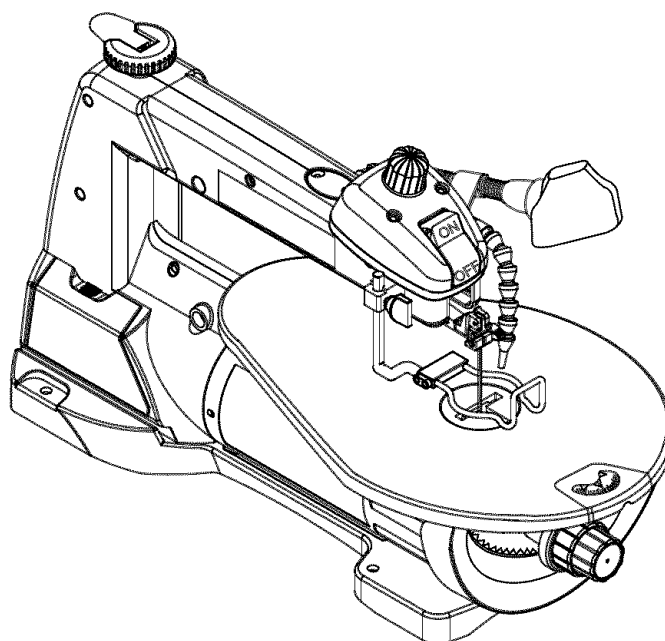


Operator's Manual

CRAFTSMAN®

16 IN. SCROLL SAW

Model No. 137.216010



CAUTION:

Before using this Scroll Saw, read this manual and follow all its Safety Rules and Operating Instructions

- Safety Instructions
- Installation
- Operation
- Maintenance
- Parts List

**Customer Help Line
For Technical Support
1-800-843-1682**

**Sears Parts &
Repair Center
1-800-488-1222**

Sears, Roebuck and Co., Hoffman Estates, IL 60179 USA

Visit our Craftsman website: www.sears.com/craftsman

Part No. 137216010001

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WARRANTY

ONE-YEAR FULL WARRANTY ON CRAFTSMAN TOOL

If this Craftsman tool fails due to a defect in material or workmanship within one year from the date of purchase, **CALL 1-800-4-MY-HOME® TO ARRANGE FOR FREE REPAIR** (or replacement if repair proves impossible). If this tool is used for commercial or rental purposes, this warranty will apply for only ninety days from the date of purchase. This warranty applies only while this tool is in the United States. This warranty gives you specific legal rights, and you may also have other rights, which vary, from state to state.

Sears, Roebuck and Co., Hoffman Estates, IL 60179

PRODUCT SPECIFICATIONS

MOTOR

Power Source..... 120V AC, 60HZ, 1.6Amp
 Speed..... 400-1600 SPM
 Speed Control..... Electric

BLADE

Type..... Pin-end or Plain-end
 Depth of Throat..... 16-1/16 in.
 Blade Stroke..... 11/16 in.
 Depth of 45° Cut..... 1-1/16 in. Right ; 3/4 in. Left
 Depth of 90° Cut..... 2-1/8 in.

TABLE

Tilt 45° Left ; Right
SAWDUST BLOWER..... Yes
WORK LIGHT Yes

WARNING

To avoid electrical hazards, fire hazards or damage to the tool, use proper circuit protection. This tool is wired at the factory for 110-120 Volt operation. It must be connected to a 110-120 Volt / 15 Ampere time delay fuse or circuit breaker. To avoid shock or fire, replace power cord immediately if it is worn, cut or damaged in any way. Before using your tool, it is critical that you read and understand these safety rules. Failure to follow these rules could result in serious injury to you or damage to the tool.

POWER TOOL SAFETY

GENERAL SAFETY INSTRUCTIONS BEFORE USING THIS POWER TOOL

Safety is a combination of common sense, staying alert and knowing how to use your power tool.

WARNING

To avoid mistakes that could cause serious injury, do not plug the tool in until you have read and understood the following.

1. **READ** and become familiar with the entire Operator's Manual. **LEARN** the tool's application, limitations and possible hazards.
2. **KEEP GUARDS IN PLACE** and in working order.
3. **REMOVE ADJUSTING KEYS AND WRENCHES.** Form the habit of checking to see that keys and adjusting wrenches are removed from the tool before turning ON.
4. **KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
5. **DON'T USE IN DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lit.
6. **KEEP CHILDREN AWAY.** All visitors should be kept a safe distance from work area.
7. **MAKE WORKSHOP CHILD PROOF** with padlocks, master switches, or by removing starter keys.
8. **DON'T FORCE THE TOOL.** It will do the job better and safer at the rate for which it was designed.
9. **USE THE RIGHT TOOL.** Do not force tool or attachment to do a job for which it was not designed.
10. **USE PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will result in a drop in line voltage and in loss of power that will cause the tool to overheat. The table on page 5 shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.
11. **WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, rings, bracelets or other jewelry that may get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair.
12. **ALWAYS WEAR EYE PROTECTION.** Any Scroll Saw can throw foreign objects into the eyes that could cause permanent eye damage. **ALWAYS** wear Safety Goggles (not glasses) that comply with ANSI Safety standard Z87.1. Everyday eyeglasses have only impact-resistance lenses. They **ARE NOT** safety glasses. Safety Goggles are available at Sears.
NOTE: Glasses or goggles not in compliance with ANSI Z87.1 could cause serious injury.
13. **WEAR A FACE MASK OR DUST MASK.** Sawing operation produces dust.
14. **SECURE WORK.** Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
15. **DISCONNECT TOOLS** before servicing; when changing accessories such as blades, bits, cutters, and the like.
16. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure switch is in OFF position before plugging in.
17. **USE RECOMMENDED ACCESSORIES.** Consult the Operator's Manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
18. **NEVER STAND ON TOOL.** Serious injury could occur if the tool is tipped or if the cutting tool is unintentionally contacted.
19. **CHECK FOR DAMAGED PARTS.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function – check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
20. **NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER "OFF".** Don't leave tool until it comes to a complete stop.
21. **DON'T OVERREACH.** Keep proper footing and balance at all times.
22. **MAINTAIN TOOLS WITH CARE.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
23. **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
24. **DO NOT OPERATE** the tool if you are under the influence of any drugs, alcohol or medication that could affect your ability to use the tool properly.
25. **DUST** generated from certain materials can be hazardous to your health. Always operate the saw in well-ventilated area and provide for proper dust removal. Use dust collection systems whenever possible.

