S

Busy Bee Tools

BBPBS10

10” Premium Band saw

Contents

Introduction

We take great pride in introducing the Model BBPBS10 a 10” band saw, a distinguished addition to the expanding Busy Bee Tools family of exceptional woodworking machinery.

When adhering to the comprehensive guidelines outlined in this manual, you can anticipate years of reliable and enjoyable performance, serving as a testament to Busy Bee Tools' unwavering commitment to customer satisfaction.

We are delighted to provide you with this manual for the Model BBPBS10 the 10” bans saw. It has been meticulously crafted to assist you with the assembly process, ensure safety compliance, and cover essential operational procedures.

Our goal is to deliver the most comprehensive documentation possible to facilitate your experience.

The specifications, drawings, and photographs featured in this manual accurately depict the Model BBPBS10 band saw as it was configured when this manual was produced. Nevertheless, in line with Busy Bee Tools' continuous improvement policy, adjustments and enhancements may be implemented at any time, with no obligation on Busy Bee Tools' part.

To enhance your convenience, we maintain an up-to-date repository of Busy Bee Tools manuals on our website at www.busybeetools.com. Any updates or modifications to your machine will be promptly reflected in these manuals.

We encourage you to visit our website regularly to access the latest revisions to this manual, and to stay informed about the optimal operation of your equipment. Your satisfaction and safety are our top priorities, and we are committed to ensuring that your experience with the BBPBS10 band saw is exceptional.

In case you require additional assistance or have any further questions, please do not hesitate to reach out and contact our dedicated Customer Service and Technical Support Department at:

Busy Bee Tools Head Office

130 Great Gulf Drive

Concord ON, L4K 5W1

Or at any of our branches across Canada.

Visit our website for the latest deals and for more information at www.busybeetools.com

Call us Toll Free: 1-800-461-2879.

Email us at: cs@busybeetools.com

Our team of experts is here to provide you with the guidance and support you need to ensure the safe and efficient operation of your machine. Your satisfaction and safety are our top priorities, and we are committed to assisting you in any way we can.

Machine data sheet

Power Rating… 120V, 60Hz
Motor ..... ½ HP
Amps… ..... 3.5 Amp
Motor Speed… ..... 1700 RPM
Resaw Capacity… ..... Height 4-5/8”
Throat Capacity… ..... Width 9-5/8”
Blade Width… ..... Width 1/8” – ½” (5/16” included)
Blade TPI ..... TPI 6 (included)
Blade Length ....70-1/2”
Saw Speed ..... 2800 ft/min
Table Size… ..... …13-3/4”X12-1/2”
Table Left Tilt ..... 0°
Table Right Tilt ..... 45°
Miter Gauge Slot ..... 5/8” X1/4”
Height to Floor ..... ….39-7/8” (with the stand)
Fence Size ..... …12-1/4”X2-3/8”
Height ..... 34-1/4”
Width ..... 21”
Depth ....16-1/4”
Base ..... …15-7/8”X9-3/8”
Dust port ..... O.D.2-1/2”
Net Weight ..... 68 lb.
Gross Weight ..... 77 lb.
Shipping Package ..... …35-7/8” X12-7/8”X18-1/4”

Machine Identification

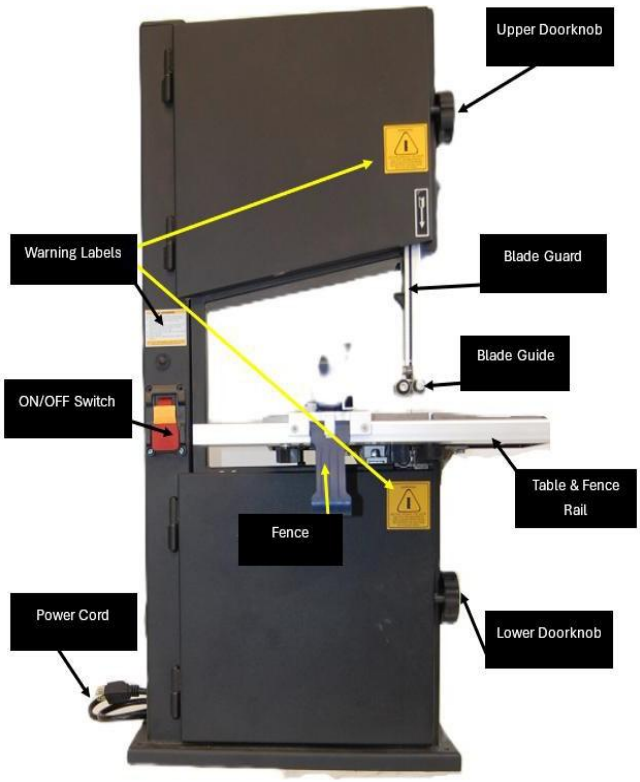


Figure 1: Front View.

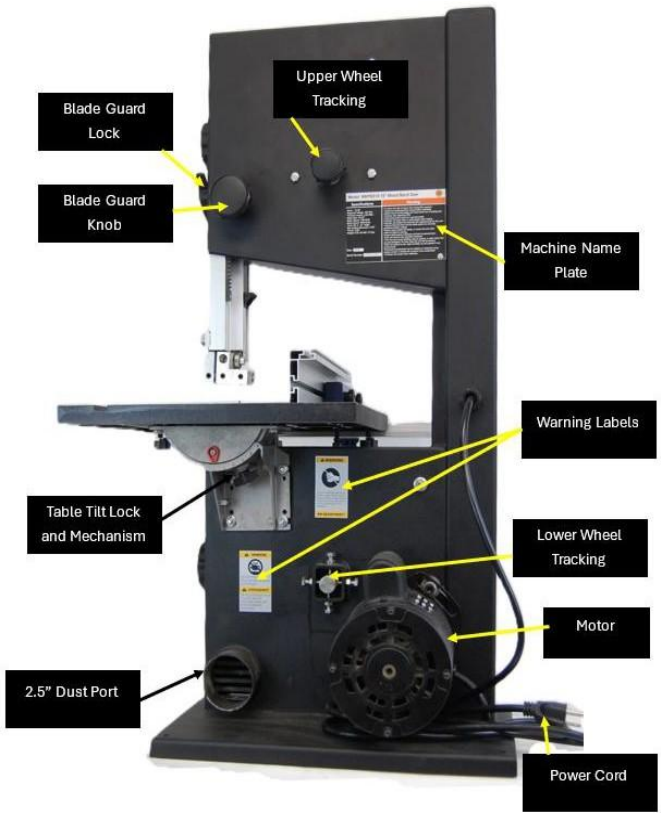


Figure 2 : Rear View.

Section 1: Safety

General Shop Safety Instructions

Your safety is of utmost importance. Prior to starting the assembly of this machine, it is imperative that you thoroughly read the instruction manual. Safety symbols and signal words have been incorporated into this manual to draw your attention to potentially hazardous conditions and to convey the significance of the safety messages. It is essential to remember that these safety messages alone cannot eliminate danger and should not replace the implementation of proper accident prevention measures.

(Minor or Moderate Injury): This symbol indicates potentially hazardous situation that, if not avoided, MAY result in minor or moderate injury. It may also serve as a warning against unsafe practices.

Warning Symbol (Death or Serious Injury): The warning symbol signifies a potentially hazardous situation that, if not avoided, COULD result in death or serious injury.

Danger Symbol (Imminent Death or Serious Injury): The danger symbol is used to indicate an imminently hazardous situation that, if not avoided, WILL result in death or serious injury.

In addition to these symbols, you will also come across a notice symbol, which is employed to alert the user to valuable information regarding the proper operation of the machine. By diligently adhering to these safety symbols and heeding the information in this manual, you can significantly enhance your safety while operating the equipment.

Machine Safety Instructions

1- Thoroughly Review the Entire Manual Before Operating Machinery: It is crucial to read and understand the complete manual before commencing any machinery operations. Machinery can pose serious injury hazards to individuals who lack proper training and familiarity with its operation.

2- Always utilize CSA Approved Safety Glasses During Machinery Operation: For your safety, it is imperative to wear safety glasses that meet ANSI (American National Standards Institute) standards when using machinery. Conventional eyeglasses are not equipped with impact-resistant lenses and should not be considered a substitute for proper safety glasses.

3- Always Wear a CSA Approved Respirator When Operating Dust-Producing Machinery: When operating machinery that generates dust, it is essential to wear a respirator that has been approved by NIOSH (National Institute for Occupational Safety and Health). Wood dust is classified as a carcinogen and can lead to cancer and severe respiratory illnesses. Your respiratory protection is paramount to your health and safety.

4- Utilize Hearing Protection When Operating Machinery: Always wear hearing protection when operating machinery. Prolonged exposure to machinery noise can result in permanent hearing damage, and protecting your hearing is vital for your long-term well-being.

5- Adhere to Proper Apparel Guidelines: Avoid wearing loose clothing, gloves, neckties, rings, or jewelry that could

potentially become entangled in moving parts of the machinery. Additionally, wear a protective hair covering to confine long hair and ensure you have non-slip footwear to prevent accidents.

6- Do Not Operate Machinery When Fatigued, or Under the Influence of Substances: Never operate machinery when you are tired, or if you are under the influence of drugs or alcohol. It is crucial to be always mentally alert when running machinery to maintain your safety and the safety of those around you.
7- Authorize Trained and Supervised Personnel Only: Permit only individuals who have received proper training and supervision to operate machinery. Ensure that operational instructions are not only safe but also clearly understood by those using the equipment.
8- Keep Children and Visitors at a Safe Distance: Maintain a safe distance between all children and visitors and the work area where machinery is in use.
9- Secure Your Workshop for Child Safety: Take measures to childproof your workshop, including the use of padlocks, master switches, and the removal of start switch keys to prevent unauthorized use by children.
10- Never Leave Machinery Running Unattended: It is essential never to leave machinery unattended while it is still running. Turn off the power and allow all moving parts to come to a complete stop before leaving the machine unattended.
11- Avoid Dangerous Environments: Refrain from using machinery in locations that are damp, wet, or where flammable or noxious fumes may be present. Always ensure a safe operating environment.
12- Maintain a Clean and Well-Lit Work Area: Keep your work area clean and well-lit to prevent accidents. Clutter and dark shadows can pose significant safety risks.
13- Use Properly Rated Extension Cords: When necessary, use a grounded extension cord rated for the amperage of the machine. Undersized cords can overheat and lose power. Replace damaged extension cords promptly. Do not use extension cords with 220V machinery.
14- Disconnect from Power Source Before Servicing: Always disconnect the machinery from the power source before servicing it. Ensure the switch is in the OFF position before reconnecting.
15- Maintain Machinery with Care: To ensure the best and safest performance, maintain your machinery with care. Keep blades sharp and clean and follow the manufacturer's instructions for lubrication and changing accessories.
16- Verify Guards Are in Place and Functional: Before using machinery, confirm that all safety guards are in place and function correctly. Never operate machinery if guards are missing or not working as intended. Your safety relies on the proper functioning of these guards.
17- Remove Adjusting Keys and Wrenches: Prior to turning on the machinery, it's essential to cultivate the habit of checking for adjusting keys and wrenches and ensuring they are removed. Leaving such tools in place can result in accidents.
18- Inspect for Damaged Parts Before Use: Before using the machinery, conduct a thorough inspection for damaged parts. Check for any issues such as binding or misalignment of parts, broken components, improperly mounted parts, loose bolts, or any other conditions that might impact the safe operation of the machine. Any damaged parts should be promptly repaired or replaced.
19- Utilize Recommended Accessories: Consult the instruction manual to identify the recommended accessories for your

machinery. Using improper accessories can pose a risk of injury, so it's essential to adhere to the manufacturer's recommendations.

20- Avoid Forcing Machinery: Operate the machinery at the speed for which it was designed and avoid forcing it beyond its intended capabilities.

21- Secure the Workpiece: Whenever possible, use clamps or a vise to secure the workpiece. A properly secured workpiece not only protects your hands but also allows you to use both hands to operate the machine safely.

22- Avoid Overreaching: always Maintain proper footing and balance. Overreaching can compromise your stability and pose a risk of accidents.

23- Beware of Workpiece Ejection: Be aware that certain machines may eject the workpiece toward the operator. Take precautions and avoid conditions that could lead to workpiece "kickback."

