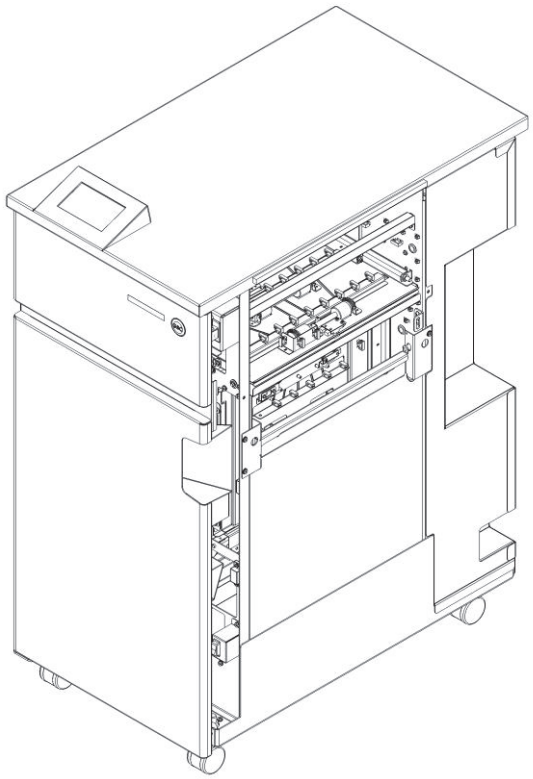
SmartPunch Plus MX-GBCP3



GB *Operation Instructions Manual*

ACCO Brands, Inc.
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SmartPunch Plus

Please read these instructions carefully and keep them in a safe place for future reference.

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TABLE OF CONTENTS

1. SAFETY INSTRUCTIONS

THE SAFETY OF YOU AND OTHERS IS VERY IMPORTANT TO GBC. IMPORTANT SAFETY MESSAGES AND INFORMATION ARE CONTAINED IN THIS MANUAL AS WELL AS ON THE MACHINE ITSELF. PLEASE MAKE SURE YOU CAREFULLY READ AND UNDERSTAND ALL OF THESE BEFORE OPERATING THE MACHINE.

THE SAFETY ALERT SYMBOL PRECEDES EACH SAFETY MESSAGE IN THIS OPERATION INSTRUCTIONS MANUAL. THIS SYMBOL INDICATES A POTENTIAL PERSONAL SAFETY HAZARD THAT COULD HURT YOU OR OTHERS.

THE FOLLOWING PICTORIAL IS FOUND ON THE SMARTPUNCH PLUS:

This safety symbol means that you might get seriously hurt or killed if you open the product and expose yourself to hazardous voltage. NEVER remove the screwed-on covers. ALWAYS refer service requirements to qualified service personnel.

Important safeguards

- Use the SmartPunch Plus only for its intended purpose of punching, creasing, & perforating paper and covers according to the indicated specifications.
- Retain the Operation Instructions manual for future use.

  CAUTION: THE PRINTER ON/OFF SWITCH DOES NOT CUT OFF POWER FROM THE DEVICE.
- The SmartPunch Plus must be connected to a supply voltage corresponding to the electrical rating of the machine operation instructions (also listed on the serial number label).
- The grounding plug is a safety feature and will only fit into the proper grounding-type power outlet. If you are unable to insert the plug into an outlet, contact a qualified electrician to have a suitable outlet installed.
- Do not alter the plug on the end of the cordset (if provided) of the SmartPunch Plus. It is provided for your safety.
- Unplug the SmartPunch Plus before moving the machine or whenever the machine is not in use for an extended period.
- Do not operate the SmartPunch Plus if the machine has a damaged power supply cord or plug. Do not operate the machine after any malfunction. Do not operate the machine in case of liquid spills, or if the machine has been damaged in any other way.
- Do not overload electrical outlets beyond their capacity. To do so may result in fire or electrical shock.

Cleaning

- You may clean the exterior of the SmartPunch Plus using a soft, damp cloth.
- Do not use detergents or solvents as damage to the machine may occur.

Safety messages

MAIN CORDSET SELECTION

(THE FOLLOWING NOTE ONLY APPLIES ONLY TO THE UNITS RATED 230V 50Hz, AND LOCATED IN THE EUROPEAN UNION)

CAUTION: WHEN CHOOSING A DETACHABLE LINE CORD FOR USE WITH YOUR SMARTPUNCH PLUS, ALWAYS FOLLOW THE FOLLOWING PRECAUTIONS

The cordset consists of three parts: the attachment plug, the cord and the appliance inlet. Each of these components must have European regulatory safety approvals.

The following minimum electrical ratings for the specific cordset are published for safety purposes.

DO NOT USE CORDSETS THAT DO NOT MEET THE FOLLOWING MINIMUM ELECTRICAL REQUIREMENTS.

PLUG: 3 amperes, 250 volts, 50/60 Hz, Class 1, 3 conductor, European safety approved.

CORD: Type H05VV-F3G0.75, Harmonized (< HAR >). The "< >" symbols indicate cord approved according to appropriate European standard (NOTE: "HAR" may be substituted for approval mark of European safety agency that approved the cord. An example would be "< VDE >").

APPLIANCE CONNECTOR: 3 amperes, 250 volts, 50/60 Hz, European safety approved, Type IEC 320. The cordset shall not exceed 3 meters in length. A cordset with component electrical ratings greater than the minimum specified electrical ratings may be substituted.

FCC NOTE

(THE FOLLOWING NOTE ONLY APPLIES TO THE UNITS RATED 115V 60Hz.)

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the Operation Manual, may cause harmful interference with radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his/her own expense.

CAN ICES-3 (A)/NMB-3(A)

CAUTION: ANY MODIFICATIONS MADE TO THIS DEVICE THAT ARE NOT APPROVED BY GBC MAY VOID THE AUTHOIRITY GRANTED TO THE USER BY THE FCC AND/OR INDUSTRY CANADA TO OPERATE THIS EQUIPMENT.

Service, SmartPunch Plus

Do not attempt to service your SmartPunch Plus yourself. Contact an authorized service representative for any required repairs or major maintenance for your SmartPunch Plus.

DO NOT REMOVE THE MACHINE'S COVER.

There are NO user-serviceable parts inside the machine in order to avoid potential personal injury and/or damage to property or the machine itself.

Service, Diesets

Every dieset is thoroughly oiled at the factory prior to shipping. During normal use this oil will be exhausted and should be replaced. As part of regular maintenance, each dieset should be oiled.

