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# ***Introduction***

Congratulations on the purchase of your new **Baker Single Notcher**. Your **Baker** should provide you with many years of profitable operation.

The **Baker Single Notcher** has been designed to be sturdy, simple and easy-to-use. We hope this manual will familiarize you enough with the machine that you will be able to easily make any adjustments that may ever become necessary.

If you have any questions or comments, please feel free to contact us.

## **Baker Products**

P O Box 128

Ellington, MO 63638

(573) 663-7711

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# Warranty

Ellington Industrial Supply, Inc. machinery is warranted against defects in material or workmanship starting from the date of shipment from the manufacturing plant.

This warranty is given solely to the “original purchaser” of the equipment and is in no way to be expressed or implied that it is transferable to any other parties without the written consent and approval from the CEO or Sales Manager of Baker Products.

Our one (1) year warranty period covers all items built at our manufacturing facilities including structural frame, cowlings, doors, shafting, dust chutes and guards.

We honor six (6) months of warranty coverage for miscellaneous vendor-purchased-supplied items including bearings, chain, sprockets, hydraulic components, etc.

Ninety (90) days of warranty coverage is provided on all electrical parts. All electrical components and wiring has been installed in accordance with the National Electrical Code (NEC) of the United States of America.

Ellington Industrial Supply, Inc. does not warranty this machine to meet any other requirements or jurisdiction of any electrical or safety codes of any other state, municipality, other country or jurisdiction. The purchaser assumes all risk and liability whatsoever resulting from the use thereof whether used singularly or in conjunction with other machinery or apparatus, including, but not limited to, all matters resulting from sawdust generation.

Note: No warranty is provided on any electrical components or parts if equipment is powered or connected to a roto-phase electrical converter in order to create a three phase power supply for operational current from a single phase source.

Any change in materials, design, or performance intended to improve any product of Ellington Industrial Supply, Inc. shall not obligate Ellington Industrial Supply, Inc. to modify any previously manufactured equipment.

This manual may contain details that if not properly followed can affect the performance of your equipment. You are responsible for proper use and maintenance of your equipment and we reserve the right to deny warranty work if deemed to be caused by a lack of proper maintenance or negligence by the owner or any of their employees.

# ***Service Policy***

In the event you have any problems, you can call us at (573) 663-7711 any time between 7:30 AM and 5:00 PM (CST), Monday through Friday. A member of our trained staff will answer any questions you may have. We charge nothing for this service.

A member of our service department will visit your plant at your request if nothing else can be done to fix the problem over the phone. He will set your saw to run at peak performance and can train your staff to keep it in top operating condition. We also offer installation, check out and start up support, as required, to get you and your equipment off to a new start. There is a charge for these services. We charge only to cover our costs and do everything we can to keep these costs down. Call for current pricing.

The only other charge is for replacement parts not covered by warranty.

# ***Important: Read this before operating your Baker Single Notcher***

Read owners manual.

Turn power off, lock out and tag out before servicing machine.

Some screws may become loosened during transport. Remove all guards and tighten all set screws on the machine before operating and again after the first week. Check the set screws monthly.

Never operate machine without guards in place.

