Busy Bee Tools

24” Premium Band Saw

BBPBS24

User’s Manual

General Shop Safety instructions

Notice: Safety First! The paramount concern in operating this equipment is safety. It is imperative to adhere strictly to the following instructions. Neglecting any of the listed guidelines may lead to risks such as electric shock, fire hazards, or severe personal injury.

This tool is specifically designed for certain applications. We emphasize the importance of refraining from modifying or repurposing the tool for any other use beyond its designated application. If you have inquiries regarding its appropriate application, refrain from using the tool until you have communicated with us and received our guidance. Please refer to the below safety symbols

CAUTION — Implies an imminently hazardous situation, which, if not avoided, could result in death or serious injury.

DANGER — Indicates a potentially hazardous situation, which, if not avoided, could result in death or serious injury.

WARNING — Indicates a potentially hazardous situation, which, if not avoided, could result in minor or moderate injury.

Please Note that this manual has some instructions and processes to help you maintain and prolong the life of your machine please perform all the recommended cleaning and maintaining processes diligently.

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Introduction

It is with distinct honor and excitement that we present to you the BBPBS24 Busy Bee Tools Professional Band Saw, a premier addition to our esteemed line of precision woodworking equipment. At Busy Bee Tools, we are committed to engineering excellence, and this machine exemplifies our dedication to providing craftsmen with superior tools for their trade.

This manual has been meticulously crafted to guide you through the setup, safe operation, and maintenance of your new BBPBS24 Professional Band Saw. By following the detailed instructions and recommendations contained within these pages, you can anticipate many years of dependable and satisfying performance. This commitment to quality underscores Busy Bee Tools' promise of enhancing customer satisfaction through innovation and reliability.

Included within this manual are precise specifications, illustrations, and photographs that represent the BBPBS24in its current configuration. Please note, in our pursuit of continual improvement and to exceed industry standards, Busy Bee Tools reserves the right to make enhancements to this model without prior notice.

For your convenience, we continuously update all our product manuals which are available on our website at www.busybeetools.com . We encourage you to visit this site regularly to download the latest updates and ensure that you are always informed about the best practices for operating and maintaining your machine. At Busy Bee Tools, your safety and satisfaction are our utmost priority, and we are dedicated to ensuring that your experience with the BBPBS24 is exceptional.

Welcome to the Busy Bee Tools family, where craftsmanship meets innovation.

Contact us.

In case you require additional assistance or have any further questions, please do not hesitate to reach out to 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 stores across Canada.
Visit our website for the latest deals and for more information.
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.

Components and Control

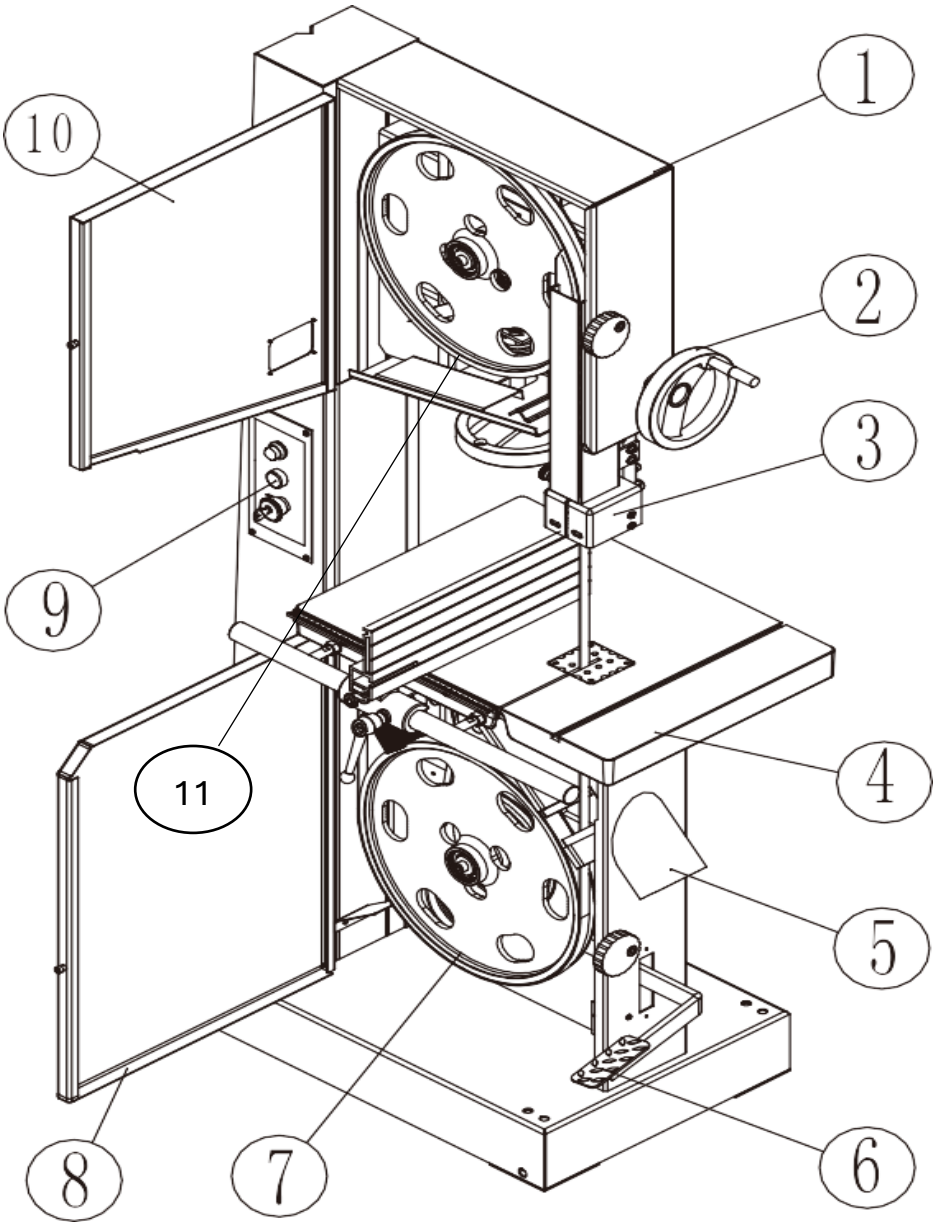

Figure 1: Machine Parts Identification.

1- Upper Wheel
2- Upper Guide Lifting Handwheel
3- Upper Guide
4- Table
5- Dust Port
6- Foot Brake System
7- Lower Wheel
8- Lower Door
9- Switch
10- Upper Door
11- Blade Tension Handwheel

Machine Data Sheet

Power rating:.....230Volt, 60Hz, single phase
Motor.....5 HP
FLA (Full Load Amps).....22 Amp
Starting Amps.....105 Amps
Runing Amps (No load).....9 Amps
Motor Speed.....1720 RPM
Blade Speed.....4920 ft/min (1499 m/min)
Sound Pressure Level.....90 dB (load)
Sound Power Level.....100dB (Load)
Table Size.....27-9/16”X24” (700X608 mm)
Resaw Capacity.....14-9/16”
Throat Capacity.....22-13/16”
Min. Blade Width.....3/8”
Max. Blade Width.....1-3/8”
Blade Length.....176” ± ½” (4470mm)
Wheel diameter.....24”
Dust Port Diameter.....4” (2 Ports)
Packaging Size.....44-1/16”X30-5/8”X85-1/16” (1119X777X2160 mm)
Net Weight.....723lbs (328Kg)

Tools and Accessories

Figure 2: Accessories and Tools.

1- Miter Gauge.
2- Allen keys with holder.
3- Push stick.
4- Fence rail.
5- Fence bracket and resaw fence.

Section 1: Safety

Self Protection and Personal Safety

Familiarize Yourself with Your Power Tool: Carefully study the owner's manual to understand the tool's intended applications, capabilities, and potential hazards.

Pre-Use Checks: Before operating the machine, thoroughly read and adhere to all Safety and Operating Instructions to prevent serious injury and equipment damage.

1. Hazardous Dust Awareness: Acknowledge that certain dust produced by power tools contains chemicals recognized by the State of California as potential causes of cancer, birth defects, or reproductive harm. Examples include lead, crystalline silica, arsenic, and chromium. Minimize exposure by working in well-ventilated areas and utilizing approved safety equipment such as dust masks designed to filter microscopic particles.
2. Comprehensive Manual Reading: Fully acquaint yourself with the Owner's Manual to understand proper tool usage for its designated applications.
3. Grounding Protocol: Ensure all tools are properly grounded by connecting to a 3-contact electrical receptacle as specified. Never remove the grounding prong to prevent accidental electric shock.
4. Environmental Considerations: Avoid using electrical tools in damp or rainy conditions, as well as in the presence of flammable substances.

5. Workspace Organization: Maintain a clean, well-lit, and orderly work area, free from slippery surfaces or hazardous debris.
6. Restricted Access: Prohibit access to the immediate work area, especially during tool operation, to prevent accidents involving visitors or children.
7. Proper Tool Usage: Refrain from forcing tools to perform tasks beyond their designed capacity to ensure safety and optimal performance.

8. Personal Protective Equipment: Wear suitable attire, avoiding loose clothing or accessories that may become entangled in moving parts. Long hair should be covered to prevent contact with machinery.
9. Workshop Safety Measures: Implement childproofing measures such as removing switch keys and padlocking tools when not in use.
10. Electrical Safety: Always disconnect tools from power sources before adjusting, replacing parts, or performing maintenance.

11. Guard Maintenance: Ensure protective guards are in place and functioning correctly to prevent accidents.
12. Startup Precautions: Verify that power switches are in the "OFF" position before connecting to power sources to prevent accidental activation.
13. Clear Workspace: Remove all maintenance tools from the vicinity before initiating machine operation.
14. Correct Accessory Usage: Utilize only recommended accessories to prevent operator injury and tool damage.
15. Respiratory Protection: Wear appropriate dust masks in well-ventilated areas to avoid inhaling harmful particles, following the Canadian Center for Occupational Health and Safety CCOHS/OSHA guidelines for respiratory protection.
16. Supervision During Operation: Never leave tools running unattended; ensure they come to a complete stop before leaving them.
17. Tool Usage Caution: Avoid standing on tools to prevent tipping or accidental contact.
18. Safe Storage Practices: Do not store items above or near tools where they may tempt someone to stand on them to reach.
19. Balance Maintenance: Maintain balance and wear appropriate footwear to prevent slips or falls.
20. Tool Maintenance: Keep tools clean and well-maintained, sharpen blades regularly, and replace worn saw blades and abrasive accessories promptly.
21. Inspection Protocol: Prior to use, thoroughly inspect tools for damaged parts, ensuring all guards are operational and aligned correctly.
22. Operating Conditions: Refrain from operating tools while fatigued or under the influence of drugs, medication, or alcohol.
23. Workpiece Securing: Always secure workpieces with clamps or jigs instead of relying on manual holding.
24. Vigilance During Operation: Stay alert, exercise caution, and use common sense when operating power tools to avoid accidents.
25. Correct Extension Cord Usage: Utilize appropriate extension cords in good condition, ensuring they can carry the necessary current without voltage drops or overheating. Only use 3-wire extension cords with proper grounding.
26. Additional Resources: Access further information regarding safe tool operation from authorized sources.