SCROLL SAW SAFETY

SPECIFIC SAFETY INSTRUCTIONS FOR THIS SCROLL SAW

1. **READ AND UNDERSTAND** all safety instructions and operating procedures throughout the manual.
2. **DO NOT OPERATE** the Scroll Saw until it is completely assembled and installed according to the instructions.
3. **SHOULD** any part of Scroll Saw be missing, damaged, or fail in any way, or any electrical component fail to perform properly, shut off the switch and remove the plug from the power supply outlet. Replace missing, damaged, or failed parts before resuming operation.
4. **IF YOU ARE NOT** thoroughly familiar with the operation of a Scroll Saw, obtain advice from your supervisor, instructor or other qualified person.
5. **SERIOUS INJURY** could occur if the tool tips over or you accidentally hit the cutting tool. Do not store anything above or near the tool.
6. **AVOID INJURY** from unexpected saw movement. Place the saw on a firm level surface where the saw does not rock and bolt or clamp the saw to its support.
7. **YOUR SCROLL SAW MUST BE SECURELY FASTENED** to a stand or workbench. If there is any tendency for the stand or workbench to move during operation, the stand or workbench **MUST** be fastened to the floor.
8. **THIS SCROLL SAW** is intended for indoor use only.
9. **TENSION BLADE PROPERLY** before starting the saw. Recheck and adjust tension as needed.
10. **BLADE TEETH MUST POINT** downward toward the table.
11. **TABLE MUST BE CLEARED** of all debris before operating saw. Do not perform lay out, set up or assemble work on the table when the saw is in operation.
12. **TO PREVENT INJURIES**, avoid awkward hand or finger positions, where a sudden slip could cause a hand to move into the blade when operating the saw.
13. **HOLD WORKPIECE FIRMLY** against the table top.
14. **NEVER CUT MATERIAL** that is too small to be held safely.
15. **DO NOT USE** dull or bent blades.
16. **TURN THE SAW OFF AND UNPLUG THE CORD** if the blade binds in the saw kerf while being backed out of the workpiece, usually caused by sawdust clogging the kerf. If this happens, turn off the scroll saw and unplug the power cord. Wedge open the kerf and back the blade out of the workpiece.
17. **DO NOT** feed the material too fast while cutting. Only feed the workpiece at the rate the saw will cut.
18. **TURN THE POWER OFF**, remove the switch key and make sure the scroll saw comes to a complete stop before installing or removing an accessory, and before leaving the work area.
19. **DO NOT START** the saw with workpiece pressing against the blade. Slowly feed the workpiece into the moving blade.
20. **WHEN CUTTING** a large workpiece, **MAKE SURE** the material is supported at table height.
21. **EXERCISE CAUTION** when cutting workpieces that are round or irregularly shaped, workpieces can pinch the blade.
22. **ALWAYS** release blade tension before loosening the blade holder screw.
23. **MAKE CERTAIN** table tilting lock is tightened before starting the machine.
24. **NEVER REACH** under the scroll saw table when motor is running.
25. **CHECK FOR DAMAGED PARTS** before each use. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting or any other conditions that may affect operation. Parts that are damaged should be properly repaired or replaced before using the tool.
26. **THINK SAFETY.**

ELECTRICAL REQUIREMENTS AND SAFETY

GROUNDING INSTRUCTIONS

IN THE EVENT OF A MALFUNCTION OR BREAKDOWN, grounding provides a path of least resistance for electric currents and reduces the risk of electric shock. This tool is equipped with an electrical cord that has an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching receptacle that is properly installed and grounded in accordance with all local codes and ordinances.

DO NOT MODIFY THE PLUG PROVIDED. If it will not fit the receptacle, have the proper receptacle installed by a qualified electrician.

IMPROPER CONNECTION of the equipment grounding conductor can result in risk of electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment grounding conductor. If repair or replacement of the electrical cord or plug is necessary, do not connect the equipment grounding conductor to a live terminal.

CHECK with a qualified electrician or service person if you do not completely understand the grounding instructions, or if you are not certain the tool is properly grounded.

USE only three-wire extension cords that have three-pronged grounding plugs with three-pole receptacles that accept the tool's plug. Repair or replace damaged or worn cords immediately.

GUIDELINES FOR EXTENSION CORDS

USE THE PROPER EXTENSION CORD. Make sure your extension cord is in good condition. Use an extension cord 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, overheating and burning out of the motor. The table on the right shows the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

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 technician before using it. Protect your extension cords from sharp objects, excessive heat and damp or wet areas.

Use a separate electrical circuit for your tool. This circuit must not be less than #12 wire with a 20 A time-

lag fuse or a #14 wire with a 15 A time-lag 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. This tool is intended for use on a circuit that has a receptacle like the one illustrated in Fig. 1.

Fig. 1 shows a three-pronged electrical plug and receptacle that has a grounding conductor. If a properly grounded receptacle is not available, an adapter (Fig. 2) can be used to temporarily connect this plug to a two-contact grounded receptacle. The adapter (Fig. 2) has a rigid lug extending from it that **MUST** be connected to a permanent earth ground, such as a properly grounded receptacle box.

⚠ WARNING

In all cases, make certain the receptacle is properly grounded. If you are not sure, have a qualified electrician check the receptacle.

⚠ WARNING

This tool is for indoor use only. Do not expose to rain or use in damp locations.

Fig. 1

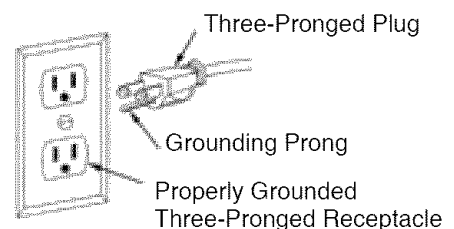
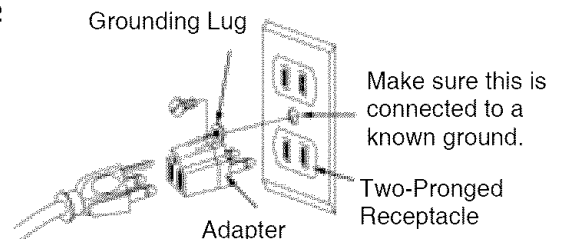


Fig. 2



⚠ WARNING

This tool must be grounded while in use to protect the operator from electric shock.

MINIMUM GAUGE FOR EXTENSION CORDS (AWG)					
(When using 120 volts only)					
Ampere Rating		Total length of Cord			
More Than	Not More Than	25ft.	50ft.	100ft.	150ft.
0	6	18	16	16	14
6	10	18	16	14	12
10	12	16	16	14	12
12	16	14	12	Not Recommended	

ACCESSORIES AND ATTACHMENTS

AVAILABLE ACCESSORIES

▲ WARNING

- To avoid injury, do not attempt to modify this tool or create accessories not recommended for use with this tool. Any such alteration or modification is misuse and could result in a hazardous condition leading to possible serious injury.
- Use only accessories recommended for this scroll saw. Follow instructions that accompany accessories. Use of improper accessories may cause hazards.

Visit your Sears Hardware Department or see the Sears Power and Hand Tool Catalog for the following accessories:

ITEM

Pin-end saw blades
Plain-end saw blades

Sears may recommend other accessories not listed in this manual.

See your nearest Sears store or Power and Hand Tool Catalog for other accessories.

Do not use any accessory unless you have completely read the instruction or Operator's Manual for that accessory.

TOOLS NEEDED FOR ASSEMBLY

Supplied



Hex key 3 mm

CARTON CONTENTS

UNPACKING AND CHECKING CONTENTS

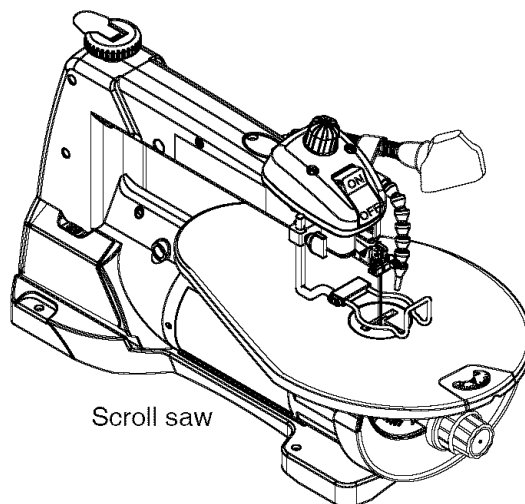
▲ WARNING

- To avoid injury, if any part is missing or damaged, do not plug the scroll saw in until the missing or damaged part is replaced, and assembly is complete. Call 1-800-4-MY-HOME® for replacement parts.
- To avoid fire and toxic reaction, never use gasoline, naphtha, acetone, lacquer, thinner or similar highly volatile solvents to clean the scroll saw.

