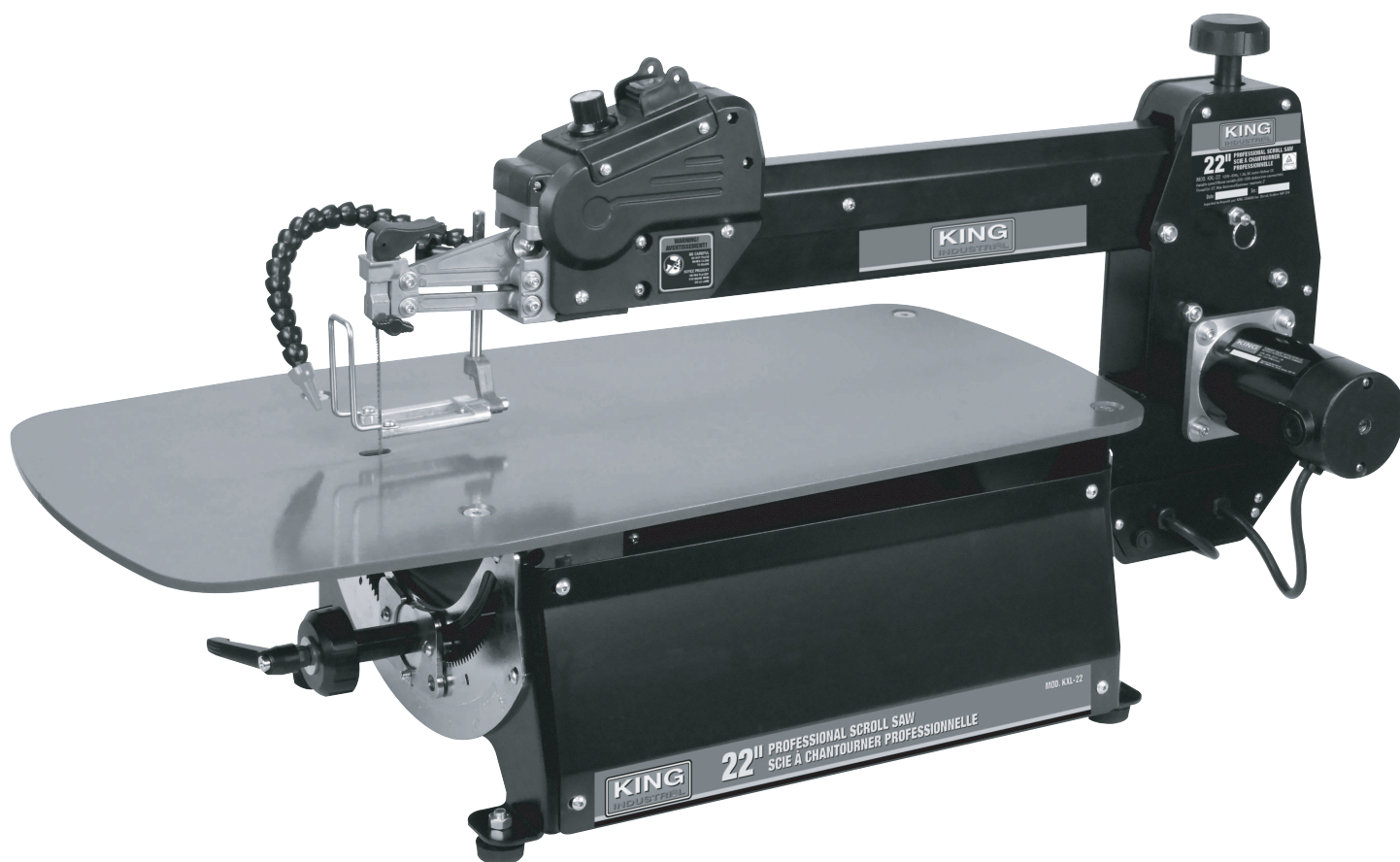




22" PROFESSIONAL SCROLL SAW



MODEL: KXL-22

INSTRUCTION MANUAL

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WARRANTY INFORMATION

**2-YEAR
LIMITED WARRANTY
FOR THIS 22" SCROLL SAW**

**KING CANADA TOOLS
OFFERS A 2-YEAR LIMITED WARRANTY
FOR NON-COMMERCIAL USE.**

PROOF OF PURCHASE

Please keep your dated proof of purchase for warranty and servicing purposes.

REPLACEMENT PARTS

Replacement parts for these products are available at our authorized King Canada service centers across Canada. Please use the 10 digit part numbers listed in this manual for all part orders where applicable.

LIMITED TOOL WARRANTY

King Canada makes every effort to ensure that these products meets high quality and durability standards. King Canada warrants to the original retail consumer a 2-year limited warranty as of the date the product was purchased at retail and that each product is free from defects in materials. Warranty does not apply to defects due directly or indirectly to misuse, abuse, normal wear and tear, negligence or accidents, repairs done by an unauthorized service center, alterations and lack of maintenance. King Canada shall in no event be liable for death, injuries to persons or property or for incidental, special or consequential damages arising from the use of our products.

To take advantage of this limited warranty, return the product at your expense together with your dated proof of purchase to an authorized King Canada service center. Contact your retailer or visit our web site at www.kingcanada.com for an updated listing of our authorized service centers. In cooperation with our authorized serviced center, King Canada will either repair or replace the product if any part or parts covered under this warranty which examination proves to be defective in workmanship or material during the warranty period.

NOTE TO USER

This instruction manual is meant to serve as a guide only. Specifications and references are subject to change without prior notice.

KING CANADA INC. DORVAL, QUÉBEC, CANADA H9P 2Y4

www.kingcanada.com

GENERAL SAFETY INSTRUCTIONS FOR POWER TOOLS

1. KNOW YOUR TOOL

Read and understand the owners manual and labels affixed to the tool. Learn its application and limitations as well as its specific potential hazards.

2. GROUND THE TOOL.

This tool is equipped with an approved 3-conductor cord and a 3-prong grounding type plug to fit the proper grounding type receptacle. The green conductor in the cord is the grounding wire. **NEVER** connect the green wire to a live terminal.

3. KEEP GUARDS IN PLACE.

Keep in good working order, properly adjusted and aligned.

