



CT147 17" DRUM SANDER CSA Manual



INDEX

General Safety Instructions	3
Specific Safety Instructions	5
Features	6
Physical Features	7
Setup	8
Un-packing	8
Assembly	9
Stand Assembly.....	9
Mounting Machine to the Stand	10
Crank Handle.....	10
Dust Hood.....	10
Test Run	11
Operations and Adjustments	12
Basic Controls	12
Sanding Depth.....	12
Variable Speed Rate	13
Sandpaper	13
Sandpaper Replacement.....	13
Tension.....	14
Tracking.....	15
Maintenance	16
Lubrication	16
Thickness Scale Calibration	16
Trouble Shooting	17-18
Parts Breakdown	19-20-21-22
Parts List	23-24
Warranty	25

General Safety Instructions

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

- **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.
- **DISCONNECT** the power source when changing drill bits, hollow chisels, router bits, shaper heads, blades, knives or making other adjustments or repairs.
- **ALWAYS** keep all safety guards in place and ensure their proper function
- **NEVER** reach over the table when the tool is in operation.
- **ALWAYS** keep blades, knives and bits sharpened and properly aligned.
- **NEVER** leave a tool unattended while it is in operation.
- **BE ALERT!** **DO NOT** use prescription or other drugs that may affect your ability or judgment to safely use your machine.
- **ALWAYS** use push sticks and feather boards to safely feed your work through the machine.
- **ALWAYS** make sure that any tools used for adjustments are removed before operating the machine.
- Always keep the bystanders safely away while the machine is in operation.

CT147-17" Drum Sander

Specific Safety Instructions

Like all power tools and machinery, proper safety and attention must be adhered to. There is danger associated with using any tool or machine so pay careful attention each and every time you use your tool. IF you are not familiar with the operations of a jointer, you should obtain the advice and/or instructions from a qualified professional.

- **DO NOT** jam or try and over push the work piece into the machine during operation. This may cause damage to the machine. Feed the work piece into the conveyor with a firm grasp, slowly and easily.
- **KEEP YOUR HAND CLEAR** of the conveyor and sand paper when feeding your work piece. Make sure your fingers do not get pinched between your work piece board and the conveyor. If your hand gets caught and pulled into the conveyor this could lead to serious injury and or death.
- **DO NOT** wear jewelry or loose clothing while operating this machine.
- **DO NOT** feed any stock into this machine that is less than 1/8" thick and more than 4" in thickness. Do not sand thinner pieces than allowed by using a "dummy" board underneath your work piece. This can be dangerous.
- **DO NOT** sand more than one piece of stock at anytime. This machine is designed to feed stock one piece at a time only.
- **DO NOT** let anyone stand in front of the machine while sanding.
- **INSPECT** your work pieces. Make sure that they are free of nails, staples, tacks, knots and other objects that may be harmful to your machine.
- **NEVER** use this machine without the proper dust collection in place.
- **TECHNICAL DIFFICULTIES.** Any problems you may run into should be carefully looked at with the power **OFF** and the machine unplugged from the power source.
- **SAFETY GLASSES and RESPIRATOR** is highly recommended when working with this machine. Some saw dust can be harmful to your lungs; please take caution when using this machine.

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.





