



## *Service Manual*

**C910 Color Printer**

**5055-01X**

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# Safety Information

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# 1. General Information

The Lexmark 910 is a high-speed, wide-format color LED electrophotographic printer with superior print quality for high-volume printing.

## Model Differences

5055-010	5055-01N
28/29 ppm Engine USB/Parallel 64MB	28/29 ppm Engine USB/Ethernet 64MB  1 x 550-sheet option
	28/29 ppm Engine USB/Ethernet 128MB  1 x 550-sheet option Duplex
	28/29 ppm Engine USB/Ethernet 128MB  1 x 550-sheet option Duplex Hard Disk Option Staple Punch Finisher w/Stand Printer Cabinet

## Overview

The Lexmark C910 is a high-speed, wide-format color LED Electrophotographic color printer with superior print quality for high-volume printing.

## Resolution

- 600 x 600 dpi
- 2400 image quality

## Toner Darkness

Toner darkness settings offer four (4) user-selectable settings to balance print darkness and toner savings. The higher the setting, the darker the print. The toner darkness default setting is 4.

The toner darkness setting is available through the operator panel under the "Print Quality" menu.

## Color Correction Settings

There are four (4) different color correction settings to provide flexibility in choosing the type of color correction to be applied when printing a file.

- Auto (default) - provides ease of use with no color science knowledge required
- Vivid - adjusts CMYK components, with the result being colors that are more saturated
- ff - no color correction is implemented from RGB or CMYK applications
- CMYK - provides the application's color correction instead of the printer's algorithms

**Black and White Lock** - (in configuration menu) allows printer and network administrators to lock the Lexmark C910 printer in a mode that will only print black. This feature cannot be overridden with any other menu or driver selection.

## Printer Packaging and Shipping Information

Description	Width	Depth	Height	Weight
<b>Printers<sup>1</sup></b>				
Lexmark C910	32.6 in. (828 mm)	29.3 in. (745 mm)	34.8 in. (883 mm)	198 lb. (90 kg)
Lexmark C910n	32.6 in. (828 mm)	29.3 in. (745 mm)	45.5 in. (1,155 mm)	246.4 lb. (112 kg)
Lexmark C910dn <sup>2</sup>	32.6 in. (828 mm)	29.3 in. (745 mm)	34.8 in. (883 mm)	259.4 lb. (117.9 kg)

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<b>Options</b>				
High Capacity Feeder	24.8 in. (630 mm)	28.6 in. (726 mm)	32.3 in. (820 mm)	75.7 lb. (34.4 kg)
Duplex Unit	27.6 in. (700 mm)	20.5 in. (520 mm)	10.6 in. (270 mm)	18.7 lb. (8.5 kg)
Optional Drawer	28.5 in. (724 mm)	31.5 in. (801 mm)	10.7 in. (272 mm)	48.4 lb. (22 kg)
<b>Supplies</b>				
Print Cartridge (Black) <sup>3</sup>	21.7 in. (551 mm)	10.1 in. (256 mm)	6.4 in. (162 mm)	6.6 lb. (3 kg)
Print Cartridge (Cyan, Magenta or Yellow)	21.7 in. (551 mm)	10.1 in. (256 mm)	6.4 in. (162 mm)	5.7 lb. (2.6 kg)
Black Photodeveloper	18.4 in. (467 mm)	4.1 in. (105 mm)	4.3 in. (110 mm)	2.2 lb. (1 kg)
Color Photodeveloper	18.4 in. (467 mm)	12 in. (306 mm)	4.5 in. (114 mm)	6.6 lb. (3 KG)
<sup>1</sup> Includes start-up kit (supplies) <sup>2</sup> “dn” model will ship unpackaged duplex inside printer <sup>3</sup> Oil coating roller will ship with black toner cartridge				

## Print Speed and Performance

### Print Speed

	Standard and Heavy Media Tray	High Capacity Feeder	Multipurpose Feeder
<b>Simplex printing on letter-size media (pages per minute)<sup>1</sup></b>			
Letter - 8.5 in. x 11 in.	28	28	28
Ledger	16	N/A	16
Legal - 8.5 in. x 14 in.	19	N/A	19
A3	16	N/A	16
A4 - 3.4 in. x 11.7 in.	29	29	29
A5/Executive	N/A	N/A	38
B4	18	N/A	18
B5	N/A	N/A	32
Transparencies	22	N/A	22
Card Stock	N/A	N/A	11
Envelopes	N/A	N/A	11
Paper Labels	22	N/A	22
<b>Duplex printing on letter-size media (sides per minute)<sup>1,2,3,4</sup></b>			
Letter - 8.5 in. x 11 in.	19	19	19
Ledger	11	N/A	11
Legal - 8.5 in. x 14 in.	12	N/A	12
A3	11	N/A	11
A4 - 3.4 in. x 11.7 in.	19	19	19
A5/Executive	N/A	N/A	20
B4	12	N/A	12
B5	N/A	N/A	19



LEF = Long Edge Feed  
SEF = Short Edge Feed  
N/S = Not Supported

<sup>1</sup> Folio and statement paper support from multipurpose feeder only

<sup>2</sup> Speeds

<sup>3</sup> When printing from the multipurpose feeder: Simplex - the first three pages print a “legal” speed with the balance printing at the speed consistent with the actual media size. Duplex - all pages print at “legal” speed.

<sup>4</sup> Average duplex print performance measured under the following conditions: Simplex text document (Mr. Brown) from the printer’s integrated tray to the printer’s standard output bin, with a job stream sufficiently long for the printer system to enter the maximum duplex print performance page sequence (2,4,6,1,3,5...) The first two sides (2 and 4) are not included in the performance computation since they “seed” the printer system’s paper path to achieve the maximum duplex print performance.

## **Performance**

The Lexmark C910 printers support the speeds listed above. Performance depends on

- Interface to the host (USB, serial, parallel, network)
- Host system and application
- Page complexity and content
- Certain printer options installed or selected
- Printer memory
- Media size and type

## **Time to First Print**

- Time to first print:
  - Black and color: 15 seconds

## Processor

- 400 MHz

## Duty Cycle

- Up to 100,000-sheet maximum, based on a single month's usage
- Up to 10,000 sheets per month

## Printer Memory

### Memory Configuration

DRAM Memory	Lexmark C910(n)	Lexmark C910dn
Standard	64MB	128MB
Maximum	512MB	512MB

## Available Memory Options

Optional 64MB, 128MB and 256MB SDRAM DIMMs are available from Lexmark.

## Flash Memory Options

Optional 4MB, 8MB and 16MB DIMMs are available from Lexmark.

## Memory and Expansion Slots

- Memory slots for extra flash or DRAM
  - Lexmark C910(n): 2
  - Lexmark C910(dn): 1
- Expansion slots for optional interface cards: 1
- Optional firmware expansion slots (application solution firmware cards): 1
- On-board hard disk interface (for optional hard disk): 1

SDRAM and flash memory options are interchangeable within any of the memory slots available on the Lexmark C910 system board. However, only one flash memory Maintenance Approach option will

be recognized. If multiple flash memory options are installed, the system will recognize the largest one.

## Paper Handling

Capacity may vary and is subject to media specifications and printer operating environment. Capacities listed are based on plain paper at 75g/m<sup>2</sup>.

## Input and Output Configurations

Sources and Capacities	Lexmark C910	Lexmark C910n	Lexmark C910dn
<b>Input Sources</b>			
Number of standard sources	2	3	3
Optional input drawers	3	2	2
High Capacity Feeder	1	1	1
Maximum number of input sources	6	6	6
<b>Input Capacities (sheets)</b>			
<b>Standard</b>			
Primary tray	550	550	550
Second tray	N/A	550	550
Multipurpose tray	100	100	100
Total standard capacity	650	1,200	1,200
<b>Optional</b>			
500-sheet drawer	550	550	550
Heavy-media tray <sup>2</sup>	Yes	Yes	Yes
High capacity feeder <sup>1</sup>	3,000	3,000	3,000

Sources and Capacities	Lexmark C910	Lexmark C910n	Lexmark C910dn
Maximum additional drawers	3	2	2
Maximum input capacity (without high capacity feeder)	2,300	2,300	2,300
Maximum input capacity + high capacity feeder	5,300	5,300	5,300
<b>Output Destination</b>			
Number (standard)	1	1	1
<b>Output Capacities sheets</b>			
Standard Output Bin	550	550	550
Face up Bin	100	100	100
<b>Optional</b>			
Finisher <sup>3,4</sup>	1,000	1,000	1,000
Maximum output capacity	1,650	1,650	1,650
<b>Other</b>			
Duplex unit	Yes	Yes	Standard
<sup>1</sup> A maximum of one high capacity input drawer is supported on any model			
<sup>2</sup> The heavy-media tray is supported only as Tray 1 (top).			
<sup>3</sup> A maximum of one finisher is supported on any model.			
<sup>4</sup> The finisher requires installation of the 2 x 550-sheet drawer with the base or printer cabinet.			

Media Size Supported

Input

	500-sheet Input	Multi- purpose Feeder	High Capacity Feeder	Duplex	Heavy Media Tray
A4-8.27" x 11.7" (210 mm x 297 mm)	X	X	X	X	X
A5-5.83" x 8.27" (148 mm x 210 mm)		X		X	X
JIS-B5-7.17" x 10.23" (182 mm x 257mm)		X		X	
JIS-B4-14.34" x 10.1" (364 mm x 252 mm)	X	X		X	X
Letter-8.5" x 11" (216 mm x 279 mm)	X	X	X	X	X
Legal-8.5" x 14" (216 mm x 256 mm)	X	X		X	X
Executive-7.25" x 10.5" (184 mm x 267 mm)		X		X	
Tabloid-11" x 17" (279.4 mm x 431.8 mm)	X	X		X	X
A3-11.69" x 16.54" (297 mm x 420 mm)	X	X		X	X

**5055-01X**

	500-sheet Input	Multi-purpose Feeder	High Capacity Feeder	Duplex	Heavy Media Tray
Universal <sup>1,2</sup>  2.75 x 5 in. to 8.5 x 14in. (69.85 x 127 mm to 229 x 355.6 mm)  5.83 x 7.17 in to 8.5 x 14 in. (148 x 182 mm to 215.9 x 355.6 mm)		X		X <sup>3</sup>	
7 3/4 Envelope- 3.875" x 7.5" (98 mm x 191 mm)		X			
9 Envelope - 3.875" x 8.9" (98 mm x 225.4 mm)		X			
10 Envelope - 4.125" x 9.5" (105 mm x 241 mm)		X			
DL Envelope - 4.33" x 8.66" (110 mm x 220 mm)		X			
C4 Envelope - 9" x 12.75" (229 mm x 324 mm)		X			
C5 Envelope - 6.38" x 9.01" (162 mm x 229 mm)		X			
B5 Envelope - 6.93" x 9.84" (176 mm x 250 mm)		X			

5055-01X

	500-sheet Input	Multi-purpose Feeder	High Capacity Feeder	Duplex	Heavy Media Tray
Other Envelope <sup>4</sup> 11.69 x 11.69 in. (297 mm to 297 mm)		X			
<b>Media Type</b>					
Paper	X	X	X	X	X
Card Stock		X			
Transparencies		X <sup>5</sup>			X
Envelopes		X			
Glossy Paper	X	X <sup>6</sup>		X	X
Paper Labels		X <sup>7</sup>			X <sup>8</sup>

**Output**

	<b>Standard Output</b>	<b>Bin 1</b>	<b>Finisher Bin 1</b>	<b>Finisher Bin 2</b>
A4-8.27" x 11.7" (210 mm x 297 mm)	X	X	X	X
A5-5.83" x 8.27" (148 mm x 210 mm)	X	X	X	
JIS-B5-7.17" x 10.23" (182 mm x 257mm)		X	X	
JIS-B4-14.34" x 10.1" (364 mm x 252 mm)	X	X	X	
Letter-8.5" x 11" (216 mm x 279 mm)	X	X	X	X
Legal-8.5" x 14" (216 mm x 256 mm)	X	X	X	
Executive-7.25" x 10.5" (184 mm x 267 mm)	X	X	X	
Tabloid-11" x 17" (279.4 mm x 431.8 mm)	X	X	X	
A3-11.69" x 16.54" (297 mm x 420 mm)	X	X	X	



**5055-01X**

	<b>Standard Output</b>	<b>Bin 1</b>	<b>Finisher Bin 1</b>	<b>Finisher Bin 2</b>
Universal <sup>1,2</sup>  2.75 x 5 in. to 8.5 x 14in. (69.85 x 127 mm to 229 x 355.6 mm)  5.83 x 7.17 in to 8.5 x 14 in. (148 x 182 mm to 215.9 x 355.6 mm)		X	X	
7 3/4 Envelope - 3.875" x 7.5" (98 mm x 191 mm)		X		
9 Envelope - 3.875" x 8.9" (98 mm x 225.4 mm)		X		
10 Envelope - 4.125" x 9.5" (105 mm x 241 mm)		X		
DL Envelope - 4.33" x 8.66" (110 mm x 220 mm)		X		
C4 Envelope - 9" x 12.75" (229 mm x 324 mm)		X	X	
C5 Envelope - 6.38" x 9.01" (162 mm x 229 mm)		X	X	
B5 Envelope - 6.93" x 9.84" (176 mm x 250 mm)		X	X	

	Standard Output	Bin 1	Finisher Bin 1	Finisher Bin 2
Other Envelope <sup>4</sup> 11.69 x 11.69 in. (297 mm to 297 mm)		X	X	
<b>Media Type</b>				
Paper	X	X	X	X
Card Stock	X	X	X	
Transparencies		X	X	
Envelopes		X	X	
Glossy Paper	X	X	X	X
Paper Labels		X	X	
<sup>1</sup> When Universal is selected, the page is formatted for 8.5 x 14 in. (215.9 x 355.6 mm) unless the size is specified in the software application.				
<sup>2</sup> Narrow media should be loaded with the length in the feed direction (portrait).				
<sup>3</sup> A5 paper 5.83 x 8.27 in. (148 x 210 mm) is the smallest size the C910 can duplex				
<sup>4</sup> When Other Envelope is selected, the page is formatted for 8.5 x 14 in. (215.9 x 355.6 mm) unless the size is specified in the software application.				
<sup>5</sup> Maximum stack of 50 sheets; if more input is required, use Heavy Media Tray.				
<sup>6</sup> Manual feed (one sheet at a time) only; if more input is required, use Heavy Media Tray				
<sup>7</sup> Maximum stack of 30 sheets; if more input is required, use Heavy Media Tray.				
<sup>8</sup> Refer to Cardstock & Label Guide for media guidelines.				

## Input Media Types and Weights

Media	Weight
<b>Standard Trays<sup>1, 2, 3</sup></b>	
Paper Xerographic or business paper	16 to 28 lb. bond (60 to 105 g/m <sup>2</sup> )
Specialty papers Glossy laser	80 lb. book (32 lb. bond) (120 g/m <sup>2</sup> )
<b>Heavy Media Tray<sup>1</sup></b>	
Paper Xerographic or business paper	28 to 47 lb. bond (105 to 176 g/m <sup>2</sup> )
Specialty papers Glossy laser <sup>4</sup>	80 lb. book (32 lb. bond) (120 g/m <sup>2</sup> )
Transparencies Laser printer type <sup>5</sup>	47 lb. bond (175 g/m <sup>2</sup> )
Labels - upper limit Paper	48 lb. bond (180 g/m <sup>2</sup> )
<b>Multipurpose Feeder<sup>1</sup></b>	
Paper Xerographic or business paper	16 to 28 lb. bond (60 to 105 g/m <sup>2</sup> )
Specialty papers Glossy laser	80 lb. book (32 lb. bond)(120 g/m <sup>2</sup> )
Card stock - upper limit Index Bristol	90 lb. index (44 lb. bond) (165 g/m <sup>2</sup> )
Transparencies Laser printer type	47 lb. bond (175 g/m <sup>2</sup> )
Labels - upper limit Paper	48 lb. bond (180 g/m <sup>2</sup> )
Envelopes Sulfite, Wood-free - up to 100% cotton	20 to 28 lb. bond <sup>2, 3</sup> (75 to 105 g/m <sup>2</sup> )
<b>High Capacity Feeder<sup>1</sup></b>	
Paper Xerographic or business paper	16 to 28 lb. bond (60 to 105 g/m <sup>2</sup> )
<sup>1</sup> The duplex option supports the same weights and types as the printer, except for transparencies, envelopes, labels and paper less than 75 g/m <sup>2</sup> (20 lb. bond) or greater than 105 g/m <sup>2</sup> (29 lb. bond)	
<sup>2</sup> 100% cotton content maximum weight is 90 g/m <sup>2</sup> (24 lb. bond)	

Media	Weight
<sup>3</sup> 105 g/m <sup>2</sup> (28 lb. bond) envelopes are limited to 25% cotton content	
<sup>4</sup> Part numbers 12A5950 (letter) and 12A5951 (A4)	
<sup>5</sup> Part numbers 12A5940 (letter) and 12A5941 (A4)	
<sup>6</sup> Refer to Cardstock & Label Guide for media guidelines	

## Output Media Types and Weights

Media	Weight
<b>Standard Output<sup>3</sup></b>	
Paper Xerographic or business paper	16 to 28 lb. bond (60 to 105 g/m <sup>2</sup> )
Specialty papers Glossy laser	80 lb. book (32 lb. bond) (120 g/m <sup>2</sup> )
Card stock - upper limit Index Bristol	90 lb. index (44 lb. bond) (165 g/m <sup>2</sup> )
Transparencies Laser printer type	47 lb. bond (175 g/m <sup>2</sup> )
Labels - upper limit Paper	48 lb. bond (180 g/m <sup>2</sup> )
<b>Bin 1<sup>3, 4</sup></b>	
Paper Xerographic or business paper	16 to 28 lb. bond (60 to 105 g/m <sup>2</sup> )
Specialty papers Glossy laser <sup>1</sup>	80 lb. book (32 lb. bond) (120 g/m <sup>2</sup> )
Card stock - upper limit Index Bristol	90 lb. index (44 lb. bond) (165 g/m <sup>2</sup> )
Transparencies Laser printer type <sup>2</sup>	47 lb. bond (175 g/m <sup>2</sup> )
Labels - upper limit Paper	48 lb. bond (180 g/m <sup>2</sup> )

Media	Weight
Envelopes Sulfite, Wood-free - up to 100% cotton	20 to 28 lb. bond <sup>6,7,8</sup> (75 to 105 g/m <sup>2</sup> )
<b>Finisher Bin 1<sup>3,4</sup></b>	
Paper Xerographic or business paper	16 to 28 lb. bond (60 to 105 g/m <sup>2</sup> )
Specialty papers Glossy laser <sup>1</sup>	80 lb. book (32 lb. bond) (120 g/m <sup>2</sup> )
Card stock - upper limit Index Bristol	90 lb. index (44 lb. bond) (165 g/m <sup>2</sup> )
Transparencies Laser printer type <sup>2</sup>	47 lb. bond (175 g/m <sup>2</sup> )
Labels - upper limit Paper	48 lb. bond (180 g/m <sup>2</sup> )
<b>Finisher Bin 2<sup>3, 4, 5</sup></b>	
Paper Xerographic or business paper	16 to 28 lb. bond (60 to 105 g/m <sup>2</sup> )
<sup>1</sup> Part numbers 12A5950 (letter) and 12A5951 (A4)	
<sup>2</sup> Part numbers 12A5940 (letter) and 12A5941 (A4)	
<sup>3</sup> The duplex option supports the same weights and types as the printer, except for transparencies, envelopes, labels and paper less than 75 g/m <sup>2</sup> (20 lb. bond) or greater than 105 g/m <sup>2</sup> (29 lb. bond)	
<sup>4</sup> Bin 1 represents engine side output and Finisher Bin 1 (face-up)	
<sup>5</sup> Finisher supports hole punch, job offset and stapling.	
<sup>6</sup> Finisher only supports long-edge fed envelopes wider than 5.8 in. (148 mm) - feed direction dimension	
<sup>7</sup> 100% cotton content maximum weight is 90 g/m <sup>2</sup> (24 lb. bond)	
<sup>8</sup> 105 g/m <sup>2</sup> (28 lb. bond) envelopes are limited to 25% cotton content	

## Input Capacity by Media and Source

Media	Stack Height	Capacity
<b>500-Sheet Trays</b>		
Plain Paper (letter, A4, legal, tabloid, A3)	2.2 in. (56 mm)	550 sheets 20 lb. (75 g/m <sup>2</sup> )
Plain Paper (letter, A4, legal, tabloid, A3)	1 in. (25 mm)	240 sheets 24 lb. (90 g/m <sup>2</sup> )
Glossy Paper	0.6 in. (15 mm)	130 sheets 32 lb. (120 g/m <sup>2</sup> )
<b>Multipurpose Feeder</b>		
Plain Paper	0.4 in. (11 mm)	100 sheets 20 lb. (75 g/m <sup>2</sup> )
Transparencies		50 transparencies
Envelopes		10 envelopes
Card Stock		55 sheets 90 lb. index (163 g/m <sup>2</sup> )
Paper Labels		55 sheets up to 48 lb. (180 g/m <sup>2</sup> )
Glossy Paper	(Manual)	1 sheet 32 lb. (120 g/m <sup>2</sup> )
<b>High Capacity Feeder</b>		
Plain Paper	12.5 in. (317 mm)	3,000 sheets 20 lb. (75 g/m <sup>2</sup> )
<b>Heavy Media Tray</b>		
Plain Paper	1.6 in. (40 mm)	300 sheets 32 lb. (120 g/m <sup>2</sup> )
Transparencies	0.8 in. (20 mm)	150 transparencies 47 lb. (175 g/m <sup>2</sup> )
Paper Labels	1.6 in. (40 mm)	200 sheets up to 48 lb. (180 g/m <sup>2</sup> )
Glossy Paper	1.6 in. (40 mm)	360 sheets 32 lb. (120 g/m <sup>2</sup> )

## Output Capacity by Media and Source

Media	Stack Heights	Capacity
<b>Standard Output Bin</b>		
Plain Paper	Varies	550 sheets 20 lb. (75 g/m <sup>2</sup> )
Glossy Paper	Varies	130 sheets 32 lb. (120 g/m <sup>2</sup> )
<b>Bin 1 and Staple Punch Finisher Bin 1</b>		
Plain Paper	Varies	100 sheets 20 lb. (75 g/m <sup>2</sup> )
Transparencies	Varies	50 transparencies 47 lb. (175 g/m <sup>2</sup> )
<b>Bin 2 - Staple Punch Finisher</b>		
Plain Paper	6.0 in. (152 mm)	1,000 sheets 20 lb. (75 g/m <sup>2</sup> )
<b>Notes:</b>		
- Performance may vary subject to media specifications and printer operating environment		
- Media at ambient environment		
- All media is letter/A4, unless otherwise noted		
- All paper weights are stated in bond, unless otherwise noted		

## Paper

Following are media guidelines for successful printing:

- Rough, highly textured, limp or pre-curved papers will result in lower print quality and more frequent paper feed failures.
- Colored papers, treated and preprinted papers, letterhead and labels must be able to withstand 338 deg. F (170 deg. C) fusing temperature.
- Preprinted forms and letterhead should be selected using guidelines found in the printer User's Guide. The chemical

process used in preprinting may render some papers unsuitable.

- Unsuitable papers include multipart forms and documents; chemically treated papers; coated, synthetic and thermal papers; and preprinted papers requiring a high degree of registration.
- Recycled paper less than 21 lb. (80 g/m<sup>2</sup>) may cause unacceptable results.

## Envelopes

- Envelopes should be fed long edge first, with flap trailing.
- When Finisher is attached, only long edge fed envelopes wider than 5.8 in. (148 mm) - feed direction dimension - may be used. To print smaller envelopes, the finisher must be undocked during the job.
- If envelope wrinkling occurs, refer to the User's Guide for correct weight, type, loading and stacking of envelopes.
- All envelopes should be new, unused and without package damage.
- Envelopes with excessive curl or twist exceeding 0.12 in. (6 mm), stuck together, with bent corners or nicked edges or those that interlock should not be used.
- Minimum weight: 20 lb. (75 g/m<sup>2</sup>)
- The following envelopes should not be used:
  - Envelopes with windows, holes, perforations, cutouts, deep embossing or package damage
  - Envelopes with metal clasps, string ties or metal folding bars
  - Envelopes with exposed flap adhesive when the flap is in the closed position

For best results, printing on new 24 lb. (90 g/m<sup>2</sup>) sulfite or 25% cotton bond envelopes is recommended.

**Note:** Under high-humidity conditions (over 60%) the envelopes may seal during printing.

## Transparencies

- Use letter sheets (p/n 12A5940) or A4-size sheets (p/n 12A5941) only



## Labels

Labels should be selected using guidelines found in the User's Guide or the Cardstock and Label Guide, and tested for acceptability.

## Lexmark Glossy Paper

- Use letter sheets (p/n 12A5950) or A4-size sheets (p/n 12A5951) only
- Glossy paper is only supported from Tray 1, Multipurpose Feeder and Heavy Media Tray.

## Print Area

Printable area for the C910 printers

- To within 0.16 in. (4.2 mm) of all edges of the media (except envelopes)

## Options and Features

Lexmark C910 printers support only Lexmark C910 paper-handling options. These options are not compatible with any other Lexmark printer.

- **550-Sheet Drawer** - (includes 550-sheet tray and support unit) installs beneath the printer and holds approximately 550 sheets of 20 lb. paper. Multiple optional drawers (up to 3) are supported simultaneously.
- **High-Capacity Feeder** - is designed to provide an additional input tray (Tray 3 or Tray 5, depending on the configuration) with a total capacity of 3,000 sheets (plain paper - letter or A4 -- 20 lb. (75 g/m<sup>2</sup>). The High-Capacity Feeder is customer installable and attaches to the right side of the printer.
- **Heavy-Media Tray** - is intended for special media such as transparencies, labels and glossy paper. This is supported only as Tray 1 (top drawer location).
- **Duplex Unit** - offers two-side printing and is designed to complement the Lexmark C910 printers.
- **Finisher** - offers stapling, hole punching, offset stacking and an additional output bin. Two models will be available. 3- or 4-hole left-edge hole punching will be available. The single staple

position is the upper left corner. The Finisher can support up to 1,100 sheets of unstapled, unpunched media. For stapled media, the output bin supports up to 30 stapled sets or 1,000 sheets. The stapler can staple a maximum of 30 sheets per set. Each C910 can support one Finisher.

- **C910 Printer Cabinet** - is customer installable and attaches below the printer - printer sits on top of the printer stand. The printer cabinet raises the printer to the correct height for use with the optional finisher and high-capacity feeder. The printer cabinet and high-capacity feeder can be installed concurrently.
- **Printer Base** - is customer installable and attaches below the printer - printer sits on top of the printer base. If used with two optional 550-sheet drawers, the printer base raises the printer to the correct height for use with the optional finisher and high-capacity feeder. The printer base and high-capacity feeder can be installed concurrently.
  - C910 -3 optional drawers
  - C910n and C910dn -2 optional drawers

## Connectivity

### Standard

- Lexmark C910
  - Bidirectional parallel and USB
- Lexmark C910n and Lexmark C910dn
  - 10/100BaseTX Ethernet and USB

### Optional Internal Local Connections

- Tri-Port Adapter (RS-232/RS-422 Serial, LocalTalk™ and Infrared)
- RS-232C Serial/Parallel-C Interface Card

**Note:** USB is supported only under Windows 98, Windows Me, Windows XP, Windows 2000 operating systems, Sun's Sun Ray appliances running Sun Ray Server code version 1.2 or later, Sun Blade workstations and Apple Macintosh iMac computer with Operating System 8.6 or higher. A USB cable is included with this card.

## Network Connections

### Internal Network Connections

- Lexmark MarkNet N2000 Series Internal Print Servers
  - MarkNet N2000t for Token-Ring attachment
  - MarkNet N2001e for Ethernet 10BaseT/100BaseTX
  - MarkNet N2002e for Ethernet 10BaseT/10Base2
- Lexmark MarkNet N2003 Series Internal Fiber Print Servers, including:
  - MarkNet N2003fx SC
  - MarkNet N2003fx MTRJ

### External Network Connections

- MarkNet X2000 Series External Print Servers
  - MarkNet X2011e (1-port) for Ethernet 10BaseT/100BaseTX
  - MarkNet X2012e (1-port) for Ethernet 10BaseT/100BaseTX, 10BaseT/10Base2
  - MarkNet X2031e (3-port) for Ethernet 10BaseT/100BaseTX
  - MarkNet X2030t (3-port) for Token-Ring attachment

### Standard Ethernet and MarkNet Compatibility

The standard Ethernet connection, MarkNet N2000 series and MarkNet N2003 series internal and MarkNet X2000 series external print servers support NetPnP 7.0 or later on Windows NT 4.0, Windows 2000 and Windows XP systems.

The Ethernet and Token-Ring print servers and the standard Ethernet connection support the following protocols:

- TCP/IP
- Novell (IPX/SPX including NetWare Directory Services)
- AppleTalk™
- LexLink (DLC/LLC)

The TCP/IP standard set of application services is supported, including DHCP, WINS, SNMP (industry standard printer MIB), http, lpr/lpd, ftp, tftp, ping, finger, telnet, bootp and rarp. The following protocols are also supported:

- IPP: Internet Printing Protocol
- SLP: Service Location Protocol
- NTP: Network Timing Protocol

Printers with standard Ethernet, MarkNet N2000 series and MarkNet N2003 series internal print servers and MarkNet X2000 series external print servers support a resident Web page with Microsoft Internet Explorer 4.0 or later and Netscape Navigator 4.5 or later for Windows 95, Windows 98, Windows Me, Windows 2000, Windows XP or Windows NT. The remote operator panel is available using the standard Ethernet connection, MarkNet N2000, MarkNet N2003 or MarkNet X2000 Series external print servers installed in or used with a Lexmark C910 printer.

## **Data Streams**

- PostScript® 3 Emulation
- Hewlett-Packard Company PCL® 6 Emulation

## **Operating Systems**

The Lexmark C910 printers are compatible with applications running under the following operating systems for either local or network connections

## **Resident Fonts**

<b>Emulation</b>	<b>Scalable Fonts</b>	<b>Bitmapped Fonts</b>
PCL 6	84	2
PostScript 3	156	0

For a listing of specific fonts, visit [www.lexmark.com](http://www.lexmark.com).

There are 83 symbol sets in the PCL 6 emulation to support all the languages that use these characters.

Not all symbol sets are supported by all fonts. Refer to the Technical Reference manual or use the printer operator panel to find which symbol sets are supported by each font.

Support for the euro currency character is included in all applicable fonts for both PostScript and PCL emulations. Twelve PCL symbol sets support the euro character, including all seven Windows symbol sets.

Additional fonts can be downloaded to the printer RAM, optional Flash DIMM or hard disk. PCL emulation supports both scalable and bit mapped downloadable fonts. PostScript emulation supports only downloadable scalable fonts. Font cards and font cartridges are not supported.

**Power and Electrical Specifications**

**Power Requirements**

Average nominal power requirements for the base printer configuration (110 volt). Power level are shown in watts.

<b>Printing States (average Power)</b>	<b>Lexmark C910(n)[dn]</b>	<b>Lexmark C910(n)[dn] with High Capacity Feeder</b>	<b>Lexmark C910(n)[dn] with Finisher</b>
Printing	1,250	1,830	1,600
Idle Sleep Mode	45	45	45
<b>Note:</b> Using a 220 to 110 power converter with the 110 volt printer is not recommended.			

## Electrical Specifications

### 110 Volt Model

- 120 to 127 VAC at 50 to 60 hertz (hz) nominal

### 110 Volt Model with High-Capacity Feeder or Finisher

- 120 to 240 VAC at 50 to 60 hertz (hz) nominal

## Operating Clearances

- Left side: 13 in. (330 mm)\*
- Right side:
  - C910(n) 6 in. (152 mm)\*\*, \*\*\*
  - C910dn 13 in. (330 mm)\*\*, \*\*\*
- Front: 26 in. (660 mm)
- Rear: 5 in. (127 mm)
- Top:\*\*\*\*
  - 91029 in. (736.6 mm)
  - C910n(dn)34.3 in. (871.2 mm)

**Note:** \* Clearance on left side should be 9 in. (228.6 mm) with the finisher attached.

\*\* Clearance on right side should be 30 in. (762 mm) with the high-capacity feeder attached.

\*\*\* Clearance on the right side should be 13 in. (330 mm) with the duplex attached, but not the high-capacity feeder.

\*\*\*\* With the high-capacity feeder or finisher attached, the top clearance needs to be 43.8 in. (1,113 mm).

## Environment

- Printer Temperature and Humidity
  - Operating
    - Temperature: 60 to 90° F (15.6 to 32.3° C)
    - Relative Humidity: 8 to 80%
    - Maximum Wet Bulb Temperature: 73° F (22.8° C)
    - Altitude: 10,000 ft. (0 to 3,048 meters)
    - Atmospheric Pressure: 74.6 kPa
  - Power Off
    - Temperature: 50 to 110° F (10 to 43.3° C)
    - Relative Humidity: 8 to 80%
    - Maximum Wet Bulb Temperature: 80.1° F (26.7° C)
    - Altitude: 10,000 ft. (0 to 3,048 meters)
  - Shipping Printer without Print Cartridges
    - Temperature: 0 to 140° F (0.6 to 60° C)
    - Relative Humidity: 5 to 100%
    - Maximum Wet Bulb Temperature: 85° F (30° C)
    - Altitude: 34,000 ft. (10,300 meters)
  - Storing Printer without Print Cartridges
    - Temperature: 0 to 140° F (0.6 to 60° C)
    - Relative Humidity: 5 to 80%
    - Maximum Wet Bulb Temperature: 85° F (30° C)
    - Altitude: 34,000 ft. (10,300 meters)
  - Shipping Supply Items

## 5055-01X

- Temperature: -40 to 104° F (-40 to 40° C)
- Relative Humidity: 5 to 100%
- Maximum Wet Bulb Temperature: 80° F (27° C)
- Storing Supply Items
  - Temperature: 0 to 104° F (0.6 to 40° C)
  - Relative Humidity: 5 to 80%
  - Maximum Wet Bulb Temperature: 80° F (27° C)
- In some cases, performance specifications (such as paper OCF, EP cartridge usage) are specified to be measured at an ambient condition.

