wheel is damaged or worn.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust tracking (<b>Page 25</b>).</li> <li>2. Adjust wheels to be coplanar (<b>Page 57</b>).</li> <li>3. Increase blade tension (<b>Page 23</b>).</li> <li>4. Properly adjust blade guides/support bearings (<b>Page 25</b>).</li> <li>5. Feed workpiece slower.</li> <li>6. Install correct blade (<b>Page 34</b>).</li> <li>7. Install new blade and remove tension from blade when not in use.</li> <li>8. Replace rubber tires or wheel.</li> </ol>
Cut is crooked or blade wanders (blade lead).	<ol style="list-style-type: none"> <li>1. Excessive feed rate/pressure.</li> <li>2. Blade tension too loose.</li> <li>3. Blade is too narrow or tooth type/TPI is incorrect for the cut.</li> <li>4. Inadequate blade support.</li> <li>5. Blade dull or has damaged tooth set from improper guides/support bearing adjustment.</li> <li>6. Blade tracking is incorrect.</li> <li>7. Table is loose.</li> <li>8. Fence or miter slot out of alignment with blade.</li> <li>9. Blade guides/support bearings improperly adjusted.</li> <li>10. Tooth set is uneven or teeth are more sharp on one side than the other.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce feed rate/pressure.</li> <li>2. Increase blade tension (<b>Page 23</b>).</li> <li>3. Use wider blade. Ensure tooth type &amp; TPI is correct. (<b>Page 34</b>).</li> <li>4. Position upper blade guides to just clear workpiece. Properly adjust blade guides/support bearings (<b>Page 25</b>).</li> <li>5. Replace blade (<b>Page 39</b>).</li> <li>6. Adjust blade tracking (<b>Page 25</b>).</li> <li>7. Tighten table trunnion mounting bolts or tilt lock lever (<b>Page 40</b>).</li> <li>8. Align table miter slot and fence with blade (<b>Page 28</b>).</li> <li>9. Properly adjust blade guides/support bearings (<b>Page 28</b>).</li> <li>10. Replace blade (<b>Page 39</b>).</li> </ol>

**Operating Machine (Cont.)**

<b>Symptom</b>	<b>Possible Cause</b>	<b>Possible Solution</b>
Blade dulls prematurely.	<ol style="list-style-type: none"> <li>1. Excessive feed rate/pressure.</li> <li>2. Wrong blade tooth type or TPI.</li> <li>3. Blade is twisted.</li> <li>4. Blade is slipping on wheel.</li> <li>5. Blade guides hitting teeth and ruining tooth set.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce feed rate/pressure.</li> <li>2. Use blade with correct tooth type and TPI. (<b>Page 34</b>).</li> <li>3. Re-install blade; replace (<b>Page 39</b>).</li> <li>4. Adjust blade tension (<b>Page 23</b>).</li> <li>5. Properly adjust guide bearings (<b>Page 26</b>).</li> </ol>
Gullets loaded with chips.	<ol style="list-style-type: none"> <li>1. Excessive feed rate/pressure.</li> <li>2. Blade TPI is too fine.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce feed rate/pressure.</li> <li>2. Install correct blade (<b>Page 34</b>).</li> </ol>
Backside of blade deformation/cracking.	<ol style="list-style-type: none"> <li>1. Excessive feed rate/pressure.</li> <li>2. Blade tension too high.</li> <li>3. Blade support bearing improperly adjusted.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce feed rate/pressure.</li> <li>2. Adjust blade tension (<b>Page 23</b>).</li> <li>3. Properly adjust blade support bearing (<b>Page 25</b>).</li> </ol>
Sawdust buildup inside cabinet.	<ol style="list-style-type: none"> <li>1. Blade brushes under table are worn or misadjusted.</li> <li>2. Clogged dust port.</li> <li>3. Low CFM (airflow) from dust collection system.</li> </ol>	<ol style="list-style-type: none"> <li>1. Properly adjust brushes; replace if necessary (<b>Page 53</b>).</li> <li>2. Clean dust port.</li> <li>3. Inspect ducting for leaks/clogs and repair as necessary; move dust collector closer to machine; install a stronger dust collector.</li> </ol>

# Electrical Safety Instructions

These pages are accurate at the time of printing. In the constant effort to improve, however, we may make changes to the electrical systems of future machines. Study this section carefully. If you see differences between your machine and what is shown in this section, call Technical Support at (360) 734-1540 for assistance BEFORE making any changes to the wiring on your machine.

**Shock Hazard:** It is extremely dangerous to perform electrical or wiring tasks while the machine is connected to the power source. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. For your own safety, disconnect machine from the power source before servicing electrical components or performing any wiring tasks!

**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.

**Modifications:** Using aftermarket parts or modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire.

**Motor Wiring:** The motor wiring shown in these diagrams is current at the time of printing, but it may not match your machine. Always use the wiring diagram inside the motor junction box.

**Circuit Requirements:** Connecting the machine to an improperly sized circuit will greatly increase the risk of fire. To minimize this risk, only connect the machine to a power circuit that meets the minimum requirements given in this manual.

