

CX15 & CX20 15" & 20" MOBILE PLANERS User Manual



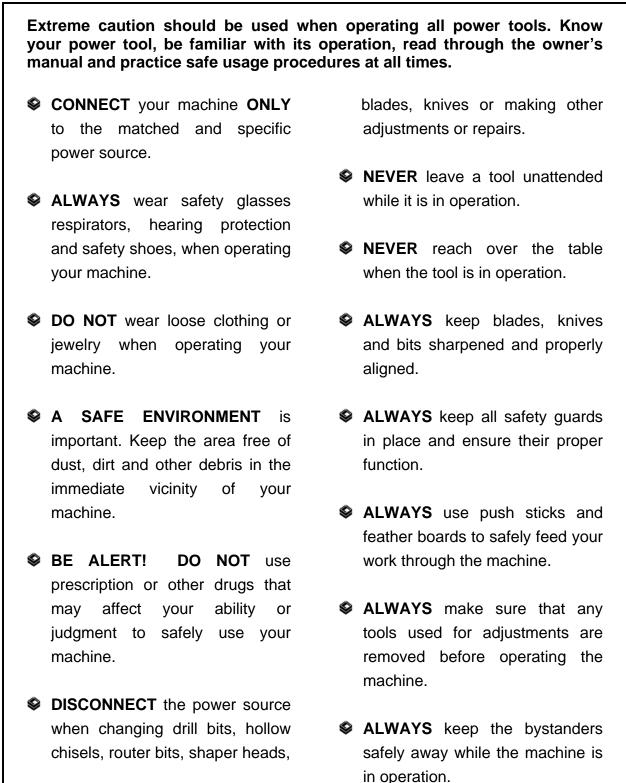
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GENERAL SAFETY INSTRUCTIONS





CX15-15" / CX20-20" Thickness Planer Specific Safety Instructions

- If you are not familiar with the operation of a thickness planer, you should obtain the advice and/or instruction from a qualified professional.
- Never reach into or through the throat of the thickness planer. Even with the power turned off, the cutter-knives are very sharp.
- Keep the cutter head and knives clean and free of tar and pitch.
- Be sure that the motor switch is properly grounded.
- Check each and every board to be surfaced for loose knots, nails,

screws and any other foreign materials and defects before planning.

- Keep hands away from the surface of the wood as it nears the in-feed rollers.
- Make all adjustments with the power OFF.
- Always keep the machine clean and free of sawdust and wood chips. They may contain moisture that could cause the cast-iron surfaces to rust.
- Turn OFF power before removing wood shavings and sawdust from the surface of in-feed & out-feed tables.

THINK SAFETY. WORK SAFELY

IMPORTANT

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.





PLANER FEATURES

MODEL CX15-15" PLANER WITH MOBILE BASE

As part of the growing line of Craftex woodworking equipment, we are proud to offer the CX15. The Craftex name guarantees Craft Excellence. By following the instructions and procedures laid out in this owner's manual, you will receive years of excellent service and satisfaction. The CX15 is a professional tool and like all power tools, proper care and safety procedures should be adhered to.

- Motor: 3HP, 220 Volts, Single Phase, 15 Amps, TEFC
- 3 "V" Belts Drive
- Cutter Head Speed: 5,000 RPM
- Cuts per minute : 15,000
- Feed Rate: 16 FPM and 30 FPM plus Neutral.
- Capacity: 15" Width, 8" Height
- Minimum Stock Thickness: 3/16"
- Max. Stock Thickness: 8"
- Max. Cut Depth Planing Full Width 3/32"
- Max. Cut Depth Planing 6 Inch Wide Board 1/8"
- Solution Number of Cutter-Head Knives: 3 Knives H.S.S, Jack-Screw Cutter-Head
- Cutter –Head Knives Size: 15" x 3/4" x 1/8"
- Table Size: 20" x 15"
- Solution All Ball Bearing and Cast-Iron Construction
- Precision Ground Cast Iron In-feed and Out-feed Tables with Rollers
- Soli-Bath Gear Box supplies 2 speeds and neutral to the in-feed and out-feed rollers
- Powder Coated Paint
- Solution Mobile Base with Locking Foot Pedal
- 4" Dust Port is Included
- Weight: 650 lbs.
- Length, Width & Height 42" x 32-1/2" x 45-7/8"
- Warranty 3 YEARS





<u>PLANER</u> FEATURES

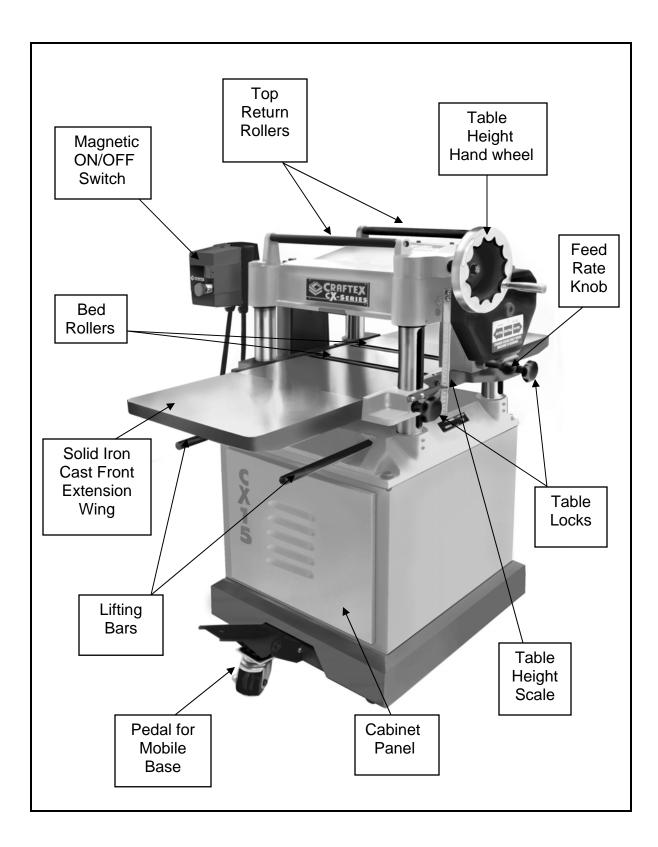
MODEL CX20-20" PLANER WITH MOBILE BASE

As part of the growing line of Craftex woodworking equipment, we are proud to offer the CX20. The Craftex name guarantees Craft Excellence. By following the instructions and procedures laid out in this owner's manual, you will receive years of excellent service and satisfaction. The CX20 is a professional tool and like all power tools, proper care and safety procedures should be adhered to.

- Motor: 5 HP, 220 Volts, Single Phase, 25 Amps
- 3 'V' Belts Drive.
- Cutter Head Speed: 5,000 RPM
- Cuts per minute: 20,000
- Feed Rate: 16 FPM and 20 FPM plus Neutral.
- Capacity: 20" width, 8" height.
- Minimum Stock Thickness: 3/16"
- Max. Stock Thickness: 8"
- Max. Cut Depth Planing Full Width 1/8"
- Max. Cut Depth Planing 6" Wide Board 1/8"
- Number of Cutter-Head Knives: 4 H.S.S Knives
- Cutter –Head Knives Size: 20" x 3/4" x 1/8"
- Table Size: 25-3/4" x 20"
- Solution All Ball Bearing and Cast-Iron Construction
- Precision Ground Cast Iron In-feed and Out-feed Tables with Rollers
- Soli-Bath Gear Box supplies 2 speeds and Neutral to the in-feed and out-feed rollers.
- Powder Coated Paint
- Mobile Base with Locking Foot Pedal
- S" Dust Port is Included
- Second Se
- Length, Width & Height 56" x 39" x 45-7/8"
- Warranty 3 YEARS



PHYSICAL FEATURES





<u>SETUP</u>

To setup the machine you need an assistant to help you. For the protection of your eyes both of you need to have safety glasses. The unpainted surfaces of the planer are coated with rust prevention waxy oil and you will want to remove this before you begin assembly. Use a solvent cleaner that will not damage painted surfaces.

IMPORTANT

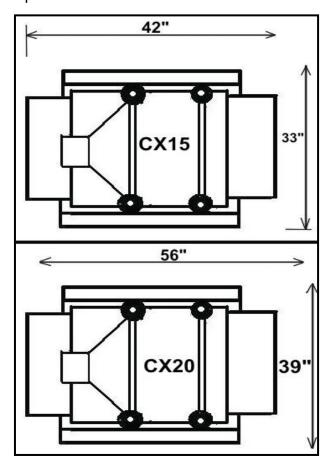
CX15/CX20 is a heavy machine. Do not over-exert yourself. For safe moving method get the help of assistant.

IMPORTANT

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

Unpacking

The planer is properly packaged in a wooden crate. When unpacking, carefully inspect the crate and ensure that nothing has been damaged during transit. Open the crate and check that the machine is in a good condition. The machine is heavy and you should use a fork truck or get assistance to move the machine for safe moving method. The cabinet stand is equipped with 4 lifting handles (rods) that pull out. Use only these handles when moving the machine with the fork truck. You should also remove the top cover and clean the cutter-head, table, feed rollers and extension wings before assembly and operation.



Minimum work space for CX15 and CX20



Proper Grounding

The machine is pre-wired to be used with a 220-volts power supply. Ensure the cord is plugged into a grounded power outlet.

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

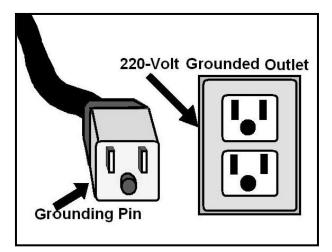


Figure-1 220-Volts Outlet for CX15 & CX20

ASSEMBLY

Installing Foot Pedal & the Caster

For clarity, it is recommended that you may want to remove the front panel on the base of the machine. See Figure-2

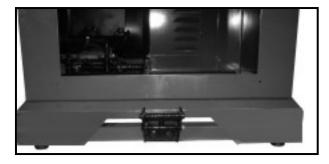


Figure-2 Removing the front panel

Once you have removed the front panel, you can begin assembling the integrated mobile base.

Remove the hex bolt and hex nut that is comes installed on the foot pedal bracket. Align the holes on the caster assembly with the holes on the bracket and flange and insert the bolt, tighten the screws.

