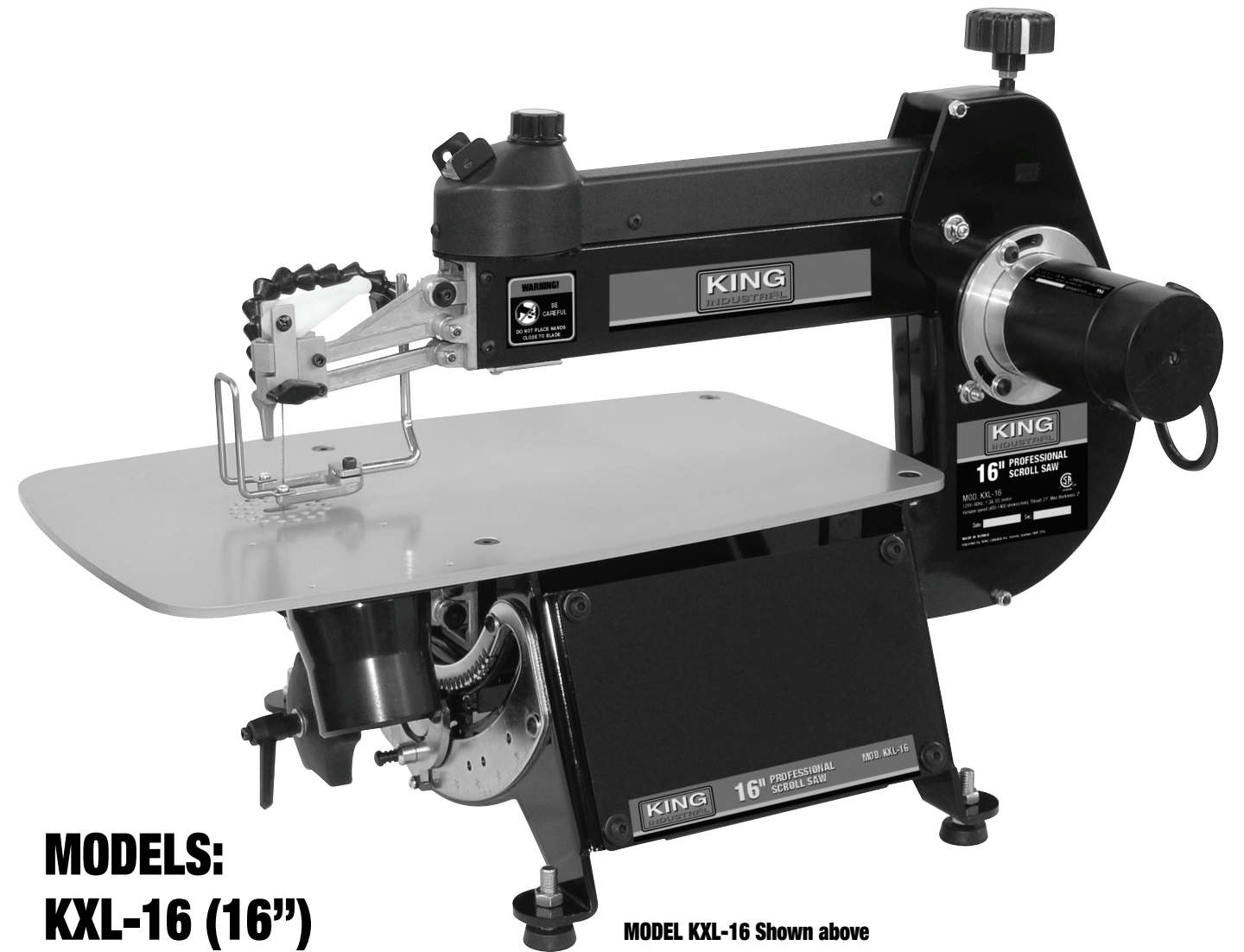




# PROFESSIONAL SCROLL SAW



**MODELS:**  
**KXL-16 (16")**  
**KXL-21/100 (21")**  
**KXL-30/100 (30")**

MODEL KXL-16 Shown above

## INSTRUCTION MANUAL

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# PARTS LIST

## MODEL KXL-30/100

No.	Order#	Description	Qty
145-4	2400301454	Washer	4
202	2400302020	Balance block	1
203	2400302030	Set screw	1
204	2400302040	Flat hd allen screw	3
205	2400302050	Spring washer	3
206	2400302060	Washer	3
207	2400302070	Motor cover plate	1
208	2400302080	Countersunk hd screw	4
209	2400302090	Ball bearing	1
210	2400302100	Motor cam	1
211	2400302110	Hex. nut	1
212	2400302120	Ball bearing	3
214	2400302140	Rocker cam	1
215	2400302150	Nylon hex. nut	1
217	2400302170	Ball bearing	12
218	2400302180	Inner bearing sleeve (short)	2
219	2400302190	Cap screw	1
220	2400302200	Bearing cover	2
221	2400302210	Bearing	2
222	2400302220	Main rocker pivot	1
223	2400302230	Nylon hex. nut	12
224	2400302240	Cap screw	2
226	2400302260	Air pump bellows	2
227	2400302270	Front rocker	2
228	2400302280	Washer	6
229	2400302290	Inner bearing sleeve-front rocker	2
230	2400302300	Bearing inner sleeve (long)	2
231	2400302310	Rocker mount	2
232	2400302320	Cap screw	2
233	2400302330	Cap screw	4

No.	Order#	Description	Qty
235	2400302350	Strut	2
236	2400302360	Blade chuck	1
237	2400302370	Set screw	2
238	2400302380	Blade clamp lock knob	2
239	2400302390	Blade	1
240	2400302400	3mm hex. key	1
241	2400302410	Clamp bracket	1
242	2400302420	Set screw	1
243	2400302430	Spring	1
244	2400302440	Tension lever	1
245	2400302450	Pan hd screw	1
246	2400302460	Sliding bracket	1
257	2400302570	Washer	4
258	2400302580	Inner bearing sleeve (long)	4
259	2400302590	Bearing inner sleeve	1
260	2400302600	Washer	2
261	2400302610	Cap screw	2
262	2400302620	Washer	12
264	2400302640	Drive link assembly	2
265	2400302650	Motor	1
266	2400302660	Spacer	1
267	2400302670	Bearing sleeve	2
268	2400302680	Cap screw	2
269	2400302690	Washer	8
270	2400302700	Motor brush	2
273	2400302730	Hex. nut	1
274	2400302740	Pedal switch assembly	1
275	2400302750	Switch plate	1
276	2400302760	Round hd allen screw	2
277	2400302770	Screw post	1

# WARRANTY INFORMATION

**2-YEAR  
LIMITED WARRANTY  
FOR THESE SCROLL SAWS**

**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, through your Dealer, or directly from King 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](http://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](http://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.

