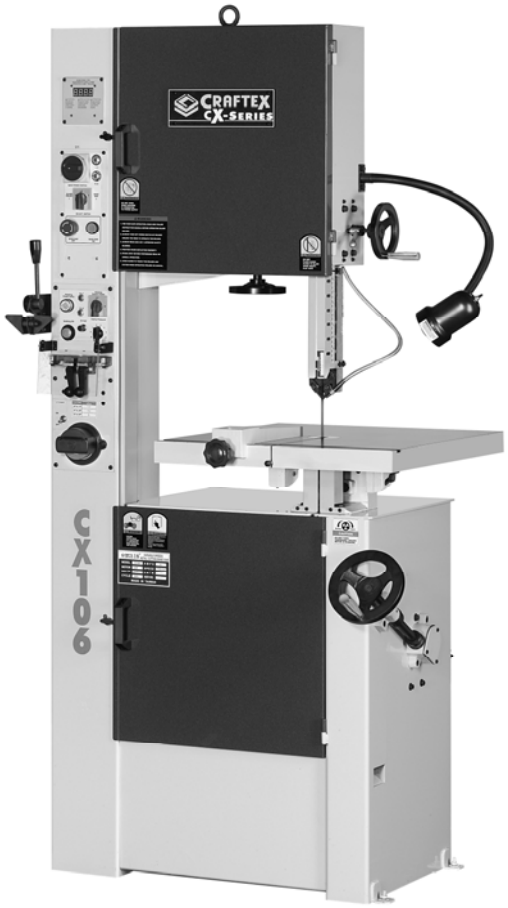
CX106
18" VARIABLE SPEED BAND SAW WITH BLADE WELDER
USER MANUAL



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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 blade and / or making adjustments.
- **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.

CX106 18” METAL BAND SAW
SPECIFIC SAFETY INSTRUCTIONS

- **CX106** is designed for cutting metal only.
- **ALWAYS INSPECT** the blade for any cracked 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. Always use a push stick when ripping narrow pieces.
- **DO NOT** back the work-piece away from the blade while cutting. Always turn off the machine if you are backing out a cut.
- **ALL GAURDS** 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.
- **ALWAYS ENSURE** that the band saw blade guard is no more than 1/2” above the stock.
- **MAKE SURE** before making any adjustments, the switch is in the “OFF” position and the cord is un-plugged from the power source.
- **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 ENSURE** that the guide blocks are properly set to prevent blade wander.
- **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 CX106. 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*.**

CX106 18" METAL BAND SAW

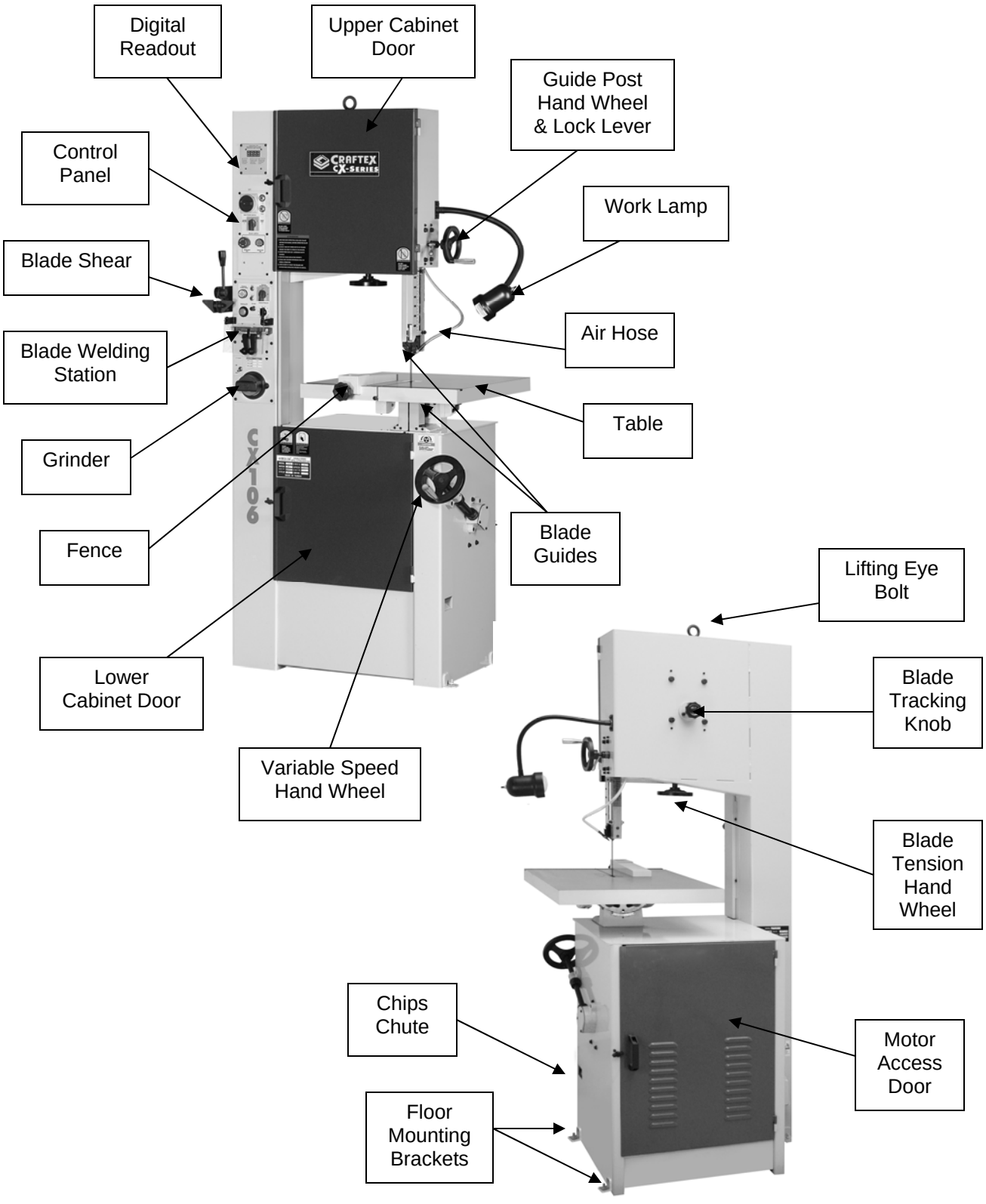
FEATURES

MODEL CX106 18” VARIABLE SPEED METAL BAND SAW WITH WELDER

As part of the growing line of Craftex CX-Series machineries, we are proud to offer the CX106 an 18” Variable Speed Band Saw with Welder. By following the instructions and procedures laid out in this user manual, you will receive years of excellent service and satisfaction. The CX106 is a professional tool and like all power tools, proper care and safety procedures should be adhered to.

- Motor ..... 2-HP, 220-V, Single Phase, 12 Amps
- Power Transfer ..... Variable Speed Belt Drive
- Switch ..... ON/OFF Push Button, Magnetic Switch with Locking Key
- Blade Speed ..... Variable Speed; 75 - 385 FPM
- Cutting Capacity ..... 10-3/4" High and 18" Left of Blade
- Cast Iron Table Size ..... Length 23-5/8" x Width 21-5/8" x Thickness 1-3/4"
- Table Tilt ..... 15° Left / Right & 10° Front / Back
- Floor to Table Height ..... 39”
- Table Construction ..... Precision Ground Cast Iron
- Wheels Construction ..... Precision Balanced Cast Iron
- Wheel Size ..... 18-1/4"
- Body Construction ..... Formed Steel
- Grinding Wheel ..... 1/8-HP, 220V, 0.75 Amps
- Welder ..... 220V, 2.4KVA, 11 Amps
- Bearings ..... Sealed and Permanently Lubricated
- Co-Planer Adjustment ..... Yes
- Powder Coated Paint ..... Yes
- Overall size ..... 40" x 30" x 75"
- Approximate Weight ..... 835 lbs
- Warranty ..... 3 Years

CX106 18” METAL BAND SAW
PHYSICAL FEATURES



UNPACKING

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

While doing the inventory if you can not find any part, check if the part is already installed on the machine.

LIST OF CONTENTS

A. Band Saw..... 1
B. Fence 1
C. Fence Lock Knob 1
D. Hex Wrench 10mm..... 1
E. Hex Wrench 5mm..... 1

MOVING CX106

The CX106 is provided with an eye bolt which is located on the top of the band saw.

When moving the band saw, place the lifting hooks through the eye bolt and lift it using a fork truck. See figure-1.

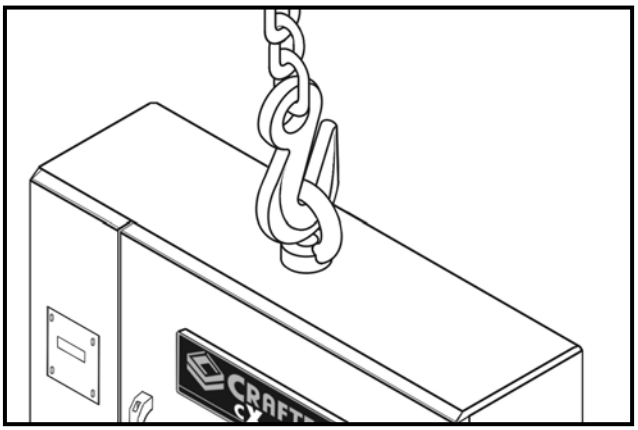


Figure-1 Lifting the band saw

You can also move the band saw using a pump truck. The band saw comes bolted on a pallet and you can use a pump truck with the band saw bolted on the pallet and move it to the desired position.

When the band saw is at the desired position, unbolt it from the pallet. Lift the band saw enough to clear the pallet with a fork truck and remove the pallet.

SETUP

The unpainted surface of the machine are coated with a rust preventive and you will want to remove this before you begin assembly. Use a solvent cleaner that will not damage painted surfaces.

When setting up your machine, you will want to find an ideal spot where your band saw will most likely be positioned most of the time. Consider your complete work environment before placing your machine in the ideal spot.

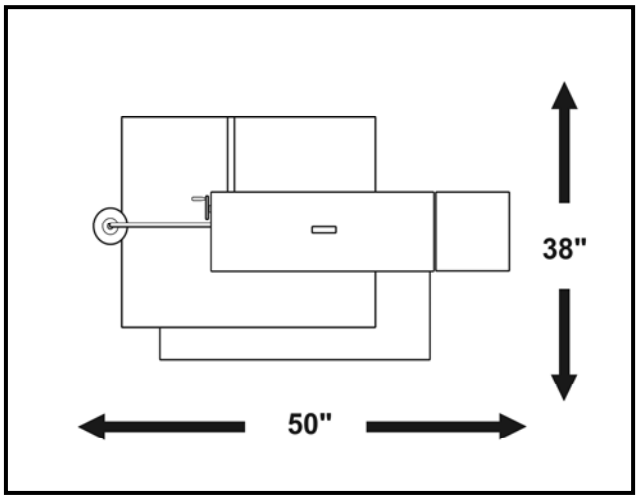


Figure-2 Minimum work space for CX106

PROPER GROUNDING

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

CX106 is for use on a normal 220 volt circuit. 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.

The band saw should be wired with a plug having 3 prongs to fit a 3 prong grounded receptacle as shown in figure-3. Do not remove the grounding prong to fit it into a 2 pronged outlet.

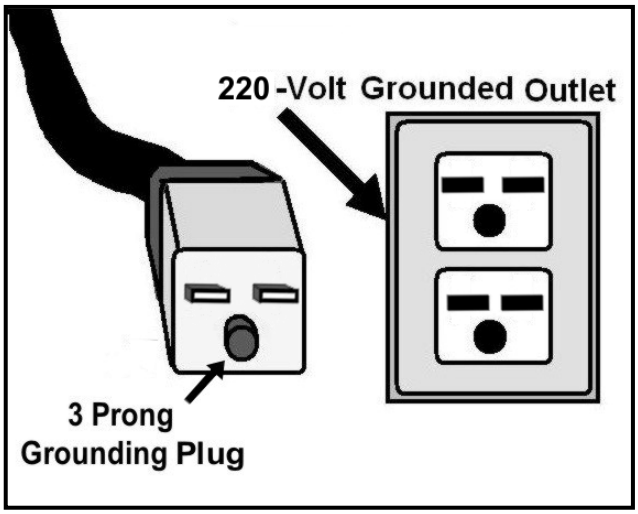


Figure-3 220-Volts outlet for CX106

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 CX106. 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.

