



**MODEL CX117**  
**2HP METALCUTTING 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.

# CX117 – 2HP METALCUTTING BAND SAW SAFETY INSTRUCTIONS

- ❖ **CX117** 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 CX117. 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.*



## CX117 - 2HP METALCUTTING BAND SAW

# FEATURES

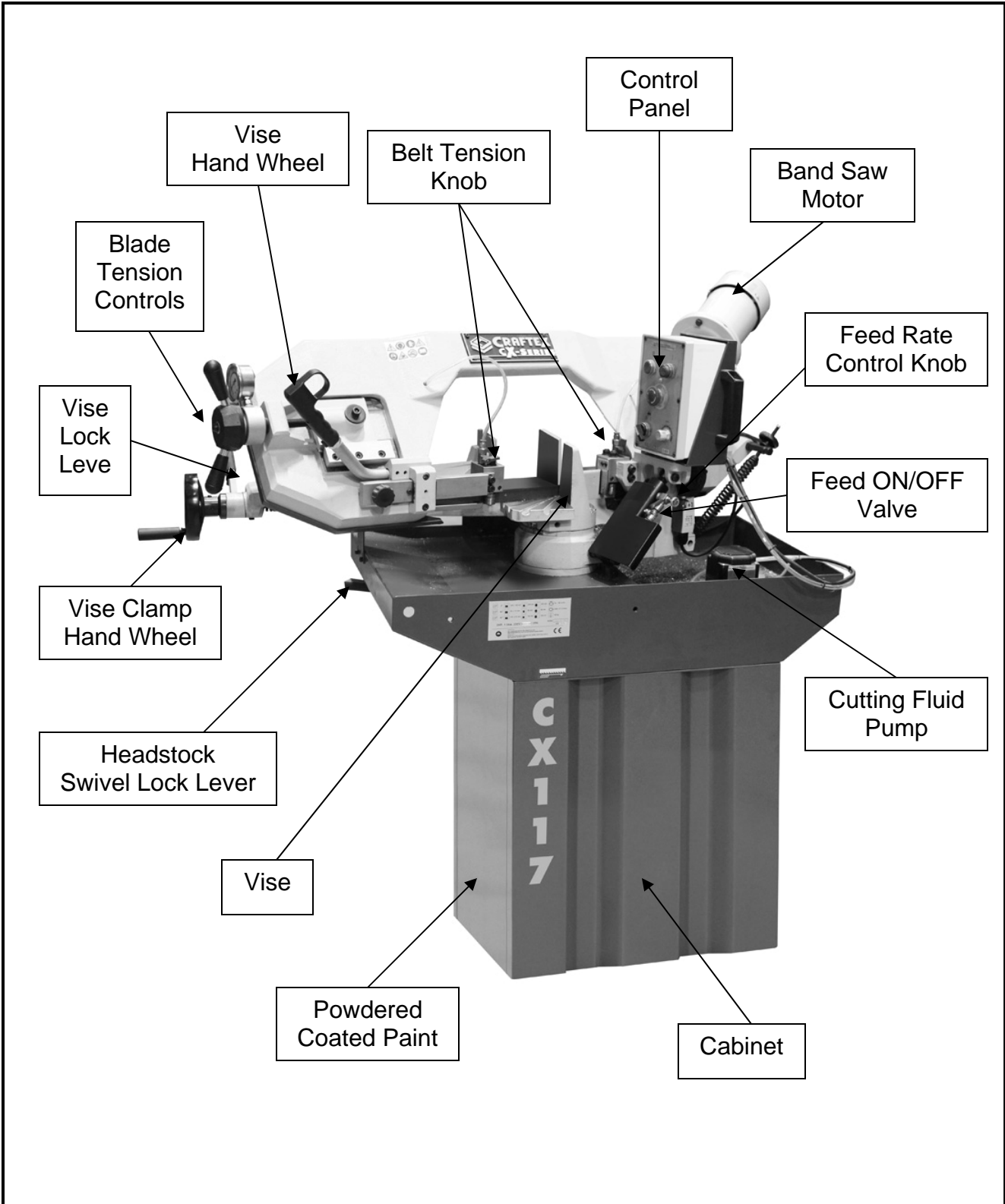
### MODEL CX117 - 2HP METALCUTTING BAND SAW

As part of the growing line of Crafter metalworking equipment, we are proud to offer CX117 2HP Metalcutting Band Saw. By following the instructions and procedures laid out in this owner's manual, you will receive years of excellent service and satisfaction. The CX117 is a professional tool and like all power tools, proper care and safety procedures should be adhered to.