Now align the holes on the foot pedal with the foot pedal bracket and secure it with the help of the washers and screws provided. See Figure-4



Figure-4 Installing the foot pedal and the caster

Your mobile base should now be installed and ready to us. You can now lower the machine back to the ground. Once the machine is sitting back on solid ground, you can lock the mobile base in the place



Assembly

by lifting the foot pedal up. When you are ready to move your machine again, it is recommended that you use the lifting handles (or once the table extension wings are in place) as leverage when operating the foot pedal so that you do not hurt your back (the machine is very heavy, so a strong rigid mobile base has been provided).

Installing the Extension Wings

Remove the extension wings from the cardboard box. Starting with either the front or the back of the machine, take the first extension table and line the holes of the table bed with the holes of the extension table. Using the hex bolts, lock washers and flat washers provided, finger-tighten all the holes so that the table is secure. Do not fully tighten at this time. See Figure-5



Figure-5 Installing the extension wings

Once you have installed both extension wings, you can begin the process of leveling out the tables to make sure that they are both flush machine. The extension tables are equipped with adjusting set screws that make these adjustments very easy. See Figure-6

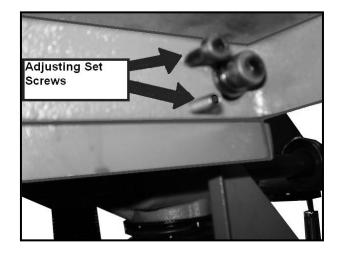


Figure-6 Adjusting the set screws

It is important to use a straight edge at this time as a guide and the set screws for leveling to make sure it is attached properly. Position the extension wings even with the main bed and once fully leveled, tighten all hex bolts. See Figure-7



Figure-7 Leveling the wings using straight edge

Repeat the same procedure for the other extension wing.



Installing the Magnetic Switch

The magnetic switch is in a protective brown box. Remove the packaging of the magnetic switch and attach it to the switch bracket located on the left front of the machine. Using the two screws and washers provided, tighten the magnetic switch in place. See Figure-8

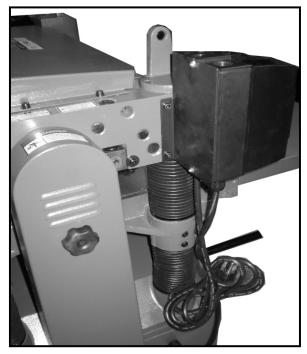


Figure-8 Installing the magnetic switch

Attaching the Dust Hood

Attach the dust hood to the top of the planer first by using the hex bolts, flat washers and hex nuts provided. Then attach the bottom of the dust hood to the planer in the same manner. See Figure-9

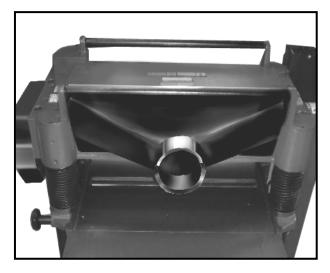


Figure-9 Attaching the dust hood

Installing the Hand Wheel

Locate the hand wheel shaft on the right side of the machine, opposite the magnetic switch. Remove the screw and washer off the keyway shaft and set them aside. Place the hand wheel onto the keyway shaft and put the screw and washer back into the shaft, tightening to secure the hand wheel. Now insert the turning handle for hand wheel onto the threaded hole on the actual hand wheel and tighten. See Figure-10

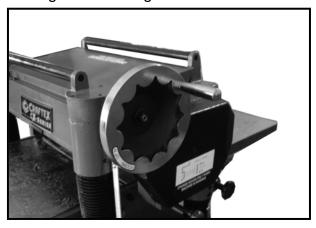


Figure-10 Installing the hand-wheel



Assembly

Installing Gear Box Pull Handle

Locate the gearbox pull handle and screw it into the gearbox. See Figure-11

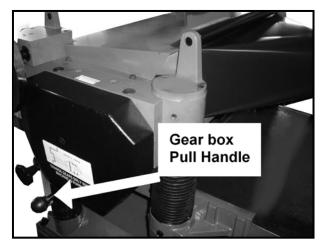


Figure-11 Gear box pull handle installed

This will allow you to change your feed speeds and will explained later in the manual (See Page-19)

Check Gear Box Oil

Before you test run the machine it is important to make sure that there is oil in the gear box. It is best to start with fresh oil. For details see page 19

Normal break-in procedure is to refill the gear box oil after the first 20 hours of operation.

TEST RUN

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

During the test run if there is an unusual noise coming from the machine or the machine vibrates, there problem might be because of the following:

- 1- Belts slapping cover
- 2- V-belts worn or loose
- 3- Pulley loose
- 4- Motor mounts loose or broken

After you investigate and If you find that the problem with your machine is one of the above,

- 1- Replace or realign the belts with a matched set
- 2- Replace the belts with a new matched set
- 3- Realign or replace shaft, pulley, setscrew and key
- 4- Tighten or replace the motor mount

WARNING

Before starting the planer please 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 this may cause serious personal injury



OPERATIONS & ADJUSTMENTS

Basic Controls

The basic controls of the planer are shown in the figure below. Use this figure and read the text to know what the basic controls of this planer are.

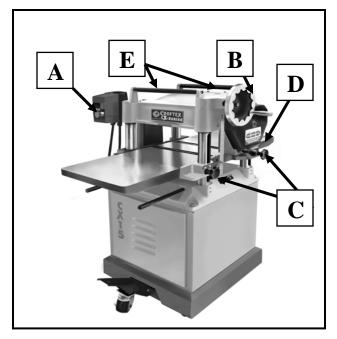


Figure-12 Showing basic controls of the planer

- A. Magnetic Switch: Starts and stops the planer.
- **B. Table Height Hand-Wheel:** Controls the height of the table under the cutter-head.
- **C. Table Locks:** Locks the table in your desired position so that it does not move during the operation.
- **D. Feed Rate Control Knob:** Changes the speed rate of the in-feed rollers.
- E. Return Rollers: Makes it easy to move wood to the in-feed side of the planer.

WARNING

Accidents are frequently caused by the lack of familiarity and failure to pay attention. If you have never used any type of this machine before, we recommond you to read and understand this user manual, or get formal training, so that you have enough knowledge about your machine before starting any project.

Depth of Cut

To control depth of cut, use the table height hand-wheel and you can read the dept of cut in inch and metric on the scale provided. The distance of upward or downward movement is controlled by the hand wheel. One revolution of the hand wheel is 1.5mm (0.059").

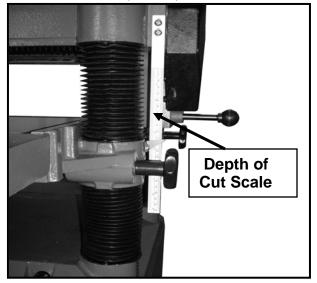


Figure-13 Depth of cut scale



Feed Speed Control

Your machine has a spiral, serrated infeed roller and they turn to feed the stock in. The feed rollers are driven by chains and the sprockets, which takes the power directly from the cutter-head through the oil bath gear box.

The feeding speed can be changed by using the feed rate control knob. When the knob is in the middle the speed rate is 0. Pulling out the knob, the feed roller operates on rate 30 FPM (CX15) and 20 FPM (CX20), while pushing it in, the feed roller operates on rate 16 FPM. See Figure-14

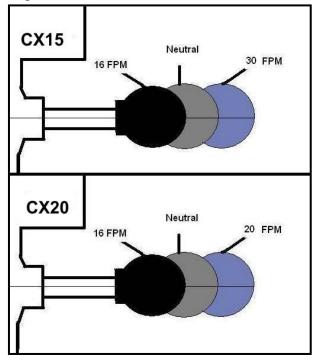


Figure-14 Feed Speed Control Knob positions for CX15 and CX20

IMPORTANT: Only change the speed rate while the machine is moving, but not in the time of any cutting operation.

Table Roller Height

Your planer is supplied with two table rollers in the middle of the planer bed to move stock. As all wood behaves different it is hard to specify the exact dimensions on the proper height settings. However, as a general rule, keep the bed roller height within 0.002"-0.020".above the table surface as u can see in figure-15.

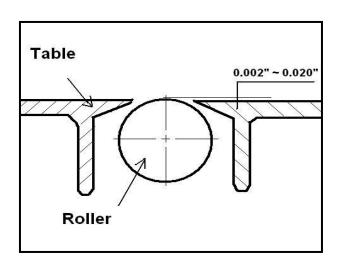


Figure-15 Setting the table roller height

When planing rough stock, the table rollers should be set at a high position and when planing smooth stock the table rollers should be set low. If you wish to adjust the rollers, loosen the screws on both side of the table and turn the eccentric shafts to raise or lower the table rollers. When the proper height is obtained, tighten the screws. The table rollers must be adjusted on the opposite side of the table as well. Be sure that the height of the front and rear rollers are the same.



In-feed and Out-feed Rollers

In-feed and Out-feed rollers are the part of machine that feed the stock while planning. Both the rollers are under spring tension and this tension must be sufficient to feed the stock uniformly through the planer without slipping but it should not be so tight that it causes damage to the board. The tension should be equal on both ends of each roller.

The spring tension on both the rollers can be adjusted by turning the set screw on the opposite ends of the in-feed and outfeed rollers. If you loosen the screw it makes the rollers to come down and if you tighten the screw the rollers goes up. See figure-16

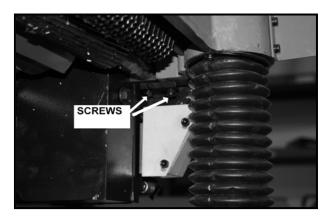


Figure-16 Setting the rollers spring tension

Chip Breaker & Pressure Bar

The in-feed roller, chip-breaker, pressure bar and out-feed roller are adjusted at the factory. The in-feed roller and chipbreaker is (0.004") below the cutting circle. The pressure bar is (0.008") and the out feed roller is (0.02") below the cutting circle. See Figure-17

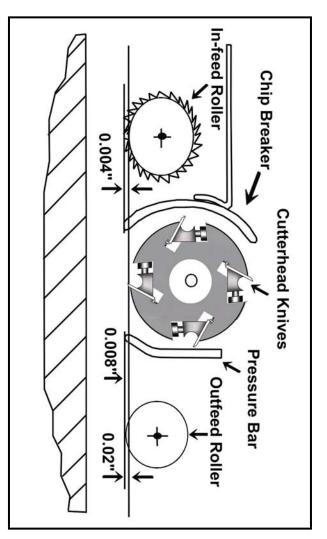


Figure-17 Adjusting chip breaker & pressure bar with the cutter-head

Anti-Kickback Fingers

To prevent from possible injuries, your machine is provided with anti-kick back fingers. These fingers should be inspected occasionally to make sure they are free of gum and pitch so that they can move independently and operate correctly.