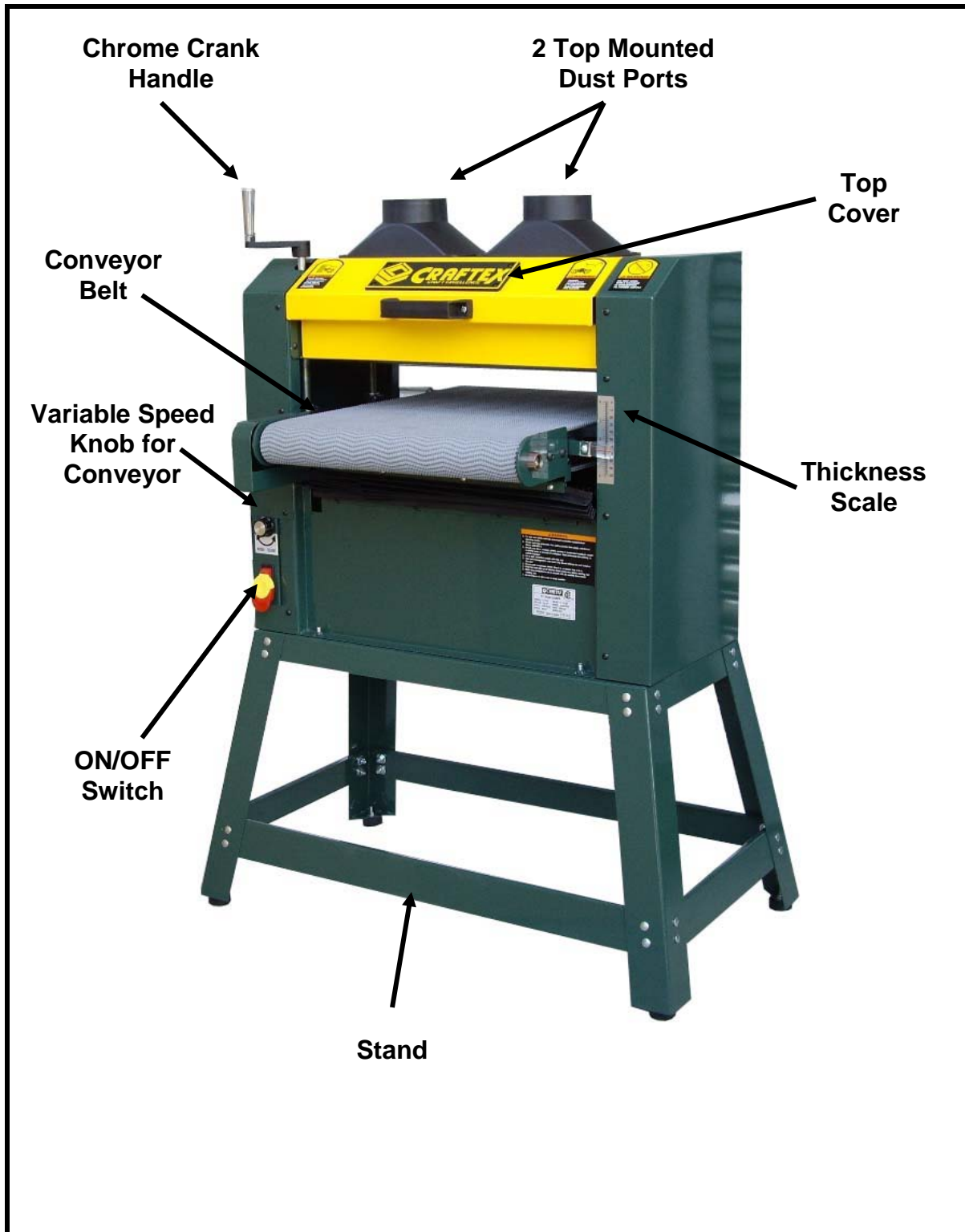
DRUM SANDER **FEATURES**

MODEL CT147-17" DRUM SANDER

As part of the growing line of Crafttex woodworking equipment, we are proud to offer CT147-17" Drum Sander. The Crafttex name guarantees Craft Excellence. By following the instructions and procedures laid out in this owner's manual, you will receive years of excellent service and satisfaction. The CT147 is a professional tool and like all power tools, proper care and safety procedures should be adhered to.

- **Main Motor** 1.5HP, 110 / 220V, 60 HZ, 2P
- **Conveyor Motor** 120W, 90V
- **Maximum Sanding Width** 17"
- **Maximum Material Thickness** 4"
- **Minimum Material Thickness** 1/8"
- **Minimum Stock Length** 7"
- **Conveyor Belt Speeds** 0 - 22 FPM
- **Sanding Drum Speed** 1720RPM (2258 FPM)
- **Sanding Belt Size** 3" roll
- **Sanding Drum Size** 5" Diameter
- **Dust Collection Port** Two 4" Top Mounted Chutes
- **Thickness Scale**
- **Spring Loaded Quick Release Abrasive Mechanism**
- **Solid Steel Welded Construction**
- **Geared Chrome Crank Handle**
- **Industrial Conveyor Belt**
- **Approx. Weight: 94KGSnet /114KGS gross**

PHYSICAL FEATURES



SETUP

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.

CT147 is a heavy machine. Do not over-exert yourself. For safe moving method use fork truck or get the help of an assistant.

Unpacking

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

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

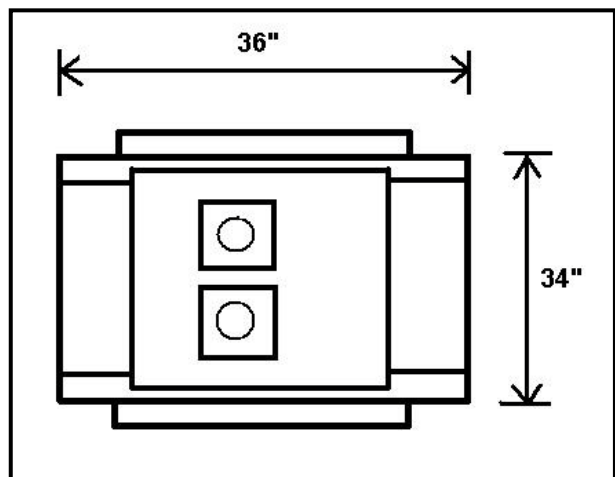


Figure-1 Minimum space needed for the machine

ASSEMBLY

Assembling & Installing the Stand

There are 2 mounting holes located on the front of the machine and 2 mounting holes at the back of the machine. To mount your machine to the stand, follow the procedure below.