Machine Safety Instructions

1- Thoroughly Review the Entire Manual Before Operating Machinery: It is crucial to read and understand the complete manual before commencing to operate any machinery. Machinery can pose serious injury hazards to individuals who lack proper training and familiarity with their 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 protective hair covering to confine long hair and ensure you use 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 safe and 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 to never leave machinery unattended while it is still running. Turn the power off 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 using or changing accessories.
16- Verify Guards Are in Place and Functional: Before using machinery, confirm that all safety guards are in place and functioning 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 the machinery on. It is 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 poses risk of injury, so it is 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 poses 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 an appropriate mask or 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 are 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

cutting 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, a feather-board 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 turn the bandsaw off 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 cutoff scraps from the table.
12- **Pre-Operational Protocol**: Prior to commencing operations, ensure thorough familiarity with all operational guidelines outlined herein.
13- Personal Protective Equipment (PPE): It is imperative to consistently utilize approved safety equipment**, including protective eyewear and hearing protection, during machine operation.**
14- **Dust Management and Ventilation**: Always use an suitable dust mask and implement effective dust collection mechanisms alongside appropriate ventilation to uphold occupational health standards.

15- **Guideline Adjustment**: Set the upper guides approximately 1/8” to 1/4” above the material to be cut, ensuring precise operational parameters.
16- **Blade Specification Verification**: Prior to operation, verify the suitability of the blade in terms of size and type relative to the material's thickness and composition to optimize cutting efficacy.
17- **Blade Configuration Optimization**: Ensure meticulous calibration of both blade tension and tracking mechanisms to align with operational requirements.
18- **Pre-emptive Cutting Methodology**: Execute "relief" cuts preceding curved cutting tasks to mitigate blade binding occurrences and enhance operational fluidity.
19- **Post-Operational Safety Protocol:** Always wait for the blade to come to a complete stop prior to removing residual workpieces from the operational surface.
20- **Jam Resolution Protocol**: Refrain from dislodging jammed workpieces until both the machine and blade have ceased operation. Subsequently, disconnect the bandsaw from its power source before undertaking any jam-clearing procedures.
21- **Stability enhancement Measures**: Employ supplementary supports such as roller stands, sawhorses, or tables for sufficiently large workpieces to prevent accidental tipping during operational processes.
22- **Tension Release Procedure**: Release the blade tension when the bandsaw is not operational for prolonged periods of inactivity to maintain equipment integrity and longevity.
23- **Work Area Maintenance**: Routinely eliminate material remnants and debris from the operational environment to uphold cleanliness standards and optimize workspace efficiency.

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 electrical installation work and wiring be carried out by a certified electrician or qualified service personnel. The installation must be fully complyant with all applicable electrical codes and standards in your area.

This proactive approach ensures the safety, reliability, and proper functioning of the machine while 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 220V: 17 Amps, 60Hz,

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 a

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.

If the machine will be sharing an electrical circuit with other equipment, the input and advice of professionals in such cases are crucial to prevent electrical overloads, ensure safety, and promote the efficient function of the machinery

Machine Pre-Wiring and Circuit Requirements

This machine comes prewired for operation on a power supply circuit that meets the following specified requirements:

Figure 3: NEMA6-30 Plug and Receptacle.

Circuit Requirements for 220V:

- Nominal Voltage: 220 Volts
- Cycle: 60 Hz
- Phase: Single-Phase
- Power Supply Circuit: 60 Amps
- Plug/Receptacle: NEMA 6-30P

This machine has the capability to be converted to operate on a power supply circuit that meets these requirements. Detailed instructions for voltage conversion can be found in the provided Voltage Conversion instructions. Ensuring that the power supply circuit aligns with these specifications is essential for safe and effective operation when operating at 220V.

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.

For 220V Operation and Grounding

When operating this machine at 220V, it is crucial to ensure proper grounding and electrical connections. Here are the steps to follow:

1. The plug specified in the "Circuit Requirements for 220V" section, which includes a grounding prong, must be attached to the equipment-grounding wire on the provided power cord.
2. The plug should only be inserted into a matching receptacle, as described in the following figure. This receptacle must be correctly installed and grounded in strict accordance with all local electrical codes and ordinances.

By adhering to these grounding and electrical connection instructions, you can ensure the safe and reliable operation of the machine at 220V while complying with local regulations and safety standards.

Safety Precautions

It is of the utmost importance to ensure the correct and safe connection of the equipment-grounding wire to prevent the risk of electric shock. Here are some crucial guidelines:

1- Identify the Equipment-Grounding Wire: The wire with green insulation (with or without yellow stripes) is designated as the equipment-grounding wire.

2- Power Cord or Plug Repair/Replacement: If repair, or replacement of the power cord or plug is necessary, it is essential not to connect the equipment-grounding wire to a live (current-carrying) terminal. Doing so could pose a severe electric shock hazard.

3- Seek Professional Assistance: If you have any doubts or uncertainties regarding these grounding requirements, or if you are unsure whether the tool is properly grounded, it is strongly recommended to consult with a qualified electrician or service personnel for guidance and assistance.

4- Monitor Cord and Plug Condition: Regularly inspect the power cord and plug for any signs of damage or wear. If you notice any issues, immediately disconnect the cord from power and replace it with a new one to maintain safety.

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.

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/capacity).

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

- HP.....5
- RPM.....1720
- AMP.....17
- Phase.....1
- Class.....B
- Frequency.....60HZ
- Start Capacitor....300µF- 320VAC (Dim. 3.25”X1.66””)
- Run Capacitor...60µF- 450VAC (Dim. 3.66”X2”)

Section 3: Unpacking and Setup

Uncrating the Band Saw

This band saw comes in a wooden crate. Position the crate in its intended final location before proceeding with uncrating. As this band saw is exceptionally heavy, it is strongly recommended to use a forklift or an equivalent lifting device for safe transportation. Carefully remove all fasteners securing the crate and fully disassemble it to expose the band saw. Remove any plastic wrapping along with the accessory boxes. Once uncrated, carefully position the band saw in its designated location.

Hardware Packing List

Initial Cleanup

Clean Rust-Protected Surfaces: Clean all rust-protected surfaces using ordinary household grease or spot remover. Avoid using gasoline, paint thinner, mineral spirits, or similar substances as they may damage painted surfaces.

Apply Paste Wax: Apply a coat of paste wax to the table to prevent rust. Wipe all parts thoroughly with a clean, dry cloth. Alternatively, you might use “Carbon Method” or other conditioning products to prevent rust and optimize the table surface. Be cautious with the pre-installed bandsaw blade, as its sharp teeth may cause injury if touched.

Location Consideration, Lifting and placement

The bandsaw is heavy, 723 lbs, so it is best to assemble the machine near its final location. When moving or positioning an assembled bandsaw, DO NOT use the table or upper blade guard assemblies to grasp it, as this may damage the machine. Move the bandsaw by grasping the support column and lower frame, which are welded together for rigidity. Alternatively, the bandsaw can be moved by laying it down on the back/left side of the column to avoid compromising the table assembly.

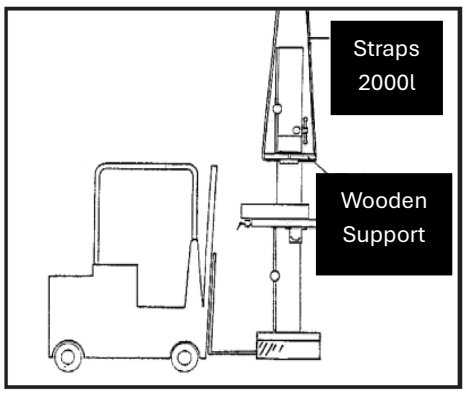

Figure 4: Machine Placement.

Remove from Crate: Carefully remove the machine from the shipping crate. Refer to the instructions above for handling the saw.

Position the Machine: Place the machine on a solid and level foundation with ample space in front, to the right side, and behind the bandsaw for cutting large or long materials. For best power and safety, plug the bandsaw directly into a dedicated grounded electrical outlet within the supplied cord length of the machine. The use of an extension cord is not recommended.

Align for Safety: Align the machine so that during use, the material being cut will not face aisles, doorways, or other work areas where bystanders may be present. Do not locate or use the machine in damp or wet conditions.

Level and Secure: Once positioned in your shop, level the machine using spacers, and secure it to the floor with lag screws (not supplied) through the four holes in the saw's base.

Assembly and Adjustments

Please not that all part numbers mentioned below are from the diagrams of this machine. If you have any questions, please refer to the diagram section at the end of this manual.

Installing the worktable:

The worktable is extremely heavy and may require the assistance of two additional individuals for installation. Ensure safety by following these steps:

1- **Preparation:**
   - Keep the upper and lower band wheel doors closed during table installation.
   - The bandsaw blade is installed at the factory. It is recommended to remove the blade prior to installing the table. Refer to "CHANGING THE SAW BLADE".

2- **Table Installation:**
   - With assistance, carefully lift and position the worktable onto the bandsaw. Use the four bolts, lock washers and flat washers provided in the hardware package see (Fig. 4).
   - Ensure that the table's miter gauge slot is parallel to the side of the saw blade. This alignment is crucial for achieving accurate cuts see (Fig.5).

3- **Alignment Procedure:**
   - Set a thin metal ruler against the side of the saw blade, ensuring it does not touch the saw's teeth, as this can angle the ruler incorrectly.
   - Measure the distance from one end of the ruler to the miter gauge slot (Fig.5).

- Repeat the measurement at the other end of the ruler to the miter gauge slot.
- Compare these two measurements. Adjust the table's angle until both distances are equal, ensuring the table is parallel to the blade.

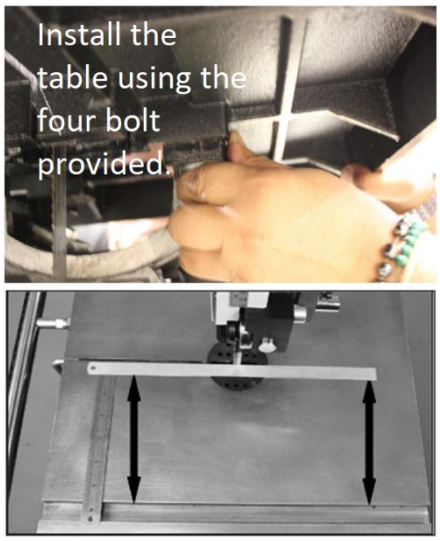

Figure 5: Installing and Aligning the Table.

4- **Secure the Table:**
    - Once the table is aligned parallel to the blade, tighten all four bolts to secure the table in place.

Installing the Fence Guide Rail and Rip Fence:

1- **Mount the Fence Guide Rail:**
    - Locate the fence guide rail and mount it onto the front table edge using two fence bar nuts and washers. Refer to Figure .
    - Ensure the guide rail is parallel to the table surface and equidistant from the front edge at both the left and right sides of the table.
2- **Install the Fence Carrier Assembly:**
    - Slide the fence carrier assembly (#84F) onto the fence's guide rail as shown in Figure .
3- **Attach the Rip Fence:**
    - Slide the rip fence onto the fence carrier and secure it by tightening the fence lock knob, located on the carrier's side opposite the fence (Fig. 6 A).
4- **Secure the Fence:**
    - Use the front locking handle to lock the fence on the rail to prevent movement during assembly (Fig. 6 B).
    - Look at the Final adjustments to the fence and on the re-saw bar section.