- ❖ Motor ..... 2HP, 230V, 60 Hz
- ❖ Capacity @ 90° ..... 9.5" x 7" Rectangular & 7" Round
- ❖ Speeds ..... 90 MPM
- ❖ Hydraulic Down Feed with Auto Shut Off
- ❖ Coolant Pump..... Yes
- ❖ Coolant ..... 100W
- ❖ Blade Wheels ..... 11.5"
- ❖ Miter Scale..... 0° - 60°
- ❖ Noise ..... 70 dB
- ❖ Fuse ..... 16A
- ❖ Dimensions..... 60" Length x 20" Width x 62" Height
- ❖ Approximate Weight ..... 216 Kg
- ❖ Warranty ..... 3 Years

# CX117 – 2HP METALCUTTING 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.

## 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.

LIST OF CONTENT	QTY
A. Band Saw Unit (not shown).....	1
B. Work Stop Arm.....	1
C. Work Stop Rod.....	4
D. Splash Unit.....	2
E. Wrench.....	2
F. Torx Key.....	1

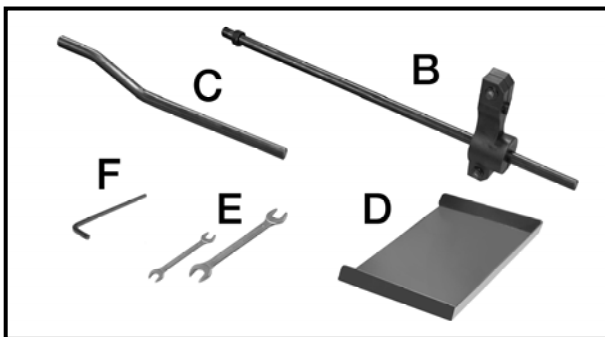


Figure-1 Inventory

## PROPER GROUNDING

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

CX117 is equipped with a 220-V single phase motor and is not supplied with a power cord.

Connection must be done by a qualified electrician in accordance with electrical code and local electrical codes.

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

It is strongly recommended not to use extension cords with your CX117. Always try to position your machine close to the power source so that you do not need to use extension cords.

When it is necessary to use an extension cord, make sure the extension cord does not exceed 50-feet in length and the cord is 12-gauge to prevent motor damage.

Your CX117 should be wired with a plug having 3-prongs to fit a 3 prong grounded receptacle. 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.

## CABINET ASSEMBLY

Assemble the four cabinet sides together with the eight hex bolts and nuts.

Use a fork truck / hoist and straps that can hold at least 200 Kg. Lift the band saw onto the top of the cabinet so that the holes on the band saw base align with the holes on the cabinet.

Secure the band saw onto the cabinet using the four hex bolts and flat washers provided.

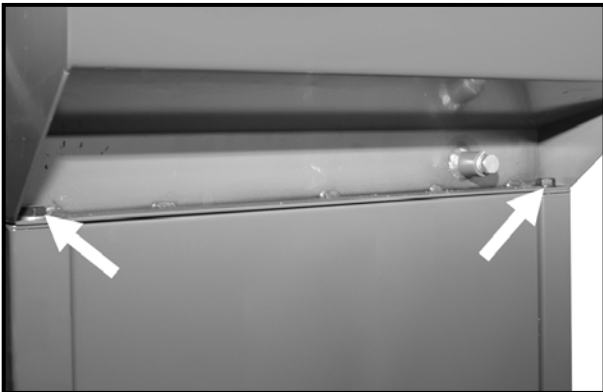


Figure-2 Mounting the band saw to the cabinet

### **WARNING!**

*CX117 is a very heavy machine, do not over-exert yourself. For safe moving method use fork truck.*

## CUTTING FLUID SYSTEM

This CX117 comes a built-in cutting fluid system that extends the life of band saw blade by lowering the temperature of the blade and work-piece while operation.