# PARTS LIST MODEL KXL-30/100

No.	Order#	Description	Qty
1	2400300010	Main body	1
3	2400300030	Top cover	1
4	2400300040	Round hd allen screw	5
5	2400300050	Switch cover	1
6	2400300060	Switch	1
12	2400300120	Blower	1
18	2400300180	Hex. bolt	2
19	2400300190	Tension plate	1
20	2400300200	Hold down mount plate	1
21	2400300210	Flat hd allen screw	2
22	2400300220	Lock knob	1
23	2400300230	Washer	4
24	2400300240	Hold down clamp screw	1
25	2400300250	Hold down bar	1
26	2400300260	Cap screw	1
27	2400300270	Hold down fork	1
28	2400300280	Blower plate	1
29	2400300290	Self tapping screw	4
30	2400300300	Variable speed knob	1
31	2400300310	Variable speed unit	1
32	2400300320	Control cable	1
33	2400300330	Flat hd screw	4
35	2400300350	Round hd allen screw	3
37	2400300370	Power cord socket	1
38	2400300380	Fuse	1
40	2400300400	Gear cover	1
41	2400300410	Hex. nut	1
45	2400300450	Flat hd allen screw	4
46	2400300460	Special set screw	1
47	2400300470	Tooth washer	4
48	2400300480	Pan hd screw	4
51	2400300510	Nylon hex. nut	4
52	2400300520	Nylon hex. nut	2
53	2400300530	Spring washer	1
54	2400300540	Washer	1
56	2400300560	Hex. bolt	2
57	2400300570	Upper arm	1
58	2400300580	Knob	1
59	2400300590	Hex. nut	1
60	2400300600	Ajusting lever	1
61	2400300610	Control box	1
62	2400300620	Cross block retainer	1
63	2400300630	Cross block housing	1
64	2400300640	Washer	1
65	2400300650	Nylon hex. nut	1
66	2400300660	Flat hd allen screw	1
67	2400300670	Cord holder	1
68	2400300680	Washer	1

No.	Order#	Description	Qty
69	2400300690	Nylon hex. nut	1
70	2400300700	Flat hd allen screw	7
71	2400300710	Cover	1
72	2400300720	Set screw	1
75	2400300750	Strain relief	1
76	2400300760	Motor PC board	1
84	2400300840	Switch "U" plate	1
92	2400300920	Power wire	1
93	2400300930	Protection bracket- upper	1
94	2400300940	Protection bracket- lower	1
95	2400300950	Bracket	1
100	2400301000	Spring washer	2
101	2400301010	Trunnion	2
102	2400301020	Side panel	2
103	2400301030	Rear trunnion plate	1
104	2400301040	Front trunnion plate	1
105	2400301050	Table	1
107	2400301070	Power cord with plug	1
108	2400301080	Spong block	1
110	2400301100	Hex. bolt	1
111	2400301110	Spring washer	3
112	2400301120	Washer	9
113	2400301130	Blade tilt washer	2
114	2400301140	Blade tilt driver gear	2
115	2400301150	Hex. bolt	10
116	2400301160	Angle follower	2
117	2400301170	Flat hd allen screw	8
118	2400301180	Washer	8
119	2400301190	Flange hd hex. nut	12
120	2400301200	Angle indicator bracket	1
121	2400301210	Flat hd allen screw	2
122	2400301220	E-ring	1
123	2400301230	Stop pin barrel	1
124	2400301240	Spring	1
125	2400301250	Stop pin	1
126	2400301260	Tilt knob	1
127	2400301270	Washer	1
128	2400301280	Blade tilt lock handle	1
129	2400301290	Countersunk hd screw	4
135	2400301350	Leveling foot	4
136	2400301360	Tilt lock draw rod	1
137	2400301370	Hex. nut	8
138	2400301380	Pointer	1
139	2400301390	Pan hd screw	1
140	2400301400	Washer	1
145-1	2400301451	Plastic shroud	1
145-2	2400301452	Dust chute	1
145-3	2400301453	Flat hd screw	4

# PARTS LIST

## MODEL KXL-21/100

No.	Order#	Description	Qty
145-4	2400211454	Washer	4
202	2400212020	Balance block	1
203	2400212030	Set screw	1
204	2400212040	Flat hd allen screw	3
205	2400212050	Spring washer	3
206	2400212060	Washer	3
207	2400212070	Motor cover plate	1
208	2400212080	Countersunk hd screw	4
209	2400212090	Ball bearing	1
210	2400212100	Motor cam	1
211	2400212110	Hex. nut	1
212	2400212120	Ball bearing	3
214	2400212140	Rocker cam	1
215	2400212150	Nylon hex. nut	1
217	2400212170	Ball bearing	12
218	2400212180	Inner bearing sleeve (short)	2
219	2400212190	Cap screw	1
220	2400212200	Bearing cover	2
221	2400212210	Bearing	2
222	2400212220	Main rocker pivot	1
223	2400212230	Nylon hex. nut	12
224	2400212240	Cap screw	2
226	2400212260	Air pump bellows	2
227	2400212270	Front rocker	2
228	2400212280	Washer	6
229	2400212290	Inner bearing sleeve-front rocker	2
230	2400212300	Bearing inner sleeve (long)	2
231	2400212310	Rocker mount	2
232	2400212320	Cap screw	2

No.	Order#	Description	Qty
233	2400212330	Cap screw	4
235	2400212350	Strut	2
236	2400212360	Blade chuck	1
237	2400212370	Set screw	2
238	2400212380	Blade clamp lock knob	2
239	2400212390	Blade (accessories)	1
240	2400212400	3mm hex. key	1
241	2400212410	Clamp bracket	1
242	2400212420	Set screw	1
243	2400212430	Spring	1
244	2400212440	Tension lever	1
245	2400212450	Pan hd screw	1
246	2400212460	Sliding bracket	1
257	2400212570	Washer	4
258	2400212580	Inner bearing sleeve (long)	4
259	2400212590	Bearing inner sleeve	1
260	2400212600	Washer	2
261	2400212610	Cap screw	2
262	2400212620	Washer	12
264	2400212640	Drive link assembly	2
265	2400212650	Motor	1
266	2400212660	Spacer	1
267	2400212670	Bearing sleeve	2
268	2400212680	Cap screw	2
269	2400212690	Washer	8
270	2400212700	Motor brush	2
273	2400212730	Hex. nut	1
274	2400212740	Pedal switch assembly	1
277	2400212770	Screw post	1

# 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.

## 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.

## ATTACHING POWER CORD

The power cord socket (A) Fig.3 is located behind the motor. Attach the female end of the power cord (B) into the power cord socket (A) as shown.

## ATTACHING PEDAL SWITCH (MODEL KXL-21/100 & KXL-30/100 ONLY)

The pedal switch (A) Fig.4 is a convenient feature which allows you to control the scroll saw activation with your foot and keep both hands free to control your workpiece. Plug in the scroll saw power cord (B) into the socket (C) behind the pedal switch. Then plug in the pedal switch power cord (D) into a 120V outlet shown in Fig.1.

To operate pedal switch, turn the main on/off switch (E) to the On position on the scroll saw, then press the pedal switch with your foot to turn the scroll saw on.