See Section 8 SmartPunch Plus Dieset Manual for instructions on servicing the Diesets.

2. INTRODUCTION

Thank you for purchasing the SmartPunch Plus. It is a versatile production system that will enable you to punch, crease & perforate documents for a variety of binding styles by means of a simple die change. It has also been designed for easy operation.

The SmartPunch Plus is an innovative solution for punching, creasing & perforating paper and offers the following design features:

- Quick-change die sets that can be interchanged without any tools.
- All SmartPunch Plus die sets include an Identification Label providing the user with the hole pattern and name.
- Convenient storage area for two extra Die Sets.

Duty Cycle and Product Positioning

The GBC SmartPunch Plus provides a flexible, cost effective punching solution for light to medium level punching production environments. It is designed for production print users that typically punch their documents at an average of 20-30% of their overall workflow. For customers that run continuous punching for long runs of over 4 hours, performance may vary or degrade due to a wide range of media weights and environmental conditions that can occur.

AMPV - Nominal 600,000 average monthly print volume (A4/letter), assuming volume is split 50/50 between punch and bypass (300,000 punch and 300,000 bypass).

Maximum Recommended Monthly Volume - The maximum recommended monthly punch volume should NOT exceed 400,000.

Maximum Punch Duty Cycle - In addition to the aforementioned conditions, no more than 2 sheets of 300gsm per 5 sheets of 75gsm should be punched. The heaviest paper stocks are typically used as only the front and back covers of the bound book application.

Operating Die Set Supplies

Dies are considered consumables and when worn, must be replaced.

Each die set has a 90-day warranty from the date of purchase. The warranty is void if the die is used beyond its specifications.

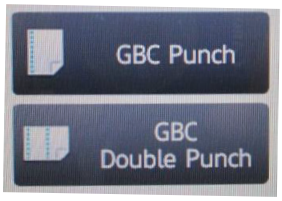
Punch die life will be maximized if oiled every 100,000 punch cycles (see Dieset Service for details)

Die sets have an expected use life of 750,000 punches using 20 lb/75 gsm paper. This is a minimum life expectation only. Die life is NOT guaranteed due to a wide range of media weights and environmental conditions that the dies may endure. If you are going to be punching extended runs that exceed the die use life, it is strongly recommended that you have extra die sets on hand to continue with minimal downtime.

3. QUICK START GUIDE

SmartPunch Plus must be connected to AC power to enable any feature of the machine. Choose from the following modes of operation on SmartPunch Plus from the Settings>Modes screen from the user interface.

When running crease or perforation modes, the corresponding mode must be selected on the printer for that SmartPunch mode, refer to Table 4 in Section 7.



Printer punch mode icon

A. Bypass Mode:

This operation will allow paper to pass through the SmartPunch Plus without being punched.

This is the default mode of operation for SmartPunch Plus.

B. Punch Modes: When a punch die is inserted

To configure the Die Set for the desired sheet size that is being processed see section 8 – Die Set User Manual.

i) Single Punch Mode (GBC Punch):

This operation will punch the trail edge of all sheets that pass through the SmartPunch Plus. A properly configured die set must be inserted before running single punch mode. See section 4.A for details on Die set changes and follow the labels on the die set for configuration.

SmartPunch Plus will now function in Single Punch mode.

ii) Double Punch Mode (GBC Double Punch):

This operation will punch two rows of holes- One in the middle of the sheet and the other adjacent to the trail edge of all sheets that pass through the SmartPunch Plus. A properly configured die set must be inserted before running punch mode. See section 4.A for details on Die set changes and follow the labels on the die set for configuration.

SmartPunch Plus will now function in Double Punch mode.

iii) Saddle Punch Mode (GBC Double Punch):

This operation will punch the two rows of holes- One just before the center of the sheet and the other the same distance after the center of the sheet. A properly configured die set must be inserted before running punch mode. See section 4.A for details on Die set changes and follow the labels on the die set for configuration.

SmartPunch Plus will now function in Saddle Punch mode.

C. Crease Modes: When a Crease die is inserted

i) Center Crease Mode (GBC Punch):

This operation will apply a crease in the center of all the sheets that pass through the SmartPunch Plus. The crease die set must be inserted before running center crease mode.

SmartPunch Plus will now function in Center Crease mode

.

ii) Book Crease Mode (GBC Double Punch):

This operation will apply 2 creases around the center of all the sheets that pass through the SmartPunch Plus. These crease positions can be adjusted to increase the width of the book spine and its position from the center. The crease die set must be inserted before running book crease mode.

SmartPunch Plus will now function in Book Crease mode.

iii) C-Fold Crease Mode (GBC Double Punch):

This operation will apply 2 creases spaced at 1/3 and 2/3 from the trail edge of the sheet. These crease positions can be adjusted to ensure the sheet will lay flat when folded. The crease die set must be inserted before running C-Fold crease mode.

SmartPunch Plus will now function in C-Fold Crease mode.

D. When a Perforation die is inserted

i) Single Perforation Mode (GBC Double Punch):

This operation will apply a perforation, at the trail edge of all LEF sheets & between the center and trail edge of all SEF sheets, that pass through the SmartPunch Plus. A perforation die set must be inserted before running single perforation mode.

SmartPunch Plus will now function in Single Perforation mode.

ii) Center Perforation Mode (GBC Punch):

This operation will apply a perforation at the center of the all the sheets that pass through the SmartPunch Plus. A perforation die set must be inserted before running single perforation mode.

SmartPunch Plus will now function in Center Perforation mode.

iii) Double Perforation Mode (GBC Double Punch):

This operation will apply 2 perforations from the center of the sheet to the trail edge, depending on sheet size and adjustment, on all the sheets that pass through the SmartPunch Plus. The perforation die set must be inserted before running double perforation mode.

SmartPunch Plus will now function in Double Perforation mode.

