



StreamPunch
Technical Service Manual

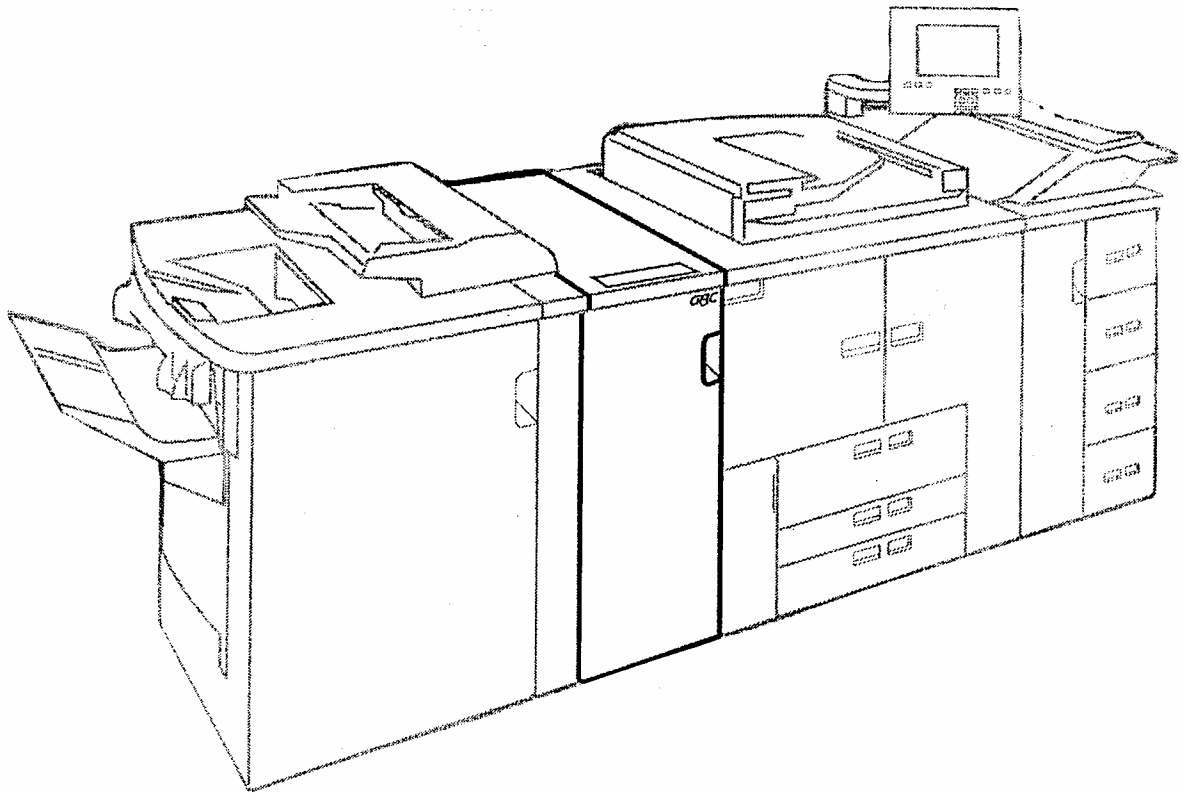


Table of Contents

Section	Page
Safety Information	
Safety Information	1
1. Introduction	
Introduction	5
2. Getting to Know the StreamPunch	
Operating Controls, Paper Paths	6
3. Operating and Finishing Modes	
Punching Patterns	7
4. Operation	
Changing Punch Die Sets	8
Punching Operations	9
5. Customer Maintenance	
Paper Chip Drawer	10
Service	10
6. Customer Problem Solving	
Problem Solving, Operator Level	11
Paper Jam	12
7. Specifications	
Specifications, 115V & 230V StreamPunch	13
8. Installation	
Pre-Installation	14
Unit Set-up	14
Test Operation	15
Die Set Information	16
9. Technical Troubleshooting	
Theory of Operation	17
General Troubleshooting	20
Troubleshooting Guide Chart	20
Electrical Schematic	24

Table of Contents

Section	Page
10. Adjustments and Special Procedures	
Tool Recommendations	25
Die Set Position Cradle Adjustment, Centering Punched Holes	26
Removal of Punch Module	29
Green Belt Replacement, Aligner Panel Removal, Explanation	30
Green Belt Replacement, Paper Entrance Side	31
Green Belt Replacement, Paper Exit Side	42
Back Gage Assembly	49
To Clear a Paper Jam	53
11. Parts Listing	
Punch Drive Module Assembly	54
Die Set Adjustment Assembly	56
Paper Guide, Punch Exit Drive Assembly	57
Paper Guide, Energy Nip Assembly	58
Cabinet Assembly (A)	59
Back Gauge, Die Set Assembly	62
Electronics Bracket Assembly	64
Exit Stepper Motor Assembly	66
Front Door Assembly	68
Cabinet Assembly B)	70
Aligner, Entrance Drive Assembly	75
Aligner, Roller Entrance, Idler Assembly	77
Aligner, Exit, Idler Assembly	79
Aligner, Exit, Drive Assembly	81
Upper Bypass Paper Guide Assembly	83
Loop Pivot Paper Guide	85
12. Maintenance	
Die Set Product Number Listing	87
Inspection, Cleaning, Lubrication	88
GBC Serial Number, Date Code	89
Die Set Maintenance	89
Preventative Maintenance Schedule	90
StreamPunch FAQ's	91
Setting the Right Expectations	92
13. Glossary of Terms	
Glossary of Terms	94

SAFETY MESSAGES

The safety of you and others is very important to GBC. Important safety messages and information are contained within this manual as well as on the machine itself. Please be certain to carefully read and understand all of these before operating the machine.



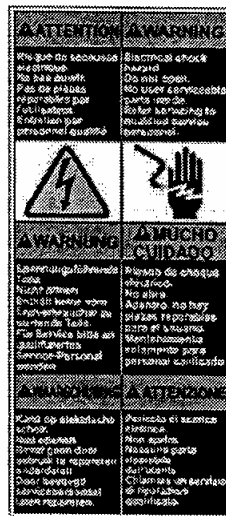
The safety alert symbol precedes each safety message in this Operating Instruction Manual. This symbol indicates a potential personal safety hazard that could hurt you or others, as well as cause product or property damage.

The following pictorial is found on the **StreamPunch**:



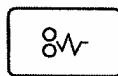
This label means:

WARNING!
Electrical shock hazard.
Disconnecting power from this section does not remove power from adjacent sections of the machine.



This safety message means that you could be 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 GBC, Gestetner, Lanier, Ricoh or Savin personnel.

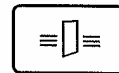
The following symbols appear on this product, and their meaning is as follows:



Paper Jam



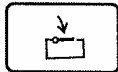
Chip Tray Full/Out



Punch Enabled



Check Die Set



Close Door



Power

IMPORTANT SAFEGUARDS

- Use the **StreamPunch** only for its intended purpose of punching paper and covers according to the indicated specifications.
- Retain this Operating Instructions manual for later use.



CAUTION: THE PRINTER ON/OFF SWITCH DOES NOT DISCONNECT POWER FROM THE PUNCH.



CAUTION: THE PUNCH ON/OFF SWITCH DOES NOT DISCONNECT POWER FROM THE PRINTER.

- The **StreamPunch** must be connected to a supply voltage corresponding to the electrical rating of the machine operating 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 **StreamPunch**. It was provided for your safety.
- Unplug the **StreamPunch** before moving the machine or whenever the machine is not in use for an extended period of time.
- Do not operate the **StreamPunch** if the machine has a damaged power supply cord or plug. Do not operate the machine after any malfunction, if liquid has been spilled into the machine, or if the machine has been damaged in any way.
- Do not overload electrical outlets beyond their capacity. To do so can result in fire or electrical shock.

SERVICE

- Do not attempt to service your **StreamPunch** yourself. Contact an authorized service representative for any required repairs or major maintenance for your **StreamPunch**.



DO NOT REMOVE THE MACHINE'S COVER.

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

CLEANING

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

SAFETY MESSAGES

MAIN CORDSET SELECTION

(THE FOLLOWING NOTE APPLIES ONLY TO THE UNITS RATED 230V 50/60HZ, AND LOCATED WITHIN THE EUROPEAN UNION)



CAUTION: WHEN CHOOSING A DETACHABLE LINE CORD FOR USE WITH YOUR StreamPunch, ALWAYS OBSERVE THE FOLLOWING PRECAUTIONS

The cordset consist of three parts; the attachment plug, cordage and appliance inlet. Each of these components must have European regulatory approvals for safety.

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.

CORDAGE: Type H05VV-F3G0.75, Harmonized (< HAR >). The “< >” symbols indicate cordage approved to appropriate European standard (NOTE: “HAR” may be substituted for approval mark of European safety agency, which approved the cordage. An example would be “ < VDE > ”).

APPLIANCE CONNECTOR: 3 ampere, 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.

Safety Information

SAFETY MESSAGES

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

FCC NOTE

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 Operator Manual, may cause harmful interference to 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.



CAUTION: CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY GENERAL BINDING CORPORATION COULD VOID YOUR AUTHORITY TO OPERATE THE EQUIPMENT.

Canada Class A Notice - Avis Canada, Classe A

This Class A digital apparatus complies with Canadian ICES-3.

Cet appareil numérique de la classe A est conforme à la norme NMB-003 du Canada.

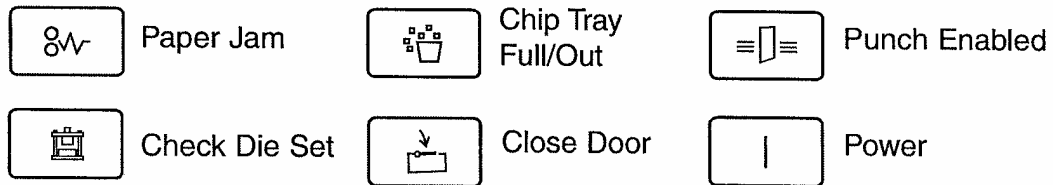
1. Introduction

INTRODUCTION

Thank you for purchasing the **StreamPunch**. It is a versatile production system that will enable you to punch documents for a variety of binding styles with a simple die change. It has also been designed for easy operation.

The **StreamPunch** is an innovative solution for punching paper and offers the following design features:

- Quick-change die sets that are self-latching without tools or levers.
- All **StreamPunch** die sets include an Identifying Label providing user with the hole pattern and name.
- Convenient storage area for three extra Die Sets located above the sheet bypass.
- Convenient LED's indicate:



- PAPER JAM: Indicates there is a paper jam.
- CHIP TRAY FULL/OUT: Indicates the chip tray should be emptied, is missing or improperly installed.
- PUNCH ENABLED: Indicates the system is in the punch mode.
- CHECK DIE SET: Indicates a Die Set is not installed properly.
- CLOSE DOOR: Indicates the access door is not properly closed.
- POWER: Indicates the machine is plugged in, the POWER is on.

These instructions have been prepared to acquaint you with the **StreamPunch** punch and it's operation. Please read them carefully. Keep this complete operating instruction for future reference.

2. Getting to Know the StreamPunch

OPERATING CONTROLS

A. On/Off Switch

Must be in the "ON" position at all times

B. Chip Tray:

Easy-to-access chip tray for quick chip disposal

C. Die Set Changes:

Are completed without tools and only take seconds to perform

D. Die Set Storage:

Holds up to 3 spare Die Sets

E. Punch Bypass:

Short straight-through paper path for unpunched documents

F. Punch Mode Path:

Wide radius turn can support stocks up to 80 lb. cover

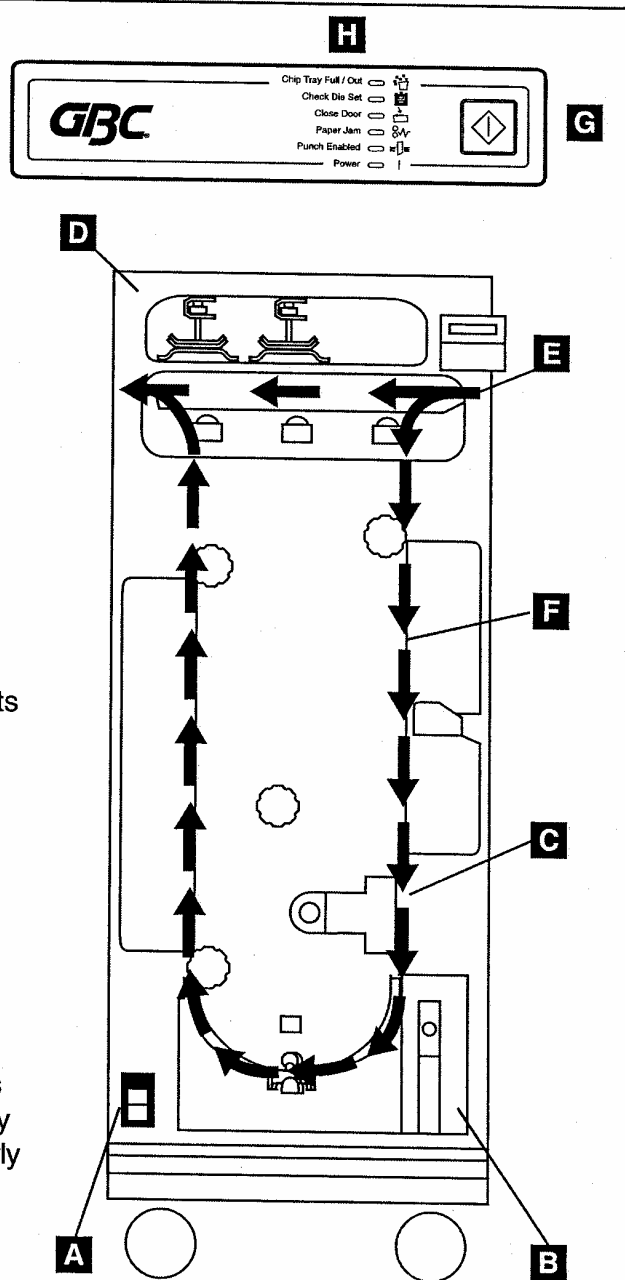
G. Enable Punch Button:

Press to enable punch. Will default to Punch Bypass approximately

60 seconds after a punch job is completed.

H. LED Indicators:

Informs operator that power is on, punch is enabled, chip tray is full or out, die-set is improperly seated, door is open, or you have a paper jam.


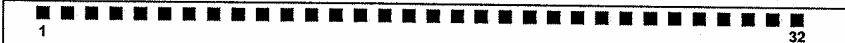


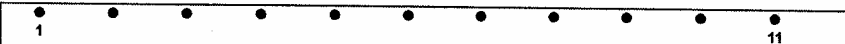



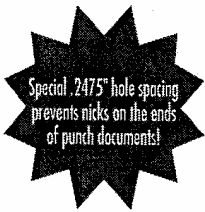
3. Operating and Finishing Modes

PUNCHING PATTERNS

The **StreamPunch** 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 **StreamPunch** to punch documents in any of the binding styles indicated in Table 1.

TABLE 1

For Plastic Comb Binding choose from:	
	19
PB Plastic Bind; Hole Size: .313"L x .116"W; Center-to-Center Hole Spacing: .563"	
For Twin Loop® Binding choose from:	
	32
W3 Wire; Square; 3 Holes per inch; Hole Size: .156"L x .156"W; Center-to-Center Hole Spacing: .333"	
	21
W2 Wire; Rectangle; 2 Holes per inch; Hole Size: .250"L x .214"W; Center-to-Center Hole Spacing: .500"	
For Color Coil® Binding choose from:	
	44
C4 Coil; Round; 4 Holes per inch; Hole Size: .174" Diameter; Center-to-Center Hole Spacing: .2475"	
For Velo® Bind choose from:	
	11
VB Velobind®; Round; 1 Hole per inch Hole Size: .125" Diameter; Center-to-Center Hole Spacing: 1"	
For Looseleaf Binding choose from:	
	3
3 Ring Binder; U.S. (Standard Looseleaf Patterns); Hole Size: .316" (8mm) Diameter	



©2003 CBC, Northbrook Illinois - All rights reserved. Rev 10/02 R2 3/03

Graphics do not represent actual punch pattern dimensions or spacing.

Please note that each punching style listed above requires a separate die set for the **StreamPunch**. The **StreamPunch** can hold up to four Die Sets within it's cabinet (one in the operating slot and three in the storage area).

To purchase additional or separate Die Sets, contact your authorized reseller.

CHANGING THE PUNCH DIE SETS

Your **StreamPunch** offers the convenience of interchangeable die sets, allowing you to economically punch documents for a wide variety of binding styles. Changing the machine's die sets is both quick and easy, as the following instructions illustrate:

Removing Die Sets from the Machine: The interchangeable die set slot of the **StreamPunch** is located on the right front side of the machine. If a die set "M" is already installed in your **StreamPunch**, you can easily remove the die set by following these instructions:

Step 1: Stop the printer/copier.

Step 2: Open the **StreamPunch** access door panel.

Step 3: Set **StreamPunch** to the OFF (O) mode.

Step 4: Securely grasp the handle and tug firmly. This firm tug disengages the Automatic Latching Mechanism, and allows the die set to slide out.

Step 5: Continue pulling on the handle until the Die Set is fully removed.

Step 6: Properly store the removed Die Set in the Die Set storage area of the **StreamPunch** (keep away from dust, dirt, accidental falls from the edge of counters etc.).

Step 7: Select the desired Die Set for your new job and slide it into the Die Set slot. Push Die Set in firmly until it latches.

Step 8: Set the **StreamPunch** to the ON (I) mode.

Step 9: Close the Access Door Panel.

Step 10: Enable punch and proceed with your printing and punching job.



CAUTION: POSSIBLE PINCH POINT HAZARD. WHEN INSTALLING DIE SETS INTO YOUR StreamPunch, ALWAYS KEEP FINGERS AND BODY PARTS OUT OF THE MACHINE'S DIE SET SLOT AND AWAY FROM ALL AREAS OF THE DIE SET EXCEPT FOR THE FINGER HOLE IN THE DIE SET. FAILURE TO OBSERVE THESE PRECAUTIONS MAY RESULT IN INJURY.

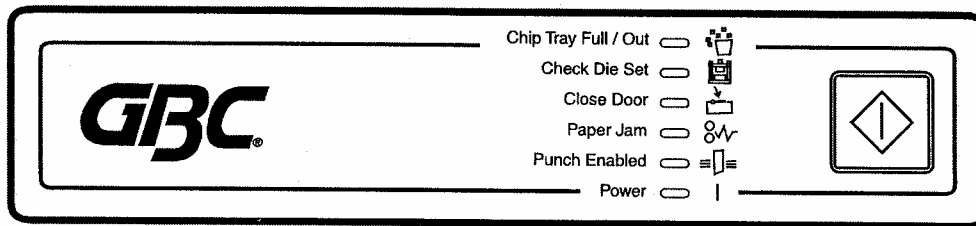
4. Operation

PUNCHING OPERATIONS

After installing the correct die set in your StreamPunch, you are ready to begin punching. The following sections indicate how to activate the machine. Read these sections completely and become familiar with the various machine and Die Set components.

The POWER LED should be illuminated. If not, apply power with the Power On/Off (I/O) switch located at the front of the StreamPunch module.

To activate the Automatic Punch Mode of the Stream Punch simply press the green button. The PUNCH ENABLED LED will illuminate.



PUNCH ENABLED: You may also activate the punch by using the Ricoh Printer interface screen on printers so equipped.

Once punch is enabled, the LED will remain illuminated and the punch will remain enabled for one full minute after the run has ended. After that time, the system will default to the bypass mode and the next run will not be punched.

CLOSE DOOR and PAPER JAM: If either of these LED's are on, no bypass and no punch can occur until these areas have been checked and corrected.

CHIP TRAY FULL/OUT and CHECK DIE SET: If either of these LED's are on, you can run in bypass mode but not punch mode.

CHIP TRAY FULL/OUT: If this LED is flashing the Chip Tray is FULL. If this LED is shining solid, the Chip Tray is OUT.

POWER: If this LED is not on, paper can not run through the GBC StreamPunch in either bypass or punch mode. The paper will jam entering the GBC StreamPunch.

5. Customer Maintenance

PAPER CHIP DRAWER

The paper chip drawer for your StreamPunch is located at the front of the machine's base. The drawer should be periodically pulled out and emptied. The StreamPunch incorporates microprocessor technology to inform the operator when the Chip Tray needs to be emptied. When the Punch has cycled a certain number of times, the Check Chip Tray LED will begin to flash on and off. You may continue to use the StreamPunch for a short period longer if you wish, but it is not recommended.

You must empty the Chip Tray with the Power On so that the sensors are able to identify this action. This will ensure that the LED will reset itself.

SERVICE

- Should your StreamPunch require service contact your local authorized service representative.
- There are NO user-serviceable parts inside the machine. To avoid potential personal injury and/or property damage, DO NOT REMOVE THE MACHINE'S COVER.
- It is recommended that your StreamPunch receives preventative maintenance every 6 months or sooner depending on usage.

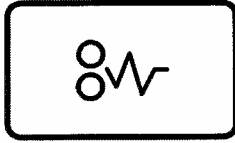
6. Customer Problem Solving

PROBLEM SOLVING, OPERATOR LEVEL StreamPunch

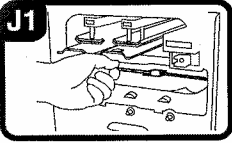
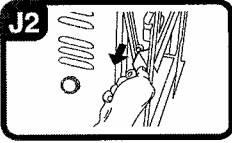
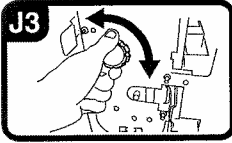
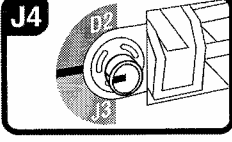
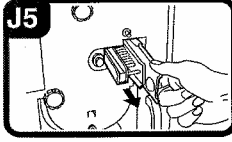
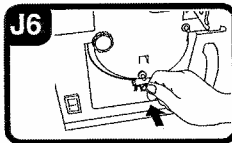
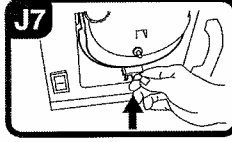
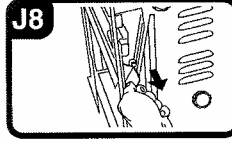
Problem	Probable Cause
No power, won't punch	Power cord not attached to back of machine or not properly plugged into the wall Power On/Off Switch not activated
Die Set will not come out using a moderate pull	The Die Set is in partial cycle. Turn the Die Set knob to the HOME position. The Die Set should now slide out easily. Also see PAPER JAMS.

6. Customer Problem Solving

PAPER JAMS



This symbol indicates a paper jam. To assist in clearing paper jams in any of the following areas, turn one or more of the small knobs to advance the paper.

Area	Description
	If paper is jammed in the Punch Bypass, lift the paper guide plate located just inside, reach in and remove the jammed paper.
	If paper is jammed in the downward paper path chute, move the door to the right, reach in and remove the jammed paper.
	If paper is jammed or the Die Set is jammed, turn Knob J3 to the HOME position, (arrows line up) slide the Die Set out and remove paper.
	
	
	If paper is jammed in the bottom chute of the Punch Paper path, Press the bottom chute latch, reach in and remove any jammed paper.
	
	If paper is jammed in the upward paper path chute, move the door to the left, reach in and remove the jammed paper.

7. Specifications

SPECIFICATIONS StreamPunch

	115V MACHINES	230V MACHINES
Speed	Up to 105 sheets per minute	Up to 105 sheets per minute
Sheet Size	8 ½" x 11"	A4 – 21.59cm x 29.74cm
Punch Edge	11" edge of 8.5" x 11"	29.74 cm edge of A4
Paper Stock	20 lb bond to 80 lb cover	75 g/m2 bond to 216 g/m2 cover
Paper Bypass Mode	Paper sizes and stocks same as printer	Paper sizes and stocks same as printer
Punch Capacity	Single Sheet	Single Sheet
Power Supply	115VAC 60 Hz Single Phase Amps – 3.0 A Watts – 340W BTU's/Hour – 1160 BTU/HR	230VAC 50 Hz Single Phase Amps – 1.6 A Watts – 340W BTU's/Hour – 1160 BTU/HR
Safety	CSA certified to UL and CSA standards	TUV/GS, CE
Dimensions	12"(W) 38.5" (H) 28.5" (D)	30.5cm (12")(W) 97.8cm (38.5") (H) 72.3cm (28.5") (D)
Weight	154 lbs.	70 Kg (154 lbs.)
Shipping Weight	235 lbs.	115.5 Kg (254 lbs.)
Manufactured	Made in the U.S.A.	Made in the U.S.A.

Specifications are subject to change without notification.

8. Installation

PRE-INSTALLATION

CAUTION: The GBC StreamPunch system must not be used with the type 1075 punch option for an SR840 finisher.

- If a type 1075 punch is present within an SR840, the 1075 must be removed.
- If a GBC StreamPunch system is inline with an SR840 finisher, a 1075 punch must not be installed.

INSTALLATION KIT CONTENTS

- E-PROM (new version for Finisher) P/N VRC57003
- Finisher Communication Cable Assembly P/N VRC57002
- Finisher to Printer Cable (longer version) P/N VRC57001
- GBC StreamPunch Interconnect Communication Cable (Gray) P/N VRC51278

UNPACKING

- Inspect the outside of the package for shipping damage. If there is evidence of shipping damage, contact the shipping carrier immediately.
- Remove the punch from its shipping carton.
- Inspect for any concealed damage to unit. If there is evidence of concealed shipping damage, contact the shipping carrier immediately.
- Remove all shipping tape from doors and levers.

UNIT SET-UP

Reference Figure 8.1 for the proper location of the cables.

- 1. Remove the Input Guide from the Finisher.
- 2. Install new EPROM for the Finisher (VRC57003).
- 3. Attach the Finisher Communication Cable Assembly (VRC57002).
 - a. Remove old cable.
 - b. Attach 9-pin connector to plug CN132(W).
 - c. Unplug connector attached to plug CN113(C) and attach to 4-pin female adapter plug on cable. Attach 4-pin male connector of cable to plug CN113(C).
 - d. Unplug middle sensor wire and attach 3-pin connector of wire to female adapter plug on cable.
 - e. Bundle and tie-wrap remaining cable.

Note: 7-pin Plocmatic connector is not used with StreamPunch.