Operations & Adjustments

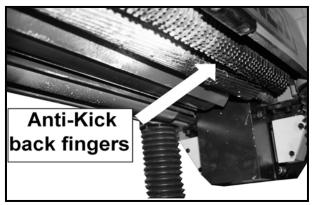


Figure-18 Anti-kick back fingers

Return Rollers

The planer has two rollers on the top which serves as convenient stock rest. You can move the stock to the in-feed side on these rollers while working which save the time and motion. See Figure-19



Figure-19 Top return rollers

Inspecting Cutter-Head Knives

The cutter-head knives are supposed to be at the same height with each other. If one of the knives is higher than the others, you will get a poor result while doing any cutting operation. To inspect the cutter-heads disconnect the planer from the power source and remove the cutter-head guard so that you can have access to the cutter-head.

Now, take a straight edge and put it on the out-feed table so that it hangs over the cutter-head. Rotate the cutter head body and check the height of each knife with the out-feed table. The knife should just touch the bottom of the straight edge. If any of the knives is set too high or too low then it should be adjusted.

Knife Replacement & Adjustment

Remove the screws holding the knifehead cover and set aside. To remove the knives, loosen the knife locking bar by turning the six knife locking screws into the knife locking bar and remove the knife locking bar, knife and springs located under the knifes.

Remove the remaining three knives in the same manner.

Clean the knife slots, knife locking bars, springs and locking screws. When changing your knives, inspect to ensure the knives do not have any nicks, cuts or wire edges. Hone the knives slights using a stone or honing guide.

Place the knife gauge over the knife and while holding down, loosen all six locking screws by turning them into the locking bar until the cutting edge of the knife comes into contact with the protrusion of the gauge. Now snug up the knife locking bar by slightly backing out the six screws against the slot. The knife gauge should touch all three points of the roller and knife. (See figure-20)



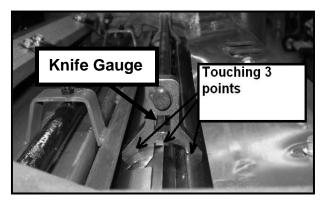


Figure-20 Knife Gauge touching 3-points

Replace and reset the other three knives in the same manner. All four knives are set with the screws just snug back and tighten the six screws against the slot starting with the end screws first and then the center screws until the knife is securely held in the cutter-head. Tighten the remaining three knives in the same manner.

Replacing V-Belts & Adjusting V-Belts Tension

CX15/CX20 planer is provided with three V-belts from the motor to the cutter head, in-feed and out-feed rollers through the gear box.

To access the V-belts, remove the front cabinet panel of the machine. If the Vbelts need to be replaced, raise the motor to release the belt tension and then replace them with a matching set of 3 belts.

To Adjust the V-belt, loosen the top motor hex nuts and adjust the bottom hex nuts to raise or lower the motor. If there is approximately 3/4" deflection when a moderate pressure is applied to the Vbelts, the V-belts are correctly tensioned. See Figure-21

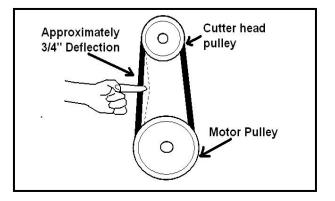


Figure-21 Correct belt tension

Adjusting Roller Spring Tension

The spring tension should be adjusted so that the work pieces move through the planer properly

The roller tension varies depending upon the type of wood you are planing. If the stock consistently stops feeding during the planing, the roller spring tension should be increased and if the roller is leaving indents in the wood as it leaves the planer, the tension should be decreased.

To adjust the roller spring tension disconnect the planer from power and adjust the #1, #2 and #3 cap screws as shown in Figure 22, so that they protrude 1/8" and adjust the #4 cap screw so that it protrudes 5/16" above the head casting. See Figure 22



Figure-22 Set screws for the roller spring tension adjustment



LUBRICATION

For long life and trouble-free operation of your planer it is important to lubricate some components of the machine.

Feed Roller Bushings

The In-feed and Out-feed rollers rotate inside bushing blocks on both ends of the rollers. Lubricate feed roller bushing by adding 2-3 drops of SAE 30W oil to the center hole of the four feed roller adjustment bolts on the top of the head casting. See Figure-23



Figure-23 Lubrication holes for the feed rollers

Table Height Worm Gear

To lubricate the gear teeth remove the three cap screws from the worm gear housing and lift the housing and hand wheel off the machine. Clean the gear and then apply a moderate amount of multi-purpose grease on the gear teeth. See Figure-24



Figure-24 Worm gear lubrication location

Columns and Lead Screws

The table moves up and down by the rotation of the Lead screws inside the columns. Loosen the dust sleeve (CX20) and apply a thin coat of SAE 30W oil to the outside surface of the columns and put a light application of multi-purpose grease to the lead screws threads. See Figure-25

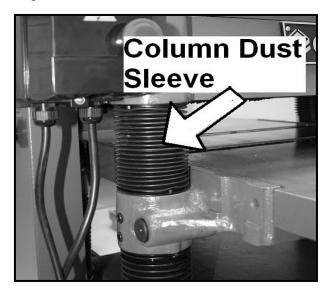


Figure-25 Column dust sleeve



Lubrication

Gearbox

Remove the drain plug and the filler cap and drain the oil (80W-90W). It is best to start with fresh oil. Un-tighten the drainplug and now fill with clean lubricant though the hole. (See figure-26). Normal break-in procedure is to refill the gearbox oil after the first 20 hours of operation.

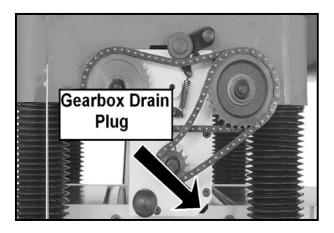


Figure-26 Lubricating the gear box

Table Height Chain & Sprockets

Remove the front and rear cabinet panels to access these parts, clean away debris and grime, and then brush on a light coat of multi-purpose grease to the chain and sprockets. See Figure-27

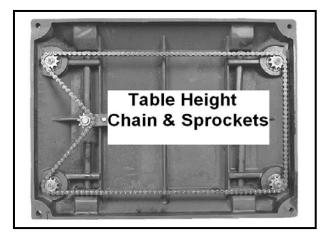


Figure-27 Table height chain and sprockets

Drive Chain and Sprockets

To lubricate the in-feed and out-feed drive chain and sprockets first remove the table height hand wheel and safety covers attached to the drive chain to access these parts. Then clean the chain and the sprockets and apply a light coat of multipurpose grease on both. See figure-28

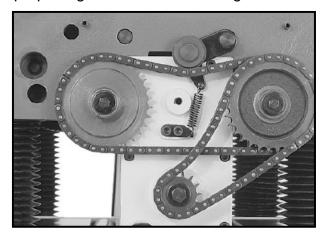
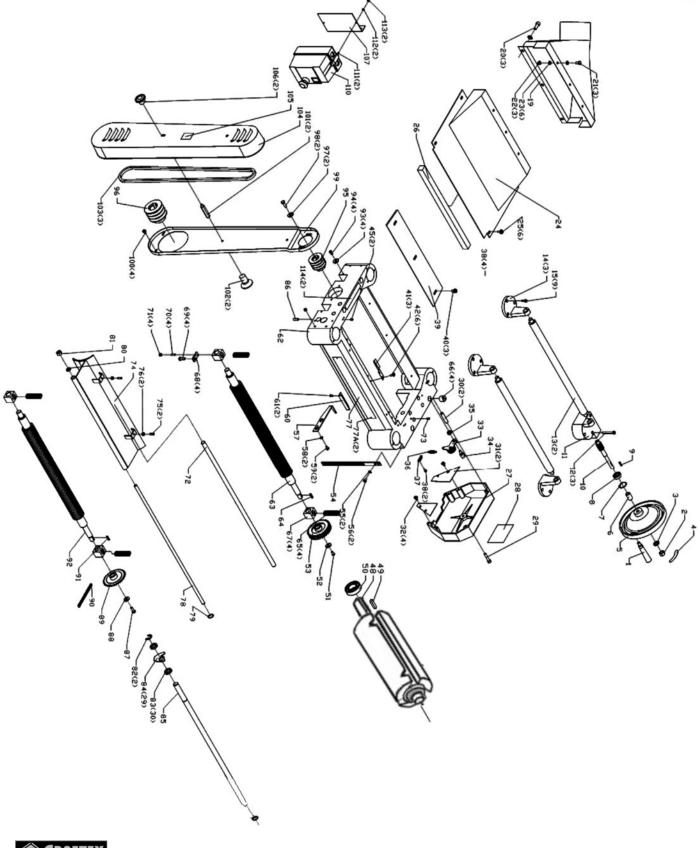


Figure-28 Drive chain & sprockets



CX15-15" PLANER HEADSTOCK PARTS LIST





CX15-15" PLANER HEADSTOCK PARTS LIST

REF# DESCRIPTION

-	
1	HANDLE
2	M12 HEX NUT
3	FLAT WASHER
4	HAND WHEEL LABEL
5	HAND WHEEL
6	COLLAR
7	32MM RETAINING RING
8	BEARING
9	4X20 KEY
10	WORM GEAR
11	WORM HOUSING
12	M5X55 HEX SOC HD SCR
13	ROLLER
14	ROLLER STAND
15	M5X14 HEX SOC HD SCR
19	DUST HOOD
20	M8X20 HEX SOC HD SCR
21	M6X10 HEX BOLT
22	M6 HEX NUT
23	6MM FLAT WASHER
24	UPPER COVER
25	HEX LOCTITE SCR
26	FOAM PIECE
27	GEAR BOX COVER
28	SPEED RATE LABEL
29	M8X45 HEX SOC HD SCR
30	6X20 SPRING PIN
31	SAFETY HATCH
32	HEX LOCTITE SCR
33	BRACKET

	1
34	SHAFT
35	COLLAR
36	SPRING
37	HANGER
38	M6X8 HEX SOC HD SCR
39	CHIP DEFLECTOR PLATE
40	HEX LOCTITE SCR
41	PRESS PLATE
42	HEX LOCTITE SCR
48	CUTTERHEAD
49	C8X36 KEY
50	BEARING
51	M6X16 HEX BOLT
52	FLAT WASHER
53	SPROCKET
54	SCALE
55	6MM FLAT WASHER
56	M6X12 CROSS PAN HD SCR.
57	POINTER
58	6MM FLAT WASHER
59	M6X12 CROSS PAN HD SCR.