24- Lock Mobile Bases (If Used) Before Operation: If your machinery is equipped with mobile bases, ensure they are locked securely before operating the equipment. This prevents unintended movement during use.

25- Understand Dust Hazards: Recognize that some dust types can be hazardous to respiratory systems, both for people and animals, particularly fine dust particles. Familiarize yourself with the hazards associated with the specific type of dust you will be exposed to and always wear a respirator approved for that specific type of dust to protect your respiratory health.

Band saw Specific Safety instructions.

Operating a bandsaw carries inherent risks, including serious cuts, amputation, or even fatal injuries if proper precautions are not taken. To reduce these risks, anyone using this machine must diligently adhere to the following safety guidelines and warnings:

1- Blade Control: To prevent injury from blade contact, always allow the blade to come to a complete stop on its own. Never attempt to stop or slow down the blade with your hand or the workpiece.

2- Guards/Covers: Blade guards and covers serve as crucial protective barriers against the moving bandsaw blade. Wheel covers also shield operators from getting entangled with rotating wheels or other moving components. Operate the bandsaw only with the blade guard in the correct position and wheel covers fully closed.

3- Blade Speed: Starting a cut before the blade has reached full speed can cause the blade to grab the workpiece and potentially pull your hands into the blade. Always allow the blade to reach full speed before commencing a cut. Never start the machine with the workpiece in contact with the blade.

4- Cutting Techniques: To prevent the blade from coming off the wheels or breaking and striking you, always turn off the bandsaw and wait for the blade to stop completely before retracting the workpiece from the blade. Do not attempt to withdraw the workpiece while the bandsaw is in operation, and avoid forcing or twisting the blade during cuts, especially when making small curves, as this can lead to blade damage or breakage.

5- Workpiece Support: Ensure proper support for long or large workpieces to maintain control and minimize the risk of blade contact or breakage. Always keep the workpiece flat and securely against the table or fence during cutting. If necessary, use a jig or other work-holding device for added stability.

6- Hand Placement: Never position your hands or fingers in line with the blade during operation, as this could result in serious injury if your hands slip, or the workpiece unexpectedly moves. Avoid

placing fingers or hands in the blade's path, and never reach under the table while the blade is in motion.

7- Small/Narrow Workpieces: When working with small or narrow workpieces, using your fingers to hold them during a cut poses a significant risk of personal injury if your grip slips. Always use push sticks, push blocks, jigs, vises, or clamping fixtures to support and feed small or narrow workpieces safely.
8- Upper Blade Guide Support: Keep the upper blade guides adjusted to provide maximum blade support while cutting. This helps reduce operator exposure to the blade.
9- Feed Rate: To avoid the risk of workpiece slippage leading to operator injury, feed the stock evenly and smoothly into the blade.
10- Blade Condition: Dull or damaged blades require more effort to make cuts, increasing the risk of accidents. Never operate with dirty, dull, cracked, or severely worn blades. Inspect blades for cracks and missing teeth before each use and ensure proper blade tension and tracking during operation.
11- Clearing Jams and Cutoffs: Always stop the bandsaw and disconnect the power before clearing scrap pieces that become stuck between the blade and the table insert. Use a brush or a push stick, not your hands, to clean away chips or cut off scrapes from the table.

Self-protection and safety instructions

When operating a woodworking band saw, ensuring personal safety is paramount. Prior to use, familiarize yourself with the machine's safety features and operational manual. Wear appropriate personal protective equipment (PPE) such as safety glasses to shield eyes from wood chips and debris, hearing protection to minimize noise exposure, and snug fitting clothing to avoid entanglement hazards. Keep the work area well-lit and clear of clutter to facilitate safe movement and operation. Utilize push sticks or push blocks to guide materials through the saw, maintaining a safe distance between your hands and the blade. Never remove or bypass machine guards and always wait for the blade to come to a complete stop before adjusting or clearing debris. Regularly inspect the band saw for signs of damage or wear and promptly addressing any issues to ensure continued safe operation.
Remember, prioritizing safety precautions and equipment usage significantly reduces the risk of accidents and injury while using a woodworking band saw.

At busybeetools.com we carry a wide range of PPE to help you stay safe and injury free.

Section 2: Power Supply

Availability and Installation of Power Supply

Before proceeding with the installation of this machine, it is crucial to assess the availability and proximity of the required power supply circuit. If an existing electrical circuit does not meet the specifications and requirements for this machine, the installation of a new circuit becomes necessary.

To minimize the potential risks of electrocution, fire, or equipment damage, it is imperative that all installation work and electrical wiring be carried out by a certified electrician or qualified service personnel. The installation must fully comply with all applicable electrical codes and standards in your area.

This proactive approach ensures the safety, reliability, and proper functioning of the machine while also mitigating the risks associated with improper electrical work.

Full-Load Current Rating

The full-load current rating is the amperage that a machine draws when it operates at 100% of

its rated output power. In machines equipped with multiple motors, this rating represents the amperage drawn by the largest motor or the cumulative amperage of all motors and electrical devices that may operate simultaneously during regular operations.

Full-Load Current Rating at 110V: 3.5 Amps
It is important to note that the full-load current rating does not represent the maximum amperage that the machine can draw. If the machine is subjected to an overload, it may draw additional amperage beyond its full-load rating.

Continued operation under overloaded conditions can lead to damage, overheating, or even fire, especially if the machine is connected to an undersized electrical circuit. To mitigate these potential hazards, it is imperative to avoid overloading the machine during operation and ensure that it is connected to a power supply circuit that meets the specified circuit requirements outlined in the machine's documentation.

Power Supply Circuit Sizing

The power supply circuit encompasses all electrical components between the building's breaker box or fuse panel and the machine itself. It is crucial that the power supply circuit employed for this machine is appropriately sized to safely accommodate the full-load current drawn from the machine over an extended duration.

If your machine is connected to a circuit protected by fuses, it is recommended to use a time delay fuse specifically marked with the letter "D." This type of fuse provides additional time delay before tripping, which can be beneficial when dealing with equipment that may experience momentary current spikes during startup.

Ensuring that the power supply circuit is properly sized and protected is vital for the safe and efficient operation of the machine while minimizing the risk of electrical issues or circuit overload.

Important Note: Dedicated Circuit vs. Shared Circuit

The circuit requirements specified in this manual pertain to a dedicated circuit, which is designed for the exclusive use of a single machine at any given time. In this scenario, only one machine is intended to operate on the circuit.

However, if your machine is to be connected to a shared circuit where multiple machines may run simultaneously, it is imperative to seek the expertise of an electrician or qualified service personnel. Their guidance is essential to ensure that the circuit is properly sized and configured to facilitate the safe operation of all machines concurrently.

The input and advice of professionals in such cases are crucial for preventing electrical overloads, ensuring safety, and promoting the efficient functioning of the machinery within a shared electrical system.

Machine Pre-Wiring and Circuit Requirements

This machine is pre-wired for operation on a power supply circuit that meets the following specified requirements:

Circuit Requirements for 110V:

- Nominal Voltage: 110V, 115V, 120V
- Cycle: 60 Hz
- Phase: Single-Phase
- Power Supply Circuit: 3.5 Amps
- Plug/Receptacle: Nema 5-15P & NEMA5-15R

This machine has the capability to be converted to operate on a power supply circuit that meets these requirements.

These requirements are essential for the safe and optimal operation of the machine. It is crucial to ensure that the power supply circuit adheres to these specifications to prevent

electrical issues and promote the efficient functioning of the equipment.

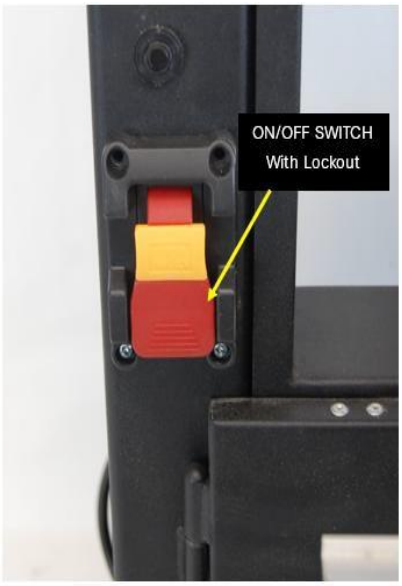
Figure 3: NEMA5-15P (Included).

Grounding Requirements

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

For operation 110V

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



By following these safety precautions and ensuring the correct grounding of the equipment, you can significantly reduce the risk of electric shock and maintain the safe operation of the machine.

Figure 4: ON/OFF Switch

Use of Extension Cords

While we strongly discourage the use of an extension cord with this machine, we understand that there may be situations where it is necessary and can only be used on a temporary basis.

It's important to note that extension cords can lead to voltage drop, which, in turn, can damage electrical components and reduce the motor's lifespan. The extent of voltage-drop increases with the length of the extension cord and decreases as the gauge size of the cord gets smaller (higher gauge numbers indicate smaller sizes).

If you find it necessary to use an extension cord with this machine, please adhere to the following guidelines:

1- Ensure the extension cord is in good condition and contains a ground wire, as well as a matching plug and receptacle.

2- Select an extension cord with a minimum gauge size of 12 AWG.

3- Keep the length of the extension cord as short as possible. A shorter cord is preferable to minimize voltage drop.

By following these guidelines, you can help mitigate the potential negative effects of using an extension cord and maintain the safety and performance of the machine when it becomes necessary to use one.

Electric Motor Information

- Voltage 120 Volts
- Current 3.5 Amps
- Power: 1/3 HP
- Speed: 1700 RPM
- Frequency: 60Hz
- Class: B

Section 3: Unpacking and Set Up

Hardware Packing List

This saw comes with most of the necessary tools for assembly. Here's a list of accessories and tools included with the saw apart from a screwdriver and a square:

1- Table
2- Hardware for the table assembly.
3- Rip Fence
4- Rip Fence Carrier assembly
5- Front Rail for Fence
6- Hardware for rail Assembly
7- Table leveling Bolt, Knob and washer
8- Blade Tensioning Knob
9- Allen Keys 2.5, 3, 5 MM

Additional requirements #2 Philips Screwdriver, and a 90° square.

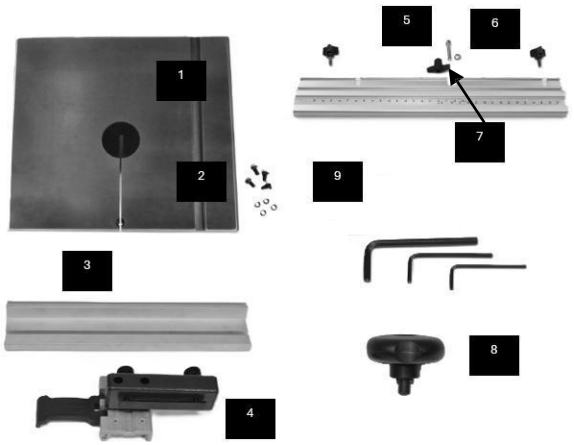


Figure 5: Accessories and Tools.

Initial Cleanup

Prior to assembly, clean up all the rust-protected surfaces using a regular household degreaser or spot remover. Avoid the use of gasoline, paint thinner, mineral spirits, or similar substances as they may damage the painted surfaces.

Apply a coat of paste wax to the table to prevent rust. Wipe all parts and accessories thoroughly with a clean, dry cloth. Alternatively, you can use Carbon Method or other conditioning product to prevent rust and optimize the table's surface. **Be VERY CAREFUL with the preinstalled band saw blade, as its sharp teeth may cause injury if touched.**

Assembly Instructions

Band Saw's Table:

Using the four bolts and washers provided bolt the table on to the table bracket as shown in figure 6. Do not tighten the bolt completely as you may need to adjust and align the table to the blade later.

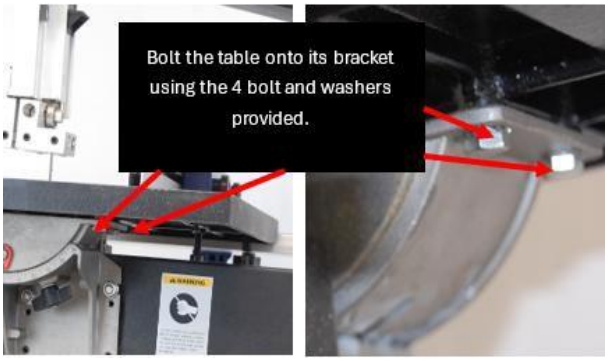


Figure 6: Assembling the Table.