4. USER OPERATIONS

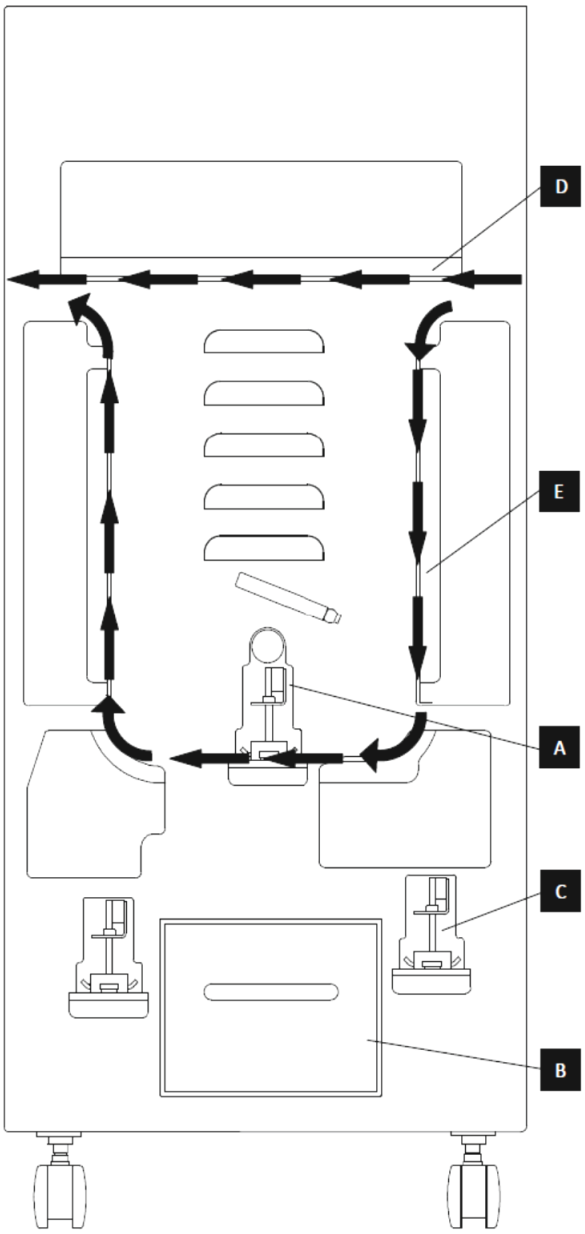
A. Interchanging Die Sets:
Are completed without tools and only take seconds to perform

B. Punch Chip Container:
Easy-to-access chip tray for quick chip disposal

C. Die Set Storage:
Holds up to 2 spare Die Sets

D. Bypass:
Short straight-through paper path for unpunched documents

E. Punch/Crease/Perforation Mode Path:
Wide radius turn can support stocks up to 300g/m^2 cover



Paper flow and User Interactive sections of SmartPunch Plus

A. Interchanging Die Sets:

Your SmartPunch Plus offers the convenience of interchangeable die sets, allowing you to economically punch, crease or perforate documents for a wide variety of binding styles and applications. Changing the die sets is both quick and easy, as the following instructions illustrate:

Note: For advanced Die Set Configuration instructions- See Section 8 Die Set User Manual.

Removing Die Sets from the Machine: The inter-changeable die set slot of the SmartPunch Plus is located above the Punch Chip container at the bottom of the punch.

Step 1: Stop the printer.

Step 2: Open the SmartPunch Plus access door panel.

Step 3: Securely grasp the die lock handle and rotate it in the CCW direction, as indicated in the label near the die lock handle. This releases the die from the locked position.

Step 4: Slide the die set out until it is fully removed, supporting it with both hands. Take care not to let the die identification chip (located on the underside at the rear end) drop onto the die stop as it leaves the machine.

Step 5: Properly store the removed Die Set in the Die Set storage area. (keep away from dust, dirt, and possible accidental falls from the edge of counters, etc.).

Step 6: Select the desired Die Set for your new job and slide it into the Die Set slot. Push the Die set firmly until the Die stop feature contacts the round magnet. This is critical in ensuring the proper position of the die set.

Step 7: Grasp the handle and rotate it in CW direction until the latch is fully engaged, as shown indicated in the label.

WARNING: POSSIBLE PINCH POINT HAZARD. WHEN INSTALLING DIE SETS IN YOUR SMARTPUNCH PLUS, ALWAYS KEEP FINGERS AND OTHER BODY PARTS OUT OF THE MACHINE'S DIE SET SLOT AND AWAY FROM ALL AREAS OF THE DIE SET. FAILURE TO FOLLOW THESE PRECAUTIONS MAY RESULT IN INJURY.

Step 8: Close the Access Door Panel.

Step 9: Proceed with your job.

Please note that when using a new die punch some oil will be present around the punched holes on the sheet. After punching 25 to 50 sheets the die will no longer leave oil on the sheets. It is recommended that a short test job be run after installing a new die or a die that has recently been oiled to remove the residual oil.

B. Punch Chip Container:

The Punch Chip Container for your SmartPunch Plus is located at the front of the machine's base. The drawer should periodically be pulled out and emptied. The SmartPunch Plus uses a sensor to determine when the punch container is full. Once the punch container becomes full the LCD display shows "Chip Tray Full" message.

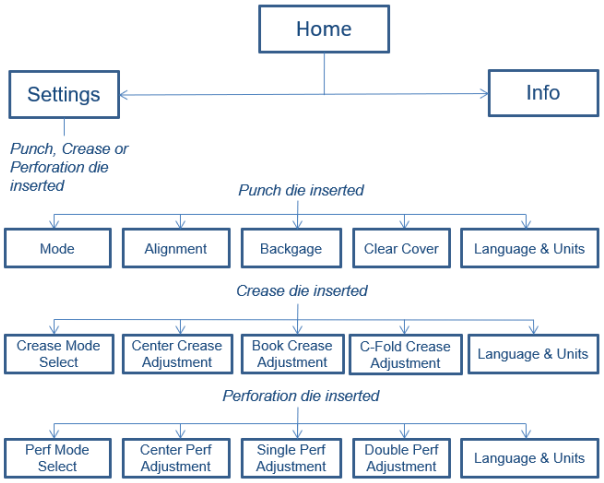
C. Paper Clearing:

When paper is jammed in the paper path of SmartPunch Plus the LCD display shows the area where a sheet(s) is jammed.

Area	Description
	If paper is jammed in Zone 1, lift the paper guide plate located just inside, reach and remove the jammed paper. To close the paper guide, raise the handle to unlatch the mechanism and firmly close it.
	If paper is jammed in Zone 2, move the door to the right, reach in and remove the jammed paper.
	If paper is jammed in Zone 3, press the top lever while holding the bottom lever. This will unlatch the chute; continue to open the chute until it reached the magnet on the right side. Reach in and remove the paper. To return the chute to the closed position, move it back in the opposite direction until the latch mechanism is activated.
	If paper is jammed in Zone 5, unlatch the chute, reach in and remove any jammed paper.
	If paper is jammed in Zone 6, move the door to the left, reach in and remove the jammed paper.
	Before uninstalling the die set, ensure Zone 3 and 5 are cleared of any jammed paper. If there is no paper found in Zone 3 and 5, then uninstall the die set to remove any jammed paper. (see Section 4. Changing the Interchangeable die sets)

5. USER DISPLAY OPERATION CONTROLS

The SmartPunch Plus has a touch screen interactive LCD panel that provides messages, settings, and information relating to the functions of the punch unit.



