

# 470KM

## 4.0 PUNCHING

### 4.1 Punching

Punching is the first step in the process of binding. And it is an important step. Attention to detail at this stage will result in a clean and attractive product. While enhancing the appearance, it will also simplify the binding operation and save time.

Before you punch an actual book, it is recommended you first use blank sheets of paper the same size as the pages of your book. This will help you determine the maximum number of holes to be punched on the binding edge and the proper spacing of the holes.

1. The Solid White Rectangles indicated on the Punch Alignment Scale (See Figure 4.4) represent the exact position of the actual punches located behind the scale.
2. Place a test sheet on the Punch Alignment Scale to determine the number of holes you will need to punch. Line up your test sheet with the left edge of the first Solid White Rectangle at the left hand side of the Punch Alignment Scale.
3. Allowing for a minimum margin of 1/8" at each end of the binding edge of your test sheet, center it on the correct number of Solid White Rectangles (e.g. 19 holes for 11").
4. Holding your test sheet in the centered position, move the Side Guide flush with the left edge of your test sheet.
5. If the left and/or right hand edge of your test sheet partially covers one of the Solid White Rectangles, raise the Selector Pin Cover and pull out the Selector Pin corresponding to the Solid White Rectangle that is partially covered by your test sheet. This will disengage the punch directly behind the Solid White Rectangle on the Punch Alignment Scale and prevent the punching of a partial hole on the edge of your test sheet. (See Figure 4.1).
6. Insert your test sheet into the throat opening of the punch. Check to insure that the test sheet is flush with the Side Guide and Back Guide Bar. Depress the Green Punch Actuator Button located directly below the Yellow, Power "ON" Indicator Light. The machine will complete a punch cycle and stop.

#### 4.0 PUNCHING (Continued)

7. After completion of the punch cycle, take your test sheet out of the machine and fold it in half (See Figure 4.2). Check to see if the space above the first hole is equal to the space below the last hole. Your test sheet was properly centered if the spaces are equal. If they are not equal, adjust your Side Guide to correct the difference, punch, and repeat this check.

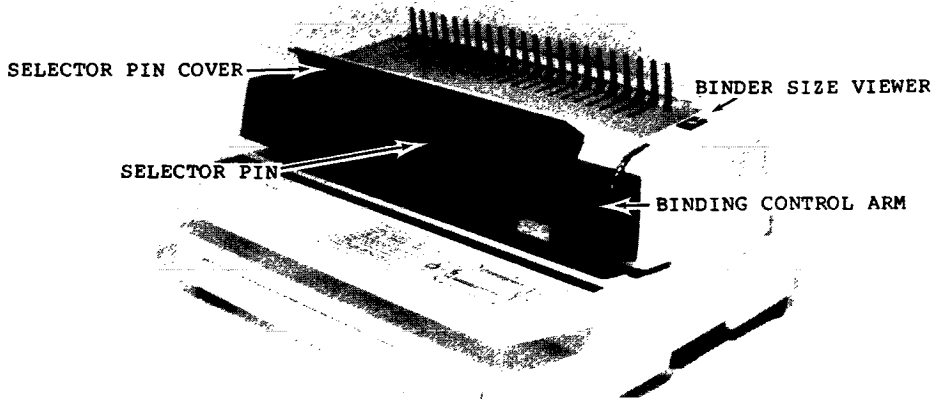


Figure 4.1

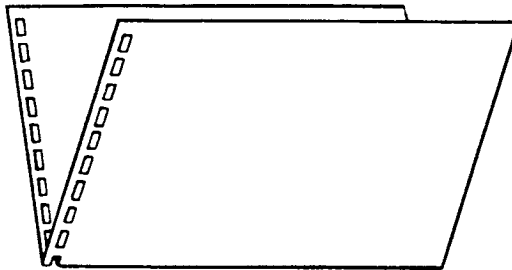


Figure 4.2

8. Setting of the Back Guide Control Knob is the final adjustment. The Back Guide Control Knob is located on the left hand side of your Electric Combo. (See Figure 4.4)

#### 4.0 PUNCHING (Continued)

9. To determine the correct back guide setting and proper GBC binding to use, a binder size viewer (See Figure 4.3) has been provided on the top cover right hand side. The viewer is color coded to correspond with the back gauge control knob. It also has a binding size chart to assist you in selecting the proper GBC binding to use.

