

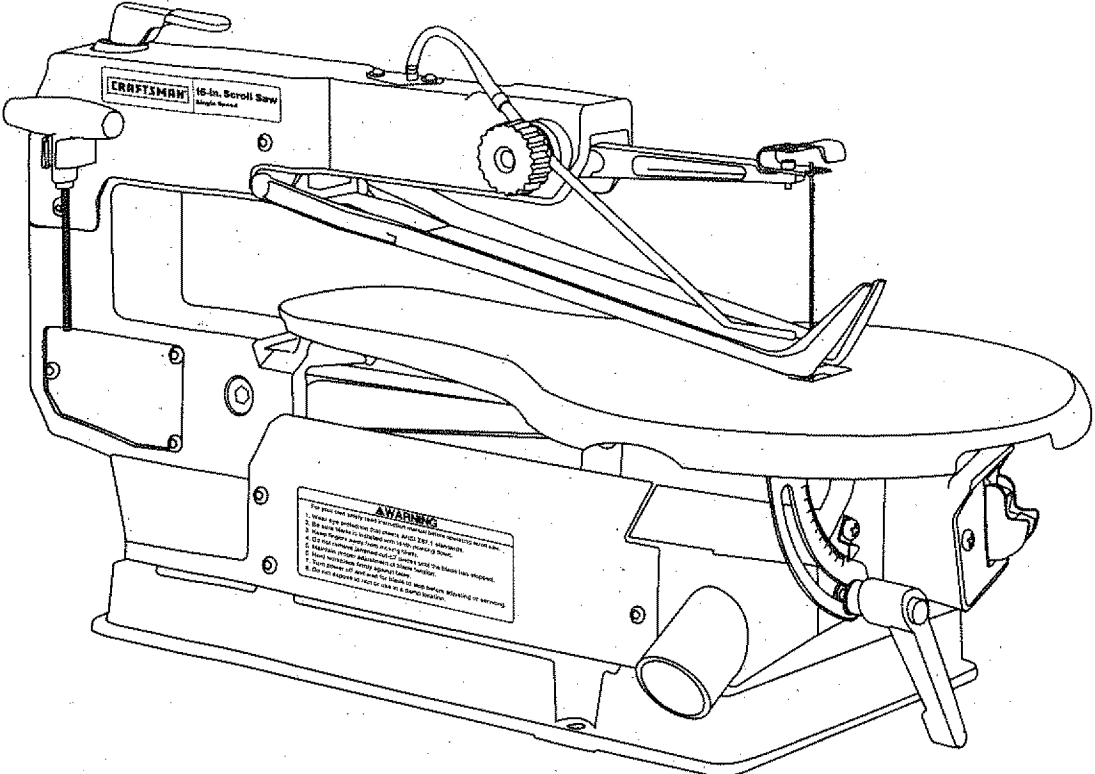
Owner's Manual



1/8 HP (Maximum Developed)
5" Pin End Blade
1725 S.P.M.

SCROLL SAW

Model No.
137.216160



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
1-800-843-1682

Sears, Roebuck and Co., Hoffman Estates, IL 60179 USA
Part No. 1372161600001

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WARNING

▲ WARNING

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

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

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

PRODUCT SPECIFICATIONS

MOTOR

Power source	120 V, 60 HZ, 1.0 Amp., AC
Horsepower	1/8 HP (Max. Developed)
Speed	1725 S.P.M.

BLADE

Type	5" Pin end
Depth of Throat	16"
Blade Stroke	3/4"
Depth of 45° Cut	1"
Depth of 90° Cut	2"

TABLE

Size	10-1/4" x 17-1/8"
Tilt	45° Left

SAWDUST BLOWER ... Yes

▲ WARNING

To avoid electrical hazards, fire hazards, or damage to the tool, use proper circuit protection.

Your scroll saw is wired at the factory for 120V operation. Connect to a 120V, 15 Amp branch circuit and use a 15 Amp 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.

SAFETY

GENERAL SAFETY INSTRUCTIONS

BEFORE USING THE SCROLL SAW

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

▲ WARNING

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

1. **READ** and become familiar with this entire instruction manual. LEARN the tool's applications, 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 A DANGEROUS ENVIRONMENT.** Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
6. **KEEP CHILDREN AWAY.** All visitors should be kept at a safe distance from the work area.
7. **MAKE WORKSHOP KID 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.** Don't force tool or the 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 cause a drop in line voltage resulting in loss of power and overheating. The table on page 7 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 which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
12. **WEAR YOUR SAFETY GOGGLES.** ALWAYS WEAR EYE PROTECTION. Any scroll saw can throw foreign objects into the eyes which could cause permanent eye damage. ALWAYS wear Safety Goggles (not glasses) that comply with ANSI safety standard Z87.1. Everyday eyeglasses have only impact-resistant lenses. They ARE NOT safety glasses. Safety Goggles are available at Sears. NOTE: Glasses or goggles not in compliance with ANSI Z87.1 could seriously hurt you when they break.
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, and when changing accessories, such as blades, bits, cutters, and the like.
16. **REDUCE THE RISK OF UNINTENTIONAL STARTING.** Make sure the switch is in OFF position before plugging in.
17. **USE RECOMMENDED ACCESSORIES.** Consult the owner's manual for the 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 THE POWER OFF.** Don't leave the 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.



SAVE THESE INSTRUCTIONS

23. **DIRECTION OF FEED.** Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
24. **WARNING:** Dust generated from certain materials can be injurious to your health. Always operate saw in well ventilated areas and provide for proper dust removal.

SPECIFIC SAFETY INSTRUCTIONS FOR THE 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 your 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 scroll saws, 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 layout, 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.

SAVE THESE INSTRUCTIONS

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. Round items will roll and 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

POWER SUPPLY AND MOTOR SPECIFICATIONS

▲ WARNING

To avoid electrical hazards, fire hazards, or damage to the tool, use proper circuit protection. Use a separate electrical circuit for your tools. Your saw is wired at the factory for 120V operation. Connect to a 120V, 15 Amp circuit and use a 15 Amp time delay fuse or circuit breaker. To avoid shock or fire, if power cord is worn or cut, or damaged in any way, have it replaced immediately.

GROUNDING INSTRUCTIONS

IN THE EVENT OF A MALFUNCTION OR BREAKDOWN, grounding provides a path of least resistance for 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 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 electric 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 sure the tool is properly grounded.

USE A SEPARATE ELECTRICAL CIRCUIT for your tools. This circuit must not be less than #12 wire and should be protected with a 15 Amp time delay 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 FIGURE A. FIGURE A shows a 3-prong electrical plug and receptacle that has a grounding conductor. If a properly grounded receptacle is not available, an adapter (FIGURE B) can be used to temporarily connect this plug to a 2-contact ungrounded receptacle. The temporary adapter should be used only until a properly grounded receptacle can be installed by a qualified technician. The adapter (FIGURE B) has a rigid lug extending from it that **MUST** be connected to a permanent earth ground, such as a properly grounded receptacle box. The Canadian Electrical Code prohibits the use of adapters.

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

▲ WARNING

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

SAVE THESE INSTRUCTIONS

Fig. A

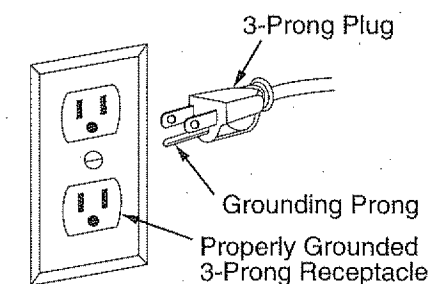
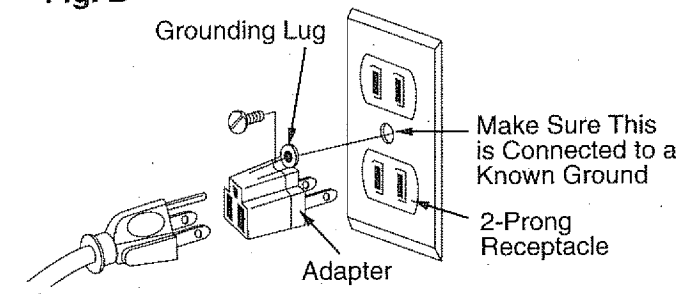


Fig. B



GUIDELINES FOR EXTENSION CORDS

USE ONLY 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug. Repair or replace damaged or worn cord immediately.

