WOODSTOCK

SHOP FOX®

INTERNATIONAL

MODEL W1872

16" VS SCROLL SAW W/FOOT PEDAL

OWNER'S MANUAL

(FOR MODELS MANUFACTURED SINCE 04/19)

Phone: (360) 734-3482 • Online Technical Support: techsupport@woodstockint.com

COPYRIGHT © APRIL, 2019 BY WOODSTOCK INTERNATIONAL, INC.

WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE OR FORM WITHOUT THE WRITTEN APPROVAL OF WOODSTOCK INTERNATIONAL, INC.

#20206AL Printed in China

⚠ WARNING!

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

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

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

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

⚠ WARNING!

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

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

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

Contents

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 Ext. 2 or send e-mail to: **techsupport@woodstockint.com**. 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 **http://www.woodstockint.com/manuals**.
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

MACHINE SPECIFICATIONS

© Woodstock International, Inc. • Phone #: (800) 840-8420 • Web: www.shopfox.biz

MODEL W1872
16" VS SCROLL SAW W/FOOT PEDAL

Product Dimensions

Weight ..... 27 lbs.
Width (side-to-side) x Depth (front-to-back) x Height ..... 13 x 25 x 20 in.
Foot Print (Length x Width) ..... 15-1/2 x 9 in.

Shipping Dimensions

Type ..... Cardboard
Content ..... Machine
Weight ..... 32 lbs.
Length/Width/Height ..... 27 x 13 x 16 in.

Electrical

Power Requirement ..... 120V, Single-Phase, 60 Hz
Full-Load Current Rating 1.2A
Minimum Circuit Size 15A
Cord Length ..... 6 ft.
Cord Gauge ..... 18 AWG
Included Plug Type 5-15
Switch ..... Toggle Switch w/Removable Key

Motors

Main

Horsepower ..... 1/6 HP
Phase ..... Single-Phase
Amps 1.2A
Speed ..... 550 - 1650 RPM
Type ..... DC Motor
Power Transfer (Blade) ..... Direct Drive
Power Transfer (Rotary Tool) ..... Belt
Bearings ..... Shielded & Permanently Lubricated

Main Specifications

Capacities

Depth of Throat ..... 16 in.
Maximum Cutting Depth ..... 15-3/4 in.
Maximum Cutting Height at 90 Degrees ..... 2 in.
Maximum Cutting Height at 45 Degrees ..... 1 in.
Table Size ..... 10 x 16-1/4 in.
Table Tilt ..... Left 45, Right 5 deg.

Blade Information

Blade Type ..... Pin
Blade Size ..... 5-1/4 in.
Stroke per Minute ..... 550 - 1650 SPM
Stroke Length ..... 3/4 in.

Rotary Tool Information

Speed Range	1650 - 4800 RPM
Maximum Collet Chuck Capacity	1/8 in.
Flex-Shaft Length	3-1/2 ft.

Construction

Table	Cast Aluminum
Frame	Cast Aluminum
Lamp	LED
Blade Guard	Plastic
Paint Type/Finish	Powder Coated

Other Related Information

Foot Pedal Cord Length	52 in.
Number of Dust Ports	1
Dust Port Size	1-1/4 in.

Other

Country of Origin	China
Warranty	2 Years
Approximate Assembly & Setup Time	15 Minutes
Serial Number Location	Machine ID Label
ISO 9001 Factory	No
Certified by a Nationally Recognized Testing Laboratory (NRTL)	No

Features

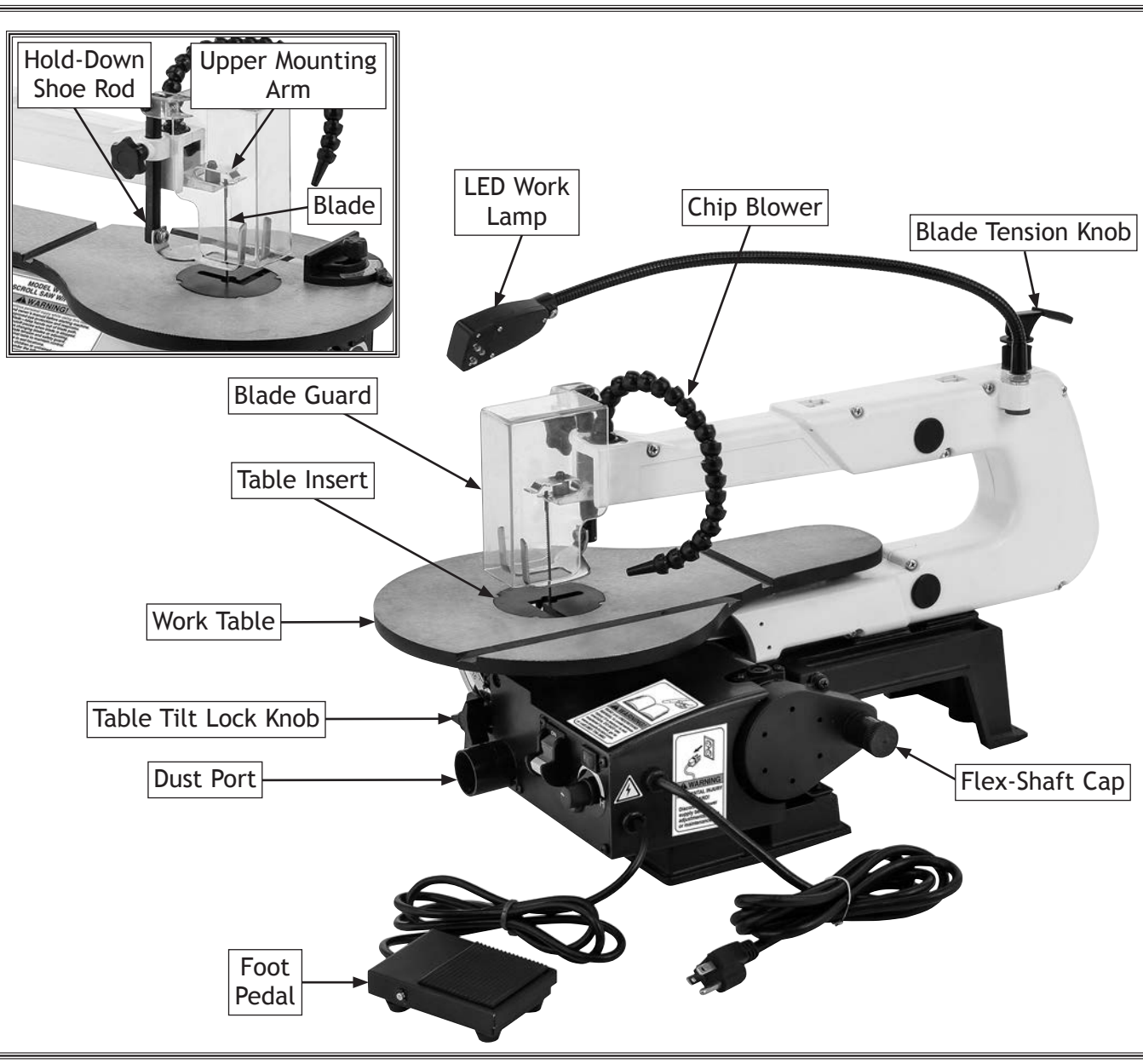
Flex-Shaft Rotary Tool Attachment
Foot Pedal for Motor Control
LED Work Light and Chip Blower
Variable Speed

Accessories

Rotary Tool
Pinless Blade Adapters
Single Pinless Blade
Miter Gauge
Dust Port Adapter (1-1/2 in.)

Identification

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



⚠WARNING

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

Controls & Components

Refer to **Figures 1-3** and the following descriptions to become familiar with the basic controls and components of this machine. Understanding these items and how they work will help you understand the rest of the manual and stay safe when operating this machine.

⚠WARNING

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

Variable-Speed Dial: Adjusts blade speed from 530-1560 RPM.

ON/OFF Switch: Starts and stops motor. Remove disabling key to disable switch.

Foot/Pedal Switch: Turn ***ON*** to operate machine with foot pedal.

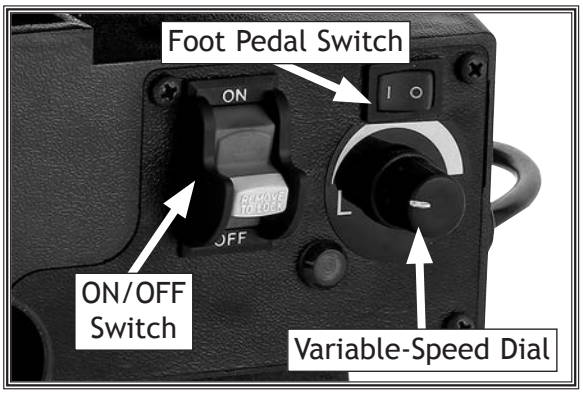


Figure 1. Power and speed controls.

Hold-Down Shoe: Holds down workpiece as blade moves during operation. Move hold-down shoe to thickness of workpiece.

Hold-Down Shoe Lock Knob: Locks hold-down shoe rod in position.

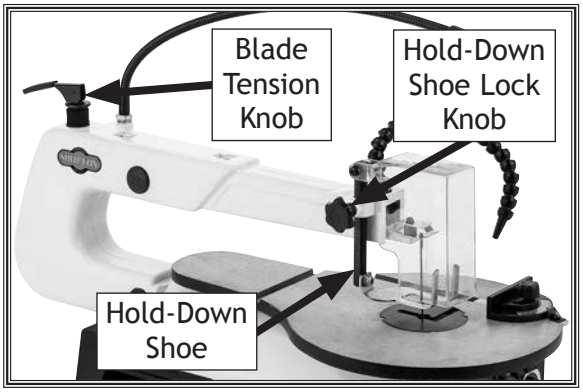


Figure 2. Hold-down shoe and height knob.

Flex-Shaft: Connects rotary tool to scroll saw.

Blade Tension Knob: Turn clockwise to increase blade tension; turn counterclockwise to decrease blade tension.

Foot Pedal: Used to turn ***ON*** scroll saw and rotary tool.

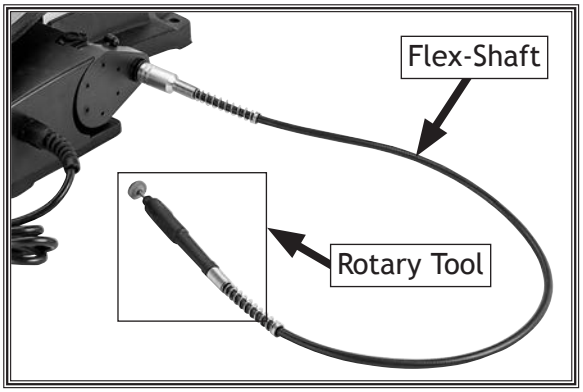


Figure 3. Flex-shaft and rotary tool.

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!

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

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

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

NOTICE **This symbol is used to alert the user to useful information about proper operation of the equipment 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.

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

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

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

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

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

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

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 loss of workpiece control.

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

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

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

INTENDED USAGE. Only use machine for its intended purpose—never make modifications without prior approval from Woodstock International. Modifying machine or using it differently than intended will void the warranty and may result in malfunction or mechanical failure that leads to serious personal injury or death!

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

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

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

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

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

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

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

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

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

CHECK DAMAGED PARTS. Regularly inspect machine for any condition that may affect safe operation. Immediately repair or replace damaged or mis-adjusted parts before operating machine.

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

EXPERIENCING DIFFICULTIES. If at any time you experience difficulties performing the intended operation, stop using the machine! Contact Technical Support at (360) 734-3482.

Additional Safety for Scroll Saws

Serious cuts or amputation can occur from contact with the moving saw blade during operation or if blade breakage occurs. To reduce this risk, anyone operating this machine MUST completely heed the hazards and warnings below.

HAND PLACEMENT. Never position fingers or hands in line with the blade. If the workpiece or your hands slip, serious personal injury could occur.