1. Take out the “Top Base of the Stand” from the package and put it upside down on the floor. Take the legs and attach one to the each corners of the “Top Base of the Stand” with the help of screws, washers and bolts provided, fingers tighten the screws. See Figure-2

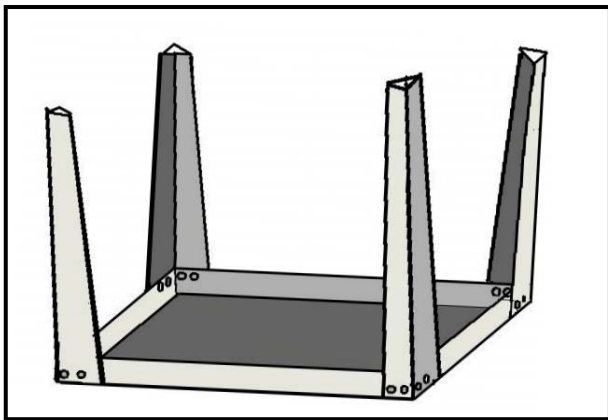


Figure-2 Attaching legs to the Top Base of the Stand

2. Now mount the two long brackets and two short brackets to the legs with the help of the screws, finger tighten. See Figure-3

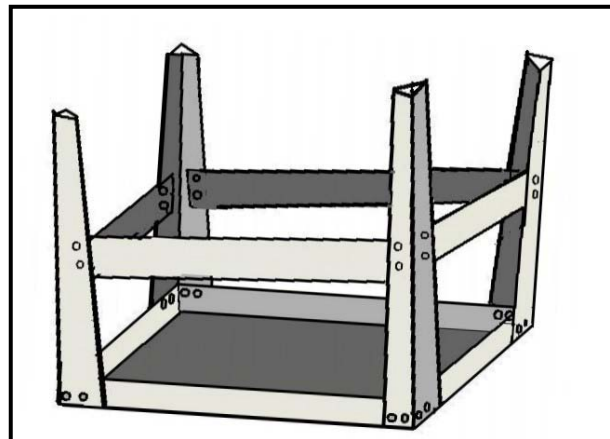


Figure-3 Attaching the brackets

3. Take out 4 rubber feet out of the package and attach one on each leg. Tighten the screws. See Figure-4

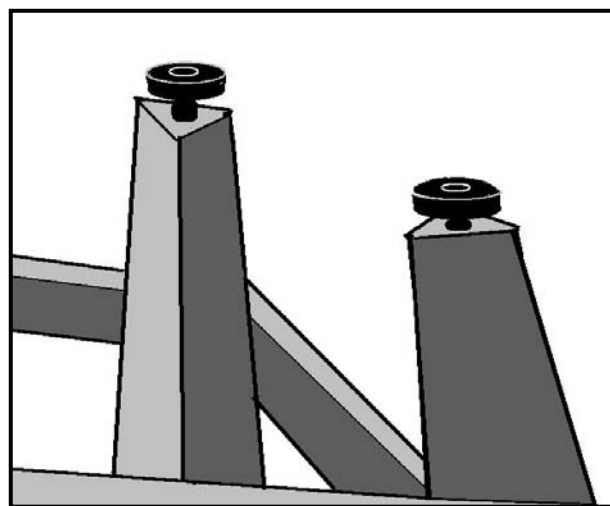


Figure-4 Attaching the rubber feet to the legs

IMPORTANT

Do not fully tighten any of the screws until the stand is assembled.

4. Turn the stand upright and adjust the legs so that they are evenly positioned, tighten all the screws well.

ASSEMBLY

Mounting the machine to the stand

To mount the machine to the stand you will need to lift the machine up with a fork truck.

1. Lift the machine up with the help of a fork truck. Bring the stand under the machine and then lower the machine on the stand.
2. Align the holes on the machine base with the holes on the "Top Base of the Stand" and secure the machine to the stand by finger tightening the screws.

Once you have put all the 4 screws in, tighten the screws fully and your machine is mounted to the stand. See Figure-5



Figure-5 Machine mounted to the Stand

Installing the Crank Handle

The crank handle that came with the machine needs to be installed. The handle should be installed on the top left side of the unit. Make sure that the set screws and handle are firmly in place before moving on.

Installing the Dust Hood

The machine comes with two 4" dust port located on the top of the machine. Attach the dust hoods to the top of the machine with the help of screws provided. See Figure-6



Figure-6 Installing the Dust-Hood

IMPORTANT

It is highly recommended to use a dust collector when using this machine. The minimum CFM requirement for this machine is 750CFM which means you should be using a 1HP or 2HP dust collector at minimum.

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.

Take a careful look in and around your machine before turning it on to ensure everything is in place, all screws and knobs are securely fastened and all controls are working properly.

IMPORTANT

Before a test run make sure that you have read and understood the manual and you are familiar with the functions and safety features on this machine.

Connect your machine to the correct power source and turn the power switch ON.

During the test run the drum sander should run smoothly and create very little noise or vibration. If there is an unusual noise coming from the machine or the machine vibrates a lot, turn the machine OFF right away and inspect the problem.

IMPORTANT

Do not make any adjustments when the machine is running. Failure to follow this warning can cause a serious personal injury.

Before turning the machine on, make sure you are wearing your safety glasses and anyone around you is also wearing safety glasses. No body should be standing in the front or back of the machine.



OPERATIONS & ADJUSTMENTS

Basic Controls

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



Figure-7 Basic Controls of the Sander

- A. Crank Handle:** Moves the conveyor belt up and down below the sanding drum.
- B. Variable Speed Knob Control:** Allows increasing or decreasing the feed rate.
- C. On / Off switch:** Starts and stops the sander.