## Physical Specifications and Weight

	Width	Depth	Height	Weight
<b>Printers</b>				
Lexmark C910	27.4in (695 mm)	25.8 in. (655 mm)	20.2 in. (512 mm)	177.1 lb. (80.5 kg)
Lexmark C910n	27.4 in. (695 mm)	25.8 in. (655 mm)	25.2 in. (641 mm)	217.8 lb. (99 kg)
Lexmark C910dn	27.4 in. (695 mm)	25.8 in. (655 mm)	25.2 in. (641 mm)	230.8 lb. (104.9 kg)
<b>Options</b>				
Duplex Option	27.4 in. (695 mm)	13.8 in (350 mm)	4.7 in. (120 mm)	13 lb. (5.9 kg)
550-Sheet Drawer	27.4 in (695 mm)	25.8 in. (655 mm)	5.1 in. (129 mm)	40.8 lb. (18.5 kg)
High Capacity Feeder	14.2 in. (360 mm)	20.7 in (525 mm)	25 in. (635 mm)	50 lb. (22.6 kg)



	Width	Depth	Height	Weight
Staple Punch Finisher, 1,100 Sheet (with stand)	19.5 in. (495 mm)	20.5 in. (520 mm)	41.7 in. (1,060 mm)	48.6 lb. (22 kg)
<b>Furniture</b>				
Printer Cabinet	26.6 in. (675 mm)	23.6 in. (598 mm)	20.4 in. (517 mm)	57.5 lb. (26 kg)
Printer Base	26.6 in. (675 mm)	21.6 in. (547 mm)	10.2 in. (260 mm)	33 lb. (15 kg)
<b>Note:</b> Weight includes cartridges and supplies.				

## Maintenance Approach

The diagnostic information in this manual leads you to the correct field replaceable unit (FRU) or part. Use the error code charts, symptom index, and service checks to determine the symptom and repair the failure. The removals in the Repair Information chapter may help you identify parts.

After you complete the repair, perform tests as needed to verify the repair.

## Standard Inspection and Cleaning Procedure

- Switch off Printer power, and disconnect the AC power cord from the electrical outlet.
- Remove and inspect the photodevelopers and toner cartridges, shielding them from strong light.
- Inspect the interior of the printer, removing foreign matter such as paper clips, staples, pieces of paper/transparencies, paper dust, hair, oil, grease or toner.
- Clean the printer interior using a lint-free cloth, dampened slightly with cold water. Do not use solvents or chemical cleaners to clean the printer interior.
- Use only the specified oil or lubricant on printer parts (some service parts are lubricated at the factory).

- Inspect and, if necessary, clean all rubber/plastic and D rollers with A lint-free cloth, dampened slightly with cold water. Dry the rollers with a lint-free cloth.
- While cleaning, inspect the interior of the printer for damaged wires, loose connections, toner leakage, loose springs, and damaged or worn parts.
- Be sure the printer is on a single, flat, strong table or desk top.
- Inspect all supplies (OCR, cartridges, photodevelopers/toner cartridges, belts, fuser CRUs) and paper sources (cassettes, trays, feeders, duplex drawers, finishers, mailbox trays) for obvious damage and proper installation (paper under corner bucklers, paper guides not too tight) Inspect for correct media usage (paper, transparencies, labels).
- Print a Demo page.
- If additional paper sources are installed, print a Demo page from each of these, (if possible).

**Note:** Failure to print from an additional tray or feeder may imply one or more pins are bent in the mating connector.

## Return Parts

Engineering periodically analyzes returned parts for failure modes. Include a printed test (DEMO) page, before and after the repair, and tag any returnable parts with a description of the failure.

## Service Recommendations

Before leaving the printer check the following:

- Be sure printer is on a flat, level, strong tabletop or level floor. This is very important for color printers that use belts. Check and set registration as necessary.
- Shake all cartridges and be sure they are correctly installed and fully seated.
- While the cover is open, wipe any residual toner from the LEDs using a lint free cloth.
- If you have serviced the finisher option, and in the process pulled it away from the printer during repair, ensure that it is properly aligned with the printer.

## **Tools**

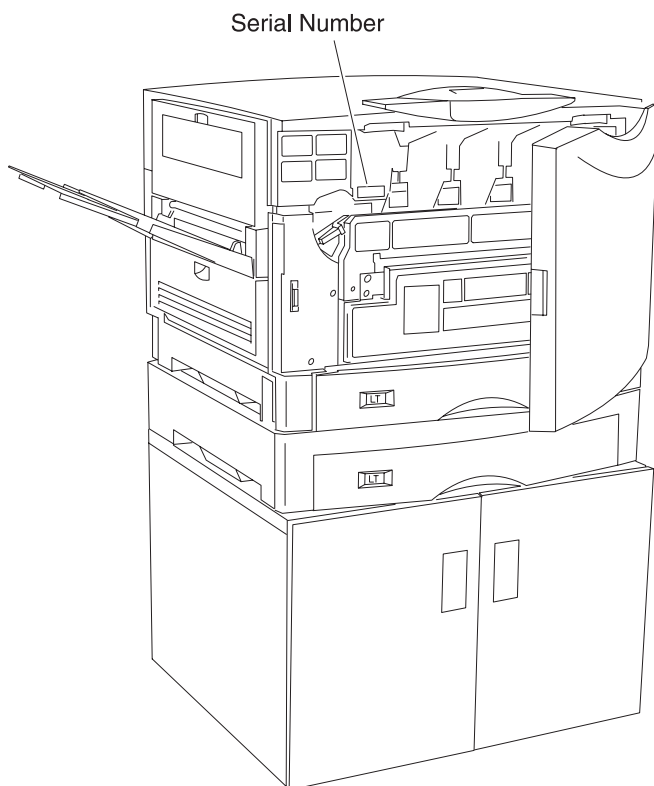
The removal and adjustment procedures require the following tools and equipment:

- Magnetic tip Phillips screwdrivers, large and small
- Flat-blade screwdrivers
- Analog volt ohmmeter (a digital volt ohmmeter may also be used)
- Needle nose pliers
- Tweezers, C-ring pliers
- Magnifier (20 times or higher)
- 6-angle wrench (1.5 mm)

When you make voltage readings, always use frame ground unless another ground is specified.

## Serial Number

Open the front door, the serial number is located as shown. The serial number is also on the menu settings page you can print from the Tests Menu.



**Abbreviations**

ASIC	Application-Specific Integrated Circuit
CSU	Customer Setup
DRAM	Dynamic Random Access Memory
EP	Electrophotographic Process
EPROM	Erasable Programmable Read-Only Memory
ESD	Electrostatic Discharge
FRU	Field Replaceable Unit
HVPS	High Voltage Power Supply
LAN	Local Area Network
LASER	Light Amplification by Stimulated Emission of Radiation
LCD	Liquid Crystal Display
LED	Light-Emitting Diode
LVPS	Low Voltage Power Supply
NVRAM	Nonvolatile Random Access Memory
OEM	Original Equipment Manufacturer
PICS	Problem Isolation Charts
PIXEL	Picture Element
POR	Power-On Reset
POST	Power-On Self Test
PQET	Print Quality Enhancement Technology
RIP	Raster Image Processor
ROS	Read-Only Storage
SRAM	Static Random Access Memory
UPR	Used Parts Replacement
V ac	Volts alternating current
V dc	Volts direct current

## Processes and Configuration

In this printer, the toner of four colors (magenta, cyan, yellow and black) melts and deposits dots on paper, which record color image information. This printing process is called the electrophotography process.

### Electrophotography Process

In the electrophotography process, electrically charged toner, exposes, develops, transfers, and is cleaned with an aluminum photosensitive drum. A photoconductive layer forms on the surface of the drum when the drum is exposed to light.

The surface of the photosensitive drum is negatively charged, forming the electrostatic image on the surface of the photosensitive drum. This charge is directed to the photosensitive medium at a low voltage, reducing the generation of ozone to a very low level. When the drum surface is charged, the image is recorded by irradiating light from the LED printhead, forming the electrostatic image. The LED printhead array along with the Selfoc lens array provide a single-dot line of the image, in a one-to-one arrangement. The image data from the printhead controller causes the LED to emit light in black dots. These black dots form an image of dots on the photosensitive drum.

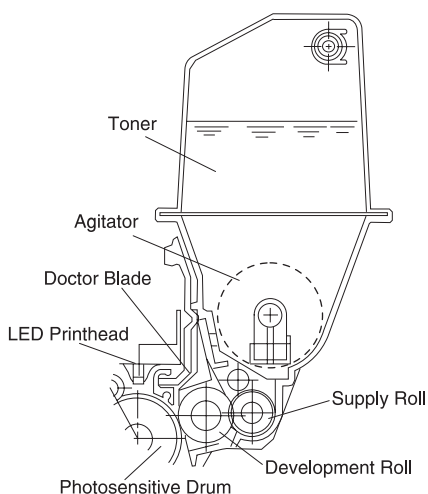
The LED printhead minimizes the displacement of images during the color print process, when images of multiple printheads overlap, causing dot position accuracy to be much higher. Since light from the volume of the LED array varies depending on the LED printheads, the light emitting value is recorded in the EPROM of the printer controller. When the LED printhead is replaced, the light emitting value should be entered for each printhead while the printer is in maintenance mode.

Since the LED printhead and EPROM on the printhead controller board of this printer are paired, the EPROM on the printhead controller board should also be replaced whenever the printhead is replaced.

## Development Unit

Toner forms the electrostatic image on the photosensitive drum during exposure. The single component, non-magnetic toner and the lusterless color toner are weather-resistant, and fade little under ultraviolet rays. This is helpful in saving documents.

Toner in the hopper is agitated and supplied to the development roll by the supply roll. A (conductive rubber) doctor blade is fitted to the development roll. Toner enters between the development roll and doctor blade by the rotating development roll and is negatively charged, forming the electrostatic image on the photosensitive drum. Toner attaches to the bright portion of the photosensitive drum per the voltage of the development roll.

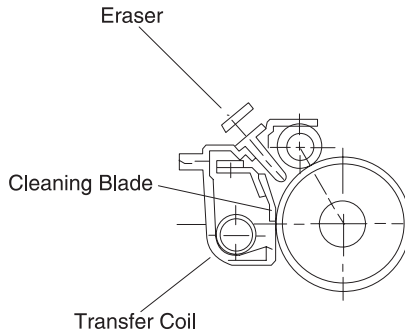


## Transfer Unit

Paper feeds electrostatically by the transfer belt and is carried to the transfer unit which turn at the speed of the photodeveloper drum. A charge roller applies a positive charge to the paper. The toner image formed on the photoconductor drum is transferred to the paper from the back side by the positive dc voltage applied to the transfer sheet, which is in contact with the paper through the transfer belt.

## Cleaning Unit

Toner remaining on the photosensitive drum following transfer, is scraped away with the cleaning blade, and collected in the recovery bag as waste toner. Residual toner on the photosensitive medium is removed by the eraser.



## Paper Feeding / Fusing

The main unit drive is composed of drives 1 and 2. Drive 1 feeds paper, stands by, drives the belt unit, separates, fuses, feeds the face up delivery unit, and drives the photodevelopers and toner cartridge by rotations of the dc motor. Drive 2 drives the face down delivery unit by rotations of the stepper motor.

The expansion paper feeder and the duplex unit use independent motors to drive the paper delivery unit.

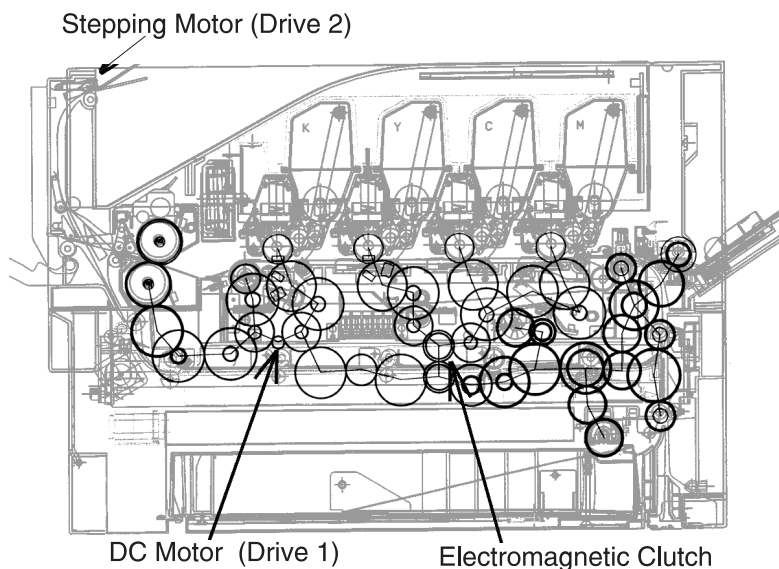


## Drive System

Drive 1, composed of a 100 V dc motor and gear unit, feeds the registration paper from the paper feeder and drives the belt unit, photodevelopers / toner cartridge, fusing unit, and face-up delivery unit. The motor rotates by the ON signal from the printer controller/ motor drive unit and sends a rotation synchronization detection signal to the motor drive unit.

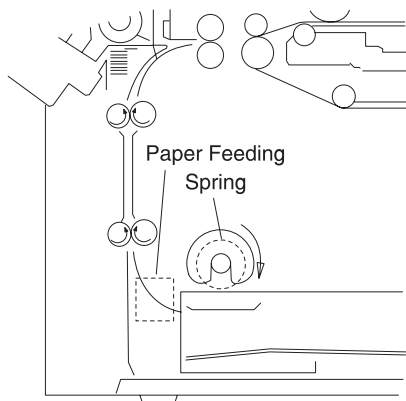
**Note:** The gear unit of drive 1 is adjusted in phase and should not be disassembled.

Drive 2, composed of a hybrid stepping motor and gear unit, drives the face-down delivery unit.



## Paper Feeding

The paper feeder is a two-way system composed of the multi-paper feeder (100 sheets maximum) and an integrated 550 sheet tray). Optionally, the expansion paper feeders (550 sheets) can be increased to four layers. A high capacity paper feeding system (3,000 sheets) may be used. Combining the multi-paper feeder, expansion paper feeders, and high capacity paper feeding system the printer has a maximum paper supply of up to 5,850 sheets.

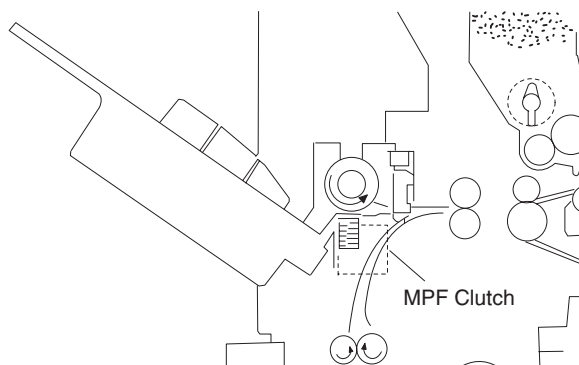


## Cassette Paper Feeder

The paper feeding solenoid turns on by the signal from the printer controller. The paper feeding roller interconnected with drive 1, rotates with the spring clutch and picks the paper in the paper cassette.

## Multipurpose Feeding

The multipaper feed solenoid turns on by the signal from the printer controller. The multipurpose feed roll interconnected with the drive 1 through the spring clutch, rotates and picks the paper in the multipurpose feeder.

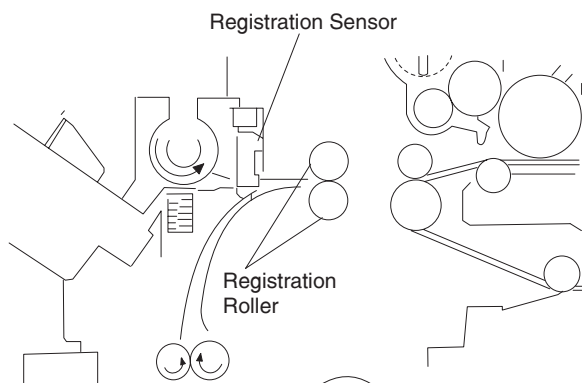


## Registration Unit

Media temporarily stops (registration) when adjusting the paper leading edge parallel with that of the image, or when adjusting the timing with the black image.

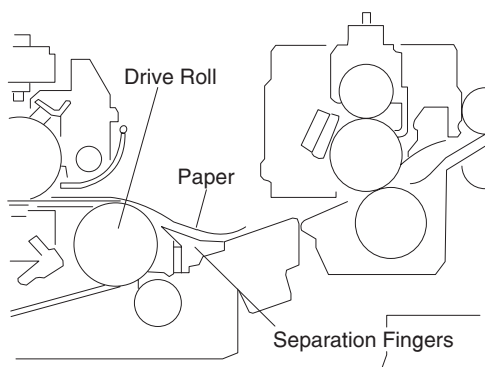
The upper and lower registration rolls are arranged in parallel with the photosensitive drum for black imaging. The lower registration roll incorporates a registration clutch which feeds or stops the paper.

In the forward direction of the registration roll, a registration sensor (photo interrupter) is provided to detect paper fed from the paper feeder and to stop paper jam feeding.



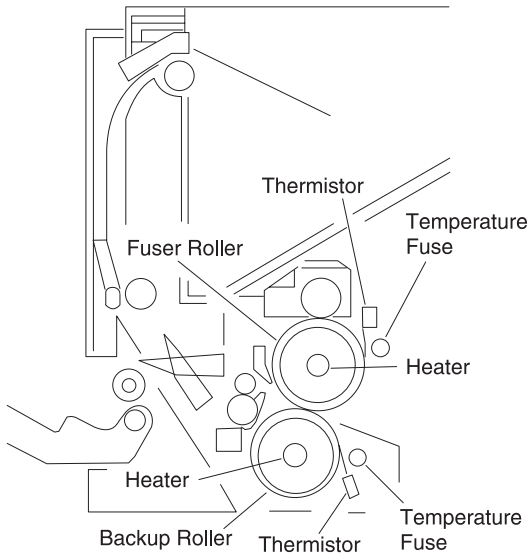
## Separation Unit

The transfer belt and paper are separated with the belt drive roll by separation fingers.



## Fuser Unit

By applying heat and pressure, the image is melted and fused to the paper.

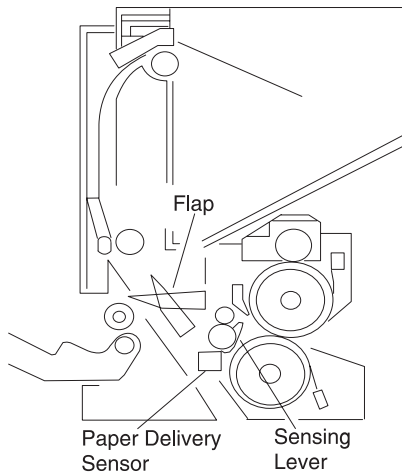


The upper and lower rollers are heated and pressure-fitted. A heater is positioned in the roller tube and a thermistor and thermostat remain in contact with the outside of the tube. Separation fingers are attached near the upper roller to separate the paper from the roller.

Each thermistor sends the surface temperature of the roller to the printer controller. The printer controller turns the heater on or off according to the voltage of each thermistor. If the controller fails and the temperature of the roller exceeds specifications, the temperature fuse (TCO) connected to each heater opens, preventing overheating.

## Delivery

After completing the fusing process, paper is discharged from the printer. The delivery sensor detects the paper condition and the FU/FD deflector switches between the face-up and face-down paper delivery. The paper from the fuser pulls down the sensing lever turning on the delivery sensor (photo interrupter). If the delivery unit remains on longer than specified, the printer controller determines that the printer is jammed, and the paper delivery flap lever switches to either face down or face up.



## Belt Unit

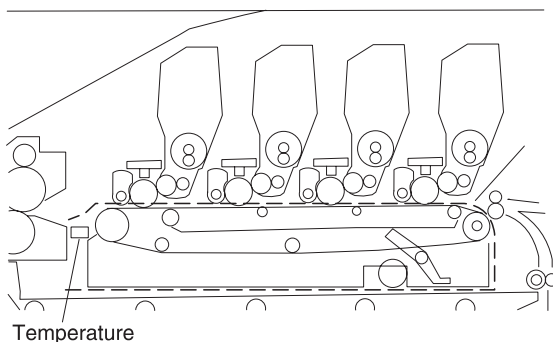
After passing through the registration unit, paper is electrostatically fed by the transfer belt through the positively charged feed roll at the inlet of the belt unit and fed by the running belt. The belt runs at the same speed as the photosensitive drum causing the image on the C, M, Y and K developer to transfer to paper.

Since the photosensitive drum has a small diameter and the paper is electrostatically fed by the transfer belt, the paper is easily separated, after toner image transfer, and fed to the next developer. Excess toner is scraped from the drum with a cleaning blade and recovered into the waste toner bottle.

Adjust the registration when the belt unit is replaced. The registration is adjusted at the leading edge of the image or by adjusting the color image. This should be adjusted in maintenance mode, when the belt unit is replaced.

The transfer belt is conductive and seamless. If the transfer belt is damaged, toner can cling to the belt and contaminate the paper. When fingerprints or other stains appear on the belt, wipe them away with a dry cloth or cloth moistened with alcohol.

A density sensor is positioned facing the belt drive roller for automatic density adjustment and registration adjustment. A mechanism is provided to clean the sensor surface, which is interconnected with the opening and closing of the front cover.

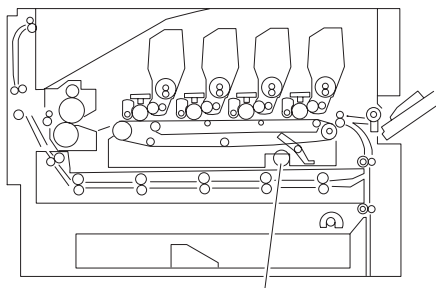




## Belt Up/Down

In monochrome printing, switching to color printing is not required. To avoid unnecessary wear of the photosensitive drum by the cleaning blade, this operation is stopped with the electromagnetic clutch in drive 1. The transfer belt is lowered so as not to touch the photosensitive drum during color printing.

The transfer belt moves up and down with the switching shaft cam by the electromagnetic clutch in drive 1. The belt position is used to detect the cam position with the photo sensor, using the fan shaped light blocking plate attached to the switching shaft. Printing with the transfer belt lowered is called monochrome mode and color printing is called color mode.



Electromagnetic Clutch (BUD)

## Expansion Paper Feeder

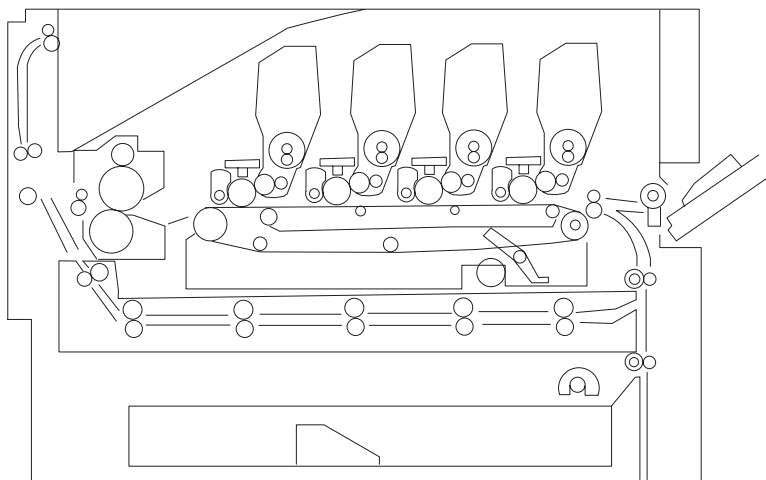
The optional expansion paper feeder can be installed at the lower part of the main unit. Including the main unit, up to five layers of cassettes can be used for cassette paper feeding.

## Duplex Unit

A duplex unit can be optionally installed in the main unit, allowing two-sided printing.

Selecting Paper feeding, Registration, Transfer, Separation, Fusing, or Face-Down paper discharging with the pulse motor in the duplex unit, feeding is stopped before the paper is delivered. Paper delivery is then reversed and fed to the duplex unit.

Paper fed with the duplex unit stops once, and the center position is corrected by the operation of the side guide plate. Paper is then re-fed by the printer controller signal to the main unit, and, following printing on the back side, is delivered to the normal feeding path.



When non-offset type color toner is used, the process speed in the OHP mode is decreased, causing toner to melt sufficiently with the fusing unit, while the fusing temperature is set higher than usual to increase the smoothness on the surface of the toner image.

This mode restricts paper feeding to multipaper feeding, not cassette feeding.

Paper Weight

Purpose:

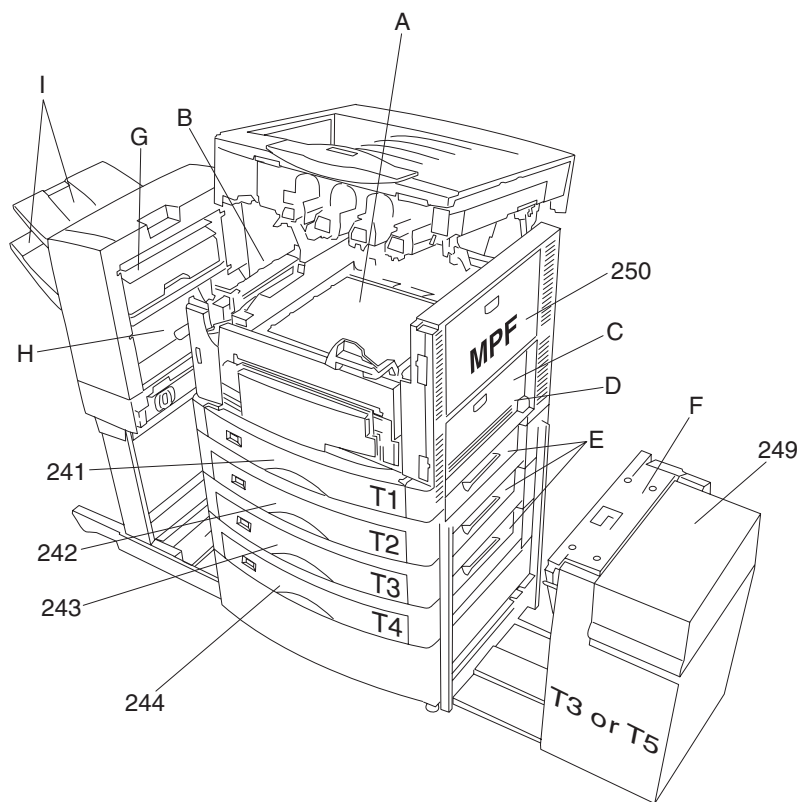
To identify the relative weight of the paper loaded in a specific source and ensure that the toner adheres properly to the printed page.

Values:

Plain Weight	Preprint Weight	Bond Weight	Labels Weight
CardStock Weight	Colored Weight	Envelope Weight	Ltrhead Weight
Trnsprncy Weight	Custom <x> Weight	Glossy	

Light	16-20 lb.
Normal*	20-24 lb.
Heavy	24-28 lb.

## Clearing Paper Jams



### 200 Paper Jam <x> Pages Jammed (Check Areas A-F)

A 200 Paper Jam message indicates that paper is jammed. The display alternates between 200 Paper Jam <x> Pages Jammed and Check Areas A-F.

If there is a paper jam when you turn the printer on, the second line of the 200 Paper Jam message will be blank. To resolve the message, you must clear all paper from the paper path. Check and clear areas A through F.

## Check Areas A, B

This message indicates a paper jam in the transfer belt, fuser, or output roller area. To clear areas A, B:

1. Open the top cover. Never touch the photodevelopers drum on the underside of the toner cartridge. The paper may be covered with un-fused toner, which can stain clothing.
2. Remove any paper on the transfer belt.
3. If the paper source was the multipurpose feeder, check the area between the multipurpose feeder and the transfer belt. Do not use any pointed objects to remove the paper. This could cause permanent damage to the transfer belt.
4. Check the fuser area and top cover for additional jams.
5. If there is no jam in the fuser area or top cover, close the top cover and front door, and then press **Go**. If a jam is present, continue with step 4.
6. Lift the fuser pressure release lever and slowly pull the paper out of the fuser toward the inside of the printer.
7. Rotate the fuser pressure release lever down. The top cover will not close until the lever is in the down position.
8. Check the top cover for additional jams.
9. If there is no jam in the top cover, close the top cover and front door, and then press **Go**.
10. Remove the jam from the top cover.
11. Close the top cover and the front door.

## Check Area C

Jams that cause a Check Area C message require opening the duplex jam access door. If you are printing on small paper, the following steps may not clear the jam. See [“Removing Small Size Paper From the Duplex Unit” on page 1-51](#).

1. Open the duplex jam access door on the right side of the printer.
2. Remove the jam.
3. Press **Go**.

**Note:** If the paper jam message continues, check and clear all paper from the paper path.

## Check Area D

This message indicates a paper jam in the duplex unit area. To clear area D:

1. Open the duplex jam access door on the right side of the printer.
2. Gently pull out the duplex unit.
3. Turn the paper forwarding dial counterclockwise. If the paper advances out of the duplex unit, remove the jam and go to step 7. If the paper does not advance, go to step 4.
4. Open the duplex unit covers.
5. Remove the jam.
6. Close the duplex unit covers.
7. Push the duplex unit back into the printer.
8. Close the access door.
9. Press **Go**. If the paper jam message continues, check and clear all paper from the paper path.

## Removing Small Size Paper From the Duplex Unit

When printing on both sides of A5 or other small size paper, you may need to partially remove the duplex unit to clear the jam.

1. Turn off the printer.
2. Open the duplex unit door.
3. Loosen the two screws.
4. Pull out the duplex unit far enough to see the duplex unit inlet.
5. Remove jam from the duplex unit inlet.
6. Slide the duplex unit in.
7. Align the thumbscrews on the duplex unit with the holes in the printer.
8. Tighten the thumbscrews to secure the duplex unit.
9. Close the duplex unit door.

## Check Area E

This message indicates a jam in the top, middle, or bottom optional drawer paper path area. If you have a high capacity feeder, pull the feeder away from the printer.

1. Open the jam access door on the top optional drawer.
2. Remove the jam.
3. Close the jam access door.
4. Close the jam access door.
5. Press **Go**.

**Note:** If the paper jam message continues, check and clear all paper from the paper path.

## Check Area F

1. Pull the high capacity feeder away from the printer.
2. Open the jam access door on the top optional drawer.
3. Remove any jams.
4. Close the jam access door.
5. Slide the high capacity feeder until the feeder locks to the docking frame. When the feeder is in the correct position, you hear a click.
6. Press **Go**.

**Note:** If the paper jam message continues, check and clear all paper from the paper path.

## 250 Paper Jam Check MP Feeder

1. Slowly pull the jam straight out of the multipurpose feeder. If the paper will not come out, continue.
2. Open the top cover.
3. Remove the paper on the transfer belt.
4. Close the top cover.
5. Press **Go**.

## 24<x> Paper Jam Check Tray <x>

Jams in five areas result in a 24<x> Paper Jam message, where x represents the tray number where the jam has occurred. Paper jam messages 241–244 indicate a jam has occurred in one of the trays.

## 241-244 Paper Jam

1. Pull out the tray indicated on the display.
2. Remove any wrinkled or creased paper.
3. Push down on the remaining paper in the tray until the bottom plate clicks into place.
4. Close the tray.
5. Press **Go**.

**Note:** If the paper jam message continues, check and clear all paper from the paper path.



## 249 Paper Jam Check Tray <x>

A 249 Paper Jam Check Tray <x> message indicates a jam has occurred in the high capacity feeder.

1. Open the top cover.
2. Remove the jam.
3. Close the top cover.
4. Press **Go**.

## 200 Paper Jam (Check Areas G, H, I)

A 200 Paper Jam indicates a jam has occurred in the finisher.

1. Open the finisher top cover and remove any jams.
2. Push the finisher to printer latch and hold it in.
3. Roll the finisher away from the printer.
4. Release the latch.
5. Remove any jams from the finisher entry guide.
6. Lift the finisher entry guide handle.
7. Lift the dust box, rotate the bottom outward, and remove it.
8. Release the finisher entry guide handle.
9. Lift the jam access cover.
10. Rotate the green knob to move the paper into the access cover area then remove the paper.
11. Lift the finisher entry guide handle.
12. Place the top of the dust box in the finisher, and rotate the bottom of the dust box into the finisher.
13. Release the finisher entry guide.
14. Open the stapler door.
15. Remove any jams from the accumulator. You can rotate the accumulator knob counterclockwise to move the paper down.
16. Close the stapler door.
17. Roll the finisher toward the printer until the finisher locks into place.
18. Make sure the finisher is properly aligned with the printer.

