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# OWNERS MANUAL

# Seal® ProCut ELITE" 2

PROFESSIONAL MULTI-SUBSTRATE CUTTER

SET-UP, OPERATION AND MAINTENANCE

## Seal Products

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## TABLE OF CONTENTS

	Page
INTRODUCTION	2-3
INSTALLATION AND SET UP	4-6
GENERAL OPERATION	6
HOW TO CUT MAT/MOUNT/FOAM BOARD	6
HOW TO CUT HARDBOARD/EXPANDED PVC'S	7
HOW TO CUT GLASS	7
HOW TO CUT PLASTIC (FRACTURE SENSITIVE)	8
MAINTENANCE AND ADJUSTMENTS BUSHING ADJUSTMENT ROCKER ARM ADJUSTMENT SQUARING ADJUSTMENT CUTTING HEAD REMOVAL BUSHING REPLACEMENT	8-10 8 9 9 10 10
PROBLEM SOLVING CHART	10
PARTS LIST	11

## **CUTTING APPLICATIONS**

MATERIAL	MAT BLADE	GLASS WHEEL	PLASTIC SCORING	ROTARY WHEELS
MATBOARD	1/4"			
FOAMBOARDS	1/2"			<del></del> -
HARDBOARD			<del></del>	3/32*
EXPANDED PVC	1/4*			1/8"
POLYSTYRENE	1/4"			1/8"
GLASS		1/4"	<del></del>	
ACRYLIC			1/4"	
ALUMINUM	040"	<del></del>		

Four separate tool holding PILLAR POSTS are provided. All PILLAR POSTS can be quickly exchanged in the HEAD making it easy to convert from one material to another.



Figure 1

The mat/mount/foam board PILLAR POST, (Figure 1) uses a special blade (A), 10 included. Replacements are available as Part No. 2431. Replace a blade by removing the two hex head screws, and the cover plate. Position a new blade with its notch, (B) in Figure 2, engaged with the pin, then replace the cover and screws.



Figure 2



The hardboard cutter (Figure 3) utilizes a dual rotary wheel cutting device (C) located on it's PILLAR POST. Replacement wheels are available as a set, Part No. 2451.



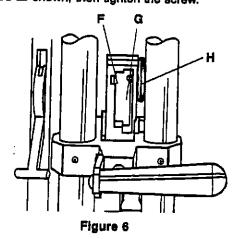
The glass cutter PILLAR POST, Figure 4, uses a replaceable wheel unit (D). Ten steel wheel units are included in the parts bag. Replacements can be ordered on Part No. 2432. A worn wheel unit can be removed with a paper clip and replaced by sliding a new unit into the slot in the PILLAR POST.

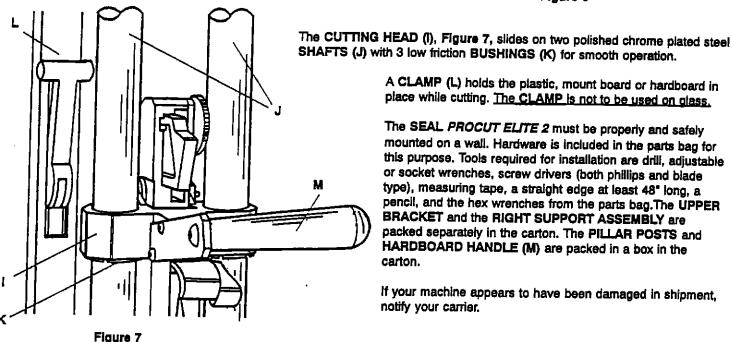


The plastic cutter PILLAR POST, Figure 5, utilizes a replaceable cutting blade (E), 10 of which are provided in the parts bag. Replacements are available as Part No. 2433, Install this blade by loosening the holding screw. Silde the blade in place with its point oriented downward as shown, then tighten the screw.