ASSEMBLY

The CX106 band saw comes fully assembled from the factory, except the fence.

To install the fence, place it on the table and secure it using the lock knob. See figure-3.

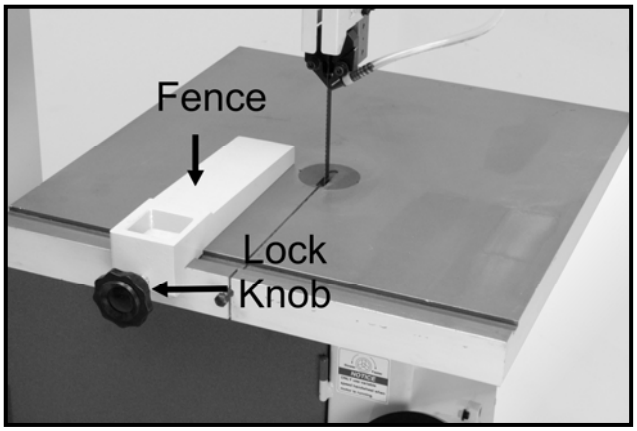


Figure-3 Installing the fence

BLADE TENSIONING AND TRACKING

When tensioning the blade, it affects the position of the blade on the wheels. We recommend you to perform blade tensioning and tracking together.

TENSIONING THE BLADE

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 TENSION THE BLADE:

Make sure the cord is disconnected from the power source.

Open the upper wheel cover.

Raise the upper blade guides to the highest using guide post hand wheel. See figure-4.

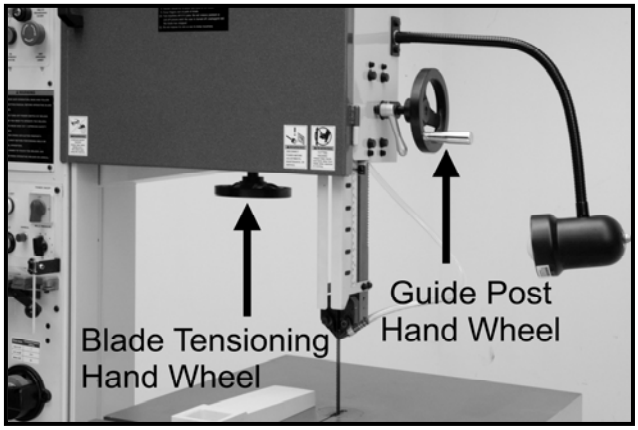


Figure-4 Guide post and blade tensioning hand wheel

Apply moderate pressure using your index finger, midway between the upper blade guides and the table to check the amount of deflection of the blade. See figure-5.

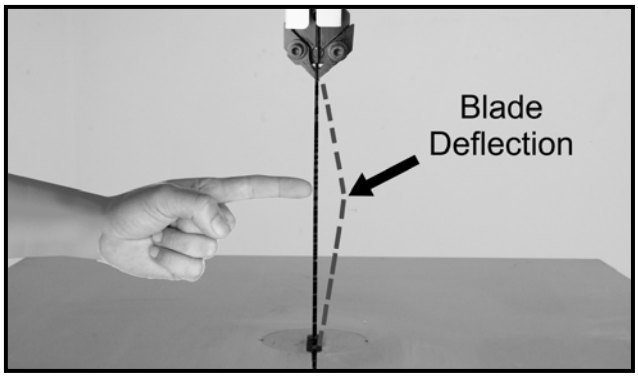


Figure-5 Checking blade deflection

The proper amount of blade deflection is approximately 3/8".

Rotate the blade tensioning hand wheel shown in figure-4 to release or tighten the tension on the blade until the amount of blade deflection is approximately 3/8" when applying moderate pressure with your finger.

BLADE TRACKING

The blade tracking means where the blade rides on the upper and lower wheels as they rotate. The blade should always be centered on both wheels. Although the blade tracking of this band saw is factory set, you should check it again to make sure that the blade is centered on the wheels.

TO ADJUST BLADE TRACKING:

Make sure the cord is disconnected from the power source.

Make sure the blade is properly tensioned.

Open the motor access door at the rear of the band saw and take the V-belt off the lower wheel pulley. See figure-6. This will allow to turn the wheels freely by hand.

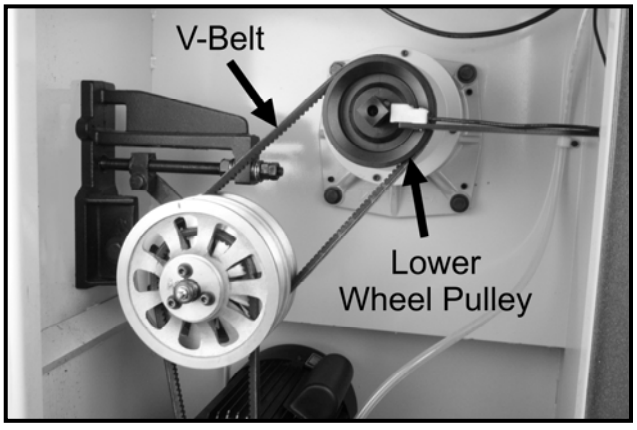


Figure-6 Taking the V-belt off the lower wheel pulley

Open the upper wheel cover.

Rotate the upper wheel by hand and watch the position of the blade on the wheel.

- If the blade is riding the wheel in the center and does not wander, it means that the blade tracks properly and does not need further adjustments.

- If the blade is riding up against the wheel flange or wanders, it needs to be adjusted.

Adjust the blade tracking by rotating the knob at the rear of the band saw shown in figure-7.

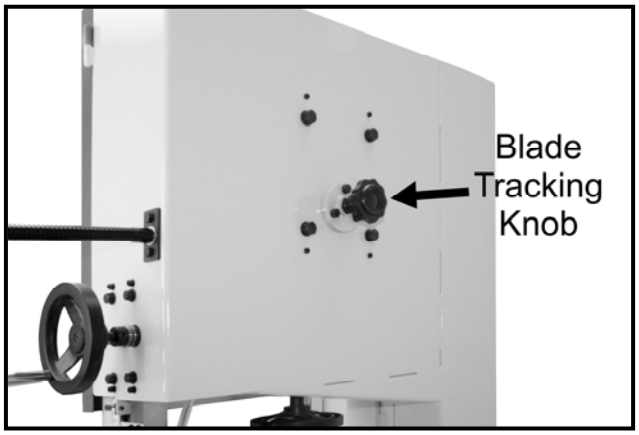


Figure-7 Blade tracking knob

If the blade is moving away from the wheel flange, turn the blade tracking knob clockwise and if the blade is moving against the wheel flange, turn the knob counter-clockwise.

Turn the blade tracking knob and rotate the upper wheel by hand while observing the position of the blade on the wheel.

Once the blade tracks properly on the wheel, re-install the V-belt and close the upper wheel cover and rear motor access door.

BLADE GUIDE ASSEMBLY

Properly adjusted support bearings help to keep the blade straight while cutting and play an important role in getting accurate cuts.

Although the blade guide assembly on CX106 is properly adjusted at the factory but we recommend that you check them.

BLADE SUPPORT ADJUSTMENT

The blade support is a round rod which is positioned behind the blade to support the blade while cutting. The distance between the blade and the support rod is supposed to be 0.016". See figure-8.

TO ADJUST THE BLADE SUPPORT:

Make sure the cord is disconnected from the power source.

Using a hex screw loosen the blade guide adjustment set screw located on the guide post. See figure-8.

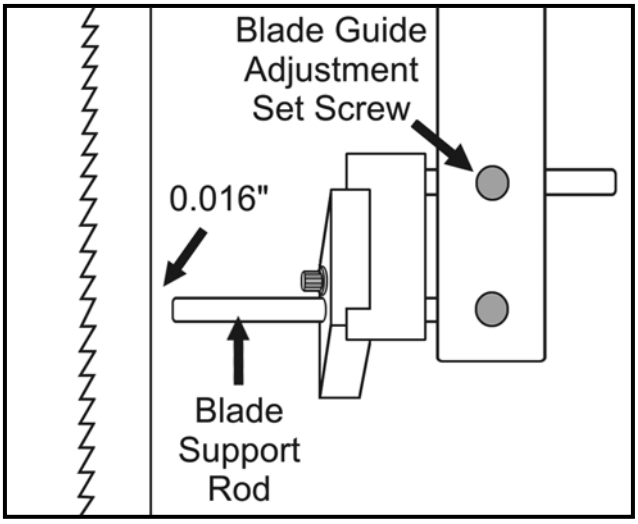


Figure-8 Blade guide assembly

Move the blade guide bracket with the blade guides away from the blade.

Now, loosen the blade support adjustment set screw located on the guide post and position the blade support 0.016" behind the blade using a feeler gauge. See figure-9.

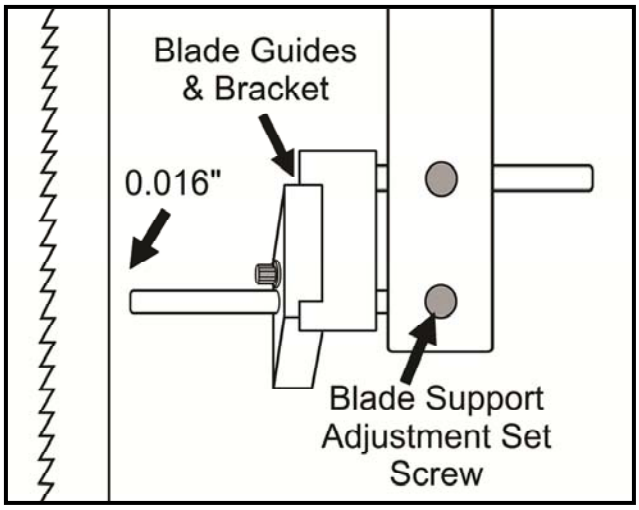


Figure-9 Blade guide assembly

Once the support rod is at the correct distance from the blade, re-tighten the blade support adjustment set screw.

BLADE GUIDE ADJUSTMENT

The guides are positioned beside the blade to support the blade from both sides and behind the teeth gullets to prevent the teeth from damage when pushed back while cutting.

TO ADJUST THE BLADE GUIDES:

Make sure the cord is disconnected from the power source.

Before adjusting the blade guides, ensure that the blade support rod is positioned correctly behind the blade.

Loosen the blade guide adjustment set screw located on the guide post shown in figure-8.

Position the blade guides 1/16” behind the blade teeth gullets as shown in figure-10.

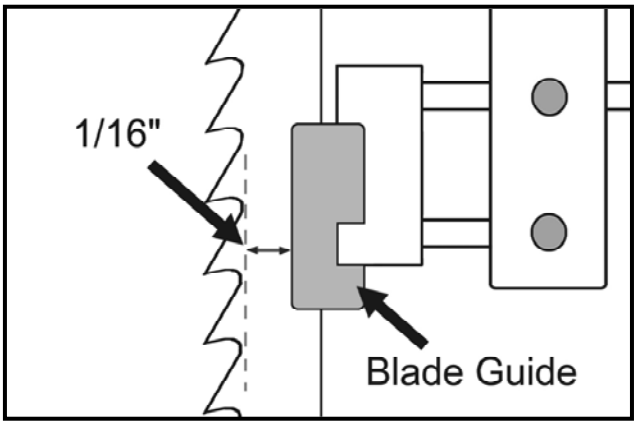


Figure-10 Blade guide position behind the teeth gullets

Re-tighten the blade guide adjustment screw to secure the guide in position.

Now, loosen the two blade guide adjustment screws, located on the blade guides. See figure-11.

Use a feeler gauge and adjust the guides 0.004" away from the blade as shown in figure-11.