4. REMOVE ADJUSTING KEYS AND WRENCHES.

Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.

5. KEEP WORK AREA CLEAN.

Cluttered areas and benches invite accidents. Make sure the floor is clean and not slippery due to wax and sawdust build-up.

6. AVOID DANGEROUS ENVIRONMENT.

Don't use power tools in damp or wet locations or expose them to rain. Keep work area well lit and provide adequate surrounding work space.

7. KEEP CHILDREN AWAY.

All visitors should be kept a safe distance from work area.

8. MAKE WORKSHOP CHILD-PROOF.

-with padlocks, master switches or by removing starter keys.

9. USE PROPER SPEED.

A tool will do a better and safer job when operated at the proper speed.

10. USE RIGHT TOOL.

Don't force the tool or the attachment to do a job for which it was not designed.

11. WEAR PROPER APPAREL.

Do not wear loose clothing, gloves, neckties or jewelry (rings, watch) because they could get caught in moving parts. Non-slip footwear is recommended. Wear protective hair covering to contain long hair. Roll up long sleeves above the elbows.

12. ALWAYS WEAR SAFETY GLASSES.

Always wear safety glasses (ANSI Z87.1). Everyday eye glasses only have impact resistant lenses, they are **NOT** safety glasses. Also use a face or dust mask if cutting operation is dusty.

13. DON'T OVERREACH.

Keep proper footing and balance at all times.

14. MAINTAIN TOOL WITH CARE.

Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.

15. DISCONNECT TOOLS.

Before servicing, when changing accessories or attachments.

16. AVOID ACCIDENTAL STARTING.

Make sure the switch is in the "OFF" position before plugging in.

17. USE RECOMMENDED ACCESSORIES.

Consult the manual for recommended accessories. Follow the instructions that accompany the accessories. The use of improper accessories may cause hazards.

18. NEVER STAND ON TOOL.

Serious injury could occur if the tool tips over. Do not store materials such that it is necessary to stand on the tool to reach them.

19. CHECK DAMAGED PARTS.

Before further use of the tool, a guard or other parts that are damaged should be carefully checked to ensure that they will operate properly and perform their intended function. Check for alignment of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other parts that are damaged should be properly repaired or replaced.

20. NEVER LEAVE MACHINE RUNNING UNATTENDED.

Turn power "OFF". Don't leave any tool running until it comes to a complete stop.

SPECIFIC SAFETY INSTRUCTIONS FOR SCROLL SAWS

1. DO NOT ALTER OR MISUSE THE TOOL.

These tools are precision built. Any alteration or modification not specified is misuse and may result in dangerous conditions.

2. AVOID GASEOUS AREAS.

Do not operate electric tools in gaseous or explosive environments. Motors in these tools normally spark and may result in dangerous conditions.

3. BEFORE CONNECTING TO THE POWER SOURCE.

Make sure the voltage supplied is the same as that specified on the nameplate of the tool. A power source with a voltage greater than that specified for the tool can result in serious injury to the operator, as well as damage to the tool. If in doubt, DO NOT PLUG IN TOOL. Using a power source with a voltage less than the nameplate rating is harmful to the motor.

4. STABILITY OF THE SCROLL SAW.

Your scroll saw must be bolted securely to a stand or a workbench. In addition, if there is any tendency for the scroll saw to tip over or move during certain operations, such as cutting long, heavy boards, bolt your scroll saw stand or workbench to the floor.

5. LOCATION.

This scroll saw is intended for indoor use only.

6. MISSING OR MALFUNCTIONING PARTS.

If any part of the scroll saw is missing, malfunctioning, has been damaged or broken...such as the motor switch, or other operating control, a safety device or the power cord...cease operating immediately until the particular part is properly repaired or replaced.

7. CUTTING SMALL PIECES.

Do not cut a piece too small to hold by hand. HINT: When making very small cutouts, always secure the workpiece to a scrap piece of plywood with double faced tape. This way, the workpiece is supported and your fingers are away from the blade.

8. CLEARING THE TABLE OF ALL OBJECTS.

Never turn your scroll saw on before clearing the table of all objects (tools, scraps of wood...) except for the workpiece and related feed and support devices for the operation planned.

9. AVOID AWKWARD HAND POSITIONS.

A sudden slip could cause a hand to move into the blade.

10. ALWAYS ADJUST THE DROP FOOT.

Adjust the drop foot to just clear the workpiece to protect the operator, it keeps blade breakage to a minimum and provides maximum support for the blade.

11. BLADE TENSION.

Always adjust the blade tension correctly.

12. BLADE TEETH DIRECTION.

The scroll saw should cut on the down stroke. Always make sure the blade teeth are oriented downwards towards the table.

13. SUPPORT WORKPIECE.

Hold the workpiece firmly against the table. When cutting a large piece of material, make sure it is supported at table height.

14. FEEDING SPEED.

Do not feed the material too fast while cutting. Only feed the material fast enough so that the blade will cut. Keep fingers away from the blade.

15. CUTTING IRREGULAR MATERIAL.

Use caution when cutting off material which is irregular in cross section, it could pinch the blade before the cut is completed. A piece of moulding, for example, must lay flat on the table as to not rock while being cut.

16. CUTTING ROUND MATERIAL.

Use caution when cutting off round material such as dowel rods or tubing. They have the tendency to roll while being cut, causing the blade to "bite". Secure round material at all times.

17. DO NOT perform any layout, assembly or setup work on the table while the scroll saw is operating.

**NOTE AND FOLLOW THE SAFETY WARNINGS AND INSTRUCTIONS
THAT APPEAR ON THE SCROLL SAW**

ELECTRICAL INFORMATION

WARNING

ALL ELECTRICAL CONNECTIONS MUST BE DONE BY A QUALIFIED ELECTRICIAN. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY! ALL ADJUSTMENTS OR REPAIRS MUST BE DONE WITH THE MACHINE DISCONNECTED FROM THE POWER SOURCE. FAILURE TO COMPLY MAY RESULT IN SERIOUS INJURY!

POWER SUPPLY

WARNING: YOUR SCROLL SAW MUST BE CONNECTED TO A 120V WALL OUTLET, WITH A MINIMUM 15-AMP. BRANCH CIRCUIT AND USE A 15-AMP TIME DELAY FUSE OR CIRCUIT BREAKER. FAILURE TO CONNECT IN THIS WAY CAN RESULT IN INJURY FROM SHOCK OR FIRE.