LCD Panel Overview

Messages on the LCD Panel

1. **Ready**

   SmartPunch Plus is ready to run the selected mode.

2. **Running**

   SmartPunch Plus is running in the selected mode operation.

3. **Chip tray Full**

   When the punch container becomes full of wastepaper chips, this message will be displayed.

4. **Chip tray Out**

   When the punch container is removed or not fully inserted into the punch unit, this message will be displayed.

5. **Check die**

   When the Die Set is removed or not fully inserted into the punch unit, this message will be displayed. When this message is displayed the punch unit will run in Bypass mode only.

6. **Close Door**

   When the Front door is open or not completely closed this message will be displayed.

7. **Paper jam**

   When a sheet of paper becomes jammed within the punch unit, this message is displayed. See the section of this manual titled PAPER CLEARING for instructions on how to remove a jammed sheet.

8. **Setting Mismatch**

   The settings on the printer and the Smartpunch Plus do not match for crease or perforation. Refer to Table 4 in Section 7

9. **Our of Range Adjustment**

   The settings on the Smartpunch Plus are out of range for the sheet size being run. Refer to Table 2 in Section 7

10. **Invalid Sheet Size**

    The sheet sent to the Smartpunch Plus is not valid for the die or mode installed in the punch. Refer to Table 1 in Section 7

Changing the Settings on the LCD panel

A. When a Punch Die is inserted

i) Alignment

Alignment is the distance of the front punched hole from the side edge of the sheet. Follow the LCD screen to modify this setting. This value can be adjusted ±2.0mm.

ii) Backgage

Backgage is the distance of the punched hole(s) from the trail edge of the sheet. Follow the LCD screen ito modify this setting. Refer to Table 3 for the range of adjustment depending on the die inserted.

The settings for backgage MID L and MID XL adjust the backgage of the mid punch holes for double punch mode for Large (L) and Extra Large (XL) sheets. MID L and MID XL function the same as the regular backgage depth but adjust the position of the middle punch. MID L sheets are LTR, Legal, 9x12, A4 & SRA4 in the short edge feed direction. MID XL are 11x17,12x18, A4, A3, & SRA3 all in the short edge feed direction.

iii) Clear Cover

Use this setting to offset the Backgage depth and Alignment setting for Clear Cover media in addition to the standard backgage & alignment setting. Adjusting this offset does not affect the standard Backgage and Alignment setting.

iv) Full Bleed

Use this setting to define how paper of length 9” or 223mm will be treated by the punch. If the sheet of this length being sent is full cover (9” x 11”) then choose the Tab/Full Cover option. If the sheet of this length is 9” x 12” or 225 x 320mm then select Full Bleed.

v) Saddle Punch Adjustment

This will adjust the position of the punches on either side from the center of the sheet. Follow the LCD screen to modify this setting. Refer to Table 2 for the range of adjustment depending on the paper size being run.

B. When a Crease Die is inserted

i) Center Crease Adjustment

This will adjust the position of the crease from the center of the sheet. Follow the LCD screen to modify this setting. Refer to Table 2 for the range of adjustment depending on the paper size being run.

ii) Book Crease Adjustment

This will adjust the position of the creases either side from the center of the sheet. Follow the LCD screen to modify this setting. Refer to Table 2 for the range of adjustment depending on the paper size being run.

iii) C-Fold Crease Adjustment

This mode will place the creases at 1/3 and 2/3 locations on the sheet. The creases can be adjusted from these default positions. Follow the LCD screen to modify this setting. Refer to Table 2 for the range of adjustment depending on the paper size being run.

C. When a Perforation Die is Inserted

i) Center Perf Adjustment

This will adjust the position of the perforation from the center of the sheet. Follow the LCD screen to modify this setting. Refer to Table 2 for the range of adjustment depending on the paper size being run.

ii) Single Perforation Adjustment

This will adjust the position of the single perforation anywhere from the center of the sheet to the trail edge. Follow the LCD screen to modify this setting. Refer to Table 2 for the range of adjustment depending on the paper size being run. Note that if the Single Perf Adjustment is set outside the allowable range for your sheet, the sheet will pass through without perforation and “Out of Range Adjustment” will appear on the screen.

iii) Double Perforation Adjustment

This will adjust the position of two perforations anywhere from the center of the sheet to the trail edge. Follow the LCD screen to modify this setting. Refer to Table 2 for the range of adjustment depending on the paper size being run. Note that if the Double Perf Adjustment is set outside the allowable range for your sheet, the sheet will pass through without perforation and “Out of Range Adjustment” will appear on the screen.

D. Language

The LCD panel can be configured to display one of the following languages: English; Francais; Espanol; Deutsch or Italiano.

E. Units

The LCD panel can be configured to display units in mm or Inches.

Displaying Information on the LCD Panel

When the Info option is selected from the home screen the following information will be shown.

1. **Die type**

   This is type of die set currently installed in the punch. No die will be displayed if a die is not installed.

2. **Die cycles**

   This is the total number of sheets punched with the currently installed die set.

3. **Punch cycles/Perf cycles/Crease cycles**

   This is the total number of punched sheets the system has processed for each type of operation.

4. **Firmware**

   This displays the current level of Main & Communication (Comm) firmware of SmartPunch Plus.

6. PROBLEM SOLVING

Problem	Probable Cause
No power, won't punch	Power cord not attached to back of machine or not properly plugged into the wall.
Punched holes not aligned with the edge of the paper	Follow instructions on die set labels to properly configure the die for a specific sheet size
Sheet jamming repeatedly at die set area.	Remove the die-set, inspect the die throat to see if there is any stuck paper chad. Check that printed sheets do not have excess curl. Make efforts to reduce curl to the minimum possible. Review the printer manual to reduce this if present.
Error code when reading die	Check the die chip is not dirty or worn.
Full cover (9"x11" or 223 x 297mm) does not have the punched holes lined up with Letter or A4 paper.	Check that the Full Bleed setting is set to Tab/Full Cover not Full Bleed
Insert Chip tray message on the LCD interface.	Make sure the Chip tray is fully inserted.