Figure 5

The cutting HEAD has a wide slot with two positions for the PILLAR POSTS. (F) and (G) in Figure 6. The hardboard cutting PILLAR POST fits in position (G) on the right, while the mounting board, glass, and plastic cutting PILLAR POSTS are placed in the left slot, (F). The SPEED SCREW (H) locks the PILLAR POST in place. You can not insert a PILLAR POST in the wrong slot.





A CLAMP (L) holds the plastic, mount board or hardboard in

place while cutting. The CLAMP is not to be used on glass. The SEAL PROCUT ELITE 2 must be properly and safely

mounted on a wall. Hardware is included in the parts bag for this purpose. Tools required for installation are drill, adjustable or socket wrenches, screw drivers (both phillips and blade type), measuring tape, a straight edge at least 48" long, a pencil, and the hex wrenches from the parts bag. The UPPER BRACKET and the RIGHT SUPPORT ASSEMBLY are packed separately in the carton. The PILLAR POSTS and HARDBOARD HANDLE (M) are packed in a box in the

If your machine appears to have been damaged in shipment, notify your carrier.

carton.

#### INSTALLATION

It is important to mount the machine on the wall securely, safely, and rigidly. At least two people will be required to lift the machine for wall mounting.

The following major steps are required for installation:

- Attach the UPPER BRACKET to the wall.
- 2. Attach the LOWER BRACKET to the machine.
- 3. Lift and bolt the machine to the UPPER BRACKET.
- 4. Attach the LOWER BRACKET to the wail.
- 5. install the left HORIZONTAL SUPPORT to the wall and machine.
- 6. Install the RIGHT SUPPORT.

Detailed procedures are as follows: Refer to the bottom of this page to identify fasteners shown full size.

Hold the UPPER BRACKET, Figure 8. against the wall with the top about 93° above the floor. Use a level to be sure it is vertical. Mark the wall through the 6 mounting holes. Drill pilot holes in the wall and install the UPPER BRACKET with six hex head wood screws from the parts bag, shown at A below.

NOTE: The UPPER BRACKET must be safely mounted to wood, not plaster. If wooden studs are not present, you can rigidly mount a sheet of plywood to the wall and attach the UPPER AND LOWER BRACKETS to the wood.

- 2. Use two 1/4-20 bolts, nuts, washers, and lock washers shown at B to attach the LOWER BRACKET to the machine. See Figure 9.
- 3. Lift the machine and attach it to the UPPER BRACKET with four 1/4-20 bolts, washers, lock washers, and nuts shown at B. See Figure 8. The holes in the UPPER BRACKET are elongated to allow the LOWER BRACKET to rest squarely against the wall.
- 4. Use the LOWER BRACKET as a guide to drill pilot holes in the wall and secure with three hex head wood screws. A.
- 5. Install the HORIZONTAL SUPPORT between the LEFT SUPPORT and the wall. See Figure 9. Use two 10-24 pan head bolts and nuts, shown at C and two hex head wood screws, A.
- Refer to Figure 9 to install the RIGHT SUPPORT assembly.
  - A. Attach the brace to the RIGHT SUPPORT with two flat head screws and nuts, D. Leave the nuts slightly loose.
  - B. Remove the two hex nuts, lock washers and washers from the vertical leg of the ANGLE BRACKET in the back of the machine.

    Set them aside to reinstall later.
  - C. Loosen, (do not remove), the button head hex screw in the RIGHT SUPPORT.
  - D. Attach the second ANGLE BRACKET to the top left end of the RIGHT SUP-PORT with two 1/4-20 bolts, washers, lock washers, and nuts, E. The long leg of the angle bracket must be horizontal. Do not tighten yet.