Fence and Rail Assembly

To install the rail and fence follow these steps:

1- Thread the three knobs in the holes located under the cast iron table.
2- Slide the rail in place and tighten the knobs securely.
3- Place the fence on the table and lock it to the rails.

See figure 7 below.

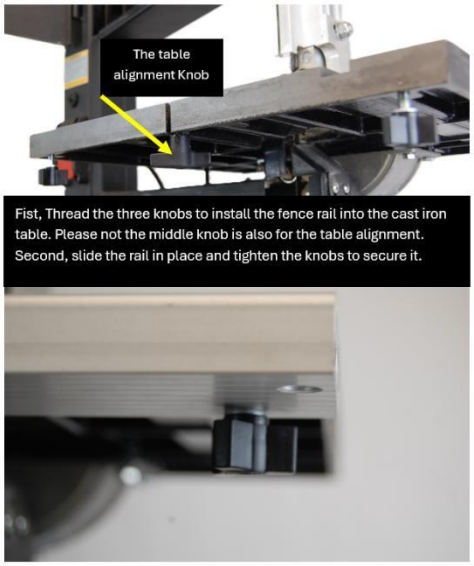


Figure 7: Installing the Rail and Fence.

Dust Collection

This Band saw is equipped with a 2-1/2" dust port that can be connected to any dust collection system. This saw requires a minimum suction of 400 to 500 CFM at the saw's port will evacuate the debris efficiently.

Initial and Fine Tune Blade Tracking

To check if the blade is tracking correctly, turn the wheel slowly by hand and check the position of the blade (the blade should sit on the centre of the wheel). Depending on the position of the blade follow these steps:

1- Disconnect the saw from the power supply.
2- Loosen the blade tensioning knob located at the top of the band saw.
3- Loosen the locking knob as shown in figure 8.
4- Use the adjustment knob to move the blade see figure 8.
5- If you want the blade to move forward turn the knob counterclockwise.
6- If you want the blade to move backwards turn the knob clockwise. See figure 8 above.

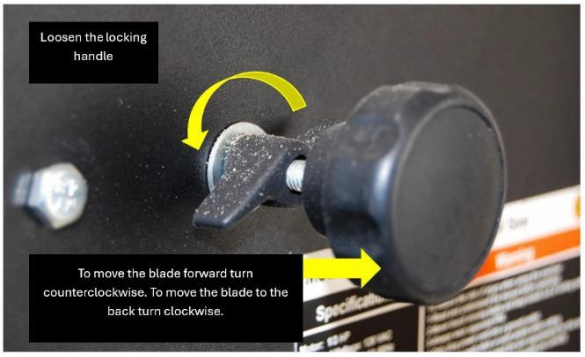


Figure 8: Adjusting the Blade Tracking.

Adjusting Blade Support Bearings & guides

To adjust the upper blade guide, see figure 9.

1- Raise the blade guard all the way up.
2- Using an M5 Alen Key loosen the cap screws for the left, right and rear guide bearings.
3- All the bearings must be adjusted to 1/32" gap from the blade.
4- Once the caps are at 1/32" you can tighten the cap screws.

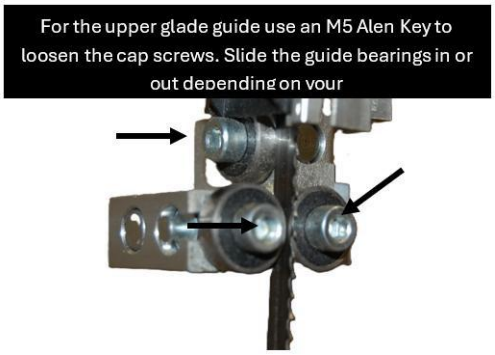


Figure 9: Adjusting the upper blade guide.

To adjust the lower blade guide, see figures 10and 11.

1- Remove the lower blade guards (2 pieces of black plastic covers fastened with 2 Philips screws each.
2- Using an M5 Alen Key loosen the cap screws the same as for the upper blade guide adjust the gap to 1/32" between

the guide bearings and the blade and retighten the cap screws.

3- Re-install the blade guards.

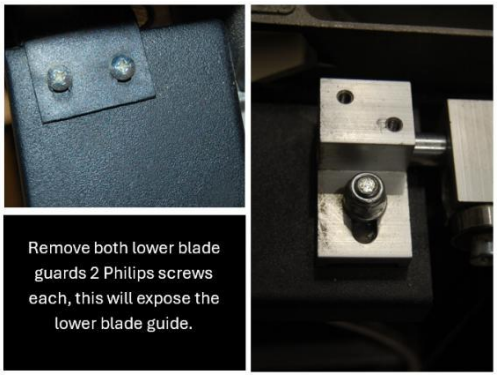


Figure 10: Lower blade guards.

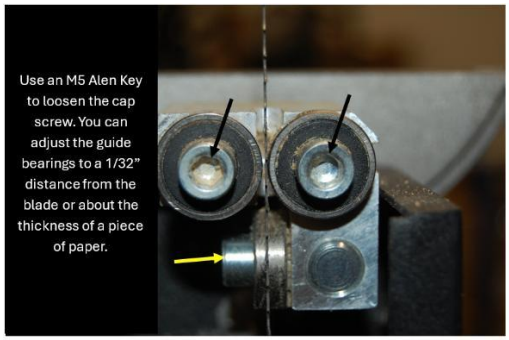


Figure 11: Adjusting the lower blade guide.

Adjustments and fine tuning

Adjusting the table and the blade alignment: See figure 6 on page 12, for this adjustment you'll need a square align the square with the edge of the table and the blade at the same time, if the blade and the table aren't aligned do the following:

1- Loosen the four bolts at the bottom of the table slightly (just enough to enable you to manipulate the table).
2- Align the table and the blade such that the square is perfectly aligned with the table and the bald simultaneously.
3- Re-tighten the bolts to secure the table.

Blade Tensioning

To properly tension the blade, lightly press on the blade with the guard all the way up; if the blade's deflection is more than ¼" this means the blade is loose; if the deflection is less than ¼" the blade is too tight, and it needs adjustment.

Figure 12: Blade tensioning

Use the knob at the top of the band saw turn it clockwise to increase the tension and counterclockwise to decrease the tension

First Run Procedure

Before operating the 10" band saw, ensure the machine is properly connected to a suitable power source in accordance with the specifications outlined in this manual. Once connected, switch the band saw on and allow it to run for a brief period without load. Carefully observe the machine for any abnormal noises, excessive vibrations, or unusual rattling that may indicate mechanical issues. Next, inspect the blade tracking to ensure it is running smoothly and centered on the wheels. If the blade is tracking correctly and no irregularities are detected, proceed by making a test cut using a small piece of scrap wood to evaluate cutting performance. If the saw operates smoothly and produces a clean cut, power off the machine. The band saw is now properly set up and ready for regular use.

Section 4: Operations

Overview

This overview serves as a foundational introduction for novice machine operators, offering a fundamental understanding of how the machine is used during operation. The goal is to facilitate a clearer comprehension of the machine's controls and components discussed in subsequent sections of this manual.

It is important to note that this overview is generic in nature and does not constitute a comprehensive instructional guide. To gain a more in-depth understanding of specific machine operations, it is strongly advised to:

1- Read the Entire Manual: Thoroughly review the entirety of this manual to gain detailed insights into the machine's operation, safety guidelines, and maintenance procedures.
2- Seek Additional Training: Seek guidance and training from experienced machine operators who can provide hands-on instruction and insights into practical operation.
3- Conduct Additional Research: Expand your knowledge by conducting further research through "how-to" books, trade magazines, and reputable websites dedicated to the subject matter.

By following these steps, you can develop a well-rounded understanding of the machine's operation and safety protocols, ensuring both your safety and the effective use of the equipment.

Typical Machine Operation Procedure

To successfully complete a typical machine operation, operators should follow a systematic set of steps to ensure safety and accurate cutting. Here is a sequence of actions commonly employed:

1- Workpiece Examination: Examine the workpiece to verify its suitability for cutting, considering factors such as material type, foreign objects, knots, moisture content, and warping.
2- Table Tilt Adjustment: If necessary, adjust the table tilt to achieve the desired cutting angle.
3- Fence or Miter Gauge Setup: Depending on the cutting requirements, set up and adjust the fence for the width of the cut, or configure the miter gauge to the desired angle. Ensure that the fence or miter gauge is securely locked in place.
4- Upper Blade Guide Height: Loosen the guidepost lock knob and adjust the upper blade guide height to provide clearance, typically no more than 1/4", just above the workpiece. Retighten the guidepost lock knob.
5- Clear Workpiece Path: Confirm that the workpiece can safely pass through the blade without encountering any obstructions or interference from other objects.
6- Safety Gear Preparation: Prior to operation, put on safety glasses and a respirator, if necessary, especially when cutting materials that produce fine dust.
7- Machine Startup: Begin by starting the dust collector to manage dust and then activate the bandsaw itself.
8- Workpiece Handling: Hold the workpiece securely and keep it flat against both the table and the fence (or miter gauge). Gradually push the workpiece into the blade at a consistent and controlled rate until the cut is completed. Be cautious to keep fingers away from the blade and use a push stick when handling narrow workpieces.
9- Shutdown: After completing the cut, stop the bandsaw.

Adhering to this procedure ensures a safe and efficient machine operation, minimizing the risk of accidents and producing accurate cuts. Always prioritize safety and precision when working with machinery.

Basic Functions of a Bandsaw

A properly adjusted bandsaw is a versatile and safe tool that can perform a variety of cuts with precision. It excels in the following types of cuts:

Straight Cuts: Bandsaws can make accurate and straight cuts with ease.

Miters: It can be adjusted to cut at different miter angles.

Angles: Bandsaws can cut at various angles to accommodate specific project requirements.

Compound Angles: Complex angled cuts can be achieved using the bandsaw.

Resawing: Resawing involves cutting a thick workpiece into thinner sections, which a bandsaw can accomplish effectively.

Ripping: Bandsaws can rip boards, meaning they can cut along the length of the wood grain.

Crosscutting: This refers to cutting wood across the grain, and bandsaws can handle this task.

Irregular Cuts: Bandsaws are excellent for cutting irregular shapes, curves, duplicate parts, circles, and beveled curves.

Basic Cutting Tips

Here are some fundamental tips to keep in mind when operating a bandsaw:

1- Maintenance: Regularly replace, sharpen, and clean the blades to maintain optimal performance. Periodically check and adjust the guides, tension, and alignment settings to ensure the bandsaw operates smoothly.
2- Even Pressure: Use light and consistent pressure when cutting. Applying excessive force can lead to poor cuts and place undue stress on the bandsaw and blade.
3- Corner Cutting: When cutting around tight corners, avoid twisting the blade. Instead, allow the blade to naturally follow the corner path. Consider using relief cuts when feasible to facilitate smoother cutting.
4- Safe Techniques: Always follow safe operating techniques. Misusing the bandsaw or employing incorrect techniques, such as twisting the blade or using the wrong feed rate, can compromise safety and result in subpar cuts.

By following these basic tips and understanding the versatility of a bandsaw, operators can utilize this tool effectively and achieve precise cutting results while ensuring safety throughout the cutting process.

Inspecting the workpiece

Before initiating any cutting operations, it is essential to thoroughly inspect all workpieces to ensure both the safety of the operator and the proper functioning of the machine. Here are key considerations when inspecting workpieces:

1- Material Type: This machine is specifically designed for cutting natural and man-made wood products, including laminate-covered wood products and certain plastics. It is not suitable for cutting materials such as metal, glass, stone, or tile. Attempting to cut these materials with a bandsaw can lead to injury.
2- Foreign Objects: Prior to cutting, carefully examine workpieces for any embedded foreign objects, such as nails, staples, rocks, or dirt. These objects can become dislodged during cutting, potentially causing harm to the operator, kickback, or blade damage. If such objects cannot be removed, refrain from cutting the workpiece.
3- Large/Loose Knots: Be cautious of workpieces with large or loose knots. These can be dislodged during cutting, potentially leading to kickback or machine damage. Choose workpieces

that do not have such knots or plan your cuts to avoid them.