REF# DESCRIPTION

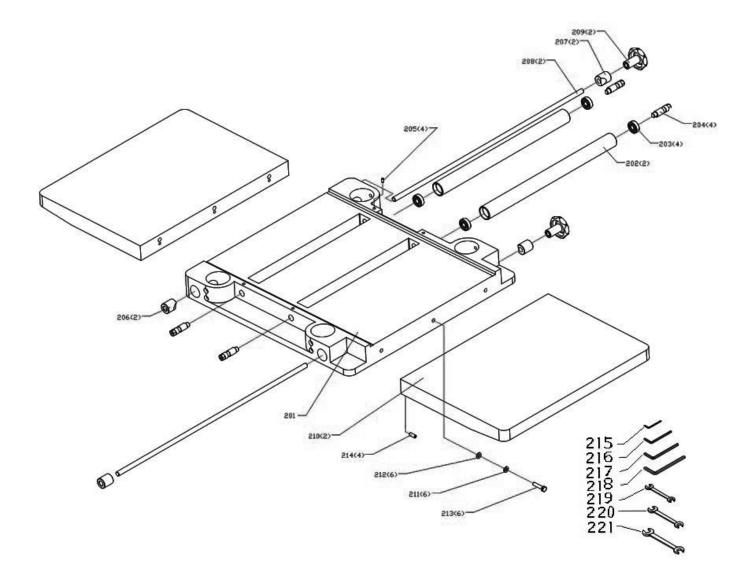
M6X8 CROSS COUNTERSUNK 61 HD SCR 62 HEAD CASTING 63 OUTFEED ROLLER 64 C5X16 KEY 65 SPRING 66 ADJUSTING SCR 67 BUSHING 68 PLATE 69 M8X16 HEX BOLT 70 M5X12MM HEX SOC SET SCR 71 M5 HEX NUT 72 SHAFT 73 M6X20 HEX SOC SET SCR 74 CHIP BREAKER 75 M6X18 HEX SOC SET SCR 76 M6 HEX NUT 77 NAMEPLATE 77A 2X4MM RIVET 78 LOCKING BOLT 79 8MM LOCK WASHER 79A M8X12 HEX BOLT 80 12MM LOCK WASHER 81 M12 HEX NUT 82 15MM RETAINING RING 83 COLLAR 84 ANTI-KICKBACK FINGER 85 SHAFT	60	CUT LIMIT PLATE
61 HD SCR 62 HEAD CASTING 63 OUTFEED ROLLER 64 C5X16 KEY 65 SPRING 66 ADJUSTING SCR 67 BUSHING 68 PLATE 69 M8X16 HEX BOLT 70 M5X12MM HEX SOC SET SCR 71 M5 HEX NUT 72 SHAFT 73 M6X20 HEX SOC SET SCR 74 CHIP BREAKER 75 M6X18 HEX SOC SET SCR 76 M6 HEX NUT 77 NAMEPLATE 77A 2X4MM RIVET 78 LOCKING BOLT 79 8MM LOCK WASHER 79A M8X12 HEX BOLT 80 12MM LOCK WASHER 81 M12 HEX NUT 82 15MM RETAINING RING 83 COLLAR 84 ANTI-KICKBACK FINGER 85 SHAFT	00	
62HEAD CASTING63OUTFEED ROLLER64C5X16 KEY65SPRING66ADJUSTING SCR67BUSHING68PLATE69M8X16 HEX BOLT70M5X12MM HEX SOC SET SCR71M5 HEX NUT72SHAFT73M6X20 HEX SOC SET SCR74CHIP BREAKER75M6X18 HEX SOC SET SCR76M6 HEX NUT77NAMEPLATE77A2X4MM RIVET78LOCKING BOLT798MM LOCK WASHER79AM8X12 HEX BOLT8012MM LOCK WASHER81M12 HEX NUT8215MM RETAINING RING83COLLAR84ANTI-KICKBACK FINGER85SHAFT	01	
63 OUTFEED ROLLER 64 C5X16 KEY 65 SPRING 66 ADJUSTING SCR 67 BUSHING 68 PLATE 69 M8X16 HEX BOLT 70 M5X12MM HEX SOC SET SCR 71 M5 HEX NUT 72 SHAFT 73 M6X20 HEX SOC SET SCR 74 CHIP BREAKER 75 M6X18 HEX SOC SET SCR 76 M6 HEX NUT 77 NAMEPLATE 78 LOCKING BOLT 79 8MM LOCK WASHER 79A M8X12 HEX BOLT 80 12MM LOCK WASHER 81 M12 HEX NUT 82 15MM RETAINING RING 83 COLLAR 84 ANTI-KICKBACK FINGER 85 SHAFT		
64 C5X16 KEY 65 SPRING 66 ADJUSTING SCR 67 BUSHING 68 PLATE 69 M8X16 HEX BOLT 70 M5X12MM HEX SOC SET SCR 71 M5 HEX NUT 72 SHAFT 73 M6X20 HEX SOC SET SCR 74 CHIP BREAKER 75 M6X18 HEX SOC SET SCR 76 M6 HEX NUT 77 NAMEPLATE 77A 2X4MM RIVET 78 LOCKING BOLT 79 8MM LOCK WASHER 79A M8X12 HEX BOLT 80 12MM LOCK WASHER 81 M12 HEX NUT 82 15MM RETAINING RING 83 COLLAR 84 ANTI-KICKBACK FINGER 85 SHAFT		
65SPRING66ADJUSTING SCR67BUSHING68PLATE69M8X16 HEX BOLT70M5X12MM HEX SOC SET SCR71M5 HEX NUT72SHAFT73M6X20 HEX SOC SET SCR74CHIP BREAKER75M6X18 HEX SOC SET SCR76M6 HEX NUT77NAMEPLATE77A2X4MM RIVET78LOCKING BOLT798MM LOCK WASHER79AM8X12 HEX BOLT8012MM LOCK WASHER81M12 HEX NUT8215MM RETAINING RING83COLLAR84ANTI-KICKBACK FINGER85SHAFT		
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67 BUSHING 68 PLATE 69 M8X16 HEX BOLT 70 M5X12MM HEX SOC SET SCR 71 M5 HEX NUT 72 SHAFT 73 M6X20 HEX SOC SET SCR 74 CHIP BREAKER 75 M6X18 HEX SOC SET SCR 76 M6 HEX NUT 77 NAMEPLATE 77A 2X4MM RIVET 78 LOCKING BOLT 79 8MM LOCK WASHER 79A M8X12 HEX BOLT 80 12MM LOCK WASHER 81 M12 HEX NUT 82 15MM RETAINING RING 83 COLLAR 84 ANTI-KICKBACK FINGER 85 SHAFT	65	SPRING
68 PLATE 69 M8X16 HEX BOLT 70 M5X12MM HEX SOC SET SCR 71 M5 HEX NUT 72 SHAFT 73 M6X20 HEX SOC SET SCR 74 CHIP BREAKER 75 M6X18 HEX SOC SET SCR 76 M6 HEX NUT 77 NAMEPLATE 78 LOCKING BOLT 79 8MM LOCK WASHER 79A M8X12 HEX BOLT 80 12MM LOCK WASHER 81 M12 HEX NUT 82 15MM RETAINING RING 83 COLLAR 84 ANTI-KICKBACK FINGER 85 SHAFT	66	ADJUSTING SCR
69M8X16 HEX BOLT70M5X12MM HEX SOC SET SCR71M5 HEX NUT72SHAFT73M6X20 HEX SOC SET SCR74CHIP BREAKER75M6X18 HEX SOC SET SCR76M6 HEX NUT77NAMEPLATE77A2X4MM RIVET78LOCKING BOLT798MM LOCK WASHER79AM8X12 HEX BOLT8012MM LOCK WASHER81M12 HEX NUT8215MM RETAINING RING83COLLAR84ANTI-KICKBACK FINGER85SHAFT	67	BUSHING
 70 M5X12MM HEX SOC SET SCR 71 M5 HEX NUT 72 SHAFT 73 M6X20 HEX SOC SET SCR 74 CHIP BREAKER 75 M6X18 HEX SOC SET SCR 76 M6 HEX NUT 77 NAMEPLATE 77A 2X4MM RIVET 78 LOCKING BOLT 79 8MM LOCK WASHER 79A M8X12 HEX BOLT 80 12MM LOCK WASHER 81 M12 HEX NUT 82 15MM RETAINING RING 83 COLLAR 84 ANTI-KICKBACK FINGER 85 SHAFT 	68	PLATE
71M5 HEX NUT72SHAFT73M6X20 HEX SOC SET SCR74CHIP BREAKER75M6X18 HEX SOC SET SCR76M6 HEX NUT77NAMEPLATE77A2X4MM RIVET78LOCKING BOLT798MM LOCK WASHER79AM8X12 HEX BOLT8012MM LOCK WASHER81M12 HEX NUT8215MM RETAINING RING83COLLAR84ANTI-KICKBACK FINGER85SHAFT	69	M8X16 HEX BOLT
 72 SHAFT 73 M6X20 HEX SOC SET SCR 74 CHIP BREAKER 75 M6X18 HEX SOC SET SCR 76 M6 HEX NUT 77 NAMEPLATE 77 NAMEPLATE 77A 2X4MM RIVET 78 LOCKING BOLT 79 8MM LOCK WASHER 79A M8X12 HEX BOLT 80 12MM LOCK WASHER 81 M12 HEX NUT 82 15MM RETAINING RING 83 COLLAR 84 ANTI-KICKBACK FINGER 85 SHAFT 	70	M5X12MM HEX SOC SET SCR
 73 M6X20 HEX SOC SET SCR 74 CHIP BREAKER 75 M6X18 HEX SOC SET SCR 76 M6 HEX NUT 77 NAMEPLATE 77 NAMEPLATE 77 A 2X4MM RIVET 78 LOCKING BOLT 79 8MM LOCK WASHER 79A M8X12 HEX BOLT 80 12MM LOCK WASHER 81 M12 HEX NUT 82 15MM RETAINING RING 83 COLLAR 84 ANTI-KICKBACK FINGER 85 SHAFT 	71	M5 HEX NUT
 74 CHIP BREAKER 75 M6X18 HEX SOC SET SCR 76 M6 HEX NUT 77 NAMEPLATE 77 XA 2X4MM RIVET 78 LOCKING BOLT 79 8MM LOCK WASHER 79A M8X12 HEX BOLT 80 12MM LOCK WASHER 81 M12 HEX NUT 82 15MM RETAINING RING 83 COLLAR 84 ANTI-KICKBACK FINGER 85 SHAFT 	72	SHAFT
 75 M6X18 HEX SOC SET SCR 76 M6 HEX NUT 77 NAMEPLATE 77 X 2X4MM RIVET 78 LOCKING BOLT 79 8MM LOCK WASHER 79A M8X12 HEX BOLT 80 12MM LOCK WASHER 81 M12 HEX NUT 82 15MM RETAINING RING 83 COLLAR 84 ANTI-KICKBACK FINGER 85 SHAFT 	73	M6X20 HEX SOC SET SCR
 76 M6 HEX NUT 77 NAMEPLATE 77 NAMEPLATE 77 2X4MM RIVET 78 LOCKING BOLT 79 8MM LOCK WASHER 79 M8X12 HEX BOLT 80 12MM LOCK WASHER 81 M12 HEX NUT 82 15MM RETAINING RING 83 COLLAR 84 ANTI-KICKBACK FINGER 85 SHAFT 	74	CHIP BREAKER
 77 NAMEPLATE 77A 2X4MM RIVET 78 LOCKING BOLT 79 8MM LOCK WASHER 79A M8X12 HEX BOLT 80 12MM LOCK WASHER 81 M12 HEX NUT 82 15MM RETAINING RING 83 COLLAR 84 ANTI-KICKBACK FINGER 85 SHAFT 	75	M6X18 HEX SOC SET SCR
77A2X4MM RIVET78LOCKING BOLT798MM LOCK WASHER79AM8X12 HEX BOLT8012MM LOCK WASHER81M12 HEX NUT8215MM RETAINING RING83COLLAR84ANTI-KICKBACK FINGER85SHAFT	76	M6 HEX NUT
78LOCKING BOLT798MM LOCK WASHER79AM8X12 HEX BOLT8012MM LOCK WASHER81M12 HEX NUT8215MM RETAINING RING83COLLAR84ANTI-KICKBACK FINGER85SHAFT	77	NAMEPLATE
 79 8MM LOCK WASHER 79A M8X12 HEX BOLT 80 12MM LOCK WASHER 81 M12 HEX NUT 82 15MM RETAINING RING 83 COLLAR 84 ANTI-KICKBACK FINGER 85 SHAFT 	77A	2X4MM RIVET
79AM8X12 HEX BOLT8012MM LOCK WASHER81M12 HEX NUT8215MM RETAINING RING83COLLAR84ANTI-KICKBACK FINGER85SHAFT	78	LOCKING BOLT
8012MM LOCK WASHER81M12 HEX NUT8215MM RETAINING RING83COLLAR84ANTI-KICKBACK FINGER85SHAFT	79	8MM LOCK WASHER
81M12 HEX NUT8215MM RETAINING RING83COLLAR84ANTI-KICKBACK FINGER85SHAFT	79A	M8X12 HEX BOLT
8215MM RETAINING RING83COLLAR84ANTI-KICKBACK FINGER85SHAFT	80	12MM LOCK WASHER
83COLLAR84ANTI-KICKBACK FINGER85SHAFT	81	M12 HEX NUT
84ANTI-KICKBACK FINGER85SHAFT	82	15MM RETAINING RING
85 SHAFT	83	COLLAR
	84	ANTI-KICKBACK FINGER
	85	SHAFT
86 M6X18 HEX SOC SET SCR	86	M6X18 HEX SOC SET SCR