7. SPECIFICATIONS

Speed	Up to 144 sheets per minute	
Paper Weight	Plain: 75gsm - 300gsm (20# bond to 110# cover) Coated: 120gsm - 300gsm (32# bond to 110# cover) Clear cover: 7mil unprinted	
Bypass mode	350mm x 1260mm (13" x 49.6") 450gsm	
Punch Capacity	Single Sheet	
Power Supply	115V, 60Hz, Single Phase 230V, 50Hz, Single Phase	
Electrical	Amps and Frequency	115V; 4.2A; 60Hz (or) 230V; 2.1A; 50Hz
Safety Certification	cTUVus	
Dimensions	L: 745mm; W: 445mm; H: 1100mm L: 29.3"; W: 17.5"; H: 43.3"	
Weight	96 kg 212 lbs	
Shipping Weight	127 kg 280 lbs.	
Manufactured	Assembled in Taiwan	

Table 1. Function Capability Chart

Paper Size	Punch			Crease			Perf		
	Single	Double	Saddle	Middle	Book	C-Fold	Middle	Single	Double
A4 SEF	✓	✓	✓	✓	✓	✓	✓	✓	✓
A4 LEF	✓	X	X	X	X	X	X	✓	X
SRA4 SEF	✓	✓	✓	✓	✓	✓	✓	✓	✓
SRA4 LEF	✓	X	X	X	X	X	X	✓	X
A3 SEF	✓	✓	✓	✓	✓	✓	✓	✓	✓
SRA3 SEF	✓	✓	✓	✓	✓	✓	✓	✓	✓
LT SEF	✓*	✓*	✓*	✓	✓	✓	✓	✓	✓
LT LEF	✓	X	X	X	X	X	X	✓	X
Legal SEF	✓*	✓*	✓*	✓	✓	✓	✓	✓	✓
9x12 SEF	✓	✓	✓	✓	✓	✓	✓	✓	✓
9x12 LEF	✓	X	X	X	X	X	X	✓	X
11x17 SEF	✓	✓	✓	✓	✓	✓	✓	✓	✓
12x18 SEF	✓	✓	✓	✓	✓	✓	✓	✓	✓

*3/5/7 Hole die is not compatible with these sheet sizes

Table 2. Crease and Perforation Modes Adjustment Range

Media		Crease								Perforation					
		Center		Book X		Book Y		C-Fold		Center		Single		Double	
Size	Orientation	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
Letter	LEF											5	14	5	14
	SEF	-12	12	0.2	21	0.2	21	-5	5	-12	12	5	139	5	139
9x12	LEF											5	14	5	14
	SEF	-7	12	0.2	21	0.2	21	-5	5	-7	12	5	152	5	152
Legal	SEF	-12	12	0.2	21	0.2	21	-5	5	-12	12	5	177	5	177
11x17	SEF	-12	12	0.2	21	0.2	21	-5	5	-12	12	5	215	5	215
12x18	SEF	-12	12	0.2	21	0.2	21	-5	5	-12	12	5	228	5	228
A4	LEF											5	14	5	14
	SEF	-12	12	0.2	12	0.2	12	-5	5	-12	12	5	148	5	148
SRA4	LEF											5	14	5	14
	SEF	-12	12	0.2	21	0.2	21	-5	5	-12	12	5	160	5	160
A3	SEF	-12	12	0.2	21	0.2	21	-5	5	-12	12	5	210	5	210
SRA3	SEF	-12	12	0.2	21	0.2	21	-5	5	-12	12	5	225	5	225

Table 3. Punched Holes Adjustment Range

Die Type	Trail & Saddle		MID L		MID XL	
	Min	Max	Min	Max	Min	Max
C4 Color Coil Round hole	-2.0	15.8	-2.0	6.4	-2.0	21.8
C4O Color Coil Oval	-2.8	14.6	-2.8	6	-2.8	20.8
4H6 2/4 Hole 6.5 mm	-7.0	9.8	-7.0	5.4	-7.0	15.8
4HS 4 hole Scandinavian	-7.0	9.8	-7.0	5.4	-7.0	15.8
3H 3 hole 8mm	-5.4	9.8	-5.4	4.6	-5.4	16.6
7H8 3/5/7 hole 8mm	-5.4	9.8	-5.4	4.6	-5.4	16.6
4H8 2/4 hole 8mm	-5.4	9.8	-5.4	4.6	-5.4	16.6
PB Plastic Bind Rectangular	-2.2	16.0	-2.2	7	-2.2	22.2
VBLTR VeloBind Round LTR	-1.6	16.8	-1.6	7	-1.6	22.8
VBA4 VeloBind Round A4	-1.6	16.8	-1.6	7	-1.6	22.8
W2R Wire 2:1 Round	-2.6	14.0	-2.6	5.4	-2.6	20.2
W2S Wire 2:1 Square	-3.2	14.0	-3.2	5.8	-3.2	20.2
W3R Wire 3:1 Round	-2.2	15.6	-2.2	6.6	-2.2	21.2
W3S Wire 3:1 Square	-2.2	15.6	-2.2	6.6	-2.2	21.8

All dimensions for Tables 2 & 3 are in mm. Divide values by 25.4 to get the inch equivalent.

Table 4. Printer and SmartPunch Modes

			Die set	Printer UI	
				GBC Punch	GBC Double Punch
GBC UI	Punch	Double	Regular die	Single Punch	Double Punch
		Saddle	Regular die	Single Punch	Saddle Punch
	Crease	Middle	Crease die	Crease (Middle)	Setting Mismatch
		Book	Crease die	Setting Mismatch	Crease (Book)
		C-Fold	Crease die	Setting Mismatch	Crease (C-Fold)
	Perf	Middle	Perf die	Perf (Middle)	Setting Mismatch
		Single	Perf die	Setting Mismatch	Perf (Single)
		Double	Perf die	Setting Mismatch	Perf (Double)

Setting Mismatch appears when the GBC Punch button on the printer is incompatible with the mode selected on the StreamPunc Plus

8. DIE SET USER MANUAL

The SmartPunch Plus accepts Punch, Crease and Perforation dies. Punch dies must be configured for the paper size being processed. Crease and Perforation dies do not need configuring.

Glossary

LEF- Long Edge Feed- Indicates that the paper is being fed through the machine so that the longer side of the sheet will be punched.

SEF- Short Edge Feed- Indicates that the paper is being fed through the machine so that the shorter side of the sheet will be punched.