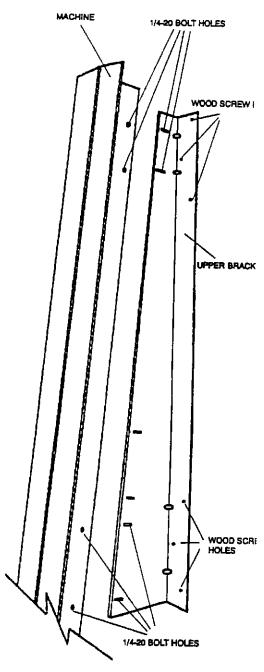
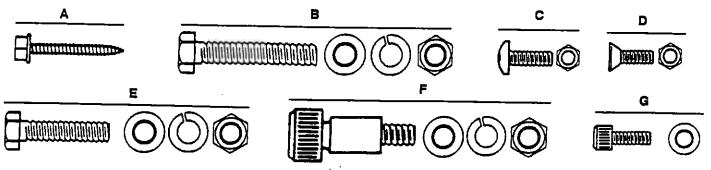
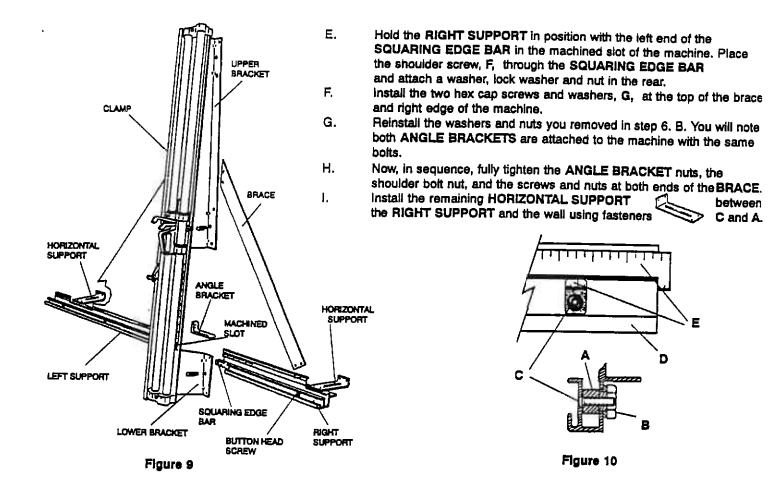


Figure 8





J. See Figure 10. Lay a long straight edge on the SQUARING EDGE BARS (A) of both the LEFT and RIGHT SUPPORTS. Rotate the ECCENTRIC NUT (B) behind the BUTTON HEAD SCREW (C) in the RIGHT SUPPORT (D). This will raise or lower the RIGHT SQUARING EDGE BAR. Raise it until the SQUARING EDGE BAR and straight edge (E) touch. You can observe this through the cut out where you see the button head screw. Tighten the BUTTON HEAD SCREW while holding the ECCENTRIC NUT so it can not turn.

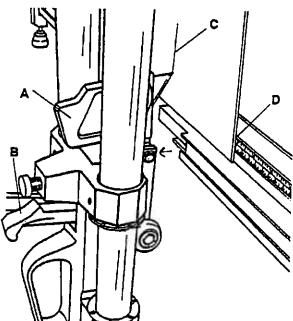


Figure 11

Refer to Figures 11 and 12. The RIGHT SUPPORT SCALE can now be aligned and set in its proper position. Mark a short line on a mat/mount board exactly 6 inches from the right edge. Insert the mat/mounting board PILLAR

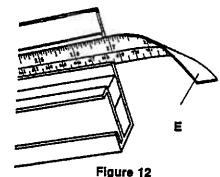
POST (A) in the cutting HEAD and lock it with the SPEED SCREW.

Depress the SHORT THUMB

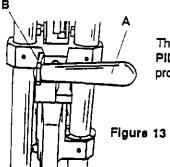
LEVER (B) and raise the CUTTING

HEAD. Place the mat/mount board on the SQUARING EDGE BAR and slide it in position so the cutting blade rests exactly on the line (C), in Figure 11.

The RIGHT SUPPORT SCALE has a strip of double sided tape (E) on the back at the right end as seen in Figure 12. Slide the SCALE out to the right and remove the protective



paper from the tape. Now, slide the SCALE back to the left until the 6 inch index on the SCALE lines up with the right edge of the mat/mount board as shown at (D) in Figure 11. Press on the right end of the SCALE and the tape will adhere it in place.