**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.

**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 before completing the task.

**Experiencing Difficulties:** If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (360) 734-1540.

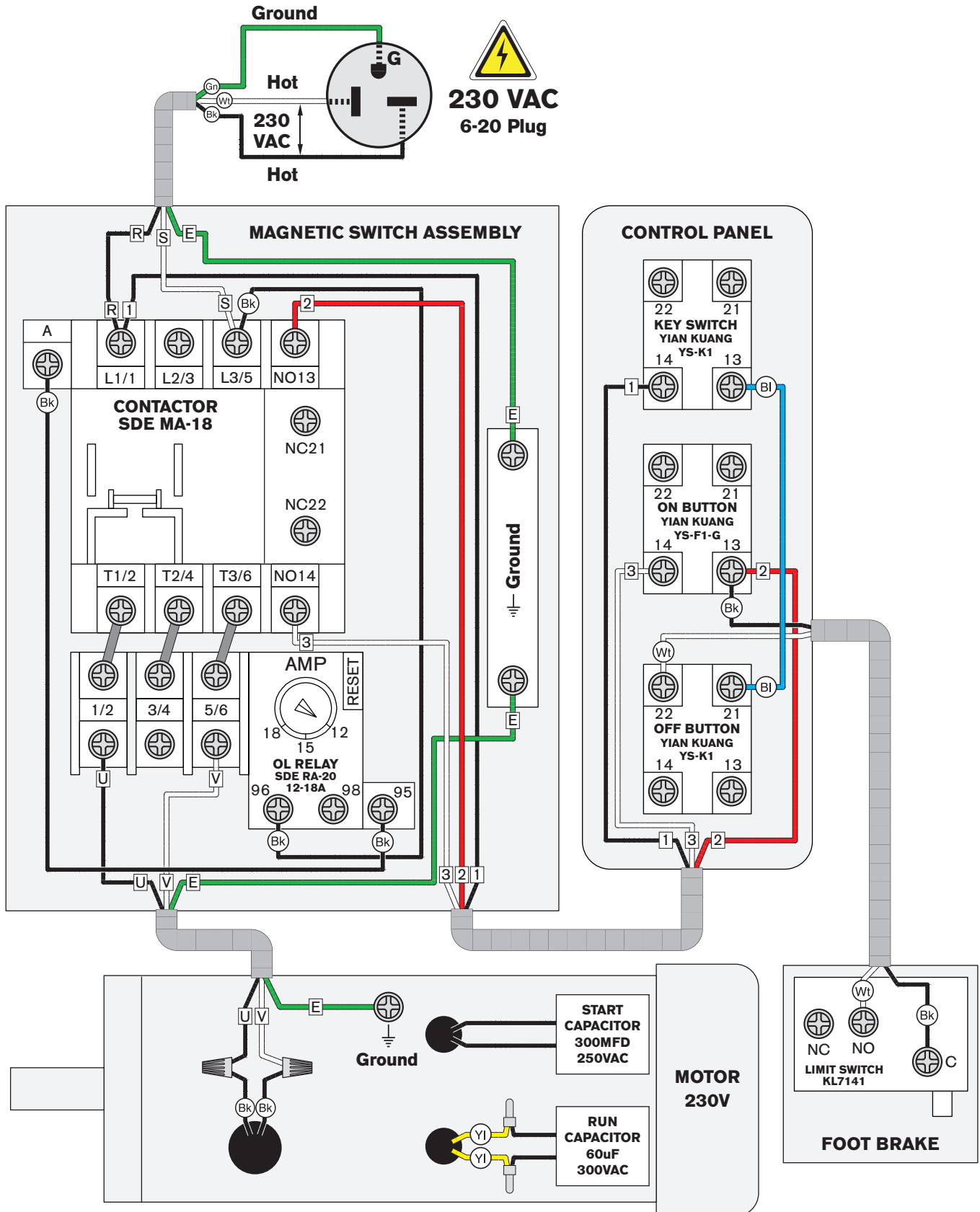
## WIRING DIAGRAM COLOR KEY

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

**NOTICE:** The photos and diagrams included in this section are best viewed in color. You can see them in color at [www.southbendtools.com](http://www.southbendtools.com).



# Wiring Diagram



# Electrical Component Pictures



Figure 100. Motor capacitor wiring.

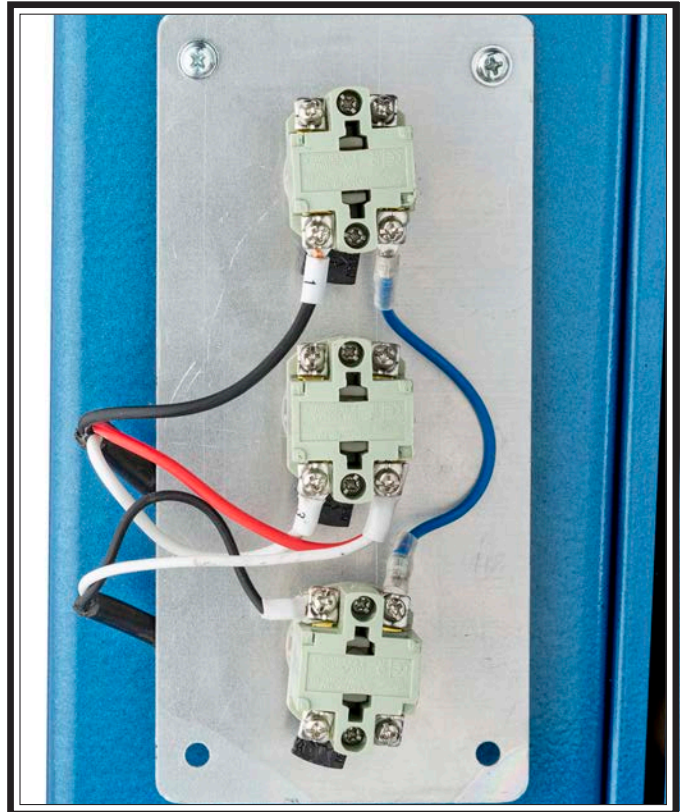


Figure 103. Control panel wiring.



Figure 101. Motor junction box wiring.

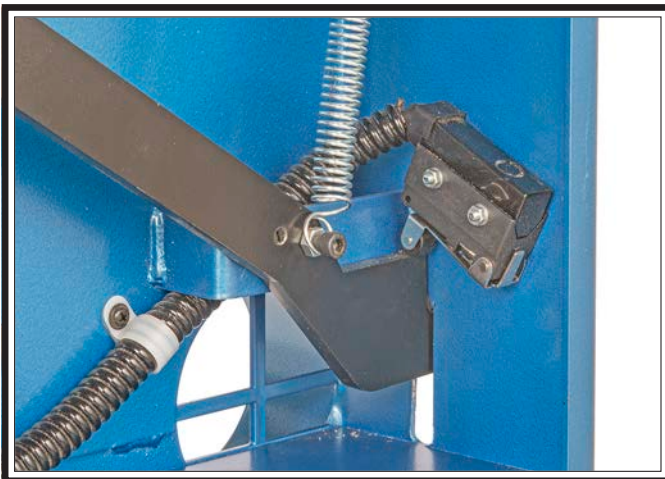


Figure 102. Foot brake limit switch.