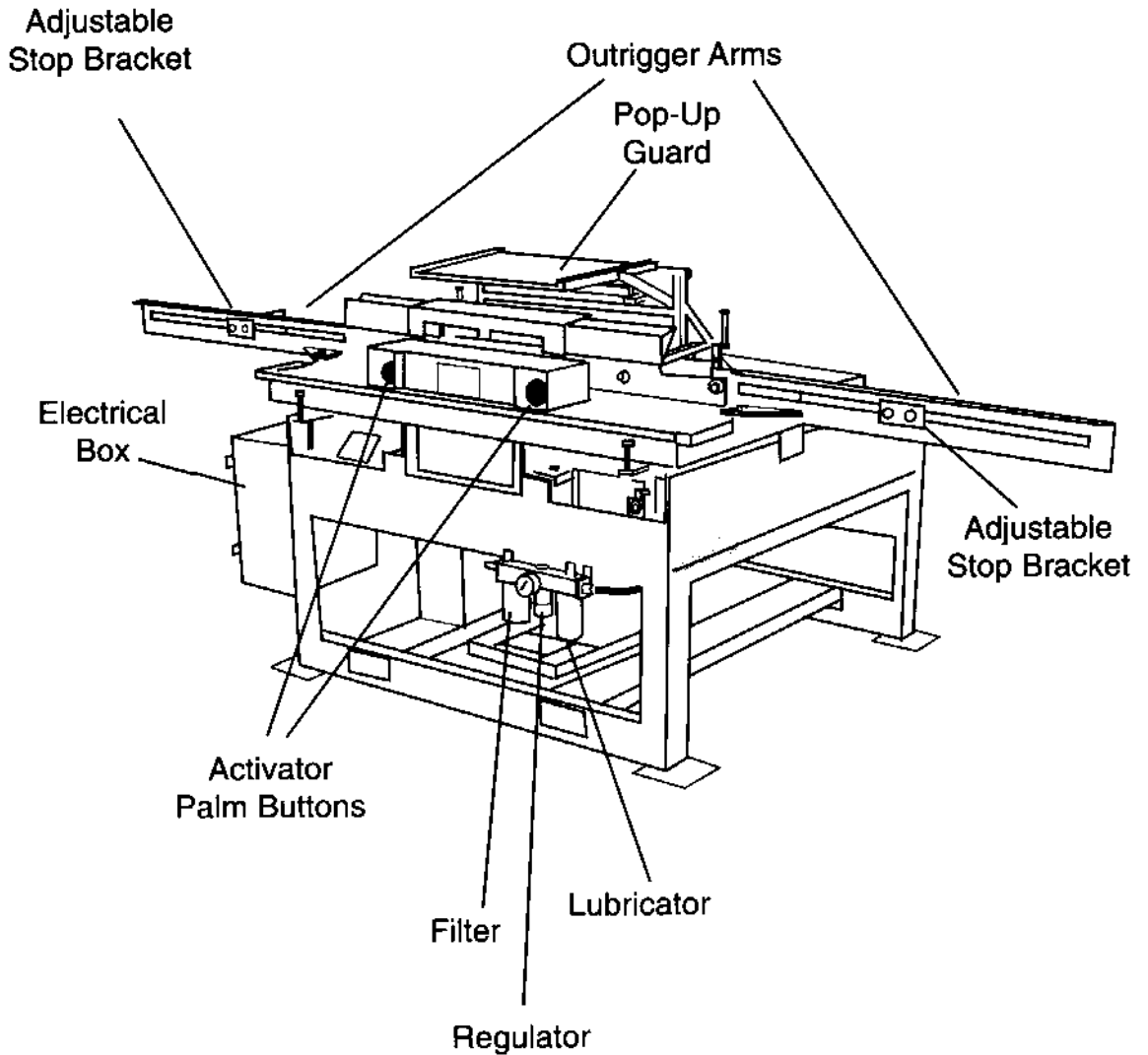
Always wear proper eye and ear protection when operating machine.

Never wear loose clothing when operating machine.

Always provide proper suction for adequate chip removal.

Stay away from cutters head and table-top pushers when operating machine.  
Always stand directly in front of the machine facing palm buttons.

# Overall View



# ***Initial Setup***

## ***Unpacking***

Remove the two bolts on front that are holding the table to the frame. These are for packaging only. For more information, see *“Unpacking and Installing Outrigger Arms”* on page 16.

Anchor the machine to floor with the bolts in foot pads. Note: If your machine is equipped with a chamfering attachment, it will need to be removed prior to notching stringers. See page 14 for details.

## ***Electrical***

Hooking up electrical systems should be done by a qualified electrician.

## ***Cutter Rotation***

Notcher: Top of cutters should rotate toward pusher side of machine (front).

Consult electrician if cutters are not rotating properly.