### TO USE THE CUTTING FLUID SYSTEM:

Remove the screws and the reservoir cover.

Remove any foreign material that may have fallen inside the reservoir during shipping and machine use.

Fill the reservoir with your cutting fluid and replace the cover.

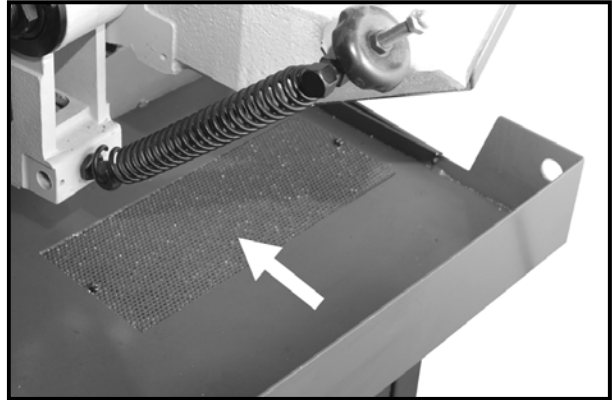


Figure-3 Cutting fluid system reservoir and cover

Turn the cutting fluid pump switch ON and adjust the valves on the cutting fluid hoses to control the flow of the cutting fluid. See figure-4.

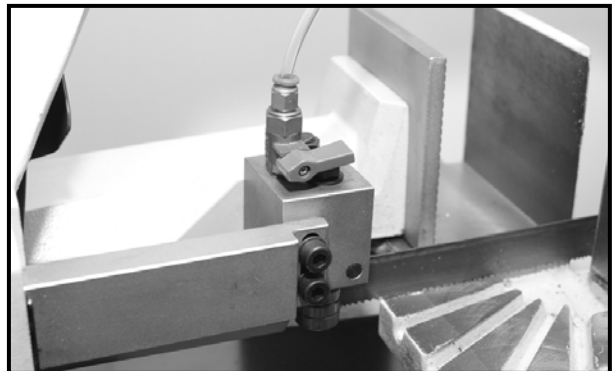


Figure-4 Cutting fluid control valve

### **IMPORTANT!**

*Always keep the reservoir cover clear so that the cutting fluid recycle easily.*

Monitor the cutting fluid level frequently to keep the system working properly.



## RECOMMENDED ADJUSTMENTS

The adjustments have been performed on the CX117 at the factory. However, because of many variables involved with shipping, we recommend that you verify the following adjustments before the Test Run.

1. Blade Tension
2. Blade Guide Adjustment
3. Stop Adjustments

## TEST RUN

Once you have assembled and inspected the machine it is then time to do a test run and see if the machine powers up and runs properly or not.

### **WARNING!**

*Make sure you have read and understood the instructions given in this manual and you are familiar with the safety features of the machines, before turning the machine on.*

All tools and objects used for assembling the machine should be removed and cleared away before the test run.

Make sure that you have verified the recommended adjustments listed before.

Fill the cutting fluid reservoir with cutting fluid if not done so already.

Connect the band saw to the correct power source.

Raise the band saw and close the feed rate control knob to keep the saw in place.

Start the band saw and keep your finger close to the Emergency Stop button at all times during the test run. The band saw should run smoothly with little or no vibration.

During the test run make sure the start/stop button and all the safety features on the mortiser are working properly.

The band saw should run smoothly with little or no vibration. If you observe that the band saw vibrates excessively or makes too much noise, shut off immediately.

### **WARNING!**

*Do not make any adjustments while the machine is running. Turn the machine OFF and un-plug from the power source before making any adjustments. Failure to do so may cause serious personal injury.*

## **CUTTING ANGLE**

The CX117 has a locking turret with a range of 0° to 60°.

### **TO SET THE ANGLE OF CUT:**

Raise the band saw head to the highest position and lock in place.

