CX301
5-HP HEAVY DUTY SHAPER with DIGITAL READOUT
User Manual

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GENERAL SAFETY INSTRUCTIONS FOR MACHINES

Extreme caution should be used when operating all power tools. Know your power tool, be familiar with its operation, read through the user 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 and clamp the work-piece (when necessary) to prevent the work-piece from any unexpected movement.
- **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.
- **NEVER** attempt to remove jammed cutoff pieces until the saw blade has come to a full stop.

CX301 – HEAVY DUTY SHAPER
SPECIFIC SAFETY INSTRUCTIONS

- Read and follow all the instructions and safety precautions in the user manual before setup or use.
- For the protection of your eyes, always wear safety glasses, goggles or face shield while operating the shaper.
- Never place your fingers or hands in the line of cut. If you slip, your hands or fingers may come into contact with the cutter. Always use a push stick when feeding stock against the cutter.
- Make sure the keyed washer is mounted directly under the spindle nuts.
- All guards must be in place while operating the shaper to ensure safety.
- Always feed the stock smoothly against the rotation of the cutter.
- Do not force the machine. It will perform a better job at a rate for which it is designed.
- Allow the motor to reach the full speed before feeding stock against the cutter.
- Use the overhead guard when adjustable fence is not in place.
- Make sure before making any adjustments, the switch is in the “OFF” position and the cord is un-plugged.
- Never leave the shaper unattended while it is running.
- Always use the cutters designed to be used with CX301 and similar shapers.
- Do not expose the shaper to rain or use in damp locations.
- Clean and sharp tools give safer and better performance. Dull cutters can cause kick backs and excessive chatter. Always check the cutter and other parts for proper adjustment before cutting operation.
- Always make sure that your shaper is in a stable position. Cutting heavy, long stock may alter the stability of the shaper. In the event that this may occur, the shaper should be firmly bolted to the floor.
- Do not wear loose clothing, neckties, jewelry or gloves that can get caught in moving parts. Confine long hair and keep sleeves above the elbow.
- Always use a feather board and/or hold-downs to support your work-piece when necessary.
- Make sure you have read and understood all the safety instructions in the manual and you are familiar with your shaper, before operating it. 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*.**

CX301 – HEAVY DUTY SHAPER

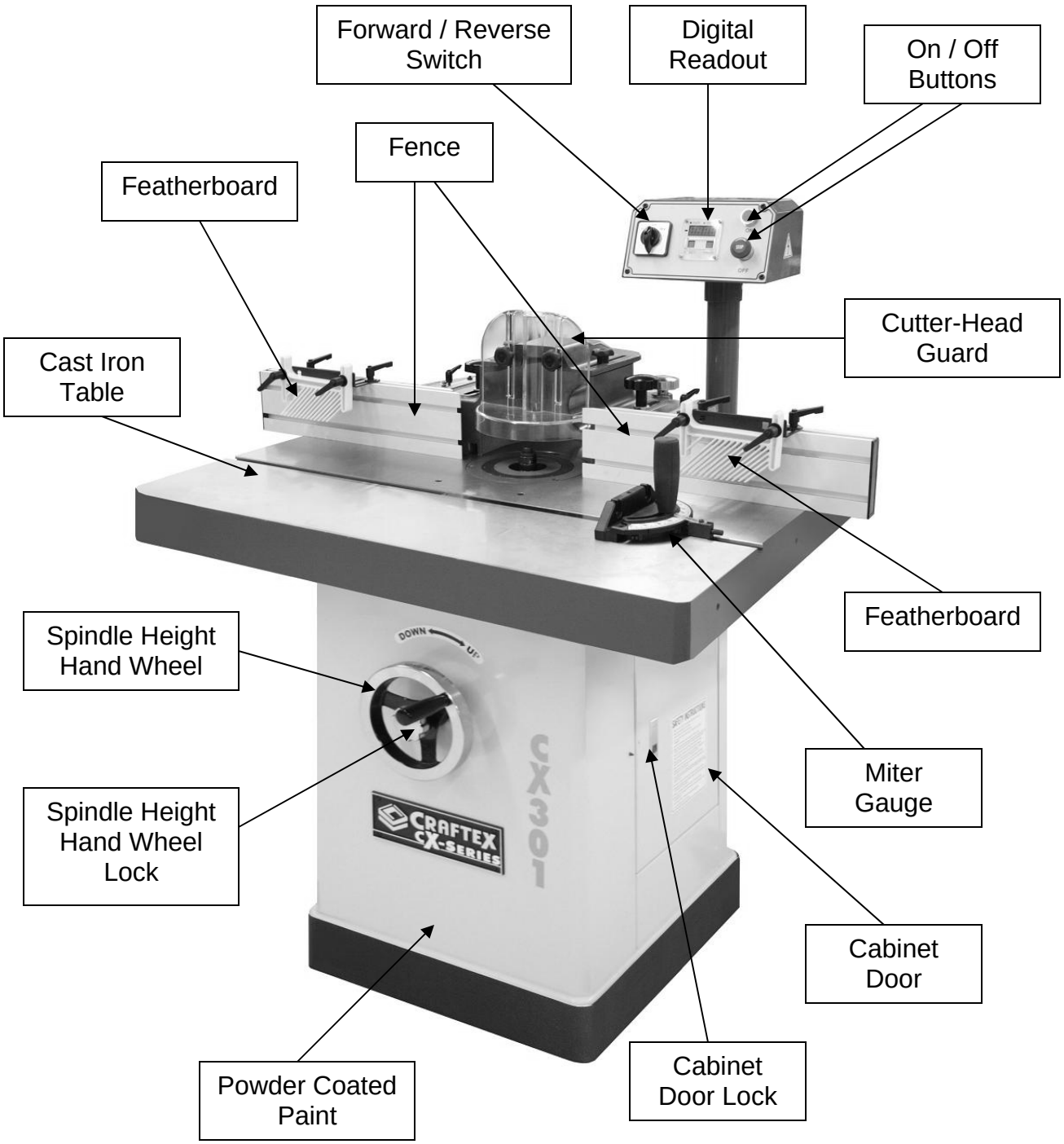
FEATURES

MODEL CX301 – 5-HP HEAVY DUTY SHAPER with DIGITAL READOUT

As part of the growing line of Craftex woodworking equipment, we are proud to offer the CX301 a 5-Hp Heavy Duty Shaper with Digital Readout. The Craftex name guarantees Craft Excellence. By following the instructions and procedures laid out in this user manual, you will receive years of excellent service and satisfaction. The CX301 is a professional tool and like all power tools, proper care and safety procedures should be adhered to.

- Motor ..... 5-HP, 220-V, 18 Amp, 60 Hz, Single Phase
- RPM ..... 3450 RPM
- Table Size..... 39-5/16” x 31-7/16” x 3-1/2”
- Spindle Travel..... 4”
- Spindle Size..... 3/4" and 1-1/4”
- Spindle Speeds ..... 5000, 7000 and 10000 RPM
- Direction ..... Forward / Reverse
- Router Collets..... 1/4” and 1/2"
- Table Opening Diameter ..... 7-5/16”
- Digital Readout..... Standard
- Fence Size..... 18-3/4” x 4-3/4” x 1-1/4”
- Fine Adjustment..... Yes
- Dust Ports..... Two 4”
- Floor to Table Height..... 36”
- Gross Weight..... 845 lbs
- Warranty..... 3 Years

CX301 5-HP HEAVY DUTY SHAPER
PHYSICAL FEATURES



SETUP

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

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

> ***WARNING***
> *CX301 is a very heavy machine, do not over-exert yourself. For safe moving use fork truck or get the help of an assistant or friend.*

UNPACKING

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

NOTE: While doing inventory, if you can not find any part, check if the part has already been installed on the machine. Some parts come pre-assembled for shipping purposes.

When setting up your machine, you will want to find an ideal spot where your shaper will most likely be positioned most of the time. Consider your complete work environment as well as working comfortability with the shaper, before placing your machine in the ideal spot.

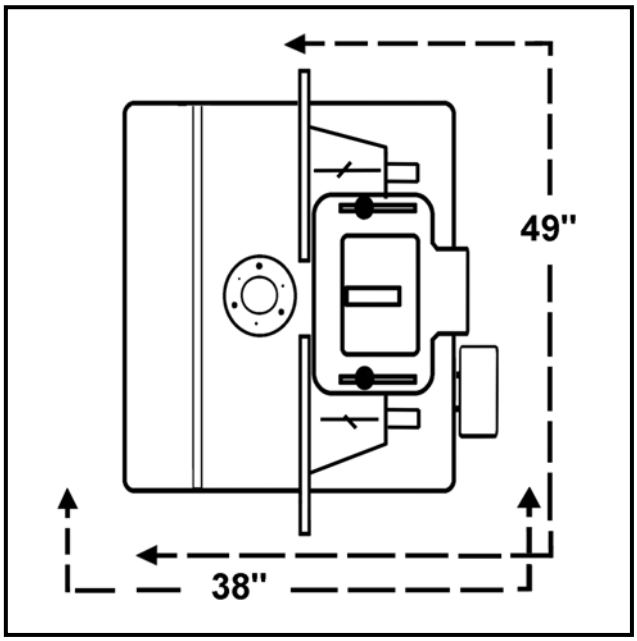


Figure-1 Minimum work space for CX301

PROPER GROUNDING

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

CX301 is equipped with a 220-V single phase motor. This machine is provided with a terminal block in the electrical connection box 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.

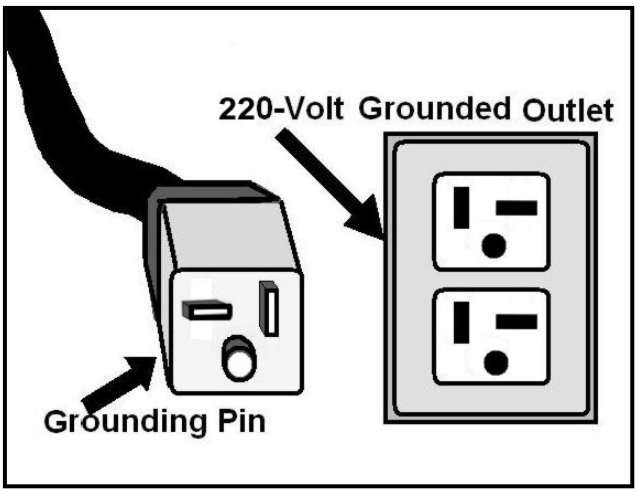


Figure-3 220-Volts Outlet for CX301

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 CX301. 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 CX301 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.

ASSEMBLY

Read the manual and follow the instructions given in this manual to assemble your CX301.

Slide the spindle height hand wheel onto the hand wheel shaft and secure it using set screw provided. See figure-3.