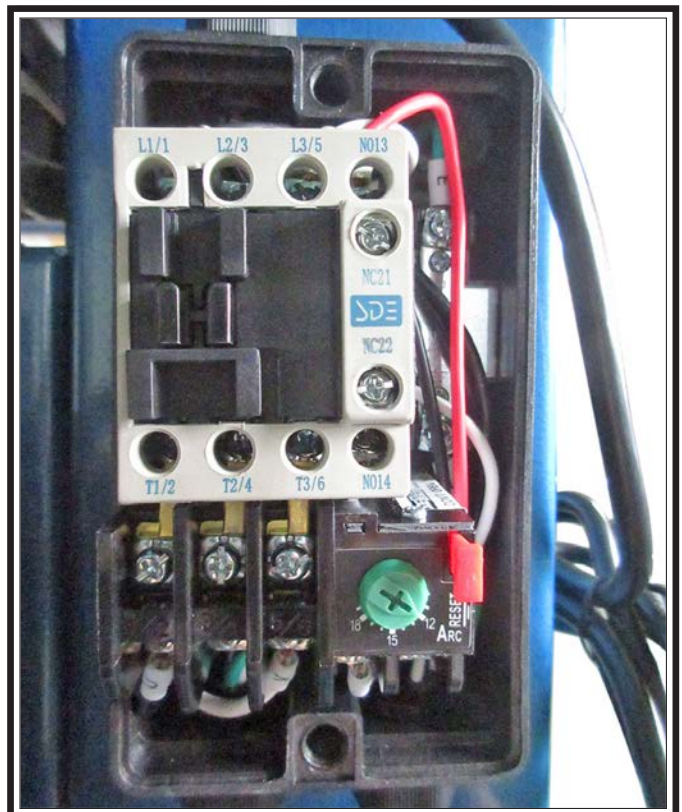
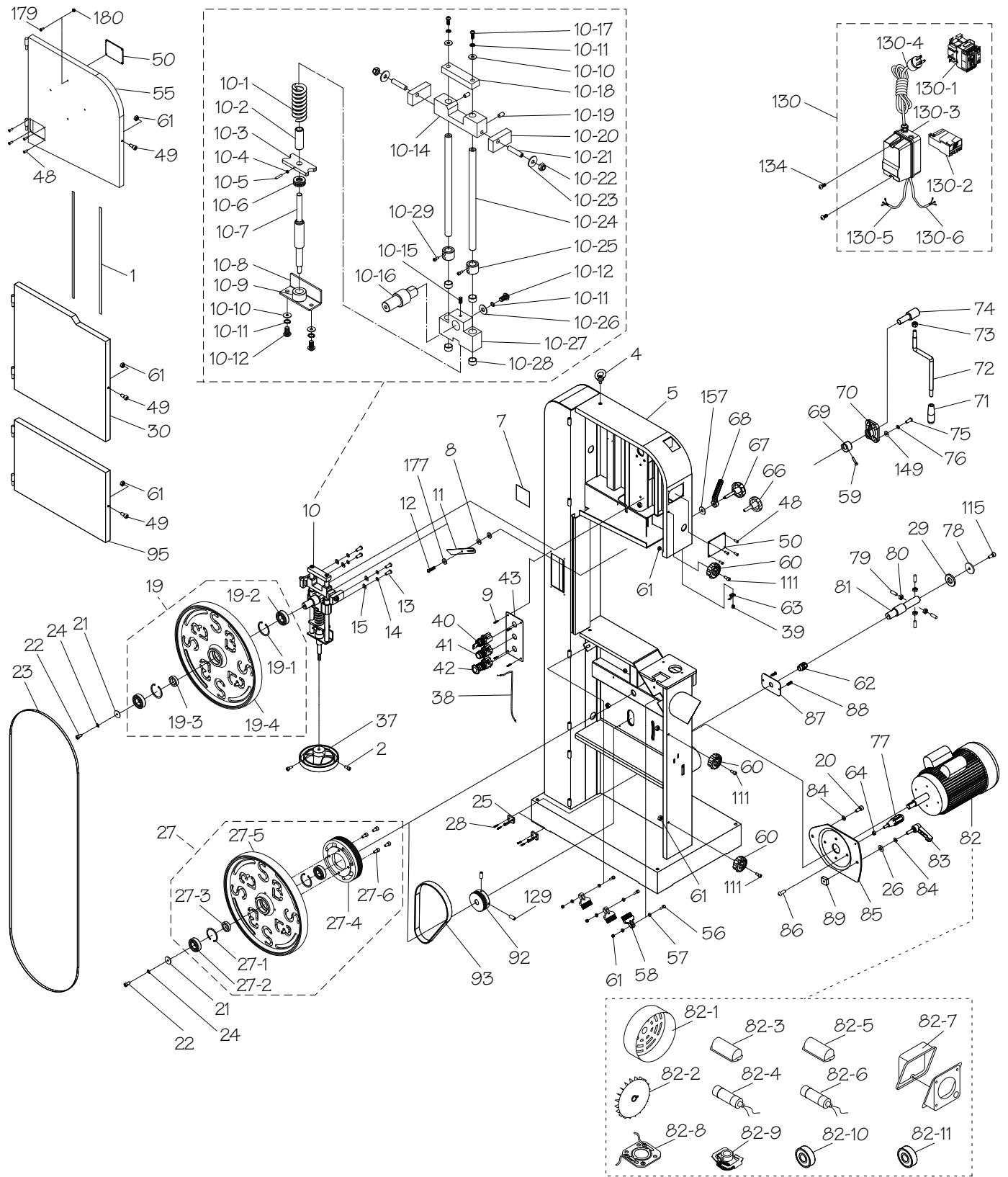


Figure 104. Magnetic switch wiring.

# Main





# Main Parts List

REF	PART #	DESCRIPTION
1	PSB1080001	DOOR SEAL 10 X 760 X 1MM
2	PSB1080002	CAP SCREW M6-1 X 25
4	PSB1080004	EYE BOLT M10-1.5
5	PSB1080005	MACHINE BODY
7	PSB1080007	TENSION SCALE
8	PSB1080008	FENDER WASHER 6MM
9	PSB1080009	FLANGE SCREW M5-.8 X 8
10	PSB1080010	UPPER WHEEL SLIDING ASSY
10-1	PSB1080010-1	COMPRESSION SPRING 7X 34 X 90
10-2	PSB1080010-2	BUSHING
10-3	PSB1080010-3	ALIGNMENT PLATE
10-4	PSB1080010-4	HEX NUT M4-.7
10-5	PSB1080010-5	SET SCREW M4-.7 X 35
10-6	PSB1080010-6	THRUST BEARING 51201
10-7	PSB1080010-7	BLADE TENSION ADJUSTING ROD
10-8	PSB1080010-8	ADJUSTMENT PLATE
10-9	PSB1080010-9	BUSHING
10-10	PSB1080010-10	FLAT WASHER 8MM
10-11	PSB1080010-11	LOCK WASHER 8MM
10-12	PSB1080010-12	BUTTON HD CAP SCR M8-1.25 X 20
10-14	PSB1080010-14	BLOCK
10-15	PSB1080010-15	SET SCREW M8-1.25 X 6
10-16	PSB1080010-16	UPPER WHEEL SHAFT
10-17	PSB1080010-17	BUTTON HD CAP SCR M8-1.25 X 30
10-18	PSB1080010-18	BLOCK
10-19	PSB1080010-19	SET SCREW M6-1 X 10
10-20	PSB1080010-20	LOCATING BLOCK
10-21	PSB1080010-21	SET SCREW M10-1.5 X 50
10-22	PSB1080010-22	HEX NUT M10-1.5 NYLON
10-23	PSB1080010-23	FLAT WASHER 10MM
10-24	PSB1080010-24	SHAFT
10-25	PSB1080010-25	COLLAR
10-26	PSB1080010-26	FLAT WASHER 8MM
10-27	PSB1080010-27	UPPER WHEEL SLIDING BRACKET
10-28	PSB1080010-28	BEARING DU1610
10-29	PSB1080010-29	HEX BOLT M8-1.25 X 16
11	PSB1080011	POINTER
12	PSB1080012	SHOULDER SCREW M4-.7 X 5, 6 X 3
13	PSB1080013	BUTTON HD CAP SCR M8-1.25 X 20
14	PSB1080014	LOCK WASHER 8MM
15	PSB1080015	FLAT WASHER 8MM
19	PSB1080019	UPPER WHEEL ASSEMBLY
19-1	PSB1080019-1	INT RETAINING RING 52MM
19-2	PSB1080019-2	BALL BEARING 6205ZZ
19-3	PSB1080019-3	BUSHING
19-4	PSB1080019-4	UPPER WHEEL 16"
20	PSB1080020	HEX BOLT M10-1.5 X 35
21	PSB1080021	FLAT WASHER 8MM
22	PSB1080022	CAP SCREW M8-1.25 X 16
23	PSB1080023	SAW BLADE 131-1/2" X 1/2" 6-TPI HOOK