## PROPERLY GROUNDED OUTLET

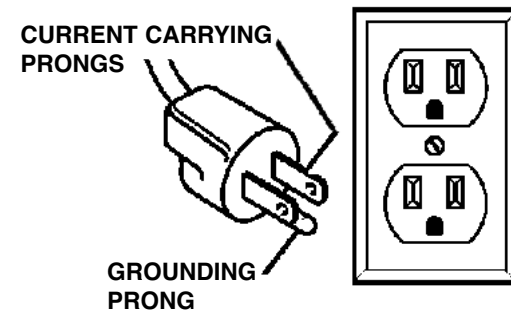


Figure 1

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



Figure 3

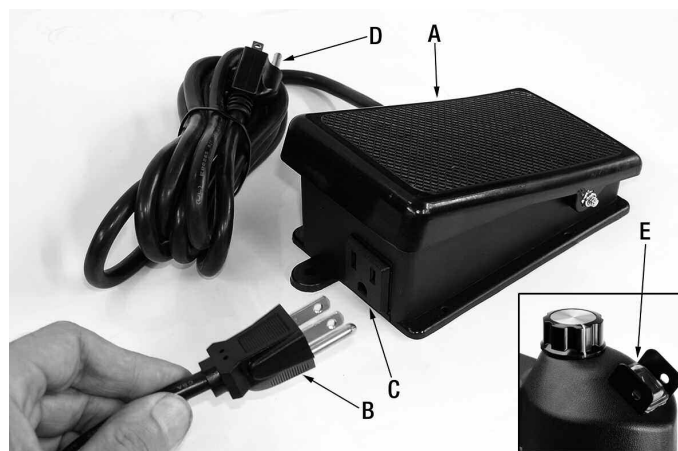


Figure 4

# PARTS LIST MODEL KXL-21/100

No.	Order#	Description	Qty
1	2400210010	Main body	1
3	2400210030	Top cover	1
4	2400210040	Round hd allen screw	5
5	2400210050	Switch cover	1
6	2400210060	Switch	1
12	2400210120	Blower	1
18	2400210180	Hex. bolt	2
19	2400210190	Tension plate	1
20	2400210200	Hold down mount plate	1
21	2400210210	Flat hd allen screw	2
22	2400210220	Lock knob	1
23	2400210230	Washer	4
24	2400210240	Hold down clamp screw	1
25	2400210250	Hold down bar	1
26	2400210260	Cap screw	1
27	2400210270	Hold down fork	1
28	2400210280	Blower plate	1
29	2400210290	Self tapping screw	4
30	2400210300	Variable speed knob	1
31	2400210310	Variable speed unit	1
32	2400210320	Control cable	1
33	2400210330	Flat hd screw	4
35	2400210350	Round hd allen screw	3
37	2400210370	Power cord socket	1
38	2400210380	Fuse	1
40	2400210400	Gear cover	1
41	2400210410	Hex. nut	1
45	2400210450	Flat hd allen screw	4
46	2400210460	Special set screw	1
47	2400210470	Tooth washer	4
48	2400210480	Pan hd screw	4
51	2400210510	Nylon hex. nut	4
52	2400210520	Nylon hex. nut	2
53	2400210530	Spring washer	1
54	2400210540	Washer	1
56	2400210560	Hex. bolt	2
57	2400210570	Upper arm	1
58	2400210580	Knob	1
59	2400210590	Hex. nut	1
60	2400210600	Ajusting lever	1
61	2400210610	Control box	1
62	2400210620	Cross block retainer	1
63	2400210630	Cross block housing	1
64	2400210640	Washer	1
65	2400210650	Nylon hex. nut	1
66	2400210660	Flat hd allen screw	1
67	2400210670	Cord holder	1
68	2400210680	Washer	1

No.	Order#	Description	Qty
69	2400210690	Nylon hex. nut	1
70	2400210700	Flat hd allen screw	7
71	2400210710	Cover	1
72	2400210720	Set screw	1
75	2400210750	Strain relief	1
76	2400210760	Motor PC board	1
84	2400210840	Switch "U" plate	1
92	2400210920	Power wire	1
93	2400210930	Protection bracket- upper	1
94	2400210940	Protection bracket- lower	1
95	2400210950	Bracket	1
100	2400211000	Spring washer	2
101	2400211010	Trunnion	2
102	2400211020	Side panel	2
103	2400211030	Rear trunnion plate	1
104	2400211040	Front trunnion plate	1
105	2400211050	Table	1
107	2400211070	Power cord with plug	1
108	2400211080	Spong block	1
110	2400211100	Hex. bolt	1
111	2400211110	Spring washer	3
112	2400211120	Washer	9
113	2400211130	Blade tilt washer	2
114	2400211140	Blade tilt driver gear	2
115	2400211150	Hex. bolt	10
116	2400211160	Angle follower	2
117	2400211170	Flat hd allen screw	8
118	2400211180	Washer	8
119	2400211190	Flange hd hex. nut	12
120	2400211200	Angle indicator bracket	1
121	2400211210	Flat hd allen screw	2
122	2400211220	E-ring	1
123	2400211230	Stop pin barrel	1
124	2400211240	Spring	1
125	2400211250	Stop pin	1
126	2400211260	Tilt knob	1
127	2400211270	Washer	1
128	2400211280	Blade tilt lock handle	1
129	2400211290	Countersunk hd screw	4
135	2400211350	Leveling foot	4
136	2400211360	Tilt lock draw rod	1
137	2400211370	Hex. nut	8
138	2400211380	Pointer	1
139	2400211390	Pan hd screw	1
140	2400211400	Washer	1
145-1	2400211451	Plastic shroud	1
145-2	2400211452	Dust chute	1
145-3	2400211453	Flat hd screw	4

# PARTS LIST

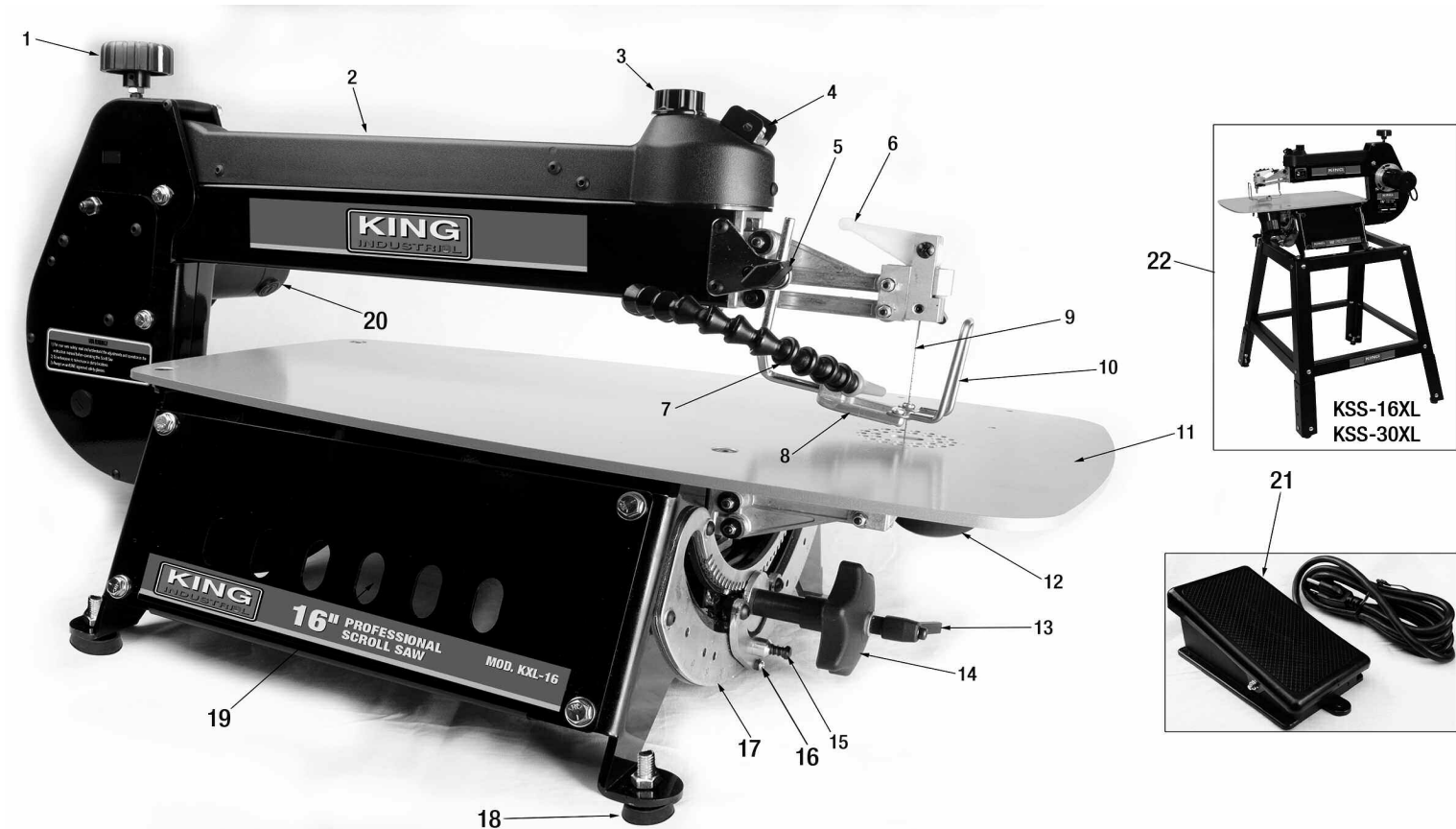
## MODEL KXL-16

No.	Order#	Description	Qty
145-4	2400161454	Washer	4
202	2400162020	Balance block	1
203	2400162030	Set screw	1
204	2400162040	Flat hd allen screw	3
205	2400162050	Spring washer	3
206	2400162060	Washer	3
207	2400162070	Motor cover plate	1
208	2400162080	Countersunk hd screw	4
209	2400162090	Ball bearing	1
210	2400162100	Motor cam	1
211	2400162110	Hex. nut	1
212	2400162120	Ball bearing	3
214	2400162140	Rocker cam	1
215	2400162150	Nylon hex. nut	1
217	2400162170	Ball bearing	12
218	2400162180	Inner bearing sleeve (short)	2
219	2400162190	Cap screw	1
220	2400162200	Bearing cover	2
221	2400162210	Bearing	2
222	2400162220	Main rocker pivot	1
223	2400162230	Nylon hex. nut	12
224	2400162240	Cap screw	2
226	2400162260	Air pump bellows	2
227	2400162270	Front rocker	2
228	2400162280	Washer	6
229	2400162290	Inner bearing sleeve-front rocker	2
230	2400162300	Bearing inner sleeve (long)	2
231	2400162310	Rocker mount	2