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 which will cause the tool to overheat. The table below 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.

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

▲ WARNING

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

MINIMUM GAUGE FOR EXTENSION CORDS (AWG)					
(when using 120 volts only)					
Ampere Rating		Total length of cord in feet			
more than	not more than	25'	50'	100'	150'
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

RECOMMENDED ACCESSORIES

Visit your Sears Hardware Department or see the Craftsman Power and Hand Tools Catalog to purchase recommended accessories for this power tool.

⚠ WARNING

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.

⚠ WARNING

To avoid the risk of personal injury, do not modify this power tool or use accessories not recommended by Sears.

CARTON CONTENTS

UNPACKING AND CHECKING CONTENTS

⚠ WARNING

To avoid injury from unexpected starting, do not plug the power cord into a power source receptacle during unpacking and assembly. This cord must remain unplugged whenever you are working on the saw.

⚠ WARNING

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.

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

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, or the saw will be damaged.

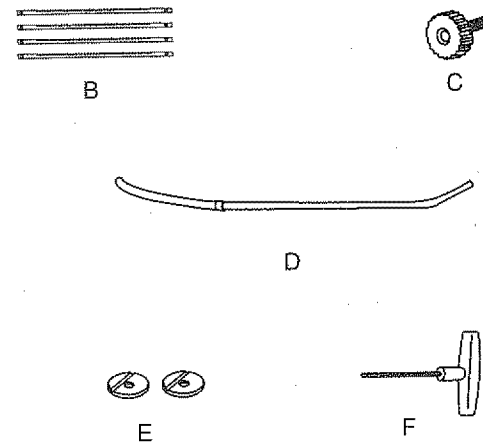
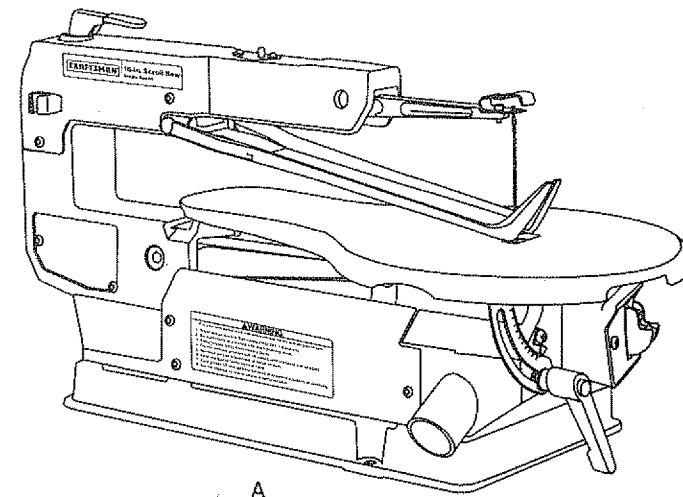
⚠ WARNING

To avoid fire and toxic reaction, never use gasoline, naphtha, acetone, lacquer, thinner, or similar highly volatile solvents to clean the scroll saw.

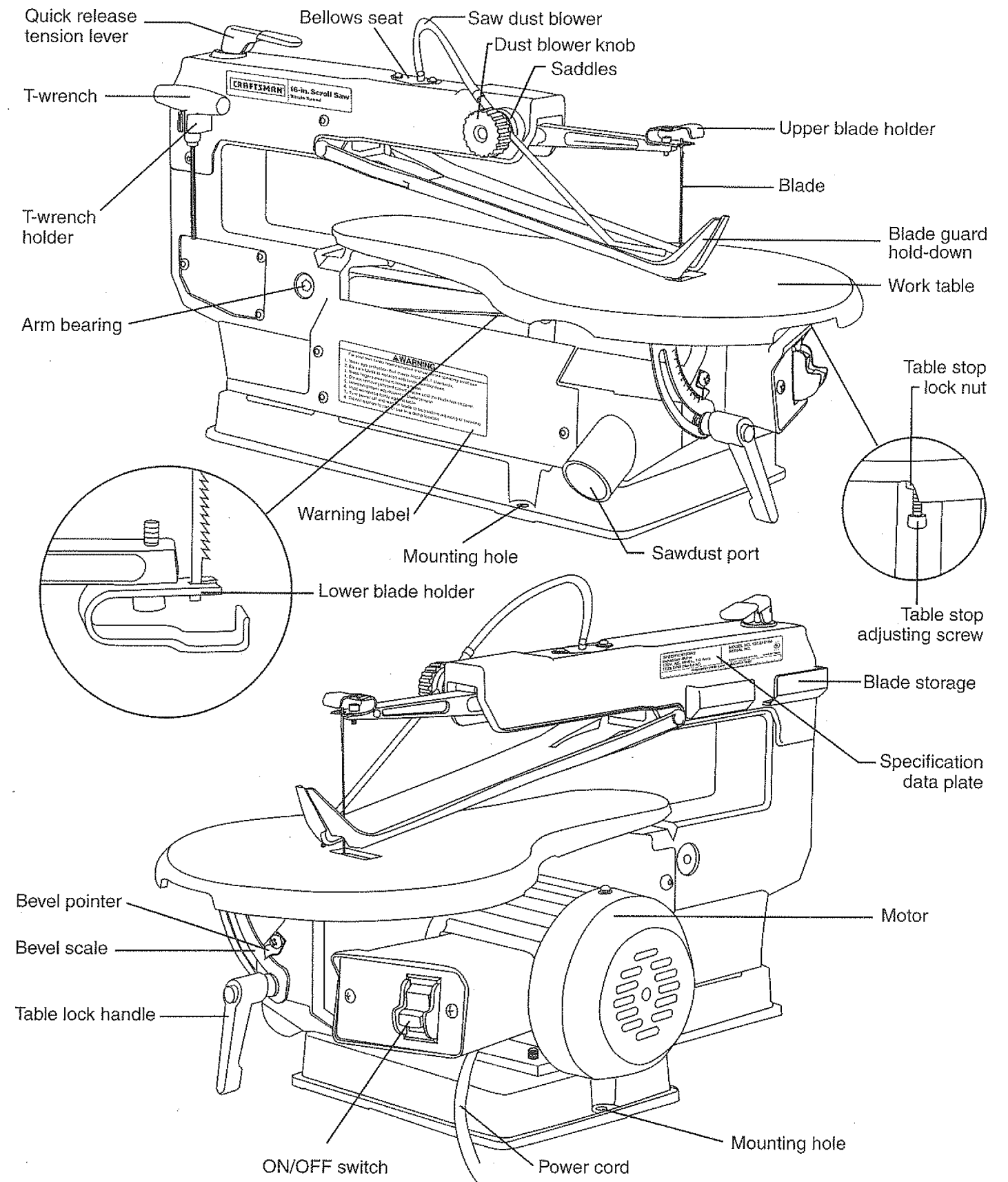
TABLE OF LOOSE PARTS

ITEM	DESCRIPTION	QUANTITY
A.	Scroll saw	1
B.	Blades (Pin type only)	4
C.	Knob	1
D.	Dust blower tube	1
E.	Saddles	2
F.	T-wrench	1

UNPACKING YOUR SCROLL SAW



KNOW YOUR SCROLL SAW



GLOSSARY OF TERMS

SCROLL SAW TERMS

BEVEL ANGLE SCALE – Represents the degree of table angle, from 0 to 45 degrees.

BLADE GUARD HOLD-DOWN – Keeps your work piece from raising up from the table while performing cutting operations.

BLADE HOLDERS – Retains and positions blades.

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

ON-OFF SWITCH – The switch has a locking feature intended to help prevent unauthorized and hazardous use by children and others. Insert the key into the switch and push to the ON position to turn the scroll saw on.