Legal Paper- 8.5" X 14"
Ledger Paper- 11" X 17"

Punch Dies

The punch die sets for the SmartPunch Plus are intended to work with multiple paper sizes and sheet feed directions. In order to accommodate different sheet sizes the die set must be configured to the correct number of punching pins and the die stop must be set to the proper position. The die label contains information on the common paper punching sizes, for the uncommon sizes please refer to Table 1.

Pin Numbering

Die punching pins are numbered sequentially starting from the handle end. Figure 8.1 shows a 47 hole coil die as an example. All square and round hole die sets follow the same pin numbering format.

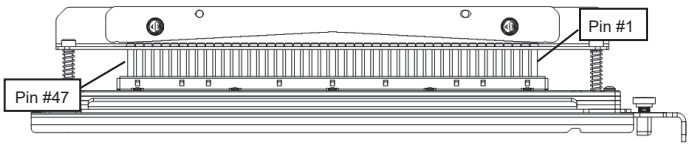


Figure 8.1 Coil Die Set Pin Numbering

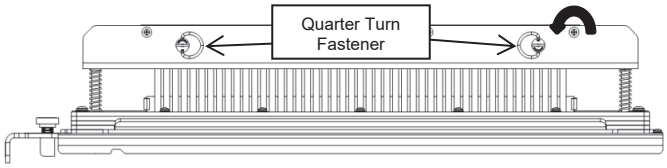


Figure 8.2 Pressure Bar Removal

To remove punch pins from the punch die first turn the two Quarter Turn Fasteners counter clockwise to release the pressure bar. Remove the pressure bar and set aside.

Figure 8.3 Pressure Bar

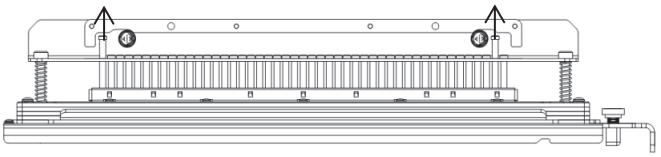


Figure 8.3 Pin Removal

Lift up and remove the desired pins according to Table 8.1. Store pins in the pin storage tray inside front door of machine making sure pins cannot be dropped, damaged or lost while removed.

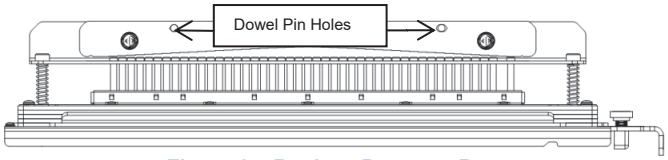


Figure 8.4 Replace Pressure Bar

Replace the pressure bar by lining up dowel pin holes with exposed dowel pins. Hold pressure bar so that it is seats completely over dowel pins and then rotate Quarter Turn Fasteners clockwise until a click is felt to lock pressure bar in position.

Important! Make sure pressure bar is attached and both Quarter Turn Fasteners are in the locked position prior to inserting the die set into the machine or serious damage can occur to both the machine and die set.

Pin Removal

	Coil Rnd/Oval	Wire 2:1 Rnd/Sq	Wire 3:1 Rnd/Sq	3 Hole 8mm	3/5/7 Hole 8mm	2/4 Hole 8mm	2/4 Hole 6.5mm	2/4 Hole SCAN	VeloBind 11 Hole LTR	VeloBind 12 Hole A4	CombBind
US Paper Sizes	Pin numbers to be removed based on paper size and orientation										
GBC Part Number	WSM7724570 WSM7724583	WSM7724571 WSM7724581	WSM7724584 WSM7724582	WSM7724573	WSM7724574	WSM7724575	WSM7724576	WSM7724577	WSM7724578	WSM7724579	WSM7724580
LTR LEF	2, 47	1, 23	1, 34	NONE	3H/5H/7H	N/A	N/A	N/A	NONE	N/A	1, 21
LTR SEF	7, 42	NONE	5, 31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NONE
LEGAL SEF	7, 42	NONE	5, 31	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NONE
LEDGER SEF	2, 47	1, 23	1, 34	NONE	3H/5H/7H	N/A	N/A	N/A	NONE	N/A	1, 21
9" x 12" LEF	1, 2, 47	1, 23	1, 34	NONE	3H/5H/7H	N/A	N/A	N/A	NONE	N/A	1, 21
12" x 18" SEF	1, 2, 47	1, 23	1, 34	NONE	3H/5H/7H	N/A	N/A	N/A	NONE	N/A	1, 21

	Coil Rnd/Oval	Wire 2:1 Rnd/Sq	Wire 3:1 Rnd/Sq	3 Hole 8mm	3/5/7 Hole 8mm	2/4 Hole 8mm	2/4 Hole 6.5mm	2/4 Hole SCAN	VeloBind 11 Hole LTR	VeloBind 12 Hole A4	CombBind
ISO Paper Sizes	Pin numbers to be removed based on paper size and orientation										
GBC Part Number	WSM7724570 WSM7724583	WSM7724571 WSM7724581	WSM7724584 WSM7724582	WSM7724573	WSM7724574	WSM7724575	WSM7724576	WSM7724577	WSM7724578	WSM7724579	WSM7724580
A4 LEF	NONE	NONE	NONE	N/A	N/A	2H/4H	2H/4H	NONE	N/A	NONE	NONE
A4 SEF	7, 41	4, 21	5, 30	N/A	N/A	1, 4	1, 4	NONE	N/A	N/A	4, 19
A3 SEF	NONE	NONE	NONE	N/A	N/A	2H/4H	2H/4H	NONE	N/A	NONE	NONE
SRA4 LEF	NONE	NONE	NONE	N/A	N/A	2H/4H	2H/4H	NONE	N/A	NONE	NONE
SRA3 SEF	NONE	NONE	NONE	N/A	N/A	2H/4H	2H/4H	NONE	N/A	NONE	NONE

*For CombBind 20H configuration pull Pin Number 1

Table 8.1 Pin Removal Guide

The above chart shows the information on which pins need to be removed to correctly punch each sheet size and configuration that the SmartPunch Plus can accept. For standard offering dies not found in the chart no pin adjustment is necessary.

Pin Addition

The process for adding punch pins is the same as pin removal except that pins are added and not removed once the pressure bar is off. When replacing punch pins make certain that the pins are completely seated against the pin retainer prior to reattaching the pressure bar.