## ***Chip Removal***

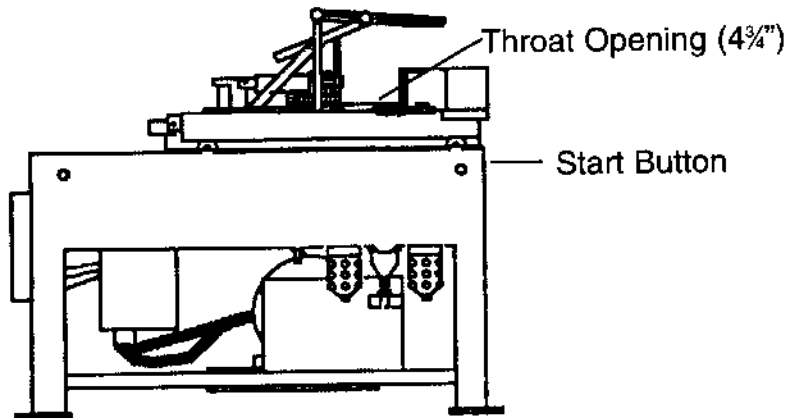
Connect blower pipe to 12” dust chute on rear on machine. Machine must be attached to a blower system in order to run properly. Failure to provide proper chip removal may cause damage to machine and can void warranty. A minimum of 3,000 CFM is required.

## ***Compressed Air***

Attach ½” air hose with a quick disconnect coupling to your 120 PSI air supply to filter, regulator, and lubricator on lower left side of machine. Do not use an air shut off valve. Always use a disconnect. Set regulator to give constant air pressure of 90 to 100 PSI. A quick disconnect on the air supply will allow you to ensure air pressure is off when working on the machine for any reason.

# Operation

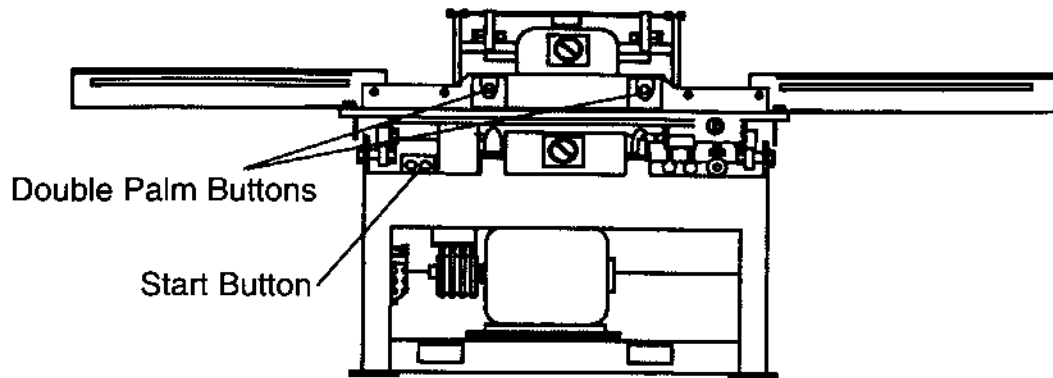
Your new **Baker Single Notcher** is designed to cut one, two, or three stringers at a time. This depends on the thickness of the stringer. The throat opening is  $4\frac{3}{4}$ " , but the table must travel about  $\frac{3}{8}$ " (depending on table speed) for the throat guard to drop clear of the material. Therefore, any combined thickness over 4" will jam against the guard and stop the table. Quantity must be determined for your applications by trial.



**Figure A: Side View**

- 1: Be sure all guards are in place.
- 2: Start cutter motor by pushing start button on left front side below table. Machine is now ready to cut.
- 3: Double palm buttons are located on each side of front hood (See Figure B on page 9). Both must be pushed to activate the table so both hands are assured of being clear for safety (if only one button is pushed, nothing will happen). After pushing the double palms, the stringers are automatically seized firmly by means of two cylinders and a connecting blade from the back. This connecting blade holds the work firmly and helps protect the operator from broken pieces of wood and blades. When double palm buttons are pushed, table will move away from operator carrying stringers over cutters.