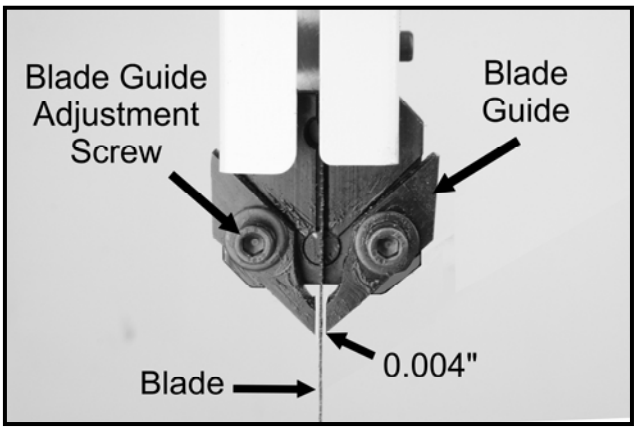


Figure-11 Adjusting the blade guides 0.004" away from the blade

Once the guides are at the correct position from the blade, re-tighten the blade guide adjustment screws.

BASIC CONTROLS

This section describes the basic controls of the CX106. Use the figure and read the descriptions to understand the basic controls of this band saw.

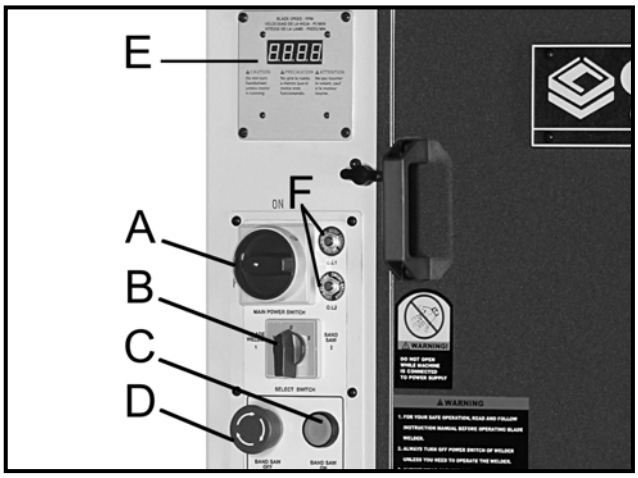


Figure-12 Band saw controls

A. MAIN POWER SWITCH. Used to enable/disable power to the band saw and the welding station.

B. SELECTOR SWITCH. Used to select the band saw or the welding station.

C. ON BUTTON. Starts the band saw.

D. EMERGENCY STOP BUTTON. Stops the band saw when pushed in. You will have to turn it slightly so that it pops out before turning the band saw ON.

E. SPEED DIGITAL READOUT. Displays the speed of the blade in feed per minute when the band saw is ON.

F. OVERLOAD SWITCHES. Shuts off power to the band saw when there is an overload.

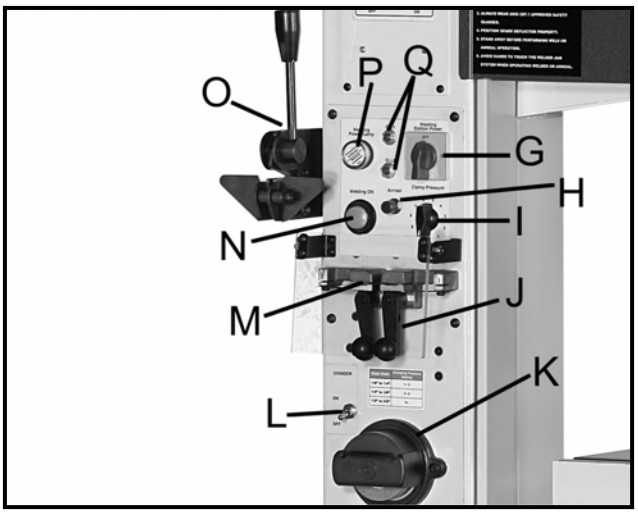


Figure-13 Welding controls

G. WELDING POWER SWITCH. Enables/disables power to the welder.

H. ANNEAL BUTTON. Allows the blade to cool down gradually.

I. CLAMPING PRESSURE KNOB. Applies pressure to the ends of the band saw blade for proper weld.

J. SPARK GUARD. Protects operator's eyes from sparks while welding operation.

K. GRINDING WHEEL. Used to smoothen the ends of the blade for a flat and clean joint.

L. GRINDING WHEEL ON/OFF SWITCH. Starts/Stops the grinding wheel.

M. WELDING CLAMPS. Hold the blade while welding operation.

N. WELDING BUTTON. Turn the power on to form the weld.

O. BLADE SHEAR. Cuts the blade.

P. WELDING POWER LIGHT. Turns on when power is enabled to the welder.

Q. OVERLOAD SWITCHES. Shuts off power to the welder when there is an overload.

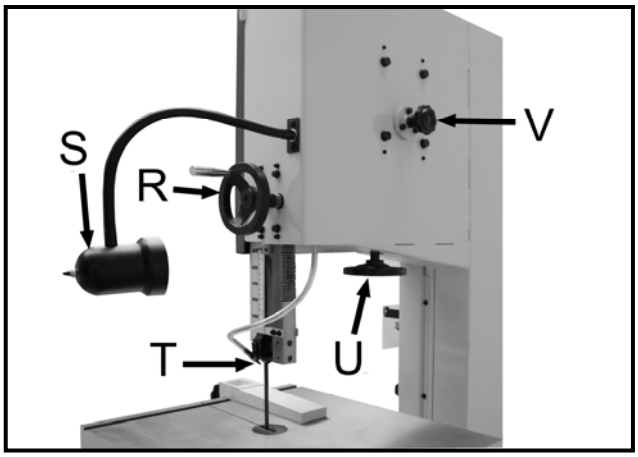


Figure-14 Other controls

R. GUIDE POST HAND WHEEL WITH LOCK LEVER. Controls the height of the upper blade guides assembly and blade guard.

S. WORK LIGHT. Illuminates the work area on the table.

T. AIR NOZZEL. Produces air and removes the chips from the cutting area.

U. BLADE TENSIONING HAND WHEEL. Used to increase or decrease the amount of tension on the blade.

V. BLADE TRACKING KNOB. Used to adjust the blade position on the wheels.

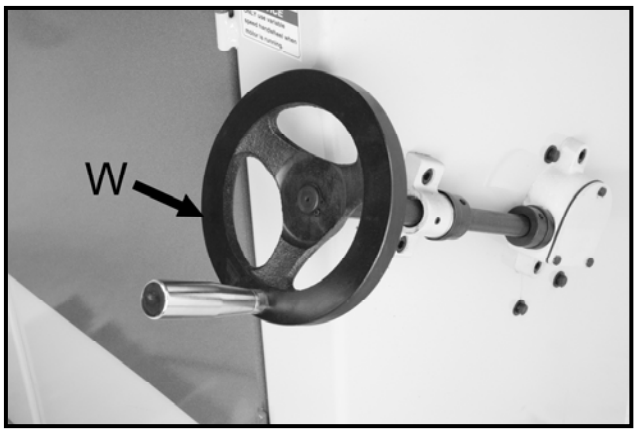


Figure-15 Variable speed hand wheel

W. VARIABLE SPEED HAND WHEEL. Used to provide blade speed 75 to 385 RPM.

TEST RUN

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

Before doing a test run, make sure the blade is tracking correctly on the wheels.

> ***WARNING!***
> *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.*

TO TEST RUN THE CX106:

Remove all the tools and objects used for assembling the machine.

Walk around the machine, ensure all nuts, bolts, and screws are tightened and the machine is properly assembled.

Connect the cord to the power source and turn the main power switch to ON position. Turn the selector switch to "2" selecting the band saw and push the ON button. See figure-16.

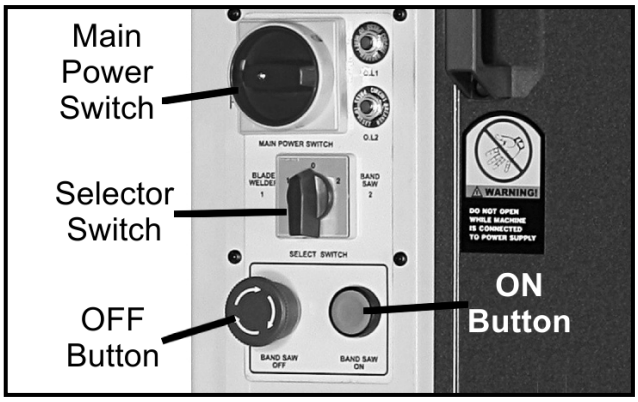


Figure- 16 CX106 control panel

The band saw should start smoothly with no or little vibration.

With the band saw ON, turn the variable speed hand wheel located below the table. Observe the digits on the digital speed readout. Turning the hand wheel should change the digits on the digital speed readout.

Now, push the OFF button and this should turn the band saw off.

Now, push the ON button without resetting the OFF button. The band saw should not run until you reset the OFF button.

Reset the OFF button and turn the selector switch to "1" to the left, selecting the blade welder. Turn the welding power switch to ON position to enable power to the welder. The welding power light will illuminate.

Test the grinding wheel by turning the grinding wheel ON/OFF switch.

Turn OFF the welder power switch to disable power to the welder.

> ***WARNING!***
> *This machine can perform many types of operations which are beyond the scope of this manual and are very dangerous if performed incorrectly. The safety instructions given in this manual can not be complete because the environment in every shop is different. Always consider safety first as it applies to your individual working conditions*.

DISABLING POWER TO THE BAND SAW & TO THE WELDING STATION

The CX106 features a main power switch to disable/enable power to the band saw and to the welding station.

Make sure the main power switch is to the OFF position before connecting the cord to the power source. See figure-17.

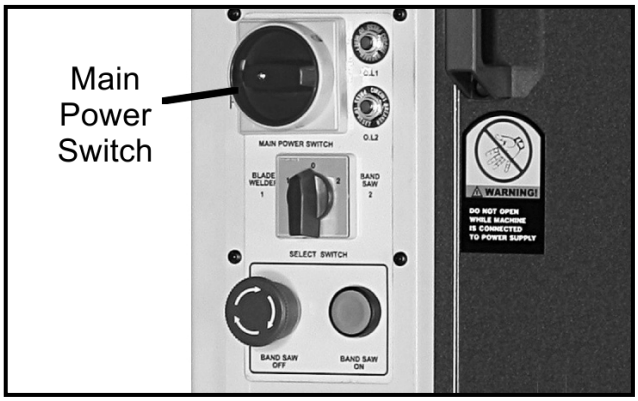


Figure- 17 Disabling the power switch

WORKPIECE INSPECTION

Before cutting a metal work-piece, inspect it carefully for any defects in the material.

For thin or small metals, the work-piece should be clamped between larger pieces to hold the work-piece tight, when fed against the blade.

Some small work-pieces will be damaged if cut on the band saw; instead use; a shear or nibblers for this work.

Some round work-pieces like cables, chains etc, which are not stable, if not supported with a vise, should not be cut using a vertical band saw.

Some hard metals take a longer time when cutting. These kinds of metals need a different type of blade and lubrication while cutting.

Tanks, cylinders, valves that contain gasses or liquids can cause fire, explosion or serious personal injury and damage to the machine.

IMPORTANT

Avoid cutting tanks, cylinders and valves that contain gasses or liquids if possible. If you find it really necessary to cut these items, always vent and purge them, before cutting.

Sometimes it is not safe to cut magnesium. Cutting magnesium with a dull blade can create enough friction to make the small magnesium chips produce fire. Avoid cutting magnesium If possible.

GUIDE POST

The guide post assembly can be moved up or down above the work-piece. The movement of the guide post is controlled with the hand wheel shown in figure-18.

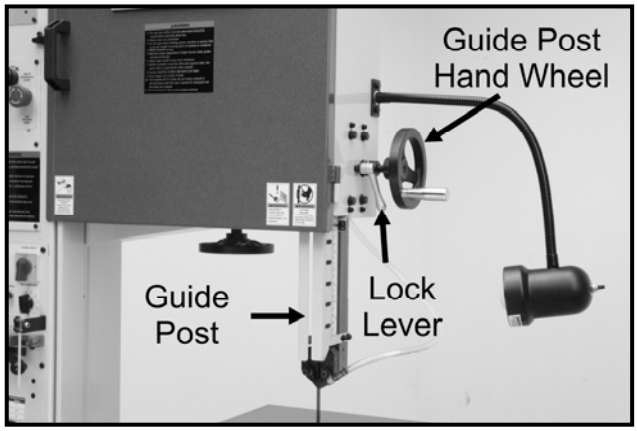


Figure-18 Guide post and controls

To make accurate cuts and to reduce the blade slipping out of position, it is recommended to position the guide post so that the upper blade guides are approximately 1/4" above the work-piece while cutting operation.

