

MODEL W1706 14" BANDSAW



OWNER'S MANUFACTURED SINCE 8/10

Phone: (360) 734-3482 · Online Technical Support: tech-support@shopfox.biz

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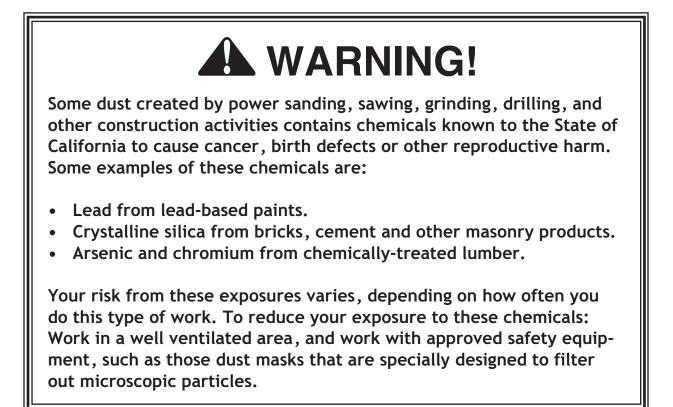
WARNING!

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

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

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

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





INTRODUCTION

SAFETY

ELECTRICAL

SET UP

Contents

INTRODUCTION	
Specifications	
SAFETY Standard Machinery Safety Instructions Additional Safety for Bandsaws	4
POWER SUPPLY Circuit Requirements Grounding Requirements Extension Cords	7 8
SETUP Unpacking Inventory Machine Placement Cleaning Machine Setup Procedures Assembly Dust Collection Blade Tracking Power Connection Test Run Additional Adjustments Tensioning Blade Adjusting Positive Stop Aligning Table Adjusting Fence Adjusting Blade Support Bearings Adjusting Blade Guide Bearings	9 9 10 11 11 13 14 15 16 16 17 18 19 20 21 22
OPERATIONS. General Operation Overview Disabling & Locking Switch Basic Controls. Cutting Overview. Workpiece Inspection Basic Cutting Tips Table Tilt Adjusting Guide Post Ripping.	26 27 28 29 29 30 31 31

Crosscutting33Resawing34Cutting Curves35Stacked Cuts35Blade Speed36Blade Information37Blade Changes39	
ACCESSORIES	
MAINTENANCE41General41Cleaning41Protecting Table41Lubrication41	
SERVICE42General42Redressing Rubber Tires42Belt Service43Shimming Table45Blade Lead46Aligning Wheels47Electrical Safety Instructions50Wiring Diagram51Troubleshooting52	
PARTS 53 Cabinet Stand 53 Body 55 Fence & Miter Gauge 57	
WARRANTY 61	

OPERATIONS MAINTENANCE

USE THE QUICK GUIDE PAGE LABELS TO SEARCH OUT INFORMATION FAST!



INTRODUCTION Woodstock Technical Support

This machine has been specially designed to provide many years of trouble-free service. Close attention to detail, ruggedly built parts and a rigid quality control program assure safe and reliable operation.

Woodstock International, Inc. is committed to customer satisfaction. Our intent with this manual is to include the basic information for safety, setup, operation, maintenance, and service of this product.

We stand behind our machines! In the event that questions arise about your machine, please contact Woodstock International Technical Support at (360) 734-3482 or send e-mail to: <u>tech-support@shopfox.</u> <u>biz</u>. Our knowledgeable staff will help you troubleshoot problems and process warranty claims.

If you need the latest edition of this manual, you can download it from <u>http://www.shopfox.biz</u>. If you have comments about this manual, please contact us at:

Woodstock International, Inc. Attn: Technical Documentation Manager P.O. Box 2309 Bellingham, WA 98227 Email: manuals@woodstockint.com

Specifications

Motor Size Motor Speed	
Power Transfer	
Max. Cutting Width	
Max. Cutting Height	
Table Size	
Footprint	
Overall Height	
Table Height	
Table Angles (Maximum)	
Blade Speeds	1800 and 3100 FPM
Blade Size Range	1/8" to $3/4$ "
Blade Length	
Bearings	Permanently-Lubricated Ball Bearings
Power Control	
Net Weight	



INTRODUCTION

Controls and Features

Refer to **Figures 1-2** and the descriptions below to better understand the controls and features of the Model W1706.

- A. Blade Quick-Release Lever: Quickly releases or engages blade tension for blade changes.
- B. Blade Tracking Knob: Adjusts and locks the blade tracking.
- C. Table Stop: Allows for returning the table to 0° quickly and accurately.
- D. Trunnion Lock Knob: Locks the table in any tilted position from 45° right to 10° left.
- E. Upper Blade Guides: Provides low-friction support and extended blade life.
- F. Blade Guide Lock Knob: Locks the upper blade guides in place.
- G. Guide Post Elevation Handwheel: Moves the blade guides quickly to the desired height.
- H. Blade Tension Knob: Tensions the blade in gradual increments.
- I. Miter Gauge: Provides support for angle cuts.
- J. Fence Rails: Front and rear fence rails provide stable support for the fence.
- K. Storage Cabinet: Offers convenient storage for bandsaw related items.
- L. Locking Fence: Provides support when cutting long workpieces.
- M. ON/OFF Buttons: Toggles power ON and OFF to the motor, and can be locked for safety.

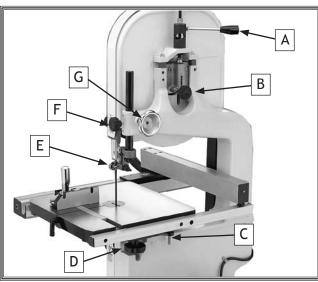


Figure 1. Bandsaw rear view.

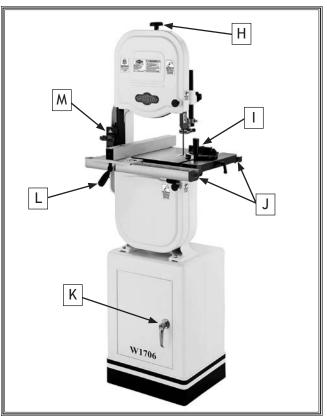


Figure 2. Bandsaw front view.



SAFETY For Your Own Safety, Read Manual Before Operating Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures—this responsibility is ultimately up to the operator!



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

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

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

This symbol is used to alert the user to useful information about proper operation of the equipment, and/or a situation that may cause damage to the machinery.

Standard Machinery Safety Instructions

- **OWNER'S MANUAL.** Read and understand this owner's manual BEFORE using machine. Untrained users can be seriously hurt.
- **EYE PROTECTION.** Always wear ANSI-approved safety glasses or a face shield when operating or observing machinery to reduce the risk of eye injury or blindness from flying particles. Everyday eyeglasses are not approved safety glasses.
- HAZARDOUS DUST. Dust created while using machinery may cause cancer, birth defects, or long-term respiratory damage. Be aware of dust hazards associated with workpiece materials, and always wear a NIOSH-approved respirator to reduce your risk.
- WEARING PROPER APPAREL. Do not wear clothing, apparel, or jewelry that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips which could cause a loss of workpiece control.

- HEARING PROTECTION. Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.
- **MENTAL ALERTNESS.** Be mentally alert when running machinery. Never operate under the influence of drugs or alcohol, when tired, or when distracted.
- DISCONNECTING POWER SUPPLY. Always disconnect machine from power supply before servicing, adjusting, or changing cutting tools (bits, blades, cutters, etc.). Make sure switch is in OFF position before reconnecting to avoid an unexpected or unintentional start.
- DANGEROUS ENVIRONMENTS. Do not use machinery in wet or rainy locations, cluttered areas, around flammables, or in poorly-lit areas. Keep work area clean, dry, and welllighted to minimize risk of injury.



- APPROVED OPERATION. Untrained operators can be seriously hurt by machinery. Only allow trained or properly supervised people to use machine. When machine is not being used, disconnect power, remove switch keys, or lock-out machine to prevent unauthorized use—especially around children. Make workshop kid proof!
- **ONLY USE AS INTENDED.** Only use machine for its intended purpose. Never modify or alter machine for a purpose not intended by the manufacturer or serious injury may result!
- USE RECOMMENDED ACCESSORIES. Consult this owner's manual or the manufacturer for recommended accessories. Using improper accessories will increase the risk of serious injury.
- **CHILDREN & BYSTANDERS.** Keep children and bystanders a safe distance away from work area. Stop using machine if children or bystanders become a distraction.
- **REMOVE ADJUSTING TOOLS.** Never leave adjustment tools, chuck keys, wrenches, etc. in or on machine—especially near moving parts. Verify removal before starting!
- SECURING WORKPIECE. When required, use clamps or vises to secure workpiece. A secured workpiece protects hands and frees both of them to operate the machine.
- FEED DIRECTION. Unless otherwise noted, feed work against the rotation of blades or cutters. Feeding in the same direction of rotation may pull your hand into the cut.
- GUARDS & COVERS. Guards and covers can protect you from accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged, and working correctly before using machine.

- NEVER STAND ON MACHINE. Serious injury or accidental contact with cutting tool may occur if machine is tipped. Machine may be damaged.
- **STABLE MACHINE.** Unexpected movement during operations greatly increases the risk of injury and loss of control. Verify machines are stable/secure and mobile bases (if used) are locked before starting.
- FORCING MACHINERY. Do not force machine. It will do the job safer and better at the rate for which it was designed.
- AWKWARD POSITIONS. Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make workpiece control difficult or increase the risk of accidental injury.
- **UNATTENDED OPERATION.** Never leave machine running while unattended. Turn machine off and ensure all moving parts completely stop before walking away.
- MAINTAIN WITH CARE. Follow all maintenance instructions and lubrication schedules to keep machine in good working condition. An improperly maintained machine may increase the risk of serious injury.
- CHECK DAMAGED PARTS. Regularly inspect machine for damaged parts, loose bolts, mis-adjusted or mis-aligned parts, binding, or any other conditions that may affect safe operation. Always repair or replace damaged or mis-adjusted parts before operating machine.
- **EXPERIENCING DIFFICULTIES.** If at any time you are experiencing difficulties performing the intended operation, stop using the machine! Contact our Technical Support for help at (360) 734-3482.



Additional Safety for Bandsaws



READ and understand this entire manual before using this machine. Serious personal injury may occur if safety and operational information is not understood and followed. DO NOT risk your safety by not reading!

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

- **BLADE CONDITION.** Do not operate with dull, cracked or badly worn blade. Dull blades require more effort to perform the cut and increase the risk of kickback. Inspect blades for cracks and missing teeth before each use.
- HAND PLACEMENT. Never position fingers or hands in line with the blade. If the workpiece or your hands slip, serious personal injury could occur.
- **BLADE REPLACEMENT.** To avoid mishaps that could result in operator injury, make sure the blade teeth face down toward the table and the blade is properly tensioned and tracked before operating.
- SMALL WORKPIECE HANDLING. If your hands slip while holding small workpieces with your fingers during a cut, serious personal injury could occur. Always support/feed the workpiece with push sticks, jig, vise, or some type of clamping fixture.
- **BLADE SPEED.** Moving the workpiece against a blade that is not at full speed could cause the blade to grab the workpiece and draw the operator's hands into the blade. Always allow the blade to come to full speed before starting the cut.
- **CUTTING TECHNIQUES.** Plan your operation so the blade always cuts to the outside of the workpiece. DO NOT back the workpiece away from the blade while the saw is running, which could cause kickback and personal injuries. If you need to back the workpiece out, turn the bandsaw *OFF* and wait for the blade to come to a complete stop. DO NOT twist or put excessive stress on the blade that could damage it.
- FEED RATE. To avoid the risk of the workpiece slipping and causing operator injury, always feed stock evenly and smoothly. DO NOT force or twist the blade while cutting, especially when sawing small curves.
- WORKPIECE MATERIAL. This machine is intended for cutting natural and man-made wood products, and laminate covered wood products. This machine is NOT designed to cut metal, glass, stone, tile, etc.
- **BLADE CONTROL.** To avoid serious personal injury, DO NOT attempt to stop or slow the blade with your hand or the workpiece. Allow the blade to stop on its own.



POWER SUPPLY

Circuit Requirements

This machine must be connected to the correct size and type of power supply circuit, or fire or electrical damage may occur. Read through this section to determine if an adequate power supply circuit is available for this machine. If a correct circuit is not available, you must have a qualified electrician install one before you can operate the machine.

A power supply circuit includes all electrical equipment between the main breaker box or fuse panel in your building and the incoming power connections at the machine. The power supply circuit used for this machine must be sized to safely handle the full-load current drawn from the machine for an extended period of time.

Full-Load Current Rating

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

Full-Load Current Rating at 110V 11 Amps Full-Load Current Rating at 220V 5.5 Amps

Circuit Requirements for 110V (Prewired)

This machine is prewired to operate on a 110V power supply circuit that has a verified ground and meets the following requirements:

Circuit Type	110V/120V, 60 Hz, Single-Phase
Circuit Size	15 Amps
Plug/Receptacle	NEMA 5-15

Circuit Requirements for 220V

This machine can be converted to operate on a 220V power supply. To do this, the motor will need to be rewired and a new plug installed on the power cord; refer to the **Wiring Diagram** on **Page 51** for details. The intended 220V circuit must have a verified ground and meet the requirements that follow:

Circuit Type	220V/240V, 60 Hz, Single-Phase
Circuit Size	15 Amps
Plug/Receptacle	NEMA 6-15

AWARNING

The machine must be properly set up before it is safe to operate. DO NOT connect this machine to the power source until instructed to do so in the "Test Run" portion of this manual.



DO NOT work on your electrical system if you are unsure about electrical codes and wiring! Seek assistance from a qualified electrician. Ignoring this warning can cause electrocution, fire, or machine damage.

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

NOTICE

The circuit requirements listed in this manual apply to a dedicated circuit where only one machine will be running at a time. If this machine will be connected to a shared circuit where multiple machines will be running at the same time, consult a qualified electrician to ensure that the circuit is properly sized for safe operation.