The HARDBOARD HANDLE (A) and HANDLE BRACKET (B) are shipped in the box with the PILLAR POSTS. Install them to the head as shown in Figure 13 with the screws and washers provided.

CAUTION

BLADES ARE VERY SHARP
HANDLE CAREFULLY

### **HOW TO USE THE Seal ProCut ELITE 2**

There are some general principles which apply to the proper use of the Seal ProCut ELITE 2.

- **CAUTION:** Handle glass carefully. Use protective eye wear, gloves, and clothing.
- All cutting and scoring is done on the downward stroke.
- The SPEED SCREW must hold each PILLAR POST firmly in place.
- The material being cut should be placed on the LEFT SQUARING EDGE BAR. Then slide it to the right to the desired dimen sion as read on the LEFT SUPPORT SCALE. The scrap is generally the smaller piece resting on the RIGHT SUPPORT.
- The clamp is to be used on all materials except glass. Never clamp a sheet of glass because it may break unexpectedly.
- A plastic storage bin is included which hooks over the RIGHT SUPPORT and provides a safe and convenient place to store the PILLAR POSTS when not in use.
- Have a convenient receptacle near the machine for disposing of scrap material.
- Keep the machine and workplace clean and neat.

### HOW TO CUT MAT/MOUNT/FOAM BOARD

REMEMBER, THIS BLADE IS VERY SHARP. HANDLE CAREFULLY!

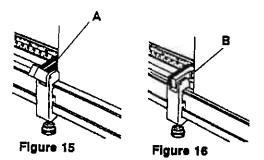
- 1. Insert the mat/mount/foam board PILLAR POST in the CUTTING HEAD and lock with the SPEED SCREW.
- 2. Set the board to be cut on the LEFT SQUARING EDGE BAR (C) and slide it to the right so the left edge of the board aligns with the desired cutting dimension. Figure 14. The MEASURING STOP is useful when more than one piece is to be cut to the same size. Set the BLACK STOP LEVER to the desired dimension (D) and lock the MEASURING STOP in piace with the LOCKING KNOB (E). Slide the board to the left against the BLACK STOP LEVER, and apply the CLAMP to hold the mount board in place and prevent buckling.
- 3. Grasp the CUTTING HEAD with your right hand and depress the SHORT THUMB LEVER. Slide the CUTTING HEAD upward until the blade is above the material being cut. Release the SHORT THUMB LEVER and pull the CUTTING HEAD all the way downward to its stop position. Release the CLAMP and remove both cut pieces.
- 4. A fresh blade should completely separate most mounting boards in one cutting stroke. As the blade begins to become dull, or with some very dense boards, it may require two passes of the blade. It is also possible to apply a very slight pressure upward on the underside of the SHORT THUMB LEVER as you pull the CUTTING HEAD downward. This will lock the blade in its cutting position. An alternative, when cutting this material such as a significant of the strong position.

Figure 14

will lock the biade in its cutting position. An alternative, when cutting thin material such as mat board, is to place a piece of scrap mat material behind the board being cut. This will reduce the fraying of the edge which may otherwise occur.

## **HOW TO CUT HARDBOARD & EXPANDED PVC**

The measuring stop, provided with the Seal ProCut ELITE 2, has two STOP LEVERS. See Figures 15 and 16. The black STOP LEVER on the left is useful when cutting glass, plastic, or mat/mounting board. The white STOP LEVER on the right is essential when cutting with the hard board PILLAR POST.



- Insert the hardboard cutting PILLAR POST in the CUTTING HEAD and lock with the SPEED SCREW.
- 2. Since the hardboard PILLAR POST fits in the CUTTING HEAD to the right of the other PILLAR POSTS, an adjustment must be made to the scale reading when cutting hardboard. This adjustment is made by simply setting the MEASURING STOP so the black STOP LEVER is positioned on the desired dimension on the SCALE (A). Then, flip the white STOP LEVER forward and locate the edge of the hardboard against the white STOP LEVER (B). Apply the CLAMP.
- 3. Grasp the CUTTING HEAD HANDLE with your right hand and depress the SHORT THUMB LEVER with your right thumb. Raise the CUTTING HEAD so the PILLAR POST is well above the upper edge of the hardboard. Release the SHORT THUMB LEVER.
- 4. Lower the CUTTING HEAD until the CUTTING WHEELS contact the edge of the hardboard. Shift your right hand to the HARD-BOARD HANDLE and firmly pull the CUTTING HEAD down to its stop position. Avoid striking the edge of the hardboard too aggressively.
- Release the CLAMP and remove the hardboard pieces.