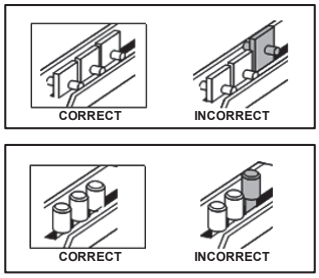


Figure 8.5 Pin Addition

Die Stop Position

On some of the SmartPunch Plus die sets there is an adjustable die stop which is used to re-center the die set for certain sheet sizes, as shown in Figure 8.7. For die sets without a die stop knob there is no die stop position adjustment necessary.

For units with a die stop knob, the die stop must be set to the correct position or the punched holes will not be centered on the sheet. The common paper sizes are shown on the die stop handle label below the die stop knob, for the uncommon paper sizes please refer to Table 8.2.

Position A is when the arrow on the die stop knob points down towards the handle and lines up with the lower arrow on the die stop handle label. Position B is when the arrow on the die stop knob points to the side and lines up with the side arrow on the die stop handle label. (See Figure 8.7)

To change the die stop position first remove the die from the machine and place on a flat stable surface. While holding the die in a stable position push down on the die stop knob until the knob is free to rotate. Then turn the knob until the arrow on the knob lines up with the desired arrow on the die stop handle label. Once the arrows line up, release the die stop knob making sure that the metal die stop on the bottom fully seats against the die plate.

	Coil Rnd/ Oval	Wire 2:1 Rnd/Sq	Wire 3:1 Rnd/Sq	CombBind
US Paper Sizes	Die Stop Position Based On Paper Size or Orientation			
LTR LEF	B	A	A	A
LTR SEF	B	A	B	A
LEGAL SEF	B	A	B	A
LEDGER SEF	B	A	A	A
9" x 12" LEF	B	A	A	A
12" x 18" SEF	B	A	A	A

	Coil Rnd/ Oval	Wire 2:1 Rnd	Wire 3:1 Rnd	CombBind
US Paper Sizes	Die Stop Position Based On Paper Size or Orientation			
A4 LEF	A	A	A	A*
A4 SEF	A	A	A	B
A3 SEF	A	A	A	A*
SRA4 LEF	A	A	A	A*
SRA3 SEF	A	A	A	A*

*For CombBind 20H Configuration set to die stop position B

Table 8.2 Die Stop Position Guide

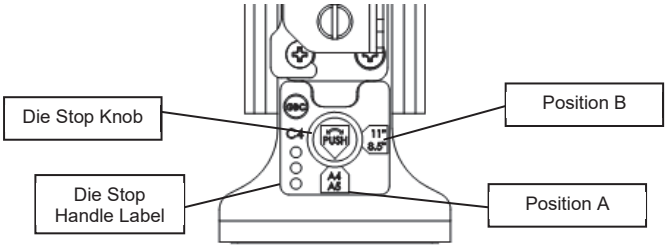


Figure 8.7 Coil Die Stop Position

Die Set Maintenance

The SmartPunch Plus die set must be periodically oiled and greased to maintain proper functionality and prevent premature failure of the die set. The die set should be oiled and inspected every 250K cycles. Before lubricating the die, remove all visible paper dust present, preferably using compressed air or a clean dry cloth if compressed air is not available. If compressed air is available, use it to clean out the area between the top and bottoms plates. Do not used a cloth to clean this area.

To lubricate die set pins that do not have felt pads:

1. Depress the die set so that the pins protrude from the bottom plate.
2. Apply a drop of high quality machine oil to the end of each pin.
3. Wipe clean, leaving a light coat of oil on them.

To lubricate die set pins that have felt pads:

1. Lubricate with a high quality machine oil.
2. Apply oil lightly along the length of the pad [1], but do not over saturate.
3. Do not use spray lubricants because they tend to dry up quickly and leave a sticky residue.

Oil from the die may blemish the first few punched sheets after oil has been applied. Run test punched copies until clean copies can be made.

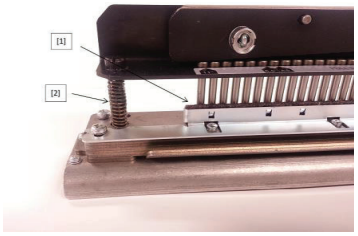


Figure 8.8 Lubrication

HD Die Set Shoulder Bolts

HD die set shoulder bolts must be checked and lubricated as necessary every 750K cycles. If the grease is missing from the springs or shoulder bolts [2] then additional grease must be applied.

1. Lubricate with a high quality Teflon-based grease.
2. Apply grease to shoulder bolts and springs [2]
3. Wipe up any excess grease.

End of Die Life

If a die set is at the end of its life it will tend to cause paper jams due to hanging paper chips. This is a result of die plate wear and not pin wear, which cannot be corrected. When this occurs, the die set must be replaced with a new one. Attempting to replace or sharpen pins will not correct the issue since the wear is in the plates and therefore is not recommended.

SmartPunch Plus Punch Die Sets

The SmartPunch Plus uses a variety of easily interchangeable die sets that allow you to punch documents in line for several different binding styles. By selecting the appropriate die set, you can use your SmartPunch Plus to punch documents in any of the following binding styles. DuraGlide HD™ die sets are shown in bold where available.

Die Set Description	Sharp Part Number	
For Plastic Comb Binding:		
PB Plastic Bind; Hole Size: 8mm x 2.9mm (0.313" x 0.116") (LxW); Center-to-Center Hole Spacing: 14.3mm (0.563")	Die, Comb Bind **Die, Comb Bind, HD**	MX-GBCP19 **MX-GBCP51HD**

* When the Plastic Comb binding die is used in the 21 hole configuration on A4 width paper (297mm), there is the potential for the outer edge of holes 1 and 21 to be torn. The theoretical paper edge should be 1.62mm from the edge of the sheet. This event is dependent on paper type, paper width and hole alignment optimization. To avoid this issue, it is recommended to use a 20 hole configuration instead. 20 hole comb binding supplies are commonly available from GBC and other manufacturers and are considered more optimal than the 21 hole configuration.