- a. Move the binding control arm (See Figure 4.3) upward, this will open the spreading hooks.
- b. With your left hand place the book to be punched against the vertical holding fingers, with your right hand move the binding selector arm down until the spreading hooks hold the book to be punched.
- c. Look into the binder size viewer to determine the proper color at which to set the back gauge, also notice the size this will give an **approximate** size of which GBC binding to use.

Before removing the book set the back gauge control knob to the corresponding color in the viewer.

- d. Move the binding selector arm up to release the book.

**IMPORTANT:** Do not punch deeper into the sheet than is necessary. Excessively deep punched holes will make it difficult to turn pages of the bound book.

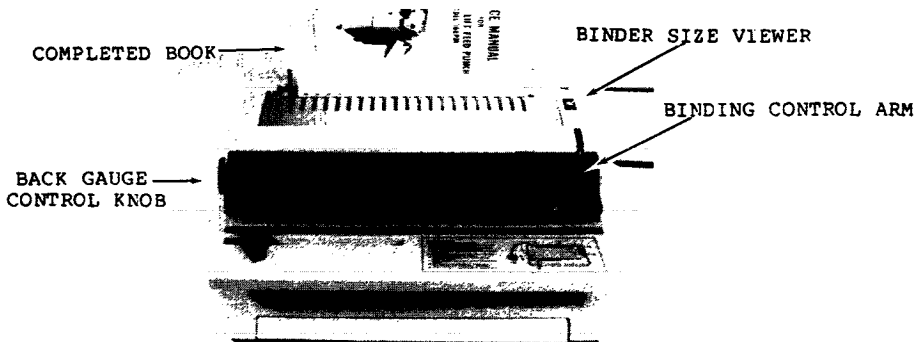


Figure 4.3

#### 4.0 PUNCHING (Continued)

**NOTE:** Clearing Of Jams. If the machine is unable to complete its punch cycle, it will automatically return to its original home position within three (3) seconds. Jams occur if too many sheets are inserted into the punch throat at one time, or if material being punched is unusually tough. When the punch has returned to its home position, withdraw the material from the punch throat and reduce its thickness before attempting to punch again.

The "Open End" design of the punching mechanism will permit full length punching of sheets longer than 12". This is done in multiple steps. Simply divide the dimension of the binding edge to be punched into units that can be accommodated on the Punch Alignment Scale. Repeat the punching operation until the binding edge is completely punched.

**EXAMPLE:** In punching an edge 24" long, divide into two 12" sections. Beginning at the left, determine the necessary number of holes and provide for the minimum 1/8" margin at your far left. Moving to the right, repeat **EXCEPT** providing for a margin on the right hand side. Check for centering as previously indicated.

**NOTE:** Your GBC Electric Combo is designed for punching average weight paper or similar material of equivalent weight. Do not punch more than 20 sheets of ordinary stock at one time. The proper number of sheets to be punched at one time is dependent on the weight and finish of the paper, ease of punching, etc., and can only be determined by trial punching. Punching too many sheets in one "lift" may result in a "feathered edge" hole and may place excessive stress on the machine.

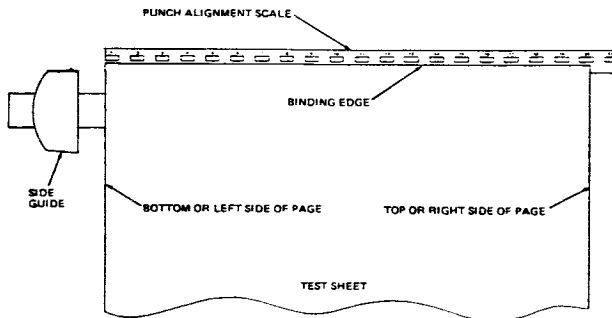


Figure 4.4

## PUNCHING (Continued)

### 4.2 Extended Covers

Books that have "Flush" covers (same as the size of the body sheets) can be punched with the cover and body stock gathered into one complete unit and both can be punched to the same setting of the machine.