INTENDED USE. 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 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.

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

BLADE SPEED. Always allow blade to reach full speed before starting the cut. Moving the workpiece into a blade that is not at full speed could cause the blade to break or grab the workpiece and draw the operator's hands into the blade.

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.

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 cutting small curves.

BLADE GUARD. When properly adjusted, the blade guard helps protect the operator's hands and fingers from accidental contact with the moving blade. ONLY operate this scroll saw with the blade guard in the proper position. Keep the guard as close as possible to the workpiece without interfering with the intended operation.

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, as this could cause kickback and personal injuries. If you need to back the workpiece out of blade, turn scroll saw ***OFF*** and wait for the blade to come to a complete stop. DO NOT twist or put excessive stress on the blade or it could damage/break blade. Instead, use relief cuts for curve cuts that may twist the blade.

LEAVING WORK AREA. Never leave a machine running unattended. Allow the scroll saw to come to a complete stop before you leave it unattended.

SMALL WORKPIECE HANDLING. If your hands slip while guiding small workpieces with your fingers during a cut, amputation or laceration injuries could occur. Always support/feed the workpiece with push sticks, jig, vise, or some type of clamping fixture.

CUT-OFF PIECES. Never use your hands to move cut-offs away from the blade while the saw is running. If a cut-off becomes trapped between the blade and table insert, turn the saw OFF and allow the blade to completely stop before removing it.

ELECTRICAL

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. If a correct circuit is not available, a qualified electrician MUST install one before you can connect the machine to power.

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

Full-Load Current Rating

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

Full-Load Current Rating at 120V ..... 1.2 Amps

Circuit Requirements for 120V

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

Circuit Type .....110V, 115V, 120V, 60 Hz, Single-Phase
Circuit Size ..... 15 Amps
Plug/Receptacle ..... NEMA 5-15

⚠WARNING

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

⚠WARNING

Incorrectly wiring or grounding this machine can cause electrocution, fire, or machine damage. To reduce this risk, only an electrician or qualified service personnel should do any required electrical work on this machine.

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 with an electrician to ensure that the circuit is properly sized for safe operation.

Grounding Requirements

This machine MUST be grounded. In the event of certain types of malfunctions or breakdowns, grounding provides a path of least resistance for electric current 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 equipment-grounding wire. If repair or replacement of the power cord or plug is necessary, do not connect the equipment-grounding wire to a live (current carrying) terminal.

Check with a qualified electrician or service personnel if you do not understand these grounding requirements, or if you are in doubt about whether the 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.

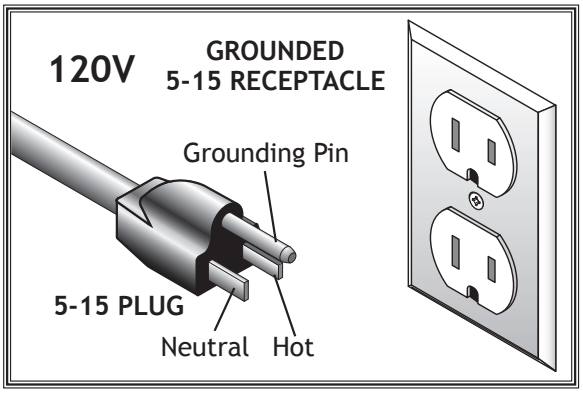
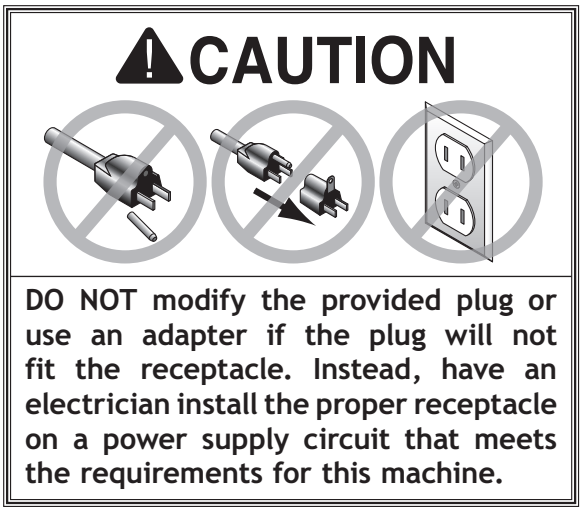


Figure 4. NEMA 5-15 plug & receptacle.



DO NOT modify the provided plug or use an adapter if the plug will not fit the receptacle. Instead, have an electrician install the proper receptacle on a power supply circuit that meets the requirements for this machine.

For 120V Connection

This machine is equipped with a power cord with an equipment-grounding wire and NEMA 5-15 grounding plug (see figure). The plug must only be inserted into a matching receptacle 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 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:

Minimum Gauge Size at 120V ..... 16 AWG
Maximum Length (Shorter is Better) ..... 50 ft.

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 list of items shipped with your machine. Before beginning setup, lay these items out and inventory them.

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

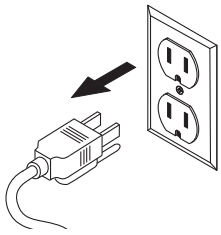
Box Inventory (Figure 5) **Qty**

A. Blade Guard 1
B. Dust Port Adapter 1
C. Miter Gauge 1
D. Hex Wrench 4mm.....1
E. Hex Wrench 2.5mm 1
F. Pin-End Blade 18 TPI.....1
G. Blade Adapters.....2

Flex-Shaft Rotary Tool (Figure 6)

H. Flex-Shaft Rotary Tool 1
I. Collet Locking Pin 3mm 1
J. Drill Bit 1/8".....1
K. Collet Chuck Wrench.....1

⚠WARNING



Keep machine disconnected from power until instructed otherwise.

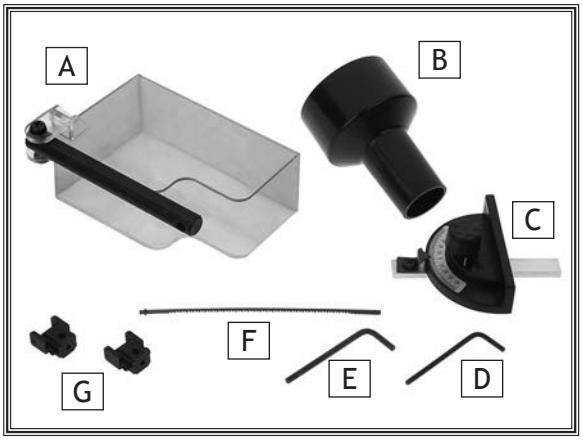


Figure 5. Box inventory items.

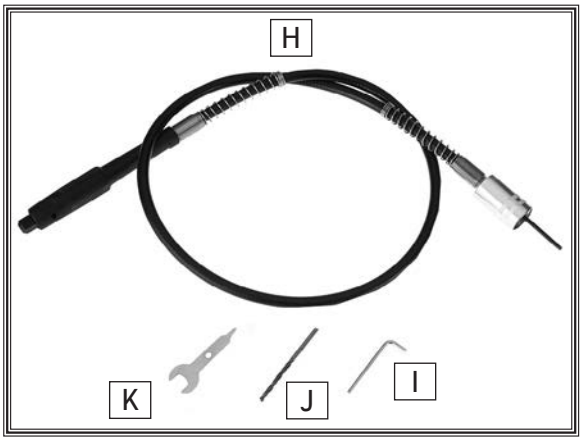


Figure 6. Flex-shaft inventory items.

Machine Placement

Workbench Load

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

Placement Location

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

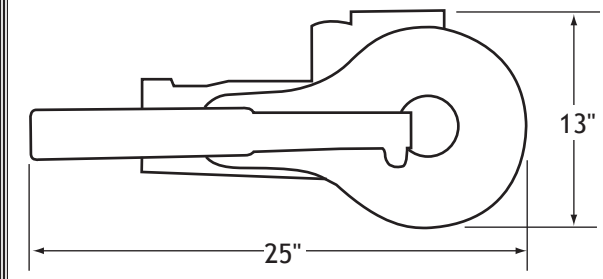


Figure 7. Minimum working clearances.

CAUTION

INJURY HAZARD! Untrained users can injure themselves with this machine. Restrict access to machine when you are away, especially if it is installed where children are present.

Bench Mounting

Number of Mounting Holes..... 3
Diameter of Mounting Hardware Needed.....3/8"

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

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

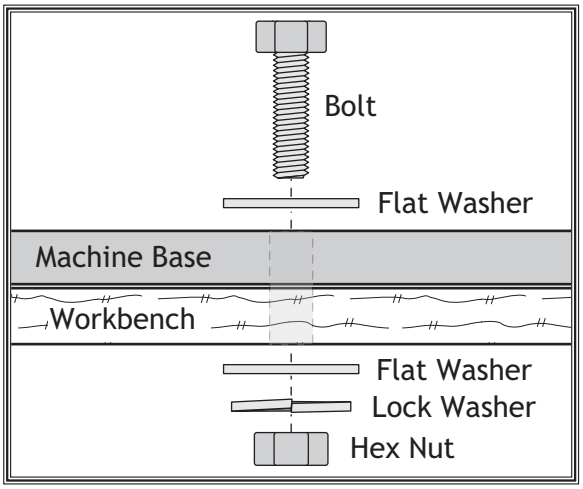


Figure 8. Typical "Through Mount" setup.

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

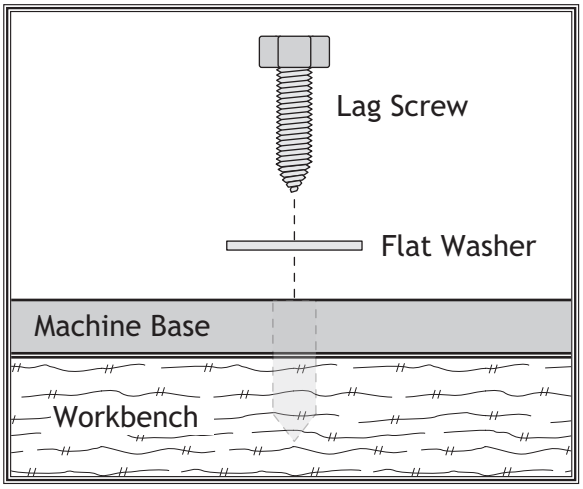


Figure 9. Typical "Direct Mount" setup.

Assembly

Before beginning the assembly process, refer to **Items Needed for Setup** and gather everything you need. Ensure all parts have been properly cleaned of any heavy-duty rust-preventative applied at the factory (if applicable). Be sure to complete all steps in the assembly procedure prior to performing the **Test Run** or connecting the machine to power.

To assemble machine, do these steps:

1. Remove pre-installed cap screw, lock washer, and flat washer from top of hold-down shoe rod shown in **Figure 10**.

2. Attach blade guard to top of hold-down shoe rod with cap screw, lock washer, and flat washer (see **Figure 10**).

3. Pivot guard up and down to ensure it moves smoothly. If necessary, loosen mounting screw to allow movement.

4. Verify blade pins are seated in V-notch indents, as shown in **Figure 11**.

5. Pinch blade and move it side to side with light pressure to verify it is tensioned so it will not come off during operation. If adjustments are necessary, refer to **Blade Tension** instructions on **Page 22**.

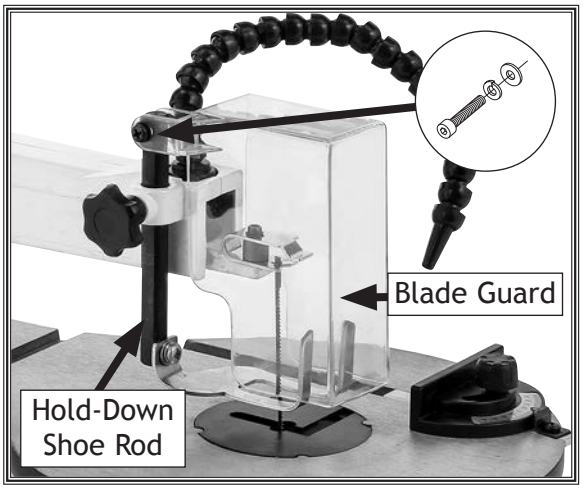


Figure 10. Blade guard installed.

