



WEN Products 3921 16 Inch Two Direction Variable Speed Scroll Saw Instruction Manual

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MODEL 3921
16" VARIABLE SPEED
SCROLL SAW
Instruction Manual



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3921 16 Inch Two Direction Variable Speed Scroll Saw

NEED HELP? CONTACT US!

Have product questions? Need technical support? Please feel free to contact us:



1-[847-429-9263](tel:847-429-9263) (M-F 8AM-5PM CST)



TECHSUPPORT@WENPRODUCTS.COM

IMPORTANT: Your new tool has been engineered and manufactured to WEN's highest standards for dependability, ease of operation, and operator safety. When properly cared for, this product will supply you years of rugged, trouble free performance. Pay close attention to the rules for safe operation, warnings, and cautions. If you use your tool properly and for its intended purpose, you will enjoy years of safe, reliable service.

For replacement parts and the most up-to-date instruction manuals, visit WENPRODUCTS.COM

To purchase accessories for your tool, visit WENPRODUCTS.COM

Scroll Saw Stand (Model MSA1621)

Momentary Power Foot Pedal Switch (Model WA0392)

Replacement Scroll Saw Blades

(Models BLE-series, BLG-series, BLK-series, BLR-series, BLX-series, and 3920B-076)

INTRODUCTION

Thanks for purchasing the WEN Scroll Saw. We know you are excited to put your tool to work, but first, please take a moment to read through the manual. Safe operation of this tool requires that you read and understand this operator's manual and all the labels affixed to the tool. This manual provides information regarding potential safety concerns, as well as helpful assembly and operating instructions for your tool.



SAFETY ALERT SYMBOL: Indicates danger, warning, or caution. The safety symbols and the explanations with them deserve your careful attention and understanding. Always follow the safety precautions to reduce the risk of fire, electric shock or personal injury. However, please note that these instructions and warnings are not substitutes for proper accident prevention measures.

NOTE: The following safety information is not meant to cover all possible conditions and situations that may occur. WEN reserves the right to change this product and specifications at any time without prior notice.

At WEN, we are continuously improving our products. If you find that your tool does not exactly match this manual, please visit wenproducts.com for the most up-to-date manual or contact our customer service at 1-[847-429-9263](tel:847-429-9263).

Keep this manual available to all users during the entire life of the tool and review it frequently to maximize safety

for both yourself and others.

SPECIFICATIONS

Model Number	3921
Motor	120V. 60 Hz. 1.2A
Speed	550 to 1600 SPM
Throat Depth	16 Inches
Blade	5 Inches. Pinned & Pinless
Blade Stroke	9/16 Inches
Cutting Capacity	2 Inches at 90°
Table Tilt	0° to 45° Left
Dust Port Inner Diameter	1.21 in. (30.85mm)
Dust Port Outer Diameter	1.40 in. (35.53 mm)
Overall Dimensions	26-3/81' x 13' x 14-3/41'
Weight	27.5 Pounds
Includes	15 TPI Pinned Blade
	18 TPI Pinned Blade
	18 TPI Pinless Blade

GENERAL SAFETY RULES

⚠WARNING! Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Safety is a combination of common sense, staying alert and knowing how your item works. The term “power tool” in the warnings refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

SAVE THESE SAFETY INSTRUCTIONS.

WORK AREA SAFETY

1. Keep work area clean and well lit. Cluttered or dark areas invite accidents.
2. Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.
Power tools create sparks which may ignite the dust or fumes.
3. Keep children and bystanders away while operating a power tool. Distractions can cause you to lose control.

ELECTRICAL SAFETY

1. Power tool plugs must match the outlet. Never modify the plug in any way.
Do not use any adapter plugs with earthed (grounded) power tools.

Unmodified plugs and matching outlets will reduce risk of electric shock.

2. Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.

There is an increased risk of electric shock if your body is earthed or grounded.

3. Do not expose power tools to rain or wet conditions.

Water entering a power tool will increase the risk of electric shock.

4. Do not abuse the cord. Never use the cord for carrying, pulling or unplugging the power tool. Keep cord away from heat, oil, sharp edges or moving parts.

Damaged or entangled cords increase the risk of electric shock.

5. When operating a power tool outdoors, use an extension cord suitable for outdoor use.

Use of a cord suitable for outdoor use reduces the risk of electric shock.

6. If operating a power tool in a damp location is unavoidable, use a ground fault circuit interrupter (GFCI) protected supply.

Use of a GFCI reduces the risk of electric shock.

PERSONAL SAFETY

1. Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.

A moment of inattention while operating power tools may result in serious personal injury.

2. Use personal protective equipment. Always wear eye protection. Protective equipment such as a respiratory mask, non-skid safety shoes and hearing protection used for appropriate conditions will reduce the risk of personal injury.

3. Prevent unintentional starting. Ensure the switch is in the off-position before connecting to power source and/or battery pack, picking up or carrying the tool.

Carrying power tools with your finger on the switch or energizing power tools that have the switch on invites accidents.

4. Remove any adjusting key or wrench before turning the power tool on. A wrench or a key left attached to a rotating part of the power tool may result in personal injury.

5. Do not overreach. Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.

6. Dress properly. Do not wear loose clothing or jewelry.

Keep your hair and clothing away from moving parts.

Loose clothes, jewelry or long hair can be caught in moving parts.

7. If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used. Use of dust collection can reduce dust-related hazards.

POWER TOOL USE AND CARE

1. Do not force the power tool. Use the correct power tool for your application. The correct power tool will do the job better and safer at the rate for which it was designed.

2. Do not use the power tool if the switch does not turn it on and off. Any power tool that cannot be controlled with the switch is dangerous and must be repaired.

3. Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools. Such preventive safety measures reduce the risk of

starting the power tool accidentally.

4. Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate the power tool.

Power tools are dangerous in the hands of untrained users.

5. Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation.

If damaged, have the power tool repaired before use.

Many accidents are caused by poorly maintained power tools.

6. Keep cutting tools sharp and clean. Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.

7. Use the power tool, accessories and tool bits, etc.

in accordance with these instructions, taking into account the working conditions and the work to be performed.

Use of the power tool for operations different from those intended could result in a hazardous situation.

8. Use clamps to secure your workpiece to a stable surface. Holding a workpiece by hand or using your body to support it may lead to loss of control.

9. KEEP GUARDS IN PLACE and in working order.

SERVICE

1. Have your power tool serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the power tool is maintained.


CALIFORNIA PROPOSITION 65 WARNING

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities may contain chemicals, including lead, known to the State of California to cause cancer, birth defects, or other reproductive harm. Wash hands after handling. 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 with approved safety equipment such as dust masks specially designed to filter out microscopic particles.

SCROLL SAW SAFETY WARNINGS

 **WARNING!** Do not operate the power tool until you have read and understood the following instructions and the warning labels.

BEFORE OPERATION

1. Check for both proper assembly and proper alignment of moving parts.
2. Understand the proper use of the ON / OFF switch.
3. Know the condition of the scroll saw. If any part is missing, bent, or does not operate properly, replace the component before attempting to operate the scroll saw.

4. Determine the type of work you are going to be doing.
Properly protect your body including your eyes, hands, face, and ears.
5. To avoid injury caused by pieces thrown from accessories, use only recommended accessories designed for this saw.
Follow the instructions supplied with the accessory.
The use of improper accessories may cause risk of injury.
6. To avoid contact with rotating equipment:
 - Do not put your fingers in a position where they risk contacting the blade if the workpiece unexpectedly shifts or your hand unexpectedly slips.
 - Do not cut a workpiece too small to be held safely.
 - Do not reach under the scroll saw table when the motor is running.
 - Do not wear loose clothing or jewelry. Roll long sleeves above the elbow. Tie back long hair.
7. To avoid injury from accidental startups of the scroll saw:
 - Make sure to turn OFF the switch and unplug the power cord from the electric outlet before changing the blade, performing maintenance or making adjustments.
 - Make sure the switch is OFF before plugging in the power cord to an electric outlet.
8. To avoid injury from a fire hazard, do not operate the scroll saw near flammable liquids, vapors or gases.
9. To avoid back injury:
 - Obtain help when raising the scroll saw more than 10 inches (25.4 cm). Bend your knees when lifting the scroll saw.
 - Carry the scroll saw by its base. Do not move the scroll saw by pulling on the power cord. Pulling on the power cord could cause damage to the insulation or the wire connections resulting in electric shock or fire.