"Extended" covers, those slightly larger than the body on any or all dimensions, must not be gathered with the body sheets for punching.

First, all body sheets should be punched.

Then, the side guide must be reset for the covers. By resetting the side guide and centering the covers, the same punching pattern used on the body sheets will be centered on the covers.

After punching the covers, gather them to body sheets as you bind.

### 4.3 Binding

The binding process begins by making the selection of the proper plastic binding to be used. Plastic binding selection should be done by following Section 4.1.9 Punching.

To allow free turning of the sheets after they are plastic the correct diameter of the binding element should be from 1/16" up to 1/8" larger than the actual thickness of the book.

The chart below lists the color code and the sizes of plastic sizes of plastic bindings they represent.

COLOR CODE	FRACTIONAL SIZE	MILLIMETER SIZE
Red	3/16" to 7/16"	5 to 10 mm
Orange	1/2" to 9/16"	12 to 14 mm
White	5/8" And Above	16 mm And Above

## PUNCHING (Continued)

### 4.4 Binder Operation

Your GBC Electric Combo is equipped with a unique electric binder. Being familiar with this function of the machine is important.

1. In Section 4.1 Paragraph 9 we arrived at an approximate binding size. Looking in the viewer, move the binding selector to that number. This will allow the plastic binding to open enough to bind. Depress the foot pedal to return hooks to the home position. You are now ready to bind.

Place a binding element on the binding head of your Electric Combo with the rings between the vertical pins (See Figure 4.3.1). **ALWAYS** be sure the tips of the plastic rings are on top and pointing away from you. Next depress the foot pedal to open the binding.

**NOTE:** If the binding does not open enough adjust the binding selector to the appropriate opening.

3. Pick up the punched book. Holding the book firmly in your left hand with your fingers on the back cover of the book and your thumb on the front cover, place the punched book vertically into the area of the open rings of the binding element. The front cover should **ALWAYS** face toward you. Align holes with the tips of the plastic rings. Swing book down to allow the rings to enter the punched holes of the book. (See Figure 4.3.1).
4. Depress foot switch to close binding. Lift the bound book off the vertical fingers of the binding head.

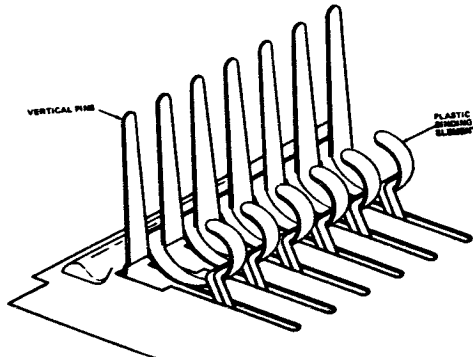


Figure 4.3.1

## **4.0 PUNCHING (Continued)**

### **4.5 Removing Or Adding Pages**

1. Place the book front side down on the binder, allowing the vertical fingers to enter the binding element rings.
2. Move the binder selector gradually up until the binding opens enough to add or delete. Move the selector in the opposite position to close the binding.

### **4.6 Special Attachments**

Taped to the bottom of the Electric Combo are two (2) small aluminum screw posts. The use of these posts with your Electric Combo is necessary for efficient binding with 1-1/4 inch and larger oval surelox plastic binding elements.

To install the two Posts included with your GBC Electric Combo first remove the two screws directly behind the upright holding fingers. Then, screw the posts in their place.

You are now ready to proceed with your binding job. In operation the two white Posts will support the oval surelox plastic binding elements and prevent them from sliding up and over the top of the upright holding fingers.

**NOTE:** The aluminum posts are intended for use only with 1-1/4 inch and larger oval surelox plastic binding elements. It will be necessary to remove the Posts when binding with the other types of GBC Plastic Bindings.

### **4.7 Removing Punching Waste**

Slide the chip tray drawer completely out from the front of the machine. Empty the chips from the drawer and replace the drawer.

**NOTE:** It is important to empty the drawer often to insure proper punching operation.