



**CX103**  
**7" x 12" HORIZONTAL AND VERTICAL**  
**METAL CUTTING BAND SAW**  
**User Manual**



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# GENERAL SAFETY INSTRUCTIONS

Extreme caution should be used when operating all power tools. Know your power tool, be familiar with its operation, read through the owner's manual and practice safe usage procedures at all times.

- ❖ **ALWAYS** read and understand the user manual before operating the machine.
- ❖ **CONNECT** your machine **ONLY** to the matched and specific power source.
- ❖ **ALWAYS** wear safety glasses respirators, hearing protection and safety shoes, when operating your machine.
- ❖ **DO NOT** wear loose clothing or jewelry when operating your machine.
- ❖ **A SAFE ENVIRONMENT** is important. Keep the area free of dust, dirt and other debris in the immediate vicinity of your machine.
- ❖ **BE ALERT! DO NOT** use prescription or other drugs that may affect your ability or judgment to safely use your machine.
- ❖ **DISCONNECT** the power source when changing drill bits, hollow chisels, router bits, shaper heads, blades, knives or making other adjustments or repairs.
- ❖ **NEVER** leave a tool unattended while it is in operation.
- ❖ **NEVER** reach over the table when the tool is in operation.
- ❖ **ALWAYS** keep blades, knives and bits sharpened and properly aligned.
- ❖ **ALL OPERATIONS MUST BE** performed with the guards in place to ensure safety.
- ❖ **ALWAYS** use push sticks and feather boards to safely feed your work through the machine.
- ❖ **ALWAYS** make sure that any tools used for adjustments are removed before operating the machine.
- ❖ **ALWAYS** keep the bystanders safely away while the machine is in operation.

# CX103 – 7"x12" Horizontal & Vertical Band Saw

## SAFETY INSTRUCTIONS

- ⚠ **CX103** is designed to cut metal only.
- ⚠ **ALWAYS** inspect the blade for any crack or missing teeth before operating the band saw.
- ⚠ **ALWAYS** ensure that the blade tension is properly set for the type and width of blade installed.
- ⚠ **NEVER** place your fingers or hands in the line of cut. If you slip, your hands or fingers may come into contact with the blade.
- ⚠ **ALL THE GUARDS** must be in place while operating the band saw to ensure safety.
- ⚠ **ALWAYS** feed the stock smoothly. Do not force or twist the work-piece while cutting.
- ⚠ **MAKE SURE** before making any adjustments, the switch is in the "OFF" position and the cord is un-plugged.
- ⚠ **NEVER LEAVE** the band saw unattended while it is running.
- ⚠ **DO NOT** attempt to remove jammed pieces unless the band saw has come to a complete stop and the power switch has been turned to the **OFF** position.
- ⚠ **NEVER** turn **ON** the band saw if the blade is in contact with your stock.
- ⚠ **ALWAYS** make certain that the bearings are properly adjusted to guide the blade.
- ⚠ **MAINTAIN AND SERVICE** your band saw regularly as instructed in the user manual.
- ⚠ **MAKE SURE** you have read and understood all the safety instructions in the manual and you are familiar with your band saw, before operating the CX103. If you fail to do so, serious injury could occur.

## WARNING

*The safety instructions given above can not be complete because the environment in every shop is different. Always consider safety first as it applies to your individual working conditions.*



## CX103 – Horizontal & Vertical Band Saw

### FEATURES

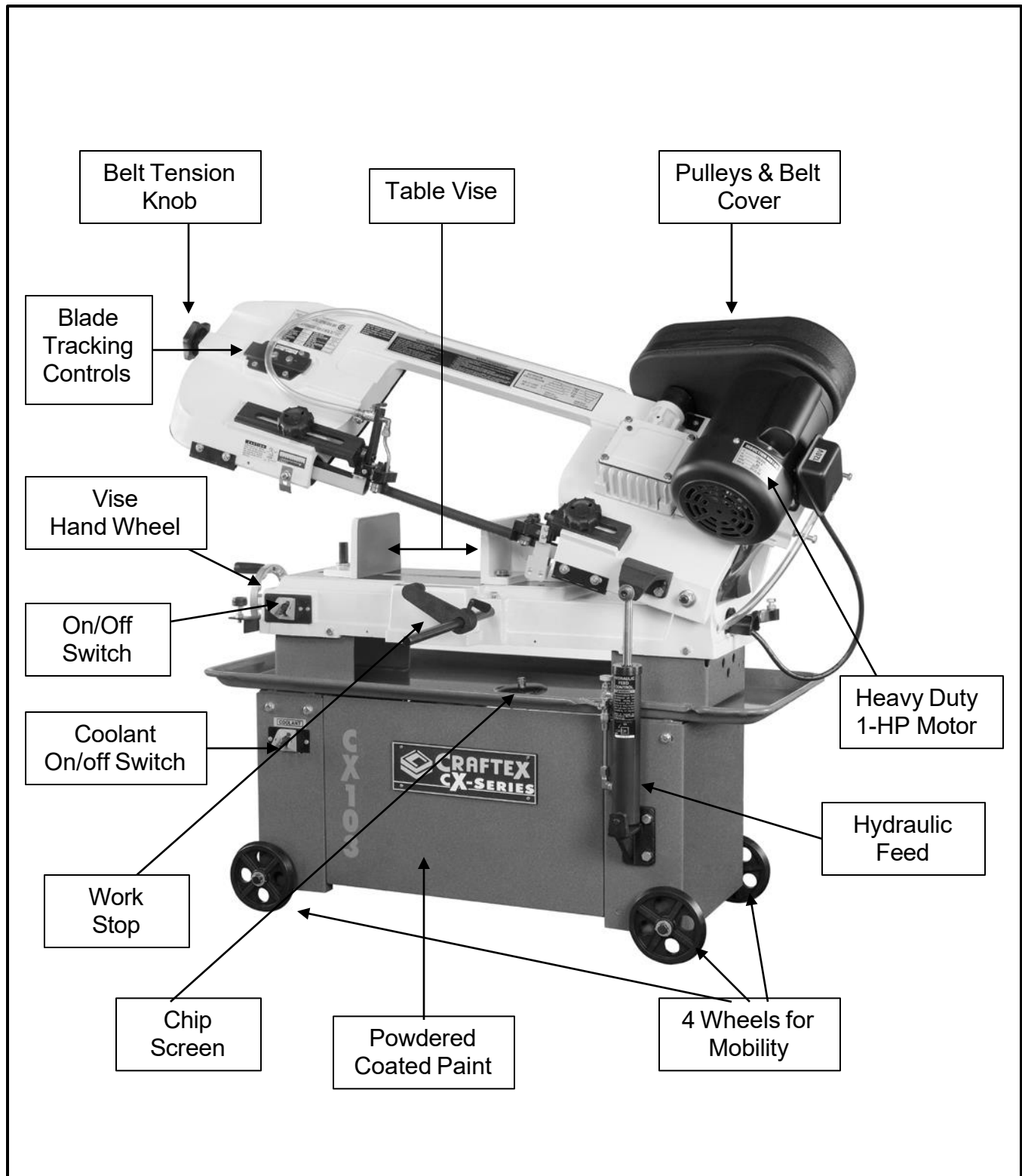
#### **MODEL CX103 – 7”x12” HORIZONTAL & VERTICAL BAND SAW**

As part of the growing line of Crafttex metalworking equipment, we are proud to offer CX103 -7” x 12” Horizontal and Vertical Band Saw. The Crafttex name guarantees Craft Excellence. By following the instructions and procedures laid out in this owner’s manual, you will receive years of excellent service and satisfaction. The CX103 is a professional tool and like all power tools, proper care and safety procedures should be adhered to.

- ❖ Motor ..... 1HP, 110V, Single Phase, Sealed Worm Gear Transmission
- ❖ Capacity @ 90° ..... 7” x 12” Rectangular, 7” Round
- ❖ Blade Speed ..... 86 – 132 – 178 – 260 FPM
- ❖ Gear Box..... Oil Bath
- ❖ Hydraulic Down Feed with Auto Shut Off
- ❖ Blade Size..... 3/4” x 0.32” x 93”
- ❖ Vise Swings to ..... 45°
- ❖ Heavy Cast Iron Table ..... Yes
- ❖ Powdered Coated Paint ..... Yes
- ❖ 4 wheels for Mobility ..... Yes
- ❖ Coolant Pump ..... Yes
- ❖ Approximate Weight..... 160 Kg
- ❖ Warranty ..... 3 Years

# CX103 – 7"x12" Horizontal & Vertical Band Saw

## PHYSICAL FEATURES



## SETUP

Before setting up your machine you need to read and understand the instructions given in this manual.

The unpainted surfaces of this band saw are coated with rust prevention waxy oil and you will want to remove this before you begin assembly. Use a solvent cleaner that will not damage painted surfaces.