Sanding Depth

The optimum sanding depth will depend on what type of project you are working, what type of wood you are using and the sand paper grit. Under most conditions, the depth **SHOULD NOT** exceed 0.006", or approx. 1/8 turn of the crank wheel. If you attempt to remove too much wood while sanding this may cause the machine to jam, your wood to burn, rapid paper wear or tear and or motor damage.

When setting your depth, rotate the crank handle until the table is well below the sanding drum. Then raise the table to ensure a proper and safe gap between the work piece and the drum.

Turn the machine on, start the conveyor and feed your work piece. Slowly raise the table until the work piece makes slight contact with the drum. This would be your ideal sanding height.



Figure-8 Sanding Depth

OPERATIONS & ADJUSTMENTS

Variable Speed Rate

The variable speed knob will allow you to increase the feed rate of your work piece from 0 – 22 FPM. The correct speed will vary from work piece to work piece and will depend of what type of wood you are using.

A general rule of thumb is that the slower the feed rate the smoother the sanding job you will get. However, this also runs the risk of burning your wood. After you are familiar with the machine and how it handles, this will not be an issue; however in the beginning the use of trial and error with scrap wood will be helpful to get a feel for the machine.

Start the Conveyor. Rotate the variable speed knob clockwise to increase the speed and counterclockwise to decrease the speed. See figure-9



Figure-9 Speed Knob Control

Sandpaper

The CT147 is designed with 3" sandpaper rolls. The grit of paper you chose depends on what job you a doing.

- 1) An extra coarse, low grit paper is generally used for sanding of rough material, removing glue or thickness sanding.
- 2) A medium grit paper is used for removing planer marks and initial finish sanding.
- 3) A fine grit paper is used for finish sanding.

Sandpaper Replacement

IMPORTANT

Before replacing the sandpaper make sure the machine is turned off and disconnected from the power source.

- 1) Open the top cover of the sander to expose the sanding drum.
- 2) Remove the old paper by unlocking the quick release spring tension paper mechanism and unwinding the paper. See Figure-8 and pay careful attention to the direction it comes off.

OPERATIONS & ADJUSTMENTS

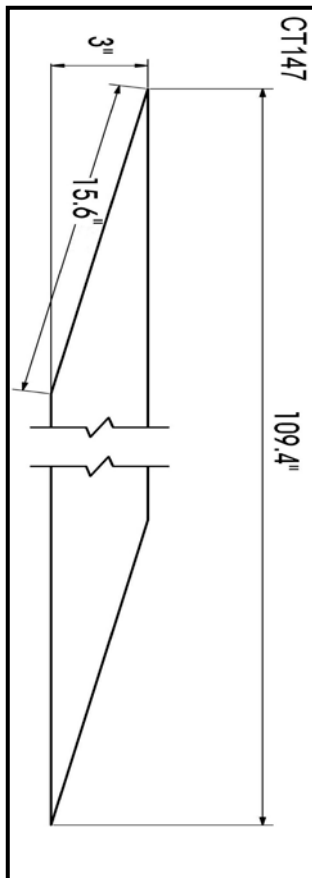


Figure-8 Removing the sand paper

- 3) The old sandpaper can be used as a pattern to cut out the new sandpaper or use the pattern shown below to cut the new sandpaper being installed.
- 4) When wrapping the new sandpaper on the drum make sure that it wrapped tightly and with minimal gaps. This is important for proper sanding after installation.
- 5) Use the spring loaded quick release mechanism to secure the sandpaper to the drum. See figure-9



Figure-9 Spring Loaded Quick Release Mechanism

Tension

After reasonable usage of the drum sander, the conveyor may slightly stretch and will require to be tensioned. When tensioning the conveyor belt, it is important to do so from both sides and not to tension one side more than the other as this may lead to more tracking problems.

On the side of the conveyor you will find tensioning controls. See Figure-10



Figure-10 Speed Knob Control

OPERATIONS & ADJUSTMENTS

Turn the conveyor adjustment knobs one full turn at a time until the conveyor belt no longer slips or is off during operation. If you notice that the conveyor is tracking to one side, turn the machine off, and follow the next few steps for proper tracking.

Tracking

The conveyor must track straight for proper sanding. If it tracks to any side but not straight, you must fix the tracking. When tracking your conveyor, remember that this process can take some time and that proper balance and patience is required.

To make the conveyor move in the middle of the rollers, it is recommended that you first over tighten the loose side (the side the belt is tracking towards) and then loosen that same side in order to make the conveyor stay in position. You can try this for both sides but must ensure that the conveyor tracks in the middle by trial and error.

- 1) Turn the conveyor belt on. Watch the conveyor track and notice which way it is tracking.
- 2) Once you have determined which way it is tracking, turn the machine off, tension the tracking bolt on the loose side (the direction the belt is tracking to). Turn the machine on to see if it is tracking the opposite way. (This may take some time to notice a difference but be patient)

- 3) When the conveyor is near the middle of the table, loosen the adjustment knobs until the conveyor itself stops moving sideways and tracks straight
- 4) Repeat steps 2 & 3 if you do not get results right away. This process may take several minutes.



Figure-11 Tracking Conveyor Belt

IMPORTANT

While doing the adjustments, make sure the machine is off and disconnected from the power source to prevent any possible injury.