Carefully unpack the scroll saw and all its parts and compare against the illustration following.

1. Remove the scroll saw from the carton by lifting the saw by the back of the upper frame.
2. Place the saw on a secure surface and examine it carefully.

CAUTION: Do not lift this saw by the arm that holds the blade, this may result in damage to the tool.



Scroll saw

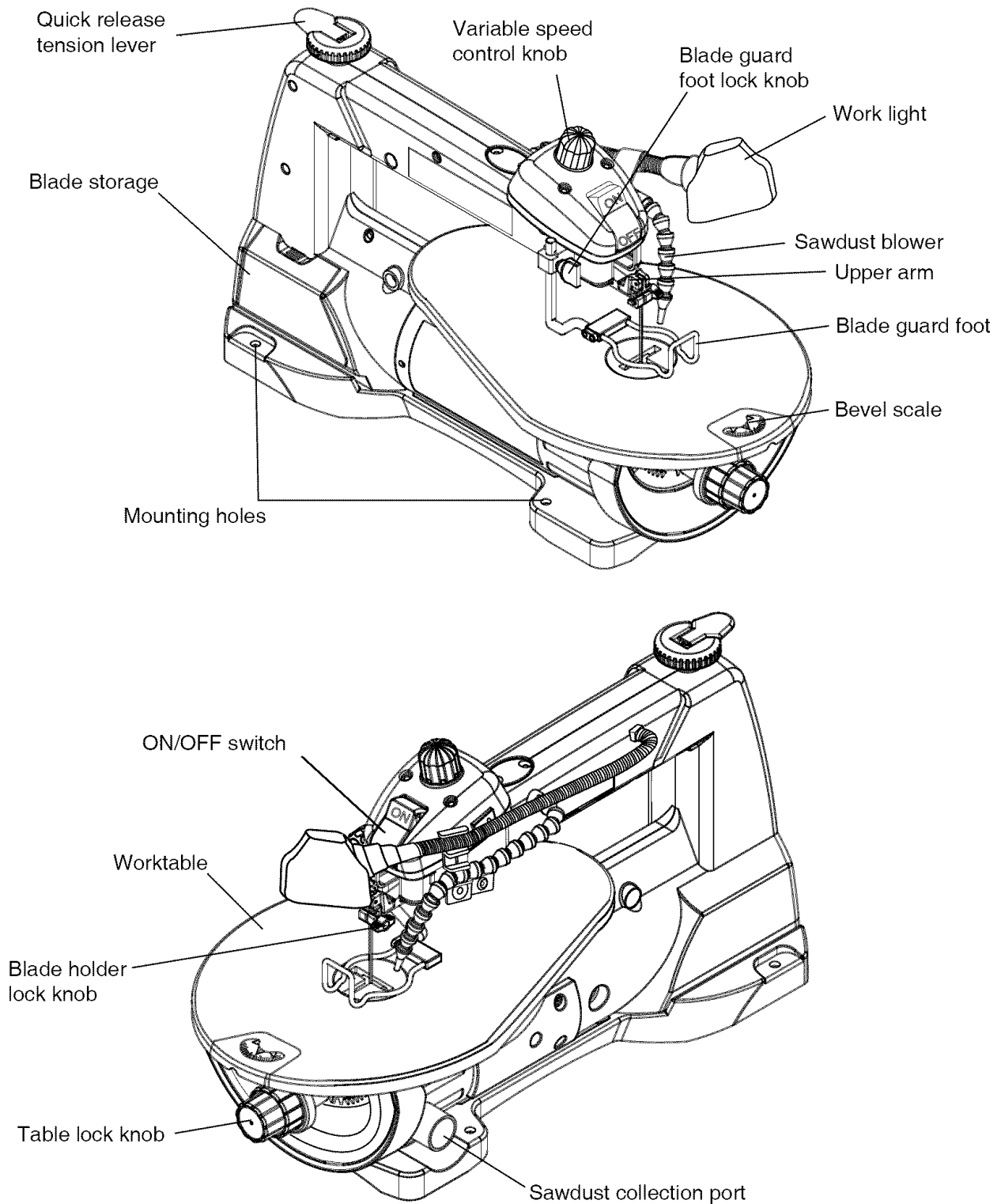


Blade



Hex key

KNOW YOUR SCROLL SAW



GLOSSARY OF TERMS

SCROLL SAW TERMS

BEVEL SCALE – Represents the degree of table angle from 0° to 45° when the table is tilted for bevel cutting.

BLADE GUARD FOOT – Guards the blade and keeps your workpiece from rising. Helps protect fingers from blade contact.

BLADE GUARD FOOT LOCK KNOB – Allows you to raise or lower the foot and lock it at the desired height.

BLADE HOLDERS – Retain and position the blades.

BLADE STORAGE – Provides convenient easy access to extra blades or wrenches.

QUICK RELEASE TENSION LEVER – Quickly loosens and retightens the blade to its original tension. The tension lever quickly sets and resets the blade tension when performing interior cutting operations or changing blades.

SAWDUST BLOWER – Keeps sawdust from covering the line of sight for more accurate cuts. The best results occur when the blower tube is directed toward the blade and workpiece.

SAWDUST COLLECTION PORT – Allows vacuum hose or attachments to be used to remove the sawdust from under the table and base.

TABLE LOCK KNOB – Securely locks the table at the angle desired for bevel cutting.

VARIABLE SPEED ON/OFF CONTROL KNOB – Variable switch dial allows greater versatility when cutting a variety of materials. Adjust the speed to the desired setting, between 400 to 1600 strokes per minute (SPM), by turning the control knob clockwise or counter clockwise.

WOODWORKING TERMS

BLADE TOOTH SET – The total width the blade will cut based on the distance from the outside point of one bent tooth to the outside point of the next bent tooth establishing set of teeth.

DEFLECTION – Slight movement of blade in the horizontal direction while the blade is moving inline during cutting operation. This may be caused by the blade following the grain or the path of least resistance.

FEED – Rate of moving material to be cut into the blade.

KERF – The slot cut by the blade.

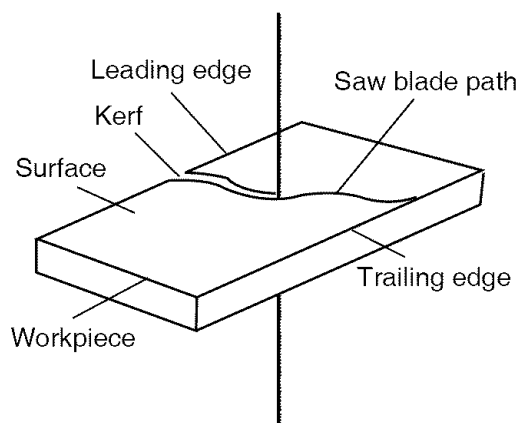
LEADING EDGE – The front edge of the workpiece that is guided into the blade.