SCROLL SAW SAFETY

1. To avoid injury from unexpected saw movement:
 - Use the scroll saw on a firm level surface with adequate space for handling and supporting the workpiece.
 - Be sure the scroll saw cannot move when operated.Secure the scroll saw to a workbench or table with wood screws or bolts, washers and nuts.
2. Before moving the scroll saw, unplug the power cord from the electrical outlet.
3. To avoid injury from kickback:
 - Hold the workpiece firmly against the tabletop.
 - Do not feed the workpiece too fast while cutting. Only feed the workpiece at the rate the saw will cut.
 - Install the blade with the teeth pointing downward.
 - Do not start the saw with the workpiece pressing against the blade. Slowly feed the workpiece into the moving blade.
 - Use caution when cutting round or irregularly shaped workpieces. Round items will roll and irregularly shaped workpieces can pinch the blade.
4. To avoid injury when operating the scroll saw:
 - Obtain advice from a qualified person if you're not thoroughly familiar with the operation of scroll saws.
 - Before starting the saw, make sure the blade tension is correct. Recheck and adjust tension as needed.
 - Make sure the table is locked into position before starting the saw.
 - Do not use dull or bent blades.
 - When cutting a large workpiece, make sure the material is supported at the table height.

– Turn the saw OFF and unplug the power cord if the blade jams in the workpiece. This condition is usually caused by sawdust clogging the line you are cutting.

Wedge open the workpiece and back out the blade after turning off and unplugging the machine.

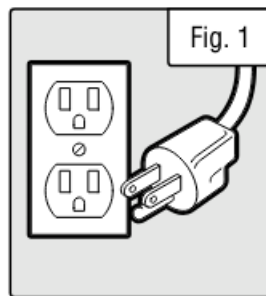
ELECTRICAL INFORMATION

GROUNDING INSTRUCTIONS

In the event of a malfunction or breakdown, grounding provides the path of least resistance for an electric current and reduces the risk of electric shock. This tool is equipped with an electric cord that has an equipment grounding conductor and a grounding plug. The plug **MUST** be plugged into a matching outlet that is properly installed and grounded in accordance with ALL local codes and ordinances.

1. Do not modify the plug provided. If it will not fit the outlet, have the proper outlet installed by a licensed electrician.
2. Improper connection of the equipment grounding conductor can result in electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment grounding conductor. If repair or replacement of the electric cord or plug is necessary, **DO NOT** connect the equipment grounding conductor to a live terminal.
3. Check with a licensed electrician or service personnel if you do not completely understand the grounding instructions or whether the tool is properly grounded.
4. Use only three-wire extension cords that have three-pronged plugs and outlets that accept the tool's plug (INSERT CR). Repair or replace a damaged or worn cord immediately.

CAUTION! In all cases, make certain the outlet in question is properly grounded. If you are not sure, have a licensed electrician check the outlet.



GUIDELINES AND RECOMMENDATIONS FOR EXTENSION CORDS

When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. The table below shows the correct size to be used according to cord length and ampere rating. When in doubt, use a heavier cord. The smaller the gauge number, the heavier the cord.

AMPERAGE	REQUIRED GAUGE FOR EXTENSION CORDS			
	25 ft.	50 ft.	100 ft.	150 ft.
1.2A	18 gauge	16 gauge	16 gauge	14 gauge

1. Examine extension cord before use. Make sure your extension cord is properly wired and in good condition.
Always replace a damaged extension cord or have it repaired by a qualified person before using it.
2. Do not abuse extension cord. Do not pull on cord to disconnect from receptacle; always disconnect by pulling

on plug. Disconnect the extension cord from the receptacle before disconnecting the product from the extension cord.

Protect your extension cords from sharp objects, excessive heat and damp/wet areas.

3. Use a separate electrical circuit for your tool. This circuit must not be less than a 12-gauge wire and should be protected with a 15A time-delayed fuse. Before connecting the motor to the power line, make sure the switch is in the OFF position and the electric current is rated the same as the current stamped on the motor nameplate. Running at a lower voltage will damage the motor.

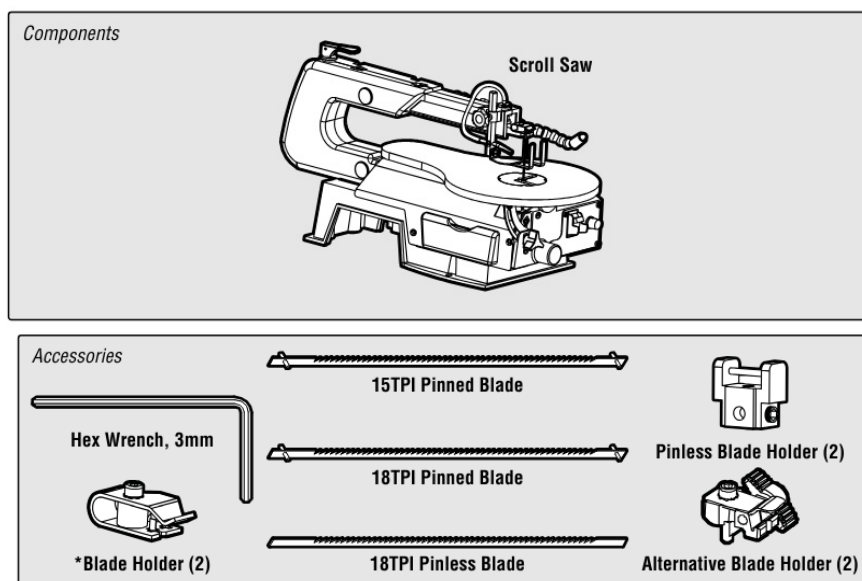
UNPACKING & PACKING LIST

UNPACKING

With the help of a friend or trustworthy foe, such as one of your in-laws, carefully remove the scroll saw from the packaging and place it on a sturdy, flat surface. Make sure to take out all contents and accessories. Do not discard the packaging until everything is removed. Check the packing list below to make sure you have all of the parts and accessories. If any part is missing or broken, please contact customer service at 1-[847-429-9263](tel:847-429-9263) (M-F 8-5 CST), or email techsupport@wenproducts.com.

⚠CAUTION! Do not lift the saw by the arm that holds the blade. The saw will be damaged. Lift the saw by the table and back housing.

⚠WARNING! To avoid injury from accidental startups, turn switch OFF and remove the plug from the power source before making any adjustments.

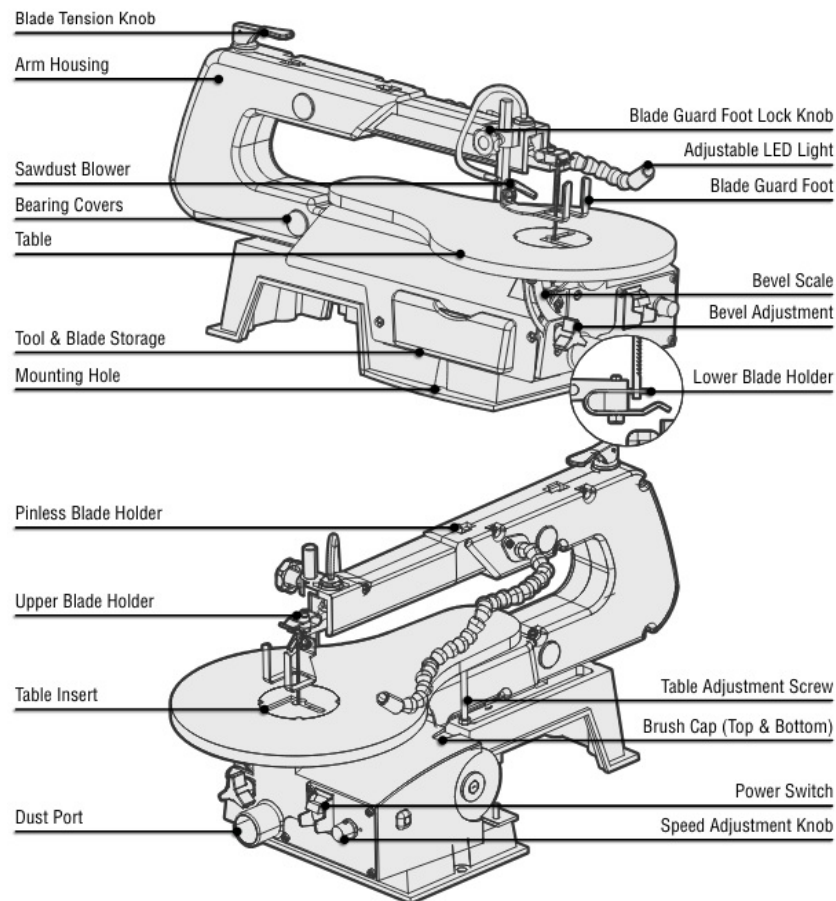


* Pre-Installed

KNOW YOUR SCROLL SAW

TOOL PURPOSE

Take on the most intricate and artful cuts with your WEN Scroll Saw. Refer to the following diagrams to become familiarized with all the parts and controls of your scroll saw. The components will be referred to later in the manual for assembly and operation instructions.