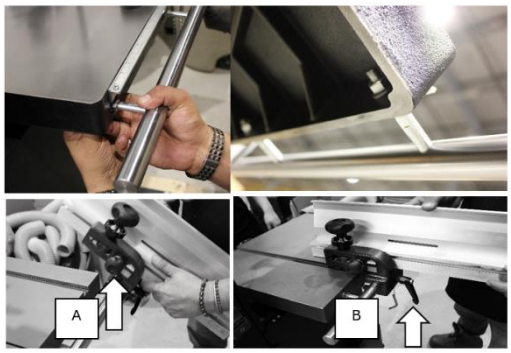

Figure 6: Installing the fence and rails.

Dust Collection

First Run

First Run Inspection

After completing the assembly and adjustments, follow these steps for the first run of the bandsaw:

1- Prepare the Bandsaw:
   - Plug the bandsaw into a grounded electrical outlet.
   - Ensure the worktable and saw are clear of all tools and objects.
2- Start the Bandsaw:
   - Unlock the lock-out button Fig. (A).
   - Press the ON button Fig. (C).

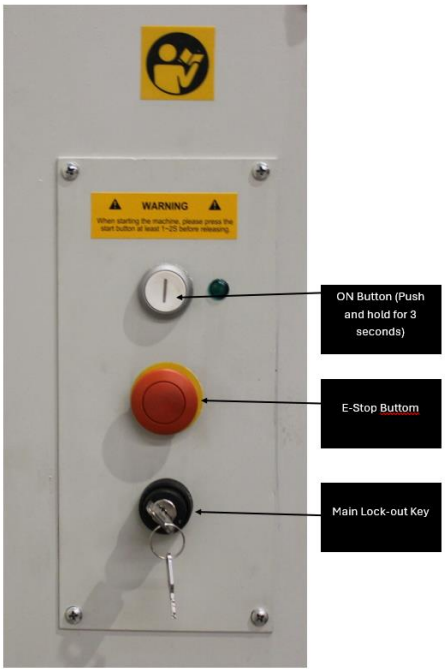

Figure 7: Main Switch box Assembly.

3- Inspect During Operation:
   - Listen for Noises: Pay attention to any strange or unusual sounds.
   - Check Blade Position: Look through the window to ensure the blade is running in the center of the wheel.
   - Verify Blade Guides: Ensure the blade guides are properly positioned and not interfering with the blade's movement.
   - Check Fastenings: Ensure all parts are securely tightened.
4- Complete the Inspection:
   - Turn off the saw Fig. 7 (B).
   - Lock out the saw for safety Fig. 7 (A).

Your first run inspection is now complete, and the bandsaw is ready for use.

Further set up instructions are provided in the Section 4: Operations.

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 this manual in its entirety 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.

Typical Machine Operation Procedure

To operate the machine safely and accurately, follow these steps:

Workpiece Examination: Examine the workpiece to ensure its suitability for cutting, and consider factors such as type of cut, material type, foreign objects, knots, moisture content, warping, etc.

1- Table Tilt Adjustment: If necessary, adjust the table tilt to achieve the desired cutting angle.
2- 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.
3- 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.
4- Clear Workpiece Path: Confirm that the workpiece can safely pass through the blade without encountering any obstructions or interference from other objects.
5- Safety Gear Preparation: Prior to operation, put on safety glasses and an appropriate mask or respirator, if necessary, especially when cutting materials that produce fine dust.
6- Machine Startup: Begin by starting the dust collector to manage dust and then activate the bandsaw itself.
7- 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.
8- 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 Band Saw

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, that means, they can cut along the length of the wood grain.

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

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

Foot Brake Operation

The foot brake Fig. 8 (A) provides an essential safety feature by allowing you to slow and stop the blade without having to reach the main “STOP” button. This feature is particularly useful when handling large workpieces. The foot brake functions as follows:

Engaging the Foot Brake:

- Depress the foot brake lever see (Fig. 8).
- This action pivots the brake pad (B-Fig. 28 against the brake disc on the motor pulley.
- The blade will slow and come to a stop simultaneously.

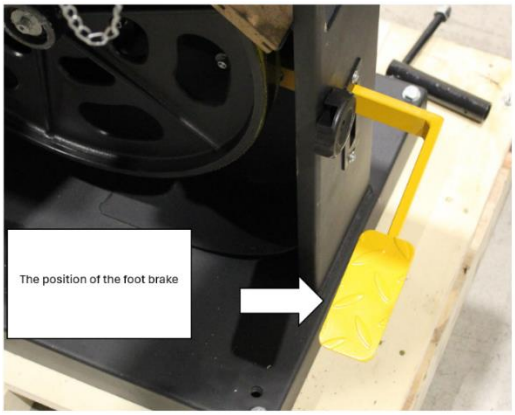

Figure 8: Engaging the Foot Brake.

This mechanism ensures safe operation by allowing immediate stopping of the blade, facilitating safer handling of materials and reducing the need to reach for the switch control station.
Note: Regular maintenance and inspection of the foot brake mechanism are recommended to ensure proper functioning and safety.

Basic Cutting Tips

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

1- Blade 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's 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 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 blow 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"

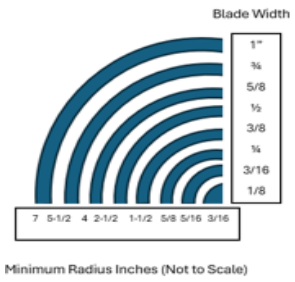

Figure 9: Blade Selection Chart.

Replacing 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.

Step 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.

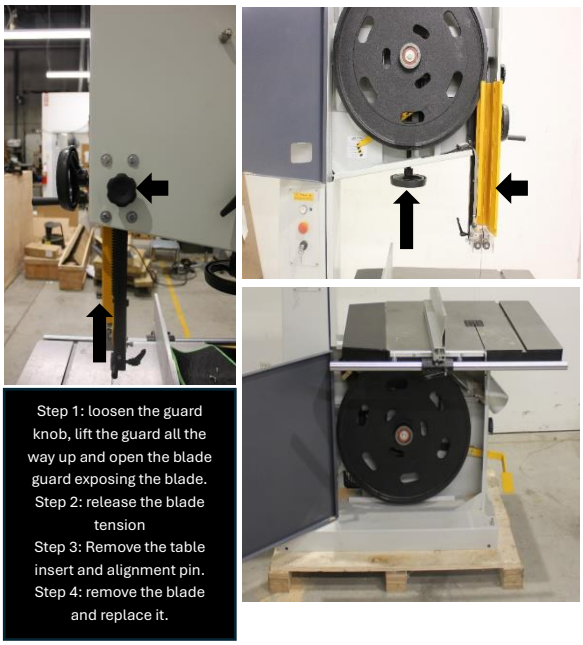

Figure 10: Replacing the Saw Blade.

Step 2: Release Blade Tension

- Locate the blade tension lever, situated at the top of the saw. In case the blade width is changed, the knob located at the top of the saw must be loosened as well (this will allow for proper tension adjustment see blade tensioning section). Turn it to release tension on the current blade.
- Confirm the blade is loose enough by lightly pulling it from the wheels.

Step 3: Remove the Table Insert and Blade Guard

- Remove the table insert (the small plate surrounding the blade). The insert simply lifts out.
- Unscrew the knob that locks the guard and open the front part of the guard (it slides open).

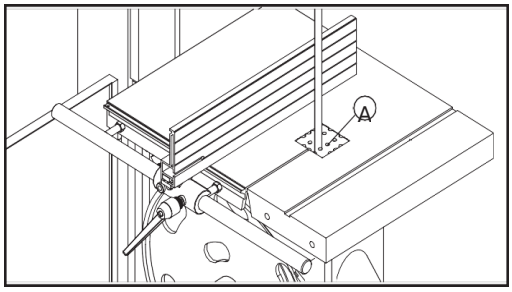

Figure 11: Removing the Table and Table Insert.

Step 4: Remove the Old Blade

- Open both top and bottom doors.
- Carefully slide the old blade off the upper and lower wheels. It should easily come free once the tension is released.
- Position the new blade around both the upper and lower wheels. Ensure the blade's teeth are pointing downward toward the table.
- Thread the blade through the table slot, the left-side spine of the saw, all guides and guard.

Step 6: Re-tension the Blade

- Use the tension knob at the top to apply the correct tension for your new blade. Check the blade

tensioning section and follow the instruction for the appropriate tension setting based on the blade size.

- This band saw is equipped with a tension gauge located on the inside of the top cabinet, next to the top wheel. See tensioning section to help you set the blade tension accurately.

Step 7: Align the Blade

- Adjust the tracking knob (located on the back of the saw) to ensure the blade is centered on the wheels. Turn the upper wheel by hand and watch the blade's position. Fine-tune the tracking until the blade stays aligned.

Step 8: Adjust the Blade Guides

- The blade guides (above and below the table) should be set just behind the blade's teeth. Loosen the guide screws, adjust them to be as close to the blade as possible without touching the blade or causing deflection, and then tighten the screws. Ensure the guide bearings are positioned just behind the blade teeth.
- Do the same for the thrust bearing, which supports the back of the blade.

Step 9: Reinstall the Table Insert and Blade Guard

- Replace the table insert and blade guard. Tighten any screws or clips securing these components.

Step 10: Test the New Blade

- Once everything is reinstalled, manually rotate the upper wheel to check that the blade moves smoothly without obstruction, and that the blade is tracking well on the wheel.
- Plug in the saw and run it at a low speed to test the tracking and tension. Make any final adjustments as needed.
- By following these steps carefully, you can safely and efficiently change the blade on your 18" band saw, ensuring optimal performance for your cutting tasks.

Setting the Blade Guard and Guide

Adjusting the Saw Blade Guard

The adjustable saw blade guard must be positioned as close as possible to the workpiece to ensure optimal safety and cutting precision. To adjust the height, loosen the locking knob (D, Fig.) and rotate the handwheel (E, Fig. 12) to raise or lower the guard. Once the desired position is achieved, securely tighten the locking knob.

Note: This adjustment must always be performed while the machine is completely stopped.

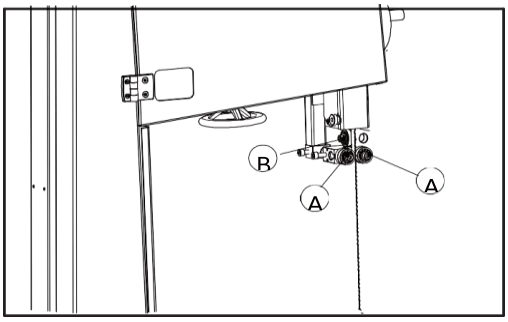

Figure 12: Upper Blade Guide.

Roller Bearings Blade Guide

The roller bearings should make barely make contact with the blade to minimize vibration and maintain proper cutting alignment. The position of the bearings is adjusted using screw “A” (Fig. 13). After achieving the correct positioning, tighten screw “A” to secure the adjustment. The bearings should be positioned approximately 2 mm behind the blade's teeth.

The rear bearing is designed to limit excessive backward movement of the blade during operation. It should be set 1–2 mm from the back of the blade and can be adjusted using screw “B” (Fig. 12).