SAW BLADE PATH – Area or line of sight of the workpiece moving in line toward the saw blade edge.

SURFACE – Top of workpiece being cut.

TRAILING EDGE – The end of the workpiece edge last cut by the saw blade.

WORKPIECE – Material on which the cutting operation is being performed.



ASSEMBLY AND ADJUSTMENTS

ASSEMBLY INSTRUCTIONS

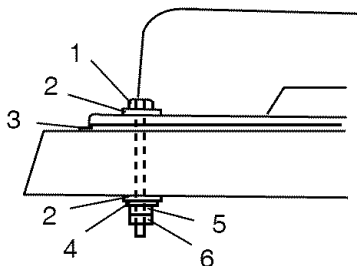
▲ WARNING

To avoid injury, do not connect this scroll saw to the power source until it is completely assembled and adjusted and you have read and understood this instruction manual.

MOUNTING SCROLL SAW TO WORK SURFACE (FIG. A)

1. If mounting the scroll saw to a workbench, a solid wood bench is preferred over a plywood board to reduce noise and vibration.
2. The hardware to mount this saw is NOT supplied with the saw. The hardware as shown in Fig. A should be used:

Fig. A

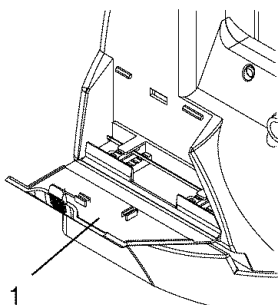


1. (3) Hex head bolts; length as required
2. (6) Flat washers
3. Foam pad or carpet (optional)
4. (3) Lock washers
5. (3) Hex nuts
6. (3) Jam nuts

BLADE STORAGE (FIG. B)

The blade storage (1) is located on the left rear side of the scroll saw body. Pull out the blade storage (1) to open. The blade storage can conveniently store your hex wrenches and both Pin-end and Plain-end blades.

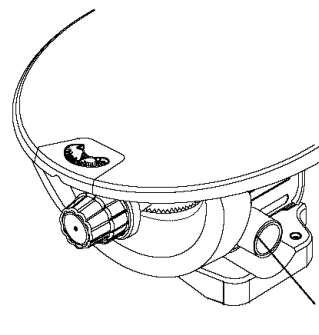
Fig. B



SAWDUST COLLECTION PORT (FIG. C)

This scroll saw will accept a hose or vacuum accessory (not provided) to be connected to the port (1) on the right side of base. If excessive sawdust buildup occurs inside the base, use a wet/dry vacuum cleaner or manually remove sawdust by removing the screws on the right side of saw. Reattach the metal plate and screws before starting the saw. This will keep your saw cutting efficiently.

Fig. C



BLADE REMOVAL AND INSTALLATION

PLAIN-END BLADE REMOVAL AND INSTALLATION

This scroll saw accepts 5-inch plain-end or pin-end blades to cut a wide variety of materials.

Plain-end type blades are recommended whenever fine, accurate and intricate work is- being performed on 3/4 in. or thinner material. It will take slightly longer to assemble the blade and blade tension, but you will also be able to use finer blades for cutting a thinner kerf.

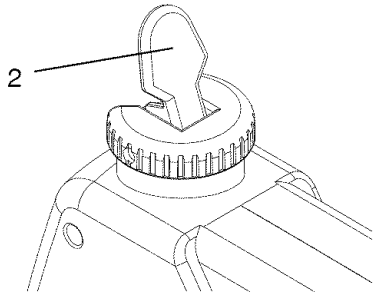
▲ WARNING

To avoid injury from accidental starting, always turn the switch OFF and remove power cord plug from power source before removing or replacing the blade.

PLAIN-END BLADE REMOVAL (FIG. D, E, F)

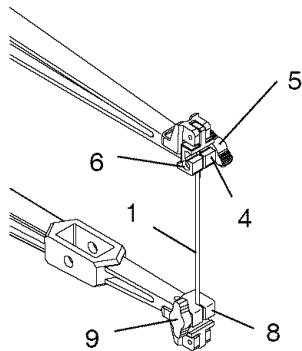
1. To remove the blade, loosen the blade tension by lifting the quick release tension lever. (2-Fig. D)

Fig. D



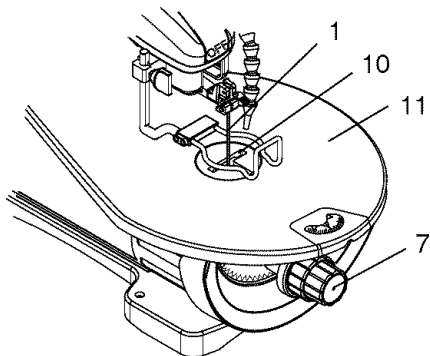
2. Loosen the upper blade holder (4) by turning the blade holder lock knob (5) counterclockwise. (Fig. E)
NOTE: The hex set screw (6) on the left side is used for fine adjustments and is only adjusted if the blade is not perpendicular to the table.

Fig. E



3. Tilt the table to 0° and tighten the table lock knob (7-Fig. F). Loosen the lower blade holder lock knob (9-Fig. E) under the table on the left side of the lower blade holder (8-Fig. E) by turning counterclockwise.
4. Remove the blade from the upper and lower blade holders by pulling forward and lifting the blade through the access hole (10) in the table (11). (Fig. F)

Fig. F



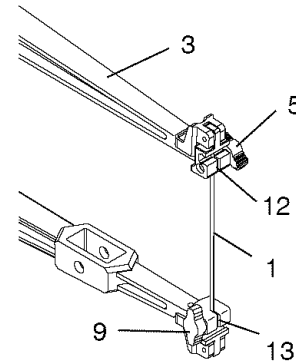
PLAIN-END BLADE INSTALLATION (FIG. F, G, H)

CAUTION: In order to avoid uncontrollable lifting of the workpiece, the teeth of the blade should ALWAYS point downward.

NOTE: The tension of a scroll saw blade must be very tight.

1. Install the new blade through the access hole in the table with teeth pointing down.
2. Insert the new blade into the lower blade holder slot (13), then tighten the lower blade holder knob (9). (Fig. G)

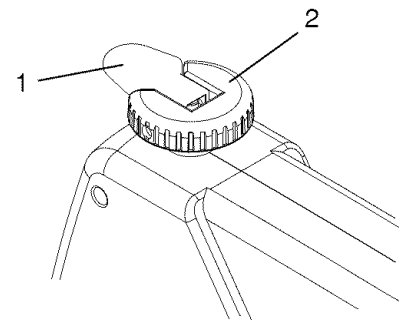
Fig. G



3. Tilt the table to the 0° bevel setting and lock the bevel knob.
4. Insert the other end of the blade into the upper blade holder slot (12-Fig. G) and then tighten the quick release knob (1-Fig. H).
5. Tighten the tension on the blade by turning the tension knob (2-Fig. H) clockwise. Check the tension on the blade. If too loose, turn lever clockwise. Do not make too tight or blade will easily break in use. (Fig. H)

NOTE: The quick release lever must always be down to make the tension adjustments, Release the quick release lever upward only during blade changing operations. If the blade is over-tightened, the lever is difficult to lower.