GROUNDING

Your Scroll Saw must be properly grounded. Not all outlets are properly grounded. If you are not sure if your outlet is properly grounded, have it checked by a qualified electrician.

WARNING: IF NOT PROPERLY GROUNDED, THIS SCROLL SAW CAN CAUSE ELECTRICAL SHOCK, PARTICULARLY WHEN USED IN DAMP LOCATIONS. TO AVOID SHOCK OR FIRE, IF THE POWER CORD IS WORN OR DAMAGED IN ANY WAY, HAVE IT REPLACED IMMEDIATELY.

If this Scroll Saw should malfunction or breakdown, grounding provides a path of least resistance for electric current, to reduce the risk of electric shock. This Scroll Saw is equipped with a cord having an equipment-grounding conductor and grounding plug. The plug must be plugged into an appropriate outlet that is properly installed and grounded in accordance with all local codes and ordinances.

WARNING: TO MAINTAIN PROPER GROUNDING, DO NOT REMOVE OR ALTER THE GROUNDING PRONG IN ANY MANNER.

120V OPERATION

As received from the factory, your Scroll Saw is ready to run for 120V operation. This machine is intended for use on a circuit that has an outlet and a plug which looks like the one illustrated in Fig.1.

WARNING: DO NOT USE A TWO-PRONG ADAPTOR(S) FOR THEY ARE NOT IN ACCORDANCE WITH LOCAL CODES AND ORDINANCES. NEVER USE IN CANADA.

EXTENSION CORDS

The use of any extension cord will cause some loss of power. If you do not have a choice, use the table in Fig.2 to determine the minimum wire size (A.W.G-American Wire Gauge) extension cord needed. Use only 3-wire extension cords which have 3-prong grounding type plugs and 3-hole receptacles which accept the tool's plug.

For circuits that are further away from the electrical circuit box, the wire size must be increased proportionately in order to deliver ample voltage to the Scroll Saw motor. Refer to Fig.2 for wire length and size.

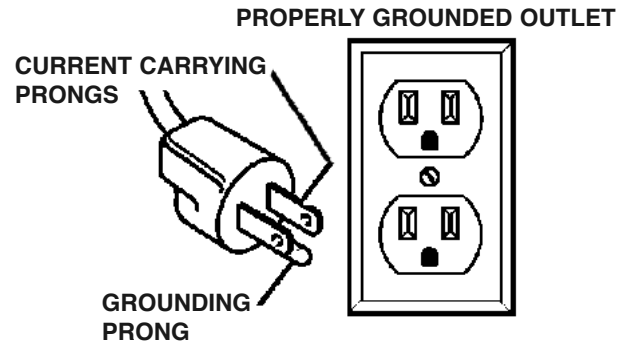


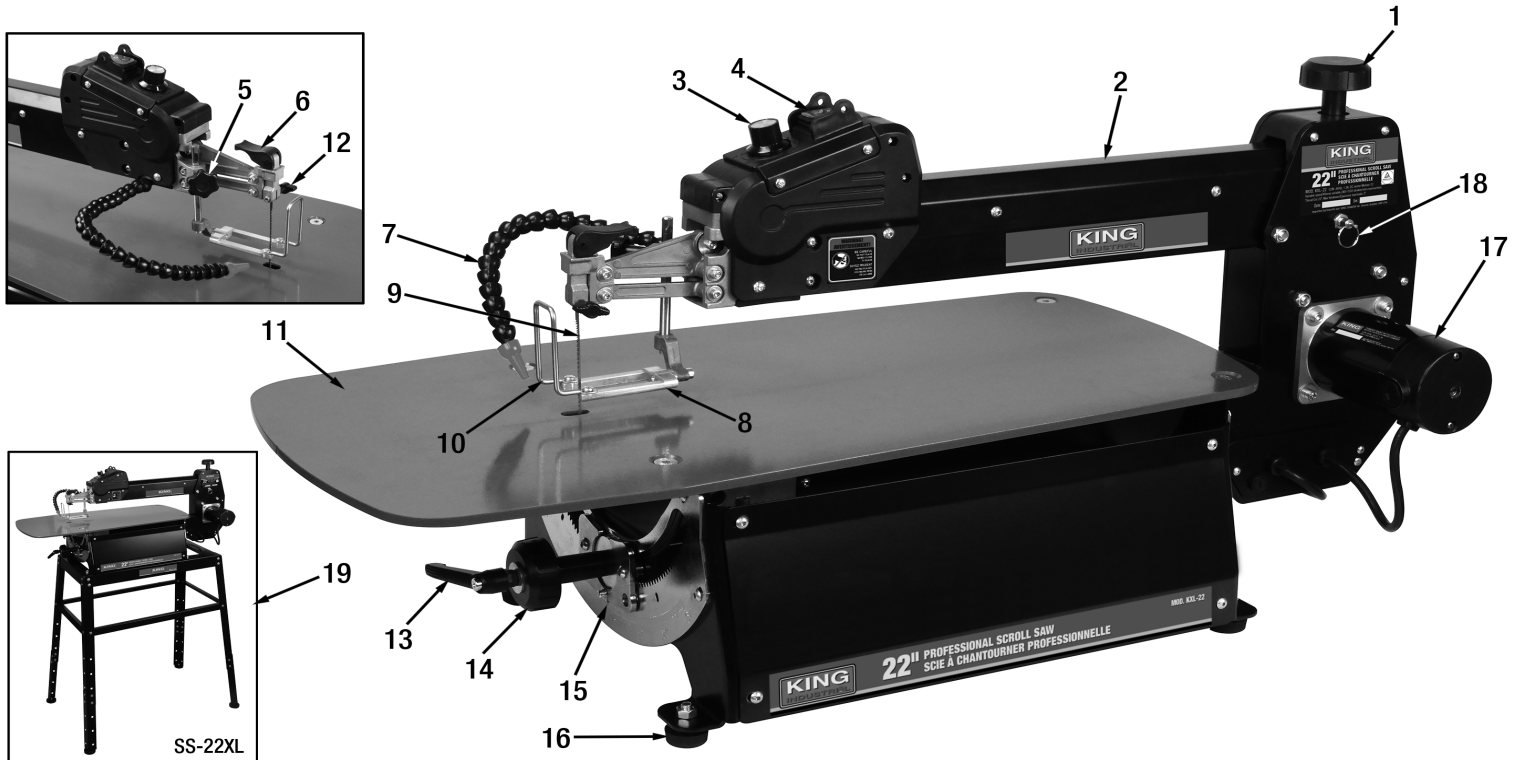
Figure 1

Tool's Amperage Rating	Cord Size in A.W.G.			
	Cord Length in Feet			
	25	50	100	150
3-6	18	16	16	14
6-8	18	16	14	12
8-10	18	16	14	12
10-12	18	16	14	12
12-16	14	12	-	-