Grounding Requirements

In the event of certain types of malfunctions or breakdowns, grounding provides a path of least resistance for electric current to travel— in order to reduce the risk of electric shock.

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

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

For 110V Connection (Prewired)

A NEMA 5-15 plug has a grounding prong that must be attached to the equipment-grounding wire inside the included power cord. The plug must only be inserted into a matching receptacle (see **Figure 3**) that is properly installed and grounded in accordance with all local codes and ordinances.

For 220V Connection (Must Be Rewired)

When converting this machine to 220V operation, you must properly install a NEMA 6-15 grounding plug. The plug must only be inserted into a matching receptacle (see **Figure 4**) that is properly installed and grounded in accordance with local codes and ordinances.

Extension Cords

We do not recommend using an extension cord with this machine. Extension cords cause voltage drop, which may damage electrical components and shorten motor life. Voltage drop increases with longer extension cords and the gauge smaller gauge sizes (higher gauge numbers indicate smaller sizes).

Any extension cord used with this machine must contain a ground wire, match the required plug and receptacle, and meet the following requirements:

AWARNING

The machine must be properly set up before it is safe to operate. DO NOT connect to the power source until instructed to do so later this manual.

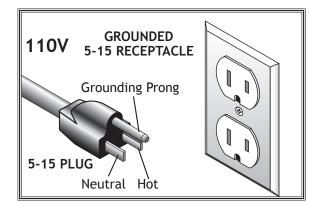


Figure 3. NEMA 5-15 plug & receptacle.

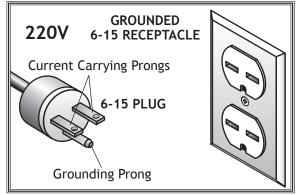


Figure 4. NEMA 6-15 plug & receptacle.

DO NOT modify the provided plug or use an adapter if the plug will not fit your receptacle. If the machine must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel; and after reconnection, the machine must comply with all local codes and ordinances.



SETUP

Unpacking

This machine has been carefully packaged for safe transportation. If you notice the machine has been damaged during shipping, please contact your authorized Shop Fox dealer immediately.

Inventory

The following is a description of the main components shipped with the Model W1706. Lay the components out to inventory them.

Note: If you can't find an item on this list, check the mounting location on the machine or examine the packaging materials carefully. Occasionally we pre-install certain components for safer shipping.

Inve	entory (Figures 5-6)	Qty
Α.	Table	
Β.	Saw Blade 6TPI x ³ / ₈ " x 93 ¹ / ₂ "	1
С.	Cabinet Stand	1
D.	Bandsaw Body	2
Ε.	Trunnion Base	
F.	Front Fence Rail	1
G.	Rear Fence Rail	1
Н.	Hardware Bag:	
	- Small Table Insert	1
	- Large Table Insert	
	-Hex Bolts ⁵ / ₁₆ "-18 x 1 ¹ / ₂ " (Bandsaw Body)	
	-Hex Nuts 5/16"-18 (Bandsaw Body)	
	-Lock Washers ⁵ /16" (Bandsaw Body)	
	-Flat Washers ⁵ / ₁₆ " (Bandsaw Body)	4
	-Hex Bolts 5/8"-18 x 11/4" (Trunnion Base)	
	-Lock Washers ⁵ / ⁸ " (Trunnion Base)	
	-Cap Screws 1/4"-20 x 5/8" (Fence Rail)	2
	-Hex Bolts 1/4"-20 x 3/4" (Fence Rail)	
	-Flat Washers 1/4"	2
	-Combo Wrench 10 x 12mm	1
	-Hex Wrench 5mm	1
١.	Miter Gauge Assembly	1
J.	Fence Assembly	
Κ.	Trunnion Lock Knobs	2

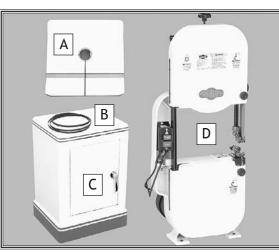


Figure 5. Inventory A-D.

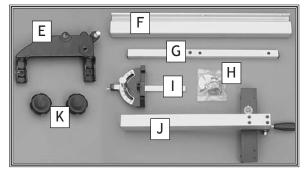
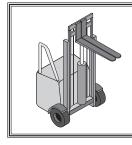


Figure 6. Inventory E-K.



Machine Placement

- Floor Load: This machine distributes a heavy load in a small footprint. Some residential floors may require additional bracing to support both machine and operator.
- Working Clearances: Consider existing and anticipated needs, size of material to be processed through the machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your bandsaw.
- Lighting: Lighting should be bright enough to eliminate shadow and prevent eye strain.
- Electrical: Electrical circuits must be dedicated or large enough to handle amperage requirements. Outlets must be located near each machine, so power or extension cords are clear of high-traffic areas. Follow local electrical codes for proper installation of new lighting, outlets, or circuits.



USE helpers or power

lifting equipment to lift this Bandsaw. Otherwise, serious personal injury may occur.



AKE your shop "child safe." Ensure that your workplace is inaccessible to children by closing and locking all entrances when you are away. NEVER allow untrained visitors in your shop when assembling, adjusting or operating equipment.

Cleaning Machine

The table and other unpainted parts of your bandsaw are coated with a waxy grease that protects them from corrosion during shipment. Clean this grease off with a solvent cleaner or citrus-based degreaser. DO NOT use chlorinebased solvents such as brake parts cleaner or acetone—if you happen to splash some onto a painted surface, you will ruin the finish.



NEVER clean with gasoline or other petroleumbased solvents. Most have low flash points, which make them extremely flammable. A risk of explosion and burning exists if these products are used. Serious personal injury may occur if this warning is ignored!



ALWAYS work in wellventilated areas far from possible ignition sources when using solvents to clean machinery. Many solvents are toxic when inhaled or ingested. Use care when disposing of waste rags and towels to be sure they DO NOT create fire or environmental hazards.

Setup Procedures

Before connecting your bandsaw to power for the first time and performing the Test Run on Page 16, you MUST successfully complete the following tasks in the given order per the instructions on the referenced pages:

- Assemble the bandsaw, as instructed on this page. 1.
- 2. Connect the bandsaw to an adequate dust collection system (see Page 13).
- 3. Adjust the blade tracking, as instructed on Page 14.

Assembly

The assembly procedure consists of attaching the bandsaw body to the cabinet stand, installing the trunnion base and table, and attaching the fence rails to the table.

To assemble the bandsaw, do these steps:

- 1. Place the cabinet stand in the working location.
 - If you plan to mount the bandsaw on a mobile base, put the stand on it now and secure the mobile base so that it cannot move for the remainder of the setup.
- 2. With the help of another person, carefully place the bandsaw body on the cabinet stand and align the mounting holes (see Figure 7).
- 3. Secure the bandsaw body to the cabinet with (4) $\frac{5}{16}$ "-18 x 1¹/₂" hex bolts, $\frac{5}{16}$ " lock washers, $\frac{5}{16}$ " flat washers, and 5/16-18 hex nuts.

The trunnion base supports the table and enables it to be tilted at any angle from 45° right to 10° left.

4. Position the trunnion base on the bandsaw body as shown in **Figure 8**, then secure it in place with (2) $\frac{5}{16}$ - 18 x $1^{1}/4^{"}$ hex bolts and $\frac{5}{16}^{"}$ lock washers.





The bandsaw is heavy load. Get lifting assistance before you begin this step.



Figure 7. Bandsaw body mounted on the cabinet stand.



Figure 8. Installing the trunnion base.



- 5. Remove the insert and the table slot locking pin from the table.
- 6. Line up the table slot with the blade, position the table so that the blade is in the center cut-out.
- Rotate the table so that the table slot faces to the right, then insert the table bolts through the mounting holes in the trunnion base, as shown in Figure 9.
- **8.** Secure the table by fully threading the two trunnion lock knobs onto the table bolts.
- 9. Replace the table insert and locking pin.

Important: Make sure you re-install the table slot locking pin. This pin keeps the table surfaces on either side of the slot even with the changes in operating pressures and temperature changes.

10. Attach the smaller rear fence rail to the rear of the table with (2) 1/4"-20 x 5/8" cap screws, as shown in Figure 10.

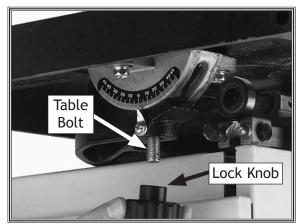


Figure 9. Installing the table onto the trunnion base.

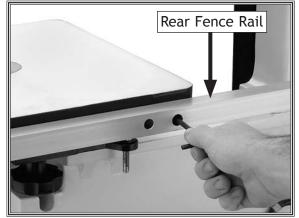


Figure 10. Installing rear fence rail.

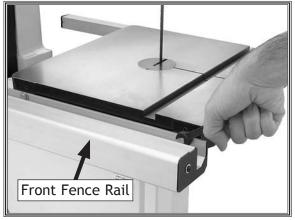


Figure 11. Installing front fence rail.

11. Attach the larger front fence rail shown in Figure 11, with (2) $\frac{1}{4}$ +20 x $\frac{3}{4}$ hex bolts and $\frac{1}{4}$ flat washers.



 Place the fence assembly onto the front rail and position it to the left of the table insert, then secure it in place by pressing down on the lock lever (see Figure 12).



Figure 12. Fence secured in place.

Dust Collection

Recommended CFM at Dust Port: 400 CFM

Do not confuse this CFM recommendation with the rating of the dust collector. To determine the CFM at the dust port, you must take into account many variables, including the CFM rating of the dust collector, the length of hose between the dust collector and the machine, the amount of branches or Y's, and the amount of other open lines throughout the system. Explaining this calculation is beyond the scope of this manual. If you are unsure of your system, consult an expert or purchase a good dust collection "how-to" book.

DO NOT operate this machine without an adequate dust collection system. This machine creates substantial amounts of wood dust while operating. Failure to use a dust collection system can result in short and long-term respiratory illness.

To connect a dust collection hose, do these steps:

- 1. Slide a 4" dust hose over the dust port and secure it in place with a hose clamp, as shown in Figure 13.
- 2. Tug on the hose to make sure it is secure.

Note: A tight fit is necessary for proper dust collection.



Figure 13. Dust collection hose connected to the dust port.



Blade Tracking

Blade tracking is affected by the tilt of the upper wheel (known as center tracking) and the alignment of both wheels (known as coplanar tracking).

The wheels on this bandsaw were aligned at the factory, so center tracking is the only adjustment that needs to be performed when the saw is new (refer to **Aligning Wheels** on **Page 47** for detailed instructions on coplanar tracking).

Note: Changes in the blade tension may change the blade tracking. For best performance, regularly check and maintain the proper blade tracking.

To center track the blade, do these steps:

- 1. DISCONNECT BANDSAW FROM POWER!
- 2. Adjust the upper and lower blade guides away from the blade (refer to Adjusting Blade Guide Bearings on Page 24 for detailed instructions).

Note: When adjusting the blade tracking for the test run in this procedure, the blade must have a reasonable amount of tension to simulate operating conditions. After the test run is successfully completed, you will perform a thorough version of the following steps to correctly tension the blade.

- 3. Move the blade tension quick release lever all the way right (as viewed from the rear of the machine) to apply tension to the blade (see Figure 14).
- 4. Use the tension knob on top of the bandsaw to bring the upper edge of the indicator block to the appropriate blade tension scale mark for the blade width (see Figure 14).

Note: If you are using the blade that was shipped with the machine, this would be 3/8".

5. Open the upper wheel cover.

NOTICE

If, after properly performing the blade tracking procedure, the blade is still not tracking correctly, refer to *Aligning Wheels* on *Page 47* for additional solutions.

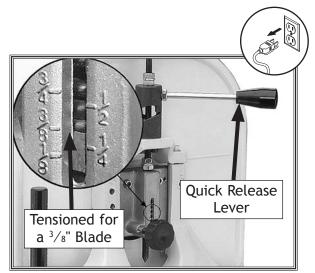


Figure 14. Tension applied for a 3/8" blade.

- 6. Rotate the upper wheel by hand several times (at least three) and watch how the blade rides on the wheel crown. See Figure 15 for an illustration of this concept.
 - If the blade rides in the center of the upper wheel and is centered on the peak of the wheel crown, then the bandsaw is already properly centertracked and no further tracking adjustments are needed at this time.
 - If the blade does NOT ride in the center of the upper wheel and is not centered on the peak of the wheel crown, then continue with this procedure.
- Loosen the wing nut on the tracking knob (see Figure 16), then rotate the knob a small amount.

Note: When the tracking knob is rotated, the lower portion of the upper wheel will tilt out or in, which affects the way the blade tracks.

- 8. Spin the upper wheel with one hand and slowly adjust the tracking knob with the other until the blade rides in the center of the wheel tire without wandering.
- 9. Tighten the wing nut to secure the setting, then spin the upper wheel again to confirm the tracking. If necessary, repeat **Steps 6-8** until you are satisfied with the blade tracking.
- Re-adjust the blade guide bearings toward the blade (refer to Adjusting Blade Guide Bearings on Page 24 for detailed instructions).
- **11.** Close and secure the upper wheel cover before beginning operation.

Power Connection

Before the machine can be connected to the power source, an electrical circuit and connection device must be prepared per the **POWER SUPPLY** section on **Page 7**, and all previous setup instructions in this manual must be complete to ensure that the machine has been assembled and installed properly.

Always make sure the OFF button is pushed in before connecting power.

Blade Centered on Wheel

Figure 15. Blade center tracking.

Wing Nut



Insert the plug attached to the machine power cord into a matching power supply receptacle. The machine is now connected to the power source.

If you need to disconnect the machine from power later, pull the plug completely out of the receptacle.



Tracking Knob



Test Run

Once the assembly is complete, test run your machine to make sure it runs properly.

If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the machine immediately, then review the **Troubleshooting** on **Page 52**.

If you still cannot remedy a problem, contact our Tech Support at (360) 734-3482 for assistance.