### **WARNING**

*CX103 is a very heavy machine, do not over-exert yourself. For safe moving method use fork truck or get the help of an assistant or friend.*

## List of Contents

## Qty

A. Saw .....	1
B. Belt Cover .....	1
C. Wheels .....	4
D. Wheel Axle.....	2
E. Material Stop Bar .....	1
F. Material Stop .....	1
G. Hardware Bag..... (washers and screws)	

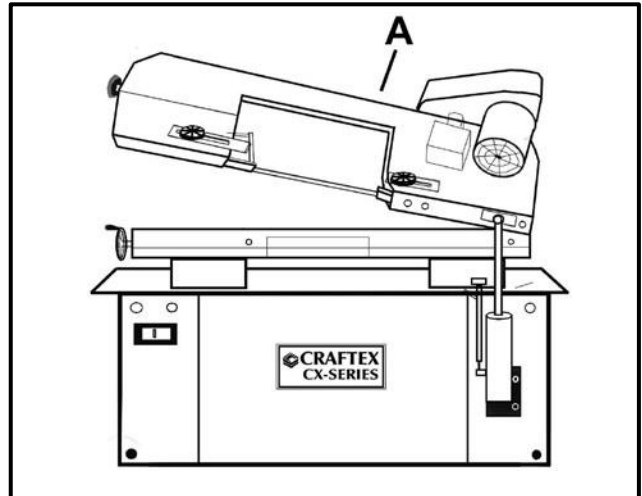


Figure-1 Inventory

## UNPACKING

The machine is properly packaged and is shipped completely in a crate for safe transportation. When unpacking, carefully inspect the crate and ensure that nothing has been damaged during transit. Open the crate and check that the machine is in good condition.

Remove the bolts securing the saw on the skid and place it on a level surface.

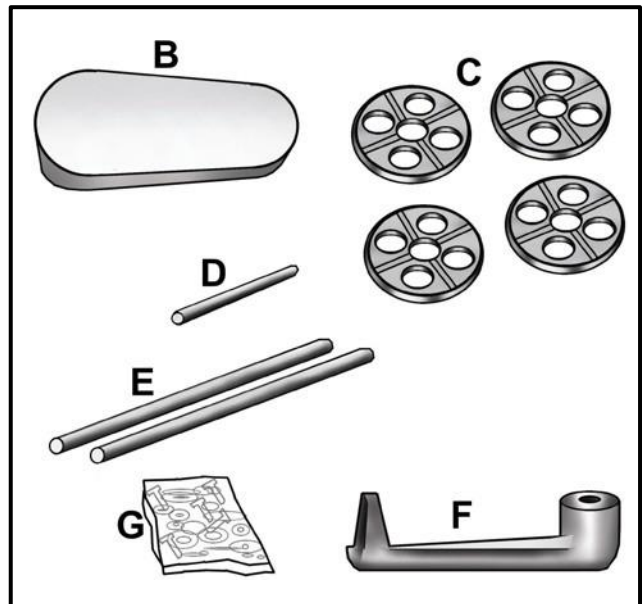


Figure-2 Inventory

## PROPER GROUNDING

Grounding provides a path of least resistance for electric current to reduce the risk of electric shock.

CX103 is equipped with a 110 single phase motor which features 3-conductor cord and 3-prong grounding plug to fit a grounded type receptacle. Make sure the cord is plugged into a properly installed and grounded power outlet.

To prevent electrical hazards, have a qualified electrician ensure that the line is properly wired.

This appliance is for use on a normal 110-volt circuit and is factory-equipped with a specific electric cord and plug to permit connection to a proper electric circuit. Make sure that the appliance is connected to an outlet having the same configuration as the plug. If an adaptor plug is used, it must be attached to the metal screw of the receptacle.

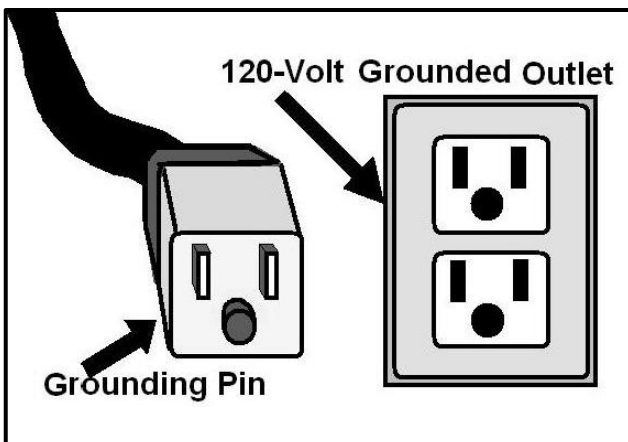


Figure-3 120-Volts Outlet for CX100



### **WARNING**

*Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.*

It is strongly recommended not to use extension cords with your CX103. Always try to position your machine close to the power source so that you do not need to use extension cords.

In case if you really find it necessary to use an extension cord, make sure the extension cord does not exceed 50-feet in length and the cord is 14-gauge to prevent motor damage.

Your CX103 is equipped with a cord having 3-prongs which fit 3 prong grounding receptacle as shown in figure-3. Do not remove the grounding prong to fit it into a 2-pronged outlet. Always check with a qualified electrician if you are in doubt.



# **ASSEMBLY**

## **Wheels**

To install the wheels place blocking under the ends of the saw base to allow wheel installation and make sure the saw is steady while temporarily supported.

Take the axle and slide it through the hole, located at the bottom part of your CX103 cabinet. Now attach the wheels on each side of the axle and secure them with pins. Bend the pins to hold it place. See figure-4.



Figure-4 Installing the wheels

Install the other two wheels in the same manner. Once all four wheels are installed, remove the blocking from under the base of the saw and make sure all the pins are properly tighten.

## **Work Stop**

Insert the work stop rod through the hole in the bed of the saw and lock it in position with the hex bolt provided. See figure-5.

Now, take the work stop and slide it over the rod and secure it by tightening the thumb screw shown in figure-5.

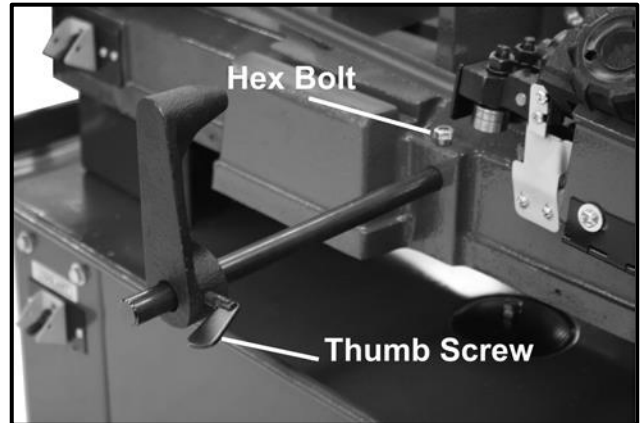


Figure-5 Installing the work stop

## **Motor Assembly**

Attach the motor mounting plate to the head using the long bolt and make sure that the flat side of the plate is facing up.

Install the guard plate to the head, using the screw, lock washer and the carriage bolt. Attach the motor mounting plate to the guard plate through the slotted hole in the guard using screws and washers provided. These components also serve to position and lock the motor in place for proper speed/belt adjustment.

Now, install the motor to the motor mounting plate using four bolts and nuts and make sure the motor shaft is placed through the large opening in the guard plate and must be aligned with the drive shaft.

## Motor & Drive Pulleys

Assemble the motor pulley to the motor shaft. Make sure that the small diameter must be closest to the motor and finger-tighten the set screw.

Assemble the drive pulley to the protruding drive shaft and make sure that the large diameter must be closest to the bearing and finger-tighten the set screw.

## Belt Cover

Take the belt cover and slide it onto the pulleys, make sure the collar of the cover is slid on to the bottom part of the pulleys and secure it with screws and washers provided. See figure-6.

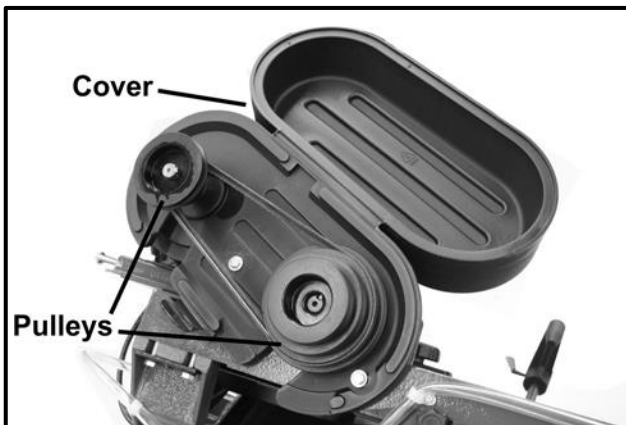


Figure-6 Installing the belt cover

Close the belt cover and secure it with the lock knob.

## Installing the Belt

Place the belt into one of the pulley grooves and the other end into the respective grooves of the second pulley.

Line up the belt and both the pulleys in such a way that the belt is running parallel in the pulley grooves. See figure-7.

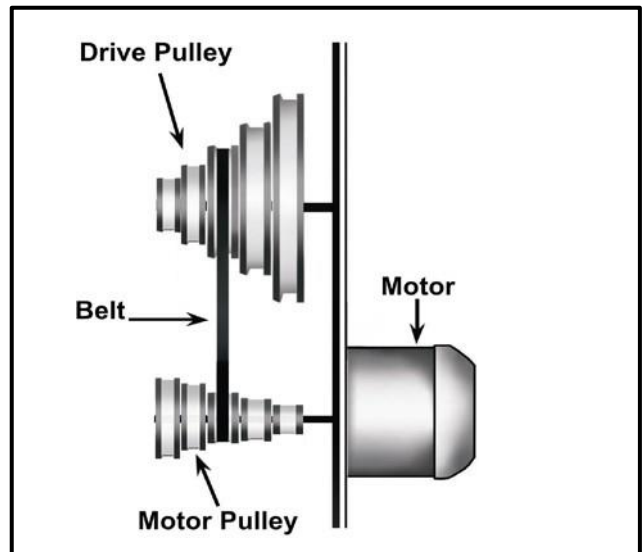


Figure-7 Belt and the pulleys

Properly tighten the set screws on both pulleys and place the belt into the proper pulley combination for proper blade speed. See material cutting chart on page-18.