TO ADJUST THE GUIDE POST:

Make sure the cord is disconnected from the power source.

Loosen the guide post lock lever on your band saw shown in figure-18 and rotate the hand-wheel to move the guide post assembly up or down. When the guide post assembly is about 1/4" above the work-piece, lock the guide post in place using the lock knob.

TABLE TILT

The work table on CX106 can be tilted 15° side to side and 10° front to back when bevel cutting.

TO TILT THE TABLE SIDE TO SIDE:

Make sure the cord is disconnected from the power source.

Loosen the two cap screws under the table, shown in figure-19.

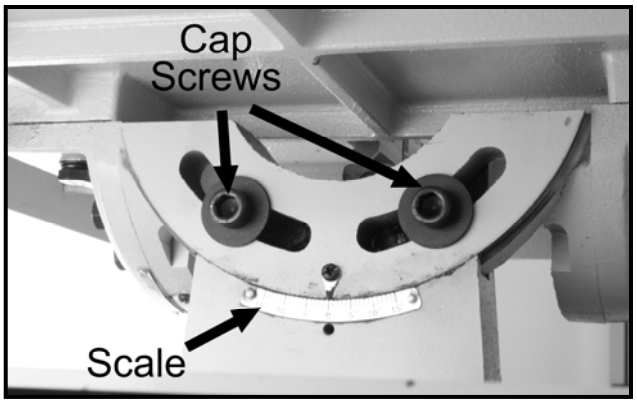


Figure-19 Side to side table tilt cap screws

Tilt the table using the scale shown in figure-19 as a guide and re-tighten the cap screws.

WARNING!

After tilting the table, make sure to tighten the cap screws and hex bolts properly before operation. Failure to do so could result in moving of the table while operation and you fingers can come in contact with the blade.

TO TILT THE TABLE FRONT TO BACK:

Make sure the cord is disconnected from the power source.

Loosen the two hex bolts under the table, shown in figure-20.

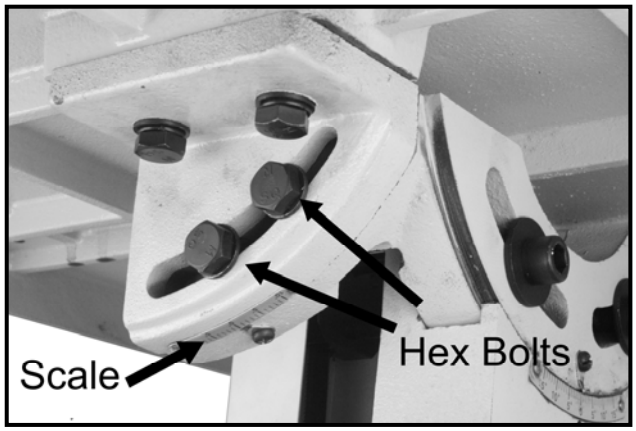


Figure-20 Front to back table tilt hex bolts

Tilt the table to the desired angle using the scale shown in figure-20 and re-tighten the hex bolts.

PREMATURE BLADE BREAKAGE & CARE

There are many conditions that cause premature blade breakage but most of the times it is because of the poor care and judgment of the operator. This section describes the most common causes of blade breakage and tells you how to avoid it.

1. One of the causes is leaving the blade tensioned when not using the band saw for a long period of time.

2. Always check the blade for any damage or dull teeth before operating the band saw. Dull teeth produces extra amount of heat and damages the blade.

3. When tensioning the blade, make sure it is not over-tensioned and the blade is tracking centered on the wheels.

4. When using a blade with the wrong pitch for cutting a work-piece, the blade produces extra heat and gets damaged. Always select a blade with the right pitch, set and width for each application and use the right speed for the blade.

5. Sometimes the blade is not properly welded and it breaks when tensioned and used. Always use a blade which is properly welded.

BLADE SHEAR

Using the blade shear on the CX106 is very easy. Simply position the blade into the shear as shown in figure-21 and pull the handle down to cut off the blade end.

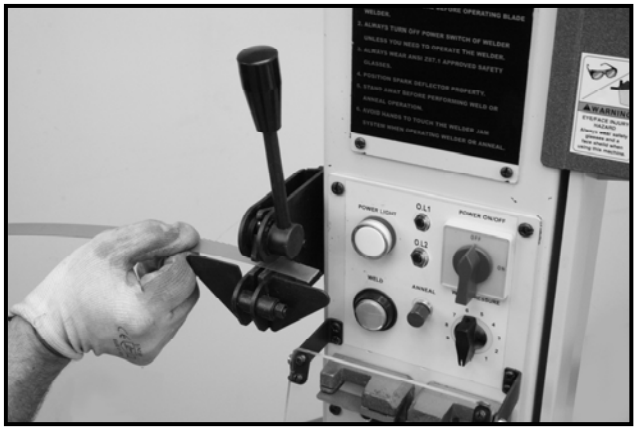


Figure-21 Cutting off the blade end

BLADE WELDING

The CX106 is equipped with a blade welder used to weld band saw blade ends together. The welder uses electrical resistance to head and fuse the blade ends together.

TO WELD THE BAND SAW BLADE ENDS TOGETHER:

Make sure the motor is OFF and power switch key is in the locked position.

It is recommended to use heavy duty leather gloves for the protection of your hands.

Grind the blade ends using the grinder on the CX106 to make sure there is no teeth in the welding area. See figure-22

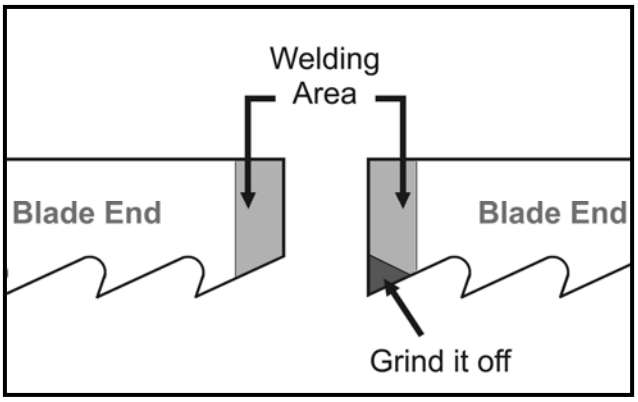


Figure-22 Grinding the blade teeth off the welding area

Figure-23 Grinding the blade ends

Now, pull the plastic shield up located on the welder and pull the lock levers down to release welding clamps. See figure-24.

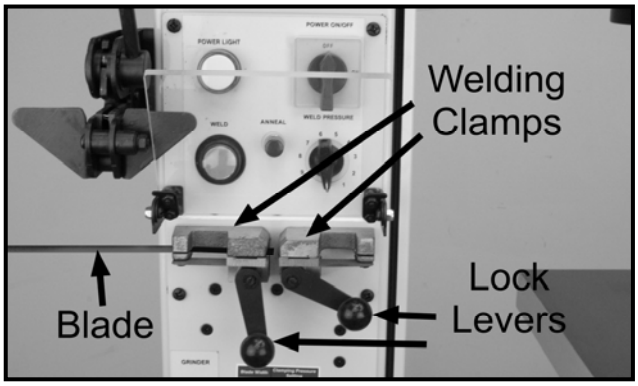


Figure-24 Blade into the welding clamps

Position one of the blade ends evenly into one of the welder clamps so that the teeth of the blade are the facing towards you. Make sure that the blade end is midway between the two welding clamps as shown in figure-24.

Turn the clamping pressure knob located on the welder control panel to "0". See figure-25.

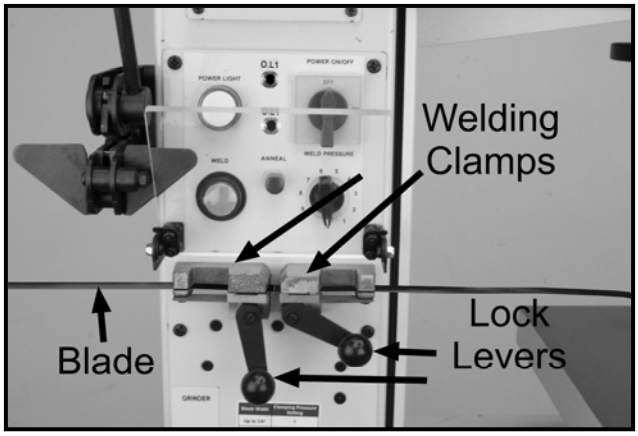


Figure-25 Welder controls

Now place the second blade end into the welding clamp so that its end is evenly touching the opposite blade end and lock the lever to secure it in position. See figure-25.

Position the welding shield to its position to guard the welder.

Use the table given below for setting the correct clamping pressure according to the width of the blade.

CLAMPING PRESSURE	BLADE WIDTH
1	up to 1/4"
2 to 3	1/4" to 3/8"
4 and up	3/8" above

WARNING!

The flammable material can catch fire from the burning sparks produced during welding. Make sure to keep the welder shield down and do not weld close to the flammable materials.

Connect the cord to the power outlet and turn the welding power switch knob to the ON position.

Press the welding button and release to form the weld. Do not to hold the welding button.

Turn the clamping pressure dial to "0" and push the lock levers down to release the welding clamps and check the weld.

- If the blade is not welded properly and having gaps, go back to the first step and grind the blade to square up the ends.

- If the blade is welded properly and is even and smooth with no gaps, continue to the next step.

Position the blade into the weld clamps with the weld in the center between the two clamps.

Press the annealing button two or three times until the weld area turns red but do not hold the annealing button. This will allow the weld to cool down gradually.

Repeat the above step four to five times and let the weld for about 35 seconds to cool down each time.

Let the blade cool down completely, release the lock levers and check the weld.

Grind the blade with its both sides so that that weld is smooth. Make sure not to grind the teeth or overheat the blade. This can weaken the weld.

Bend the blade in an arc with the weld in the center of the arc and test its strength and flexibility. The blade should bend smoothly with no angles.

Turn the welder OFF.

MAINTENANCE

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

> ***WARNING!***
> *Make sure the machine's power switch is OFF and the cord is disconnected from the power source when installing / removing any part or servicing the band saw.*

Check your machine daily for the following before use:

- Loose mounting nuts, bolts, and parts
- Damaged or dull blade
- Blade tracking
- Damaged or worn cord
- Any other unsafe condition

Check you machine after every 15 days or so for the following:

- Damaged or worn V-belt.
- Air pump lubrication

CLEANING

The table should be cleaned and wiped after every use to make sure there is no chips and debris. Apply rust preventive product to keep the table rust free.

Clean the wheels and the areas around the wheels after every 20 days or so to make sure that there is no metal chips or built up grease.

V-BELTS RELACEMENT

The v-belts get old with use and will need to be replaced.

TO REPLACE THE V-BELTS:

Disconnect the cord from the power source.

Open the cabinet door to access the pulleys and the v-belt.

Take the belt off from motor pulley and the air pump pulley.

Lift the air pump pulley up and to release the tension and remove the belt from the motor pulley and variable speed pulley.

Remove the v-belt from the lower pulley and then remove it from the variable speed pulley. See figure-26

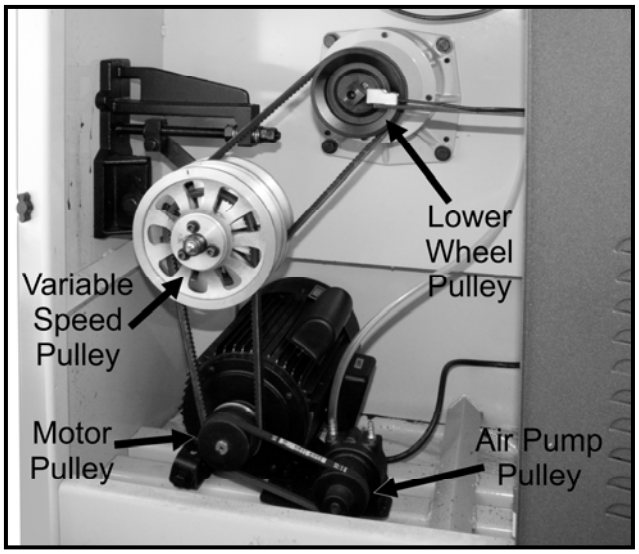


Figure-26 Pulleys and v-belts

Install the new v-belts in the reverse order as you removed the old v-belts and close the cabinet door.