To test run the machine, do these steps:

- 1. Make sure you understand the safety instructions at the beginning of the manual, and verify that the machine is setup properly.
- 2. Ensure all tools and objects used during set up are cleared away from the machine.
- 3. Turn the machine ON.
- 4. Listen to and watch for abnormal noises or actions. The machine should run smoothly with little or no vibration or rubbing noises.
 - Strange or unusual noises should be investigated and corrected before operating the machine further. Always disconnect the machine from power when investigating or correcting potential problems.
- 5. Turn the machine OFF.

Additional Adjustments

After successfully completing the **Test Run**, the adjustment procedures listed below must be performed to ensure safe and accurate cutting operations (refer to the following subsections for detailed instructions):

- Properly tension the blade (Page 17).
- Adjust the positive stop bolt (Page 18).
- Align the table with the blade (Page 19).
- Square the miter gauge body to the blade (Page 20).
- Align the fence with the blade (Page 21).
- Adjusting the blade support bearings (Page 22).
- Adjusting the blade guide bearings (Page 24).



Projectiles thrown from the machine could cause serious eye injury. Wear safety glasses to reduce the risk of injury.



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

Tensioning Blade

A properly tensioned blade is essential for making accurate cuts, extending the life of the blade, and making many other bandsaw adjustments. For instance, every time you replace the blade, you must perform this procedure because all blades tension differently.

Note: Before you performed the **Test Run**, you set the blade to its approximate tension. The following procedure fine-tunes the blade tension to ensure accurate cutting results.

To correctly tension the bandsaw blade, do these steps:

- 1. DISCONNECT BANDSAW FROM POWER!
- 2. Move the upper and lower guide/support bearings as far away from the blade as possible (refer to Adjusting Blade Guide Bearings on Page 24 for detailed instructions).

Note: This procedure will NOT work correctly if the guide/support bearings are in contact with the blade.

- 3. Move the blade tension quick release lever all the way right (as viewed from the rear of the machine) to apply tension to the blade (see Figure 17).
- 4. Use the tension knob on top of the bandsaw to bring the upper edge of the indicator block to the appropriate blade tension scale mark for the blade width (see Figure 17).
- 5. Re-connect the bandsaw to power, then turn it **ON** and wait for the blade to reach full speed.
- 6. Decrease blade tension very slowly by rotating the tension knob counterclockwise (as viewed from above) until the blade just starts to flutter or vibrate, then stop decreasing the tension.
- Now, increase the tension by rotating the knob in the opposite direction (clockwise) until the blade stops fluttering, then rotate the knob another ¹/₄ turn clockwise.
- 8. Turn the bandsaw OFF.
- 9. Re-adjust the blade tracking (refer to Page 14) and the blade guides (refer to Pages 22 and 24).

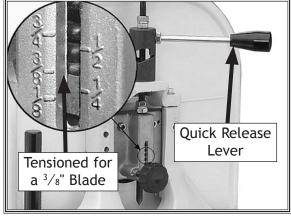


Figure 17. Example of tension control settings

NOTICE

When not in use, move the tension quick release lever to the left to release blade tension, which will increase blade life and reduce machine wear.





Adjusting Positive Stop

After using the table at a tilt of other than 0°, the positive stop allows the table to be quickly and accurately returned to the horizontal position in relation to the blade. This is important for accurate cutting results.

Note: The height of the positive stop is lowered when the table is tilted to the left. Properly re-adjust the positive stop after returning the table to 0° or greater.

Tools Needed

Wrench 13mm	1
Machinist's Square	1
Phillips Screwdriver	1

To adjust the positive stop, do these steps:

- 1. Make sure the blade is properly tensioned as instructed on the previous page.
- 2. DISCONNECT BANDSAW FROM POWER!
- 3. Place the machinist's square flat on the table and against the side of the blade, as shown in Figure 19.
 - If the square sits on the table and against the blade without any gaps, no adjustments are necessary.
 - If there are gaps between the square, table, and blade, continue with Step 4.
- 4. Loosen both trunnion lock knobs (see Figure 18) to allow the table to tilt.
- 5. Loosen the hex nut on the positive stop shown in **Figure 20**, then adjust the height of the positive stop until the square is flat against the table and blade.
- 6. When you are satisfied with the setting, re-tighten the hex nut to secure the positive stop in place.
- Loosen the screw on the tilt scale pointer shown in Figure 18, then align the pointer with the "0" on the scale before re-tightening the screw.

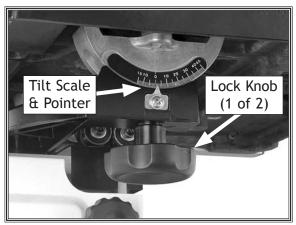


Figure 18. Table tilt controls.

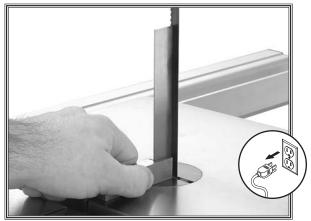


Figure 19. Using a machinist's square to adjust the table tilt.

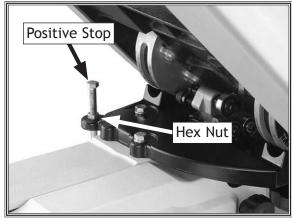


Figure 20. Positive stop (table tilted to the right for photo clarity).

Otv

Aligning Table

To ensure cutting accuracy when the table is first installed, the table should be aligned so the miter slot is parallel to the bandsaw blade. This procedure works best with a 3/4" blade.

Tools Needed	Qty
Wrench or Socket 10mm	1
Straightedge 24"	1
Fine Ruler 12"	1

To align the miter slot parallel to the bandsaw blade, do these steps:

- Make sure that the blade is correctly tensioned (refer to Page 17) and is tracking properly (refer to Page 14).
- 2. DISCONNECT BANDSAW FROM POWER!
- 3. Place an accurate straightedge along the blade. The straightedge should lightly touch both the front and back of the blade without resting on a tooth (see Figure 21). Take care not to move the blade in this step.
- 4. Use a fine ruler to gauge the distance between the blade and the miter slot. The distance you measure should be the same at both the front and back ends of the miter slot.
 - If the measurements at the front and back ends of the miter slot are the same, no adjustments are necessary.
 - If the measurements are not the same, continue with Step 5.
- 5. Loosen the six trunnion bolts that secure the trunnions to the table (see Figure 22).
- 6. Adjust the table as needed until the distance between the blade and miter slot is equal at both ends, as measured in **Step 4**.
- 7. Tighten the trunnion bolts to secure the setting.

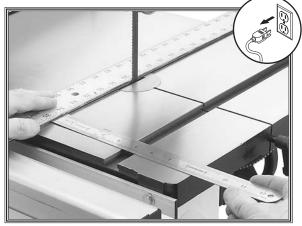


Figure 21. Taking measurements for aligning the table with the blade.

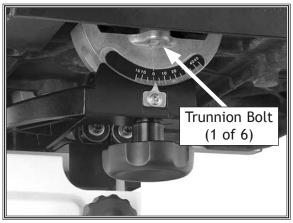


Figure 22. Location of trunnion bolt.



Aligning Miter Gauge Body

To ensure accurate cutting results when using the miter gauge, the miter gauge body must be aligned with the blade.

Tools Needed	Qty
Machinist's Square	1
Phillips Screwdriver	

To align the miter gauge body, do these steps:

- 1. Install the widest blade possible, then make sure the blade is properly tensioned (refer to Page 17) and is tracking correctly (refer to Page 14).
- 2. DISCONNECT BANDSAW FROM POWER!
- 3. Make sure the table is properly aligned with the blade (refer to Page 19).
- 4. Lay the machinist's square flat on the table and up against the blade without touching any blade teeth (see Figure 23 for an example).
- 5. Without moving the square, bring the miter gauge body up to the square.
 - If there are no gaps between the miter gauge body and the square, no adjustments are needed.
 - If there are gaps between the miter gauge body and the square, continue with this procedure.
- 6. Loosen the miter gauge lock knob and rotate the gauge body until it is flat against the square, then re-tighten the lock knob.
- 7. Loosen the screw that secures the miter gauge pointer, set the pointer to the 0° mark on the scale, then re-tighten the screw.

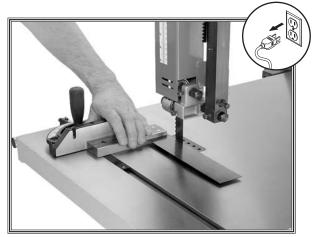


Figure 23. Aligning the miter gauge body with the blade.

Adjusting Fence

The fence must be aligned with the blade to ensure accurate cutting results. This is best done by aligning the fence with the miter slot after the table is properly aligned.

Tools Needed	Qty
Hex Wrench 5mm	1
Wrench 10mm	1

To align the fence with the miter slot, do these steps:

- 1. DISCONNECT BANDSAW FROM POWER!
- 2. Make sure the table is properly aligned with the blade (refer to Page 19).
- 3. Mount the fence on the right side of the blade and even with the miter slot (see Figure 24 for an example).
 - If the fence face is even with the miter slot from front-to-back, skip to Step 5.
 - If the fence face is not even with the miter slot along its length, continue with Step 4.
- 4. Loosen the four cap screws shown in Figure 25, adjust the fence until it is even with the miter slot from front-to-back, then re-tighten the cap screws to secure the setting.

Note: If cuts are tapered after aligning the fence with the miter slot, refer to **Blade Lead** on **Page 46**.

- 5. Note the gap between the fence and the table along the entire length of the blade.
 - If the gap is not even, loosen the hex nut on the rub foot (see Figure 26), adjust the foot in or out until the gap is even along the length of the fence. When you are satisfied, re-tighten the hex nut to secure the setting.



Figure 24. Example of aligning the fence with the table miter slot.



Figure 25. Fence alignment cap screws.

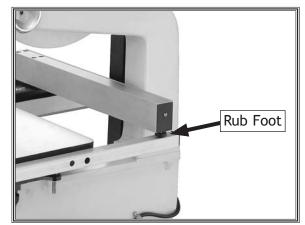


Figure 26. Fence rub foot.





Adjusting Blade Support Bearings

The support bearings are positioned behind the blade and support the back of the blade during cutting operations. Proper adjustment of the support bearings is an important part of making accurate cuts and also keeps the blade teeth from coming in contact with the guide bearings while cutting. There are support bearings on the upper lower blade guide assemblies—both sets adjust in the same manner.

To adjust the support bearings, do these steps:

- Make sure that the blade is correctly tensioned (refer to Page 17) and is tracking properly (refer to Page 14).
- 2. DISCONNECT BANDSAW FROM POWER!
- 3. Familiarize yourself with the blade support bearing controls shown in Figure 27.
- 4. Loosen the assembly lock bolt.
- 5. Look at the face of the support bearing and rotate the blade guide assembly side-to-side, until the blade is perpendicular with the face of the support bearing, as illustrated in Figure 28.
- 6. Re-tighten the assembly lock bolt to secure the setting.

NOTICE

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

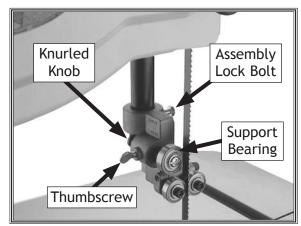


Figure 27. Blade support bearing controls.

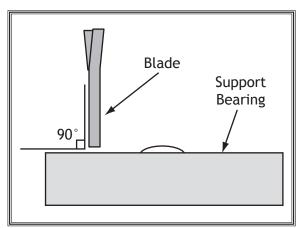


Figure 28. Support bearing perpendicular to the blade.



- 7. Loosen the thumbscrew on the support bearing adjustment shaft (see Figure 27).
- 8. Use the knurled knob to position the support bearing approximately 0.016" away from the back of the blade, as illustrated in Figure 29.

Tip: For a quick gauge, fold a crisp dollar bill in half twice (four thicknesses of a dollar bill is approximately 0.016") and place it between the support bearing and the blade, as shown in **Figure 30**.

9. Re-tighten the thumbscrew to keep the support bearing locked in place.

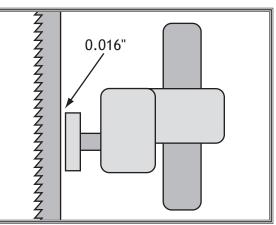


Figure 29. Support bearing positioned 0.016" away from the back of the blade.

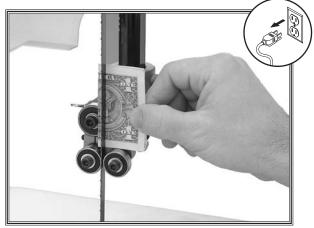


Figure 30. Dollar bill folded twice in half for a quick 0.016" gauge.



Adjusting Blade Guide Bearings

The blade guides provide side-to-side support to keep the blade straight while cutting. The blade guides are designed to be adjusted in two ways—forward/backward and side-to-side. Properly adjusted blade guides are essential to making accurate cuts.

Tools NeededQtyHex Wrench 4mm1

To adjust the blade guide bearings, do these steps:

- Make sure that the blade is correctly tensioned (refer to Page 17) and is tracking properly (refer to Page 14).
- 2. DISCONNECT BANDSAW FROM POWER!
- 3. Familiarize yourself with the blade guide bearing controls shown in Figure 31.
- 4. Loosen the thumbscrew.
- 5. Rotate the knurled knob behind the blade guide bearings to position them so that the edges of the bearings are as forward as possible without going past the gullets (see the illustration in Figure 32).

Note: The goal in this step is to position the guide bearing so that when the blade is deflected back against the support bearing it will not come in contact the blade teeth.

6. When you are satisfied with the guide bearing positions, re-tighten the thumbscrew.

NOTICE

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

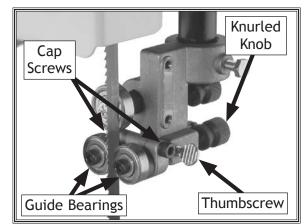


Figure 31. Blade guide bearing controls.