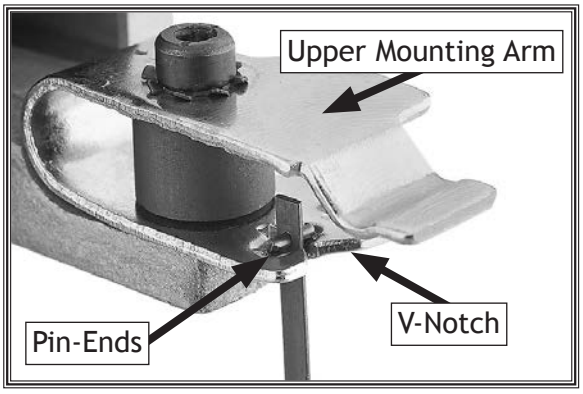


Figure 11. V-notch indent.

6. Remove flex-shaft cap shown in **Figure 12**.

Figure 12. Flex-shaft cap location.

7. Insert inner spindle of flex-shaft into threaded shaft in saw, then turn flex-shaft clockwise to tighten, as shown in **Figure 13**.

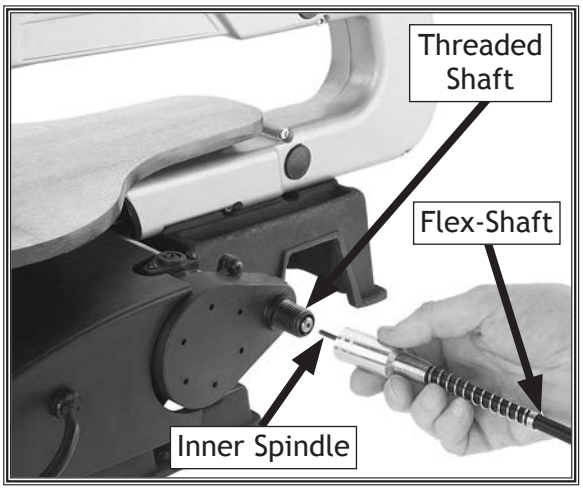


Figure 13. Example flex-shaft installation.

8. Insert included drill bit or a tool bit (not included) into flex-shaft collet.

9. Insert collet locking pin into hole on collet and tighten bit with 9mm flat wrench by turning clockwise, as shown in **Figure 14**.

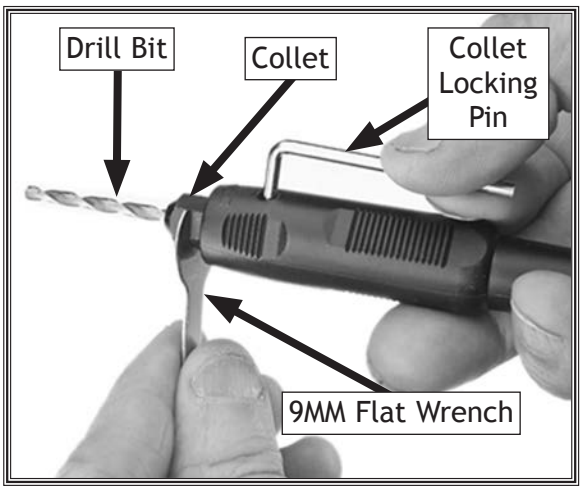


Figure 14. Securing drill bit in flex-shaft collet.

Dust Collection

Recommended CFM at Dust Port: ..... 100 CFM

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

⚠CAUTION

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

Item(s) Needed	Qty
Dust Collection System	1
Dust Hose 1¼"	1
Hose Clamps 1¼"	2

To connect a dust collection hose, do these steps:

1. Fit a 1¼" dust hose over dust port, as shown in **Figure 15**, and secure in place with hose clamp.

2. Tug hose to make sure it does not come off.

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

3. If needed, use the included dust port adapter, as shown in **Figure 16**. This will require (2) 1½" hose clamps.

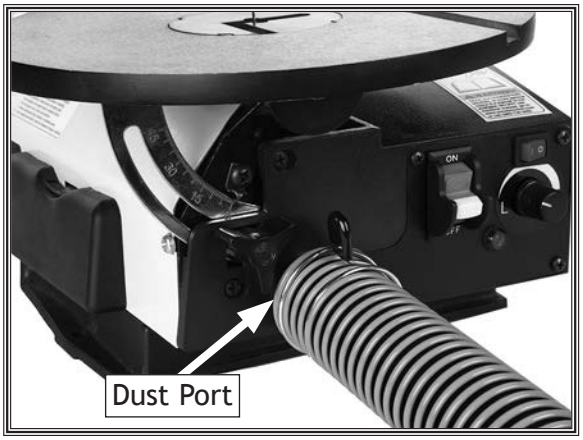


Figure 15. Dust port connected to dust collection system.

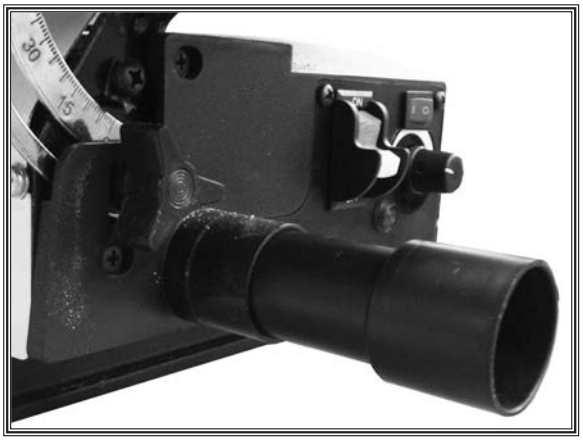


Figure 16. Dust port adapter.

Test Run

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

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

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

To test run the machine, do these steps:

1. Clear all setup tools away from machine.
2. Make sure blade is properly installed and tensioned, and that blade guard is in down position.
3. Rotate variable-speed dial counterclockwise all the way.
4. Connect machine to power supply.
5. Firmly hold flex-shaft rotary tool.
6. Turn machine ***ON***, verify motor operation and variable-speed dial, and then turn machine ***OFF***.

   Motor should run smoothly, without unusual noises.
7. Remove switch disabling key, as shown in **Figure 17.**
8. Try to start machine with switch. Machine should not start.

   — If machine *does not* start, switch disabling feature is working as designed.

   — If machine *does* start, immediately stop machine. The switch disabling feature is not working correctly. This safety feature must work properly before proceeding with regular operations. Call Tech Support for help.
9. Remove flex-shaft rotary tool until you need to operate it, and re-install flex-shaft cap.

⚠WARNING

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

⚠WARNING

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

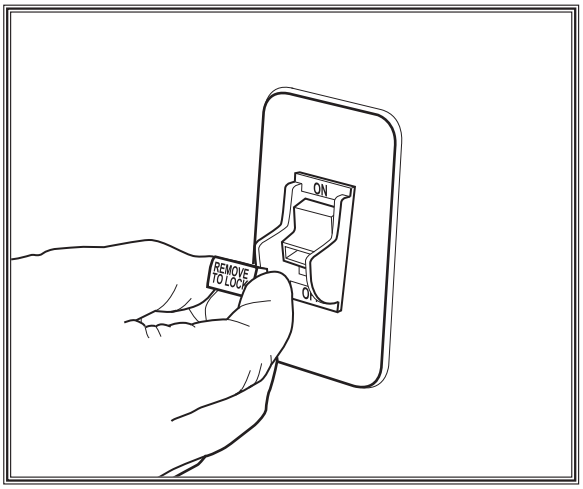


Figure 17. Removing switch disabling key from toggle switch.

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!

The overview below provides 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 its generic nature, this overview is **NOT** intended to be an instructional guide.

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

1. Examines workpiece to make sure it is suitable for cutting.
2. If necessary, adjusts table tilt to correct angle of desired cut.
3. Loosens hold-down shoe height knob, adjusts blade guard height to just clear workpiece (no more than 1/4"), then retightens hold-down shoe height knob.
4. Verifies workpiece can safely pass all the way through blade without interference from other objects.
5. Puts on safety glasses and a respirator.
6. Starts dust collector and turns machine ***ON***.
7. Sets saw blade speed.
8. Holds workpiece firmly and flat against table and then pushes workpiece into blade at a steady and controlled rate until cut is complete.
9. Rotates variable-speed dial to slowest speed, then turns machine ***OFF***.

⚠WARNING

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

⚠WARNING

To reduce the risk of eye injury and long-term respiratory damage, always wear safety glasses and a respirator while operating this machine.

NOTICE

If you are an inexperienced operator, we strongly recommend that you read books or trade articles, or seek training from an experienced operator of this type of machinery before performing unfamiliar operations. Above all, safety must come first!

Basic Functions of a Scroll Saw

A properly adjusted scroll saw performs many types of cuts with ease and accuracy. It is capable of performing these types of cuts:

Straight Cuts

- Miters, angles and compound angles, ripping, and crosscutting

Irregular Cuts

- Simple and complex curves, duplicate parts, circles, and beveled curves

Basic Cutting Tips

Basic tips to follow when operating a scroll saw:

- Typically, a scroll saw blade stays sharp from ½ hour to 2 hours of use, depending on how blade is used and type of material being cut.
- Best cutting results will be achieved when cutting workpieces less than 1" thick. When cutting workpieces thicker than 1", move workpiece through the blade very slowly.
- Blades dull much faster when cutting plywood, hardwoods, and laminates.
- Exerting excessive side pressure on blade greatly increases chance of blade breakage.
- Plan cut before starting curves. Make relief cuts in waste areas near tight inside curves or leave tight inside curves for a second pass to minimize backing out. Cut sharp outside curves by cutting past curve and looping around to cut from different angle.
- When approaching tight radius, slow down feed rate, but don't stop. Give teeth time to make cut. Forcing workpiece through curve will cause blade to twist or break.
- If cut produces waste in curve's interior, turn power OFF and wait until all motion stops before removing waste.
- Scroll saw blades have a tendency to drift. This is compensated by adjusting the feed direction.

Workpiece Inspection

Some workpieces are not safe to cut or may require modification before they can be made safe to cut. **Before cutting, 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, laminate covered wood products, and some plastics. Cutting drywall or cementitious backer board creates extremely fine dust and may reduce the life of the bearings. This machine is NOT designed to cut metal, glass, stone, tile, etc.; cutting these materials with a scroll saw may lead to injury.
- ***Foreign Objects:*** Nails, staples, dirt, rocks and other foreign objects are often embedded in wood. While cutting, these objects can become dislodged and hit the operator, cause kickback, or break the blade, which might then fly apart. Always visually inspect your workpiece for these items. If they can't be removed, DO NOT cut the workpiece.
- ***Large/Loose Knots:*** Loose knots can become dislodged during the cutting operation. Large knots can cause kickback and machine damage. Choose workpieces that do not have large/loose knots or plan ahead to avoid cutting through them.
- ***Wet or "Green" Stock:*** Cutting wood with a moisture content over 20% causes unnecessary wear on the blades, increases the risk of kickback, yields poor results.
- ***Excessive Warping:*** Workpieces with excessive cupping, bowing, or twisting are dangerous to cut because they are unstable and often unpredictable when being cut. DO NOT use workpieces with these characteristics!
- ***Minor Warping:*** Workpieces with slight cupping can be safely supported if the cupped side faces the table. On the contrary, a workpiece supported on the bowed side will rock during a cut and could cause kickback or severe injury.

Hold-Down Shoe & Blade Guard

The hold-down shoe and blade guard are mounted on the same rod and are adjusted together. The hold-down shoe keeps the workpiece from raising up from the force of the moving blade. The blade guard helps prevent debris from flying at the operator and acts as a barrier between the blade and the operator's hands, thus reducing the risk of accidental contact.