Fig. H



PIN-END BLADE REMOVAL AND INSTALLATION

▲ WARNING

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

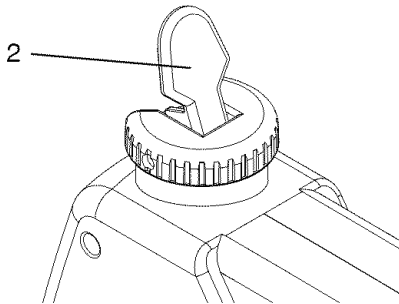
Pin-end type blades are thicker for stability and for faster assembly. These blades are used whenever faster cutting on a variety of materials and 3/4 in. thickness or greater are required. Use whenever less precision or thicker kerf cutting is acceptable.

NOTE: When installing pin-end blades, the set screws located on the upper and lower blade holders should not be over or under tightened. The slot must be slightly wider than the thickness of the blade. After the blade is installed, the blade tension mechanism will keep the pin-end in place.

PIN-END BLADE REMOVAL (FIG. I, J)

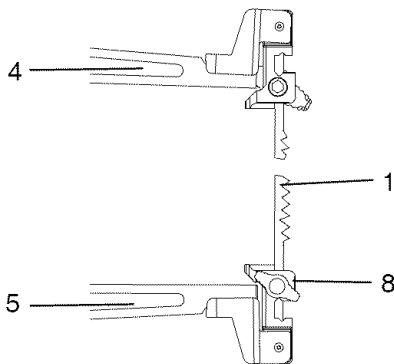
1. To remove the blade, loosen the tension by lifting up the quick release tension lever. (2-Fig. I)

Fig. I



2. Remove the blade (1) from the upper (4) and lower (5) blade holder by pulling forward to release, and lift the blade through the access hole. (Fig. J)

Fig. J



3. Tilt the table to a 45° angle and lock the bevel lock knob to view lower blade holder (8). (Fig. J)

NOTE: Apply slight downward pressure on the upper arm when removing the blade from the upper blade holder.

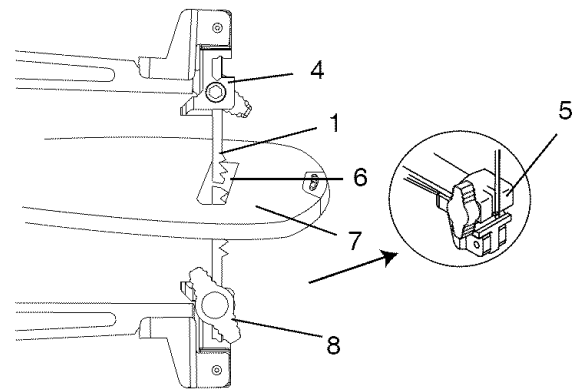
PIN-END BLADE INSTALLATION (FIG. K, L)

NOTE: Do not tighten the lock knobs (8-Fig.K) when using Pin-end blades.

CAUTION: In order to avoid uncontrollable lifting of the workpiece, the teeth of the blade should always point downward.

1. Install the blade (1) by inserting one end of it through the access hole (6) or throat plate in the table. Hook the lower blade pin in the pin recess in the lower blade holder (5) and then the upper blade pin in the upper blade holder (4). (Fig. K)

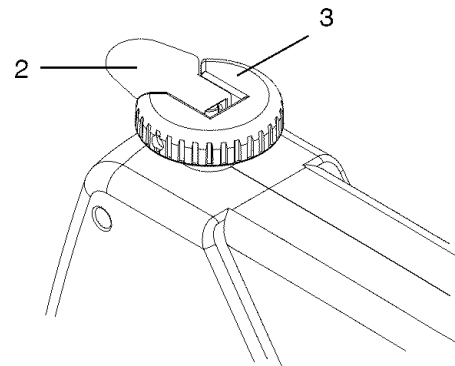
Fig. K



2. Check to see that the pins are properly located in the upper (4) and the lower (5) blade holders.
3. To tension the blade (1-Fig.K), lower the quick release tension lever (2). Check the tension on the blade; if tension is too tight, turn the knob (3) counterclockwise. If tension is too loose, turn the knob (3) clockwise. (Fig. L)

NOTE: If the blade is over tensioned, the lever will be difficult to lower and could result in damage to the blade holder or arm assembly.

Fig. L



3. Tilt the table to a 45° angle and lock the bevel lock knob to view lower blade holder (8). (Fig. J)
- NOTE:** Apply slight downward pressure on the upper arm when removing the blade from the upper blade holder.

BLADE GUARD FOOT ADJUSTMENT (FIG. M, N)

NOTE: User must keep constant downward pressure on workpiece when cutting. The blade guard foot is not designed to hold down the workpiece, but rather a guard to help prevent the workpiece from lifting up excessively.

When cutting at angles, the table guard foot (1) should be adjusted so it's parallel to the table and rests flat above the workpiece.

1. To adjust, loosen the screw (2), tilt the foot so it's parallel to table and tighten the screw.
2. Loosen the blade guard foot lock knob (3) to raise or lower the foot until it rests slightly above the workpiece. Tighten blade guard foot lock knob.

NOTE: To remove the blade guard foot (1), loosen the hex screw (2) and by using a hex. key to turn the screw counterclockwise. (Fig. N)

Fig. M

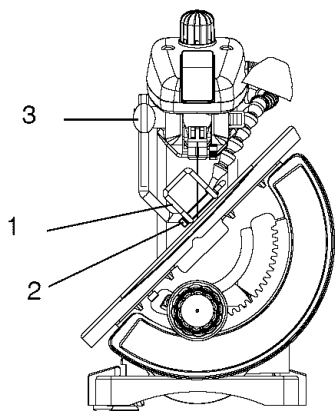
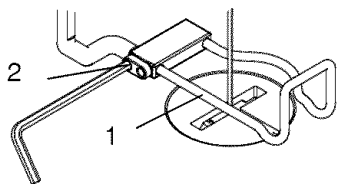


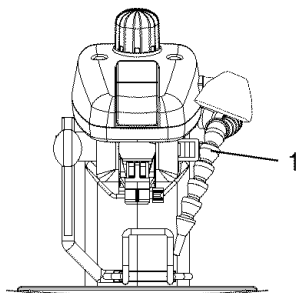
Fig. N



SAWDUST BLOWER (FIG. O)

The sawdust blower (1) should be positioned to point to the blade and workpiece to blow sawdust out of the line-of sight when cutting. It is not designed to blow all of the sawdust off the table.

Fig. O



BLADE SELECTION (FIG. P)



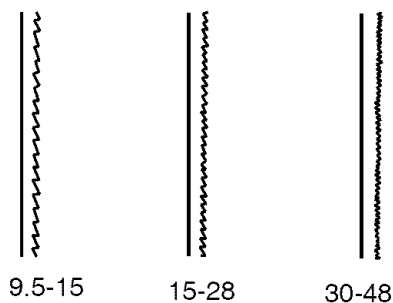
To avoid injury from accidental starting, always turn the switch OFF and unplug the scroll saw before moving, replacing the blade or making adjustments.

This scroll saw accepts 5-inch length blades with a wide variety of blade thickness and widths. The type of material and intricacies of cutting operations (size of radius or curve) will determine the number of teeth per inch. As a general rule, always select the narrowest blades for intricate curve cutting and the widest blades for straight and large curve cutting operations.