### **HOW TO CUT GLASS**

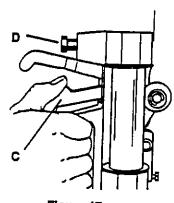


Figure 17

- √ Always wear eye protection, gloves, and protective clothing when handling glass!
- Always load glass from the left side of the machinel
- ✓ Glass should not extend beyond the left support!
- √ Do not use the clamp on glass!
- √ All cutting and scoring is done on the downstrokel
- 1. Insert the glass cutting PILLAR POST in the CUTTING HEAD and lock it with the SPEED SCREW as described on previous pages.
- 2. Set the glass on the SQUARING EDGE BAR on the left side of the machine. Position the glass for the size you wish by aligning the left edge of the glass with the desired dimension on the SCALE. Normally, the scrap piece will be smaller and will be to the right of the cutting line.
- 3. Rest your left hand lightly on the glass to hold it against the triangular face plate. Grasp the CUTTING HEAD handle with your right hand and depress the SHORT THUMB LEVER (C) as shown in Figure 17.
- 4. Raise the CUTTING HEAD until the glass cutting wheel is well above the upper edge of the glass. Release the SHORT THUMB LEVER and bring the CUTTING HEAD down until you feel the wheel RAMP contact the glass. With one continuous motion, bring the CUTTING HEAD all the way down to its rest position. You will hear and see the score produced.
- 5. Never score the same place more than once. A light, continuous score is best. If the pressure is too great, the score will be flaky. Pressure is adjusted with the PRESSURE KNOB, (D). The correct position of this KNOB will expose about 1/2" of threads.
- To break the glass along the score line, do not move it after scoring. While keeping your left hand against the glass, apply pressure with your right thumb on the bottom right corner of the glass. DO NOT APPLY BREAKING PRESSURE AT THE CENTER OF THE GLASS.

### HOW TO CUT PLASTIC

- The Seal ProCut ELITE 2 will score and break flat fracture sensitive plastics such as acrylics. Polycarbonates and expanded PVC's are not fracture sensitive and do not break readily from bending. It is not necessary to remove the protective coating prior to cutting.
- Insert the plastic cutting PILLAR POST in the CUTTING HEAD and lock it with the SPEED SCREW.
- Place the sheet of plastic on the LEFT SQUARING EDGE BAR and slide it to the right until the desired dimension reads at the left edge of the plastic. Apply the CLAMP so the plastic will remain in place during scoring and break out.
- Grasp the CUTTING HEAD with your right hand and depress the SHORT THUMB LEVER with the right thumb. Raise the CUTTING HEAD and release the SHORT THUMB LEVER so the tip of the scoring blade rests on the surface of the plastic as close as possible to the upper edge. It should rest about 1/32\* from the top edge. See (A) Figure 18.

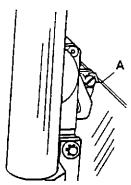
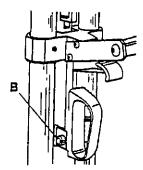


Figure 18



- Pull the CUTTING HEAD downward to its resting position. You may use the HARDBOARD HANDLE if you wish. For plastic up to 1/8" thick, one scoring pass with a fresh blade is normally enough. If the plastic is 1/4" thick, it will be wise to repeat the scoring cut three or four times. Each time, keep the plastic clamped so it does not move. You will hear a gouging noise as the cutter scores the plastic. If it chatters or skips, as it may on some very thin plastics, reduce the pressure with the pressure adjusting knob and score more slowly.
- To break out the plastic, first hold the SHORT THUMB LEVER down and depress the DETENT (B) in Figure 19. While pushing the DETENT, release the SHORT THUMB LEVER. This will leave the DETENT automatically depressed and the cutting tool will be pivoted away from the plastic.