REF# DESCRIPTION

M6X16 HEX BOLT 87 88 FLAT WASHER 89 SPROCKET 90 CHAIN 91 C5X16 KEY 92 IN-FEED ROLLER 93 FLAT WASHER 94 M6X12 HEX BOLT 95 CUTTERHEAD PULLEY 96 MOTOR PULLEY 97 COLLAR 98 M8X20 HEX BOLT 99 BELT GUARD 100 HEX LOCTITE SCR 101 BOLT M6X12 COUNTERSUNK 102 HD SCR 103 V-BELT 104 BELT COVER 105 WARNING LABEL 106 NUT 107 SWITCH PLATE 108 M6X12 HEX SOC HD SCR 109 6MM FLAT WASHER 110 MAGNETIC SWITCH 111 M5X20 CROSS PAN HD SCR. 112 5MM FLAT WASHER 113 M5 HEX NUT		
88 FLAT WASHER 89 SPROCKET 90 CHAIN 91 C5X16 KEY 92 IN-FEED ROLLER 93 FLAT WASHER 94 M6X12 HEX BOLT 95 CUTTERHEAD PULLEY 96 MOTOR PULLEY 97 COLLAR 98 M8X20 HEX BOLT 99 BELT GUARD 100 HEX LOCTITE SCR 101 BOLT M6X12 COUNTERSUNK 102 HD SCR 103 V-BELT 104 BELT COVER 105 WARNING LABEL 106 NUT 107 SWITCH PLATE 108 M6X12 HEX SOC HD SCR 109 6MM FLAT WASHER 110 MAGNETIC SWITCH 111 M5X20 CROSS PAN HD SCR. 112 5MM FLAT WASHER		M6X16 HEX BOLT
89 SPROCKET 90 CHAIN 91 C5X16 KEY 92 IN-FEED ROLLER 93 FLAT WASHER 94 M6X12 HEX BOLT 95 CUTTERHEAD PULLEY 96 MOTOR PULLEY 97 COLLAR 98 M8X20 HEX BOLT 99 BELT GUARD 100 HEX LOCTITE SCR 101 BOLT 102 HD SCR 103 V-BELT 104 BELT COVER 105 WARNING LABEL 106 NUT 107 SWITCH PLATE 108 M6X12 HEX SOC HD SCR 109 6MM FLAT WASHER 110 MAGNETIC SWITCH 111 M5X20 CROSS PAN HD SCR. 112 5MM FLAT WASHER	87	
90 CHAIN 91 C5X16 KEY 92 IN-FEED ROLLER 93 FLAT WASHER 94 M6X12 HEX BOLT 95 CUTTERHEAD PULLEY 96 MOTOR PULLEY 97 COLLAR 98 M8X20 HEX BOLT 99 BELT GUARD 100 HEX LOCTITE SCR 101 BOLT 102 HD SCR 103 V-BELT 104 BELT COVER 105 WARNING LABEL 106 NUT 107 SWITCH PLATE 108 M6X12 HEX SOC HD SCR 109 6MM FLAT WASHER 110 MAGNETIC SWITCH 111 M5X20 CROSS PAN HD SCR. 112 5MM FLAT WASHER	88	FLAT WASHER
91C5X16 KEY92IN-FEED ROLLER93FLAT WASHER94M6X12 HEX BOLT95CUTTERHEAD PULLEY96MOTOR PULLEY97COLLAR98M8X20 HEX BOLT99BELT GUARD100HEX LOCTITE SCR101BOLT102HD SCR103V-BELT104BELT COVER105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	89	SPROCKET
92IN-FEED ROLLER93FLAT WASHER94M6X12 HEX BOLT95CUTTERHEAD PULLEY96MOTOR PULLEY97COLLAR98M8X20 HEX BOLT99BELT GUARD100HEX LOCTITE SCR101BOLTM6X12 COUNTERSUNK102HD SCR103V-BELT104BELT COVER105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	90	CHAIN
93FLAT WASHER94M6X12 HEX BOLT95CUTTERHEAD PULLEY96MOTOR PULLEY97COLLAR98M8X20 HEX BOLT99BELT GUARD100HEX LOCTITE SCR101BOLTM6X12 COUNTERSUNK102HD SCR103V-BELT104BELT COVER105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	91	C5X16 KEY
94M6X12 HEX BOLT95CUTTERHEAD PULLEY96MOTOR PULLEY97COLLAR98M8X20 HEX BOLT99BELT GUARD100HEX LOCTITE SCR101BOLT101BOLT102HD SCR103V-BELT104BELT COVER105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	92	IN-FEED ROLLER
95CUTTERHEAD PULLEY96MOTOR PULLEY97COLLAR98M8X20 HEX BOLT99BELT GUARD100HEX LOCTITE SCR101BOLT101BOLT102HD SCR103V-BELT104BELT COVER105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	93	FLAT WASHER
96MOTOR PULLEY97COLLAR98M8X20 HEX BOLT99BELT GUARD100HEX LOCTITE SCR101BOLT101BOLT102HD SCR103V-BELT104BELT COVER105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	94	M6X12 HEX BOLT
97COLLAR98M8X20 HEX BOLT99BELT GUARD100HEX LOCTITE SCR101BOLTM6X12 COUNTERSUNK102HD SCR103V-BELT104BELT COVER105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	95	CUTTERHEAD PULLEY
98M8X20 HEX BOLT99BELT GUARD100HEX LOCTITE SCR101BOLT101BOLT102M6X12 COUNTERSUNK103V-BELT104BELT COVER105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	96	MOTOR PULLEY
99BELT GUARD100HEX LOCTITE SCR101BOLT101BOLT102HD SCR103V-BELT104BELT COVER105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	97	COLLAR
100HEX LOCTITE SCR101BOLT101BOLT102M6X12 COUNTERSUNK103V-BELT104BELT COVER105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	98	M8X20 HEX BOLT
101BOLTM6X12 COUNTERSUNK102HD SCR103V-BELT104BELT COVER105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	99	BELT GUARD
M6X12 COUNTERSUNK102HD SCR103V-BELT104BELT COVER105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	100	HEX LOCTITE SCR
102HD SCR103V-BELT104BELT COVER105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	101	BOLT
103V-BELT104BELT COVER105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER		M6X12 COUNTERSUNK
104BELT COVER105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	102	HD SCR
105WARNING LABEL106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	103	V-BELT
106NUT107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	104	BELT COVER
107SWITCH PLATE108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	105	WARNING LABEL
108M6X12 HEX SOC HD SCR1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	106	NUT
1096MM FLAT WASHER110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	107	SWITCH PLATE
110MAGNETIC SWITCH111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	108	M6X12 HEX SOC HD SCR
111M5X20 CROSS PAN HD SCR.1125MM FLAT WASHER	109	6MM FLAT WASHER
112 5MM FLAT WASHER	110	MAGNETIC SWITCH
	111	M5X20 CROSS PAN HD SCR.
113 M5 HEX NUT	112	5MM FLAT WASHER
	113	M5 HEX NUT