No.	Order#	Description	Qty
232	2400162320	Cap screw	2
233	2400162330	Cap screw	4
235	2400162350	Strut	2
236	2400162360	Blade chuck	1
237	2400162370	Set screw	2
238	2400162380	Blade clamp lock knob	2
239	2400162390	Blade	1
240	2400162400	3mm hex. key	1
241	2400162410	Clamp bracket	1
242	2400162420	Set screw	1
243	2400162430	Spring	1
244	2400162440	Tension lever	1
245	2400162450	Pan hd screw	1
246	2400162460	Sliding bracket	1
257	2400162570	Washer	4
258	2400162580	Inner bearing sleeve (long)	4
259	2400162590	Bearing inner sleeve	1
260	2400162600	Washer	2
261	2400162610	Cap screw	2
262	2400162620	Washer	12
264	2400162640	Drive link assembly	2
265	2400162650	Motor	1
266	2400162660	Spacer	1
267	2400162670	Bearing sleeve	2
268	2400162680	Cap screw	2
269	2400162690	Washer	8
270	2400162700	Motor brush	2
273	2400162730	Hex. nut	1
277	2400162770	Screw post	1

# GETTING TO KNOW YOUR SCROLL SAW

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. BLADE GUARD.**
- 11. TABLE.**

- 12. 2-1/2" DUST CHUTE.**
- 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 POSITIVE STOP PIN.** Pushing in the angle locking positive stop pin while rotating the angle adjustment knob will allow the saw to snap into several common angles automatically.
- 16. ANGLE POINTER.**
- 17. ANGLE SCALE.**
- 18. LEVELING FEET (1 OF 4).**
- 19. HOLES FOR BLADE STORAGE.** (Model KXL-21/100 & KXL-30/100).
- 20. ELECTRIC DC MOTOR.**
- 21. PEDAL SWITCH** (Model KXL-21/100 & KXL-30/100).
- 22. OPTIONAL STAND.**

# SPECIFICATIONS & UNPACKING

# PARTS LIST MODEL KXL-16

## SPECIFICATIONS

**MODEL** .....KXL-16  
**VOLTAGE**.....120V, 60 Hz, 1 phase  
**AMPS** .....1.3A  
**MOTOR R.P.M.** .....400-1,400 RPM  
**MAX THROAT CAPACITY** .....16"  
**MAX. WORKPIECE THICKNESS** .....2"  
**VARIABLE SPEEDS** .....400-1,400 Strokes/min  
**BLADE TILT RANGE**.....30° Left / 45° Right  
**TABLE SIZE** .....12" X 18-1/2"  
**PEDAL SWITCH INCLUDED**.....No  
**WEIGHT** .....55 LBS

**MODEL** .....KXL-21/100  
**VOLTAGE**.....120V, 60 Hz, 1 phase  
**AMPS** .....1.3A  
**MOTOR R.P.M.** .....400-1,550 RPM  
**MAX THROAT CAPACITY** .....21"  
**MAX. WORKPIECE THICKNESS** .....2"  
**VARIABLE SPEEDS** .....400-1,550 Strokes/min  
**BLADE TILT RANGE**.....38° Left / 45° Right  
**TABLE SIZE** .....13-1/2" X 23-1/2"  
**PEDAL SWITCH INCLUDED** .....Yes  
**WEIGHT** .....65 LBS

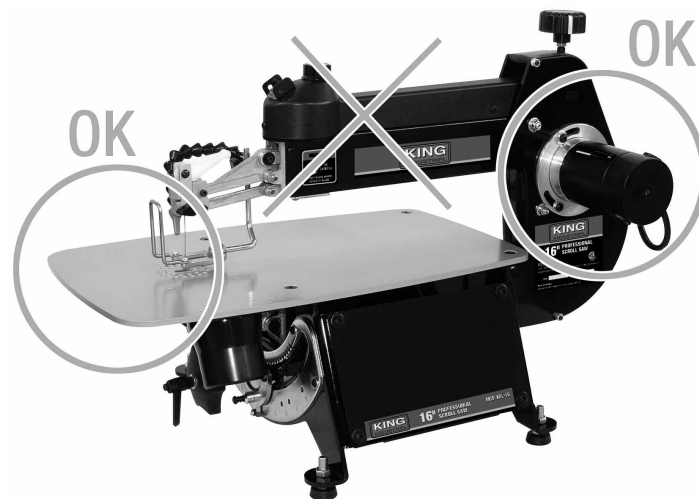
**MODEL** .....KXL-30/100  
**VOLTAGE**.....120V, 60 Hz, 1 phase  
**AMPS** .....1.3A  
**MOTOR R.P.M.** .....400-1,550 RPM  
**MAX THROAT CAPACITY** .....30"  
**MAX. WORKPIECE THICKNESS** .....2"  
**VARIABLE SPEEDS** .....400-1,550 Strokes/min  
**BLADE TILT RANGE**.....38° Left / 45° Right  
**TABLE SIZE** .....14" X 32-1/2"  
**PEDAL SWITCH INCLUDED** .....Yes  
**WEIGHT** .....100 LBS