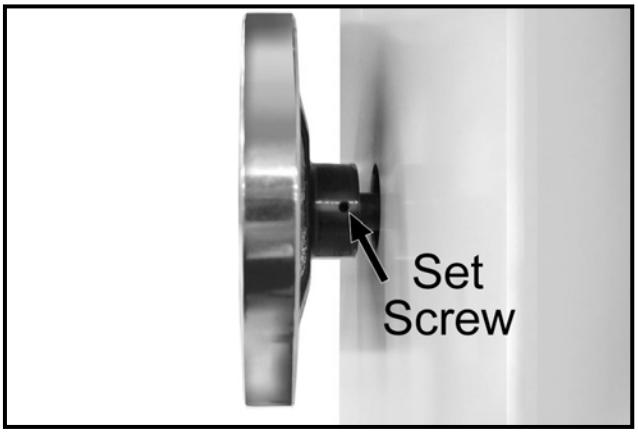


Figure-3 Securing the blade height hand wheel

Lock the hand wheel by threading the lock knob into the middle of the hand wheel.

Thread the handle onto the hand wheel and tighten using a proper size wrench. See figure-4.

Figure-4 Installing the handle on the hand wheel

Align the four holes on the console column bracket with the holes on the edge of the table on the rear side of the shaper. Secure it using screws provided. See figure-5.

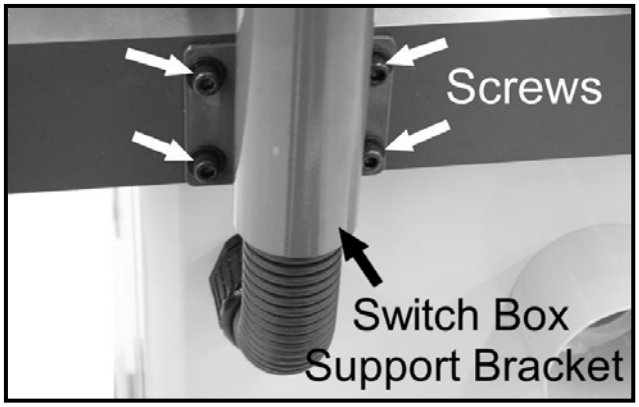


Figure-5 Installing the switch box

SPINDLE

The CX301 comes with two spindles 3/4" and 1-3/4".

To install the spindle:

Make sure the switch is in the “OFF” position and the cord is un-plugged from the power source.

Raise the arbor all the way up using the hand wheel. Open the cabinet door and pull the spindle lock out and turn it 90° to lock the spindle.

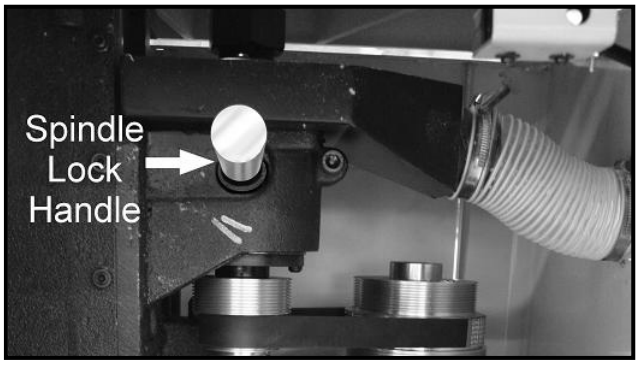


Figure-6 Spindle lock handle

WARNING

Unlock the spindle before turning on the shaper. See figure-6.

Turn the arbor by hand until it locks and does not rotate.

Thread the nut onto the threaded side of the spindle. See figure-7.

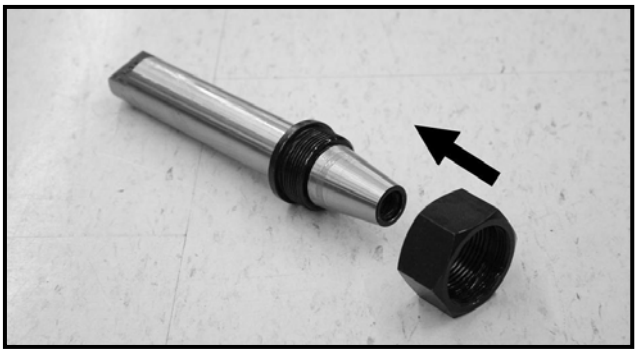


Figure-7 Threading the nut on the spindle

Slide the spindle into the arbor opening and thread the nut onto the arbor with your hand. See figure-8

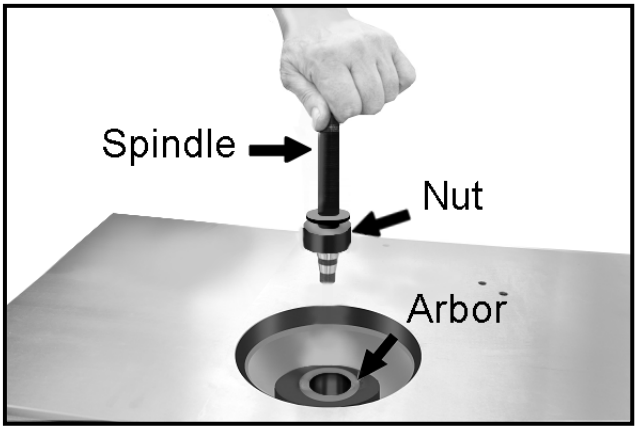


Figure-8 Sliding the spindle into the quill

Slide the draw bar into the shaft on the spindle pulley from the bottom and tighten with your hand as shown in figure-9.

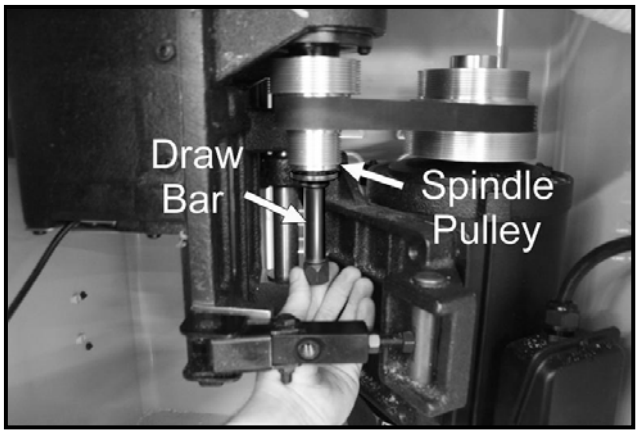


Figure-9 Installing the draw bar

Use a wrench to hold the top part of the spindle while tightening the draw bar nut on the draw bar from the bottom as shown in figure-10.

Figure-10 Tightening the draw bar

Using a proper sized wrench, hold the spindle from the top part with one hand and tighten the nut with the other hand using another wrench. See figure-11.

Figure-11 Tightening the nut

Unlock the spindle by pulling the spindle lock handle out and turning it 90°. See figure-6 on page-9.

FENCE ASSEMBLY

The CX301 comes with two 18-3/4" x 4-3/4" independent fences which attach to the dust hood.

To install the fence:

Attach the lock blocks to the dust hood as shown in figure-12 and secure them from the back using lock knobs provided. Do not fully tighten at this time.

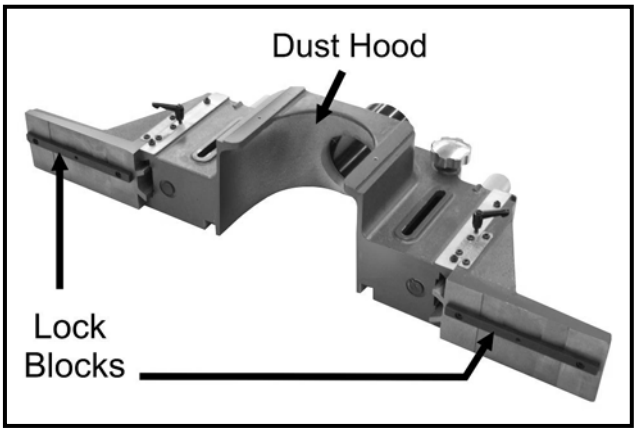


Figure-12 Lock blocks installed

Slide the fences onto the lock blocks on both sides, through the slot on the fence and secure them by tightening the lock knobs.

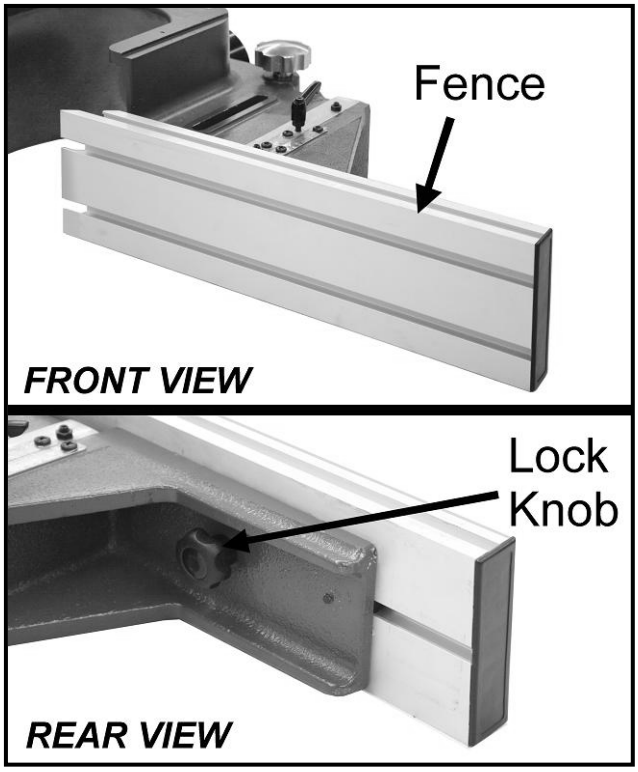


Figure-13 Installing the fence

Once you have installed both the fences, lift the dust hood assembly with the fences, and place it on the table.

Align the slots on the bottom of the dust hood with the two brackets, installed on the table surface.

Thread the two lock knobs into the holes on the table through the dust hood as shown in figure-14. Tighten the lock knobs to secure the dust hood to the table.

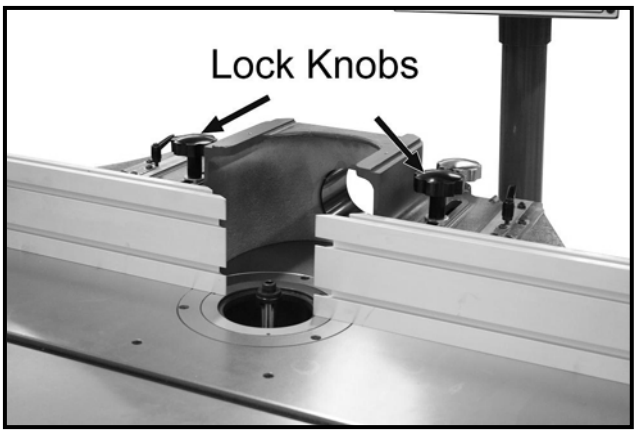


Figure-14 Securing the dust hood to the table

TOP COVER

Install the top cover on the top of the dust hood using the two lock knobs provided. See figure-15.