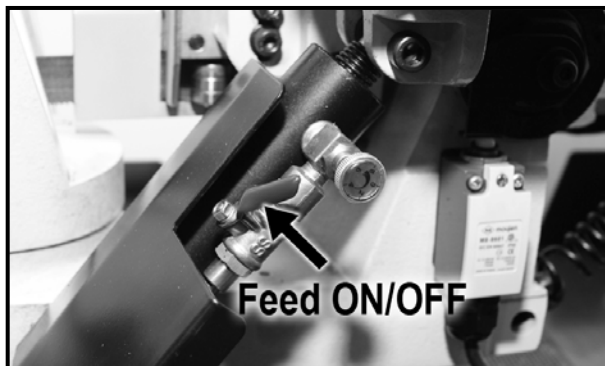


Figure-5 Feed ON/OFF valve

Move the swivel lock handle shown in figure-6, to the left and rotate the headstock until the scale indicates the angle that you need.



Figure-6 Swivel lock handle

Move back the swivel lock handle to the right to lock the headstock in place. The cutting angle is not set.

## **WORKSTOP**

The CX117 comes with an adjustable workstop.

### **TO INSTALL THE WORKSTOP:**

Thread the workstop rod in the base and secure it by tightening the jam nut.

Slide the workstop onto the rod. See figure-7.

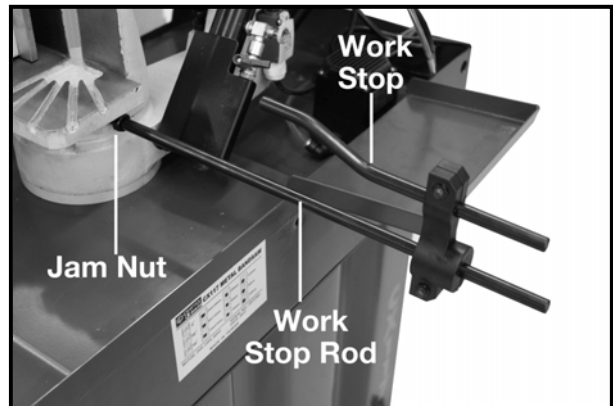


Figure-7 Installing the workstop

Slide the workstop to the desired position from the blade and tighten the nut.

## WISE

The vise has a quick tighten/release lever and depending on the cut angle or work-piece shape, you can remove or install the aluminum vise clamp plate.

### TO USE THE VISE:

Raise the band saw and lock it in position by closing the ON/OFF valve. See figure-8.

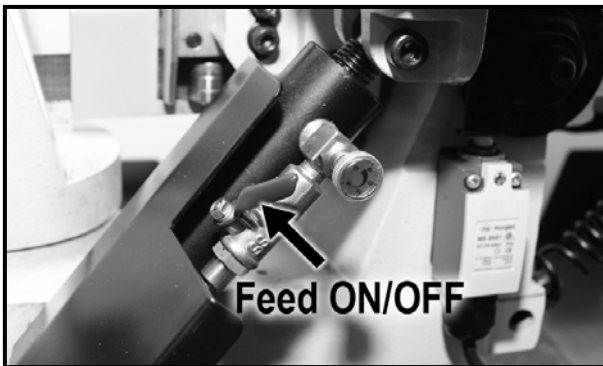


Figure-8 ON/OFF valve

Position the work-piece between the jaws.

Close the jaws so that they are 1/8" from the work-piece by using the hand wheel.

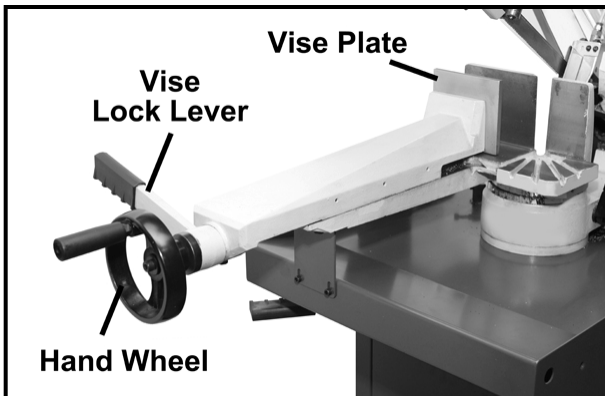


Figure-9 Vise

Use the vise lock lever to secure the work-piece and release the jaws to move the work-piece after the cut.