Figure 2

GETTING TO KNOW YOUR SCROLL SAW & SPECIFICATIONS

This versatile Professional Scroll Saw is great for making toys, puzzles and jewelry, and because of its cutting capacity, it is a handy do-it-yourself tool. It cuts wood up to 2" thick as well as plastics.



1. **UPPER ARM ADJUSTMENT KNOB.** Adjusting this knob will raise and lower the upper arm to fine tune the blade tension.
2. **UPPER ARM.**
3. **BLADE SPEED ADJUSTMENT KNOB.** Allows you to increase or decrease the blade speed by rotating the knob.
4. **POWER SWITCH.** Has a lockout safety feature which is intended to prevent accidental starting.
5. **DROP FOOT LOCK KNOB.**
6. **BLADE TENSION LEVER.**
7. **BLOWER.** The sawdust blower keeps the workpiece clean for more accurate scroll cuts. For best results, always direct the air flow at the blade and the workpiece.
8. **DROP FOOT.** The drop foot should always be lowered until it rests on top of the workpiece to prevent the workpiece from lifting during the cut, but not so much that the workpiece drags.
9. **BLADE (5" PINLESS).**
10. **REMOVEABLE BLADE GUARD.**
11. **TABLE.**
12. **UPPER BLADE LOCK KNOB.**
13. **BLADE TILT LOCK HANDLE.** Used to lock the Scroll Saw head in the desired angle.
14. **ANGLE ADJUSTMENT KNOB.** Select the desired angle by rotating the angle adjustment knob.
15. **ANGLE POINTER AND ANGLE SCALE.**
16. **LEVELING FEET (1 OF 4).**
17. **ELECTRIC DC MOTOR.**
18. **HEAD UNLOCK PULL RING.** When the upper arm is raised completely, it will lock into place. Pull the pull ring to unlock and lower upper arm.
19. **OPTIONAL STAND (model SS-22XL).**

SPECIFICATIONS

MODEL	KXL-22
VOLTAGE.....	120V, 60 Hz, 1 phase
AMPS	1.3A
MOTOR R.P.M.	550-1,550 RPM
MAX THROAT CAPACITY	22"
MAX. WORKPIECE THICKNESS	2"
VARIABLE SPEEDS	550-1,550 Strokes/min
BLADE TILT RANGE	45° Left / 45° Right
TABLE SIZE	13-3/4" X 27-5/8"
WEIGHT	69 lbs

UNPACKING, ASSEMBLY & ADJUSTMENTS

UNPACKING

WARNING! To avoid personal injury from unexpected starting or electrical shock, do not plug the power cord into a power source. The power cord must remain unplugged whenever you are adjusting or maintaining your Scroll Saw.

WARNING! Lifting the Scroll Saw by the upper arm could result in damage to the drivetrain. Instead, lift the Scroll Saw by holding onto the table and the motor as shown in Fig.3.

INSTALLING THE LEVELING FEET

- 1) Install the leveling feet as shown in Fig.4, with one hex. nut (A) above the mounting hole, and one hex. nut below (B). Adjust the height of the feet by loosening the hex. nuts as needed.

MOUNTING YOUR SCROLL SAW TO A BENCH

- 1) Mounting your Scroll Saw base (A) Fig.5 to a workbench (C), a solid bench is preferable over a plywood bench where noise and vibration will be more noticeable.
- 2) The hardware to mount this Scroll Saw to a workbench is NOT SUPPLIED. However, we recommend the hardware used be no smaller than the following: 4 x hex. bolts - 1/4 - 20 (D), 4 x washers 9/32" (E), 4 x spring washers 9/32" (F), 8 x hex. nuts 1/4 - 20 (G).
- 3) A soft foam pad (B) Fig.5 placed between your Scroll Saw and your workbench is not supplied but we recommend the use of such a pad to reduce noise and vibration.

DO NOT OVERTIGHTEN THE MOUNTING BOLTS- leave some cushion in the foam pad for absorbing noise and vibration.

ON / OFF SWITCH

This Scroll Saw is equipped with a rocking On/Off power switch (A) Fig.6, featuring a plastic dust protection cover. Additionally, the switch can be locked out by inserting a padlock through the two holes (B).

ADJUSTING BLADE SPEED (550-1550 SPM)

The Scroll Saw blade speed can be adjusted by rotating the blade speed adjustment knob (C) Fig.6. Turn the knob clockwise to increase the blade speed, and counterclockwise to decrease the blade speed.

General Guidelines for setting blade speed:

- 1) Type of materials, thickness of materials, blade type, rate of cutting, experience and skill, desired finish quality, and personal preference are all factors that will affect blade speed selection.
- 2) In general, the higher the blade speed, the easier it will be to make cuts, and the smoother the cuts will be. Select the highest blade speed that you feel comfortable with based on your experience and skill level.
- 3) In general, the harder or denser the workpiece material, the slower the blade speed required will be.
- 4) When using thin blades, cutting most types of metal, or other brittle and delicate materials, a slower blade speed may be desired.
- 5) To prevent certain types of wood or other materials from burning while you cut, you may need to lower the blade speed.