Item(s) Needed **Qty**
Hex Wrench 4mm 1

To adjust hold-down shoe and blade guard, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Loosen hold-down shoe lock knob and shoe screw shown in **Figure 18**.
3. Adjust shoe so it is no more than $^{1}/_{16}$" above workpiece.

   Note: *When tilting table for angle cutting operations, adjust shoe so it is parallel with table.*
4. Lower blade guard over shoe.
5. Re-tighten hold-down lock knob and shoe screw, then verify workpiece moves smoothly under shoe.

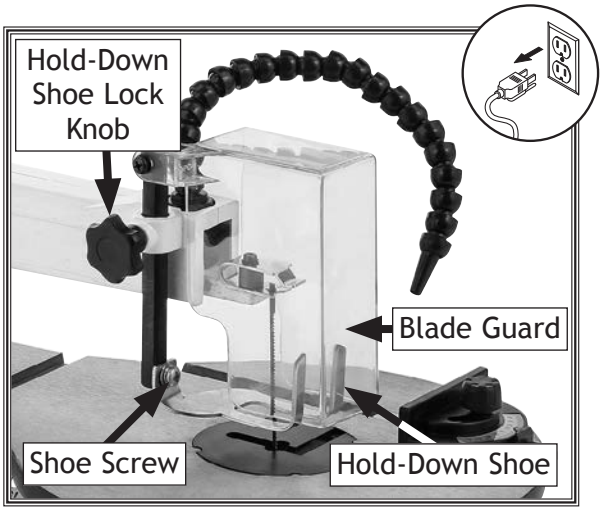


Figure 18. Hold-down shoe and blade guard assembly.

Figure 19. Example of making a straight cut.

Chip Blower

The chip blower moves air across the blade to keep wood debris away from the line of the cut. This makes it easier to follow your cutting lines with accuracy.

Standard Scroll Cuts

For standard scroll cutting, follow the pattern line on the workpiece by pushing and turning the workpiece at the same time, which allows the kerf of the cut to make way for the turn.

DO NOT turn the workpiece without pushing it through the blade at the same time; otherwise, the blade could twist and break. See **Figures 19-20** for examples of standard scroll cutting.

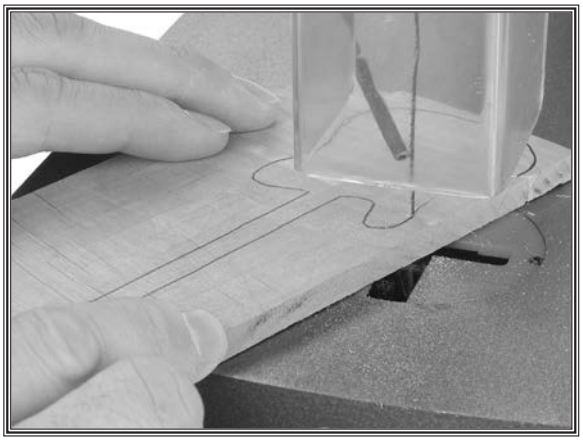


Figure 20. Example of making a curved cut.

Blade Tension

If the blade is not tensioned enough, it will drift while cutting, making it difficult to follow your cutting lines. If the blade is tensioned too tightly, it can break or cause damage to the saw.

Adjust blade tension using the knob shown in **Figure 21**. Turn the blade tension knob clockwise to increase the blade tension and counterclockwise to decrease it.

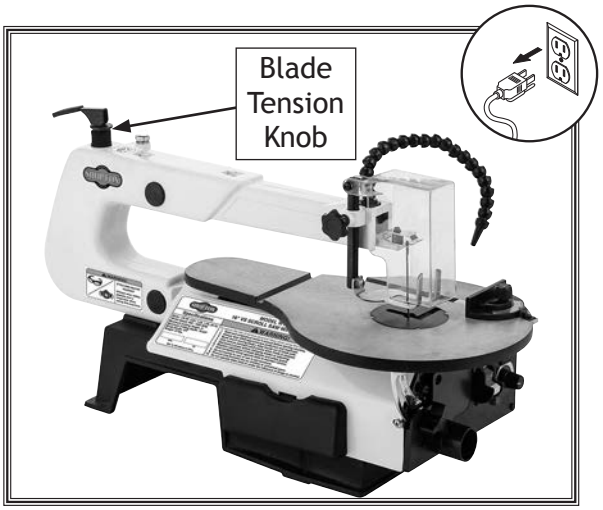


Figure 21. Location of blade tension knob.

To check/adjust blade tension, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Pivot blade guard up.
3. Pinch blade and move it side to side with light pressure to check tension. When properly tensioned, center of blade will deflect only slightly when moved, and blade ends will remain firmly in position.
4. Tighten/loosen blade as necessary and pivot blade guard down. Perform a test cut on a scrap piece of wood and repeat this entire procedure if further adjustments are necessary.

Bevel Cuts

Bevel cuts can be used for miters, cope joints, and making relief or recessed projects.

Figure 22. Example of making a bevel cut.

To make a bevel cut, do these steps:

1. Draw your cutting path pattern on workpiece.
2. Adjust table to desired angle.
3. Turn machine ***ON***, then feed workpiece slowly and evenly into blade. Remember not to force workpiece. Allow the blade to do the cutting according to the rate it was designed for (see **Figure 22**).
4. Turn machine ***OFF***, then wait until blade stops before removing any chips/dust near blade that didn't get removed by chip blower.

Inside Cuts

Inside cuts can be easily made with your scroll saw by threading the blade through a hole drilled in the workpiece. The flex-shaft rotary tool on the W1872 can be used to assist with this drilling.

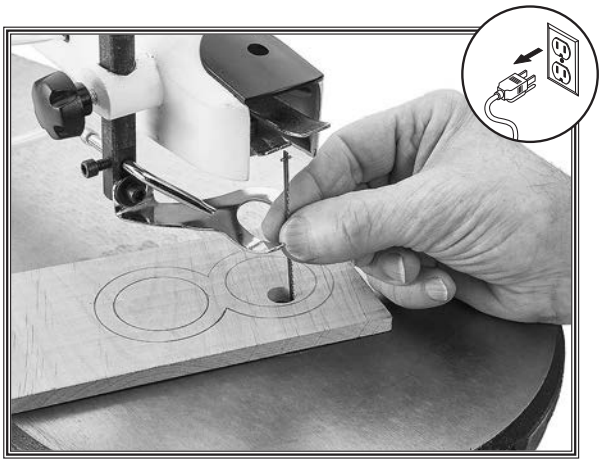


Figure 23. Example of installing blade for an inside cut.

To make an inside cut, do these steps:

1. Drill a 1/4" hole in the workpiece inside scrap area of internal cut.
2. DISCONNECT MACHINE FROM POWER!
3. Remove blade from saw.
4. Insert blade through previously drilled hole in workpiece (see **Figure 23**).

   Note: *If using a plain-end blade, remove one blade adapter to allow the blade to be inserted through the workpiece, then re-install the adapter on the blade.*
5. Re-install blade.
6. Adjust hold-down shoe and guard, connect saw to power, then perform cut.
7. When finished, disconnect saw from power, remove blade from saw and workpiece, remove workpiece, then re-install blade on saw.

Blade Speed

The variable-speed dial shown in **Figure 24** adjusts the blade speed between 550–1650 SPM (strokes per minute).

To reduce the risk of injury from unexpected fast speed at startup, always rotate the variable-speed dial to its slowest setting when starting/stopping the scroll saw.

Figure 24. Variable-speed dial.

Blade Selection

Scroll saw blades are classified as either "pin-end" (mounting pins in the ends of the blade) or "plain end" (no pins). The blade included with your scroll saw is a "pin-end" blade. However, the W1872 can use "plain-end" blades using the included adapters.

The typical format for blade identification is:

Teeth Per Inch	Width	Thickness	Strokes Per Minute	Workpiece Material
10 TPI	0.110"	0.020"	1200–1650	General purpose cutting. Hard and soft woods between 3/16"–2". Also good for plastics, paper, felt, and bone.
15 TPI	0.110"	0.020"	700–1200	Thin wood and plastic between 3/32"–1/2".
18 TPI	0.095"	0.010"	550–700	Tight radius cutting in thin hard and soft woods between 3/32"–1/8". Also good for thin pieces of bone, plastics, and veneer.

Figure 25. Blade Identification.

Note: *There may be other numbers or letters that have meaning for a particular type of blade. Always refer to the manufacturer's technical data for a complete explanation when choosing a scroll saw blade.*

Installing Pin-End Blades

The V-notches of the upper and lower blade holders are designed to hold pin-end blades (see **Figure 26**).

Item(s) Needed	**Qty**
Phillips Head Screwdriver	1

To install a pin-end blade, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Rotate blade tension knob counterclockwise to decrease blade tension.
3. Position hold-down shoe at maximum height and swing blade guard up and out of the way to give you working room.
4. Remove table insert, then use Phillips head screwdriver to remove screws from lower arm guard shown in **Figure 27**.
5. Push down on upper blade mounting arm shown in **Figure 28**, slide blade out of upper and lower mounting arms, and then remove blade.
6. Slide saw blade through table hole so teeth face down and forward (see **Figure 29**).
7. Position lower pin-ends underneath V-notch in lower blade holder, as shown in **Figure 29**.

   Note: *Wiggle the blade end back and forth with slight pressure to make sure the pins are seated in the indents of the mounting arm.*
8. Push upper blade mounting arm down, then slide upper pin-ends onto V-notch of the blade holder, as shown in **Figure 28**.
9. Replace table insert and arm guard.
10. Tension blade.

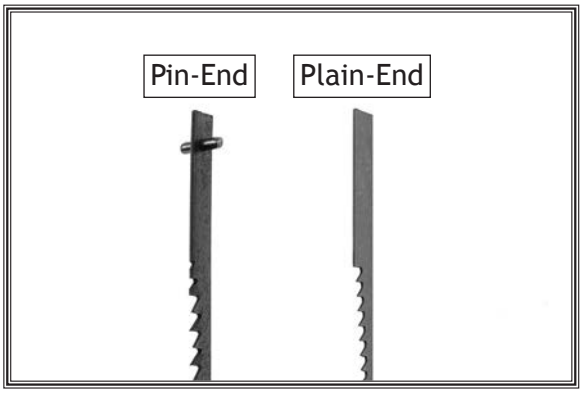


Figure 26. Pin-end and plain-end blade comparison.

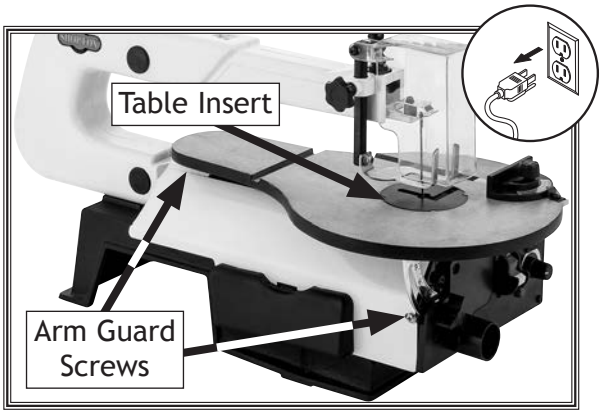


Figure 27. Table insert and arm guard.

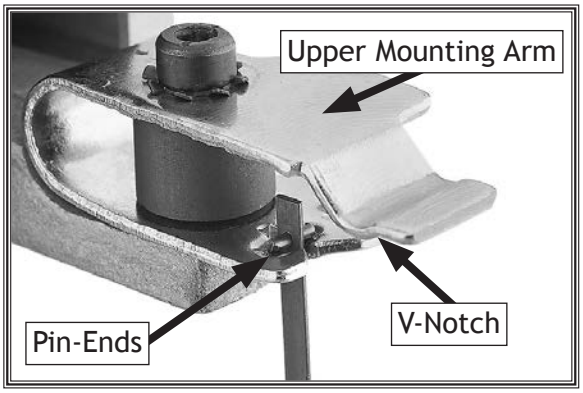


Figure 28. Upper blade mounting arm.