## BLADE SELECTION

The CX117 uses a 1" wide x 97.5" long x 0.03" thick band saw blade.

Selecting the right blade depends on a variety of factors, such as the type of material being cut, hardness of material, material shape and machine capability.

Always do some research to get the right blade to match your needs.

## USING BLADE GUIDES

To ensure straight cuts the upper blade guides should be as close as possible to the work-piece.

### TO ADJUST THE UPPER BLADE GUIDES:

Loosen the lock knob shown in figure-10 and slide the upper blade guide assembly as close to the work-piece as possible, then tighten the lock knob.

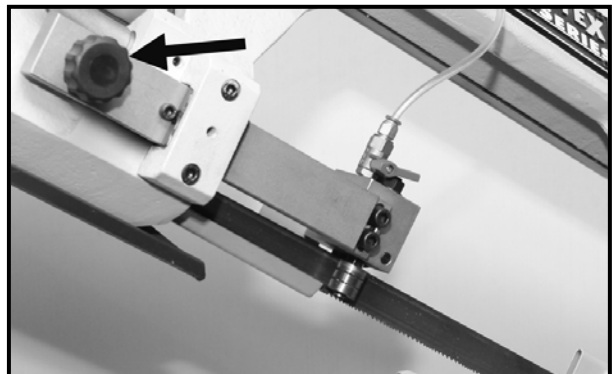


Figure-10 Blade guide assembly with lock knob

## SETTING FEED RATE

Feed rate is the speed at which the band saw blade cuts through the work-piece. The feed rate is set by adjusting the feed rate dial. The feed ON/OFF lever starts and stops lowering the bow.

### TO SET THE FEED RATE:

Raise the bow to the highest position and lock it in place using the feed ON/OFF lever.

Set the feed rate dial to the desired feed rate.

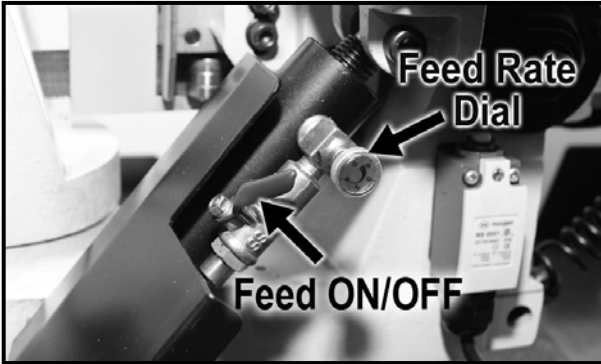


Figure-11 Feed rate dial

Turn On the pump and the band saw and start cutting.

If the chips are evenly shaped, slightly curled with a slight colour change, the feed rate, blade speed, cutting fluid type, and blade type are correct.

If the chips are tightly curled, warm, brown to black in colour, reduce the feed rate and increase the blade speed or both.

If the metal chips are blue coloured, reduce the blade speed, use cutting fluid, reduce the feed rate or reduce all three.

If you get thin powder like silver coloured chips, increase feed rate, decrease the blade speed or both.

## CUTTING FLUID

Before using the cutting fluid, consider the type, hardness and shape of the material being cut. Choosing the right cutting fluid also depends on blade feed rate, blade TPI, tooth type and cutting speed. Make sure to read and follow all the product instructions on the product.

Below are some tips for choosing the right cutting fluids:

For cutting low alloy, low carbon and general purpose metals with a bi-metal blade, always use water soluble cutting fluids.

For cutting stainless steel, high alloy, high carbon metals, brass, copper and mild steels, use neat cutting oil that have extreme pressure additives.

For cutting cast iron, you do not need to use any cutting fluids.

## MAINTENANCE

During the life of your machine, you will need to practice some regular maintenance to keep your band saw in peak performance.