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 attachments or hose to be used to remove the sawdust from under the table and base.

STROKES PER MINUTE (SPM) – Speed of the saw blade measured by the count of its reciprocating actions.

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

TABLE STOP ADJUSTING SCREW – Allows easy adjustment to ensure the table is set perpendicular to the blade.

T-WRENCH HEX KEY – Is used to tighten hex bolts if they become loose.

T-WRENCH STORAGE – Allows quick easy storage of the T-wrench when changing blades to avoid loss or misplacement.

WOODWORKING TERMS (FIG. A)

KERF – The slot cut by the blade.

LEADING EDGE – The front edge of the workpiece which is pushed into the blade.

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

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.

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

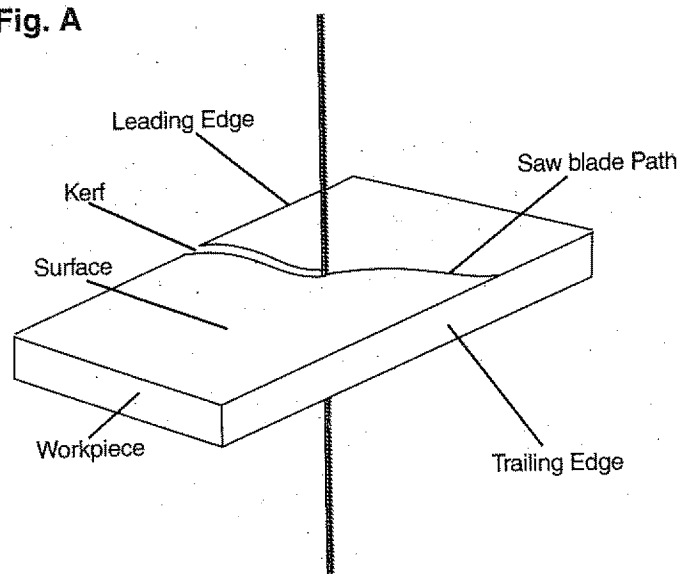
SURFACE – Top of workpiece being cut.

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

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

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

Fig. A



ASSEMBLY AND ADJUSTMENTS

ASSEMBLY INSTRUCTIONS

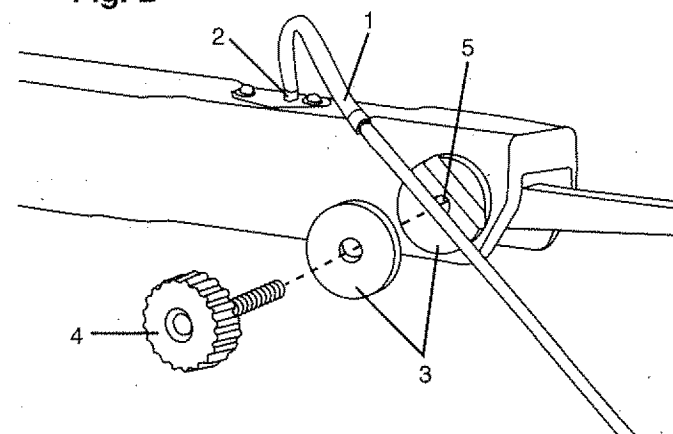
▲ WARNING

To avoid injury, make sure all parts are assembled and adjusted properly before plugging into a power source outlet or turning this saw ON.

INSTALLING THE DUST BLOWER (FIG. B)

1. Locate the dust blower tubing (1).
2. Connect the PVC plastic end of the tube to the bellows seat (2).
3. Place one saddle (3) on each side of the tubing. The tube should pass through the holes formed by the saddles.
4. Thread the dust blower knob (4) through the saddle assembly and screw into the hole (5) on the upper arm of the scroll saw. Tighten.
5. For best results, the dust blower tube should be adjusted to direct air at both the blade and the workpiece.

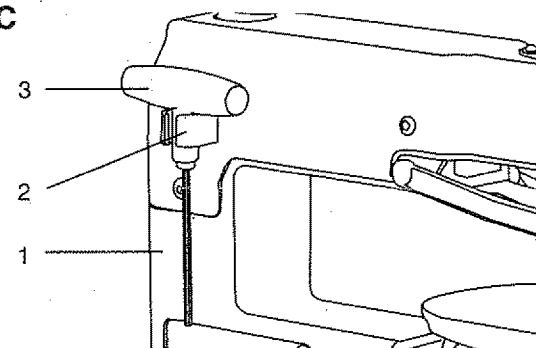
Fig. B



STORING THE T-WRENCH (FIG. C)

The left rear side of the body (1) has a U-shaped clamp holder (2) designed to store the T-shaped hex wrench (3). Position the shaft of the T-wrench handle into the U-shaped clamp holder as shown.

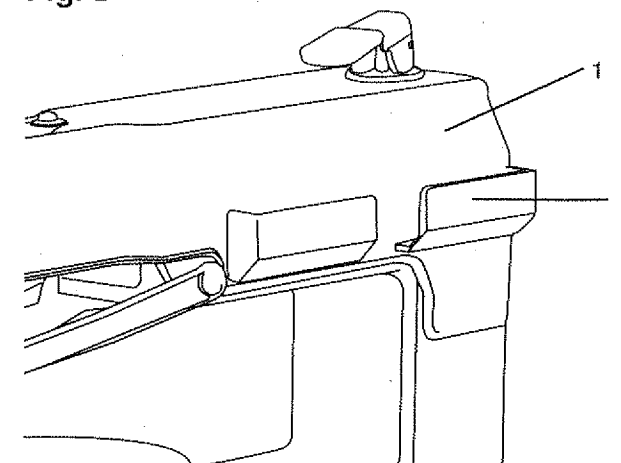
Fig. C



BLADE STORAGE (FIG. D)

The right side (1) of the scroll saw body has a tray (2) suitable for storage of saw blades.

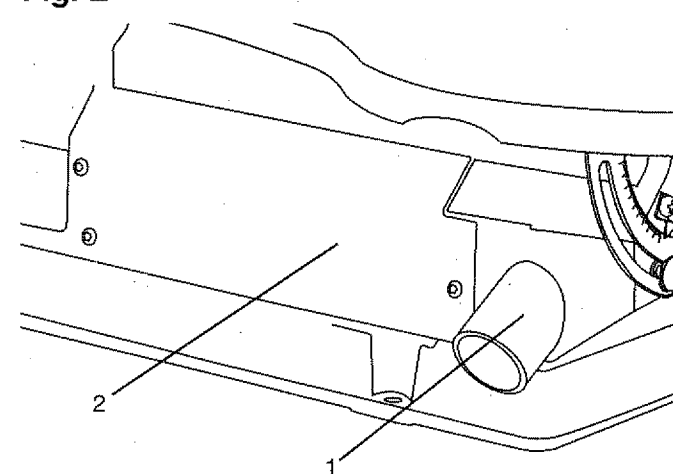
Fig. D



SAWDUST COLLECTION PORT (FIG. E)

This scroll saw allows a hose or vacuum accessory (not provided) to be connected to the port (1) on the left 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 and metal plate (2) on the left side of saw. Reattach the metal plate and screws before starting the saw. This will keep your saw cutting efficiently.

Fig. E



PIN-END BLADE REMOVAL AND INSTALLATION

⚠ WARNING

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

NOTE: This machine uses only pin-end blades.

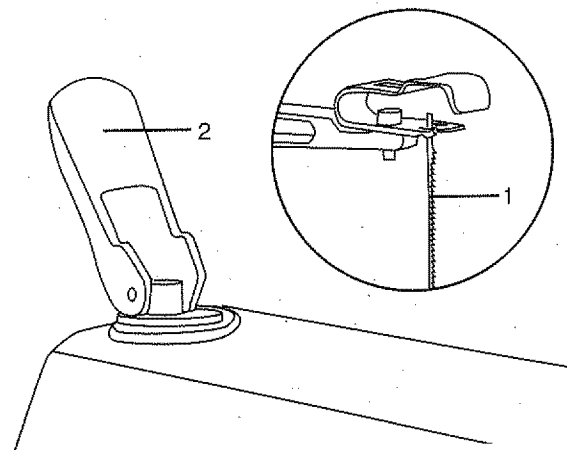
Pin-end type blades are thicker for stability and for faster assembly. They provide faster cutting on a variety of materials.