Adjust the motor position to obtain approximately 1/2" depression in the belt when applying pressure with your finger. See figure-8.

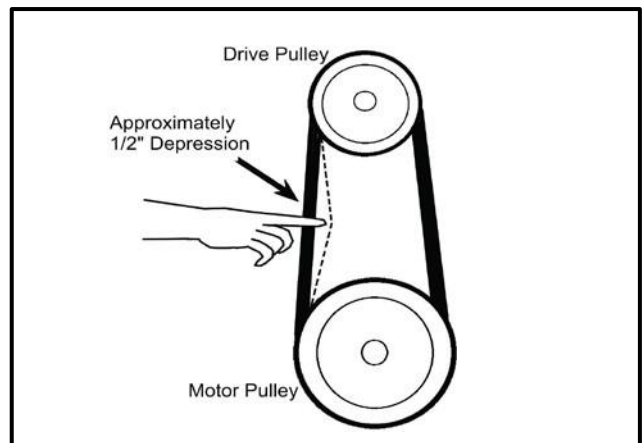


Figure-8 Belt tension

Tighten the head screw holding the motor mounting plate to the guard plate.

## Vertical Cutting Table

CX103 can easily be set up for vertical use. Notching, Slitting and contour work maybe be done with CX103 in the vertical position.

Vertical cutting table is used on the band saw only in vertical cutting mode. When using the saw in horizontal position, make sure the cutting table is removed.

To install the vertical cutting plate:

1. Disconnect the band saw from power source.
2. Lift the saw arm to the vertical position and lock it in place by turning the hydraulic cylinder valve off.
3. Use a screw driver and remove the two screws as shown in figure-9.

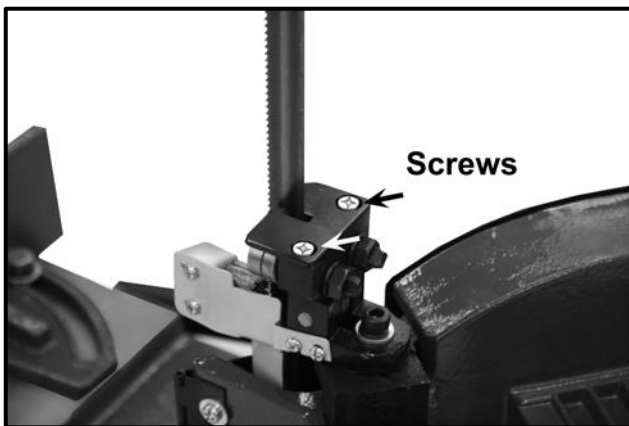


Figure-9 Removing the screws

4. Guide the blade through slot in the table and secure the table with two screws. See figure-10.

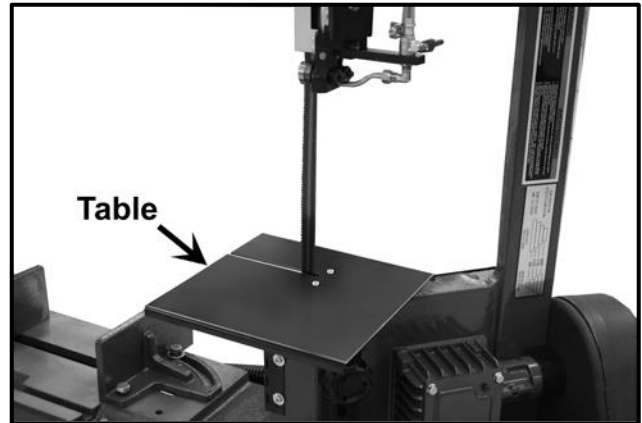


Figure-10 Installing the table

## Coolant Tank Fluid

Using water-soluble coolant will increase cutting efficiency and prolong the blade life. Make sure not to use black cutting oil as substitute. Change cutting oil often and follow manufacturer's instructions as to its uses and precautions. For details see page-18 Maintenance Section.

## Chip Screen

The chip screen keeps the coolant tank fluid clean and does not let chips and cut-offs to enter the coolant tank. Place the chip screen on to the opening shown in figure11.

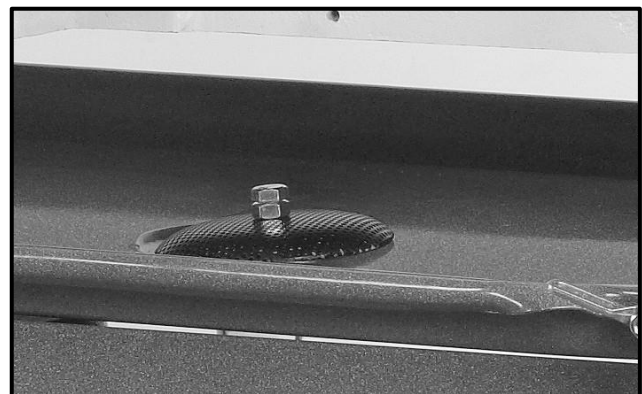


Figure-11 Installing the chip screen

## **TEST RUN**

Once you have assembled your machine completely, then it is time for a test run to make sure that the machine works properly and is ready for operation.

During the test run if there is any unusual noise coming from the machine or the machine vibrates strangely, stop the machine immediately and disconnect from the power source. Investigate and find out the problem with your machine.

If you find any part of the machine that is not assembled properly, read the assembly section of manual and re-assemble that part according to the instructions provided in the manual.

### ***READ THE MANUAL***

*Before starting the band saw, make sure that you have read and understood the manual and you are familiar with the functions and safety features on this machine. Failure to do so may cause serious personal injury.*

Lift the saw to the vertical position and remove the blade guards. Loosen the tension screw knob allowing the saw blade to slip off the wheels.

1. Place the new blade in between each of the guide bearings.
2. With teeth towards the motor position the blade around the motor wheel and hold it in place with left hand.
3. Hold the blade tight against the motor wheel by pulling the blade upward with the right hand which is placed at the top of the blade.
4. Remove your left hand from the bottom wheel and place it at the top side of the blade to continue the application on the upper wheel on the blade.
5. Remove your right hand from blade and adjust the position of the top wheel to permit left hand to slip the blade around the wheel.
6. Adjust the blade tension knob clockwise until it is just right enough so that no blade slippage occurs. Make sure not to tighten fully.
7. Install the guards.
8. Apply a few drops of oil on the blade.

# Blade Tracking

The blade tracking means where the blade rides on the upper and lower wheels. It should always be centered on both wheels.

## **IMPORTANT**

*Blade tracking is already adjusted at the factory. Keep in mind that blade tracking is a very important adjustment on your band saw and it is done in very rare cases. It is recommended not to adjust the blade tracking unless it is absolutely necessary.*

To adjust the blade tracking on your CX103:

1. Turn off the motor and disconnect the cord from the power source.
2. Lift the saw arm and position the saw in the vertical position. Close the feed lock shown in figure-19, page-17.
3. Remove the blade guard and open the wheel access cover.
4. Loosen the lower cap screw in the tilting mechanism to a point where it is loose but snug. See figure-12.
5. Rotate the blade tension knob to decrease tension on the blade.
6. Adjust the set screw shown in figure-12 and tighten the lower cap screw.

## **IMPORTANT**

*Tightening the set screw will move the blade close to the shoulder of the wheel while loosening it will move the blade away from the shoulder of the wheel.*

7. Rotate the blade tension knob to tension the blade.
8. Install the blade guard and turn the saw on. Be careful when the machine is running and do not touch the wheels or the blade. Watch carefully where the blade rides the wheels.

If the blade rides the wheel along its shoulder, the blade tracking is properly done but if the blade drifts away or hits the shoulder, repeat step-2 to step-7.

9. Close the wheel access cover.

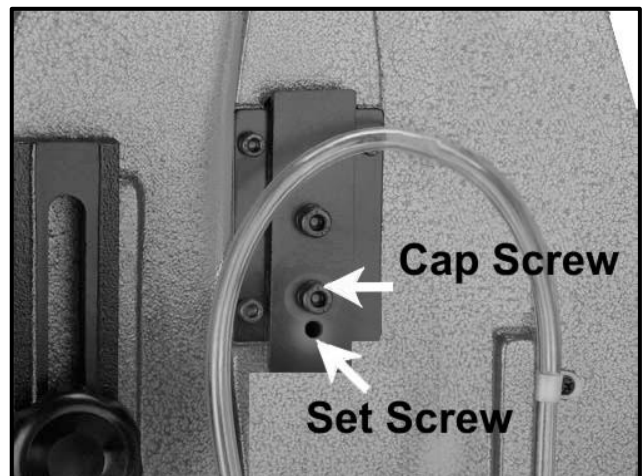


Figure-12 Blade tracking screws

## Blade Tension

A properly tensioned blade is very important to get the best performance from any band saw. If the blade is too loose there is a possibility that the blade slip or drift off the line while operation and it will be hard to have accuracy in the line of cut. If the blade is tensioned too tightly, it will be very difficult to make tighter radius cuts and secondly there will be a great possibility of breaking prematurely.

To adjust the blade tension:

Turn the saw off and disconnect the cord from the power source. Turn the blade tension knob shown in figure-13. Turning the knob clockwise will increase the tension on the blade while turning the knob counter-clockwise will decrease the blade tension.