### CHECK YOUR BAND SAW DAILY FOR:

- ✓ Loose mounting bolts
- ✓ Worn or damaged wires
- ✓ Damaged saw blades
- ✓ Any other unsafe condition
- ✓ Proper blade tension
- ✓ Cutting fluid level

### CHECK YOUR BAND SAW MONTHLY FOR:

- ✓ Lubricate vise screw
- ✓ Cutting fluid level

## CLEANING

After using your band saw, vacuum all the chips. If you are using water based cutting fluid, wipe down the liquid and lubricate the areas where it might cause rust after some times.

## LUBRICATION

Make sure to wipe the area clean before applying lubricant.

Lubricate the blade tension lead screw with general purpose grease. See figure-12.

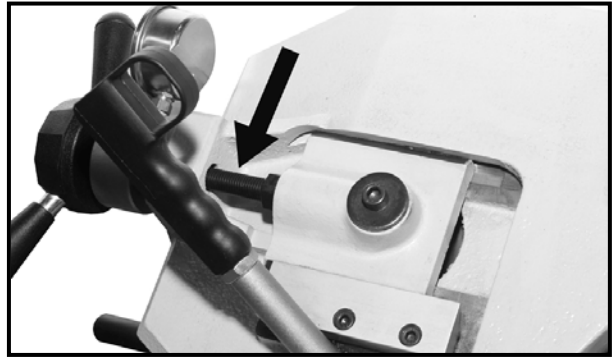


Figure-12 Blade tension lead screw

Lubricate the vise lead screw with a thin layer of grease. See figure-13.

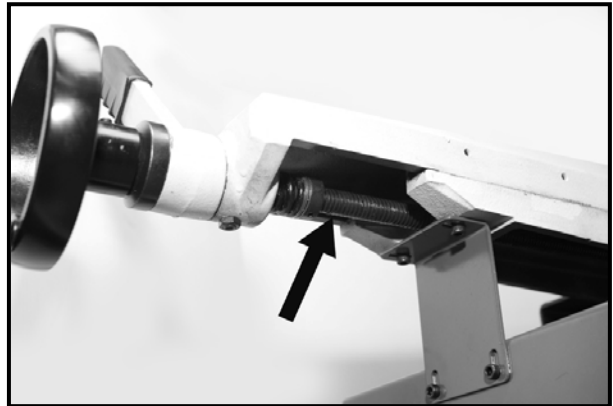


Figure-13 Vise lead screw

## BLADE CHANGE

The blade gets dull or damaged with use and will need to be replaced. You will also need to replace the blade when cutting a material that requires a certain type or tooth count.

### **WARNING!**

Make sure the switch is in the OFF position and the cord is disconnected from the power source when removing or installing, servicing or adjusting any part of the machine. Failure to do so could result in serious injury.

### TO CHANGE THE BLADE:

Disconnect the cord from the power source.

Raise the bow and lock it position using the lock lever.

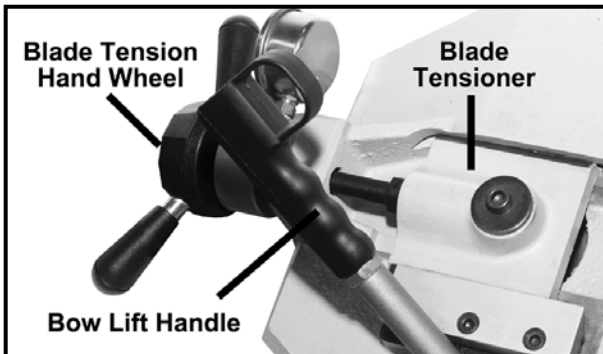


Figure-14 Blade tensioner, blade tension hand wheel and bow lift handle

Slide the blade guides as far as possible and remove the wheel access cover.

Remove both of the blade guide guards from the band saw. See figure-15.