MAINTENANCE

Cleaning and maintaining this machine is relatively easy. It is imperative to vacuum or use an air blower to clean off wood dust from internal components from time to time to keep the machine clean. To clean your sandpaper from time to time to preserve the life, you can use a rubber abrasive cleaner and run it on the drum as it spins.

LUBRICATION

Lubrication of the chain mechanism is important and should be done periodically for proper maintenance.

Use alight machine oil. Do not use too much lubrication only a fair amount as too much will attract dirt and could cause the chain to malfunction as it may clog. Refer to the diagram below and take note of the arrows designated for lubrication.

Every six months, the table lift screws will also need lubrication. (Shown in diagram above) It is best to clean the screws first before lubricating. Wipe off with a cleaning towel and then run on the lubrication in an even manner.

THICKNESS SCALE CALIBRATION

After some times you may notice that the thickness scale can be a little off. In order to sand accurately you must make sure that the thickness scale is calibrated properly and this is an easy process to do every once in a while.

- 1) Sand a scrap work piece with the sander and measure the thickness of the finished piece.
- 2) Loosen the screw that secures the thickness scale pointer and adjust this to the measured work piece.



Figure-11 Calibrating the Thickness Scale

TROUBLE SHOOTING

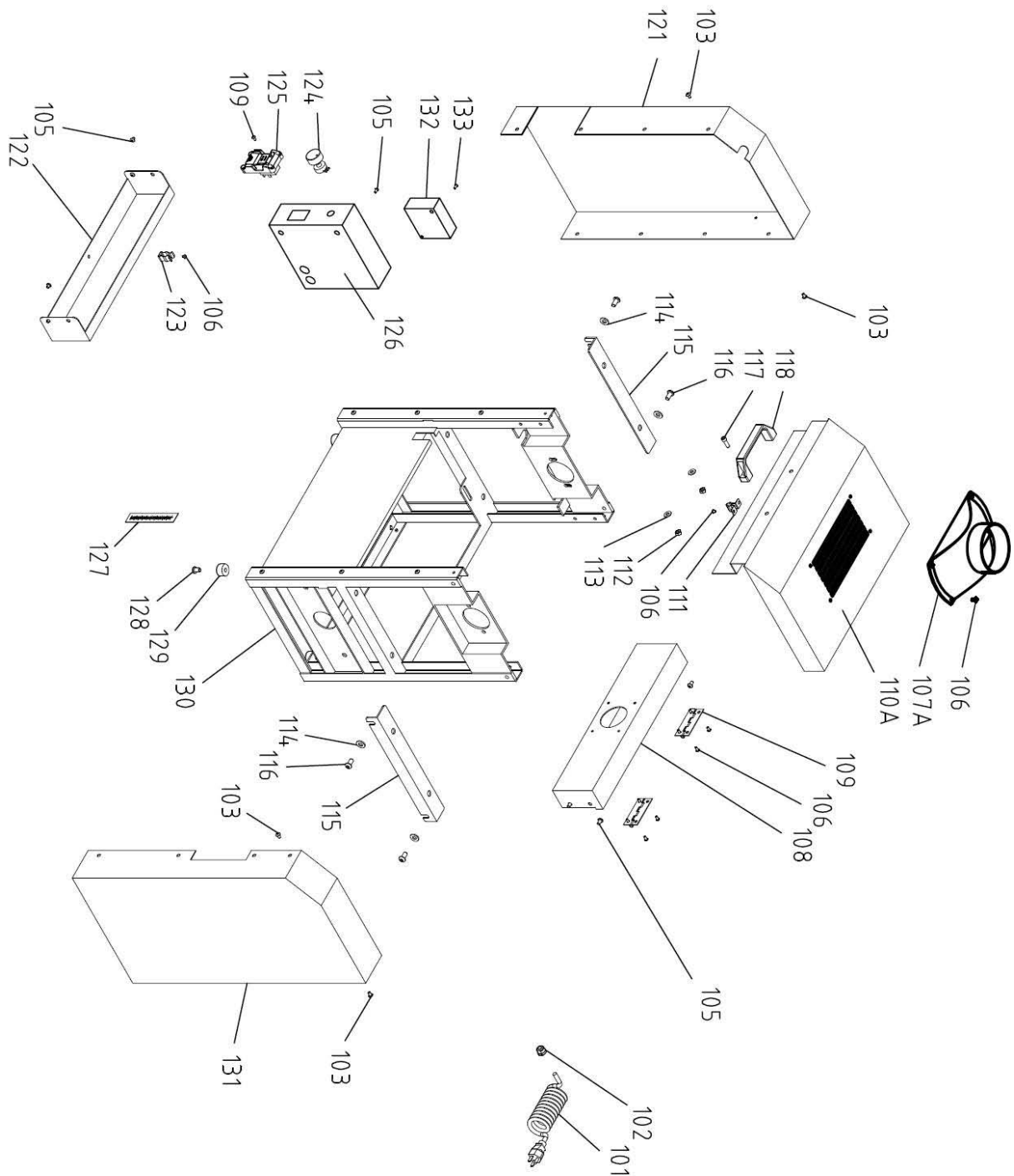
SYMPTOM	POSSIBLE CAUSE	POSSIBLE SOLUTION
Machine is vibrating too much or is too noisy	<ol style="list-style-type: none"> 1. V Belts are worn or loose 2. Motor or other integral component is loose 3. Pulley is loose 4. Motor bearings are worn 	<ol style="list-style-type: none"> 5. Inspect the belts and replace with same size or re-tension 6. Inspect the nuts and bolts that secure the motor and replace if necessary. Also replace worn or stripped bolts. 7. Remove pulley, replace shaft, pulley & setscrew and re-align. 8. Check and replace if necessary
Motor Overheats or is too hot	<ol style="list-style-type: none"> 1. Poor circulation of air through motor 2. Motor overload 3. Motor is on too long 	<ol style="list-style-type: none"> 4. Clean motor to provide normal air circulation 5. Reduce load on motor 6. Allow motor to cool off.
Sandpaper tears off drum or wears excessively	<ol style="list-style-type: none"> 1. Sand paper is not securely fastened to drum 2. Nail or metal piece in wood being sanded 3. Too much use without cleaning of paper 	<ol style="list-style-type: none"> 1. Re-check to ensure paper is fastened to drum using spring loaded release 2. Sand only clean pieces, or severe damage can be caused to machine