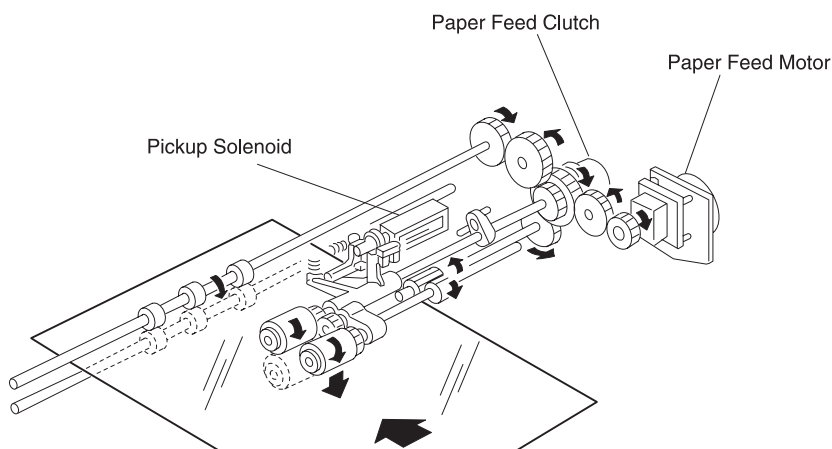
## High Capacity Feeder (HCF)

### Paper Feed and Separation Mechanism

The high capacity feeder consists of a tray and paper transfer mechanisms. The paper feed and separation mechanism uses a friction roller separation and paper feed system with a non-contact magnet type maintenance-free torque limiter.

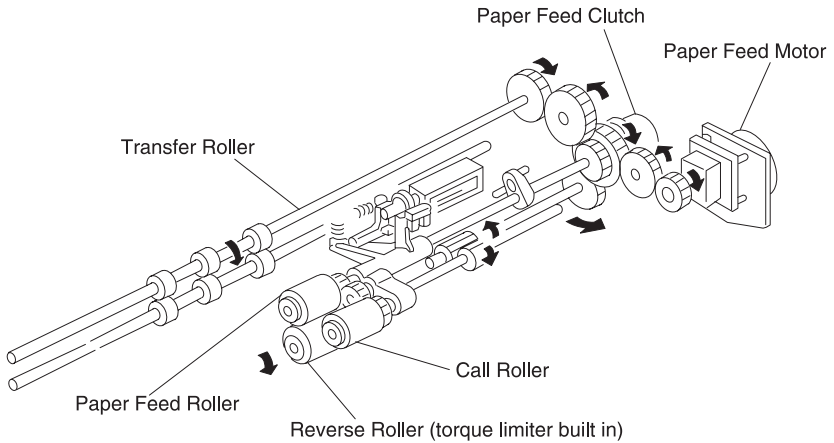
When the paper feed clutch turns on, the paper feed roller shaft rotates and the paper feed roller is driven with the one-way clutch. The call roller rotates with the relay gears to feed the top paper. The reverse roller rotates along with the paper feed roller.

During paper feed, if two sheets feed, the reverse roller rotates by the torque limiter, returning the lower sheet. When the paper feed sensor (reflection type sensor) detects the paper, the pickup solenoid turns off to raise the call roller, transferring the paper to the registration roller.



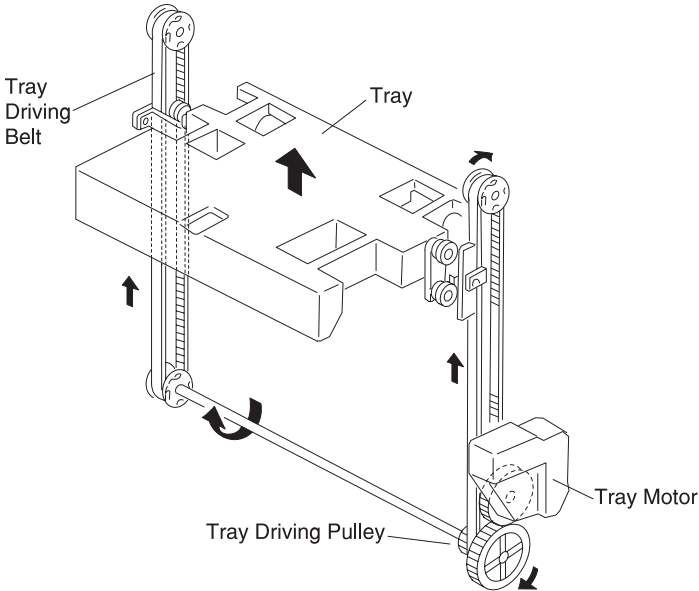
## Registration Operation

When the paper feed motor rotates, the transfer roller is driven with relay gears. The reverse roller shaft rotates the gears on the paper feed clutch in the direction of the arrow and stops by the friction force of the paper feed roller.

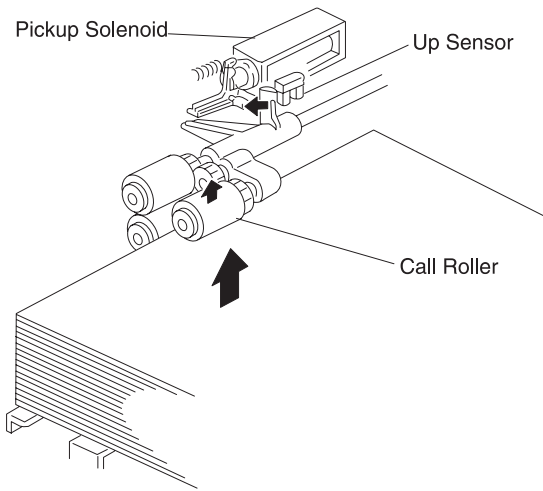


## Tray Up/Down Mechanism

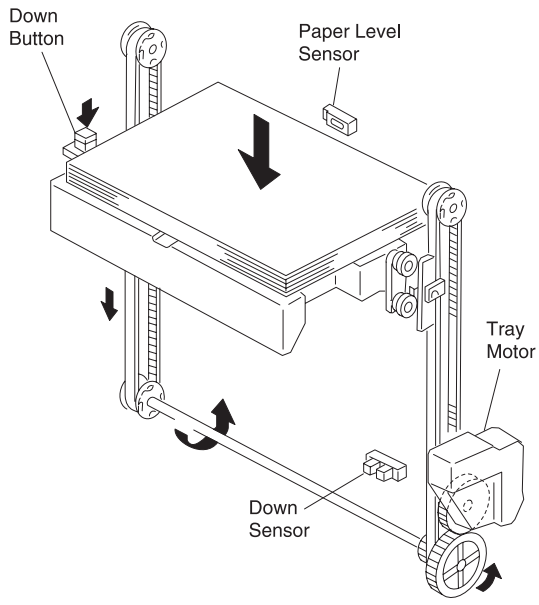
The driving force of the tray motor transmits to the tray driving pulley through the gears. Moving the tray moves up and down through the tray driving belt. After the paper loads, and the top cover is set, the pickup solenoid turns on to lower the call roller. When the tray moves up, the call roller is raised by the top surface of the paper, and the shield plate on the up sensor is released from the up sensor which turns off the tray motor.



Also, when the top surface of the paper lowers during printing and the up sensor is shielded, the tray motor again rotates forward to raise the paper.



When the down button is pressed, the tray motor reverses to move the tray down. During the down motion of the tray, as the top surface of paper passes the paper level sensor, the tray motor stops. The tray moves down by about 500 sheets. The down sensor detects the tray lower limit position.



## **Tray Up Condition**

Tray up motion stops when the:

- Up sensor is OFF (not shielded)
- Power cord is connected and the joint switch is ON
- Up sensor is ON (shielded) during printing
- Top cover is closed, or when up sensor is ON

## **Tray Down Condition**

Tray down motion stops when the:

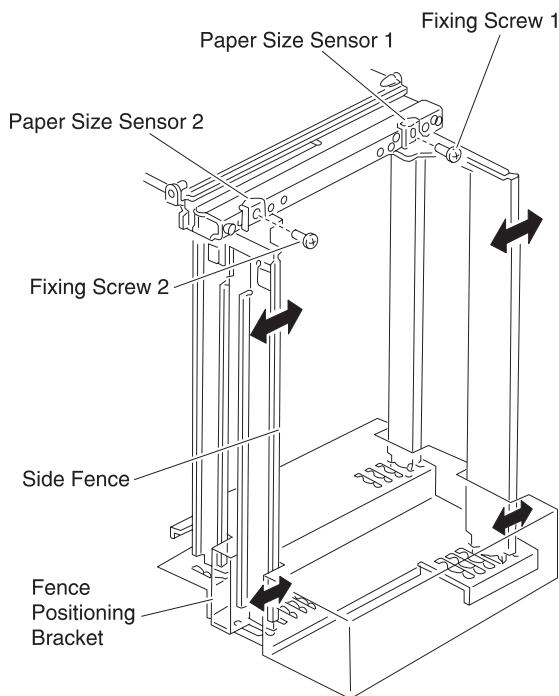
- Paper level sensor is OFF
- Down button is pressed
- Paper end is detected

## Size Detection Mechanism

The paper size can be switched between A4 and letter (11 inches) by changing the side fence position.

The paper size sensor 2 detects the fixing screw 2 at the A4 position.

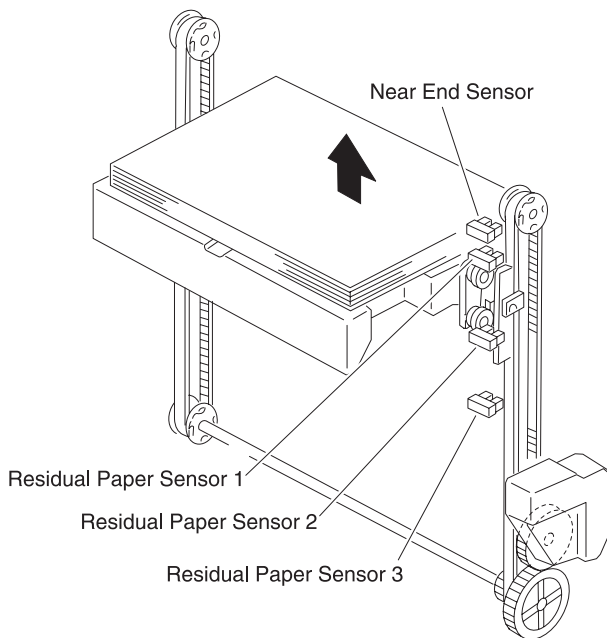
The paper size sensor 1 detects the fixing screw 1 at the letter position. Tray up motion stops when the up sensor is OFF, not shielded.



## Residual Paper Detection Mechanism

The residual paper quantity in the tray is detected with four photo interrupters. The quantity of pages remaining in the sheet feeder displays in the following increments:

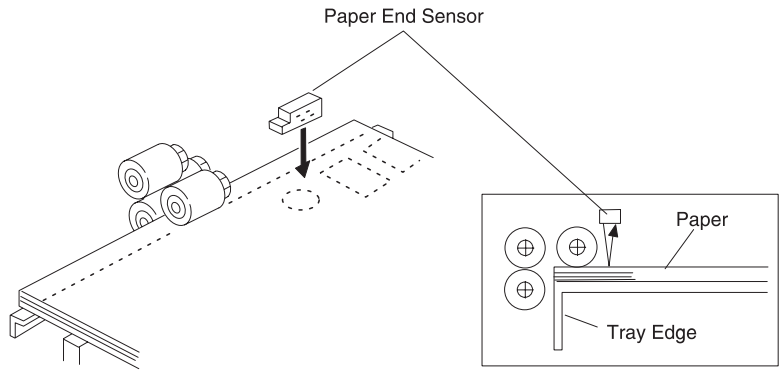
- Near end, about 80 sheets
- About 300 sheets
- About 1,000 sheets
- About 2,000 sheets





Paper End Detection

A reflection type sensor is provided on the top stay to detect the paper top surface and the paper end.



## Maintenance Mode

### DIP Switch Specifications

The DIP switches on the high capacity paper feed board have the following functions:

- Function switching and initial setting of the standard machine or optional machine.

DIP Switch	Function Switch		Maintenance Switch		Description
	4	3	2	1	
OFF					1 Standard machine initial setting
ON	X	X			
OFF	X				2 Optional machine initial setting
ON		X			

- Maintenance switch (test mode selection) is valid without connecting to the printer controller board.

DIP Switch	Function Switch		Maintenance Switch		Test paper feed mode (standalone)
	4	3	2	1	
OFF					Test OFF mode
ON			X	X	
OFF			X		Linear velocity 101 mm/s Thick paper mode
ON				X	
OFF			X	X	Linear velocity 129 mm/s Plain paper mode
ON					
OFF				X	Linear velocity 180 mm/s
ON			X		

- Test paper feed operation.
  1. Turn on the docking safety switch with a non-metallic object.  
The interface cable with the printer controller board need not be connected.
  2. Close the top cover or manually activate the cover switch.
  3. Load paper.
  4. Wait until the paper tray stops and the pickup solenoid turns off
  5. With the cover closed or with the cover switch activated, press and hold the tray down button for more than 1/2 second. In steps 1 and 2, paper feeding starts and is continuously fed until the cover is opened. The test ends when the tray motor stops and the paper ejects or the tray down button is released.
- Test Sequence
  1. The tray motor moves the tray to the upper limit.
  2. The pickup solenoid activates then de-activates.
  3. When the tray down switch is pressed for longer than 1/2 second, the paper feed motor starts, the paper feed clutch operates and feeding begins.
  4. Feeding can be stopped by releasing the tray down button.

## High Capacity Paper Feed Sensor / Switch Test

Check the condition of each sensor from the lighting of LEDs on the high capacity paper feed board. When each sensor operates with the power supplied, the associated LED lights.

To perform the test:

Interrupt the photointerrupter sensor signal or actuate the micro-switch being tested while observing the associated LED on the high-capacity paper feed board.

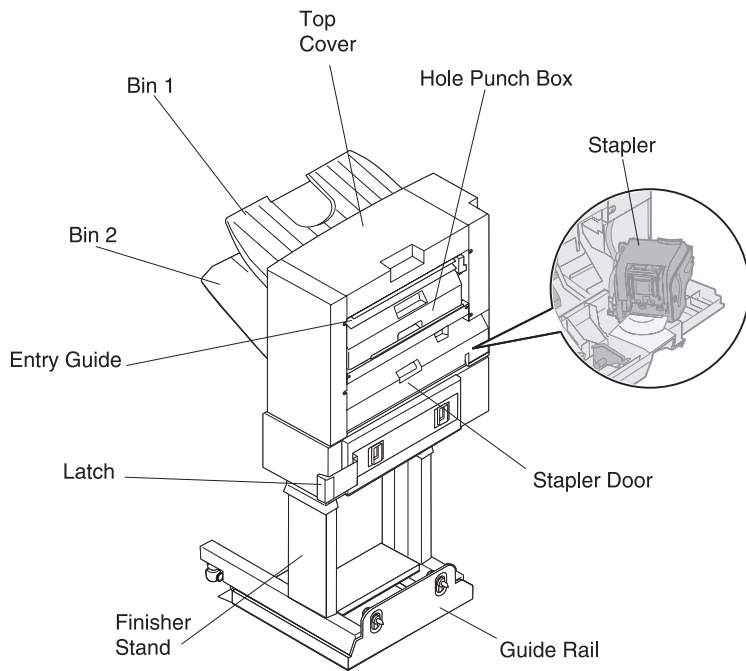
LED	Sensor Name
1	Paper size sensor 1 switch (letter size 11 inches)
2	Paper size sensor 1 switch (A4 size)
3	Residual paper sensor 1 switch
4	Residual paper sensor 2 switch
5	Residual paper sensor 3 switch
6	Residual paper sensor 4 switch
7	Paper level sensor switch
8	Lower limit switch
9	Cover open sensor switch
10	Docking sensor switch
11	Upper limit switch
12	Paper sensor switch
13	Paper feed sensor switch

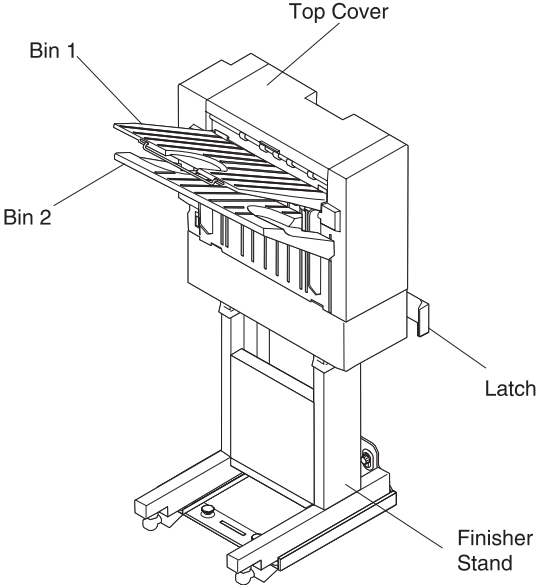
## Finisher

The 5055-01X finisher communicates with the host engine through serial interface signals and performs the following operating modes:

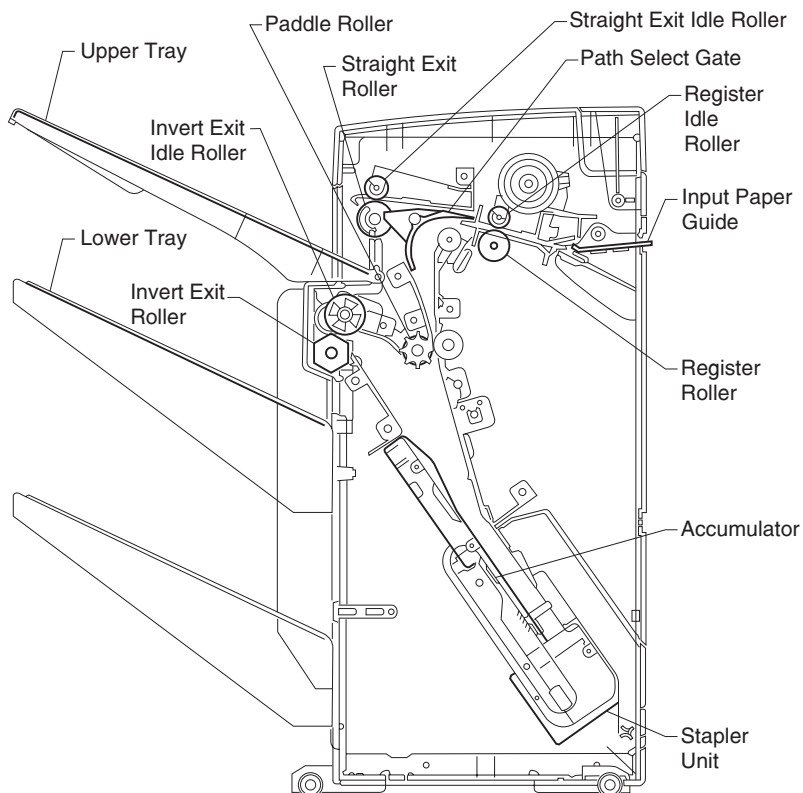
- **Straight** - exits paper to the upper tray.
- **Punch and straight** - stops paper at the leading edge, punches it, and exits it to the upper tray.
- **Invert** - sends paper to the accumulator, and exits it to the lower tray.
- **Punch and invert** - stops paper at the leading edge, punches it, and sends it to the accumulator where it exits to the lower tray.
- **Invert and staple** - jogs each sheet of paper in the accumulator. When the accumulated number of sheets reaches a designated number, it staples a batch of sheets, and then exits the stapled set to the lower tray.
- **Punch, invert and staple** - stops paper at the leading edge, punches it, sends it to the accumulator and jogs each sheet. When the accumulated number of sheets reaches a designated number, the batch is stapled, and exited to the lower tray.
- **Invert and offset** - jogs each paper in the accumulator, shifts it by the offset, then exits it to the lower tray.
- **Punch, invert and offset** - stops paper at the leading edge, punches it, sends it to accumulator and jogs each page, offsets it, and then exits it to the lower tray.

**Note:** Capacity - up to 100 sheets of 20 lb. paper in tray 1 (top tray) up to 1000 sheets of 20 lb. paper in tray 2 (lower tray).





## Finisher Cross Section





## Electrical Parts Function

- **Finisher Set Switch** - detects the connection with the printer.
- **Staple Cartridge Set Switch** - detects when the staple cartridge is open.
- **Staple Existence Sensor** - detects when the stapler is empty.
- **Staple Home Position Sensor** - locates home position for stapling.
- **Paper Register Sensor** - detects when paper enters into the finisher, detects paper jams and triggers the punch.
- **Paper Exit Sensor (Upper Tray) (Letter), Invert Path Sensor (A4)** - detects when paper feeds into the lower tray, the end of jogged paper and paper jams.
- **Paper Exit Sensor** - detects that paper has exited the printer.
- **Tractor Home Position Sensor** - locates home position for the drive belt.
- **Elevator Upper Limit Sensor** - detects when the lower tray is at the highest position.
- **Jogging Home Position Sensor** - locates home position for the jogging bar.
- **Paper Detecting Sensor** - detects when the paper is at the correct position for stapling.
- **Paper Full Sensor A** - detects when there is a full stack of paper on the lower tray.
- **Paper Upper Level Sensor B** - Locates the top of the stacked paper on lower tray. Also detects when paper is removed from stacked papers on the lower tray while stacking.
- **Elevator Lower Limit Sensor** - detects when the lower tray is at the lowest position.

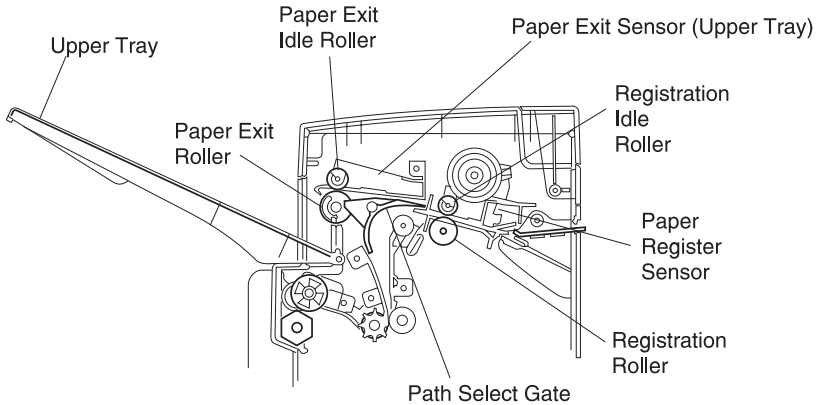
## Paper Feed Mechanism

Paper is transported, after it is detected at paper register sensor by drive gears and drive belts, driven by the paper feed motor or tractor drive motor and other rollers. Paper path route differs subject to the selected mode.

### Straight Paper Path (Exit paper to Upper Tray)

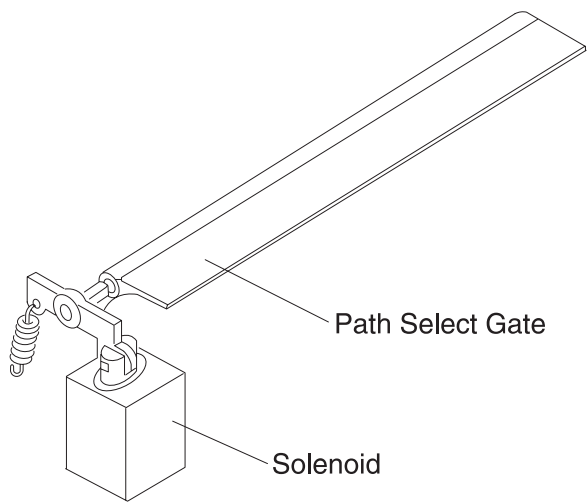
Paper feed motor drives and rotates rollers. The path select gate is changed by the path select solenoid, and paper goes out to upper tray by the exit rollers.

1. Path select gate solenoid
2. Solenoid



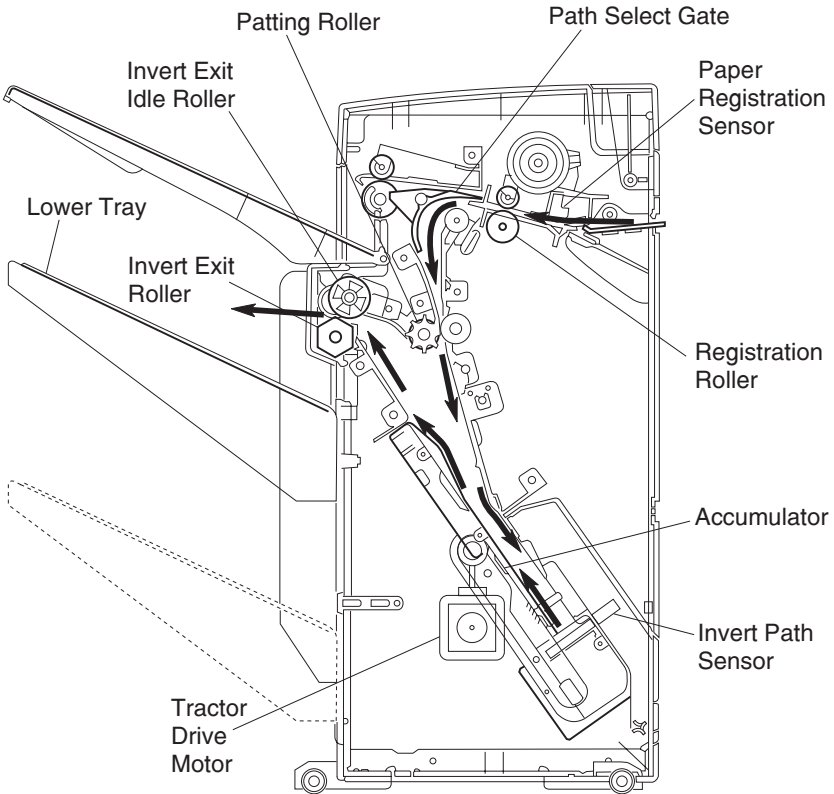
5055-01X

Path Select Gate

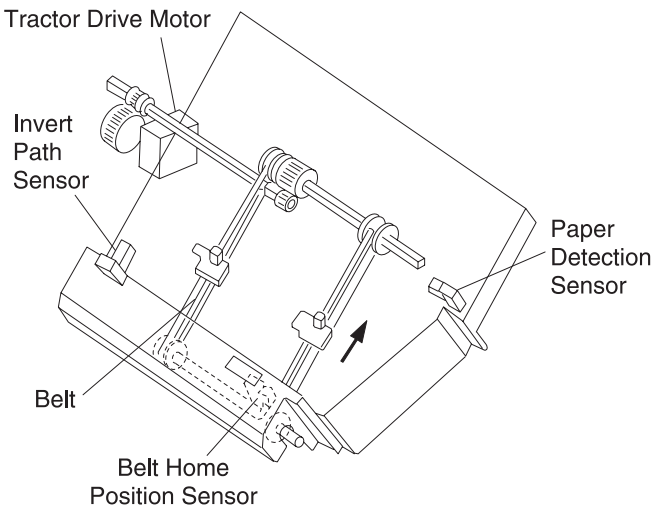


**Inverting Paper Path** (Exit paper to lower tray through accumulator)

The paper feed motor drives and rotates the rollers as paper feeds through the registration rollers, path select gate, and patting rollers. Paper is detected by the invert path sensor. Paper is then jogged by jogging bar and driven by the belt drive motor before exiting to the lower tray (accumulator)



Accumulator

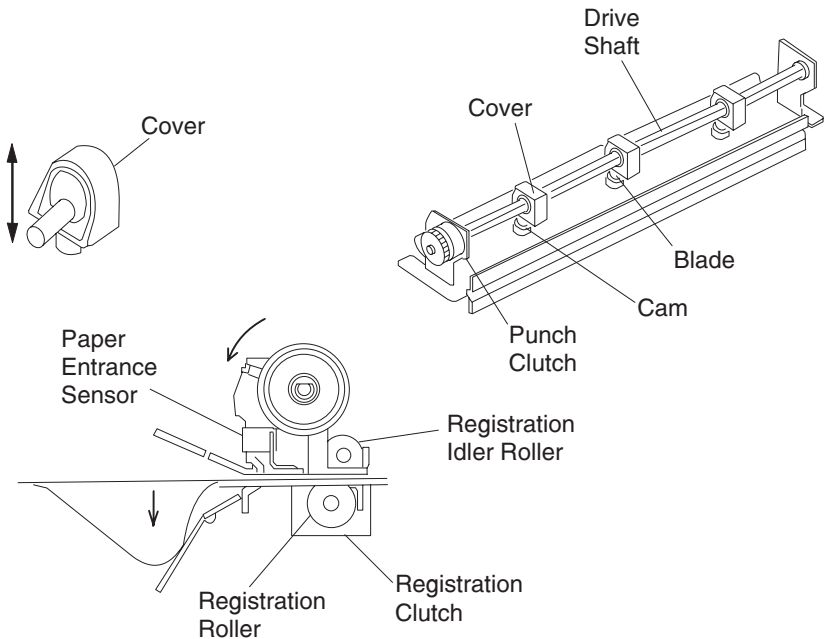


**Paper Registration Sequence**

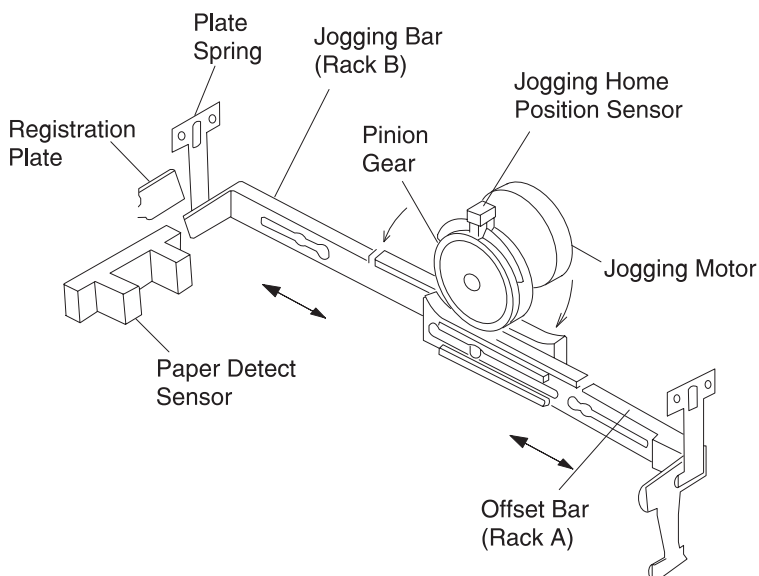
Paper is stopped at the hole punching position momentarily before the paper standstill clutch turns ON and changes to open. At this point the driving force cannot be transmitted to the register rollers. The paper then stops at register rollers, and since the finisher keeps feeding the paper from the host printer, the leading edge of the paper stops at the register rollers. The paper buckles at the entrance. The paper buckle feeds downward to the lower entrance paper guide, where it is hole-punched at the leading edge. The paper standstill clutch turns OFF and changes to close as the driving force transmits to register rollers and the paper transportation restarts.

## Punch Unit Driving Sequence

When the paper feed motor drives, the driving force is transmitted through punch unit drive gear to the clutch gears of the punch unit. Since the punch clutch is normally opened OFF, the driving force is not transmitted to the driving shaft. When the punch clutch turns ON, it is closed and unlocked. The driving force is then transmitted from the clutch gears to the driving shaft. As the shaft turns, the rotation of the cam causes the paper to be hole-punched. Immediately after one turn of the shaft, the punch clutch turns OFF, and the drive shaft stops.



## Jogging / Offset Mechanism



### Jogging Sequence

Each sheet, upon entering the accumulator, is aligned by the jogging bar which moves the sheet horizontally until the edge of the sheet contacts the registration plate. The paper detecting sensor detects the paper position for stapling.

### Offsetting Sequence

Sheets of jogged paper are offset by the horizontal movement of the jogging bar. The jogging bar, is moved horizontally by the rack and pinion mechanism, while the jogging motor rotates. Each plate spring on the jogging bar pushes the rack in the direction of the pinion gear, so that the rack and pinion gears meet securely. The distance of the offset bar movement depends on paper size, A4 or letter.

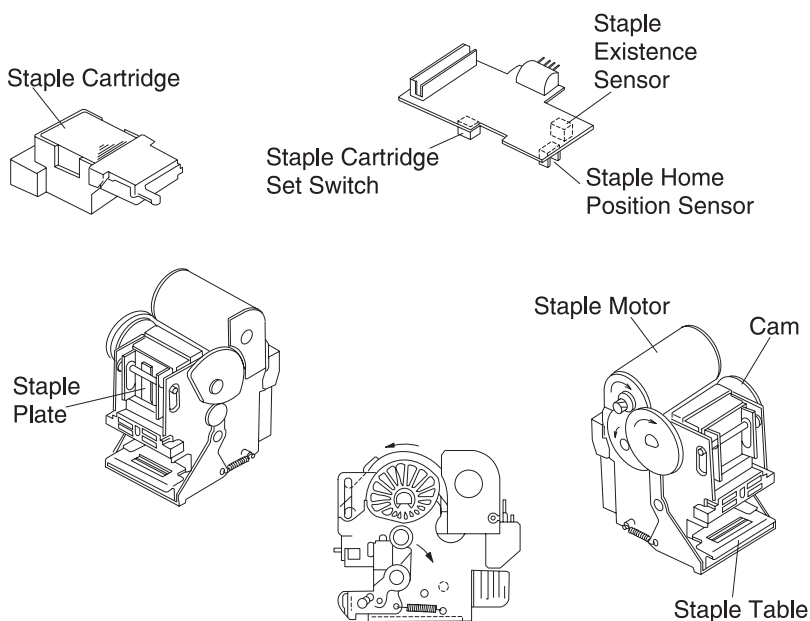


## Detection of Fixed Position

The fixed position of the jogging bar is detected by the jogging home position sensor and a sensor flag united with the pinion. The fixed position is set when the sensor detects the sensor flag. This fixed position is used as a reference point to calculate the distance of the movement of the jogging bar and offset bar depending on paper size.