NOTE: When installing pin-end blades, the slot must be slightly wider than the thickness of the blade. After the blade is installed, the blade tension mechanism will keep it in place.

PIN-END BLADE REMOVAL (FIG. F, G, and H)

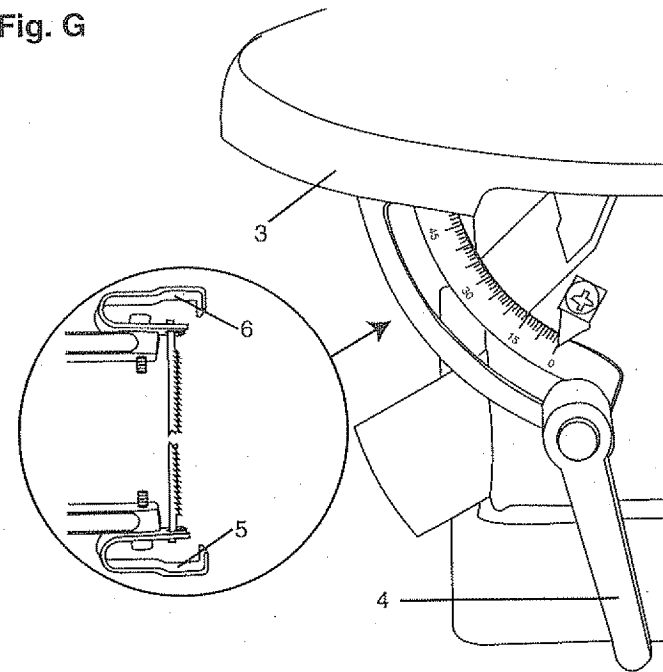
1. To remove the blade (1), loosen the tension on it by first lifting up the quick release tension lever (2). (FIG. F)

Fig. F



2. To view lower blade holder (5), level the table (3) to a 0 degree horizontal angle and lock the bevel lock handle (4). (FIG. G)
3. Remove the blade from the upper (6) and lower blade holder (5) by pulling and lifting the blade forward to release it from the upper and lower pin recesses. If the blade was installed for side-cutting, lift the blade to the side to remove it from the side blade recesses.

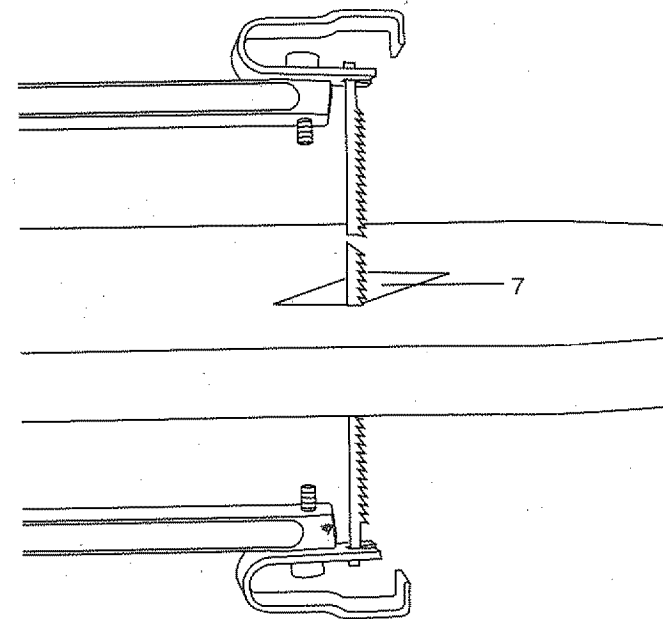
Fig. G



4. Lift the blade through the table access hole (7). (FIG. H)

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

Fig. H

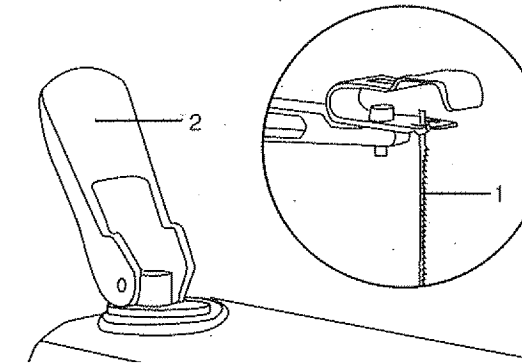


PIN-END BLADE INSTALLATION (FIG. I, J, K, L, AND M)

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

1. To install the blade (1), loosen the tension on it by first lifting up the quick release tension lever (2). (FIG. I)

Fig. I

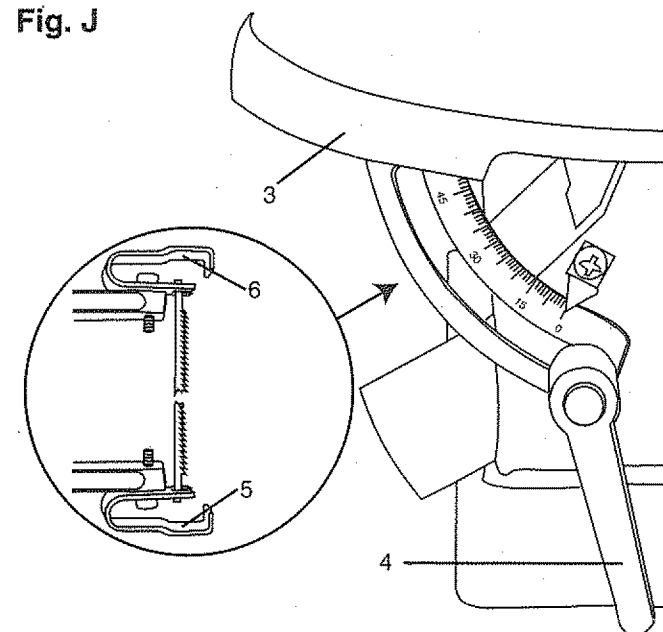


2. Level the table (3) to a 0 degree horizontal angle to view the lower blade holder (5), and lock the bevel lock handle (4). (FIG. J)
3. Notice that the blade holders have blade slots and pin recesses for both forward and side cutting positions. Decide which position you will be using.

NOTE: Cutting from the side is necessary if your workpiece exceeds 16 inches in length.

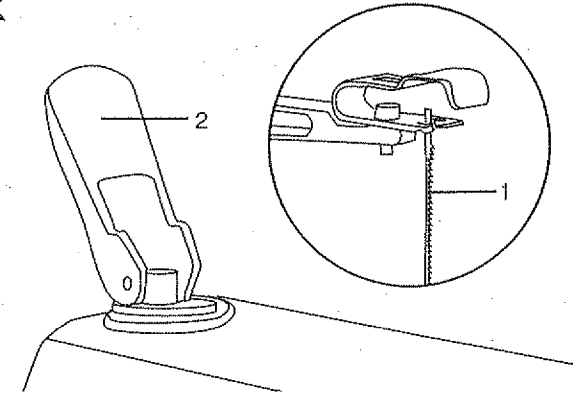
CAUTION: For side-cutting, the table must be used at a 0° bevel angle.