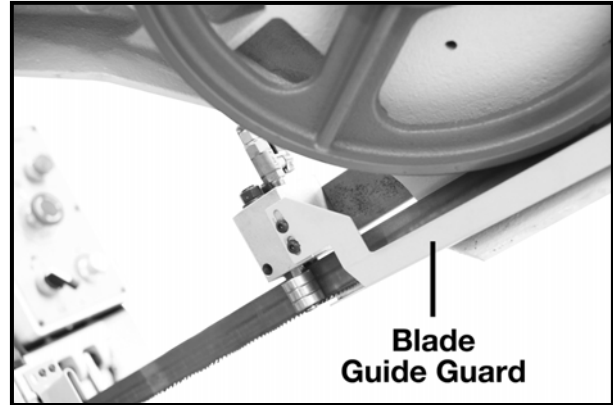


Figure-15 Blade guide guards

Loosen the blade tension handle shown in figure-14 and remove the blade from the wheels.

Slide the new blade through the blade guide bearings and install it onto the wheel.

Hold the blade around the bottom wheel with one hand and slip it around the top wheel with the other hand while keeping the blade between the guide bearings.

Make sure the blade teeth are facing toward the work-piece and the direction of cut.

Once the blade is installed around both the wheels, adjust the blade so that the back of the blade is against the shoulder of the wheels.

Reinstall the blade cover and blade guide guards.

Now it is time to tension the blade. See page-15 Blade Tension for details.

## BLADE TENSION

The blade should be tensioned correctly in order to get straight and efficient cuts every time.

The blade is not properly tensioned when: the blade stalls in the cut and slips on the wheels or when the blade breaks from being too tight.

### **WARNING!**

Make sure the switch is in the OFF position and the cord is disconnected from the power source when removing or installing, servicing or adjusting any part of the machine. Failure to do so could result in serious injury.

### TO TENSION THE BLADE:

Loosen the lock nut on the blade tensioner lead screw.

Watch the graduated scale on the blade tension indicator and turn the blade tension hand wheel so that the tension is in the green range when using the saw.



Figure-16 Blade tension graduated scale

When the blade is tensioned correctly, tighten the lock nut on the blade tensioner lead screw.

## BLADE GUIDES

The blade guides are adjusted at the factory however due to shipping we recommend you to readjust them to ensure proper cuts.

### TO ADJUST THE BLADE GUIDES:

Disconnect the cord from the power source.

Raise and lock the bow in position.

Loosen the two cap screws and the blade guide guard. See figure-17.

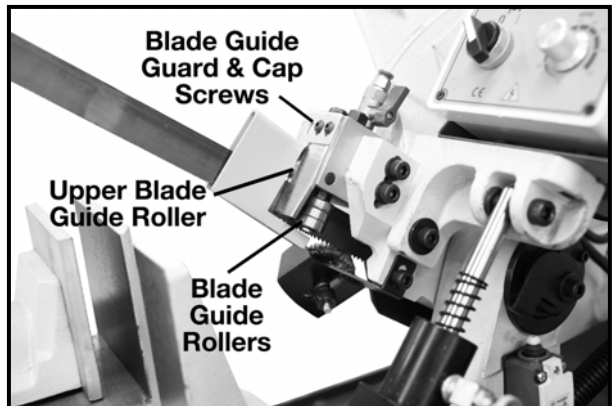


Figure-17 Blade guide adjustment

Loosen the cap screws shown in figure-18 and adjust the blade guide housing so that the back of the blade slightly touches the bearing and the guide housing is not tilted. Once done, tighten the cap screws.



Figure-18 Blade guide housing cap screws

Loosen the jam nut and adjust the bearings against the sides of the blade. See figure-19.

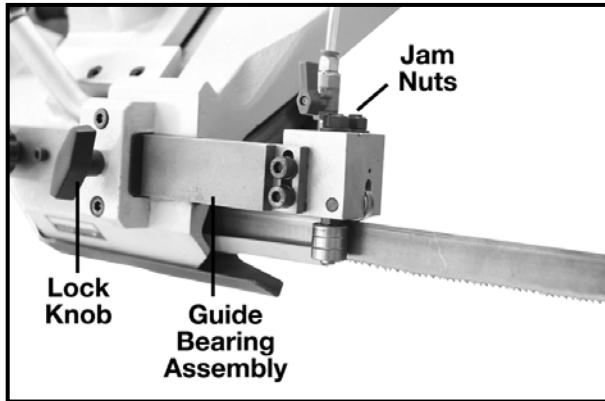


Figure-19 Blade guide adjustment

Tighten the jam nuts.