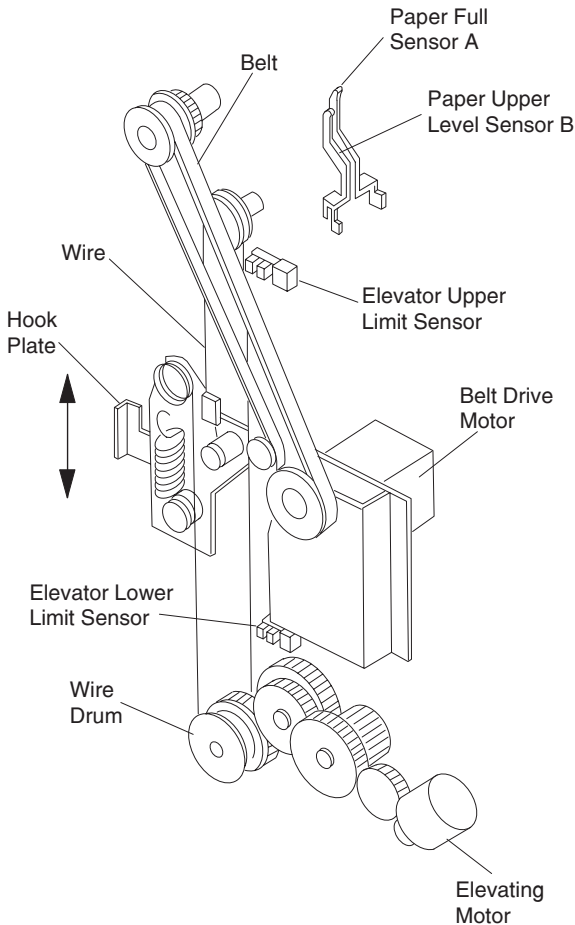
## Stapling Mechanism

The stapler motor rotation drives a gear link and cam mechanism. The cam movement allows the stapler mechanism to operate.



## Elevator Sequence

The wire drum rotates by the elevator motor as the wire drum rolls the wire pulling the hook plate up and down. The lower tray moves up by the driving force of the elevator motor until the elevator upper limit sensor is ON, the paper feeds onto the Tray, or until the paper upper level sensor B is ON if no paper feeds onto the Tray. When paper feeds out to the lower tray and the paper full sensor A turns ON, the lower tray moves down until the paper full sensor A turns OFF. If paper feeds onto the lower tray when the elevator lower limit sensor turns ON, and the paper upper level sensor B turns ON, paper feeding from host printer is prohibited. When paper is removed from the lower tray and the paper upper level sensor B turns OFF, the lower tray moves up.

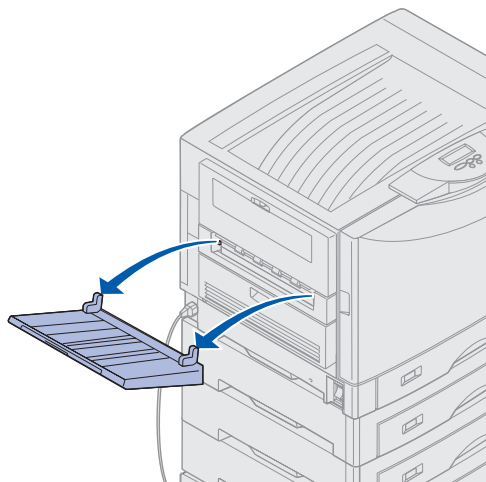


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## Finisher Installation

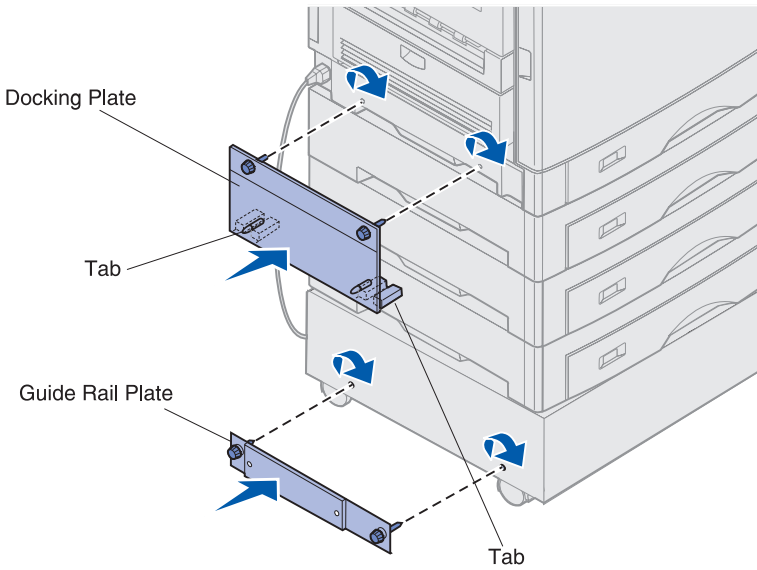
### Attaching the Docking Plate and Guide Rail

1. Lift the printer exit tray halfway and remove. You will need the tray when the finisher is attached.

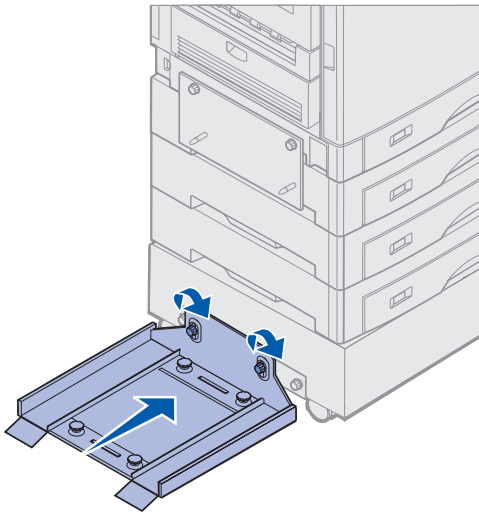


2. Insert the docking plate tabs into the printer.
3. Align the thumbscrews on the docking plate with the holes in the side of the printer.
4. Tighten the docking plate thumbscrews.
5. Align the thumbscrews on the guide rail plate with the holes in the side of the printer cabinet or stand.

6. Tighten the guide rail plate thumbscrews.

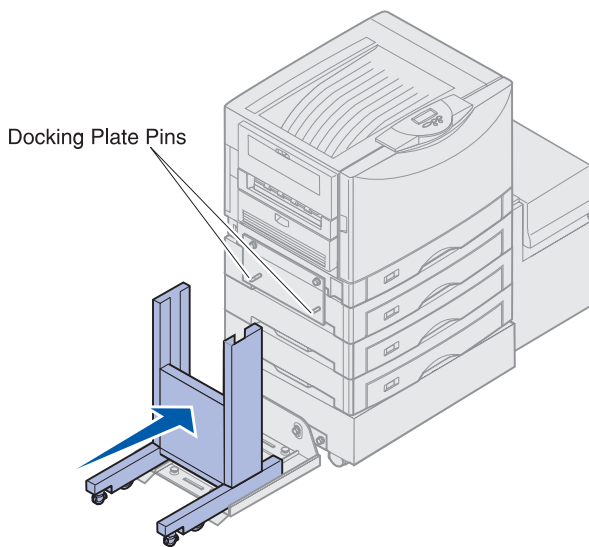


7. Align the thumbscrews on the guide rail with the holes in the guide rail plate.
8. Tighten the guide rail thumbscrews.



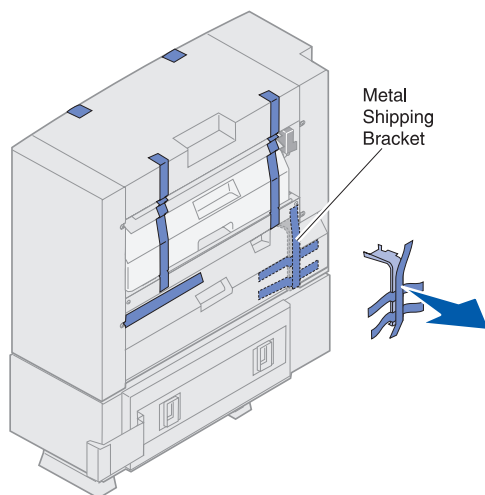
## Combining the Finisher and Stand

1. Roll the finisher stand onto the guide rail. Do not push the stand all the way up against the printer.



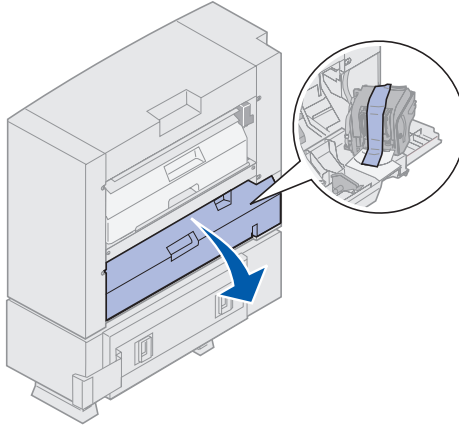
2. Remove and discard all shipping tape, packing material, and the metal shipping bracket.

**Caution:** The finisher weighs 19.7 kg (42.2 lbs).

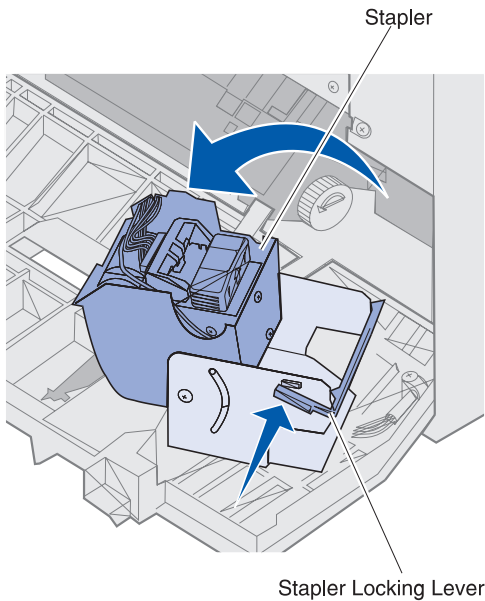


3. Open the stapler door.

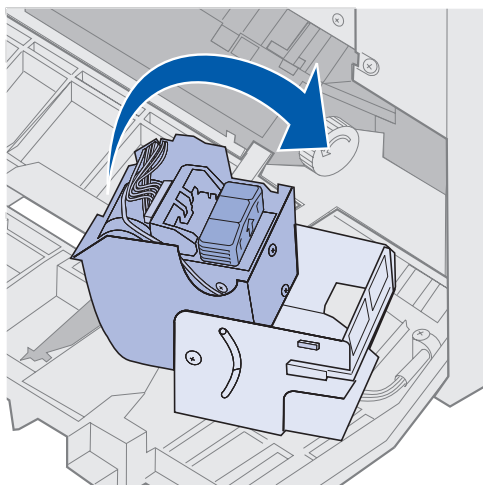
4. Remove all shipping tape and packing material.



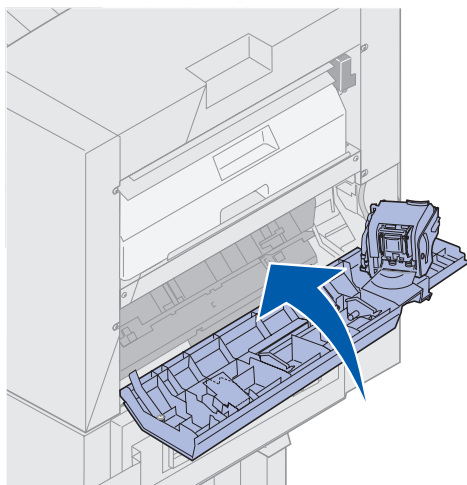
5. Lift the stapler locking lever.
6. Raise the stapler.
7. Remove all shipping tape and packing material.



8. Close the stapler.



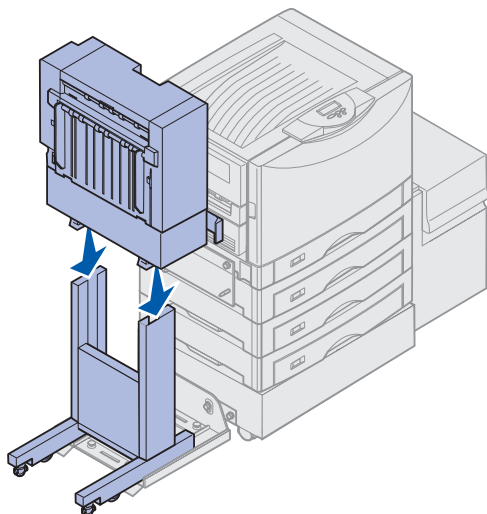
9. Close the stapler door.



10. Align the two sockets on the bottom of the finisher with the legs of the finisher stand.

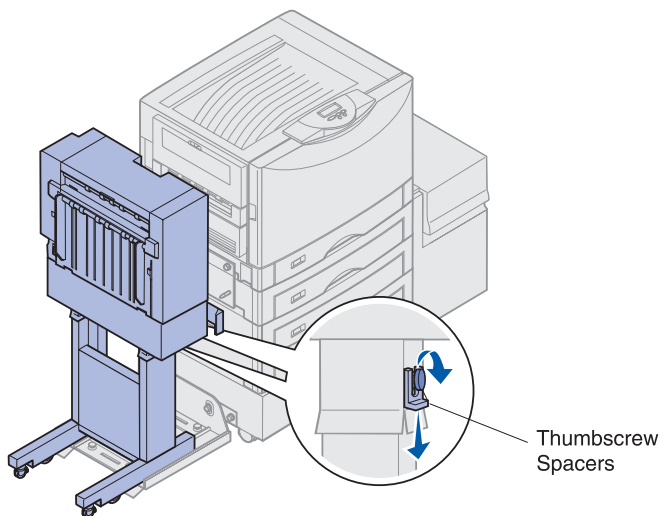
11. Lower the finisher onto the finisher stand.

**Caution:** When assembled, the finisher weighs 26.3 kg (56.9lbs) and requires at least two people to lift it safely.



12. Remove both thumbscrew spacers.

13. Tighten the two thumbscrews.

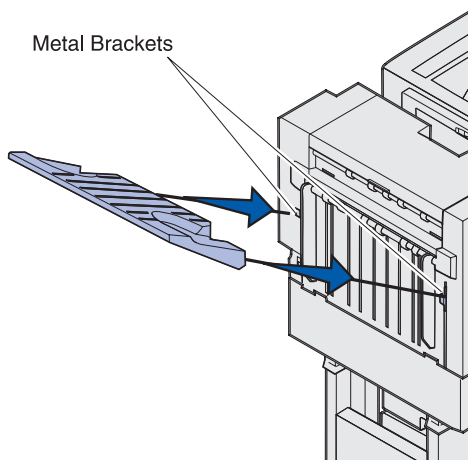




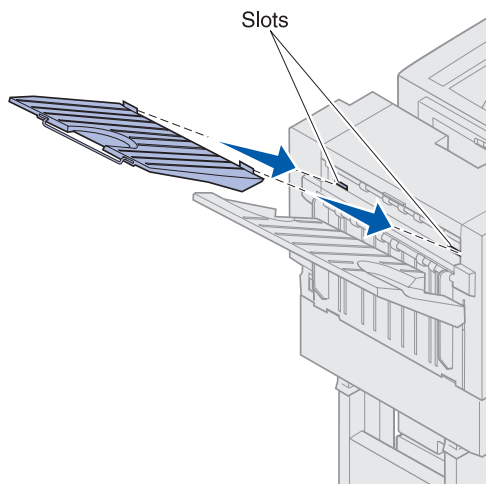
## Attaching the Bins

1. Align the slots on bin 2 with the metal brackets on the rear of the finisher.
2. Slide the bin down onto the metal brackets until it is fully seated.

**Note:** When assembled, the finisher and finisher stand are referred to as the finisher.



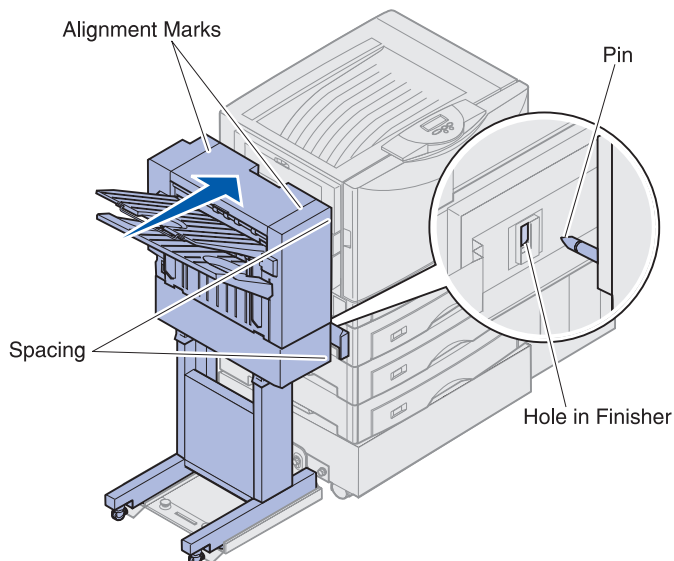
3. Align the tabs on bin 1 with the slots on the rear of the finisher.
4. Lower the bin until it is fully seated.



## Aligning the Finisher and Printer

The following three areas must align properly to prevent paper jams.

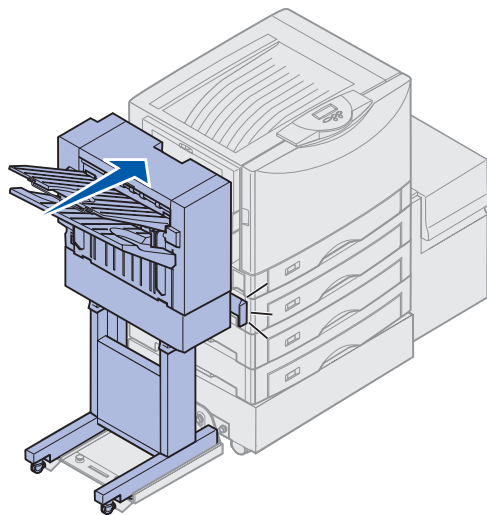
1. The docking plate pins must enter the holes in the finisher.
2. The space between the printer and finisher must be the same at the top and bottom of the finisher.
3. The alignment marks on top of the finisher must align with the edges of the cover on the side of the printer.



4. Roll the finisher toward the printer until the finisher locks to the docking plate pins.

You hear a click when the finisher locks into position.,

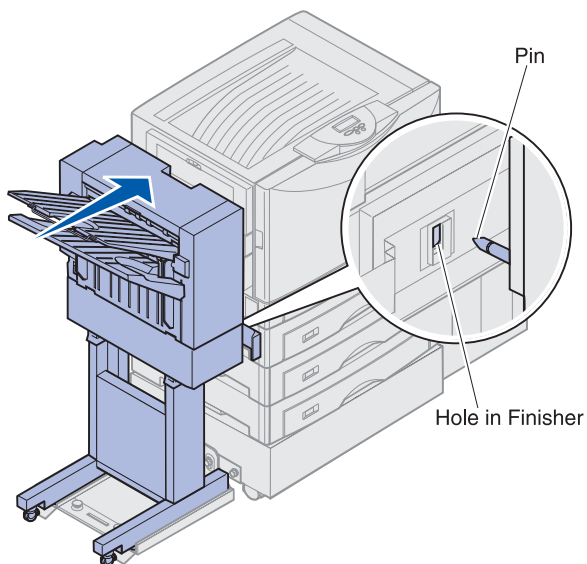
If the pins did not go into the holes in the finisher, go to **“Lowering or Raising the Finisher” on page 1-88**. Otherwise, go to **“Aligning the Sides of the Finisher” on page 1-90**.



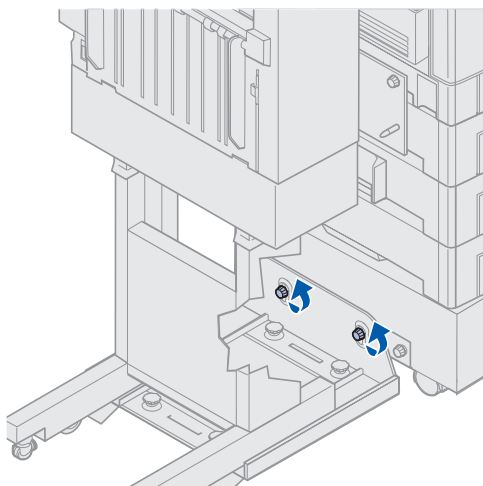
## Lowering or Raising the Finisher

Follow these instructions if the holes on the finisher are above or below the pins on the docking plate.

1. Determine if the pins are above or below the holes in the finisher.



2. Loosen the guide rail thumbscrews.



3. Rotate the adjustment knobs as needed to align the holes in the finisher with the pins.

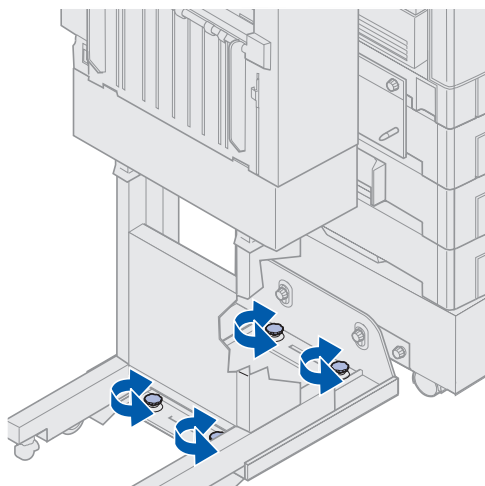
To raise the finisher, rotate the adjustment knobs clockwise.

To lower the finisher, rotate the adjustment knobs counterclockwise.

4. Roll the finisher toward the printer until the finisher locks to the docking plate pins.

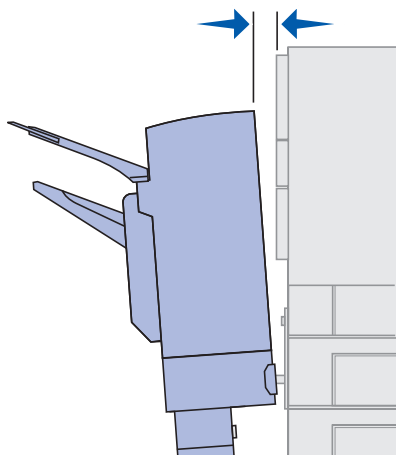
You hear a click when the finisher locks into position.

If the pins go into the holes but the finisher did not lock to the pins, go to **“Aligning the Sides of the Finisher” on page 1-90**. Otherwise, go to **“Aligning the Top of the Finisher” on page 1-92**.



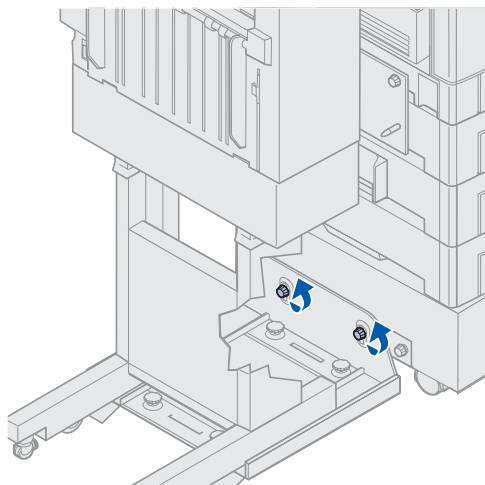
## Aligning the Sides of the Finisher

Follow these instructions if the distance between the finisher and printer is not the same at the top and bottom.



1. Loosen the guide rail thumbscrews.

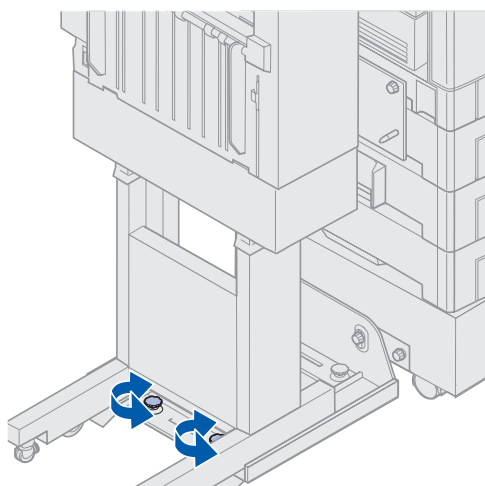
If you previously lowered or raised the guide rail plate, the thumbscrews are already loose.



2. Rotate the rear adjustment knobs to equally align the top and bottom of the finisher with the printer.

To move the top of the finisher closer to the printer, rotate the adjustment knobs clockwise.

To move the top of the finisher away from the printer, rotate the adjustment knobs counterclockwise.



3. Roll the finisher toward the printer until the finisher locks to the docking plate pins. You hear a click when the finisher locks into position.

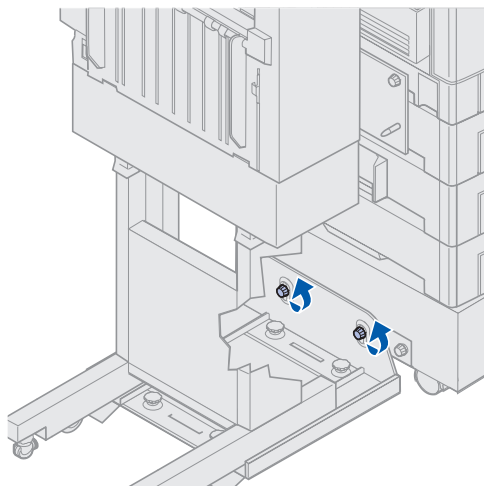
## Aligning the Top of the Finisher

**Note:** Anytime you move the printer or finisher, recheck the printer and finisher top alignment.

Follow these instructions if the alignment marks on top of the finisher are not aligned with the edges of the cover on the side of the printer.

1. Loosen the guide rail thumbscrews.

If you made previous adjustments, the thumbscrews are already loose.



2. Rotate the adjustment knobs as needed to raise or lower the side of the finisher.

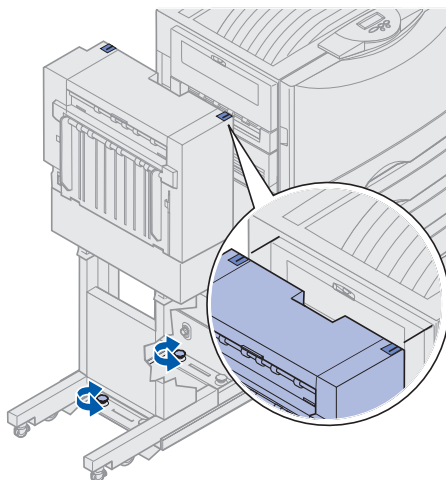
To raise the finisher, rotate the adjustment knobs clockwise.

To lower the finisher, rotate the adjustment knobs counterclockwise.

3. Tighten the guide rail thumbscrews.
4. Roll the finisher toward the printer until the finisher locks to the docking pins.



You hear a click when the finisher locks into position.



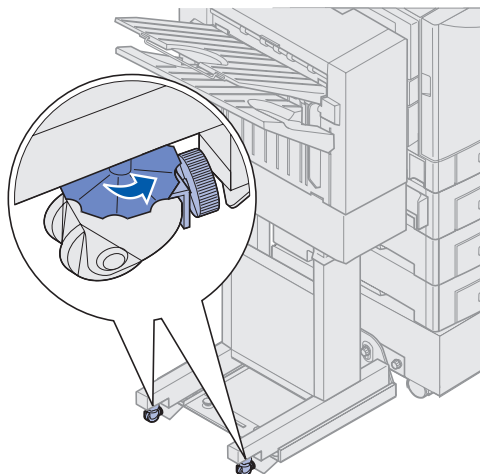
## **Adjusting the Wheels**

Adjust the wheels on the end of the finisher so the stand remains aligned when moved.

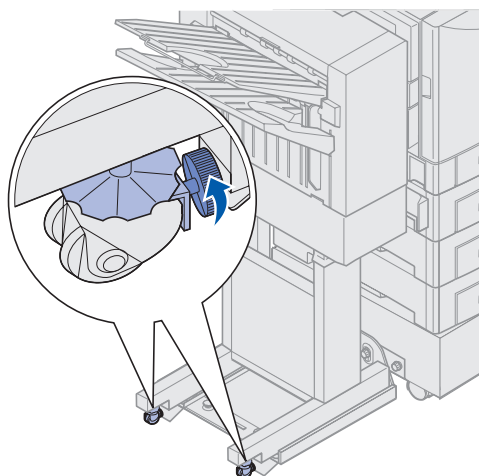
To adjust and lock the wheels:

1. Rotate the left and right upper adjustment knobs on the rear wheels until the wheels touch the floor.

To lower the wheels, rotate the adjustment knobs clockwise.



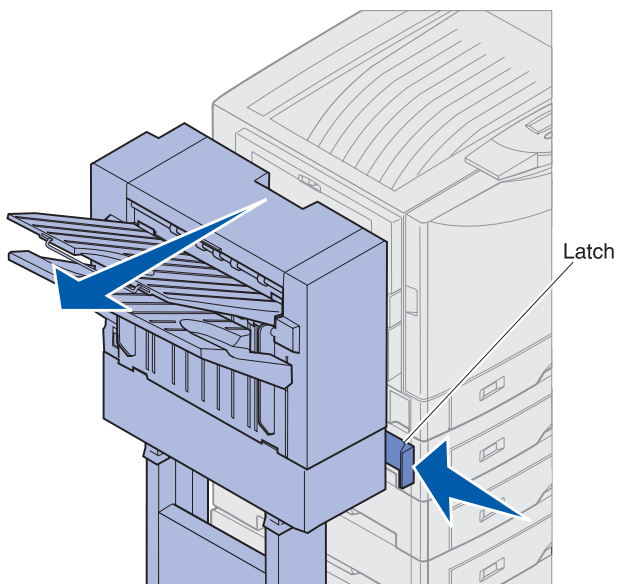
2. Turn the wheels until the locking knobs are aligned with the finisher base.
3. Rotate the locking knobs counterclockwise until they contact the finisher base.



## Attaching the Cables

The finisher comes with an interface cable and Y-power cord. The interface cable connects the finisher to the printer, and the Y-power cord provides electrical power to the finisher and printer.

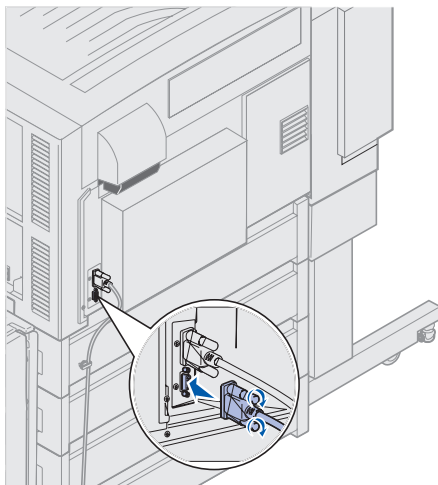
1. Turn the printer off.
2. Push the latch in and hold it.
3. Roll the finisher away from the printer.
4. Release the latch.



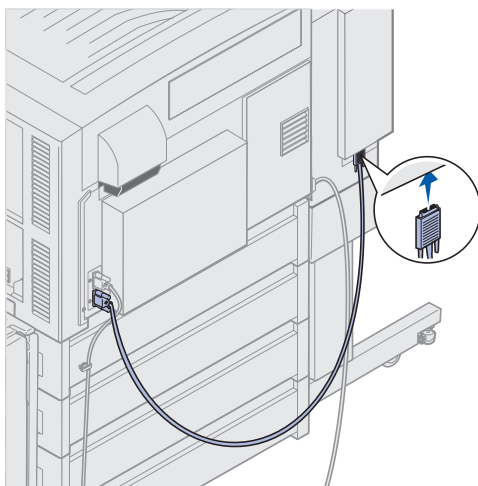
## Interface Cable

**Caution:** Make sure the printer is turned off before continuing.

1. Plug the interface cable into the bottom connector on the back of the printer.
2. Tighten the thumbscrews.



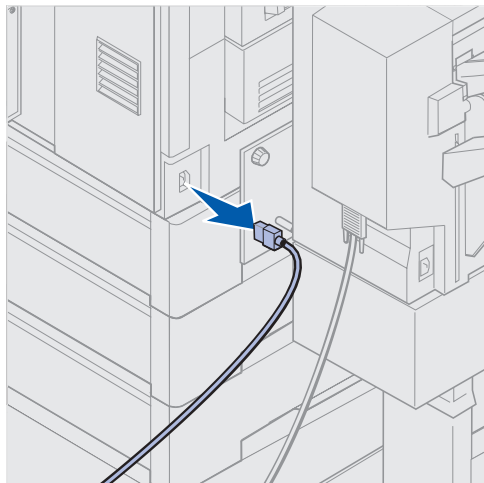
3. Plug the interface cable into the connector on the side of the finisher. The plug will be on a slight angle when connected.
4. Tighten the thumbscrews.