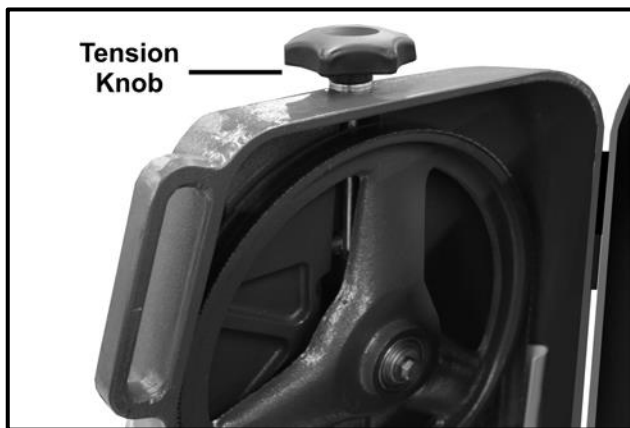


Figure-13 Blade tension knob

### **IMPORTANT**

*To prolong the life of the blade and reduce blade stretching, when the machine is not in use for period of 24 hours or more, release the tension on the blade.*

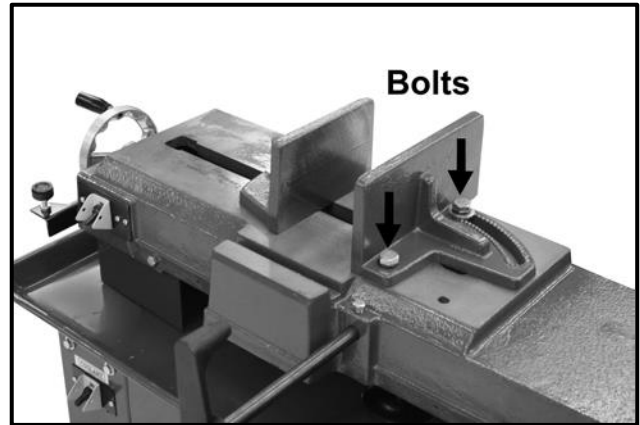


Figure-14 Removing bolts holding the vise

## Vise Adjustment

To set the vise for 0 to 45-degree cutting:

1. Lift the saw arm up to 90-degree and loosen the bolts holding the vise to the saw table. See figure-14.
2. Position the vise and re-install it to a 45-degree. See figure-15.
3. Adjust the moveable vise jaw parallel to the fixed jaw by loosening the bolt shown in figure-15, making it parallel and tightening the bolt.

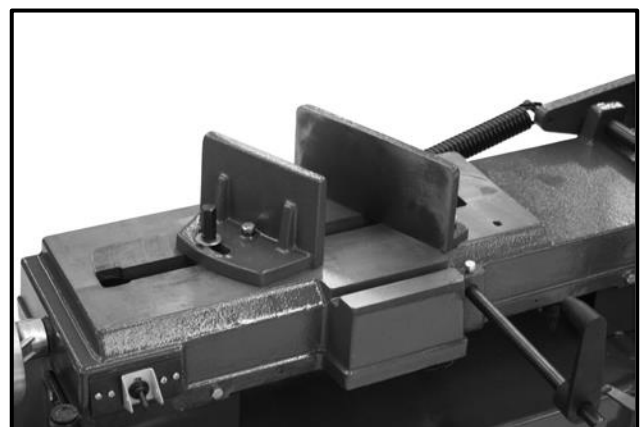


Figure-15 Setting the vise at 45-degree

To Set the Vise for Maximum Width of Stock Cutting:

1. Remove the nut and bolt.
2. Position the vise and re-install the bolts.

## Adjusting the Blade Parallel to the Table

1. Turn the machine off and disconnect the cord from the power source.
2. Take a machinist's square and place it on the table as shown in figure-16.

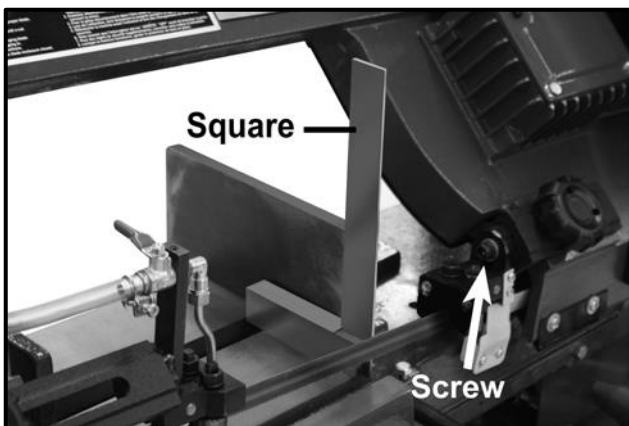


Figure-16 Squaring the blade to the table

3. Check to see if the blade is making contact along the entire width of the blade.
4. If adjustment is necessary, loosen screw shown in figure-16 and rotate the blade guide slightly until the blade is square along its entire width with the table.
5. Tighten the bolts.

## Adjusting the Blade Parallel to the Vise

1. Turn the machine off and disconnect the cord from the power source.
2. Place the square as shown in figure-17. The square should lie along the entire length of the vise and blade without a gap.
3. If adjustment is necessary, loosen the bolts holding the vise and adjust it so that the square lines up properly.
4. Tighten the bolts back.

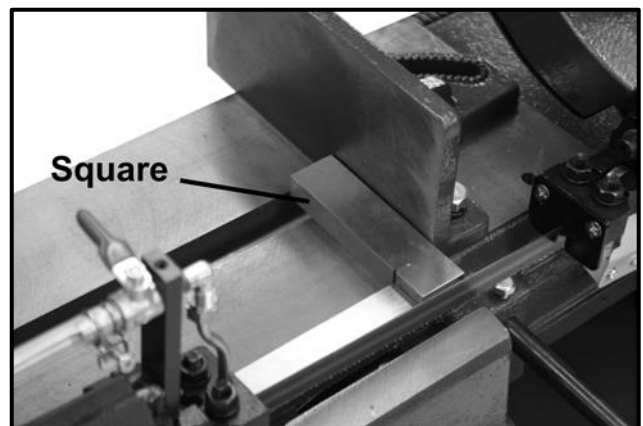


Figure-17 Squaring the vise to the blade

## Blade Guide Bearing Adjustment

One of the most important adjustments on your CX103 is the blade guide bearing adjustment.

If the blade guides are not properly adjusted, it is impossible to get the satisfactory result.

The bearing guides on your CX103 are adjusted and power tested with several test cuts in the factory to ensure proper settings so the need for adjustment should rarely occur. If the guides do get out of adjustment, it is important to readjust them immediately.

Because guides adjustment is a critical factor in the performance of your saw, it is wise to try cutting with a new blade before adjusting the guide to see if the new blade solves the problem.

If the new blade does not solve the problem check the space between the blade guides.

There should be from 0.000" to 0.001" clearance between the blade guide bearings and make sure not to squeeze the blade too tightly with the bearings.

To obtain this clearance:

1. The inner guide bearing is fixed and can not be adjusted. The outer guide bearing is mounted to an eccentric bushing and can be adjusted.
2. Lift the saw arm to 90-degree and loosen the nut while holding the bolt with an Allen wrench.
3. Position the outer guide bearing by turning the bolt to the desired position of clearance.
4. Tighten the nut.
5. Adjust the second blade guide bearing in the same manner.

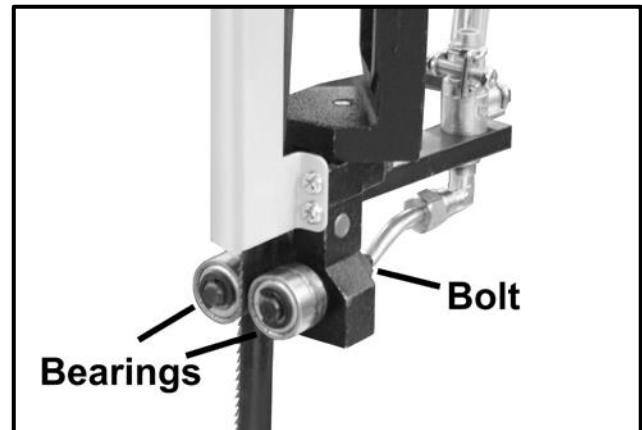


Figure-18 Adjusting the bearing guides

## Work Stop Adjustment

Loosen the thumb screw holding the work stop to the shaft and adjust the work stop to the desired length position.

Rotate the work stop to the bottom of the cut as close as possible and tighten the thumb screw.

Make sure the blade is not touching the work-piece even if the machine is in off position.

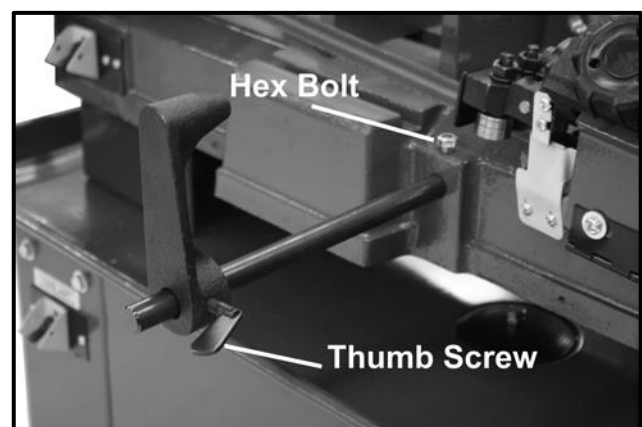


Figure-19 Adjusting the work stop



## Hydraulic Feed

The CX103 is equipped with a hydraulic feed which allows controlled lowering of the saw arm.