The following table represents suggestions for various materials. When purchasing blades, refer to the back of the package for the best use of blades and speeds on various materials.

Use this table as an example, but practice and your own personal preference will be the best selection method.

Fig. P



TEETH/ INCH TPI	BLADE WIDTH INCH	BLADE THICKNESS INCH	BLADE/ SPM	MATERIAL CUT
9.5-15	0.110	0.018	400-1200	Medium turns on 1/4 in. to 1-3/4 in. wood, soft metal, hardwood
15-28	.055-.110	.010-.018	800-1800	Small turns on 1/8 in. to 1-1/2 in. wood, soft metal, hardwood
30-48	.024-.041	.012-.019	Varies	Non-ferrous metals/hardwoods using very slow speeds

NOTE: When using blades, sometimes speeds must change to compensate for smaller curves, radii or smaller diameters. Thinner blades will have more possibilities for blade deflection when cutting angles which are not perpendicular to the table. Read BASIC SCROLL SAW OPERATION for more suggestions.

NOTE: The blade must be installed with the teeth pointing downward, as shown in Fig. P, to prevent the workpiece from being pulled upward by the saw blade action.

OPERATION

VARIABLE SPEED CONTROL ON/OFF SWITCH

The variable speed control allows greater versatility to cut a variety of materials such as wood, plastics, non-ferrous metals, etc. Depending on the hardness and thickness of material, the speed should be reduced to allow the blade teeth to remove cut material from the kerf.

REPLACING THE BULB

1. Use only a 10 watt maximum bulb. Turn the light switch off and unplug the saw.
2. Remove old bulb. Place new bulb into socket.

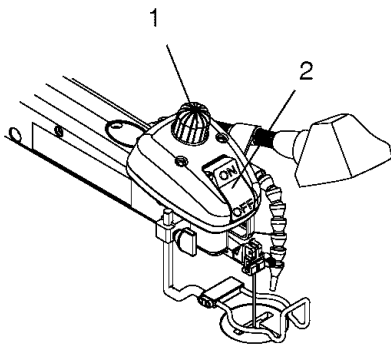
ON/OFF SWITCH (FIG. Q)

1. To turn power ON or OFF, push the ON/OFF switch (2).

VARIABLE SPEED SWITCH

1. Your saw is equipped with a variable speed control knob(1). The blade stroke rate may be adjusted by simply rotating the variable speed control knob (1). To increase speed, rotate dial clockwise. To reduce speed, rotate dial counterclockwise.

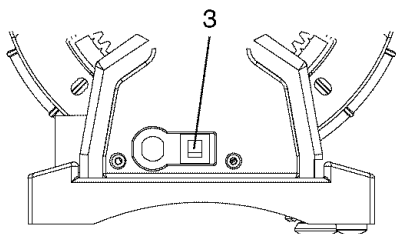
Fig. Q



OVERLOAD BREAKER (FIG. Q, R)

When the motor becomes too hot during operation, the overload breaker switch (3) will cause the motor to stop automatically to prevent damage to the motor. Push in on the ON/OFF switch (2) to turn saw OFF and do not restart until the motor has had time to cool. Push in on the breaker switch (3) and switch the ON/OFF switch (2) to ON to start the saw.

FIG. R



RECOMMENDATIONS FOR CUTTING

1. When feeding the workpiece into the blade do not force the leading edge of the workpiece into the blade because the blade will deflect, reducing the accuracy of cut and possibly breaking the blade. Allow the saw to cut material by guiding the workpiece into the blade as it cuts.
2. The blade teeth cut material ONLY on the down stroke.
3. You must guide the wood into the blade slowly because the teeth of the blade are very small and they can only remove wood when they are on the down stroke.
4. There is a learning curve for each person who wants to use this saw. During that period of time it is expected that some blades will break until you learn how to use the saw and receive the greatest benefit from the blades.
5. Best results are achieved when cutting wood less than one inch thick.
6. When cutting wood thicker than one inch, the user must guide the wood very 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 must be replaced frequently for best cutting results. Scroll saw blades generally stay sharp for 1/2 to 2 hours of cutting.
8. To get accurate cuts, be prepared to compensate for the blade's tendency to follow the wood grain as you are cutting.
9. This scroll saw is intended to cut wood or wood products. Precious and non-ferrous perform well on scroll saws that have very slow speed capability, and should be lubricated with machine oil or beeswax.
10. When choosing a blade to use with your scroll saw, consider very fine, narrow blades to scroll cut in thin wood 1/4 in. thick or less. Use wider blades for thicker materials but this will reduce the ability to cut tight curves.
11. This saw uses 5 in. long pin or plain end type blades.
12. Blades wear faster when cutting plywood or particle board which is very abrasive. Angle cutting in hardwoods reduces blade set faster due to the blade deflection.

FREEHAND CUTTING (FIG. S)

▲ WARNING

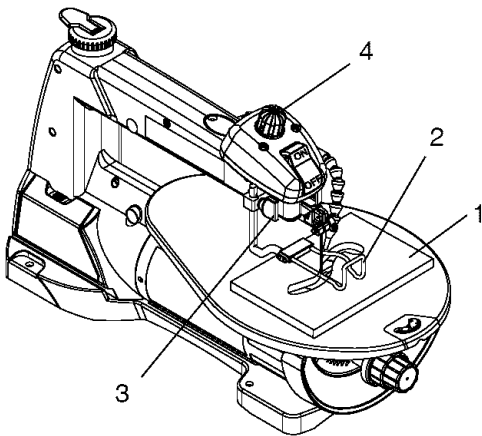
To avoid injury from an accidental start, make sure the switch is in the OFF position and the plug is not connected to the power source outlet.

1. Lay out desired design, or secure design to the workpiece (1).
2. Raise the blade guard foot (2) by loosening the blade guard foot lock knob(3).
3. Position the workpiece against the blade and place the blade guard foot slightly above the top surface of the workpiece.
4. Secure the blade guard foot (2) by tightening the blade guard foot lock knob (3).
5. Remove the workpiece from the blade prior to turning the scroll saw ON. Pull the variable speed control knob (4) out and set the desired speed by turning the control knob clockwise or counterclockwise.

CAUTION: In order to avoid uncontrollable lifting of the workpiece and to reduce blade breakage, do not turn saw ON while the workpiece is against the blade.

6. When turning the scroll saw ON, position the workpiece against scrap wood prior to touching the leading edge of the workpiece against the blade.
7. Slowly feed the workpiece into the blade by guiding 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 accuracy of cut, and may break.
8. When the cut is complete, move the trailing edge of the workpiece beyond the blade guard foot. Turn the scroll saw OFF.