CX15-15" PLANER WORKING TABLE PARTS BREAKDOWN



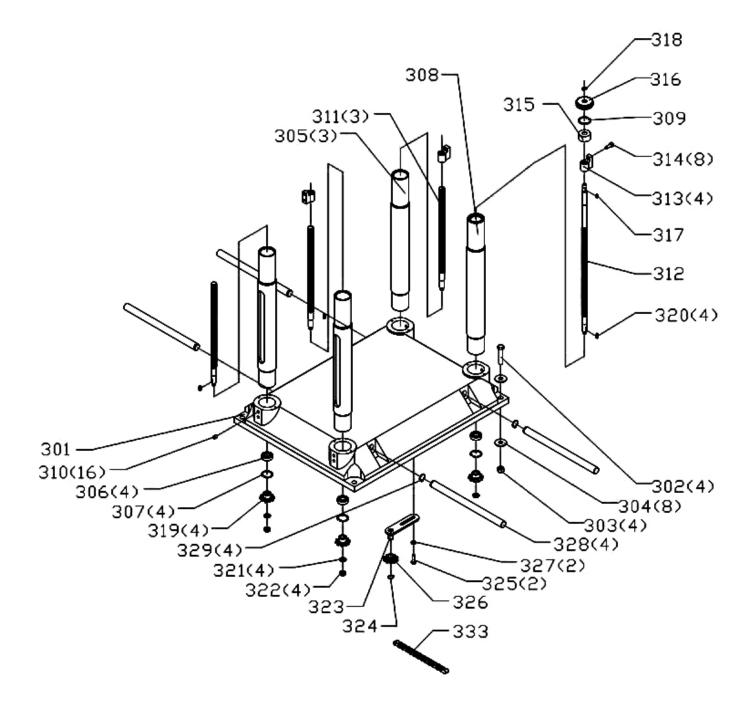


CX15-15" PLANER WORKING TABLE PARTS LIST

REF#	DESCRIPTION
202	ROLLER
203	BEARING
204	ECCENTRIC SHAFT
205	M6X16 HEX SOC SET SCR
206	LOCK BOLT
207	LOCKSMITH
208	LOCK BAR
209	KNOB
210	TABLE CASTING EXTENSION
211	8MM LOCK WASHER
212	8MM FLAT WASHER
213	M8X30 HEX BOLT
214	M8X20 HEX SOC SET SCR
215	2.5MM HEX WRENCH
216	3MM HEX WRENCH
217	4MM HEX WRENCH
218	6MM HEX WRENCH
219	10-12MM OPEN END WRENCH
220	14-17MM OPEN END WRENCH
221	17-19MM OPEN END WRENCH



CX15-15" PLANER BASE PARTS BREAKDOWN

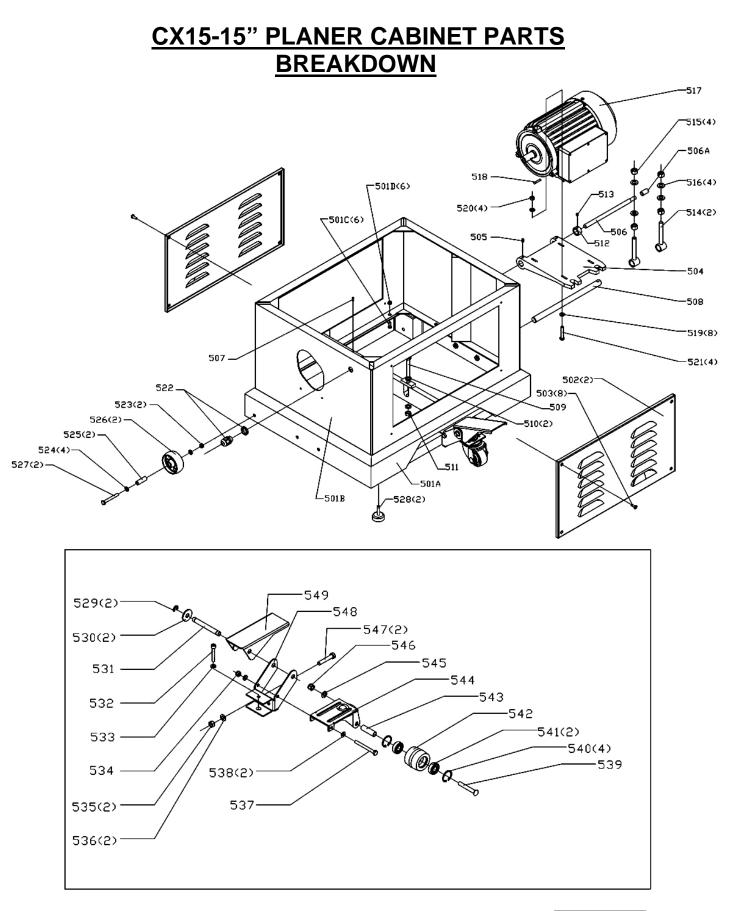




CX15-15" PLANER BASE PARTS LIST

REF#	DESCRIPTION
301	BASE
302	M12X45 HEX BOLT
303	M12 HEX NUT
304	12MM FLAT WASHER
305	COLUMN
306	BALL BEARING 60302Z
307	42MM INT REATINING RING
308	COLUMN
309	40MM INT REATINING RING
310	M10X12MM HEX SOC SET SCR
311	LEAD SCREW
312	LEAD SCREW
313	LEAD NUT
314	M6X20MM HEX SOC HD SCR
315	BUSHING
316	GEAR
317	4X12MM KEY
318	12MM EXT RETAINING RING
319	SPROCKET
320	C5X16 KEY
321	FLAT WASHER
322	M10 HEX NUT
323	BRACKET
323A	
323B	BRACKET
324	EXT RETAINING RING 15MM
325	M8X20 HEX BOLT
326	CHAIN SPROCKET
327	FLAT WASHER
328	CRANE POST
329	15MM EXT RETAINING RING
330	CHAIN 12.7A×134







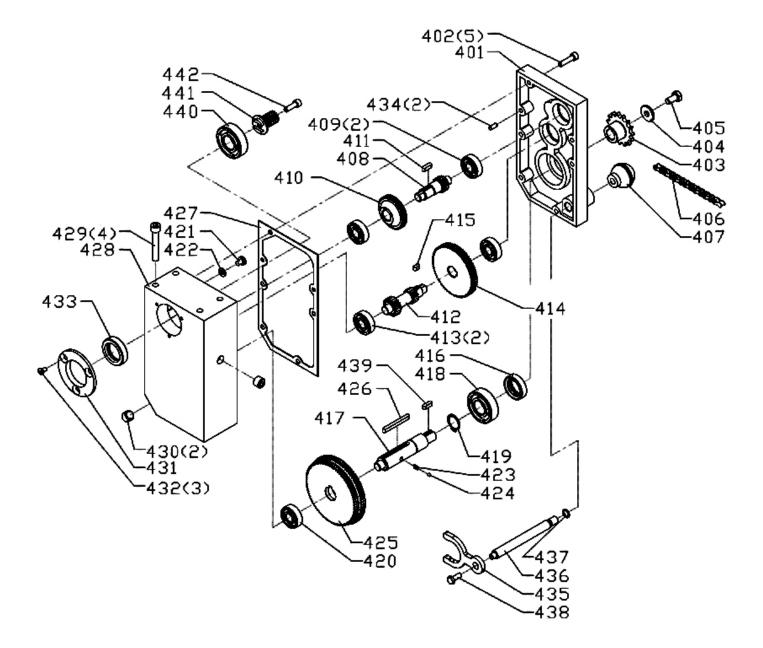
CX15-15" PLANER CABINET PARTS LIST

REF#	DESCRIPTION
501A	FRAME
501B	FRAME SUPPORT
501C	5/16-18X19 HEX BOLT
501D	5/16-18 HEX NUT
502	COVER
	M6X20 CROSS COUNTERSUNK
503	HD SCR
504	MOTOR PLATE
505	M6X12 HEX SOC SET SCR
506	PLATE CONNECTING ROD
506A	COLLAR
507	M8X12 HEX SOC SET SCR
508	PLATE CONNECTING ROD
509	M10X70 HEX BOLT
510	10MM FLAT WASHER
511	M10 HEX NUT
512	COLLAR
513	M6X8 HEX SOC SET SCR
514	ADJUST BOLT
515	M12 HEX NUT
516	12MM FLAT WASHER
517	MOTOR
518	5X30 KEY
519	FLAT WASHER
520	M8 HEX NUT
521	M8X45 HEX BOLT
522	STRAIN RELIEF
523	M8 SPECIAL HEX NUT
524	8MM FLAT WASHER
525	SLEEVE
526	UNIVERSAL PULLEY
527	M8X65 HEX BOLT
528	RUBBER FEET

REF#	DESCRIPTION
529	9MM RETAINING RING
530	12MM FLAT WASHER
531	SHAFT
532	M8X50 HEX BOLT
533	8MM FLAT WASHER
534	M8 SPECIAL HEX NUT
535	M10 HEX NUT
536	10MM FLAT WASHER
537	M8X100 HEX BOLT
538	8MM FLAT WASHER
539	SPECIAL BOLT
540	35MM RETAINING RING
541	6202Z BEARING
542	TROLLEY WHEEL
543	SLEEVE
	TROLLEY UNIVERSAL
544	KIT
545	10MM WASHER
546	M10 SPECIAL HEX NUT
547	M10X55 HEX BOLT
548	BRACKET
549	PEDAL