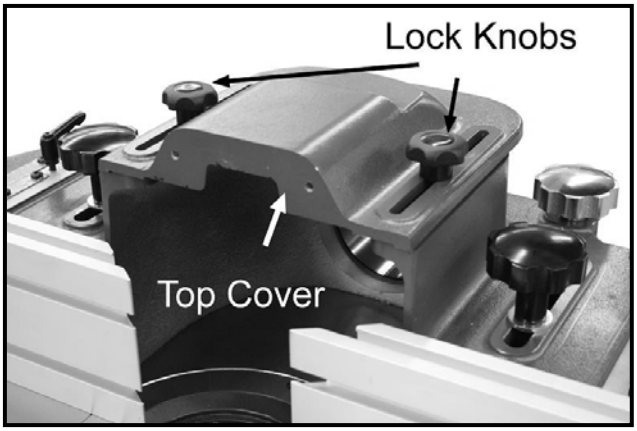


Figure-15 Installing the top cover

WARNING

The guards should be as close to the cutter as possible without interfering with the travel of the work-piece or cutter.

FEATHERBOARDS

The CX301 comes with two featherboards which are installed on the fences to hold the work-piece for safe operation.

A. Attach the featherboard to the bracket using the two lock levers. See figure-16.

B. Install the featherboard on the fence by sliding the nuts through the slot on the top edge of the fence and securing it by tightening the lock levers See figure-16.

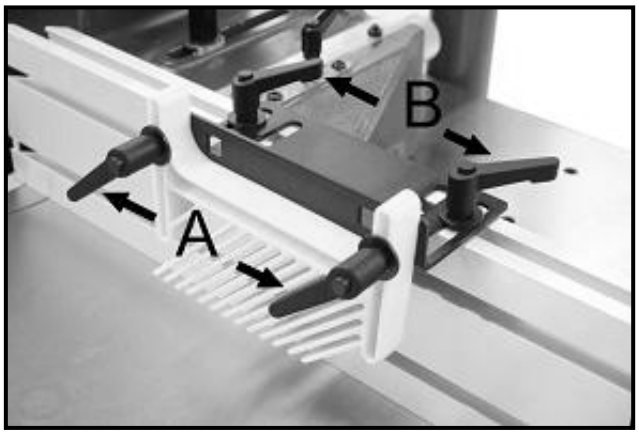


Figure-16 Installing the featherboard

Install the featherboard on the other fence in the same manner.

CUTTER-HEAD GUARD

CX301 comes with a see-thru plastic cutter-head guard that allows seeing the cutting point while in operation.

Install the cutter-head guard to the top cover and using two lock knobs. See figure17.

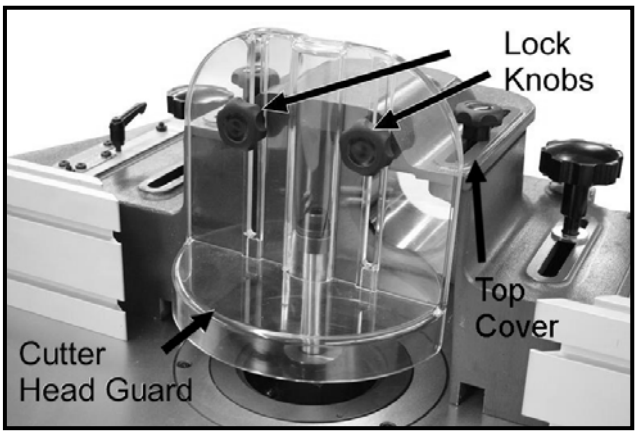


Figure-17 Installing the cutter-head guard

CONNECTING TO A DUST COLLECTOR

CX301 features two 4” diameter dust port to connect to a dust collector.

When connecting to a dust collector, use a proper sized hose and make sure all the connections are sealed tightly.

It is recommended to use a proper sized dust collector with the CX301 to ensure adequate dust collection.

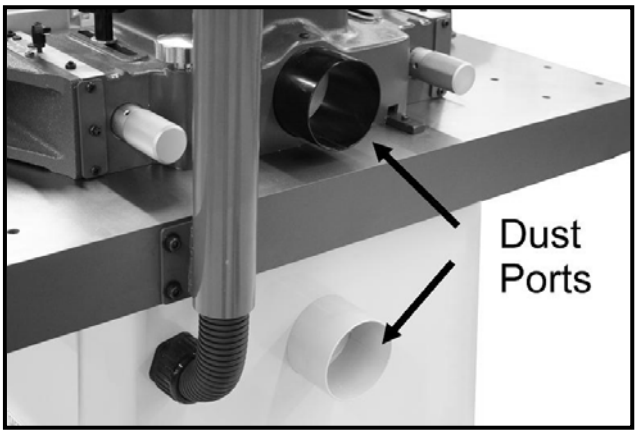


Figure-18 CX301 dust ports

BASIC CONTROLS

The basic controls of this machine are shown in the figure-19. Use the figure and read the text to understand what the basic controls of your CX301 are.

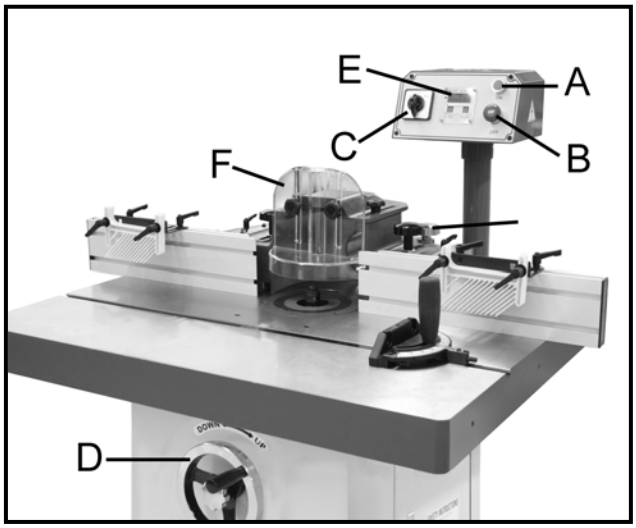


Figure-19 Basic controls on CX301

A. ON Button
This button turns the machine “ON”.

B. OFF Button
This button turns the machine “OFF”.

C. Forward/Reverse Switch
It is used to control the direction of rotation of the cutter head.

D. Spindle Height Hand Wheel
The spindle height hand wheel is used to raise and lower the spindle.

E. Digital Read Out
It shows the height of the spindle in Inches and Millimeters digitally.

F. Cutter-Head Guard
Guards the cutter from the top and protects operator’s hands from accidental injuries.

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.

WARNING

Unlock the spindle before turning on the shaper. See page-9, figure-6.

All the tools and objects used for assembling the machine should be removed and cleared away during the test run. Spindle, draw bar and cutters should be tight.

Plug the cord to the power outlet and press the green button to turn the machine ON. Test the ON & OFF buttons and Forward/Reverse switch and make sure they are working properly.

During the test run if there is any unusual noise coming from the machine or the machine vibrates excessively, shut off the machine immediately and disconnect the cord from the power source. Check all the parts you have assembled, once again and investigate to find out the problem. See page-22 for Troubleshooting

READ THE MANUAL

Before starting the shaper, 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.

INSTALLING THE CUTTER

The CX301 operates at speeds of 5000, 7000 and 10000 RPM. Make sure to use the proper sized cutters with proper sized spindles on your CX301 to ensure safe operation.

To install the cutter:

Turn the machine “OFF” and make sure the cord is un-plugged from the power source.

Loosen the two lock knobs securing the dust hood on the table and move the dust hood and the fence away from the spindle.

Place an appropriate spacer or collar on the spindle for support. (If needed)

Place the cutter on the spindle and make sure the orientation of the cutter is correct for your cutting application.

Place the spacers or collar (as needed) with the washer on the top and thread the screw into the hole on the spindle. See figure-20.

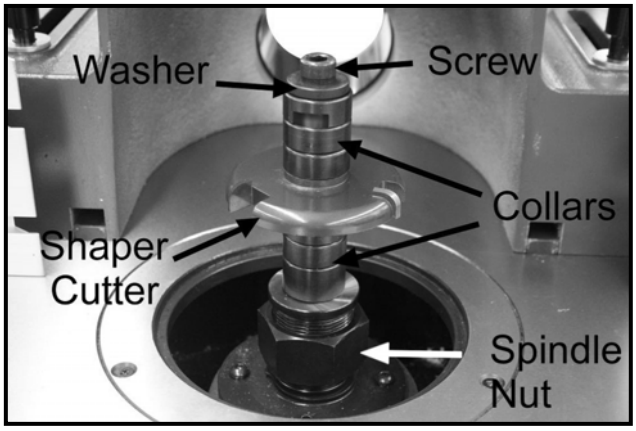


Figure-20 Installing the shaper cutter

Hold the spindle nut with a wrench for leverage and tighten the screw using an Allen key.

TABLE INSERTS

CX301 comes with three different size table inserts to be used with different size cutters.

Clean any dust or dirt on the spindle opening edges before installing the table insert.

Place the table insert, on the spindle opening, and make sure the insert is flush with the table surface.

Adjust the 3 cap screws on each table inserts (if needed) to adjust the height and make it flush with the table surface. See figure-21.

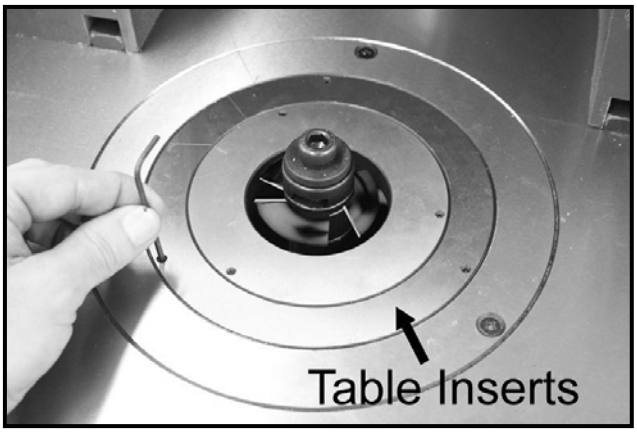


Figure-21 Adjusting the table inserts height

SPEED CHANGE

The CX301 is a three-speed shaper and operates at 5000, 7000 and 10000 RPM.

To change the speed:

Turn the switch “OFF” and make sure the cord is un-plugged from the power source.

Open the cabinet door and turn the spindle height hand wheel to lower the spindle and motor assembly.

Move the belt tension handle to the left unlocking the motor, and allowing it to swivel on its hinge. This loosens the tension on the belt. See figure-22.

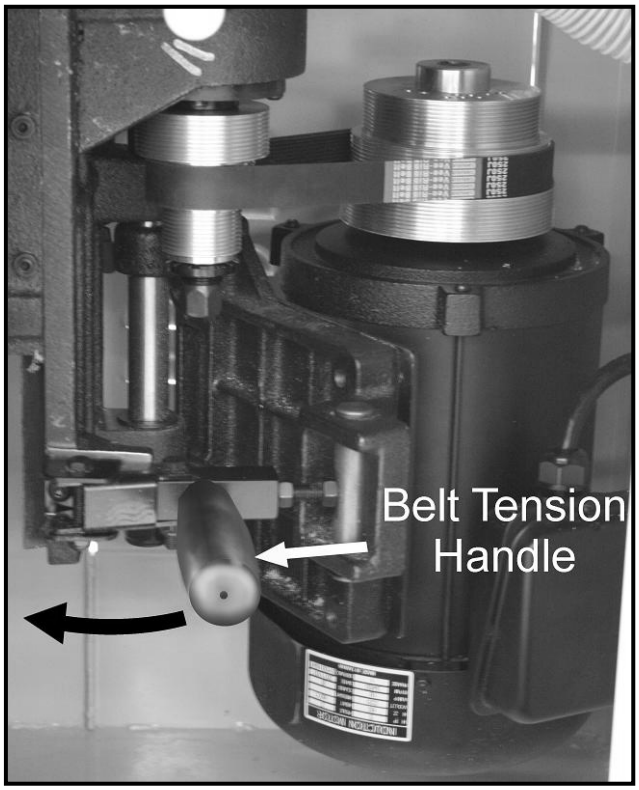


Figure-22 Loosening the belt tension

Line up the belt on the pulleys, according to the figure-23 to change the spindle speed.