REF	PART #	DESCRIPTION
24	PSB1080024	LOCK WASHER 8MM
25	PSB1080025	SPARE BLADE HOLDER
26	PSB1080026	FLAT WASHER 10MM
27	PSB1080027	LOWER WHEEL ASSEMBLY
27-1	PSB1080027-1	INT RETAINING RING 52MM
27-2	PSB1080027-2	BALL BEARING 6205ZZ
27-3	PSB1080027-3	BUSHING
27-4	PSB1080027-4	WHEEL PULLEY
27-5	PSB1080027-5	LOWER WHEEL 16"
27-6	PSB1080027-6	HEX BOLT M8-1.25 X 16
28	PSB1080028	PHLP HD SCR M4-.7 X 8
29	PSB1080029	SPACER
30	PSB1080030	LOWER WHEEL COVER
37	PSB1080037	HANDWHEEL TYPE-33 6D X 10B-5 X M8-1.25
38	PSB1080038	SWITCH CORD 16G 1W 7.9"
39	PSB1080039	FLANGE SCREW M5-.8 X 8
40	PSB1080040	KEYED SWITCH YIAN KUANG YS-K1
41	PSB1080041	ON BUTTON YIAN KUANG YS-F1-G
42	PSB1080042	OFF BUTTON YIAN KUANG YS-K1
43	PSB1080043	SWITCH PLATE
48	PSB1080048	RIVET 3.2 X 10 BLIND
49	PSB1080049	CAP SCREW M6-1 X 10
50	PSB1080050	CLEAR WINDOW 90 X 70 X 3MM
55	PSB1080055	UPPER WHEEL COVER
56	PSB1080056	HEX BOLT M6-1 X 25
57	PSB1080057	FLAT WASHER 6MM
58	PSB1080058	WHEEL BRUSH 1-3/4"
59	PSB1080059	CAP SCREW M6-1 X 25
60	PSB1080060	KNOB M6-1, 10-LOBE, D60
61	PSB1080061	HEX NUT M6-1 (NYLON)
62	PSB1080062	STRAIN RELIEF TYPE-3 PG13.5
63	PSB1080063	GUIDE POST HEIGHT INDICATOR
64	PSB1080064	HEX NUT M8-1.25
66	PSB1080066	KNOB BOLT M10-1.5 X 20, 6-LOBE, D52
67	PSB1080067	KNOB BOLT M10-1.5 X 53, 6-LOBE, D60
68	PSB1080068	LOCK LEVER M10-1.5
69	PSB1080069	CAM
70	PSB1080070	BLADE TENSION PILLOW BLOCK BEARING
71	PSB1080071	HANDLE M12-1.75, 26 X 85
72	PSB1080072	SHAFT M12-1.75
73	PSB1080073	HEX NUT M12-1.75
74	PSB1080074	LEVER HUB
75	PSB1080075	BUTTON HD CAP SCR M8-1.25 X 20
76	PSB1080076	LOCK WASHER 8MM
77	PSB1080077	FIXED HANDLE 30 X 78, M8-1.25 X 20
78	PSB1080078	DOCK WASHER 8 X 45 X 5
79	PSB1080079	SET SCREW M8-1.25 X 20
80	PSB1080080	HEX NUT M8-1.25
81	PSB1080081	LOWER WHEEL SHAFT

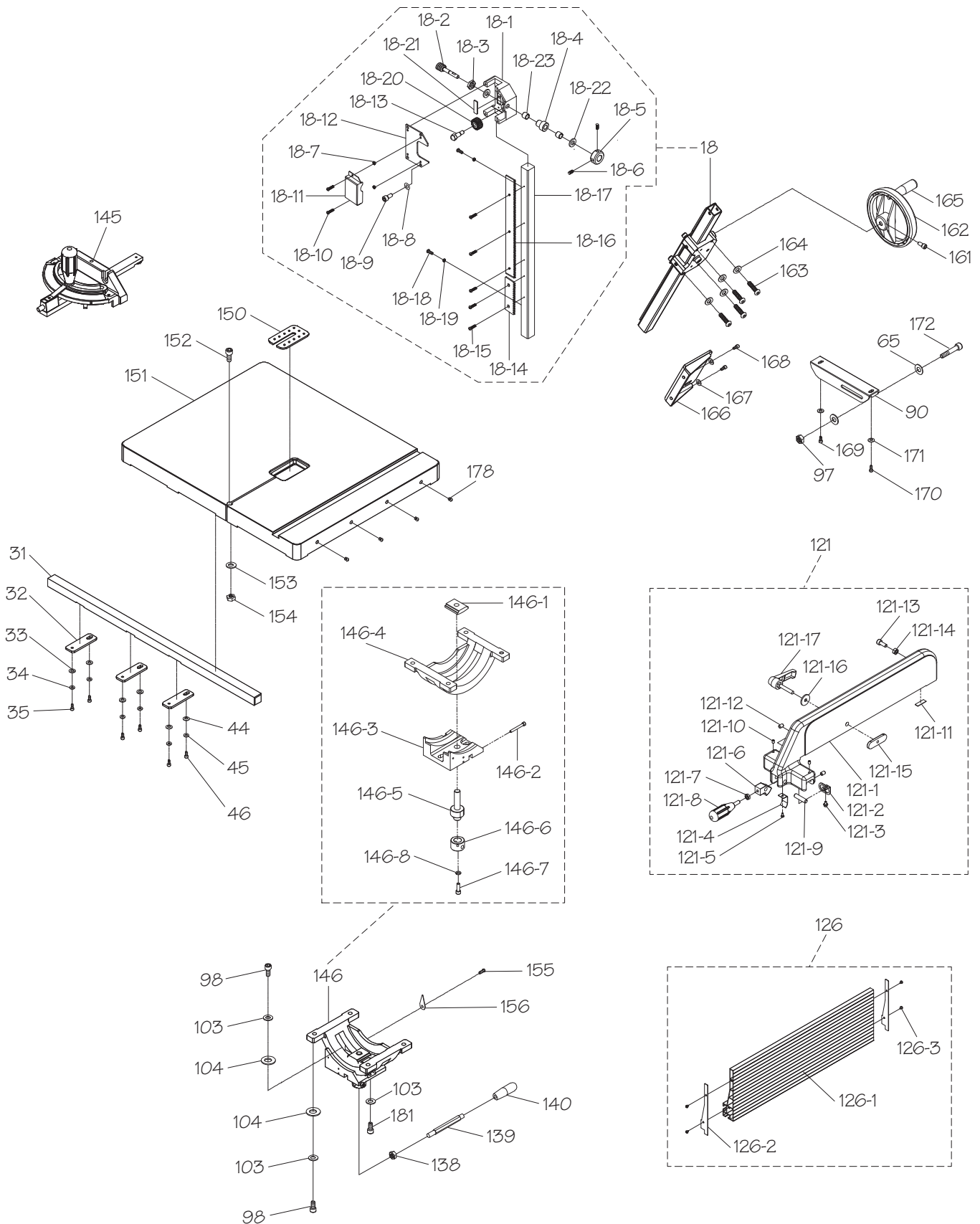
## Main Parts List (Cont.)