Fig. S



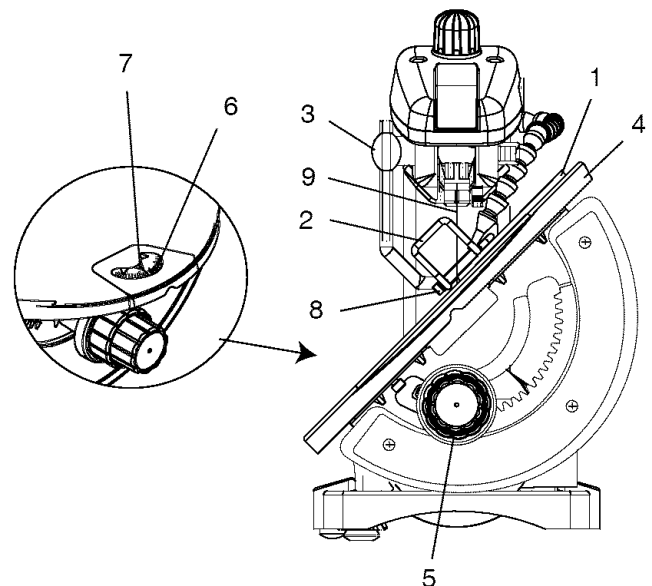
ANGLE CUTTING (FIG. S, T)

▲ WARNING

To avoid injury from an accidental starting, make sure the switch is in the OFF position and the plug is not connected to the power source outlet before moving, replacing the blade or making adjustments.

1. Lay out or secure design to workpiece (1).
2. Move the blade guard foot (2) to the highest position by loosening the blade guard foot lock knob (3) and retighten. (Fig. S)
3. Tilt the table (4) to the desired angle by loosening the table lock knob (5) and move the table to the proper angle, using the degree scale (6) and the pointer (7). (Fig. T)
4. Tighten the table lock knob (5).
5. Loosen the blade guard screw (8), and tilt the blade guard to the same angle as the table (4). Retighten the blade guard screw.
6. Position the workpiece on the left and right side of the blade (9). Lower the blade guard foot slightly above the surface by loosening the blade guard foot lock knob (3).
7. Follow items 4-8 under FREEHAND CUTTING OPERATION.

Fig. T



RIP OR STRAIGHT LINE CUTTING (FIG. U)

▲ WARNING

To avoid injury from an accidental starting, make sure the switch is in the OFF position and the plug is not connected to the power source outlet before moving, replacing the blade or making adjustments.

Tools Needed (Not Included)

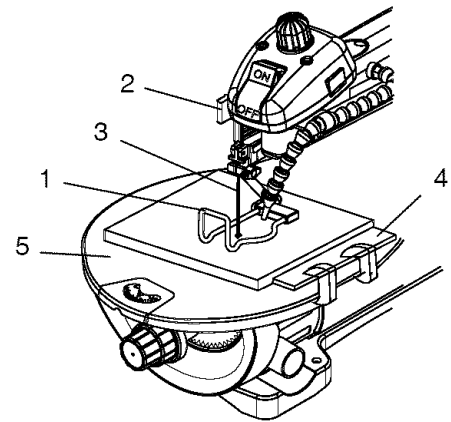
QUANTITY	DESCRIPTION
2	Small C-clamps
1	Ruler or measuring tape
1	12-inch straight scrap of wood (Thickness to match workpiece)

1. Raise the blade guard foot (1) by loosening the blade guard foot lock knob (2) on the right side of the upper arm. Measure from the tip of the blade (3) to the desired distance. Position the straight edge (4) parallel to the blade at that distance.
2. Clamp the straight edge (4) to the table (5).
3. Recheck your measurements, using the workpiece to be cut, and make sure the scrap wood is secure.
4. Position the workpiece against the blade and place the blade guard foot (1) slightly above the top surface of the workpiece.
5. Secure the blade guard foot in place by tightening the height adjustment knob.
6. Remove the workpiece from the blade prior to turning the scroll saw ON. Set the desired speed by turning the control knob clockwise or counterclockwise.
CAUTION: In order to avoid uncontrollable lifting of the workpiece and reduce blade breakage, do not turn saw ON while the workpiece is against the blade.
7. Position the workpiece against the straight edge (4) prior to touching the leading edge of the workpiece against the blade (3).
8. Slowly feed the workpiece into the blade, guiding the workpiece against the straight edge and press the workpiece down against the table while cutting.
CAUTION: Do not force the leading edge of the workpiece into the blade. The blade will deflect, reducing accuracy of cut and may break.

9. When the cut is complete, move the trailing edge of the workpiece beyond the blade guard foot. Turn the scroll saw OFF.

NOTE: When cutting a narrow workpiece use push sticks.

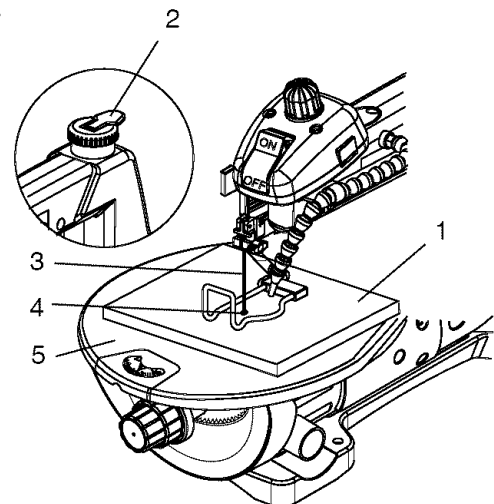
Fig. U



INTERIOR CUTTING (FIG. V)

1. Lay out the design on the workpiece (1). Drill a 1/4 in. hole in the workpiece.
2. Release the quick release tension lever (2), remove the blade (3). Refer to BLADE REMOVAL AND INSTALLATION.
3. Place the workpiece on the saw table with the hole (4) over the access hole in the table (5).
4. Install the blade (3) through the hole in the workpiece and lower the quick release tension lever (2).
5. Follow the process, items 3-9, under FREEHAND CUTTING OPERATIONS.
6. When finished making the interior scroll cuts simply turn the scroll saw OFF, remove the blade from the blade holder and remove the workpiece from the table.

Fig. V



MAINTENANCE

WARNING

For your own safety, turn the switch OFF and remove the plug from the power source before maintaining your saw.

GENERAL

An occasional coat of paste wax on the work table will allow the wood being cut to glide smoothly across the work surface.

MOTOR

1. If the power cord is worn, cut or damaged in any way, have it replaced immediately.
2. Do not attempt to oil the motor bearings or service the motor internal parts.

TROUBLESHOOTING GUIDE

WARNING

To avoid injury from accidental starting, always turn switch OFF and unplug the tool before moving, replacing the blade or making adjustments.

Consult your Sears Service Center if for any reason the motor will not run.

PROBLEM	PROBLEM CAUSE	REMEDY SUGGESTED
Breaking blades	<ol style="list-style-type: none"> 1. Wrong tension. 2. Overworking blades. 3. Wrong blade application. 4. Twisting blade in wood. 	<ol style="list-style-type: none"> 1. Adjust blade tension. See BLADE REMOVAL AND INSTALLATION section. 2. Reduce feed rate. See BLADE REMOVAL AND INSTALLATION section. 3. Use narrow blade. See BLADE SELECTION section. 4. Avoid side pressure on blade. See BLADE REMOVAL AND INSTALLATION section.
Motor will not run.	<ol style="list-style-type: none"> 1. Defective cord or plug. 2. Defective motor. 3. Blown overload breaker. 	<ol style="list-style-type: none"> 1. Replace defective parts before using saw again. See ELECTRICAL REQUIREMENTS AND SAFETY section. 2. Call Service Center. Any attempt to repair this motor may create a HAZARD unless the repair is done by a qualified technician. 3. Push the motor switch to the OFF position. Let the motor cool. See OPERATION-OVERLOAD BREAKER section.
Excessive vibration. NOTE: There will always be some vibration present when the saw is running because of motor operation.	<ol style="list-style-type: none"> 1. Improper mounting of saw. 2. Unsuitable mounting surface. 3. Loose table or table resting against motor. 4. Loose motor mounting. 	<ol style="list-style-type: none"> 1. See mounting instructions in this manual for proper mounting technique. 2. The heavier your workbench is, the less vibration will occur. A plywood workbench will not be as good a work surface as the same size solid lumber. Use common sense in choosing a mounting surface. 3. Tighten the table lock knob. 4. Tighten motor mounting screw.
Blade run out. Blade not in line with arm motion.	<ol style="list-style-type: none"> 1. Blade holders not aligned. 	<ol style="list-style-type: none"> 1. Loosen blade holder lock knob holding blade holder to arms. Adjust position of blade holders. Retighten blade holder lock knob. See BLADE REMOVAL AND INSTALLATION section.