4- Wet or "Green" Stock: Avoid cutting wood with a moisture content exceeding 20%. Cutting wet or "green" stock can result in premature blade wear, increased risk of kickback, and suboptimal cutting results.
5- Excessive Warping: Workpieces exhibiting significant cupping, bowing, or twisting are hazardous to cut, as they are unstable and unpredictable during cutting. Do not use workpieces with these characteristics.
6- Minor Warping: Workpieces with slight cupping can be safely cut if the cupped side is placed against the table or fence for support. Conversely, placing a workpiece with a bowed side against the table can cause instability during the cut, potentially resulting in kickback or serious injury.

Adhering to these workpiece inspection and safety guidelines it is vital to ensure a safe and productive cutting environment while using the bandsaw machine.

Blade Selection & selection Chart

Selecting the correct blade size for a woodworking band saw is critical to achieving optimal performance and precision see (Fig. 9). The size of the blade affects the type of cuts you can make, particularly when cutting curves. Wider blades provide stability for straight cuts but are limited when it comes to making tight radius curve cuts, where a narrower blade is more suitable. Additionally, the number of teeth per inch (TPI) plays a crucial role in determining how well the blade can handle different workpiece thicknesses. Blades with a higher TPI are ideal for thinner materials, as they produce smoother cuts, while lower TPI blades are better suited to cut thicker workpieces, allowing for faster material removal without clogging the teeth. Ensuring the right balance between blade size and TPI based on the workpiece and the type of cut will significantly impact the quality and efficiency of your woodworking project.

Please see the figures below to determine what type of blade and what TPI is suitable for the application you are trying to accomplish.

TPI	Min. Material Thickness
32	3/32"
24	1/8"
18	5/32"
14	¼"
10	5/16"
8	3/8"
6	½"
4	¾"
3	1"
2	1-1/2"

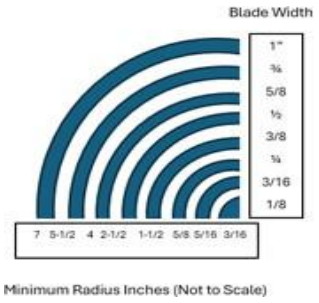


Figure 13: Cut Radius and Material thickness

Changing the Blade

To Change the Band Saw Blade please follow the Step-by-Step Instructions below

Changing the blade on a band saw requires attention to detail and safety procedures. Follow the steps below to properly replace your blade.

Tools & Materials Needed:

- Replacement band saw blade

- Safety gloves

- Safety glasses

- Wrench (if needed for wheel adjustment)

- User manual for reference.

1- Safety First

- Turn off and unplug the band saw: Always disconnect the power before performing any maintenance on the machine.
- Wear safety gloves and glasses: This protects your hands from sharp teeth and your eyes from debris.

2- Release Blade Tension using the knob at the top of the saw turn

counterclockwise to release the tension on the blade.

3- **Remove the Table Insert and the rail.** The rail and the table insert are fixed to the table with three knobs located on the underside of the table, loosen them and remove the rails and the table alignment insert.
4- **Replace the Old Blade** now thread the old blade out of its position carefully, PLEASE note that even though the blade is dull it is still dangerous it may cause serious injury. Install the new blade with care.
5- **Blade Teeth Direction** make sure that the teeth of the new blade are pointing in the right direction (the tooth hook must point downwards in the direction of the cutting).
6- **Re-tension the Blade** use the knob at the top of the band saw to retighten the tension on the blade.
7- **Align the Blade** Give the upper wheel few turn by hand to see if the blade is tracking correctly. If the blade isn't tracking correctly use the knob at the rear of the saw to align it. See figure 14.

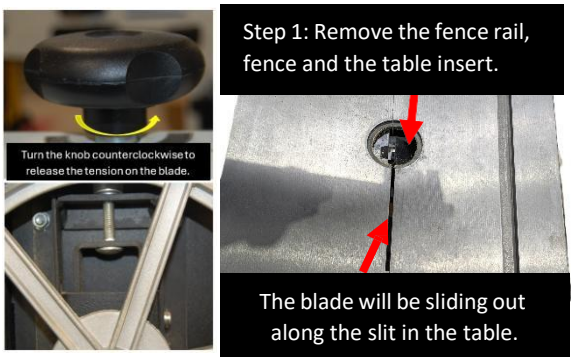


Figure 14: removing the rail and table insert.

8- **Adjust the Blade Guides** readjust the blade guides, making sure that they are supporting the blade. See figures 9 and 11.
9- **Reinstall the Table Insert and Rail** now that the blade is replaced, tracked and ready to use you can reinstall the rail and table insert.
10- **Test the New Blade as** the last action before using the blade you must perform a test cut to ensure that the blade is working properly and that it is safe to use.

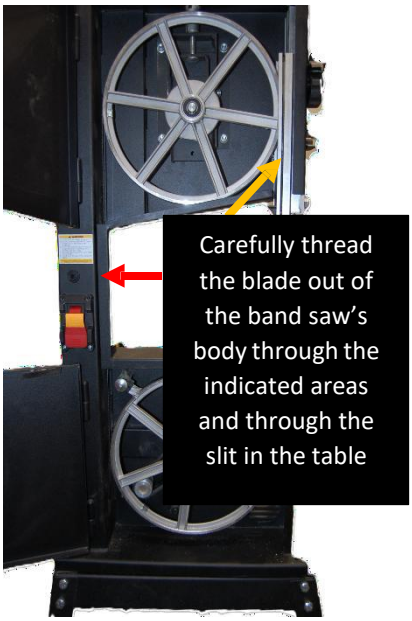


Figure 15: Replacing the blade.

Tilting table

The bandsaw table offers a versatile range of tilt adjustments to accommodate various cutting needs. It can be tilted within the following range:

5° Left to 45° Right: To facilitate easy and precise adjustments, the bandsaw is equipped with the following features:

Table Tilt Scale: The trunnion features a scale with a pointer that allows operators to set and monitor the desired table tilt angle accurately.

Positive Stop: A positive stop is integrated into the design, enabling users to return the table quickly and conveniently to its 0° position when transitioning from a right-tilt setting. This feature simplifies the process of setting the table for different cutting angles, enhancing efficiency and accuracy during operations.

To adjust the table tilt angle on the bandsaw, follow these steps carefully:

1- Disconnect Machine from Power: Prior to making any adjustments, ensure the machine is completely disconnected from its power source to guarantee safety during the procedure.
2- Loosen Table Tilt Lock Lever: Locate the table tilt lock lever, as indicated in Figure (if provided). Loosen this lever to allow for table movement.
3- Rotate Table Tilt Adjustment Lever: Using the table tilt adjustment lever, carefully rotate the table to the desired angle. Ensure that the table is positioned accurately to match the angle required for your specific cutting task.
4- Retighten Lock Lever: Once the table is set to the desired angle, securely retighten the table tilt lock lever. This step is crucial to lock the table in place and prevent any unintended movement during operation.

Figure 16: Table tilt mechanism.

By following these steps, you can effectively adjust the table tilt angle on the bandsaw, allowing you to make precise beveled cuts as needed for your woodworking projects. Always prioritize safety and proper adjustment when operating the machine.

Ripping

Ripping on a bandsaw refers to cutting wood stock along the grain or down the length of the workpiece. This process is straightforward and can also be adapted for beveled rip cuts by tilting the table. Here's how to perform a rip cut on a bandsaw:

1- Fence Adjustment: Begin by adjusting the fence to match the width of the cut required for your workpiece. Once set, securely lock the fence in place to maintain the desired width throughout the cut.
2- Blade Guide Height: Adjust the blade guide assembly to the appropriate height above the workpiece. This ensures that the blade is positioned correctly for the cut you intend to make.
3- Safety Precautions: Prior to starting the bandsaw, ensure that all safety precautions have been met. This includes wearing appropriate safety gear, such as safety glasses and hearing protection. Verify that the workpiece is properly positioned and secured for the cut.
4- Machine Startup: Turn the bandsaw ON and wait for it to reach full speed. It's important to allow the blade to achieve full speed before beginning the cut.
5- Feed the Workpiece: With all safety measures in place, slowly and steadily feed the workpiece into the blade. Continue to push the workpiece until the blade has completely passed through it.

Figure 17 provides an example of a ripping operation, illustrating how the bandsaw is used for this task.

Figure 17: Rip cut.

By following these steps, you can safely and accurately perform a rip cut on your bandsaw, whether it's a straight rip cut or a beveled rip cut achieved by tilting the table. Always prioritize safety and precision during the cutting process.

Crosscutting

Crosscutting on a bandsaw involves cutting wood stock across the grain or, in the case of plywood and other processed wood, cutting across the width of the material. These crosscuts can be made at 90° angles or at various angles using the miter gauge. Compound crosscuts are those where both the miter gauge is angled, and the table is tilted. Here's how to make a crosscut on a bandsaw:

1- Marking the Workpiece: Begin by marking the workpiece on the edge where you want to start the cut. This mark will serve as a reference point for lining up the cut.
2- Blade Guide Height: Adjust the blade guide assembly to the correct height above the workpiece. This ensures that the blade is positioned correctly for the crosscut.
3- Miter Gauge Angle: Adjust the miter gauge to the desired angle needed for the cut. This step allows you to achieve crosscuts at specific angles, whether they are 90° or angled cuts.
4- Positioning the Workpiece: Move the fence out of the way if it's in use. Place the workpiece evenly against the miter gauge, aligning the marked reference point with the blade.
5- Safety Precautions: Before starting the bandsaw, ensure that all safety precautions are in place. This includes wearing safety gear like safety glasses and hearing protection. Verify that the workpiece is properly positioned and secured for the cut.
6- Machine Startup: Turn the bandsaw ON and allow it to reach full speed before proceeding.
7- Feed the Workpiece: With the safety measures in place, slowly and steadily feed the workpiece into the blade. Continue to advance the workpiece until the blade has completely cut through it.

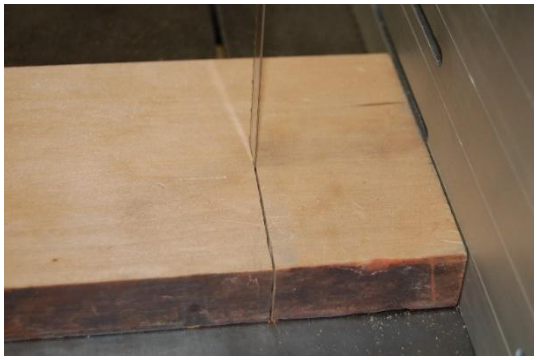


Figure 18: Cross Cut.

Figure 17 provides an example of a crosscutting operation, illustrating how the bandsaw is used for this purpose.

By following these steps, you can safely and accurately perform crosscuts on your bandsaw, whether they are straight crosscuts at 90° or angled crosscuts using the miter gauge. Always prioritize safety and precision during the cutting process.

Cutting Curves

Cutting curves on a bandsaw requires a careful and precise technique to ensure the blade follows the desired layout line without twisting or binding. Here are the steps and tips to follow when cutting curves on a bandsaw:

1- Choose the Right Blade: Select a blade that is appropriate for the curve you intend to cut. For sharp or tight curves, use a narrower blade with a higher TPI (teeth per inch). This type of blade allows for more intricate and precise cuts.

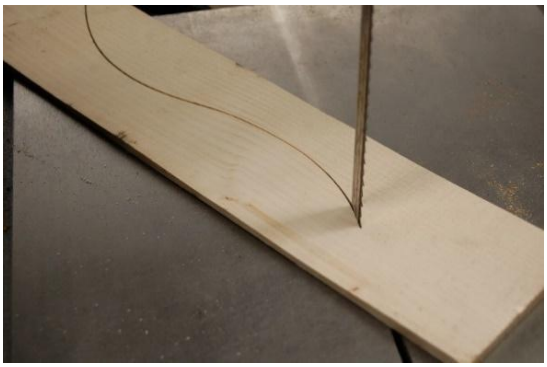


Figure 19: Curve Cut.