Raise the CUTTING HEAD and depress the LONG THUMB LEVER (C) to push the white BREAK OUT ROLLERS (D) against

the plastic (E) near the top edge as in Figure 20. Press on the LONG THUMB LEVER until you hear the cracking sound of the plastic breaking. While holding this same pressure on the ROLL-ERS, bring the CUTTING HEAD all the way down as far as it will go. The plastic will have broken along the score line.

Release the LONG THUMB LEVER and the CLAMP and remove the two plastic pieces. The DETENT will return to its normal position the next time you depress the SHORT THUMB LEVER.

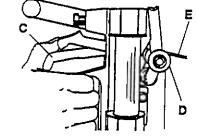


Figure 20

### MAINTENANCE AND ADJUSTMENTS

With care and frequent cleaning, the Seal ProCut ELITE 2 will remain in proper adjustment and will perform as expected indefinitely.

#### **GENERAL MAINTENANCE TIPS:**

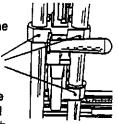
- Use the BRUSH provided in the parts bag to clean the SQUARING EDGE BARS daily. If glass chips or paper debris collects on the SQUARING EDGE BARS, the material being cut will not rest squarely and the cut will be out of line.
- Wipe the TUBES with a clean dry cloth at least weekly. Do not apply oil to the TUBES. Tiny glass chips may stick to the oil and cause fast wear of the BUSHINGS.

Apply a drop of oil to the glass cutting wheel weekly. This will lubricate the wheel axle and improve glass cutting performance.

Always use sharp cutting tools. Keep a supply of each of the cutting blades in a convenient place near the machine.

#### **BUSHING ADJUSTMENT**

Three set screws (F) in Figure 21, can be adjusted to keep the CUTTING HEAD well fitted to the TUBES. Use the hex wrench provided and tighten any one of the three set screws while sliding the CUTTING HEAD up and down. At the first indication of "drag", loosen just enough to eliminate the drag. Make this adjustment with each of the set screws.



#### ROCKER ARM ADJUSTMENTS

After considerable use, it may become necessary to perform certain adjustment routines.

That portion of the CUTTING HEAD which holds the PILLAR POSTS and moves in and out when you depress the SHORT THUMB LEVER is called the ROCKER ARM. Two adjustments affect its function.

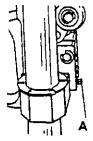


Figure 22

- The PRESSURE ADJUSTING KNOB described earlier, determines how much pressure each cutting tool applies to the material being cut. It does not affect the HARDBOARD CUTTER. Avoid too much pressure. About 1/2" of threads visible is correct.
- 2. The ROCKER ARM ADJUSTING SCREW (A) in Figure 22 determines the "at rest" position of the ROCKER ARM; that is, the position of the cutting tools when the SHORT THUMB LEVER is not depressed. Set this screw so the glass cutting wheel is about .020" from the vertical extrusion of the machine. You may judge this by looking from the right side, Figure 23 (B). The wheel should not enter the groove, but should be close enough to contact the thinnest glass to be cut. This position of the ROCKER ARM will also insure the mat/mount board blade will enter the groove, but not touch the aluminum at the bottom of the groove.

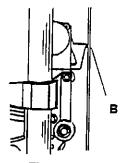


Figure 23

#### SQUARING THE MACHINE

If all screws remain tight, the machine should continue to produce cut pieces that have 90° corners. Verifying this condition is called "squaring" the machine. To be square, both SQUARING EDGE BARS must be straight, in line with one another, and 90° to the cutting line. Following is the precedure to test the machine for squareness and make corrections.