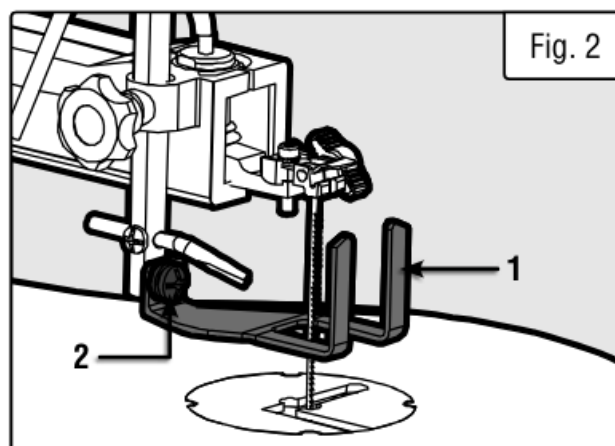
ASSEMBLY & ADJUSTMENTS

NOTE: Prior to making adjustments, mount the scroll saw on a stable surface. See “Bench mounting the saw.”

ALIGN THE BEVEL INDICATOR

The bevel indicator has been adjusted at the factory, but should be rechecked prior to use for best operation.

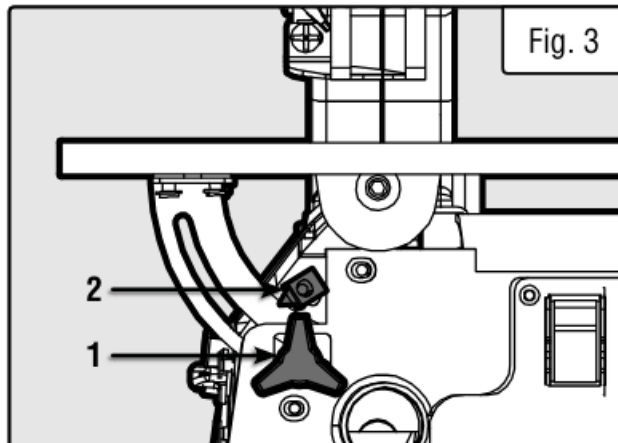
1. Remove the blade guard foot (Fig. 2 – 1), using a Phillips head screwdriver (not included) to loosen the screw (Fig. 2 – 2).



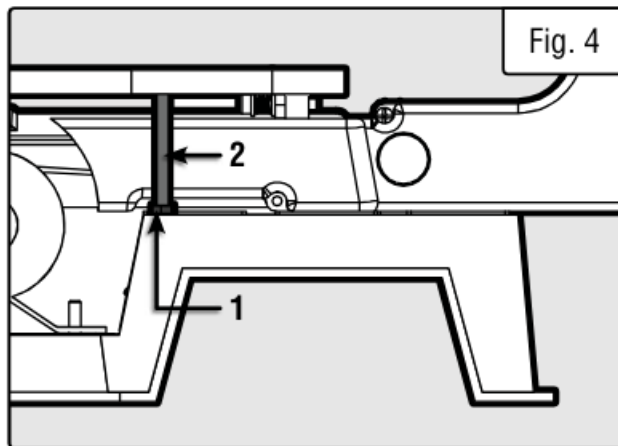
2. Loosen the table bevel lock knob (Fig. 3 – 1) and bevel the table until it is approximately at a right angle to the blade.
3. Loosen the locking nut (Fig. 4 – 1) on the table adjusting screw (Fig. 4 – 2) under the table by turning it counter-clockwise.

Lower the table adjusting screw by turning it clockwise.

4. Use a combination square (Fig. 5 – 1) to set the table exactly 90° to the blade (Fig. 5 – 2). If there is space between the square and blade, adjust the table angle until the space is closed.
5. Lock the table bevel lock knob (Fig. 3 – 1) under the table to prevent movement.



6. Tighten the adjusting screw (Fig. 4 – 2) under the table until the head of the screw touches the table. Tighten the lock nut (Fig. 4 – 1).
7. Loosen the screw (Fig. 3 – 2) holding the bevel scale pointer and position pointer to 0°. Tighten the screw.



8. Attach the blade guard foot (Fig. 2 – 1) so the foot rests flat against the table. Tighten the screw (Fig. 2 – 2) using a Phillips head screwdriver (not included).

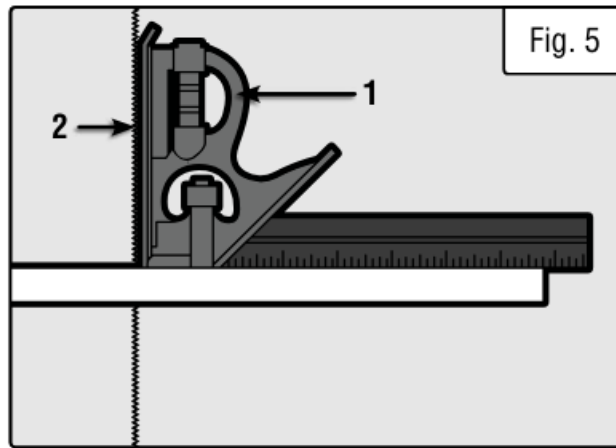
NOTE: Avoid setting the edge of the table against the top of the motor. This can cause excess noise when the saw is running.

BENCH MOUNTING THE SAW

Before operating the saw, it must be firmly mounted to a workbench or another rigid frame. Use the base of the saw to mark and pre-drill the mounting holes on the mounting surface.

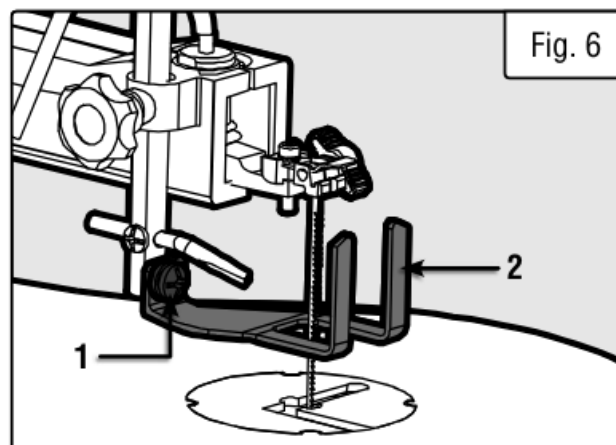
If the saw is to be used in one location, permanently secure it to the work surface. Use wood screws if mounting to wood. Use bolts, washers, and nuts if mounting into metal. To reduce noise and vibration, install a soft foam pad (not supplied) between the scroll saw and the workbench.

NOTE: Mounting hardware is not included.



⚠ WARNING! TO REDUCE RISK OF INJURY:

- When carrying the saw, hold it close to your body to avoid injury to your back. Bend your knees when lifting the saw.
- Carry the saw by the base. Do not carry the saw by the power cord or upper arm.
- Secure the saw in a position where people cannot stand, sit, or walk behind it. Debris thrown from the saw could injure people standing, sitting, or walking behind it. Secure the saw on a firm, level surface where the saw cannot rock. Make sure there is adequate room for handling and properly supporting the workpiece.



BLADE GUARD FOOT ADJUSTMENT

When cutting at angles, the blade guard foot should be adjusted so it is parallel to the table and rests flat above the workpiece.

1. To adjust, loosen the screw (Fig. 6 – 1), tilt the foot (Fig. 6 – 2) so it is parallel to the table, and tighten the screw.
2. Loosen the height adjustment knob (Fig. 7 – 1) to raise or lower the foot until it just rests on top of the workpiece. Tighten the knob.

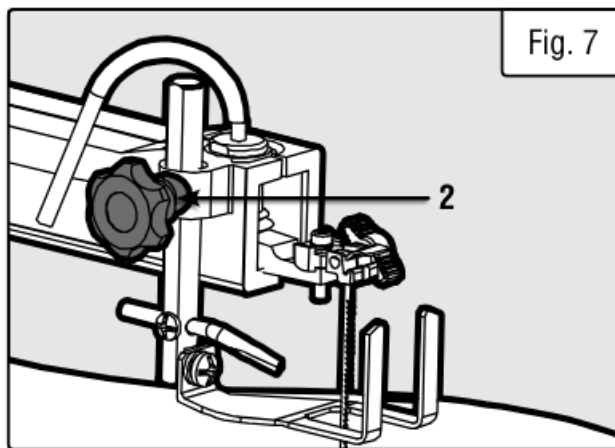


Fig. 7

ADJUSTING THE DUST BLOWER

For best results, the dust blower tube (Fig. 8 – 1) should be adjusted to direct air at both the blade and the workpiece.