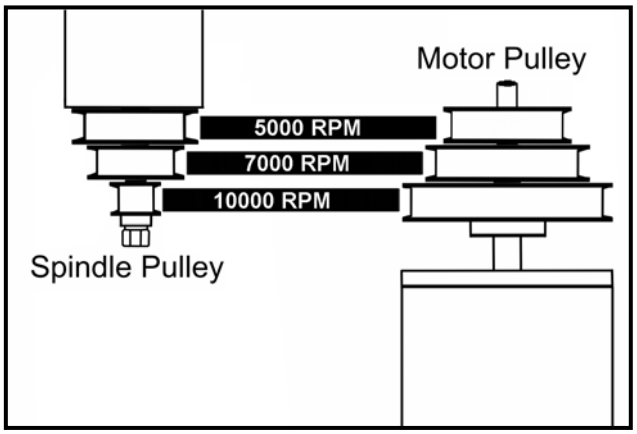


Figure-23 Belt positions on the pulleys

Lock the motor back to its position using the belt tension handle.

BELT REPLACEMENT

The belt stretches with use and should be checked regularly and replaced if needed.

To change the drive-belt on your CX301:

Turn the switch “OFF” and make sure the cord is un-plugged from the power source.

Open the cabinet door and release the belt tension using the belt tension handle shown in figure-22.

Take the belt off the pulleys and replace with a new one.

Lock the motor back to its place using the belt tension handle.

BELT TENSIONING

The belt should be tensioned enough to prevent slippage while operation.

To tension the belt:

Turn the switch “OFF” and make sure the cord is un-plugged from the power source.

Release the belt tension using the belt tension handle.

Loosen and separate the 2 lock nuts A & B.

Turn the bolt a few turns anti-clockwise. See figure-24.

Make sure the belt is seated properly on the pulleys and lock the motor using the belt tension handle.

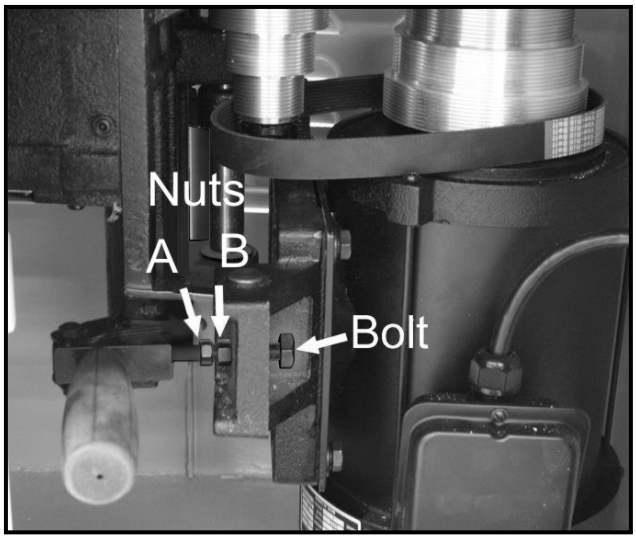


Figure-24 Belt tension adjustment

Tighten the nut (B) to the right against the bracket. Check the tension on the belt and tighten the nut (A) towards the bracket against nut (B).

CONTROL PANEL

The control panel of CX301 features ON and OFF push buttons, Forward / Reverse Switch and a Digital Readout.

Figure-25 Control panel

DIGITAL READOUT

The digital readout is instrumental for making accurate spindle height adjustments.

To set the digital read out:

Set the spindle to the desired height for the work-piece to be cut.

Plug the cord to the power outlet so that the digital display is lit.

Select the "**inch**" or "**mm**" by pressing the red button on the right.

Press the "**0" SET**" button for approximately three seconds to reset the digital display to zero which is your reference point.

When the spindle is raised or lowered the change is relative to this reference.

The display should be reset to zero for each new cutting operation when this feature is used.

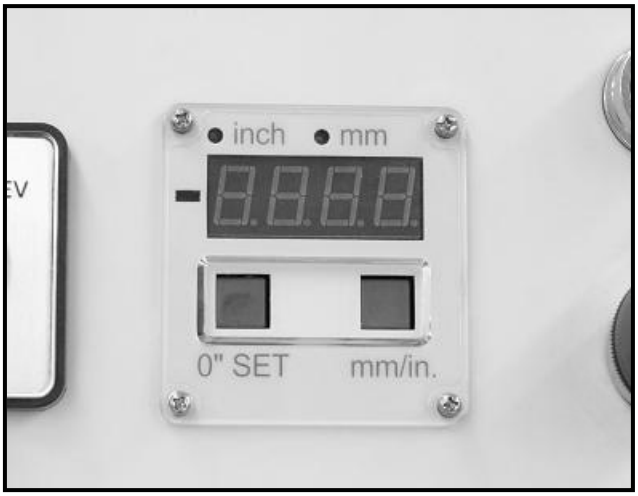


Figure-26 Digital read out

FORWARD / REVERSE SWITCH

The CX301 is equipped with a forward / reverse switch which controls the direction of rotation of the cutter.

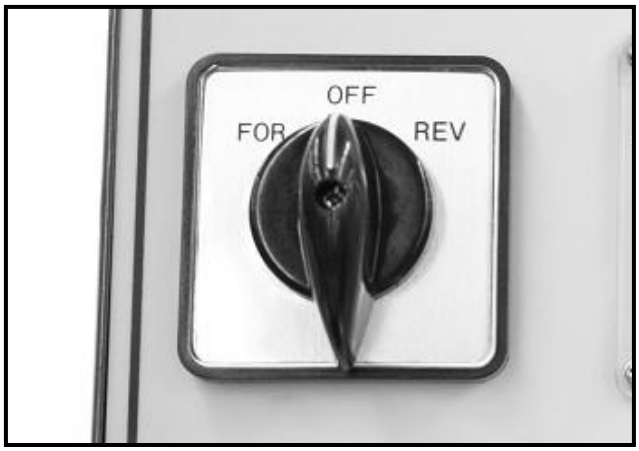


Figure-27 Forward / Reverse switch

Most of the jobs are done with the forward rotation of the cutter but some times if it is necessary, you will want to flip the cutter on the spindle and reverse the cutter rotation to perform some specific jobs

The selector knob on the switch can be turned and set on any of the three positions; Forward, Off and Reverse.

When the switch is in the "Forward" position, the spindle will rotate in counter-clockwise direction and when in the "Reverse" position, the spindle will rotate in clockwise direction. When the switch is set on "Off", the spindle will stop moving.

WARNING

Before operating the shaper, check the direction of the rotation of the cutter. Cutters rotating backwards can cause unsafe conditions.

FENCE ADJUSTMENT

The CX301 features a two pieces independent fence system mounted to the dust hood assembly using fence lock knobs.

The dust hood assembly is adjusted forward / backward on the table by loosening the two lock knobs securing the fence on the table and turning the fence adjustment knob shown in figure-28.

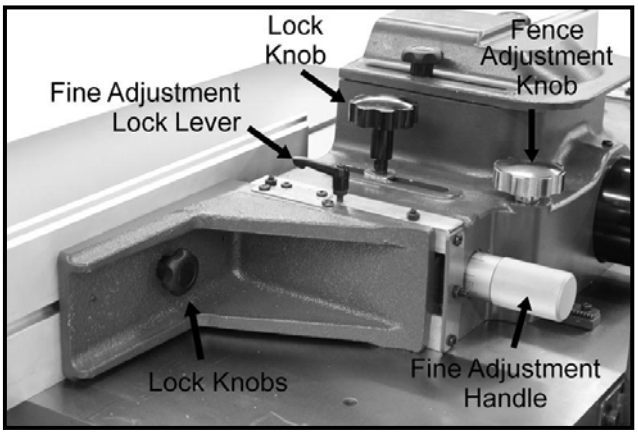


Figure-28 Fence adjustment controls

The left and right independent fence halves can be separated to allow for a larger opening to accommodate larger cutters.

The fences also have fine adjustment feature which is performed by turning the find adjustment lock handle shown in figure-28.

Simply loosen the fine adjustment lock lever shown in figure-28 and turn the fine adjustment handle to move the fence forwards or backwards.

When the fence is in the desired position, lock the lever to secure the fence.

SPINDLE GIB ADJUSTMENT

The spindle housing gib is adjusted in the factory and should not require any adjustment. After a period of use it may become loose and cause vibration to the spindle which should be adjusted.

To adjust the spindle gib:

Make sure the switch is in the OFF position and the cord is disconnected from the power source.

Use the hand wheel and lower the spindle all the way down.

Open the cabinet door and loosen the four jam nuts securing the gib set screws. See figure-29.

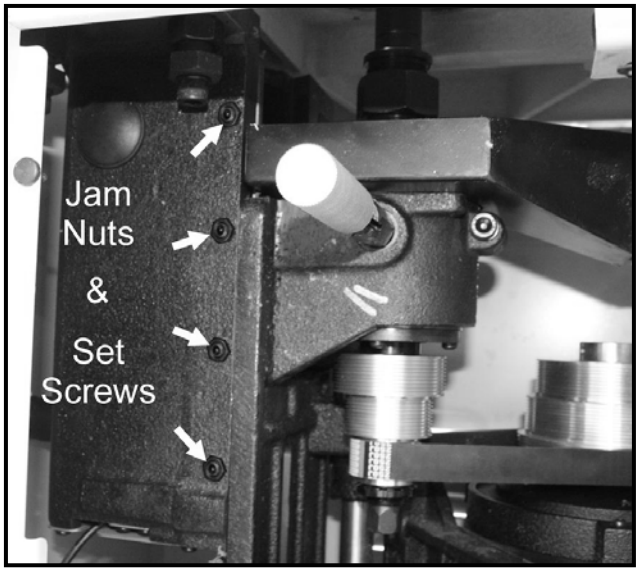


Figure-29 Adjusting the spindle gib

Tighten the set screws starting with the lowest one followed by the uppermost one and then the two middle ones.

Make sure not to over tighten the set screws. If the set screws are over tightened, it will be difficult to turn the spindle height hand wheel.

Once the screws are tightened enough, tighten the jam nuts while holding the set screws using a hex wrench.

SHAPING WITH THE FENCE

Using the fence is the safest method of shaping. Most operations that use the fence for support can be performed by following the guidelines below:

If performing a cut where a portion of the edge of the work-piece is not touched by the cutter-head, both sides of the fence are positioned at the same depth. See figure-30.