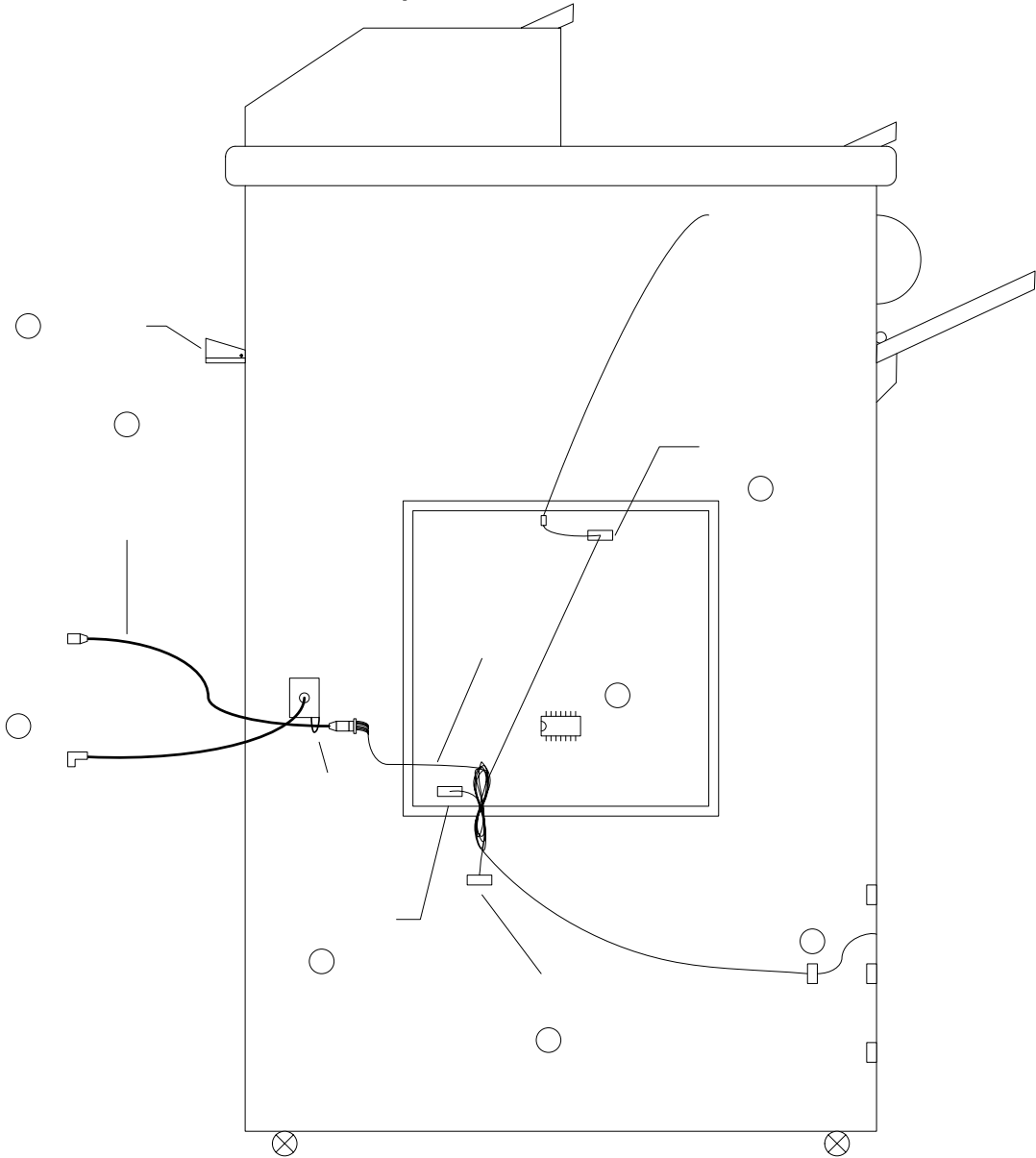
- 4. Attach the longer Finisher to Printer Cable (VRC57001), to replace the standard short outside cable.
- 5. Attach the GBC StreamPunch Interconnect Communication Cable (VRC51278). This cable resides inside the Finisher and plugs to an outside connection of the StreamPunch. Note the shape of the connector on the StreamPunch end of the cable to ensure attachment in proper orientation. Secure to bracket with wire tie-wrap.
- 6. Line Cord (not shown): Connect the square end of the power cord to the receptacle in the back of the machine. Connect the plug of the power cord to an electrical (convenience) outlet.
- ATTENTION: Attach the “Electric Shock – Warning” label to the Printer near the power cord receptacle of the Printer. This label warns the Technician that disconnecting power from one section of the system does not remove power from adjacent sections of the system. For example, disconnecting the Printer does not disconnect the Punch. This label is required by the safety agency that approved this product and the National Electrical Code.**

8. Installation

TEST OPERATION

- Check to ensure that the paper chip tray is securely in place.
- Check to ensure that a Die Set is installed properly and that any extra Die Sets are securely stored in the Die Storage Area.
- Run a small test job in "Bypass" mode. Check to ensure that the job is not punched and bypasses properly.
- Run a small job with Punch Enabled. Check the punched holes of the job.

GBC StreamPunch Installation and Set-up

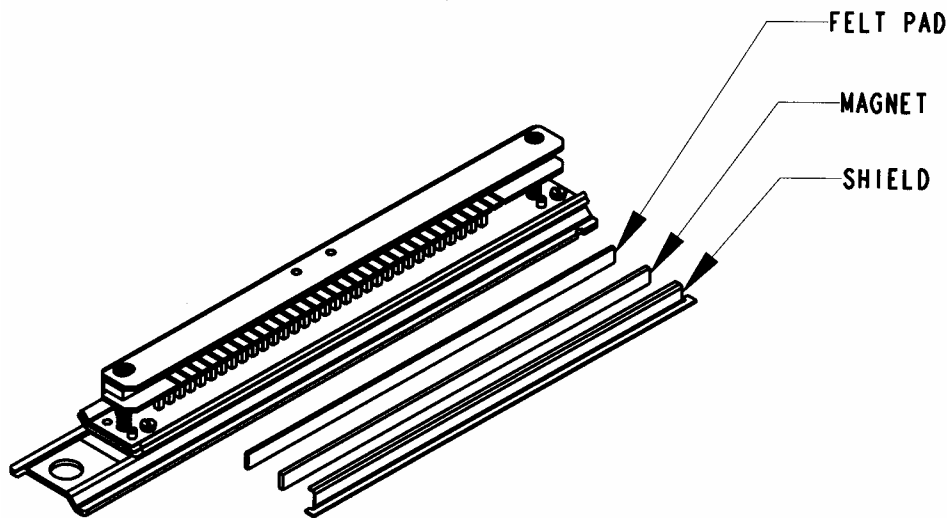


GBC StreamPunch Die Set - Information Sheet

IMPORTANT NOTICE REGARDING THE DIE SETS PLEASE READ

Your GBC StreamPunch die set (C4, W2 and W3 versions), is supplied with a felt pad containing oil, a pad retaining magnet and shield*. **Do not throw these items away!** The felt pad will provide lubrication to the punch pins under normal usage and will help to keep the punch pins clean. The magnet is intended to keep the felt pad in place during typical handling. If the pad and magnet came off of this die set during shipping or unpacking, please replace them as indicated in the accompanying diagram.

Keep this sheet as a reference in the event that the pad and magnet are removed or replaced.



***NOTE:**

Felt Pad and Retaining Magnet are **not** required or included with the 3-Hole, PB or VB die sets.

9. Technical Troubleshooting

THEORY OF OPERATION

The GBC Stream Punch is a machine that punches various die set hole patterns into single sheets of paper. The machine is placed between a printer / copier and a finisher. There are two paper paths. One is the bypass section, which does not punch paper. The other is the punch path. The punch path can be selected by pressing the green button on the top of the Stream Punch.

The Stream Punch consists of several input / output devices to operate the machine functions. The system intelligence is a Microchip micro-controller PIC17C752. The present code is written in Microchip assembler. The list of I/O devices is:

Refer to the electrical wiring information, when reading the following material.

INPUTS:

Sensor 1	Optical	Starts machine motors, Sheet speed measurement, Jam detect
Sensor 2	Optical	Stepper 1 control, Sheet speed measurement, Jam detect
Sensor 3	Optical	Punch mechanism control, Backstop raiser, Jam detect
Sensor 4	Optical	Jam detect at entrance of U-Channel
Sensor 5	Optical	Jam detect at exit of U-Channel
Sensor 6	Optical	Stepper 2 Control, Jam detect
Sensor 7	Optical	Exit sensor, Jam detect
Sensor 8	Optical	Bypass sensor, Sheet speed measurement, Jam detect
Sensor 9	Optical Vane	Monitors rotation of punch mechanism, Controls clutch and brake
Switch 1	Keypad	Selects punch mode
Switch 2A	Mechanical	Interlock Voltage, no machine movement if door is open
Switch 2B	Mechanical	Door open signal
Switch 3	Mechanical	Chip tray switch
Switch 4	Mechanical	Die Set switch

OUTPUTS:

Diverter	DC Solenoid	Diverts paper from bypass to punch sections
Brake	DC Brake	Stops the punch mechanism, keeps it in correct position
Clutch	DC Clutch	Clutches the punch mechanism to drive through paper
Backstop	DC Solenoid	Provides stop for paper to rest against during punching
Transport	AC Motor	Provides paper movement through machine
Punch	AC Motor	Provides power to punch the paper
Stepper 1	PWM Signal	Controls Stepper Motor 1
	Winding	On / Off signal for stepper holding current
Stepper 2	PWM Signal	Controls Stepper Motor 2
	Winding	On / Off signal for stepper holding current
LED 1	Chip Tray	ON: Chip Tray missing, FLASHING: Chip Tray may be full
LED 2	Die Set	ON: Die Set not installed properly
LED 3	Door	ON: Door is Open
LED 4	Jam	ON: Paper Jammed in Machine
LED 5	Punch On	ON: Punch Enabled

9. Technical Troubleshooting

THEORY OF OPERATION (continued)

PRINTER COMMUNICATION:

Punch	Input	Printer turns on Punch enabled mode (not presently operational)
Motor	Input	Printer turns on Stream Punch Motor
Jam	Output	Punch signals a jam or the door is open (no operation allowed)
Tray / Die	Output	Punch indicates tray or die set missing (bypass only allowed)

SERIAL EEPROM CONTROL:

1 Input	3 Outputs	Counts number of punches for die set full, Saves value
---------	-----------	--

For the Stream Punch to operate, all optical sensors must be clear. Any blocked sensor or open door will prevent operation. The machine may operate in bypass mode with or without a chip tray or die set. Both of these must be present to punch.

Stepper #1 Control:

If punch is not enabled, the Stream Punch will run in bypass mode (no punching). Either the printer or the first sheet entering the machine will turn on both stepper motors. The time is measured for the leading edge of the first sheet to pass sensor 8. Knowing the distance between the sensors and the time it takes for the sheet to pass both sensors, we can determine the speed of the paper. The time is compared to a list and Stepper 1 and stepper 2 are adjusted to closely match the incoming speed.

If the punch is enabled, the backstop is raised, the brake is engaged, and both the transport and punch motors are started. Also, the divert solenoid is activated to direct the sheets into the punch path. As above, the input speed is measured, this time using Sensor 1 and 2. Stepper 1 is adjusted to meet the measured input speed; Stepper 2 is accelerated to the speed of the transport motor. Sensor 2 now delays for a time period based on the input speed to ensure that the sheet has cleared the printer exit roller. After this delay, stepper 1 accelerates the sheet to match the transport speed. 19 msec after the sheet's trailing edge passes sensor 2, Stepper 1 is decelerated to match the previously measured input speed.

Punch Control:

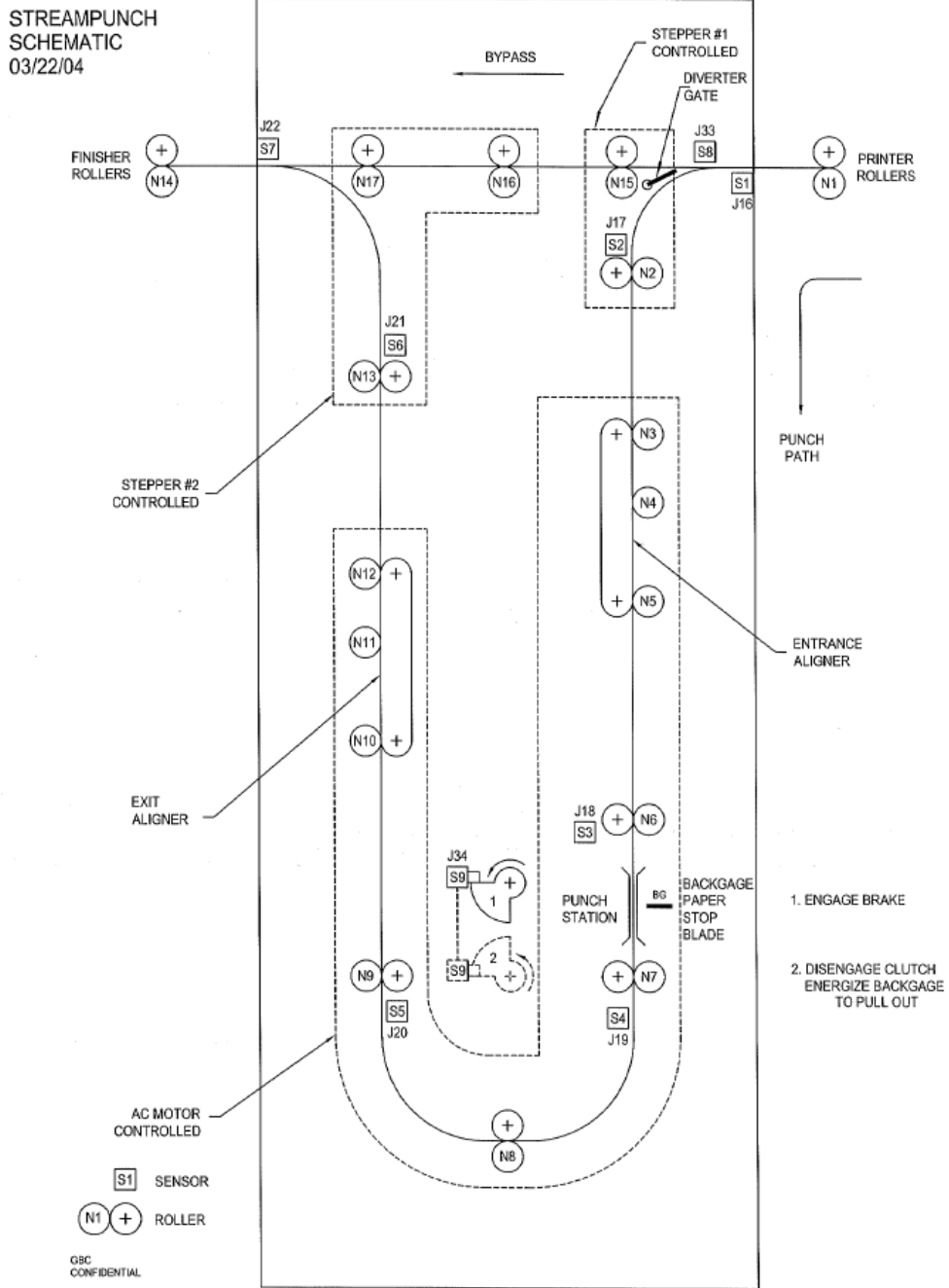
The punch cycle begins 40 msec after the leading edge of the sheet reaches Sensor 3. The brake is released, and the clutch is engaged. Sensor 9 now looks for the leading edge of its flag, and when seen, the clutch is disengaged, and the backstop is lowered. When the trailing edge of the flag is seen, the brake is engaged. When Sensor 3 sees the trailing edge of the sheet, the backstop is raised.

Stepper #2 Control:

72 msec after the leading edge of the sheet passes Sensor 6, Stepper 2 is decelerated to match the measured input speed from the printer. This delay ensures that the sheet exits from the transport rollers. When the trailing edge of the sheet passes Sensor 6, Stepper 2 is accelerated to match the speed of the transport motor.

9. Technical Troubleshooting

THEORY OF OPERATION (continued)



9. Technical Troubleshooting

GENERAL TROUBLESHOOTING

One of the first rules of troubleshooting is to first understand the normal operating sequence of the machine. Then carefully listen to the key operator's description of the problem or complaint. Follow this by your own visual observation. The cause of the problem can be determined by noting at which point in the operating cycle the problem occurred. To pinpoint the problem to a defective electrical component or mechanical part, use the Troubleshooting Guide and the Electrical Schematic Diagram.

During any service call, it is a good practice to check the cable connections for fit and alignment.

TROUBLESHOOTING GUIDE CHART

The Troubleshooting Guide Chart that follows is arranged in order of the normal operational sequence. When a malfunction occurs, read down the SYMPTOM column until you reach the appropriate description for your symptom. Read the corresponding PROBABLE CAUSE and then perform the recommended procedure in the CORRECTIVE ACTION column.

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
No indication of power	Not plugged in	Check to ensure that power cord is properly connected to the machine as well as the supply voltage. Check the power supplied from the outlet
No indication of power, Unit is plugged in	Main Control Board, a minimum of 2 of the 3 LED's on this board should be lit, if not, board is bad Display Panel or Cable Door not making interlocks Die Set not making switch Jumper on the Main Control Board is not set to the proper line voltage	Replace Main Control Board Inspect or replace Inspect or replace Inspect or replace Change the jumper to the proper line voltage

9. Technical Troubleshooting

TROUBLESHOOTING GUIDE CHART

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
<p>No indication of power, Unit is plugged in</p>	<p>Main Control Board, a minimum of 2 of the 3 LED's on this board should be lit, if not, board is bad</p> <p>Display Panel or Cable</p> <p>Door not making interlocks</p> <p>Die Set not making switch</p> <p>Jumper on the Main Control Board is not set to the proper line voltage</p>	<p>Replace Main Control Board</p> <p>Inspect or replace</p> <p>Inspect or replace</p> <p>Inspect or replace</p> <p>Change the jumper to the proper line voltage</p>
<p>Machine will not start, READY LED is ON</p>	<p>Check Power Supply Board LED, if not lit, board is bad</p> <p>Check Main Control Board LED's, if a minimum of two of the three are not lit, board is bad</p> <p>Door is not closed or properly making the interlock</p>	<p>Inspect cable connections, replace board as needed</p> <p>Inspect cable connections, replace board as needed</p> <p>Inspect and correct</p>
<p>Paper Jam LED is lit, customer / operator has been unable to locate the jam</p> <p>Paper Jam, not able to find any large sheets, removed sheets are torn</p>	<p>A small piece of chad or torn paper is blocking a sensor and/or the paper path</p> <p>Suspect a small piece of paper is hidden somewhere in the paper path</p>	<p>Separate the StreamPunch from the Printer and the Finisher, clean out the entire paper path</p> <p>Run a heavy cover stock through the system by hand. This process may drive any small torn pieces out of the paper path</p>

9. Technical Troubleshooting

TROUBLESHOOTING GUIDE CHART

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
Punch does not cycle	Punch Clutch	Adjust or replace
	Main Control Board	Adjust or replace
	AC Punch Motor	Adjust or replace
Paper Jam and/or Punch shaft does not return to the "HOME" position	Punch Brake is not performing properly	Adjust or replace
Paper Jam and/or Punch continues to cycle	Flag Sensor is broken or misaligned	Adjust or replace
Paper will not enter the punch area, runs through bypass only	Divert Solenoid malfunction	Adjust or replace
Paper is punched in the middle of the sheet	Back stop (back gauge) solenoid is malfunctioning	Adjust or replace
Punch paper path is not operable, system will only bypass	Transport Motor not functioning	Adjust or replace
	Main Control Board not functioning properly	Check connections, replace
	Stepper Motor #1 or #2 is not functioning correctly	Adjust or replace
	Stepper Motor #1 or #2 Driver Boards are not functioning correctly	Check connections, replace
Punched holes are not centered	Die Set positioning bracket is out of adjustment	Inspect and adjust as required, see adjustment procedure

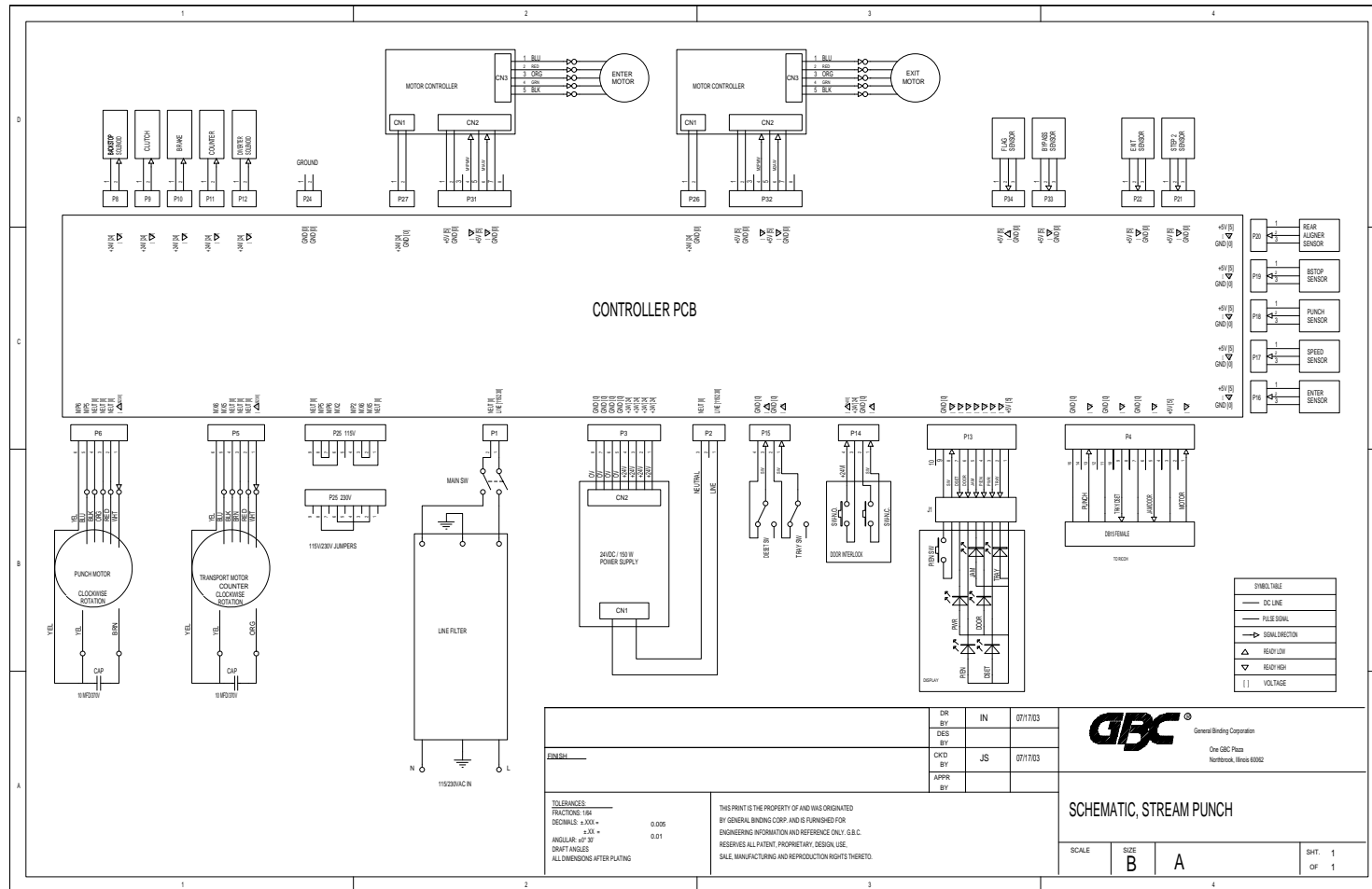
9. Technical Troubleshooting

TROUBLESHOOTING GUIDE CHART

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
Punched holes are not parallel to the edge of the paper	Back Stop (Back Gauge) is not functioning properly	Inspect and adjust as required, see adjustment procedure

9. Technical Troubleshooting

The StreamPunch Electrical Schematic is also posted on the Ricoh WEB site as a stand-alone file. Please see the TSC Web Site at <http://tsc.ricohcorp.com>.



10. Adjustments and Special Procedures

Hand Tool Recommendations for the GBC StreamPunch

What you need to service the GBC StreamPunch:

1. Standard Measure Tools (English as opposed to metric)
 - a. Open End Ignition Wrench – ¼” (*required only for Chad Kit installation*)
 - b. Nut Driver, 5/16”
 - c. Nut Driver, ¼” (*see note below*)
 - d. Allen Wrench, 3/32” (*comes with Chad Control Kit*)
 - e. Allen Wrench, 5/64”
 - f. Allen Wrench, 9/64”
2. Other recommended tools
 - a. Needle Nose Pliers (Side Cutters)
 - b. E-Prom Extractor Tool – Order under Ricoh P/N **VRC11186** (Also used for Plockmatic) or can be purchased from the following supplier:
Supplier Digi-Key.com
Digi-Key Part Number: K293-ND
Manufacturer Part Number:EX-5
Description: TOOL EXTRACTOR IC PLCC UNIVERSAL
 - c. Wire Cutters
 - d. Screw Driver, Phillips Head
 - e. Screw Driver, Flat Head, Small
3. Supply of Wire Tie Wraps

NOTE: A nut driver head of ¼” is the most common size for the barrel of a Magnetic or interchangeable tip screwdriver.

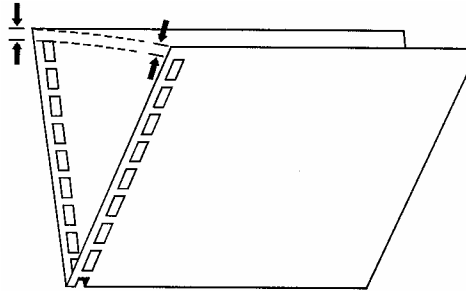
10. Adjustments and Special Procedures

Die Set Position Cradle Adjustment – Centering of Punched Holes

The die set position cradle is set in the factory, however, because of the punched-hole spacing on the PB die sets, there is a minimal amount of paper on each edge of the punched paper. The die set position cradle may have to be fine adjusted to center the punched-hole pattern in the paper.

Listed below are the step-by-step instructions to adjust the die set to the proper position:

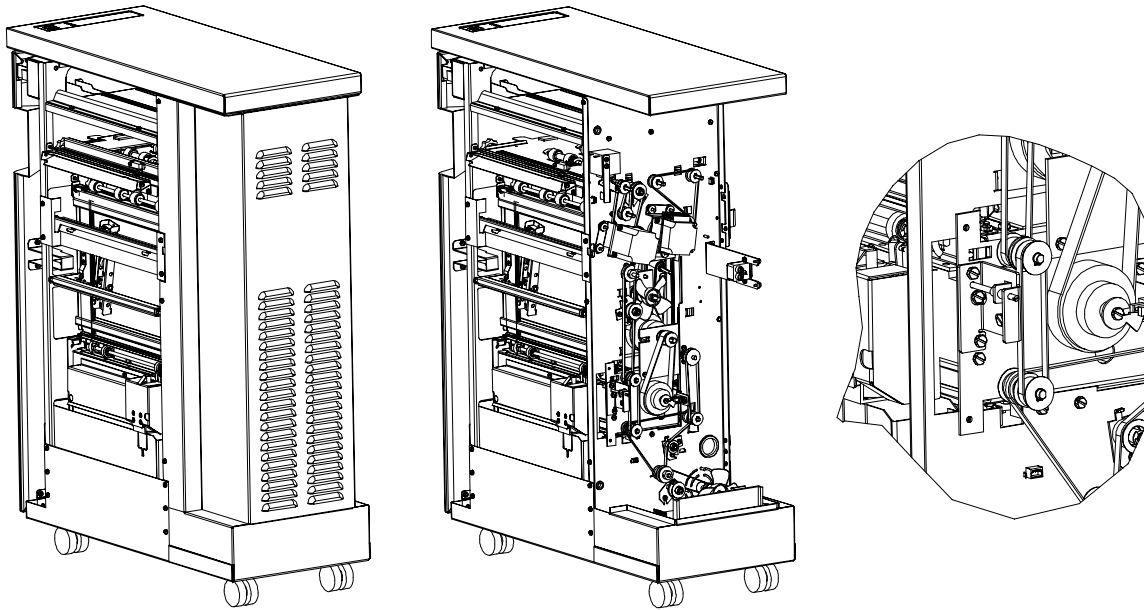
- The punched-hole alignment must be checked on a piece of punched paper. Fold the punched sheet of paper in half and the punched-holes should be aligned. If the punched-holes are not aligned, then the die set cradle must be adjusted to align the punched holes. Note: the paper path is always constant, if the holes are not centered, you must adjust the die set cradle.