## 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.

**Note:** Remove the 4 bolts and nuts at the base of the machine to remove the Scroll Saw from the plywood base.

**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.5.



**FIGURE 5**

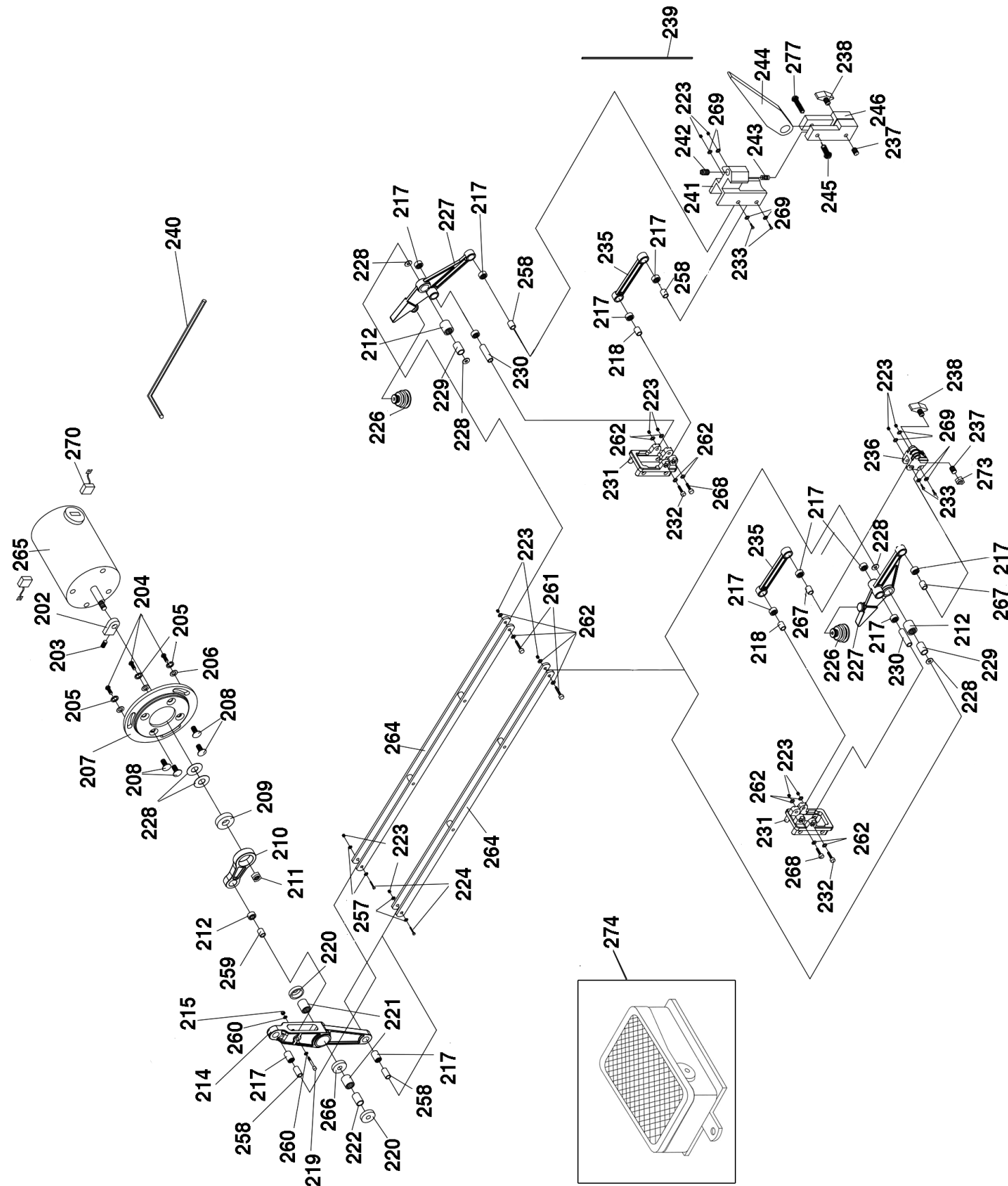
No.	Order#	Description	Qty
1	2400160010	Main body	1
3	2400160030	Top cover	1
4	2400160040	Round hd allen screw	5
5	2400160050	Switch cover	1
6	2400160060	Switch	1
12	2400160120	Blower	1
18	2400160180	Hex. bolt	2
19	2400160190	Tension plate	1
20	2400160200	Hold down mount plate	1
21	2400160210	Flat hd allen screw	2
22	2400160220	Lock knob	1
23	2400160230	Washer	4
24	2400160240	Hold down clamp screw	1
25	2400160250	Hold down bar	1
26	2400160260	Cap screw	1
27	2400160270	Hold down fork	1
28	2400160280	Blower plate	1
29	2400160290	Self tapping screw	4
30	2400160300	Variable speed knob	1
31	2400160310	Variable speed unit	1
32	2400160320	Control cable	1
33	2400160330	Flat hd screw	4
35	2400160350	Round hd allen screw	3
37	2400160370	Power cord socket	1
38	2400160380	Fuse	1
40	2400160400	Gear cover	1
41	2400160410	Hex. nut	1
45	2400160450	Flat hd allen screw	4
46	2400160460	Special set screw	1
47	2400160470	Tooth washer	4
48	2400160480	Pan hd screw	4
51	2400160510	Nylon hex. nut	4
52	2400160520	Nylon hex. nut	2
53	2400160530	Spring washer	1
54	2400160540	Washer	1
56	2400160560	Hex. bolt	2
57	2400160570	Upper arm	1
58	2400160580	Knob	1
59	2400160590	Hex. nut	1
60	2400160600	Ajusting lever	1
61	2400160610	Control box	1
62	2400160620	Cross block retainer	1
63	2400160630	Cross block housing	1
64	2400160640	Washer	1
65	2400160650	Nylon hex. nut	1
66	2400160660	Flat hd allen screw	1
67	2400160670	Cord holder	1
68	2400160680	Washer	1

No.	Order#	Description	Qty
69	2400160690	Nylon hex. nut	1
70	2400160700	Flat hd allen screw	7
71	2400160710	Cover	1
72	2400160720	Set screw	1
75	2400160750	Strain relief	1
76	2400160760	Motor PC board	1
84	2400160840	Switch "U" plate	1
92	2400160920	Power wire	1
93	2400160930	Protection bracket- upper	1
94	2400160940	Protection bracket- lower	1
95	2400160950	Bracket	1
100	2400161000	Spring washer	2
101	2400161010	Trunnion	2
102	2400161020	Side panel	2
103	2400161030	Rear trunnion plate	1
104	2400161040	Front trunnion plate	1
105	2400161050	Table	1
107	2400161070	Power cord with plug	1
108	2400161080	Spong block	1
110	2400161100	Hex. bolt	1
111	2400161110	Spring washer	3
113	2400161130	Blade tilt washer	2
114	2400161140	Blade tilt driver gear	2
116	2400161160	Angle follower	2
117	2400161170	Flat hd allen screw	8
118	2400161180	Washer	8
119	2400161190	Flange hd hex. nut	12
120	2400161200	Angle indicator bracket	1
121	2400161210	Flat hd allen screw	2
122	2400161220	E-ring	1
123	2400161230	Stop pin barrel	1
124	2400161240	Spring	1
125	2400161250	Stop pin	1
126	2400161260	Tilt knob	1
127	2400161270	Washer	1
128	2400161280	Blade tilt lock handle	1
129	2400161290	Countersunk hd screw	4
135	2400161350	Leveling foot	4
136	2400161360	Tilt lock draw rod	1
137	2400161370	Hex. nut	8
138	2400161380	Pointer	1
139	2400161390	Pan hd screw	1
140	2400161400	Washer	1
143	2400161430	Washer	8
144	2400161440	Hex. bolt	8
145-1	2400161451	Plastic shroud	1
145-2	2400161452	Dust chute	1
145-3	2400161453	Flat hd screw	4



# PARTS DIAGRAM

MODELS KXL-16, KXL-21/100, KXL-30/100



# ASSEMBLY & ADJUSTMENTS

## INSTALLING THE LEVELING FEET

1) Install the leveling feet as shown in Fig.6, 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) If you would prefer to mount your Scroll Saw base (A) Fig.7 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 saw to a workbench is NOT SUPPLIED with the Scroll Saw. 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.7 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

These Scroll Saws are equipped with a rocking On/Off power switch (A) Fig.8, 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

The Scroll Saw blade speed can be adjusted by rotating the blade speed adjustment knob (C) Fig.8. Turn the knob clockwise to increase the blade speed, and counterclockwise to decrease the blade speed.

**Model KXL-16 (400-1400 SPM) / KXL-21/100 & KXL-30/100 (400-1550 SPM).**

## 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.

## 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.9 so that it is a comfortable distance away from your hands as you move the workpiece.

## USING THE DROP FOOT

These Scroll Saws have a drop foot (B) Fig.9 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.