REF	PART #	DESCRIPTION
82	PSB1080082	MOTOR 3HP 230V1-PH
82-1	PSB1080082-1	MOTOR FAN COVER
82-2	PSB1080082-2	MOTOR FAN
82-3	PSB1080082-3	R CAPACITOR COVER
82-4	PSB1080082-4	R CAPACITOR 60M 300V 3-3/4 X 1-3/4
82-5	PSB1080082-5	S CAPACITOR COVER
82-6	PSB1080082-6	S CAPACITOR 300M 250V 3-3/4 X 1-3/4
82-7	PSB1080082-7	MOTOR JUNCTION BOX
82-8	PSB1080082-8	CONTACT PLATE
82-9	PSB1080082-9	CENTRIFUGAL SWITCH
82-10	PSB1080082-10	BALL BEARING 6205ZZ (FRONT)
82-11	PSB1080082-11	BALL BEARING 6203ZZ (REAR)
83	PSB1080083	ADJUSTABLE HANDLE M10-1.5 X 35, 60L
84	PSB1080084	LOCK WASHER 10MM
85	PSB1080085	MOTOR MOUNT BRACKET
86	PSB1080086	BUTTON HD CAP SCR M8-1.25 X 20
87	PSB1080087	STRAIN RELIEF PLATE
88	PSB1080088	TAP SCREW M4 X 8
89	PSB1080089	MOTOR MOUNT PILLOW BLOCK

REF	PART #	DESCRIPTION
92	PSB1080092	MOTOR PULLEY
93	PSB1080093	POLY-V BELT 290J5
95	PSB1080095	BLADE STORAGE COVER
111	PSB1080111	CAP SCREW M6-1 X 20
115	PSB1080115	CAP SCREW M8-1.25 X 16
129	PSB1080129	SET SCREW M6-1 X 12
130	PSB1080130	MAG SWITCH ASSY 230V SDE MPE-18
130-1	PSB1080130-1	CONTACTOR SDE RA-20 230V
130-2	PSB1080130-2	OL RELAY SDE RA-20 12-18A
130-3	PSB1080130-3	SWITCH BOX
130-4	PSB1080130-4	POWER CORD 14G 3W 72" 6-20P
130-5	PSB1080130-5	MOTOR CORD 14G 3W 33.5"
130-6	PSB1080130-6	CONTROL CORD 16G 3W 60"
134	PSB1080134	PHLP HD SCR M5-.8 X 16
149	PSB1080149	FLAT WASHER 8MM
157	PSB1080157	FLAT WASHER 10MM
177	PSB1080177	FLAT WASHER 6MM
179	PSB1080179	FLANGE SCREW M4-.7 X 10
180	PSB1080180	FLANGE NUT M4-.7