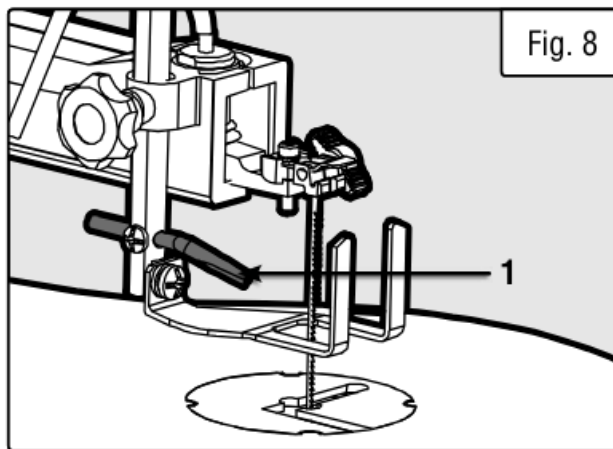


Fig. 8

DUST COLLECTION PORT

A hose or vacuum accessory (not provided) should be connected to the dust chute (Fig. 9 – 1). If excessive sawdust buildup occurs inside the base, use a wet/dry vacuum cleaner or manually remove sawdust by remove the two screws (Fig. 9 – 2) and the side panel on the left side of the saw.

Once the sawdust is removed, reattach the side panel and two screws.

Dust Port Inner Diameter: 1.21 in. (30.85mm)

Dust Port Outer Diameter: 1.40 in. (35.53 mm)

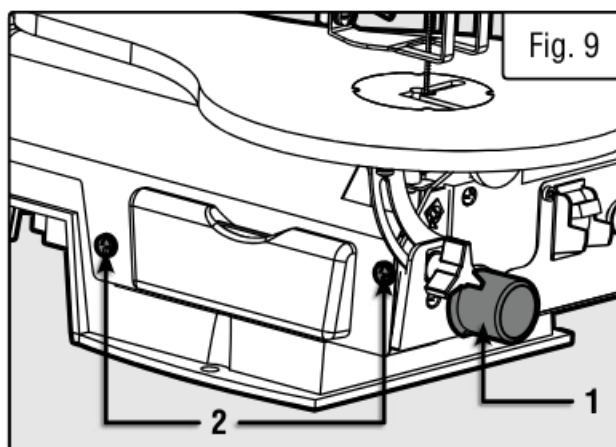


Fig. 9

BLADE SELECTION

This scroll saw accepts 5" long pin-end and pinless blades, with a wide variety of blade thicknesses and widths. The type of material and intricacies of cutting operations will determine the number of teeth per inch. Always select

the narrowest blades for intricate curve cutting and the widest blades for straight and large curve cutting operations.

The table below represents suggestions for various materials. Use this table as an example, but with practice, personal preference will be the best selection method.

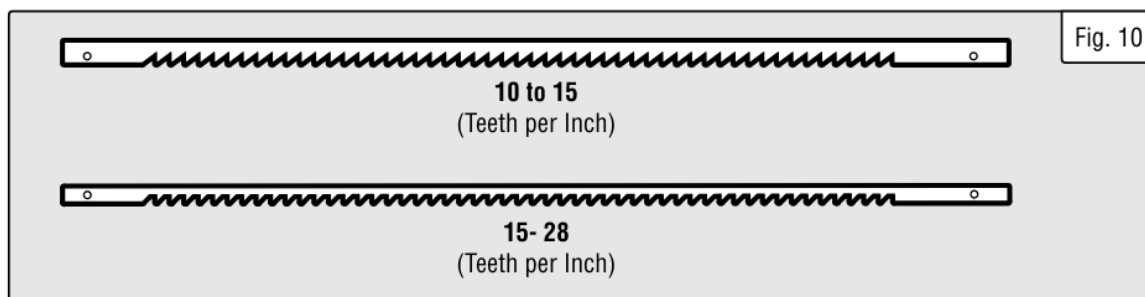
When choosing a blade, use very fine, narrow blades to scroll cut in thin wood 1/4" thick or less.

Use wider blades for thicker materials

NOTE: This will reduce the ability to cut tight curves. A smaller blade width can cut circles with smaller diameters.

NOTE: Thinner blades will tend to deflect more when making bevel cuts.

Teeth per Inch	Blade Width	Blade Thickness	Blade SPM	Material Cut
10 to 15	0.11"	0.018"	500 to 1200 SPM	Medium turns on 1/4" to 1-3/4" wood, soft metal, hardwood
15 to 28	0.055" to 0.11"	0.01" to 0.018"	800 to 1700 SPM	Small turns on 1/8" to 1-1/2" wood, soft metal, hardwood



BLADE CARE

To maximize the life of your scroll saw blades:

1. Do not bend blades when installing.
2. Always set proper blade tension.
3. Use the right blade (see instruction on replacement blade packaging for proper use).
4. Feed the work correctly into the blade.
5. Use thin blades for intricate cutting.

⚠ CAUTION! Any and all servicing should be performed by a qualified service center.

⚠ WARNING! To prevent personal injury, always turn saw OFF and disconnect the plug from the power source before changing blades or making adjustments.

This saw uses pinned and pinless blades. Pinned blades are thicker for stability and for faster assembly. They provide faster cutting on a variety of materials.

NOTE: When installing pinned blades, the slot on the blade holder must be slightly wider than the thickness of the blade.

After the blade is installed, the blade tension mechanism will keep it in place.

TIP: The table insert can be removed during blade changes to provide more access to the blade holders, but this is not mandatory.

The table insert should always be replaced before using the saw.

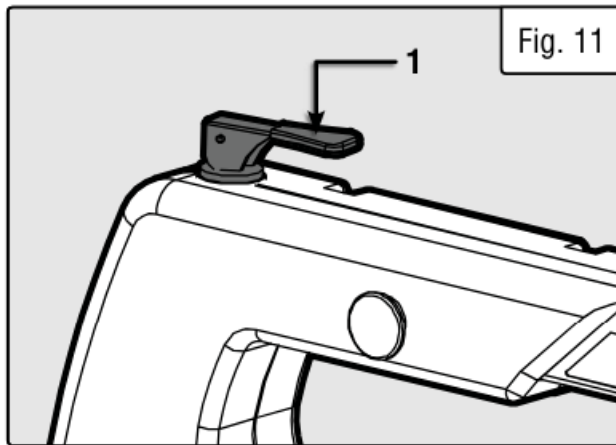


Fig. 11

BLADE REMOVAL

This saw uses pinned and pinless blades. Pinned blades are thicker for stability and for faster assembly. They provide faster cutting on a variety of materials.

NOTE: When installing pinned blades, the slot on the blade holder must be slightly wider than the thickness of the blade.

After the blade is installed, the blade tension mechanism will keep it in place.

1. To remove the blade, loosen the tension on it by lifting up the blade tension lever (Fig. 11 – 1). Turn the lever counterclockwise to loosen the blade holder if necessary.

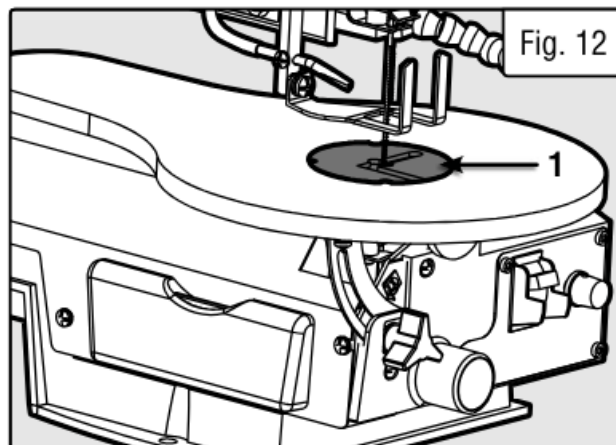


Fig. 12

2. Carefully remove the table insert (Fig. 12 – 1).
3. Push down on the upper blade holder (Fig. 13 – 1) to remove the blade from the holder. Remove the blade from the lower blade holder Fig. 14 – 1).

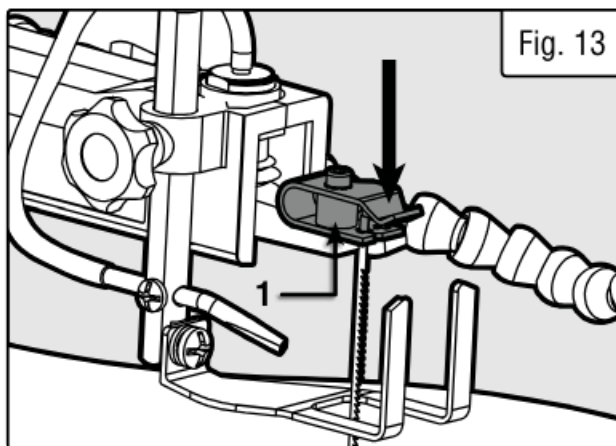
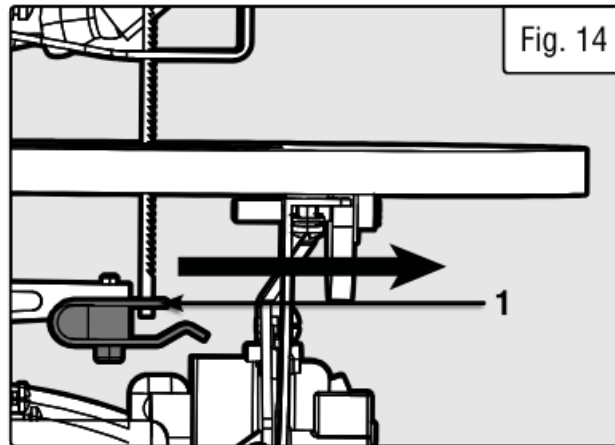


Fig. 13

BLADE INSTALLATION

1. To install the blade, hook the blade in the recess of the lower blade holder (Fig. 14 – 1).
2. While pushing down on the upper blade holder (Fig. 13 – 1), insert the blade into the slot of the holder.
3. Move the blade tension lever (Fig. 11 – 1) down and make sure the blade pin is properly positioned in the blade holders.
4. Adjust the blade to the desired tension. Turning the blade tension knob clockwise tightens the blade and turning the knob counterclockwise loosens the blade.
5. Place the table insert (Fig. 12 – 1) back into place.