10. Adjustments and Special Procedures

Die Set Position Cradle Adjustment – Centering of Punched Holes (continued)

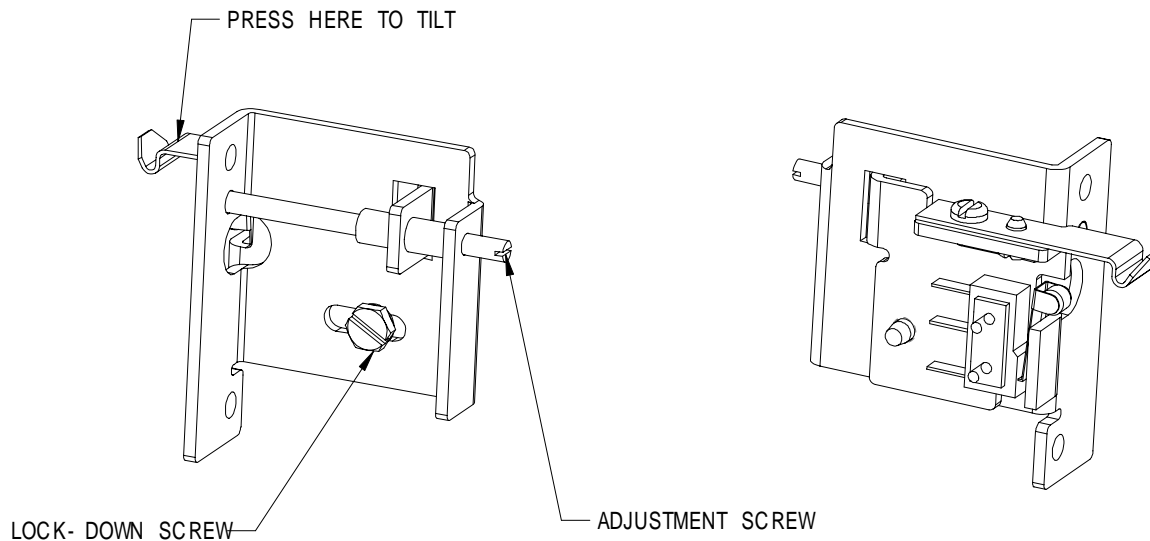
- The back cover on the StreamPunch must be removed to access the die set position cradle.



10. Adjustments and Special Procedures

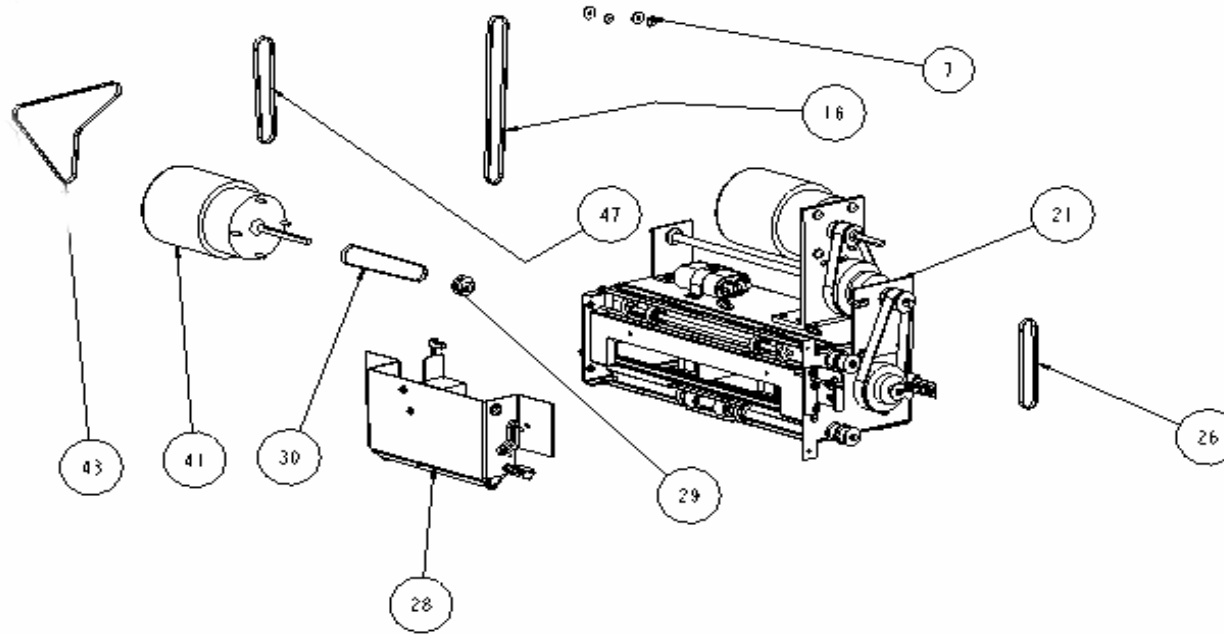
Die Set Position Cradle Adjustment – Centering of Punched Holes (continued)

- Before adjusting the die set position cradle, you must first note what direction the die set cradle must move.
 - Observe the punched paper; if the punched-holes are too close to the rear of the machine, then you must turn the adjustment screw counter-clockwise.
 - If the punched-holes are too close to the front of the machine, then you must turn the adjustment screw clockwise.
 - Before you adjust the die set position cradle, you must loosen the lock-down screw.
 - Using a flat-head screwdriver, turn the adjustment screw clockwise or counter-clockwise to move the die set position cradle. NOTE: seven full turns of the adjustment screw result in a ¼” change in the punched hole position.
 - Before tightening the lock-down screw, tilt or bias the assembly towards the bottom of the machine and tighten the lock-down screw. This will ensure positive engagement between the locking lever and the die set.
 - Run a test sample of punched paper and recheck paper alignment. Re-adjust if necessary.



10. Adjustments and Special Procedures

Removal of Punch Module



1. Examine the Drive Belts. Note the consistency in tightness of the belts. They should all have approximately $\frac{1}{4}$ " of deflection Remove the four drive belts items 18, 26, 43, 47.
2. Disconnect the Sensor Wire Connection (shown)
3. Remove 4 screws in front and 2 in back
4. Cut any wire ties that may prevent freedom of movement to slide the Punch Module outward
5. Remove the Back Gauge Assembly (item 26).
6. Remove the black Knob at the front (customer side) of the Punch Module Drive Shaft item 23.
7. Slide the Punch Module unit part way out to reach and unplug the Punch Sensor Harness (Red, Black, White wires)
8. Slide the entire Punch Assembly out and lay it beside the StreamPunch. Take care not to damage wires or Rollers as you do so.
9. To replace any component of the punch Module, disassemble components as required.

10. Adjustments and Special Procedures

Green Belt Replacement, Aligner Panel Removal - Explanation

The following procedure explains how to remove the Entrance Side Aligner Panel and the Exit Side Aligner Panel. The basic intent of this procedure is to access and replace the Green Aligner Belts, but once you know how to follow this procedure you are now able to access other components as well.

SYMPTOM

Paper will stop moving through the Punch paper path.

CAUSE

One or both of the Green Aligner Belts have broken. If this break occurs, it would usually occur at the Weld Splice.

This break could occur with the Belt type used during the first three months of production. The range of potential StreamPunch units is serial numbers beginning with PI, PJ, PK. (Built in 09, 10 and 11 of 2003).

ACTION IN THE FIELD

Replace the Green Belt of the Belt Aligner Assembly using the following procedure.

PRODUCTION COUNTERMEASURE

Improve the method of manufacture (of the Weld Splice) starting with 12/01/03 production (serial numbers PL, QA, QB and onward).

PROCEDURE TO REPLACE ALIGNER BELTS

*Replacement of the Green Belt from the Aligner, Paper Entrance Side.
Replacement of the Green Belt from the Aligner, Paper Exit Side.*

10. Adjustments and Special Procedures

Green Belt Replacement, Aligner Panel Removal - Paper Entrance Side

The following step-by-step directions informs you how to remove and then assembly the components necessary to access the Paper **Entrance** Side Aligner **Green Belt, P/N VRC51019**.

It will help you to reference your StreamPunch Service Manual part drawings as you follow this process.

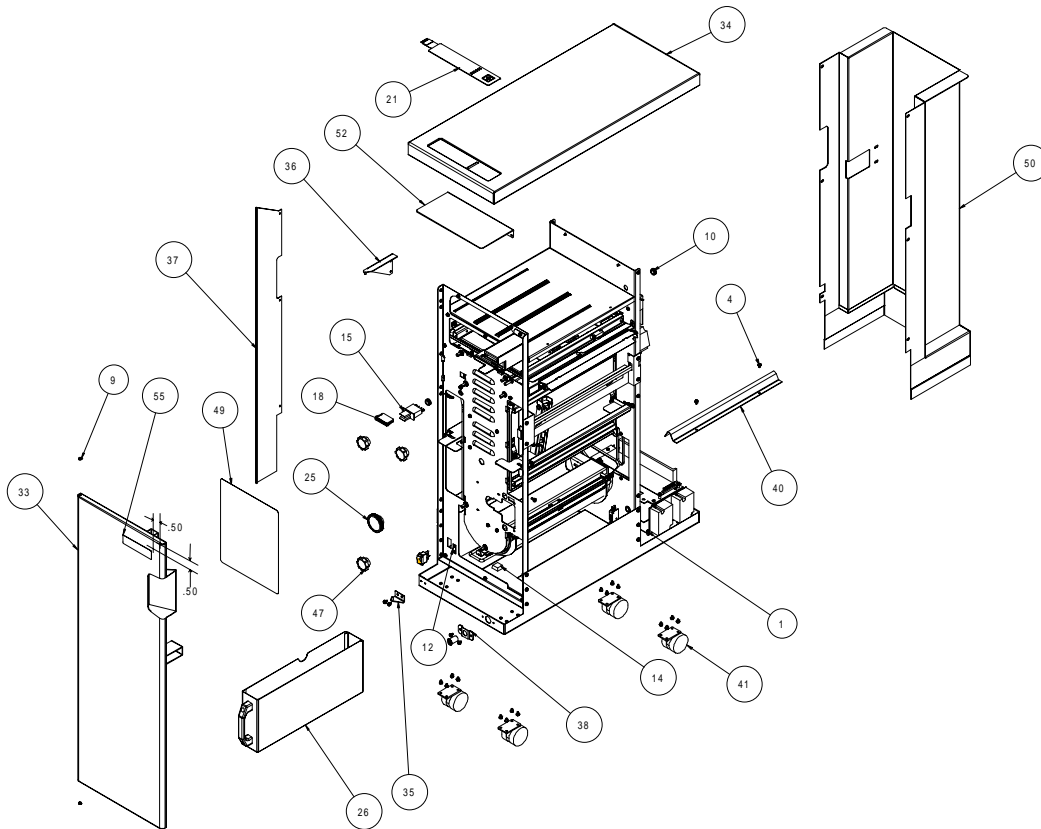
Special Tools Required:

- Twelve inch metal ruler or similar straight edge.
- Phillips Head Screw Driver 7" or less in total length.
- Alan wrenches (5/64" & 9/64").
- Nut Driver (1/4" & 5/16")
- Rare Earth Magnet Snake Neck (optional – good for retrieving any hardware that happens to fall in hard to reach spots)
- Snap Ring pliers
- E-Ring tool

NOTE: During assembly, be sure not to over tighten any of the mounting screws.

10. Adjustments and Special Procedures

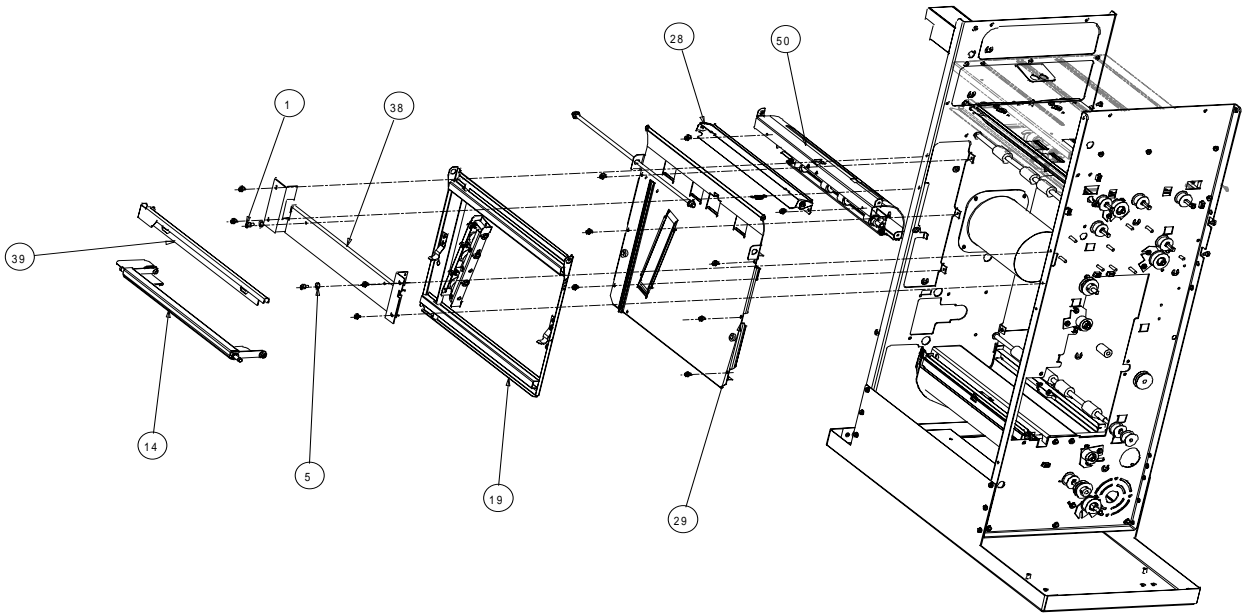
- Step 1: Disconnect the StreamPunch from Power. Retain the power cord in your possession for your safety.
- Step 2: Disconnect the Communication Cable to the Finisher.
- Step 3: Unlatch the GBC StreamPunch from both the Finisher and the Printer.
NOTE: You must first remove the screw that secures the latch in place (if so equipped).
- Step 4: Open the Front Door (item 55) of the StreamPunch.
- Step 5: Remove the Paper Chip Tray (Chad Tray, item 26), empty it and replace it. This is to prevent difficulty in finding any small parts that you may drop into the chad.
- Step 6: To remove the Rear Cabinet/Cover (item 50) of the StreamPunch,
A. Remove the “5” screws on Exit side and “3” screws on Entrance side.
B. ***Slide*** the Rear Sheet Metal Cabinet/Cover off of the StreamPunch.
- NOTE: You do not need to lift upward and you do not need to remove the Top Cover.



10. Adjustments and Special Procedures

Looking into the StreamPunch from the Paper Entrance Side;

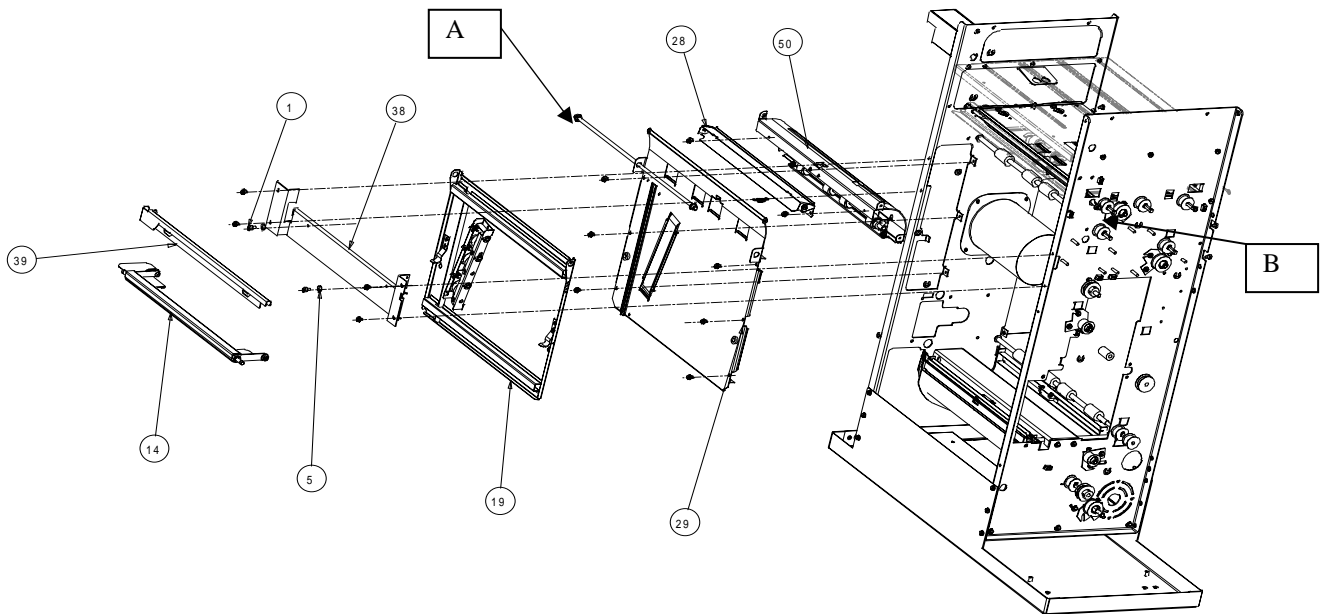
- Step 7: Disconnect the Entrance Sensor Wire from the Side Frame.
- Step 8: Remove the “4” screws that secure the Front Paper Chute (item 50), set aside.
- Step 9: To remove the J2 Flipper, Door Latch (item 14).
- A. Unhook the spring of the J2 Flipper on the right end.
 - B. Remove only one (the one closest to the frame) of the “E” Rings of the J2 Flipper on the left end (front Door side).
 - C. Push the J2 Flipper in toward the front Door until it clears the rear frame.
 - D. Pull the entire J2 Flipper, Door Latch out and set it aside.
- Step 10: Remove the “4” screws that secure the Docking Bracket (item 38). Remove, and set aside.



10. Adjustments and Special Procedures

Step 11: To remove Entrance Aligner Panel, Idler Paper Guide Assembly (item 19)

- A. Remove “2” E-Rings from the Pivot Shaft (item A).
- B. Slide the Shaft (A) all the way out through the front of the StreamPunch.
- C. Remove the Fan (item B) that prevents access to the Flexible Cable. To remove it simply pull it off of the Shaft.
- D. Remove the Flexible Cable using an Alan Wrench.
- E. Remove the rear top Pulley.
- F. Loosen the Belt Idler.
- G. Remove the Belt and Pulley.
- H. Loosen screw from the Solenoid Link.
- I. Remove the Solenoid Assembly and link from the Diverter Shaft, leave it hang.
- J. Remove the two E-Rings of the Entrance Diverter Assembly, slide the Diverter out and set it aside.

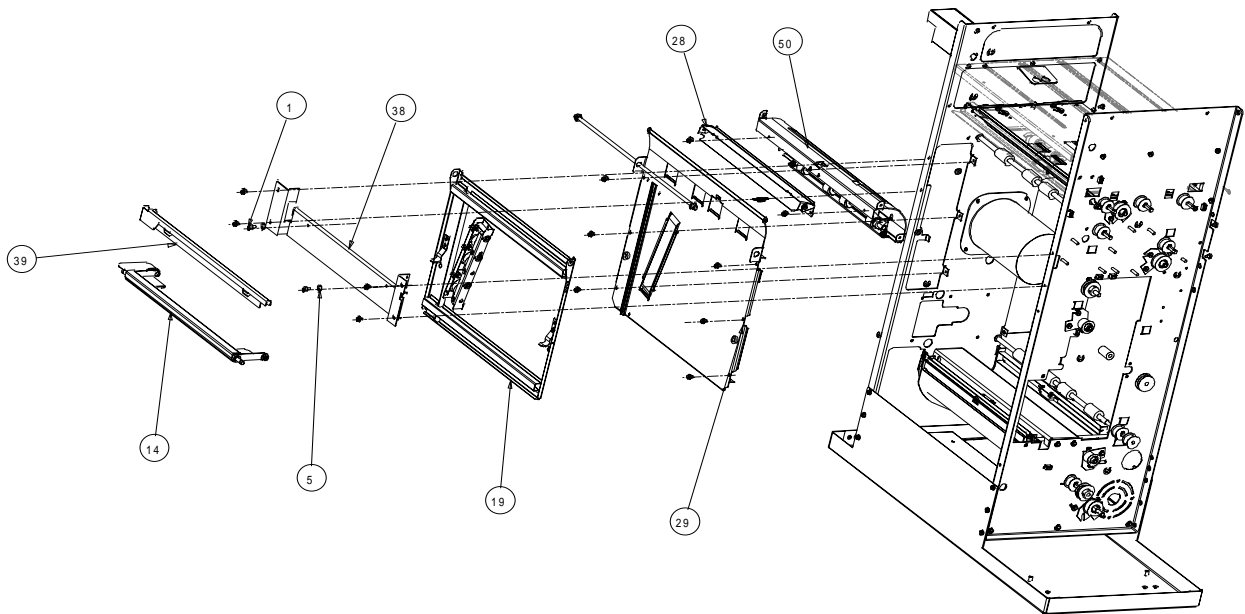


10. Adjustments and Special Procedures

Step 12: To remove the Drive Side, Paper Entrance Guide Aligner Assembly (item 29), which is the large sheet metal Assembly that actually contains the Green Belt and Aligner.

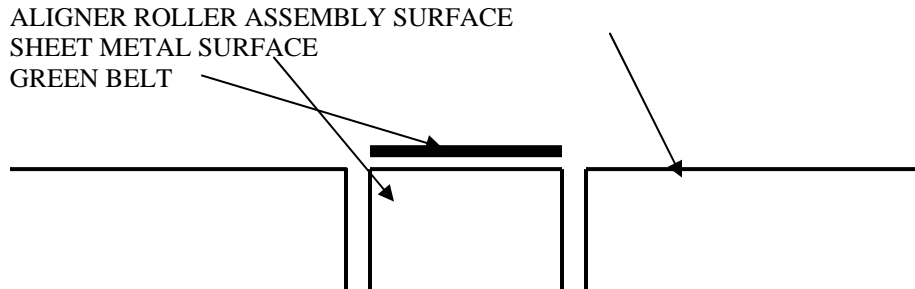
- A. Remove the “6” Screws that secure the face of this Assembly.
- B. Remove the “2” screws that secure this Assembly from the Side Frame.
- C. Pull and walk the entire sheet metal assembly of the Paper Guide Aligner Assembly up and outward. You can grab the Assembly at the Roller cut out with your fingers.

IMPORTANT: As you do this, disconnect the Sensor harness behind the Assembly as soon as you are able to reach it.

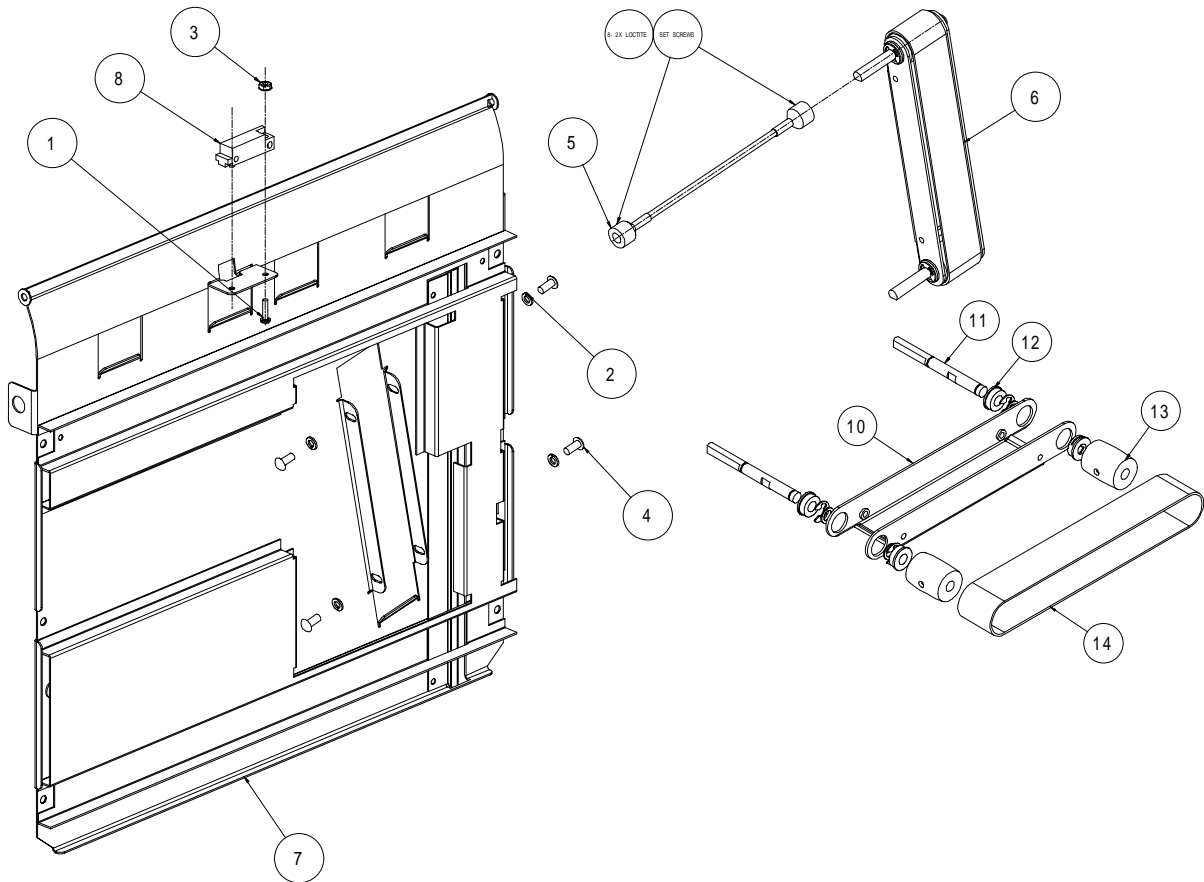


10. Adjustments and Special Procedures

Step 13: Before you remove the Green Belt Aligner Roller Assembly from the sheet metal paper guide, observe the perfectly flush surfaces of the Green Belt Aligner Roller Assembly to the sheet metal surface of the Rear, Drive Side, Paper Guide Aligner Assembly. Hold a straight edge like a 12" metal ruler across the surface of the sheet metal face and the metal (w/o a belt) Green Belt Aligner Roller itself. Note that the two metal surfaces are flush.



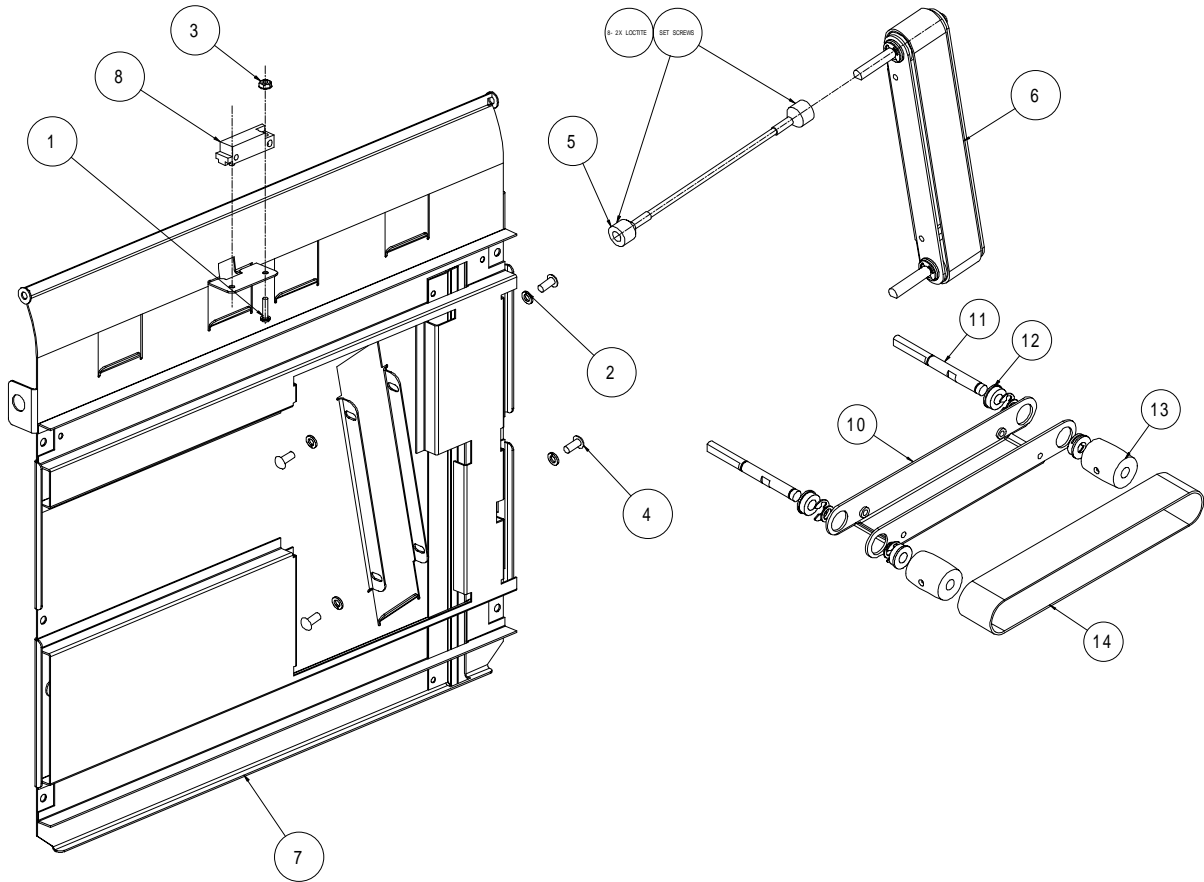
Step 14: Remove the Green Belt Aligner Roller Assembly by removing the "4" screws (item 4).
Important: leave the Flex Shaft (item 5) attached.