- 1. Lay a long straight edge across both the LEFT AND RIGHT SQUARING EDGE BARS. They should be in contact with the straight edge along their entire lengths.
- 2. Place a full size mat/mount board in position as though you were planning to cut it in half and apply the CLAMP. The bottom edge of the board resting on the SQUARING EDGE BARS must be straight.
- Insert the mat/mount board PILLAR POST in the CUTTING HEAD and lock it with the SPEED SCREW.
   Make a short cut 1/2\* long at the bottom of the board and another at the top.
- 4. Turn the board around 180° and place it back in the machine resting on the <u>same</u> bottom edge as before. Slide the board until the blade perfectly lines up with the bottom cut, now visible from the rear side of the board. Clamp the board in place. Raise the CUTTING HEAD (with the SHORT THUMB LEVER depressed) and make a short cut at the top edge of the board.
- 5. If the machine is square, the two cuts at the top of the board, (one made from the front and one from the back) will be in alignment. If not, (C) Figure 24, the SQUARING EDGE BARS must be repositioned. If the second cut at the top is to the left of the cut made from the front, the LEFT SQUARING EDGE BAR must be lowered. Conversely, if the second top cut is to the right of the first, the LEFT SQUARING EDGE BAR must be raised. In either case, the amount of squaring adjustment required is half the distance between the two top cuts.

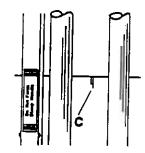


Figure 24

NOTE: One end of each squaring edge bar is fixed in position by its PIVOT SCREW near the cutting line. Each of the bars can be raised or lowered slightly by rotating them around their PIVOT SCREW. This is done by turning ECCENTRIC NUTS (D), Figure 25, one in the RIGHT SQUARING EDGE BAR and two in the left. The LEFT SQUARING EDGE BAR is very long, so two ECCENTRICS are provided to assure the SQUARING EDGE BAR can be adjusted straight.

- 6. If adjustment is required to square the machine, start with the ECCENTRIC NUT in the middle of the LEFT SQUARING EDGE BAR. Reposition the board to align the bottom cut with the blade, then raise the CUTTING HEAD to the top edge. The biade should touch halfway between the two top cuts. Readjust the ECCENTRIC NUT until this is so.
- 7. Remove the mount board, and lay the long straight edge on the SQUARING EDGE BARS. Adjust the left ECCENTRIC NUT until the LEFT SQUARING EDGE BAR is straight.
- 8. Adjust the ECCENTRIC NUT in the RIGHT SQUARING EDGE BAR to make it line up perfectly with the LEFT SQUARING EDGE BAR. Each time you use the ECCENTRIC NUT, hold it from moving while tightening the button head screw (E).
- 9. After any adjustment is made, re-check the squareness as in steps 2 through 5, above.

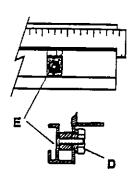
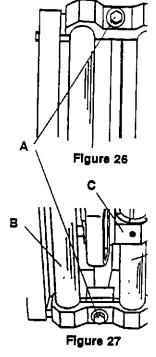


Figure 25

#### REMOVING THE CUTTING HEAD

Follow these steps if it should ever be necessary to remove the cutting head.

- 1. Loosen the bolts in the UPPER and LOWER BRACKETS. (A) in Figures 26 and 27.
- 2. Slide the LEFT TUBE (B) up out of the LOWER BRACKET until it is above the CUTTING HEAD (C). Rotate the CUTTING HEAD around the RIGHT TUBE (D) and lower the LEFT TUBE BACK into the LOWER BRACKET.
- 3. Hold the CUTTING HEAD and slide the RIGHT TUBE upward until the CUTTING HEAD is free. Set the RIGHT TUBE back into the LOWER BRACKET.
- To reinstall the cutting head, reverse the above procedure.