⚠ CAUTION! Install the blade with the teeth pointing downward.



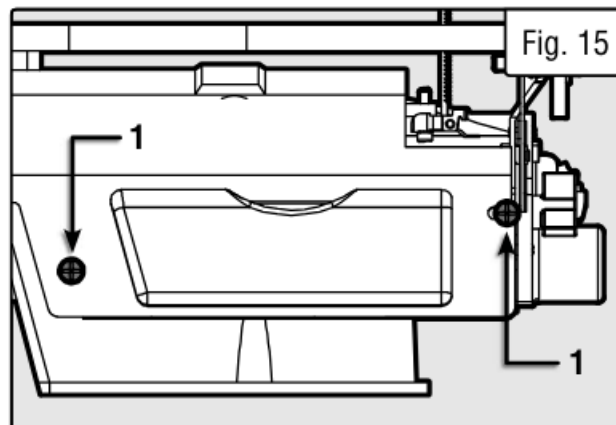
INSTALLING THE ALTERNATE BLADE HOLDER

NOTE: Your WEN Scroll Saw includes two different style blade holders: a standard system and an adapter system (pre-installed on saw). The adapter style allows for quick blade changes when making exterior or larger interior cuts and allows for infinite ripping capacity.

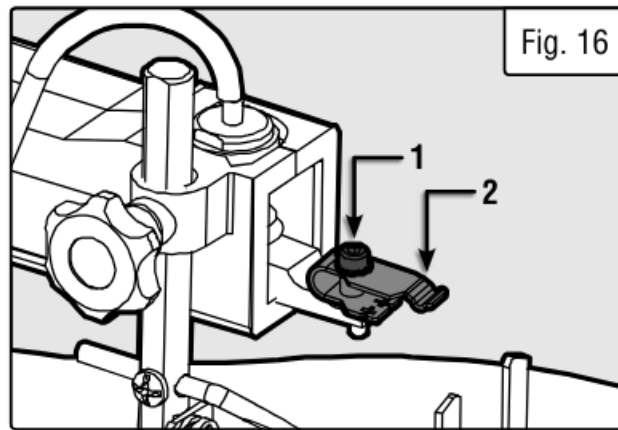
The standard style allows for a tight grip on your blade and easier blade changes for intricate interior cuts.

Different users have different preferences depending on the needs of the task at hand.

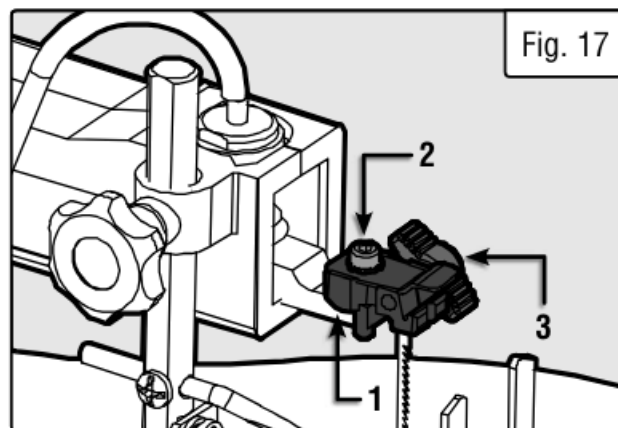
Try out both styles and see which one you prefer.



1. Ensure the unit is unplugged and all safety instructions in the manual are followed.
2. Remove the two M6x10 screws (Fig. 15 – 1) from the side panel and remove the side panel.
3. Use the included 3 mm hex wrench to remove the M4x20 screws (Fig. 16 – 1) securing the original blade holders (Fig. 16 – 2) on the top and bottom arms.
4. Replace the original blade holder with the alternative blade holder. Secure the alternative blade holder (Fig. 17 – 1) and blade guard with the M4x20 screws (Fig. 17 – 2) and tighten with the included 3 mm hex wrench.

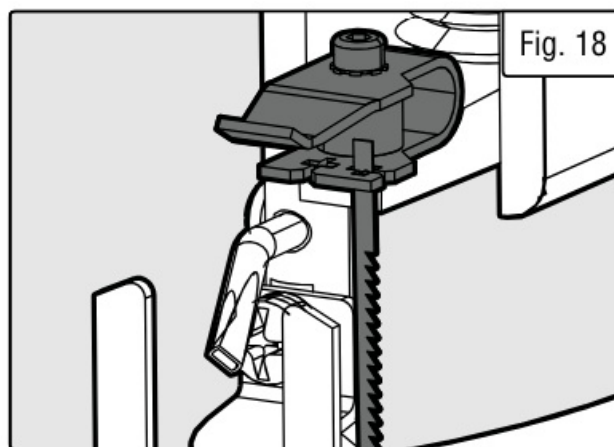


5. Screw the thumbscrew (Fig. 17 – 3) into the alternative blade holder to use with pinless blades.
6. Replace the side panel and the two M6x10 screws (Fig. 15).
7. Enjoy your alternative blade holders.



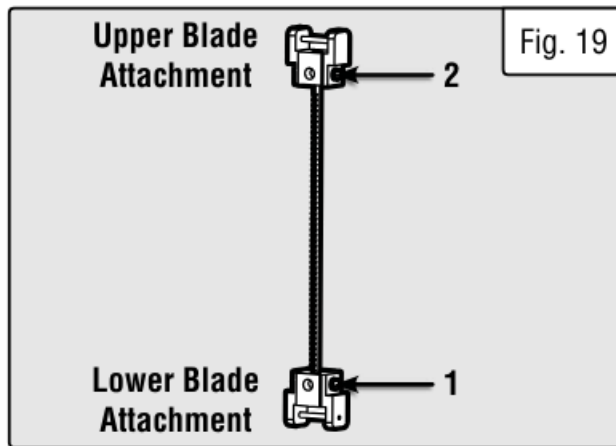
ADJUSTING THE BLADE DIRECTION

Your scroll saw accepts pinned blades in two different positions to accommodate a wider variety of workpieces. Notice the two various slots for pinned blades that appear on the head of the saw. Pinned blades can be placed in either of the two slots (Fig. 15), changing the direction of the blade by 90 degrees. A coinciding slot exists for each holder underneath the plate.

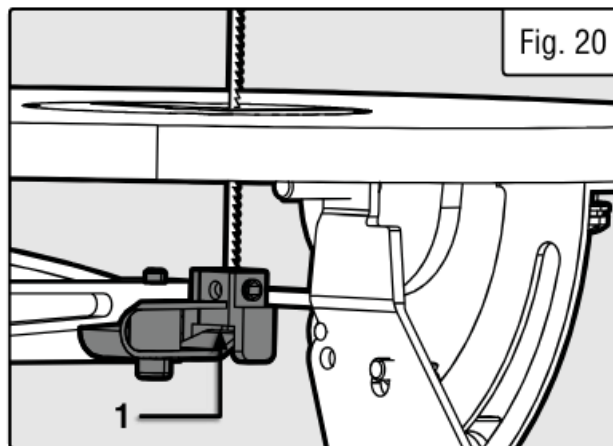


INSTALLING PINLESS BLADES

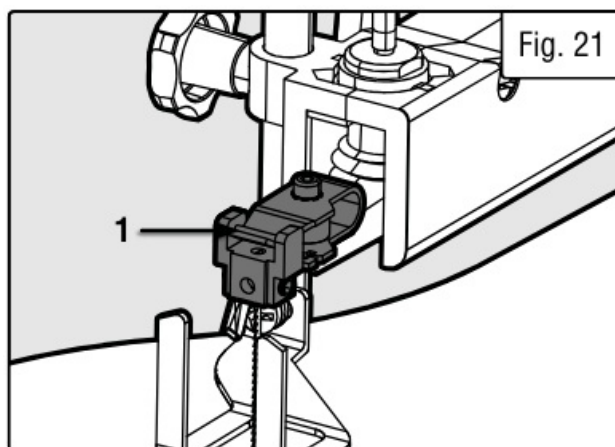
1. Remove the existing blade and table insert, see BLADE REMOVAL & INSTALLATION.