10. Adjustments and Special Procedures

Assembly Process

Step 15: Stretch the new Belt (item 14) onto the Aligner Roller Assembly, green side out. Rotate the Shaft (item 11) to confirm that the belt tracks properly.

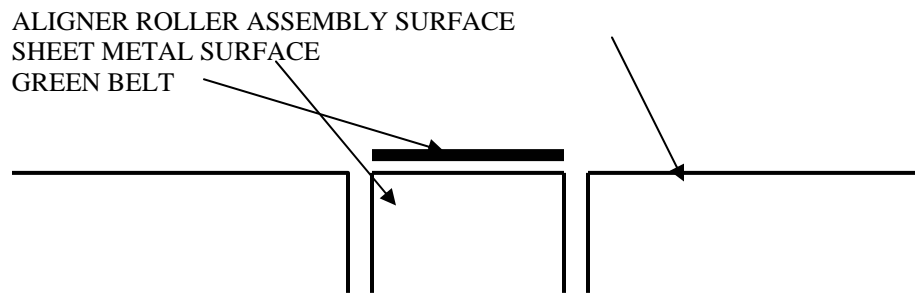


10. Adjustments and Special Procedures

Step 16: Slide the Aligner into place, **loosely** attach the “4” Pan Head Screws with the “4” Lock Washers.

Check that the metal surface of the Aligner Roller Assembly is flush with the Sheet Metal surface of the Paper Guide. A 12” metal ruler works well to check this adjustment. Slip the ruler under the green belt and press it flat against the two surfaces. Adjust the Aligner and **snug** the screws when perfectly flush. NOTE: The green belt should look like the drawing shown after step 11.

As a double check, hold the entire Paper Guide assembly up so that you can visually inspect the alignment between the sheet metal surface and the metal surface of the Aligner. The Green Belt should appear to be even or parallel, and just floating above the surface of the sheet metal.



Step 17: To install the Paper Guide Assembly into the StreamPunch.

A. As you slide the Paper Guide Assembly into place,
a. Hook up the Sensor Harness to the Sensor on the back.
b. Lift it up slightly to clear the lower Transition Paper Guide.
c. Be sure to clear the Sensor Bracket at the top left.
d. Be sure that the Flex Coupling Shaft is sticking out of the rear of the StreamPunch properly.

B. Visually check all around the mounting area of the Paper Guide Assembly and that the Sensor Harness is properly connected.

C. **Loosely** secure it in place with “3” screws on the left and “3” on the right.

D. **Loosely** install the “2” top screws.

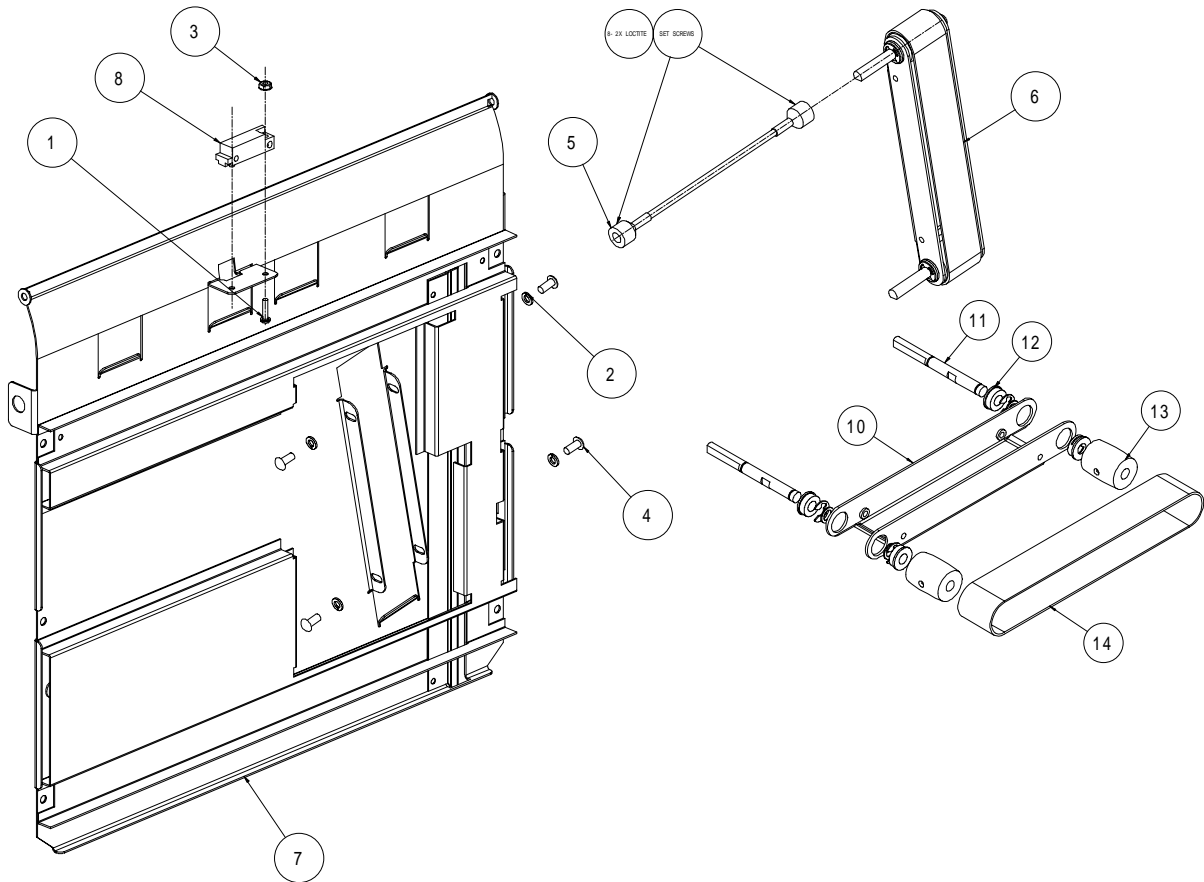
E. Once all “8” mounting screws have been properly started you have good alignment. You may now go back and tighten the screws until they are snug.

10. Adjustments and Special Procedures

Step 18: Install the Flexible Shaft (item 5).

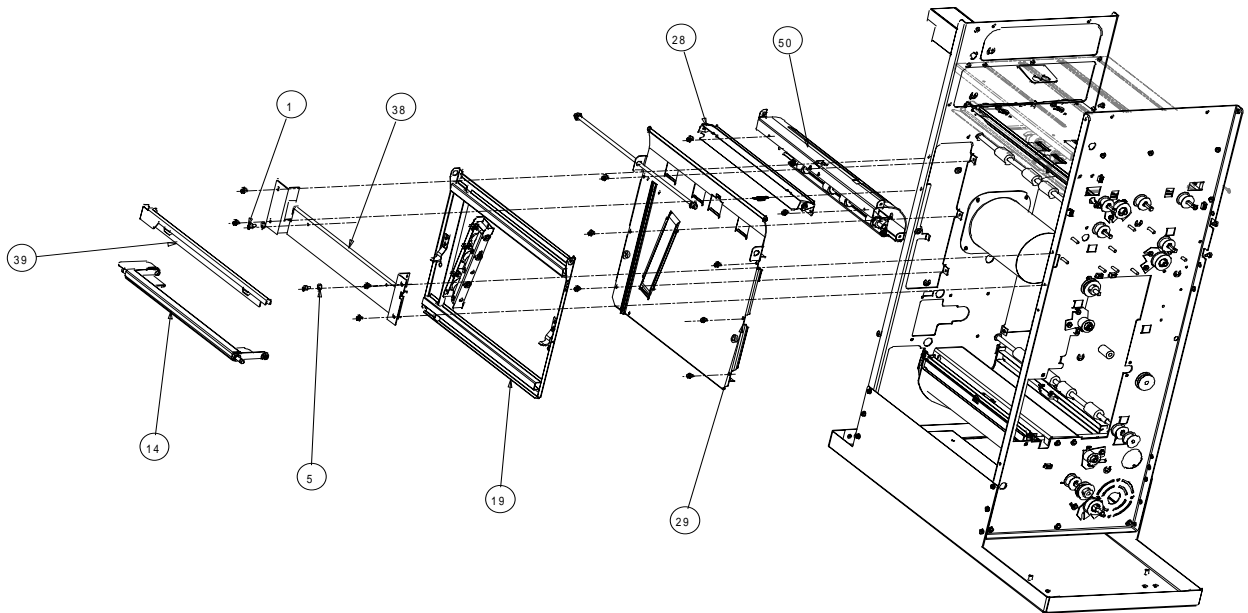
Step 19: Install the curved sheet metal Exit Paper Guide (item 7) with Idler Roller "4" Screws.

Start all "4" screws, (2 on front and 2 on back) then tighten.



10. Adjustments and Special Procedures

- Step 20: Connect the Sensor Wire Harness at the top rear of the Exit Paper Guide.
- Step 21: Install the J2 Shaft back into place by inserting it first into the front, then the back.
- Step 22: Close the J2 Flipper Latch.
Repeat the test of rotating the pulleys to ensure smooth rotation of the Idler Rollers.
- Step 23: Attach the J2 Shaft Spring
Install the front E-Ring to secure J2.



10. Adjustments and Special Procedures

- Step 24: To install the Idler Aligner Paper Guide.
- A. Hold it loosely in place.
 - B. Press the Nylon Flange Bearings into place, through both pieces of sheet metal, with the Flange to the inside.
 - C. Slide the Shaft through the front of the machine, while holding the Nylon Flange Bearing in place.
 - D. Secure with “2” E-Rings on the inside of the bearing.
 - E. Inspect by pressing in on the bottom area of the sheet metal for:
 - #1, should see a slight deflection of each Idler Roller as you press,
 - #2, as you press, you can turn the Pulley’s at the rear of the StreamPunch and see the Idler Rollers rotate smoothly.

Step 25: Attach the Docking Plate using “4” Screws.

Step 26: Attach the Back Rear Cover using the 7 screws (2 for the Entrance and 5 for the Exit side).

Test the StreamPunch by running 10 copies in bypass mode,
Then 1 sheet in punch mode,
Then 10 sheets in punch mode,
Then 100 sheets in punch model

This entire process takes approximately 60 minutes. First time maybe a little longer.

10. Adjustments and Special Procedures

Green Belt Replacement, Aligner Panel removal - Paper Exit Side

The following step-by-step directions informs you how to remove and then assembly the components necessary to access the Paper Exit Side Aligner *Green Belt, P/N VRC51019*.

It will help you to reference your StreamPunch Service Manual part drawings as you follow this process.

Special Tools Required:

- Twelve inch metal ruler or similar straight edge.
- Phillips Head Screw Driver 7” or less in total length.
- Alan wrenches.
- Nut Driver
- Rare Earth Magnet Snake Neck (optional – good for retrieving any hardware that happens to fall in hard to reach spots)
- Snap Ring pliers
- E-Ring tool

NOTE: During assembly, be sure not to over tighten any of the mounting screws.

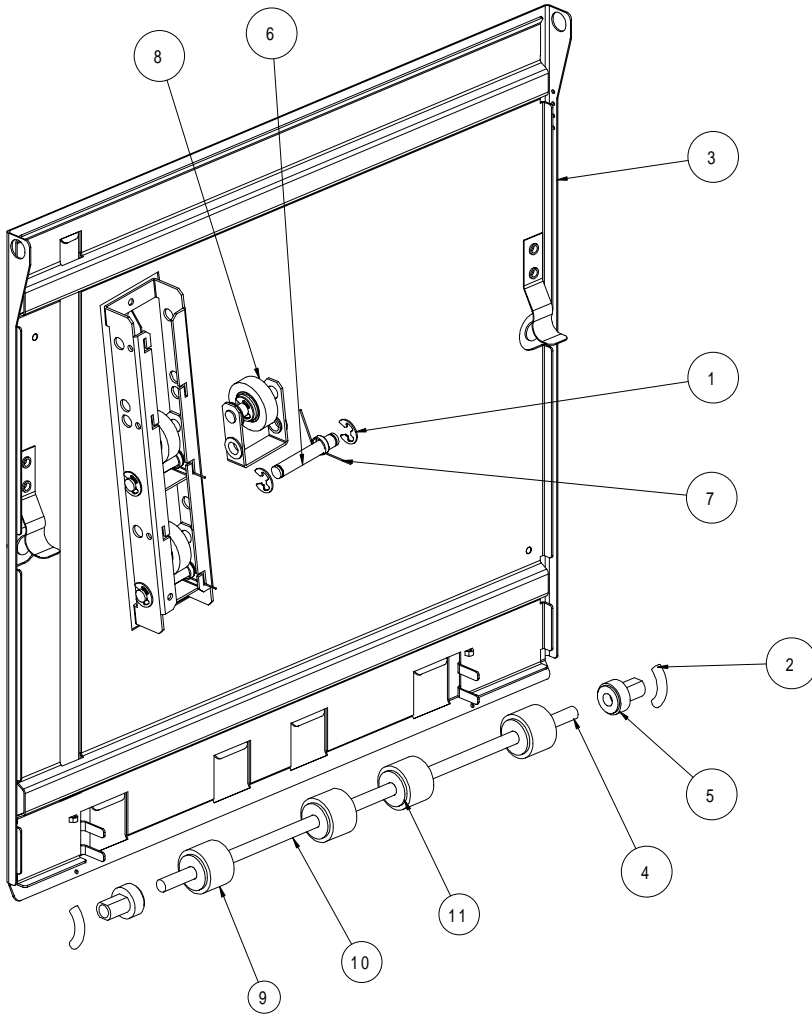
10. Adjustments and Special Procedures

- Step 1: Disconnect the StreamPunch from Power. Retain the power cord in your possession for your safety.
- Step 2: Disconnect the Communication Cable to the Finisher.
- Step 3: Unlatch the GBC StreamPunch from both the Finisher and the Printer.
NOTE: You must first remove the screw that secures the latch in place (if so equipped).
- Step 4: Open the front door (item 33) of the StreamPunch.
- Step 5: To remove the Rear Cabinet/Cover (item 50) of the StreamPunch,
B. Remove the 5 screws on Exit side and 2 screws on Entrance side.
B. Slide the Rear Sheet Metal Cabinet/Cover off of the StreamPunch.
NOTE: You do not need to lift upward and you do not need to remove the Top Cover.

Looking into the StreamPunch from the Paper Exit Side;

- Step 6: To remove the J2 Flipper (item 14), Door Latch.
A. Remove only one (the one closest to the frame) of the “E” Rings of the J2 Flipper on the right end (front Door side).
B. Push the J2 Flipper in toward the front Door until it clears the rear frame.
C. Pull the entire J2 Flipper, Door Latch out and set it aside.
- Step 7: Unhook spring from the Docking Plate (item 38) and Door. Remove the “4” screws that secure the Docking Bracket. Remove, and set aside.
- Step 8: To remove the Rear Aligner, Idler Paper Guide Assembly
A. Remove “2” E-Rings from the Pivot Shaft.
B. Slide the Shaft all the way out through the front of the StreamPunch.
C. Remove the “2” Nylon Bearings.
D. Remove and set aside the Rear Aligner, Idler Paper Guide Assembly.
- Step 9: To remove the curved sheet metal Exit Paper Guide Assembly
A. Remove the “4” Screws (2 rear and 2 front) of the curved sheet metal Exit Paper Guide Assembly
B. Unplug the Sensor
C. Pull the entire sheet metal Exit Paper Guide Assembly out, set aside.

10. Adjustments and Special Procedures



Step 10: To remove the Rear, Drive Side, Paper Guide Aligner Assembly. This is the large Sheet Metal Assembly within the StreamPunch that actually contains the Green Belt Aligner itself.

IMPORTANT: Walk the Belt off of the Aligner Pulley at the rear.

A. Remove the “2” screws that hold the Block to the Frame.
Now – the Coupler is loose and the Rear Panel will come out.

NOTE: The Helical coupling is very delicate, be gentle.

B. Remove the “6” Screws that secure the face of this Assembly.

C. Remove the “2” Screws that secure this Assembly from the top.

NOTE: In order to access these screws, you must first remove the Die Set Storage Shelf and the Cable Shield attached to the Die Storage Shelf at the paper entrance side. Moving the Die Storage Shelf aside will enable better access to the “2” screws with a short (7” or less) Phillips Screw Driver.

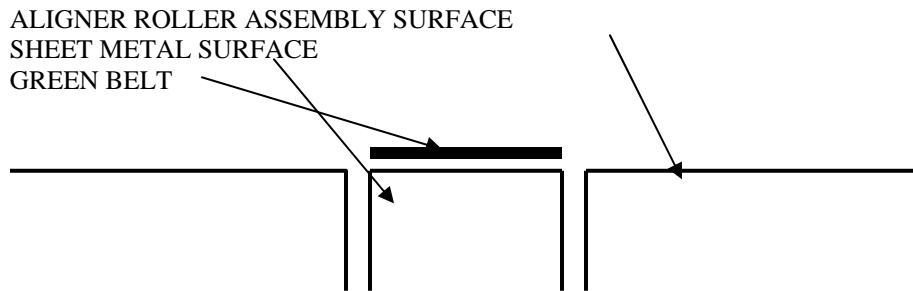
10. Adjustments and Special Procedures

D. Pull and walk the entire sheet metal assembly of the Paper Guide Aligner up and outward. You can grab the Assembly at the Roller cut out with your fingers.

E. Bend in the Tab of the frame near the middle, front area to allow enough clearance to work the sheet metal Paper Guide Aligner Assembly out.

IMPORTANT: As you do this, disconnect the Sensor harness behind the Assembly as soon as you are able to reach it.

Step 11: Before you remove the Green Belt Aligner Roller Assembly from the sheet metal paper guide, observe the perfectly flush surfaces of the Green Belt Aligner Roller Assembly to the sheet metal surface of the Rear, Drive Side, Paper Guide Aligner Assembly. Hold a straight edge like a 12" metal ruler across the surface of the sheet metal face and the metal (w/o a belt) Green Belt Aligner Roller itself. Note that the two metal surfaces are flush.



Step 12: Remove the Green Belt Aligner Roller Assembly by removing the "4" screws.
Important: leave the Coupler attached.

10. Adjustments and Special Procedures

Assembly Process

Step 13: Stretch the new green belt onto the Aligner Roller Assembly, green side out.

Take care when handling the Aligner Roller Assembly so as not to damage the Flex Coupling.

Rotate the shaft to confirm that the belt tracks properly.

Step 14: Slide the Aligner into place, **loosely** attach the “4” Pan Head Screws with the “4” Lock Washers.

Check that the metal surface of the Aligner Roller Assembly is flush with the Sheet Metal surface of the Paper Guide. A 12” metal ruler works well to check this adjustment. Slip the ruler under the green belt and press it flat against the two surfaces. Adjust the Aligner and **snug** the screws when perfectly flush. NOTE: The green belt should look like the drawing shown after step 11.

As a double check, hold the entire Paper Guide assembly up so that you can visually inspect the alignment between the sheet metal surface and the metal surface of the Aligner. The Green Belt should appear to be even and just floating above the surface of the sheet metal.

Step 15: To install the Paper Guide Assembly into the StreamPunch.

B. As you slide the Paper Guide Assembly into place,
a. Hook up the Sensor Harness to the Sensor on the back.
b. Lift it up slightly to clear the lower Transition Paper Guide.
c. Be sure to clear the Sensor Bracket at the top left.
d. Be sure that the Flex Coupling Shaft is sticking out of the rear of the StreamPunch properly.

B. Visually check all around the mounting area of the Paper Guide Assembly and that the Sensor Harness is properly connected.

C. **Loosely** secure it in place with “3” screws on the left and “3” on the right.

D. **Loosely** install the “2” top screws. A useful tip might be to secure the Screw to the tip of your Screwdriver with a small piece of masking tape to assist you in finding the hole.

E. Once all “8” mounting screws have been properly started you have good alignment. You may now go back and tighten the screws until they are snug. **Do not over tighten the “2” screws on top!**

10. Adjustments and Special Procedures

- Step 16: Install the “2” Screws to secure the Bearing Block for the Pulley arrangement at the rear of the StreamPunch. Press the block to the top of the punch before tightening
- Step 17: Install the Pulley and Belt onto the Pulley Block. Once properly aligned, **check Belt and Pulley movement**. Tighten the Set Screw.
- Step 18: Install the Die Set Storage Rack with “3” screws front and “3” screws back. Remember to attach the Ground Strap at the middle screw on the rear (belt side). Start each screw to achieve proper alignment, then go back over each screw and tighten it.
- Step 19: Install the Cable Guard on top of the Die Set Storage Rack (“2” Screws).
- Step 20: Install the curved sheet metal Exit Paper Guide with Idler Roller “4” Screws.
- Start all “4” screws, (2 on front and 2 on back) then tighten.
- Step 21: Connect the Sensor Wire Harness at the top rear of the Exit Paper Guide.
- Step 22: To install the Idler Aligner Paper Guide.
- A. Hold it loosely in place.
 - B. Press the Nylon Flange Bearings into place, through both pieces of sheet metal, with the Flange to the inside.
 - C. Slide the Shaft through the front of the machine, while holding the Nylon Flange Bearing in place.
 - D. Secure with “2” E-Rings on the inside of the bearing.
 - E. Inspect by pressing in on the bottom area of the sheet metal for:
 - #1, should see a slight deflection of each Idler Roller as you press,
 - #2, as you press, you can turn the Pulley’s at the rear of the StreamPunch and see the Idler Rollers rotate smoothly.

10. Adjustments and Special Procedures

- Step 23: Bend the small metal tab back into place.
- Step 24: Install the J2 Shaft back into place by inserting it first into the front, then the back.
- Step 25: Close the J2 Flipper Latch.
Repeat the test of rotating the pulleys to ensure smooth rotation of the Idler Rollers.
- Step 26: Attach the J2 Shaft Spring
Install the front E-Ring to secure J2.
- Step 27: Attach the Docking Plate using “4” Screws and install spring from Plate to Door.
- Step 28: Attach the Back Rear Cover using the 7 screws (2 for the Entrance and 5 for the Exit side).

Test the StreamPunch by running 10 copies in bypass mode,
Then 1 sheet in punch mode,
Then 10 sheets in punch mode,
Then 100 sheets in punch model

This entire process takes approximately 60 minutes. First time maybe a little longer.

10. Adjustments and Special Procedures

Back Gage and Chad Control Mechanism - Adjustment, Assembly / Disassembly Procedure

The Back Gage with Chad Control Mechanism is available as a kit (**Ricoh P/N VRC51277**) to upgrade units built before March 01, 2004 (S/N QC). See step 16 for Skew Adjustment and step 17 for Deep Punch Adjustment.

General Description;

The StreamPunch Chad Control Mechanism directs Paper Chad into the Chad Disposal Container, significantly reducing the amount of Chad that could flow through the paper path. There will be some Chad that falls outside the Chad Container. In one circumstance, when the customer changes their Die Set, some Chad always comes with the Die and falls to the bottom of the machine or to the floor. As a general practice, it is a good Preventative Maintenance practice to vacuum the inside of the StreamPunch periodically. This kit is standard with all StreamPunch machines built after March 1, 2004 which is identified by serial numbers beginning with QC.

What you need to install this kit:	Contents of Kit:
<ul style="list-style-type: none"> <input type="checkbox"/> Die Sets to replace any and all of the customers current Die Set selection. *A <input type="checkbox"/> Open End Ignition Wrench – ¼” <input type="checkbox"/> Nut Driver, 5/16” <input type="checkbox"/> Nut Driver ¼” <input type="checkbox"/> Needle Nose Pliers (Side Cutters) <input type="checkbox"/> E-Prom Extractor Tool (can be purchased from the following supplier) Supplier Digi-Key.com Digi-Key Part Number: K293-ND Manufacturer Part Number:EX-5 Description: TOOL EXTRACTOR IC PLCC UNIVERSAL <input type="checkbox"/> Allen Wrench (for 4-40 SHS – 3/32”) <input type="checkbox"/> Wire Cutters <input type="checkbox"/> Wire Tie Wraps (Qty. 5) <input type="checkbox"/> Screw Driver, Phillips Head <input type="checkbox"/> Screw Driver, Flat Head, Small 	<ul style="list-style-type: none"> <input type="checkbox"/> Back Gage #7706972 <input type="checkbox"/> E-Prom #7706791, 7706799 <input type="checkbox"/> Brush #7706711 <input type="checkbox"/> Holder #7706476

*A IMPORTANT: This Chad Control Mechanism only performs properly with Die Sets equipped with an extra sheet metal flange tack welded to the bottom die plate. This serves to guide most of the paper chad into the chad control chute, which in turn directs it into the chad debris tray.

10. Adjustments and Special Procedures

Installation Steps

Step 1: Disconnect power and communication cable.

Step 2: Open door and remove Die Set, chad bin, and rear cover (opposite the door). NOTE: Once you remove the screws that secure the rear cover, it will slide out from under the top cover. You do not need to remove the top cover.

Step 3: Remove the two screws holding the Die rail at the front of the StreamPunch.

Step 4: Remove the four screws holding the Die rail at the rear of the StreamPunch.

Step 5: Remove the wire that attaches the solenoid to the PC board. After all the screws and the wire are removed you can now remove the back gage and rail as an assembly.

Step 6: Facing the back gage pull the rail from the right side first and slide out the assembly.

If Bracket already in StreamPunch has three notches, skip steps 7, 8 & 9. Proceed to Step 10.

Step 7: Remove the two-roller bracket held on by two screws. The screw on the left is the easy one the right side will take some time and finesse to remove. NOTE: This step requires a small Ignition Open End, ¼" Wrench. The removal of this Screw is difficult and time consuming due to limited access.

Step 8: Note the screw that holds the U-Channel to the frame. Remove this first to give you some room. After this is done remove the roller and springs and transfer them to the new bracket with the three notches.

Step 9: Replace the bracket and replace the right side screw with a 4-40 Socket Head screw, nut and washer provided.

Step 10: Install the new back gage. Also, when replacing the two screws that hold the die rail make sure you install the brush that is provided in the kit.

Step 11: Replace the E-Prom with the new E-Prom provided. Be sure to orient the E-Prom correctly with the notch. The new E-Prom not only provides software to work with the new Back Gage mechanism, it also contains new software that changes the default time to 4 minutes. This provides the customer sufficient time to clear a jam without returning to by-pass mode.

Step 12: Reattach the wire harnesses using wire ties. Add a small loop to the new wires coming from the new Solenoid to the PCB and using a wire tie, secure the harness so that it is not in the path of the Chip Tray.

10. Adjustments and Special Procedures

Installation Steps, continued

Step 13: Install the chad bin.