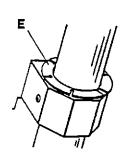


Figure 28

#### REPLACING A BUSHING

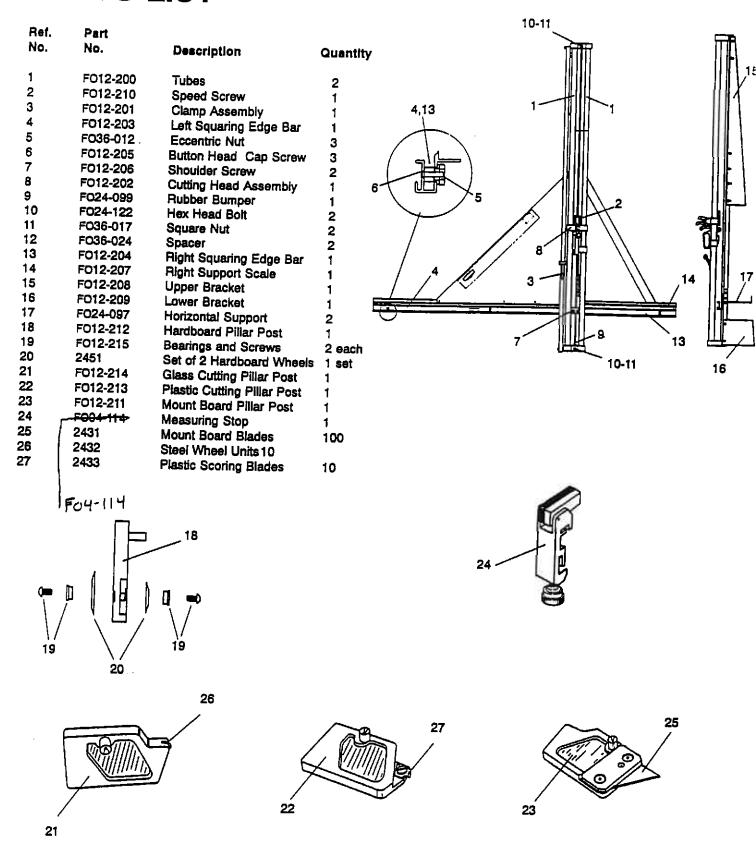
The CUTTING HEAD slides on three low friction BUSHINGS (E), Figure 28. It is unlikely they will require replacement, but they can be removed as follows.

- Remove the CUTTING HEAD as described above.
- 2. The flange at one end of each BUSHING is trapped in a slot in the CUTTING HEAD.
- 3. Squeeze and collapse the BUSHING so the flange becomes free of the CUTTING HEAD, and pull it out.
- 4. Reinstall a BUSHING by reversing the above steps.

#### PROBLEM SOLVING CHART

PROBLEM	PROBABLE CAUSE	CORRECTION  Replace wheel unit Clean glass Adjust rocker arm adjusting screw. Page 9 Tighten pressure knob. Page 7	
Glass cutter skips	Worn wheel Dirty glass Wheel not touching glass Insufficient wheel pressure		
Glass score chips	Too much wheel pressure Scoring more than once	Loosen pressure knob. Page 7 Never score more than once.	
Plastic scoring chatters	Too much pressure Scoring too fast	Loosen pressure knob. Page 7 Slow the scoring stroke. Page 8	
Ragged cut edges on Mat/mount board	Lack of fresh slip sheet, or no slip sheet Cutting blade is dull	Use new slip sheet Page 6 Replace blade. Page 3	
Not cutting squarely	Foreign material on squaring edge bars Squaring edge bars not adjusted properly	Use brush to clean squaring edge bars Adjust squaring edge bars Page 9	
Hardboard cutting takes too much force or the edge is rough	Hardboard cutting wheels are worn or will not turn because of build up of debris	Replace the cutting wheels Clean all cutting debris from the wheels.	

### PARTS LIST



The information contained herein is based upon our research and believed to be accurate, but the accuracy and completeness of our recommendations is not guaranteed. The user shall determine the suitability of the product for their intended use, before using the product, and the user assumes all risk and liability whatsoever in connection with the use of the product. Neither seller nor manufacturer shall be liable for any injury, loss or damage, direct or consequential, arising out of the use of or inability to use the product. The following is made in lieu of all warranties, express or implied: Seller's and manufacturer's only obligation shall be to replace or credit such quantity of the product proved to be defective.



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