2- Layout Line: Mark the layout line on your workpiece to guide the cut. This line represents the desired shape of the curve.
3- Relief Cuts: For sharp or tight curves, consider making relief cuts. Relief cuts are short cuts made through the waste portion of the workpiece. These cuts are stopped at the layout line. Relief cuts serve several purposes:
   - They prevent the blade from being pinched or twisted during the cut.
   - They release waste wood from the workpiece, reducing pressure on the back of the blade.
   - They make it easier to back the workpiece out once the saw blade has come to a stop, if necessary.
4- Short Cuts First: Start by making short cuts along the curve, gradually working your way along the layout line. This approach helps reduce the chances of the blade binding or twisting during the cut.
5- Turning the Stock: As you feed the workpiece into the blade, simultaneously turn the stock carefully to follow the layout line. Maintain a steady and controlled feed rate to ensure the blade accurately follows the curve.
6- Longer Cuts: After completing the short cuts, proceed to the longer cuts along the layout line. By this point, the relief cuts should have alleviated pressure on the back of the blade, allowing for smoother and more controlled cutting.
7- Safety Precautions: Always prioritize safety when cutting curves on the bandsaw. Wear appropriate safety gear, such as safety glasses and hearing protection, and ensure the workpiece is securely positioned and supported.

By following these steps and using relief cuts as needed, you can achieve accurate and smooth curve cuts on your bandsaw. Proper technique and patience are essential for successful curve cutting operations.

Stacked Cuts

Cutting curves on a bandsaw requires a careful and precise technique to ensure the blade follows the desired layout line without twisting or binding. Here are the steps and tips to follow when cutting curves on a bandsaw:

1- Choose the Right Blade: Select a blade that is appropriate for the curve you intend to cut. For sharp or tight curves, use a narrower blade with a higher TPI (teeth per inch). This type of blade allows for more intricate and precise cuts.
2- Layout Line: Mark the layout line on your workpiece to guide the cut. This line represents the desired shape of the curve.
3- Relief Cuts: For sharp or tight curves, consider making relief cuts. Relief cuts are short cuts made through the waste portion of the workpiece. These cuts are stopped at the layout line. Relief cuts serve several purposes:
   - They prevent the blade from being pinched or twisted during the cut.

- They release waste wood from the workpiece, reducing pressure on the back of the blade.
- They make it easier to back the workpiece out once the saw blade has come to a stop, if necessary.

4- Short Cuts First: Start by making short cuts along the curve, gradually working your way along the layout line. This approach helps reduce the chances of the blade binding or twisting during the cut.
5- Turning the Stock: As you feed the workpiece into the blade, simultaneously turn the stock carefully to follow the layout line. Maintain a steady and controlled feed rate to ensure the blade accurately follows the curve.
6- Longer Cuts: After completing the short cuts, proceed to the longer cuts along the layout line. By this point, the relief cuts should have alleviated pressure on the back of the blade, allowing for smoother and more controlled cutting.
7- Safety Precautions: Always prioritize safety when cutting curves on the bandsaw. Wear appropriate safety gear, such as safety glasses and hearing protection, and ensure the workpiece is securely positioned and supported.

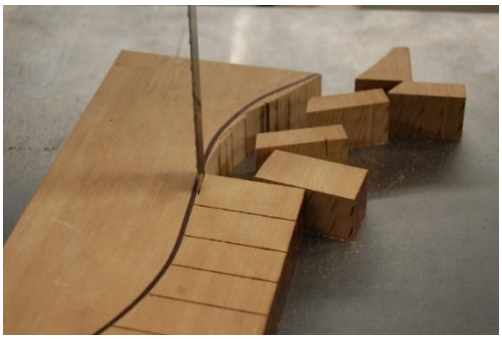


Figure 20: Relief Cut.

By following these steps and using relief cuts as needed, you can achieve accurate and smooth curve cuts on your bandsaw. Proper technique and patience are essential for successful curve cutting operations.

Resawing

Resawing on a bandsaw is the process of cutting the thickness of a board into two or more thinner boards. This technique allows you to maximize the use of your wood stock and create thinner boards for various projects. Here's how to perform resawing on a bandsaw effectively:

1- Blade Selection: The choice of the right blade is crucial for successful resawing. opt for a wide blade as it cuts straighter and is less likely to exhibit "blade lead," which can result in uneven cuts. Blades with fewer teeth per inch (TPI) are ideal, typically ranging from 3 to 6 TPI. These blades have larger gullet capacities for clearing sawdust efficiently, reducing heat buildup and strain on the motor.
2- Prepare the Workpiece: Begin by selecting the board you want to resaw. Ensure that the board is flat and free of defects, as any irregularities can affect the quality of the resawn pieces. If needed, joint and plane the board to achieve a smooth, even surface.
3- Set Up the Bandsaw: Adjust the bandsaw's blade guide assembly to the proper height above the workpiece. The blade guide should be as close to the workpiece as necessary for stability but not so close that it causes unnecessary friction.
4- Blade Tension: Ensure that the bandsaw blade is properly tensioned. A well-tensioned blade will cut more accurately and reduce the risk of blade deflection during the cut.
5- Fence or Rip Fence: If your bandsaw has a fence or rip fence, set it to the desired width for the resaw cut. The fence helps maintain a straight cut by guiding the workpiece parallel to the blade.

6- Safety Gear: Prioritize safety by wearing safety glasses, hearing protection, and any other necessary safety equipment. Respiratory protection may also be required depending on the type of wood being cut.

Figure 21: Resawing.

7- Start the Bandsaw: Turn on the bandsaw and allow it to come to full speed before starting the cut. Always wait for the machine to reach its maximum speed to ensure a clean, efficient cut.
8- Resaw the Board: Carefully feed the workpiece into the blade, making sure it is flat against the table and the fence (if used). Maintain a steady and controlled feed rate to achieve an even cut. Keep your hands and fingers a safe distance from the blade.
9- Monitor the Cut: Pay close attention to the cut as it progresses. If you notice any deviations or irregularities in the cut, adjust as needed.
10- Complete the Cut: Once the entire length of the board has been resawn, turn off the bandsaw and wait for the blade to come to a complete stop before removing the resawn pieces.
11- Inspect and Plane: Examine the resawn pieces for any imperfections or rough surfaces. If necessary, use a planer to achieve smooth, even thickness across the newly created boards.

Resawing on a bandsaw can significantly expand your woodworking capabilities and allow you to make the most of your lumber resources. With the right blade and proper technique, you can achieve precise and consistent results.

Section 5: Accessories

BBPBS10ST stand for BBPBS10 band saw (sold separately).
BBPBS10MK mobile kit for BBPBS10 band saw (sold separately).
A wide range of saw blades to accommodate a variety of applications.

Section 6: Maintenance

Scheduling

Proper maintenance is essential to ensure the longevity and reliable performance of your bandsaw. Follow this maintenance schedule to keep your machine in top condition. Be sure to consult the specific maintenance instructions provided in your bandsaw's manual for any additional guidance or manufacturer recommendations.

Daily Maintenance Check:

1- Loose Mounting Bolts: Inspect all mounting bolts and fasteners to ensure they are properly tightened. Pay particular attention to the bolts securing the table and fence.
2- Saw Blade: Examine the bandsaw blade for signs of wear, damage, or dullness. Replace the blade if it shows any visible defects or if it has become dull and less effective.
3- Wires: Inspect the electrical wires and cables for any wear, damage, or exposed wiring. Replace any damaged wires immediately to prevent electrical hazards.
4- Wheel Brush: Check the condition of the wheel brush, which is responsible for cleaning debris from the blade. Clean or replace the brush if it is worn or clogged.

5- table Surface: Clean and protect the table surface. Ensure it is free from sawdust, debris, and any residue from cutting operations. Apply a suitable protectant to prevent corrosion.
6- Lubrication Points: Lubricate any specified lubrication points as recommended in your bandsaw's manual. Proper lubrication helps maintain smooth operation and prevents excessive wear.
7- General Safety Check: Inspect for any other unsafe conditions or anomalies that may affect the safe operation of the bandsaw. Address any identified issues promptly.

Monthly Maintenance Check:

1- V-Belt Tension: Check the tension of the V-belt that drives the bandsaw. The belt should have the correct tension to ensure efficient power transmission. Adjust the tension if necessary and inspect the belt for damage or wear.
2- Dust Build-Up: Clean the interior of the bandsaw cabinet and the motor components. Remove accumulated sawdust and debris to prevent overheating and maintain optimal airflow.

Regular and routine maintenance is crucial to the safe and efficient operation of your bandsaw. Following this schedule and addressing any issues promptly will help extend the lifespan of your machine and reduce the risk of breakdowns or accidents. Additionally, always refer to your bandsaw's specific manual for manufacturer-recommended maintenance practices and intervals.

Cleaning and protecting

Cleaning your bandsaw is a straightforward process, and regular maintenance helps ensure its optimal performance and longevity. Here are the steps to clean your bandsaw:

Cleaning the Bandsaw:

1- Vacuum Excess Debris: Begin by using a vacuum cleaner equipped with a nozzle attachment to remove excess wood chips, sawdust, and debris from the bandsaw's interior. Pay close attention to areas around the blade, wheels, and motor housing.
2- Wipe Off Remaining Dust: After vacuuming, use a dry cloth or a dusting brush to wipe off any remaining dust and residue from the bandsaw's surfaces. Ensure that you remove dust from the table, fence, and other accessible areas.
3- Removing Resin Build-Up: If you notice any resin build-up on the bandsaw's components, use a resin-dissolving cleaner specifically designed for this purpose. Follow the manufacturer's instructions for safe and effective resin removal. Resin build-up can occur from cutting resinous woods, and it's essential to keep the blade and components clean for smooth operation.
4- Protecting Cast Iron Surfaces: To prevent rust on unpainted cast iron surfaces, such as the table, it's crucial to keep them dry and free from moisture. After cleaning, wipe down the cast iron surfaces with a cloth to remove any remaining moisture or wood dust. Periodically apply a rust-preventive product of your choice.

Regular Maintenance Tips:

1- Blade Maintenance: Regularly inspect the bandsaw blade for sharpness, wear, and damage. Replace the blade as needed to ensure clean and precise cuts.
2- Lubrication: Follow the manufacturer's recommendations for lubricating specific points on your bandsaw. Proper lubrication helps maintain smooth operation.

3- Belt Tension: Check and adjust the tension of the V-belt that drives the bandsaw according to the manufacturer's guidelines.
4- Safety Checks: Routinely inspect safety features, such as blade guards and safety switches, to ensure they are functioning correctly.
5- Blade Tracking: Monitor and adjust the blade tracking as necessary to ensure it runs smoothly and stays on the wheels.
6- Motor Cooling: Keep the motor and surrounding components free from dust and debris to prevent overheating.

By following these cleaning and maintenance steps, you'll keep your bandsaw in optimal condition, reducing the risk of breakdowns and ensuring safe and precise cutting operations. Always refer to your bandsaw's manual for specific maintenance instructions provided by the manufacturer.

Maintaining the lower wheel brushes on your bandsaw is essential for preventing sawdust buildup on the tire and ensuring smooth operation. Here are the steps for checking and cleaning the lower wheel brushes:

Wheel Brushes:

Daily Check and Cleaning of Lower Wheel Brushes:

1- Inspect Brushes: Start by visually inspecting the lower wheel brushes to check for dirt, sawdust accumulation, and bristle wear. The brushes are designed to help keep the tire clean, so it's crucial to ensure they are in good condition.
2- Cleaning Brushes: If you notice that the brushes have accumulated sawdust or debris, use a stiff brush or a vacuum cleaner with a nozzle attachment to clean them. Brush away or vacuum the sawdust and dirt to ensure the brushes can continue to perform their function effectively.
3- Adjustment for Bristle Wear: As part of your daily inspection, check the adjustment brackets for the lower wheel brushes. These brackets allow you to adjust the brushes for bristle wear. If the bristles are significantly worn, consider adjusting the brushes to ensure they maintain proper contact with the tire.

Replacing the Wheel Brush for Bristle Wear

1- Disconnect Machine from Power: Ensure that the bandsaw is disconnected from the power source before making any adjustments or maintenance.
2- Access Adjustment Brackets: Locate the locate the bracket for the lower wheel brush.
3- Loosen Fasteners: Loosen the carriage bolt and lock nut that secures the brush to the lower wheel (the nut is located at the back of the saw). This will allow you to replace the damaged brush.