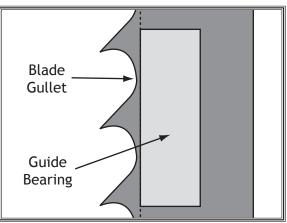


Figure 32. Guide bearing positioned behind the blade gullets.



- 7. Loosen the cap screws behind the guide bearings (see Figure 31), then open the upper wheel cover.
- Rotate the upper wheel with one hand, and use the hex wrench to rotate the eccentric guide bearings until they just begin to rotate with the blade (see Figure 33). The guides should just lightly touch the blade.
- **9.** When you are satisfied with blade guide bearing positions, re-tighten the cap screws behind them to secure the settings.

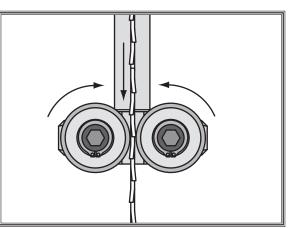


Figure 33. Rotating the blade guide bearings toward the blade.



OPERATIONS

General

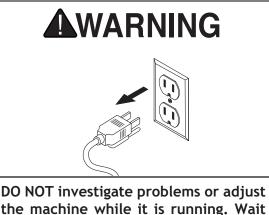
This machine will perform many types of operations that are beyond the scope of this manual. Many of these operations can be dangerous or deadly if performed incorrectly.

The instructions in this section are written with the understanding that the operator has the necessary knowledge and skills to operate this machine. If at any time you are experiencing difficulties performing any operation, stop using the machine!

If you are an inexperienced operator, we strongly recommend that you read books or trade articles, or seek training from an experienced *Bandsaw* operator before performing any unfamiliar operations. **Above all, your safety should come first!**



READ and understand this entire instruction manual before using this machine. Serious personal injury may occur if safety and operational information is not understood and followed. DO NOT risk your safety by not reading!



the machine while it is running. Wait until the machine is turned OFF, unplugged and all working parts have come to a complete stop before proceeding!



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



Operation Overview

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

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

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

- 1. Examines the workpiece to make sure it is suitable for cutting.
- 2. Adjusts the fence for the width of the cut and then locks it in place.
- 3. Adjusts the table tilt, if necessary, to the correct angle of the desired cut.
- 4. Loosens the guide post lock knob, adjusts the blade guide height to between 1/4" and 1" from the top of the workpiece using the guide post elevation handwheel, then tightens the guide post lock knob.
- 5. Checks to make sure the workpiece can safely pass all the way through the blade without interference from other objects.
- 6. Puts on safety glasses and a respirator.
- 7. Starts the dust collector and bandsaw, and waits for the blade to come to full speed.
- **8.** Holds the workpiece firmly and flatly against both the table and fence, and then pushes the workpiece into the blade at a steady and controlled rate until the workpiece moves completely beyond the blade.

The operator is very careful to keep fingers away from the blade and uses a push stick to feed narrow workpieces.

9. Stops the bandsaw.

Disabling & Locking Switch

The ON/OFF switch can be disabled and locked with the provided padlock (see Figure 34). While the padlock is inserted through the ON button, the motor cannot be started, which reduces the risk of accidental startup by children of unauthorized users.

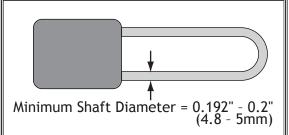


Figure 34. Padlock installed in the switch.

Children or untrained people can be killed or seriously injured by this machine. If the machine is accessible to children or other people, always disable and lock the switch before leaving the machine unattended. Place the key in a well-hidden or secure location.

NOTICE

The switch can only be disabled if the installed padlock shaft meets the minimum diameter shown below: otherwise, the shaft may be too small to properly disable the switch.





Basic Controls

Refer to **Figures 35-37** and the descriptions below to better understand the basic controls and components of this bandsaw.

- A. ON/OFF Buttons: Turns the motor ON and OFF.
- B. Upper Wheel Cover Knob: Enables access to the upper wheel compartment.
- C. Fence and Miter Gauge: Allows for controlled cutting at various angles.
- **D.** Upper Blade Guide Assembly: Supports the sides and back of the blade when cutting. The lower guide assembly underneath the table is similar.
- E. Fence Lock Lever: Locks the fence to the front rail.
- F. Fence Pointer & Scale: Displays the fence position relative to the blade.
- **G. Blade Tension Scale:** Indicates the approximate tension for each blade width. Rotate the blade tension knob on top of the bandsaw to adjust the indicator block inside the aluminum housing of the scale and align it with the appropriate mark on the scale for the blade width.
- H. Blade Tension Quick Release Lever: Quickly releases or engages full blade tension.
- I. Blade Tracking Knob: Adjusts the tilt of the upper wheel for proper blade tracking.
- J. Guide Post Handwheel: Adjusts the height of the guide post and blade guide assembly above the workpiece.
- K. Positive Stop: Allows the table to be quickly returned to 0° after tilting to the right.
- L. Trunnion Lock Knob (1 of 2): Secure the table tilt position.
- M. Table Slot Locking Pin: Keeps the table on each side of the slot even.
- N. Guide Post Lock Knob: Secures the guide post in position.
- **O.** Blade Tension Knob: Adjusts the blade tension.

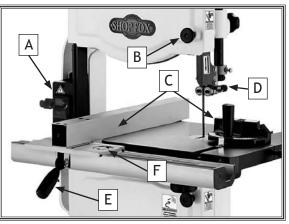


Figure 35. Front Controls

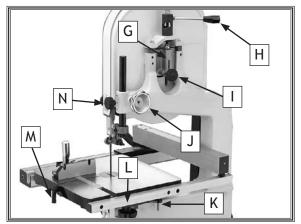


Figure 36. Rear controls.



Figure 37. Blade tension knob.

Cutting Overview

The Model W1706 is capable of performing the following cuts:

- Miters
- Angles
- Resawing
- Ripping
- Crosscutting

- Compound Angles
- Simple/Complex Curves
- Duplicate Parts
- Circles
- Beveled Curves

Workpiece Inspection

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

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

- Material Type: This machine is intended for cutting natural and man-made wood products, and laminate-covered wood products. Cutting drywall or cementitious backer board creates extremely fine dust, which may reduce the life of the bearings. This machine is NOT designed to cut metal, glass, stone, tile, etc.
- Foreign Objects (Figure 38): Nails, staples, dirt, rocks and other foreign objects are often embedded in wood. While cutting, these objects can become dislodged and hit the operator or break the blade, which might then fly apart. Always visually inspect your workpiece for these items. If they can't be removed, DO NOT cut the workpiece.
- Large/Loose Knots: Loose knots can become dislodged during the cutting operation. Large knots can cause blade damage. Choose workpieces that do not have large/loose knots or plan ahead to avoid cutting through them.

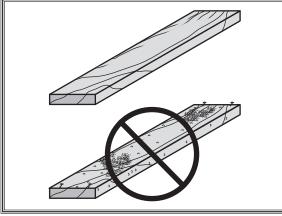


Figure 38. Selecting the board without embedded foreign materials.





- Wet or "Green" Stock: Cutting wood with a moisture content over 20% causes unnecessary wear on the blade and yields poor results.
- **Excessive Warping:** Workpieces with excessive cupping, bowing, or twisting are dangerous to cut because they are unstable and can move unpredictably when being cut. DO NOT cut excessively warped wood.
- Minor Warping: Workpieces with slight cupping can be safely supported if the cupped side faces the table or fence, as shown in Figure 39. On the contrary, a workpiece supported on the bowed side will rock during a cut, leading to loss of control.

Basic Cutting Tips

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

- Keep the upper blade guide assembly adjusted to within 1" of the workpiece.
- Use the correct blade for the operation.
- Replace, sharpen, and clean blades as necessary. Make adjustments periodically to keep the saw running in top condition.
- Use light and even pressure while cutting. Light contact with the blade makes it easier to follow lines and prevents extra friction, which reduces blade life.
- Avoid twisting the blade when cutting around tight corners. Allow the blade to saw around the corners.
- Do not back the workpiece away from the blade while the saw is running.

Because of the unpredictable nature of cutting warped stock, use extreme caution. The difference between acceptable and unacceptable warped stock varies from machine to machine. If you are in doubt, square-up the stock first or do not cut it.

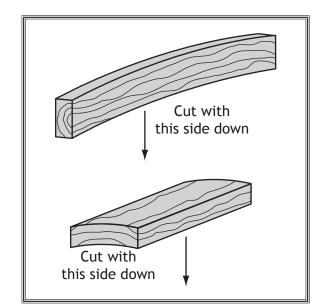


Figure 39. Cutting workpieces with minor warping.



Table Tilt

The table tilts 45° to the right and 10° to the left for a wide range of cutting options.

To tilt the table, do these steps:

- 1. DISCONNECT BANDSAW FROM POWER!
- 2. Loosen the two trunnion lock knobs underneath the table (see Figure 40), then use the tilt scale on the front of the trunnion to bring the table to the desired angle.

Note: When tilting the table to the left, the positive stop must be lowered or removed. Remember to properly re-adjust it after returning the table from a left-hand tilt (refer to **Page 18**).

3. Tighten both trunnion lock knobs to secure the table in place.

Adjusting Guide Post

The guide post (see **Figure 41**) moves the blade guide assembly up or down. To cut accurately and safely, the bottom of the blade guide assembly must be no more than 1" above the workpiece during cutting operations this positioning provides the greatest blade support and minimizes the length of moving blade that is exposed to the operator.

To adjust the guide post, do these steps:

- 1. DISCONNECT BANDSAW FROM POWER!
- 2. Make sure that the blade tension, blade tracking, support bearings, and blade guides are adjusted correctly.
- 3. Loosen the guide post lock knob shown in Figure 41.
- 4. Rotate the guide post handwheel to properly position the blade guide assembly above the workpiece, then re-tighten the lock knob to secure the setting.

AWARNING

If the bandsaw should unexpectedly start when making adjustments, severe personal injury could result. ALWAYS disconnect the bandsaw from power before making any adjustments.

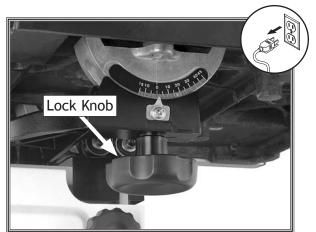


Figure 40. Location of trunnion lock knob (1 of 2).

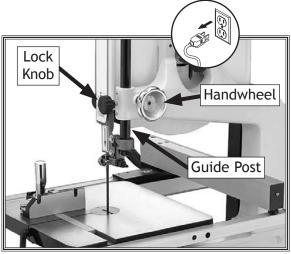


Figure 41. Guide post controls.



Ripping

Ripping is the process of cutting with the grain of the wood stock. For plywood and other processed wood, ripping simply means cutting down the length of the workpiece. For ripping, a wider blade is better. In most ripping applications, a standard raker tooth style will be sufficient (refer to **Blade Information** on **Page 37**).

To make a rip cut, do these steps:

- 1. Adjust the fence to match the width of the cut on your workpiece and lock the fence in place.
- 2. Adjust the blade guide assembly to the correct height.
- 3. After all safety precautions have been met, turn the bandsaw *ON* and wait for the blade to reach full speed.
- 4. Slowly feed the workpiece into the blade and continue with the cut until the blade is completely through the workpiece.

Figure 42 shows a typical ripping operation.

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

NEVER place fingers or hands in the line of cut. In the event that something unexpected happens, your hands or fingers may be pulled into the blade. ALWAYS use a push stick when ripping narrow pieces. Failure to follow these warnings may result in serious personal injury!

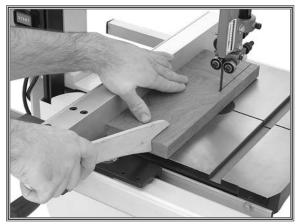


Figure 42. Example of ripping.

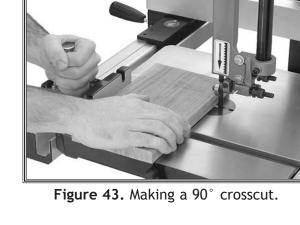
Crosscutting

Crosscutting is the process of cutting across the grain of wood. For plywood and other processed wood, crosscutting simply means cutting across the width of the material.

To make a 90° crosscut, do these steps:

- 1. Mark the workpiece on the edge where you want to begin the cut.
- Adjust the blade guide assembly to the correct height and make sure the miter gauge is set to 0° (or other angle for angled cuts).
- 3. Move the fence out of the way. Place the workpiece evenly against the miter gauge.
- 4. Hold the workpiece against the miter gauge and line up the mark with the blade.
- 5. After all safety precautions have been met, turn the bandsaw *ON* and wait for the blade to reach full speed.
- 6. Slowly feed the workpiece into the blade and continue the cut until the blade is all the way through the workpiece.

Figure 43 shows a typical crosscutting operation.







Resawing

Resawing (see **Figure 44** for an example) is the process of cutting a board into two or more thinner boards. The maximum board width that can be resawn is limited by the maximum cutting height of the bandsaw. Maximum cutting height for this bandsaw is 6".

The Model W1706 is capable of resawing, provided the saw is set up properly. Use common sense when resawing. Attempting to resaw too wide or too dense of a board may put excessive strain on the blade and cause it to break.

One of the most important considerations when resawing is blade selection. Use the widest blade possible when resawing—a wide blade cuts straighter and is less prone to blade lead (refer to **Blade Lead** on **Page 46** for additional information). In most applications, a hook or a skip tooth style will be desirable.

Also, since most resawn lumber will be planed smooth, you should choose blades with fewer teeth-per-inch (from 3 to 6 TPI). While blades with fewer teeth-per-inch produce rougher cuts, these types of blades offer larger gullet capacities for clearing sawdust.

To resaw a workpiece, do these steps:

- 1. Verify that the bandsaw is setup properly and that the table is perpendicular to the blade.
- 2. Use the widest blade your bandsaw will accept. The blade must also be sharp and clean.
- 3. Set the fence to the desired width of cut and lock it in place.