Lower Saw Blade Guide

The lower roller bearings must make light contact with the blade to reduce vibration and ensure precise cutting direction. These rollers are adjusted using screw “A” (Fig. 13). Once properly positioned, secure the setting by tightening screw “A.” The bearings should be 2 mm behind the blade's teeth.

The thrust shaft functions to prevent excessive backward movement of the blade during operation. It should be positioned 1–2 mm from the back of the blade and can be adjusted using screw “B” (Fig. 13).

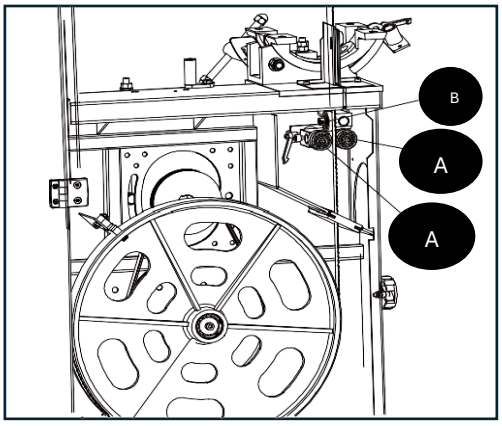

Figure 13: Lower Blade Guide.

Tilting the 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 see (Fig.14).

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 30 (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.

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.

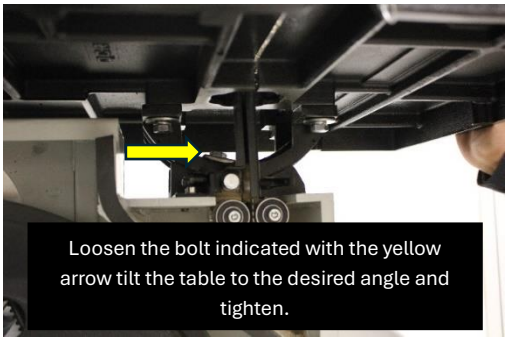

Figure 14: Tilting the Table.

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.

Performing Various Types of Cuts

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 see (Fig. 15):

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 feed the workpiece until the blade has completely passed through it see (Fig.15).

Figure 15: ripping cuts.

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 see (Fig. 16):

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 see (Fig. 16).

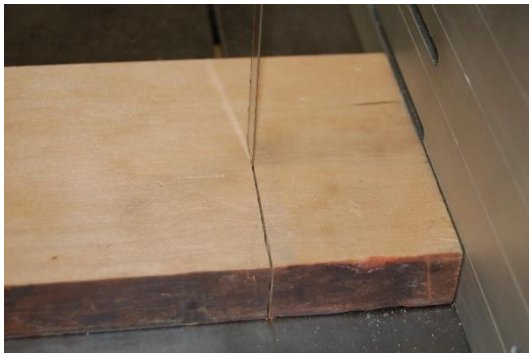

Figure 16: Cross Cutting.

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 See (Fig. 17):

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.

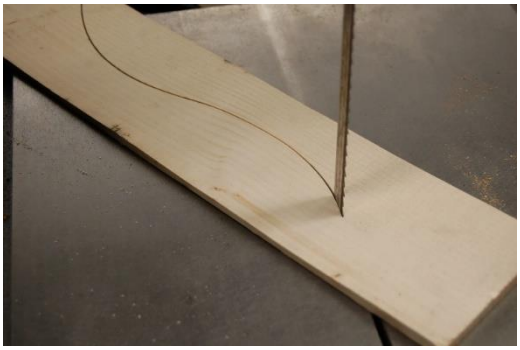

Figure 17: curve Cutting.

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 Cut

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 see (Fig. 18):

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 see figure 33 for the correct blade width for curve cutting.
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.

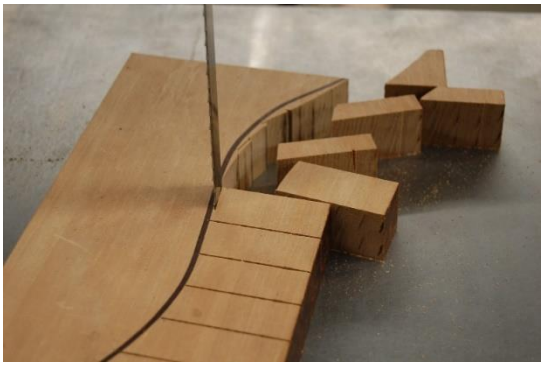

Figure 18: Stacked Cut.

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 see (Fig. 19):

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.

Figure 19: Resaw.

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.
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 a 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

Busy Bee Tools offers a comprehensive selection of high-quality band saw blades designed to meet a wide range of wood-cutting applications. In addition, we provide specialized blade lubricants, cleaning solutions, and rust prevention products to enhance performance and longevity. For expert guidance in selecting the most suitable products for your needs, please consult with one of our knowledgeable sales associates.

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 and 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 the lubrication section of the user 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 and 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 Protection

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-preventing Product such as paste wax, Carbon Method system or similar.

Regular maintenance Tips

1- Clean 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 Brush

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.

Adjusting 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 adjustment brackets for the lower wheel brushes. These brackets allow you to move the brushes closer to the tire as the bristles wear down.
3- Loosen Fasteners: Loosen the fasteners (usually screws or bolts) on the adjustment brackets. This will allow you to make the necessary adjustments.
4- Adjust 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 made the adjustments, tighten the fasteners on the adjustment brackets securely but not overly tight. Ensure the brushes are properly aligned with the tire.
6- Reconnect Power: After completing the adjustments, reconnect the bandsaw to the power source.

To adjust the brush for bristles' wear loosen the bracket's screw and move the brush closer to the wheel (black arrow). When it is time to replace the brush unscrew the brush from the bracket and replace it (red arrow).

Figure 20: Adjusting/ Replacing the Brush.

By regularly checking, cleaning, and adjusting the lower wheel brushes, you will help maintain the effectiveness of the tire cleaning system on your bandsaw. This simple maintenance task contributes to a 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 Prior to 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 spirit 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, repair or replacement them

Applying Lubrication

1- Select Lubricant: Choose an appropriate lubricant for your bandsaw components such as Splitz for the blade lubrication and regular machine grease for the table tilting mechanism. Follow the manual's recommendations for the type of lubricant to use on specific parts. **DO NOT lubricate the bearing or the cast iron trunnion assembly.**
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 provided by the manufacturer.

Specific Bandsaw Maintenance

Guidepost Rack

Lubricating the guidepost rack and pinion on your bandsaw is an important maintenance task to ensure smooth and precise adjustments; regular machine grease is the best to use for this job. Here are the steps to lubricate the guidepost rack and pinion:

Lubricating the 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 guidepost 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.

Figure 21: Guidepost 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 Adjustment Mechanism

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- If there’s a large amount of accumulation you may need to remove the upper wheel.
3- 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 mainly the lead screw (see Figure22). Ensure that these components are clean and free from debris; you may use an air compressor to clear the debris.
4- Apply Lubricant: After cleaning, apply a thin coat of regular machine grease to the cleaned areas of the blade tension assembly and lead screw. This will ensure smooth operation without attracting dust or debris.
5- 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

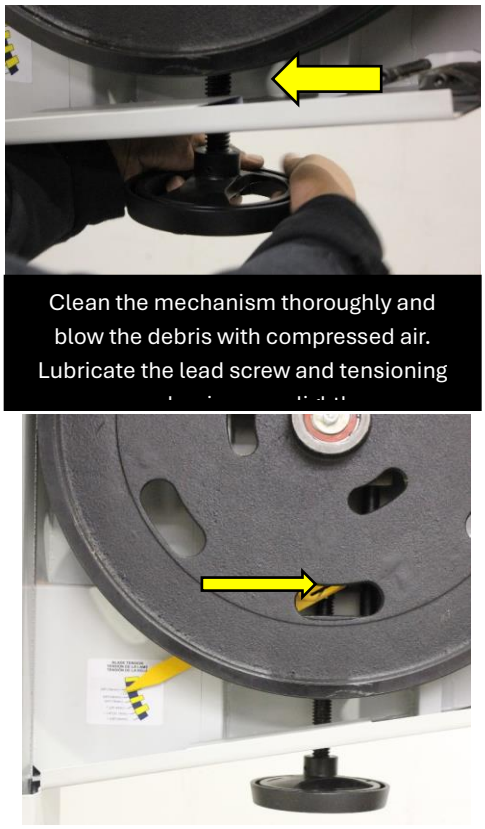

Figure 22: Blade Tension Mechanism Lubrication.

trunnions may create a sticky substance that could impede smooth movement.

6- Close Upper Wheel Cover: After lubricating the necessary components, close the upper wheel cover. Ensure that it is securely fastened in place.
7- 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

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 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 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 the manufacturer's technical support. Provide them with the serial number and manufacture date 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. If you are unsure about a particular issue or procedure, it is best to seek professional assistance to avoid potential risks or damage to the machine.

Section 8: Wiring and Electrical Diagram

Wiring Safety Instructions

It is 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. In order to prevent any electrical accidents always disconnect the power from the machine before servicing electrical components.
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.