Fig. J



4. Insert one end of the blade through the table access hole (7). (FIG. K)

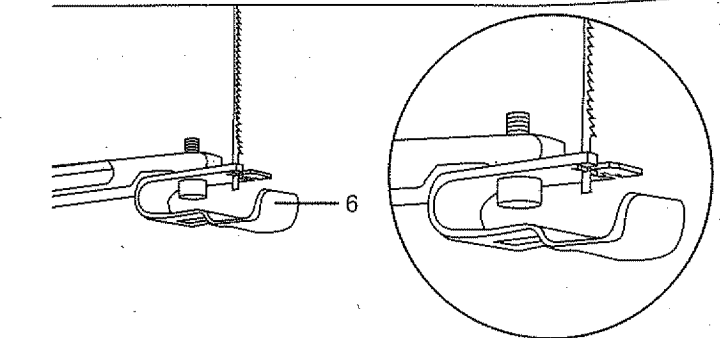
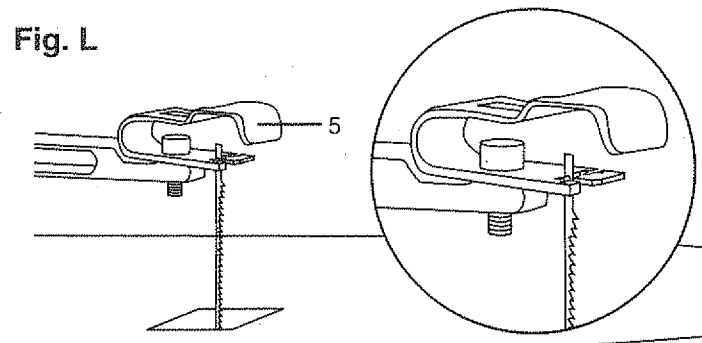
Fig. K



5. Hook the lower blade pin in the pin recess of the lower blade holder (5) first, and then the upper blade holder (6). (FIG. L)

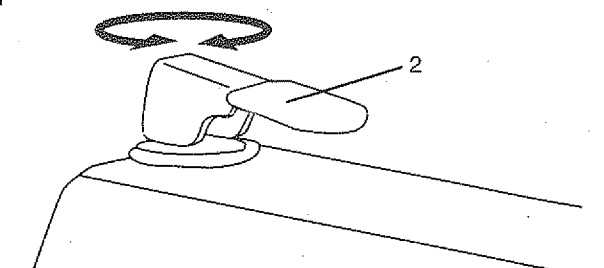
NOTE: Apply slight downward pressure against the upper arm when installing the blade in the upper blade holder.

Fig. L



6. Lower the quick release tension lever (2) to tension the blade. If the tension is too tight, turn counterclockwise. If too loose, turn the lever clockwise. (FIG. M)

Fig. M



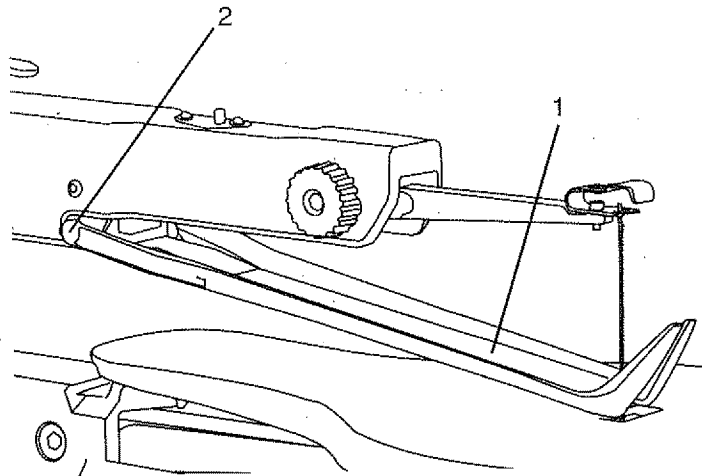
ADJUSTMENT INSTRUCTIONS

SQUARING THE TABLE (FIG. N, O, and P)

NOTE: Your scroll saw has been adjusted but should be rechecked prior to use for best operation.

1. Remove the hold-down blade guard (1) by pulling the side pegs (2) out of the holes in the scroll saw body. (Fig. N)

Fig. N



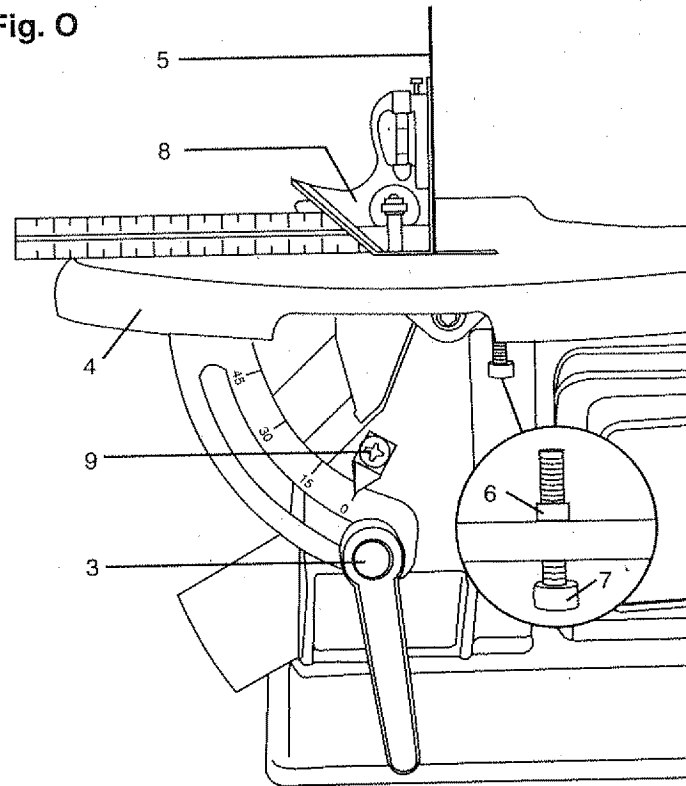
2. Loosen the table bevel lock handle (3) and move the table (4) until it is or at a right angle to the blade (5). (Fig. O)
3. Loosen the locking nut (6) on the adjusting screw (7) under the table by turning counterclockwise.
4. Lower the adjusting screw by turning clockwise.
5. Use a small square (8) on the table and against the blade, as shown. Set the table at 90 degrees to the blade. If there is space between the square and blade, adjust the table angle until the space is removed.
6. Lock the table bevel lock handle (3) under the table to secure movement. Raise the adjusting screw (7) by turning counterclockwise until the top end of the screw touches the table.
7. Tighten the locking nut (6) by turning clockwise.

NOTE: Avoid setting edge of table against top of motor which could cause noise when saw is running.

8. Loosen the screw holding the bevel scale pointer (9) and adjust the pointer to 0 degrees. Tighten the screw.
10. Reattach the hold-down blade guard (2) by placing the pegs into the side holes in the saw body. (Fig. N)

NOTE: Remember the bevel scale is a convenient guide but should not be relied upon for precision.

Fig. O



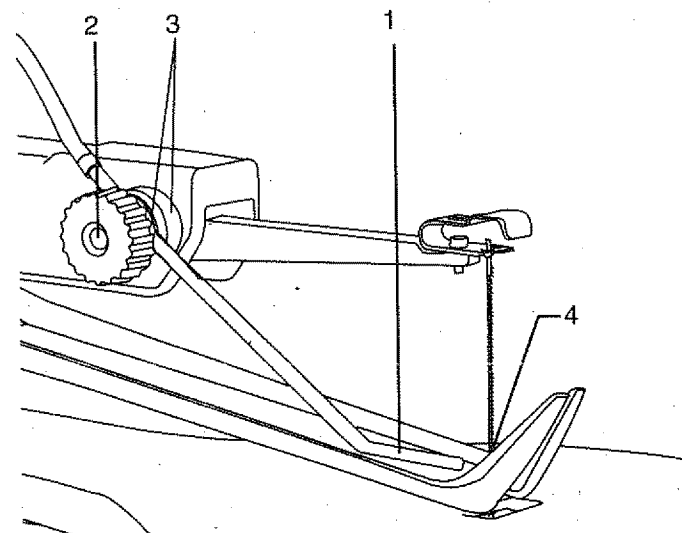
SAWDUST BLOWER (FIG. P)

Adjust the sawdust blower tube (1) to point to the blade and workpiece:

1. Loosen the knob (2)
2. Move the tube through the saddles (3) to aim the nozzle at the blade and hold-down foot (4).

NOTE: The tube's function is to blow the sawdust off the line of sight when cutting. It is not designed to blow all of the sawdust off the table.