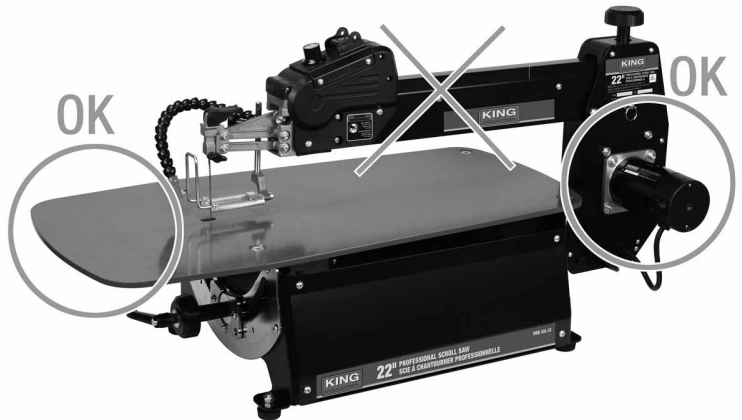


FIGURE 3

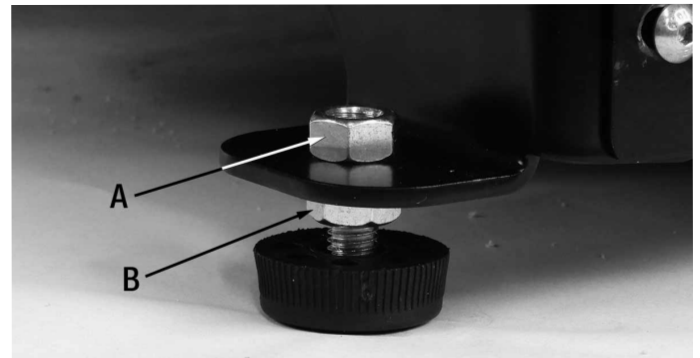


FIGURE 4

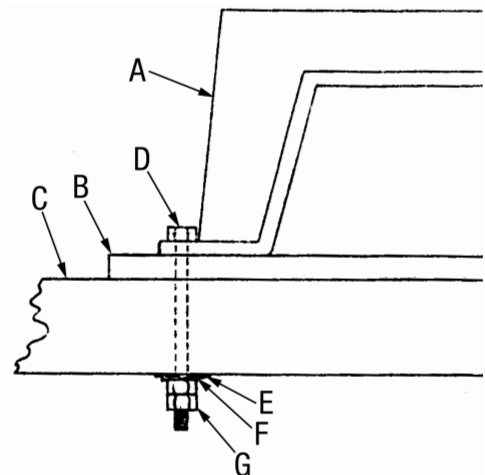


FIGURE 5

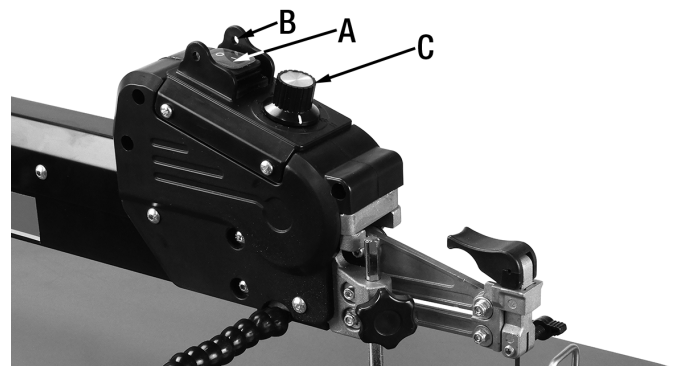


FIGURE 6

ADJUSTMENTS

ADJUSTING THE BLOWER

The built-in blower can be adjusted to keep the workpiece clear of dust, ensuring reference lines are visible. Adjust the nozzle (A) Fig.7 so that it is a comfortable distance away from your hands as you move the workpiece.

USING THE DROP FOOT

This Scroll Saw has a drop foot (B) Fig.7 that must be adjusted to hold the workpiece against the table during cutting. The drop foot can be adjusted up and down by turning the lock knob (C). Loosen the lock knob to set the drop foot at the desired height. Once the height is set, (ensuring the workpiece is still free to move underneath) retighten the lock knob.

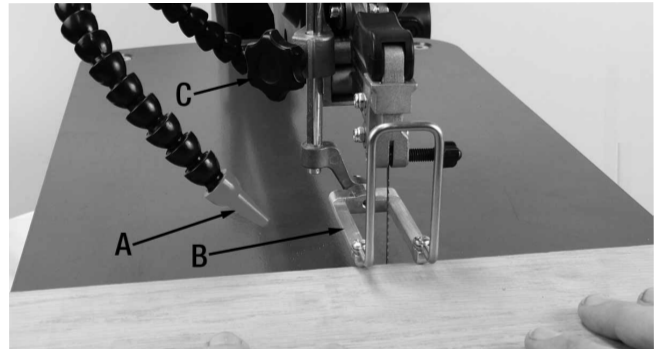


FIGURE 7

SETTING THE HEAD FOR HORIZONTAL OR BEVEL CUTTING

The head of the Scroll Saw can be tilted to the right or left to allow for angle or bevel cuts. The table remains flat and stationary so that cuts can be made easily and comfortably. The head tilt controls are located at the front of the Scroll saw, underneath the table, as shown in Fig.8.

To tilt the head of the Scroll Saw:

- 1) Loosen the blade tilt lock handle (A) Fig.8 by turning it counterclockwise.
- 2) Turn the large knob (B) Fig.8 clockwise or counter-clockwise until the blade is set at the desired cutting angle.
- 3) Use the angle pointer (C) Fig.8 and the degree markings (D) to assist in setting the desired angle.
- 4) Turn the blade tilt lock handle (A) clockwise to retighten and secure the Scroll Saw head.

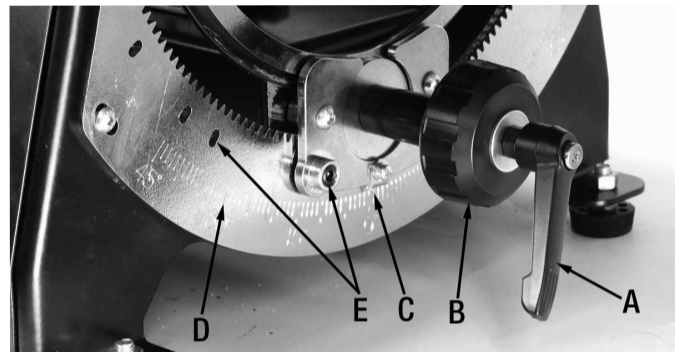


FIGURE 8

NOTE: When turning the large knob (B) Fig.8 as you set the head angle, a detent will engage the positive stops (E) and will snap into common cutting angles (0°, 22.5°, 30° and 45° left and right).