2. To install the pinless blade, loosen the thumb screw (Fig. 16 – 1) on the lower blade attachment.
3. Install the blade into the lower blade attachment and tighten the thumb screw. Hook the lower blade attachment onto the curve of the bottom blade holder (Fig. 17 – 1) found underneath the table.
4. Place the insert back into the table after carefully inserting the blade through the table insert slot and the pilot hole of the workpiece.



5. Insert the blade into the upper blade attachment. Tighten the upper thumb screw (Fig. 16 – 2) to secure the blade.
6. Hook the upper blade attachment onto the top curve of the upper blade holder (Fig. 18 – 1).
7. Move the blade tension lever down and make sure the blade attachments are properly secured and tensioned onto the machine.



OPERATION

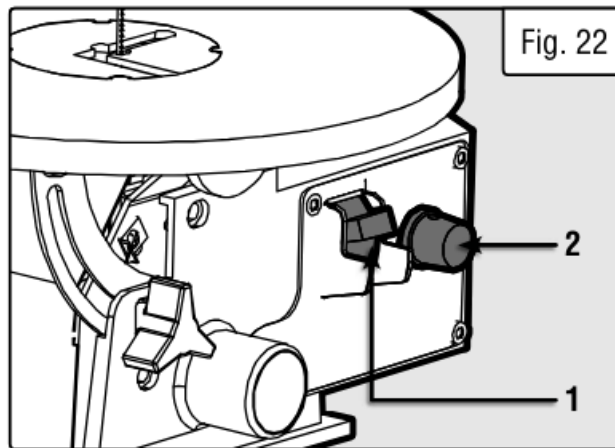
RECOMMENDATIONS FOR CUTTING

A scroll saw is basically a curve-cutting machine. It can also be used for straight cutting and beveling or angle cutting operations. Please read and understand the following directions before attempting to use the saw.

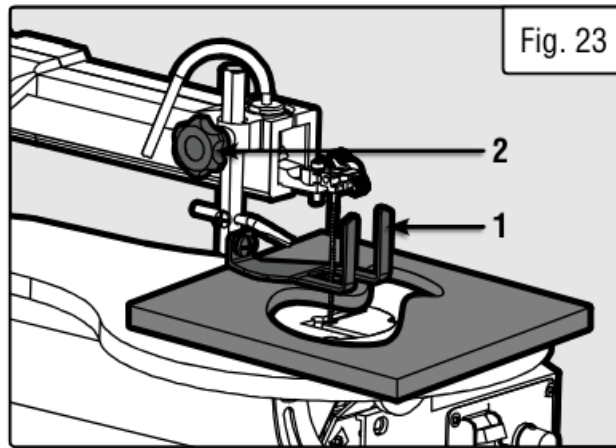
1. When feeding the workpiece into the blade, do not force it against the blade. This could cause blade deflection and poor cutting performance. Let the tool do the work.
2. The blade teeth cut material ONLY on the down stroke. Ensure the blade teeth point downwards.
3. Guide the wood into the blade slowly. Again, let the tool do the work.
4. There is a learning curve for each person using this saw. During that period, expect some blades to break as you get the hang of using the saw.
5. Best results are achieved when cutting wood one inch thick or less.
6. When cutting wood thicker than one inch, guide the wood slowly into the blade and take extra care not to bend or twist the blade while cutting, in order to maximize blade life.
7. Teeth on scroll saw blades wear out, and the blades must be replaced frequently for best cutting results. Scroll saw blades generally stay sharp for 1/2 hour to 2 hours of cutting, depending on the type of cut, wood species, etc.
8. To get accurate cuts, be prepared to compensate for the blade's tendency to follow the wood grain.
9. This scroll saw is primarily designed to cut wood or wood products. For cutting precious and non-ferrous metals, the variable control switch must be set at very slow speeds.
10. When choosing a blade, use very fine, narrow blades to scroll cut in thin wood 1/4" thick or less. Use wider blades for thicker materials. This, however, will reduce the ability to cut tight curves.
11. Blades wear down faster when cutting plywood or very abrasive particle board. Angle cutting in hardwoods also wears blades down faster.

ON/OFF & SPEED CONTROL SWITCH

Always wait for the saw to come to a complete stop before restarting.



1. To turn the saw ON, flip the power switch (Fig. 19 – 1) to ON.
When first starting the saw, it is best to move the speed control knob (Fig. 19 – 2) to the middle speed position.
2. Adjust the blade speed to the desired setting between 400 to 1600 strokes per minute (SPM). Turning the control knob clockwise increases speed; turning it counterclockwise reduces speed.
3. To turn the saw OFF, flip the power switch back to OFF.



4. To lock the switch in the OFF position, remove the yellow safety key from the switch. This will prevent accidental operation.

Store the safety key in a safe place.

⚠ WARNING! Remove the safety key whenever the drill is not in use. Place the key in a safe place and out of the reach of children.

⚠ WARNING! To avoid injury from accidental start-ups, always turn the switch OFF and unplug the scroll saw before moving the tool, replacing the blade, or making adjustments.

FREEHAND CUTTING

1. Lay out desired design, or secure design to the workpiece.
2. Raise the blade guard foot (Fig. 20 – 1) by loosening the height adjustment knob (Fig. 20 – 2).
3. Position the workpiece against the blade and place the blade guard foot against the top surface of the workpiece.
4. Secure the blade guard foot (Fig. 20 – 1) by tightening the height adjustment knob (Fig. 20 – 2).
5. Remove the workpiece from the blade prior to turning the scroll saw ON.

⚠ CAUTION! Always make sure the blade is not in contact with the workpiece before turning the saw ON.

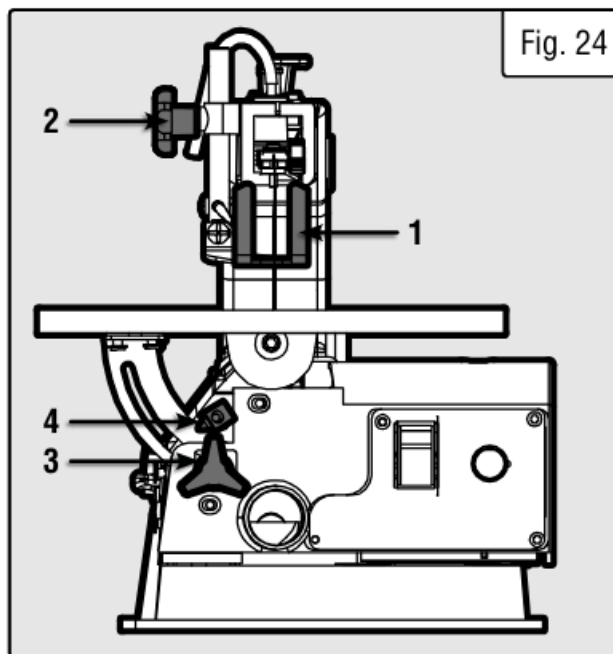
6. Slowly feed the workpiece into the blade while holding the workpiece securely against the table.

⚠ CAUTION! Do not force the leading edge of the workpiece into the blade. The blade will deflect, reducing accuracy of cut, and may break

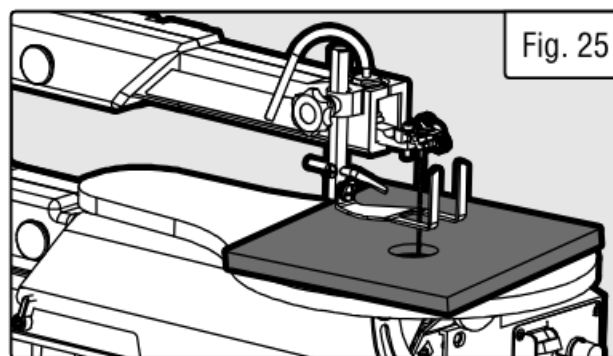
7. When cutting is complete, move trailing edge of the workpiece beyond the blade guard foot. Turn the switch OFF.

ANGLE CUTTING (BEVELING)

1. Layout or secure design to workpiece.
2. Move the blade guard foot (Fig. 21 – 1) to the highest position by loosening the height adjustment knob (Fig. 21 – 2) and retighten.
3. Tilt the table to the desired angle by loosening the table bevel lock knob (Fig. 21 – 3). Move the table to the proper angle using the degree scale and the pointer (Fig. 21 – 4).
4. Tighten the table bevel lock knob (Fig. 21 – 3).



5. Loosen the blade guard screw (Fig. 21 – 2), and tilt the blade guard (Fig. 21 – 1) to the same angle as the table. Retighten the blade guard screw.
6. Position the workpiece on the right side of the blade. Lower the blade guard foot against the surface by loosening the height adjustment knob. Retighten.
7. Follow steps 5 to 7 under Freehand cutting.