**Figure B: Front View**

- 4: Place material in hopper and shift to right-hand stop.
- 5: Press double-palm buttons. (See Figure B).
- 6: After table returns to original position, shift material to left against left-hand stop and press double-palm buttons.
- 7: After table returns to original position, remove wood, stack on left side of machine and repeat steps 1-4.

# **Adjustments**

## **Depth of Cut**

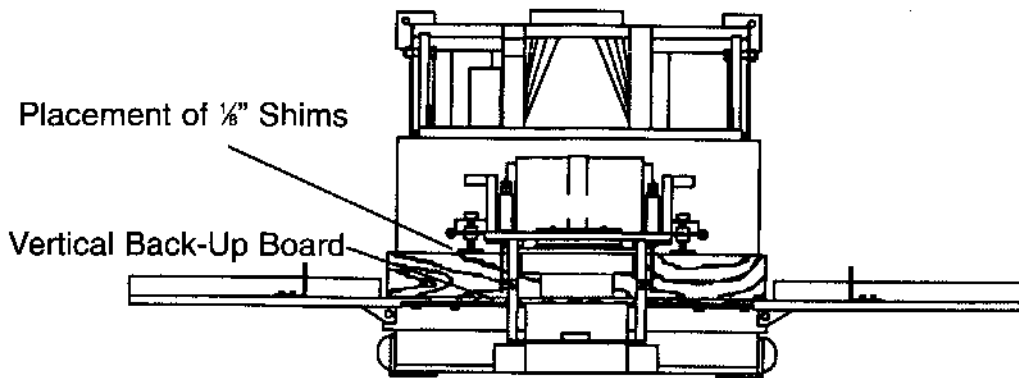
- 1: To adjust the depth of cut, remove  $\frac{1}{8}$ " shims under bottom back-up boards (See Figure C on page 11).
- 2: The vertical back-up board should be changed for each depth notch to give clean cuts. When making first cut after replacing any back-up boards, insert stringer and slow table speed.

## **Table Speed**

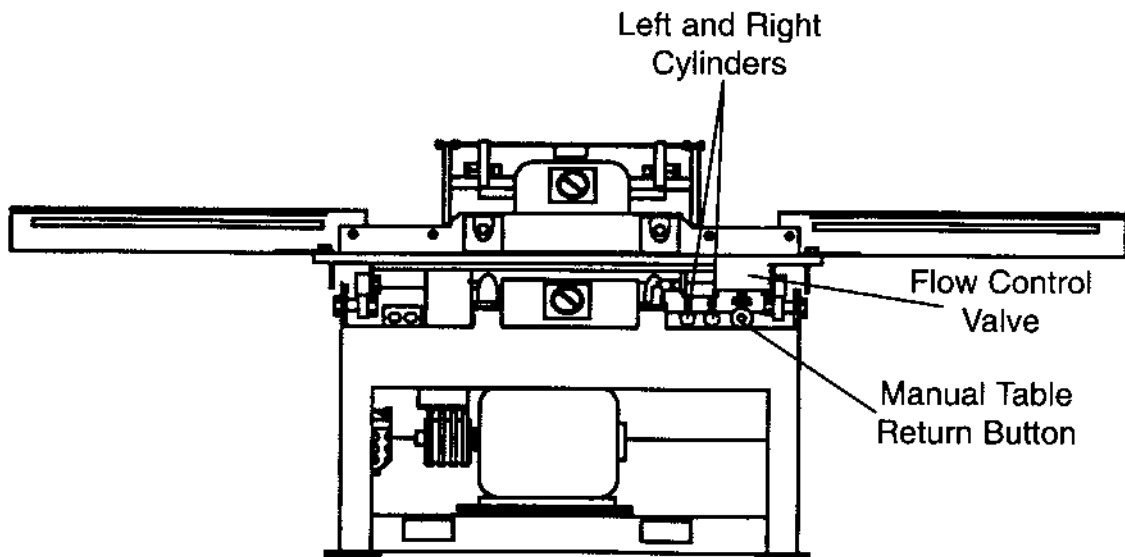
The flow control valve on right side of machine just below table top, controls oil flow and thus the table motion (See Figure D on page 11). The machine is shipped with this control closed to prevent table moving in shipment. For proper speed, open approximately  $2\frac{1}{2}$ " turns counterclockwise. If valve is opened too much, table will not operate smoothly. The valve regulates forward motion only. The return motion full speed. Turn knurled aluminum knob on the flow valve. To slow motion, turn the knob clockwise and counterclockwise to speed motion.