Tip: You can also draw a reference line on the edge of the board, place the board against the fence, line up the reference line with the blade, then lock the fence in place.

- 4. Support the ends of the board if necessary.
- 5. Turn the bandsaw *ON* and wait for the blade to reach full speed.
- 6. Keeping even pressure against the fence and table with the workpiece, slowly feed it into the moving blade until the blade is completely through the workpiece.

When resawing thin pieces, a wandering blade (blade lead) can tear through the surface of the workpiece, exposing your hands to the blade teeth. ALWAYS keep your hands clear of the blade by using push blocks and push sticks when resawing.

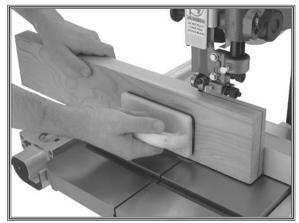


Figure 44. Example of resawing.

OPERATIONS



Radius

1/8"

3/8"

5/8"

1¹/₄"

2¹/₂"

Cutting Curves

When cutting curves, simultaneously feed and turn the stock carefully so that the blade follows the layout line without twisting. Use either a narrower blade or a blade with more TPI (teeth per inch), or make more relief cuts, to avoid having to back the workpiece away from the blade, especially if the curve is sharp.

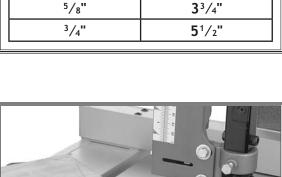
Always make short cuts first, then proceed to the longer cuts. Relief cuts will also reduce the chance that the blade will be pinched or twisted. Relief cuts are cuts made through the waste portion of the workpiece and are stopped at the layout line. As you cut along the layout line, waste wood is released from the workpiece, alleviating any pressure on the back of the blade. Relief cuts also make backing the workpiece out easier once the saw blade has come to a stop, if needed.

Stacked Cuts

One of the benefits of a bandsaw is its ability to cut multiple copies of a particular shape by stacking a number of workpieces together (see **Figure 45** for an example). Before making stacked cuts, ensure that both the table and the blade are properly adjusted to 90°. Otherwise, any error will be compounded.

To complete a stacked cut, do these steps:

- 1. Align your pieces from top to bottom to ensure that each piece has adequate scrap to provide a clean, unhampered cut.
- 2. Secure all the pieces together in a manner that will not interfere with the cutting. Hot glue on the edges works well, as do brad nails through the waste portion. (Be careful not to cut into the brads or you may break the blade!)
- 3. On the face of the top piece, lay out the shape you intend to cut.
- 4. Make relief cuts perpendicular to the outline of your intended shape in areas where changes in blade direction could strain the woodgrain or cause the blade kerf to bind.
- 5. Cut the stack of pieces as though you were cutting a single piece. Follow your layout line with the blade kerf on the waste side of your line.



NOTICE

The chart below displays blade widths

and the corresponding minimum radii

for those widths.

Width

1/8"

3/16"

1/4"

³/8"

1/2"

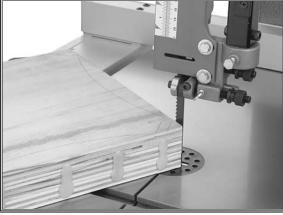


Figure 45. Example of stacked cutting.



Blade Speed

The Model W1706 offers blade speeds of 1500 & 3200 FPM (Feet Per Minute). For general woodworking and most cutting operations, we recommend using the 3200 FPM speed. Keep in mind, the results from different speeds are related to the type of blade being used. Whenever determining blade speed, also choose a type of blade that is related to your operation. Use the chart below as a general guide to blade speed:

Type of Cutting Operation	Blade Speed
Most Species of Wood	3100 FPM
Super Dense Hardwood	1800 FPM
Fast/Average Feed Rate	3100 FPM
Requires Slow Feed Rate	1800 FPM
Rough Edges Tolerable	3100 FPM
Requires Smooth Edges	1800 FPM
Quick, Production Cuts	3100 FPM
Detailed, Intricate Cuts	1800 FPM

Speed changes are performed by moving the belt to one of the two sets of pulleys.

Tools Needed	Qty
Socket 12mm w/Extension	1

To change the blade speed, do these steps:

- 1. DISCONNECT BANDSAW FROM POWER!
- 2. Open the lower wheel cover, then loosen the motor mount bolts (adjustment and hinge bolts) shown in Figure 46.
- 3. Move the body of the motor so that the motor adjustment bolt slides to the right-hand side (facing bandsaw front) of the adjustment slot.
- 4. Place the belt in the wheel pulley and motor pulley grooves, as illustrated in Figure 47, for your desired speed.
- 5. Move the body of the motor so that the motor adjustment bolt slides to the left-hand side (facing bandsaw front) of the adjustment slot.
- 6. Hold the motor in position with one hand and tighten the motor adjustment bolt with the other hand.

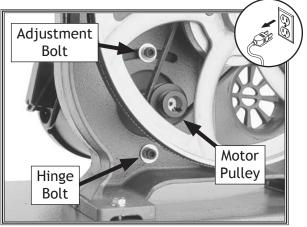


Figure 46. Blade speed controls.

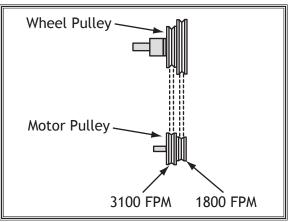


Figure 47. Belt positions for selecting the blade speed.

- 7. Push the center of the belt with moderate force.
 - If deflection is approximately ³/₄" with moderate pressure from your thumb or finger, then the tension is correct.
 - If the deflection is more than ³/₄", repeat Steps 3-6.
- 8. When the belt tension is correct, tighten the motor hinge bolt and close the lower wheel cover.

Blade Information

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

Blade Length

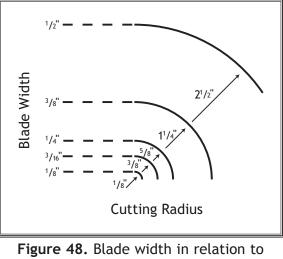
Measured by the circumference, blade lengths are usually unique to the brand of your bandsaw and the distance between wheels. This saw uses $92^{1}/2^{"}$ to $93^{1}/2^{"}$ long blades. Refer to Page 40 for blade replacements.

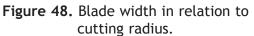
Blade Width

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

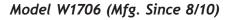
This saw uses blades from 1/8" to 3/4" in width. Always pick the size of blade that best suits your application.

- Curve Cutting: Use the chart in Figure 48 to determine the correct blade for curve cutting. Determine the smallest radius curve that will be cut on your workpiece and use the corresponding blade width.
- **Straight Cutting:** Use the largest width blade that you own. Large blades excel at cutting straight lines and are less prone to wander.











Tooth Style

Figure 49 illustrates the three main tooth styles:

- **Raker:** Considered to be the standard because the tooth size and shape are the same as the tooth gullet. The teeth on raker blades usually are very numerous, have no angle, and produce cuts by scraping the material. As a result, smooth cuts can be achieved without cutting fast or generating more heat than other types.
- Skip: Similar to a raker blade that is missing every other tooth. Because of the design, skip toothed blades have a much larger gullet than raker blades, and therefore, cut faster and generate less heat. However, these blades also leave a rougher cut than raker blades.
- Hook: The teeth have a positive angle (downward) which makes them dig into the material, and the gullets are usually rounded for easier waste removal. These blades are excellent for the tough demands of resawing and ripping thick material.

Tooth Pitch

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

Blade Care

A bandsaw blade is a thin piece of steel that is subjected to tremendous strain. You can obtain longer use from a bandsaw blade if you give it fair treatment and always use the appropriate feed rate for your operation. Be sure to select blades with the proper width, style, and pitch for each application. The wrong choice of blades will often produce unnecessary heat which will shorten the life of your blade.

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

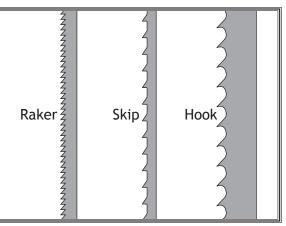


Figure 49. Three main tooth styles.

Blade Breakage

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

The most common causes of blade breakage are:

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



Blade Changes

To change the blade, do these steps:

- 1. DISCONNECT BANDSAW FROM POWER!
- 2. Put on heavy leather gloves and safety glasses.
- 3. Release the blade tension by moving the tension quick release lever all the way left.
- 4. Remove the table insert and the table locking pin (see Figure 50).
- 5. Adjust the upper and lower guide bearings as far away as possible from the blade.
- 6. Open the both wheel covers and slide the blade off of both wheels.
- 7. Slide the blade through the slot in the table.
- 8. Slide the new blade through the table slot, ensuring that the teeth are pointing forward and down toward the table, as shown in Figure 51.

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

- **9.** Slip the blade through the guides, and mount it on the upper and lower wheels.
- 10. Adjust the blade tension as described on Page 17.
- 11. Adjust the blade tracking if needed (refer to Page 14).
- 12. Align the upper and lower support bearings (refer to Page 22), then adjust the blade guide bearings (refer to Page 24).
- 13. Replace the table insert and table locking pin.
- 14. Close the wheel covers.



If the bandsaw should unexpectedly start up when the wheel covers are open or when changing the blade, entanglement or amputation injuries could result. ALWAYS disconnect the bandsaw from power before opening the wheel covers.

Bandsaw blades are sharp and can spring open when uncoiled, which could cause deep punctures or lacerations. ALWAYS wear heavy leather gloves and safety glasses when handling bandsaw blades.

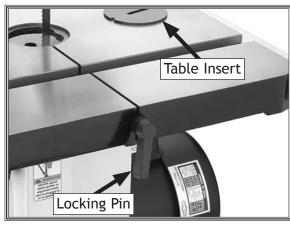


Figure 50. Table insert and locking pin.

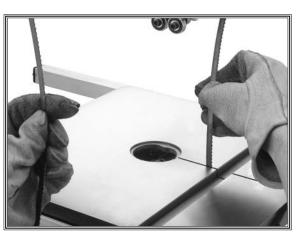


Figure 51. Changing the blade.

-39-

ACCESSORIES Bandsaw Accessories

The following Bandsaw accessories may be available through your local Woodstock International Inc. Dealer. If you do not have a dealer in your area, these products are also available through online dealers. Please call or e-mail Woodstock International Inc. Customer Service to get a current listing of dealers at: 1-800-840-8420 or at sales@woodstockint.com.

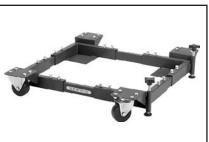
The *Steelex*[®] High-Carbon Steel Replacement Blades for the Model W1706 feature hardened teeth and a flexible back to provide extra cutting sharpness and durability for all woodcutting applications. We tested these against some of the highest-priced carbon blades on the market and could tell no difference in performance. These great blades are priced within reach of any shop. Available in raker and hook styles with various TPI, and from 1/8" to 3/4" in width.

The D2260A SHOP FOX Adjustable Mobile Base supports your bandsaw so you can move it easily and lock it in position. All SHOP FOX Adjustable Mobile Bases are the first mobile bases designed strong enough to move heavy machines on a continual basis. These mobile bases are adjustable to fit a variety of machines and can be leveled without the use of shims or tools.

The SHOP FOX D3348 6" Extension Block Kit allows you to increase the cutting capacity of the W1706 Bandsaw to 12". This kit contains a 105" blade, a 6" spacer block, the extended blade guards, a blade post extension, and all the mounting hardware. This is an excellent and easy upgrade to your bandsaw.

The SHOP FOX Heavy-Duty Roller Stands & Roller Tables make using your bandsaw safer and easier. All models feature convenient hand knobs for fast height adjustment and offer rigid steel construction. These stands are invaluable for supporting work on bandsaws to reduce blade bend and pinch on long boards.









MAINTENANCE

General

Regular periodic maintenance on your machine will ensure its optimum performance. Make a habit of inspecting your machine each time you use it.

On a daily basis, check for the following conditions and repair or replace when necessary:

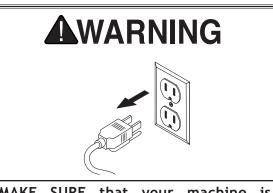
- Loose mounting bolts.
- Worn switch.
- Worn or damaged cords and plugs.
- Damaged or worn V-belt.
- Damaged or worn blade support and guide bearings.
- Damaged or glazed wheel rubber tires.
- Any other condition that could hamper the safe operation of this machine.

Cleaning

Frequently blow-off sawdust with compressed air. This is especially important for the internal working parts and motor. Dust build-up around the motor is a sure way to decrease its life span. Additionally, open the wheel covers and clean away any sawdust and built-up grime.

Protecting Table

The table can be kept rust-free with regular applications of products like SLIPIT[®]. For long term storage you may want to consider products like Boeshield T-9^m.



MAKE SURE that your machine is unplugged during all maintenance procedures! If this warning is ignored, serious personal injury may occur.

Lubrication

The sealed and pre-lubricated ball bearings on this bandsaw require no lubrication for the life of the bearings. All bearings are standard sizes, and replacements can be purchased from our parts department or a bearing supply store.

As for other items on this machine, such as adjustment controls, wipe off any sawdust with a clean cloth, towel or dry paint brush, then apply a small amount of light machine oil.

Take care oil does not get on the pulleys or belt that would cause belt deterioration and slippage and a reduction in power efficiency.



SERVICE

General

This section covers the most common service adjustments or procedures that may need to be made during the life of your machine.

If you require additional machine service not included in this section, please contact Woodstock International Technical Support at (360) 734-3482 or send e-mail to: <u>tech-support@shopfox.biz</u>.

Redressing Rubber Tires

As the bandsaw ages, the rubber tires may need to be redressed if they become hardened or glazed over. Redressing the rubber tires improves blade tracking and reduces vibration/blade lead.