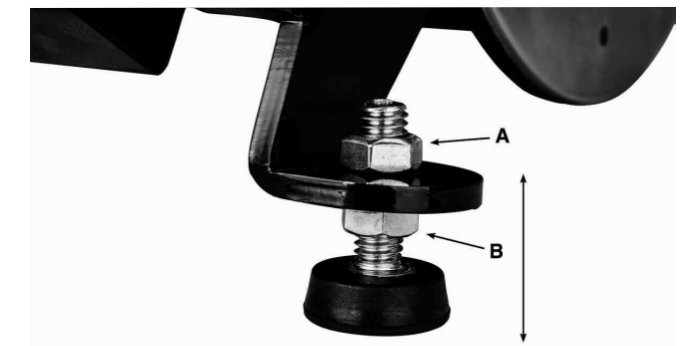


FIGURE 6

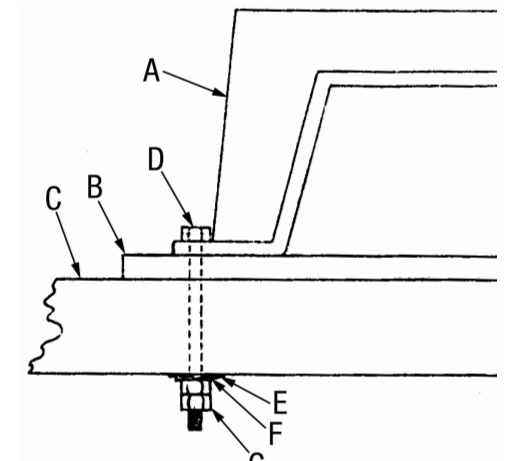


FIGURE 7

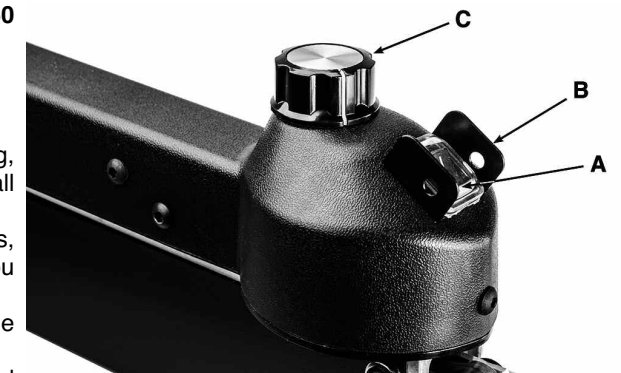


FIGURE 8

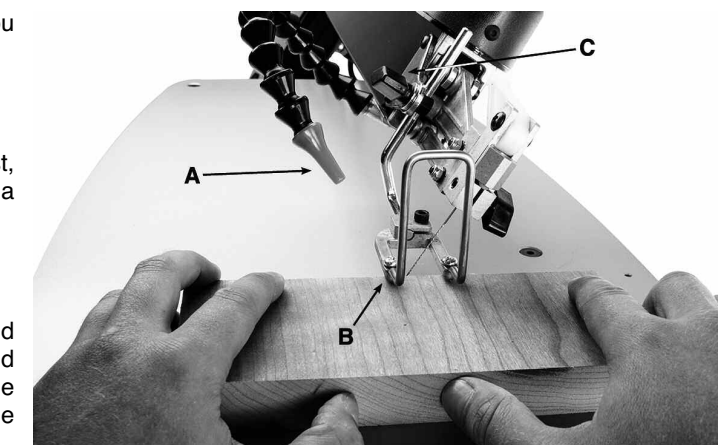


FIGURE 9

# ADJUSTMENTS

## 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 table tilt controls are located at the front of the Scroll saw, underneath the table, as shown in Fig.10.

To tilt the head of the Scroll Saw:

- 1) Release the blade tilt lock handle (A) Fig.10 by turning it counterclockwise.
- 2) Turn the large knob (B) clockwise or counter-clockwise until the blade is set at the desired cutting angle.
- 3) Use the angle pointer (C) Fig.10 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.

**NOTE:** By pushing in and holding the spring loaded pin (E) Fig.10 as you set the head angle, the pin will engage the positive stops (F), these are common cutting angles (0°, 22.5°, 30° and 45°).

**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.11, this will ensure there is enough clearance under the table. Undo the lock knob (A), undo the set screw on the opposite side and reverse the parts. Lock knob (B) is shown installed on the other side.

## REMOVING THE DUST CHUTE

The dust chute (A) Fig.12 allows for hook-up to an external shop vacuum or dust collector. However, it reduces the tilt clearance under the table when tilting the blade to the left. This limits the maximum tilt at 30° (model KXL-16 only), and 38° (model KXL-21/100 & KXL-30/100).

- 1) To remove the dust chute (A) Fig.12, loosen the 4 pan head screws and washers (B) that attach the dust chute to the bottom of the table. This will return the maximum tilt capacity to 45°.

## REMOVING & INSTALLING SAW BLADES

- 1) To remove a saw blade, flip the blade tension lever from Position 1 forward to Position 2 as shown in Fig.13. Loosen the upper lock knob (A) on the upper blade mount (B), and loosen the lower lock knob (C) on the lower blade mount (D).

- 2) Remove the blade.