1. Raise the saw arm to the maximum height and remove the spring the tension using the tension knob. Lock the saw arm in place using the feed lock shown in figure-19.
2. Place the work piece on the table and clamp it tightly with the vise.
3. Make sure the blade is properly installed and proper speed is set. Turn the lubricant pump and the saw on.
4. Open the feed lock slowly rotate the feed rate dial to slow feed rate until the saw blade begins to cut the work-piece.

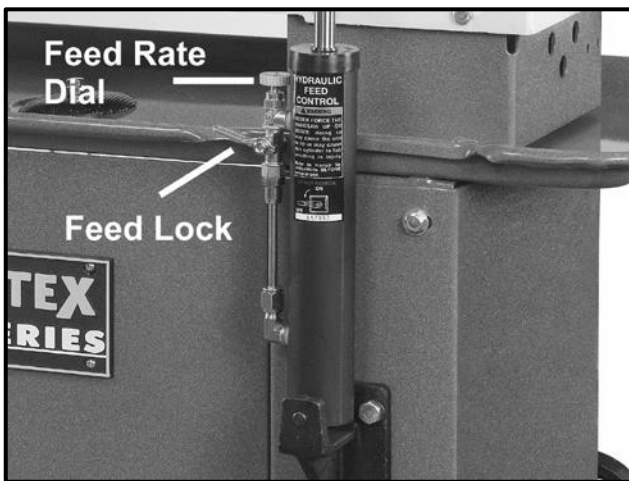


Figure-19 Hydraulic feed

Make sure not to apply pressure to cut the work-piece, but let the hydraulic feed provide the cutting force. Once the cutting is done, the saw turns off automatically.

## OPERATION

### Blade Selection

An 8-tooth per inch, general use blade is furnished with this metal cutting band saw. Additional blades in 4, 6, 8 and 10 teeth sizes are available. The choice of the blade pitch is governed by the thickness of the work-piece to be cut. The thinner the work-piece, the blade with more teeth should be used. A minimum of three teeth should engage the work-piece at all times for proper cutting. If the teeth of the blade are so far apart that they straddle the work, severe damage can occur to the work-piece and to the blade.

### Blade Direction of Travel

The blade is mounted on the wheels such that the vertical edge engages the work-piece first. See figure-20.

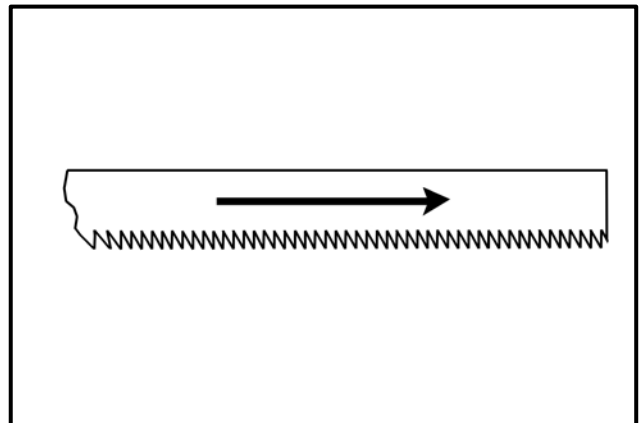


Figure-20 Shows blade direction

## Blade Speeds

When using your band saw always change the blade speed to best suit the material being cut. The material cutting chart given below shows the blade speeds for several materials.

Material	Speed F.P.M		Belt Groove Used	
	60 Hz	50 Hz	Motor Pulley	Saw Pulley
Tool Stainless Alloy Steels Bearing Bronze	86	72	Small	Largest
Medium to High Carbon Steels Hard Brass or Bronze	132	110	Medium	Large
Low to Medium Carbon Steels Soft Brass	178	148	Large	Medium
Aluminum Plastic	260	217	Largest	Small

4-Speed Material Cutting Chart

## MAINTENANCE

During the life of your machine, you will need to do some maintenance regularly to maintain it in a good condition and get perfect result every time you use your machine.

### **WARNING**

*Make sure the machine is turned off and the cord is disconnected from the power source before servicing and removing/replacing any components on the machine.*

## Coolant Tank Preparation

Using water-soluble coolant will increase cutting efficiency and prolong the blade life. Make sure not to use black cutting oil as substitute. Change cutting oil often and follow manufacturer's instructions as to its uses and precautions.

1. Disconnect the machine from the power source.
2. Remove the coolant return hose from the tank cover.
3. Remove the tank from the saw base and carefully remove the lid containing coolant pump.
4. Fill the tank to approximately 80% of its capacity.
5. Place the lid back onto the tank and place the tank assembly back into the base.

Replace the return hose back into the hole in the tank lid.

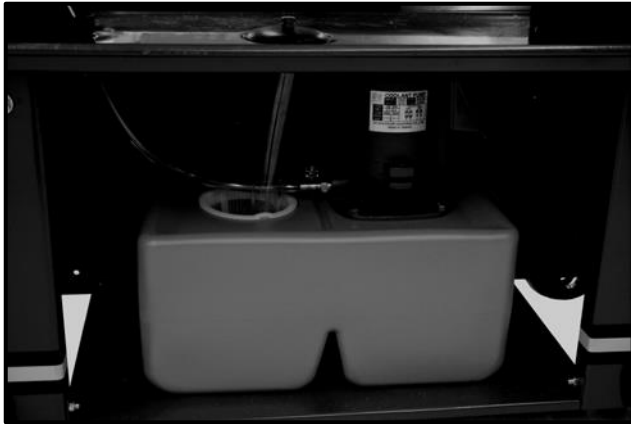


Figure-21 Coolant Tank



## **WARNING**

*When cutting magnesium, do not use oil-water solutions as fluid because, the water in the solution can cause magnesium-chip fire. Always use a cutting fluid used for magnesium.*

## **LUBRICATION**

Lubricate the following components using SAE-30 oil.

1. Ball bearings.
2. Driven pulley bearing 6-8 drops a week.
3. Vise lead screw as needed.
4. The drive gears run in oil bath and do not require a lubricant. Change the oil in the bath once a year, unless the lubricant is accidentally contaminated or a leak occurs because of improper replacement of the gearbox cover. During the first few days of operation, the worm gear drive will run hot. Until the temperature does not go over 200F, it is normal.

## **WARNING**

*Make sure the machine is turned off and the cord is disconnected from the power source before servicing and removing/replacing any components on the machine.*