TROUBLE SHOOTING

SYMPTOM	POSSIBLE CAUSE	POSSIBLE SOLUTION
Machine doesn't turn on or trips breaker when turned on	<ol style="list-style-type: none"> 1. Capacitor is faulty 2. Centrifugal switch is faulty 3. Motor ON/OFF switch is faulty 4. Motor is faulty 5. Motor connection wired incorrectly 	<ol style="list-style-type: none"> 1. Test and replace capacitor if needed 2. Adjust or replace centrifugal switch 3. Replace ON/OFF switch if faulty 4. Test, replace or repair motor 5. Make sure motor is wired correctly
Conveyor Slips when sanding under load	<ol style="list-style-type: none"> 1. Conveyor is too loose 2. Excessive Load 	<ol style="list-style-type: none"> 1. Tension the conveyor properly 2. Reduce the load
Conveyor tracks to one side only	<ol style="list-style-type: none"> 1. Conveyor not tracking properly 	<ol style="list-style-type: none"> 1. Track the conveyor belt properly <p>(See page 15)</p>
Machine stalls or seems under powered	<ol style="list-style-type: none"> 1. Low power supply voltage 2. Belt is slipping 3. Poor Dust Collection 4. Machine overload 5. Overheated Motor 	<ol style="list-style-type: none"> 1. Ensure that all lines and grounds are operations and have correct voltage 2. Replace belt and re-check 3. Check for air leaks seal leaks, eliminate bends in piping and ensure machine is getting proper suction from port 4. Use new sandpaper and ensure you are following max. guidelines 5. Allow motor to cool

PARTS BREAKDOWN

CT147-17" Drum Sander



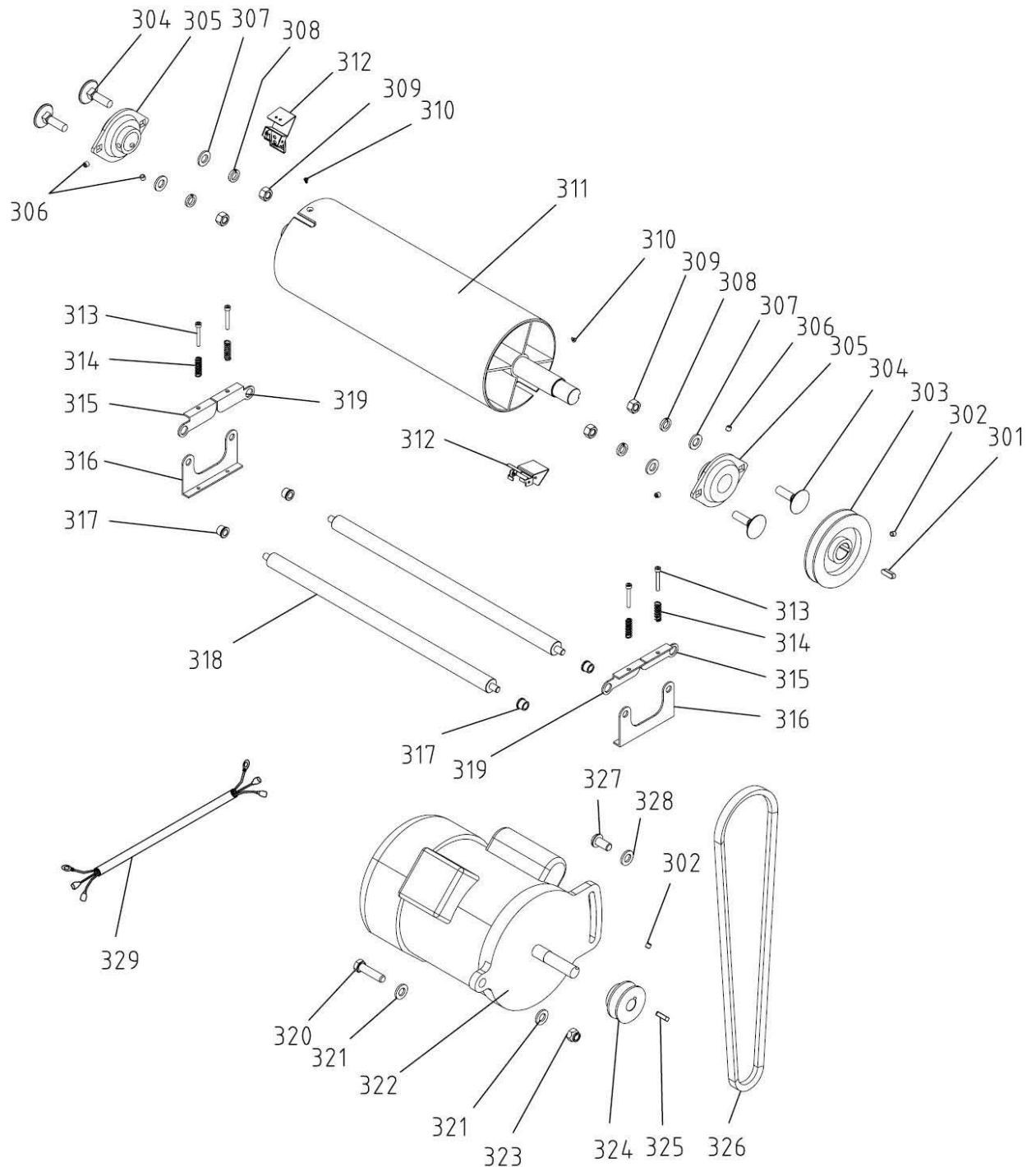
This exploded view diagram illustrates the assembly of a mechanical device, likely a hinge or latch mechanism. The components are identified by numerical callouts:

- 201-207:** Various pins, washers, and small structural components.
- 208-212:** Small rectangular blocks and pins.
- 213-218:** Screws, bolts, and small fasteners.
- 219-228:** A large rectangular plate (229), a cylindrical component (227), and various mounting hardware.
- 229:** A large rectangular plate or cover.
- 230-239:** A series of small components including pins, washers, and a small bracket.
- 240-247:** A large L-shaped bracket (242), a long thin plate (243), and various fasteners for the final assembly.

The diagram shows the spatial relationship between these parts, indicating how they are assembled into a functional unit.

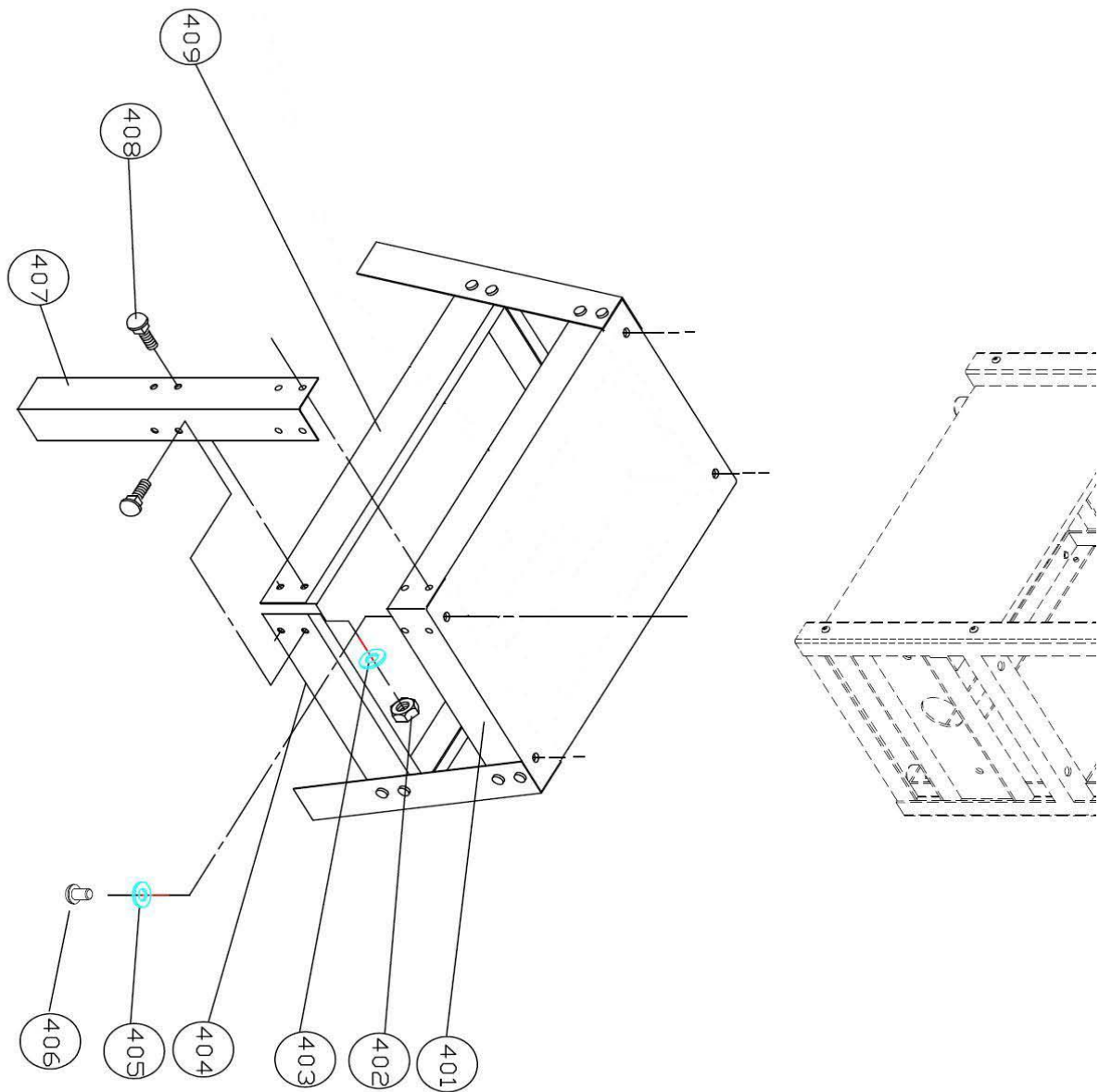
PARTS BREAKDOWN

CT147-17" Drum Sander



PARTS BREAKDOWN

CT147-17" Drum Sander



PARTS LIST

CT147-17" Drum Sander

REF	DESCRIPTION
101	POWER CORD
102	CORD HOLDER
103	M5X10 SOCKET PAN HEAD SCREW
104	REAR PANEL
105	M6X10 SOCKET PAN HEAD SCREW
106	M4X5 SOCKET PAN HEAD SCREW
107	DUST PORT
108	BASE OF DUST PORT
109	HINGE
110	TOP COVER
111	LATCH
112	NUT 1/4"
113	WASHER 1/4"
114	WASHER 5/16"
115	BRACE
116	M8X12 SOCKET PAN HEAD SCREW
117	PAN SCREW 1/4"X5/8"
118	HANDLE
119	M4X10 SOCKET PAN HEAD SCREW
120	BRACE
121	LEFT COVER
122	FRONT PANEL
123	LATCH SEAT
124	VARIABLE SPEED CONTROL
125	SWITCH
126	BOX OF SWITCH
127	DEPTH SCALE
128	SCREW 5/16"X3/4"
129	FOOT
130	BODY

131	RIGHT COVER
201	SET 1/4"X1/4"
202	HANDLE
203	HANDLE BASE
204	WASHER 12X22-0.5
205	TABLE LIFT SCREW(L)
206	C-25 RING
207	WASHER 25X35X3
208	ROLLER BRACKET(R)
209	BUSHING SUPPORT