CX15-15" PLANER GEARBOX PARTS BREAKDOWN



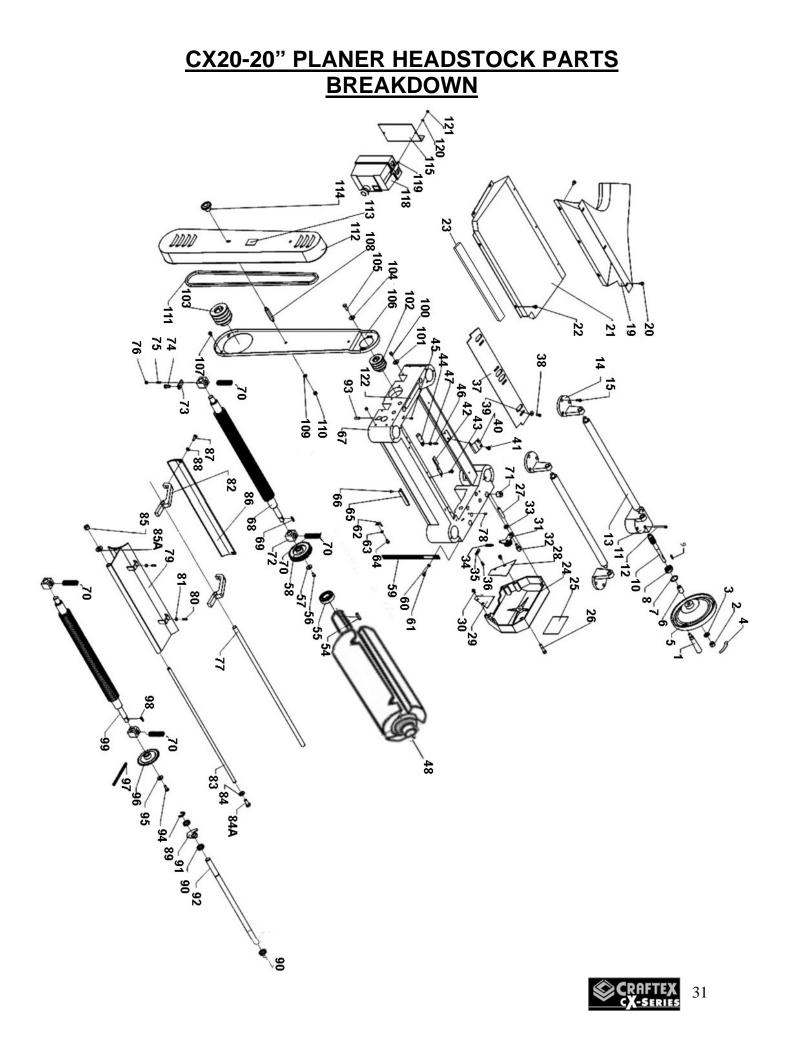


CX15-15" PLANER GEARBOX PARTS LIST

REF#	DESCRIPTION
401	GEAR BOX COVER
402	M6X25MM HEX SOC HD SCR
403	SPROCKET
404	FLAT WASHER 8MM
405	M8X16 HEX BOLT
406	CHAIN
407	BALL KNOB
408	SHAFT
409	BALL BEARING 80201
410	GEAR
411	C5X14 KEY
412	SHAFT
413	BALL BEARING 80201
414	GEAR
415	C5X10 KEY
416	OIL SEAL $20 \times 35 \times 7$
417	SHAFT
418	BALL BEARING 80204
419	20MM EXT REATINING RING
420	BALL BEARING 80201
421	M6X8 CROSS PAN HD SCR.

REF#	DESCRIPTION
422	6MM FLAT WASHER
423	COMPRESSION SPRING
424	4MM STEEL BALL
425	GEAR
426	5X50 KEY
427	GASKET
428	GEAR BOX
429	M8X50MM HEX SOC HD SCR
430	OIL PLUG
431	FLANGE COVER
	M5X12 COUNTERSUNK
432	HD SCR
433	OIL SEAL
434	5×10 PIN
435	CLUTCH
436	HANDLE SHAFT
437	16×2.4 O-RING
438	HEX LOCTITE SCR
439	C5X16 KEY
440	BALL BEARING 80204Z
441	GEAR
442	M6X20MM HEX SOC HD SCR





CX20-20" PLANER HEADSTOCK PARTS LIST

REF#	DESCRIPTION
1	HANDLE
2	M12 HEX NUT
3	FLAT WASHER
4	HAND WHEEL LABEL
5	HAND WHEEL
6	COLLAR
7	32MM RETAINING RING
8	BALL BEARING
9	4X20 KEY
10	WORM GEAR
11	WORM HOUSING
12	M5X55 HEX SOC HD SCR
13	ROLLER
14	ROLLER STAND
15	M6X16 HEX SOC HD SCR
19	DUST HOOD
20	HEX SOC HD SCREW
21	UPPER COVER
22	HEX LOCTITE SCR
23	FOAM PIECE
24	GEAR BOX COVER
25	SPEED CHANGE LABEL
26	HEX LOCTITE SCR
27	6X20 ROLL PIN
28	SAFETY HATCH
29	SAFETY HATCH
30	HEX LOCTITE SCR
31	BRACKET ASSEMBLY
31A	
32	SHAFT

REF#	DESCRIPTION
33	COLLAR
34	EXTENSION SPRING
35	HANGER
36	M6X10 HEX SOC HD SCR
37	CHIP DEFLECTOR PLATE
38	M6X16 FLANGE BOLT
39	6MM FLAT WASHER
40	SPRING PLATE
41	HEX LOCTITE SCR
42	SPRING PLATE
43	HEX LOCTITE SCR
44	ADJUSTING SHAFT
45	M6X12MM HEX SOC SET SCR
46	M6X12MM HEX SOC SET SCR
47	M6 HEX NUT
48	CUTTERHEAD
54	C8X36 KEY
55	BALL BEARING 6206
56	M6X16 HEX BOLT
57	FLAT WASHER
	SPROCKET FOR DOUBLE
58	CHAIN
59	SCALE
60	6MM FLAT WASHER
61	PHLP HD SCR M6-1X12
62	CUT LIMIT POINTER
63	6MM FLAT WASHER
64	M6X12 CROSS PAN HD SCR.
65	CUT LIMITER PLATE
66	M5X12 COUNTERSUNK

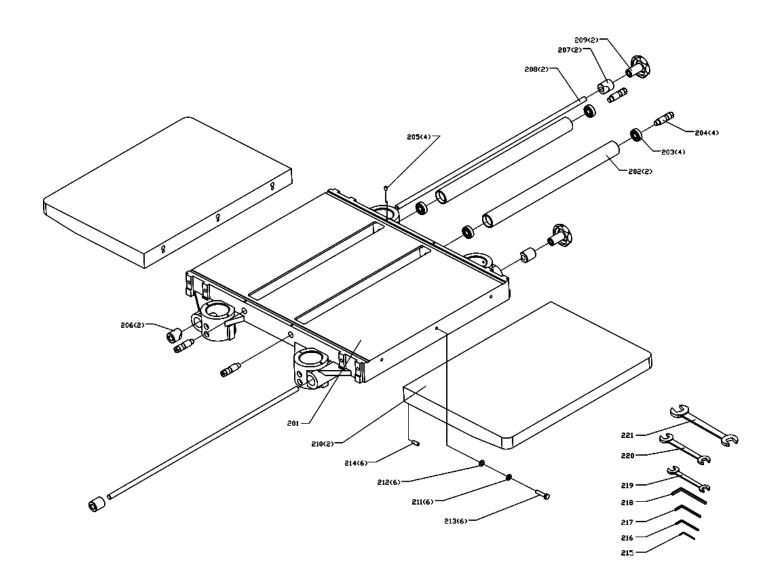


67	HEAD CASTING
68	OUT-FEED ROLLER
69	C5X22 KEY
70	COMPRESSION SPRING
71	ADJUSTING SCR
72	BUSHING
73	PLATE
74	M8X20 HEX BOLT
75	M6X20 HEX SOC SET SCR
76	M6 HEX NUT
77	SHAFT
78	M6X16 HEX SOC SET SCR
79	CHIP BREAKER
80	M6X20 HEX SOC SET SCR
81	M6 HEX NUT
82	BRACKET
83	LOCKING ROD
84	8MM FLAT WASHER
84A	M8X12 HEX BOLT
85	M12 HEX NUT
85A	12MM LOCK WASHER
86	PRESSURE PLATE
87	M8X20 HEX BOLT
88	8MM LOCK WASHER
89	15MM RETAINING RING
90	COLLAR
91	ANTI-KICKBACK FINGER
92	ANTI-KICKBACK SHAFT
93	M6X12 HEX SOC SET SCR

94	M6X16 HEX BOLT
95	FLAT WASHER
96	SPROCKET
97	CHAIN
98	C5X22 KEY
99	IN-FEED ROLLER
100	M6X12 HEX BOLT
101	FLAT WASHER
102	CUTTERHEAD PULLEY
103	MOTOR PULLEY
104	FLAT WASHER
105	M8X25 HEX BOLT
106	BELT GUARD
107	HEX LOCTITE SCR
108	SPECIAL BOLT
109	8MM FLAT WASHER
110	8MM HEX NUT
111	V-BELT
112	BELT COVER
113	WARNING LABEL
114	KNOB
	MAG-SWITCH MOUNTING
115	PLATE
118	MAGNETIC SWITCH
119	M5X20 CROSS PAN HD SCR.
120	5MM FLAT WASHER
121	M5 HEX NUT
122	M5 HEX NUT