For Twin Loop™ Binding:		
W3 Wire; Square; 3 Holes per inch; Hole Size: 4mm x 4mm (0.156" x 0.156") (L x W); Center-to-Center Hole Spacing: 8.5mm (0.333")	Die, Wire 3.1, Sq.	MX-GBCP32SQ
W2 Wire; Rectangle; 2 Holes per inch; Hole Size: 6.4mm x 5.4mm (0.250" x 0.214")(L xW); Center-to-Center Hole Spacing: 12.7mm (0.500")	Die, Wire 2.1, Sq.	MX-GBCP21SQ
W3 Wire; Round; 3 Holes per inch; Hole Size: 4mm (0.158") Diameter; Center-to-Center Hole Spacing: 8.5mm (0.335")	Die, Wire, 3:1, Rnd.	MX-GBCP32RND
W2 Wire; Round; 2 Holes per inch; Hole Size: 6.5mm (0.0.256") Diameter; Center-to-Center Hole Spacing: 12.7mm (0.5")	Die, Wire, 2:1, Rnd.	MX-GBCP21RND
For Color Coil™ Binding:		
C4 Coil; Round; 4 Holes per inch; Hole Size: 4.4mm (0.174") Diameter; Center-to-Center Hole Spacing: 6.3mm (0.2475")	Die, Coil, Rnd. **Die, Coil, Rnd, HD**	MX-GBCP44RND **MX-GBCP52HD**
 C4 Coil; Oval; 4 Holes per inch; Hole Size: 4mm x 5mm (0.158" x 0.197") (L x W); Center-to-Center Hole Spacing: 6.3mm (0.2475")	Die, Coil, Oval	MX-GBCP44OVL
For Velo® Bind:		
VB Velobind®; Round; 1 Hole per inch Hole Size: 3.2mm (0.125") Diameter; Center-to-Center Hole Spacing: 25.4mm (1")	Die, Velobind®, 11 Holes, Ltr.	MX-GBCP11
For Loose Leaf Binding:		
3 Ring Binder; U.S. (Standard Loose-leaf Patterns); Hole Size: 8mm (0.316") Diameter	Die, 3 Hole, 8mm **Die, 3 Hole, 8mm, HD**	MX-GBCP03 **MX-GBCP53HD**
3 Ring, 5 Ring, 7 Ring; U.S. (Standard Loose-leaf Patterns); Hole Size: 8mm (0.316") Diameter	Die, 3/5/7 Hole, 8mm	MX-GBCP357

 Graphics do not represent actual punch pattern dimensions or spacing.

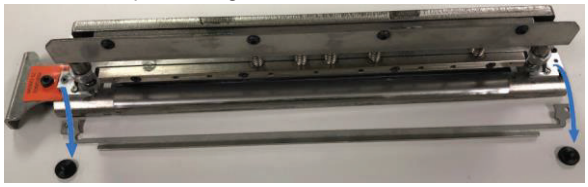
Crease & Performation dies

Perforation Die Backing Plate Exchange

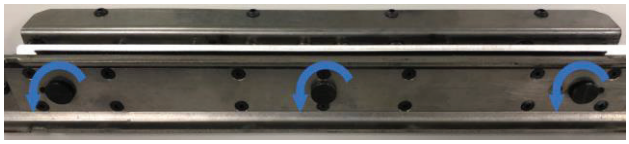
It is recommended to exchange the backing plate of the 75-120gsm die every 375K cycles and the 120-300gsm die every 250K cycles. Two backing plates are provided with each Perforation die. Additional backing plate kits can be purchased as service parts.

To exchange the backing plate:

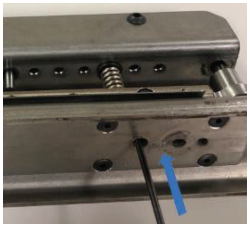
1. Complete steps 1-4 from Section 4-A of this manual to remove the die from the machine. Take care not to damage the chip located at the rear underside of the die.
2. Unscrew the 2 knurled screws from the input sheet guide and remove the input sheet guide.



3. Turn the die onto its side and unscrew the 3 knurled screws from the underside of the die.



4. Remove the backing plate from the throat of the die. If the backing plate does not come out easily, push it out from the bottom by inserting a tool such as an Allen wrench, into the holes provided, to release it.



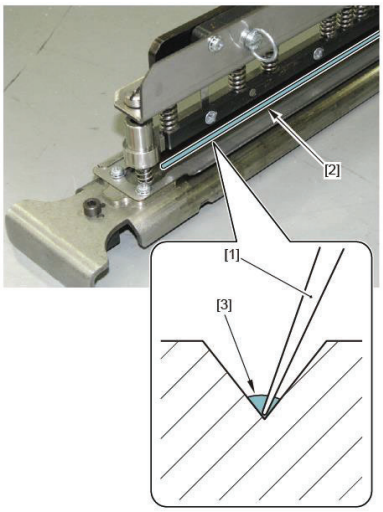
5. Slide the new backing plate into the throat of the die and let it fall into the backing plate opening.
6. Carefully turn the die over and secure the new backing plate using the 3 knurled screws.
7. Re-attached the input sheet guide and secure the input sheet guide using the 2 knurled screws.

Crease & Perforation Die Cleaning

Media being creased or perforated may become smeared by toner deposits accumulating in the groove of the crease die or the backing plate of the perforation die. If this is observed follow the procedure below to clean the die.

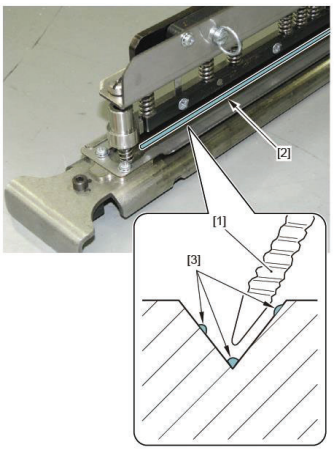
To clean the die:

1. Complete steps 1-4 from Section 4-A of this manual to remove the die from the machine. Take care not to damage the chip located at the rear underside of the die.
2. Scrape toner residue [3] from the crease die groove [2] or perforation backing plate using a plastic pointed swab [1] or similar.



Be careful not to damage the groove of the crease die or backing plate of the perforation die. Do not use a metal pointed tip to remove the toner.

3. Clean excess toner particles [3] from the crease die groove [2] or perforation backing plate using a foam or cotton swab [1].



4. Complete steps 6-9 from Section 4-A of this manual to insert the crease to perforation die into the machine.
5. Once the die has been inserted, feed some sheets to confirm that there is no toner marking on the sheet. If toner marking is still observed complete the cleaning procedure again.

Die Set Description	GBC Part Number	
For Creasing:		
Crease	DIE, Crease	MX-GBCPCR
For Perforation:		
12 TPI for media 75-120gsm	DIE, Perf, 75-120 GSM	MX-GBCPPF12
9 TPI for media 120-300gsm	DIE, Perf, 120-300 GSM	MX-GBCPPF9

Graphics do not represent actual punch pattern dimensions or spacing.