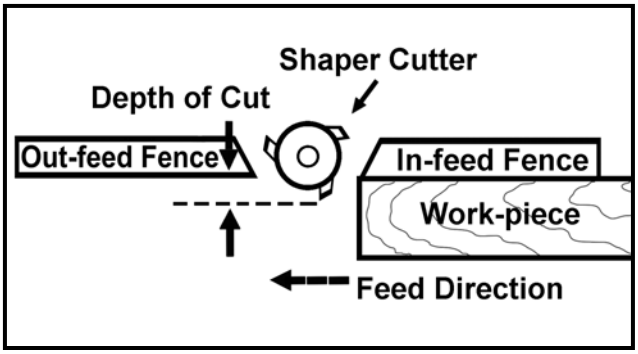


Figure-30 Fences at the same depth

When performing a cut where the entire edge of the work-piece is removed, the fence must be positioned differently. If the fence halves are kept in line, once the work-piece passes through the cutter-head, the shaped edge would no longer be supported against the fence. See figure-31.

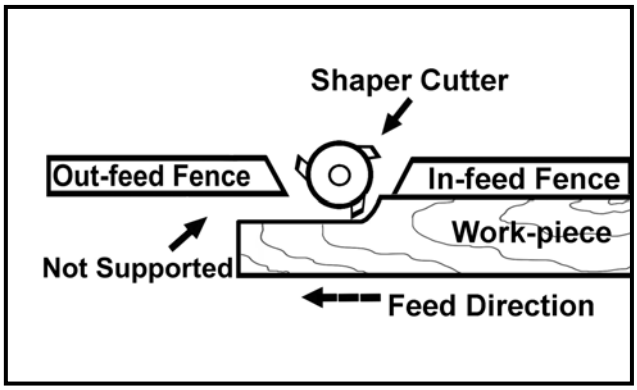


Figure-31 Work-piece not supported with the out-feed fence

To prevent this, the out-feed fence must be repositioned to compensate for the material being removed. Advance the out-feed side of the fence equal to the amount of material being removed.

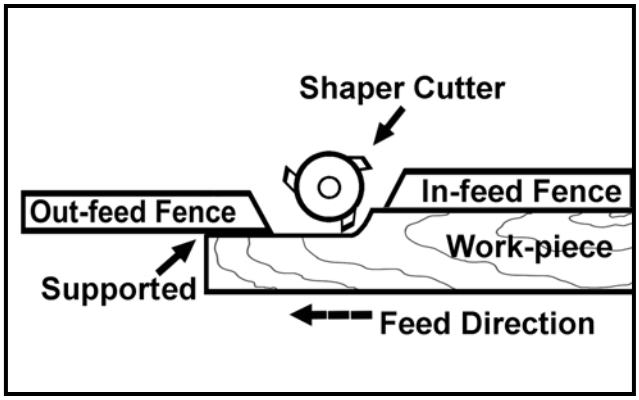


Figure-32 Out-feed fence positioned forward equal to the depth of cut

If using a miter gauge, the in-feed side of the fence must be parallel with the miter slot. Also make sure that the other fence piece is positioned out of the way so that it does not contact the work-piece after it passes through the cutter-head.

FREE HAND SHAPING

To set up the shaper for free hand shaping:

Turn the switch “OFF” and make sure the cord is un-plugged from the power source.

Remove the fence assembly and insert the starting pin in the most suitable hole on the insert. See figure-33.

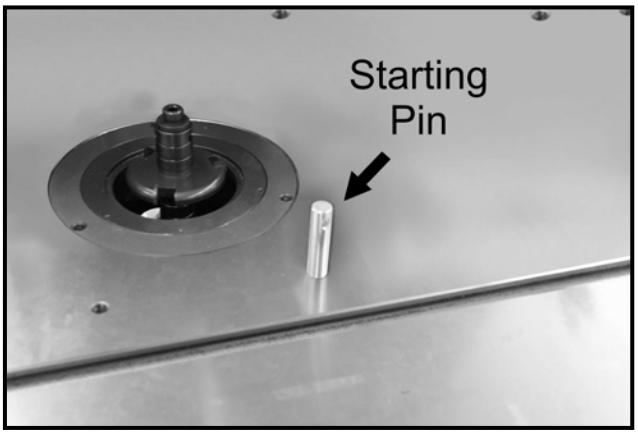


Figure-33 Starting pin

Use a hold down jig or push blocks for the safety of your hands and place the work-piece against the starting pin.

Plug the cord into the receptacle and turn the machine “ON”. Slowly pivot and feed the work-piece into the cutter and try to avoid starting your cut on the corner of the work-piece to avoid kick back.

WARNING

When performing free hand shaping, the fence is removed which exposes the cutter and increase the risk of injury.

USING COLLARS

When shaping work-pieces that have irregular shapes, it is necessary to use rub-collars. Collars can be used below or above the cutter or between two cutters. Each setup type has its own advantages and disadvantages.

Below the Cutter

When using rub-collars below the cutter, the user will have a good view of the cut. But if the work-piece is lifted even slightly, it will cause the cutter to gouge the wood and ruin the work-piece.

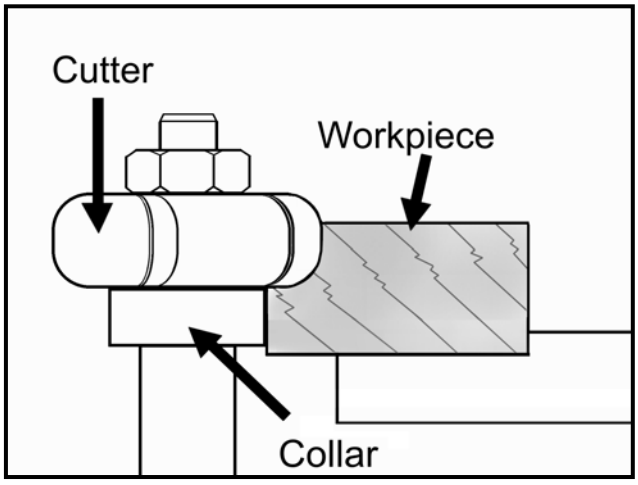


Figure-34 Using collars below the cutter

Above the Cutter

When using collars above the cutter as shown in figure-35, the cut will not be affected by slight variations in the thickness of the work-piece and the work-piece will not be gouged if lifted up accidentally.

The only disadvantage of using a collar above the cutter is that the operator will not be able to see the cut being made.

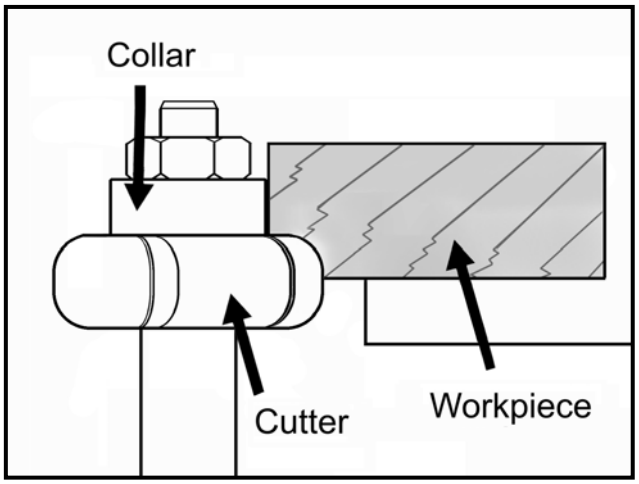


Figure-35 Using collar above the cutter

Between the Cutters

A collar is used between two cutters when both edges of the work-piece are to be shaped.

Like using the collar below the cutter, this method has also the disadvantage that if the work-piece is accidentally lifted up, the cutter will gouge and ruin the work-piece.

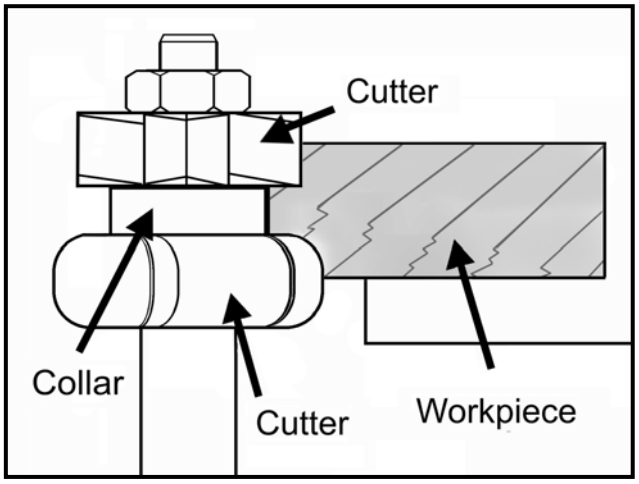


Figure-36 Using collar between the cutters

MAINTENANCE

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

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.

LUBRICATION

The shaper has sealed lubricated bearings in the motor housing and arbour assembly and do not require any lubrication.

CLEANING

The moisture from the wood dust remaining on the table surface can cause rust. The table and other un-painted surfaces of the machine should be cleaned and wiped after every use to make sure that there is no moisture against bare metal surfaces. Then seal with an aerosol or paste wax.