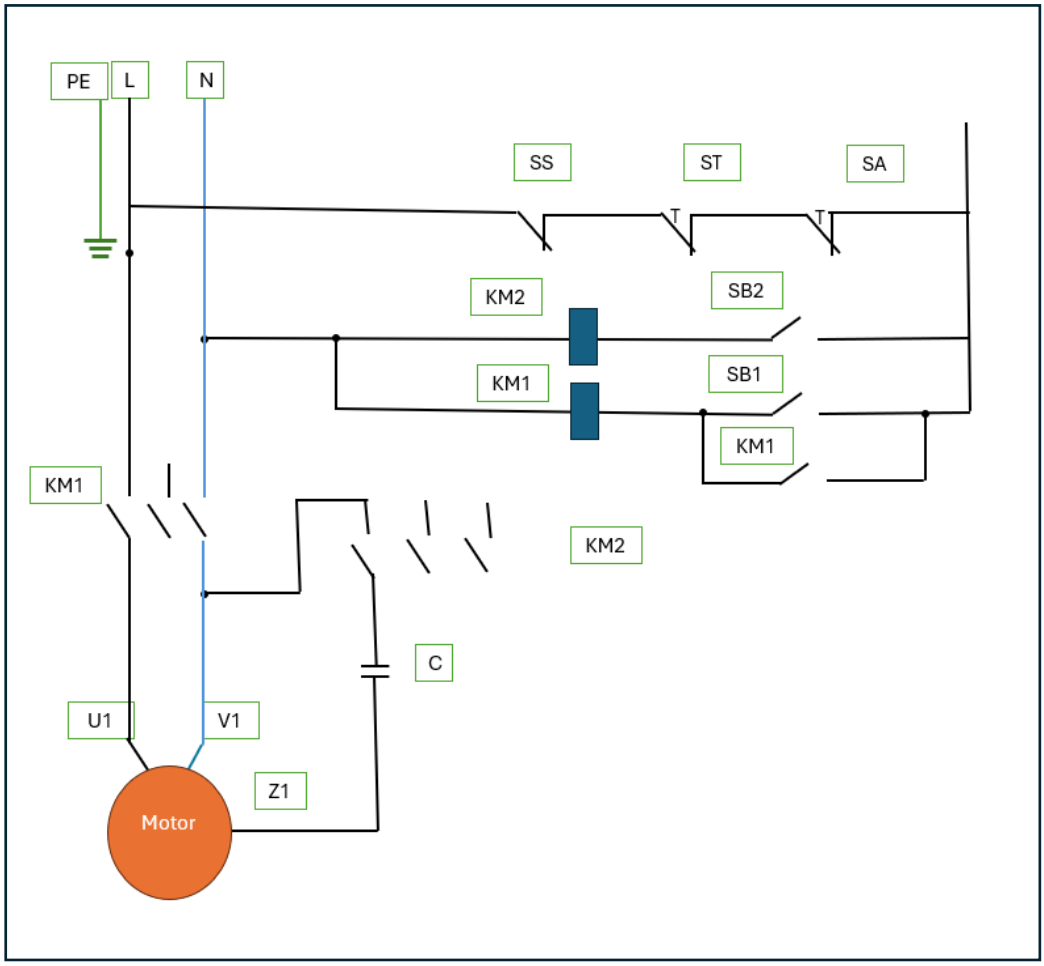

Figure 23: Electrical Wiring Diagram

Section 9: Troubleshooting Guide

Issue	Cause	Solution
The machine doesn't turn ON when switched ON	1- The power supply is OFF. 2- The ON/OFF switch is defective	1- Check the power source. 2- Contact customer service for repairs and replacement of defective switch
The Blade will not run while the motor is moving.	1- The quick release lever or the tensioning mechanism is not tight. 2- The blade is off the wheel. 3- The blade is broken. 4- The drive belt is damaged.	1- Turn the machine OFF tighten the quick release/ tensioning mechanism. 2- Open door, replace the blade if broken or reinstall it is off the wheel. 3- Replace the bad belt.
The blade isn't cutting in a straight line	1- The fence isn't used. 2- The feed rate is too fast. 3- The blade is dull and damaged. 4- The blade guide needs adjustments.	1- Reinstall the fence. 2- Reduce the feed rate. 3- Replace the blade if damaged. 4- The blade guide should be ¼" above the workpiece.
The blade isn't cutting or it's cutting very slowly	1- The blade is dull. 2- The teeth direction on the blade is oriented upside down.	1- Replace the blade, use 6TPI for soft wood and material, use 14TPI for harder woods and material. 2- Inspect the teeth's direction and reverse it if necessary.
There's buildup of saw dust inside the machine	1- This is normal	A periodic clean up must be performed at least on weekly basis. Use a dust collector with a minimum 650CFM capacity
Excessive sawdust buildup inside the motor housing.	1- This is due to excessive buildup on the exterior of the machine's components	A periodic clean up must be performed at least on weekly basis. This is a must to maintain the machine working properly.
The table will not cut at 45° or 90°	1- The table adjustment isn't done correctly. 2- 2- The blade is dull, and it is bending and twisting under pressure.	1- Follow the angle adjustment steps in the setup section of the manual. 2- Replace the dull blade immediately/.

You are unable to place the blade on the band wheels.	1- The blade tracking was changed. 2- The blade's quality is not acceptable. 3- The wheel alignment is off.	1- Readjust the tracking of the blade. 2- Replace the lower quality blade with a new high-quality blade. 3- Adjust the lower wheel see instructions below.

Replacing the Drive Belt

The procedure for replacing the motor's drive belt. Before proceeding with the replacement of the motor drive belt, ensure the bandsaw is disconnected from the power source to prevent any potential electrical hazards. Release the tension on the saw blade by activating the quick release blade tension lever.

1- **Loosening Motor Fasteners**: Access the internal components of the machine and proceed to loosen the two Hex Bolts (Part #92, see Fig. 38 (A) that secure the motor to the frame. Additionally, loosen the Hex Nut (Part #54, see Fig. 38, B) situated on the top of the Motor Adjusting Rod. This action will allow the motor to be maneuvered downward for belt adjustment purposes.
2- **Lower Wheel Removal**: Remove the lower wheel (Part #9B) from the Wheel Assembly by disengaging the hex head bolt (Part #1, see Fig. 37, A) and washer located at the center of the wheel's hub. Carefully slide the lower wheel off the lower wheel shaft while simultaneously removing the saw blade from the wheel.
3- **Drive Belt Replacement**: Extract the old drive belt from the wheel's pulley and proceed to install the new belt. Ensure proper alignment of the ribs in the drive belt with the pulley grooves before proceeding with reassembly.
4- **Reassembly Process**: Reinstall the lower wheel onto the lower wheel shaft and reattach the saw blade to the wheel. Reverse the disassembly procedure to reassemble the various components of the saw.
5- **Belt Tensioning**: Tension the drive belt until achieving a deflection of 3/8". Adjust the tension by either pushing the motor downward for reduced tension or lifting the motor upwards for increased tension. Refer to page () for detailed instructions on Adjusting the Drive Belt Tension.

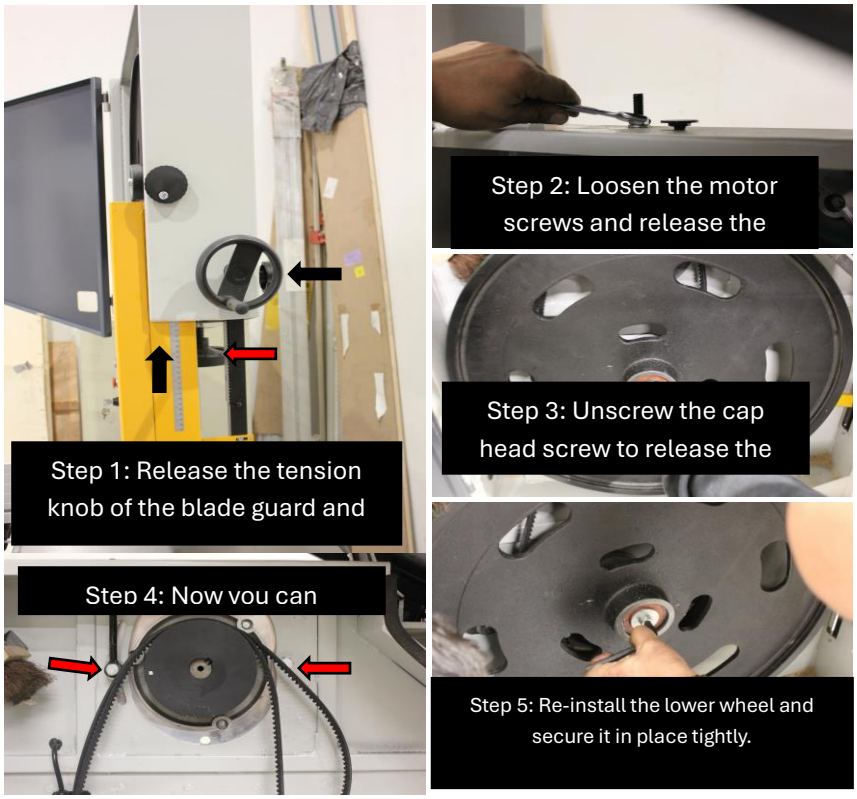

Figure 24: Changing the Motor Belt.

NOTE: Beneath the frame, there exists a secondary hex nut Fig. 27 (step 2) on the motor pulling rod. This nut must also be loosened to facilitate upward movement of the motor for tension adjustment. Once the desired belt tension is achieved, securely tighten the motor mounting nuts that were previously loosened during the initial steps.

Lower Wheel Adjustment

The following instructions outline the corrective measures for common blade alignment issues related to the lower wheel's positioning relative to the upper wheel. These adjustments aim to rectify the blade's placement on the lower wheel and optimize the performance of the bandsaw.

CAUTION : Please carefully review and comprehend these steps before proceeding with any adjustments. Failure to do so may result in damage to the machine. However, performing these adjustment are NOT recommended unless you are proficient at this process.

1- Release Blade Tension: Before initiating any adjustments to the lower wheel, ensure that the blade tension is completely released. This step is essential to facilitate proper adjustments and prevent potential damage to the machine.

2- Identify Alignment Issue: If the blade is not running true or is not centered on the lower wheel while it is correctly positioned on the upper wheel, an adjustment to the wheel hub at the rear of the bandsaw is necessary.
3- Wheel Hub Adjustment: The numbers depicted on the rear hub photo correspond to positions on a clock face. To aid in identifying the extent of rotation on a bolt, mark a black dot on the edge of the bolt as a visual indicator.

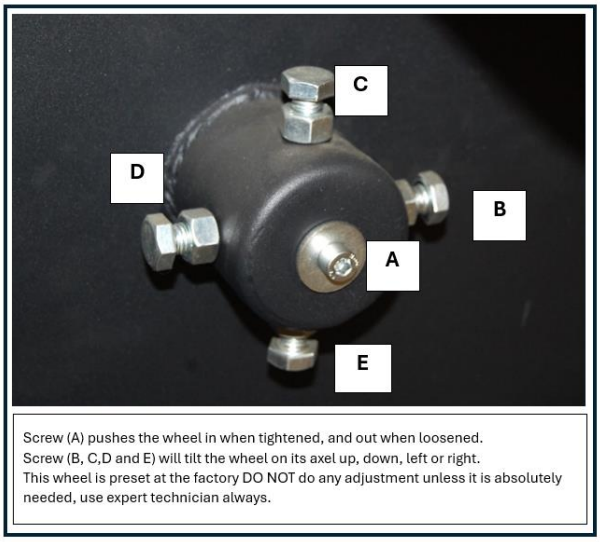

Figure 25: Lower Wheel Adjustment.

Correction Steps for Forward Tracking Blade:

- De-tension the saw blade.
- Loosen the shaft bolt located at the 12 o'clock position by rotating it one half turn.
- Tighten the shaft bolt positioned at 6 o'clock until the shaft makes contact with the 12 o'clock adjusting bolt.
- Securely lock all three shaft bolts.
- Re-tension the saw blade and adjust the upper wheel to plumb by manipulating the tracking knob. Rotate the upper wheel manually and observe the blade tracking.
- Repeat the adjustment process if further corrections are deemed necessary.

By meticulously following these steps, you can effectively address blade alignment issues and ensure optimal performance of the bandsaw.

Changing the Bandsaw Tire

To remove the tire from the wheel, utilize a putty knife to gently insert it underneath the tire and gradually lift it away from the wheel. Utilize the putty knife to maneuver around the entire circumference of the wheel, loosening the tire. Subsequently, utilize the putty knife

as a lever to flip the tire over and detach it from the wheel. Ensure thorough cleaning of the wheel groove, eliminating any dirt, debris, or cement residue using lacquer thinner.

Prepare the replacement tire by soaking it in hot water to enhance its flexibility. Once dried, while still hot, position the tire onto the wheel. Initiate the placement process by inserting the tire into the wheel groove at the top. Utilize a putty knife to carefully maneuver the new tire around the wheel, ensuring to avoid causing any damage to the tire surface. If employing rubber cement as a binding agent, ensure uniform distribution across the wheel and tire inner face. Uneven surfaces between the wheel and tire can result in vibrations and adversely affect blade tracking.