# Table, Tilt, Trunnion & Fence

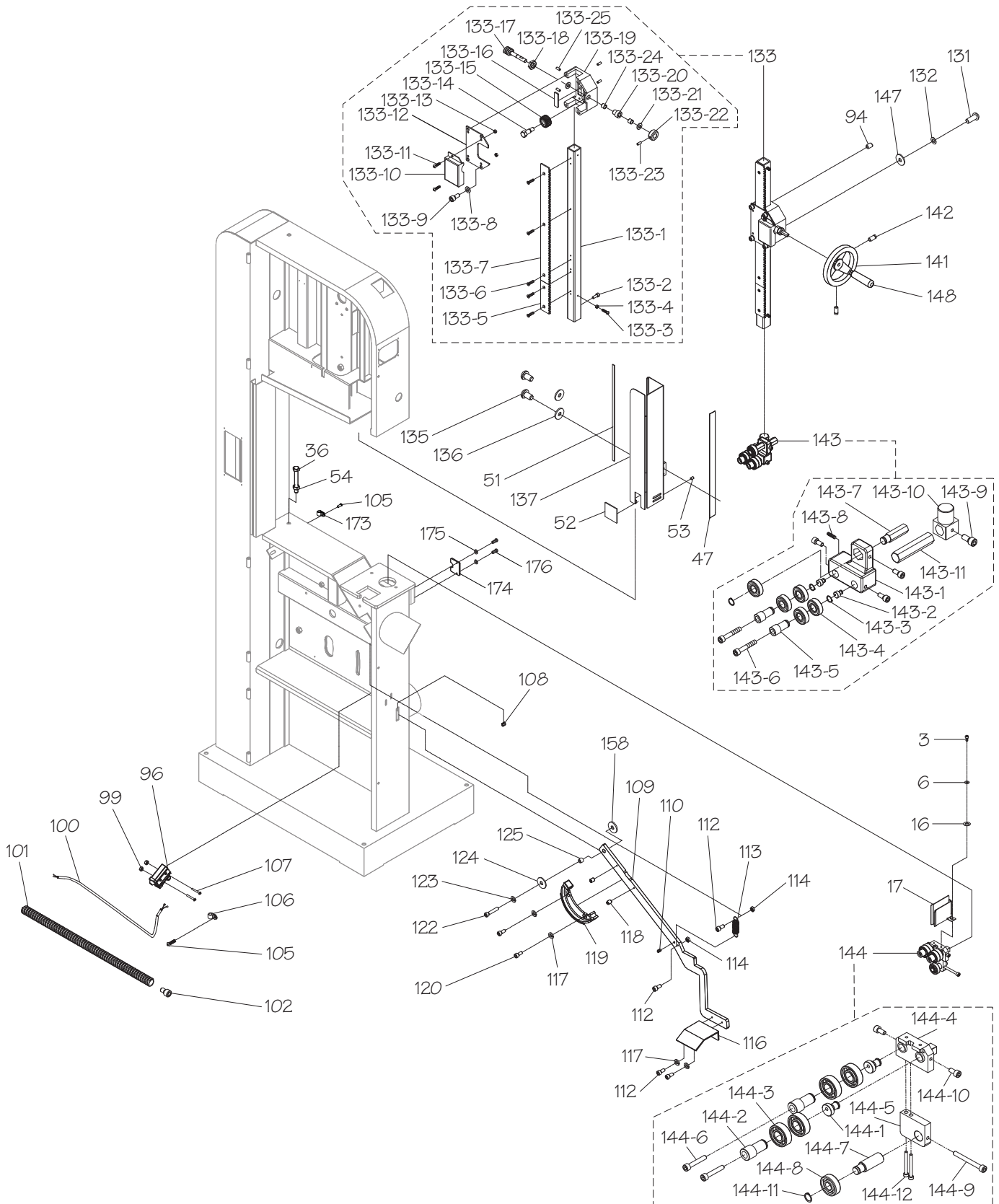


# Table, Tilt, Trunnion & Fence Parts List

REF	PART #	DESCRIPTION
18	PSB1080018	TABLE TILT ASSEMBLY
18-1	PSB1080018-1	GUIDE BRACKET
18-2	PSB1080018-2	WORM SHAFT
18-3	PSB1080018-3	HEX NUT M16-1.5
18-4	PSB1080018-4	BUSHING
18-5	PSB1080018-5	LOCK COLLAR
18-6	PSB1080018-6	SET SCREW M5-.8 X 5
18-7	PSB1080018-7	HEX NUT M5-.8
18-8	PSB1080018-8	LOCK WASHER 8MM
18-9	PSB1080018-9	CAP SCREW M8-1.25 X 16
18-10	PSB1080018-10	FLANGE SCREW M5-.8 X 10
18-11	PSB1080018-11	HOUSING COVER
18-12	PSB1080018-12	GEAR COVER
18-13	PSB1080018-13	PINION GEAR BOLT
18-14	PSB1080018-14	RACK EXTENSION
18-15	PSB1080018-15	FLAT HD SCR M4-.6 X 10
18-16	PSB1080018-16	RACK
18-17	PSB1080018-17	GUIDE TUBE
18-18	PSB1080018-18	PHLP HD SCR M4-.7 X 10
18-19	PSB1080018-19	HEX NUT M4-.7
18-20	PSB1080018-20	GEAR
18-21	PSB1080018-21	FIXED PLATE
18-22	PSB1080018-22	FIBER WASHER 6MM
18-23	PSB1080018-23	BEARING BUSHING DU 10 X 12MM
31	PSB1080031	FENCE RAIL
32	PSB1080032	FENCE RAIL MOUNTING PLATE
33	PSB1080033	FENDER WASHER 6MM
34	PSB1080034	LOCK WASHER 6MM
35	PSB1080035	CAP SCREW M6-1 X 20
44	PSB1080044	FLAT WASHER 8MM
45	PSB1080045	LOCK WASHER 8MM
46	PSB1080046	CAP SCREW M8-1.25 X 20
65	PSB1080065	FLAT WASHER 8MM
90	PSB1080090	SLIDING PLATE
97	PSB1080097	HEX NUT M8-1.25 NYLON
98	PSB1080098	CAP SCREW M10-1.5 X 35
103	PSB1080103	LOCK WASHER 10MM
104	PSB1080104	FLAT WASHER 10MM
121	PSB1080121	FENCE ASSEMBLY
121-1	PSB1080121-1	FENCE
121-2	PSB1080121-2	POINTER
121-3	PSB1080121-3	FLANGE SCREW M5-.8 X 8
121-4	PSB1080121-4	PLATE SPRING
121-5	PSB1080121-5	FLANGE SCREW M4-.7 X 8
121-6	PSB1080121-6	LOCK CAM
121-7	PSB1080121-7	HEX NUT M8-1.25
121-8	PSB1080121-8	FIXED HANDLE 20 X 99, M8-1.25 X 22
121-9	PSB1080121-9	SHAFT

REF	PART #	DESCRIPTION
121-10	PSB1080121-10	SET SCREW M7-1 X 10 PLASTIC
121-11	PSB1080121-11	SLIDE (NYLON)
121-12	PSB1080121-12	SET SCREW M8-1.25 X 12
121-13	PSB1080121-13	CAP SCREW M8-1.25 X 20
121-14	PSB1080121-14	HEX NUT M8-1.25
121-15	PSB1080121-15	FENCE GUIDE PLATE
121-16	PSB1080121-16	FLAT WASHER 8MM
121-17	PSB1080121-17	ADJUSTABLE HANDLE M8-1.25 X 20, 70L
126	PSB1080126	RESAW FENCE ASSEMBLY
126-1	PSB1080126-1	RESAW FENCE 505MM AL
126-2	PSB1080126-2	END CAP
126-3	PSB1080126-3	TAP SCREW M3.5 X 12
138	PSB1080138	HEX NUT M12-1.75
139	PSB1080139	HANDLE SHAFT M12-1.75 X 140
140	PSB1080140	KNOB M12-1.75 D26 TAPERED
145	PSB1080145	MITER GAUGE
146	PSB1080146	TRUNNION BLOCK ASSEMBLY
146-1	PSB1080146-1	T-SLIDE
146-2	PSB1080146-2	HEX BOLT M6-1 X 50
146-3	PSB1080146-3	TRUNNION SUPPORT BRACKET
146-4	PSB1080146-4	TRUNNION BLOCK
146-5	PSB1080146-5	PRESS SHAFT
146-6	PSB1080146-6	MICRO ADJUSTMENT RING
146-7	PSB1080146-7	CAP SCREW M8-1.25 X 25
146-8	PSB1080146-8	LOCK WASHER 8MM
150	PSB1080150	TABLE INSERT
151	PSB1080151	TABLE
152	PSB1080152	CAP SCREW M8-1.25 X 50
153	PSB1080153	FENDER WASHER 8MM
154	PSB1080154	HEX NUT M8-1.25 NYLON
155	PSB1080155	PHLP HD SCR M4-.7 X 5
156	PSB1080156	POINTER
161	PSB1080161	CAP SCREW M6-1 X 25
162	PSB1080162	HANDWHEEL TYPE-33 X 10B- X 3/8-16
163	PSB1080163	BUTTON HD CAP SCR M8-1.25 X 20
164	PSB1080164	LOCK WASHER 8MM
165	PSB1080165	REVOLVING HANDLE 24 X 80, M10-1.5 X 13
166	PSB1080166	SUPPORT PLATE
167	PSB1080167	LOCK WASHER 8MM
168	PSB1080168	CAP SCREW M8-1.25 X 25
169	PSB1080169	CAP SCREW M6-1 X 10
170	PSB1080170	BUTTON HD CAP SCR M6-1 X 12
171	PSB1080171	FLAT WASHER 6MM
172	PSB1080172	HEX BOLT M8-1.25 X 55
178	PSB1080178	PLUG
179	PSB1080179	FLANGE SCREW M4-.7 X 10
180	PSB1080180	FLANGE NUT M4-.7
181	PSB1080180	CAP SCREW M10-1.5 X 25