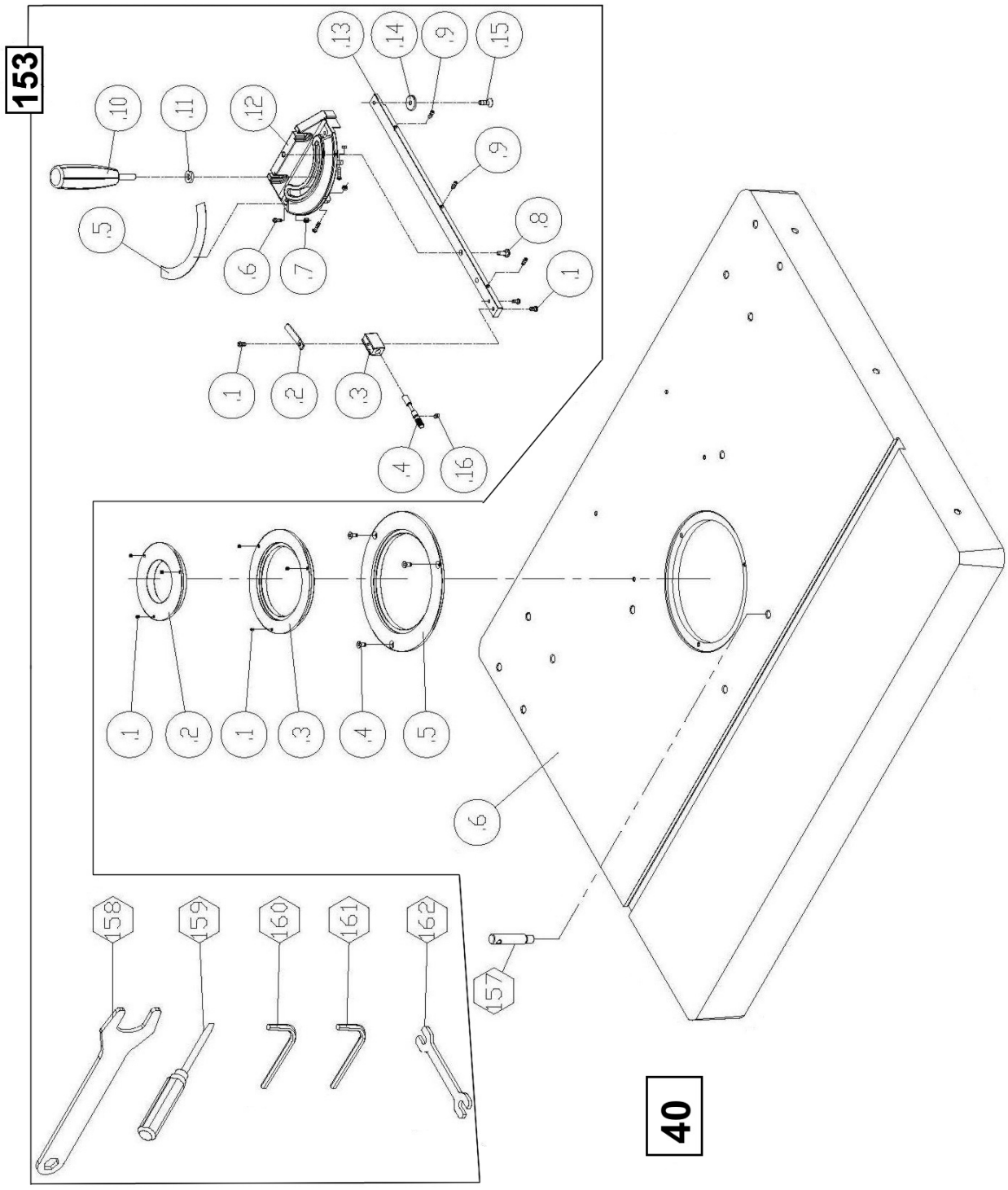
V-BELT INSPECTION

The V-belt stretches with use and should be checked regularly. Check the V-belt for proper tension and belt condition every month.

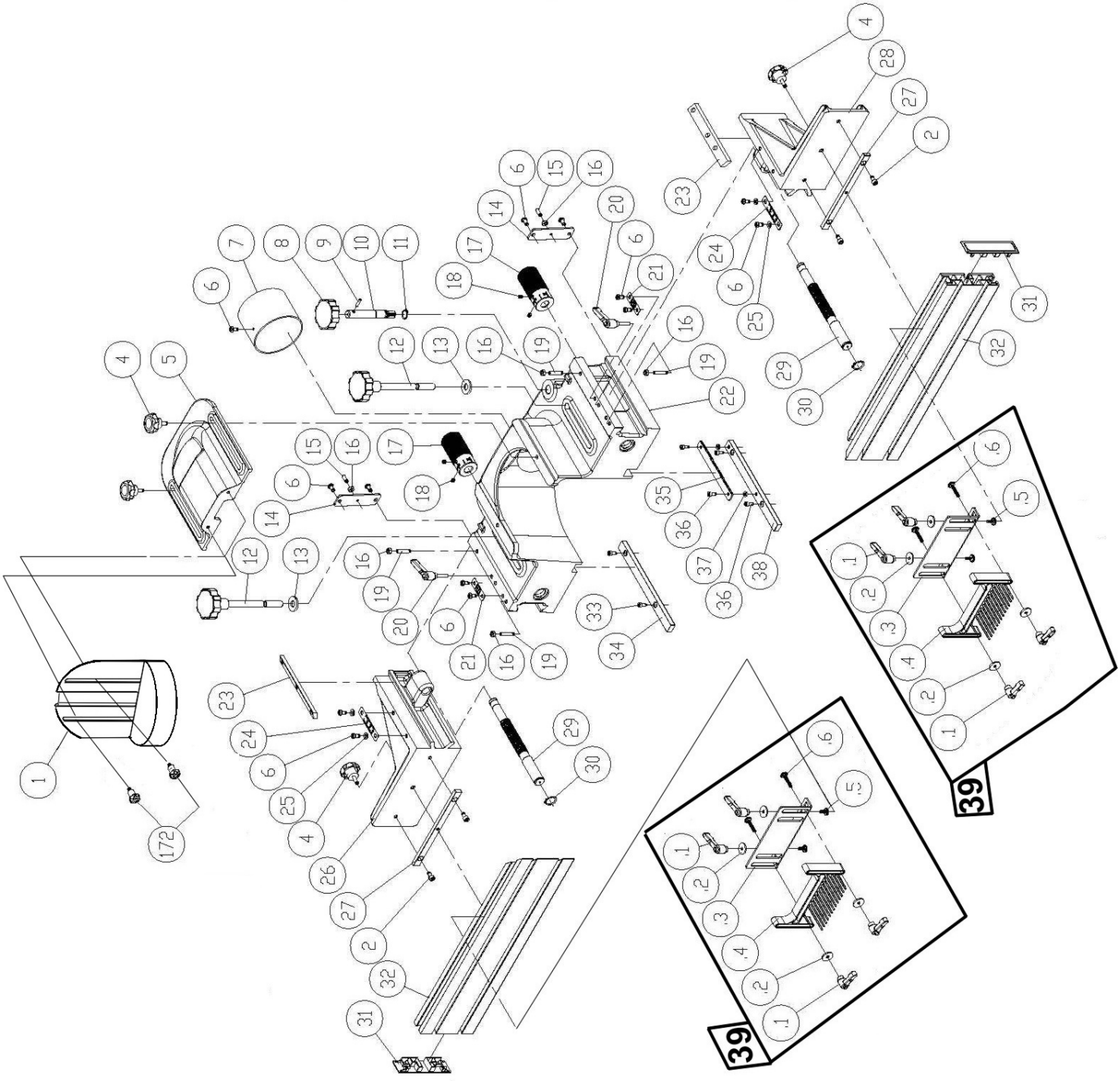
TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	SOLUTION
The shaper does not start	1. The supply circuit has low/no voltage or high resistance.	1. Check breaker / If you are unqualified to test voltage, determine circuit loads, or rewire, contact a qaulified electrician.
	2. The motor start capacitor is open or shorted.	2. Unplug the shaper and inspect the capacitor for oily residue, bubbled plastic, foul odor & test and replace accordingly.
	3. Forward/Reverse switch is in the "OFF" position.	3. Make sure the switch is in the "Forward" or "Reverse" position.
The shaper runs slow.	1. The belt-to-pulley ratio is set low speed.	1. Unplug the shaper and move the belt to the high speed pulley position.
	2. The extension cord used is the wrong gauge and has too much resistance, or supply circuit has low voltage, or high resistance.	2. Eliminate the extension cord and move the shaper closer to the wall receptacle. If you are unqualified to test or determine circuit loads, contact a qualified electrician.
The drive belt tears or runs off the shaper.	1. The belt tension is too low and the belt has run off the pulley.	1. Increase the belt tension to prevent slippage. DO NOT over tighten the belt tension.
The shaper vibrates, the spindle is loose or the cutter chatters.	1. The shaper is unstable and wobbles.	1. Stabilize the shaper with the floor, using shims.
	2. The spindle, cutter, or router bit spindle adapter is loose or out of alignment.	2. Reinstall spindle, cutter or router bit spindle adapter as outlined.
	3. The shaper has a loose motor or spindle cartridge.	3. Unplug the shaper & carefully look for loose motor, motor mounts, spindle cartridge or other parts. Tighten fasteners as required.
	4. The spindle gib screws are loose.	4. Tighten the spindle gib screws.