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

To redress the rubber tires, do these steps:

- 1. DISCONNECT BANDSAW FROM POWER!
- 2. Put on heavy leather gloves, then remove the blade.
- 3. Clean any built-up sawdust from the rubber tires.
- 4. Hold 100 grit sandpaper against the rubber tire and rotate the wheel by hand. Only redress the rubber enough to expose a fresh rubber surface.
- 6. Re-install the blade, then check blade tension (refer to Page 17) and tracking (refer to Page 14).



MAKE SURE that your machine is unplugged during all service procedures! If this warning is ignored, serious personal injury may occur.



Belt Service

To ensure optimum power transmission from the motor to the blade, the belt must be in good condition and operate under proper tension. The belt should be checked for cracks, fraying, and wear. Belt tension should be checked at least every 3 months—more often if the bandsaw is used daily.

Checking Belt

- 1. DISCONNECT BANDSAW FROM POWER!
- 2. Open the lower wheel cover.
- 3. Note the condition of the belt. If the belt is cracked, frayed, or glazed, it should be replaced.
- 4. Press the belt with moderate pressure midway between the pulleys. The deflection should be approximately 1/4", as illustrated in Figure 52.
 - If the deflection is not approximately ¹/₄", continue with the next procedure to properly tension the belt.

Adjusting Belt Tension

Tools Needed	Qty
Socket 12mm w/Extension	1

- To tension the belt, do these steps:
- 1. DISCONNECT BANDSAW FROM POWER!
- Open the lower wheel cover and loosen the motor mount bolts (adjustment and hinge) shown in Figure 53.
- 4. Move the motor so that the motor adjustment bolt slides to the left-hand side (facing bandsaw front) of the adjustment slot.
- 5. Hold the motor in position with one hand and tighten the motor adjustment bolt with the other hand.
- 6. Press the center of the belt. If deflection is approximately 1/4" with moderate pressure from your thumb or finger, then the tension is correct. If the deflection is more than 1/4", repeat Steps 4-6.
- 7. When the belt tension is correct, tighten the motor hinge bolt and close the lower wheel cover.

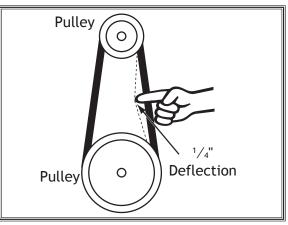


Figure 52. Testing for proper belt tension.

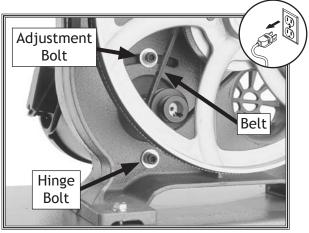


Figure 53. Belt tensioning controls.

SERVICE



Replacing Belt

Tools Needed	Qty
Socket 12mm w/Extension	1
Wrench or Socket 13mm	1

To replace the belt, do these steps:

- 1. DISCONNECT BANDSAW FROM POWER!
- 2. Open both wheel covers, remove the bandsaw blade, and loosen the motor mount bolts shown in Figure 54 on the previous page.
- 3. Move the body of the motor so that the motor adjustment bolt slides to the right-hand side (facing bandsaw front) of the adjustment slot and pull the belt off of the motor pulley.
- 4. Unthread the lower wheel mount bolt shown in Figure 55, then slide the lower wheel off of the bearing shaft.

Note: The wheel mount bolt is a left-hand bolt and unthreads clockwise.

- 5. Slip the old belt off of the wheel pulley and install the new belt in its place.
- 6. Position the belt on the pulleys for the desired blade speed.
- 7. Slide the lower wheel back onto the bearing shaft and replace/tighten the wheel mount bolt.
- 8. Move the body of the motor so that the motor adjustment bolt slides to the left-hand side (facing bandsaw front) of the adjustment slot.
- **9.** Hold the motor in position and tighten the motor adjustment bolt with the other hand.
- **10.** Check and adjust the belt tension as instructed on the previous page.
- 11. When the belt tension is correct, tighten the motor hinge bolt, re-install the blade, then close both wheel covers.
- Make sure that the blade is correctly tensioned (refer to Page 17) and is tracking properly (refer to Page 14).

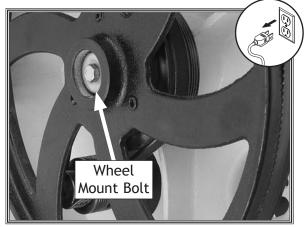


Figure 55. Lower wheel mount bolt.

Shimming Table

To ensure accuracy when cutting stacked workpieces or circles, the table should be 90° to the back of the blade, as illustrated in **Figure 56**. If the table is not perpendicular to the back of the blade, the table will need to be shimmed.

Items Needed	Qty
Wrench or Socket 10mm	1
Machinist's Square	1
Metal Shims As	Needed

To shim the table, do these steps:

- 1. Make sure that the blade is tracking properly and that it is correctly tensioned.
- 2. DISCONNECT BANDSAW FROM POWER!
- **3.** Bring the table to 0° tilt, then place the machinist's square flat on the table and against the back of the blade.
 - If there is not a gap between the square and the blade, no further adjustments need to be made.
 - If there is a gap between the square and the blade, continue with **Step 4**.
- 4. Loosen the six trunnion bolts that secure the trunnions to the table (see Figure 57).
- 5. Place shim stock between the table and the two trunnions to shim the table in the desired direction.

Another way to shim the table is to add washers between the table and the trunnion. Electrical washers are a good choice for this procedure because they are very thin and will allow for fine adjustment.

6. Check, and if necessary, align the table (refer to Page 19).

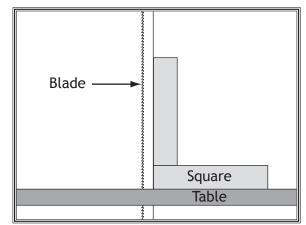


Figure 56. Checking if the table is perpendicular to the back of the blade.

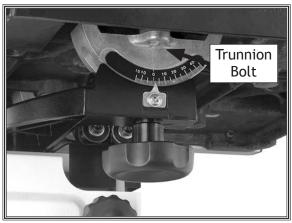


Figure 57. Location of trunnion bolt (1 of 6).

SERVICE





Blade Lead

Bandsaw blades may wander off the cut line when sawing, as shown in **Figure 58**—this is called blade lead. Blade lead is usually caused by too fast of a feed rate, a dull or damaged blade, or improper blade tension. If your blade is sharp/undamaged, properly tensioned and you still have blade lead, perform the following procedures.

Correcting Blade Lead

- 1. Use less pressure when feeding the workpiece through the cut.
- 2. Make sure that the fence is parallel to the blade line, and the miter gauge body is perpendicular to the blade.
- 3. Check for proper blade tension. If the blade tension is correct and it is not convenient to replace the blade, compensate for lead by skewing the fence or shifting the table.

Items Needed

Board ³ / ₄ "T x 3"W x 17"L	1
Hex Wrench 5mm	1

To skew the fence, do these steps:

- 1. On the wide face of the board, draw a straight line parallel to the long edge.
- 2. Slide the fence out of the way and cut free-hand along the line. Stop at the halfway point. Turn the bandsaw *OFF* and wait for the blade to stop.
- 3. Clamp the board to the bandsaw table without moving it. Now slide the fence over to the board so it barely touches one end of the board.
- 4. Loosen the four fence alignment cap screws shown in **Figure 59**.
- 5. Skew the fence left or right so it is parallel to the edge of the scrap piece.
- 6. While maintaining the skew, tighten the cap screws.

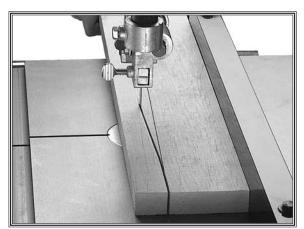


Figure 58. Example of blade lead.

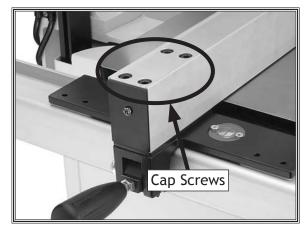


Figure 59. Fence alignment cap screws.

Otv

Tool Needed	Qty	
Wrench or Socket 10mm	1	

The skew the table, do these steps:

- 1. On a scrap piece of wood, mark a line that is perpendicular to the front edge. Starting where the line begins, cut the board by pushing it through the blade with the miter gauge.
- 2. Loosen the six trunnion bolts that secure the table (see Figure 60). Shift the table to compensate for the difference between the cut edge of the workpiece and the mark you made in Step 1.

Note: Keep in mind that as the table alignment is changed, so is the fence alignment.

- 3. Repeat Steps 1-2 until the blade cuts straight when wood is pushed through with the miter gauge.
- 4. Re-tighten the trunnion bolts to secure the setting.

Aligning Wheels

Wheel alignment is one of the easiest ways to ensure you get optimal performance from your bandsaw. When wheels are aligned, or coplanar, the bandsaw is more likely to cut straight without wandering; and vibration, heat, and blade wear are considerably decreased because the blade is automatically balanced on the wheel. This is known as "Coplanar Tracking."

Tools Needed	Qty
Wrench or Socket 10mm	1
Wrench or Socket 13mm	1
Wrench or Socket ³ / ₄ "	1
Straightedge 48"	1
Fine Ruler	1
Shim Washers As ne	eded

To verify if the upper and lower wheels are coplanar, do these steps:

- 1. DISCONNECT BANDSAW FROM POWER!
- 2. Remove the table and open both wheel covers.

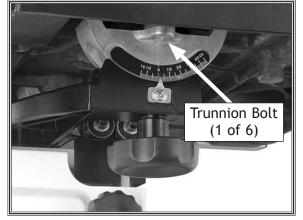


Figure 60. Location of trunnion bolt.

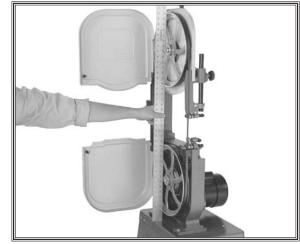


Figure 61. Checking wheel alignment with a straightedge.



- 3. With the blade installed and properly tensioned, hold a straightedge close to the center of both wheels. Make sure the straightedge fully extends across the wheels, as shown in Figure 61 on the previous page.
 - If the wheels are coplanar (see **Figure 62**, "A"), the straightedge will evenly touch the top and bottom of both wheels.
 - If the wheels are not coplanar (see Figure 62, "B"), place the straightedge on the lower wheel first (ensuring that it touches both the top and bottom rim), then adjust the upper wheel tracking knob to make the upper wheel coplanar with the lower wheel.
 - If the wheels are coplanar (parallel with each other), but the straightedge does not touch the rims of both wheels (see **Figure 62**, "C"), then shim the wheels as instructed on the next page.

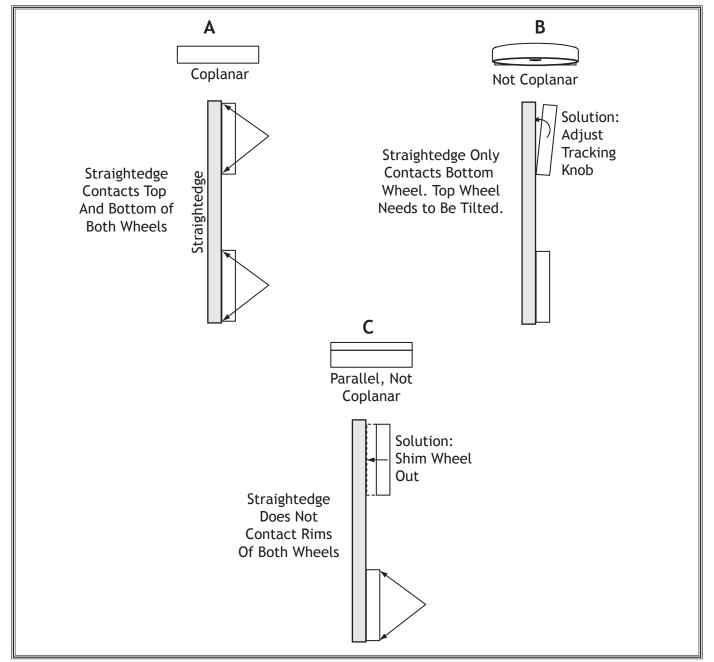


Figure 62. Coplanar conditions.



Shimming a Wheel

- 1. DISCONNECT BANDSAW FROM POWER!
- 2. With a straightedge touching both points of whichever wheel is forward most, measure the distance the straightedge is away from the out-of-adjustment upper wheel (see Figure 63 for an example).
- 3. Remove the blade from the saw, then remove the wheel that needs to be shimmed.
- 4. Determine the amount of shim washers necessary to compensate for the distance measured in Step 3, then place them on the wheel shaft.
- 5. Replace the wheel and the blade.
- 6. Properly tension the blade, then check the wheels with the straightedge.

Note: Wheel coplanarity changes as the blade is tightened, so it is best to check the wheel alignment when the blade is fully tensioned as it would be for normal operations.

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

Note: When wheels are properly coplanar, the blade may not be centered on the crown of the wheel, but it will be balanced.

- 8. Secure the wheel covers and re-install the table before re-connecting the bandsaw to power.
- 9. Make sure that the blade is tracking properly (refer to Page 14).

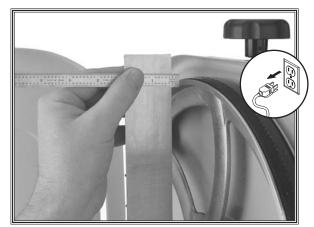


Figure 63. Measuring the distance the wheel is out of adjustment.



Electrical Safety Instructions

These pages are current at the time of printing. However, in the spirit of improvement, we may make changes to the electrical systems of future machines. Study this diagram carefully. If you notice differences between your machine and these wiring diagrams, call Woodstock International Technical Support at (360) 734-3482.