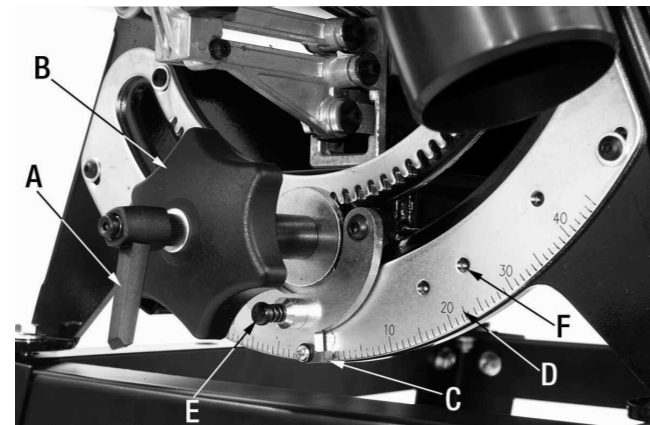


FIGURE 10

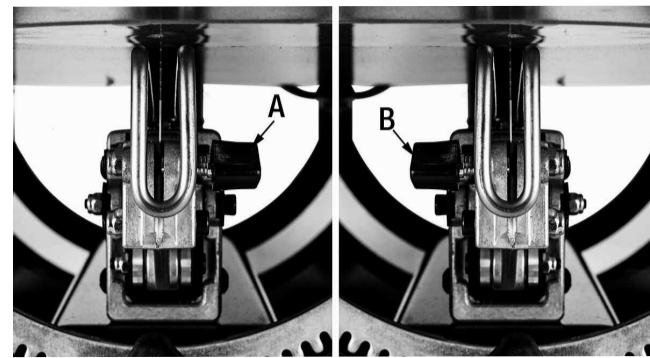


FIGURE 11



FIGURE 12

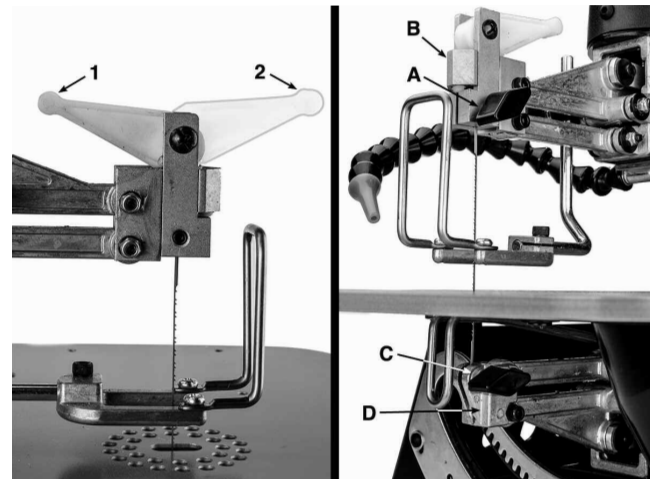
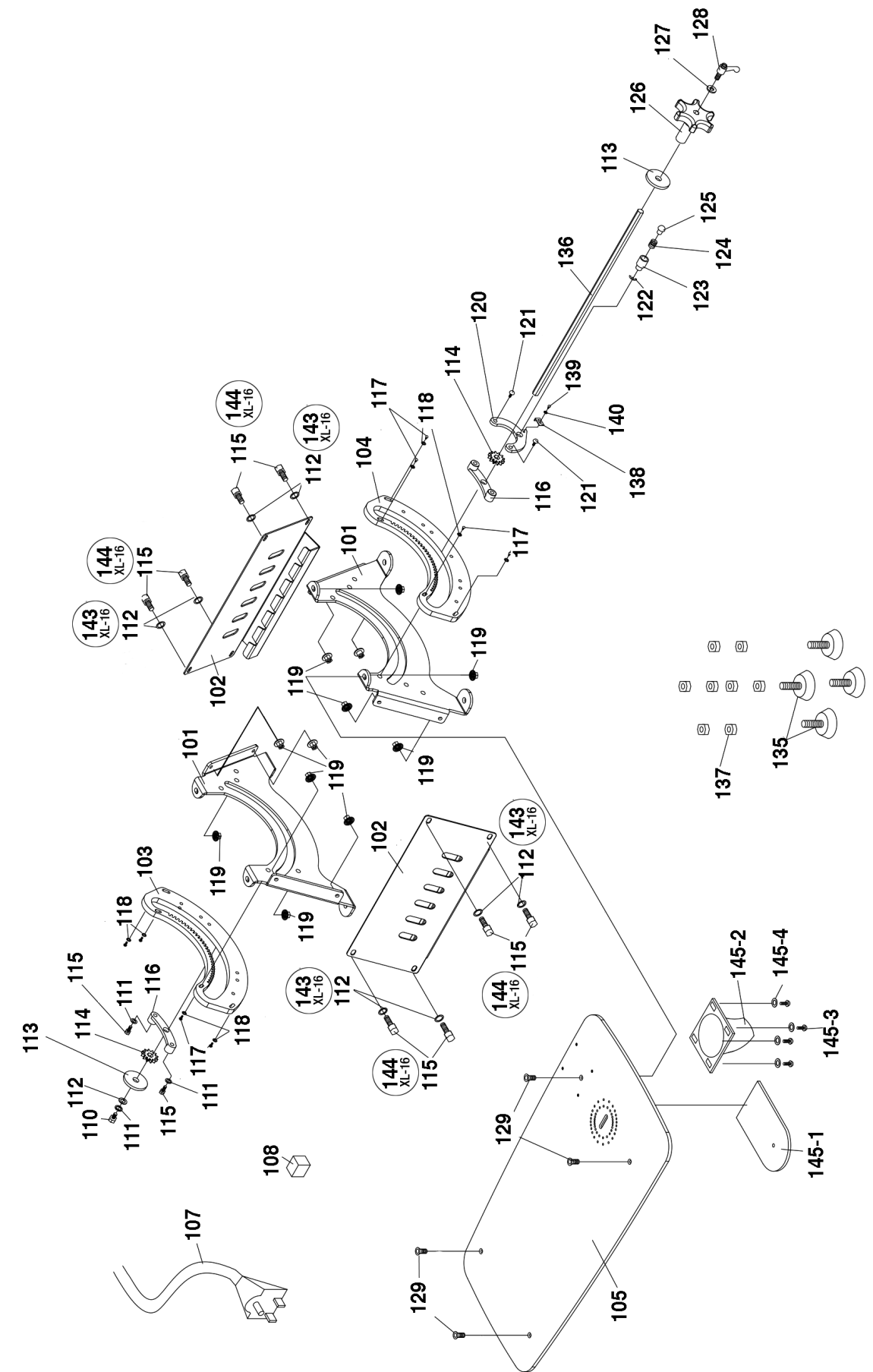


FIGURE 13

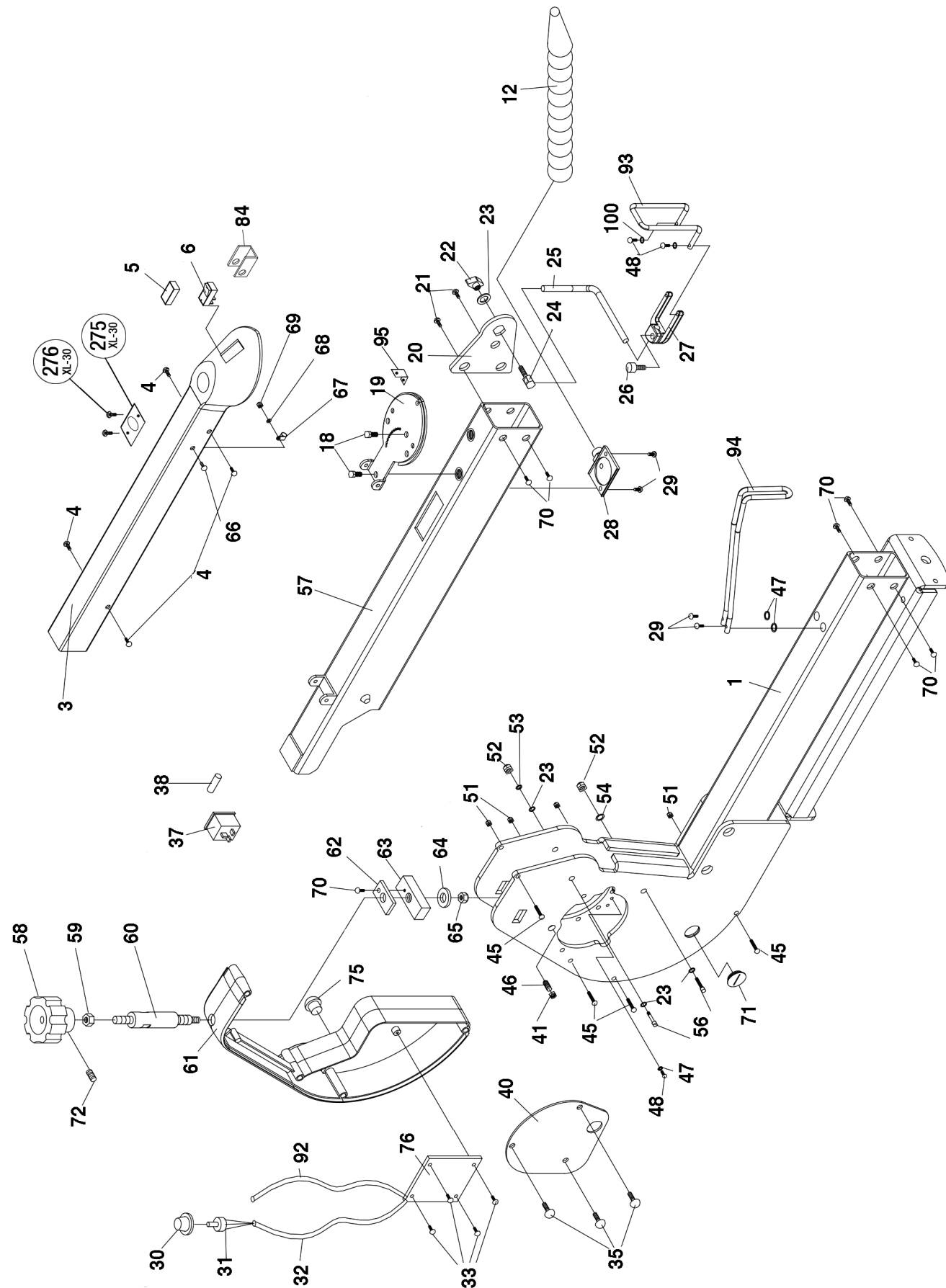
# PARTS DIAGRAM

MODELS KXL-16, KXL-21/100, KXL-30/100



# PARTS DIAGRAM

MODELS KXL-16, KXL-21/100, KXL-30/100



# ADJUSTMENTS

## REMOVING & INSTALLING SAW BLADES continued...

- 3) Before installing a new or different blade, make sure the upper arm (A) Fig.14 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.15, but lower than the top of the shoulder of the blade mount (B).
- 5) Retighten the upper lock knob and lower lock knob, reposition the blade tension lever from Position 2 back to Position 1, refer to Fig.13.

**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.13) in the back position (applying full tension to the blade), 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.14 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.15 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:** These Scroll Saws can only use 5" pinless blades. See your dealer for available Scroll Saw blades.

## TYPES OF SCROLL SAW BLADES

- 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.