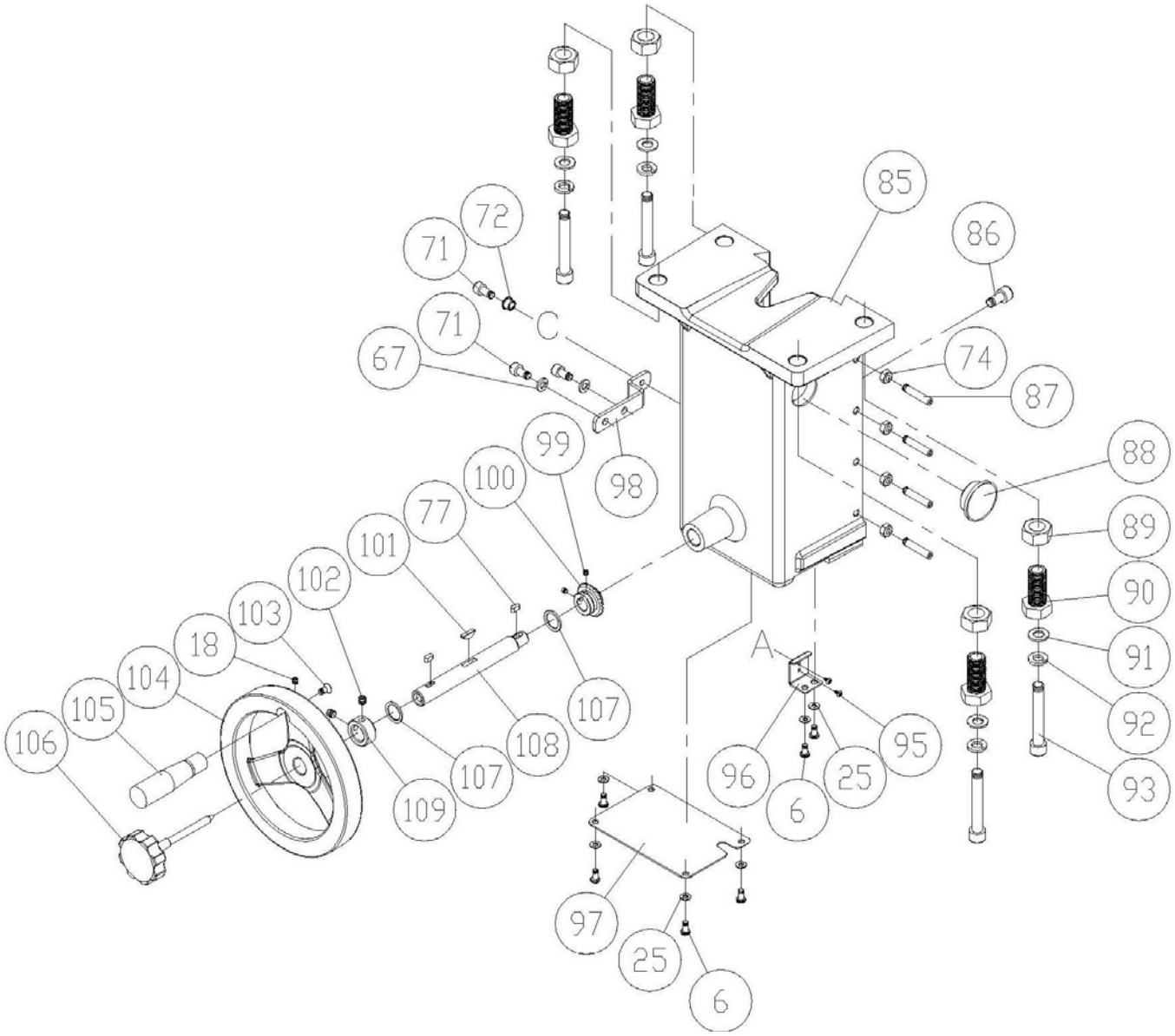
CX301 PARTS BREAKDOWN



CX301 PARTS BREAKDOWN



CX301 PARTS BREAKDOWN



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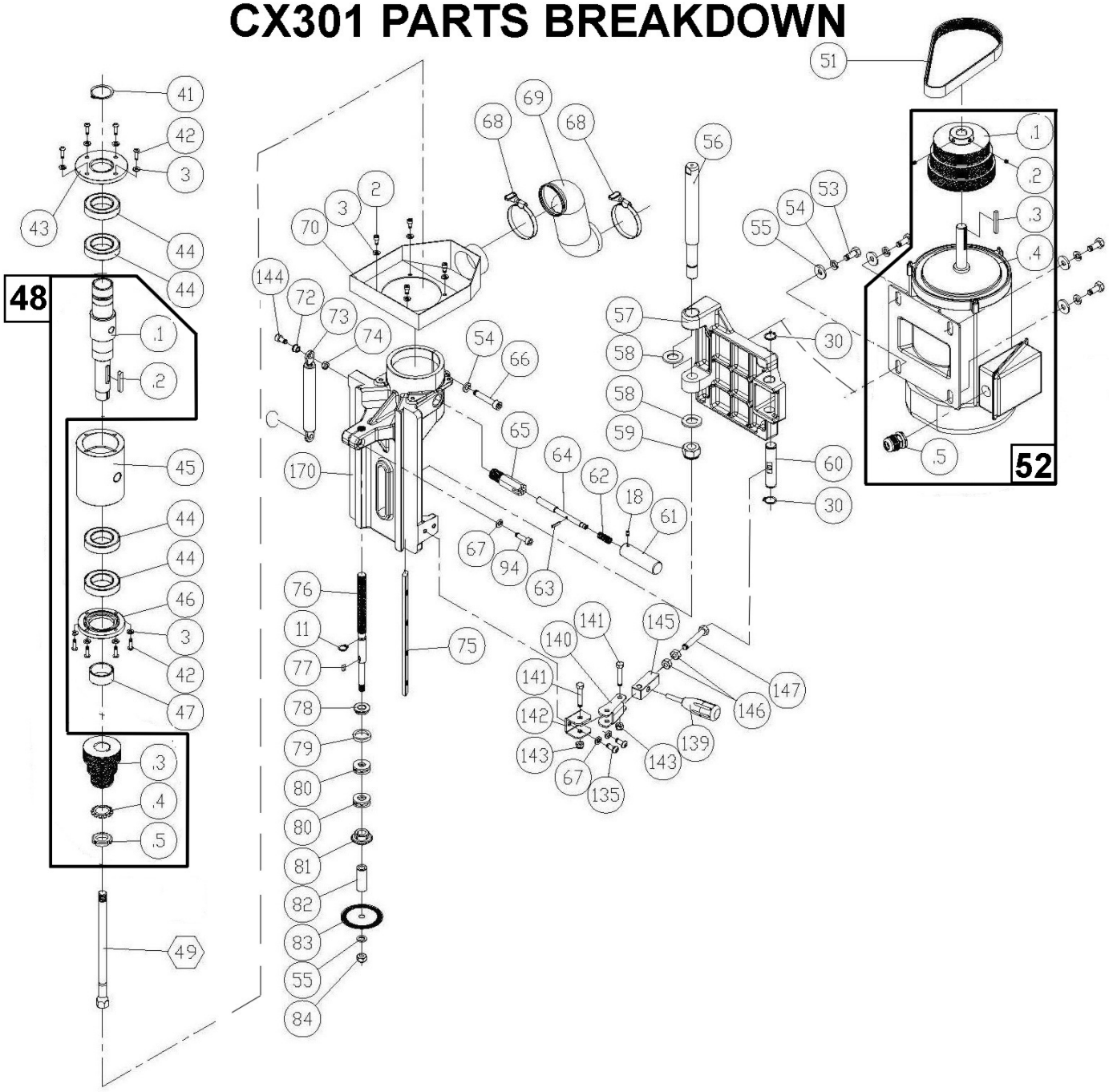

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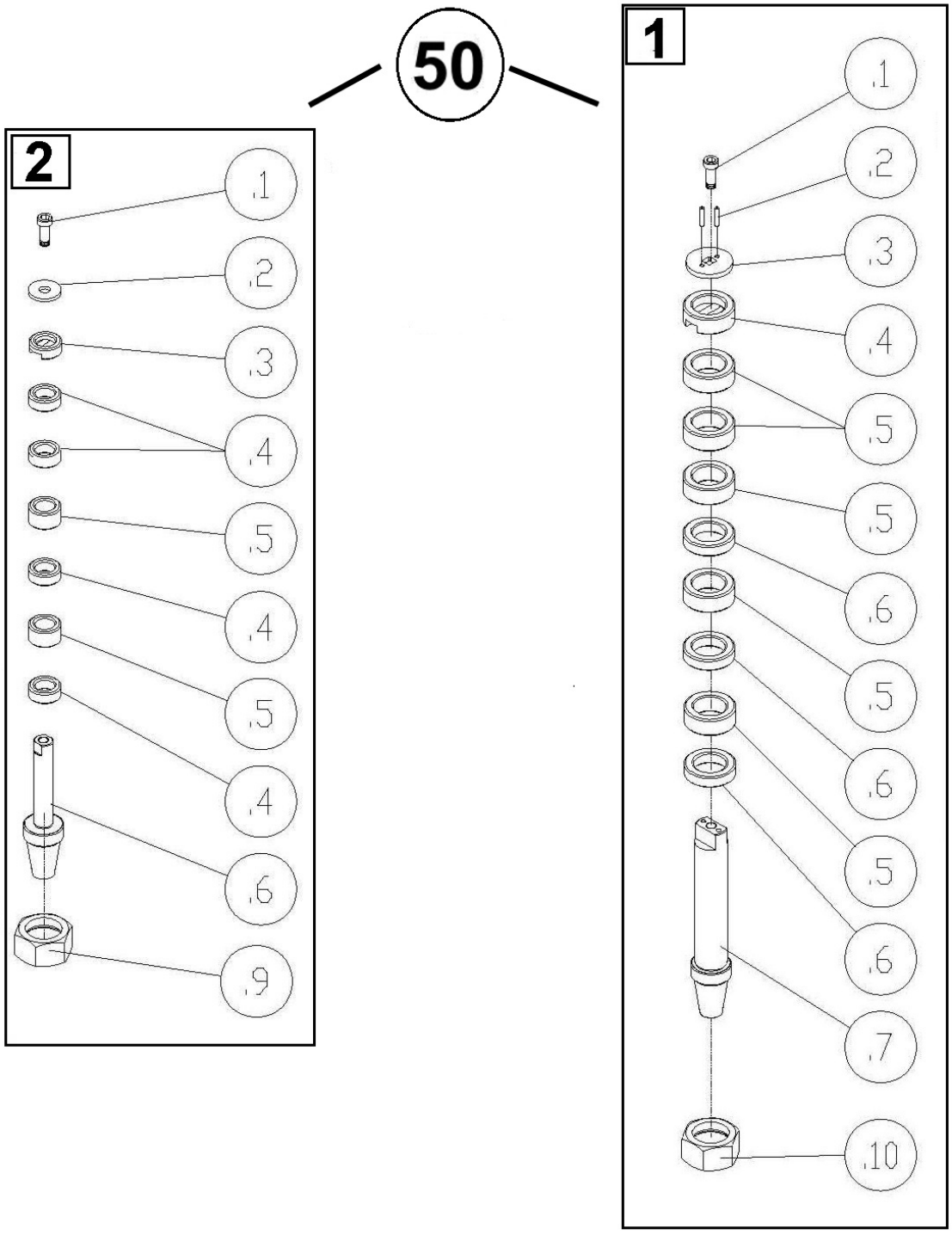
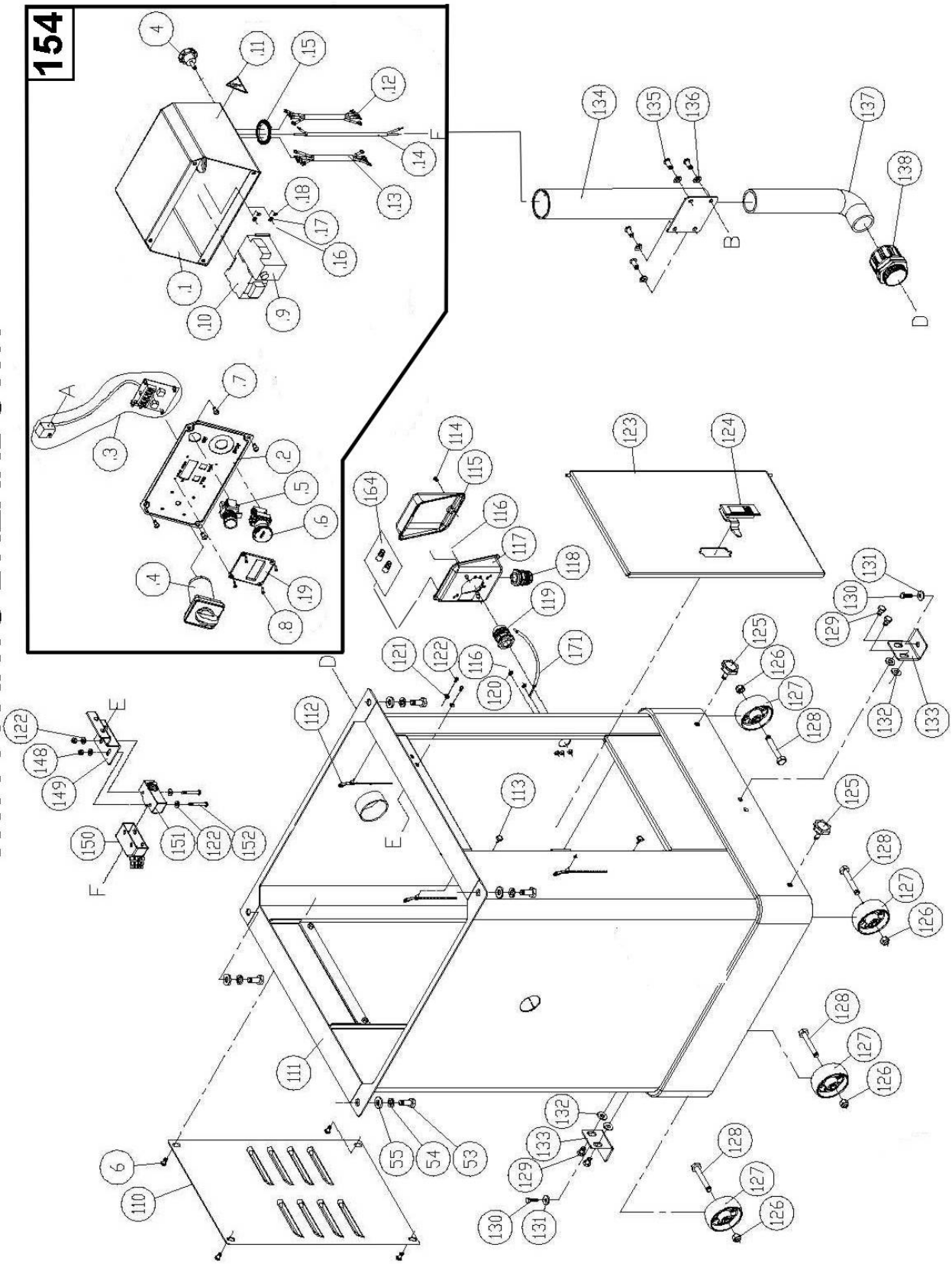