# Brake, Guides & Guide Post

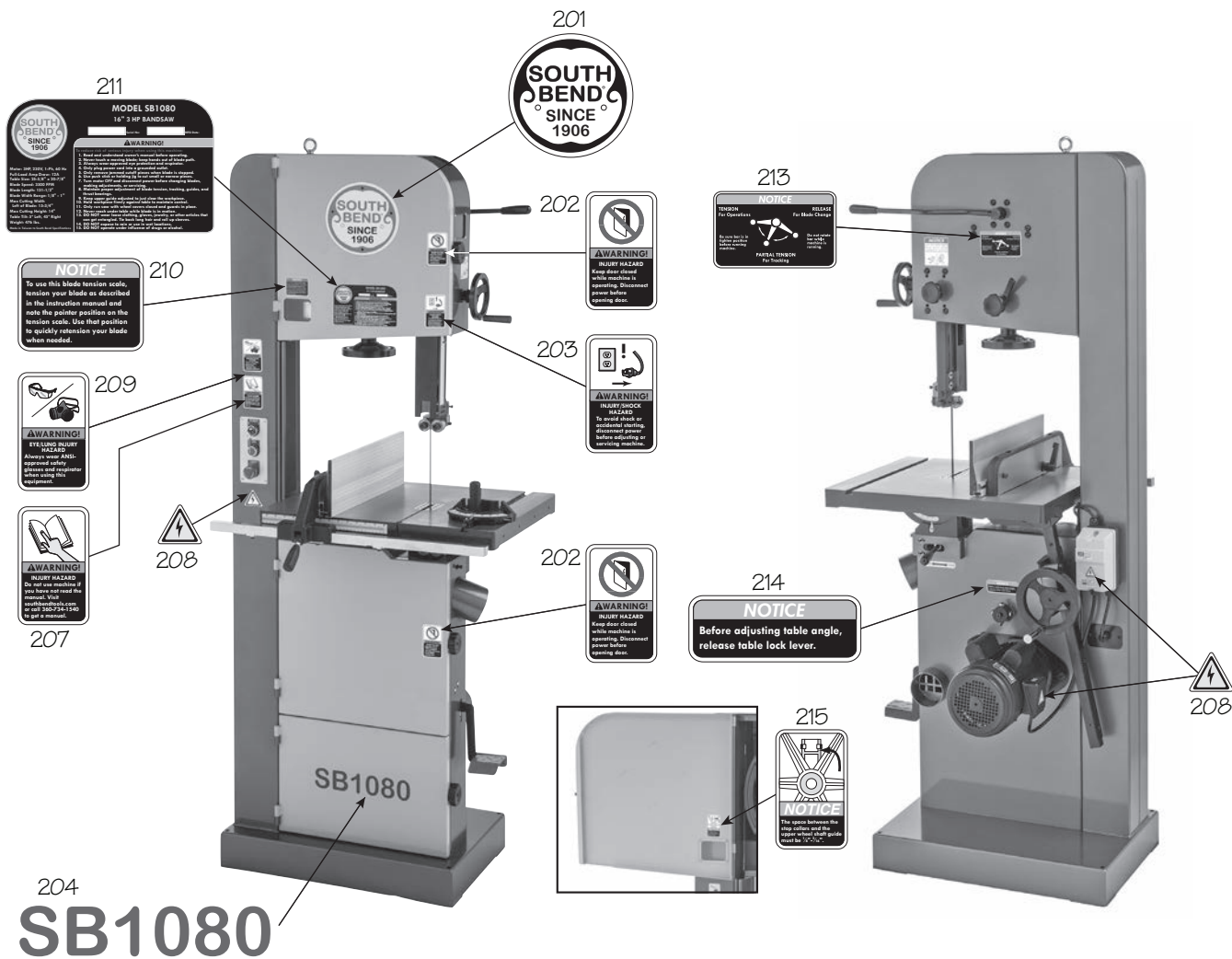


# Brake, Guides & Guide Post Parts List

REF	PART #	DESCRIPTION
3	PSB1080003	HEX BOLT M5-.8 X 12
6	PSB1080006	LOCK WASHER 5MM
16	PSB1080016	FLAT WASHER 5MM
17	PSB1080017	BLADE GUARD
36	PSB1080036	HEX BOLT M10-1.5 X 90
47	PSB1080047	SCALE
51	PSB1080051	MAGNET 7X 340MM
52	PSB1080052	CLEAR WINDOW 50 X 47 X 3
53	PSB1080053	SET SCREW M4-.7 X 4
54	PSB1080054	HEX NUT M10-1.5
94	PSB1080094	SET SCREW M8-1.25 X 6
96	PSB1080096	LIMIT SWITCH KL7141
99	PSB1080099	HEX NUT M4-.7
100	PSB1080100	LIMIT SWITCH CORD 18G 2W 63"
101	PSB1080101	FLEXIBLE CONDUIT 1/2"ID X 21-5/8"L
102	PSB1080102	CORD BUSHING
105	PSB1080105	FLANGE SCREW M5-.8 X 8
106	PSB1080106	CORD CLAMP 5/8" PLASTIC
107	PSB1080107	FLANGE SCREW M4-.7 X 30
108	PSB1080108	RUBBER BUMPER 9 X 10
109	PSB1080109	FOOT BRAKE ARM
110	PSB1080110	SET SCREW M7-1 X 10 NYLON
112	PSB1080112	CAP SCREW M6-1 X 16
113	PSB1080113	EXTENSION SPRING 1.6 X 16 X 63
114	PSB1080114	HEX NUT M6-1
116	PSB1080116	FOOT BRAKE PEDAL
117	PSB1080117	LOCK WASHER 6MM
118	PSB1080118	BUSHING
119	PSB1080119	BRAKE SHOE
120	PSB1080120	CAP SCREW M6-1 X 25
122	PSB1080122	CAP SCREW M8-1.25 X 25
123	PSB1080123	LOCK WASHER 8MM
124	PSB1080124	FLAT WASHER 8MM
125	PSB1080125	BUSHING
131	PSB1080131	BUTTON HD CAP SCR M8-1.25 X 20
132	PSB1080132	LOCK WASHER 8MM
133	PSB1080133	GUIDE POST ASSEMBLY
133-1	PSB1080133-1	UPPER GUIDE TUBE
133-2	PSB1080133-2	CAP SCREW M6-1 X 10
133-3	PSB1080133-3	PHLP HD SCR M4-.7 X 10
133-4	PSB1080133-4	HEX NUT M4-.7
133-5	PSB1080133-5	RACK EXTENSION
133-6	PSB1080133-6	FLAT HD SCR M4-.7 X 8
133-7	PSB1080133-7	RACK
133-8	PSB1080133-8	LOCK WASHER 8MM
133-9	PSB1080133-9	CAP SCREW M8-1.25 X 16
133-10	PSB1080133-10	GEAR COVER
133-11	PSB1080133-11	FLANGE SCREW M5-.8 X 10
133-12	PSB1080133-12	HOUSING COVER
133-13	PSB1080133-13	HEX NUT M5-.8