NOTE: When tilting the head to the left at extreme angles, you may need to remove and reverse the position of the lower blade mount lock knob (A) Fig.9, this will ensure there is enough clearance under the table. Undo the lock knob (A), undo the set screw (B) on the opposite side and reverse the parts. Lock knob is shown installed on the other side (C).

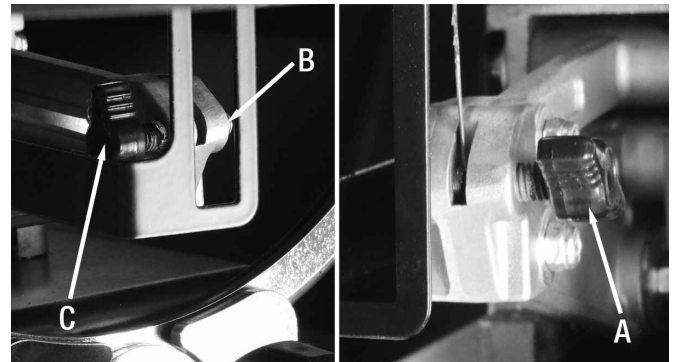


FIGURE 9

REMOVING & INSTALLING SAW BLADES

- 1) To remove a saw blade, flip the blade tension lever (A) upwards as shown in Fig.10. Loosen the upper lock knob (B) on the upper blade mount (C), and loosen the lower lock knob (D) on the lower blade mount (E).
- 2) Remove the blade.

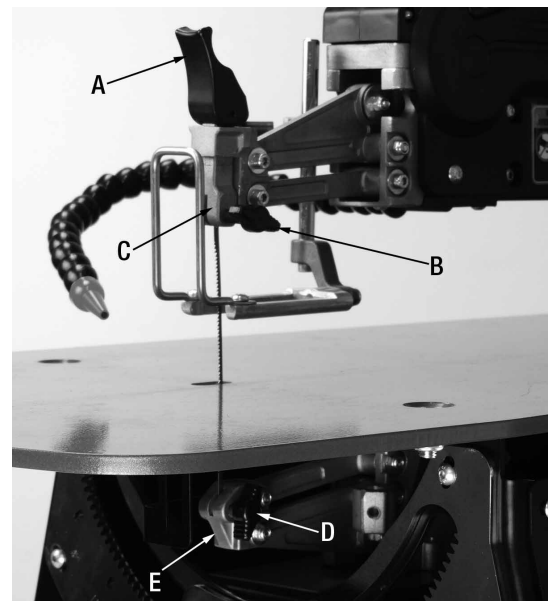


FIGURE 10

ADJUSTMENTS

REMOVING & INSTALLING SAW BLADES continued...

- 3) Before installing a new or different blade, make sure the upper arm (A) Fig.11 is roughly parallel with the table (B) by turning the upper arm/ blade tension adjustment knob (C) to raise the arm up or down as needed.
- 4) To install a new blade, ensure the teeth are facing forward and down. Slide the top of the blade into the upper blade mount, ensuring that the top of the blade is higher than the set screw (A) Fig.12, but lower than the top of the shoulder of the blade mount (B).
- 5) Retighten the upper lock knob and lower lock knob, lower the blade tension lever, refer to Fig.10.

NOTE: Do not overtighten the blade clamp lock knobs. Only tighten enough to prevent the blade from slipping.

SETTING THE BLADE TENSION

Properly setting the blade tension will make the blade last longer, and make it less likely to break during cutting. Setting the tension properly is something that comes with experience. Here are some general guidelines:

- 1) If the blade is too tight, it will be more likely to break. If the blade is too loose, you may notice it drifting off course during cutting, or excessive noise and vibration.
- 2) With the blade secured properly and the blade tension lever (Fig.10) in the down/locked position, pluck the blade like the string of an instrument. If it is properly tensioned, you will hear a clear note.
- 3) If the blade is not properly tensioned, it can be fine tuned by rotating the upper arm/ blade tension adjustment knob (C) Fig.11 to raise the arm up or down as needed.

BLADE CLAMPING LOCK KNOBS

NOTE: The blade could be damaged if the set screw (A) Fig.12 is threaded beyond the blade slot. Make sure the set screw is protruding slightly into the blade slot when tightening the blade using the lock knob (C).

NOTE: Over time the blade clamping lock knobs and set screws may be worn smooth, and begin to lose their grip on the blade. If the blade is slipping, this may be a sign that you should replace the blade clamping lock knobs and set screws. If they need replacing DO NOT OVER TIGHTEN THE LOCK KNOBS TO COMPENSATE FOR BLADE SLIPPAGE.

SCROLL SAW BLADES

NOTE: This Scroll Saw can only use 5" pinless blades. Fig.13 lists all the Scroll Saw blades available from King Canada.

SKIP TOOTH. Blades with widely set teeth for fast cuts with minimum burning and good chip removal. Works best on soft woods and plastics 3/32" - 2" thick.

DOUBLE TOOTH. For faster cutting and a smoother edge while providing efficient chip removal. Works well on both hard and soft woods and plastics 3/32" - 2" thick.

SPIRAL. Teeth are twisted in a spiral shape along the blade length. Allows the blade to cut in all directions up to 360 degrees without turning your work. Excellent for 0 radius scroll projects. Works well on both hard and soft woods and plastics 3/32" - 3/4" thick.

REVERSE TEETH. Set with reverse teeth, blades eliminate tear-out and provide a splinter-free surface. Blades run smoother and more accurate when working on both straight and radius cuts. Will outperform regular stamped blades and work best when cutting hard and exotic woods 1/4" - 2" thick.

PRECISION GROUND. Set with reverse teeth, blades eliminate tear-out and provide a splinter-free surface. Blades run smoother and more accurate when working on both straight and radius cuts. Will outperform regular stamped blades and work best when cutting hard and exotic woods 1/4" - 2" thick.