Fig. P

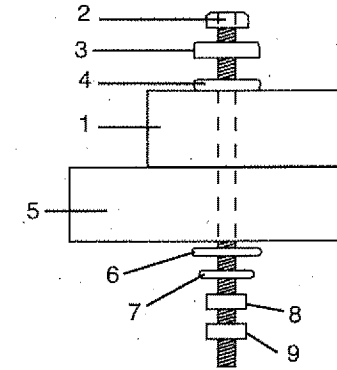


MOUNTING THE SCROLL SAW (FIG. Q)

1. To mount your scroll saw in a permanent location such as a sturdy workbench, bolt the scroll saw base to a solid workbench top. The scroll saw base (1) has 4 mounting holes.
2. Place the scroll saw on the work surface (5), mark the holes on the work surface and drill 3/8" holes. Use bolts, washers, nuts to secure.
3. If the workbench moves or shakes during operation, it must be fastened to the floor.
4. Your scroll saw is designed to be used on horizontal surfaces only. Motor damage may result when mounted on a non-horizontal surface.

Fig. Q

1. Scroll saw
2. Hex head bolt
3. Rubber washer
4. Flatwasher
5. Workbench
6. Flatwasher
7. Lockwasher
8. Hex nut
9. Jamb nut



BLADE SELECTION

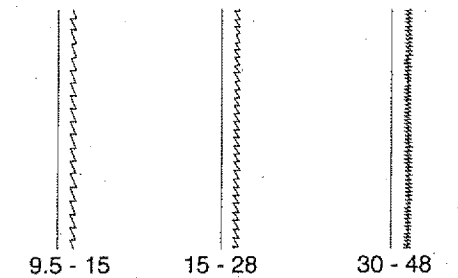
BLADE SELECTION (FIG. R)

⚠ WARNING

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

This scroll saw accepts 5" length pin end blades with a wide variety of blade thicknesses and widths. The type of material and intricacies of cutting operations (size of radius or curves) 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 best use of blades on various materials. Use this table as an example, but practice and your own personal preference will be the best selection method.

Fig. R



TEETH/ INCH TPI	BLADE WIDTH INCH	BLADE THICKNESS INCH	BLADE/ SPM	MATERIAL CUT
10-15	0.110	0.018	400-1200	Medium turns on 1/4" to 1-3/4" wood, soft metal, hardwood
15-28	.055-.110	.010-.018	800-1800	Small turns on 1/8" to 1-1/2" wood, soft metal, hardwood
30-48	.024-.041	.012-.019	Varies	Non-ferrous metals/hardwoods using very slow speeds

NOTE: Thinner blades will have more possibilities for blade deflection when cutting angles are not perpendicular to the table. Read BASIC SCROLL SAW OPERATION for more suggestions.

OPERATION

▲ WARNING

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

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 items about your scroll saw before attempting to use the saw.

RECOMMENDATIONS FOR CUTTING

- 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.
- The blade teeth cut material ONLY on the down stroke.
- 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.
- 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.
- Best results are achieved when cutting wood less than one inch thick.
- When cutting wood thicker than one inch the user must guide the wood very, very slowly into the blade and take extra care not to bend or twist the blade while cutting in order to maximize blade life.
- 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.
- To get accurate cuts be prepared to compensate for the blade's tendency to follow the wood grain as you are cutting.
- This scroll saw is intended to cut wood or wood products. Precious and non-ferrous metals perform well on scroll saws that have very slow speed capability, and should be lubricated with machine oil or beeswax.
- When choosing a blade to use with your scroll saw, consider very fine, narrow blades to scroll cut in thin wood 1/4" thick or less. Use wider blades for thicker materials but this will reduce the ability to cut tight curves.

- This saw uses 5 inch long pin type blades only.
- 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 accidental starting, always turn switch OFF and unplug the scroll saw before moving, replacing the blade or making adjustments.

- Draw your design on the workpiece or secure a design to the workpiece (1).
- Raise the blade guard assembly (2) by lifting.
- Position the workpiece against the blade (3) and place the blade guard hold-down foot against the top surface of the workpiece.

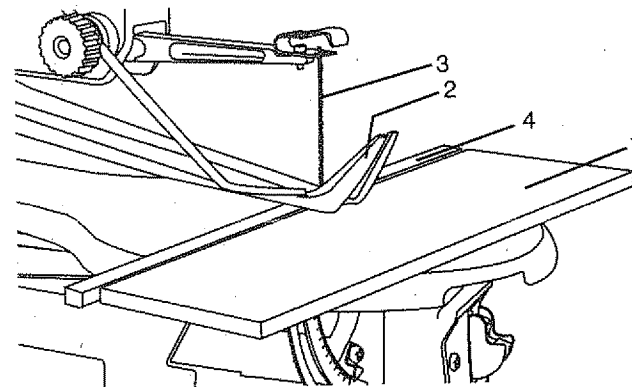
CAUTION: In order to avoid uncontrollable lifting of the workpiece and reduce blade breakage, do not turn the switch ON while the workpiece is against the blade.

- Before turning the scroll saw ON, position a piece of scrap wood (4) against and ahead of the workpiece. Cut the scrap before cutting into the leading edge of the workpiece (1).
- Slowly feed the workpiece into the blade, guiding and pressing the workpiece down against the table.

CAUTION: Do not force the leading edge of workpiece into the blade because the blade will deflect, reducing accuracy of cut and possibly breaking the blade.

- When the cut is complete, move the trailing edge of the workpiece beyond the hold-down foot before turning the scroll saw OFF.

Fig. S



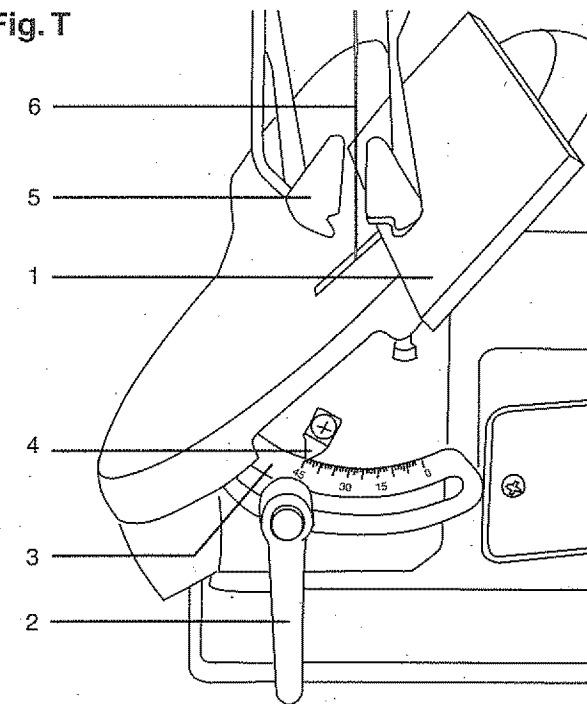
ANGLE CUTTING (BEVEL CUTTING) (FIG. T)

▲ WARNING

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

- Draw your design on the workpiece or secure a design to the workpiece (1).
- Loosen the bevel lock handle (2) and move the table to the proper angle, using the degree scale (3) and the pointer (4).
- Tighten the bevel lock handle securely.
- Lift the blade guard (5).
- Position the workpiece on the right side of the blade (6) and lower the blade guard hold-down foot against the surface.
- Follow items 4-6 under FREEHAND CUTTING OPERATIONS.

Fig. T



RIP OR STRAIGHT LINE CUTTING (FIG. U)

▲ WARNING

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

Tools Needed

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

- Measure from the inside tip of the blade (1) to the desired distance and position scrap wood (2) parallel to the blade.
- Clamp the scrap wood to the table (3).
- Recheck your measurements, using the workpiece (4) to be cut, and make sure the scrap wood is secure.
- Position the workpiece against the blade, placing the hold-down foot (5) against the top surface of the workpiece.
- Remove the workpiece 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 pull the control knob ON while the workpiece is against the blade.