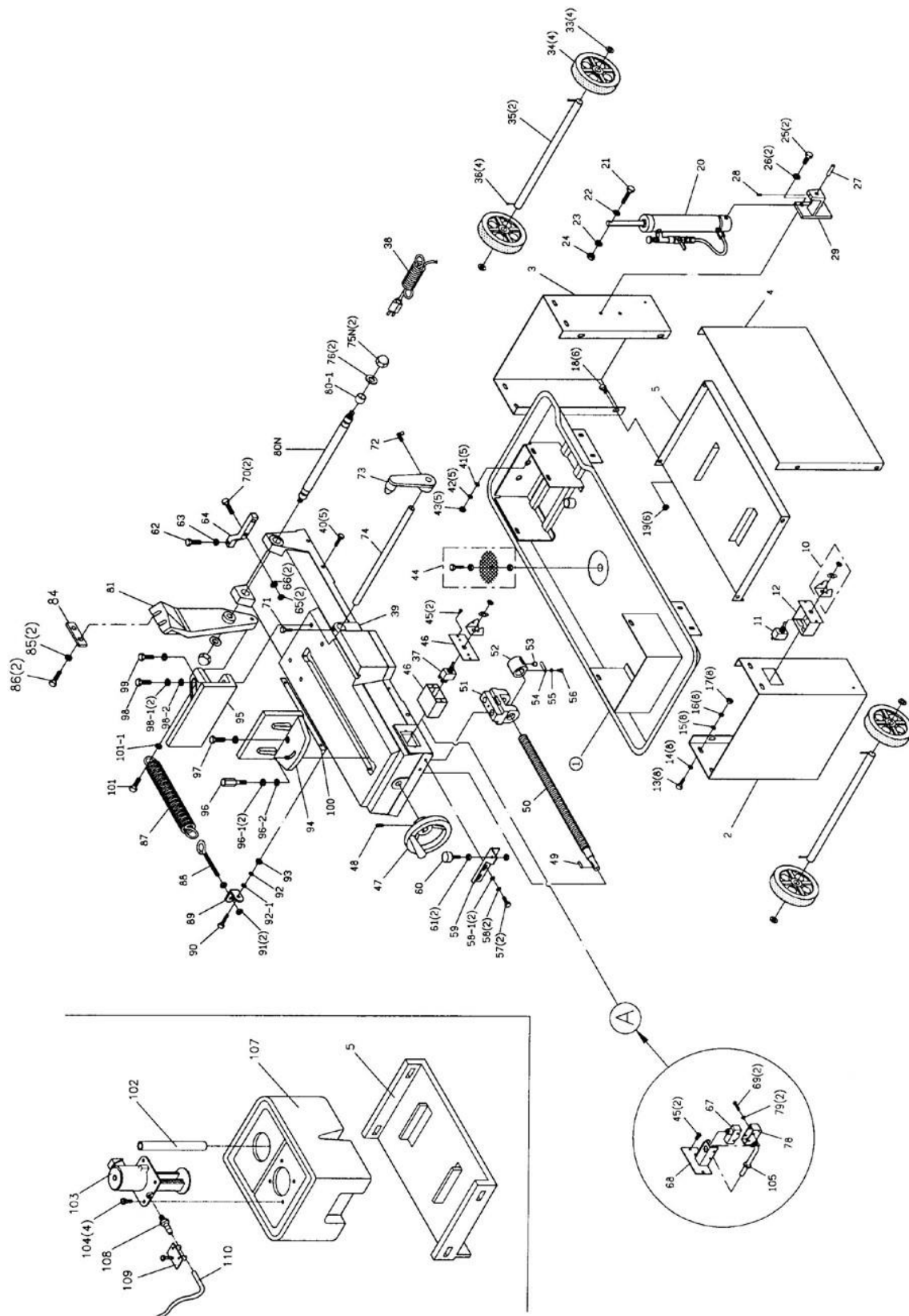
# TROUBLE SHOOTING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Excessive Blade Breakage	<ol style="list-style-type: none"> <li>1. Incorrect blade tension</li> <li>2. Incorrect speed or feed</li> <li>3. Material loose in vise</li> <li>4. Blade rubs on wheel flange</li> <li>5. Teeth too coarse for material</li> <li>6. Teeth in contact with work before saw is started</li> <li>7. Misaligned guides</li> <li>8. Blade too thick for wheel diameter</li> <li>9. Cracking at weld</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust to where blade just does not slip on wheel</li> <li>2. Check machinist handbook</li> <li>3. Clamp work securely</li> <li>4. Adjust wheel alignment</li> <li>5. Check machinist handbook for recommended blade type</li> <li>6. Place blade in contact work after motor is started</li> <li>7. Adjust</li> <li>8. Use thinner blade</li> <li>9. Make longer annealing cycle</li> </ol>
Premature Blade Dulling	<ol style="list-style-type: none"> <li>1. Teeth too coarse</li> <li>2. Too much speed</li> <li>3. Inadequate feed pressure</li> <li>4. Hard spots or scale in/on material</li> <li>5. Work hardening of material (specially stainless steel)</li> <li>6. Blade installed backwards</li> <li>7. Insufficient blade tension</li> </ol>	<ol style="list-style-type: none"> <li>1. Use finer teeth blade</li> <li>2. Try next lower speed</li> <li>3. Decrease spring tension on side of saw</li> <li>4. Reduce speed increase feed pressure (scale) Increase feed pressure (hard spots)</li> <li>5. Increase feed pressure by reducing spring tension</li> <li>6. Remove blade twist inside out and reinstall</li> <li>7. Increase tension to proper level</li> </ol>
Blade Cuts (Crooked)	<ol style="list-style-type: none"> <li>1. Work no square</li> <li>2. Feed pressure too great</li> <li>3. Guide bearing not adjusted properly</li> <li>4. Inadequate blade tension</li> <li>5. Blade guides spaced out too much</li> <li>6. Dull blade</li> <li>7. Speed Incorrect</li> <li>8. Blade guide assembly loose</li> <li>9. Blade guide bearing assembly loose</li> <li>10. Blade tracks too far away from wheel flanges.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust the vise to be square with the blade and always clamp the work-piece</li> <li>2. Reduce pressure by increasing spring tension on side of the saw.</li> <li>3. Adjust guide bearing to .001 greater than maximum thickness, including weld of the saw.</li> <li>4. Increase blade tension a little at a time</li> <li>5. Move guide to the work-piece as close as possible</li> <li>6. Replace blade</li> <li>7. Check manual for recommended speeds</li> <li>8. Tighten</li> <li>9. Tighten</li> <li>10. Redo the blade tracking adjustment according to the manual</li> </ol>

# TROUBLE SHOOTING

SYMPTOM	POSSIBLE CAUSE	CORRECTIVE ACTION
Blade Cuts (Rough)	<ol style="list-style-type: none"> <li>1. Too much speed or feed</li> <li>2. Blade is too coarse</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce speed and feed</li> <li>2. Replace with finer blade</li> </ol>
Blade is Twisting	<ol style="list-style-type: none"> <li>1. Cut is binding blade</li> <li>2. Too much blade tension</li> </ol>	<ol style="list-style-type: none"> <li>1. Decrease feed pressure</li> <li>2. Decrease blade tension</li> </ol>
Un-usual Wear on Side/Back of Blade	<ol style="list-style-type: none"> <li>1. Blade guides worn</li> <li>2. Blade guides bearings not adjusted properly</li> <li>3. Blade guide bearing bracket is loose</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace</li> <li>2. Adjust as per operators manual</li> <li>3. Tighten</li> </ol>
Teeth Ripping from Blade	<ol style="list-style-type: none"> <li>1. Tooth coarse for work</li> <li>2. Too heavy feed / too slow feed</li> <li>3. Vibrating work place</li> <li>4. Gullets loading</li> </ol>	<ol style="list-style-type: none"> <li>1. Use finer tooth blade</li> <li>2. Increase feed pressure and / or speed</li> <li>3. Clamp work securely</li> <li>4. Use coarse tooth blade or brush to remove chips</li> </ol>
Motor Running Too Hot	<ol style="list-style-type: none"> <li>1. Blade tension too high</li> <li>2. Drive belt tension too high</li> <li>3. Blade is too coarse for work (pipes specially)</li> <li>4. Blade is too fine for work (heavier, soft material)</li> <li>5. Gear not aligned properly</li> <li>6. Gears need lubrication</li> <li>7. Idler wheel needs lubrication</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce tension on blade</li> <li>2. Reduce tension on drive belt</li> <li>3. Use finer blade</li> <li>4. Use coarse blade</li> <li>5. Adjust gears so that worm is in center of gear</li> <li>6. Check oil bath</li> <li>7. Oil bearing / shaft on idler wheel</li> </ol>

# CX103 – CABINET & BASE PARTS BREAKDOWN



# CX103 – PARTS LIST

NO.	Part Number	DESCRIPTION	SIZE	Q'TY
1	PCX10301	BOTTOM PAN		1
2	PCX10302	LEG (LEFT)		1
2-1	PCX10302-1	HEX. HD. SCREW	3/8x2 1/2	1
2-2	PCX10302-2	Nut	3/8	1
3	PCX10303	LEG (RIGHT)		1
4	PCX10304	SKIRT		1
5	PCX10305	SHELF		1
10	PCX10310	SWITCH BRACKET		1
11	PCX10311	TOGGLE SWITCH		1
12	PCX10312	ELECTRICAL BOX		1
13	PCX10313	HEX. HD. SCREW	5/16x3/4	8
14	PCX10314	WASHER	5/16	8
15	PCX10315	WASHER	5/16	8
16	PCX10316	SPRING WASHER	5/16	8
17	PCX10317	NUT	5/16	8
18	PCX10318	HEX. HD. SCREW	5/16x1/2	6
19	PCX10319	NUT	5/16	6
20	PCX10320	CYLINDER		1
21	PCX10321	HEX. SOC. SCREW	M10x40	1
22	PCX10322	WASHER	3/8	1
23	PCX10323	SPRING WASHER	M10	1
24	PCX10324	NUT	M10	1
25	PCX10325	HEX. HD. SCREW	3/8x1	2
26	PCX10326	SPRING WASHER	3/8	2
27	PCX10327	SUPPORT ROD		1
28	PCX10328	SET SCREW	1/4x3/8	1
29	PCX10329	BOTTOM SUPPORT		1
33	PCX10333	WASHER	5/8	4
34	PCX10334	WHEEL	5"	4
35	PCX10335	WHEEL SHAFT		2
36	PCX10336	CUTTER PIN		4
37	PCX10337	TOGGLE SWITCH		1
38	PCX10338	ELECTRIC CORD ASSEMBLY		1
39	PCX10339	TABLE		1
40	PCX10340	HEX. HD. SCREW	5/16x1	5
41	PCX10341	WASHER	5/16	5
42	PCX10342	SPRING WASHER	5/16	5
43	PCX10343	NUT	5/16	5
44	PCX10344	FILTER		1
45	PCX10345	ROUND HD. SCREW	3/16x3/8	2
46	PCX10346	ELECTRIC BOX ASSEMBLY		1
47	PCX10347	HANDLE WHEEL		1
48	PCX10348	SET SCREW	5/16x3/8	1
49	PCX10349	KEY	5x20	1
50	PCX10350	LEAD SCREW		1
51	PCX10351	NUT SEAT		1
52	PCX10352	ACME NUT		1
53	PCX10353	BUTTON		1
54	PCX10354	RETAINER		1
55	PCX10355	SPRING WASHER	M5	1
56	PCX10356	ROUND HD. SCREW	M5x8	1
57	PCX10357	HEX. HD. SCREW	5/16x5/8	2
58	PCX10358	SPRING WASHER	5/16	2