## **Manual Table Return**

At the lower left side below the table is a single push button (See Figure D on page 11). This is for manual table return. If machine table stops before cycle is complete for some reason, this button can be pushed and table will return to front position.



**Figure C: Top View**



**Figure D: Front View**

# ***Adjusting the Notch Width***

**Note:** Always turn off power, lock out, tag out, and disconnect air before making any adjustments. For a standard 9" wide notch, no split chippers are used. The keyway and lock nut on the outside of the radius cutters holds the head assembly on shaft.

## ***Adjusting Notch Width from 9" or Less***

- 1: Loosen lock nut on side of split chippers.
- 2: Pull back radius cutter to loosened nut.
- 3: Four bolts (2 on each side of shaft) hold split chipper in place. Remove split chippers as desired.
- 4: After appropriate chippers are removed, slide radius cutter up against remaining chippers in head (take care to note that carbide in last chipper way has to be slide away from radius plate so as not to be crushed when securing lock nut).
- 5: Tighten lock nut either against radius cutter or spacers depending on amount of threaded shaft.
- 6: Retighten lock nut on the opposite of head.

## ***Adjusting Notch Width from 9" or larger***

Procedure is similar to the preceding section.

**Note:** When reinstalling, follow the first procedure except when tightening split chippers to shaft, tighten the four bolts alternately from side to side and make sure gap between chipper halves remain constant after tightening.

# Installing New Indexable Carbide Cutters

For all indexable tooling, check inserts daily for wear. Worn inserts should be replaced or turned as excessive wear can cause damage to the cutter head or possibly the machine and require excessive horsepower. Check for sharpness. A dull edge, on the tips, exists when a fine white line, approximately 0.005", runs along the cutting edge. Proper tip maintenance will give you many years of satisfactory service. Factors reducing tip life include high feed speeds, frozen lumber, dirty lumber, and frequency of changing worn inserts.

- 1: Install cutters on the shaft of machine. **Note:** Each cutter is numbered and should be installed in the numbered sequence to obtain proper spiral.
- 2: Clean all surfaces in back of carbide inserts and around wedge blocks.
- 3: To install square inserts, loosen socket head cap screw. Insert square carbide down against seat and tighten screw (see Figure E).