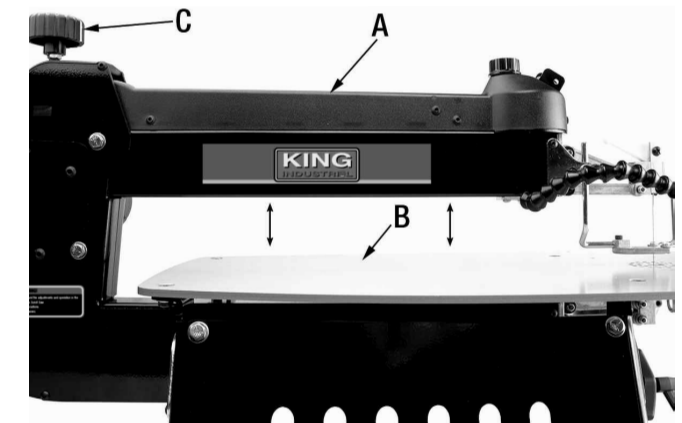


FIGURE 14

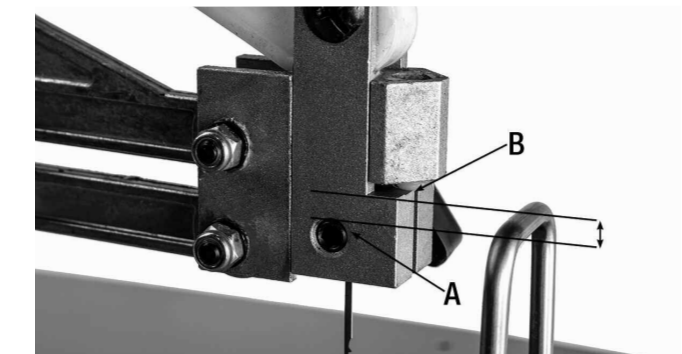


FIGURE 15

# 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 machinists square (A) Fig.17 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) securing the front trunnions and the four allen head round screws (D) securing rear trunnions 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.10 so it aligns with the 0° mark on the angle scale (D). Loosen angle pointer screw, adjust position and retighten screw.

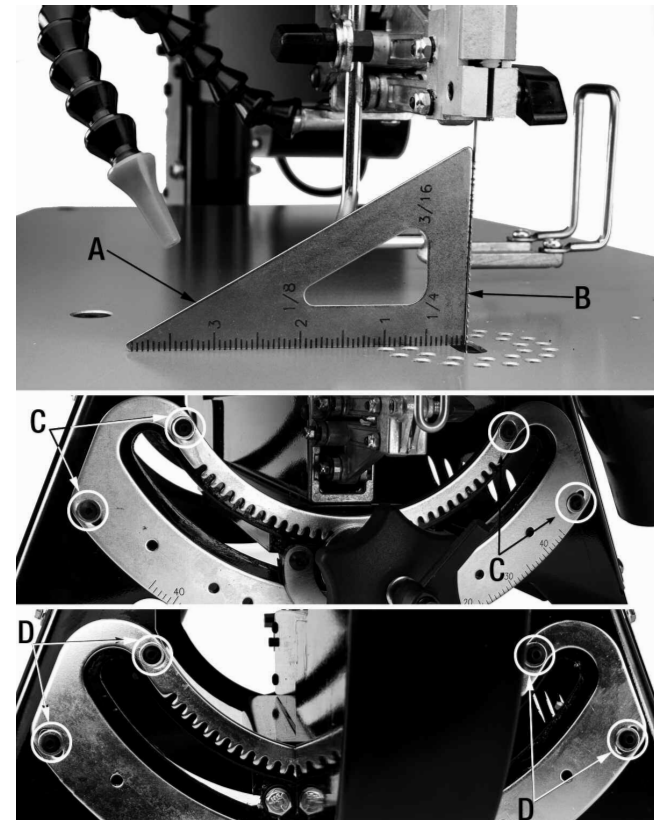


FIGURE 17

## 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 in 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.

# 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.

## BLADE TENSION LEVER LUBRICATION

Regularly applying a small amount of white grease or petroleum jelly to the friction point of the blade tension lever (A) Fig.18 will allow for smoother operation, and help to extend the life of the lever. Re-apply after every 10-15 hours of use, or as needed depending on the amount of use.

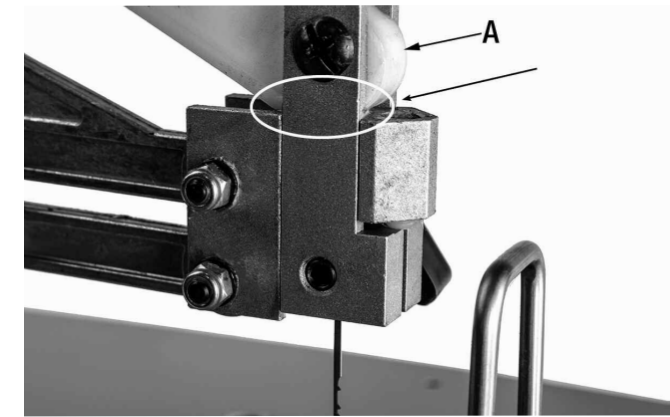


FIGURE 18

## BLADE TENSION LEVER REPLACEMENT

The blade tension lever may need to be replaced due to normal wear over time. This Scroll Saw comes with a replacement kit. To replace the lever:

- 1) Flip the lever forward, and remove the blade.
- 2) The barrel bolt can be removed by using two Phillips screwdrivers to loosen the binding screw and remove the barrel bolt as shown in Fig.19.
- 3) Remove the old lever, and install the new lever in the reverse order using the new barrel bolt and binding screw.

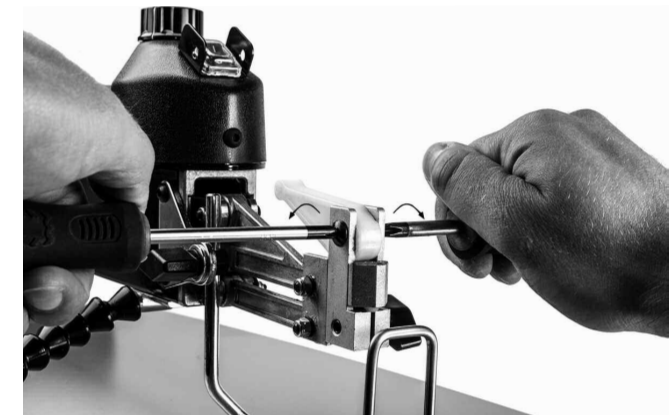


FIGURE 19

## UPPER ARM ADJUSTMENT FOR FRET WORK

Over time with normal wear on the Scroll Saw, the upper arm adjustment screw (A) Fig.20 may need to be adjusted to hold the upper arm in the raised position. To reset the adjustment screw:

- 1) Remove the blade. Ensure that the upper arm is roughly parallel to the table.
- 2) Loosen the lock nut (B).
- 3) Slowly turn the adjustment screw (A) until there is just enough tension to just hold the upper arm in the raised position.
- 4) Retighten the lock nut and ensure that the upper arm will stay in the raised position. If not, repeat steps 1 to 3.

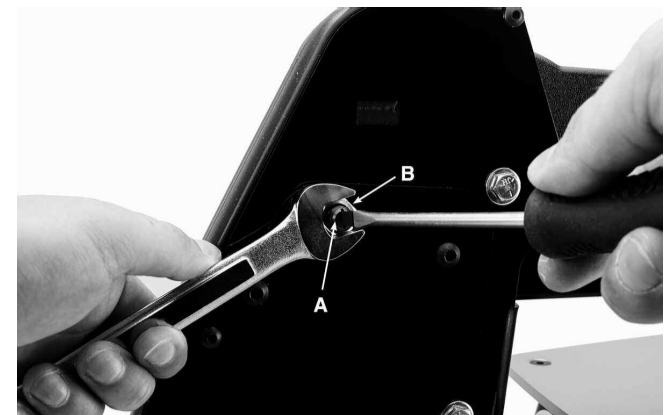


FIGURE 20

**WARNING!:** Over tightening the adjustment screw could apply too much resistance, and prevent the saw from operating properly. This could cause damage to the Scroll Saw.