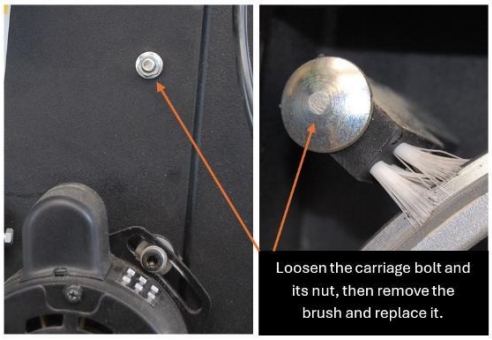


Figure 22: Adjusting/ Replacing the lower wheel brush.

4- Adjust the new Brush Position: Carefully adjust the position of the brushes so that they make proper contact with the tire. The goal is to ensure that the bristles touch the tire without excessive pressure.
5- Tighten Fasteners: Once you've replaced the brush, tighten the fasteners on bracket securely but not overly tight. Ensure that the brushes are properly aligned with the tire.

6- Reconnect Power: After completing the adjustments, reconnect the bandsaw to the power source.

By regularly checking, cleaning the lower wheel brush as needed, you'll help maintain the effectiveness of the tire cleaning system on your bandsaw. This simple maintenance task contributes to smoother and safer bandsaw operation. Always refer to your bandsaw's manual for specific instructions provided by the manufacturer.

Lubrication

Proper cleaning and lubrication of your bandsaw components are essential for maintaining its performance and extending its lifespan. Here are the steps for cleaning and lubricating the components:

Cleaning Components Before Lubrication:

1- Disconnect Machine from Power: Ensure that the bandsaw is disconnected from the power source before performing any maintenance or cleaning.
2- Identify Components: Identify the components that require cleaning and lubrication. These may include moving parts, sliding surfaces, and pivot points.
3- Use the Right Cleaner: Select an appropriate oil/grease solvent cleaner or mineral spirits for cleaning the components. Make sure the cleaner is safe to use on the materials of your bandsaw.
4- Apply Cleaner: Apply the cleaning solution to a clean cloth or rag. Do not apply it directly to the machine. Use the cloth to wipe down the components, removing any built-up dust, dirt, and grease. Pay special attention to areas where moving parts contact each other.
5- Thorough Cleaning: Continue wiping down the components until they are free from dirt and grime. You may need to use multiple clean cloths or rags to ensure thorough cleaning.
6- Inspect for Damage: While cleaning, inspect the components for any signs of damage, excessive wear, or corrosion. If you discover any damaged parts, they may require repair or replacement.

Applying Lubrication:

1- Select Lubricant: Choose an appropriate lubricant for your bandsaw components. Regular machine grease or oil are ideal types of lubricants to use on specific parts.
2- Apply Lubricant: Apply the selected lubricant to the cleaned components. Use a small brush, oiler, or a cloth to apply the lubricant precisely to the areas that require it. Avoid over-lubricating, as excess lubricant can attract dust and debris.
3- Operate the Machine: After lubricating the components, operate the bandsaw briefly to allow the lubricant to distribute evenly across the moving parts.
4- Wipe Off Excess: After the lubrication has been distributed, use a clean cloth to wipe off any excess lubricant. This prevents the accumulation of dust and debris on the lubricated surfaces.
5- Reconnect Power: Once you have completed the cleaning and lubrication process, reconnect the bandsaw to the power source.

By following these steps, you can ensure that your bandsaw components are clean and properly lubricated, promoting smooth and safe operation. Regular maintenance and cleaning will help keep your bandsaw in excellent working condition. Always refer to your bandsaw's manual for specific lubrication recommendations.

Specific Maintenance for Band Saw

Guidepost Rack

Lubricating the guidepost rack and pinion on your bandsaw is an important maintenance task to ensure smooth and precise adjustments.

Here are the steps to lubricate the guidepost rack and pinion:

Lubricating Guidepost Rack and Pinion:

1- DISCONNECT MACHINE FROM POWER: Safety is a priority. Ensure the bandsaw is disconnected from the power source before starting any maintenance tasks.
2- Lower Guidepost: Lower the guide post all the way down. This will expose the rack and pinion components that require lubrication.
3- Prepare Cleaning Rag: Use a clean rag or cloth and mineral spirits to wipe off any existing grease and sawdust buildup on the rack and pinion components. Make sure to remove all dirt and debris to ensure proper lubrication.
4- Apply Lubricant: Once the components are clean, apply an appropriate lubricant to the rack and pinion. The lubricant should be specifically designed for this purpose and should not attract dust or debris. Follow the manufacturer's recommendations for the type of lubricant to use.
5- Distribute Lubricant: Move the guidepost up and down a few times to help distribute the lubricant evenly across the rack and pinion. This will ensure that the lubricant reaches all the contact points.
6- Wipe Off Excess: After distributing the lubricant, use a clean cloth to wipe off any excess lubricant. This step helps prevent the accumulation of dust and debris on the lubricated surfaces.
7- Reconnect Power: Once you have completed the lubrication process and wiped off any excess lubricant, you can safely reconnect the bandsaw to the power source.

Regularly lubricating the guidepost rack and pinion will help maintain smooth and precise adjustments on your bandsaw. This contributes to the overall performance and longevity of the machine. Always follow the manufacturer's recommendations for lubricants and maintenance intervals provided in your bandsaw's manual for the best results.

Blade Tension Assembly Adjustment

Lubricating the tension adjustment assembly on your bandsaw is essential to maintain its proper function and prolong its lifespan. Follow these steps to lubricate the tension adjustment assembly:

Lubricating Tension Adjustment Assembly:

1- DISCONNECT MACHINE FROM POWER: Prioritize safety by disconnecting the bandsaw from the power source to prevent any accidental start-ups.
2- Clean the Assembly: Use a clean rag or cloth and mineral spirits to thoroughly wipe off any existing grease and sawdust buildup from the blade tension adjustment assembly and tension lever cam (see Figure). Ensure that these components are clean and free from debris.
3- Apply Lubricant: After cleaning, apply a thin coat of an appropriate lubricant to the cleaned areas of the blade tension adjustment assembly and the tension lever cam. Use a lubricant that is specifically designed for this purpose and recommended by the manufacturer. This will ensure smooth operation without attracting dust or debris.
4- Avoid Trunnions: Do not add lubricant to the cast iron trunnions, as these components produce their own fine graphite powder over time, acting as a natural lubricant. Adding additional lubricant to the trunnions may create a sticky substance that could impede smooth movement.
5- Close Upper Wheel Cover: After lubricating the necessary components, close the upper wheel cover. Ensure that it is securely fastened in place.

6- Reconnect Power: Once you have completed the lubrication process and closed the upper wheel cover, you can safely reconnect the bandsaw to the power source.

Regularly lubricating the tension adjustment assembly will help maintain precise tension control on your bandsaw, which is crucial for achieving accurate cuts. Always follow the manufacturer's recommendations for lubricants and maintenance intervals provided in your bandsaw's manual for the best results.

Section 7: Service

Certainly, if you encounter any issues with your machine, it's essential to troubleshoot the problem to identify the root cause and determine the appropriate solution. Here are some general troubleshooting procedures to follow:

Check for Power Supply Issues:

- Ensure that the machine is properly connected to a functional power source.
- Verify that circuit breakers or fuses are not tripped or blown.

Examine Blade and Blade Tension:

- Inspect the condition of the blade. Replace it if it's damaged, dull, or worn out.
- Check the blade tension to make sure it's correctly adjusted according to the manufacturer's guidelines.

Verify Proper Blade Tracking:

- Ensure that the blade is correctly aligned on the wheels and that it is tracking properly. Misaligned or poorly tracked blades can lead to issues.

Review of Safety Features:

- Check if any safety mechanisms are engaged or malfunctioning. Ensure all safety guards, covers, and switches are in their correct positions.

Inspect Table and Fence Alignment:

- Verify that the table and fence are correctly aligned to ensure accurate cuts.

Check for Loose or Damaged Components:

- Inspect the machine for loose or damaged parts, such as bolts, nuts, or belts. Tighten or replace them as needed.

Review of the User Manual:

- **Consult your machine's user manual for troubleshooting guidance specific to your model. The manual may contain a troubleshooting section with common issues and solutions.**

Contact Technical Support:

If you cannot identify or resolve the issue on your own, contact Busy Bee Tools technical support. Provide us with the serial number and the purchasing date or Invoice number of your machine for assistance.

Remember to prioritize safety when troubleshooting and performing any maintenance or repairs on your machine. Always disconnect it from the power source before inspecting or adjusting it. If you're unsure about a particular issue or procedure, it's best to seek professional assistance to avoid potential risks or damage to the machine.

Tensioning/Replacing V-Belt

To replace the belt, follow these steps:

1- Disconnect the machine from the power source.
2- Release the motor tensioning cap screw using an M6 Allen key.

3- Remove the C-clip off the lower wheel.
4- The lower wheel should come off easily by pulling out by hand.
5- The belt is now exposed and free, inspect it thoroughly and replace it if needed.
6- Re-tension the belt by putting pressure on the motor and tightening the cap screw at the rear of the machine (there should be a ¼" deflection on the belt when you apply pressure with one finger).
7- Re-install the lower wheel and secure it in place with the C-clip.
8- Close the lower door and reconnect to the power source, then turn on the machine to check if everything is re-installed correctly.

Now the belt is replacing/ tensioned properly make a sample cut to make sure the saw is running well. See figure 23.

Figure 23: Replacing/ tensioning the drive belt.

Blade Tracking

To track the blade, follow these steps:

1- Disconnect the saw from the power source.
2- Turn the upper wheel by hand carefully and slowly, to see where the blade is tracking on the upper wheel.
3- Loosen the locking knob of the tracking mechanism.
4- If the blade is tracking on the rear half of the wheel, turn the knob counterclockwise in small increments and turn the wheel in between to verify the position of the blade.
5- If the blade is tracking in center of the wheel, it is in the right position.
6- If the blade is tracking at the front half of the wheel, turn the knob clockwise in small increments to move the blade backwards; check the position of the blade in between every turn. See step 5 for result.
7- Once the blade is tracking correctly retighten the locking knob to secure the blade in position.
8- Reconnect the saw to the power supply and turn it on to see the position; if the position is not where it's supposed to be repeat all the steps above until it is. See figure 24.

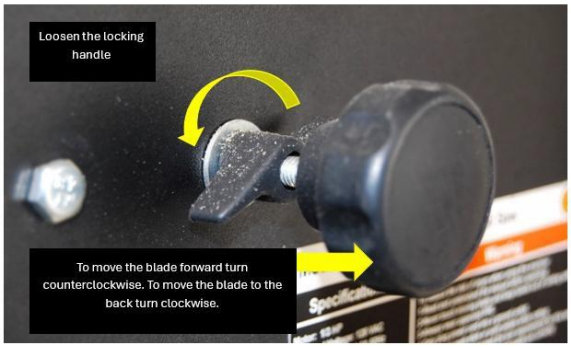


Figure 24: Blade tracking.

Guidepost Parallelism Adjustment

To align the guard post, follow these steps:

1- Disconnect the saw from the power source.
2- Using a square determine how far off the guidepost is (note that the guidepost will be off only in the front rear direction).
3- Perpendicularity to the table is set up at the factory.
4- Loosen the two bolts very slightly shown in figure 25. It is important to make sure the guidepost isn't moving freely.
5- With the help of a mallet tap the guidepost in the desired direction until the post is perpendicular to the table (this will ensure that it is parallel to the blade).

6- Once you are satisfied re-tighten the blots firmly to secure the desired position.
7- Reconnect the band saw to the power source. It is ready to be used.

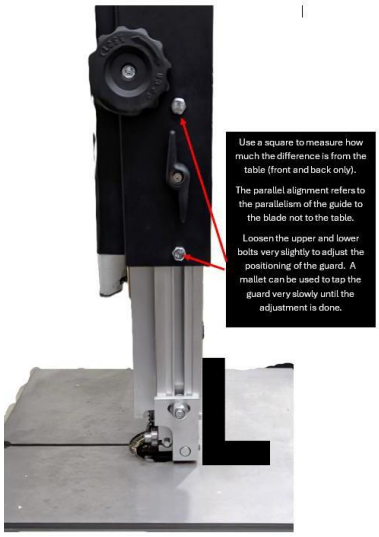


Figure 25: guidepost parallelism.