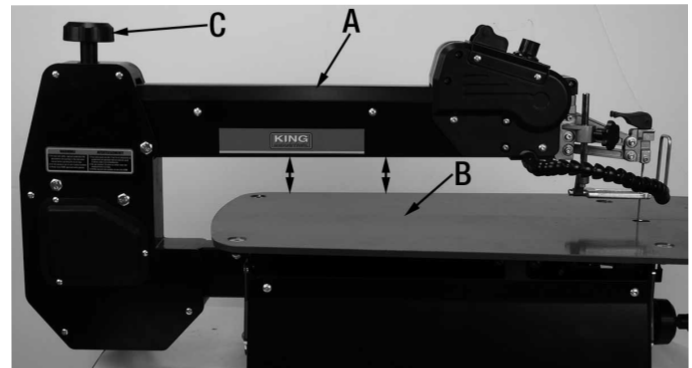


FIGURE 11

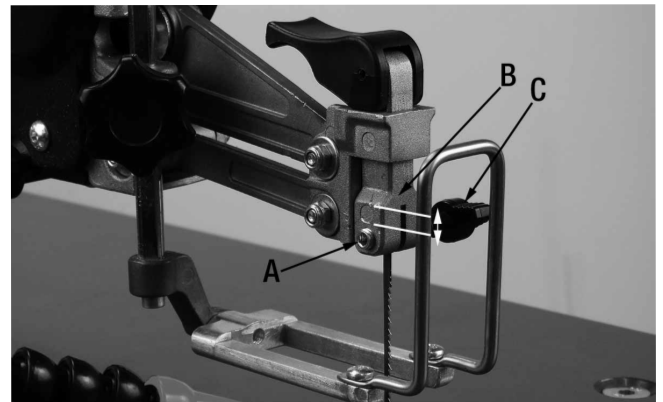


FIGURE 12

Skip tooth 						
MODEL	Universal Size	TPI	Width	Thickness	Cutting Thickness	Kit Qty
KSSB-SK20	2/0	30	.015	.010	3/32" - 1/4"	12
KSSB-SK02	02	23	.028	.013	3/32" - 1/4"	12
KSSB-SK05	05	16	.039	.015	1/4" - 1/2"	12
KSSB-SK07	07	14	.045	.018	1/2" - 3/4"	12
KSSB-SK12	12	9.5	.063	.024	1" - 2"	12
Double Tooth 						
MODEL	Universal Size	TPI	Width	Thickness	Cutting Thickness	Kit Qty
KSSB-DT20	2/0	37	.024	.011	3/32" - 1/4"	12
KSSB-DT02	02	27	.030	.013	3/32" - 1/4"	12
KSSB-DT03	03	23	.032	.014	3/32" - 1/4"	12
KSSB-DT04	04	20	.035	.015	1/4" - 1/2"	12
Spiral 						
MODEL	Universal Size	TPI	Width	Thickness	Cutting Thickness	Kit Qty
KSSB-SP02	02	44	.028	-	1/8" - 1/4"	12
KSSB-SP03	03	40	.031	-	1/8" - 1/4"	12
KSSB-SP04	04	36	.035	-	1/4" - 1/2"	12
Reverse Tooth 						
MODEL	Universal Size	TPI	Width	Thickness	Cutting Thickness	Kit Qty
KSSB-RT07	07	12	.043	.017	1/2" - 1"	12
KSSB-RT09	09	12	.050	.017	1" - 2"	12
Precision Ground 						
MODEL	Universal Size	TPI	Width	Thickness	Cutting Thickness	Kit Qty
KSSB-PG05	05	13	.037	.015	1/4" - 1/2"	12
KSSB-PG07	07	10	.043	.017	1/2" - 1"	12
KSSB-PG09	09	8	.050	.018	1" - 2"	12

FIGURE 13

ADJUSTMENTS & BASIC OPERATION

SQUARING THE BLADE TO THE TABLE

Normal wear over time may cause the blade to come out of alignment with the table. Check to see if the blade is square with the table periodically. To check the blade angle and square it to the table:

- 1) Make sure the saw is turned off and unplugged.
- 2) Set the blade angle to 0° using the blade tilt controls at the front of the saw.
- 3) Place a small square (A) Fig.14 on the table, against the blade (B). Check the blade angle.
- 4) If the blade is not square with the table, loosen the four allen head round screws (C) Fig.14 securing the front trunnion (D) and the four allen head round screws (E) securing rear trunnion (F) at the back of the Scroll Saw.
- 5) Move the entire head of the saw until the blade is square with the table.
- 6) Lock the saw head in this position and retighten all of the trunnion allen head round screws.
- 7) Once the adjustment is done, it may be needed to reposition the tilt angle pointer (C) Fig.8 so it aligns with the 0° mark on the angle scale. Loosen angle pointer screw, adjust position and retighten screw.

INTERIOR CUTTING & FRETWORK

1. Lay out the design on the workpiece. Drill a 1/4" pilot hole in the workpiece.
2. Lift the blade tension lever (A) Fig.10. Loosen the blade lock knob (B).
3. Gently lift the upper arm (A) Fig.11 of the scroll saw until it locks in place.
4. Place the workpiece on the saw table, threading the blade through the hole in the workpiece.
5. Pull the head unlock pull pin (A) Fig.15, lower the upper arm.
6. Secure the blade in the upper blade mount. Tension blade properly.
7. Make your interior cut.
8. When finished making the interior cut, turn the Scroll Saw OFF and unplug it. Release blade tension and remove the blade from the upper blade mount. Raise the upper arm and remove the workpiece. Lower the upper arm.

BASIC SCROLL SAW OPERATION

Follow these instructions for operating your Scroll Saw to get the best results and to minimize the likelihood of personal injury.