- 1. SHOCK HAZARD. Working on wiring that is connected to a power source is extremely dangerous. Touching electrified parts will result in personal injury including but not limited to severe burns, electrocution, or death. Disconnect the power from the machine before servicing electrical components!
- 2. QUALIFIED ELECTRICIAN. Due to the inherent hazards of electricity, only a qualified electrician should perform wiring tasks on this machine. If you are not a qualified electrician, get help from one before attempting any kind of wiring job.
- 3. WIRE CONNECTIONS. All connections must be tight to prevent wires from loosening during machine operation. Double-check all wires disconnected or connected during any wiring task to ensure tight connections.
- 4. WIRE/COMPONENT DAMAGE. Damaged wires or components increase the risk of serious personal injury, fire, or machine damage. If you notice that any wires or components are damaged while performing a wiring task, replace those wires or components before completing the task.

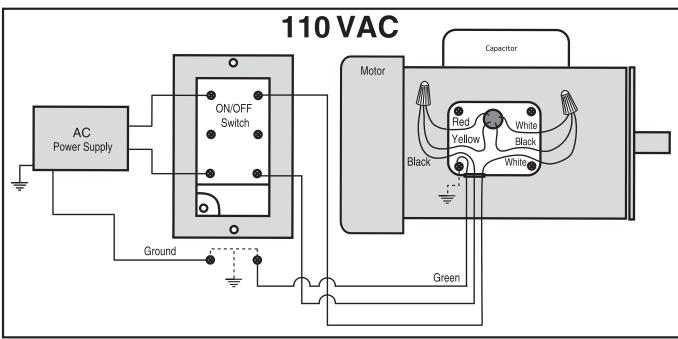
- 5. MOTOR WIRING. The motor wiring shown in these diagrams is current at the time of printing, but it may not match your machine. Always use the wiring diagram inside the motor junction box.
- 6. MODIFICATIONS. Using aftermarket parts or modifying the wiring beyond what is shown in the diagram may lead to unpredictable results, including serious injury or fire.
- 7. CAPACITORS/INVERTERS. Some capacitors and power inverters store an electrical charge for up to five minutes after being disconnected from the power source. To avoid being shocked, wait at least this long before working on these components.
- 8. ELECTRICAL REQUIREMENTS. You MUST follow the electrical requirements at the beginning of this manual when connecting your machine to a power source.
- **9. EXPERIENCING DIFFICULTIES.** If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (360) 734-3482.

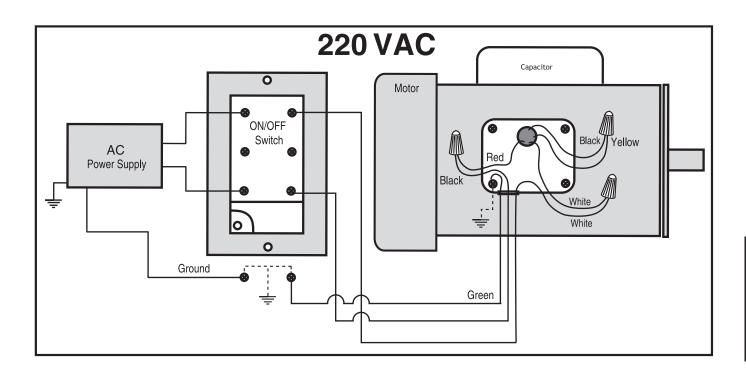
NOTICE		WIRING DIAGRA	M COLOR KEY	
The photos and diagrams	BLACK Bk	BLUE BI Y	ELLOW YI	
included in this section are	WHITE ===Wt	BROWN Br G	ELLOWYg	BLUE BLUE
best viewed in color. You can view these pages in	GREEN Gn	_	PURPLE Pu	WHITE
color at www.shopfox.biz.	RED Red	ORANGE Or P	PINK Pk	QUOISE



W1706 Wiring Diagram









Troubleshooting

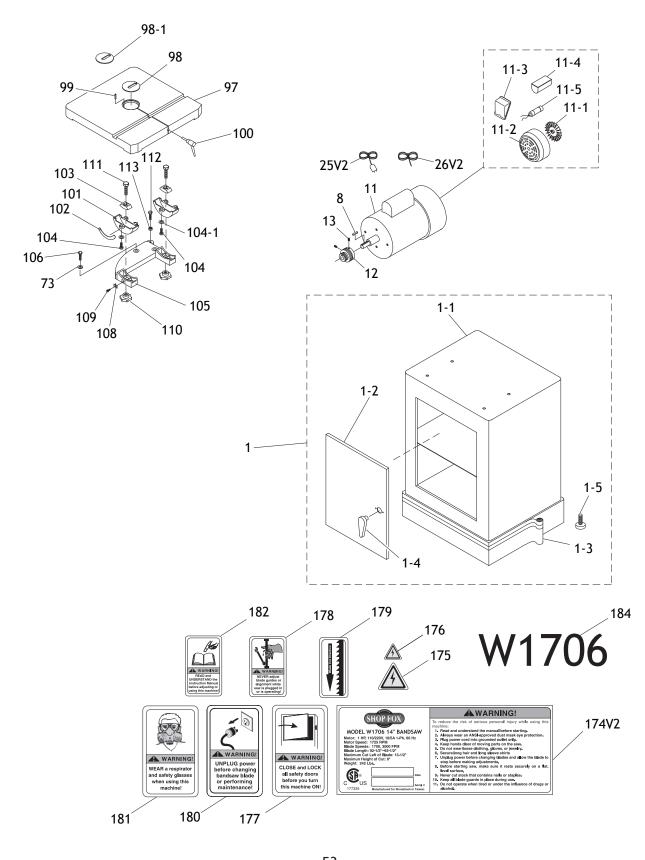
This section covers the most common problems and corrections with this type of machine. WARNING! DO NOT make any adjustments until power is disconnected and moving parts have come to a complete stop!



PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Motor will not start.	 Low voltage. Open circuit in motor or loose connections. Faulty start capacitor. 	 Check power supply for proper voltage. Inspect all lead connections on motor and magnetic switch for loose or open connections. Replace start capacitor.
Fuses or circuit breakers trip open.	 Short circuit in line cord or plug. Short circuit in motor or loose connections. Incorrect fuses or circuit breakers in power supply. 	 Inspect cord or plug for damaged insulation and shorted wires and replace extension cord. Inspect all connections on motor for loose or shorted terminals or worn insulation. Install correct fuses or circuit breakers.
Motor overheats.	 Motor overloaded. Air circulation through the motor restricted. 	 Reduce load on motor. Clean motor to provide normal air circulation.
Motor fails to develop full power.	 Power line overloaded with other electrical devices. Low power from the power source. 	 Reduce load on power line. Request a power check from the power company.
Motor stalls (resulting in blown fuses or tripped circuit).	 Short circuit in motor of loose connections. Low voltage. Incorrect fuses or circuit breakers in power line. Motor overloaded. 	 Inspect connections on motor for loose or shorted terminals or worn insulation. Correct the low voltage conditions. Install correct fuses or circuit breaker. Reduce load on motor.
Machine slows when operating.	 Excessive feed rate. Dull blade. Incorrect blade for operation. Binding the blade when cutting curves. Workpiece wet. 	 Reduce feed rate. Sharpen/replace blade. Use correct blade for workpiece. Make more relief cuts; use correct blade width for operation. If moisture content is higher than 20%, sticker and allow to dry.
Blade does not run evenly on wheels or runs off.	 Tracking is not properly adjusted. Wheels are not coplanar. 	 Properly adjust blade tracking (see Page 14). Adjust wheel alignment (see Page 47).
Blade slows when cutting; machine makes a squealing noise upon startup.	 Belt loose. Belt excessively worn. 	 Adjust belt tension (see Page 43). Replace belt (see Page 44).
Ticking sound when bandsaw is running.	 Blade weld contacting guide bear- ings. Motor fan or cover damaged. Damaged blade; bent teeth. 	 Use a stone to smooth blade weld. Replace. Replace blade.
Blade contacting table insert.	 Excessive side pressure on blade when cutting. Table not properly adjusted. 	 Reduce side pressure on blade. Properly align the table with the blade (see Page 19).
Excessive vibration when bandsaw is running.	 Machine sits on floor unevenly. Wheels not coplanar. Tires incorrectly installed. Belt worn out. Bent or damaged blade. Wheel(s) out of balance. 	 Adjust rubber feet; shim if necessary. Adjust wheel alignment (see Page 47). Check/re-install/replace. Replace belt (see Page 44). Replace blade (see Page 39). Replace wheel(s).



PARTS Cabinet Stand



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Cabinet Stand Parts List

REF	PART #	DESCRIPTION
1	X1706001	CABINET STAND ASSEMBLY
1-1	X1706001-1	CABINET STAND
1-2	X1706001-2	CABINET DOOR
1-3	X1706001-3	BOTTOM BLACK STRIPE
1-4	X1706001-4	HANDLE
1-5	X1706001-5	CABINET RUBBER FOOT
8	XPK23M	KEY 5 X 5 X 25
11	X1706011	MOTOR 1HP 110V/220V 1PH
11-1	X1706011-1	MOTOR FAN
11-2	X1706011-2	MOTOR FAN COVER
11-3	X1706011-3	MOTOR JUNCTION BOX
11-4	X1706011-4	CAPACITOR COVER
11-5	X1706011-5	S CAPACITOR 300M 125V
12	X1706012	MOTOR PULLEY
13	XPSS07	SET SCREW 1/4-20 X 1/2
25V2	X1706025V2	POWER CORD 16G 3C 5-15 V2.08.10
26V2	X1706026V2	MOTOR CORD 16G 3C V2.08.10
73	XPLW01	LOCK WASHER 5/16
97	X1706097	TABLE
98	X1706098	LARGE TABLE INSERT
98-1	X1706098-1	SMALL TABLE INSERT
99	XPRP15M	ROLL PIN 3 X 8
100	X1706100	TABLE LOCK PIN

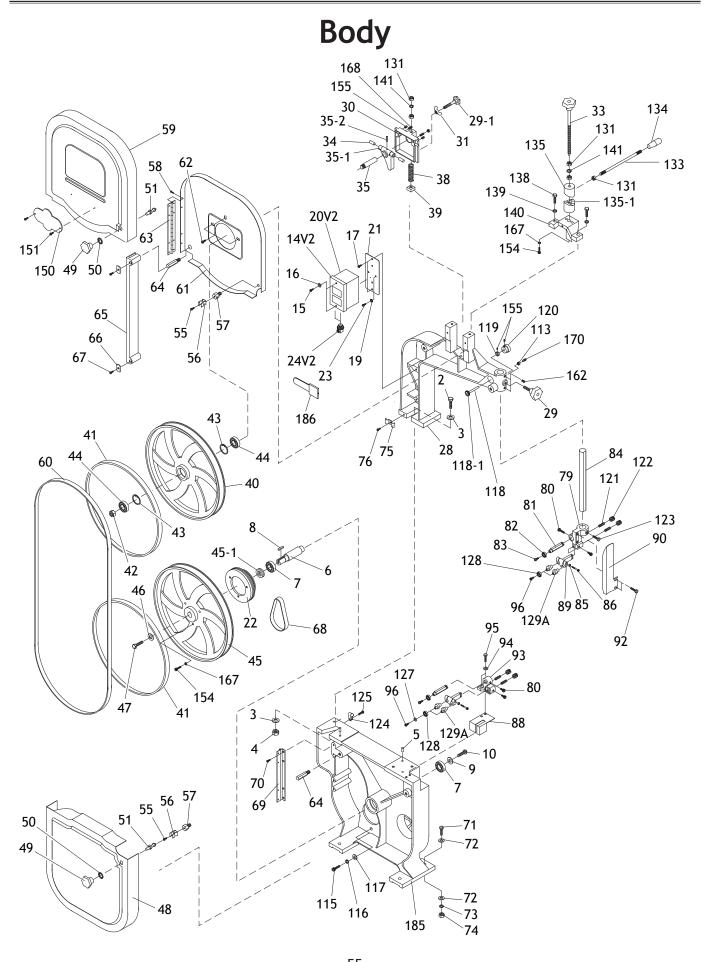
REF	PART #	DESCRIPTION
101	X1706101	TRUNNION
102	X1706102	TILT SCALE
103	X1706103	TRUNNION CLAMP SHOE
104	XPB19	HEX BOLT 1/4-20 X 1/2
104-1	XPW06	FLAT WASHER 1/4
105	X1706105	TRUNNION BASE
106	XPB12	HEX BOLT 5/16-18 X 1-1/4
108	X1706108	POINTER
109	XPS18	PHLP HD SCR 10-24 X 1/4
110	X1706110	TRUNNION LOCK KNOB 3/8-16
111	XPB58	HEX BOLT 3/8-16 X 2
112	XPB22	HEX BOLT 5/16-18 X 1-3/4
113	XPN02	HEX NUT 5/16-18
174V2	X1706174V2	MACHINE ID LABEL CSA V2.08.10
175	XLABEL-14	ELECTRICITY LABEL LARGE
176	XLABEL-14B	ELECTRICITY LABEL SMALL
177	XLABEL-03	CLOSE DOOR WARNING LABEL
178	XLABEL-10B	BANDSAW ADJUST LABEL
179	XLABEL-17	BLADE DIRECTION LABEL
180	XLABEL-07A	UNPLUG WARNING LABEL
181	XLABEL-06	RESPIRATOR WARNING LABEL
182	XLABEL-08	READ MANUAL LABEL SMALL
184	X1706184	MODEL NUMBER LABEL

Body Parts List

REF	PART #	DESCRIPTION	
2	XPB64	HEX BOLT 5/8-11 X 2-1/2	
3	XPW14	FLAT WASHER 5/8	
4	XPN04	HEX NUT 5/8-11	
5	X1706005	GUIDE PIN 6 X 5MM	
6	X1706006	LOWER WHEEL SHAFT	
7	XP6204-2RS	BALL BEARING 6204-2RS	
8	XPK23M	KEY 5 X 5 X 25	
9	XPW07	FLAT WASHER 5/16	
10	XPB86	HEX BOLT 5/16-18 X 3/4	
14V2	X1706014V2	PUSH BUTTON SWITCH V2.08.10	
15	XPHTEK37	TAP SCREW #10 X 3/4	
16	XPW03	FLAT WASHER #10	
17	XPS01	PHLP HD SCR 10-24 X 1/2	
19	XPTLW01	EXT TOOTH WASHER #10	
20V2	X1706020V2	SWITCH BOX V2.08.10	
21	X1706021	SWITCH BRACKET	