TILT SCALE CALIBRATION

The table tilt scale on your CX106 needs to be calibrated with the blade for accurate cuts.

TO CALIBRATE THE TILT SCALE:

Disconnect the cord from the power source.

Loosen the cap screws (for side to side) and hex bolts (for front to back) tilt scale calibration.

Place a square on the table against the blade as shown in figure-27. Do not place it against the teeth of the blade.

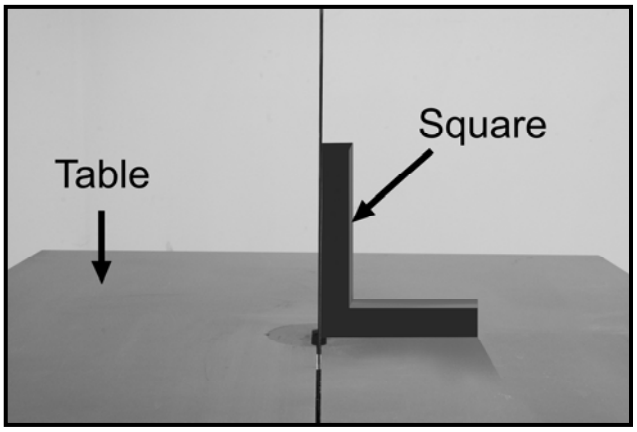


Figure-27 Square positioned to check table front to back tilt

Adjust the table so that the square is touching the blade with its full length and the table is at 90° with the blade.

Retighten the cap screws / hex bolts underneath the table to secure the table in position.

Check the scale pointer underneath the table. If the scale pointer does not point directly to the 0° mark, loosen the screw and adjust the pointer to 0° mark. Retighten the screw.

WHEEL ALIGNMENT

The CX106 comes with heavy duty cast iron wheels for added stability and overall performance. When wheels are properly aligned and parallel to each other it will give less vibration, more power, accuracy and less wandering.

The wheels on your band saw were properly aligned at the factory but after a long period of time of use the wheels might become out of alignment and will need to be adjusted. The wheels are out of alignment when, the blade does not track properly even after adjustments, excessive vibration while operation and excessive blade wandering when cutting.

IMPORTANT

Wheel alignment is adjusted in very rare cases and is not a simple and common adjustment. Before adjusting the wheel alignment make sure to perform blade tensioning and tracking adjustments to see if the problem is solved with those simple adjustments.

TO CHECK WHEEL ALIGNMENT:

You need a 2 x 6 x 5' board with it is one edge completely straight and cut a slot in the middle for the cabinet. This board will work as a gauge that can reach the top and bottom wheels at the same time. See figure-28.

Disconnect the cord from the power source.

Remove the table and open the upper and lower cabinet doors.

Hold the board close to the wheels and make sure that the board is the touching the wheels with its full length.

If the board is touching the top and bottom of the wheels evenly with its full length and the wheels are aligned with each other, no adjustment required.

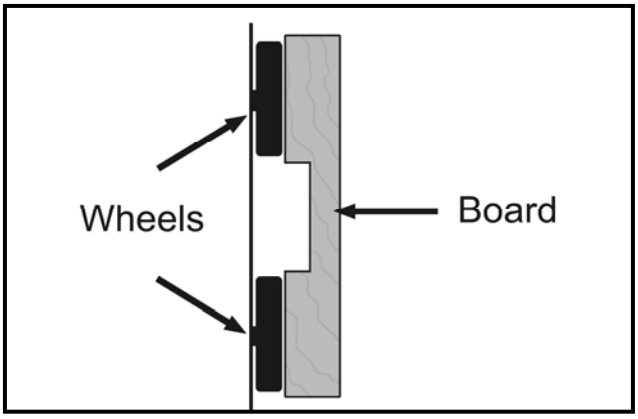


Figure-28 Board evenly touching the wheels with its full length

If the top wheel is not parallel to the bottom wheel, use the blade tracking knob to adjust the wheel alignment.

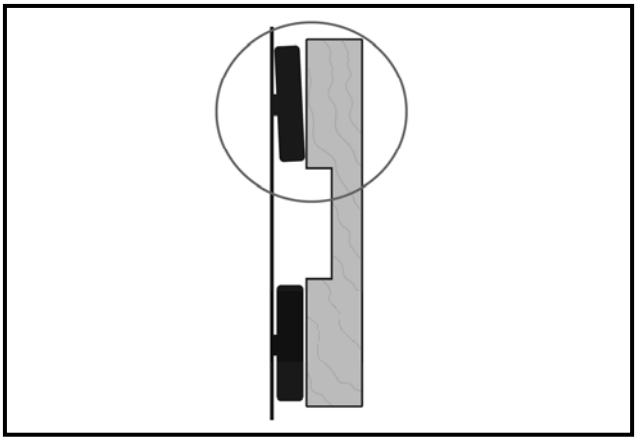


Figure-29 Wheels not aligned

If the top wheel is not parallel from its side, it will need to be adjusted. See next page **"TOP WHEEL ADJUSTMENT"**.

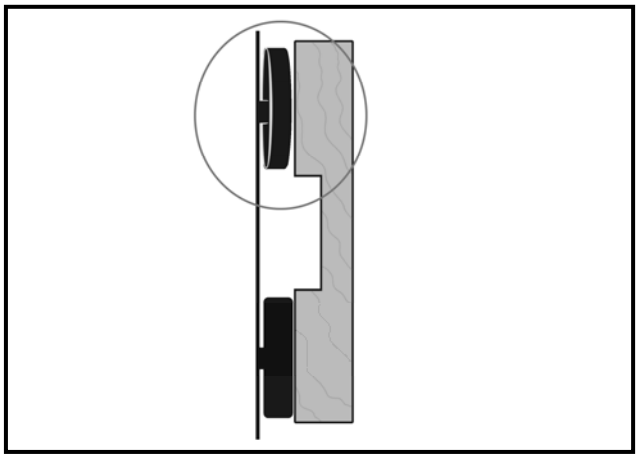


Figure-30 Wheels not parallel from side

If the top and bottom wheels are parallel to each other but not aligned, one of the wheels will need to be shimmed. See next page **"SHIMMING THE WHEEL"**.

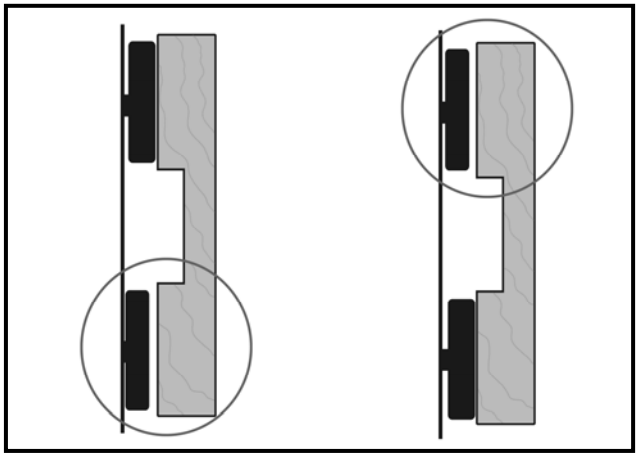


Figure-31 Wheels are not aligned

TOP WHEEL ADJUSTMENT

Disconnect the cord from the power outlet.

Loosen the four hex bolts located on the rear side of the upper cabinet 2 to 3 turns. Do not loosen completely.

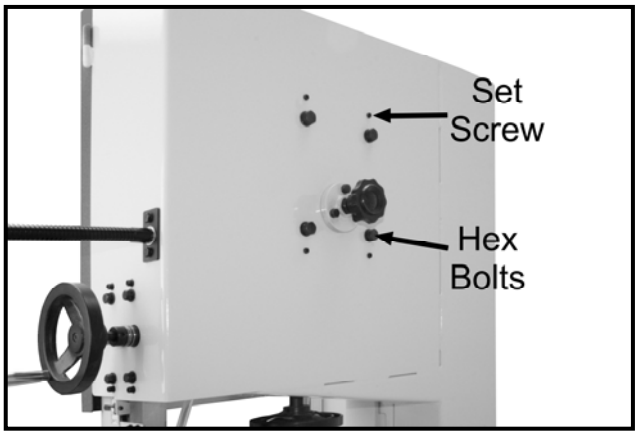


Figure-32 Adjusting the upper wheel

Now, loosen the set screws in equal amounts so that if the wheel is twisted to the left (viewed from the front), thread the right hand set screws out (viewed from the back) and the right hand screws in, all in equal amount.

Tighten the hex bolts and use the board to check if the wheels are aligned properly.

Repeat the above procedure until the wheels are aligned with each other and close the cabinet doors.

SHIMMING THE WHEEL

Disconnect the cord from the power outlet.

Uninstall the blade and remove the table.

Remove the wheel that needs to be shimmed and add shims.

Reinstall the wheel and use the gauge to check wheel coplanarity.

If the wheels is not coplanar, add or remove shims.

If the wheel is coplanar secure the wheel and close the cabinet door.

LUBRICATION

The CX106 has sealed lubricated bearings and do not require any lubrication while there are some other components of the band saw which will need to be lubricated.

> ***WARNING!***
> *Make sure the machine's power switch is OFF and the cord is disconnected from the power source when lubrication the band saw.*

The air pump should be lubricated after every 4 hours of use while the guide post rack, tension lead screw and the variable speed pulley shaft needs to be lubricated after every 85 hours of use.

AIR PUMP

Open rear cabinet door.

Add four to five drops of air tool oil to the air pump. See figure-33.

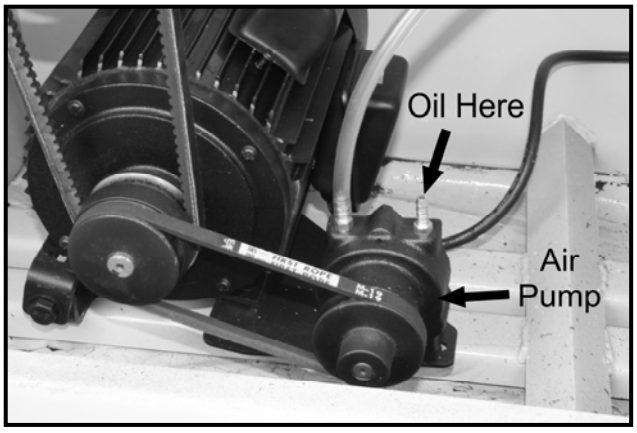


Figure-33 Lubrication the air pump

Clean the excessive oil on the outside of air pump and close the cabinet door.

GUIDE POST

Lower the guide post all the way down and clean the guide post rack using a rag with mineral spirits.

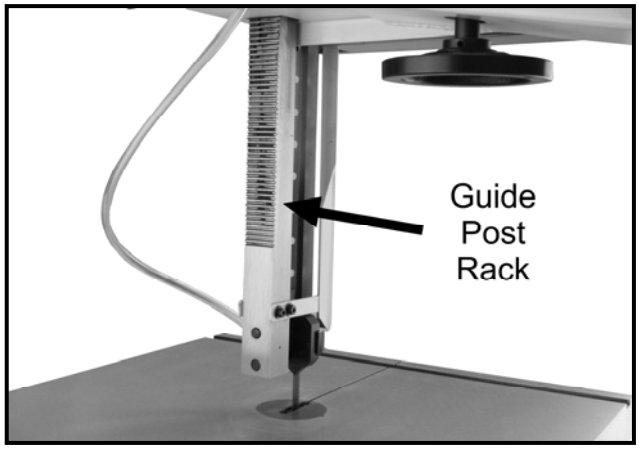


Figure-34 Lubricating guide post rack

Apply a light coat of #2 grease or equivalent and use the hand wheel to raise and lower the guide post to distribute the grease.