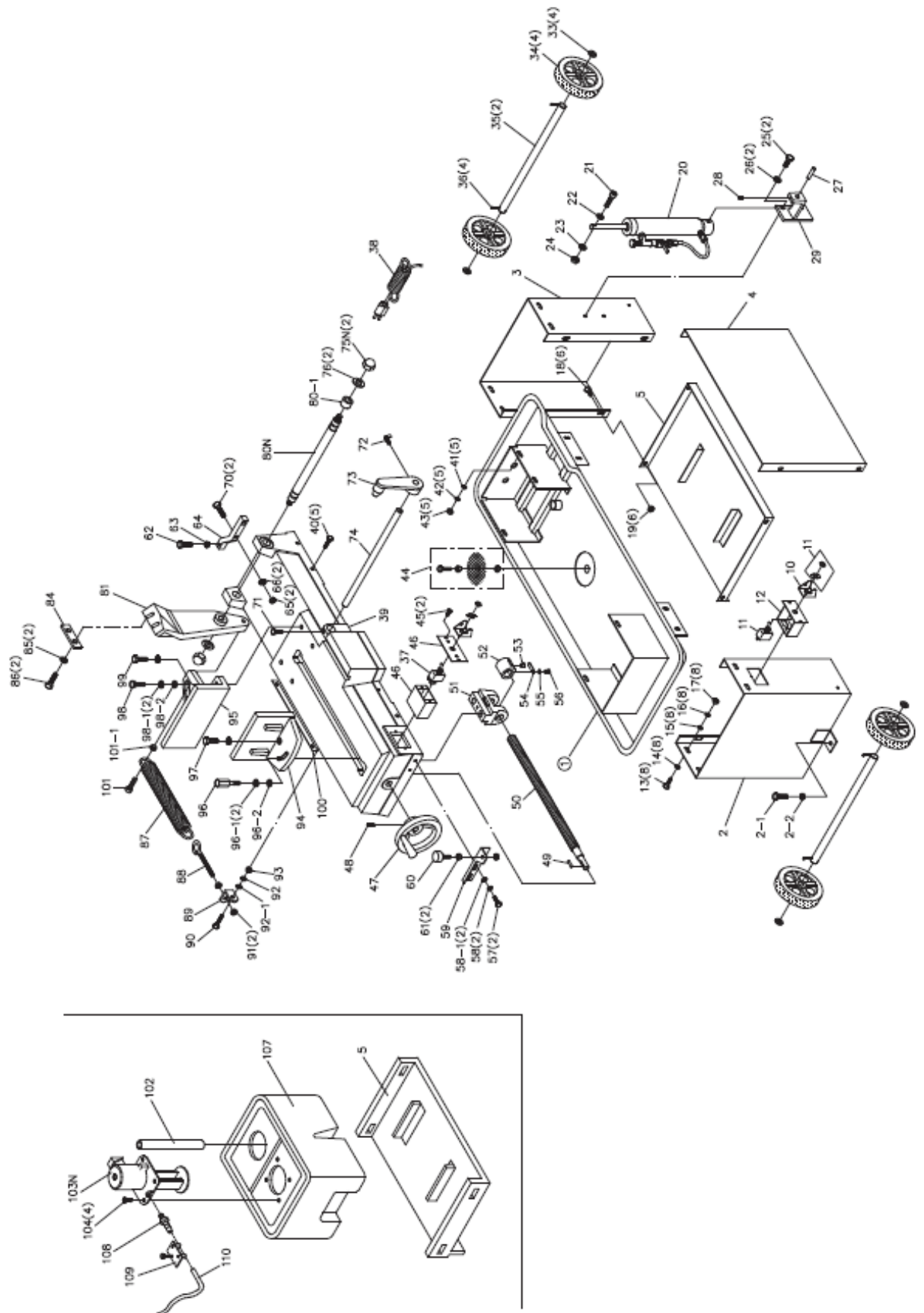
58-1	PCX10358-1	WASHER	5/16	2
<b>NO.</b>	<b>Part Number</b>	<b>DESCRIPTION</b>	<b>SIZE</b>	<b>Q'TY</b>
59	PCX59	SUPPORT PLATE		1
60	PCX10360	STOP SCREW		1
61	PCX10361	NUT	5/16	2
62	PCX10362	HEX. HD. SCREW	3/8x1	1
63	PCX10363	NUT	3/8	1
64	PCX10364	90° POSITION SUPPORT		1
65	PCX10365	NUT	3/8	2
66	PCX10366	SPRING WASHER	3/8	2
70	PCX10370	HEX. HD. SCREW	3/8x1 1/2	2
71	PCX10371	HEX. HD. SCREW	5/16x3/4	1
72	PCX10372	THUMB SCREW		1
73	PCX10373	STOP BLOCK		1
74	PCX10374	WORK STOP ROD		1
75N	PCX10375N	FIBER HEX. NUT	1/2	2
76	PCX10376	WASHER	1/2	2
77	PCX10377	BEARING BUSHING (FRONT)		1
80N	PCX10380N	SUPPORT SHAFT	22MM	1
80-1	PCX10380-1	BUSHING		1
81	PCX10381	PIVOT ARM		1
84	PCX10384	PLATE		1
85	PCX10385	SPRING WASHER	3/8	2
86	PCX10386	HEX. HD. SCREW	3/8x1 1/2	2
87	PCX10387	SPRING		1
88	PCX10388	ADJUSTABLE SPRING ROD		1
89	PCX10389	SPRING BRACKET		1
90	PCX10390	HEX. HD. SCREW	5/16x1	1
91	PCX10391	NUT	3/8	2
92	PCX10392	SPRING WASHER	5/16	1
92-1	PCX10392-1	WASHER	5/16	1
93	PCX10393	NUT	5/16	1
94	PCX10394	FRONT VISE		1
95	PCX10395	REAR VISE		1
96	PCX10396	VISE THRUST SHAFT		1
96-1	PCX10396-1	SPRING WASHER	3/8	2
96-2	PCX10396-2	WASHER	3/8	1
97	PCX10397	HEX. HD. SCREW	3/8x1 1/4	1
98	PCX10398	HEX. HD. SCREW	1/2x1 1/2	1
98-1	PCX10398-1	SPRING WASHER	1/2	2
98-2	PCX10398-2	WASHER	1/2	1
99	PCX10399	HEX. HD. SCREW	1/2x1 1/4	1
100	PCX103100	SCALE		1
101	PCX103101	HEX. SOC. SCREW	3/8x1 3/4	1
101-1	PCX103101-1	NUT	3/8	1
102	PCX103102	HOSE	1"	1
103N	PCX103103N	PUMP		1
104	PCX103104	BIG ROUND HD. SCREW	1/4x1/2	4
107	PCX103107	COOLANT TANK		1
108	PCX103108	HOSE FITTING		1
109	PCX103109	HOSE CLAMP	13MM	1
110	PCX103110	HOSE	5/16	1
111	PCX103111	SAW BOW		1
112N	PCX103112N	TAPPING SCREW	6x20	4
113	PCX103113	VENT PLUG		1
114N	PCX103114N	GEAR BOX COVER		1
115N	PCX103115N	GEAR BOX GASKET		1
116	PCX103116	WORM GEAR		1