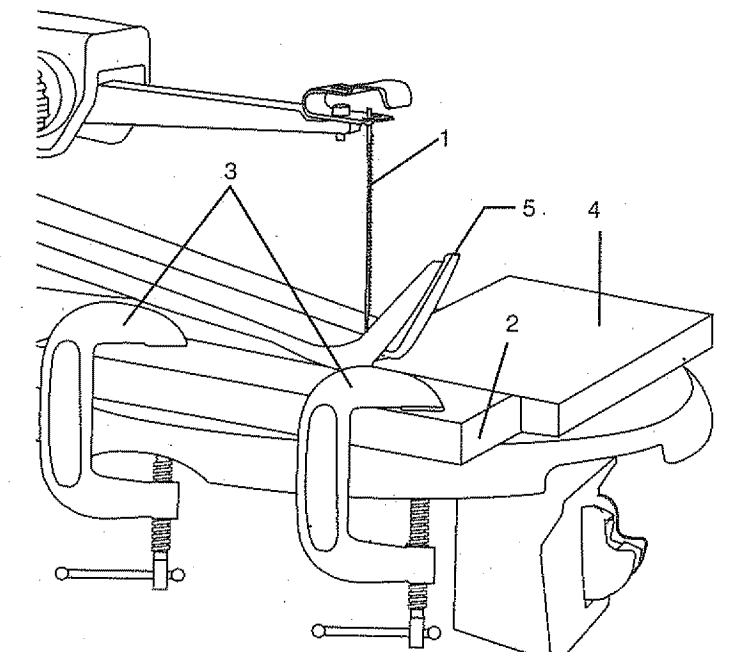
- Position the workpiece against the scrap wood (2) prior to touching the leading edge of the workpiece against the blade (1).
- Slowly feed the workpiece into the blade, guiding the workpiece against the straight edge of the scrap wood. Press the workpiece down against the table while cutting.

CAUTION: Do not force the leading edge of workpiece into the blade because the blade will deflect, reducing accuracy of cut and possibly breaking the blade.

- When the cut is complete, move the trailing edge of the workpiece beyond the hold-down foot. Turn the scroll saw switch OFF.

NOTE: When cutting a narrow workpiece use push sticks.

Fig. U



INTERIOR CUTTING (FIG. V)

▲ WARNING

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

1. Draw your design or secure a design to a workpiece (1). Drill a 1/4 inch hole in the workpiece to perform inside cutting.
2. Raise the quick release tension lever (2) and remove the blade (3). Refer to BLADE REMOVAL AND INSTALLATION (page 11).
3. Place the workpiece on the saw table with the hole (4) in the board over the access hole in the table.
4. Install the blade (3) through the hole in the board (4) and lower the quick release tension lever (2).

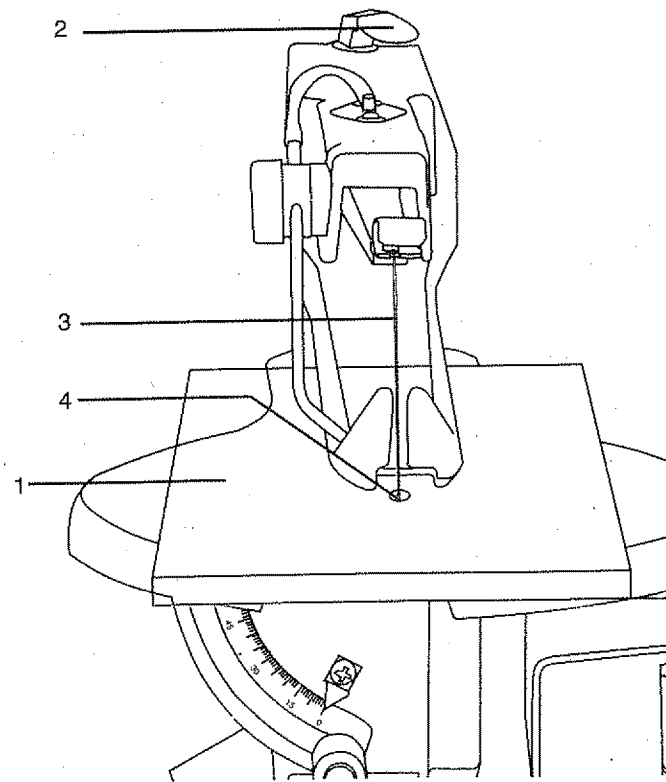
CAUTION: To avoid uncontrollable lifting of the workpiece and to reduce blade breakage, do not turn the scroll saw ON while the blade is against the wood.

5. Position the workpiece so the blade is not touching the wood and turn the scroll saw ON.
6. Slowly feed the workpiece into the blade, guiding and pressing the workpiece down against the table.

CAUTION: Do not force the workpiece into the blade. The blade will deflect, reducing accuracy of cut and possibly breaking the blade.

7. 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 or lubricating 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

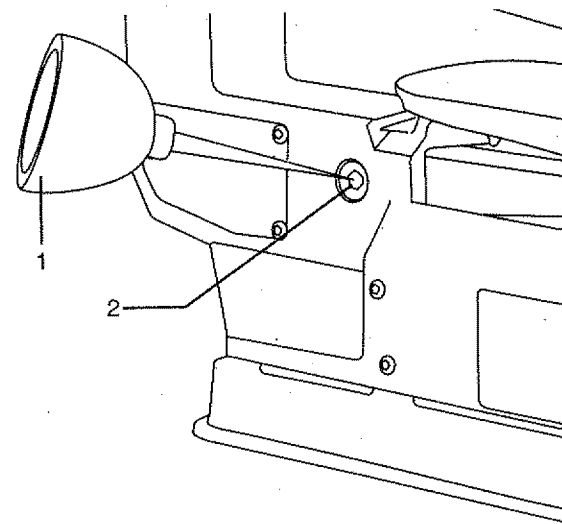
1. If the power cord is worn, cut, or damaged in any way, have it replaced immediately.
2. Do not attempt to oil the motor bearings or service the motor internal parts.

ARM BEARINGS (FIG. W)

Lubricate the arm bearings after every 50 hours of use.

1. Turn the saw on its side.
2. Squirt a generous amount of SAE 20 (lightweight) oil (1) around the shaft end and bronze bearing (2).
3. Let the oil soak in overnight, keeping the saw in this position.
4. The next day repeat the above procedures for the opposite side of the saw.

Fig. W



TROUBLESHOOTING

TROUBLESHOOTING GUIDE

▲ WARNING

To avoid injury from an accidental start, turn the switch OFF and always remove the plug from the power source before making any adjustments.

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

PROBLEM	PROBABLE 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. 2. Reduce feed rate. 3. Use narrow blades. 4. Avoid side pressure on blade.
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. 2. Call Sears Service Center. Any attempt to repair this motor may create a HAZARD unless repair is done by a qualified service technician. 3. Push the power switch to the OFF position. Let the motor cool.
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 work bench is the less vibration will occur. A plywood workbench will not be as good work surface as the same size solid lumber. Use common sense in choosing a mounting surface. 3. Tighten table lock knob. 4. Tighten motor mounting screws.
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 cap screws holding blade holders to arms. Adjust position of blade holders. Retighten cap screws.

WARRANTY

FULL ONE YEAR WARRANTY

If this product fails due to a defect in material or workmanship within one year from the date of purchase, Sears will repair it free of charge.

Contact a Sears Service Center for repair.

If this product is used for commercial or rental purposes, this warranty applies only for 90 days from the date of purchase.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

Sears, Roebuck and Co., Dept. 817 WA, Hoffman Estates, IL 60179

PARTS

CRAFTSMAN SCROLL SAW

137.216160

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.