Replacing/ Adjusting the Wheel Brush

When the wheel brush needs adjustment there are 3 bolts that'll enable you to adjust the brush. Cap screw 1 (black arrow) is for up/down adjustment this will lift or lower the brush to bring it closer or farther away from the wheel, and the two Philips head screws (red arrow) will allow you to move the brush in or out.

To adjust the brush for bristles' wear loosen the bracket's screw and move the brush closer to the wheel (black arrow). When it is time to replace the brush unscrew the brush from the bracket and replace it (red arrow).

Figure 26: Wheel Brush Adjustment.

Replacing the Brake Shoe

When it is time to change the brake pad, the lower wheel must be removed (see figure 27), the two bolts highlighted below should be loosened and the new brake pad can be installed; see the figure below.

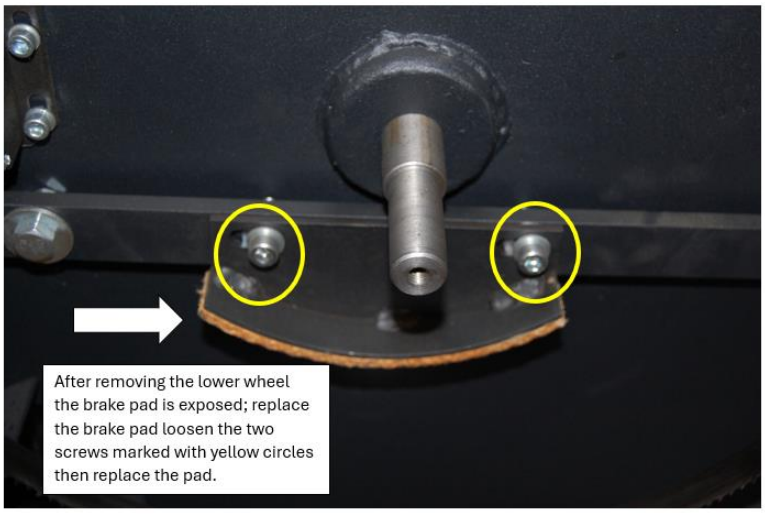

Figure 27: Replacing the brake pad.

Section 10: Machine Diagrams and Parts

While we strive to maintain a comprehensive inventory of replacement parts, it is 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.