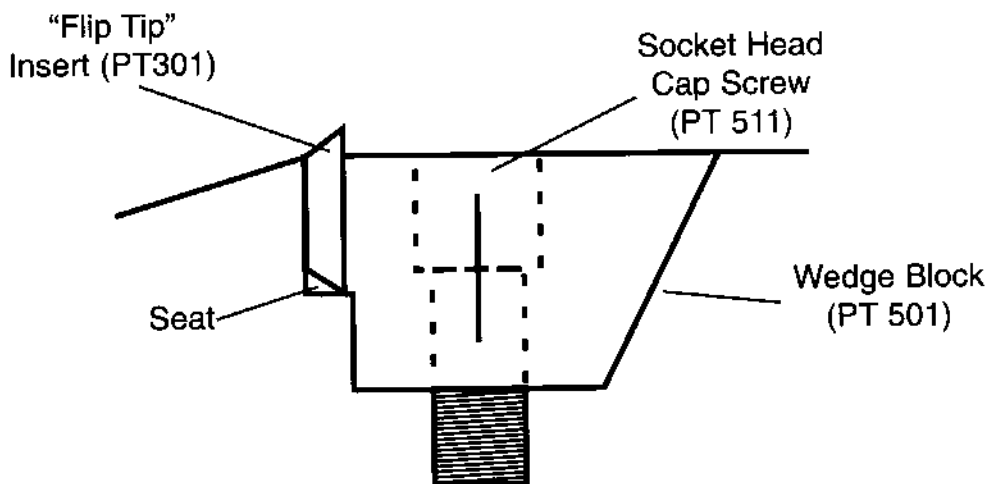


Figure E: Side View of Cutter Head

# ***Chamfer Attachment (Optional)***

If your **Baker Single Notcher** was ordered with a Chamfer Attachment, it was shipped from the factory installed. (If the Chamfer Attachment was not ordered with the machine, this option may be added later). See diagrams on page 15.

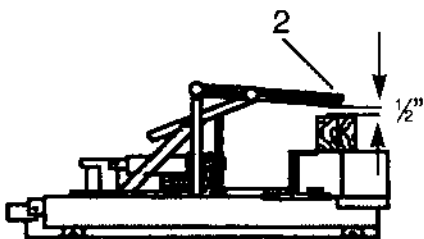
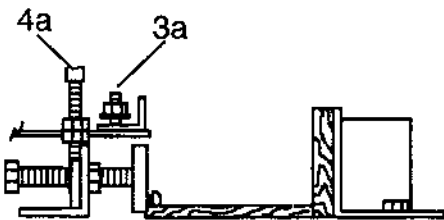
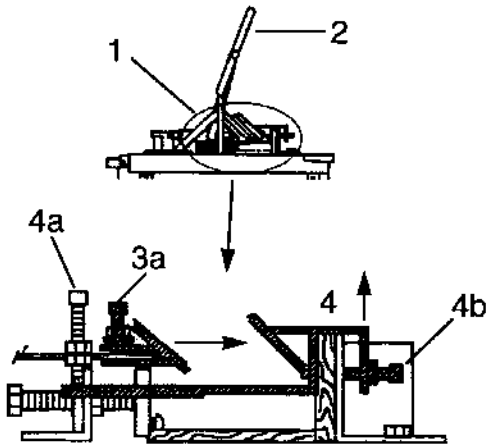
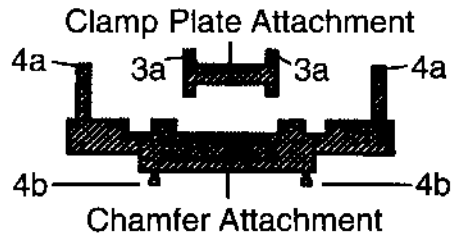
## ***Removing the Chamfer Attachment***

- 1: Loosen set screws on the side of plastic safety guard (1) and raise guard (2).
- 2: Loosen set screws (3a) on clamp plate attachment and slide off toward front of the machine.
- 3: Loosen set screws at back (4a) and front (4b) of Chamfer Attachment (4) and lift off.
- 4: Retighten set screws (3a) and (4a).
- 5: Reposition plastic safety guard (2). Guard should be positioned  $\frac{1}{2}$ " above the height of the material you are cutting. Tighten set screws on the plastic safety guard (1).

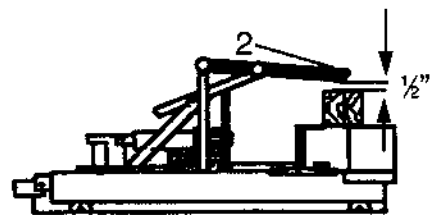
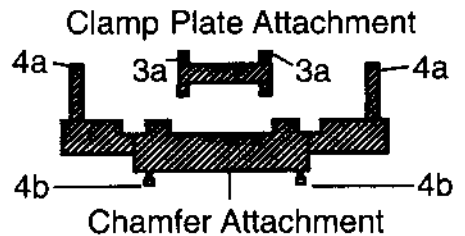
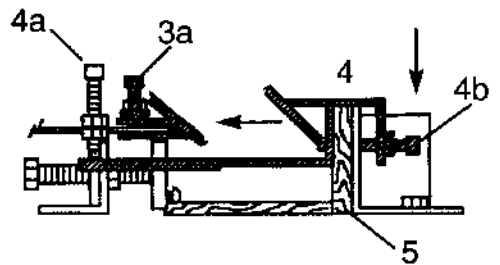
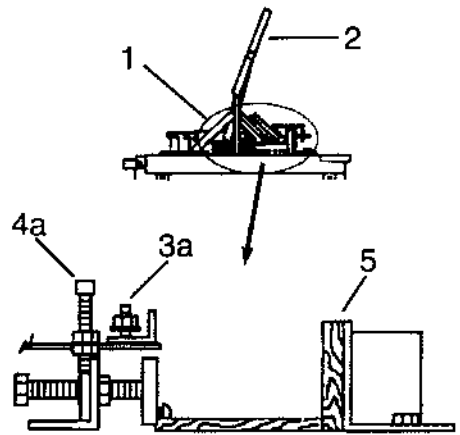
## ***Installing the Chamfer Attachment***