Order by PART NUMBER, not by key number

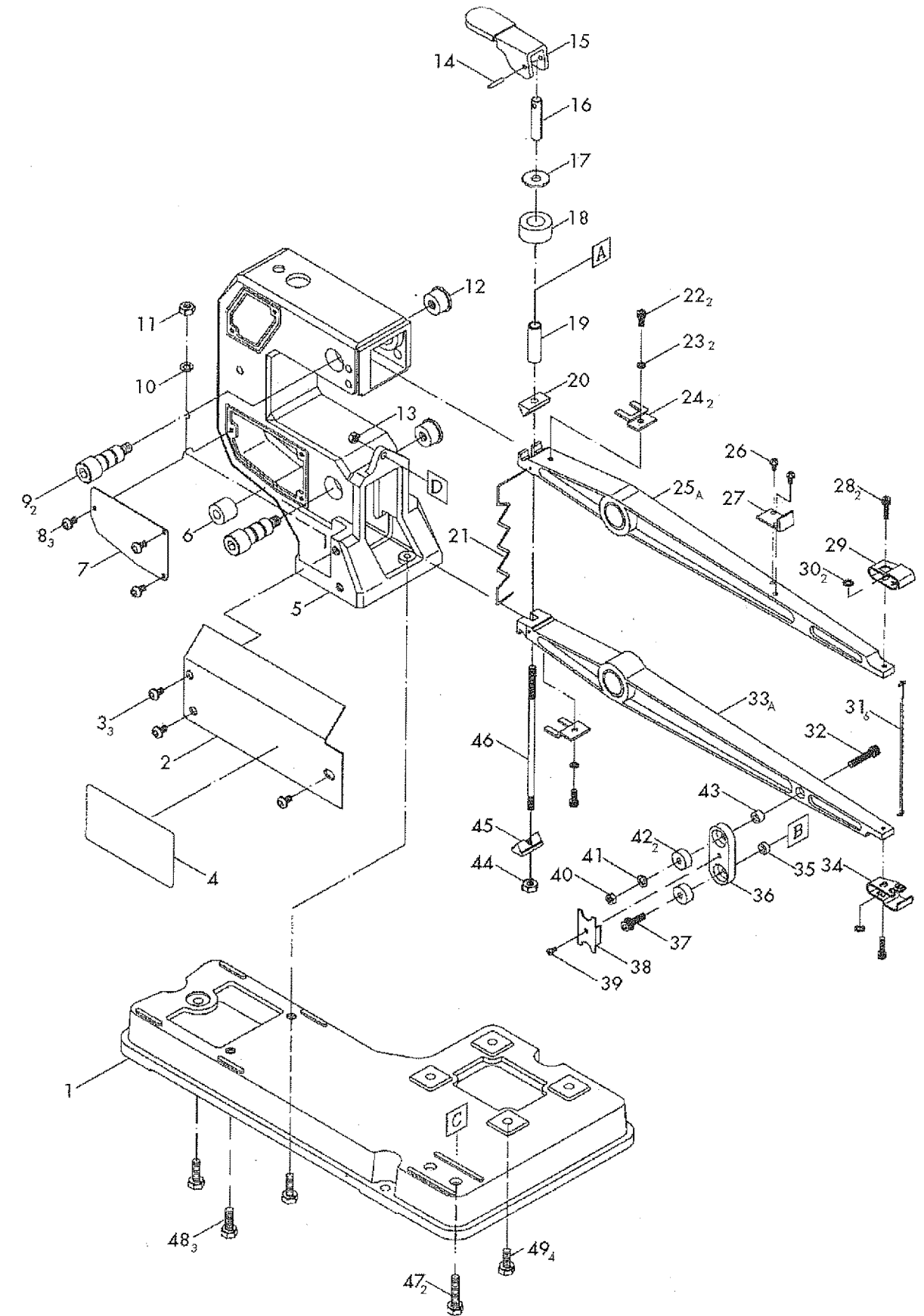
SCHEMATIC A

Key No.	PART NUMBER	Description	Size	Qty.
1	17100101	Base		1
2	17100206	Plate cover		1
3	2608BBLA32	Truss head screw	M5x0.8-10	3
4	17107029	Warning label		1
5	17100407	Body		1
6	17100501	Bumper		1
7	18506616	Caution label		1
8	2608BBLA32	Truss head screw	M5x0.8-10	3
9	17100801	Hex soc. head cap bolt		2
10	2502NBC406	Spring washer	1/4	1
11	2701FBD106	Hex nut	M6x1 T=5	1
12	17101301	Bush		2
13	2701FBD106	Hex nut	M6x1 T=5	1
14	2536MBE603	Spring pin	3-16	1
15	17109901	Knob		1
16	18109301	Shaft-pivot		1
17	2501NBDN27	Flat washer	5/16x7/8-5/64	1
18	18112501	Bush		1
19	18109201	Spacker		1
20	15800901	Clamp bolster		1
21	17101901	Segment spring		1
22	2602BBLA09	Hex soc. head cap bolt	M4x0.7-12	2
23	2502NBC402	Spring washer	5/32	2
24	14706601	Set plate		2
25	17102302A1	Upper arm rocker assembly		1
26	26600PBCK12	Truss head tapping screw	M4x18-10	2
27	17103201	Baffle plate		1
28	2602BBLA07	Hex soc. head cap bolt	M4x0.7-8	2
29	17102601	Blade holder		1
30	2504MZC004	Tooth washer	4	2
31	15802103	Blade		6
32	2602BBLA28	Hex soc. head cap bolt	M5x0.8-25	1
33	17103401A1	Bottom arm rocker assembly		1
34	17104401	Blade holder		1
35	14701101	Washer		1
36	17104001	Bearing seat		1
37	2617BBLC15	Hex soc head cap screw	M5x0.8-16	1
38	15808001	Bearing protector		1
39	2660MBCE10	Pan head tapping screw	M4x16-8	1
40	2701FBD105	Hex nut	M5x0.8 T=4	1
41	2502ABC408	Spring washer	5	1
42	2001ZZ0625	Ball bearing	625ZZ	2
43	14704901	Shaft sleeve		1
44	2705FBD106	Nut chuck	M6 T=6	1
45	14706902	Clamp bolster		1
46	18102102	Lingager bar		1
47	2615BBDC26	Hex head screw & washer	M8x1.25-30	2
48	2615BBDC20	Hex head screw & washer	M6x1-25	3
49	2615NBDC01	Hex head screw & washer	1/4x20-3/4	4

CRAFTSMAN SCROLL SAW

137.216160

SCHEMATIC A



NOTES / NOTAS

CRAFTSMAN SCROLL SAW
SCHEMATIC B

137.216160

Key No.	PART NUMBER	Description	Size	Qty.
50	2602BBLA28	Hex soc. head cap bolt	M5x0.8-25	1
51	2668BBDA39	Pan head screw	M6x1.0-12	1
52	15805401	Needle pointer		1
53	17106303	Support		1
54	2506MBN606	Wave washer		2
55	2701FBD105	Hex nut	M5x0.8 T=4	1
56	2701FBD106	Hex nut	M6x1 T=5	1
57	2602BBLB44	Hex soc head cap bolt	M6x1.0-35	1
58	14703601	Spring		1
59	2501NBDN12	Flat washer	1/4x5/8-1/16	3
60	17105304	Table		1
61	17103302	Blade guard		1
62	17106901	Clamp handle		1
63	17106001	Saddle		2
64	17105602	Brass tube		1
65	17116017	Trade mark label		2
66	2637BBDA23	Truss head screw	M5x0.8-8	4
67	17111703	Hex wrench		1
68	17107902	PVC hose		1
69	2660MBCE15	Pan head tapping screw	M4x16-16	2
70	19611501	Bellows seat		1
71	18123803	Bellows		1
72	17120502	Rocker arm cover		1
73	2608BBLA32	Pan head screw	M5x0.8-10	1
74	2501MBDN05	Flat washer	5x10-1	1
75	17108902	Safe cover		1
76	8337D24304	Motor		1
77	2606BDLA52	Hex soc set screw	M6x1.25-8	1
78	14700901	Eccentric		1
79	2502NBC406	Spring washer	1/4	1
80	2602BBLA43	Hex soc. head cap bolt	M6x1.0-30	1
81	17105503	Bracket-tilt		1
82	2668BBDA23	Pan head screw	M5x0.8-8	2
83	18504202A1	Handle		1
*	137216160001	Owner's manual		1

* Not shown

CRAFTSMAN SCROLL SAW

137.216160

SCHEMATIC B