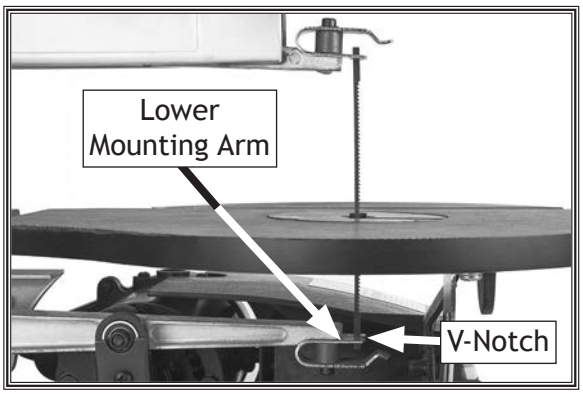


Figure 29. Lower blade mounting arm.

Installing Plain-End Blades

The V-notches of the upper and lower blade holders are designed to hold pin-end blades. However, with the use of the blade adapters, plain-end blades can be used with your scroll saw.

Item(s) Needed	**Qty**
Hex Wrench 2.5mm	1

To install a plain-end blade, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Repeat **Steps 1-5** on **Page 25**.
3. Loosen blade adapter set screws to allow saw blade ends to slide into adapters (see **Figure 31**).
4. Place adapters and blade in indents on top arm, as shown in **Figure 30**, with blade facing up.
5. Thread one set screw in until it just makes contact with blade. Then tighten other set screw (see **Figure 31**).
6. Tighten remaining adapter set screws to secure blade.
7. Slide one end of blade assembly through hold-down shoe, and place adapter over upper mounting arm (see **Figure 32**).
8. While holding adapter, press it down and install other adapter on lower mounting arm (see **Figure 29** on **Page 25**).
9. Replace table insert and arm guard, adjust hold-down shoe, then tension blade.

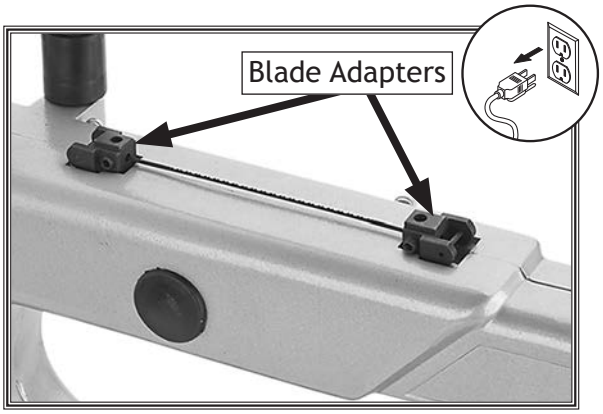


Figure 30. Adapters in indexing slots.

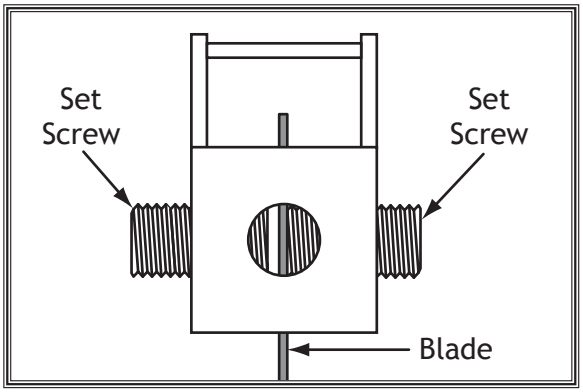


Figure 31. Plain-end blade adapter.

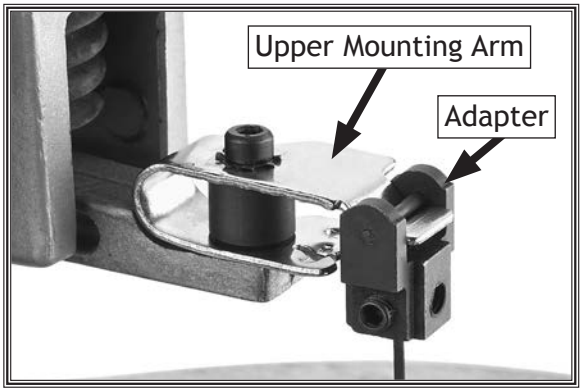


Figure 32. Blade adapter installed.

Using Flex-Shaft Tool

To operate flex-shaft rotary tool, do these steps:

1. Position guard so it covers hold-down shoe and touches table (see **Figure 33**).
2. Hold flex-shaft rotary tool, turn power ***ON***, and select desired speed for operation using variable speed dial.
3. After completing work with flex-shaft rotary tool, remove it from machine and re-install flex-shaft cap.

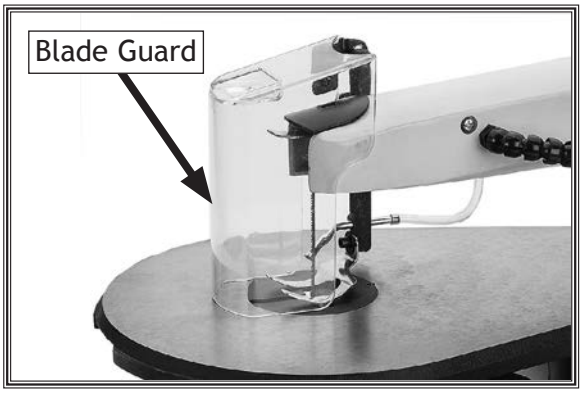


Figure 33. Blade guard position example.

ACCESSORIES

Scroll Saw Accessories

The following Scroll Saw 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.

D2056—Tool Table
Great for bench-top tools like scroll saws. Support cross braces on top provide incredible strength and capacity. Flared legs and adjustable rubber feet ensure stability and reduce machine vibration. Butcher block laminate table top measures 13" x 23" and is 30½" tall. Bottom measures 21" x 32". 700 lb. capacity.

D2675—Safety Glasses Metal Frame
A metal band across the top of these glasses are not only stylish, but it adds strength. This band is linked to the metal ear pieces through a tough hinge. These glasses have a wide field of view and side shields for added protection. Exceeds ANSI Z87.1 - 1989 standards for impact resistance.

D4251—Universal Adapter
Reduce dust collection hose from 4" to 1" OD in 2¾", 2⅜" and 1⅞" OD steps. Simply cut off what you don't need. Heavy wall thickness stands up to hose clamp pressure.

W1844—Wall-Mount Dust Collector with Canister Filter
Equipped with a 1 HP motor that provides 537 CFM air suction through a 4" intake hole.

D2471—20 pc. Mini Diamond Burr set 1/8" Shank
This complete set of diamond burrs features just about every profile needed for most grinding and sharpening applications including: balls, cone, taper and cylindrical. 150 grit and 1/8" shank.

D2057A—Adjustable Mobile Base - Heavy Duty
Shop Fox Heavy Duty Mobile Bases are designed to give you a stable and mobile platform upon which to mount machinery and equipment having a variety of base sizes and weights. The heavy-duty casters are arranged on outriggers allowing the machine to sit as low as possible and yet be extremely stable. Swivel casters on two corners provide excellent maneuverability. The bolt pattern on the fixed caster side allows orientation of the wheels in either of two directions. The base can be assembled in any of eight configurations providing maximum flexibility of use. The unique two piece retractable feet use rare earth magnets to allow the knob to turn while the foot pad i s tight to the floor. You will find these mobile bases to be far superior to any mobile base on the market in strength, adjustability and movability. This patented mobile base is the most stable on the market with outrigger type supports. Adjusts from 20" x 20" to 29 1/2" x 29 1/2". 700 lb. maximum capacity.

MAINTENANCE

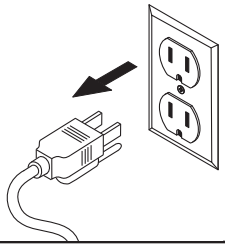
General

For optimum performance from this machine, this maintenance schedule must be strictly followed.

Ongoing
To minimize your risk of injury and maintain proper machine operation, shut down the machine immediately if you ever observe any of the items below and fix the problem before continuing operations:

- Loose mounting bolts.
- Damaged saw blade.
- Worn or damaged wires.
- Any other unsafe condition.
- Oil bearings, see below.

⚠WARNING



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

Cleaning & Protecting

Cleaning Model W1872 is relatively easy. Vacuum excess wood chips and sawdust, and wipe off remaining dust with a dry cloth. If any resin has built up, use a resin dissolving cleaner to remove it. Keep your table rust-free with regular applications of quality lubricants. If excessive sawdust accumulates around the motor, remove arm guard and remove sawdust with a vacuum.

Lubrication

The upper and lower arms have two sleeve bearings each that require lubrication with SAE 30 oil after every 8 hours of machine use.

To lubricate sleeve bearings, do these steps:

1. DISCONNECT MACHINE FROM POWER!

2. Remove plastic caps to expose sleeve bearing ends (see **Figure 34**).

3. Lay saw flat on its side (see **Figure 34**), then apply a generous amount of light machine oil to cups around bearing ends. Let oil seep into bearings for 1-2 hours.

4. Wipe off excess oil, turn saw over, and repeat **Step 3** with remaining two bearings.

5. Replace plastic caps before beginning operation.

Figure 34. Plastic caps removed to expose sleeve bearing ends.

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: **techsupport@woodstockint.com**.

Calibrating Table Tilt

The table tilt lock knob and tilt scale are used to tilt the table for horizontal angle cuts.

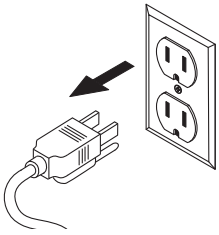
Note: *The table tilt scale is only an approximate scale and should not be used when precise angle measurements are required for the operation.*

Item(s) Needed	**Qty**
Phillips Screwdriver #2	1
Wrench 10mm	1
Machinist's Square 2"	1

To calibrate table tilt, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Raise hold-down shoe to maximum height and lock it in place.
3. Loosen table tilt lock knob (see **Figure 35**).
4. Place machinist's square behind blade, as shown in **Figure 36**.
5. Adjust table to be square with blade, then tighten lock knob.
6. Loosen pointer screw, adjust tip to 0° mark on scale, then tighten screw to secure setting.

⚠WARNING



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

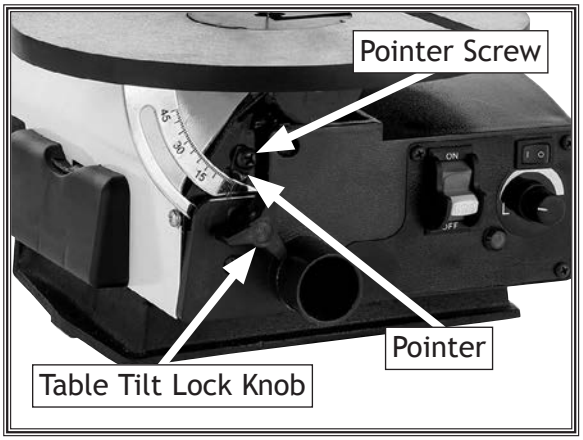


Figure 35. Components for calibrating table tilt.

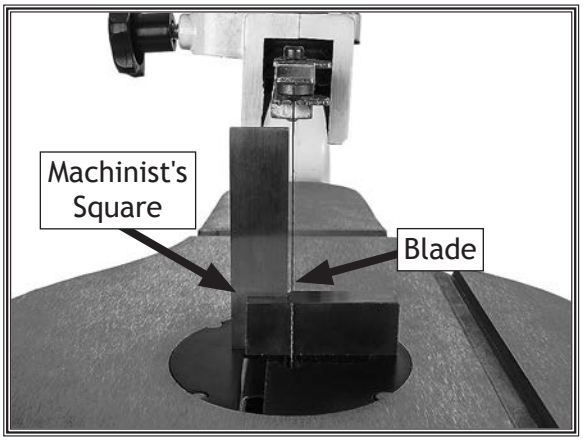


Figure 36. Squaring table to blade.