## **Power Cable**

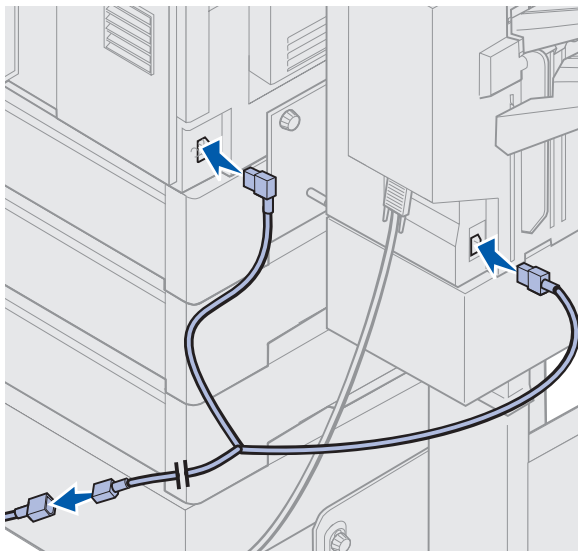
1. Unplug the power cord from the side of the printer.

Set the cord aside.

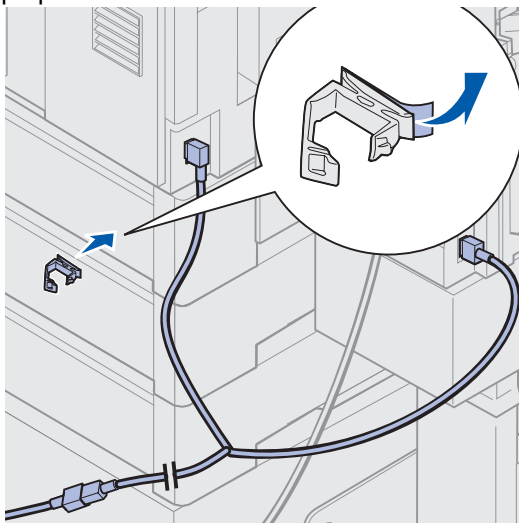


2. Plug the straight Y-power cord connector into the socket on the side of the finisher.
3. Plug the angled connector of the Y-power cord into the socket on the side of the printer.

4. Connect the previously removed printer power cord to the Y-power cord.



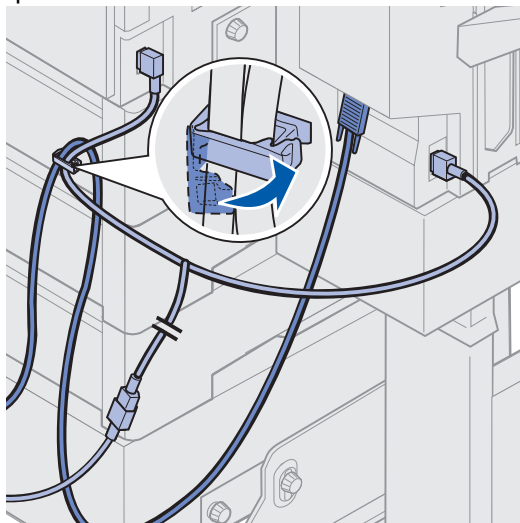
5. Remove the protective paper from the back of the cable holder.
6. Firmly press the adhesive-backed cable holder onto the back of the top optional drawer.



7. Place the finisher interface cable and power cord into the cable holder.

8. Close the cable holder.
9. Turn the printer on.

The finisher does not have a power switch. Power is controlled by the printer.



## Hole Punch Adjustment

You can adjust the hole punch alignment by approximately 4 mm (3/16 in.). This adjustment is useful when you want to center the punched holes onto the paper or if you hole punch a printed job on different finishers.

**Note:** The following procedures are used for both three and four hole punch finishers.

1. Verify the alignment of the printer and finisher is correct.

If the alignment is not correct, go to **“Aligning the Finisher and Printer” on page 1-86**, and then print and hole punch another sheet of paper and see if an adjustment is needed.

If an adjustment is needed, continue with step 2.

2. Using a sheet of paper previously punched from the finisher, fold the paper so the bottom punched hole is aligned with the top punched hole.

3. Determine if the edge of the bottom of the page is below or above the top edge of the page.
4. Loosen the guide rail thumbscrews.

**Note:** Do not move the adjustment knobs more than three complete turns from their starting position. Adjustments greater than three turns may cause paper jams.

5. Rotate both adjustment knobs the same amount to raise or lower the side of the finisher.

A half turn of the knob moves the position of the hole approximately one third to one half the distance of the punched hole.

To move the bottom of the paper down, rotate the knobs clockwise.

To move the bottom of the paper up, rotate the knobs counterclockwise one quarter turn.

6. Tighten the guide rail thumbscrews.
7. Print and punch another piece of paper.
8. Repeat steps 2 and 3. If the holes are not aligned repeat steps 3 through 8.



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## 2. Diagnostic Information

The diagnostic information in this chapter leads you to the failing part. Before you replace an entire assembly, determine if just the defective part is available in the parts catalog. Use the error code tables, symptom table, service checks and the diagnostic aids chapter to determine the symptom and repair the failure. The removal procedures in the Repair Information chapter may help you identify parts. After you complete the repair, perform the appropriate tests to verify the repair.

If an error is displayed, locate it in the **“Service Error Message Table” on page 2-4**, the **“Attendance Messages” on page 2-38**, or the **“Symptom Table” on page 2-66** and take the appropriate action.

If an error message appears while you are working on the printer, go to the error message table and take the indicated action.

### Adjustments and Procedures Following Parts Replacement

**Note:** When troubleshooting, or prior to making any adjustment to print quality, always be sure:

- The printer is installed on a level rigid surface.
- The photodevelopers are never exchanged. Do not exchange a black photodeveloper for a color photodeveloper, as they have different surface phase counts.
- The Alignment Page is used when adjusting print registration.

Whenever you replace any of the following parts be sure to perform the required adjustments or procedures. The adjustments are in the Repair Information and Diagnostic Aids chapters.

### **Printer Controller Board/Printer Control EPROM (U5)**

If you replace the printer controller board, remove EPROM (U5) and install it on the new board. Also check the printhead alignment.

If you change the EPROM, record and input the following items using the diagnostic mode following EPROM replacement.

- LED Printhead Light Quantity
- Printer Alignment (X, Y, and Theta)
- All Counters
- Configuration ID

### **RIP Controller Board**

If you replace the RIP controller board, move the solid state drive, memory, and option cards from the old card to the new one.

### **Transfer Belt**

If you replace the transfer belt, check the printer alignment (X, Y, and Theta), adjusted in diagnostic mode.

### **LED Printhead Controller Board or LED Printhead**

If you replace the LED printhead controller board or LED printhead, check and adjust the following items in diagnostic mode:

- LED printhead light quantity
- Printer alignment (X, Y, and Theta)

---

## Start

### Initial Check

Before you start troubleshooting, check the following:

#### Installation Environment

- The power supply line voltage is plus or minus 10% of the rated line voltage.
- The machine is securely installed on a level surface in a well-ventilated place.
- The room temperature is between 10 and 32°C (50 and 90°F) and the relative humidity between 20 and 80%.
- Avoid sites generating ammonia gas, high temperature, high humidity (near water faucets, kettles, humidifiers), cold spaces, near open flames, and dusty areas.
- Avoid sites exposed to direct sunlight.

#### Print Paper Checks

- Use the recommended paper for this printer.
- Paper dampness. Make a trial print with paper from a newly opened package, and check the result.

## Printer Messages

The printer displays three types of messages: service messages, status messages, and attendance messages. *Service messages* indicate a problem that requires a service technician. *Status messages* provide information about the current state of the printer, requiring no action. *Attendance messages* alert the operator to printer problems that require operator intervention.

### Service Error Message Table

#### 900 - Unrecoverable Software Error

910 Service Motor Error
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#### 910 - Drive Motor Error

Step	Questions / Actions	Yes	No
1	Are connectors CN1 and CN5 on the motor drive board connected properly?	Go to step 2.	Connect CN1 and CN5.
2	Is connector CN33 on the printer controller board connected properly?	Go to step 3.	Connect CN33.
3	Is there an abnormal load on the toner or drum unit?	Replace the toner or drum unit.	Replace the printer controller board and go to step 4.
4	Did replacement of the printer controller board solve the problem?	Problem solved.	Replace the motor drive board and go to step 5.
5	Did replacement of the motor drive board solve the problem?	Problem solved.	Replace the drive motor.

## 911 - Paper Exit Motor Error

Step	Questions / Actions	Yes	No
1	Is connector CN4 on the printer controller board securely connected?	Replace the paper exit motor and go to step 2.	Plug the connector in securely.
2	Did replacement of the paper exit motor solve the problem?	Problem solved.	Replace the printer controller board.

## 912 - High Capacity Feed Motor Error

Step	Questions / Actions	Yes	No
1	Is connector CN40 on the printer controller board securely connected?	Go to <b>“High Capacity Feeder (HCF) Service Check”</b> on page 2-73.	Plug the connector in securely.

**917 - RIP Fan Error**

917 Service Fan Error
--------------------------

Step	Questions / Actions	Yes	No
1	Is connector J5 on the RIP board connected properly?	Go to step 2.	Properly connect J5.
2	Is 24 V dc present between pins 1 and 3 of connector J5 on the RIP board?	Replace the RIP fan.	Go to step 3.
3	Is 24 V dc present between pin 80 of the RIP/printer controller and ground?	Replace the RIP board.	Replace the printer controller board.

**918 - Main Unit Fan Error**

Step	Questions / Actions	Yes	No
1	Is +24 V present between pins 1 and 3 on connectors CN17 (upper left fan) and CN5 (upper right fan) on the printer controller board?	Replace the failing fan.	Replace the printer controller board.

**919 - Power Supply Fan Error**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Is +24 V present between pins 1 and 3 of connector CN6 on the printer controller board?	Replace the power supply fan.	Replace the printer controller board.

**920 - Fuser Error - Fuser Heater Trouble**

92x Service Fuser Error
----------------------------

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Replace the fuser. Did this fix the problem?	Problem solved.	Return the fuser, replace the power supply 2 and go to step 2.
2	Did replacing power supply 2 fix the problem?	Problem solved.	Return power supply 2 and replace the printer controller board.

**923 - Upper Fuser Thermistor Open Error**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Is connector CN44 on the printer controller board connected properly?	Disconnect CN44 and turn the printer on. Go to step 2.	Plug the connector in securely.
2	Is error 923 displayed?	Power off and reconnect CN44. Go to step 3.	Replace the printer controller board.
3	Power the printer off and short pins 1 and 4 of CN44 and power on. Is error 923 displayed?	Replace the fuser.	Replace the printer controller board.

**924 - Lower Fuser Thermistor Open Error**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Is connector CN44 on the printer controller board connected properly?	Disconnect CN44 and turn the printer on. Go to step 2.	Plug the connector in securely.
2	Is error 924 displayed?	Turn the printer off and reconnect CN44. Go to step 3.	Replace the printer controller board.



<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
3	Power the printer off and short pins 8 and 11 of CN44 and turn the printer on. Is error 924 displayed?	Replace the fuser.	Replace the printer controller board.

## 925 - HVU Error

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Is connector CN42 on the printer controller board connected properly?	Replace the printer controller board. Go to step 2.	Plug the connector in securely.
2	Did replacing the printer controller board fix the problem?	Problem solved.	Replace the high voltage power board (HVU).

# 926(K), 927(C), 928(Y), 929(M) - Toner Sensor Error

## 92x Service Toner Sensor

Step	Questions / Actions	Yes	No
1	Is the toner cartridge the correct type for the printer?	Go to step 2.	Recommend the customer replace the cartridge with the correct type.
2	Is the toner cartridge encoder wheel dirty?	Clean the encoder wheel and toner sensor.	Go to step 3.
3	Replace the toner cartridge for the color with the error. Did this fix the problem?	Problem solved.	Go to step 4.
4	Test the sensors. While actuating the sensor, does the voltage fluctuate between 0 V and +5 V between pins 1 and 2 on connectors CN22(K), CN21(Y), CN18(M), and CN19(C) on the printer controller board?	Replace the printer controller board.	Replace the affected toner sensor.

**930 - Yellow Printhead Error**

<b>930 Service Printhead Error</b>
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<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Check to ensure that the cables between the LED printhead and the printhead controller board as well as the cables between the printhead controller board and the printer controller board are properly connected. Are they properly connected?	Go to step 2.	Properly connect the cables.
2	Is fuse 5 on the printhead control board open?	Replace the printhead control board, cables (CL13, CL24), and LED printhead.	Replace the printhead controller board and go to step 3
3	Did replacement of the printhead controller board correct the problem?	Problem solved.	Replace the printer controller board.

**931 - Magenta Printhead Error**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Check to ensure that the cables between the LED printhead and the printhead controller board as well as the cables between the printhead controller board and the printer controller board are properly connected. Are they properly connected?	Go to step 2.	Properly connect the cables.
2	Is fuse 6 on the printhead control board open?	Replace the printhead control board, cables (CL13, CL24), and LED printhead.	Replace the printhead controller board and go to step 3.
3	Did replacement of the printhead controller board correct the problem?	Problem solved.	Replace the printer controller board.

**932 - Cyan Printhead Error**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Check to ensure that the cables between the LED printhead and the printhead controller board as well as the cables between the printhead controller board and the printer controller board are properly connected. Are they properly connected?	Go to step 2.	Properly connect the cables.
2	Is fuse 3 on the printhead control board open?	Replace the printhead control board, cables (CL13, CL24), and LED printhead.	Replace the printhead controller board and go to step 3.
3	Did replacement of the printhead controller board correct the problem?	Problem solved.	Replace the printer controller board.

**933 - Black Printhead Error**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Check to ensure that the cables between the LED printhead and the printhead controller board as well as the cables between the printhead controller board and the printer controller board are properly connected. Are they properly connected?	Go to step 2.	Properly connect the cables.
2	Is fuse 4 on the printhead control board open?	Replace the printhead control board, cables (K13, K24), and LED printhead.	Replace the printhead controller board.
3	Did replacement of the printhead controller board correct the problem?	Problem solved.	Replace the printer controller board.

**934 - Color Drum Sensor Error**

934 Service Drum Sensor
----------------------------

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Is connector CN28 connected properly?	Go to step 2.	Plug the connector in securely.
2	Clean the color drum sensor LED. Did this fix the problem?	Problem solved.	Replace the color drum sensor. Go to step 3.

Step	Questions / Actions	Yes	No
3	Did replacing the color drum sensor fix the problem?	Problem solved.	Replace the printer controller board.

### 935 - Black Drum Sensor Error

Step	Questions / Actions	Yes	No
1	Is connector CN27 connected properly?	Go to step 2.	Plug the connector in securely.
2	Clean the black drum sensor LED. Did this fix the problem?	Problem solved.	Replace the black drum sensor. Go to step 3.
3	Did replacing the black drum sensor fix the problem?	Problem solved.	Replace the printer controller board.

### 936 - 939 Cassette Error

936 Service Paper Option
-----------------------------

Step	Questions / Actions	Yes	No
1	Are connectors CN35 and CN36 on the printer controller board connected properly?	Replace the printer controller board.	Plug the connector in securely.

## 940 - High Capacity Feed Sensor Error

Step	Questions / Actions	Yes	No
1	Is connector CN40 on the printer controller board connected properly?	Go to <b>“High Capacity Feeder (HCF) Service Check”</b> on page 2-73.	Plug the connector in securely.

## 941 - High Capacity Feed Tray Error

Step	Questions / Actions	Yes	No
1	Is connector CN40 on the printer controller board connected properly?	Go to <b>“High Capacity Feeder (HCF) Service Check”</b> on page 2-73.	Plug the connector in securely.

## 942 - Duplex Error

942 Service Duplex

Step	Questions / Actions	Yes	No
1	Is connector CN37 on the printer controller board connected properly?	Replace the printer controller board.	Plug the connector in securely.



**945 - Engine Flash Error**

945 Service Engine Flash
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Reflash the engine code.

**946 - Printer / Printhead Controller Board Communication Error**

946 Service Communication
------------------------------

Step	Questions / Actions	Yes	No
1	Replace the printhead controller board. Did this fix the problem?	Problem solved.	Replace the printer controller board.

**947 - Finisher Communication Error**

Step	Questions / Actions	Yes	No
1	Are the finisher to printer interface cable and power cable properly connected?	Go to step 2.	Properly connect the cable.
2	Replace the interface cable. Did this resolve the problem?	Problem solved.	Replace the control finisher board. Go to step 3.
3	Did finisher control board replacement resolve the problem?	Problem solved.	Replace the printer control board.

## 948 - Machine ID Error

948 Service Machine ID
---------------------------

Step	Questions / Actions	Yes	No
1	Turn the printer off and wait 30 seconds. Turn the printer on. Did this fix the problem?	Problem solved.	Verify proper installation of the EPROMs on both the printer controller board and the printhead controller board. Go to step 2.
2	Are the EPROMs installed correctly?	Replace the printer controller board. Go to step 3.	Install the EPROMs correctly.
3	Did replacing the printer controller board fix the problem?	Problem solved.	Replace the printhead controller board.

**949 - Tray (X) Comm**

Step	Questions / Actions	Yes	No
1	Replace the printer controller board. Does this fix the problem?	Problem solved.	Replace the expansion feeder control board for trays 2 - 5.  If the problem is with the high capacity paper feeder, replace the HCPF board.

**950 - Pr Control Board**

Replace the printer controller board.

**952 - NVRAM Chip Failure**

952 Service  
NVRAM Failure

Replace the printer controller board.

**954 - NVRAM CRC Failure**

Replace the RIP board.

**955 - Code CRC**

955 Service  
Code CRC <loc>

Replace the RIP board.

**956 - Processor Failure**

956 Service  
System Board

Replace the RIP board.

## 957 - ASIC Failure

Replace the RIP board.

## 958 - NAND Failure

958 Service  
NAND Failure

Replace the RIP board.

## 960 - RAM Slot 1 Bad

960 Service  
RAM Memory Error

Replace the RAM Card or the RIP board.

## 961 - RAM Slot 2 Bad

Replace the RAM Card or the RIP board.

## 962 - RAM Slot 3 Bad

Replace the RAM Card or the RIP board.

## 964 - Emulation Error

964 Service  
Emulation Error

Replace the DLE board. If this does not fix the problem, replace the RIP board.

## 970 - Standard Network Error

970 Service  
Standard Network

970 Service  
Network Card X

## **975 - Unrecognizable Network Port**

Software error.

## **976 - Unrecoverable Software Error in Network Port**

Software error. Go to the [“Options Service Check”](#) on page 2-98 and refer to the network card option section.

## **978 - Bad Checksum While Programming Network Card**

Software error.

## **979 - Flash Parts Failed While Programming Network Port**

Reflash network port.

# 980 - Face Up/Down Switching Error

980 Service  
Switch Error

Check Area  
B

Step	Questions / Actions	Yes	No
1	Does the FU/FD deflector move at all during power up?	Go to step 2.	Go to step 3.
2	Manually operate the FU/FD deflector. Does it properly lock into position when manually operated?	Go to step 3.	Go to step 4.
3	Is there continuity on the FU/FD deflector solenoid between pins 1 and 2 of CN14 on the printer controller board?	Go to step 5.	Replace the FU/FD deflector solenoid.
4	Make sure that the FU/FD deflector pivot arm is in the proper position. Is it in the proper position with its operating linkage?	Replace the FU exit assembly.	Place the FU/FD pivot arm in the proper position.

Step	Questions / Actions	Yes	No
5	Test the FU/FD sensor while actuating the sensor. Does the voltage fluctuate between 0 V and +5 V between pins 1 and 2 on connector CN12 on the printer controller board?	Go to step 6.	Replace the FU/FD deflector sensor
6	Check the cable from the FU/FD solenoid to the printer controller board for broken insulation and possible shorting to the frame. Is the cable OK?	Replace the printer controller board.	Replace the FU exit assembly and the printer controller board.

**981 - Belt Up/Down Sensor Error**

981 Service Switch Error
-----------------------------

Step	Questions / Actions	Yes	No
1	Are connectors CN409 and CN407 on the sensor board connected properly?	Go to step 2.	Plug the connectors in securely.
2	Are connectors CN26 and CN29 on the printer controller board connected properly?	Go to step 3.	Plug the connector in securely.
3	Remove the transfer belt. Verify the belt up/down sensor actuator flag is properly installed, not broken, and in the proper position. Make sure the sensor is fully snapped in place and that the sensor connector is fully seated. Are these items correct?	Go to step 4.	<p>If the sensor is out of position or disconnected, properly install the sensor and securely connect the sensor connector.</p> <p>If the sensor actuator flag is broken, replace the belt up/down changing shaft.</p>
4	Clean the belt up/down sensor. Does this fix the problem?	Problem solved.	Go to step 5.



Step	Questions / Actions	Yes	No
5	Test the sensor. While actuating the sensor, does the voltage fluctuate between 0 V and +5 V between pins 8 and 10 of connector CN29 on the printer controller board?	Replace the belt up/down clutch. Go to step 6.	Replace the belt up/down sensor.
6	Did replacing the belt up/down clutch fix the problem?	Problem solved.	Replace the printer controller board.

## 982 - Sensor Controller Error

982 Service Sensor Control
-------------------------------

Step	Questions / Actions	Yes	No
1	Turn the printer off and wait 30 seconds. Turn the printer on. Is error 982 displayed?	Replace the printer controller board.	Problem solved.

**983 - Black Gear Sensor Error**

983 Service Gear Sensor
----------------------------

Step	Questions / Actions	Yes	No
1	Is connector CN20 on the printer controller board connected properly?	Go to step 2.	Plug the connector in securely.
2	Clean the gear sensor. Does this fix the problem?	Problem solved.	Replace the K drive unit gear sensor. If the problem remains, replace the printer controller board.

**984 - Yellow Gear Sensor Error**

Step	Questions / Actions	Yes	No
1	Is connector CN20 on the printer controller board connected properly?	Go to step 2.	Plug the connector in securely.
2	Clean the gear sensor. Does this fix the problem?	Problem solved.	Replace the Y drive unit gear sensor. If the problem remains, replace the printer controller board.

**985 - Transfer Belt Thermistor Error**

985 Service Thermistor Error
---------------------------------

Step	Questions / Actions	Yes	No
1	Are connectors CN407 and CN408 on the sensor board connected properly?	Go to step 2.	Plug the connector in securely.
2	Is connector CN29 on the printer controller board connected properly?	Replace the transfer belt unit. If the problem remains, replace the printer controller board.	Plug the connector in securely.

**986 - Transparency (OHP) Sensor Error**

986 Service OHP Sensor
---------------------------

Step	Questions / Actions	Yes	No
1	Are connectors CN15 (light emitting) and CN7 (light receiving) on the printer controller board connected properly?	Go to step 2.	Plug the connector in securely.

Step	Questions / Actions	Yes	No
2	Test the sensor. While actuating the sensor, does the voltage fluctuate between 0 V and +5 between pins 2 and 3 of connector CN7 of the printer controller board?	Replace the printer controller board.	Replace the upper and lower transparency sensor.

## 992 - Temperature/Humidity Sensor Error

Step	Questions / Actions	Yes	No
1	Is connector CN3 on the printer controller board connected properly?	Go to step 2.	Plug the connector in securely.
2	Replace the temperature and humidity sensor (a component of the paper feed solenoid assembly). Did this fix the problem?	Problem solved.	Replace the printer controller board.

## 993 CPU Error

Replace the printer controller board.

**994 - Density Sensor Error**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Are connectors CN406 and CN407 on the sensor board connected properly?	Go to step 2.	Plug the connector in securely.
2	Is connector CN29 on the printer controller board connected properly?	Replace the density sensor. Go to step 3.	Plug the connector in securely.
3	Did replacing the density sensor fix the problem?	Problem solved.	Replace the printer controller board.

<b>995 Service Finisher</b>
---------------------------------

**995 - Finisher Main Feed Motor Abnormal**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Is there jammed paper or other obstructions in the paper path?	Clear the paper path.	Go to step 2.

Step	Questions / Actions	Yes	No
2	Check to ensure the connector PJ6 on the finisher control board and the feed motor assembly cable are properly connected. Are the cables properly connected?	Go to step 3.	Properly connect the cables.
3	Make sure the finisher set switch is activated. Measure for +24 V dc (+ or - 10%) between pins 7 and 8 and +5 V dc (+ or - 10%) between pins 7 and 6 on the feed motor assembly cable connector CN1. Is either voltage missing?	Go to step 4.	Go to step 5.
4	Disconnect the feed motor assembly cable and PJ6 on the finisher control board. Measure continuity on the cable for all positions. Is there continuity?	Go to step 6.	Replace the cable.
5	Replace the feed motor assembly. Did this resolve the problem?	Problem solved.	Replace the finisher control board.

Step	Questions / Actions	Yes	No
6	Measure for +24 V dc between pins 1 and 2 on connector PJ3 on the finisher control board. Measure for +5 V dc between pins 1 and 3 on PJ2 on the finisher control board. Is either voltage missing?	Replace the power supply.	Replace the finisher control board.

**996 - Finisher Jogging Motor Error**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Are there foreign objects or obstructions in the jogging assembly?	Clear the objects or obstruction.	Go to step 2.
2	Are the jogging motor connectors CN2 on the finisher control board securely connected?	Go to step 3.	Securely connect the connectors.
3	Make sure the finisher set switch is activated. Measure for +24 V dc (+ or - 10%) between pin 1 on CN2 and frame ground. Is +24 V dc present?	Go to step 4.	Go to step 5.
4	Replace the jogging motor assembly. Did this resolve the problem?	Problem solved.	Replace the finisher control board.
5	Disconnect CN2 and PJ5. Perform a continuity check on the cable for all positions. Is there continuity?	Go to step 6.	Replace the cable.



Step	Questions / Actions	Yes	No
6	Check for +24 V dc (+ or - 10%) between pins 1 and 2 of PJ3 on the finisher control board. Is +24 V dc present?	Replace the finisher control board.	Replace the power supply.

**997 - Finisher Tractor Motor Error**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Are there obstructions or foreign objects in the accumulator or face down paper path?	Remove the objects or obstructions.	Go to step 2.
2	Are the connectors CN3 at the tractor motor and PJ4 on the finisher control board securely connected?	Go to step 3.	Securely connect the connectors.
3	Make sure the finisher set switch is activated. Measure +24 V dc between pin 1 of tractor motor connector CN3 and frame ground. Is +24 V dc (+ or - 10%)?	Go to step 4.	Go to step 5.
4	Replace the tractor motor. Did this resolve the problem?	Problem solved.	Replace the finisher control board.
5	Disconnect CN3 and PJ4 on the finisher control board and perform a continuity check on all positions. Is there continuity on all positions?	Go to step 6.	Replace the cable.

Step	Questions / Actions	Yes	No
6	Check for +24 V dc between pins 1 and 2 of PJ3 on the finisher control board. Is +24 V dc present?	Replace the finisher control board.	Replace the power supply.

## 998 - Tray Elevator Motor Error

Step	Questions / Actions	Yes	No
1	Are the connectors CN4 at the tray elevator motor and connector PJ4 on the finisher control board properly connected?	Go to step 2.	Properly connect the connectors.
2	Make sure that the finisher set switch is activated. Power the printer off. Measure for approximately +24 V dc (+ or -10%) between pins 1 and 2 of connector CN4 at the tray elevator motor. Power the printer on and observe the voltage meter during the first 12 seconds of power up. Is +24 V dc present while the printer is powering up?	Replace the tray elevator motor.	Go to step 3.

Step	Questions / Actions	Yes	No
3	Disconnect CN4 at the tray elevator motor. Disconnect PJ4 on the finisher control board. Measure for continuity between CN4 pin 1 and PJ4 pin 7. Measure for continuity between CN4 pin 2 and PJ4 pin 8. Is there continuity in both locations?	Go to step 4.	Replace the cable.
4	Measure for +24 V dc (+ or -10%) between pins 1 and 2 on connector PJ6. Is +24 V dc present?	Replace the finisher control board.	Replace the finisher power supply.

## 999 - Stapler Motor Error

Step	Questions / Actions	Yes	No
1	Are staples jammed in the stapler?	Go to step 2.	Go to step 3.
2	Clear the staple jam and run the staple test in diagnostic mode or run a staple job. Does the problem reoccur?	Replace the staple cartridge and to go step 4.	Problem solved.

Step	Questions / Actions	Yes	No
3	Are the connectors CN5 on the stapler and PJ1 on the finisher control board securely connected?	Go to step 5.	Securely connect the connectors.
4	Did replacement of the stapler cartridge resolve the problem?	Problem resolved.	Replace the stapler.
5	Make sure the finisher set switch is activated. Measure for 5 V dc between pins 11 and 12 on stapler connector CN5. Is 5 V dc present?	Replace the stapler.	Replace the finisher control board.
6	Did replacement of the finisher control board correct the problem?	Problem solved.	Go to step 7.
7	Is there continuity on the stapler to finisher control board cable?	Replace the power supply.	Replace the cable.

## Attendance Messages

Message	Meaning	Action
Activating Menu Changes	The printer is activating changes made to the printer settings.	Wait for the message to clear.
Bin <x> Full	The specified bin is full.	Remove the paper from the bin.
Busy	The printer is busy receiving, processing, or printing data.	Wait for the message to clear or press <b>Menu</b> to open the Job Menu and cancel the current job.
Canceling Fax	The printer is processing a request to cancel a fax job.	Wait for the message to clear.
Canceling Job	The printer is processing a request to cancel the current print job.	Wait for the message to clear.
Change <x>	The printer is requesting a different type of paper.	Change paper.
Check <device> connection	<ul style="list-style-type: none"> <li>The specified device is not fully connected.</li> <li>Hardware failure.</li> </ul>	<ul style="list-style-type: none"> <li>Reestablish communication by reattaching the device.</li> <li>Press <b>Go</b> to clear the message.</li> <li>If a hardware failure, turn the printer off and back on. If the error recurs, turn the printer off, remove the specified device and call for service. If the error cannot be reset, go to <b>“Map 10 - Unrecoverable “Check Tray (X) or Duplex Connection” Message” on page 2-63.</b></li> </ul>
Clearing Job Accounting Stat	The printer is deleting all job statistics stored on the hard disk.	Wait for the message to clear.

Message	Meaning	Action
Close Side Door	The printer side door is open.	Close the printer side door. If the error cannot be reset, go to <b>“Map 1 - False “Side Door Open” Message” on page 2-57.</b>
Close Front Door	The printer front door is open.	Close the printer top door and front door. If the error cannot be reset, go to <b>“Map 2 - False “Close Front Door” Message” on page 2-57.</b>
Close Tray <x> Top Cover	The high capacity feeder door is open.	Close the HCF door and the top cover. If the error cannot be reset, go to <b>“Map 3 - False “Close Tray (X) Top Cover” Message” on page 2-58.</b>
Copying	The printer is processing a copy job originating from the OptraImage™ scanner.	Wait for the message to clear.
Defragmenting	The printer is defragmenting the flash memory to reclaim storage space occupied by deleted resources.	Wait for the message to clear.  <b>Warning:</b> Do not turn the printer off while this message is displayed.
Delete All Jobs	The printer is requesting confirmation to delete all held jobs.	<ul style="list-style-type: none"> <li>• Press <b>Go</b> to continue. The printer deletes all held jobs.</li> <li>• Press <b>Stop</b> to cancel the operation.</li> </ul>
Deleting Jobs	The printer is deleting one or more held jobs.	Wait for the message to clear.
Disabling Menus	The printer is responding to a request to disable the menus.	Wait for the message to clear.  <b>Note:</b> While the menus are disabled, you cannot change the printer settings from the operator panel.

Message	Meaning	Action
Disk Corrupted Reformat?	The printer has attempted a disk recovery process and cannot repair the disk.	<ul style="list-style-type: none"> <li>Press <b>Go</b> to reformat the disk and delete all files currently stored on the disk.</li> <li>Press <b>Stop</b> to clear the message without reformatting the disk.</li> </ul>
Disk Recovery x/5 yyy%	The printer is attempting to recover the hard disk.	<p>Wait for the message to clear.</p> <p><b>Warning:</b> Do not turn the printer off while this message is displayed.</p>
Enabling Menus	The printer is responding to a request to make the menus available to all users.	Wait for the message to clear and press <b>Menu</b> to view the menus available.
Engine Warming	The printer is warming the fuser assembly.	Wait for the message to clear.
Enter PIN: =_____	The printer is waiting for you to enter your four-digit PIN number.	Use the operator panel buttons to enter the PIN.
Fax <x>	The printer is processing an incoming fax.	Wait for the message to clear.
Flushing Buffer	The printer is flushing corrupted print data and discarding the current print job.	Wait for the message to clear.
Formatting Disk yyy%	The printer is formatting the hard disk. The second line shows percentage complete.	Wait for the message to clear.
Formatting Flash	The printer is formatting flash memory.	Wait for the message to clear.
Fuser Maintenance	The counter that tracks wear on the fuser has reached its limit.	<ul style="list-style-type: none"> <li>Press <b>Go</b> to continue printing.</li> <li>If print quality is unacceptable, replace the fuser.</li> </ul>



Message	Meaning	Action
Held Jobs May be Lost	The printer memory is too full.	<ul style="list-style-type: none"> <li>Press <b>Go</b> to clear the message. The printer frees memory by deleting the oldest job and continues deleting jobs until there is enough memory.</li> <li>Press <b>Stop</b> to clear the message without deleting jobs.</li> <li>Press <b>Menu</b> to open the Job Menu and cancel the current job.</li> </ul>
Infrared <x>	An infrared interface is the active communication link.	Wait for the message to clear.
Insert Tray <x>	The specified tray is either missing or not fully inserted.	Insert the specified tray. If the error cannot be reset, go to <b>“Paper Tray Missing Service Check” on page 2-84.</b>
Install <device> or Cancel Job	The printer is requesting a specified device be installed so it can print.	<ul style="list-style-type: none"> <li>Turn the printer off, install the specified device and restart the printer.</li> <li>Press <b>Menu</b> to open the Job Menu and cancel the current job.</li> </ul>
Invalid Engine Code	The printer engine code has not been programmed or is not valid.	Call for service.
Invalid Network <x> Code	The code in an internal print server is not valid. The printer cannot receive and process jobs until valid code is programmed into the internal print server.	Download valid code to the printer internal print server.