Step 14: Install the new (see footnote below) die set. Test the StreamPunch system running first one page at a time, then two pages then 5 pages, then 10 pages and lastly run 50 test pages.

Step 15: Replace the cover and run a few more test jobs.

Step 16-**Skew Adjustment**: Check for proper Hole alignment to paper edge.

The back gage is designed to give you some adjustment when the three screws are loosened.

It will give you up and down play, which allows you to remove skew.

The ideal situation is to have the back gage all the way to the top position.

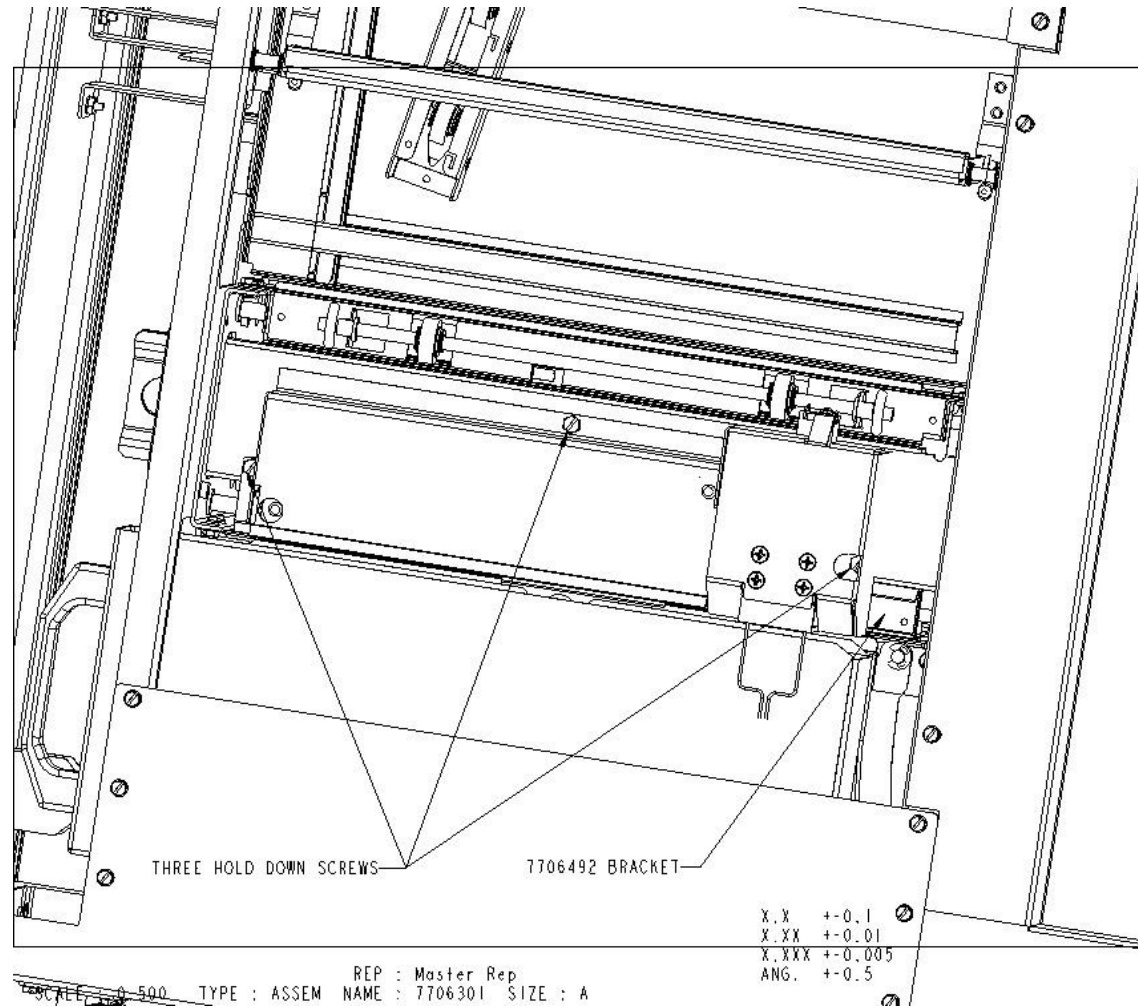
If not, paper can slip past the paper stops and give you a deep punch. This may occur if the back gage is tightened into place in it's bottom most position. This situation is most likely to occur when using the VeloBind or PB die sets, which are at one end of the Back Gage tolerance spectrum

Three-Hole Die Set: At the other end of the Back Gage tolerance is the Three-Hole Die Set. If the customer owns a Three-Hole Die, check this die to see if it is easy to insert and remove. If the die is too tight you will need to lower the back gage slightly to achieve the tightness you desire, while still retaining the PB and VeloBind functionality mentioned above.

Now you need to run some paper and check for skew, at this point you can now use the three screws to adjust skew if needed. After the adjustment is made re test with the three-hole die. If all is well re test with the VeloBind die to make sure there are no deep punches.

Step 17 - **Back Gage Adjustment to eliminate Deep Punching**: Check for proper operation with PB Die Set: In some cases, using a PB Die Set, you may have an occurrence of a "Deep Punch" symptom. If this shows up during testing, loosen the three main screws that secure the entire Back Gage Assembly, push the entire mechanism upward, taking up all play, tighten the three screws securely. Test approximately 200 to 500 sheets of paper through the PB die. Check for no deep punching and no paper jamming in the Die Set area

10. Adjustments and Special Procedures



10. Adjustments and Special Procedures

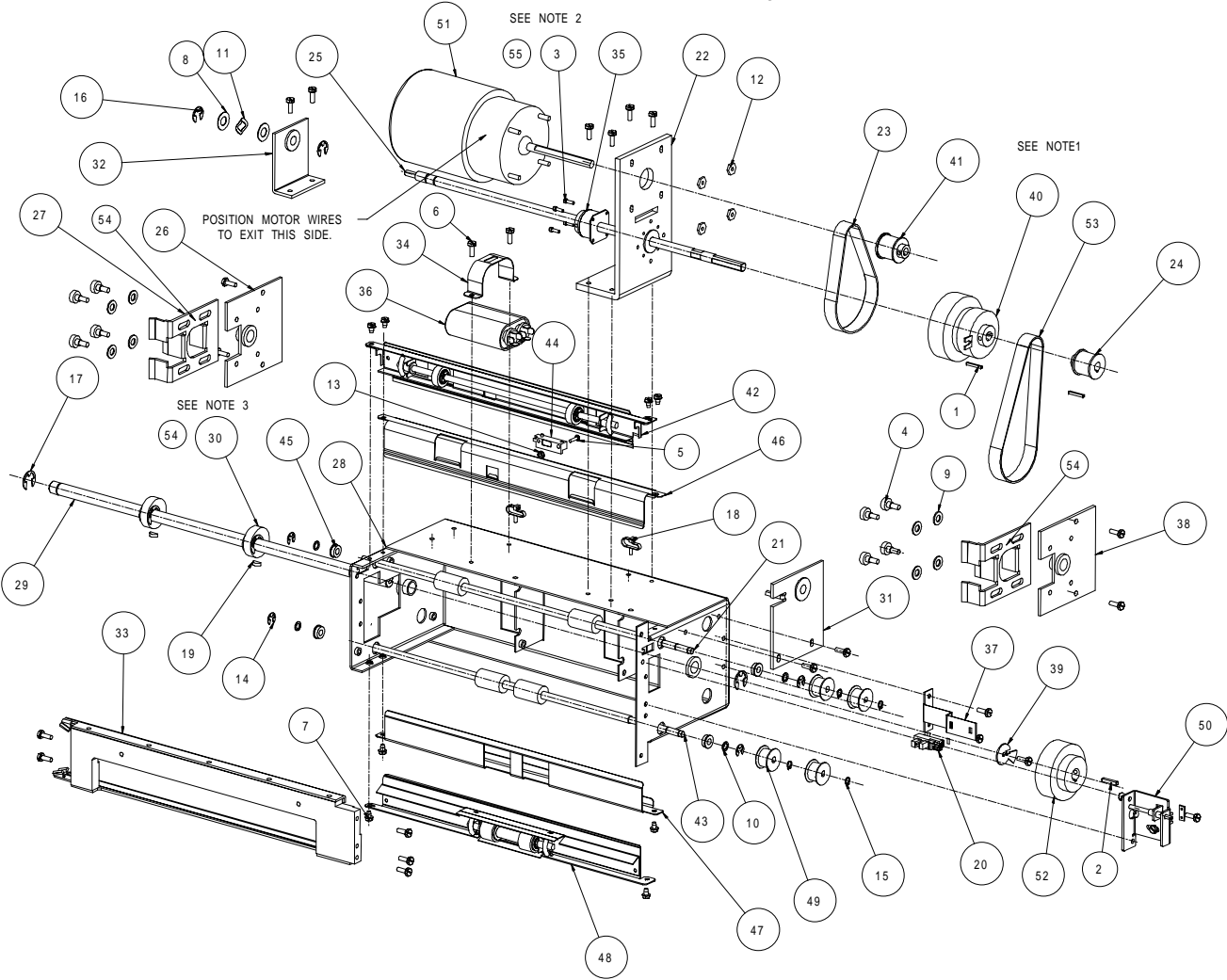
To Clear A Paper Jam

To clear a jam, first press the stop button on the printer, then check the printer screen to see the area of the jam. If the jam is in the printer or finisher only, follow the information on the screen to clear the jam. If the screen shows a jam in the punch, try to follow this sequence.

1. Open punch door.
2. Turn off the power
3. Turn punch knob J3 to home position.
4. Open top cover J1.
5. Open front paper door lever J2.
6. Open exit paper door lever J8.
7. Open bottom U-channel J7 by pressing in lever J6 and lower.
8. Clear paper from all these areas by turning knobs as shown.
9. When all the paper is cleared turn on power shut the door make sure the jam light is out if not go back to step 1. And find the paper that is not clear.
10. When all the paper is cleared from the punch and the light is out follow the steps used above to clear the printer and finisher.
11. Hit the punch green button and then the resume button on the printer, operation should start.
12. If by chance you do not hit the green button the punch will go into bypass mode at this time you will have to hit the stop button on the printer hit the green button on the punch then the resume button on the printer.
13. This is only my way to clear a jam after you become more familiar with the punch this procedure can change to your own refinement.

11. StreamPunch Parts Listing

Punch Drive Module Assembly 6400



11. StreamPunch Parts Listing

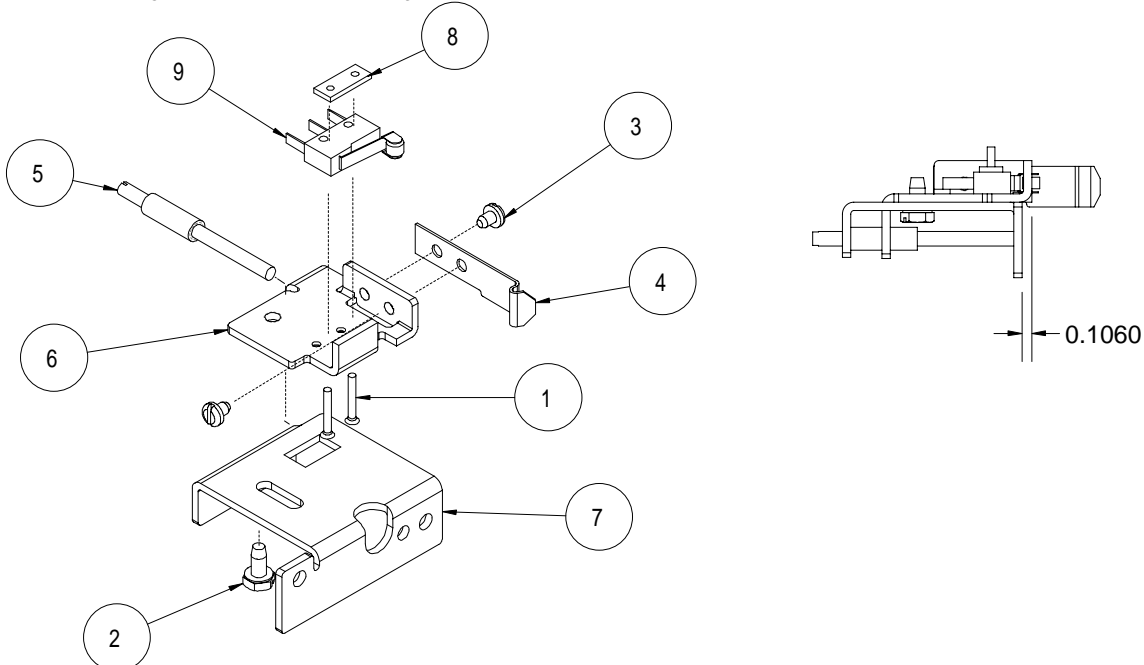
Punch Drive Module Assembly 6400

Item	P/N	Description 6400	Qty
1	VRC51199	KEY, 3/32 x 3/32 x 3/4	2
2	VRC51200	KEY, .125 X .125 X .75	1
3	VRC51203	SCR, SOC HD CAP, 4-40, 3/8 L	4
4	VRC51206	SCR, #10-32 x 1/4 S.H.S .1875 LONG	8
5	VRC51210	SCREW, MACHINE PAN HD, #4-40 x 15/32 PHILLIPS	1
6	VRC51214	SCREW SLOT, HEX SEMS #8-32, 1/2" L	23
7	VRC51215	SCR, #8-32x1/4, SLOT, HEX, SEMS, TRD FORM	8
8	VRC51223	WASHER, 3/4 x 3/8 x .030	2
9	VRC51224	WASHER, .2285 ID x .555 OD x .050 W	8
10	VRC51041	WASHER FLAT, NON-MTL 1/4 x 3/8 x 1/32	4
11	VRC51368	WASHER, WAVY .661 x .395 x .005 x .052 MAX DEF	
12	VRC51227	NUT & WASHER, KEPS, 8-32	4
13	VRC51228	NUT & WASHER, KEPS, 4-40	1
14	VRC51033	RING, RETAINING "E" 1/4" SHAFT	4
15	VRC51032	RING, RETAINING 1/4" SHAFT	4
16	VRC51369	RING, SPRING .38 x .04	
17	VRC51231	RING, SPRING .50 x .04	6
18	VRC51234	WIRE TIE WRAP	2
19	VRC51236	KEY WOODRUFF .12 x .375	2
20	VRC51007	OPTICAL SENSOR	1
21	VRC51044	ROLLER, ENERGY DRIVE	1
22	VRC51013	BRACKET, MOTOR	1
23	VRC51005	BELT HTD 60T x 15mm W x 5mm PITCH	1
24	VRC51083	PULLEY, CLUTCH SHAFT, 15T	1
25	VRC51084	SHAFT, CLUTCH DRIVE	1
26	VRC51085	BRACKET ASM STRIPPER, OPERATOR SIDE	1
27	VRC51086	STRIPPER	2
28	VRC51087	BRACKET, CAM DRIVE	1
29	VRC51088	SHAFT, CAM	1
30	VRC51089	CAM	2

Item	P/N	Description - 6400	Qty
31	VRC51011	BRACKET, CLUTCH	1
32	VRC51012	BRACKET, IDLER	1
33	VRC51080	DIE SET MOUNT ASM	1
34	VRC51091	BRACKET, CAPACITOR	1
35	VRC51004	BRAKE	1
36	VRC51092	CAPACITOR	1
37	VRC51093	BRACKET, OPTICAL SWITCH	1
38	VRC51094	BRKT, ASM STRIPPER DRIVE SIDE	1
39	VRC51095	FLAG	1
40	VRC51003	CLUTCH ASM	1
41	VRC51096	PULLEY, MOTOR SHAFT, 15T	1
42	PAGE 58	PAPER GUIDE, ENERGY NIP ASSY (6441)	1
43	VRC51031	ROLLER, TRANSPORT DOUBLE DRIVE	1
44	VRC51008	SENSOR, OPTICAL	1
45	VRC51046	BEARING, BALL FLANGE .25 ID x .50 OD	4
46	VRC51128	PAPER GUIDE, PUNCH INFEED ASSY	1
47	VRC51129	PAPER GUIDE, PUNCH EXIT DRIVE ASSY	1
48	PAGE 57	PAPER GUIDE, PUNCH EXIT IDLER (6561)	1
49	VRC51047	PULLEY, HTD TIMING 3 mm PITCH .752 PD	4
50	PAGE 56	DIESET ADJUSTMENT ASSEMBLY (6640)	1
51	VRC51002	MOTOR, PUNCH	1
52	VRC51173	PULLEY DRIVE SHAFT, 38T	1
52	VRC51346	A4 , PULLEY DRIVE SHAFT, 32T	1
53	VRC51006	BELT HTD 72 T x 15 MM x 5 MM PITCH	1
53	VRC51347	A4 - BELT HTD 69t T x 15 MM x 5 MM P	1
54	VRC51243	GREASE	.01
55	VRC51043	LOCTITE	.01

11. StreamPunch Parts Listing

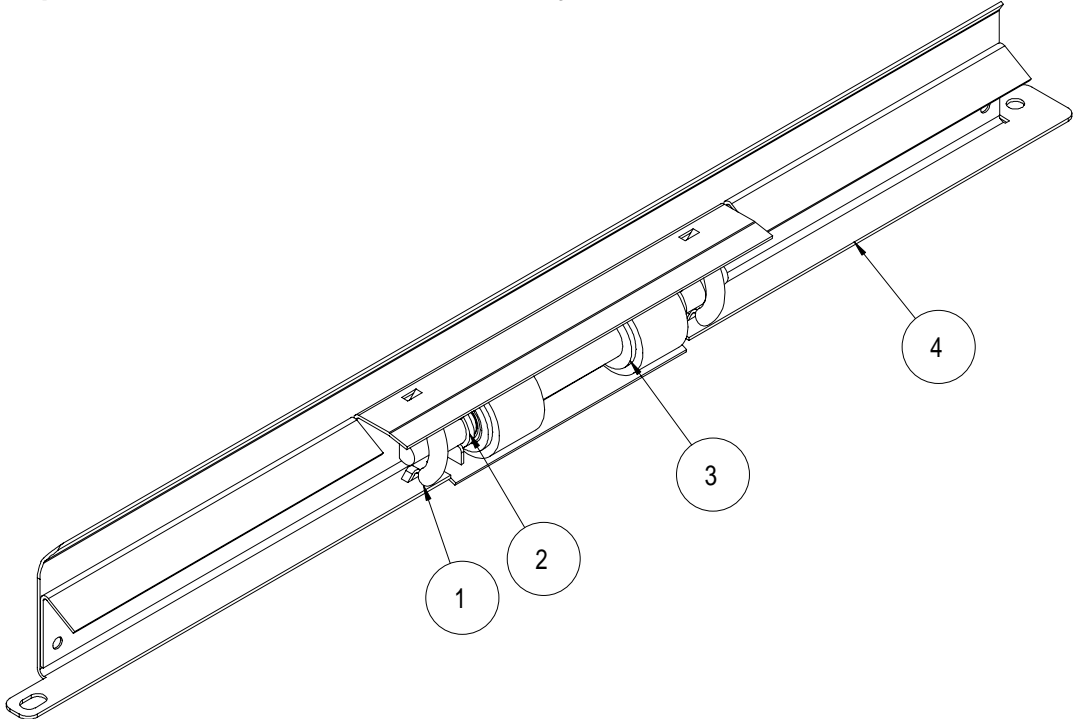
Die Set Adjustment Assembly 6640



ITEM	PART NO.	DESCRIPTION 6640	QTY
1	VRC51208	SCR, PHL FLT HD, 2-56 X .63	2
2	VRC51213	SCR, SLT IND HEX HD, EXT SEMS WSHR, 8-32 X .38	1
3	VRC51217	SCR, PHL PAN HD, EX SEMS, 6-32 X .18	2
4	VRC51156	SPRING, LOCK	1
5	VRC51157	SCREW, ADJUSTMENT, DIESET	1
6	VRC51158	PLATE, ADJUSTMENT, DIESET	1
7	VRC51159	BASE, ADJUSTMENT, DIESET	1
8	VRC51196	PLATE, NUT, 2-56	1
9	VRC51197	SWITCH, CONTACT, NO/NC	1

11. StreamPunch Parts Listing

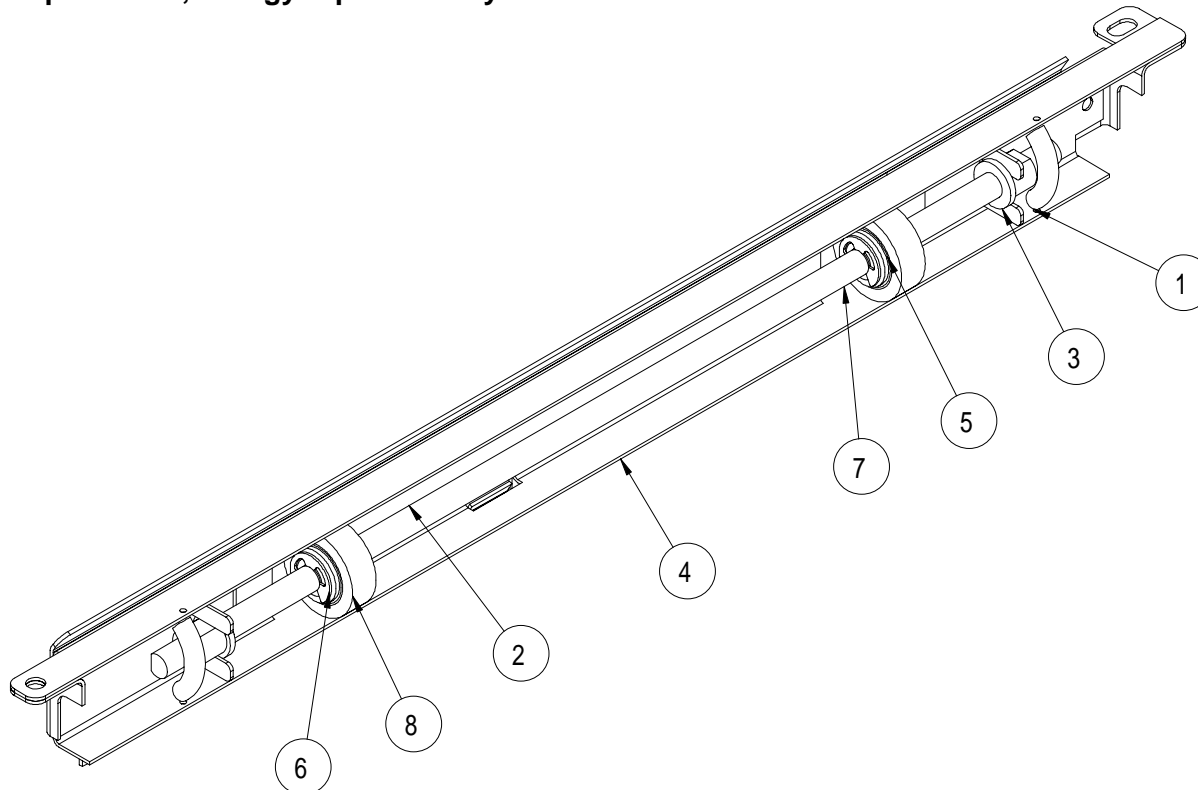
Paper Guide, Punch Exit Drive Assembly 6561



ITEM	PART NO.	DESCRIPTION 6561	QTY
1	VRC51034	SPRING, EXTENSION	2
2	VRC51045	BEARING, DOUBLE "D" FLANGE	2
3	VRC51027	3 IDLER ROLLER, ASSEMBLY	1
4	VRC51111	PAPER GUIDE, PUNCH EXIT ASSEMBLY.	1

11. StreamPunch Parts Listing

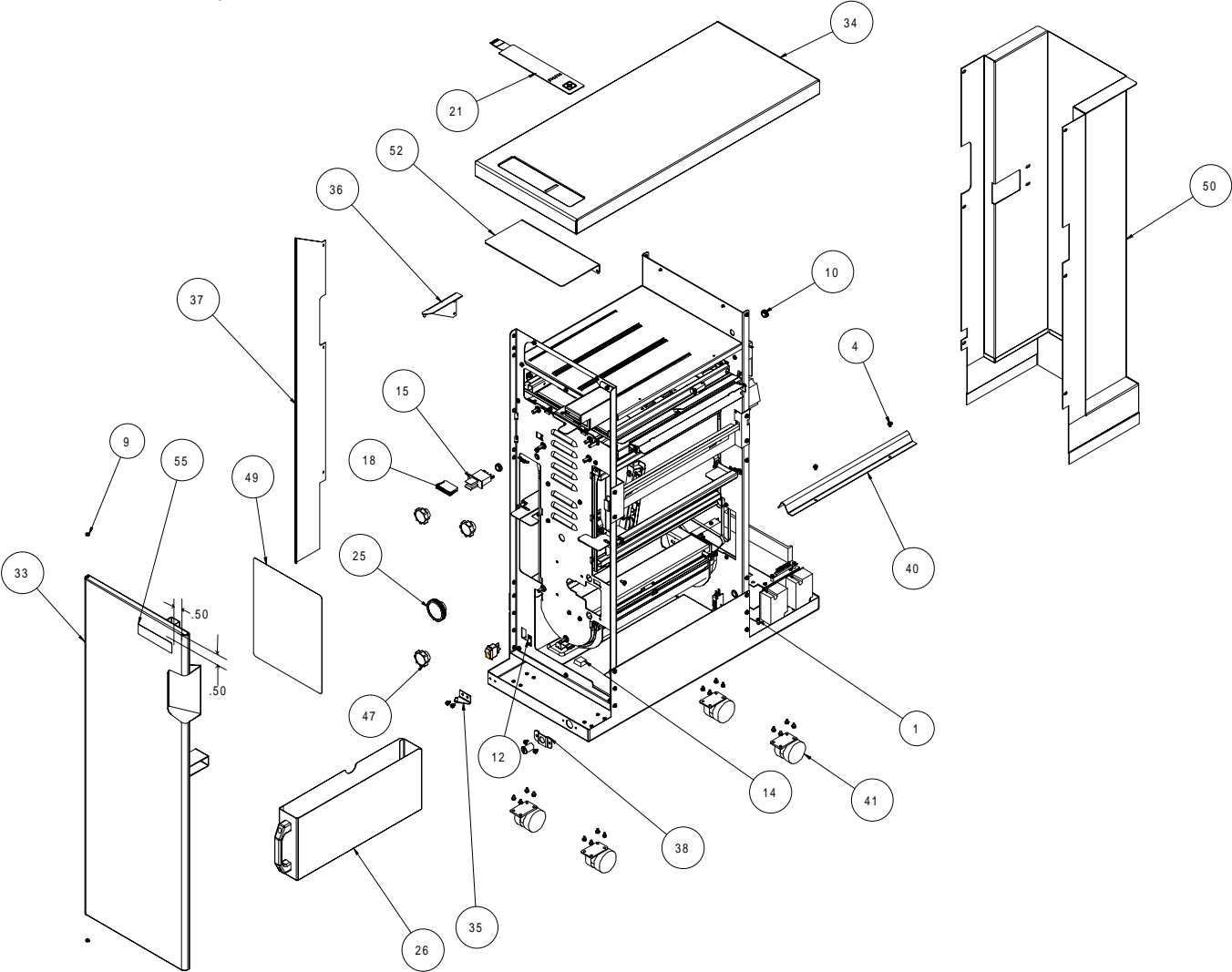
Paper Guide, Energy Nip Assembly 6441



ITEM	PART NO.	DESCRIPTION – 6441	QTY
1	VRC51034	SPRING, EXTENSION	2
2	VRC51329	IDLER ROLLER, ASSEMBLY	1
3	VRC51045	BEARING, DOUBLE "D" FLANGE	2
4	VRC51133	4 PAPER GUIDE WELDMENT, PUNCH INFEED IDLER	1
5	VRC51041	WASHER, NON-MET 1/4X3/8X1/32	4
6	VRC51033	RING, RETAINING E 1/4 SHAFT	4
7	VRC51067	SHAFT, ENERGY ROLLER	1
8	VRC51035	ENERGY ROLLER ASM.	2