INTERIOR CUTTING

1. Lay out the design on the work piece. Drill a 1/4" hole in the work piece.
2. Remove the blade, see BLADE REMOVAL & INSTALLATION.
3. Place the work piece on the saw table with the hole in the work piece over the access hole in the table.
4. Install a blade through the hole in the work piece.
5. Follow steps 3 – 7 under FREEHAND CUTTING.
6. When finished making the interior scroll cuts, simply turn the scroll saw OFF. Unplug the saw before removing the blade from the blade holder. Remove the work piece from the table.

RIP OR STRAIGHT LINE CUTTING

1. Raise the blade guard foot by loosening the height adjustment knob.
2. Measure from the tip of the blade to the desired distance. Position the straight edge parallel to the blade at that distance.
3. Clamp the straight edge to the table.

4. Recheck your measurements using the work piece to be cut and make sure the straight edge is secure.
5. Position the work piece against the blade and place the blade guard foot against the top surface of the work piece.
6. Secure the blade guard foot in place by tightening the height adjustment knob.
7. Remove the work piece from the blade prior to turning the scroll saw ON.


CAUTION! In order to avoid uncontrollable lifting of the workpiece and reduce blade breakage, do not turn the switch on while the workpiece is against the blade.

8. Position the workpiece against the straight edge prior to touching the leading edge of the workpiece against the blade.
9. Slowly feed the workpiece into the blade, guiding the workpiece against the straight edge and pressing the workpiece down against the table.

CAUTION! Do not force the leading edge of the workpiece into the blade. The blade will deflect, reducing the accuracy of the cut, and may even break.

10. When the cut is complete, move trailing edge of the workpiece beyond the blade guard foot. Turn the switch OFF.

MAINTENANCE

 **WARNING!** Always turn the switch OFF and unplug the power cord from the outlet before maintaining or lubricating the scroll saw.

To ensure that the wood glides smoothly across the work surface, periodically apply a coat of paste wax (sold separately) to the surface of the worktable.

If the power cord is worn out or damaged in any way, replace it immediately.

Do not attempt to oil the motor bearings or service the motor's internal parts.

CARBON BRUSH REPLACEMENT

The wear on the carbon brushes depends on how frequently and how heavily the tool is used. To maintain maximum efficiency of the motor, we recommend inspecting the two carbon brushes every 60 hours of operation or when the tool stops working. The carbon brushes can be found on the top and bottom of the motor.

1. Unplug the saw. To access the carbon brushes, remove the carbon brush cover with a flat-head screwdriver (not included). Turn the saw on its side to access the carbon brush cap on the bottom of the motor.
2. Carefully remove the old carbon brushes using pliers. Keep track of which orientation the old carbon brushes were in to prevent needless wear if they will be reinstalled.
3. Measure the length of the brushes. Install the new set of carbon brushes if either carbon brush length is worn down to 3/16" or less. Reinstall the old carbon brushes (in their original orientation) if your brushes are not worn down to 3/16" or less. Both carbon brushes should be replaced at the same time. Replacement carbon brushes (part 3920B-071-2) can be purchased from wenproducts.com.
4. Replace the carbon brush cover.

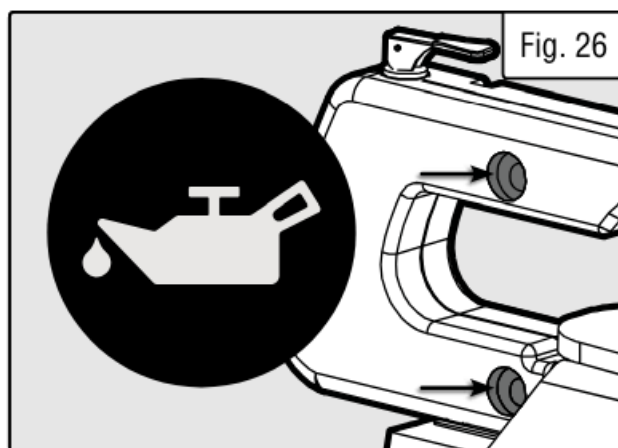
NOTE: New carbon brushes tend to spark for a few minutes during the first use as they wear down.

LUBRICATION

Lubricate the arm bearings (Fig. 26) every 50 hours of use.

1. Turn the saw on its side and remove the cover.
2. Squirt a generous amount of SAE 20 oil (lightweight motor oil, sold separately) around the shaft and bearing.
3. Let the oil soak in overnight.

4. Repeat the above procedure for the opposite side of the saw.
5. The other bearings on your saw are permanently sealed and require no additional lubrication.



BLADES

To maximize the life of your scroll saw blades:

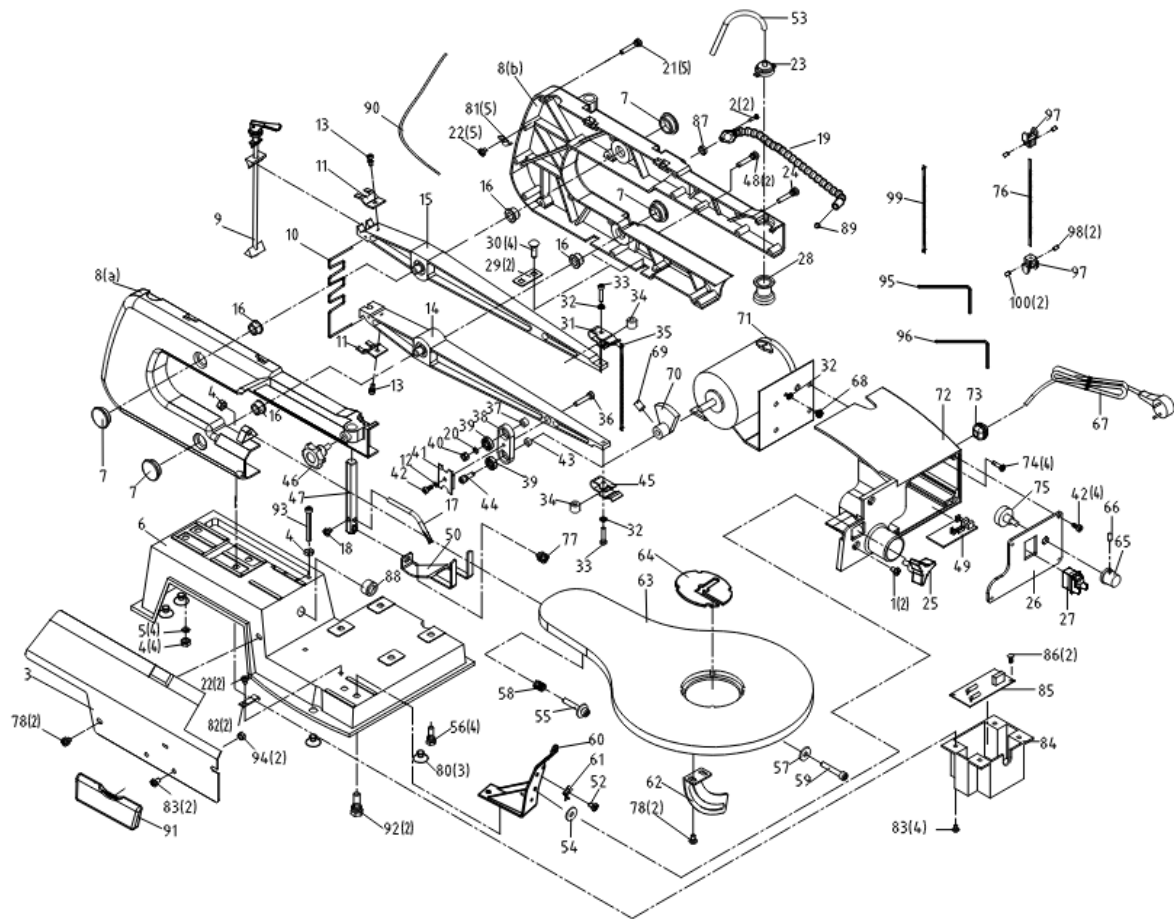
1. Do not bend blades when installing.
2. Always set proper blade tension.
3. Use the right blade (see instructions on replacement blade packaging for proper use).
4. Feed the work correctly into the blade.
5. Use thin blades for intricate cutting.

TROUBLESHOOTING GUIDE

PROBLEM	POSSIBLE CAUSE	SOLUTION
Motor will not start.	1. Machine not plugged in.	1. Plug unit into power source.
	2. Incorrect size of extension cord.	2. Choose the proper size and length of extension cord.
	3. Worn carbon brushes.	3. Replace carbon brushes.
	4. Blown fuse on main PCB.	4. Replace fuse (T5AL250V, 5mm x 20mm). Contact customer service at 1-847-429-9263 for assistance.
	5. Defective power switch, PCB, or motor.	5. Contact customer service at 1-847-429-9263.
Variable speed does not work.	1. Defective potentiometer (3920B-075).	1. Contact customer service at 1-847-429-9263
	2. Defective PCB (3920B-049).	2. Contact customer service at 1-847-429-9263
	1. Side panel open.	1. Make sure side panel is closed for optimum dust collection.