REF	PART #	DESCRIPTION
133-14	PSB1080133-14	HEX BOLT M10-1.5 X 20
133-15	PSB1080133-15	GEAR
133-16	PSB1080133-16	ALIGNMENT PLATE
133-17	PSB1080133-17	WORM SHAFT
133-18	PSB1080133-18	HEX NUT M16-1.5 THIN
133-19	PSB1080133-19	GEAR HOUSING
133-20	PSB1080133-20	BUSHING
133-21	PSB1080133-21	FLAT WASHER 16MM FIBER
133-22	PSB1080133-22	LOCK COLLAR
133-23	PSB1080133-23	SET SCREW M5-.8 X 5
133-24	PSB1080133-24	BUSHING BEARING DU 10 X 12MM
133-25	PSB1080133-25	SET SCREW M7-1 X 10 NYLON
135	PSB1080135	HEX BOLT M5-.8 X 12
136	PSB1080136	FLAT WASHER 5MM
137	PSB1080137	BLADE GUARD
141	PSB1080141	HANDWHEEL TYPE-33 5D X 10B-S X M8-1.25
142	PSB1080142	SET SCREW M6-1 X 12
143	PSB1080143	UPPER BLADE GUIDE ASSEMBLY
143-1	PSB1080143-1	UPPER BLADE GUIDE MOUNTING BLOCK
143-2	PSB1080143-2	ECCENTRIC SHAFT
143-3	PSB1080143-3	EXT RETAINING RING 15MM
143-4	PSB1080143-4	BALL BEARING 6202ZZ
143-5	PSB1080143-5	BEARING BUSHING
143-6	PSB1080143-6	CAP SCREW M6-1 X 35
143-7	PSB1080143-7	UPPER SUPPORT BEARING ADJ SHAFT
143-8	PSB1080143-8	SET SCREW M6-1 X 10
143-9	PSB1080143-9	CAP SCREW M6-1 X 16
143-10	PSB1080143-10	UPPER BLADE GUIDE SUPPORT BLOCK
143-11	PSB1080143-11	UPPER BLADE GUIDE ADJUSTMENT SHAFT
144	PSB1080144	LOWER BLADE GUIDE ASSEMBLY
144-1	PSB1080144-1	ECCENTRIC SHAFT
144-2	PSB1080144-2	BEARING BUSHING
144-3	PSB1080144-3	BALL BEARING 6202ZZ
144-4	PSB1080144-4	LOWER BLADE GUIDE MOUNTING BLOCK
144-5	PSB1080144-5	MOUNTING BLOCK BASE
144-6	PSB1080144-6	CAP SCREW M6-1 X 35
144-7	PSB1080144-7	BEARING BUSHING
144-8	PSB1080144-8	BALL BEARING 6201ZZ
144-9	PSB1080144-9	CAP SCREW M6-1 X 55
144-10	PSB1080144-10	CAP SCREW M6-1 X 12
144-11	PSB1080144-11	EXT RETAINING RING 12MM
144-12	PSB1080144-12	CAP SCREW M5-.8 X 40
147	PSB1080147	FLAT WASHER 8MM
148	PSB1080148	FIXED HANDLE 22 X 77, M8-1.25 X 12
158	PSB1080158	FENDER WASHER 12MM STEEL
173	PSB1080173	CORD CLAMP 3/8" PLASTIC
174	PSB1080174	LIMIT PLATE
175	PSB1080175	FLAT WASHER 5MM
176	PSB1080176	CAP SCREW M5-.8 X 10

# Machine Labels



REF	PART #	DESCRIPTION
201	PSB1080201	NEW SOUTH BEND NAMEPLATES 203MM
202	PSB1080202	KEEP DOOR CLOSED LABEL
203	PSB1080203	DISCONNECT POWER LABEL
204	PSB1080204	MODEL NUMBER LABEL
207	PSB1080207	READ MANUAL LABEL
208	PSB1080208	ELECTRICITY LABEL

REF	PART #	DESCRIPTION
209	PSB1080209	GLASSES/RESPIRATOR LABEL
210	PSB1080210	BLADE TENSION NOTICE
211	PSB1080211	MACHINE ID LABEL
213	PSB1080213	BLADE TENSIONER LABEL
214	PSB1080214	TABLE LOCK LABEL
215	PSB1080215	UPPER WHEEL GUIDE NOTICE

**⚠ WARNING**

The safety labels provided with your machine are used to make the operator aware of the machine hazards and ways to prevent injury. The owner of this machine **MUST** maintain the original location and readability of these safety labels. If any label is removed or becomes unreadable, **REPLACE** that label before using the machine again. Contact South Bend Tools at (360) 734-1540 or [www.southbendtools.com](http://www.southbendtools.com) to order new labels.



# Warranty

This quality product is warranted by South Bend Tools to the original buyer for **2 years** from the date of purchase. This warranty does not apply to consumable parts, or defects due to any kind of misuse, abuse, negligence, accidents, repairs, alterations or lack of maintenance. We do not reimburse for third party repairs. In no event shall we be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our products.

We do not warrant or represent that this machine complies with the provisions of any law, act, code, regulation, or standard of any domestic or foreign government, industry, or authority. In no event shall South Bend's liability under this warranty exceed the original purchase price paid for this machine. Any legal actions brought against South Bend Tools shall be tried in the State of Washington, County of Whatcom.

This is the sole written warranty for this machine. Any and all warranties that may be implied by law, including any merchantability or fitness, for any purpose, are hereby limited to the duration of this warranty.

Thank you for your business and continued support.

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





[southbendtools.com](http://southbendtools.com)