VARIABLE SPEED PULLEY SHAFT

Open the rear cabinet door and clean the grease and dirt on the variable speed pulley shaft using mineral spirit and a rag.

Use a grease gun and apply 3 to 4 pumps of #2 grease or equivalent to the shaft fitting.

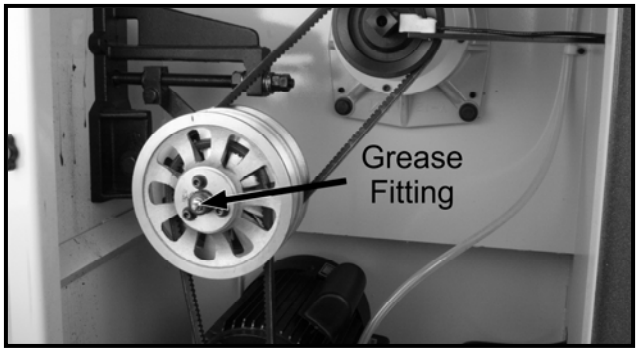


Figure-35 Lubricating the pulley shaft

BLADE TENSION LEAD SCREW

Open the upper cabinet and remove the blade.

Rotate the blade tension hand wheel clockwise all the way.

Clean the grease and dirt from the blade tension lead screw threads.

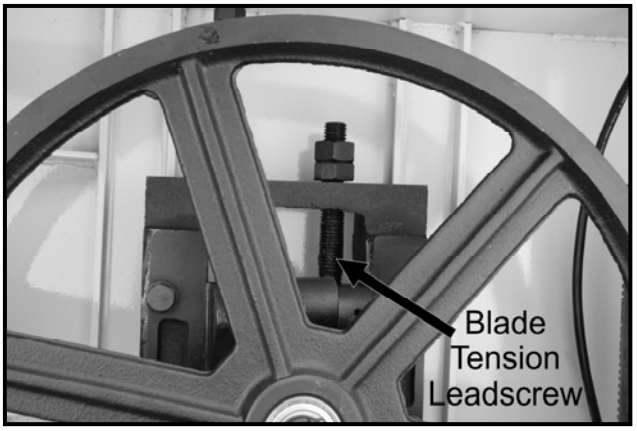


Figure-36 Lubricating the blade tension lead screw

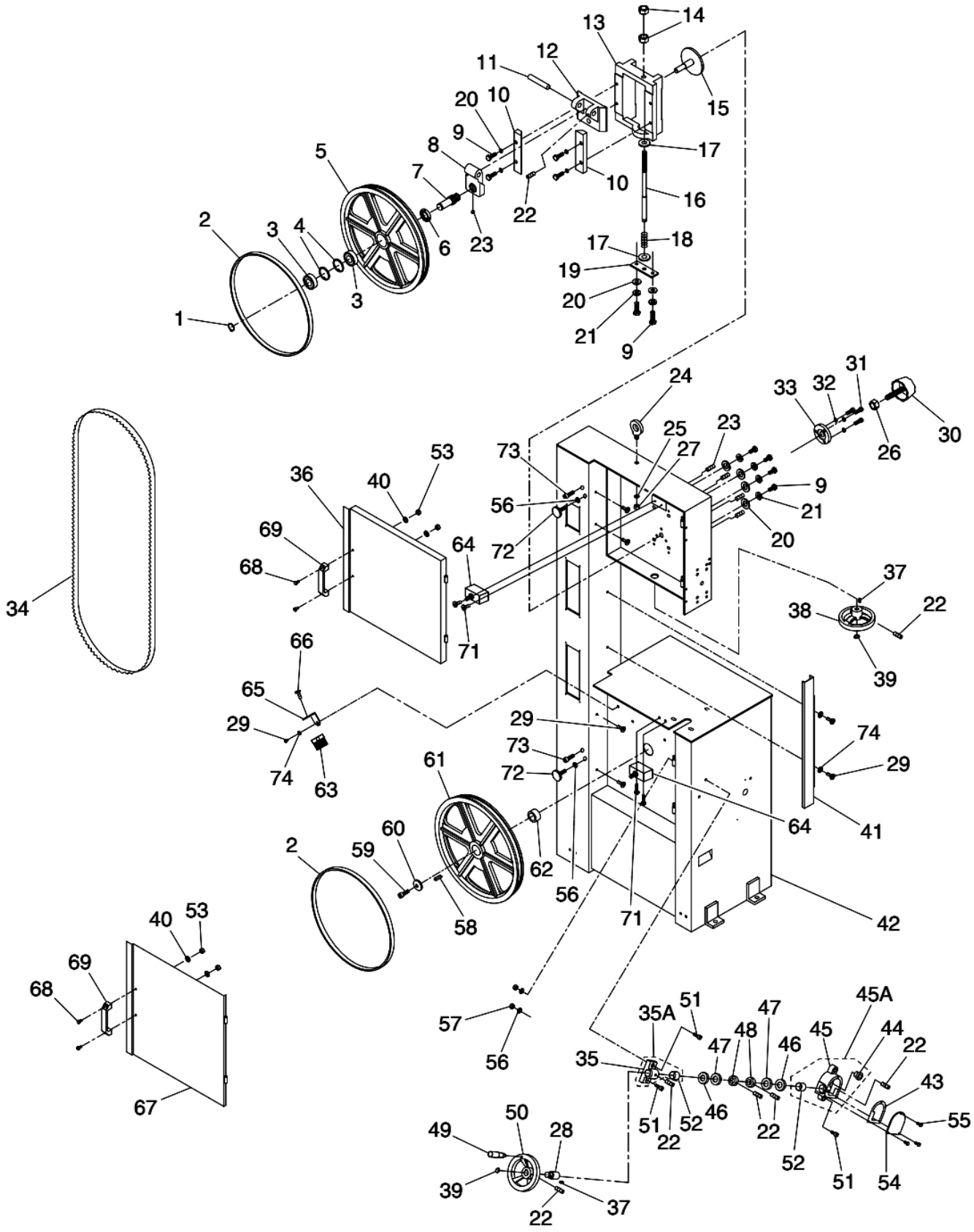
Apply a thin coat of #2 grease or equivalent to the lead screw. Distribute the grease using a new rag. DO NOT apply grease on the blade tension sliding ways.

Re-tension the blade and adjust blade tracking (if required).

IMPORTANT

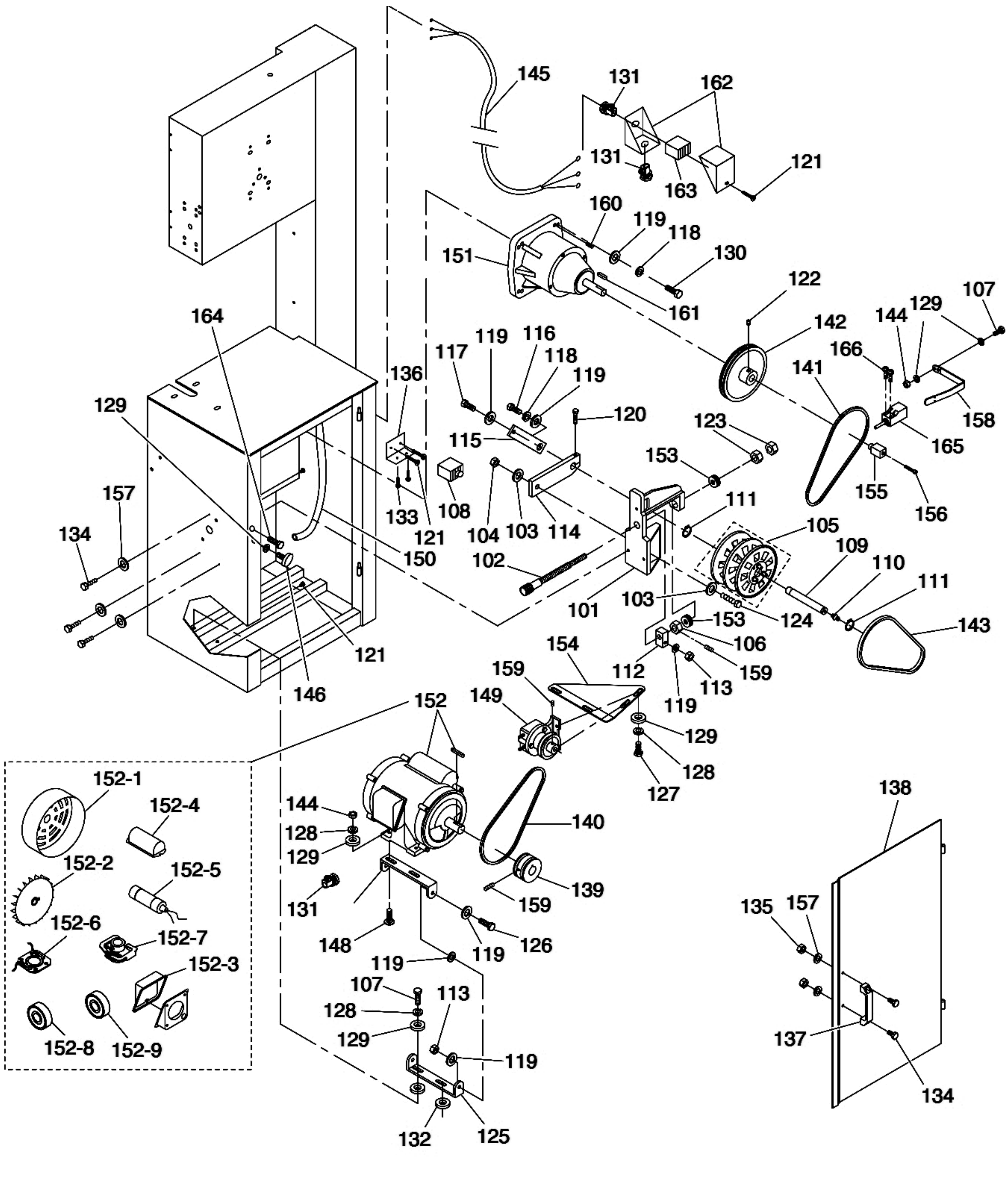
DO NOT apply grease on the table trunnions and blade tension sliding ways. Applying grease on the table trunnions and blade tension sliding ways, will create dirt build ups which will interfere with the smooth movement of the table and the ways.