11. StreamPunch Parts Listing

Cabinet Assembly –6301



11. StreamPunch Parts Listing

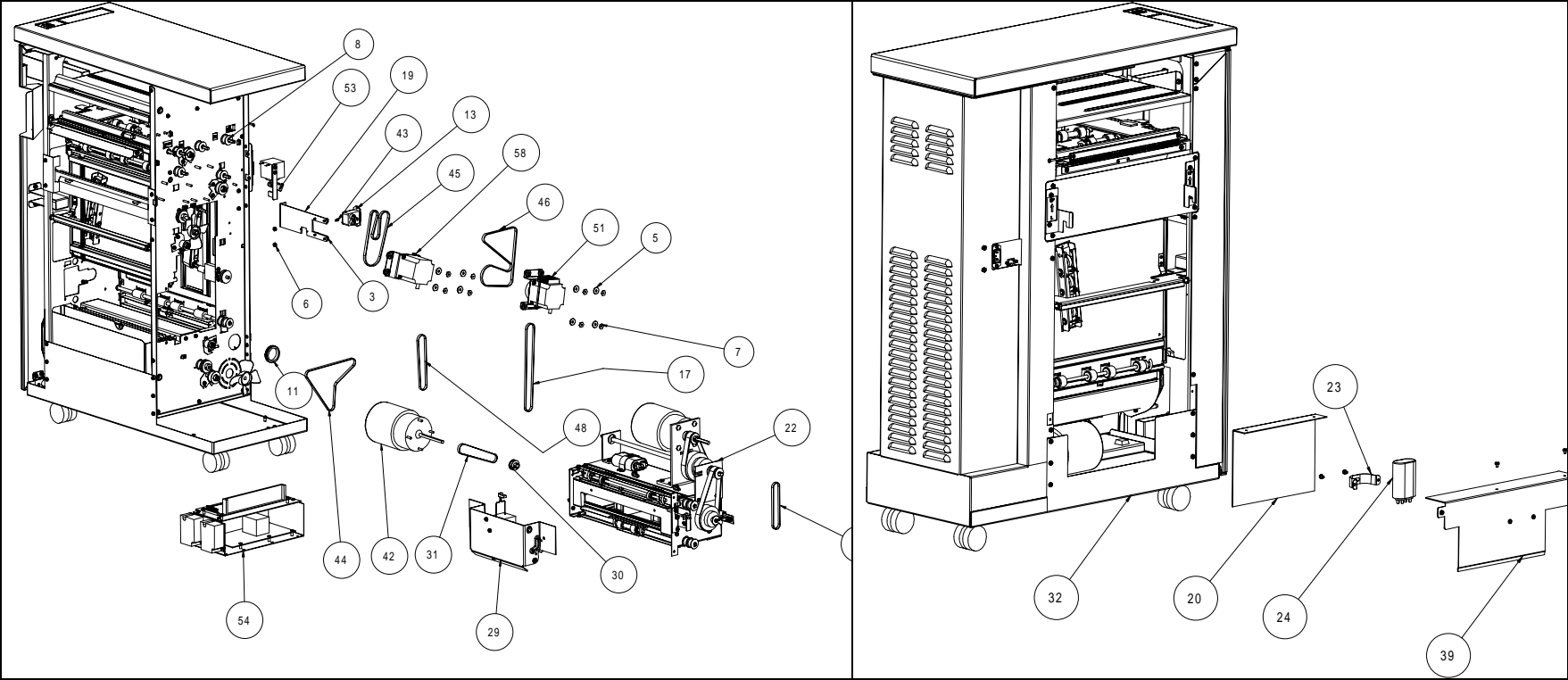
Cabinet Assembly –6301

Item	P/N	Description - 6301	Qty
1	VRC51211	SCR, SLT IND HEX HD, EXT SEMS WSHR, 6-32 x .38	6
2	VRC51212	SCR, SLT IND HEX HD, EXT SEMS WSHR, 8-32 X .25	2
3	VRC51213	SCR, SLT IND HEX HD, EXT SEMS WSHR, 8-32 X .38	4
4	VRC51215	SCR, #8-32X1/4, SLOT_HEX, SEMS, TRD FORM	45
5	VRC51222	WSHR, .192 ID X .625 O.D. X .060 T	8
6	VRC51226	NUT & WSHR, KEPS, 6-32	2
7	VRC51227	NUT & WSHR, KEPS, 8-32	8
8	VRC51032	RI, RETAINING 1/4 SHAFT	1
9	VRC51240	BEARING, FLANGE (IGUS)	2
10	VRC51060	GROMMET, 3/8 I.D X 1/2 O.D	3
11	VRC51061	GROMMET, 1 1/4 I.D X 1 1/2 O.D	1
12	VRC51251	LABEL ON/OFF	1
13	VRC51063	RFI POWER FILTER, 115V	1
13	VRC51309	A4 - RFI POWER FILTER, 230V	1
14	VRC51064	RUBBER FEET	1
15	VRC51066	INTERLOCK SWITCH	1
16	VRC51259	ROCKER SWITCH	1
17	VRC51021	BELT, 3mm PITCH X 6mm WIDTH X 153T	1
18	VRC51074	MAGNETIC CATCH	1
19	VRC51076	BRACKET, RFI POWER FILTER	1
20	VRC51080	COVER, I/O SWITCH	1
21	VRC51016	CONTROL PANEL, STREAM PUNCH	1
22	VRC51326	PUNCH MODULE	1
23	VRC51091	BRACKET, CAPACITOR	1
24	VRC51092	CAPACITOR	1
25	VRC51018	KNOB	1
26	VRC51037	CHIP TRAY ASSEMBLY	1
27	VRC51024	BELT, 3mm PITCH X 6mm WIDTH X 84T	1
28	VRC51098	MAGNET, .5625 O.D., 5.5 LBS.	1
29	Page 62, 63	BACK GAUGE, DIE SET ASSEMBLY (6972)	1

Item	P/N	Description - 6301	Qty
30	VRC51109	PULLEY, MOTOR HTD TIMING, 3mm PITCH, .752 P.D.	1
31	VRC51025	BELT, TRANSPORT MOTOR, 3mm PITCH 94T	1
32	VRC51333	FRAME TRANSPORT, ASSEMBLY	
33	VRC51338	FRONT DOOR ASSEMBLY	1
34	VRC51145	TOP COVER WELDMENT	1
35	VRC51146	BRACKET, BOTTOM FRONT DOOR	1
36	VRC51147	BRACKET, TOP FRONT DOOR	1
37	VRC51148	COVER, LEFTSIDE, FRONT	1
38	VRC51149	BRACKET, MAGNET MOUNTING	1
39	VRC51150	BRACKET, MOTOR COVER	1
40	VRC51155	COVER, WIRE	1
41	VRC51030	CASTER	4
42	VRC51001	MOTOR	1
43	VRC51162	FEMALE SCREWLOCK, SPECIAL AMPLIMITE	2
44	VRC51020	BELT HTD, 3mm PITCH X 6mm WIDTH X 148T	1
45	VRC51022	BELT, 2 SIDED, 3mm PITCH x 6mm WIDTH x 158 T	1
46	VRC51023	BELT, 2 SIDED, 3mm PITCH x 6mm WIDTH x 200 T	1
47	VRC51017	KNOB, TRANSPORT	3
48	VRC51052	BELT, 3mm PITCH X 6mm WIDTH X 100T	1
49	VRC51183	LABEL, MASTER	1
50	VRC51184	REAR COVER WELDMENT	1
51	Page 66, 67	EXIT STEPPER MOTOR ASSEMBLY (6905)	1
52	VRC51188	COVER, CONTROL PANEL	1
53	VRC51010	DIVERTER SOLENOID ASM.	1
54	Page 64, 65	ELECTRONICS BRACKET ASEMBLY (6930)	1
55	VRC51191	LABEL, STREAMPUNCH LOGO	1
56	VRC51193	FAN, COOLING, PUNCH, (CW)	1
57	VRC51016	FAN, COOLING, TRANSPORT, (CCW)	1
58	VRC51351	STEPPER MOTOR ASSEMBLY, ENTRANCE	1

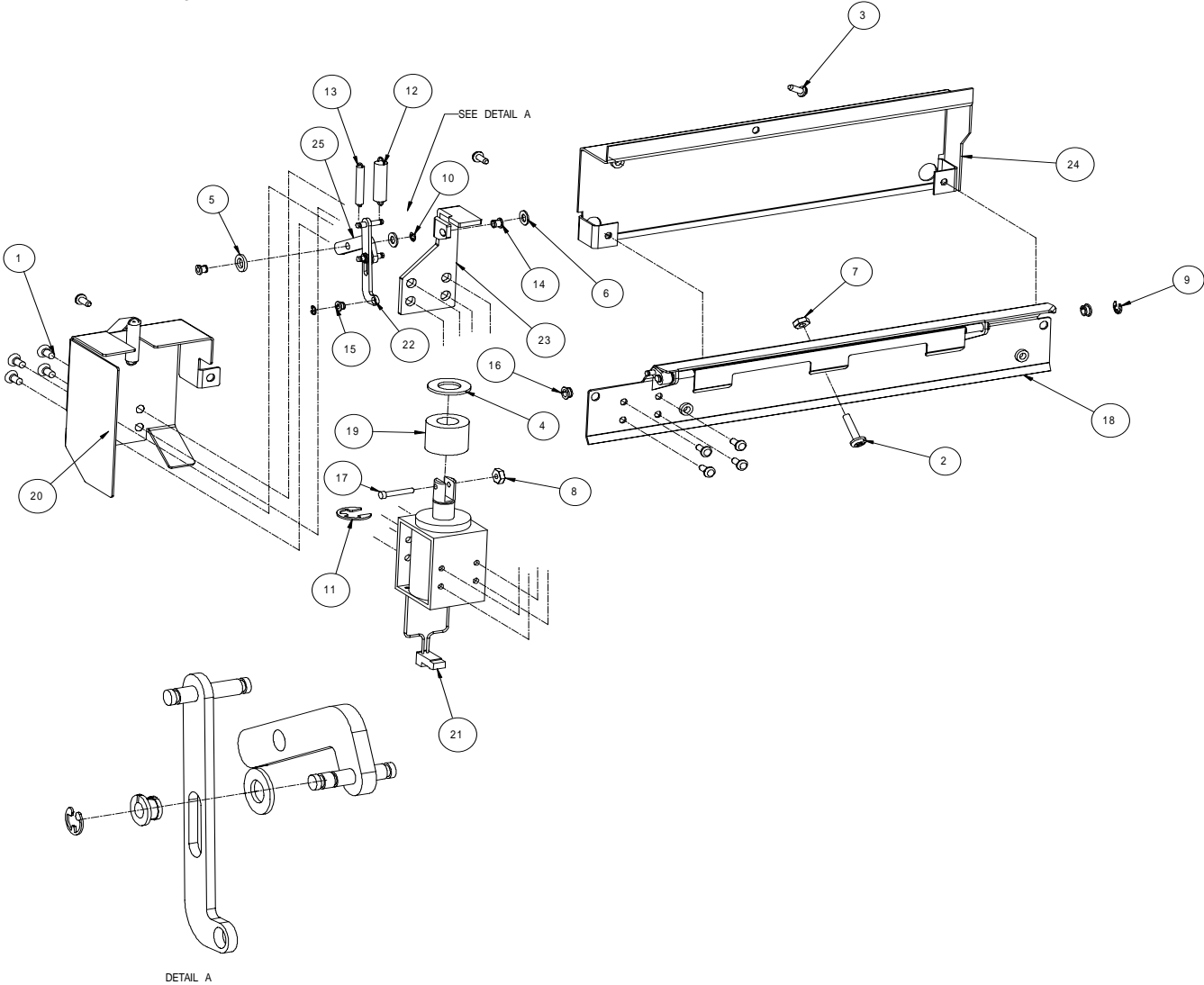
11. StreamPunch Parts Listing

Cabinet Assembly – 6301



11. StreamPunch Parts Listing

Back Gage, Die Set Assembly – 6972



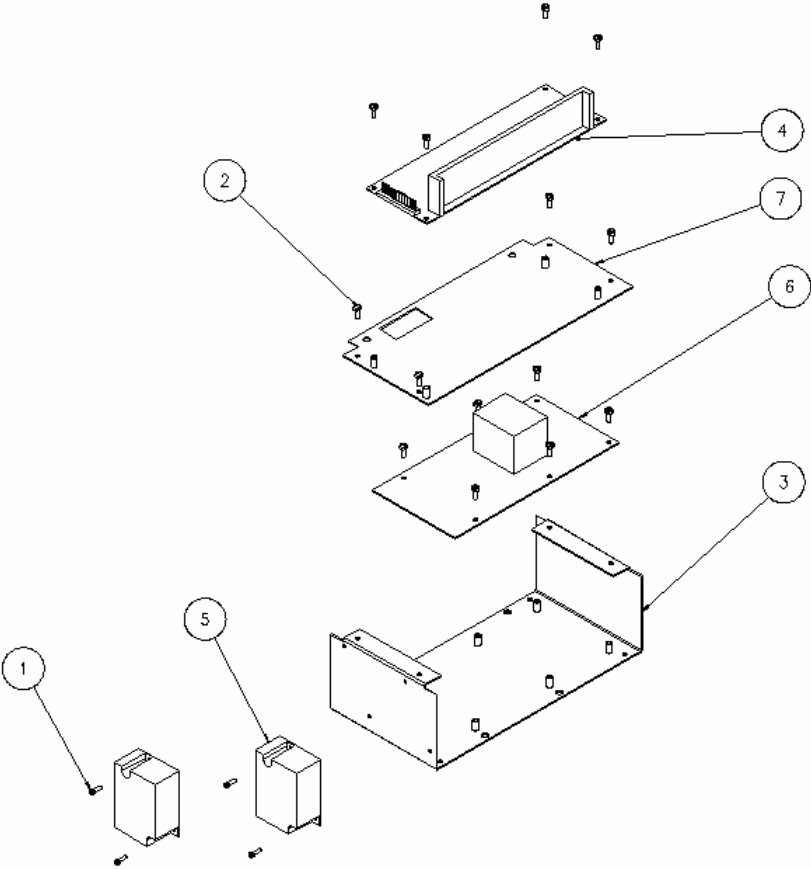
11. StreamPunch Parts Listing

Back Gage, Die Set Assembly – 6972

ITEM	P/N	DESCRIPTION - 6972	QTY
1	VRC51282	SCR. PHL FLT HD (80-82 DEG), 8-32 X 3/8	4
2	VRC51284	SCR, PHL PAN HD, 8-32 X .75	1
3	VRC51286	SCR, PHL PAN HD, EX SEMS, 8-32 X .38	7
4	VRC51289	WASHER ½ ID 1 1/16 OD	1
5	VRC51290	WASHER, FLT MTL, NON STD, .26 X .44 X .06	1
6	VRC51291	WASHER, NON MTL, HARD FIBER, 3/16 X 3/8 X 1/32	3
7	VRC51292	NUT, HEX, 8-32	1
8	VRC51293	NUT, HEX, NYLOCK 4-40	1
9	VRC51294	RING, SPRING TRU-ARC RETAINING, .19	1
10	VRC51370	RING, SPRING, .13 X .02	3
11	VRC51371	RING, SPRING, .50 X .04	1
12	VRC51296	SPRING, EXTENSION	2
13	VRC51297	SPRING, EXTENSION	1
14	VRC51298	BEARING, NYLINER, SPLIT FLANGE .125 ID	2
15	VRC51376	BEARING, SPLIT FLANGE .125 ID	2
16	VRC51299	BEARING, FLANGE (IGUS)	2
17	VRC51310	SHOULDER SCREW, 4-40, CLUTCH	1
18	VRC51323	PAPER STOP – LINK ASSEMBLY, BACK GAGE	1
19	VRC51325	FOAM SLEEVE	1
20	VRC51327	CHIP GUARD, BACK GAGE	1
21	VRC51378	SOLENOID, BACKGAGE	1
22	VRC51356	LINK CONNECT, BACK GAGE	1
23	VRC51357	LINK HOLDER, BACK GAGE	1
24	VRC51358	OUTER SHIELD, BACK GAGE	1
25	VRC51359	LINK SOLENOID, BACK GAGE	1

Production versions Sept. 2003(PI) to February 2004 (QB) replaced by Chad Kit P/N VRC51277 (Includes Items 1 – 25).
For installation instructions, see pages 50 - 53

Electronics Bracket Assembly 6930



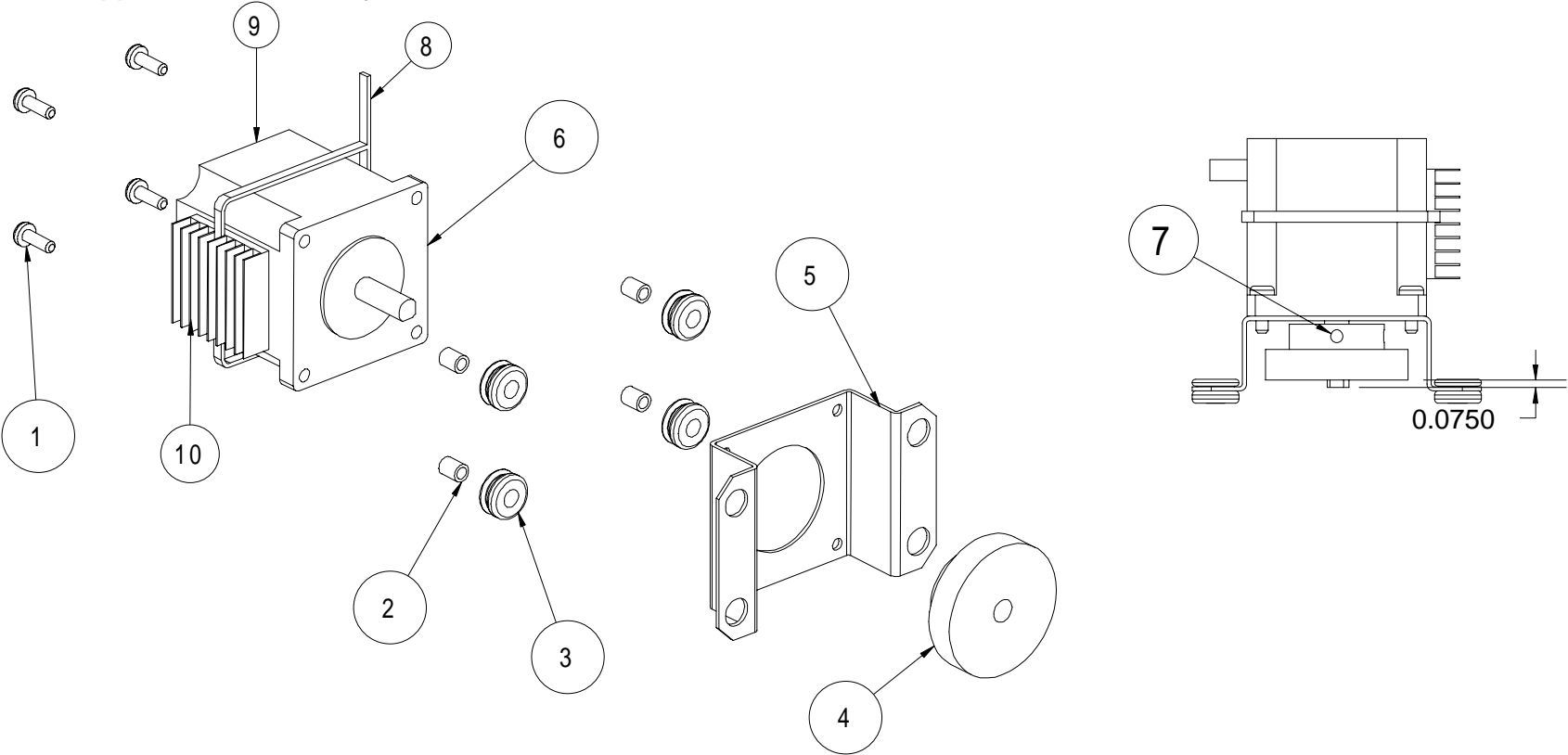
11. StreamPunch Parts Listing

Electronics Bracket Assembly 6930

ITEM	P/N	DESCRIPTION - 6930	QTY
1	VRC51203	SCR, SOC HD CAP, 4-40, 3/8L	4
2	VRC51211	SCR, SLT IND HEX HD, EXT SEMS WSHR, 6-32 X .381	4
3	VRC51151	PC BOARD MTG. PLATE	1
4	VRC51038	POWER SUPPLY, 24V, 6.3A	1
5	VRC51015	STEP MOTOR DRIVER	2
6	VRC51039	PC BOARD, STREAM PUNCH	1
7	VRC51190	POWER SUPPLY, MOUNTING PLATE	1
	VRC51363	E-PROM, PROGRAMMED	1

11. StreamPunch Parts Listing

Exit Stepper Motor Assembly 6905



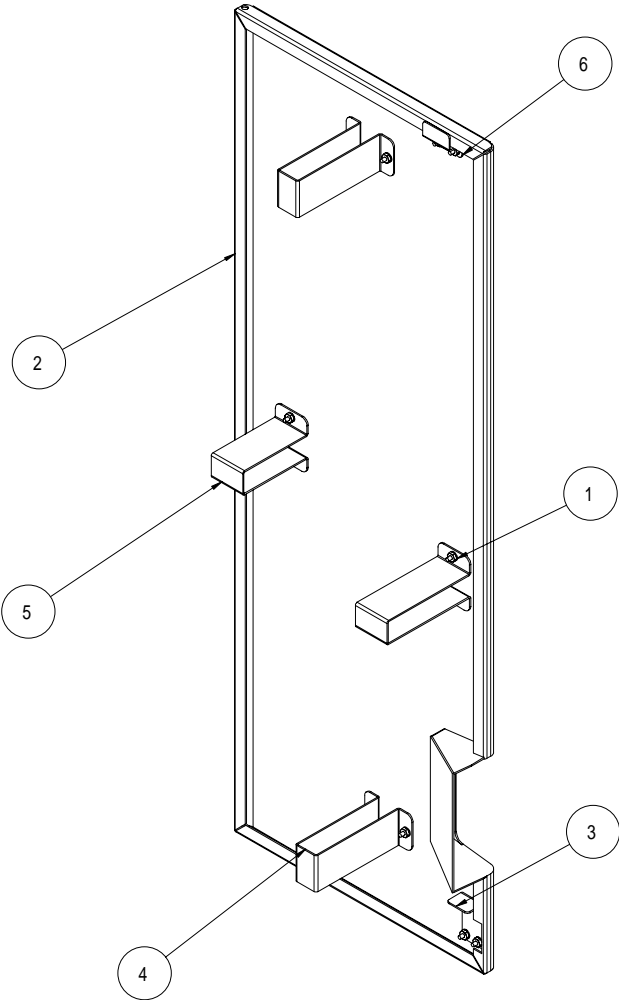
11. StreamPunch Parts Listing

Exit Stepper Motor Assembly 6905

ITEM	PART NO.	DESCRIPTION - 6905	QTY
1	VRC51216	SCR, PHL PAN HD, EX SEMS, 8-32X.50	4
2	VRC51219	SPCR, STD, 8-32 X .25 X .5	4
3	VRC51241	GROMMET, 3/8 I.D X 1/2 O.D.	4
4	VRC51164	PULLEY, HTD TIMING, 3mm PITCH, 50 TOOTH	1
5	VRC51165	BRACKET, STEPPER MOTOR	1
6	VRC51014	MOTOR AND HEAT SINK ASM	1
7	VRC51043	LOCTITE	.01
8	VRC51372	TIE WRAP, HEAT SINK	1
9	VRC51161	MOTOR, STEPPER	1
10	VRC51192	HEAT SINK	1

11. StreamPunch Parts Listing

Front Door Assembly 6600



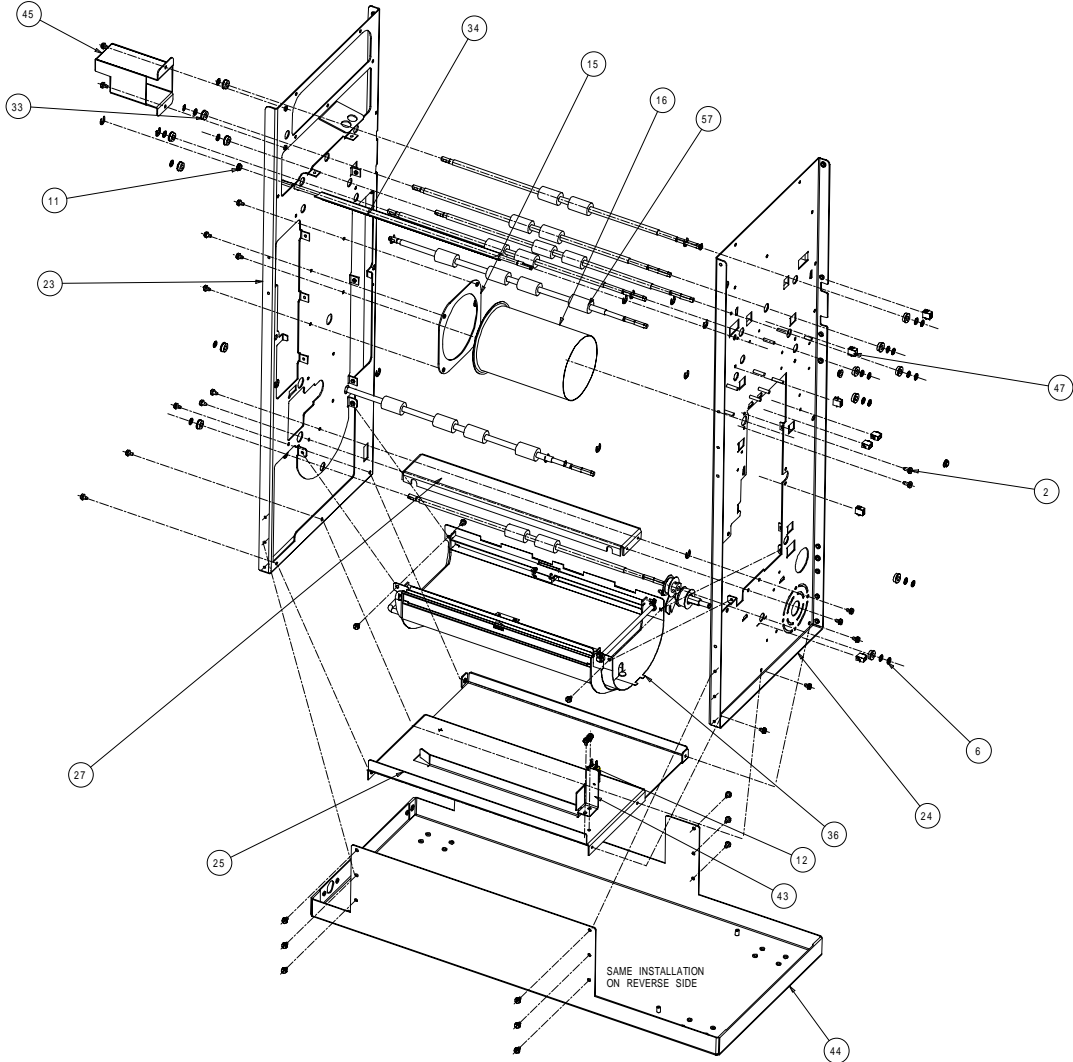
11. StreamPunch Parts Listing

Front Door Assembly 6600

ITEM	PART NO.	DESCRIPTION - 6600	QTY
1	VRC51226	NUT & WSHR, KEPS, 6-32	12
2	VRC51143	FRONT DOOR WELDMENT	1
3	VRC51144	BRACKET, SWITCH ACTIVATING	1
4	VRC51171	BRACKET, DOOR STOP	3
5	VRC51172	BRACKET, DOOR STOP	1
6	VRC51189	BRACKET, MAGNET	