Message	Meaning	Action
Load <x>	The printer is trying to feed paper from a source it detects is empty.	<p>Load paper of the size and type requested in the second line of the display in the specified tray. Press <b>Menu</b> to open the Job Menu and cancel the current job.</p> <ul style="list-style-type: none"> <li>• If Load (Tray) cannot be reset, go to “<a href="#">Map 4 - False “Tray (X) Low/Empty” Message</a>” on <a href="#">page 2-59</a>.</li> <li>• If Load (MPF), check the MPF paper present sensor.</li> </ul>
Load Manual	A request for a manual feed job has been sent to the printer. The printer is ready for insertion of a single sheet into the manual feed slot.	<ul style="list-style-type: none"> <li>• Load a sheet of paper specified in the second line of the display in the manual feed tray or multipurpose feeder.</li> <li>• Press <b>Select</b> or <b>Go</b> to ignore the manual feed request and print on paper already in the printer.</li> <li>• Press <b>Menu</b> to open the Job Menu and cancel the current job.</li> </ul>
LocalTalk <X>	A LocalTalk interface is the active communication link.	Wait for the message to clear.
Menus Disabled	The printer menus are disabled.	You can still open the Job Menu to cancel a job that is printing or to select a confidential job or a held job that you want to print.
Network Card Busy	An internal print server is being reset.	Wait for the message to clear.
Network <x>	A network interface is the active communication link.	Wait for the message to clear.

Message	Meaning	Action
Network <x>, <y>	Network interface is the active communication link, where <x> represents the active link and <y> represents the channel.	Wait for the message to clear.
No Jobs Found, Retry?	The PIN number entered is not associated with any confidential job.	<ul style="list-style-type: none"> <li>• Press <b>Go</b> to enter another PIN.</li> <li>• Press <b>Stop</b> to clear the PIN entry prompt.</li> </ul>
Not Ready	The printer is not ready to receive or process data.	Press <b>Go</b> to make the printer ready.
Parallel <x>	A parallel interface is the active communication link.	Wait for the message to clear.
Performing Self Test	The printer is running the series of start-up tests it performs after it is turned on.	Wait for the message to clear.
Power Saver	The printer is ready to receive data. It is reducing electricity consumption while idle.	<ul style="list-style-type: none"> <li>• Send a job to the printer.</li> <li>• Press <b>Go</b> to quickly warm the printer to normal operating temperature and display the <b>Ready</b> message.</li> </ul>
Print Jobs on Disk	Jobs spooled to the hard disk before the printer was last turned off have not yet printed.	<p>Press <b>Go</b> to print the jobs.</p> <p>Press <b>Return</b> or <b>Stop</b> to delete jobs.</p>
Printer Calibrating	The printer is adjusting the color tables to correct variations caused by environmental conditions.	Wait for the message to clear.
Printing Alignment Page	The printer is processing or printing a test page that shows alignment values.	Wait for the message to clear.
Printing Directory List	The printer is processing or printing a directory of all files stored in flash memory or on a hard disk.	Wait for the message to clear.

Message	Meaning	Action
Printing Font List	The printer is processing or printing a list of all available fonts for the specified printer language.	Wait for the message to clear.
Printing Job Accounting Stat	The printer is processing or printing all job accounting statistics stored on the hard disk.	Wait for the message to clear.
Printing Menu Settings	The printer is processing or printing the menu settings page.	Wait for the message to clear.
Prog Engine Code	The printer is programming new code into flash memory.	Wait for the message to clear.
Prog System Code	The printer is programming new system code.	Wait for the message to clear.
Program Flash	The printer is storing resources, such as fonts or macros, in flash memory.	Wait for the message to clear.
Programming Disk	The printer is storing resources, such as fonts or macros, on hard disk.	Wait for the message to clear.
Programming Error <x>	An error occurred while the printer was programming code into memory.	Correct the problem specified on the second line of the display.
Queuing and Deleting Jobs	The printer is deleting one or more held jobs and sending one or more jobs to print.	Wait for the message to clear.
Queuing Jobs	The printer is sending one or more held jobs to print.	Wait for the message to clear.
Ready	The printer is ready to receive and process print jobs	Send a job to print.

Message	Meaning	Action
Ready Hex	The printer is in Hex Trace mode and is ready to receive and process print jobs	<ul style="list-style-type: none"> <li>• Send a job to print. All data is printed in hexadecimal. Control strings are printed, not executed.</li> <li>• Turn the printer off and then on to exit Hex Trace mode.</li> </ul>
Remove Paper <specified bin>	The specified output bin is full.	Remove the paper from the specified bin(s).
Resetting Maint Cnt Value	The printer is resetting the counter that tracks wear on the fuser.	Wait for the message to clear.
Resetting the Printer	The printer is resetting to the current default settings. Any active print jobs are canceled.	Wait for the message to clear.
Restore Held Jobs. Go/Stop?	The printer has been reset or has been turned on and the printer detects print and hold jobs stored on the hard disk.	<p>Press <b>Go</b>. All jobs on hard disk are restored.</p> <p>Press <b>Return</b> or <b>Stop</b>. No jobs are restored and the printer returns to Ready.</p>
Restoring Factory Defaults	The printer is restoring factory default settings.	Wait for the message to clear.
Restoring Held Jobs	The printer is restoring held jobs from the hard disk.	Wait for the message to clear.
Serial <x>	A serial interface is the active communication link.	Wait for the message to clear.
Std Bin Full	The standard bin is full.	Remove the paper in the bin to clear the message.
Supplies	One of the printer supplies requires attention.	Press <b>Menu</b> to open the Supplies Menu and identify which supply item needs replacing.

Message	Meaning	Action
Tray <x> Empty	The specified tray is out of paper.	Load paper in the tray and try to clear the message. If the message cannot be reset, go to <b>“Map 4 - False “Tray (X) Low/Empty” Message” on page 2-59.</b>
Tray <x> Low	The specified tray is low of paper.	Add paper in the tray and try to clear the message. If the message cannot be reset, go to <b>“Map 4 - False “Tray (X) Low/Empty” Message” on page 2-59.</b>
Tray <x> Missing	The specified tray is either missing or not fully inserted.	Insert the tray completely. If the message cannot be reset, go to <b>“Paper Tray Missing Service Check” on page 2-84.</b>
Unsupported Disk	The printer detects an unsupported disk.	<ul style="list-style-type: none"> <li>• Press <b>Go</b> to clear the message.</li> <li>• Format the disk.</li> </ul>
USB <x>	The printer is processing data through the specified USB port.	Wait for the message to clear.
Waiting	The printer is waiting for an End of Job command, a Form Feed Command, or additional data.	<ul style="list-style-type: none"> <li>• Press <b>Go</b> to print the contents of the buffer.</li> <li>• Press <b>Menu</b> to open the Job Menu and cancel the current job.</li> </ul>
1565 Emul Error Load Emul Option	The download emulator version on the firmware card does not match the printer code version.	Download the correct emulator version from Lexmark's Web site.
2 <xx> Paper Jam	The printer detects a paper jam.	Clear the paper path. If the message cannot be reset, go to the <b>“Paper Carrying Service Check” on page 2-75.</b>

Message	Meaning	Action
30 Coating Roll Missing	The oil coating roll is either missing or installed incorrectly.	Correctly install the oil coating roll. If the message cannot be reset, go to <b>“Map 5 - False “30 Oil Coating Roll Missing” Message” on page 2-60.</b>
30 <color> Print Unit Missing	One or more of the color print units is either missing or incorrectly installed.	Correctly install the color print unit(s). If the message cannot be reset, go to <b>“Map 6 - False “&lt;Color&gt; Print Unit Missing” Message” on page 2-60.</b>
32 Unsupported <color> Cartridge	The printer detects an unsupported toner cartridge.	Replace the cartridge.
33 Tray <x> Config Error	The optional heavy media tray is inserted into any tray location except tray 1.	Remove the heavy media tray from the invalid location.
34 Short Paper	The paper is too short.	<ul style="list-style-type: none"> <li>• Press <b>Go</b> to clear the message.</li> <li>• Make sure the paper size setting in the Paper Menu is correct for the size you are using.</li> <li>• Press <b>Menu</b> to open the Job Menu and cancel the current job.</li> </ul>
35 Res Save Off Deficient Memory	The printer lacks the memory to enable Resource Save.	<ul style="list-style-type: none"> <li>• Press <b>Go</b> to disable Resource Save and continue printing.</li> <li>• Install additional memory.</li> </ul>
37 Insufficient Collation Area	The printer memory does not have the free space necessary to collate the job.	<ul style="list-style-type: none"> <li>• Press <b>Go</b> to print the portion of the job already stored and begin collating the rest of the job.</li> <li>• Press <b>Menu</b> to open the Job Menu and cancel the current job.</li> </ul>

Message	Meaning	Action
37 Insufficient Defrag Memory	The printer cannot defragment flash memory.	<ul style="list-style-type: none"> <li>• Delete fonts, macros, and other data in printer memory.</li> <li>• Install additional printer memory.</li> </ul>
37 Insufficient Memory	The printer memory is full and cannot continue processing current jobs.	<ul style="list-style-type: none"> <li>• Press <b>Go</b> to clear the message and continue printing.</li> <li>• Press <b>Stop</b> to clear the message without deleting print jobs.</li> <li>• Press <b>Menu</b> to open the Job Menu and cancel the current job.</li> </ul>
38 Memory Full	The printer is processing data, but the memory is full.	<ul style="list-style-type: none"> <li>• Press <b>Go</b> to clear the message and continue printing.</li> <li>• Press <b>Menu</b> to open the Job Menu and cancel the current job.</li> </ul>
39 Complex Page	The print information on the page is too complex.	<ul style="list-style-type: none"> <li>• Press <b>Go</b> to clear the message and continue printing.</li> <li>• Press <b>Menu</b> to open the Job Menu and cancel the current job.</li> </ul>
4 <x> Unsupported Firmware Card	The printer detects an unsupported version of firmware on the installed firmware card.	<ul style="list-style-type: none"> <li>• Turn the printer off and then press and hold <b>Go</b> while turning it on, bypassing the code on the firmware card.</li> <li>• Remove the firmware card.</li> </ul>



Message	Meaning	Action
40 Tray <x> Size Sense Error	The high capacity feeder detects an error in the size sensing mechanism.	<ul style="list-style-type: none"> <li>• Turn off the printer and be sure that all the high capacity feeder connectors are installed properly.</li> <li>• Check the high capacity feeder size sensor and go to <b>“Map 8 - False “40 Tray (X) Size Sensor Error” Message” on page 2-62.</b></li> </ul>
41 Open Bin 1 Exit Tray	The printer wants to send paper to the bin 1 output tray, but the tray is closed.	<ul style="list-style-type: none"> <li>• Open bin 1 to clear the message.</li> <li>• Press <b>Go</b> to clear the message and continue. If the message cannot be reset, go to <b>“Map 9 - False “41 Open Bin 1 Exit Tray” Message” on page 2-62.</b></li> </ul>
51 Defective Flash	The printer detects defective flash memory.	<ul style="list-style-type: none"> <li>• Press <b>Go</b> to clear the message and continue printing.</li> <li>• Install different flash memory before downloading.</li> </ul>
52 Flash Full	There is not enough free space in flash memory.	<ul style="list-style-type: none"> <li>• Press <b>Go</b> to clear the message and continue printing.</li> <li>• Delete fonts, macros, and other data stored on flash memory.</li> <li>• Install flash memory with more storage capacity.</li> </ul>

Message	Meaning	Action
53 Unformatted Flash	The printer detects unformatted flash memory.	<ul style="list-style-type: none"> <li>Press <b>Go</b> to clear the message and continue printing.</li> <li>Format the flash memory. If the error remains, the flash memory may be defective.</li> </ul>
54 Serial Option <x> Error	The printer has detected a serial interface error on a serial port.	<ul style="list-style-type: none"> <li>Make sure the serial link is set up correctly and you are using the appropriate cable.</li> <li>Press <b>Go</b> to clear the message and continue.</li> <li>Press <b>Menu</b> to open the Job Menu and reset the printer.</li> </ul>
54 Network <x> Software Error  54 Standard or Std <x> Software Error	The printer cannot establish communications with an installed network port.	<ul style="list-style-type: none"> <li>Press <b>Go</b> to clear the message and continue printing.</li> <li>Program new firmware for the network interface by way of the parallel port.</li> <li>Press <b>Menu</b> to open the Job Menu and reset the printer.</li> </ul>
54 Std Par ENA Connection Lost  54 Par <x> ENA Connection Lost	The printer has lost the connection to an external print server.	<ul style="list-style-type: none"> <li>Make sure the cable connecting the ENA and the printer is securely attached. Turn the printer off and then on to reset.</li> <li>Press <b>Go</b> to clear the message and continue printing.</li> </ul>
56 Serial Port <x> Disabled	Data has been sent to the printer through a disabled serial port.	<ul style="list-style-type: none"> <li>Press <b>Go</b> to clear the message.</li> <li>Make sure the Serial Buffer menu item in the Serial Menu is set to Disabled.</li> </ul>

Message	Meaning	Action
56 Parallel Port <x> Disabled  56 Std Parallel Port Disabled	Data has been sent to the printer through a disabled parallel port.	<ul style="list-style-type: none"> <li>Press <b>Go</b> to clear the message.</li> <li>Make sure the Parallel Buffer menu item in the Parallel Menu is set to Disabled.</li> </ul>
56 USB Port <x> Disabled  56 Std USB Port Disabled	Data has been sent to the printer through a disabled USB port.	<ul style="list-style-type: none"> <li>Press <b>Go</b> to clear the message.</li> <li>Make sure the USB Buffer menu item in the USB Menu is set to Disabled.</li> </ul>
58 Too Many Bins Attached	Too many output bins are installed.  Unsupported output bins are installed.	Turn off and unplug the printer. Remove or reconfigure the output bins. Plug the printer in and turn it on.
58 Too Many Disks Installed	Too many disks are installed.	Turn off and unplug the printer. Remove the excess hard disks. Plug the printer in and turn it on.
58 Too Many Flash Options	Too many flash options are installed.	Turn off and unplug the printer. Remove the excess flash options. Plug the printer in and turn it on.
58 Too Many Trays Attached	Too many trays are installed.	Turn off and unplug the printer. Remove the excess trays. Plug the printer in and turn it on.
61 Defective Disk	The printer detects a defective hard disk.	<ul style="list-style-type: none"> <li>Press <b>Go</b> to clear the message and continue printing.</li> <li>Install a different hard disk before you perform any operations that require one.</li> </ul>

Message	Meaning	Action
62 Disk Full	Insufficient memory on the hard disk.	<ul style="list-style-type: none"> <li>Press <b>Go</b> to clear the message and continue printing.</li> <li>Delete fonts, macros, and other data stored on the hard disk.</li> </ul>
63 Unformatted Disk	The printer detects an unformatted hard disk.	<ul style="list-style-type: none"> <li>Press <b>Go</b> to clear the message and continue printing.</li> <li>Format the disk before performing disk operations.</li> <li>Replace the hard disk.</li> </ul>
64 Unsupported Disk Format	The printer detects an unsupported disk format.	<ul style="list-style-type: none"> <li>Press <b>Go</b> to clear the message.</li> <li>Format the disk.</li> </ul>
80 Belt Exhausted	The transfer belt has reached end of life.	Replace the transfer belt.
80 Belt/Fuser Exhausted	The transfer belt and fuser have reached end of life.	Replace the transfer belt and fuser.
80 Belt/Fuser Life Warning	The transfer belt and fuser are nearing end of life.	Press <b>Go</b> to clear the message and continue printing. The supplies message is displayed until you replace the transfer belt and fuser.
80 Belt Life Warning	The transfer belt is nearing end of life.	Press <b>Go</b> to clear the message and continue printing. The supplies message is displayed until you replace the transfer belt and fuser.
80 Fuser Exhausted	The fuser has reached end of life.	Replace the fuser.
80 Fuser Life Warning	The fuser is nearing end of life.	Press <b>Go</b> to clear the message and continue printing. The supplies message is displayed until you replace the transfer belt and fuser.

Message	Meaning	Action
81 Engine Code CRC Failure	Microcode in the engine flash code module has failed a system check.	Press <b>Go</b> to clear the message and discard the code. Retransmit the microcode data from the host computer.
84 All Photo Devs Exhausted	All of the photodevelopers have reached end of life.	Replace all of the photodevelopers. Make sure you also install the new fuser coating roll that is included in each photodeveloper kit.
84 Black Photo Dev Abnormal	The printer has detected an abnormal black photodeveloper.	Install a new black photodeveloper to clear the message and continue printing.
84 Black Photo Dev Exhausted	The black photodeveloper has reached end of life.	Replace the black photodeveloper. Make sure you also install the new oil coating roll that is included in the kit.  If print quality is still acceptable and you do not want to replace the photodeveloper, press <b>Go</b> to clear the message and continue printing.
84 Black Photo Dev Life Warning	The black photodeveloper is nearing end of life.	Press <b>Go</b> to clear the message and continue printing. The supplies message is displayed until you replace the photodeveloper.
84 Color Photo Dev Abnormal	The printer has detected an abnormal color photodeveloper.	Install a new color photodeveloper to clear the message and continue printing.

Message	Meaning	Action
84 Color Photo Devs Exhausted	The color photodevelopers have reached end of life.	Replace the color photodevelopers (Cyan, Magenta and Yellow) at the same time.  If print quality is still acceptable and you do not want to replace the photodevelopers, press <b>Go</b> to clear the message and continue printing.
84 <Color> Photo Dev Life Warning	The color photodevelopers are nearing end of life.	Press <b>Go</b> to clear the message and continue printing. The supplies message is displayed until you replace the photodevelopers.
85 Toner Empty Coating Roll Exhausted  88 Black Toner Empty	The oil coating roll has reached end of life.  The black toner cartridge is empty. See note below.	Replace the oil coating roll and black toner cartridge.
<b>Note:</b> If the customer has replaced the black toner cartridge before this message displays, the oil coating roller message will not display until the cartridge is empty.		
86 Abnormal Coating Roll	Abnormal coating roll installed.	Replace the coating roll with a valid one to clear this message.
85 Coating Roll Life Warning	Coating roll is nearing it's expected lift.	If the print quality is still good, press <b>Go</b> to continue. Otherwise, replace the oil coating roll.
84 <Color> Photo Dev Abnormal	Abnormal photodeveloper installed	Install correct photodeveloper.
Replace Oil Coating Roll	A new black toner cartridge has been installed. This is a reminder to install a new oil coating roll.	Press <b>Go</b> to clear or replace the oil coating roll with a new one.

Message	Meaning	Action
88 <color> Toner Empty	The printer has ceased operating because the specified toner cartridge is empty.	Install a new toner cartridge and go to <b>“Map 7 - False “88 &lt;Color&gt; Toner Low/Toner Empty” Message” on page 2-61.</b>
88 <color> Toner Low	The printer has detected that the specified toner cartridge is low.	<ul style="list-style-type: none"> <li>• Replace the specified toner cartridge.</li> <li>• Press <b>Go</b> to clear the message and continue printing. The supplies message is displayed until you replace the specified toner cartridge. Go to <b>“Map 7 - False “88 &lt;Color&gt; Toner Low/Toner Empty” Message” on page 2-61.</b></li> </ul>

## Clearing Finisher Messages

Message	Solution
<b>Bin &lt;X&gt; Full</b>	Remove the stack of paper from the bin to clear the message. If you assigned the bin a name, the bin name is displayed instead of the bin number. Press <b>Go</b> to clear the message and continue printing.
<b>Check Finisher Installation</b>	Make sure the finisher is flush against the printer. If this does not resolve the problem, go to <b>“Finisher Service Check” on page 2-74</b> to check the finisher set switch.
<b>Close Finisher Top Cover</b>	Close the finisher top cover and align the finisher flush against the printer to clear the message.
<b>Empty Box</b>	Empty the hole punch box to continue printing.
<b>Leave Staple Job in Finisher</b>	The printer has detected a paper jam while printing a job that must be stapled. The message <b>Leave Staple Job in Finisher</b> alternates with the <b>Paper Jam</b> message. Leave the printed pages on the stacking tray inside the finisher and clear the paper jam in the printer. Press <b>Go</b> to clear the message and continue printing.
<b>Staples Empty</b>	Replace the staple cartridge if you want to continue stapling. You can press <b>Go</b> to clear the message and continue printing without stapling.
<b>Stapler Missing</b>	The staple holder is missing. Place the staple holder in the stapler to clear the message. Go to <b>“Finisher Service Check” on page 2-74</b> to check the no staple sensor.
<b>Insert Hole Punch Box</b>	Install the hole punch box. The printer will automatically clear the message. Go to <b>“Finisher Service Check” on page 2-74</b> to check the punch box detect sensor.



Message	Solution
<b>Insert Staple Cartridge</b>	The staple cartridge is either missing or installed incorrectly. Correctly install the staple cartridge. Go to <b>“Finisher Service Check” on page 2-74</b> to check the staple cartridge set sensor.
<b>210 Staple Jam</b>	Open the finisher stapler door, remove the paper from the accumulator, and remove the staple jam. Go to <b>“210 Staple Jam Service Check” on page 2-89</b> .

## Maintenance Analysis Procedures (MAPS)

### Map 1 - False “Side Door Open” Message

Step	Questions / Actions	Yes	No
1	Close the side (turn guide) door. Does the message reset?	Problem solved.	Go to step 2.
2	Disconnect CN30 from the printer controller board. While activating the door switch, is there continuity at pins 1 and 2 of the connector?	Replace the printer controller board.	Replace the side door (turn guide) sensor assembly.

### Map 2 - False “Close Front Door” Message

Step	Questions / Actions	Yes	No
1	Close the top unit and front cover. Does the message reset?	Problem solved.	Go to step 2.
2	Is the interlock switch actuator broken?	Replace the front door.	Go to step 3.
3	Is the actuator rod that activates the interlock switch on power supply 2 damaged or broken?	Replace the actuator rod.	Replace the power supply 2.

**Map 3 - False “Close Tray (X) Top Cover” Message**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Remove the rear cover on the high capacity feeder and observe LED 9 on the HCF card while actuating the cover open micro-switch. Does the LED go on and off, while opening and closing the door?	Replace the HCF card.	Replace the cover open micro-switch.

**Map 4 - False “Tray (X) Low/Empty” Message**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Is the “Tray X Low” message present?	Go to step 2.	Go to step 5.
2	Is the paper remaining actuator inside the cassette drawer binding, or operating incorrectly?	Go to step 3.	Repair or replace parts as necessary.
3	Are connectors CN35 and CN36 on the printer controller board, and CN10 on the expansion feeder control card associated with the failing tray properly connected?	Go to step 4.	Properly connect the connectors.
4	Replace the paper remaining sensor board for the problem tray. Does this fix the problem?	Problem solved.	Replace the expansion feeder control card.
5	Is the paper present flag operating correctly?	Go to step 6.	Repair or replace the failing parts.
6	Are connectors CN35 and CN36 on the printer controller board, and CN6 on the expansion feeder control card associated with the failing tray properly connected?	Go to step 7.	Properly connect the connectors.
7	Replace the paper present sensor. Does this fix the problem?	Problem solved.	Replace the associated expansion feeder control card.

**Map 5 - False “30 Oil Coating Roll Missing” Message**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Is the OCR properly installed?	Go to step 2.	Properly install the OCR.
2	Is the OCR fuse missing?	Replace the OCR	Go to step 3.
3	Is the OCR contact at the rear of the fuser damaged or broken?	Replace the fuser.	Go to step 4.
4	Is CN44 on the printer controller board properly connected?	Replace the printer controller board.	Properly connect CN44.

**Map 6 - False “<Color> Print Unit Missing” Message**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Are all connectors that the print unit photodeveloper contacts when the top cover is closed operating correctly and not damaged, worn, or missing?	Go to step 2.	Replace the sub frame.
2	Is CN42 on the printer controller board properly connected?	Replace the printer controller board.	Properly connect CN42.

## Map 7 - False “88 <Color> Toner Low/Toner Empty” Message

Step	Questions / Actions	Yes	No
1	Ensure that the encoder located at the rear of the toner set is clean and free of dirt or paper dust. Is the encoder wheel clean and free of dirt or paper dust?	Go to step 2.	Clean the encoder wheel or replace the toner set.
2	Is the toner remaining photo interrupter sensor clean and free of obstructions?	Go to step 3.	Clean or replace the toner remaining photo interrupter.
3	Is the connector of the problem color properly connected on the printer controller board?  Magenta - CN18 Yellow - CN21 Cyan - CN19 Black - CN22	Replace the printer controller board.	Properly connect the connector.

**Map 8 - False “40 Tray (X) Size Sensor Error” Message**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	On the high capacity feeder, are the paper size adjusting screws present on the upper portion of the side fence and fully screwed into the adjusting bracket?	Go to step 2.	Replace the missing thumbscrew or screw them in all the way.
2	Observe the LEDs 1 and 2 on the HCF control board while unscrewing the paper size adjusting thumbscrews. Do the LEDs light when the screws are loosened all the way?	Replace the HCF control board.	Replace the affected sensor. Paper size sensor 1 for 11inch or paper size 2 for A4.

**Map 9 - False “41 Open Bin 1 Exit Tray” Message**

<b>Step</b>	<b>Questions / Actions</b>	<b>Yes</b>	<b>No</b>
1	Is the exit tray switch actuator broken or damaged?	Replace the paper exit tray.	Go to step 2.
2	Disconnect CN31 from the printer controller board. When activating the paper exit tray switch, is there continuity between pins 1 and 2?	Replace the printer controller board.	Replace the paper exit tray switch.

## Map 10 - Unrecoverable “Check Tray (X) or Duplex Connection” Message

Step	Questions / Actions	Yes	No
1	Is the problem with a specific paper tray or the duplex unit?	Go to step 2.	Go to step 8.
2	Is the problem with tray 1?	Go to step 3.	Go to step 6.
3	Are connectors CN 35 and CN36 on the printer controller board properly connected?	Go to step 4.	Properly connect the connectors.
4	Are connectors CN3 and CN1 on the expansion paper feed control card, for tray 1, properly connected?	Go to step 5.	Properly connect the connectors.
5	Replace the tray 1 expansion feeder control card. Does this fix the problem?	Problem solved.	Return the tray 1 expansion feeder control card and replace the printer controller board. If the problem remains, replace the expansion feeder cable assembly.
6	Are connectors CN9, CN8, CN7 and CN3 on the expansion feeder control card (for the problem tray and the trays above and below) properly connected?	Go to step 7.	Properly connect the connectors.

Step	Questions / Actions	Yes	No
7	Exchange the expansion feeder control board for the problem tray with one above or below. Does the symptom follow the exchanged card?	Replace the defective expansion feeder control card.	Replace the upper and lower expansion paper feed drawer connecting cable assemblies.
8	Are any of the pins or contacts on the duplex drawer connectors bent or damaged?	Go to step 9.	Repair or replace the connector.
9	Are connectors CN101 and CN102 on the duplex interface card properly connected?	Go to step 10.	Properly connect the connectors.
10	Replace the duplex interface card. Does this fix the problem?	Problem solved.	Return the duplex interface card and go to step 11.
11	Replace the duplex interface cable. Does this fix the problem?	Problem solved.	Go to step 12.
12	Are CN37 and CN38 on the printer controller board properly connected?	Replace the printer controller board. If the problem remains, replace the duplex connector cable.	Properly connect the connectors.



## Map 11 - Paper Size Map

Step	Questions / Actions	Yes	No
1	Do the paper size sensor actuators on the paper operation tray operate correctly, as you slide the paper location plate?	Go to step 2.	Replace parts as necessary.
2	Do the size sensor levers operate correctly?	Go to step 3.	Replace the size sensor levers.
3	Are the following connectors properly connected?  CN2 (tray 1) on the printer controller board.  CN4 on the expansion feeder control card (trays 2-5).	Go to step 4.	Properly connect the connectors.
4	Replace the paper size sensor card. Does this fix the problem?	Problem solved.	Replace the printer controller board (tray 1). Replace the expansion feeder control card (trays 2-5).

## Symptom Table

Symptom	Action
You cannot print color.	<p>Make sure the Color Correction menu item is not set to Black &amp; White.</p> <p>Make sure the color print units are completely installed in the printer.</p> <p>Go to the <b>“Transfer Belt Up/Down Service Check” on page 2-89.</b></p>
Transparencies curl excessively.	<p>Make sure you’re using the recommended Lexmark transparencies. Also be sure the paper delivery is set to the rear exit.</p>
The printer seems slow to print.	<p>If you set the Paper Type to Transparency or Card Stock, the printer increases the fuser temperature and slows printing to improve the print quality. After printing on these media, the printer requires additional time to cool the fuser after you select another Paper Type setting (such as Plain Paper or Letterhead).</p> <p>If Printer Usage is set to Maximum Yield, the printer calibrates the print head timing. The printer performs this same calibration each time you turn the printer on and each time you open and close the top cover. Depending on the types of jobs you print, these adjustments may significantly slow print time.</p>
You cannot remove paper jammed in the fuser.	<p>Open the fuser rollers by operating the fuser pressure relief lever. If you cannot remove the jam, replace the fuser.</p>
You cannot clear the paper jam message.	<p>To clear the paper jam messages, you must remove all paper from the printer paper path. Check both inside the printer as well as the paper source you were using. Open and close the front cover and press <b>Go</b>. If the message does not clear, go to <b>“Paper Carrying Service Check” on page 2-75.</b></p>
Paper jam in pick-up assembly.	<p>Go to the <b>“Paper Carrying Service Check” on page 2-75.</b></p>

Symptom	Action
Fuser failure.	Go to the <b>“920 - Fuser Error - Fuser Heater Trouble” on page 2-7.</b>
No paper pick-up from multipurpose tray.	Go to the <b>“Paper Carrying Service Check” on page 2-75.</b>
No paper pick-up from upper or lower cassettes.	Go to the <b>“Paper Carrying Service Check” on page 2-75.</b>
Registration roller does not rotate.	Go to the <b>“Paper Carrying Service Check” on page 2-75.</b>
Operator panel does not operate properly.	<p>Go to the Diagnostic Aids chapter and run the LCD and Button tests. If the tests fail, replace the operator panel. If you still have a problem, replace the RIP controller board.</p> <p>If your machine beeps 5 times and the screen is blank or all diamonds, replace the operator panel.</p>
<ul style="list-style-type: none"> <li>• Foggy print</li> <li>• Black pages</li> <li>• Blank print</li> <li>• White spots</li> <li>• Poor reproduction</li> <li>• Incorrect color image registration</li> <li>• Dirt on back of paper</li> <li>• Low image density</li> <li>• White and black lines and bands</li> </ul>	Go to <b>“Print Quality Problems” on page 2-90.</b>

Symptom	Action
Evenly spaced marks on the paper, or a single mark in the same place on every page.	Go to the <b>“Marks on Paper Service Check” on page 2-87.</b>
Poor fusing.	Go to the <b>“920 - Fuser Error - Fuser Heater Trouble” on page 2-7.</b>
Toner scatter on front or back of paper.	<p>Check the following:</p> <ul style="list-style-type: none"> <li>• Excessive toner buildup on the transfer belt. Clean off the toner and run a test print.</li> <li>• Transfer belt assembly</li> <li>• Transfer belt toner waste bottle</li> <li>• Transfer belt separation fingers</li> <li>• Fuser separation pawl</li> </ul>
Paper will not feed from MPF.	<p>Be sure you have paper in the MPF.</p> <p>Be sure the MPF paper present sensor connector (CN11) is connected to the printer controller board. If the paper still does not feed, go to the <b>“Paper Carrying Service Check” on page 2-75.</b></p>

## Finisher

Use the following table to find solutions to problems with the optional finisher.

Symptom	Cause	Solution
<b>Paper frequently jams in the finisher.</b>	<p>The finisher and printer are misaligned.</p> <p>The printer and finisher have been moved.</p> <p>Attempting to staple, hole punch, or offset print jobs on print media other than paper.</p>	<p>Paper frequently jams in the finisher. Properly align the finisher with the printer. Align the top of the guide rail with the line on the holding plate by rotating the two alignment knobs closest to the holding plate. This action raises or lowers the guide rail, depending on which way the knobs are turned. The edge of the guide rail should line up with the sticker where the white and gray portions divide.</p> <p>Restrict use of the finisher to plain paper. You cannot hole punch transparencies, card stock, labels, or envelopes.</p>
<b>Printer only prints to bin 1 or bin 2.</b>	<p>The finisher cables are not connected properly.</p> <p>The printer driver and the operator panel settings are different.</p>	<p>Check the cable connections.</p> <p>Make sure your printer driver is set to direct the output to the bin you want.</p> <p>Printer settings selected from a software application or driver override default settings selected from the operator panel.</p>

Symptom	Cause	Solution
<b>You cannot clear the paper jam message.</b>	The cover is not closed, finisher is against the printer, or there is paper somewhere in the paper path.	Open and close the top cover and make sure the finisher is locked onto the alignment pins. Recheck the finisher and printer for additional jams.
<b>Pages are not stapled.</b>	Attempting to staple too many sheets.  The staple cartridge is empty.  The stapler is jammed.	Reduce the number of pages in the staple job. The finisher can staple up to 30 sheets of 20 lb paper. If you attempt to staple a larger stack of paper, the finisher ejects the stack without stapling it.  Install a new staple cartridge.  Check the stapler for a staple jam.