REF	PART #	DESCRIPTION	
22	X1706022	WHEEL PULLEY	
23	XPS22	PHLP HD SCR 10-24 X 5/8	
24V2	X1706024V2	STRAIN RELIEF V2.08.10	
28	X1706028	UPPER FRAME ARM	
29	X1706029	KNOB BOLT 5/16-18 X 3/4	
29-1	X1706029-1	KNOB BOLT 5/16-18 X 2	
30	X1706030	TENSION SPRING HOUSING	
31	XPWN03	WING NUT 5/16-18	
33	X1706033	TENSION BOLT 3/8-16 X 11-5/8	
34	X1706034	PIVOT PIN	
35	X1706035	UPPER WHEEL SHAFT	
35-1	X1706035-1	SHAFT BRACKET	
35-2	XPRP73M	ROLL PIN 4 X 30	
38	X1706038	TENSION SPRING 3.8 X 76	
39	X1706039	INDICATOR NUT 3/8 X 16	
40	X1706040	UPPER WHEEL	







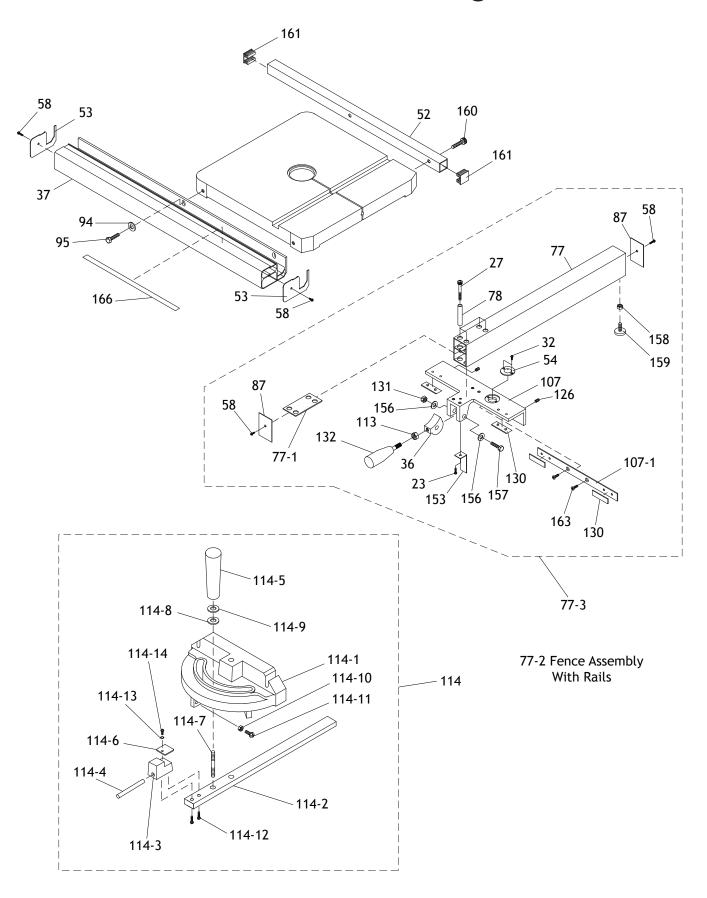
Body Parts List

REF	PART #	DESCRIPTION	
41	X1706041	WHEEL TIRE	
42	XPN01	HEX NUT 1/2-20	
43	XPR21M	INT RETAINING RING 35MM	
44	XP6202-2RS	BALL BEARING 6202-2RS	
45	X1706045	LOWER WHEEL	
45-1	X1706045-1	SHIM 19 X 29 X 1MM BRASS	
46	X1706046	LOWER WHEEL FLAT WASHER 5/16	
47	XPB104	HEX BOLT 5/16-18 X 3/4 LH	
48	X1706048	LOWER WHEEL COVER	
49	X1706049	WHEEL COVER KNOB 5/16-18	
50	XPTLW03M	INT TOOTH WASHER 8MM	
51	X1706051	STUD LATCH	
55	XPS01	PHLP HD SCR 10-24 X 1/2	
56	X1706056	САТСН	
57	X1706057	LOCATING BOLT 3/8-16 X 1-3/32	
58	XPHTEK7	TAP SCREW #8 X 3/8	
59	X1706059	UPPER WHEEL COVER	
60	X1706060	SAW BLADE 6TPI X 93-1/2 X 3/8	
61	X1706061	UPPER WHEEL HOUSING	
62	XPFS19	FLANGE SCREW 10-24 X 5/16	
63	X1706063	UPPER WHEEL COVER HINGE	
64	X1706064	BLADE GUARD STUD	
65	X1706065	BLADE GUARD	
66	X1706066	FLAT WASHER 28 X 16 X 2	
67	XPHTEK23	TAP SCREW #10 X 1/2	
68	X1706068	MULTI-GROOVE BELT 200J5	
69	X1706069	LOWER WHEEL COVER HINGE	
70	XPS06	PHLP HD SCR 10-24 X 3/8	
71	XPB11	HEX BOLT 5/16-18 X 1-1/2	
72	XPW07	FLAT WASHER 5/16	
73	XPLW01	LOCK WASHER 5/16	
74	XPN02	HEX NUT 5/16-18	
75	X1677005	DOUBLE CORD CLAMP	
76	XPS01	PHLP HD SCR 10-24 X 1/2	
79	X1706079	UPPER BLADE GUIDE CASTING	
80	X1706080	THUMBSCREW 1/4-20 X 1/4	
81	X1706081	BEARING ARBOR 1/4-20	
82	XP6000ZZ	BALL BEARING 6000ZZ	
83	XPFS19	FLANGE SCREW 1/4-20 X 5/16	
84	X1706084	GUIDE POST	
85	XPLW03	LOCK WASHER #10	
86	XPCAP101	CAP SCREW 10-24 x 1-1/4	
88	X1706088	LOWER BLADE GUIDE BRACKET	
88	X1706088	LOWER BLADE GUIDE BRACKET	

REF	PART #	DESCRIPTION	
89	X1706089	GUIDE SHAFT BRACKET	
90	X1706090	GUIDE POST GUARD	
92	XPS06	PHLP HD SCR 10-24 X 3/8	
93	X1706093	LOWER BLADE GUIDE CASTING	
94	XPW06	FLAT WASHER 1/4	
95	XPB05	HEX BOLT 1/4-20 X 3/4	
96	XPCAP109	CAP SCREW 10-32 X 1/4	
113	XPN02	HEX NUT 5/16-18	
115	XPB03	HEX BOLT 5/16-18 X 1	
116	XPLW01	LOCK WASHER 5/16	
117	XPW07	FLAT WASHER 5/16	
118	X1706118	PINION SHAFT	
118-1	X1706118-1	PINION GEAR	
119	X1706119	LOCK COLLAR	
120	X1706120	KNURLED KNOB 1/4-24	
121	XPSS52	SET SCREW 5/16-24 X 1-3/4	
122	X1706122	KNURLED KNOB 5/16-24	
123	XPCAP01	CAP SCREW 1/4-20 X 5/8	
124	X1706124	CORD CLAMP 3/4"	
125	XPS01	PHLP HD SCR 10-24 X 1/2	
127	XPW03	FLAT WASHER #10	
128	XP608-2RS	BALL BEARING 608-2RS	
129A	X1706129A	ECCENTRIC SHAFT 3/8" V2.09.04	
131	XPN08	HEX NUT 3/8-16	
133	X1706133	QUICK RELEASE LEVER	
134	X1706134	LEVER KNOB	
135	X1706135	UPPER CLUTCH	
135-1	X1706135-1	LOWER CLUTCH	
138	XPB12	HEX BOLT 5/16-18 X 1-1/4	
139	XPLW01	LOCK WASHER 5/16	
140	X1706140	CLUTCH SUPPORT BRACKET	
141	XPLW04	LOCK WASHER 3/8	
150	XPLOGO3	SHOP FOX LOGO	
151	XPHTEK10	TAP SCREW #4 X 3/8	
154	XPCAP06	CAP SCREW 1/4-20 X 1	
155	XPSS04	SET SCREW 1/4-20 X 5/16	
162	X1706162	BALL PLUNGER 1/4-20 X 1/2	
167	XPLW02	LOCK WASHER 1/4	
168	PSS06	SET SCREW 1/4-20 X 3/4	
170	X1706170	DOG POINT SET SCREW 1/4-20 X 1/2	
185	X1706185	LOWER FRAME	
186	X1706186	SWITCH PADLOCK	



Fence & Miter Gauge





Fence & Miter Gauge Parts List

REF	PART #	DESCRIPTION	
23	XPS22	PHLP HD SCR 10-24 X 5/8	
27	XPCAP44	CAP SCREW 1/4-20 X 2-1/2	
32	XPS49	PHLP HD SCR 8-32 X 1-1/4	
36	X1706036	LOCK CAM	
37	X1706037	FRONT FENCE RAIL	
52	X1706052	REAR FENCE RAIL	
53	X1706053	FRONT RAIL END CAP	
54	X1706054	FENCE POINTER LENS	
58	XPHTEK7	TAP SCREW #8 X 3/8	
77	X1706077	FENCE TUBE	
77-1	X1706077-1	FENCE INSET PLATE	
77-2	X1706077-2	FENCE ASSEMBLY W/RAILS	
77-3	X1706077-3	FENCE ASSEMBLY W/O RAILS	
78	X1706078	SLEEVE	
87	X1706087	FENCE END CAP	
94	XPW06	FLAT WASHER 1/4	
95	XPB05	HEX BOLT 1/4-20 X 3/4	
107	X1706107	FENCE CARRIAGE	
107-1	X1706107-1	LOCKING PLATE	
113	XPN02	HEX NUT 5/16-18	
114	X1706114	MITER GAUGE ASSEMBLY	
114-1	X1706114-1	MITER GAUGE BODY	
114-2	X1706114-2	MITER BAR	
114-3	X1706114-3	STOP BLOCK	

REF	PART #	DESCRIPTION	
114-4	X1706114-4	STOP DOWEL	
114-5	X1706114-5	HANDLE 1/4-20	
114-6	X1706114-6	POINTER	
114-7	X1706114-7	STUD 1/4-20 X 1-1/8	
114-8	X1706114-8	PLASTIC FLAT WASHER 1/4"	
114-9	XPW06	FLAT WASHER 1/4	
114-10	XPN07	HEX NUT 10-24	
114-11	XPS08	PHLP HD SCR 10-24 X 3/4	
114-12	XPS18	PHLP HD SCR 10-24 X 1/4	
114-13	XPW02M	FLAT WASHER 5MM	
114-14	XPS18	PHLP HD SCR 10-24 X 1/4	
126	XPSS02	SET SCREW 5/16-18 X 3/8	
130	X1706130	BEARING PAD	
131	XPN08	HEX NUT 3/8-16	
132	X1706132	FENCE LOCK LEVER 5/16-18 X 5/8	
153	X1706153	CAM WEAR PLATE	
156	XPW02	FLAT WASHER 3/8	
157	XPB58	HEX BOLT 3/8-16 X 2	
158	XPN01M	HEX NUT M6-1	
159	X1706159	RUB FOOT M6-1 X 15	
160	XPCAP01	CAP SCREW 1/4-20 X 5/8	
161	X1706161	REAR RAIL END CAP	
163	XPFH9M	FLAT HD SCR M6-1 X 6	
166	X1706166	FENCE SCALE	



Warranty Registration

Name				
Street				
City	State		Zip	
			Invoice #	
Model #	Serial #	Dealer Name	Purchase Date	
		a voluntary basis. It will be used j . Of course, all information is str		
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		odworker/metalworker? _2-8 Years8-20 Ye	ears20+ Years	
3. How man 0-2		r tools are Shop Fox? _3-5	10+	
4. Do you th	iink your machine rep	presents a good value?	_YesNo	
5. Would yo	u recommend Shop F	ox products to a friend?	_YesNo	
6. What is y 20 50		30-39 60-69	40-49 70+	
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8. Which of	the following magazi	ines do you subscribe to?		
End to the second secon	Shop Machinist al of Light Cont. team Airplane News	 Popular Mechanics Popular Science Popular Woodworking Practical Homeowner Precision Shooter Projects in Metal RC Modeler Rifle Shop Notes Shotgun News 	 Today's Homeowner Wood Wooden Boat Woodshop News Woodsmith Woodwork Woodworker West Woodworker's Journal Other: 	
9. Comment	s:			

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WARRANTY

Woodstock International, Inc. warrants all Shop Fox machinery to be free of defects from workmanship and materials for a period of two years from the date of original purchase by the original owner. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, lack of maintenance, or reimbursement of third party expenses incurred.

Woodstock International, Inc. will repair or replace, at its expense and at its option, the Shop Fox machine or machine part, which in normal use has proven to be defective, provided that the original owner returns the product prepaid to a Shop Fox factory service center with proof of their purchase of the product within two years, and provides Woodstock International, Inc. reasonable opportunity to verify the alleged defect through inspection. If it is determined there is no defect, or that the defect resulted from causes not within the scope of Woodstock International Inc.'s warranty, then the original owner must bear the cost of storing and returning the product.

This is Woodstock International, Inc.'s sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant that Shop Fox machinery complies with the provisions of any law or acts. In no event shall Woodstock International, Inc.'s liability under this warranty exceed the purchase price paid for the product, and any legal actions brought against Woodstock International, Inc. shall be tried in the State of Washington, County of Whatcom. We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special or consequential damages arising from the use of our products.

Every effort has been made to ensure that all Shop Fox machinery meets high quality and durability standards. We reserve the right to change specifications at any time because of our commitment to continuously improve the quality of our products.



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