CX106 PARTS BREAKDOWN & LIST



REF#	DESCRIPTION
1	EXT RETAINING RING 25MM
2	
2	WHEEL TIRE, RUBBER
3	BALL BEARING 6005ZZ
4	INT RETAINING RING 47MM
5	
5	UPPER WHEEL
6	WHEEL SHAFT LOCK COLLAR
7	UPPER WHEEL SHAFT
8	PIVOT BRACKET
9	HEX BOLT M10-1.5 X 30
10	SLIDE BRACKET GUIDE
11	PIVOT BRACKET AXLE
12	SLIDE BLOCK
13	SLIDE BLOCK HOUSING
14	HEX NUT 5/8-11 LH
15	BLADE TRACKING RAM
16	TENSIONING LEADSCREW
17	SPACER
18	COMPRESSION SPRING
19	SPRING RETAINING PLATE
20	FLAT WASHER 10MM
21	LOCK WASHER 10MM
22	SET SCREW M6-1 X 6
23	SET SCREW M8-1.25 X 8
24	LIFTING EYE BOLT M12-1.75 X 20
25	FLAT WASHER 12MM
26	HEX NUT 5/8-18
27	HEX NUT M12-1.75
28	HANDWHEEL SHAFT
29	PHLP HD SCR M5-.8 X 8
30	TRACKING KNOB BOLT 5/8-18 X 2-1/2
31	HEX BOLT M8-1.25 X 25
32	LOCK WASHER 8MM
33	KNOB BOLT BRACKET
34	BLADE 120" X 1/2" X 0.25" 14 RAKER
34	BLADE 140" X 1/2" X 0.25" 14 RAKER
35A	PILLOW BLOCK ASSY W/BUSHING
35	PILLOW BLOCK
36	
36	UPPER WHEEL DOOR

REF#	DESCRIPTION
37	KEY 5 X 5 X 16
38	TENSIONING HANDWHEEL
39	EXT RETAINING RING 18MM
40	FLAT WASHER 6MM
41	BLADE GUARD
42	
42	CABINET
43	GEARBOX COVER GASKET
44	FLANGE BUSHING
45A	GEARBOX HOUSING ASSEMBLY
45	GEARBOX HOUSING
46	THRUST BEARING 51104
47	DUST DEFLECTOR
48	LOCK COLLAR
49	HANDWHEEL HANDLE
50	VARIABLE SPEED HANDWHEEL
51	CAP SCREW M8-1.25 X 25
52	BUSHING
53	HEX NUT M6-1
54	GEARBOX HOUSING COVER
55	HEX BOLT M5-.8 X 10
56	FLAT WASHER 8MM
57	HEX NUT M8-1.25
58	KEY 7 X 7 X 30
59	CAP SCREW M10-1.5 X 25 LH
60	WHEEL FLAT WASHER 10MM
61	
61	LOWER WHEEL
62	BUSHING
63	CHIP BRUSH
64	DOOR SWITCH SHINOZAKI AZ-100-IT
65	CHIP BRUSH BRACKET
66	TAP SCREW M5 X 8
67	
67	LOWER WHEEL DOOR
68	HEX BOLT M6-1 X 16
69	DOOR HANDLE
71	PHLP HD SCR M4-.7 X 35
72	DOOR LOCK
73	CAP SCREW M5-.8 X 8
74	FLAT WASHER 5MM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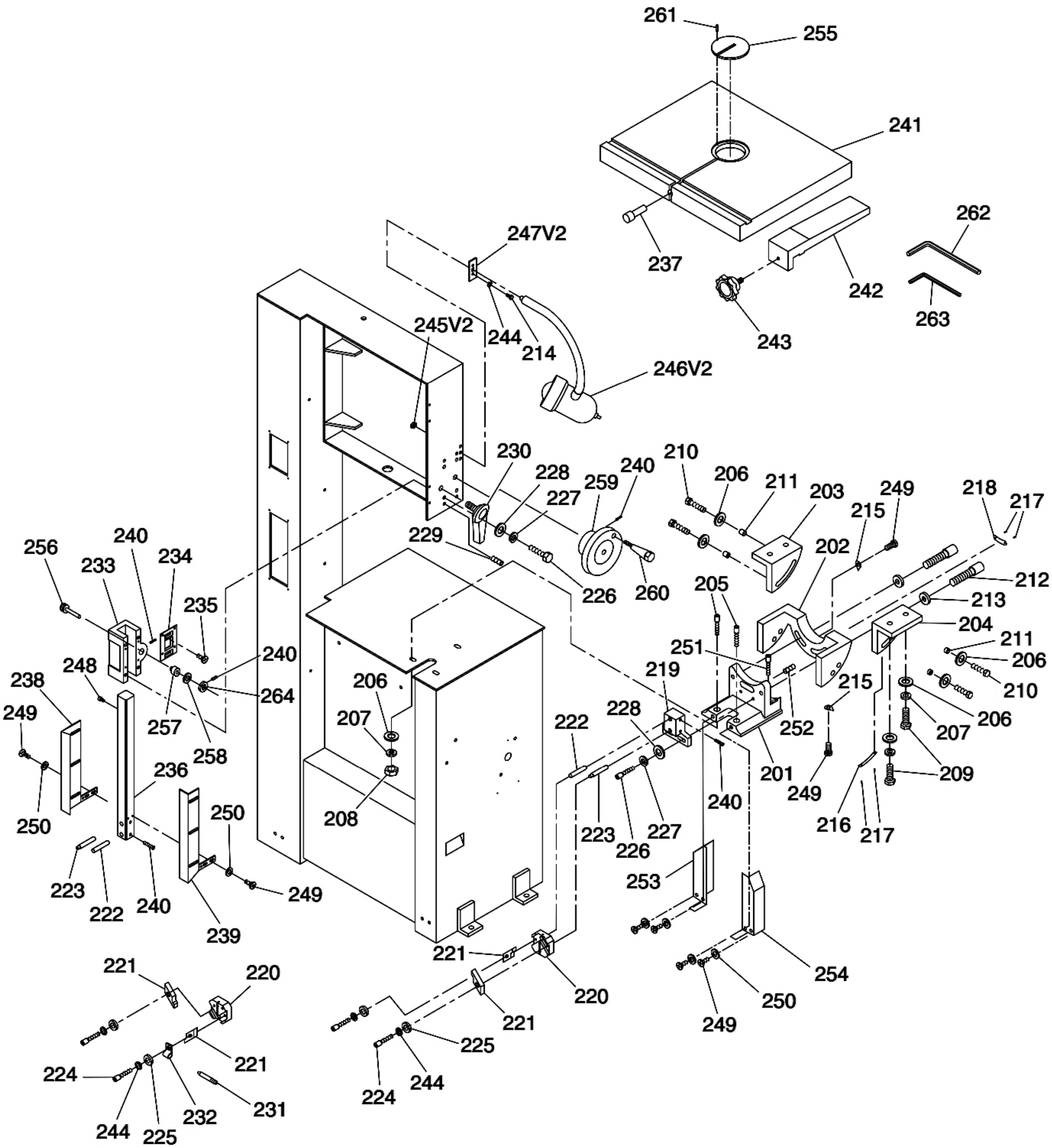
REF #	DESCRIPTION
101	PULLEY BRACKET
102	VARIABLE SPEED LEADSCREW
103	FLAT WASHER 1/2
104	LOCK NUT 1/2-13
105	VARIABLE SPEED PULLEY ASSY
106	LEADSCREW LOCK NUT
107	HEX BOLT M8-1.25 X 20
108	DOOR SWITCH SHINOZAKI AZ-100-IT
109	PULLEY SHAFT
110	GREASE FITTING, STRAIGHT M6-1 X 5
111	EXT RETAINING RING 20MM
112	LEADSCREW BLOCK
113	LOCK NUT M10-1.5
114	PULLEY SHAFT PIVOT ARM
115	GEAR SHAFT PIVOT ARM
116	HEX BOLT M10-1.5 X 20
117	HEX BOLT M10-1.5 X 45
118	LOCK WASHER 10MM
119	FLAT WASHER 10MM
120	HEX BOLT M8-1.25 X 35
121	PHLP HD SCR M5-.8 X 8
122	SET SCREW M8-1.25 X 8
123	HEX NUT M12-1.75
124	HEX BOLT 1/2-13 X 2
125	MOTOR MOUNT PIVOT BRACKET
126	HEX BOLT M10-1.5 X 35
127	HEX BOLT M8-1.25 X 15
128	LOCK WASHER 8MM
129	FLAT WASHER 8MM
130	HEX BOLT M10-1.5 X 40
131	STRAIGHT LT STRAIN RELIEF 1/2" NPT
132	SPACER RUBBER
133	PHLP HD SCR M5-.8 X 30
134	HEX BOLT M6-1 X 16
135	HEX NUT M6-1
136	SAFETY SWITCH BRACKET
137	DOOR HANDLE
138	
138	MOTOR ACCESS DOOR
139	MOTOR PULLEY