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## Service Checks

### Drive 1 DC Motor Service Check

	FRU	Action
1	<ul style="list-style-type: none"><li>• DC Motor</li><li>• Drive Unit 1</li><li>• Printer Controller Board</li></ul>	<p>If the motor does not attempt to turn and you receive a 910 error code, replace the driver 1 dc motor.</p> <p>Be sure the toner and photodeveloper units are not causing an overload on the dc motor.</p> <p>If the motor turns but the paper carrying section of the machine does not rotate, check the drive 1 unit gear train for damage. Be sure the clutch on the gear train engages for color printing. Replace the drive 1 unit if necessary.</p> <p>If this does not correct the problem, replace the printer controller board.</p>

### Drive 2 Stepper Motor Service Check

	FRU	Action
1	Drive 2 Stepper Motor	Be sure connector CN4 on the printer controller board is firmly connected. If there still is a problem, replace the drive 2 stepper motor.

## Duplex Unit Service Check

	FRU	Action
1	Feed Roller Belts	Check for wear or damage to the feed roller belts. Replace as necessary.
2	<ul style="list-style-type: none"> <li>Duplex Stepper Motor</li> <li>Side Fence</li> <li>Stepper Motor Gears</li> </ul>	<p>Be sure the stepper motor turns freely with no binding.</p> <p>Check for wear or damage to the associated gears.</p>
3	<ul style="list-style-type: none"> <li>Feed Roller Solenoid Assembly</li> <li>Paper Re-feed Solenoid Assembly</li> </ul>	Check for proper operation of the solenoid and linkage. Replace as necessary.
4	Photo-interrupter Assembly	Ensure that the photo-interrupter actuators are operating correctly and are in the proper position.

## Expansion Paper Feed Service Check

If you have a “200 Paper Jam Tray (X)” error code, check the option connection cable for proper connection to the printer or other paper feeder.

	FRU	Action
1	Feeder Drive Motor	If the feeder drive motor works, go to the <b><a href="#">“Paper Carrying Service Check” on page 2-75.</a></b>
2	<ul style="list-style-type: none"> <li>Gears</li> <li>Feeder Solenoid</li> <li>Paper Feed Clutch</li> <li>Expansion Feeder Control Board</li> </ul>	If the motor turns but the drive gears do not, replace the gears as necessary. Check the feeder solenoid and paper feed clutch for proper operation, and replace as necessary. If this does not correct the problem, replace the expansion feeder control board.



## Face Down Stacker Full Service Check

	FRU	Action
1	Stacker Full Detection Lever	Check the stacker full detection lever for damage.
2	<ul style="list-style-type: none"> <li>Stacker Full Detection Sensor</li> <li>Printer Controller Board</li> </ul>	Check for a voltage fluctuation between 0 V and +5 V between pins 2 and 3 of connector CN9 on the printer controller board while actuating the sensor.

## High Capacity Feeder (HCF) Service Check

	FRU	Action
1	<ul style="list-style-type: none"> <li>Paper Size Sensors 1 &amp; 2</li> <li>Residual Paper Sensors 1 - 4</li> <li>Paper Level Sensor</li> <li>Lower Limit Switch</li> <li>Docking Switch</li> <li>Upper Limit</li> <li>Paper Sensor Switch</li> <li>Paper Feed Sensor</li> </ul>	Go to the <b>“High Capacity Paper Feed Sensor / Switch Test” on page 1-64</b> , and perform the LED sensor test. You can block each sensor to verify if it is working properly. Replace the failing sensor.
2	<ul style="list-style-type: none"> <li>Tray Motor</li> <li>Paper Feed Motor</li> <li>HCPF Power Supply</li> <li>Pickup Solenoid</li> <li>Paperfeed Roller</li> <li>Transfer Roller</li> <li>Paper Feed Clutch</li> <li>Tray Drive Belt</li> </ul>	Be sure that all rollers, gears, and belts are in good working order. Replace as necessary.
3	<ul style="list-style-type: none"> <li>Paper Feed Clutch</li> <li>Pickup Solenoid</li> <li>HCPF Power Supply</li> <li>Paper Feed Motor</li> <li>Tray Motor</li> <li>HCPF Board</li> </ul>	Go to the <b>“Maintenance Mode” on page 1-62</b> and run the tests.

## Finisher Service Check

	FRU	Action
1	<ul style="list-style-type: none"> <li>• Input Path Sensor</li> <li>• Paper Register Sensor</li> <li>• Upper Tray Exit Sensor</li> <li>• Tractor Home Pos. Sensor</li> <li>• Paper Full A Sensor</li> <li>• Paper Detect Sensor</li> <li>• Staple Home Pos. Sensor</li> <li>• No Staple Sensor</li> <li>• Punch Box Detect Sensor</li> <li>• Invert Path Sensor</li> <li>• Lower Tray Exit Sensor</li> <li>• Elev. Upper Limit Sensor</li> <li>• Tray Near Full Sensor</li> <li>• Elev. Lower Limit Sensor</li> <li>• Jogging Home Pos. Sensor</li> <li>• Pap. Upper Level Sensor</li> <li>• Fin. Set Switch Sensor</li> <li>• Staple Cart. Set Sensor</li> </ul>	<p><b>Note:</b> For frequent jams, hole punch problems or stapling problems. First check the finisher to printer alignment. Go to <a href="#">“Aligning the Finisher and Printer” on page 1-86.</a></p> <p>Run the finisher sensor test in diagnostic mode to test the sensors and switches.</p>
2	<ul style="list-style-type: none"> <li>• Timing Belts</li> <li>• Patting Roller</li> <li>• Path Select Solenoid</li> <li>• Path Select Gate</li> <li>• Guide Stack Assembly</li> <li>• Jogging Assembly</li> <li>• Tractor Drive Motor</li> <li>• Tractor belts</li> <li>• Jogging Motor</li> <li>• Stapler</li> </ul>	<p>Run the staple test in diagnostic mode to test feeding and stapling function.</p>

	FRU	Action
	<ul style="list-style-type: none"> <li>• Registration Roller</li> <li>• Paper Exit Rollers</li> <li>• Registration Sensor</li> <li>• Registration Clutch</li> <li>• Punch Clutch Punch Unit</li> <li>• Timing Belt</li> </ul>	Run the hole punch test in diagnostic mode to test the hole punch function.
	<ul style="list-style-type: none"> <li>• Elevator Motor</li> <li>• Tray Wires</li> </ul>	Observe the elevator motor operation while powering the printer up.

## Operator Panel Service Check

	FRU	Action
1	<ul style="list-style-type: none"> <li>• Operator Panel</li> <li>• Operator Panel Cable</li> <li>• RIP Board</li> </ul>	<p>Run both the LCD Hardware Test and the Button Test in Diagnostic Mode.</p> <p>Be sure the operator panel cable connections are securely connected on the RIP board and operator panel.</p>

## Paper Carrying Service Check

**Paper has not exited or is stopped in the high capacity feeder (Area F, 249).**

	FRU	Action
1	<ul style="list-style-type: none"> <li>• Paper Feed Roller</li> <li>• Transfer Roller</li> </ul>	Be sure the paper feed roller transfer roller, reverse roller, and call roller are free of dirt and are not damaged. Clean or replace parts as necessary.

2	<ul style="list-style-type: none"><li>• Paper Feed Clutch</li><li>• Paper Feed Motor</li><li>• Sensors</li></ul>	<p>Set up and run a test in Maintenance Mode and go to the <b>“High Capacity Feeder (HCF) Service Check” on page 2-73.</b></p> <p>Ensure all motors, clutches, and sensors operate correctly.</p>
3	<ul style="list-style-type: none"><li>• HCPF Control Card</li><li>• HCPF Power Supply</li></ul>	<p>Set up and run a test in Maintenance Mode and go to the <b>“High Capacity Feeder (HCF) Service Check” on page 2-73.</b></p> <p>If no LEDs light, check the power source. Replace the HCF control card. Replace the HCF power supply.</p>

**Paper is being picked up and carried to the registration roller  
(Areas C, E, 240, 24x).**

	FRU	Action
1	<ul style="list-style-type: none"> <li>Paper Size Guide</li> <li>Side Location Plates</li> </ul>	<p>Be sure the paper cassette has the size guides and the side locator locks are working properly.</p> <p>Replace parts as necessary.</p>
2	<ul style="list-style-type: none"> <li>Paper Feed Roller (MPF)</li> <li>Paper Feed Rolls MPF Tray 1, 2, 3, 4, 5</li> <li>Carrying Roller Tray 1, 2, 3, 4, 5</li> <li>Fanning Pad (MPF)</li> </ul>	<p>Be sure the paper feed rollers are free of dirt and not damaged.</p> <p>Be sure the fanning pad is free of dirt and not damaged.</p> <p>Replace parts as necessary.</p>
3	Gears	Be sure the paper feed gears are not damaged.
4	<ul style="list-style-type: none"> <li>Paper Feed Solenoid</li> <li>Paper Feed Clutch</li> <li>MPF Clutch</li> </ul>	<p>Be sure the paper feed solenoid activates the paper feed clutch and the clutch engages properly.</p> <p>Check the failing paper feed solenoid for continuity. Also check connector CN24 (tray1) and CN16 (MPF) on the printer controller board and CN5 on the expansion feeder control card.</p>
5	<ul style="list-style-type: none"> <li>Registration Sensor</li> <li>MPF Sensor</li> <li>Printer Controller Board</li> </ul>	<p>Check for a fluctuation between 0 and +5 V on the printer controller board between the following pins, when actuating the sensor:</p> <ul style="list-style-type: none"> <li>Registration sensor - CN11 (pins 1 and 2)</li> <li>MPF sensor - (CN11 pins 4 and 5)</li> </ul> <p>If the voltage fluctuates as stated above, replace the printer controller board. If the voltage does not fluctuate, replace the sensor.</p>

**Paper has stopped at the registration roller or has not reached the fuser (Areas C, E, 240, 24x).**

	FRU	Action
1	<ul style="list-style-type: none"> <li>Registration Roller Clutch</li> <li>Registration Roller</li> <li>Transfer Belt Unit</li> <li>Rear Paper Feed Guide</li> </ul>	<p>Check these parts for wear or damage. Replace as necessary. Be sure all guide surfaces in the paper path are free of dirt.</p> <p>Check the registration roller clutch for continuity.</p> <p>Be sure connector CN13 on the printer controller board is connected properly.</p>
2	<ul style="list-style-type: none"> <li>Registration Sensor</li> <li>Printer Controller Board</li> </ul>	<p>Check for a fluctuation of between 0 V and +5 V between pins 1 and 2 of connector CN11 on the printer controller board while actuating the sensor. If the voltage fluctuates as stated above, replace the printer controller board. If the voltage does not fluctuate, replace the sensor.</p>

**Paper has exited the registration roller and entered the fuser (Areas A and B).**

	FRU	Action
1	<ul style="list-style-type: none"> <li>Transfer Belt Unit</li> <li>Rear Paper Guide</li> <li>Discharge Brush</li> <li>Fuser</li> </ul>	<p>Remove any buildup of toner. Replace any damaged or worn parts.</p> <p>Check the paper exit flag on the fuser for damage. Replace the fuser if necessary.</p>
2	Fuser Separation Pawl	Replace the fuser if paper jams cannot be removed.

**Paper has entered the fuser and exited the printer (Area B).**

	<b>FRU</b>	<b>Action</b>
1	Fuser	Remove any toner buildup and replace any worn or damaged parts.
2	<ul style="list-style-type: none"> <li>• Fuser Exit Lower Roller</li> <li>• Exit Guide</li> <li>• FU/FD Flap Solenoid</li> <li>• Exit Flap Clutch Lever</li> <li>• Gears</li> <li>• Fuser Exit Upper Roller</li> </ul>	<p>Be sure the exit FU/FD solenoid energizes in the correct position for either face down or face up delivery. Replace any damaged or worn parts.</p> <p>Do a continuity check of the solenoid. Be sure connector CN122 is properly connected to the printer controller board.</p>
3	<ul style="list-style-type: none"> <li>• Paper Exit Motor (Drive 2 Stepper Motor)</li> <li>• Face Down Feed Roller Belt</li> </ul>	Be sure that connector CN4 is properly connected to the controller board.
4	<ul style="list-style-type: none"> <li>• Paper Exit Switch</li> <li>• face up/face-down Sensor</li> </ul>	<p>Check for a fluctuation of between 0 V and +5 V on the printer controller board between the following pins, when actuating the sensor:</p> <ul style="list-style-type: none"> <li>• Paper exit switch - CN12 (pins 4 and 5)</li> <li>• face up/face down sensor - (CN12 pins 1 and 2)</li> </ul> <p>If the voltage does not fluctuate, replace the sensor.</p>

**Paper has entered the duplex unit (Area D).**

	FRU	Action
1	Feed Rollers Belts	Check for wear or damage to feed rollers and belts.
2	Duplex Unit	Be sure the duplex unit is properly installed and that all connections are correct.
3	<ul style="list-style-type: none"> <li>Duplex Stopper Motor</li> <li>Side Fence Stepper Motor</li> </ul>	<p>Be sure the stepper motor turns freely with no binding.</p> <p>Check for wear or damage to the associated gears. Replace as necessary.</p>
4	<ul style="list-style-type: none"> <li>Feed Roller Solenoid Assembly</li> <li>Paper Re-feed Solenoid Assembly</li> </ul>	Check for proper operation of the solenoid and linkage. Replace as necessary.

**Paper jammed in Finisher Area G**

	FRU	Action
1	<ul style="list-style-type: none"> <li>Registration Roller</li> <li>Paper Exit Rollers</li> <li>Registration Sensor</li> <li>Registration Clutch</li> <li>Punch Clutch Punch Unit</li> </ul>	<p>Check finisher to printer alignment. Go to <b>“Aligning the Finisher and Printer” on page 1-86.</b></p> <p>Check all belts for wear or damage. Check the registration roller for wear or damage.</p> <p>Check for obstructions.</p> <p>Check the registration sensor by running the finisher sensor tests in diagnostic mode.</p> <p>Check the registration clutch by running the staple test or hole punch test in diagnostic mode. Replace parts as necessary.</p>



2	<ul style="list-style-type: none"> <li>• Paper Feed Motor</li> <li>• Finisher Control Board</li> </ul>	<p>Check the paper feed motors by running the staple test or hole punch test in diagnostic mode.</p> <p>If the paper feed motor has been replaced, replace the finisher control board.</p>
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### Paper jammed in Finisher Area H

	FRU	Action
1	<ul style="list-style-type: none"> <li>• Timing Belts</li> <li>• Patting Roller</li> </ul>	<p>Check finisher to printer alignment. Go to <b>“Aligning the Finisher and Printer” on page 1-86.</b></p> <p>Check for obstructions in the paper path. Check all belts for wear or damage.</p> <p>Check for wear or damage on the patting roller.</p>
2	<ul style="list-style-type: none"> <li>• Path Select Solenoid</li> <li>• Path Select Gate</li> <li>• Guide Stack Assembly</li> <li>• Jogging Assembly</li> <li>• Tractor Drive Motor</li> <li>• Tractor Belts</li> <li>• Jogging Motor</li> <li>• Stapler</li> </ul>	<p>Check for proper operation of the guide stack assembly and jogging assembly by running the staple test in diagnostic mode. Check the tractor belts for proper alignment.</p> <p>Replace parts as necessary.</p>

3	<ul style="list-style-type: none"><li>• Belt Home Position Sensor</li><li>• Jogging Home Position Sensor</li><li>• Paper Detecting Sensor</li><li>• Invert Path Sensor</li><li>• Finisher Control Board</li></ul>	<p>Ensure that all sensors are operating properly by running the sensor test in diagnostic mode.</p> <p>Replace sensors as necessary.</p>
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**Paper jammed in Area I**

	FRU	Action
1	Timing Belts	<p>Check finisher to printer alignment. Go to <b>“Aligning the Finisher and Printer” on page 1-86.</b></p> <p>Check the paper path for obstructions. Check all belts for wear or damage.</p>
2	<ul style="list-style-type: none"> <li>• Invert (Tray 2) Exit Roller</li> <li>• Exit Guide (Tray 2) Invert Assembly</li> <li>• Exit Guide (Tray 1) Straight Assembly</li> </ul>	Check to ensure that all rollers are operating correctly by running the hole punch and staple tests in diagnostic mode.
3	<ul style="list-style-type: none"> <li>• Paper Exit Sensor (Tray1)</li> <li>• Paper Exit Sensor (Tray 2)</li> <li>• Paper Full Sensor A (Tray 2)</li> <li>• Paper Upper Level Sensor B (Tray 2)</li> </ul>	Ensure that the sensors are working properly by running the sensor test in diagnostic mode.
4	<ul style="list-style-type: none"> <li>• Elevator Upper Limit Sensor</li> <li>• Elevator Lower Limit Sensor</li> <li>• Elevator Motor</li> </ul>	Ensure that the elevator upper limit sensor, elevator lower limit sensor, and the elevator motor are operating correctly at power up.

## Paper Exit, FU/FD Service Check

	FRU	Action
1	FU/FD Sensor Actuator	If the paper is not exiting to the back paper face up tray or the face down tray, check the sensor for proper operation by checking for a fluctuation of between 0 V and +5 V between pins 1 and 2 of connector CN12, while actuating the sensor.
2	FU/FD Deflector	Check the FU/FD deflector that directs the paper to the proper tray. Replace if necessary.
3	FU/FD Solenoid	Check the FU/FD solenoid for continuity. Also be sure the connector is properly connected to the printer controller board.
4	Face Up Exit Assembly	Check the gears and the actuating mechanism for wear or damage. Replace as necessary.
5	Printer Controller Board	Check connectors CN2 and CN14 for proper connection on the printer controller board.

## Paper Tray Missing Service Check

	FRU	Action
1	Size Sensor Actuators  Cassette Parts	Check to ensure that the paper size adjustment is correct for the paper being used. Ensure that the paper size sensor actuators are not bent or broken. Make sure that there are no broken parts on the cassette that would allow the cassette to move or shift from its intended position inside the printer.
2	Size Sensor Board  Expansion Paper Feeder Control Board  Printer Controller Board	Be sure that connector CN2 on the printer controller board is connected properly. Also check CN4 on the expansion paper feeder control board for the associated tray.

## Photodeveloper Missing Service Check

When you replace the photodeveloper unit, all three color units must be replaced at the same time.

	FRU	Action
1	Photodeveloper	Check for dirt or damage to the sensing contacts on rear. Clean or replace the photodeveloper drum unit if necessary.
2	Sub-frame Unit	Check the sensing contacts on the sub-frame assembly. Clean or replace the affected contacts or sub-frame.
3	High Voltage Unit	If the problem remains, replace the high voltage unit (HVU).
4	Printer Controller Board	If the problem remains, replace the printer controller board.

## Power Supply Service Check

	FRU	Action
1	Voltage	Be sure the switch is on and the power cord is firmly plugged into the printer. Be sure the correct voltage is present at the outlet.
2	Power Cord	Check the power cord for continuity.
3	<ul style="list-style-type: none"> <li>• Fuse</li> <li>• Switch</li> <li>• Power Supply 1</li> </ul>	The power supply fuses may be blown. Unplug the machine and check fuse F2 on the power supply 1 for continuity. If the fuse is good, check the power switch connector for continuity.
4	Power Supply 2	<p>The power supply 2 may be defective.</p> <p>Check the dc power of the power supply for the following pins:</p> <p>CN102 pins 8 and 11 for +3.3 V            CN103 pins 7 and 14 for +3.3 V            CN105 pin 5 for +3.3 V</p> <p>CN102 pins 12 and 14 for +5 V            CN103 pins 1, 3, 8, 9 for +5 V            CN104 pins 1 and 2 for +5 V</p> <p>CN104 pins 7 and 8 for +24 V            CN105 pin 4 for +24 V            CN106 pins 5 and 6 for +24 V</p> <p>Replace power supply 2 if necessary.</p>

## Marks on Paper Service Check

If you have evenly spaced marks on the paper, measure the distance between the marks and locate the symptom below. Check the assembly for dirt or damage and clean as necessary. Run a test print to verify the problem has been corrected. The indicated assemblies are replaced by the customer at prescribed intervals.

If you remove the transfer belt, do not turn it upside down. Toner will fall from the waste toner box onto the transfer sheets and roller(s) inside the belt. This causes lower transfer efficiency and washed out colors.

Distance between marks	FRU / Supply Item
27 mm	Absorption/Charge Roller (transfer roller)
139.2 mm	Fuser Upper Roller
140 mm	Fuser Lower Roller
824.5 mm	Transfer Belt
46.9 mm	Upper Registration Roller
46.9 mm	Lower Registration Roller
45.1 mm	Supply Roller (toner cartridge)
47.5 mm	Developer Roller (toner cartridge)
94.2 mm	photodeveloper Drum
31.5 mm	Photodeveloper Charge roller
64.5 mm	OCR (oil coating roller)

Fuser Part Locations	mm From Paper Center
Thermistor Hot Roll	-6
Thermistor BUR	0
TCO Hot Roll	66
TCO BUR	101
Detact Fingers Hot Roll	113.5/75/37.5/0/-37.5/-75/-113.5
Detact Fingers BUR	134/90/45/0/-45/-90/-134
Exit Rollers	96/37.5/-37.5/-96
Star Rollers	127/60/15/-15/-60/-127



## Transfer Belt Up/Down Service Check

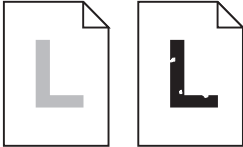
	FRU	Action
1	Belt Up/Down Sensors  Belt Up/Down Actuator	Check the transfer belt up/down sensor. Be sure that connector CN29 is firmly connected to the printer controller board. Replace the sensor or the actuator if necessary. Check for a fluctuation between 0 V and +5 V between pins 8 and 10, while actuating the sensor.
2	Belt Up/Down Clutch	Be sure connector CN26 is firmly connected to the printer controller board. Replace the belt up/down unit if necessary.
3	Belt Up/Down Lift Cams	Check and replace the belt up/down lift cam shaft if necessary.
4	Printer Controller Board	If there still is a problem, replace the printer controller board.

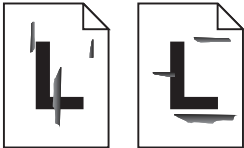



## 210 Staple Jam Service Check

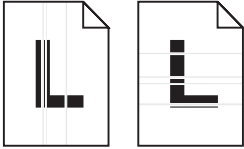
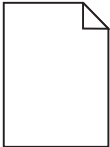

	FRU	Action
1	Stapler  Staple Cartridge Holder	Check for jammed staples in the stapler. Clear the staple jam, go into diagnostic mode, and run a staple test. If the problem reoccurs, replace the staple cartridge holder. If this does not resolve the problem, replace the stapler.
2	Stapler  Finisher Control Board  Stapler Cable	If the error occurs and there is no staple jam, check to ensure that connectors CN5 on the stapler and PJ1 on the finisher control board are properly connected. Make sure that the finisher set switch is activated. Measure for +5 V dc between pins 11 and 12 on stapler connector CN5. If +5 V dc is not present, check for continuity on the stapler to finisher control board cable. If there is no continuity on any pin position, replace the cable. If there is continuity, replace the finisher control board. If +5 V dc is present, replace the stapler.

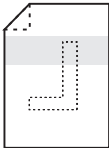


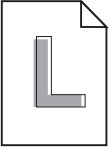
# Image Quality Troubleshooting

## Print Quality Problems

Problem	Action
<p>Print is too light, or printed images or characters have voids or dropouts.</p> 	Be sure you're using recommended paper or other media. Use media from a new package.
	Be sure you have selected the correct Paper Weight setting for the media you're using.
	Be sure the affected print unit is completely installed in the printer.
	Set print darkness to 4 from the Color Menu.
	Clean the printhead LEDs.
	If you suspect a toner cartridge is low on toner, remove the appropriate toner cartridge and gently shake it back and forth to distribute the toner evenly. Reinsert the print unit and try printing the job again.
	Replace the affected toner cartridge.
	Replace the photodevelopers. If only black print appears light, replace just the black photodeveloper. If one of the colors prints too light, replace all three of the color photodevelopers. If there is still a problem, go to <b>“Uneven Printing” on page 2-97</b> .

Problem	Action
<p>Colored lines, streaks, or smudges appear on the printed page, or print appears blurred or unclear.</p> 	<p>Replace the photodevelopers. If the problem only occurs when printing black, replace just the black photodeveloper and fuser coating roll. If the problem occurs when printing one of the colors, replace all three of the color photodevelopers. If the problem remains, go to <b>“Black Line” on page 2-95</b>.</p>
<p>Toner specks appear on the page.</p> 	<p>Replace the oil coating roll.</p>
<p>Toner colors the background of the page.</p> 	<p>Be sure the affected photodevelopers and toner cartridges are completely installed in the printer.</p>
<p>The page has 100% coverage of one color.</p> 	<p>Be sure the affected photodevelopers are completely installed in the printer.</p> <p>Replace the photodevelopers. If the page is black, replace just the black photodeveloper. If the page is another color, replace all three of the color photodevelopers. If this does not fix the problem, go to <b>“Black Print” on page 2-95</b>.</p>

Problem	Action
<p>Light lines or streaks appear on the printed page.</p> 	Clean the LEDs.
	Make sure the affected photodeveloper is completely installed in the printer.
	Remove the affected toner cartridge and gently shake it back and forth to distribute the toner evenly. Reinsert the toner cartridge and try printing the job again.
	Replace the affected toner cartridge.
	Replace the photodevelopers. If the problem only occurs when printing black, replace just the black photodeveloper. If the problem occurs when printing one of the colors, replace all three of the color photodevelopers and the transfer belt. If the problem remains, go to <b>“Uneven Printing” on page 2-97.</b>
<p>The page is blank.</p> 	Be sure the affected print unit is completely installed in the printer.
	Replace the affected toner cartridge. If the problem remains, go to <b>“No Image” on page 2-94.</b>
<p>Toner smears or rubs off the page.</p> 	Be sure you're using recommended paper or media.
	Be sure you have selected the correct Paper Weight setting for the media you're using.
	Be sure the top cover is completely closed and both sides are snapped shut.
	You may need to replace the fuser.

Problem	Action
<p>Toner adheres to the back of the page.</p> 	<p>Remove the fuser oil roll and wipe it with a dry, lint-free cloth, and clean the transfer belt. If there still is a problem, go to <b>“Periodic Dirt” on page 2-97</b>.</p>
<p>Quality of printed transparencies is inadequate.</p> 	<p>Be sure you're using the recommended Lexmark transparencies.</p>
	<p>Be sure you have selected the correct paper weight setting for the media you are using.</p>
	<p>When printing transparencies, always set the Paper Type to Transparency.</p>
	<p>Avoid getting fingerprints on transparencies before printing.</p>
<p>Print on the page is skewed.</p> 	<p>Be sure the width guides in the paper tray or the multipurpose feeder fit snugly against the media you loaded.</p>
	<p>Be sure the paper you load fits under the two corner tabs at the front of the tray.</p>
	<p>Be sure charge roll or belt is seated properly.</p>
<p>A white gap is noticeable between color fills, due to poor color registration.</p> 	<p>Be sure all four corners of the printer are resting on a steady flat surface.</p>
	<p>Turn the printer off and back on. The printer calibrates the print head timing, which may improve registration. Be sure that Auto Registration, in diagnostic mode, is <b>On</b>.</p>

## No Image

Possible Cause	Action
Moist Paper	Be sure the printer is not in a damp environment and the paper is not curled or wavy due to moisture. If necessary inform the customer about correct storage.
LED Printhead	Be sure the LED printhead cable is securely connected to the printhead controller board and LED printhead assembly. If the problem remains, replace the LED printhead.
High Voltage Unit (HVU)	Be sure all the connectors to the high voltage unit are securely connected. If the problem remains, replace the high voltage unit.
Printer Controller Board	Be sure all connectors are securely connected to the printer controller board. If the problem remains, replace the printer controller board.
Printhead Controller Board	If the problem remains, replace the printhead controller board.

## Black Line

Possible Cause	Action
Photodeveloper Drum	Clean any dirt from the drum surface. Replace it if it is scratched.
<ul style="list-style-type: none"> <li>• Fuser Detach Pawl</li> <li>• Fuser Roller Surface</li> <li>• Fuser Thermistor Surface</li> </ul>	Remove any toner buildup. Replace the fuser.
LED Printhead	Clean the LED printhead. Print a blank document. Replace the LED printhead if a black line appears on the paper.

## Black Print

Possible Cause	Action
High Voltage Unit (HVU)	The printed paper has black print. Be sure the high voltage unit is properly connected. If the problem remains, replace the high voltage unit.
Sub-frame	If the problem remains, replace the right sub-frame contacts.
Photodeveloper Drum Set	If the problem remains after replacing the sub-frame, be sure the photodeveloper has clean contacts. If necessary, replace the photodeveloper.

## Missing Colors

Possible Cause	Action
Toner Cartridge Unit  Photodeveloper	Be sure the toner cartridge and the PC drum unit are properly seated. Be sure the contacts on the print unit are clean. Be sure the print unit is installed in the correct position. Run a print test.  If the problem remains, switch the toner cartridge with another color and run a test print. If the new color prints, replace the failing toner cartridge.
High Voltage Unit	If the problem remains, check the connector on the high voltage unit. Replace the high voltage unit If the problem remains.
LED Printhead Unit	If the problem remains, replace the printhead and EPROM.
LED Printhead Controller Board	If the problem remains, replace the printhead controller board.
High Voltage Unit (HVU)	If the problem remains, replace the high voltage unit.
Transfer Belt Unit	If the problem remains, replace the transfer belt unit.



## Uneven Printing

Possible Cause	Action
Photodeveloper	Check for condensation or dirt on the photodeveloper.
LED Printhead	Clean any dirt off the exposed surface of the LED printhead. Also check the locating pins of the printhead.
Transfer Belt Unit	Be sure the transfer belt is clean and not damaged. Replace parts as necessary.
Top Cover	Be sure the top cover is fully locked.

## Periodic Dirt

Possible Cause	Action
<ul style="list-style-type: none"> <li>Oil Coating Fuser Roller</li> </ul>	Check for dirt or damage to the fuser hot, the fuser press roll, or the fuser oil roll OCR backup.
Photoconductor Drum	Check for scratches on the surface and replace if necessary.
Transfer Belt Unit	Be sure the transfer belt is clean and not damaged. Replace parts as necessary.

## White Spots

Possible Cause	Action
<ul style="list-style-type: none"> <li>LED Printhead</li> <li>Photodeveloper</li> <li>Toner Cartridge</li> </ul>	Firmly install the photodeveloper and the toner cartridge into the printer.

Possible Cause	Action
Belt Unit	Check the transfer belt unit for scratches or nicks. Be sure there is no toner buildup on the belt. Replace the belt unit if it is damaged.

## Options Service Check

Service Tip: When you have a problem with any of the options installed in the options slots on the interconnect board, switch the non operating option to one of the other option slots to isolate the failure.

### Serial Port Service Check

Run the **“Serial Wrap Tests” on page 3-17**.

**Note:** The Serial Wrap Test is designed to check the serial port hardware by using a wrap plug, P/N 1329048, and invoking the Serial Post Diagnostic Test. The test helps isolate the printer from the serial cable and host computer. The test provides failure information on the display for approximately three seconds. If the test indicates a problem, replace the RIP board.

### Flash Memory Option(s)

Run a copy of the test page and check to see if the option you are checking is listed. The printer does not recognize the option being installed if the option is not listed. Be sure the memory card assembly is installed correctly and is not broken or damaged. If the Memory card assembly is correctly installed, not broken or damaged, then run the **“Flash Test” on page 3-22**. If the test fails, replace the Flash card assembly. If the problem continues, replace the RIP board.

### DRAM Memory Option(s)

This service check is the same as the flash memory option service check with the following exception:

Run the **“DRAM Memory Test” on page 3-13** from the menu if the DRAM Memory card assembly is correctly installed and not broken

## 5055-01X

or damaged. If the test fails, replace the DRAM card assembly. If the problem continues, replace the RIP board.

### Hard Disk Option

**Service Tip:** The 5055-01x printers support one hard disk option. Be sure only one 3.2 GB or larger one hard disk option is installed. Be sure the hard disk and the hard disk board are correctly installed. Run the **“Quick Disk Test” on page 3-21** from the Device Test on the Diagnostic Menu when a problem is suspected either with the hard disk system board or with the hard disk.

**Note:** The Quick Disk Test is a non-destructive test and indicates Pass or Fail. If the test fails, replace the hard disk. If a problem still exists, replace the hard disk board.

Use the **“Disk Test/Clean” on page 3-21** to help restore the disk if it contains bad data and is unusable. This test is divided into a cleaning and a verifying or testing section.

**WARNING:** This can be a very lengthy test depending on the disk size. This test leaves the hard disk unformatted. The servicer or user must reformat the disk using the Format Disk Menu operation. This is a destructive type of test. All the data on the disk is destroyed and should not be performed on a known good disk.

### Network Card Option

The network is installed on the system board on network model printers.

### Error Code 976 - Network Card X (X=Network card 1, 2, or 3)

A 976 error code indicates an unrecoverable software error in network card x. Verify that network card x is correctly installed in the socket on the interconnect board and is properly grounded. If you find no problem, contact your next level of support before replacing the network card.

### 54 Network <X> Software Error

This error displays when the RIP software detects that a network card is installed in slot x on the interconnect board but cannot establish communications with the network card.



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## 3. Diagnostic Aids

**Note:** When troubleshooting, or prior to making any adjustment to print quality, always be sure:

- The printer is installed on a level rigid surface.
- The OPCs are never exchanged. Do not exchange a black OPC for a color OPC, as they have different surface phase counts.
- Radar Page is always used when adjusting print registration.