210	M8X20 SOCKET PAN HEAD SCREW
211	NUT M10
212	SCREW M10X50
213	WASHER 1/4"
214	WASHER 5/16"
215	M6X10 SOCKET PAN HEAD SCREW
216	M8X12 SOCKET PAN HEAD SCREW
217	SPROCKET M10
218	SET M5X5
219	WASHER M5
220	M5X10 SOCKET PAN HEAD SCREW
221	COVER
222	CONVEYOR MOTOR CHAIN
223	SPROCKET M12
224	ROLLER BRACKET(F)
225	BUSHING 18.9X31X25.4X20
226	MOTOR PLATE
227	DC MOTOR
228	DRIVE ROLLER
229	CONVEYOR BELT
230	NUT

PARTS LIST

CT147-17" Drum Sander

REF	DESCRIPTION
231	SHAFT
232	CHAIN
233	TABLE LIFT SCREW(S)
234	IDLER ROLLER
235	TABLE
236	POINTER BASE
237	POINTER
238	PAN SCREW 3/16"X3/8"
239	C-10 RING
240	SPROCKET SHAFT
241	NUT 5/16"
242	NUT 3/16"
301	KEY 6X6X25
302	SET 1/4"X1/4"
303	DRUM PULLEY
304	5/16"X1" CARRIAGE BOLT
305	DRUM BEARING ASSY
306	SET SCREW M6-6
307	WASHER 5/16"
308	SPRING WASHER 5/16"
309	NUT 5/16"
310	M3X6 FLAT HEAD SCREW
311	DRUM
312	SANDING DRUM
313	M4X35 CAP SCREW
314	SPRING
315	RIGHT ROLLER BRACKET
316	ROLLER SUPPORT BRACKET
317	BUSHING 8*10
318	PRESSURE ROLLER
319	LEFT ROLLER BRACKET
320	3/8"X1 1/4" HEX BLOT
321	WASHER 3/8"-20
322	MOTOR

323	NUT 3/8"
324	MOTOR PULLEY
325	KEY 5X5X25
326	V-BELT A-39
327	M10-25 CAP SCREW
328	WASHER 3/8"-25
329	MOTOR CORD
401	STAND TOP BASE
402	5/16" HEX NUT
403	5/16" FLAT WASHER
404	STAND LOWER SIDE BRACK(S)
405	5/16" FLAT WASHER
406	5/16" HEX BOLT
407	STAND LEG
408	CARRIAGE SCREW
409	STAND LOWER SIDE BRACK(L)



WARRANTY

CRAFTEX 2 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 **two 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 repair.