Replacing Fuse

The purpose of the fuse is to protect the motor and circuit board.

If the fuse blows, the light will turn ***ON*** but the motor will not start. You can verify if the fuse has blown or not by holding it up to the light and inspecting the element inside the glass (the element looks like a thin wire). If the fuse is blown the element will be broken in half.

Item(s) Needed **Qty**
Fuse 5A 250V 0.18" Fast-Acting, Glass.....1

To replace the fuse, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove switch cover, slide circuit board partially out, remove fuse (see **Figure 37**), and install a new one.
3. Re-install circuit board and cover.

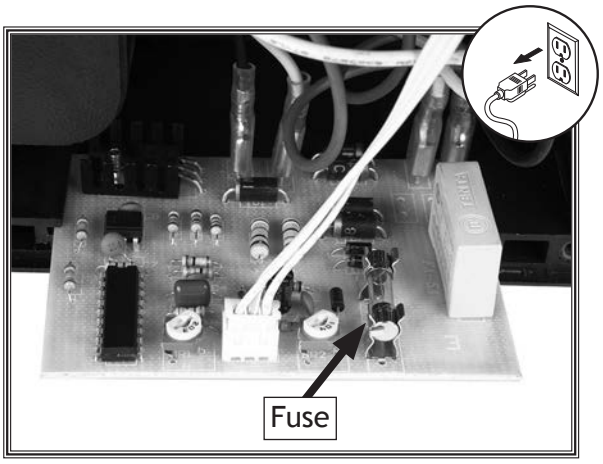


Figure 37. Fuse location on circuit board.

Replacing Motor Brushes

The motor brushes wear with use. When they require replacement, the motor will stop operating correctly, fail to start, or cut in and out during operation. Always replace both brushes at the same time.

Item(s) Needed **Qty**
Flat Head Screwdriver 1
Motor Brushes (X1872126) 2

To inspect/replace motor brushes, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove upper motor brush cap and motor brush, as shown in **Figure 38**, then install new brush and replace cap.
3. Turn machine on its side.
4. Remove lower brush cap and motor brush, accessing them through a hole in bottom of base (see **Figure 39**).
5. Replace brush assembly and secure with brush cap.

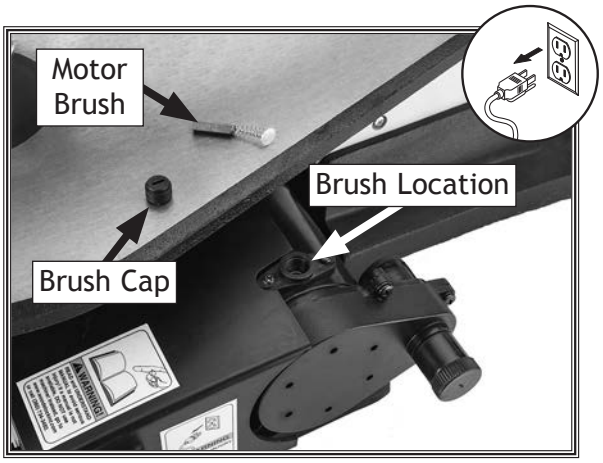


Figure 38. Upper motor brush location.

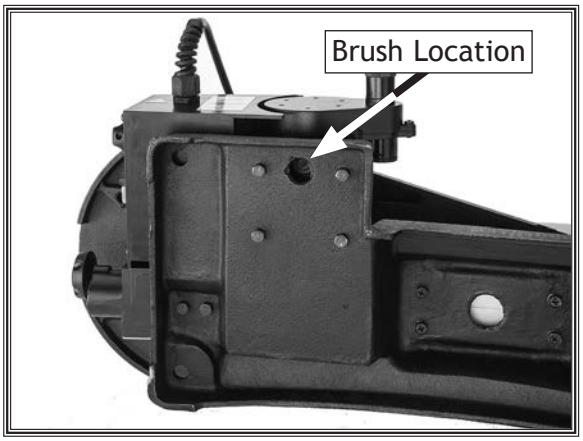


Figure 39. Lower motor brush location.

Replacing Timing Belt

If you hear unusual sounds coming from the motor or notice that the flex-shaft rotary tool stops working, the timing belt may be broken. If this happens, it must be replaced before further operation to avoid damaging the plastic motor pulley.

To replace timing belt, do these steps:

1. DISCONNECT MACHINE FROM POWER!
2. Remove flex-shaft rotary tool, if installed.
3. Remove three screws that secure belt cover (see **Figure 40**), then remove cover.
4. Remove E-clip and flat washer from drive shaft (see **Figure 41**), remove timing belt from pulleys, then slide new timing belt onto pulleys.
5. Re-install belt cover with screws removed in **Step 3**, then re-install flex-shaft rotary tool.

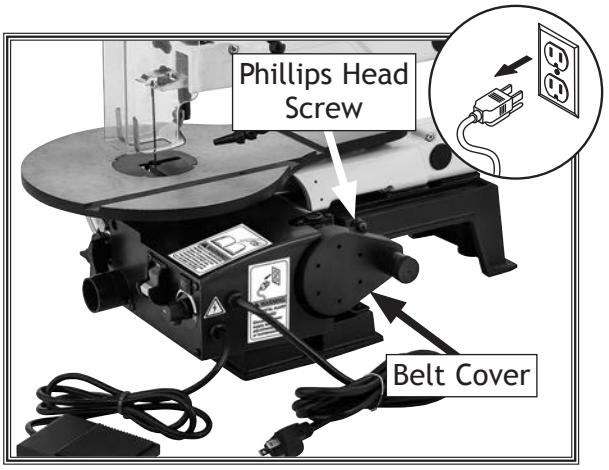


Figure 40. Timing belt cover screw location.

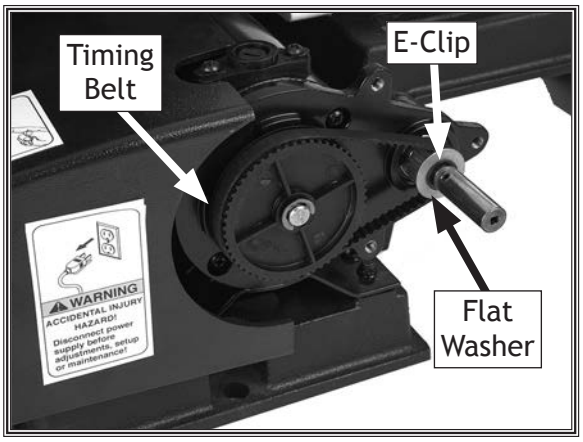
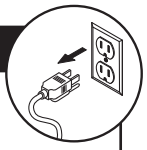


Figure 41. Timing belt and pulleys.

Troubleshooting

The following troubleshooting tables cover common problems that may occur with this machine. If you need replacement parts or additional troubleshooting help, contact our Technical Support.

Note: *Before contacting Tech Support, find the machine serial number and manufacture date, and if available, your original purchase receipt. This information is required to properly assist you.*



PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
Machine does not start, or power supply fuse/breaker trips immediately after startup.	1. Variable-speed potentiometer at fault. 2. Switch disabling key removed. 3. Power supply circuit breaker tripped or fuse blown. 4. Incorrect power supply voltage or circuit size. 5. Circuit board at fault. 6. Motor at fault.	1. Test/repair if at fault. 2. Install switch disabling key. 3. Ensure circuit is sized correctly and free of shorts. Reset circuit breaker or replace fuse. 4. Ensure correct power supply voltage and circuit size. 5. Inspect/replace if at fault. 6. Test/repair/replace.
Machine stalls or is underpowered.	1. Blown fuse. 2. Incorrect workpiece material. 3. Feed rate/cutting speed too fast. 4 Machine undersized for task. 5. Motor brushes at fault. 6. Motor has overheated.	1. Replace fuse/ensure no shorts. 2. Inspect/replace if wrong material. 3. Decrease feed rate/cutting speed. 4. Use correct blade/reduce feed rate or depth of cut. 5. Remove/replace brushes (refer to **Page 30**). 6. Let motor cool; reduce workload.
Machine has vibration or noisy operation.	1. Motor or component loose. 2. Blade at fault. 3. Incorrectly mounted to workbench. 4. Motor mount loose/broken.	1. Replace damaged or missing bolts/nuts or tighten if loose. 2. Replace warped/bent blade. 3. Tighten mounting hardware (refer to **Page 14**). 4. Tighten/replace.
Blade will not stay on layout line.	1. Blade not tensioned correctly. 2. Too much pressure applied to workpiece. 3. Blade holders not aligned correctly.	1. Properly tension blade (refer to **Page 22**). 2. Reduce feed rate and pressure on workpiece. 3. Re-adjust blade holders so they are aligned in a straight line with saw.
Excessive blade breakage.	1. Blade not tensioned correctly. 2. Not using relief cuts when cutting tight curves; twisting blade. 3. Wrong blade for operation. 4. Too much pressure on blade. 5. Incorrect blade for cutting task.	1. Properly tension blade (refer to **Page 22**). 2. Use more relief cuts for tight turns; reduce feed rate; do not twist blade—allow blade to do the work. 3. Refer to the **Blade Selection Chart** on **Page 24** and use correct blade for operation. 4. Reduce pressure on workpiece as it passes through blade. 5. Select correct blade for task.

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. Compare the manufacture date of your machine to the one stated in this manual, and study this section carefully.

If there are differences between your machine and what is shown in this section, call Technical Support at (360) 734-3482 for assistance BEFORE making any changes to the wiring on your machine. An updated wiring diagram may be available. **Note:** *Please gather the serial number and manufacture date of your machine before calling. This information can be found on the main machine label.*

⚠WARNING

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!

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.

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.

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.

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

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

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

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

EXPERIENCING DIFFICULTIES. If you are experiencing difficulties understanding the information included in this section, contact our Technical Support at (360) 734-3482.

NOTICE

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

WIRING DIAGRAM COLOR KEY

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

SERVICE

Electrical Components

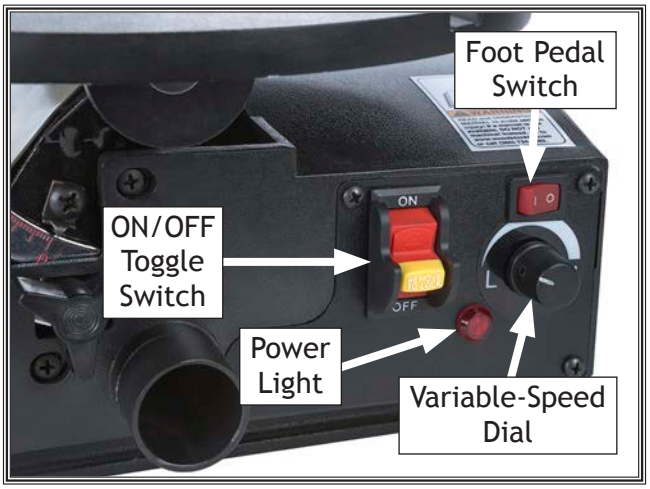


Figure 42. Controls.

Figure 44. Switch connections.