WARNING! To avoid being pulled into the blade - **DO NOT WEAR:** Loose fitting gloves, necktie, loose clothing, jewelry. **TIE BACK LONG HAIR AND ROLL UP SLEEVES ABOVE THE ELBOWS.**

- 1) You must feed 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. The blade will flex backwards when you'll apply too much feeding pressure. Too much feeding pressure will cause blade breakage.
- 2) There is a learning curve for each person who wants to use this Scroll Saw. During that period of time it is expected that some blades will break until you learn how to use the Scroll Saw and receive the greatest benefit from the blades.
- 3) Best results are achieved when cutting wood less than 1" thick.
- 4) When cutting wood thicker than 1" the user must feed the wood very slowly into the blade, increase the blade tension and take extra care not to bend or twist the blade while cutting in order to maximize the blade life.
- 5) The teeth on the Scroll Saw blade wear out and as such must be replaced frequently for best cutting results. Scroll Saw blades generally stay sharp for 1/2 hour to 2 hours of cutting.
- 6) To get accurate cuts be prepared to compensate for the blade's tendency to follow the grain of the wood as you are cutting.
- 7) When you are choosing a blade to use with your Scroll Saw, consider the following carefully:
 - a. Choose a blade that allows at least three teeth to be in contact with the workpiece at all times.
 - b. Very fine, narrow blades should be used to cut thin wood (1/4" thick or less).
 - c. To cut thicker wood, use wider blades with fewer teeth per inch.
 - d. Most blade packages state the size or thickness of wood which the blade is intended to cut, and the radius (size of curve) which can be cut with that blade. Refer to the previous page for more specific blade information.
 - e. Wider blades can't cut curves as tight or small as thinner blades.
 - f. This saw uses **5" long, plain-end pinless type blades only.**
 - g. Blades wear faster when (1) cutting plywood, which is very abrasive, (2) when cutting thick wood, and (3) when cutting hardwood, or when side pressure is placed on the blade.

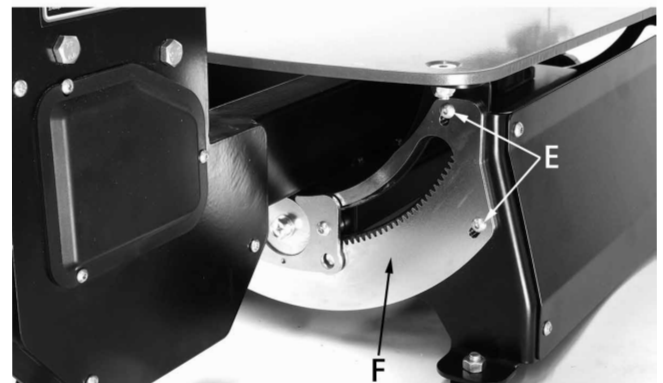
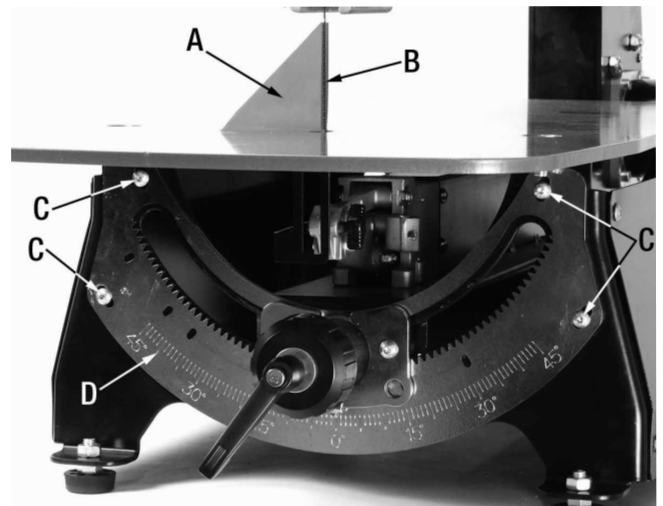


FIGURE 14



FIGURE 15

MAINTENANCE

WARNING! For your own safety, turn the switch “OFF” and remove the plug from the power source before maintaining or lubricating your Scroll Saw.

CARBON BRUSH REPACEMENT

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

1. Unplug the saw. To access the carbon brushes, remove the carbon brush cover (A) Fig.16 with a flat-head screwdriver (not included).
2. Carefully remove the old carbon brushes (B) Fig.16. Keep track of which orientation the old carbon brushes were in to prevent unnecessary wear if they are to be reinstalled.
3. Measure the length of the carbon brushes. Install the new set of carbon brushes if either carbon brush length is worn down to 19/32” (0.9375”) or less (Fig.17). Reinstall the old carbon brushes (in their original orientation) if your carbon brushes are not worn down to 19/32” or less. Both carbon brushes should be replaced at the same time.
4. Once carbon brushes are installed, secure them with the carbon brush covers (A).

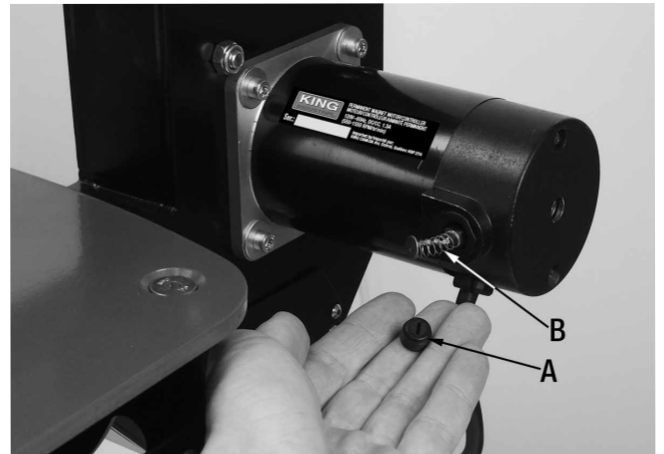


FIGURE 16

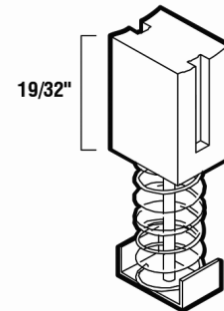


FIGURE 17

GENERAL MAINTENANCE

1. Clean your Scroll Saw after each use. Wipe it down with a soft cloth. Clean any accumulated sawdust out of the base. Use low-pressure compressed air (do not exceed 25 PSI) to blow any sawdust out of the blade mounts, blade bevel rails, etc.
2. If desired, apply a light coat of dry lubricant (such as PTFE) to the inside of the blade bevel rails. This will help the table bevel smoothly.
3. The motor bearings, interior bearings, and table bevel rail bearings are all sealed and require no additional lubrication.

PARTS DIAGRAM & PARTS LISTS

Refer to the Parts section of the King Canada web site for the most updated parts diagram and parts list.