REF #	DESCRIPTION
140	COGGED V-BELT M-19
141	COGGED V-BELT 17-360
142	SPEED REDUCTION PULLEY
143	COGGED V-BELT 17-320
144	HEX NUT M8-1.25
145	CONTROL PANEL CORD 14G 3C
146	DOOR LOCK
148	CARRIAGE BOLT M8-1.25 X 35
149	AIR PUMP ASSEMBLY
150	
150	AIR HOSE 6.6 X 10 X 2400MM
151	
151	REDUCTION GEARBOX
152	
152	MOTOR 2HP 220V 1PH W/KEY
152-1	MOTOR FAN COVER
152-2	MOTOR FAN
152-3	MOTOR JUNCTION BOX
152-4	CAPACITOR COVER
152-5	
152-5	S CAPACITOR 500M 250V
152-6	CONTACT PLATE 5/8"ID
152-7	CENTRIFUGAL SWITCH 1725RPM 5/8"ID
152-8	BALL BEARING 6203ZZ
152-9	BALL BEARING 6202ZZ
153	THRUST BEARING 51101
154	AIR PUMP MOUNTING BRACKET
155	SPEED SENSOR TARGET
156	CAP SCREW M6-1 X 35
157	FLAT WASHER 6MM
158	SPEED SENSOR BRACKET
159	SET SCREW M6-1 X 6
160	SET SCREW M8-1.25 X 20
161	KEY 7 X 7 X 38
162	POWER WIRING JUNCTION BOX
163	TERMINAL BLOCK 6P
164	CAP SCREW M6-1 X 8
165	SPEED SENSOR BAKS DA-1805NO
166	PHLP HD SCR M3-.5 X 20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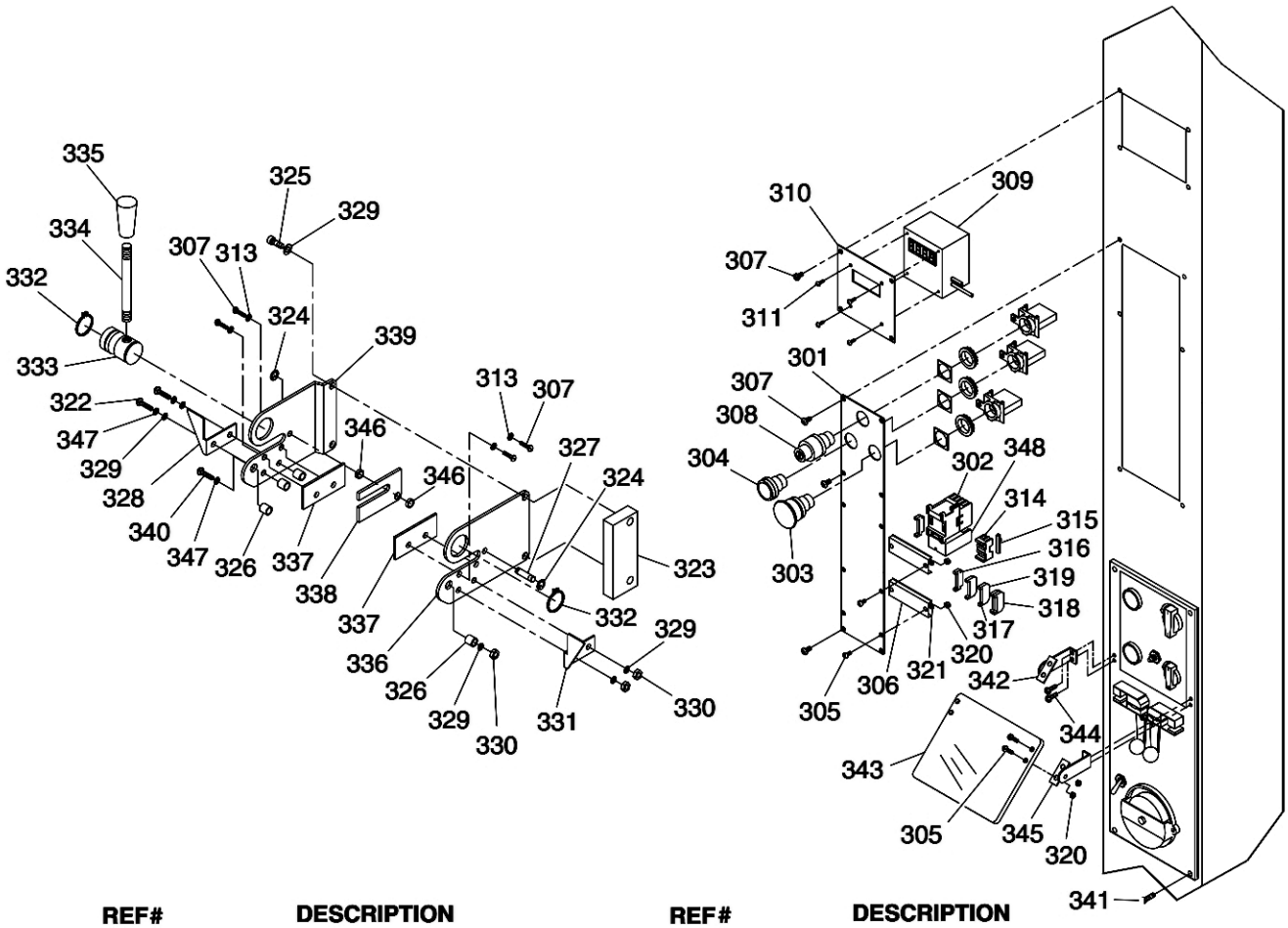
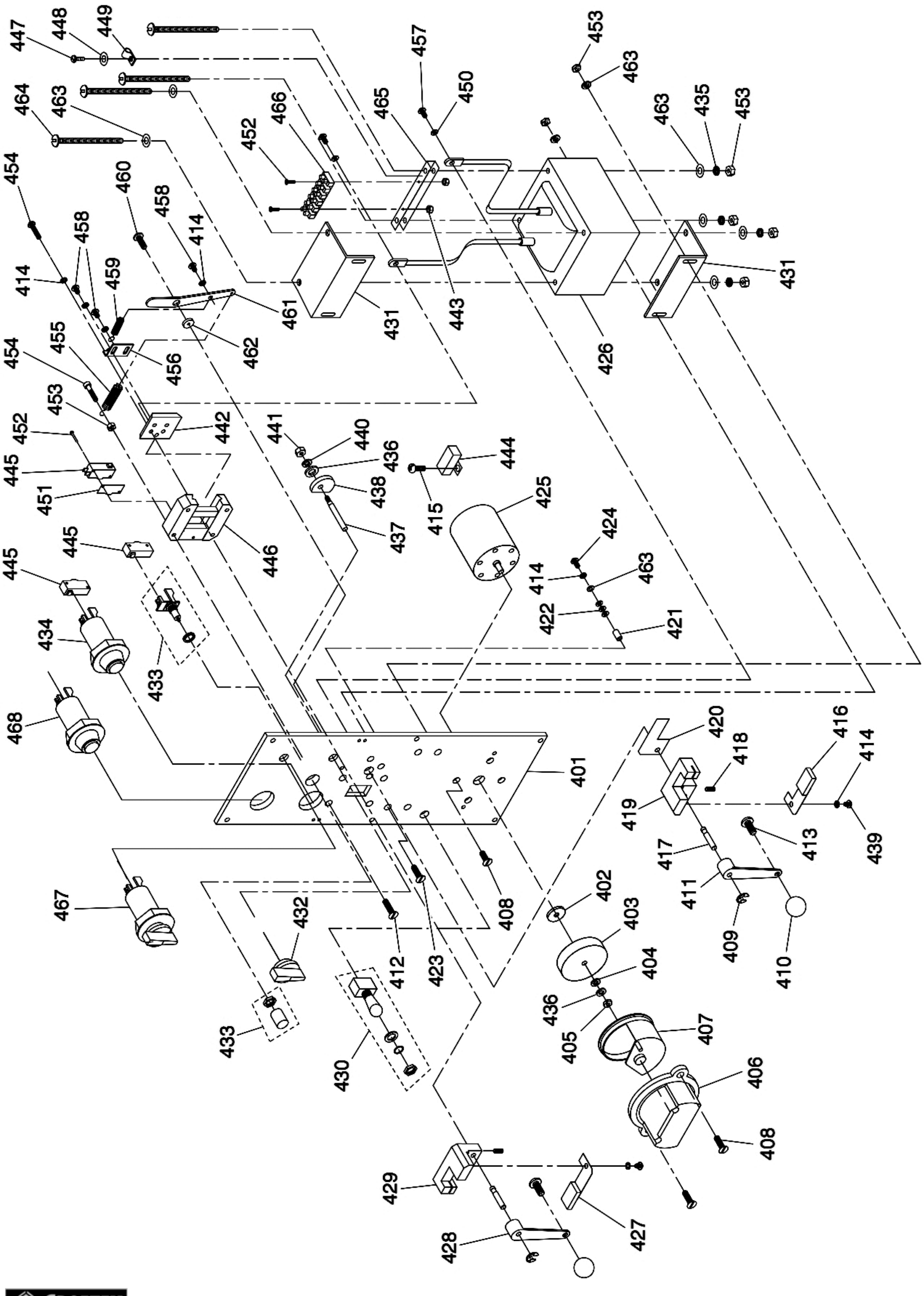
REF #	DESCRIPTION
201	TRUNNION SUPPORT
202	TRUNNION
203	LEFT TABLE BRACKET
204	RIGHT TABLE BRACKET
205	CAP SCREW M10-1.5 X 25
206	FLAT WASHER 10MM
207	LOCK WASHER 10MM
208	HEX NUT M10-1.5
209	HEX BOLT M10-1.5 X 30
210	HEX BOLT M10-1.5 X 45
211	BUSHING
212	CAP SCREW M12-1.75 X 55
213	FLAT WASHER 12MM
214	HEX BOLT M6-1 X 12
215	POINTER
216	FORWARD-BACK TILT SCALE
217	STEEL FLUTED RIVET 2 X 6MM
218	LEFT-RIGHT TILT SCALE
219	LOWER BLADE SUPPORT BRACKET
220	BLADE GUIDE BRACKET
221	BLADE GUIDE
222	GUIDE BRACKET SUPPORT ROD
223	BLADE SUPPORT ROD
224	CAP SCREW M6-1 X 25
225	FLAT WASHER 6MM
226	CAP SCREW M8-1.25 X 30
227	LOCK WASHER 8MM
228	FLAT WASHER 8MM
229	SET SCREW M8-1.25 X 16
230	GUIDE POST LOCK LEVER
231	AIR NOZZLE
232	NOZZLE CLAMP

REF #	DESCRIPTION
233	GUIDE POST BRACKET
234	GUIDE POST BRACKET COVER
235	FLAT HD SCR M5-.8 X 8
236	GUIDE POST
237	TABLE PIN
238	LEFT BLADE GUARD
239	RIGHT BLADE GUARD
240	SET SCREW M6-1 X 6
241	TABLE
242	FENCE
243	LOCK KNOB BOLT 1/2-12 X 1-1/2
244	LOCK WASHER 6MM
245V2	THIN HEX NUT 3/8-24
246V2	WORK LAMP ASSY 220V 3/8"-24 V2.06.12
247V2	LAMP BRACKET 3/8" SLOT V2.06.12
248	CAP SCREW M6-1 X 12
249	PHLP HD SCR M5-.8 X 8
250	FLAT WASHER 5MM
251	CAP SCREW M10-1.5 X 45
252	SET SCREW M6-1 X 10
253	LOWER LEFT BLADE GUARD
254	LOWER RIGHT BLADE GUARD
255	TABLE INSERT
256	PINION SHAFT
257	SHAFT SLEEVE
258	FLAT WASHER 13MM
259	GUIDE POST HANDWHEEL
260	HANDWHEEL HANDLE 3/8-16 X 3-1/4
261	ROLL PIN 4 X 12
262	HEX WRENCH 10MM
263	HEX WRENCH 5MM
264	LOCK COLLAR



REF#	DESCRIPTION
301	CONTROL PANEL
302	CONTACTOR NHD C-09D10 230V
303	STOP BUTTON NHD NPH-H CB-01
304	ON BUTTON NHD NPB-F CB-10
305	PHLP HD SCR M4-.7 X 12
306	MOUNTING BRACKET
307	PHLP HD SCR M5-.8 X 8
308	POWER SWITCH W/KEY NHD NSS-K CB-10
309	DIGITAL SPEED READOUT TLC FPM101DW2
310	READOUT PANEL
311	TAP SCREW M3 X 6
313	LOCK WASHER 5MM
314	FUSE HOLDER NHD HTF1
315	FUSE 2A 250V
316	BRACKET END STOP
317	TERMINAL BLOCK 2P
318	TERMINAL BLOCK 4P
319	GROUND BLOCK 2P
320	HEX NUT M4-.7
321	EXT TOOTH WASHER 4MM
322	PHLP HD SCR M6-1 X 25
323	MOUNTING SPACER
324	E-CLIP 6MM
325	CAP SCREW M6-1 X 25

REF#	DESCRIPTION
326	SPACER
327	CAPTIVE PIN
328	LEFT ALIGNMENT BRACKET
329	FLAT WASHER 6MM
330	HEX NUT M6-1
331	RIGHT ALIGNMENT BRACKET
332	EXT RETAINING RING 25MM
333	SHEAR CAM
334	STUD-DE 3/8-16 X 3-3/4 1/2
335	HANDLE KNOB 3/8-16
336	RIGHT SHEAR BRACKET
337	LOWER SHEAR BLADE
338	UPPER SHEAR BLADE
339	LEFT SHEAR BRACKET
340	PHLP HD SCR M6-1 X 40
341	PHLP HD SCR M6-1 X 16
342	LEFT GUARD BRACKET
343	WELDING GUARD
344	PHLP HD SCR 10-32 X 5/16
345	RIGHT GUARD BRACKET
346	SPACER
347	LOCK WASHER 6MM
348	OL RELAY NHD NTH-14 11-14A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REF#	DESCRIPTION
401	FRONT PANEL
402	SPACER
403	GRINDING WHEEL A60 65 X 16 X 7MM
404	FLAT WASHER 6MM
405	HEX NUT M6-1
406	GRINDER COVER
407	GRINDER GUARD
408	FLAT HD SCR 10-24 X 1/2
409	E-CLIP 6MM
410	ROUND KNOB M6-1
411	RIGHT CLAMPING LEVER
412	FLAT HD SCR M5-.8 X 8
413	PHLP HD SCR M6-1 X 16
414	LOCK WASHER 5MM
415	PHLP HD SCR 10-24 X 1/4
416	RIGHT MOVABLE CLAMP
417	ECCENTRIC SHAFT
418	SET SCREW M6-1 X 6
419	RIGHT STATIONARY CLAMP
420	CLAMP INSULATION PLATE
421	INSULATING SPACER 5MM
422	INSULATING FLAT WASHER 5MM
423	FLAT HD SCR M5-.8 X 12
424	CAP SCREW M5-.8 X 16
425	GRINDING MOTOR 1/8HP 110/220V 1PH
426	TRANSFORMER A174-0023 2.4KVA 0/220V
427	LEFT MOVABLE CLAMP
428	LEFT CLAMPING LEVER
429	LEFT STATIONARY CLAMP
430	ON/OFF SWITCH R13-28F
431	TRANSFORMER MOUNTING BRACKET
432	PRESSURE ADJUSTMENT KNOB
433	ANNEAL BUTTON ASSY DEFOND 15.1A 250V
434	WELD BUTTON ASSY YENOX YCL1G28

REF#	DESCRIPTION
435	EXT TOOTH WASHER 5MM
436	LOCK WASHER 6MM
437	PRESSURE SHAFT
438	PRESSURE CAM
439	PHLP HD SCR M5-.8 X 6
440	FLAT WASHER 6MM
441	HEX NUT M6-1
442	PRESSURE GUIDE BLOCK
443	HEX NUT M3-.5
444	S CAPACITOR 2M 250V
445	SWITCH DEFOND 125/250V
446	PRESSURE GUIDE CASTING
447	PHLP HD SCR M4-.7 X 8
448	FLAT WASHER 4MM
449	CORD CLAMP 1/2"
450	FLAT WASHER 5MM BRASS
451	SWITCH INSULATOR
452	PHLP HD SCR M3-.5 X 20
453	HEX NUT M5-.8
454	CAP SCREW M5-.8 X 16
455	LONG EXTENSION SPRING
456	SPRING BRACKET
457	PHLP HD SCR M5-8 X 10 BRASS
458	PHLP HD SCR M5-.8 X 8
459	SHORT EXTENSION SPRING
460	PHLP HD SCR 1/4-20 X 5/8
461	TENSION ARM
462	TENSION ARM FLAT WASHER 1/4"
463	FLAT WASHER 5MM
464	PHLP HD SCR M5-.8 X 65
465	TERMINAL BLOCK BRACKET
466	TRANSFORMER TERMINAL BLOCK
467	WELDER ON/OFF SWITCH NHD NCS-S4
468	POWER LAMP NHD NLD-22

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.