Diagrams

Cabinet Diagram

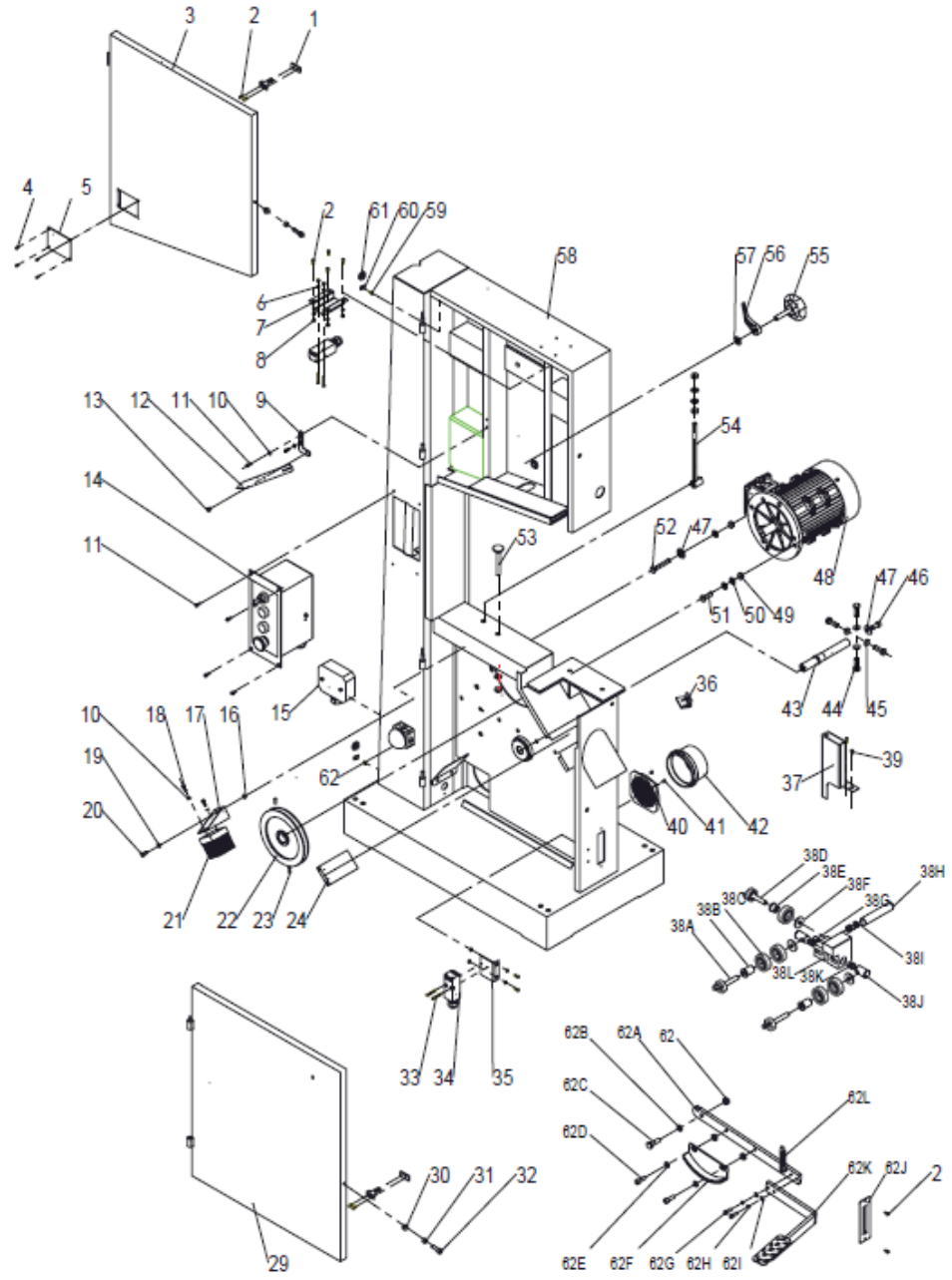

Figure 28

Upper- and Lower-Wheel Assembly

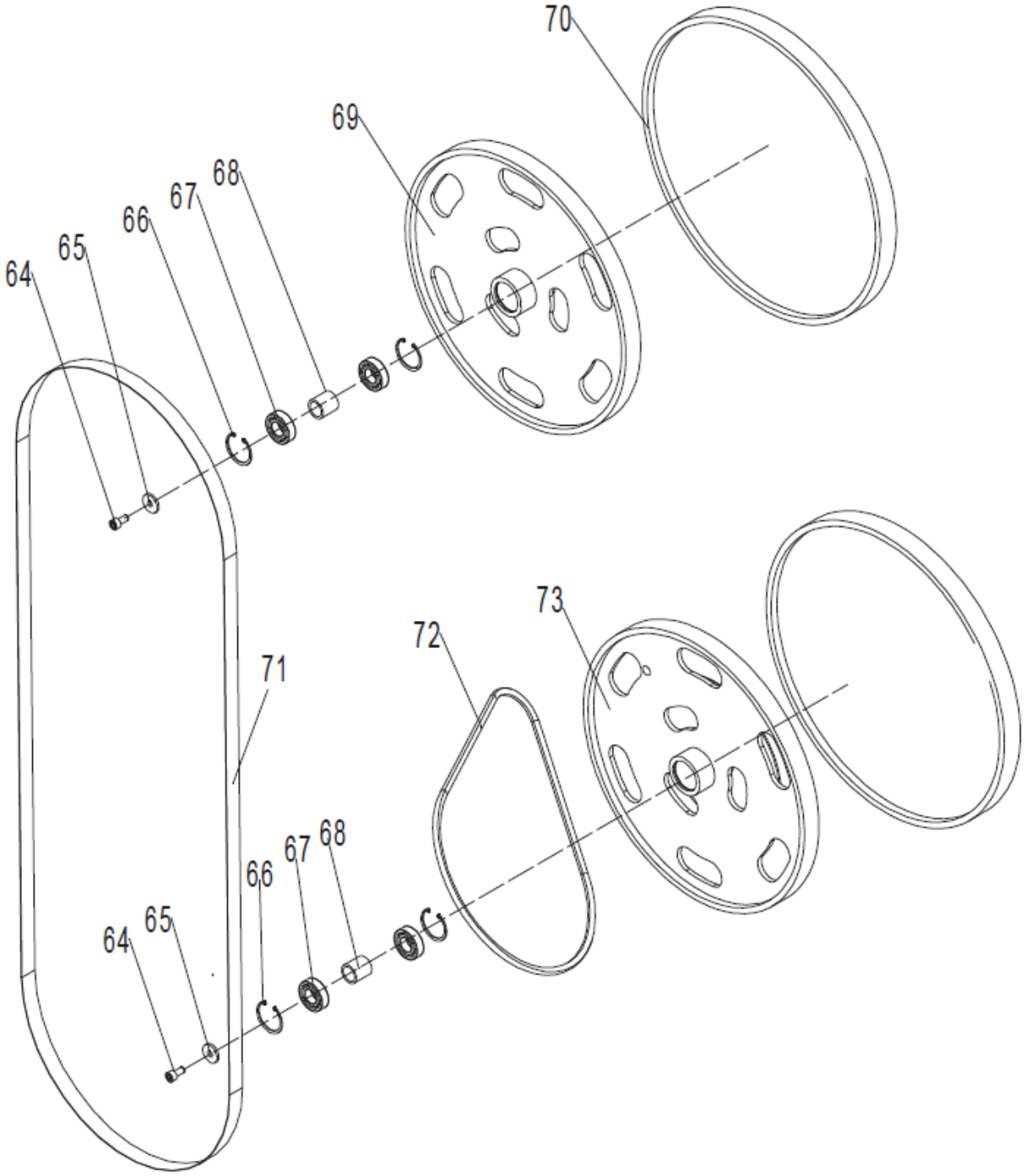

Figure 29

Table and Fence Assembly

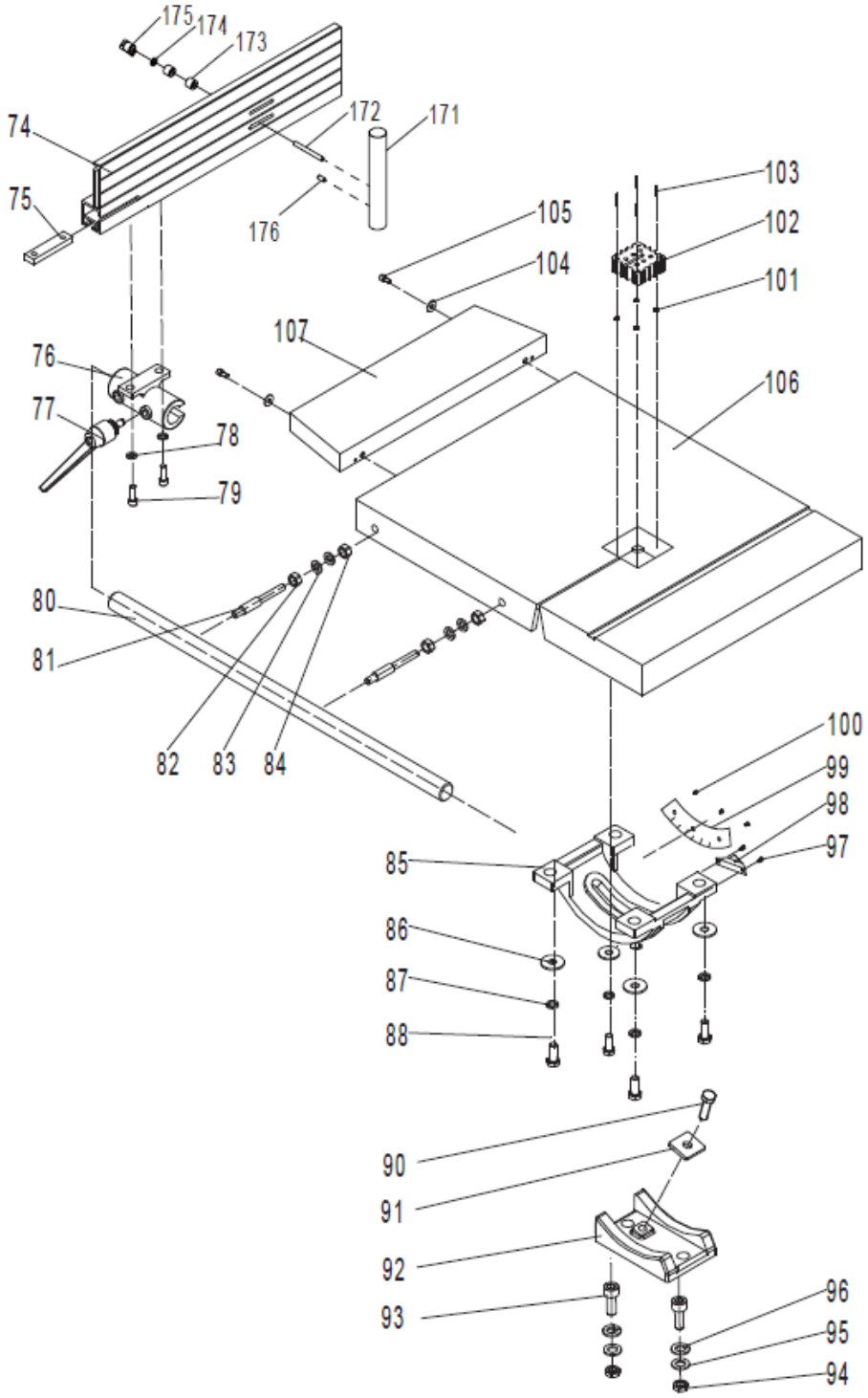

Figure 30

Blade Tensioning Mechanism

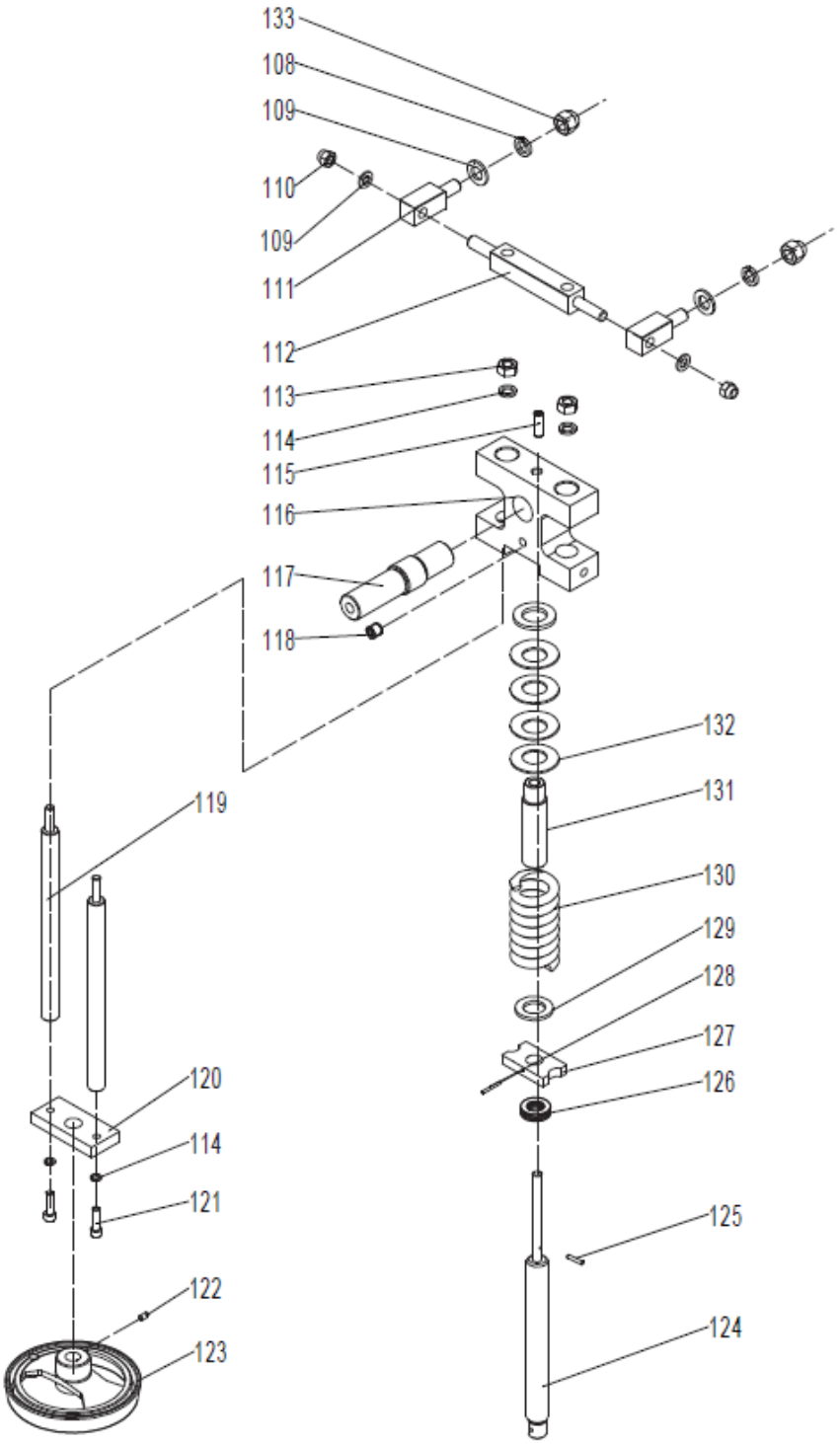

Figure 31

Blade Guard Assembly

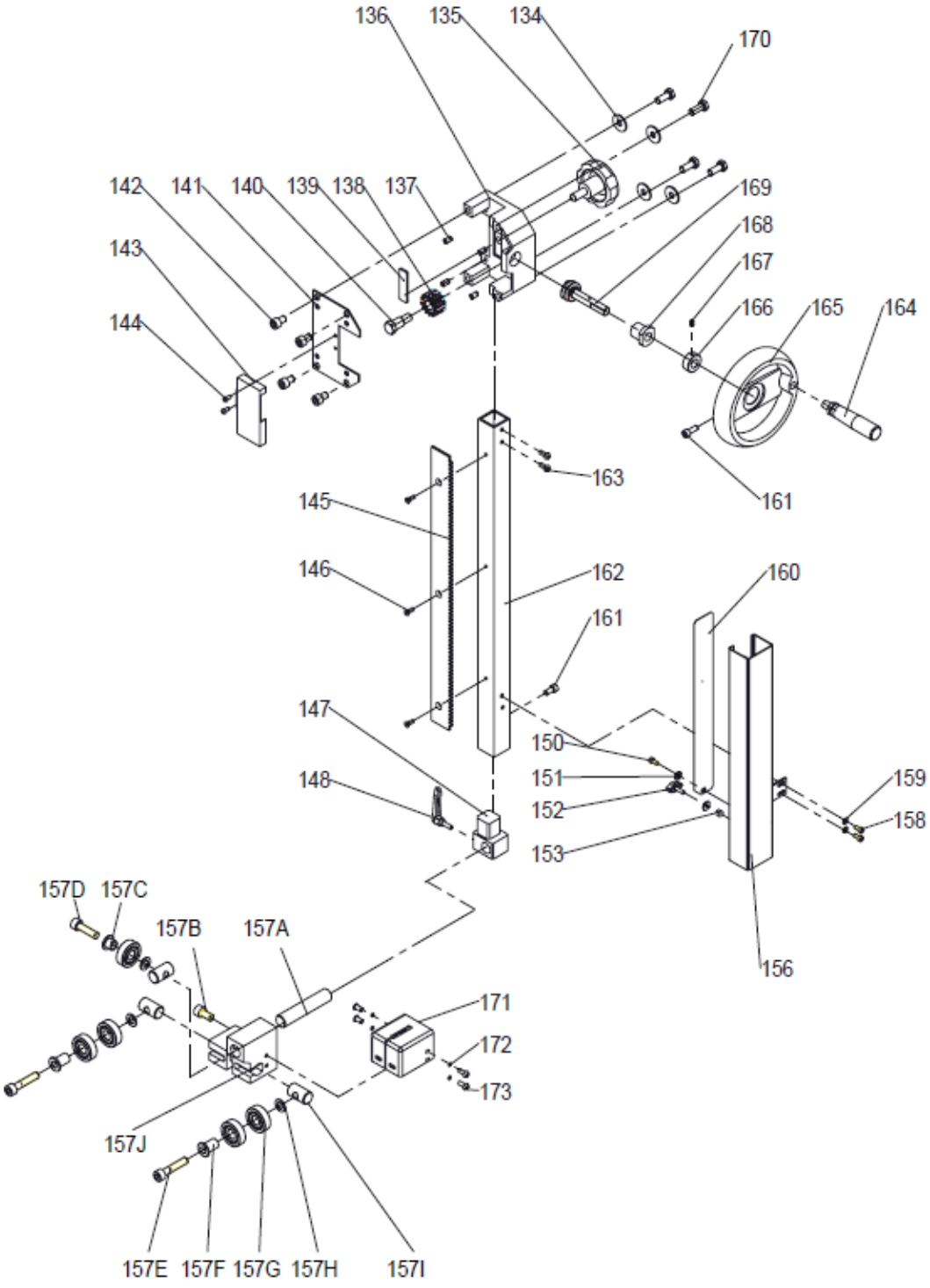

Figure 32

Parts List

Key	Part #	Description	Qty
01	PBBPBS2401	Thread Plate	2
02	ZPHSM407010	Screw - PAN HD M4-0.7 X 10	10
03	PBBPBS2403	Upper Door	1
04	PBBPBS2404	Window Glass	1
05	PBBPBS2405	Blind Rivet RVT3X7	4
06	PBBPBS2406	Pointer Position Plate	1
07	ZFWM500000	Washer - Flat M5	4
08	ZPHSM508010	Screw - PAN HD M5-0.8 X 10	6
09	PBBPBS2409	Pointer	1
10	ZPHSM50804	Pointer Screw M5-0.80x4 MM	1
11	PBBPBS2411	Switch Box	1
12	PBBPBS2412	Wiring box	1
13	ZHXNM610000	Nut - HEX M6-1.0 (THIN)	1
14	PBBPBS2414	Dust Brush Seat (Plate)	1
15	ZSTSST4D816	Self-tapping Screw ST4D8X16	2
16	ZFWM600000	Washer - FLAT M6	3
17	ZCHSM610012	SCREW - CAP HD M6-1.0 X 12 MM	1
18	PBBPBS2418	Dust Bursh 64x53x63 MM	1
19	PBBPBS2419	Motor Pulley	1
20	ZHXBM812510	BOLT - HEX HD M8-1.25 X 10	2
21	PBBPBS2421	Anti-Dust plate	1
22	PBBPBS2422	Lower Door	1
23	ZLKNM610000	NUT - M6-1.0 (NYLOCK)	2
24	PBBPBS2424	Sleeve	2
25	ZCHSM610020	SCREW - CAP HD M6-1.0 X 20 MM	2
26	PBBPBS2426	Connecting Shaft for Lower	1
27	PBBPBS2427	Lower Guide Guard	1
28	ZCHSM812530	Hexagon Socket Cap Screw M8X30	2
29	PBBPBS2429	Lower Bearing Sleeve	2
30	ZBRG6202ZZ	Deep groove Ball Bearing 6202	5
31	ZCHSM812540	Hexagon Socket Cap Screw M8X40	1
32	PBBPBS2432	Upper Bearing Sleeve	1
33	ZFWM800000	Big Washer M8	3
34	CHSM610010	Hexagon socket set screw M6X10	1
35	PBBPBS2435	Lower Guide Shaft	1
36	PBBPBS2436	guide shaft	2
38	PBBPBS2438	Lower guide	1
39	ZHXBM40706	BOLT - HEX HD M4-0.7 X 6	2
40	PBBPBS2440	Suction Grill	1