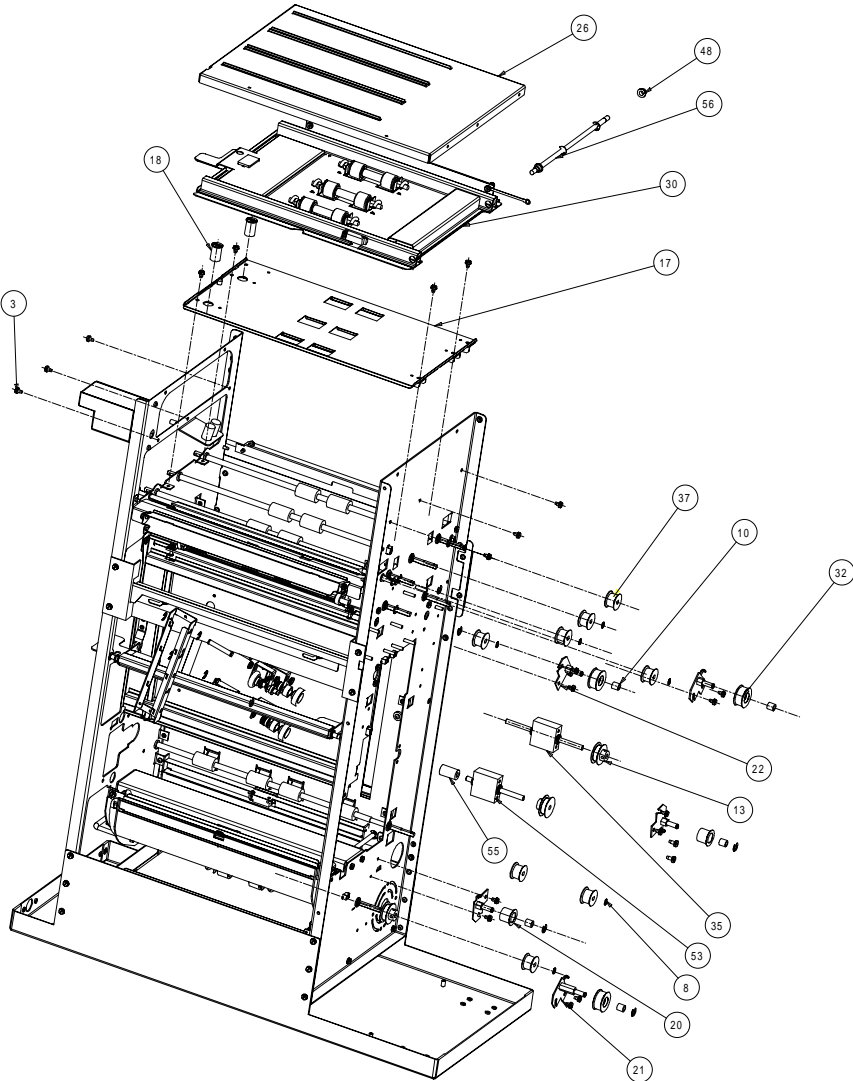
11. StreamPunch Parts Listing

Cabinet Assembly -6500-sm1



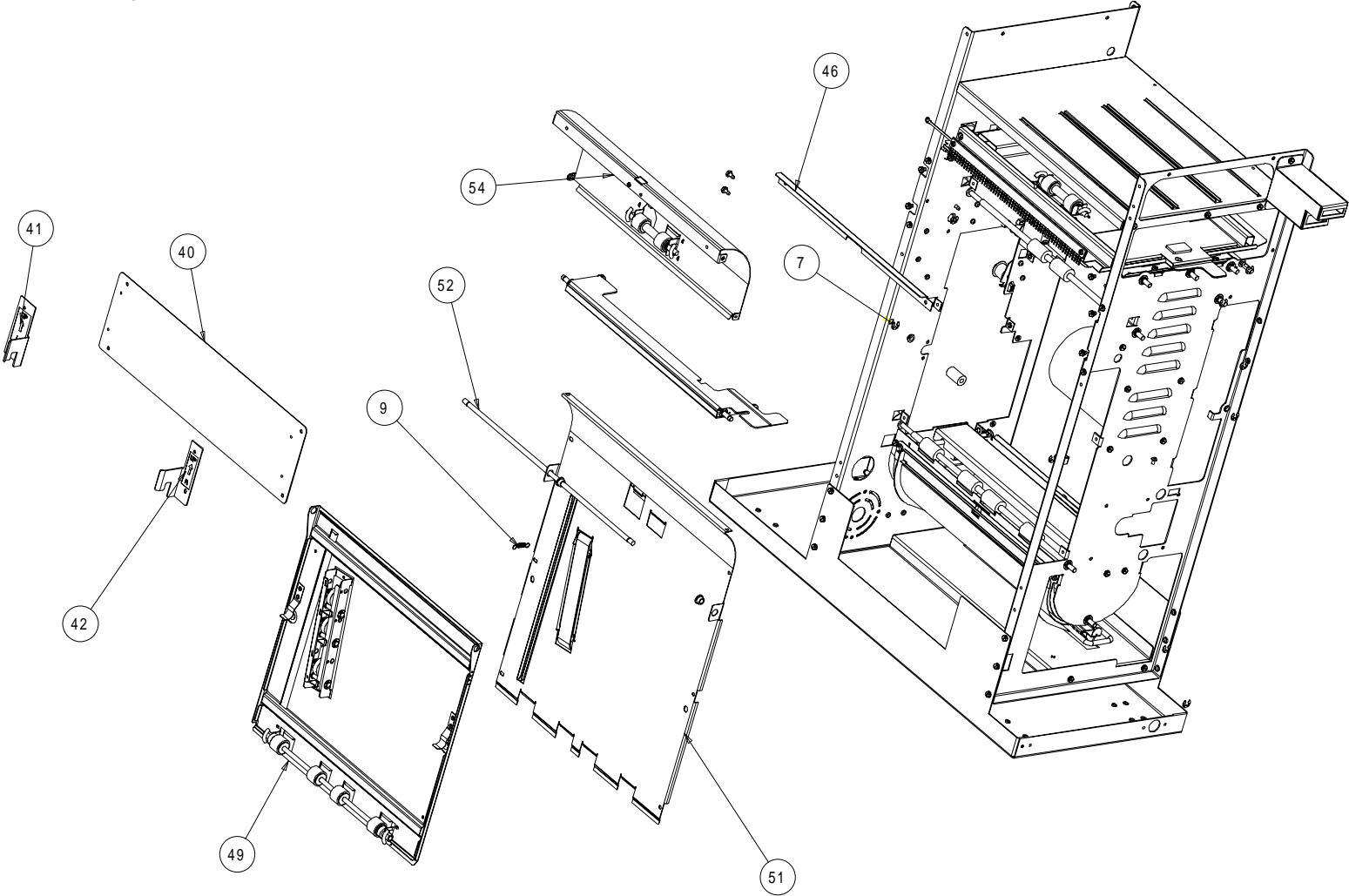
11. StreamPunch Parts Listing

Cabinet Assembly -6500-sm2



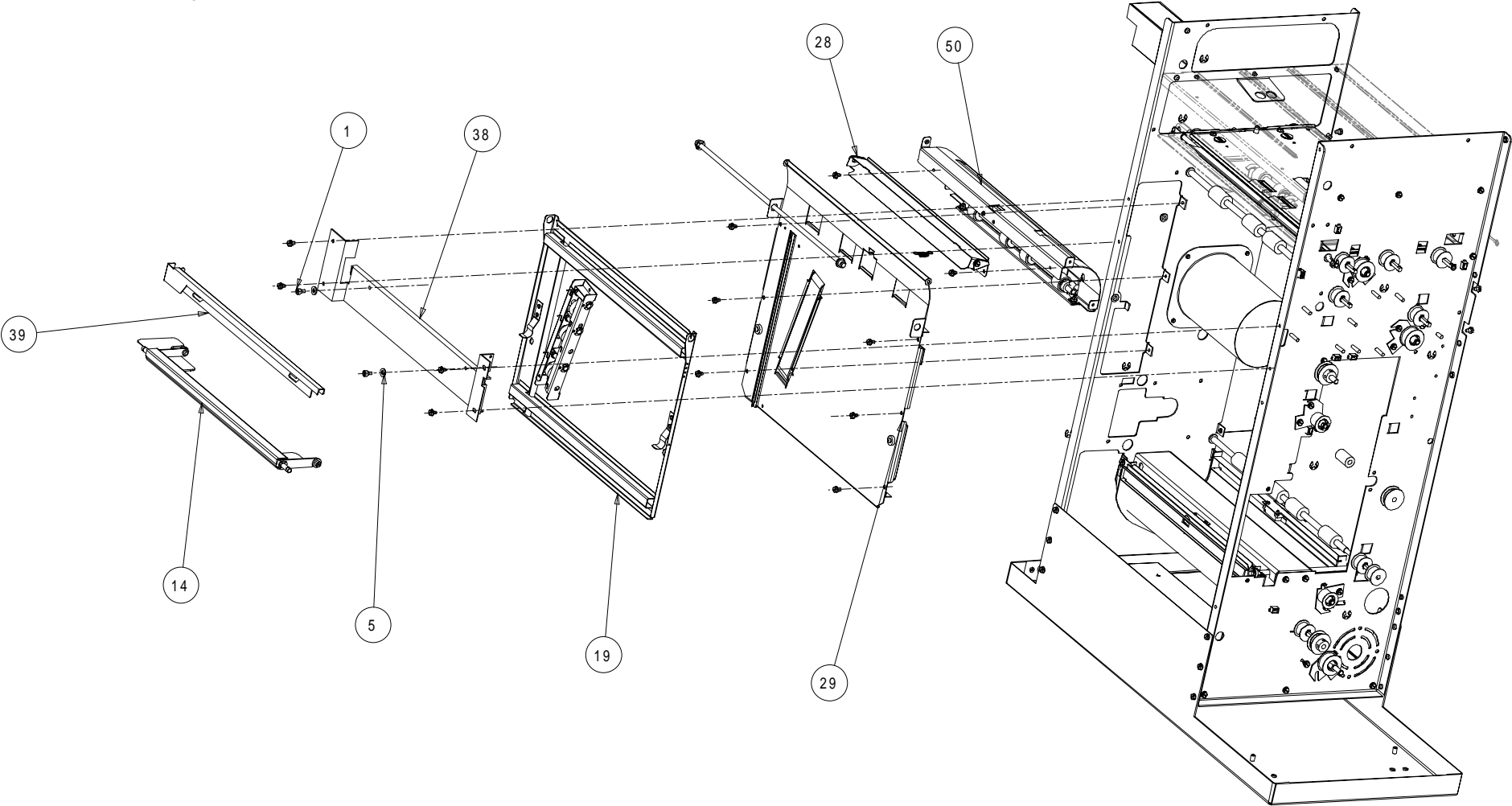
11. StreamPunch Parts Listing

Cabinet Assembly –6500-sm3



11. StreamPunch Parts Listing

Cabinet Assembly -6500-sm4



11. StreamPunch Parts Listing

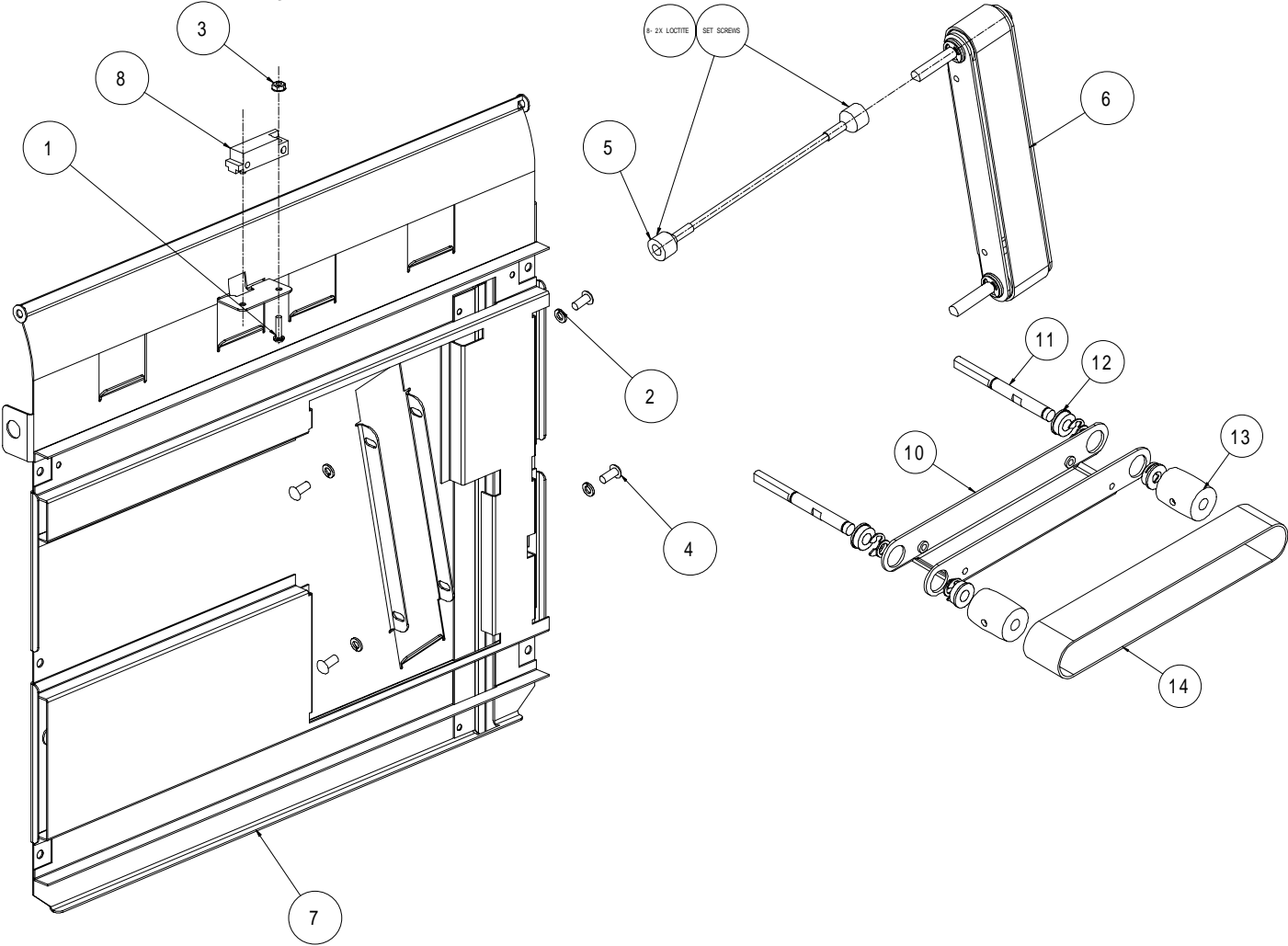
Cabinet Assembly –6500

ITEM	P/N	DESCRIPTION - 6500	QTY
1	VRC51364	SCREW #8-32 X .125 S.H.S., .1875 X .125 LG	2
2	VRC51365	SCR, SLT IND HEX HD, EXT SEMS WSHR, 8-32 X .38	12
3	VRC51366	SCR, #8-32X1/4, SLOT_HEX, SEMS, TRD FORM	77
4	VRC51287	SCR, PHL PAN HD, EX SEMS, 6-32X.25	2
5	VRC51367	WASHER, .203 ID. X 7/16 O.D. X .06 T	2
6	VRC51041	WASHER FLAT, NON-METALLIC 1/4X3/8X1/32	21
7	VRC51033	RI, RETAINING E 1/4 SHAFT	30
8	VRC51032	RI, RETAINING 1/4 SHAFT	9
9	VRC51373	SPRING, EXTENTION	2
10	VRC51374	SPACER, IDLER ROLLER	5
11	VRC51375	BEARING, SPLIT FLANGE .250 I.D.	6
12	VRC51009	SNAP SWITCH	1
13	VRC51069	PULLEY, ALIGNER, 3mm PITCH, 24T	3
13	VRC51069	A4 , PULLEY, ALIGNER, 3mm PITCH, 24T	2
13	VRC51311	A4 , PULLEY, ALIGNER, .752 PD PITCH, 20T	1
14	VRC51321	LATCH ASSEMBLY, ALIGNERS	2
15	VRC51078	BASE, PIPE AIR INTAKE MOUNTING	1
16	VRC51079	PIPE, AIR INTAKE	1
17	VRC51097	PAPER GUIDE, BYPASS LOWER ASSY.	1
18	VRC51098	MAGNET, .5625 O.D., 5.5 LBS.	4
19	Page 77, 78	ALIGNER ROLLER ENTRANCE, IDLER ASSY (6471)	1
20	VRC51028	ROLLER IDLER, DRIVE ASSY.	2
21	VRC51331	TENSIONER DRIVE, ASSEMBLY (LONG)	1
22	VRC51379	TENSIONER DRIVE, ASSEMBLY (SHORT)	4
23	VRC51114	FRAME, TRANSPORT SIDE R.H.	1
24	VRC51115	FRAME, TRANSPORT SIDE L.H.	1
25	VRC51116	FRAME, TRANSPORT BASE	1
26	VRC51117	RACK, DIESET STORAGE	1
27	VRC51118	BRACKET, PUNCH MODULE SLIDE	1
28	VRC51334	ENTRANCE GUIDE ASSEMBLY	1
29	VRC51264	ALIGNER, ENTRANCE, DRIVE ASSEMBLY	1

ITEM	P/N	DESCRIPTION - 6500	QTY
30	Page 83, 84	UPPER BYPASS PAPER GUIDE ASSY (6520)	1
31	VRC51031	ROLLER, TRANS DOUBLE DRIVE	5
32	VRC51026	IDLER DRIVE, PULLEY ASSY	3
33	VRC51046	BEARING, BALL FLANGE, .25 I.D., .50 O.D.	14
34	VRC51124	DIVERter ASSEMBLY, PLASTIC OVERMOLD	1
35	VRC51266	HOUSING BEARING, ASSEMBLY	1
36	VRC51337	PAPER GUIDE, LOOP PIVOT ASSY	1
37	VRC51047	PULLEY, HTD TIMING, 3mm PITCH, .752 P.D.	8
38	VRC51134	BRACKET, ENTRANCE FIXED LOCK	1
39	VRC51135	BRACKET, ENTRANCE SLIDE LOCK	1
40	VRC51136	PLATE, EXIT LOCK	1
41	VRC51137	BRACKET, EXIT HOOK LEFT	1
42	VRC51138	BRACKET, EXIT HOOK RIGHT	1
43	VRC51139	BRACKET, CHIP TRAY SENSOR	1
44	VRC51152	BASE, FRAME ADJUSTABLE	1
45	VRC51153	BRACKET, INTERLOCK SWITCH	1
46	VRC51154	BRACKET, EXIT GUIDE	1
47	VRC51160	HEADER, SENSOR	7
48	VRC51050	BEARING, ALIGNER	6
49	VRC51341	ALIGNER, EXIT, IDLER, ASSEMBLY	1
49	VRC51353	A4 -ALIGNER, EXIT, IDLER, ASSEMBLY	1
50	VRC51342	PAPER GUIDE, LOWER ENTRY	1
51	VRC51343	ALIGNER, EXIT, DRIVE, ASSEMBLY	1
51	VRC51355	A4 , ALIGNER, EXIT, DRIVE, ASSEMBLY	1
52	VRC51174	SHAFT, ALIGNER DOOR PIVOT	2
53	VRC51344	HOUSING BEARING ASSEMBLY, EXIT ALIGNER	1
54	VRC51345	PAPER GUIDE, LOWER EXIT ASSEMBLY	1
55	VRC51054	HELICAL FLEXURED U-JOINT, EXIT, ALIGNER	1
56	VRC51182	SHAFT, BYPASS DOOR PIVOT	1
57	VRC51055	FOUR ROLLER ASM, ALIGNER EXIT	2

11. StreamPunch Parts Listing

Aligner, Entrance, Drive Assembly 6509



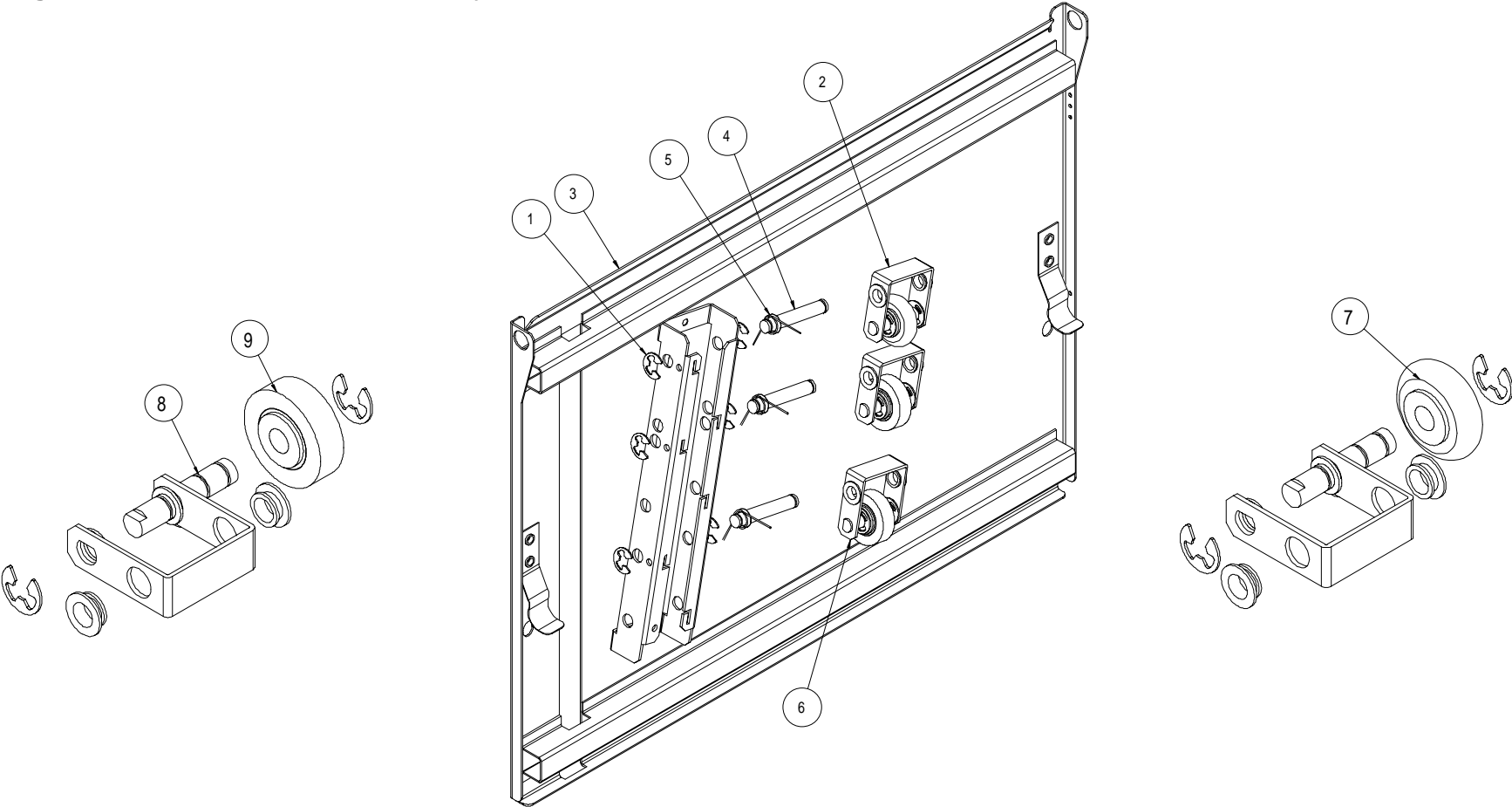
11. StreamPunch Parts Listing

Aligner, Entrance, Drive Assembly 6509

ITEM	PART NO.	DESCRIPTION - 6509	QTY
1	VRC51210	SCREW, MACHINE PAN HD, #4-40 X 15/32 PHILLIPS	1
2	VRC51225	WASHER, # 8 LOCK	4
3	VRC51228	NUT & WSHR, KEPS, 4-40	1
4	VRC51248	SCR, HEX SOC BTN HD CAP, 8-32 X .38	4
5	VRC51105	FLEXIBLE SHAFT, ALIGNER DRIVE	1
6	VRC51332	ALIGNER DRIVE, BELT ASSY.	1
7	VRC51113	ALIGNER PAPER, GUIDE WELDMENT	1
8	VRC51008	SENSOR, OPTICAL	1
9	VRC51043	LOCTITE	.01
10	VRC51104	BRACKET, ALIGNER DRIVE	1
11	VRC51106	SHAFT, ALIGNER BELT DRIVE	2
12	VRC51046	BEARING, BALL FLANGED, .25X.50	4
13	VRC51127	ROLLER, ALIGNER DRIVE BELT	2
14	VRC51019	BELT, HABASIT MAT-02H 1" WIDE	1

11. StreamPunch Parts Listing

Aligner, Roller Entrance, Idler Assembly - 6471



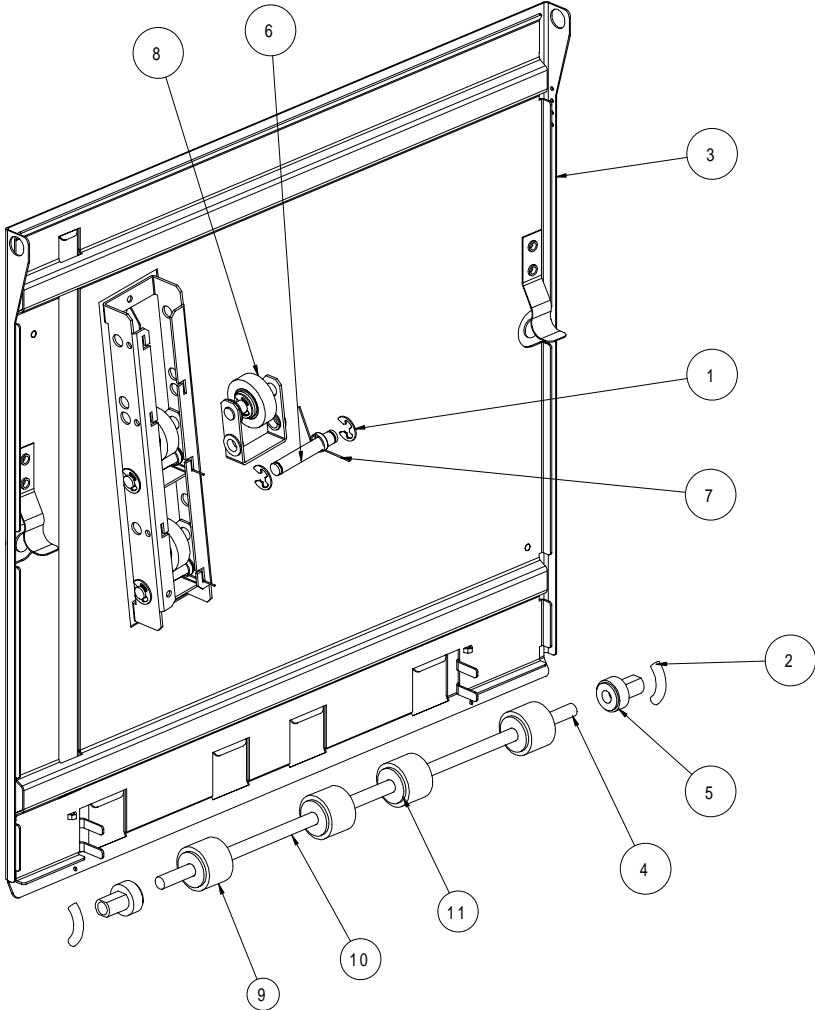
11. StreamPunch Parts Listing

Aligner, Roller Entrance, Idler Assembly 6471

ITEM	PART NO.	DESCRIPTION - 6471	QTY
1	VRC51033	RING, RETAINING E 1/4 SHAFT	6
2	VRC51324	ALIGNER, PLASTIC ROLLER ASSY.	1
3	VRC51107	PAPER GUIDE, IDLER ALIGNER WELDMENT	1
4	VRC51271	SHAFT, ALIGNER PIVOT	3
5	VRC51274	SPRING, TORSION, ALIGNER	3
6	VRC51361	ALIGNER, IDLER ROLLER ASSY.	2
7	VRC51322	ALIGNER IDLER, PLASTIC ROLLER ASSY	1
8	VRC51130	SHAFT, ALIGNER IDLER ROLLER	3
9	VRC51049	ALIGNER IDLER, ROLLER ASSY.	2