PARTS LIST

16 IN. SCROLL SAW

MODEL NO. 137.216010

⚠ WARNING

When servicing use only CRAFTSMAN replacement parts. Use of any other parts may create a HAZARD or cause product damage. Any attempt to repair or replace electrical parts on this Scroll Saw may create a HAZARD unless repair is done by a qualified service technician. Repair service is available at your nearest Sears Service Center.

PARTS LIST FOR SCROLL SAW SCHEMATIC

I. D. NO	Description	Size	Qty	I. D. NO	Description	Size	Qty
0751	PLUNGER HANDLE		1	0KKJ	CR.RE. PAN HD. ROUND NECK SCREW	M4*0.7-12	2
0752	TENSION HANDLE		1	0KQW	LOCK NUT	M5*0.8 T=5	1
04Q4	STICKER		1	0KQX	NUT	M6*1.0 T=6	1
075B	INSERT		1	0KQY	LOCK NUT	M8*1.25 T=8	1
075E	CAUTION LABEL		1	0KTH	STRAIN RELIEF		1
075L	PLUNGER HOUSING		1	0KUX	TERMINAL		1
075N	HANDLE		1	0L71	POWER CABLE		1
076B	VARIABLE SPEED CONTROL KNOB		1	0LS9	ROCKER SWITCH		2
08JA	SPRING		1	0LSR	CIRCUIT BREAKER SWITCH		1
0A98	COMPRESSION SPRING		1	0LYN	STEEL BALL	φ10	1
0AM3	WASHER		1	0U7V	CR. RE. TRUSS HD. TAPPING SCREW	M4*16-16	1
0AMW	SET PLATE		2	0ZW4	MOTOR		1
0C10	BLADE		1	0ZW6	BASE	#AW	1
0C12	BLADE		1	0ZW7	WING NUT		1
0C15	BEARING SEAT		4	0ZW8	LEVELING PAD		1
0CDD	FOOT		3	0ZWG	BEARING SEAT ASS'Y		1
0DDW	UPPER ARM ROCKER ASS'Y	#06	1	0ZWJ	BUSH		2
0DF1	CONTROLLER ASS'Y		1	0ZWL	HOUSING	#AW	1
0DF6	BELLOWS		1	0ZWM	BLADE BOX		1
0DF8	PLUG HOUSING		1	0ZWN	SUPPORT ROD		1
0DG2	PVC HOSE		1	0ZWP	PLATE COVER		1
0DG4	AIR DUCT ASS'Y		1	0ZWR	HOLDER BLADE ASS'Y		2
0FPN	EXTENSION SPRING		1	0ZWS	LINGAGE BAR ASS'Y		1
0G1U	DUST SHIELD		4	0ZWX	BOTTOM ARM ROCKER	#06	1
0GXP	CLAMP-CORD		4	0ZX1	CONNECTOR BOX		1
0GXQ	PLUNGER HOUSING		1	0ZX3	CONNECTOR BOX COVER		1
0GXR	SHAFT-PIVOT		1	0ZX4	SWITCH BOX		1
0J3M	HEX. WRENCH		1	0ZX6	PUSH BUTTON		1
0J4U	FLAT WASHER	φ6*18-1.5	7	10QX	ECCENTRIC ASS'Y		1
0J66	FLAT WASHER	φ4*10-1	1	1276	SWITCH BOX COVER		1
0J91	SPRING WASHER	φ4	2	20P1	CLAMP PLATE		1
0JAE	EXTERNAL TOOTH LOCK WASHER	φ4	1	20XY	HEX.SOCKET HD.CAP SCREWS	M6*1.0-20	2
0JAZ	WAVE WASHER		1	22KK	GUIDE CLAMP		1
0JB0	WAVE WASHER		2	27Y7	LEAD WIRE ASS'Y		1
0JPG	HEX. HD. BOLT	M6*1.0-30	5	2E73	TABLE	#AW	1
0JU4	HEX. SOC. HD. CAP BOLT	M4*0.7-10	2	2E78	BRACKET-TILT		1
0JUZ	HEX. SOC. HD. CAP BOLT	M8*1.25-40	1	2E79	TRUNNION BRACKET		1
0JVD	HEX. SOC. HD. CAP BOLT	M5X0.8-35	1	2EBB	CR. RE.COUNT HD. TAPPING SCREW	M5*12-16	2
0JX7	HEX. SOC. SET SCREW	M6*1.0-6	2	2EC3	PLATE COVER		1
0JX8	HEX. SOC. SET SCREW	M6*1.0-8	1	2EC4	GUIDE HOLDER		1
0JXR	HEX. SOC. SET SCREW	M8*1.25-8	1	2EC5	COVER		1
0K23	HEX SOC. HD. CAP SCREW	M6X1.0-16	2	2EC7	GUIDE BLOCK		1
0K2B	HEX SOC. HD. CAP SCREW	M6*1.0-16	3	2ECA	LAMP ASS'Y		1
0K56	CR. RE. COUNT HD. SCREW	M5*0.8-12	2	2ECB	WIRE ROPE ASS'Y		1
0K70	CR.-RE. TRUSS HD. SCREW	M4*0.7-16	1	2ECC	HOUSING RIGHT	#AW	1
0K71	CR.-RE. TRUSS HD. SCREW	M5*0.8-8	2	2EDG	TILTING SCALE		1
0K7F	CR. RE. ROUND WASHER HD. SCREW	M5*0.8-8	2	2ERU	INSTRUCTION MANUAL		1
0KA9	CR.RE. PAN HD. TAPPING SCREW	M3*24-10	2	2EZD	LABEL		1
0KBD	CR.RE. PAN HD. TAPPING SCREW	M4X18-25	4	2EZH	WARNING LABEL		1
0KBE	CR.RE. PAN HD. TAPPING SCREW	M5*16-35	2	2EZJ	TRADE-MARK LABEL		2
0KD7	CR. RE. PAN HD. SCREW	M4*0.7-10	1	2EZU	TILTING SCALE		1
0KDK	CR. RE. PAN HD. SCREW	M5*0.8-16	1	2EZV	WARNING LABEL		1
0KDM	CR. RE. PAN HD. SCREW	M5*0.8-20	3	2EZW	CAUTION LABEL		1
0KDR	CR. RE. PAN HD. SCREW	M5*0.8-10	9	2F35	RETAINING CLIP		1
0KEE	CR. RE. PAN HD. SCREW	M5*0.8-50	4				

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