Wheels Alignment

Table Tilt Calibration

To adjust the table angle of tilt, follow these steps:

1- Disconnect the saw from the power source.
2- Using a level determine the current position of the table angle.
3- Use the bolt and nut located under the table to adjust the 0˚ angle first. This bolt will act a stop helping you go back to 0˚ immediately.
4- Once the perpendicular angle is determined, inspect the angle's red pointer and make sure it is pointing to the 0-degree angle on the trunnion.
5- If the pointer isn't pointing to the right angle use a Philips screwdriver and loosen the screw to adjust the position of the pointer.
6- Once this is done the 45˚ angle should be readily available. See Figure 26.

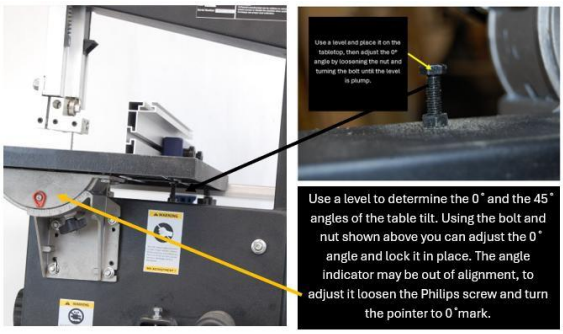


Figure 26: Table tilt adjustments.

Section 8: Wiring and Electrical Diagram

Wiring safety instruction

It's essential to take note of the manufacturer's advice regarding potential changes or updates to the electrical systems of your machine. Here are some key steps to follow if you suspect differences between your machine and the information provided in the manual:

1- Check the Manufacture Date: As mentioned in the manual, verify the manufacture date of your machine, which can be found on the main machine label.
2- Compare the Manual and Your Machine: Carefully compare the information and wiring diagrams provided in the manual with the actual components and wiring of your machine.
3- Contact Technical Support: If you identify any differences or have concerns about the electrical systems of your machine, reach out to the manufacturer's Technical Support team. They can provide guidance and updated wiring diagrams if necessary.
4- Provide Serial Number: ** **Be prepared to provide the serial number of your machine** when contacting Technical Support. This information helps them identify the specific model and configuration of your machine.
5- Do Not Make Unauthorized Changes: As a precaution, avoid making any unauthorized changes or modifications

to the wiring of your machine until you have received guidance from Technical Support.

6- Prioritize Safety: Always prioritize safety when dealing with electrical systems. Ensure that the machine is **disconnected from the power source before inspecting or making any changes.**

By following these steps and seeking assistance from Technical Support when needed, you can ensure that your machine operates safely and effectively, even if there have been updates or changes to its electrical systems since the manual was printed.

The warnings and guidelines provided in the manual are crucial for ensuring your safety and the proper functioning of your machine's electrical systems. Here's a summary of the key points to keep in mind:

1- Shock Hazard: Working on wiring connected to a power source can be extremely dangerous and may result in severe burns, electrocution, or even death. Always disconnect the power from the machine before servicing electrical components to prevent any electrical accidents.
2- Modifications: Avoid making unauthorized modifications to the wiring of your machine. Modifying the wiring beyond what is shown in the manufacturer's diagrams can lead to unpredictable and potentially hazardous results, including serious injury or fire. Additionally, the installation of unapproved aftermarket parts is discouraged.
3- Wire Connections: Ensure that all wire connections are tight and secure. Loose connections can pose a safety risk and may lead to electrical problems during machine operation. After any wiring task, double-check all connections to confirm they are properly tightened.
4- Circuit Requirements: Adhere to the circuit requirements outlined at the beginning of the manual when connecting your machine to a power source. This includes using the appropriate voltage, phase, and circuit amperage to ensure safe and reliable operation.
5- Wire/Component Damage: Damaged wires or components can increase the risk of personal injury, fire, or machine damage. If you identify any wires or components that are damaged while performing a wiring task, it is crucial to replace them promptly to ensure safety and prevent further issues.
6- Motor Wiring: The motor wiring diagrams provided in the manual may not exactly match your machine's configuration. If you find discrepancies, consult the wiring diagram inside the motor junction box for accurate information.
7- Capacitors/Inverters: Some capacitors and power inverters can store an electrical charge for a significant duration (up to 10 minutes) after being disconnected from the power source. To reduce the risk of electrical shock, wait for at least this duration before working on capacitors.
8- Experiencing Difficulties: If you encounter difficulties understanding the information presented in this section or require assistance with your machine's wiring, don't hesitate to contact Technical Support for guidance and clarification.

Following these additional warnings and guidelines will help ensure that you work safely with your machine's electrical components and effectively address any wiring-related issues that may arise. Prioritize safety when handling electrical systems and components.

Wiring Diagram

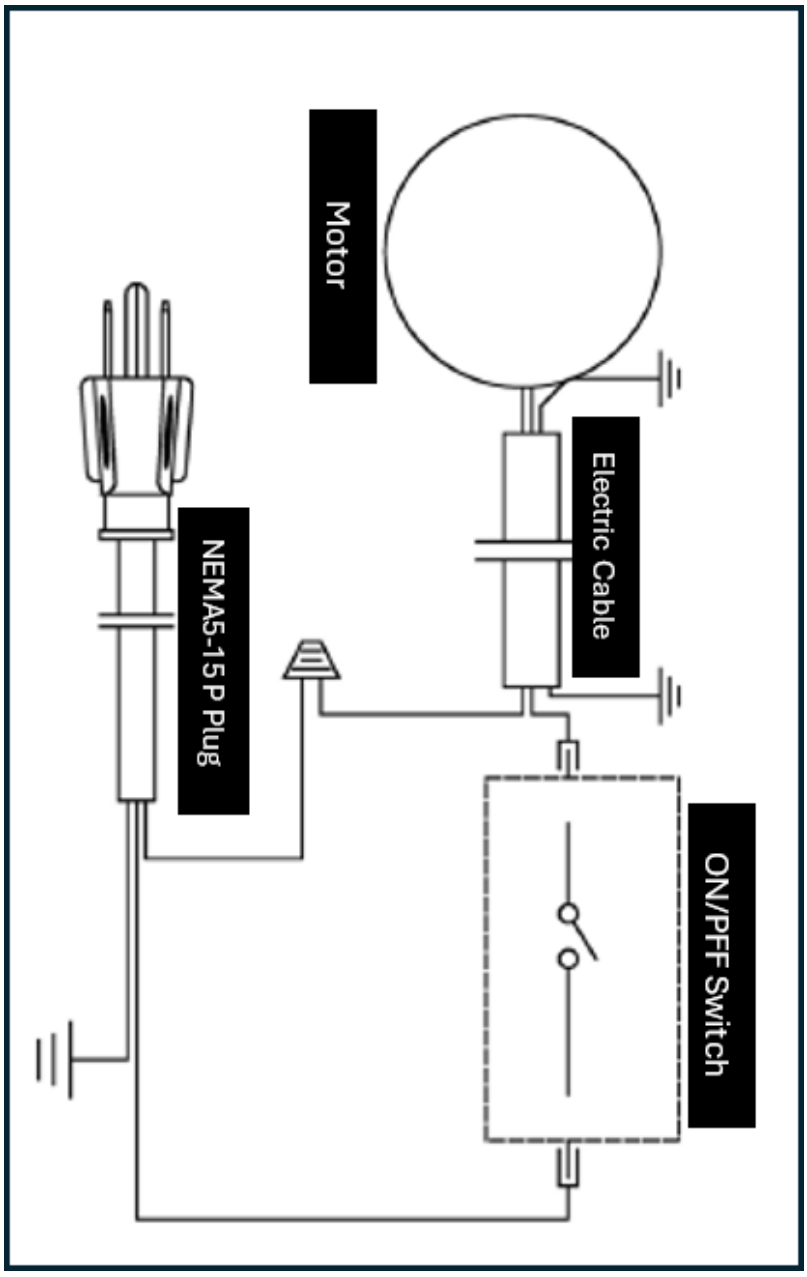


Figure 27: Electrical Diagram.

Section 9: Troubleshooting Guide

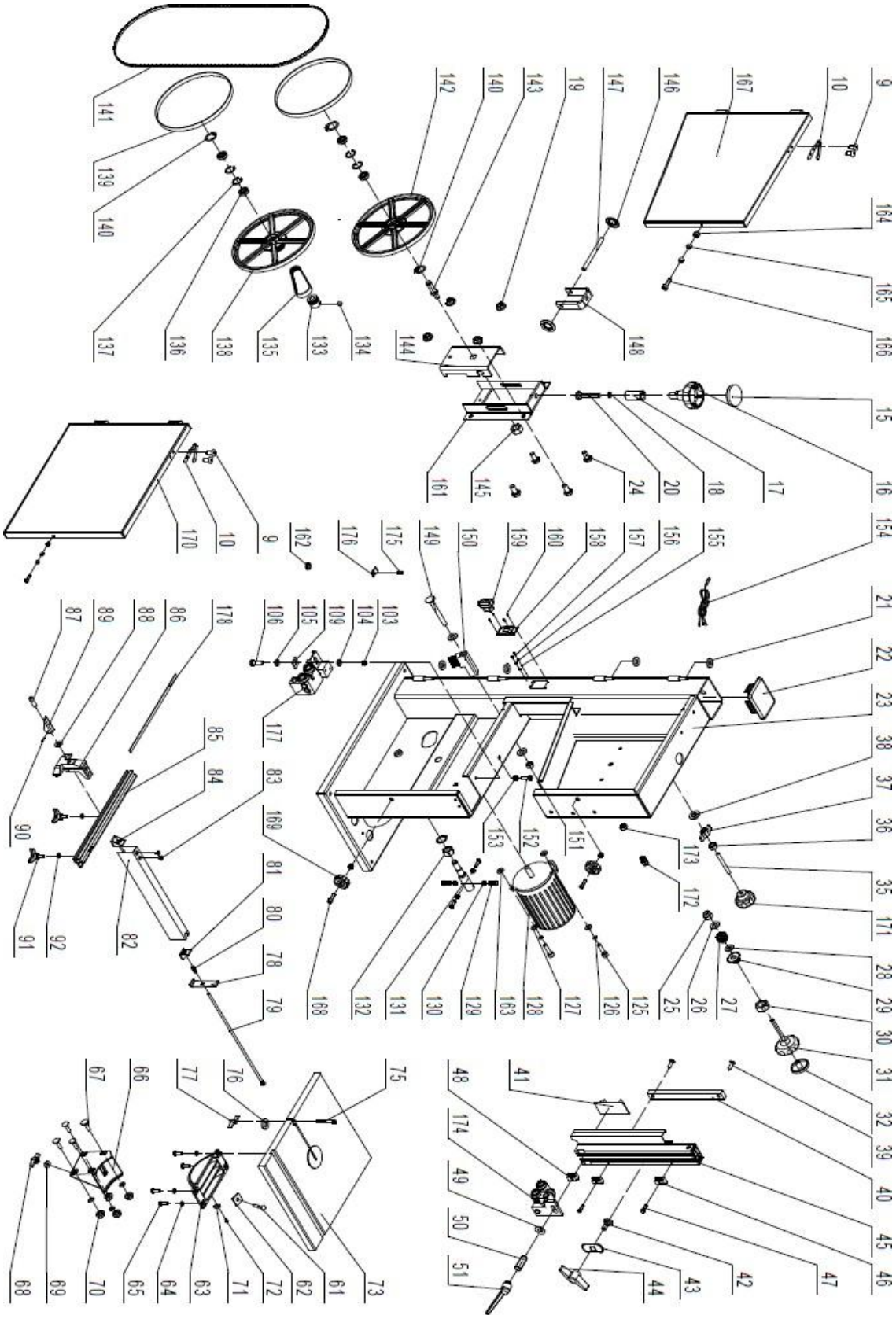
PROBLEM	DIAGNOSIS	REMEDY
The machine does not start when switched on.	1. No power source. 2. Faulty switch. 3 Malfunctioning motor.	1. Check the cable for damage. 2. Replace the switch. 3. Replace defective motor.
The saw blade does not move with the motor running.	1. The blade tension knob has not been tightened properly. 2. The blade has come off one of the wheels. 3. The saw blade has broken. 4. The drive belt has broken.	1. Turn off the motor, retighten the blade tension knob . 2. Open the doors and check. 3. Exchange the blade. 4. Change the belt.
The saw blade does not cut in a straight line.	1. Rip fence for cutting not used. 2. Feed rate too fast. 3. The blade teeth are dull or damaged. 4. Blade guides not suitably adjusted.	1. Use a rip fence. 2. Put light pressure on the workpiece. Make sure the saw blade does not bend. 3. Try a new saw blade. 4. Adjust the blade guides (see ADJUSTMENT instructions).
The saw blade does not cut, or cuts very slowly.	1. The teeth are dull, caused by cutting hard material or long use. 2. The saw blade fitted the wrong way on the bandsaw.	1. Replace the saw blade, use a 6 T.P.I. saw blade for wood and soft material. Use a 14 T.P.I. saw blade for harder materials. A 14 T.P.I. saw blade always cuts slower due to the finer teeth and the slower cutting performance. 2. Fit the saw blade correctly.
Sawdust accumulation inside the machine.	This is normal	Clean the machine regularly. Open the doors and remove the sawdust with a vacuum cleaner. Ideally daily.
Sawdust inside the motor housing.	This is normal	Clean the ventilating slots of the motor with a vacuum cleaner. Once a week is ideal remove the sawdust to prevent it from being drawn into the housing. Ideally daily.
The machine does not cut at 45 or 90-degrees.	1. The table is not at right angles to the blade. 2. The saw blade is dull, or too much pressure was put on the workpiece.	1. Adjust the table. 2. Replace the saw blade or put less pressure on the workpiece.