41	ZSTSST3D59D5	Self-tapping Screw ST3D5X9D5	2
42	PBBPBS2442	Dust port	1
43	PBBPBS2443	Lower Wheel shaft	1
44	AHXBM1217540	Bolt- HEX M12-1.75 X 40	4
45	ZHXNM1217500	Nut- HEX M12-1.75	4
46	ZCHSM1015020	Screw - CAP HEX SOC M10-1.5 X 20	1
47	ZFWM1000000	Washer - Flat M10 (BIG)	2
48	BBPBS24MOT	Motor 220V/60Hz/1PH/5HP	1
49	ZHXNM1015000	Nut - HEX M10-1.5	5
50	ZFWM1000000	Washer - Flat M10	6
51	HXBM1015040	Bolt - HEX M10-1.5 X 40	1
52	ZHXBM1015070	Bolt - HEX M10-1.5 X 70	1
53	ZHXBM1015035	Support Screw M10-1.50x35 MM	1
54	PBBPBS2454	Motor Pull Rod	1
55	PBBPBS2455	Adjustable Handle	1
56	PBBPBS2456	Adjustable Locking Handle	1
57	ZFWM1200000	Washer - Flat M12	1
58	PBBPBS2458	Frame	1
59	HXNM1015000	Nut - HEX M10-1.5	1
60	PBBPBS2460	Connecting Rod	1
61	ZFWM1000000	Washer - Flat M10 (BIG)	1
62	CHSM1015035	Bolt - HEX M10-1.5 X 35	1
63	ZCHSM812520	Screw - CAP HD M8-1.25 X 20	2
64	ZFWM800000	Washer - FLAT M8	2
65	PBBPBS2465	Connecting Rod	1
66	CHSM610025	Screw - CAP HEX SOC M6-1.0 X 25	4
67	ZSWM600000	Washer - SPRING M6	2
68	ZPHSM407010	Screw - PAN HD M4-0.7 X 10 (PHILLIPS)	2
69	PBBPBS2469	Side Cover	1
70	PBBPBS2470	Foot Pedal	1
71	PBBPBS2471	Pull Spring	1
72	ZCHSM1015020	Screw CAP HD M10-1.5 X 20 MM	2
73	ZFWM1000000	Washer FLAT M10 LARGE	2
74	ZCRI00525200	Retaining ring 52	4
75	ZBRG6206ZZ	Bearing 6206ZZ	4
76	PBBPBS2476	Tube	2
77	PBBPBS2477	Upper Wheel	1
78	PBBPBS2478	Tire	2
79	PBBPBS2479	Blade 16x4470±3 MM	1
80	PBBPBS2480	Belt SPZ1180	1
81	PBBPBS2481	Lower Wheel	1

82	PBBPBS2482	Rip Fence	1
83	PBBPBS2483	Lock plate	1
84	PBBPBS2484	Fence Bracket	1
85	PBBPBS2485	Handle	1
86	ZFWM800000	Washer - Flat M8	2
87	ZCHSM812525	Screw CAP HD M8-1.25 X 25	2
88	PBBPBS2488	Fence Guide	1
89	PBBPBS2489	Rod	2
90	ZHXNM1015000	Nut- HEX M10-1.5	2
91	ZFWM1000000	Washer - LARGE M10	4
92	ZHXNM1015000	Nut- HEX M10-1.5	2
93	PBBPBS2493	Slider	1
94	ZFWM1200000	Washer - Flat M12	4
95	ZSWM1200000	Washer - Spring M12	4
96	ZHXBM1217535	Bolt - HEX M12-1.75 X 35	4
97	ZHXBM12175445	Bolt - HEX M12-1.75 X 45	1
98	PBBPBS2498	Large Pad	1
99	PBBPBS2499	Support	1
100	ZHXBM1015045	Bolt - HEX M10-1.5 X 45	2
101	ZHXNM1015000	Nut - HEX M10-1.5	2
102	ZFWM1000000	Washer - Flat M10 (BIG)	2
103	ZSWM100000	Washer - Spring M10	2
104	ZHXNM3050	NUT - HEX M3 X 5	2
105	PBBPBS24105	Angle Pointer	1
106	PBBPBS24106	Angle Indicator	1
107	PBBPBS24107	Rivet RV2D5X5	3
108	ZLKNM508000	Nut - HEX M5-0.8 (NYLOCK)	4
109	PBBPBS24109	Table Insert	1
110	PBBPBS24110	Screw Set M5-0.80 X 30	4
111	ZFWM800000	Washer - Flat M8	2
112	ZCHSM812516	Screw - CAP HEX SOC M8-1.25 X 16	2
113	PBBPBS24113	Table	1
114	PBBPBS24114	Extension Table 595 X 175 MM	1
115	ZSWM1200000	Washer - Spring M12	2
116	ZFWM1200000	Washer - Flat M12	4
117	ZLKNM1217500	Nut - HEX M12-1.75 (NYLOK)	2
118	PBBPBS24118	Thread Rod M12-1.75	2
119	PBBPBS24119	Thread Rod M12-1.75	1
120	ZHXNM1015000	Nut - HEX M10-1.5	2
121	ZSWM100000	Washer - SPRING M10	4
122	ZSTSM812520	Screw - SET M8-1.25 X 20	1

123	PBBPBS24123	Bracket	1
124	PBBPBS24124	Upper Shaft	1
125	PBBPBS24125	Screw - SET M8-1.25 X 8	1
126	PBBPBS24126	Sliding Rod	2
127	PBBPBS24127	Upper shaft	1
128	PBBPBS24128	Screw - SET M10-1.5 X 30	2
129	PBBPBS24129	Screw - SET M6-1.0 X 12	1
130	PBBPBS24130	Handwheel	1
131	PBBPBS24131	Thread Rod Tr22-4.0	1
132	PBBPBS24132	PIN - Roll 3 X 18 MM	1
133	PBBPBS24133	Bearing 51100ZZ	1
134	PBBPBS24134	Block	1
135	PBBPBS24135	PIN - Roll 3 X 30	1
136	PBBPBS24136	Washer - Flat M24	2
137	PBBPBS24137	Sliding Rod	1
138	PBBPBS24138	Tube Φ11 X 100 MM	1
139	PBBPBS24139	Washer - Spring M50	4
140	PBBPBS24140	NUT - HEX M12-1.75	2
141	PBBPBS24141	Washer- Flat M8 (BIG)	4
142	PBBPBS24142	Locking Handle	1
143	PBBPBS24143	Gear Seat	1
144	PBBPBS24144	Screw - Set M6-1.0 X 12	4
145	PBBPBS24145	Bevel Gear Z=14 M=2	1
146	PBBPBS24146	Base Plate	1
147	PBBPBS24147	shoulder screw HEX M10-1.5 X 33	1
148	PBBPBS24148	Seat cover	1
149	PBBPBS24149	Screw-CAP HEX SOC M8-1.25 X 16	4
150	PBBPBS24150	Anti-Dust cover	1
151	PBBPBS24151	Screw- PAN HD M4-0.7 X 4 (PHILLIPS)	2
152	PBBPBS24152	Rack	1
153	PBBPBS24153	Screw - Countersink HD M4-0.7 X 10 (PHILLIPS)	3
154	PBBPBS24154	support Rod Seat	1
155	PBBPBS24155	adjustable Handle	1
156	PBBPBS24156	Screw - CAP SOC HD M6-1.0 X 10	1
157	PBBPBS24157	Washer - Flat M6 (BIG)	2
158	PBBPBS24158	Complex Screw	1
159	PBBPBS24159	Rivet Nut -Countersunk M6-1.0	1
160	PBBPBS24160	Blade Guard Assy.	1
161	PBBPBS24161	Upper Guide Shaft	1
162	PBBPBS24162	Screw - CAP HEX SOC M8-1.25 X 16	1
163	PBBPBS24163	Upper Bearing sleeve	1

164	PBBPBS24164	Screw - CAP HEX SOC M8-1.25 X 30	1
165	PBBPBS24165	Screw - CAP HEX SOC M8-1.25 X 40	2
166	PBBPBS24166	Lower Bearing Sleeve	2
167	PBBPBS24167	Bearing 6201ZZ	5
168	PBBPBS24168	Washer - Flat M8	3
169	PBBPBS24169	Guide Shaft	3
170	PBBPBS24170	Upper Guide	1
171	PBBPBS24171	Screw - CAP HEX SOC M5-0.8 X 10	2
172	PBBPBS24172	Washer - Flat M5 (BIG)	2
173	PBBPBS24173	SPRING - LEAF 535 X 60	1
174	PBBPBS24174	Screw CAP SOC HD M6-1.0 X 16	1
175	PBBPBS24175	Sliding Rod	1
176	PBBPBS24176	Screw - PAN HD M5-0.8 X 10 (PHILLIPS)	3
177	PBBPBS24177	Handle Assy.	1
178	PBBPBS24178	Big Handwheel	1
179	PBBPBS24179	Circlip-EXT 12 MM	1
180	PBBPBS24180	Screw - SET M5-0.8 X 8	1
181	PBBPBS24181	Sleeve M20-2.0	1
182	PBBPBS24182	Worm Z=14 M=2	1
183	PBBPBS24183	Bolt - HEX M8-1.25 X 20	4
184	PBBPBS24184	Protection guard	1
185	PBBPBS24185	Washer - Flat M5	4
186	PBBPBS24186	Sasher- PAN HD M5-0.8 X 16	4
187	PBBPBS24187	Washer - Flat M10 (BIG)	1
188	PBBPBS24188	Screw- CAP HEX SOC M10-1.5 X 16	1

Busy Bee Tools

BUSY BEE TOOLS 2 YEARS LIMITED WARRANTY

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.