- 1: Loosen set screws on the side of plastic safety guard (1) and raise guard (2).
- 2: Loosen set screws (3a) and (4a).
- 3: Slide clamp plate attachment firmly onto notchers clamp plate and tighten set screws (3a).
- 4: Loosen set screws at back (4a) and front (4b) of chamfer attachment, place chamfer attachment (4) back under set screws (4a) and front down firmly over the vertical back-up board (5). Tighten set screws (4a) and (4b).
- 5: Reposition plastic safety guard (2). Guard should be positioned above the height of the material to be cut. Tighten set screws (1) on the plastic safety guard.

## Removing the Chamfer Attachment



## Installing the Chamfer Attachment



# ***Operation of Chamfer Attachment***

**Note:** Accompanying diagrams are on page 17.

## ***Stop Extension Arms and Stop Brackets***

- 1: Bolt stop extension arms on machine. One is on the right side and the other is on the left side.
- 2: Set stop brackets to desired location to give required chamfer length.

For quick and easy setup, a master copy of each deck board should be kept near machine.

## ***Loading Stringers***

- 1: Place up to 3 deck boards in hopper and shift to right-hand stop bracket.
- 2: Activate double-palm buttons.
- 3: After table returns to original position, shift material to left-hand stop and activate double palm buttons.
- 4: After table returns to original position, turn wood over and repeat steps 1-3.

## ***Lexan Guard***

- 1: Loosen bolts on inside, rear of clear Lexan guard. Adjust height of guard to  $\frac{1}{2}$ " plus material height above front hood. Remove protective covering on lexan.