CX301 PARTS BREAKDOWN



CX301 PARTS LIST

REF#	DESCRIPTION		QTY
1	Cutter Guard		1
2	Cap Screw	M6*1.0P*12	8
3	Spring Washer	6.1*12.3	12
4	Bolt		5
5	Cutter Guard Bracket		1
6	Pan Head Screw	M6*1.0P*12	23
7	Dust Chute		1
8	Knob		1
9	Spring Pin	4*18	1
10	Shaft Gear		1
11	Retaining Ring	STW-15	2
12	Knob		2
13	Flat Washer	13*28*3.0t	2
14	Adjust Bracket		2
15	Set Screw	M6*1.0P*16	2
16	Hex Nut	M6*1.0P	6
17	Micro Adjust Handle		2
18	Set Screw	M6*1.0P*8	6
19	Set Screw	M6*1.0P*30	4
20	Lock Handle		2
21	Scale		2
22	Fence Bracket		1
23	Gib		2
24	Scale		2
25	Flat Washer	6.3*13*1.0t	10
26	Fence Plate - Left		1
27	Gib		2
28	Fence Plate - Right		1
29	Shaft		2
30	Retaining Ring	STW-20	4
31	End Cap		2
32	Fence		2
33	Cap Screw	M5*0.8P*16	2
34	Location Plate		1
35	Micro Adj. Gear Rack		1
36	Cap Screw	M5*0.8P*12	4

CX301 PARTS LIST

REF#	DESCRIPTION		QTY
37	Flat Washer	5.3*10*2.0t	2
38	Location Plate		1
39	Feather Board Assy.		2
39.1	Lock Handle		4
39.2	Flat Washer	5.5*22*2.0t	4
39.3	Bracket		1
39.4	Feather Board	TS-35	1
39.5	Carriage Bolt	M5*0.8P*16L	2
39.6	Carriage Bolt	M5*0.8P*30L	2
40	Table Assy.		1
40.1	Set screw	M4*0.7P*4	6
40.2	Insert Ring (small)		1
40.3	Insert Ring		1
40.4	Flat Head Screw	M5*0.8P*12	3
40.5	Insert Ring (Large)		1
40.6	Table		1
41	Retaining Ring	STW-40	1
42	Round Head Screw	M6*1.0P*20	8
43	Bearing Cover (Top)		1
44	Ball Bearing	6008-2NK	4
45	Cartridge		1
46	Bearing Cover		1
47	Bushing		1
48	Arbor Shaft Assy.		1
48.1	Arbor Shaft		1
48.2	Key	8*7*43	1
48.3	Pulley		1
48.4	Lock Washer	25	1
48.5	Lock Nut	M25*1.5P	1
49	Connect Bar		1
50	Arbor Assy.	1-1/4” & 3/4”	1
50-1	1-1/4" Arbor Assy.		1
50-1.1	Cap Screw	M10*1.5P*30	1
50-1.2	Pin	4.0*20	2
50-1.3	Arbor Washer	10.5*45*5t	1
50-1.4	Arbor Bushing		1
50-1.5	Spacer		5
50-1.6	Spacer		3

CX301 PARTS LIST

REF#	DESCRIPTION		QTY
50-1.7	1-1/4" Arbor		1
50-1.10	Arbor Nut		1
50-2	3/4" Arbor Assy.		1
50-2.1	Cap Screw	M10*1.5P*30	1
50-2.2	Arbor Washer		1
50-2.3	Arbor Bushing		1
50-2.4	Spacer		4
50-2.5	Spacer		2
50-2.6	3/4" Arbor		1
50-2.9	Arbor Nut		1
51	Poly V-Belt	250 J10	1
52	Motor Assy.	7.5HP*220V/440V*60HZ*3PH	1
52	Motor Assy.	5HP*220V*60HZ*1PH	1
52.1	Motor Pulley		1
52.2	Set screw	M6*1.0P*8	2
52.3	Key	5*5*50	1
52.4	Motor	7.5HP*220V/440V*60HZ*3PH	1
52.4	Motor	5HP*220V*60HZ*1PH	1
52.5	Strain Relief Bushing	PGA16-14B	1
53	Hex. screw	M10*1.5P*25	8
54	Spring Washer	10.2*18.5	9
55	Flat Washer	10*25*3.0t	9
56	Shaft		1
57	Motor Bracket		1
58	Flat Washer	21*38*3t	2
59	Lock Nut	M20*1.5P	1
60	Shaft		1
61	Handle		1
62	Spring		1
63	Spring Pin	4*20	1
64	Rod		1
65	Connector		1
66	Cap Screw	M10*1.5P*55	1
67	Spring Washer	8.2*15.4	4
68	Clamp	60-80mm (I. D.)	2
69	Tube	300mm	1
70	Dust Collect		1
71	Cap Screw	M8*1.25P*16	3

CX301 PARTS LIST

REF#	DESCRIPTION		QTY
72	Bushing Sleeve		2
73	Nitrogen Cylinder		1
74	Hex Nut	M8*1.25P	5
75	Gib		1
76	Lead Screw		1
77	Key	5*5*12	3
78	Bushing		1
79	Packing		1
80	Bearing	51202	2
81	Bevel Gear		1
82	Bushing		1
83	Sensor Plate		1
84	Lock Nut	M10*1.25P	1
85	Support		1
86	Pan Head Lock Screw	M10*1.5P*20	1
87	Set screw	M8*1.25P*35	4
88	Plug		1
89	Hex Nut	M20*1.5P	4
90	Adjust Screw	M20*1.5P	4
91	Flat Washer	12.2*23*2.0t	4
92	Spring Washer	12.2*21.6	4
93	Cap Screw	M12*1.75P*80	4
94	Pan Head Lock Screw	M10*1.5P*40	1
95	Round Head Screw	M3*1.06P*08L	2
96	Bracket		1
97	Plate		1
98	Bracket		1
99	Set screw	M5*0.8P*5	2
100	Bevel Gear		1
101	Key		1
102	Set screw	5/16"-18NC*5/16"	2
103	Socket Hex. Screw	M6*1.0P*12	1
104	Handwheel		1
105	Handle		1
106	Lock Handle		1
107	Flat Washer	19.1*25.4*1.6	2
108	Lead Screw		1
109	Fix Ring		1

CX301 PARTS LIST

REF#	DESCRIPTION		QTY
110	Left Cover		1
111	Cabinet		1
112	Tie		3
113	Spacer		2
114	Pan Head Screw	3/16"-24NC*1/4"	1
115	Cover		1
116	Pan Head Screw	M5*0.8P*10	4
117	Cover		1
118	Strain Relief Bushing	50-1PGA16-14B	1
119	Strain Relief Bushing	50-1MG25A-16B	1
120	Tooth Washer	5.3*10	2
121	Pan Head Screw	M4*0.7P*8	2
122	Flat Washer	4.3*10*1.0t	6
123	Door		1
124	Latch		1
125	Knob	5/16"-18NC*3/4"	2
126	Hex. Screw	3/8"-16NC*2-1/2"	4
127	Wheel		4
128	Lock Nut	3/8"-16NC	4
129	Hex. Screw	M8*1.25P*12	4
130	Wood Screw	M6*2.6P*24	2
131	Flat Washer	6.7*19*2.0t	2
132	Flat Washer	9.2*20*2.0t	4
133	Fence Block		2
134	Switch Bracket		1
135	Round Head Screw	M8*1.25P*20	6
136	Flat Washer	8.5*16*2.0t	4
137	Wave Tube	NFE-16B*300mm	1
138	Connector	N-MGQ50-48B	1
139	Handle		1
140	Bracket		1
141	Hex. Screw	M8*1.25P*45	2
142	Brace		1
143	Lock Nut	M8*1.25P	2
144	Cap Screw	M8*1.25P*30	1
145	Shaft		1
146	Hex Nut	M10*1.5P(17B*8H)	2
147	Hex. Screw	M10*1.5P*65	1

CX301 PARTS LIST

REF#	DESCRIPTION		QTY
148	Lock Nut	M4*0.7P	2
149	Limit Switch Plate		1
150	Cover	KSSCB-2	1
151	limit Switch	MJ2-1306	1
152	Pan Head Screw	M4*0.7P*35	2
153	Miter Gauge Assy..		1
153.1	Pan Head Screw	3/16"-24NC*3/8"	3
153.2	Pointer		1
153.3	Spacer		1
153.4	Angle Set Bar		1
153.5	Miter Scale		1
153.6	Pan Head Screw	5/32"-32NC*5/8"	3
153.7	Hex Nut	5/32"-32NC	3
153.8	Shoulder Screw		1
153.9	Ball		3
153.10	Handle		1
153.11	Flat Washer	8.5*18*3t	1
153.12	Miter gauge body		1
153.13	Slot Bar		1
153.14	Ring		1
153.15	Flat Head Screw	M6*1.0P*6	1
153.16	O-Ring	P5	1
154	Switch Assy.	7.5HP*220V*60HZ*3PH	1
154	Switch Assy.	5HP*220V*60HZ*1PH	1
154.1	Control Box		1
154.2	Plate		1
154.3	Sensor Assy.		1
154.4	FWD/REV Switch	AC-3/25A 250V	1
154.4	FWD/REV Switch	AC-3/25A 250V	1
154.5	Start Switch		1
154.6	Stop Switch		1
154.7	Pan Head Screw	M6*1.0P*12	4
154.8	Pan Head Screw	M3*0.5P*12	4
154.9	Over Load	NTH-21 (17~21A)	1
154.10	Connector	C-18D10 (220V)	1
154.11	Label		1
154.12	Connect Wire	SJT12Awg*3C*1550mm	1
154.12	Connect Wire	SJT12Awg*4C*1550mm	1

CX301 PARTS LIST

REF#	DESCRIPTION		QTY
154.13	Connect Wire	SJT12Awg*4C*1350mm	1
154.14	Connect Wire	SJT18Awg*2C*950mm	1
154.15	Relief Bushing	AMB-2	1
154.16	Pan Head Screw	M5*0.8P*8	2
154.17	Tooth Washer	5.3*10	2
154.18	Grounding Label		2
154.19	Cover		1
157	Draw Bar		1
158	Spanner	50mm	1
159	Screw Driver		1
160	Hex. Wrench	3mm	1
161	Hex. Wrench	6mm	1
162	Open Wrench	14*17	1
164	Connector	SW-P6H	2
170	Arbor Shaft Bracket		1
171	Connect Wire	SJT12AWG*1C*150mm	1
172	Knob		2

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.