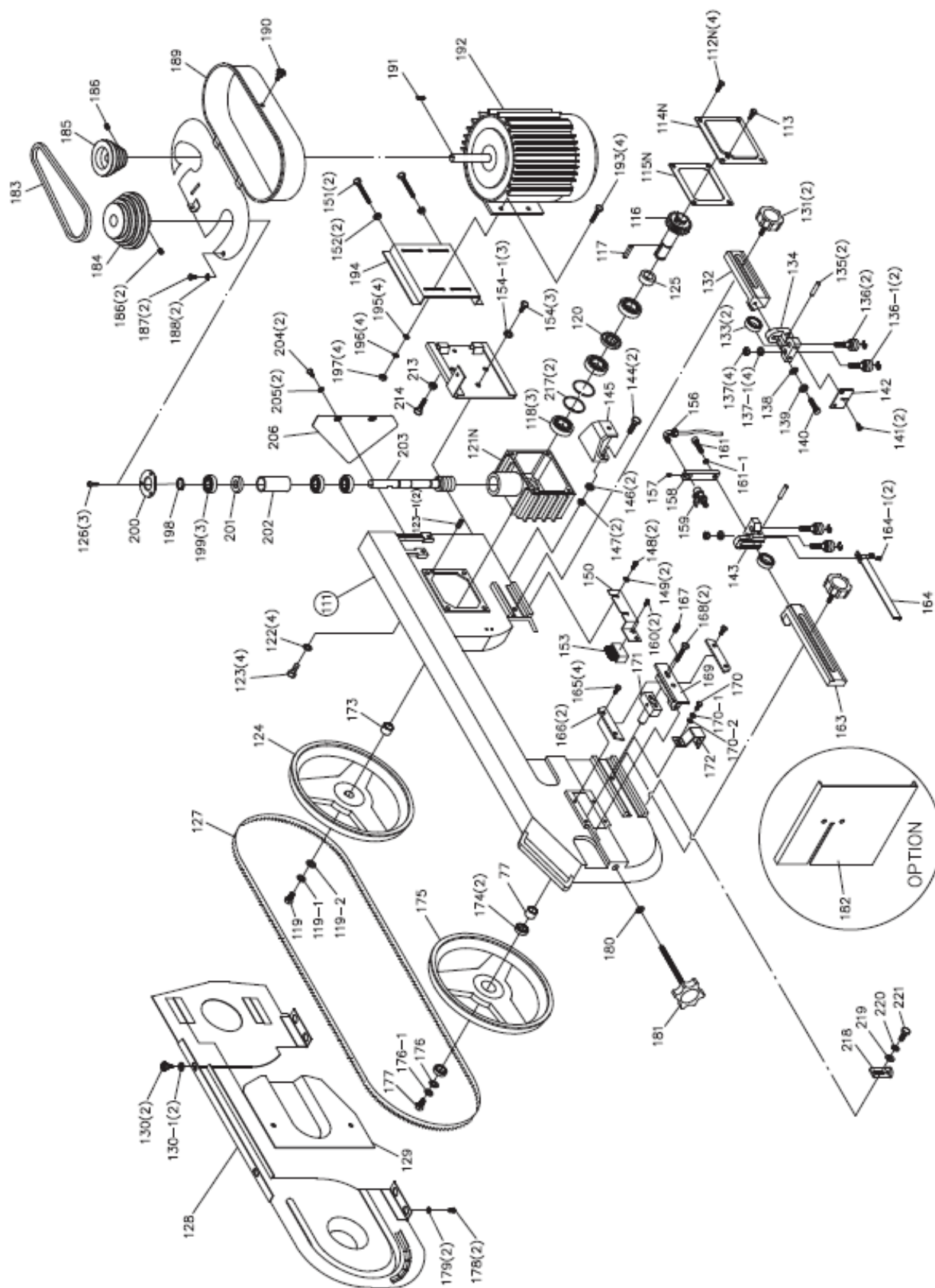


NO.	Part Number	DESCRIPTION	SIZE	Q'TY
117	PCX103117	KEY	6x20	1
118	PCX103118	BALL BEARING	6005	3
119	PCX103119	HEX. HD. SCREW	3/8x7/8	1
119-1	PCX103119-1	SPRING WASHER	3/8	1
119-2	PCX103119-2	WASHER	3/8x35x4	1
120	PCX103120	OIL SEAL	25. 47. 7	1
121N	PCX103121N	GEAR BOX		1
122	PCX103122	SPRING WASHER	5/16	4
123	PCX103123	HEX. HD. SCREW	5/16x1 1/4	4
123-1	PCX103123-1	ADJ. SCREW	1/4x3/8	2
124	PCX103124	BLADE WHEEL (REAR)		1
125	PCX103125	BEARING BUSHING		1
126	PCX103126	HEX. SOC. SCREW	3/16x5/8	3
127	PCX103127	BLADE		1
128	PCX103128	BLADE BACK COVER		1
129	PCX103129	WHEEL COVER		1
130	PCX103130	PLUM SCREW		2
130-1	PCX103130-1	WASHER	1/4	2
131	PCX103131	ADJUSTABLE GUIDE KNOB		2
132	PCX103132	ADJUSTABLE BRACKET (REAR)		1
133	PCX103133	BALL BEARING	608 ZZ	2
134	PCX103134	ADJUSTABLE BLADE SEAT (REAR)		1
135	PCX103135	BEARING PIN		2
136	PCX103136	ECCENTRIC SHAFT ASSEMBLY		2
136-1	PCX103136-1	CENTER SHAFT ASSEMBLY		2
137	PCX103137	NUT	3/8x24UNF	4
137-1	PCX103137-1	SPRING WASHER	3/8	4
138	PCX103138	WASHER	5/16	1
139	PCX103139	SPRING WASHER	5/16	1
140	PCX103140	HEX. SOC. SCREW	5/16x1 1/8	1
141	PCX103141	FLAT HEAD SCREW	1/4x1/2	2
142	PCX103142	VERTICAL CUTTING PLATE (SMALL)		1
143	PCX103143	ADJUSTABLE BLADE SEAT (FRONT)		1
144	PCX103144	HEX. HD. SCREW	3/8x1 1/4	2
145	PCX103145	TOP SUPPORT		1
146	PCX103146	SPRING WASHER	3/8	2
147	PCX103147	NUT	3/8	2
148	PCX103148	ROUND HD. SCREW	1/4x1/2	2
149	PCX103149	WASHER	1/4	2
150	PCX103150	BRUSH HOLDER		1
151	PCX103151	HEX. HD. SCREW	5/16x2 1/2	2
152	PCX103152	NUT	5/16	2
153	PCX103153	BRUSH		1
154	PCX103154	HEX. HD. SCREW	5/16x5/8	3
154-1	PCX103154-1	SPRING WASHER	5/16	3
156	PCX103156	NOZZLE		1
157	PCX103157	SET SCREW	1/4x3/8	1
158	PCX103158	NOZZLE SUPPORT		1
159	PCX103159	VALVE		1
160	PCX103160	ROUND HD. SCREW	3/16x3/8	2
161	PCX130161	HEX. SOC. SCREW	5/16x1 1/8	1
161-1	PCX103161-1	SPRING WASHER	5/16	1
163	PCX103163	ADJUSTABLE BRACKET (FRONT)		1
164	PCX103164	BLADE GUARD		1
164-1	PCX103164-1	ROUND HD. SCREW	3/16x1/4	2
165	PCX103165	HEX. HD. SCREW	1/4x1/2	4
166	PCX103166	SLIDING GUIDE PLATE		2

NO.	Part Number	DESCRIPTION	SIZE	Q'TY
167	PCX103167	SET SCREW	5/16x3/4	1
168	PCX103168	HEX. HD. SCREW	5/16x1 1/2	2
169	PCX103169	BLADE TENSION SLIDING BLOCK		1
170	PCX103170	HEX. HD. SCREW	1/4x1/2	1
170-1	PCX103170-1	SPRING WASHER	1/4	1
170-2	PCX103170-2	WASHER	1/4	1
171	PCX103171	SLIDING DRAW BLOCK		1
172	PCX103172	BRACKET		1
173	PCX103173	BEARING BUSHING (REAR)		1
174	PCX103174	BALL BEARING	6203 ZZ	2
175	PCX103175	BLADE WHEEL (FRONT)		1
176	PCX103176	WASHER	5/16	1
176-1	PCX102176-1	SPRING WASHER	5/16	1
177	PCX103177	HEX. HD. SCREW	5/16x3/4	1
178	PCX103178	ROUND HD. SCREW	1/4x1/2	2
179	PCX103179	WASHER	1/4	2
180	PCX103180	WASHER	3/8	1
181	PCX103181	BLADE ADJUSTABLE HANDLE		1
182	PCX103182	VERTICAL CUTTING PLATE	OPTION	1
183	PCX103183	BELT	3V270	1
184	PCX103184	WORM PULLEY		1
185	PCX103185	MOTOR PULLEY		1
186	PCX103186	SET SCREW	5/16x3/8	3
187	PCX103187	HEX. HD. SCREW	1/4x1/2	2
188	PCX103188	WASHER	1/4	2
189	PCX103189	PULLEY COVER		1
190	PCX103190	PLUM SCREW		1
191	PCX103191	KEY	5MM	1
192	PCX103192	MOTOR		1
193	PCX103193	HEX. HD. SCREW	5/16x1	4
194	PCX103194	MOTOR MOUNT PLATE		1
195	PCX103195	WASHER	5/16	4
196	PCX103196	SPRING WASHER	5/16	4
197	PCX103197	NUT	5/16	4
198	PCX103198	C-RING	S17	1
199	PCX103199	BALL BEARING	6003	3
200	PCX103200	BLOCK PLATE		1
201	PCX103201	OIL SEAL		1
202	PCX103202	BEARING BUSHING		1
203	PCX103203	WORM SHAFT		1
204	PCX1-3204	HEX. HD. SCREW	1/4x1/2	2
205	PCX103205	WASHER	1/4	2
206	PCX103206	SUPPORT PLATE		1
213	PCX103213	NUT	5/16	1
214	PCX103214	HEX. HD. SCREW	5/16x1 1/4	1
217	PCX103217	C-RING	R47	2
218	PCX103218	SHUT-OFF BRACKET		1
219	PCX103219	WASHER	1/4	1
220	PCX103220	SPRING WASHER	1/4	1
221	PCX103221	HEX. HD. SCREW	1/4x1/2	1

# CX103 – Machine Diagrams









## WARRANTY

### CRAFTEX 3 YEAR LIMITED WARRANTY

Craftex warrants every product to be free from defects in materials and agrees to correct such defects where applicable. This warranty covers **three years** for parts and 90 days for labour (unless specified otherwise), to the original purchaser from the date of purchase but does not apply to malfunctions arising directly or indirectly from misuse, abuse, improper installation or assembly, negligence, accidents, repairs or alterations or lack of maintenance.

*Proof of purchase is necessary.*

All warranty claims are subject to inspection of such products or part thereof and Craftex reserves the right to inspect any returned item before a refund or replacement may be issued.

This warranty shall not apply to consumable products such as blades, bits, belts, cutters, chisels, punches etceteras.

Craftex shall in no event be liable for injuries, accidental or otherwise, death to persons or damage to property or for incidental contingent, special or consequential damages arising from the use of our products.

### RETURNS, REPAIRS AND REPLACEMENTS

To return, repair, or replace a Craftex product, you must visit the appropriate Busy Bee Tools showroom or call 1-800-461-BUSY. Craftex is a brand of equipment that is exclusive to Busy Bee Tools.

For replacement parts directly from Busy Bee Tools, for this machine, please call 1-800-461-BUSY (2879), and have your credit card and part number handy.

- All returned merchandise will be subject to a minimum charge of 15% for re-stocking and handling with the following qualifications.
- Returns must be pre-authorized by us in writing.
- We do not accept *collect* shipments.
- Items returned for warranty purposes must be insured and shipped pre-paid to the nearest warehouse
- Returns must be accompanied with a copy of your original invoice as proof of purchase. Returns must be in an un-used condition and shipped in their original packaging a letter explaining your reason for the return. Incurred shipping and handling charges are not refundable.
- Busy Bee will repair or replace the item at our discretion and subject to our inspection.
- Repaired or replaced items will be returned to you pre-paid by our choice of carriers.
- Busy Bee reserves the right to refuse reimbursement or repairs or replacement if a third party without our prior authorization has carried out repairs to the item.
- Repairs made by Busy Bee are warranted for 30 days on parts and labour.
- Any unforeseen repair charges will be reported to you for acceptance prior to making the repairs.
- The Busy Bee Parts & Service Departments are fully equipped to do repairs on all products purchased from us with the exception of some products that require the return to their authorized repair depots. A Busy Bee representative will provide you with the necessary information to have this done.
- For faster service it is advisable to contact the nearest Busy Bee location for parts availability prior to bringing your product in for repairs.