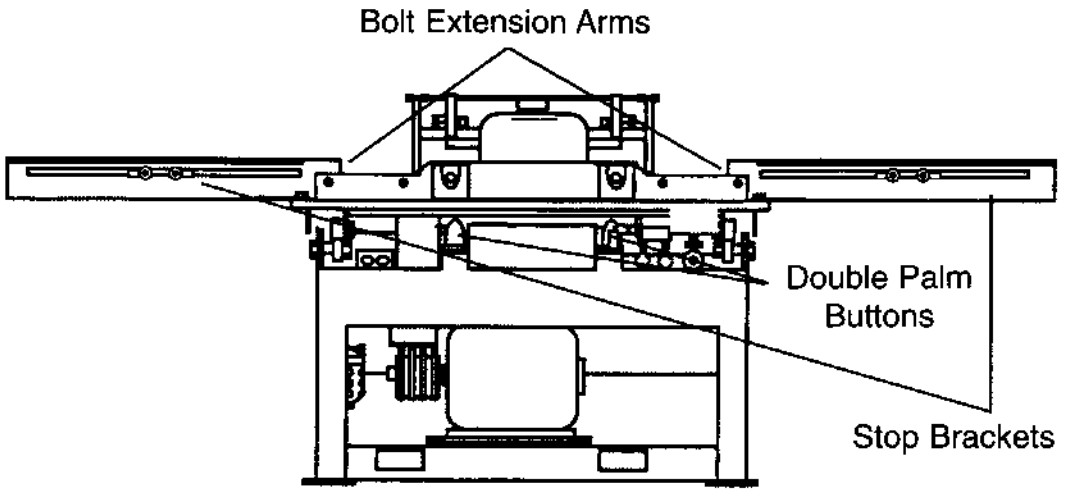


Figure F: Front View

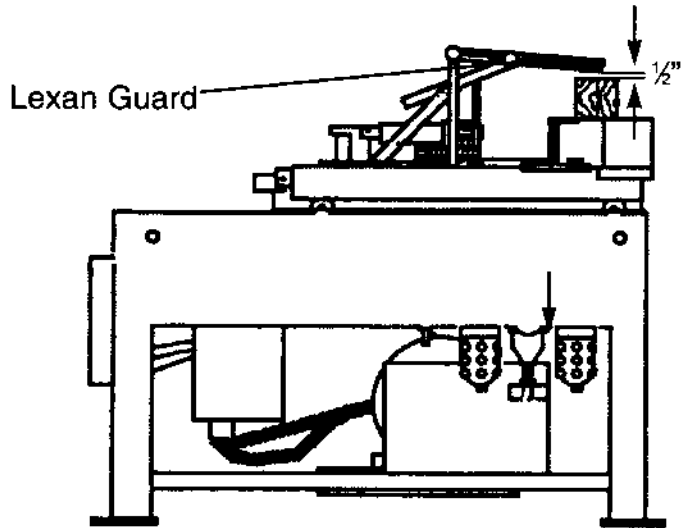


Figure G: Side View

# Troubleshooting

<b>Problem</b>	<b>Reason</b>	<b>Solution</b>
Table won't move	-Air not connected Flow control valve closed  -Adjustable mufflers in main valve closed	-Connect air -Open flow valve (right front under table)  -Adjust muffler
Table not running smoothly	-Table speed too fast -Oil low or empty in oil reservoir -Air in oil system	-Adjust flow valve -Fill oil reservoir  -Bleed oil system
Motor overload	-Dull tips  -Table speed too fast	-Replace tips or rotate indexable tips  -Adjust flow valve
Bad cuts	-Cutter tips dull, loose or broken -Back-up boards bad or wrong size for the opening	-Tighten or replace tips or rotate indexable tips -Replace back-up boards
Clamp cylinder not working	-Mac Valve out of adjustment -Adjustable muffler in Mac Valve closed	-Check cam block  -Adjust muffler in Mac Valve

# ***Maintenance***

## ***Daily***

Inspect notcher head and inserts for any visible damage.

Check air pressure, air filter, air lubrication, belt tension, and fluid level in oil reservoir.

Clean machine after use.

Inspect and ensure that machine has adequate dust/chip collection to prevent excess buildup or blockage. Waste must not be allowed to build up inside dust chute or around motor, drive belt, pulleys, etc.

## ***Weekly***

Oil air cylinder clevis pins and slides on pusher clamp plate.

Oil both ends of table movement cylinders.

Check cutter assembly for tightness.

## ***Monthly***

Grease arbor bearing and table rollers sparingly with high temperature ball bearing grease.

**Note:** The arbor bearing has plugs installed where grease zerks install. This is done so zerks will not rub table top. Hanging below valve on right side of machine will be a small bag with zerks. When greasing arbor bearings, install these zerks and replace plugs when finished. Oil lightly. Remove zerks when finished.

# ***Recommended Spare Parts List***

The following parts should be kept on hand for your **Baker Single Notcher**.

<b>Part Number</b>	<b>Description</b>	<b>Quantity</b>
ASP-25C	½" Adjustable Air Muffler	2
PT 510	Wedgeblock	32
PT 501	Square Cutters	32
PT 301	Rounds	8
PTV 314	Check Valve	1
BCK-3209-67-68	Versa Valve	1
B52	Drive Belts	3
714-0010	Scheffer Cylinder Rebuild Kit (1½" AA4)	1
714-0012	Scheffer Cylinder Rebuild Kit (2½" AA414)	1

# Air Diagram