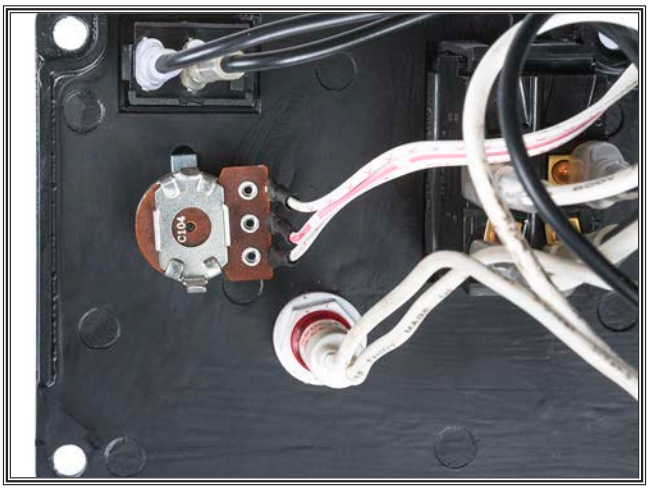


Figure 43. Foot pedal switch & potentiometer.

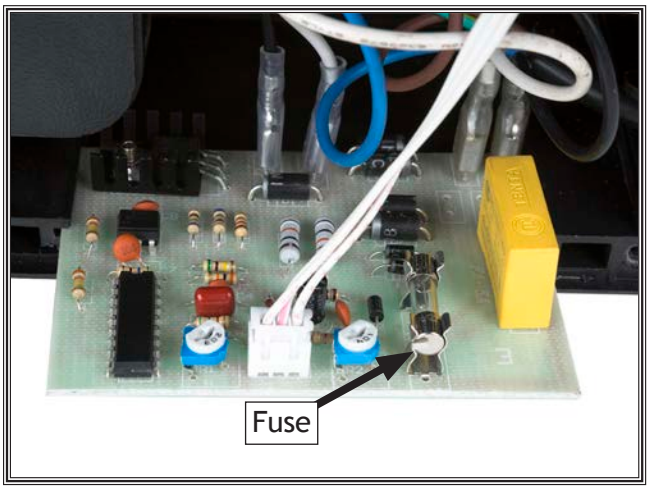
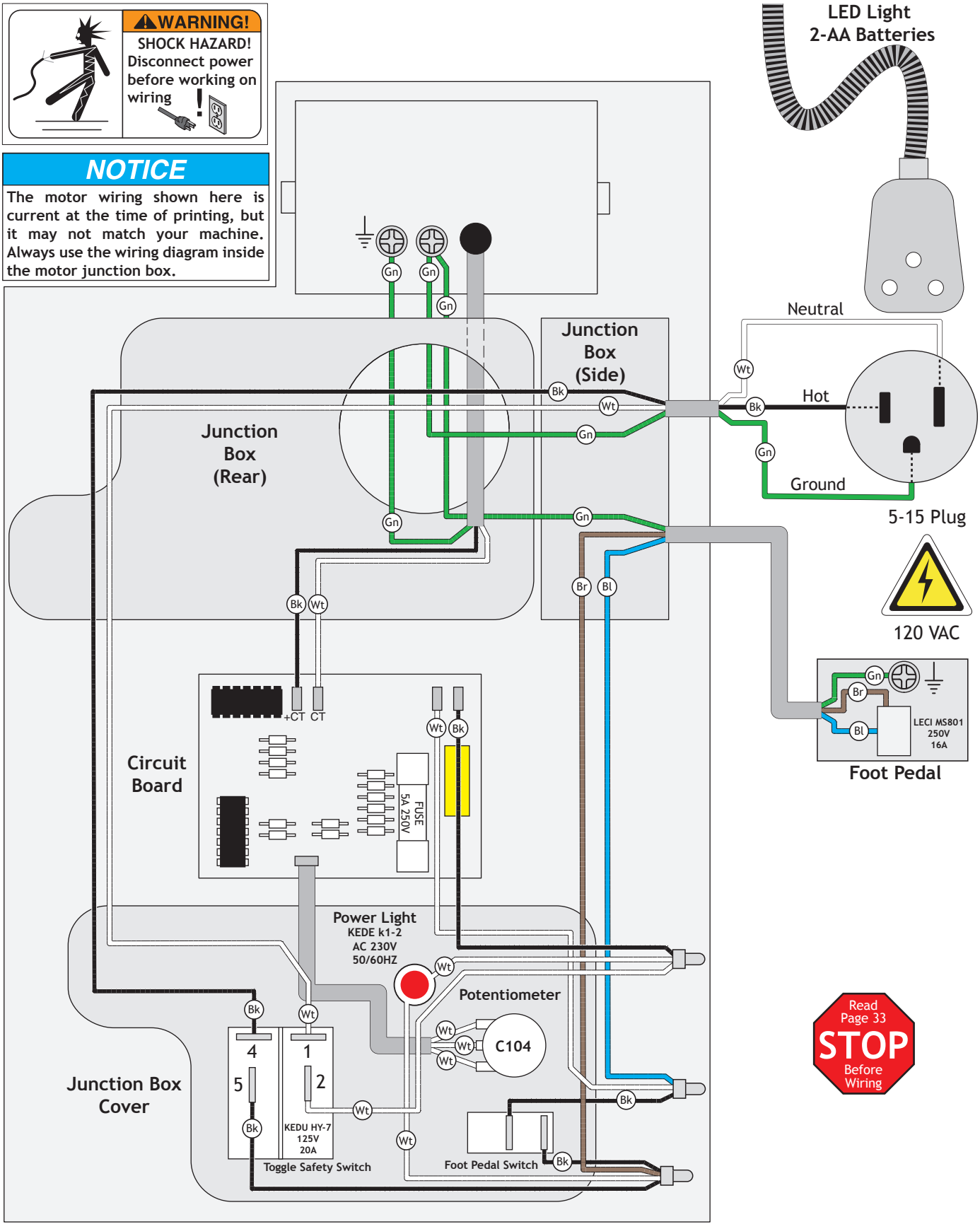


Figure 45. Circuit board.

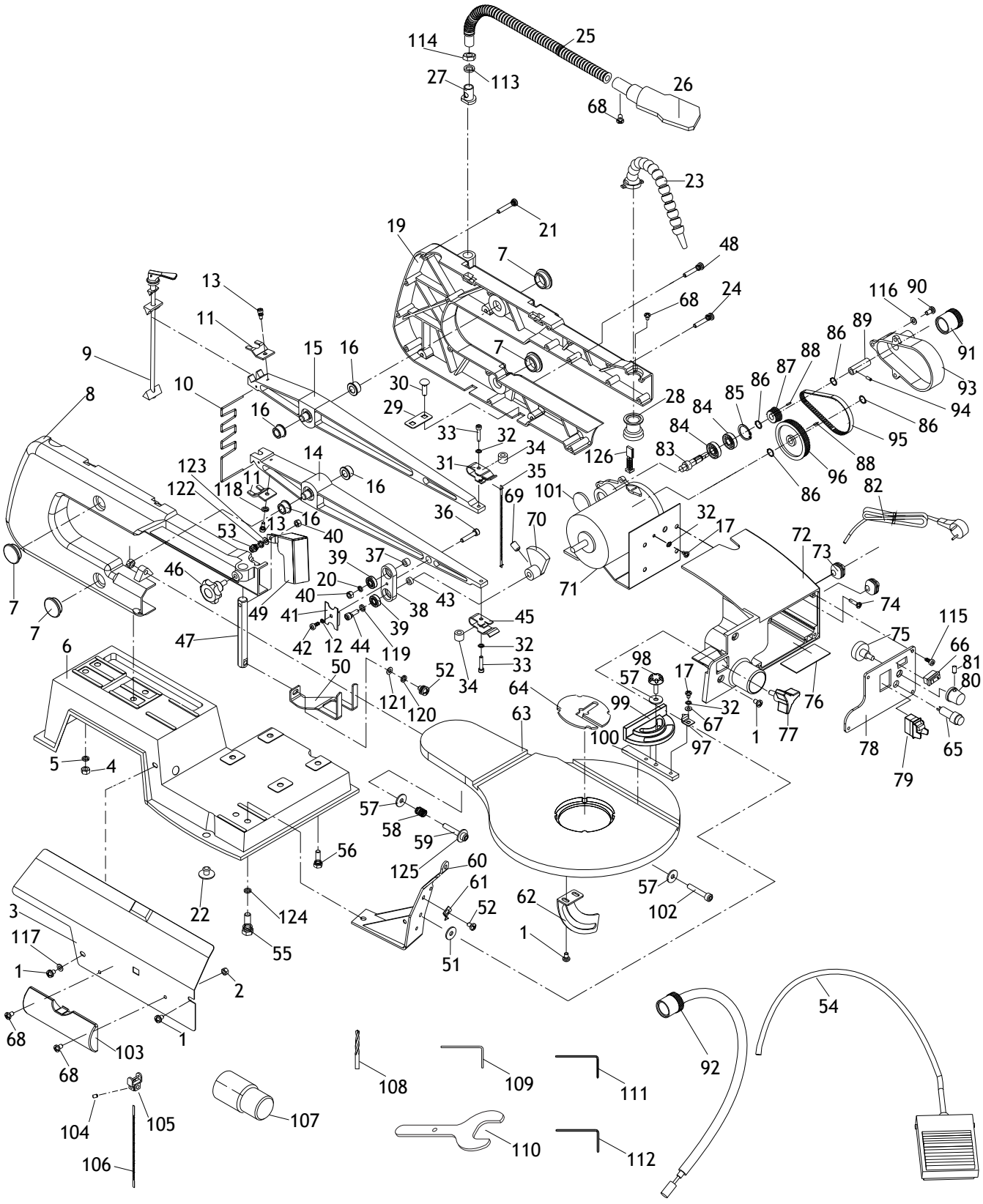
Wiring Diagram



SERVICE

PARTS

Main


114
25
27
113
26
68
23
19
21
48
7
24
68
116
90
13
11
15
16
7
89
86
88
91
9
87
86
93
10
30
28
84
85
94
8
16
29
33
32
84
86
95
34
126
83
88
14
31
35
96
123
16
69
101
86
82
122
118
11
36
32
17
13
16
53
40
70
72
73
39
37
46
20
40
43
71
74
7
49
41
38
45
115
7
39
75
47
42
12
44
119
32
66
6
50
52
33
98
81
57
17
34
64
76
80
121
120
99
32
63
67
1
77
78
65
5
4
100
97
79
57
58
59
56
125
60
61
62
57
102
22
124
52
3
55
51
1
117
1
2
68
103
1
68
92
54
108
109
111
68
104
105
107
110
112
106

Main Parts List

REF	PART #	DESCRIPTION
1	X1872001	PHLP HD SCR M5-.8 X 8
2	X1872002	HEX NUT M4-.7
3	X1872003	SIDE COVER (LEFT)
4	X1872004	HEX NUT M6-1
5	X1872005	LOCK WASHER 6MM
6	X1872006	BASE
7	X1872007	DUST CAP
8	X1872008	ARM HOUSING (LEFT)
9	X1872009	TENSION BOLT ASSEMBLY
10	X1872010	ARM SPRING
11	X1872011	PRESSURE PLATE
12	X1872012	LOCK WASHER 4MM
13	X1872013	PHLP HD SCR M4-.7 X 10
14	X1872014	ARM ASSEMBLY (LOWER)
15	X1872015	ARM ASSEMBLY (UPPER)
16	X1872016	SINTERED BUSHING 16 X 18 X 9.5 IRON
17	X1872017	PHLP HD SCR M4-.7 X 6
19	X1872019	ARM HOUSING (RIGHT)
20	X1872020	LOCK WASHER 5MM
21	X1872021	PHLP HD SCR M5-.8 X 35
22	X1872022	RUBBER FOOT
23	X1872023	RIGID AIR HOSE W/NOZZLE 16 X 266
24	X1872024	PHLP HD SCR M5-.8 X 28
25	X1872025	LIGHT POST W/THREADED END M10-1
26	X1872026	LED LIGHT ASSEMBLY
27	X1872027	THREADED SLEEVE W/FLANGE M10-1 X 22
28	X1872028	RUBBER BELLOWS
29	X1872029	CONNECTOR PLATE
30	X1872030	CARRIAGE BOLT M6-1 X 20
31	X1872031	BLADE SUPPORT (UPPER)
32	X1872032	LOCK WASHER 4MM
33	X1872033	CAP SCREW M4-.7 X 20
34	X1872034	SPACER 4 X 12 X 9.5MM
35	X1872035	BLADE 0.066" 15-TPI PIN END
36	X1872036	CAP SCREW M5-.8 X 25
37	X1872037	SPACER 5 X 9.5 X 6 (UPPER)
38	X1872038	ECCENTRIC CONNECTOR
39	X1872039	BALL BEARING 625-2RS
40	X1872040	HEX NUT M5-.8
41	X1872041	ECCENTRIC CONNECTOR PLATE
42	X1872042	PHLP HD SCR M4-.7 X 10
43	X1872043	SPACER 5 X 9.5 X 4 (LOWER)
44	X1872044	CAP SCREW M5-.8 X 16
45	X1872045	BLADE SUPPORT (LOWER)
46	X1872046	KNOB BOLT M6-1 X 12, 6-LOBE, D34
47	X1872047	HOLD-DOWN SHOE ROD
48	X1872048	PHLP HD SCR M5-.8 X 30
49	X1872049	BLADE GUARD
50	X1872050	HOLD-DOWN SHOE
51	X1872051	FLAT WASHER 6MM
52	X1872052	PHLP HD SCR M6-1 X 10
53	X1872053	PHLP HD SCR M5-.8 X 25
54	X1872054	FOOT PEDAL
55	X1872055	HEX BOLT M8-1.25 X 16
56	X1872056	HEX BOLT M6-1 X 20
57	X1872057	FLAT WASHER 6 X 12 X 1MM
58	X1872058	COMPRESSION SPRING 1 X 10 X 13