## FEED STOP

It is necessary to adjust the feed stop before you make blade adjustments. Keep in mind that the blade should never rest or rub onto the vise assembly. You can also adjust the over tilt stop so that the bow stop from being lifted past 40°.

### TO ADJUST THE FEED STOP BOLT:

Loosen the jam nut and adjust the bolt so that the blade teeth are just below the vise table surface when the cut is complete.

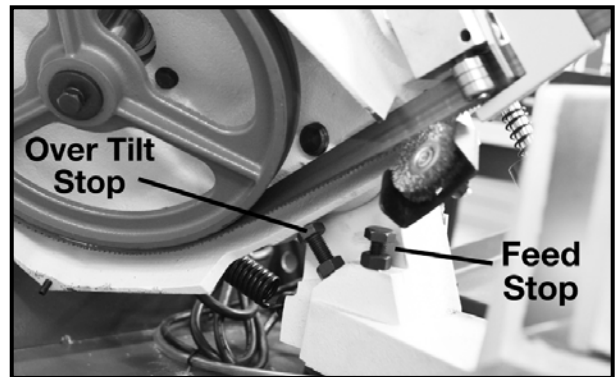


Figure-20 Adjusting the stop bolts





## CX117 PARTS LIST

NO.	DESCRIPTION	NO.	DESCRIPTION
01	Washer	31	Pivot
02	Base	32	Bearing cover
03	Bar stop rod	33	Washer
04	Cool pump	34	Key 8 x 7 x 25 mm
05	Bar stop	35	Reducer
06	Countervise	36	Motor
07	Valve	37	Round table
08	Vise jaw	38	Plate(optional)
09	Vise	39	Mobile blade guide plate
10	Body frame	40	Switch(optional)
11	Casing	41	Hand wheel
12	Motor Fan	42	Threaded shaft
13	Motor Cover	43	Spring washer
14	Connection Plate	44	Grip
16	Arm	45	Pin
17	Filter	46	Handwheel
18	Bush	47	Return flywheel
19	Pin	48	Hex. Nut
20	Lever	49	Bearings 2Z/6205 6205
21	Fixed blade guide plate	50	Saw blade
22	Key 7x7x35mm	51	C-ring
23	Bearing	52	Hex, nuts.
24	Motor flywheel	53	Blade sheel shaft
25	Washer	54	Block blade tension
26	Shaft	55	Handle
27	Blade cover	56	Lever
28	Ring nilons	57	Vise screw
29	Bearing 32006	58	R. Bladeguard
30	Ring nut M30	59	Vise spring

<b>NO.</b>	<b>DESCRIPTION</b>	<b>NO.</b>	<b>DESCRIPTION</b>
60	Vise lever	91	Fixed blade guide plate
61	Bearing	92	Mobile blade guide plate
62	Bearing cover	93	Bush
63	Vise handwheel	94	Toger switch
64	Spring	95	Condenser(Motor) (optional)
65	Spring connection	96	Coolant distributor
67	Revolving arm	97	Stand
68	Rod	98	Nut M10
69	Stop bolt	99	Pivots centric
70	Micro switch(optional)	100	Brush
71	Block	101	Plate
72	Hex. nuts	102	Bracket
73	Rubber connection	104	Pivots excetric
74	Arm	105	Blade Tension Gauge (optional)
75	Bolt	106	Switch
76	Blade guard	107	Key
77	Handle	108	block
78	Bearing 6082Z	109	Pivots centric
79	Hand wheel	110	Pivots excetric
80	Handle	111	ARM
81	Water Pipe	112	Blade guard
82	Rust Plate	113	PIN
83	L. Bladeguard	114	Rust Plate
84	Switch set	115	Scale
85	Brush (optional)		
86	Switch Shelf		
87	Scale		
89	Cylinder(optional)		
90	Pin(optional)		



## WARRANTY

### CRAFTEX 3 YEARS 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.