Dust collection ineffective.	2. Dust collection system not strong enough.	2. Use a stronger system, or reduce the length of the dust collection hose.
	3. Broken/blocked blower bellows or line.	3. Contact customer service at 1-847-429-9263.
Excessive vibration.	1. Machine speed set at a harmonic frequency of the saw.	1. Adjust speed up or down to see if issue is resolved.
	2. Machine not secured to work surface.	2. Secure machine to work surface.
	3. Incorrect blade tension.	3. Adjust blade tension.
	4. Hold-down foot not being used.	4. Adjust hold-down foot to slightly clear workpiece surface when cutting.
	5. Loose fastener.	5. Check machine for loose fasteners.
	6. Defective bearing.	6. Contact customer service at 1-847-429-9263.
Blades keep breaking.	1. Blade tension set too high.	1. Reduce blade tension.
	2. Incorrect blade size.	2. Use a larger (thicker) blade more suitable for the job at hand.
	3. Incorrect blade tooth pitch.	3. Choose a blade with more or fewer teeth per inch (TPI); a minimum of 3 teeth should contact workpiece at all times.
	4. Excessive pressure on blade.	4. Reduce pressure on blade. Let the tool do the work.
Blade drift, or otherwise poor cuts.	1. Excessive pressure on blade.	1. Reduce pressure on blade. Let the tool do the work.
	2. Blade mounted upside-down.	2. Mount blade with teeth pointing down (towards work table).
Tension mechanism does not work.	Broken tension mechanism spring.	Contact customer service at 1-847-429-9263.

EXPLODED VIEW & PARTS LIST



No.	Model No.	Description
1	3920B-001	Screw M5x8
2	3920B-002	Screw ST4.2×10
3	3920B-003	Side Cover
4	3920B-004	Nut M6
5	3920B-005	Spring Washer M6
6	3920B-006	Base
7	3920B-007	Oil Cap
8A	3920C-008A	Left Arm Housing
8B	3920C-008B	Right Arm Housing
9	3920B-009	Tension Bolt Assembly
10	3920B-010	Extension Spring
11	3920B-011	Pressure Plate
12	3920B-012	Spring Washer M4
13	3920B-013	Screw M4X10
14	3920C-013	Lower Arm
15	3920C-014	Upper Arm

16	3920C-015	Arm Bearing
17	3920C-016	Blast Pipe
18	3920B-018	Screw M5x6
19	3920B-019	Light Assembly
20	3920B-020	Spring Washer M5
21	3920B-021	Screw M5x35
22	3920B-022	Screw M4x6
23	3920B-023	Bellows Cap
24	3920B-024	Screw M5x28
25	3920B-025	Table Lock Knob
26	3920B-026	Switch Fixing Board
27	3920B-027	Switch
28	3920B-028	Bellows
29	3920B-029	Fixing Plate
30	3920B-030	Bolt M6)20
31	3920C-030	Upper Blade Support
32	3920B-032	Washer M4
33	3920B-033	Screw M4x20
34	3920C-034	Support Cushion
35	3920B-076	Blade 15TPI
36	3920B-036	Screw M5x25
37	3920B-037	Big Cushion
38	3920B-038	Eccentricity Connector
39	3920B-039	Bearing 625Z (80025)
40	3920B-040	Nut M5
41	3920B-041	Clamping Board
42	3920B-042	Screw ST4.2×9.5
43	3920B-043	Washer
44	3920B-044	Screw M5x16
45	3920C-044	Lower Blade Support
46	3920B-046	Drop Foot Lock Knob
47	3920B-047	Drop Foot Fixing Pole
48	3920B-048	Screw M5x30

49	3920B-049	PCB
50	3920B-050	Drop Foot
52	3920B-052	Screw M6x10
53	3920B-053	PVC Pipe
54	3920B-054	Big Washer M6
55	3920B-055	Screw M6x40
56	3920B-056	Bolt M6x16
57	3920B-057	Washer M6
58	3920B-058	Spring
59	3920B-059	Screw M6x25
60	3920B-060	Work Table Bracket
61	3920B-061	Pointer
62	3920B-062	Bevel Scale
63	3920B-063	Work Table
64	3920B-064	Work Table Insert
65	3920B-065	Speed Adjusting Knob
66	3920B-066	Screw M5x6
67	3920B-067	Power Cord
68	3920B-068	Screw M4x8
69	3920B-069	Screw M8x12
70	3920B-070	Eccentric Wheel
71	3920B-071	Motor
72	3920B-072	Switch Box
73	3920B-073	Cord Clamp
74	3920B-074	Screw
75	3920B-075	Potentiometer
76	3920B-076-2	Blade 18TPI Pinless
77	3920B-077	Screw M4x10
78	3920B-078	Screw M6x10
80	3920B-080	Foot
81	3920B-081	Wire Clip 1
82	3920B-082	Wire Clip 2
83	3920B-083	Screw M4x8

84	3920B-084	Transformer Box
85	3920B-085	Circuit board
86	3920B-086	Screw ST2.9x6.5
87	3920B-087	Cord Bushing 1
88	3920B-088	Cord Bushing 2
89	3920B-019	LED Assembly
91	3920B-091	Tool Box
92	3920B-092	Bolt M8x20
93	3920B-093	Bolt M6x80
94	3920B-094	Nut M4
95	3920C-095	Wrench S3
96	3920C-096	Wrench S2.5
97	3920C-097	Blade Adaptor
98	3920C-098	Set Screw M5x8
99	3920B-076-1	Blade 18TPI Pinned
100	3920C-100	Adaptor Location Screw

WARRANTY STATEMENT

WEN Products is committed to building tools that are dependable for years. Our warranties are consistent with this commitment and our dedication to quality.

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WEN Products is committed to building tools that are dependable for years. Our warranties are consistent with this commitment and our dedication to quality.

LIMITED WARRANTY OF WEN PRODUCTS FOR HOME USE

GREAT LAKES TECHNOLOGIES, LLC ("Seller") warrants to the original purchaser only, that all WEN consumer power tools will be free from defects in material or workmanship during personal use for a period of two (2) years from date of purchase or 500 hours of use; whichever comes first. Ninety days for all WEN products if the tool is used for professional or commercial use. Purchaser has 30 days from the date of purchase to report missing or damaged parts.

SELLER'S SOLE OBLIGATION AND YOUR EXCLUSIVE REMEDY under this Limited Warranty and, to the extent permitted by law, any warranty or condition implied by law, shall be the replacement of parts, without charge, which are

defective in material or workmanship and which have not been subjected to misuse, alteration, careless handling, misrepair, abuse, neglect, normal wear and tear, improper maintenance, or other conditions adversely affecting the Product or the component of the Product, whether by accident or intentionally, by persons other than Seller. To make a claim under this Limited Warranty, you must make sure to keep a copy of your proof of purchase that clearly defines the Date of Purchase (month and year) and the Place of Purchase. Place of Purchase must be a direct vendor of Great Lakes Technologies, LLC. Purchasing through third party vendors, including but not limited to garage sales, pawn shops, resale shops, or any other secondhand merchant, voids the warranty included with this product.

Contact techsupport@wenproducts.com or 1-[847-429-9263](tel:847-429-9263) with the following information to make arrangements:

your shipping address, phone number, serial number, required part numbers, and proof of purchase. Damaged or defective parts and products may need to be sent to WEN before the replacements can be shipped out. Upon the confirmation of a WEN representative, your product may qualify for repairs and service work. When returning a product for warranty service, the shipping charges must be prepaid by the purchaser. The product must be shipped in its original container (or an equivalent), properly packed to withstand the hazards of shipment. The product must be fully insured with a copy of the proof of purchase enclosed. There must also be a description of the problem in order to help our repairs department diagnose and fix the issue. Repairs will be made and the product will be returned and shipped back to the purchaser at no charge for addresses within the contiguous United States.

THIS LIMITED WARRANTY DOES NOT APPLY TO ITEMS THAT WEAR OUT FROM REGULAR USAGE OVER TIME, INCLUDING BELTS, BRUSHES, BLADES, BATTERIES, ETC. ANY IMPLIED WARRANTIES SHALL BE LIMITED IN DURATION TO TWO (2) YEARS FROM DATE OF PURCHASE. SOME STATES IN THE U.S. AND SOME CANADIAN PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

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V.2023.12.18

Documents / Resources

	<p>WEN Products 3921 16 Inch Two Direction Variable Speed Scroll Saw [pdf] Instruction Manual</p> <p>3921 16 Inch Two Direction Variable Speed Scroll Saw, 3921, 16 Inch Two Direction Variable Speed Scroll Saw, Direction Variable Speed Scroll Saw, Variable Speed Scroll Saw, Speed Scroll Saw, Scroll Saw, Saw</p>
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References

- [WEN - Shop Generators, Woodworking Tools, and Power Tools — WEN Products](#)
- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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