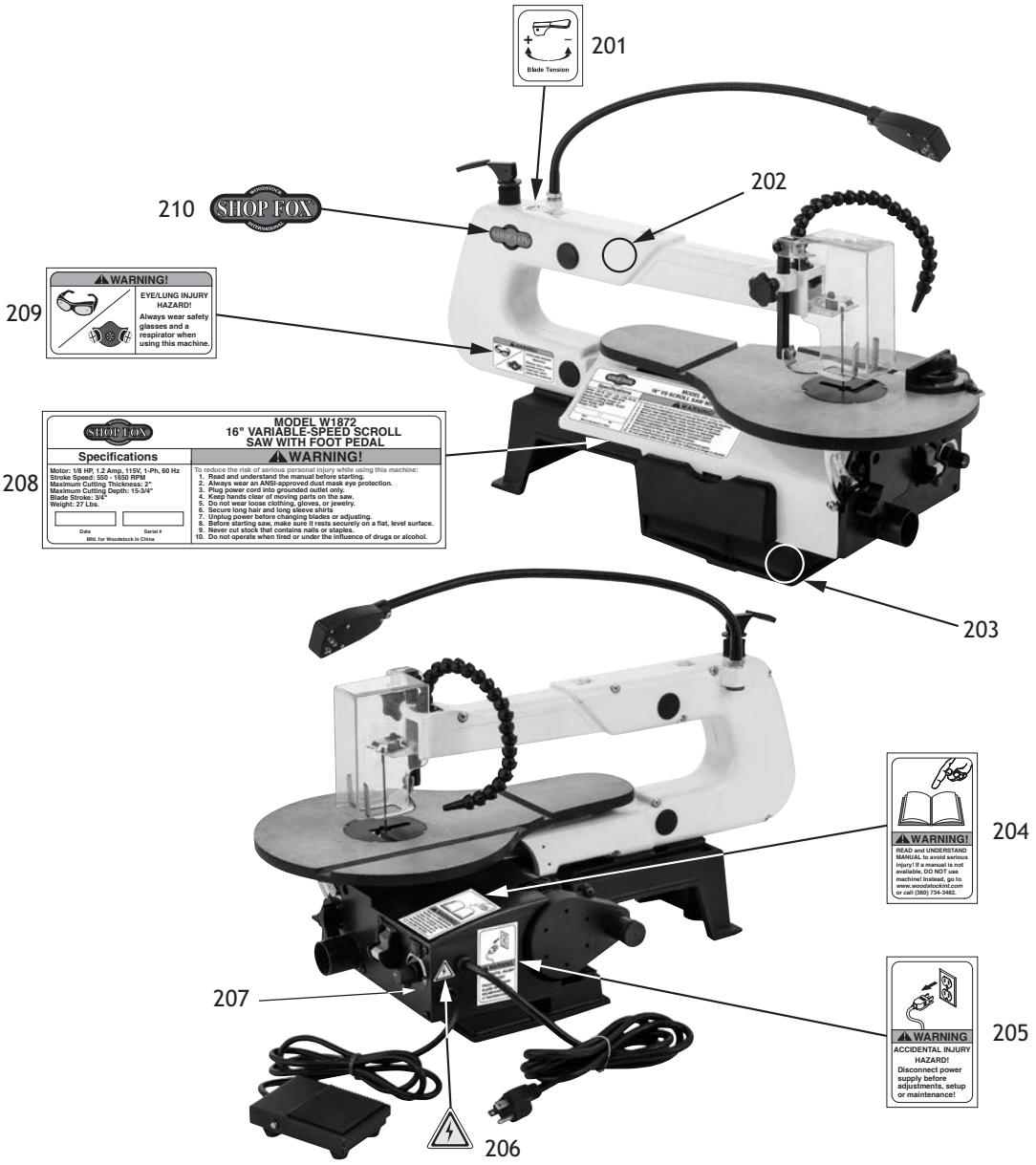
REF	PART #	DESCRIPTION
59	X1872059	CAP SCREW M6-1 X 40
60	X1872060	TABLE SUPPORT
61	X1872061	POINTER
62	X1872062	TABLE TILT SCALE
63	X1872063	TABLE
64	X1872064	TABLE INSERT
65	X1872065	POWER INDICATOR LIGHT 120V
66	X1872066	FOOT PEDAL ON/OFF SWITCH
67	X1872067	FLAT WASHER 4MM
68	X1872068	PHLP HD SCR M4-.7 X 8
69	X1872069	SET SCR M8-1 X 12
70	X1872070	ECCENTRIC COUNTERWEIGHT
71	X1872071	MOTOR 1/8HP 120V DC 1-PH
72	X1872072	JUNCTION BOX
73	X1872073	STRAIN RELIEF TYPE-1 M17
74	X1872074	PHLP HD SCR M4-.7 X 10
75	X1872075	POTENTIOMETER C104
76	X1872076	CIRCUIT BOARD
77	X1872077	KNOB BOLT M6-1 X 16, 3-LOBE, D30
78	X1872078	SWITCH COVER
79	X1872079	TOGGLE SWITCH KEDU HY7
80	X1872080	VARIABLE SPEED DIAL
81	X1872081	SET SCREW M5-.8 X 6 CONE-PT
82	X1872082	POWER CORD 18G 3W 72" 5-15P
83	X1872083	SHAFT
84	X1872084	BALL BEARING 608ZZ
85	X1872085	EXT RETAINING RING 22MM
86	X1872086	EXT RETAINING RING 6MM
87	X1872087	SMALL PULLEY 20OD X 10
88	X1872088	KEY 3 X 3 X 8
89	X1872089	COUPLING
90	X1872090	PHLP HD SCR M5-.8 X 12
91	X1872091	SAFETY CAP
92	X1872092	FLEXIBLE SHAFT
93	X1872093	BELT COVER
94	X1872094	ROLL PIN 3 X 8
95	X1872095	TIMING BELT 234.95 X 5MM
96	X1872096	LARGE PULLEY 56OD X 10ID
97	X1872097	MITER GAUGE SCALE POINTER
98	X1872098	KNOB BOLT M5-.8 X 16, D20, ROUND
99	X1872099	MITER GAUGE BODY
100	X1872100	MITER GAUGE BAR
101	X1872101	DUST COVER
102	X1872102	CAP SCREW M6-1 X 25
103	X1872103	TOOL BOX
104	X1872104	SET SCREW M5-.8 X 8
105	X1872105	BLADE ADAPTER
106	X1872106	BLADE 0.066" 18-TPI PLAIN END
107	X1872107	DUST PORT ADAPTER 1-1/4" X 1-1/2"
108	X1872108	DRILL BIT 3.2MM
109	X1872109	COLLET LOCKING PIN
110	X1872110	FLAT WRENCH 9MM OPEN-END
111	X1872111	HEX WRENCH 3MM
112	X1872112	HEX WRENCH 2.5MM
113	X1872113	LOCK WASHER 10MM
114	X1872114	HEX NUT M10-1 THIN
115	X1872115	TAP SCREW M4-.7 X 10

Main Parts List (Cont.)

REF	PART #	DESCRIPTION
116	X1872116	FLAT WASHER 5MM
117	X1872117	FLAT WASHER 5MM
118	X1872118	LOCK WASHER 4MM
119	X1872119	LOCK WASHER 5MM
120	X1872120	LOCK WASHER 6MM
121	X1872121	FLAT WASHER 6MM

REF	PART #	DESCRIPTION
122	X1872122	LOCK WASHER 5MM
123	X1872123	FLAT WASHER 5MM
124	X1872124	LOCK WASHER 8MM
125	X1872125	FLAT WASHER 6MM
126	X1872126	CARBON MOTOR BRUSH 2-PC SET

Labels & Cosmetics



REF	PART #	DESCRIPTION
201	X1872201	BLADE TENSION KNOB LABEL
202	X1872202	TOUCH-UP PAINT, SHOP FOX WHITE
203	X1872203	TOUCH-UP PAINT, SHOP FOX BLACK
204	X1872204	READ MANUAL LABEL
205	X1872205	DISCONNECT POWER LABEL

REF	PART #	DESCRIPTION
206	X1872206	ELECTRICITY WARNING LABEL
207	X1872207	VARIABLE SPEED DIAL LABEL
208	X1872208	MACHINE ID LABEL
209	X1872209	RESPIRATOR/GLASSES LABEL
210	X1872210	SHOP FOX LOGO LABEL

⚠WARNING

Safety labels warn about machine hazards and how to prevent serious personal injury. The owner of this machine MUST maintain the original location and readability of all labels on this machine. If any label is removed or becomes unreadable, REPLACE that label before allowing machine to be operated again. Contact us at (360) 734-3482 or www.woodstockint.com to order new labels.

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, replace, or arrange for a dealer refund, at its expense and option, the Shop Fox machine or machine part proven to be defective for its designed and intended use, provided that the original owner returns the product prepaid to an authorized warranty or repair facility as designated by our Bellingham, Washington office 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, acts or electrical codes. We do not reimburse for third party repairs. In no event shall Woodstock International, Inc.’s liability under this limited 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 are commited to continuously improving the quality of our products, and reserve the right to change specifications at any time.

To register the warranty, go to **https://www.woodstockint.com/warranty**, or scan the QR code below. You will be directed to the Warranty Registration page on www.woodstockint.com. Enter all applicable production information.

WARRANTY

WOODSTOCKINT.COM

High Quality Machines and Tools

Woodstock International, Inc. carries thousands of products designed to meet the needs of today's woodworkers and metalworkers. Ask your dealer about these fine products:

BROSEM® PRECISION STOP BLOCK

THE REBEL®

BOARD BUDDIES®

SLICKPLANE®

ACCU-SHARP®

JOINTER PAL®

STEELEX® FINE TOOLS

WOODSTOCK SHOP FOX® INTERNATIONAL

ROMAN CARBIDE®

Rotacator®

PLANER PAL®

PRO-STIK® ABRASIVE BELT & DISC CLEANER

STEELEX® PLUS

Aluma-Classic®

PARROT VISE®

WHOLESALE ONLY

WOODSTOCK INTERNATIONAL, INC.

Phone: (360) 734-3482 · Fax: (360) 671-3053 · Toll Free Fax: (800) 647-8801

P.O.Box 2309 · Bellingham, WA 98227

SHOPFOX.BIZ