CX20-15" PLANER WORKING TABLE PARTS BREAKDOWN



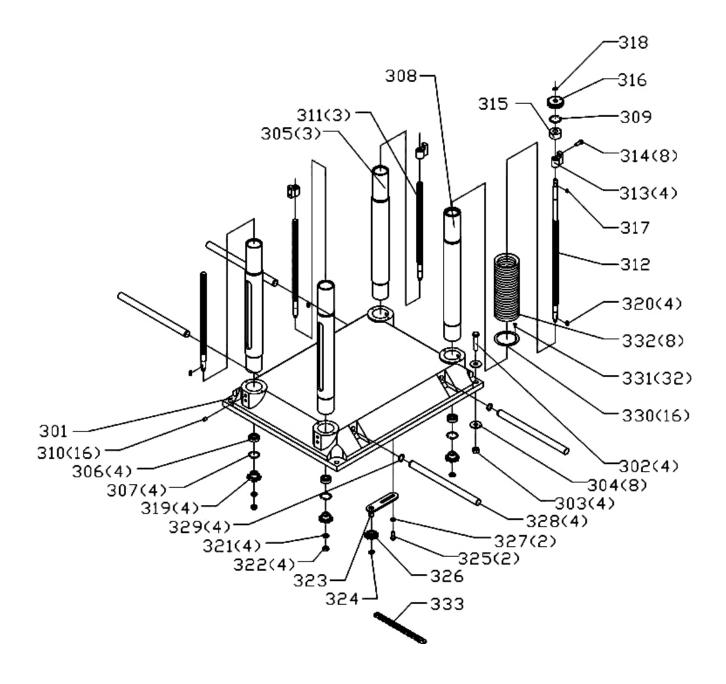


CX20-20" PLANER WORKING TABLE PARTS LIST

REF#	DESCRIPTION
201	INTERMEDIATE TABLE
202	ROLLER
203	BEARING
204	ECCENTRIC SHAFT
205	M6X16 HEX SOC SET SCR
206	LOCK BOLT
207	LOCKSMITH
208	LOCK BAR
209	KNOB
210	TABLE CASTING EXTENSION
211	8MM LOCK WASHER
212	8MM FLAT WASHER
213	M8X35 HEX BOLT
214	M8X20 HEX SOC SET SCR
215	3MM HEX WRENCH
216	4MM HEX WRENCH
217	5MM HEX WRENCH
218	6MM HEX WRENCH
219	8-10MM OPEN END WRENCH
220	12-14MM OPEN END WRENCH
221	17-19MM OPEN END WRENCH



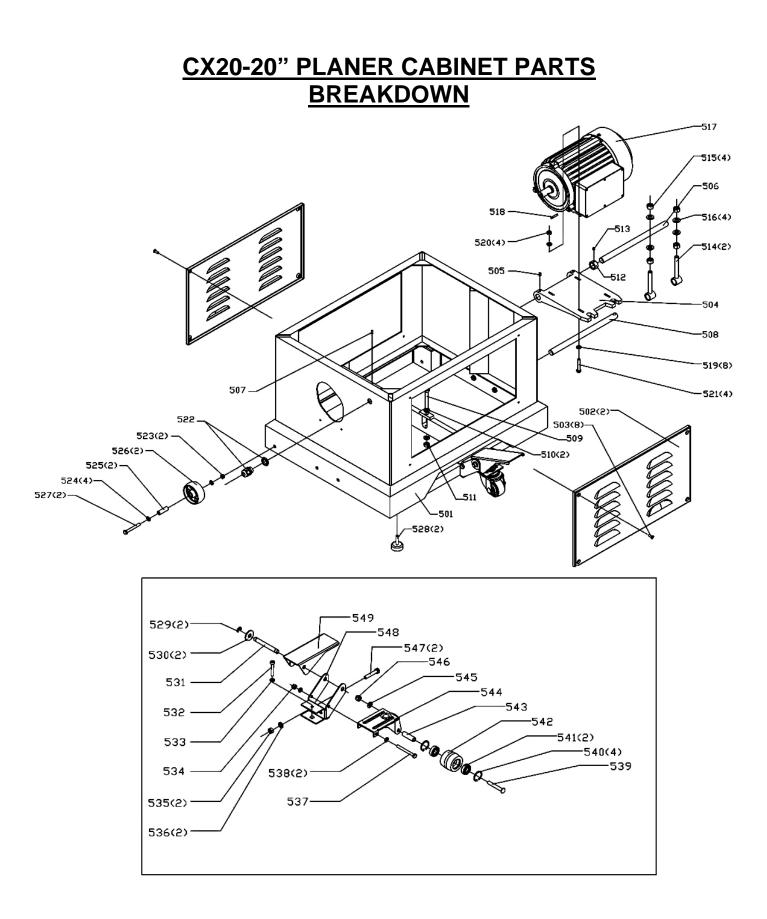
CX20-20" PLANER BASE PARTS BREAKDOWN





CX20-20" PLANER BASE PARTS LIST

REF #	DESCRIPTION
301	BASE
302	M12X60 HEX BOLT
303	M12 HEX NUT
304	12MM FLAT WASHER
305	COLUMN
306	BALL BEARING 6202
307	35MM INT RETAINING RING
308	COLUMN
309	38MM INT RETAINING RING
310	M10X12MM HEX SOC SET SCR
311	LEAD SCREW
312	LEAD SCREW
313	LEAD UNT
314	M8X20MM HEX SOC HD SCR
315	BUSHING
316	GEAR
317	4X12MM KEY
318	12MM EXT RETAINING RING
319	SPROCKET
320	C5X16 KEY
321	10MM FLAT WASHER 10MM
322	M10 HEX NUT
323	BRACKET ASSY
323A	SHAFT
323B	BRACKET
324	15MM EXT RETAINING RING
325	$M8 \times 25$ HEX BOLT
326	SPROCKET
327	FLAT WASHER
328	GRANE POST
329	21MM EXT RETAINING RING
330	PIPE BAND
331	M5X10 CROSS PAN HD SCR.
332	DUST BOOT





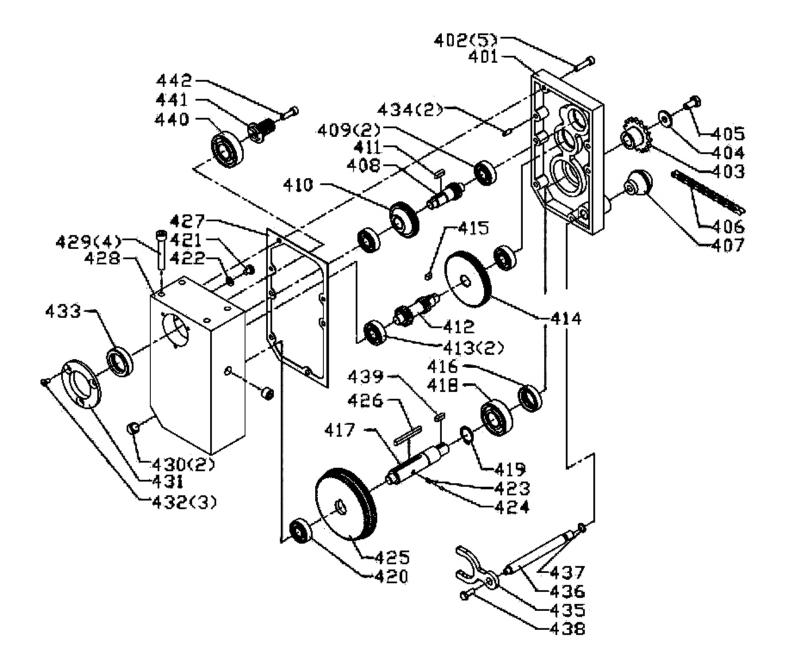
CX20-20" PLANER CABINET PARTS LIST

REF#	DESCRIPTION
501	ENCLOSED STAND
502	COVER
	M6X20 CROSS COUNTERSUNK
503	HD SCR
504	MOTOR PLATE
505	M6X12 HEX SOC SET SCR
506	PLATE CONNECTING ROD
507	M8X12 HEX SOC SET SCR
508	PLATE CONNECTING ROD
509	M10X70 HEX BOLT
510	10MM FLAT WASHER
511	M10 HEX NUT
512	COLLAR
513	M6X8 HEX SOC SET SCR
514	ADJUST BOLT
515	M12 HEX NUT
516	12MM FLAT WASHER
517	MOTOR 5HP 220V
518	5X30 KEY
519	FLAT WASHER
520	M8 HEX NUT
521	M8X45 HEX BOLT
522	STRAIN RELIEF
523	M8 SPECIAL HEX NUT
524	8MM FLAT WASHER

REF#	DESCRIPTION
525	SLEEVE
526	UNIVERSAL PULLEY
527	M8X65 HEX BOLT
528	RUBBER FEET
529	9MM RETAINING RING
530	12MM FLAT WASHER
531	SHAFT
532	M8X50 HEX BOLT
533	8MM FLAT WASHER
534	M8 SPECIAL HEX NUT
535	M10 HEX NUT
536	10MM FLAT WASHER
537	M8X100 HEX BOLT
538	8MM FLAT WASHER
539	SPECIAL BOLT
540	35MM RETAINING RING
541	BEARING
542	TROLLEY WHEEL
543	SLEEVE
544	TROLLEY UNIVERSAL KIT
545	10MM WASHER
546	M10 SPECIAL HEX NUT
547	M10X55 HEX BOLT
548	BRACKET
549	PEDAL



CX20-20" PLANER GEAR BOX PARTS BREAKDOWN





CX20-20" PLANER GEAR BOX PARTS LIST

REF# DESCRIPTION

-	
401	GEAR BOX COVER
402	M6X25MM HEX SOC HD SCR
403	SPROCKET
404	8MM FLAT WASHER
405	M8X16 HEX BOLT
406	CHAIN
407	BALL KNOB
408	SHAFT
409	BALL BEARING 6201
410	GEAR
411	C5X14 KEY
412	SHAFT
413	BALL BEARING 6201
414	GEAR
415	C5X10 KEY
416	OIL SEAL 20X35X7
417	SHAFT
418	BALL BEARING 6204
419	20MM EXT RETAINING RING
420	BALL BEARING 6201
421	M6X8 CROSS PAN HD SCR.
422	6MM FLAT WASHER

REF# DESCRIPTION

423	COMPRESSION SPRING
424	4MM STEEL BALL
425	GEAR
426	5X50 KEY
427	GASKET
428	GEAR BOX
429	M8X50MM HEX SOC HD SCR
430	OIL PLUG
431	FLANGE COVER
	M5X12 COUNTERSUNK
432	HD SCR
433	OIL SEAL
434	5×10 PIN
435	CLUTCH
436	HANDLE SHAFT
437	16×2.4 O-RING
438	HEX LOCTITE SCR
439	C5X16 KEY
440	BALL BEARING
441	GEAR
442	M6X20MM HEX SOC HD SCR





WARRANTY

CRAFTEX 3 YEAR LIMITED WARRANTY

Craftex warrants every product to be free from defects in materials and agrees to correct such defects where applicable. This warranty covers <u>three years</u> 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.