Section 10: Machine Diagrams and Parts

While we strive to maintain a comprehensive inventory of replacement parts, it's important to note that availability may vary. We cannot guarantee that all the parts depicted in our inventory are always available for purchase. To ensure you can acquire the specific parts you need, we recommend reaching out to our customer service or technical support team for the most up-to-date information on part availability. Your satisfaction is our priority, and we are here to assist you in every way possible.

Machine Diagram

Please see next page.



Parts List

Key	Part #	Description	Qty
9	PBBPBS1009	Rivet 4x8MM	4
10	PBBPBS1010	Leaf Spring	2
15	PBBPBS1015	Blade Tension Knob Cap	1
16	PBBPBS1016	Blade Tension Knob Body	1
17	PBBPBS1017	Blade Tensioner	1
18	ZFWM800000	Washer Flat M8	1
19	ZFGNM610000	Flange Nut M6-1.00	4
20	ZCSBM812550	Carriage Bolt M8-1.25X50MM	1
21	PBBPBS1021	Bushing Ring	4
22	PBBPBS1022	Top Plug	1
23	PBBPBS1023	Frame	1
24	ZHXBM610012	Bolt Hex M6-1.00X12MM	4
25	ZNYNM610000	Lock Nut M6-1.00	1
26	ZFWM600000	Washer Flat M6	1
27	PBBPBS1027	Gear	1
28	PBBPBS1028	Special Spring Washer	1
29	PBBPBS1029	Tube	1
30	PBBPBS1030	Plastic Nut	1
31	PBBPBS1031	Adjusting Knob Body	1
32	PBBPBS1032	Adjusting Knob Cap	1
35	ZHXBM610060	Bolt Hex M6-1.00X60MM	1
36	ZHXNM610000	Hex Nut M6-1.00	1
37	PBBPBS1037	Wing Nut	1
38	ZFWM600000	Washer Flat M6	1
39	PBBPBS1039	Tapping Screw ST3.5X13	2
40	PBBPBS1040	Rack	1
41	PBBPBS1041	Slider	1
42	ZCABM812520	Carriage Bolt M8-1.25X20MM	1
43	PBBPBS1043	Bolt Guide	1
44	PBBPBS1044	Wing Nut	1
45	PBBPBS1045	Blade Guide	1
46	ZTNTM610000	T-Nut M6-1.00	2
47	ZHXBM610010	Hex Bolt M6-1.00X10MM	2
48	ZTNTM610000	T-Nut M6-1.00	1
49	ZFWLGM60000	Washer Large M6	1
50	ZCHSM610025	Hex. Socket set screw M6-1.00X25MM	1
51	PBBPBS1051	Ratchet Handle	1
61	ZCABM610035	Carriage Bolt M6-1.00X35MM	1
62	PBBPBS1062	Guide Piece	1

Key	Part #	Description	Qty
63	PBBPBS1063	Upper Table Trunnion	1
64	ZSWM600000	Lock Washer 6	4
65	ZHXBM610012	Hex Bolt M6-1.00X12MM	4
66	PBBPBS1066	Lower Table Trunnion	1
67	ZCABM610016	Carriage Bolt M6-1.00X16MM	4
68	PBBPBS1068	Wing Nut	1
69	ZFWM600000	Washer Flat M6	1
70	ZFGNM610000	Flange Nut M6-1.00	4
71	PBBPBS1071	Indicator	1
72	PBBPBS1072	Tapping Screw ST3.5X9.5	1
73	PBBPBS1073	Table With Insert	1
75	ZCHSM610030	Screw Cap HD M6-1.00X30MM	1
76	ZFWM600000	Washer Flat M6	3
77	PBBPBS1077	Wing Nut	1
78	PBBPBS1078	Fence Clamp	1
79	PBBPBS1079	Threaded Rod	1
80	PBBPBS1080	Spring	1
81	PBBPBS1081	Rod Guide	1
82	PBBPBS1082	Fence	1
83	ZFHSM610010	Screw Flat HD M6-1.00X10MM	2
84	PBBPBS1084	Rod Guide	1
85	PBBPBS1085	Guide Rail	1
86	PBBPBS1086	Fence Carrier	1
87	PBBPBS1087	Connecting Screw Rod	1
88	ZFWM100000	Washer Flat M10	1
89	PBBPBS1089	Fence Handle	1
90	ZPIN03180000	Roll Pin 3x18MM	1
91	PBBPBS1091	Star Knob Screw	2
92	ZFWM600000	Washer Flat M6	2
103	ZNYNM610000	Lock Nut M6-1.00	1
104	ZFWM600000	Washer Flat M6	1
105	ZFWLGM600000	Washer Large M6	1
106	ZHXBM610020	Bolt Hex M6-1.00X20MM	1
109	PBBPBS10109	Guide Key	1
125	ZCHSM812530	Screw Cap HD M8-1.25X30MM	2
126	ZSWM800000	Washer Spring M8	2
127	ZFWM800000	Washer Flat M8	2
128	BBPBS10MOT	Motor	1
129	ZHXBM610020	Bolt Hex M6-1.00X20MM	4
130	ZHXNM610000	Nut Hex M6-1.00	4

Key	Part #	Description	Qty
131	PBBPBS10131	Lower bearing bolt	1
132	ZHXNM142000	Nut Hex M14-2.00	1
133	PBBPBS10133	Motor pulley	1
134	ZCHSM610010	Screw Cap HD M6-1.00X10MM	1
135	PBBPBS10135	Drive Belt	1
136	ZBRG6001ZZ00	Bearing 6001ZZ	4
137	ZCRX0002800	Retaining Ring 28MM	4
138	PBBPBS10138	Lower Wheel	1
139	PBBPBS10139	Tire	2
140	zcrx0001200	Retaining Ring 12MM	4
141	PBBPBS10141	Saw Blade	1
142	PBBPBS10142	Upper Wheel	1
143	PBBPBS10143	Upper Bearing Bolt	1
144	PBBPBS10144	Wheel Carrier Bracket	1
145	ZHXNM142000	Nut Hex M14-2.00	1
146	PBBPBS10146	Star Lock	2
147	PBBPBS10147	Mount Shaft	1
148	PBBPBS10148	Blade Tensioner	1
149	ZCABM812570	Bolt Carriage M8-1.25X70MM	1
150	PBBPBS10150	Brush Strip	1
151	ZFGNM812500	Nut Flange M8-1.25	1
152	ZHXBM610035	Bolt Hex M6-1.00X35MM	1
153	ZHXNM610000	Nut Hex M6-1.00	1
154	PBBPBS10154	Cable With Plug	1
155	ZSWM400000	Washer Lock M4	2
156	ZFWM400000	Washer Flat M4	2
157	ZPHSM407008	Screw Pan HD M4-0.70X8MM	2
158	PBBPBS10158	Switch cover plate	1
159	PBBPBS10159	Lock Switch	1
160	ZPHSM407012	Screw Pan HD M4-0.70X12MM	4
161	PBBPBS10161	Tension Bracket	1
162	PBBPBS10162	Rubber Tube	1
163	ZFWM800000	Washer M8	2
164	ZNYNM610000	Nut Lock M6-1.00	4
165	PBBPBS10165	Bushing	4
166	ZCHSM610020	Screw Cap HD M6-1.00X20MM	2
167	PBBPBS10167	Upper Door Assembly	1
168	ZCHSM610025	Screw Cap HD M6-1.00X25MM	2
169	PBBPBS10169	Handle	2
170	PBBPBS10170	Lower Door Assembly	1

Key	Part #	Description	Qty
171	PBBPBS10171	Knob Assembly	1
172	ZFWM800000	Cord Strain Relief	1
173	PBBPBS10173	Nut	1
174	PBBPBS10174	Lower Guide Assembly	1
175	ZPHSM508010	Screw Pan HD Cross Recessed M5-0.80X10MM	1
176	PBBPBS10176	Plate	1
177	PBBPBS10177	Upper Guide Assembly	1
178	PBBPBS10178	Scale	1

Busy Bee Tools

Busy Bee Tools warrants every product to be free from defects in materials and agrees to correct such defects where applicable. This warranty covers ***two years*** for parts and 90 days for labor (unless specified otherwise), to the original purchaser from the date of purchase but does not apply to malfunctions arising directly or indirectly from misuse, abuse, improper installation or assembly, negligence, accidents, repairs or alterations or lack of maintenance.

Proof of purchase is necessary.

All warranty claims are subject to inspection of such products or part thereof and Busy Bee Tools reserves the right to inspect any returned item before a refund or replacement may be issued.

This warranty shall not apply to consumable products such as blades, bits, belts, cutters, chisels, punches etc.

Busy Bee Tools shall in no event be liable for injuries, accidental or otherwise, death to persons or damage to property or for incidental contingent, special or consequential damages arising from the use of our products.

IF THE MACHINE IS ALTERED IN ANY WAY, THE WARRANTY SHALL BE NULL AND VOID.

RETURNS, REPAIRS AND REPLACEMENTS

To return, repair, or replace a Busy Bee Tools product, you must visit the appropriate Busy Bee Tools showroom or call 1-800-461-BUSY.
For replacement parts directly from Busy Bee Tools, for this machine, please call 1-800-461-BUSY (2879), and have your model number and part number & payment option ready.

- All returned merchandise will be subject to a minimum charge of 15% for re-stocking and handling with the following qualifications.
- Returns must be pre-authorized by us in writing.
- We do not accept collect shipments.
- Items returned for warranty purposes must be insured and shipped pre-paid to the nearest warehouse
- Returns must be accompanied with a copy of your original invoice as proof of purchase. Returns must be in an un-used condition and shipped in their original packaging a letter explaining your reason for the return. Incurred shipping and handling charges are not refundable.
- Busy Bee will repair or replace the item at our discretion and subject to our inspection.
- Repaired or replaced items will be returned to you pre-paid by our choice of carriers.
- Busy Bee reserves the right to refuse reimbursement or repairs or replacement if a third party without our prior authorization has carried out repairs to the item.
- Repairs made by Busy Bee Tools are warranted for 30 days on parts and labour.
- Any unforeseen repair charges will be reported to you for acceptance prior to making the repairs.
- The Busy Bee Parts & Service Departments are fully equipped to do repairs on all products purchased from us with the exception of some products that require the return to their authorized repair depots. A Busy Bee representative will provide you with the necessary information to have this done.
- For faster service it is advisable to contact the nearest Busy Bee location for parts availability prior to bringing your product in for repairs.