11. StreamPunch Parts Listing

Aligner, Exit, Idler, Assembly 6817



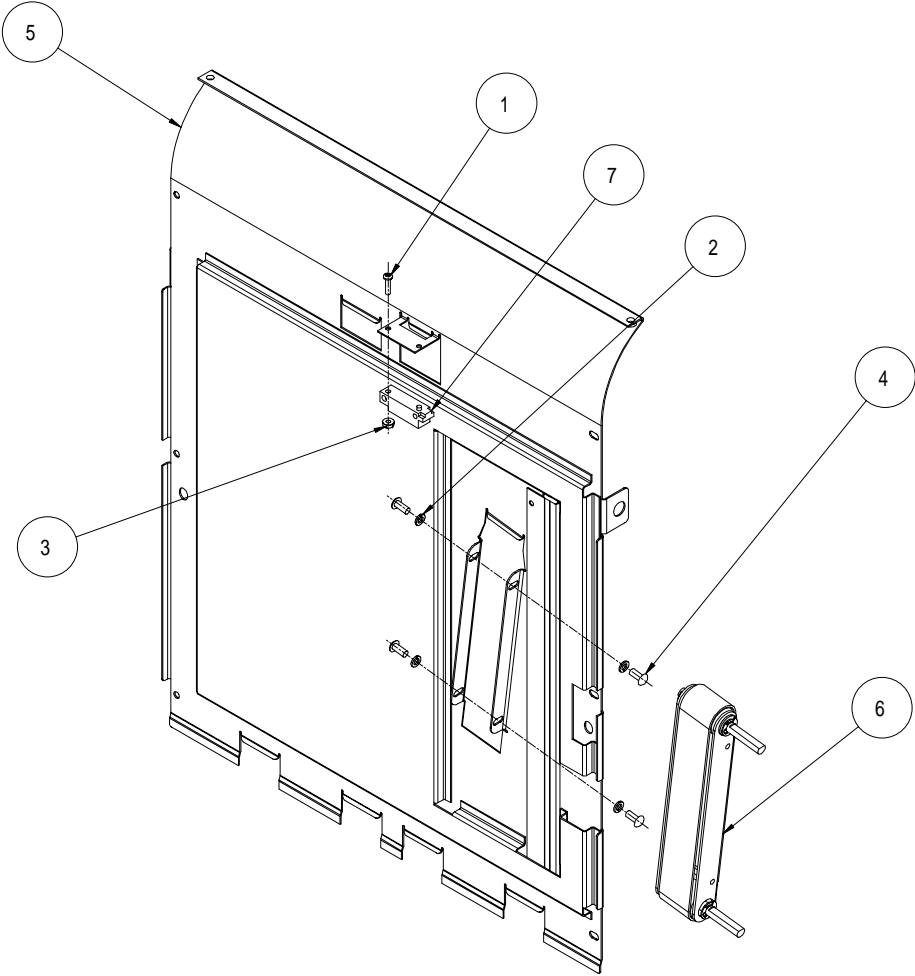
11. StreamPunch Parts Listing

Aligner, Exit, Idler, Assembly 6817

ITEM	PART NO.	DESCRIPTION - 6817	QTY
1	VRC51033	RING, RETAINING E 1/4 SHAFT	6
2	VRC51034	SPRING, EXTENSION	2
3	VRC51123	ALIGNER, EXIT, IDLER, WELDMENT	1
4	VRC51348	IDLER ASSEMBLY, 4 ROLLER	1
5	VRC51056	BEARING ASM, 4 ROLLER DRIVE	2
6	VRC51271	SHAFT, ALIGNER PIVOT	3
7	VRC51274	SPRING, TORSION, ALIGNER	3
8	VRC51361	ALIGNER, IDLER ROLLER ASSEMBLY	3

11. StreamPunch Parts Listing

Aligner, Exit, Drive, Assembly 6840



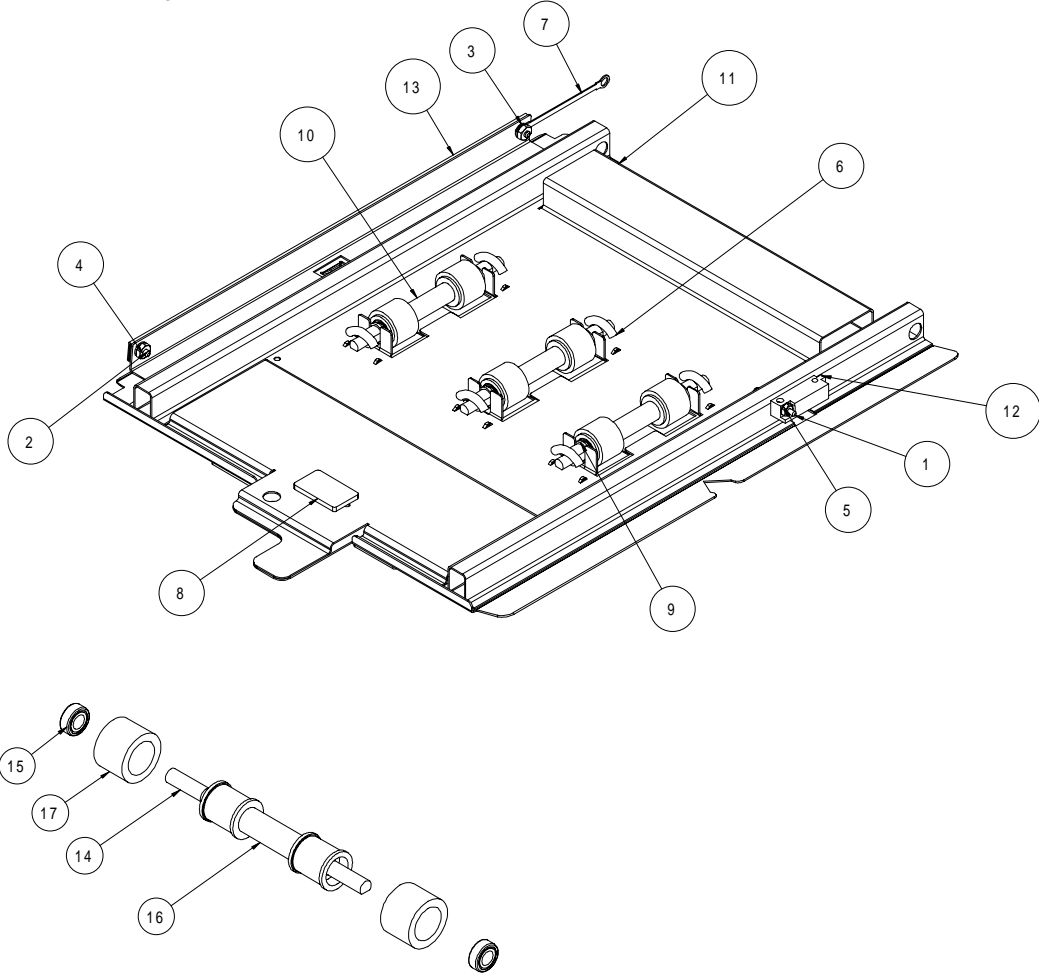
11. StreamPunch Parts Listing

Aligner, Exit, Drive, Assembly 6840

ITEM	PART NO.	DESCRIPTION - 6840	QTY
1	VRC51210	SCREW, MACHINE PAN HD, #4-40 X 15/32 PHILLIPS	1
2	VRC51225	WASHER, # 8 LOCK	4
3	VRC51228	NUT & WASHER, KEPS, 4-40	1
4	VRC51248	SCREW, HEX SOC BTN HD CAP, 8-32 X .38	4
5	VRC51099	ALIGNER, EXIT, DRIVE, WELDMENT	1
6	VRC51332	ALIGNER DRIVE, BELT ASSY.	1
7	VRC51008	SENSOR, OPTICAL	1

11. StreamPunch Parts Listing

Upper Bypass Paper Guide Assembly 6520



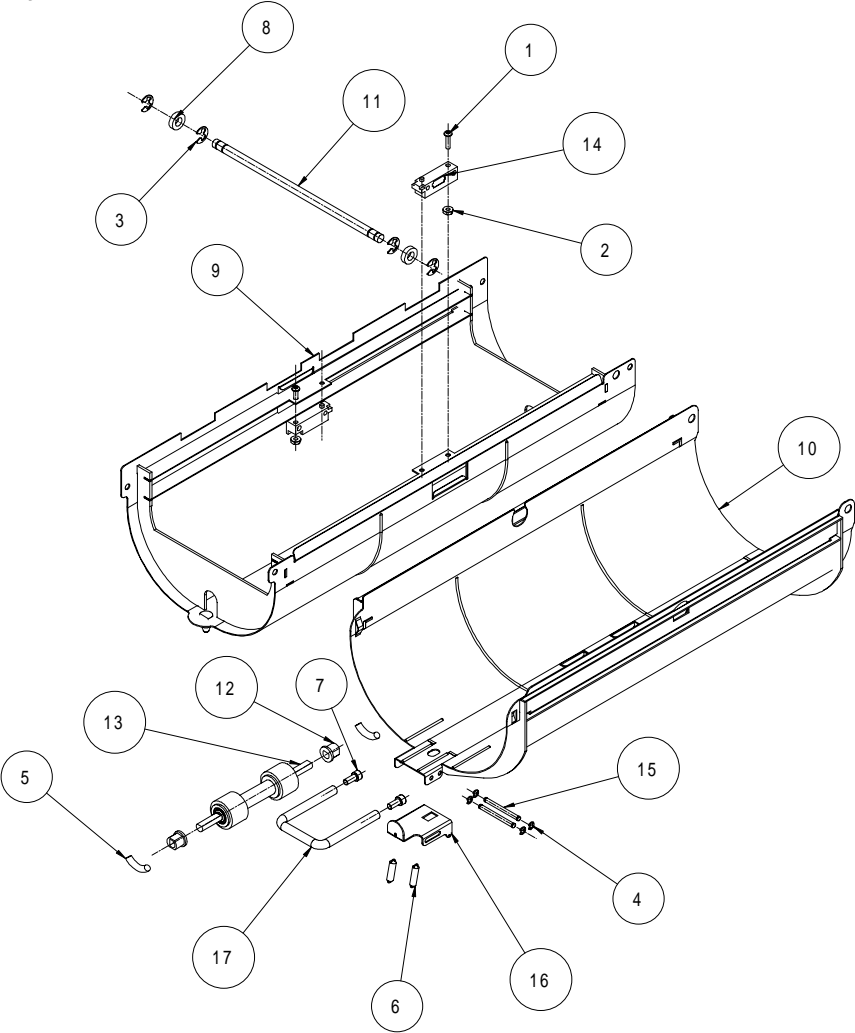
11. StreamPunch Parts Listing

Upper Bypass Paper Guide Assembly 6520

ITEM	P/N	DESCRIPTION - 6520	QTY
1	VRC51209	SCR, PHL PAN HD, 4-40 X 1.13	1
2	VRC51218	SCR, PHL PAN HD, EX SEMS, 6-32X.38	2
3	VRC51220	WSHR, FLT MTL, .16 X .31 X .035	1
4	VRC51226	NUT & WSHR, KEPS, 6-32	2
5	VRC51228	NUT & WSHR, KEPS, 4-40	1
6	VRC51034	SPRING, EXTENSION	6
7	VRC51377	GROUND STRAP ASSEMBLY	1
8	VRC51029	STEEL STRIKE, MAGNETIC CATCH	3
9	VRC51045	BEARING, DOUBLE "D" FLANGE	6
10	VRC51027	IDLER ROLLER, ASSEMBLY	3
11	VRC51121	BYPASS, PAPER GUIDE ASSEMBLY	1
12	VRC51008	SENSOR, OPTICAL	1
13	VRC51048	BRUSH, ANTI-STATIC EXIT	1
14	VRC51110	SHAFT, IDLER ROLLER	1
15	VRC51168	BALL BEARING, .25 X .5 X .196	2
16	VRC51169	ALUMINUM HUB	1
17	VRC51051	IDLER ROLLER	2

11. StreamPunch Parts Listing

Loop Pivot Paper Guide Assembly 6563



11. StreamPunch Parts Listing

Loop Pivot Paper Guide Assembly 6563

ITEM	P/N	DESCRIPTION - 6563	QTY
1	VRC51210	SCREW, MACHINE PAN HD, #4-40 X 15/32 PHILLIPS	2
2	VRC51228	NUT & WSHR, KEPS, 4-40	2
3	VRC51033	RING, RETAINING E 1/4 SHAFT	4
4	VRC51230	RING, SPR RTNG, .13 X .02	4
5	VRC51034	SPRING, EXTENSION	2
6	VRC51058	SPRING, EXTENSION	2
7	VRC51301	SCR, SOC HD CAP, SLF LCK PLSTC INST, 10-24 X .38	2
8	VRC51072	SPACER, PAPER GUIDE PIVOT ASSY.	2
9	VRC51073	PAPER GUIDE, LOWER LOOP FIXED, WELDMENT	1
10	VRC51077	PAPER GUIDE, OUTER LOOP WELDMENT	1
11	VRC51082	SHAFT, LOWER PIVOT LOOP	1
12	VRC51045	BEARING, DOUBLE "D" FLANGE	2
13	VRC51027	IDLER ROLLER, ASSEMBLY	1
14	VRC51008	SENSOR, OPTICAL	2
15	VRC51186	SHAFT, IDLER ROLLER	2
16	VRC51167	LATCH, LOCK	1
17	VRC51187	HANDLE, U-CHANNEL	1

12. Maintenance

Interchange Die Set Product Number Listing (Die Set not shown)

Die Set repair is not recommended other than to clean and lubricate the Punch Pins. Punch pins are listed here as a service item only in the event that some may be lost.

If a Die Set produces poor hole quality over time, it is more likely a result of Die Plate wear. In this case the Die Set should be replaced with a new one.

8.5 Inch x 11 Inch EDP Numbers for North America products (Ricoh).

Ricoh Part Number	Description
001449MIU	STREAMPUNCH, 115V, 11" PAPER PATH
001450MIU	DIE SET, LOOSE LEAF 3-HOLE 11"
001452MIU	DIE SET, PB, 19 HOLE RECTANGULAR, 11"
001455MIU	DIE SET, C4, 44 HOLE, ROUND, .2475 SPACING, 11"
001451MIU	DIE SET, VB, 11 HOLE ROUND, 11"
001454MIU	DIE SET, W3 SQUARE, 32 HOLE, 11"
001453MIU	DIE SET, W2 SQUARE, 21 HOLE, 11"

8.5 Inch x 11 Inch EDP Numbers for North America products (Lanier).

Lanier Part Number	Description
L:481-0735	STREAMPUNCH, 115V, 11" PAPER PATH
L: 481-0736	DIE SET, LOOSE LEAF 3-HOLE 11"
L: 481-0738	DIE SET, PB, 19-HOLE RECTANGULAR, 11"
L: 481-0741	DIE SET, C4, 44 HOLE ROUND, .2475 SPACING, 11"
L: 481-0737	DIE SET, VB, 11 HOLE ROUND, 11"
L: 481-0740	DIE SET, W3 SQUARE, 32 HOLE, 11"
L: 481-0739	DIE SET, W2 SQUARE, 21 HOLE, 11"
L: 481-0821	DIE SET, LOOSE LEAF 5-HOLE, 11"
L: 481-0822	DIE SET, LOOSE LEAF 7-HOLE, 11"

A4 Metric EDP Numbers for European and Asia Pacific versions

GBC Part Number	Ricoh EDP Number	Description
7706310		STREAMPUNCH, 230V EUROPE, A4" PAPER PATH
7706550		STREAMPUNCH, 230V AUSTRALIA, A4" PAPER PATH
7706312		DIE SET, LOOSE LEAF 4-HOLE A4"
7706587		DIE SET, LOOSE LEAF 2-HOLE A4"
7706316		DIE SET, PB, 21 HOLE RECTANGULAR, A4"
7706620		DIE SET, PB, 20 HOLE RECTANGULAR, A4"
7706324		DIE SET, C4, 47 HOLE, ROUND, .2475 SPACING, A4"
7706314		DIE SET, VB, 12 HOLE ROUND, A4"
7706322		DIE SET, W3 ROUND, 34 HOLE, A4"
7706318		DIE SET, W2 ROUND, 23 HOLE, A4"

12. Maintenance

MAINTENANCE – StreamPunch

The following maintenance should be performed once annually, under normal use.

Operational Inspection

1. If operating properly, the **StreamPunch** will punch the same types of copy paper and cover materials handled by the copier/printer. It will run at the speed of the printer.
2. Hole quality will vary between different grades of paper.

External Cleaning.

Make sure you disconnect the **StreamPunch** from its power source before cleaning. The cover may be cleaned with a soft cloth moistened with mild detergent and warm water. Do not use chemical cleaners or solvents as these may have a harmful effect. Use detergent sparingly to avoid contact with electrical components.

Internal Cleaning

Before internal cleaning, be sure to disconnect power to the StreamPunch and ensure that you retain control of the power cord.

Occasionally, it will be necessary to remove the rear cover and remove paper dust built up around the motor and other electrical components. Use a vacuum cleaner if possible. A small paintbrush can also be used but extreme care should be used around electrical components.

Internal Inspection

Whenever the cover has been removed for corrective maintenance, visually inspect for defects such as loose screws or nuts, abraded wire insulation, loose terminals, etc. Correct any defects before returning the machine to service.

Lubrication Points and Recommended Lubricant

- Lubricate the punch pins and/or the felt pad once every 50,000-punch cycles with oil (3-in-one Oil or better is recommended). Method; depress the Pin Guide so that the Punch Pins protrude from the bottom plate, oil the ends of the pins and wipe clean.
- If Punch Drive Module Assembly is ever removed for service, check for sufficient grease on the cranks.

12. Maintenance

Die Sets

StreamPunch Die Sets have an average expected life of approximately 500,000 sheets of paper. This life may vary depending on variables such as following the lubrication schedule described above, the type of paper being punched, the cover stocks being punched and the typical length of the average job.

GBC Serial Number Date Code Explanation

The serial number tagged on GBC StreamPunch as well as the Die Sets indicate the month of manufacture. The month of manufacture can be determined from the first two letters of the serial number. The first letter indicates the year and the second letter indicates the month.

First Letter	Second Letter	Built
P	J	October 2003
P	K	November 2003
P	L	December 2003
Q	A	January 2004
Q	B	February 2004
Q	C	March 2004
Q	D	April 2004
Q	E	May 2004
Q	F	June 2004
Q	G	July 2004
Q	H	August 2004
Q	I	September 2004
Q	J	October 2004
Q	K	November 2004
Q	L	December 2004
R		2005
S		2006
T		2007
U		2008
V		2009
W		2010

Example: A serial number of PJ012345 on a Die Set would indicate that it was manufactured in October of 2003. A serial number of TG00765 on a StreamPunch would indicate that it was manufactured in July of 2007.

Die Set Maintenance

Die sets have a minimum life expectancy of 500,000 cycles depending on application, environmental factors and maintenance. Periodic lubrication of the punch pins can extend the life significantly. GBC recommends use of a high quality machine oil (3 in One Oil or better – do not use spray oils) every 50,000-punch cycles. The customer/operator should perform this maintenance between Technician inspections (below).

12. Maintenance

StreamPunch Preventative Maintenance

The following preventative maintenance should be performed during the regular printer inspection intervals (350K & 600K etcetera).

- Check web site for any bulletins; bring StreamPunch up-to-date as required.
- Disconnect the main cord set and retain it in your control for your safety.
- Remove the rear cover.
- Perform a visual inspection; clean, adjust and replace components as required.
- Vacuum Paper Chad out of Back Gage Mechanism and Die Guide as well as base.
- Optical Sensors; Remove dust and particles from the lens using a soft cloth.
- Inspect Timing Belts for wearing or fraying.
- Inspect any Latching Mechanisms, clear any jams paper debris.
- Inspect and clean Rollers.
- Inspect Left / Right Punch alignment by running paper with each die set, check for even hole alignment by folding the paper in half. If adjustment is required, ensure that the Die Latch is properly adjusted.
- Inspect the Door closing latch for proper alignment, if bent, instruct the operator to avoid closing the door with paper path latches out of place.
- Lubrication of the Die Set Pins (see note above)
- Cams (when punch is pulled), lubricate with high quality grease
- Inspect the Idler Rollers, clean if necessary.
- Inspect the Drive Rollers, clean if necessary.
- Inspect the Paper Path Panels, clean if necessary.
- Inspect each Die Set for wear. Run at least 100 sheets of paper. Look for signs of excess paper jamming. Inspect the hole quality. Hanging chad or ragged holes can lead to paper jams. If the hole is cut sharp enough that there is no hanging chad and the paper passes through the system without catching and jamming, the die set still has life.

As with any electro-mechanical device, isolated component failures may occur. GBC does not recommend preventative replacement of components until the printer has reached the two million-impression milestone

Replace the following components every 2 million impressions

P/N	Description	Qty Per Unit
VRC51049	Aligner Idler Roller Assembly	4

Replace the following components every 4 million impressions

P/N	Description	Qty Per Unit
VRC51275	Bypass Kit	1
VRC51044	Roller Energy Drive	1
VRC51019	Belt, Aligner (Green Belts)	2
VRC51053	Solenoid, Back Gage	1
VRC51049	Aligner Idler Roller Assembly	4

StreamPunch FAQ's

The GBC StreamPunch will perform best when used for applications that it was designed to perform. To ensure complete satisfaction, operate the StreamPunch within the following design parameters.

Specifications:

Printers Supported: Aficio 2105, 2090, 1075, 1060

Finisher Supported: SR840 & SR841 Finishers Only

Sheet Sizes Supported:

Punching 8.5" x 11" (11" edge only)

Bypass Mode (not punching) 5 .5" x 8 .5" up to 11" x 17"

Supports all stocks and weights that the Aficio 2090/2105/1075/1060 supports (in bypass mode)

Paper Weights Supported:

Punching 75 gsm (20lb Bond) to 216 gsm (80lb Cover)

Bypass Mode (not punching) 52 gsm (16lb Bond) to 216 gsm (80lb Cover)

Physical Dimensions 12 " width x 38.5" height x 28.5 " depth

Physical Weight StreamPunch System: 154 lbs.
Shipping Weight: 235 lbs.

Power Consumption:

USA/Canada Punch: 115 V, 60 Hz
3.0 A, 340 W, 1160 BTU/Hr

StreamPunch FAQ's

Setting the Right Expectations

Product Positioning: StreamPunch provides a flexible, cost effective punching solution for light to medium level production oriented customers.

- Designed for customers that have the need to punch their documents at a maximum of 60-70% of their overall workflow.
 - Recommended punching limit to 200k sheets per month. (600k sheets in bypass mode)
- Die Sets will decrease in performance over time based on the types of stocks and weights that are being punched.
 - GBC guarantees a minimum of 500k punches per die set. However, if paper stock punched is typically 20lb bond, then up to 2 million punches can be achieved.
 - Should be regarded as a long-term supply item.
- **No Job Recovery:** The StreamPunch has limited bi-directional communication with the Aficio 2105/2090/1075/1060. When a paper jam or stoppage occurs and sheets are stopped in the StreamPunch paper path, the printer will not reprint these sheets.
 - The remainder of the job will have to be resent.
- **Interposer:** Improved communication has now been developed to allow for use with the interposer when the StreamPunch is in-line.
- **2/3 Hole Punch Type 1075:** It is ***not recommended*** to have both punch units installed at the same time.
 - Customers requiring 3-hole punch and other types of punching can utilize the 3-hole Die Set (001450MIU) with the StreamPunch.
- **SR840/SR841 Finisher Stack Capacity:** The Finisher has a stack capacity of 3000 sheets.
 - Some Die Set patterns can create larger stacked output.
 - GBC recommends offloading stacker output at around 2000 sheets.
- **8.5" x 11" (LEF) Only:** StreamPunch is designed to punch this size only (LEF) ***no exceptions***. Attempting to punch a sheet size other than 8.5" x 11" (LEF) will cause a jam.
 - StreamPunch **cannot** punch tabs. Tabs will have to be run, punched and inserted offline.
 - Use a colored sheet insert (instead of the tab) in the job workflow for easier tab insertion after the job has been run.
- **Improved Chad Containment Feature:** Early StreamPunch models that did not have this feature had many loose chads that would sometimes traverse through the printer system leading to sensors being triggered to indicate a jam. The new and improved chad containment mechanism eliminates this issue.

StreamPunch FAQ's

Setting the Right Expectations

Running Jobs: StreamPunch is currently activated manually by the touch of a button.

- Cannot be activated it from the Aficio 2105/2090/1075/1060's Touch Panel Display.
- It cannot be activated from the driver at your PC.
- For the 1060 & 1075, the document will need to be rotated 180 degrees to allow for punching on the correct side of the document.
- Jobs sent to the StreamPunch from the desktop currently have 4 minutes to begin printing from manual punch activation.
 - Complex jobs may need to be sent to the Document Server first and then punched.

Die Sets: The GBC StreamPunch is capable of punching a variety of hole-punch patterns by simply changing the Die Set. Die sets can be changed in seconds without tools. The Die Sets currently available are listed below.

3-hole

VeloBind 11-hole

CombBind 19-hole

WireBind (2 Types)

- **21-hole Wire Bind**

- **32-hole Wire Bind**

Color Coil 44-hole

Customized Die Sets can be ordered from GBC for an additional price.

GBC Sales Contact Info: GBC greatly welcomes the opportunity to connect with the Ricoh Family Group at the field level to support a variety of sales activities.

- Support local trade shows or open houses.
- Joint sales calls to add value to selling the Ricoh Printer, GBC StreamPunch and GBC finishing solutions.
- Attend local sales meetings to connect with branch reps.

To get connected with a local GBC sales representative, call Greg Milam, Business Development Manager – GBC at 281-395-9949.

13. Glossary of Terms

GLOSSARY OF TERMS

- **Tabbing**
When a hole is not punched cleanly through the material leaving a piece of paper hanging from the edge.
- **Plastic Binding**
The name used to describe GBC's most common binding method. The 19 and 21 rectangular hole, Plastic Comb type.
- **Cerlox**
The trade name GBC uses for its Plastic Binding.
- **Flush-cut Covers**
Cover stock that is the same size as the paper contents and has round corners.
- **Twin Loop**
Looped wire element that is feed into square or round holes in the document in a similar fashion to Plastic Binding. The holes are either 2:1 or 3:1 (2 holes per inch or 3 holes per inch). It is then squeezed together or crimped to create an attractive bind that lays flat.
- **Color Coil**
A plastic coil that looks like a spring which is threaded through round holes punched in the document then the ends are cut off and crimped. The holes are either 4:1 or 5:1 (4 holes per inch or 5 holes per inch). This type of bind lays flat and even folds around for easy handling of the document.
- **VeloBind**
A heat seal plastic bind that is best know for it's security and it's attractive look. The one draw-back for VeloBind is that it is not a lay-flat bind style. It is most often used in the Legal market for it's security feature.

GBC
General Binding Corporation
One GBC Plaza
Northbrook, IL 60062-4195
847/272-3700
<http://www.GBC.com>

Printed in the U.S.A. Rev. 06/30/04