### Power-On Self Test Sequence

1. Power on.
2. Printer and RIP controller check:
  - ROM and RAM
  - Fuser thermistor
3. Printer hardware check:
  - Paper jam
  - Printer cartridge unit
  - Toner supply
  - Paper cassette present
4. Fuser temperature check. Temperature regulated.
5. Ready:
  - Printer controller
  - RIP controller
  - Printer condition
  - Motor/Fan
  - Heater
6. DC motor drive 1
7. Feeding paper
8. Print
9. Stepper motor drive 2
10. Paper exit
11. Stop

## Using the Operator Panel

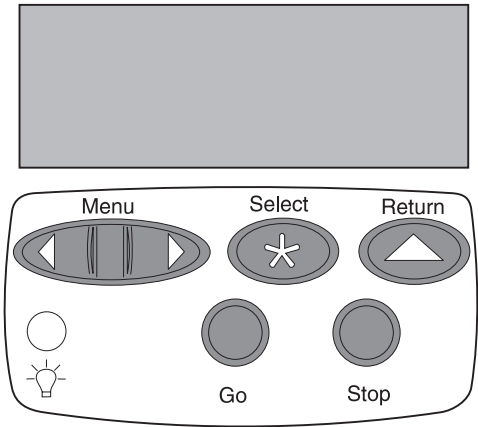
The operator panel on your printer has a 2-line by 16-character liquid crystal display (LCD), five buttons, and one indicator light.

The light indicates whether the printer power is on and whether the printer is idle or busy processing a job.

### Indicator Light

State	Indicates
Off	Printer power is off.
On	Printer is on, but idle.
Flashing	Printer is busy processing a job.

Use the five operator panel buttons to open a menu, scroll through a list of values, select printer settings, and clear error messages.



## Operator Panel Buttons

Button	Function
Go	<p>Press <b>Go</b> to:</p> <ul style="list-style-type: none"> <li>• Exit printer menus and return the printer to the ready state.</li> <li>• Clear certain messages from the display.</li> </ul> <p>If you've changed printer settings from the operator panel menus, press <b>Go</b> before you send a job to print.</p>
Menu	<p>Press <b>Menu</b>:</p> <ul style="list-style-type: none"> <li>• Enter the menus from the ready state.</li> <li>• Scroll to the next (<b>Menu&gt;</b>) or the previous (<b>&lt;Menu</b>) menu, menu item, or value.</li> <li>• Increase or decrease a numerical value for a menu item setting.</li> <li>• Display the Job Menu or the Supplies Menu while the printer is busy.</li> </ul>
Select	<p>Press <b>Select</b> to:</p> <ul style="list-style-type: none"> <li>• Select the menu shown on the second line of the display and view the available menu items.</li> <li>• Select the menu item shown on the second line of the display and view the available values and the current user default setting for that menu item.</li> <li>• Save the value displayed on the second line of the display as the new user default setting.</li> <li>• Clear certain messages from the display.</li> </ul>
Return	<p>Press <b>Return</b> to back up to the previous level of the menu structure without selecting a new menu item or value.</p>
Stop	<p>Press <b>Stop</b> when the printer displays the <b>Busy</b> or <b>Waiting</b> message to temporarily stop all activity. The message <b>Not Ready</b> is then displayed until you press <b>Go</b> to continue printer activity.</p> <p>For example, if you need to load paper in a tray while a job is printing, press <b>Stop</b> and wait for the printer motors to idle before removing the tray from the printer. Reinsert the loaded tray, and then press <b>Go</b>.</p>

## Printing the Menu Settings

1. From the printer operator panel, press **Menu** to enter the menus.
2. Continue to press and release **Menu** until you see **TESTS MENU**.
3. Press **Select**. **TESTS MENU** is displayed on the first line, and **Print Menus** is on the second line.
4. Press **Select** again to print the page. The message **Printing Menu Settings** is displayed. The printer returns to **Ready** status after the menu settings page prints.

## Operator Menu Disabled

If the operator has disabled the menu and you want to run operator print tests, turn the machine off, and then press **Go** and **Stop** as you turn the machine on.

## Menu Overview

<b>SUPPLIES MENU</b>  Belt Block Photo Dev Coating Roll Color Photo Dev <color> Toner Fuser Replace Supplies Supplies Life	<b>UTILITIES MENU</b>  Color Samples Print Alignment Print Menus Print Net <x> Setup Print Fonts Print Directory Factory Defaults Format Flash Defragment Flash Format Disk Job Acct Stat Hex Trace	<b>COLOR MENU</b>  Color Correction Manual Color Print Mode Toner Darkness
<b>PAPER MENU</b>  Paper Source PAPER SIZE PAPER TYPE CUSTOM TYPES Configure Bins Assign Type/Bin Substitute Size Configure MP Paper Weight Paper Loading Universal Setup	<b>FINISHING MENU</b>  Duplex Duplex Bind Copies Blank Pages Collation Separator Sheets Separator Source Multipage Print Multipage Order Multipage View Multipage Border	<b>USB MENU</b>  PCL SmartSwitch PS SmartSwitch MAC Binary PS NPA Mode USB Buffer Job Buffering



<b>JOB MENU</b>  Reset Printer Cancel Fax Confidential Job Held Job	<b>SETUP MENU</b>  Printer Language Printer Usage Power Saver Resource Save Download Target Print Timeout Auto Continue Wait Timeout Jam Recovery Page Protect Display Language Alarm Control Job Accounting Job Acct Limit	<b>PCL EMUL MENU</b>  Font Source Font Name Point Size Pitch Symbol Set Orientation Lines per Page A4 Width Auto CR after LF Auto LF after CR Tray Renummer
<b>POSTSCRIPT MENU</b>  Print PS Error Font Priority Image Smoothing	<b>PARALLEL MENU</b>  PCL SmartSwitch PS SmartSwitch MAC Binary PS NPA Mode Parallel Buffer Job Buffering Advanced Status Protocol Honor Init Parallel Mode 1 Parallel Mode 2	<b>SERIAL MENU</b>  PCL SmartSwitch PS SmartSwitch NPA Mode Serial Buffer Job Buffering RS-232/RS-422 RS-422 Polarity Serial Protocol Robust XON Baud Data Bits Parity Honor DSR
<b>NETWORK MENU</b>  PCL SmartSwitch PS SmartSwitch MAC Binary PS NPA Mode Network Buffer Job Buffering Network <x> setup Std Net Setup	<b>INFRARED MENU</b>  Infrared Port PCL SmartSwitch PS SmartSwitch NPA Mode Infrared Buffer Job Buffering Window Size Transmit Delay Max Baud Rate	<b>LOCALTALK MENU</b>  LocalTalk Port PCL SmartSwitch PS SmartSwitch NPA Mode LocalTalk Buffer Job Buffering NPA Hosts LocalTalk Name LocalTalk Addr LocalTalk Zone

## Diagnostic Mode

To access the diagnostics printer settings and operations:

1. Turn off the printer.
2. Press and hold **Go** and **Return**.
3. Turn on the printer. Release the buttons after the **Performing Self Test** message is displayed. The alignment menu displays first.
4. Press **Select** and using the menu key, scroll to **Alignment Test**.
5. Press **Select** to print the test. This prints the three color registration pages. These pages are the same for X, Y, Theta, and for the three colors and are available under the X Adjustment, Y Adjustment, and the Theta Adjustment.
6. There are three adjustments for each color registration; X, Y, and Theta. Adjust X and Y first, and then adjust Theta. X controls the horizontal plane. By adjusting X you move the radar image left (negative) and right (positive). Y controls the vertical plane and by adjusting the value for Y you move the color radar image up (negative) and down (positive). These values are determined by examining the left side of the radar page. Values for X are 1/600th of an inch and Y values are 1/2400th of an inch.
7. Theta controls the skew or angle of rotation. To get the correct reading, adjust X and Y before Theta.
8. Examine the left side radar images for their deviation from black. Look at all the radar images along the left and make a judgment on the value of the adjustment. When the color is correctly adjusted, the color radar image should lay directly on the black radar image.

### Setting Printer Alignment

1. Press **Menu** until the color you want to adjust displays and then press **Select**.
2. Change the displayed value and press **Select**. You see a message displayed that the value is Saved. If you want to skip a selection press **Select**.

X= sxxx* Y= sxxx* T= sxx*
------------------------------

3. Press **Menu** until Alignment Test Printing is displayed and press **Select**.

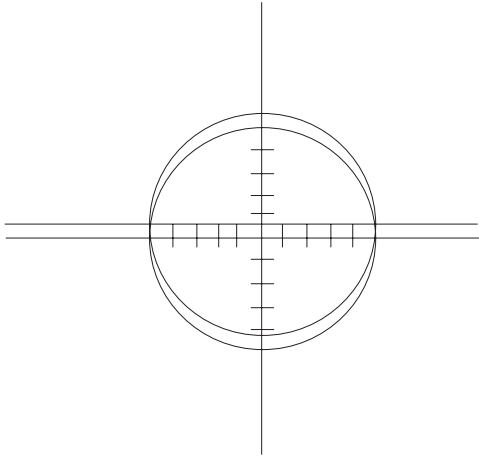
Alignment Test Printing...
-------------------------------

4. Look at the color and the value you have changed and see if this is acceptable. If so, go to the next adjustment. If it is not acceptable, go back to the color and adjust it again.
5. When all the values are acceptable for all colors, exit diagnostics.

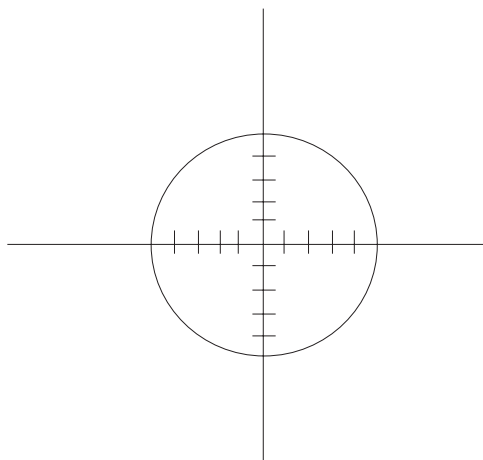
**Note:** If **Return** is pressed to exit the Alignment menu after a margin value has been incremented or decremented, then the default value is not changed. However, if the Alignment Test page is requested after a margin value has been incremented or decremented, then the default value is changed and then the Alignment Test page is printed using the new value. The alignment test page should be printed on letter or A4 paper only. To exit the alignment menu, press **Return**.

## Adjustment Example

Here is a sample of the magenta radar image. Looking down the left side for both X and Y, you can see the X value is close to correct. It may be a little to the right. The Y value for magenta is incorrect. The magenta radar image is too far above the black. In the case of Y, increase the value for Y to move the magenta image down the page. This may not seem intuitive, but increasing the value increases the timing delay, thus moving the image down the page. The images may be off by different amounts. Make the best overall judgement using all the radar images on the left side.



When the Y value is correctly adjusted, the magenta radar image should look like the following example. The Theta adjustment is done in the same manner as the Y except Theta values are taken from the right side of the test pages.



### Summary Notes:

Objective: Using the X, Y, and T adjustment procedure, adjust the color to overlay the radar image as precisely as possible.

X and Y values are taken from the left side. Theta is taken from the right.

Increasing values for X drives the color radar right. Increasing values for Y and Theta drive the color radar image down the page.

Do both the X and Y before attempting Theta.

Use a loop or magnifying glass (4x or higher) to make the job easier.

Yellow is very difficult. When you make the yellow adjustment, swap the cyan toner cartridge with the yellow cartridge. Run through the procedure making the correct adjustments to the yellow X, Y, and Theta adjustment. Remember to swap the supplies position back to the correct position when you finish.

## Print Tests

### Input Source Print Tests

The Diagnostic Input Source Print Tests may be used to verify that the printer can print on media from the installed input sources, which are available within the Print Tests menu. Chose from following:

- **Single** (prints the Print Test page once).
- **Continuous** (prints the Print Test page until **Return** or **Stop** is pressed).

The content of the Print Test page varies depending on the media installed in the selected input source. If a source is selected that contains paper, then a page similar to the Quick Test page prints. If a source is selected containing envelopes, the Envelope Print Test pattern prints. This pattern contains text of each character in the selected symbol set.

If **Continuous** is selected, all sources printing with paper sizes print the same page continuously until the test is stopped. If the source contains envelopes, then the envelope print test pattern prints on the first envelope and subsequent envelopes are blank.

**Note:** The Print Test page can be printed on any paper or envelope size. More than one sheet may be required. The Print Test page always print in simplex.

While the page prints, the following message is displayed:

<Source>  
Printing...

The Power indicator also blinks while the page prints. If **Single** is selected, no buttons are active while the Print Test page prints. If **Continuous** is selected, **Return** or **Stop** can be pressed to cancel the test, producing the following message:

Canceling...

**Note:** <input source> represents the input source selected for the Print Test. One of the following sources is displayed: Tray 1, MP Feeder, Standard Bin (Face-Down), or Output Bin 1. The value of the <media width> field is displayed when the narrow media sensor determines the media used for the Quick Test is narrow or wide, (**N** for narrow, **W** for wide).

## Print Quality Pages

Execution of this diagnostic function causes the printer to print the Print Quality Test Pages. Since the printer is in diagnostics mode, the toner cartridge lockout functionality is disabled. Print Quality Pages can be printed from the Configuration Menu Group. When printing using this method, the toner cartridge lockout functionality is enabled. These pages cannot print unless a cartridge with a Machine Class ID matching the Machine Class ID stored in NVRAM is installed.

**Note:** Additional diagnostic information relating to print quality may be printed on the Print Quality Pages when executing this diagnostic function. This additional information is not printed when the Configuration Menu Group method is used.

As the pages are printed, the printer posts:

Prt Quality Pgs Printing...
--------------------------------

Once started, this operation cannot be canceled. All keys are ignored while this message is posted.

**Note:** The <media width> field displays once the narrow media sensor determines the media used for the Quick Test is narrow or wide (**N** for narrow, **W** for wide).

## Hardware Tests

### LCD Hardware Test

The LCD Hardware Test causes the printer to continually execute the LCD display test. To cancel the test, press **Return** or **Stop**.

### Button Test

The Button Test verifies the operation of each button on the operator panel. When Button Test is selected, the following appears on the display:

OP	OP	OP	OP
		OP	OP

When a button is pressed, CL (Closed) displays. When a button is not pressed, OP (Open) displays. If the wrong message displays, the button is malfunctioning. To exit the button test, press **Return** or **Stop**.



## DRAM Memory Test

The DRAM Memory Test checks the validity of DRAM (both standard and optional). Patterns of data are written to DRAM verifying each bit in memory can be set and read correctly. When selecting this test from the operator panel, the printer begins testing DRAM memory and the following message is displayed:

DRAM Memory Test P:##### F:#####
-------------------------------------

### Terminology:

P:##### represents the number of times the memory test finishes successfully. Initially 000000 displays for #####. The maximum pass count is 999,999.

F:##### represents the number of times the memory test finishes with errors. Initially 00000 displays for #####. The maximum fail count is 99,999.

The power indicator blinks indicating the memory test is in process. The printer runs this test continually. The test can be terminated by powering off the printer. Each time the test finishes, the screen is updated with the result. If the test is successful, the Pass Count increments by 1. If the test fails, a failure message displays for approximately three seconds and the Fail Count increments by 1. Once the maximum pass count or fail count is reached, the test stops and final test results display.

## ROM Memory Test

The ROM Memory Test checks the validity of the RIP code and fonts. When this test is selected from the operator panel, the printer begins testing ROM memory and the following message is displayed.

ROM Memory Test  
P:##### F:#####

Terminology:

P:##### represents the number of times the memory test finishes successfully. Initially 000000 displays for #####. The maximum pass count is 999,999.

F:##### represents the number of times the memory test finishes with errors. Initially 000000 displays for #####. The maximum fail count is 99,999.

The power indicator blinks indicating the memory test is in process. The printer runs this test continually. The test can be terminated by powering off the printer. Each time the test finishes, the screen is updated with the result. If the test is successful, the Pass Count increments by 1. If the test fails, a failure message displays for approximately three seconds and the Fail Count increments by 1. Once the maximum pass count or fail count is reached, the test stops and final test results appear.

- ROM Checksum Error
- ROM Burst Read Error

Press **Return** or **Stop** to exit the test.

## Parallel Wrap Test

The Parallel Wrap Test checks the operation of each parallel signal, using a wrap plug. To perform the wrap test:

1. Disconnect the parallel interface cable, and install the parallel wrap plug.
2. Select **HARDWARE TESTS** from the Diagnostics Menu.
3. Select **Parallel Wrap** to initiate the Parallel Wrap Test.
4. Select the appropriate Parallel Wrap Test (**Parallel Wrap, Parallel 1 Wrap**).

The printer begins testing the parallel hardware and the following message is displayed:

Parallel Wrap P:##### F:#####
----------------------------------

Terminology:

P:##### represents the number of times the memory test finishes successfully. Initially 000000 displays for #####. The maximum pass count is 999,999.

F:##### represents the number of times the memory test finishes with errors. Initially 00000 displays for #####. The maximum fail count is 99,999.

The power indicator blinks indicating the memory test is in process. The printer continually runs the same test until canceled from the operator panel by pressing **Return** or **Stop**. Each time the test finishes, the screen is updated with the result. If the test is successful, the Pass Count increments by 1.

If the test fails, the Fail Count increments by 1 and one of the following failure messages displays for approximately three seconds:

Sync Busy Error, Byte Interrupt Request Error, Strobe Interrupt Request Error, Init Fall Error, Init Busy Error, Init Rise Error, Host Busy Error, RAM Data FF Error, RAM Data AA Error, RAM Data 00 Error, RAM Data 55 Error, DMA Count Error, DMA Address Error, DMA Interrupt Error, DMA Memory Error, DMA Background Error, Clear Init Rise Error, False Init Rise Error, False Init Fall Error, Autofeed Rising Interrupt Error, Clear Autofeed Rise Error, False Autofeed Rise Error, Autofeed Falling Interrupt Error, or Clear Autofeed Fall Error.

Once the maximum pass count or fail count is reached, the test stops and the final test results display. Press **Return** or **Stop** to exit the test.

## Serial Wrap Tests

The Serial Wrap Test checks each signal of the serial port hardware using a wrap plug. To perform the wrap test:

1. Disconnect the serial interface cable, and install the serial wrap plug.
2. Select **HARDWARE TESTS** from the Diagnostics Menu.
3. Select the appropriate Serial Wrap Test (**Serial Wrap, Serial 1 Wrap**).

The printer begins testing the serial hardware and the following message is displayed:

Serial X Wrap P:##### F:#####
----------------------------------

Terminology:

x indicates which serial port is being tested  
(blank=standard serial, 1=optional serial port #1).

P:##### represents the number of times the memory test finishes successfully. Initially 000000 displays for #####. The maximum pass count is 999,999.

F:##### represents the number of times the memory test finishes with errors. Initially 000000 displays for #####. The maximum fail count is 99,999.

The power indicator blinks indicating the memory test is in process. The printer runs this test continually. The test can be terminated by powering off the printer.

Each time the test finishes, the screen is updated with the result. If the test is successful, the Pass Count increments by 1. If the test fails, a failure message displays for approximately three seconds and the Fail Count increments by 1.

Once the maximum pass count or fail count is reached, the test stops and final test results display:

Receive Status Interrupt Error, Status Error, Receive Data Interrupt Error, Transmit Data Interrupt Error, Transmit Empty Error, Threshold Error, Receive Data Ready Error, Break Interrupt Error, Framing Error, Parity Error, Overrun Error, Data Error, Data 232 Error, Data 422 Error, FIFO Error, DSR Error, DSR PIO Error, DSR Interrupt Error, CTS Error, CTS PIO Error, or CTS Interrupt Error.

Once the maximum pass count or fail count is reached, the test stops and the final test results display. Press **Return** or **Stop** to exit the test.

## Finisher Tests

### Staple Test

This test verifies the operation of the staple mechanism in the finisher.

The media is fed from the default paper source. After selecting a destination bin, the printer feeds eight pieces of media and accumulates them in the finisher accumulator. The printer prints an alignment pattern during this test. After the last sheet is accumulated, the eight sheets are stapled and fed to bin 2.

The staple test cannot be canceled or terminated once the test has begun. As a result, no buttons are active during the execution of this test.

### Hole Punch Test

The media is fed from the default paper source. After selecting a destination bin, the printer feeds eight pieces of media, hole punches them, and feeds them to bin 1. The printer prints an alignment pattern during this test. Go to **“Aligning the Finisher and Printer” on page 1-86**.

The staple test cannot be canceled or terminated once the test has begun. As a result, no buttons are active during the execution of this test.

## Finisher Sensor Test

This test determines whether or not the finisher sensors and switches are working correctly. To run the test, select the Sensor/Sw Test operation from the Finisher Tests top level menu. The following sensors and switches are listed in the bottom level menu:

- Input Path
- Paper Register
- Tray 1 Exit
- Tractor Home Pos.
- Paper Full A
- Paper Detect
- Staple Home Pos.
- No Staple
- Punch Box Detect
- Invert Path
- Tray 2 Exit
- Elev. Upper Limit
- Tray Near Full
- Elev. Lower Limit
- Jogging Home Pos.
- Pap. Upper Level
- Fin. Set Switch
- Staple Cart. Set

To select one of the sensors/switches above, press **Menu** until the sensor/switch is displayed. Press **Select**. The following is a sample screen that may be displayed:

Input Path CL
------------------

Once the screen is displayed, you can manually actuate each of the sensors or switches. When the sensor is closed, CL is displayed. Likewise, when the sensor is open, OP is displayed. If the wrong message is displayed, then the sensor is malfunctioning.

To exit the sensor test, press **Return** or **Stop**.

- Go into diagnostic mode.
- Finisher tests - Sensor/sw tests
- Input Path - This is the paper exit sensor in the fuser activated by moving the sensor actuator.
- Paper Register - Activate the paper registration sensor and observe the display OP - CL.
- Tray 1 Exit - Activate the tray 1 exit sensor OP - CL.
- Tractor Home Pos. - Activate the tractor home sensor by rotating the green paper clearing knob so that the tractor belt flag actuates the sensor.
- Paper Full A - Activate the paper full A sensor by operating the sensor flag while observing the display.
- Paper Detect - Activate the paper detect sensor by placing a piece of paper into the sensor (photo interrupter)
- Staple Home Position - Activate the staple home position sensor by rotating the geared wheel inside the stapler clockwise. If the sensor is working properly, the display should change from CL to OP at approximately 180° of rotation of the wheel.
- No Staple - Remove the staple cartridge to activate the no staple sensor.
- Punch Box Detect - Remove the punch box and activate the punch box detector sensor level.
- Invert Path - Activate by placing a piece of paper into the sensor (photo interrupter).
- Tray 2 Exit - Remove tray 2 and activate the tray 2 exit sensor.
- Elev. Upper Limit - Activate by pressing the paper full A and the paper upper level together. This causes the elevator motor to operate, allowing the sensor flag to clear the elevator upper limit sensor, thereby activating the sensor.
- Elevator Lower Limit - Activate by inserting a piece of paper into the elevator lower limit sensor (photo interrupter).
- Jogging Home Position - Activate by rotating the jogging motor wheel.
- Pap. Upper Level - Activate by operating the paper upper level sensor flag.
- Fin. Set Switch - Activate by inserting a non-conductive tool into the opening below the staple door.
- Staple Cart. Set - Activate by removing then inserting the staple cartridge.



## Device Tests

### Quick Disk Test

The Quick Disk Test performs a non-destructive read/write on one block per track on the disk. The following message appears while the test is running:

Quick Disk Test  
Testing...

The Power indicator blinks while the test is in progress. If the test is successful, the following message is displayed:

Quick Disk Test  
Test Passed...

Press **Go**, **Return**, or **Stop** to return to the DEVICE TESTS screen. If the test fails, then the following message is displayed:

Quick Disk Test  
Test Failed...

Press **Go**, **Return**, or **Stop** to return to the DEVICE TESTS screen. You cannot cancel this test.

### Disk Test/Clean

The Disk Test/Clean Test causes the disk to be formatted, destroying all data on the disk and should not be attempted on a good disk. This test should only be used when the disk contains unusable data.

**Note:** This can be an extremely lengthy test depending on the disk size, and leaves the disk unformatted.

To run this test, select **Disk Test/Clean** from the DEVICE TESTS menu. The following message appears to warn the customer that all disk contents will be lost:

Files will be  
lost Go/Stop?

To continue with the test, press **Go**.

To exit the test immediately and return to the DEVICE TESTS screen, press **Return** or **Stop**. The Power indicator blinks while the test is in progress. Once **Go** is selected, the following screen is displayed to indicate the operation has begun:

Disk Test/Clean  
Testing...

If the test is successful, the following message is displayed.

Disk Test Clean  
Test Passed

Press **Go**, **Return**, or **Stop** to return to the DEVICE TESTS screen. If the test fails, the following message appears:

Disk Test/Clean  
Test Failed

Press **Go**, **Return**, or **Stop** to return to the DEVICE TESTS screen. You cannot cancel this test.

## Flash Test

The Flash Test writes and reads data to the flash device, destroying all data, leaving the flash unformatted. The servicer must reformat the flash using the Format Flash menu operation. To run this test, select **Flash Test** from the DEVICE TESTS menu. The following message appears warning the customer that all flash contents will be lost:

Files Will be  
Lost Go/Stop?

To continue the test, press **Go**. To exit the test immediately and return to the DEVICE TESTS screen, press **Return** or **Stop**.

The following message is displayed while the test is running:

Flash Test  
Testing

## 5055-01X

The Power indicator blinks while the test is in progress. If the test is successful, the following message appears:

Flash Test  
Test Passed

Press **Go**, **Return**, or **Stop** to return to the DEVICE TESTS screen. The Power indicator turns on solid. If the test fails, the following message is displayed.

Flash Test  
Test Failed

Press **Go**, **Return**, or **Stop** to return to the DEVICE TESTS screen.

## Diagnostics - Printer Setup

### Defaults

The following printer settings are used to determine whether U.S. or non-U.S. factory defaults should be used:

- = U.S. \*
- = Non U.S.

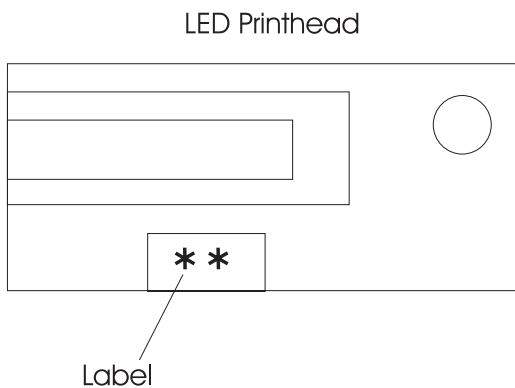
### Light Quantity

- Cyan
- Magenta
- Yellow
- Black

Range = 0 to 45

If you replace one or more of the printheads, or the EEPROM for the engine controller, the Light Quantity value must be set to the value that is marked on the printhead. To set this value:

1. Select **Diagnostic Mode**.
2. Select **Printer Setup**.
3. Select **Light Quantity** and enter the value from the label on the printhead.



## 5055-01X

### Par S Strobe Adj

This message displays only if the printer is confused with the standard parallel port.

### Par 1 Strobe Adj

This message displays only if a parallel port is available through the PCL slot 1.

### Auto Color Adj

- = On \*
- = OFF

### Reset Calibration

Press **Select** to reset.

## Viewing and Resetting the Drum Counters

The drum counters increment when a page is printed. The drum counter for a particular plane increments (if that color is printed), by 1 for Letter, A4, A5, B5 and envelopes, and by 1.2 for Legal and B4. It increments by 2 for 11 x 17 and A3. The counters are used to track printer usage.

The current value of the drum counter may be viewed in the Diagnostic menus by selecting the **Drum Count** menu, but this value is not viewable from the Ready menu.

The following screen illustrates the operator panel when the cyan drum counter displays. The leftmost digit ('1' in this example) blinks, indicating it is the first digit to be changed. To change the value, press **Menu** until the desired value display. Press **Select** to move to the next digit. The next digit ('2' in this example) blinks. Continue modifying each digit using this method. To skip a digit (and keep its current value), press **Select**.

After the final digit (5 in this example), press **Select** and the new page count is stored in NVRAM.

Cyan Drum Count =12345
---------------------------

The drum counts can be reset by scrolling to the appropriate drum color and pressing **Select**.

## Setting the Page Count

The page count can be changed through the Diagnostic menus. The servicer uses this menu to reset the Page Count whenever the engine board, containing NVRAM memory, is replaced. When **Page Count** is selected from the PRINTER SETUP menu, the current page count is displayed as follows:

Page Count =1234567*
-------------------------

The left-most digit ('1' in this example) blinks, indicating it is the first digit to be changed. To change the value, press **Menu** until the desired value displays. Press **Select** to move to the next digit. The next digit ('2' in this example) blinks. Continue modifying each digit using this method. To skip a digit (and keep its current value), press **Select**. When **Select** is pressed after the final digit ('7' in this example), the new page count is stored in NVRAM.

## Viewing the Permanent Page Count

The permanent page count setting cannot be modified through the operator panel. It can only be viewed using the Diagnostics menus. When Permanent Page Count is selected, the following appears:

Perm Page Count =1234567*
------------------------------

## Serial Number

= XXXXXXXX Printer Serial Number

This function shows the printer serial number.

## Setting Configuration ID

Use the Configuration ID to communicate characteristics of the printer that cannot be determined by the hardware sensors. The Configuration ID is originally set when the printer is manufactured, but must be reset whenever the engine board, containing NVRAM memory, is replaced

The Configuration ID can be set through the Diagnostic menus. When **Configuration ID** is selected from the PRINTER SETUP menu, the current ID is displayed:

Configuration ID =123456
-----------------------------

The left-most digit ('1' in this example) blinks, indicating it is the first digit to be changed. To change the value, press **Menu** until the desired value displays. Press **Select** to move to the next digit. The next digit ('2' in this example) blinks. Continue modifying each digit using this method. To skip a digit (and keep its current value), press **Select**. When **Select** is pressed after the final digit ('6' in this example), the Configuration ID is validated. If the ID is invalid, then the Invalid ID displays momentarily on Line 2 before the ID re-displays. If the ID is valid, it is stored in NVRAM and the printer automatically activates the new setting.

If a Configuration ID has not been set, then upon entry into diagnostics, the Configuration ID setup is the only Diagnostic function displayed until a valid ID is entered.



## Diagnostics - Error Log

### Viewing the Error Log

The Error Log provides a history of printer errors, containing the 12 most recent errors that have occurred. The most recent error displays in position 1, and the oldest error displays in position 12. If fewer than 12 errors have occurred, the oldest error displays in the position before the empty log entries begin. Empty log entries are identified with an error number of 000. Occupied log entries contain the error number for the message displayed on the operator panel. For example, 925 is contained in the log when a 925 service error occurs.

If an error occurs after the log is full, the oldest error in the log is discarded to make room for the new error. The printer stores identical errors in consecutive positions in the log. The following error messages are stored in the error log:

- All 2xx paper jam messages.
- All 9xx service messages

To view the error log, select the **Display Log** operation from the Diagnostics ERROR LOG menu. The entire error log cannot display on a single screen. Four error log entries appear per screen, requiring three screens. To move forward in the log, press **Menu>**, to move backward, press **Menu<**. The following are examples of the error log screens:

1-200	2-290
3-928	4-922

5-250	6-990
7-230	8-230

9-953	10-000
11-000	12-000

To exit the error log, press **Return** or **Stop**.

## Clearing the Error Log

To clear the error log, select **Clear Log** from the ERROR LOG menu. The following message is displayed:

Clear Log = Yes
--------------------

Select **Yes** to clear the log, as the empty log message appears:

1-000	2-000
3-000	4-000

Select **No**, **Return**, or **Stop** to exit the Clear Log menu.

## Maintenance Menu

80 Fuser Maint = 0 to xxxxxxxx
-----------------------------------

Reset 80 Fuser =Yes
------------------------

80 Belt Maint = 0 to xxxxxxxx
----------------------------------

Reset Belt Maint =Yes
--------------------------

## Exiting Diagnostics Mode

To exit diagnostics mode and POR the printer into normal user mode, press **EXIT DIAGNOSTICS**.

---

## 4. Repair Information

### Service Precautions

Observe the following precautions whenever you service the printer:

- Be sure to unplug the printer from the outlet before attempting to service the printer.
- To reassemble the printer, reverse the order of disassembly unless otherwise specified.
- Do not operate the printer anytime during disassembly. If it is absolutely necessary to run the printer with its covers removed, use care not to allow your clothing to be caught in revolving parts such as the gears, rollers, and fan motor.
- Never touch the terminals of electrical parts or high-voltage parts such as the high voltage power supply board.
- Be sure to handle the fuser carefully as it remains hot for a while after the printer stops running. Always unplug connectors by holding the connector housing.
- Be sure to use the fuse listed in the parts catalog.
- Do not forget to install the ground wire or ground plate to ensure positive conduction. Install the screw with a toothed washer in the correct position at reassembly.

## Handling Printed Circuit Boards

The following precautions must be observed when handling circuit boards with metal oxide semiconductor integrated circuits.

### Transportation/Storage:

- During transportation or when in storage, new circuit boards must not be indiscriminately removed from their protective conductive bags.
- Do not store or place circuit boards in a location exposed to direct sunlight.
- When it becomes absolutely necessary to remove a board from its conductive bag or case, always place it on its conductive mat in an area as free as possible from static electricity.
- Do not touch pins of the integrated circuits with your bare hands.

### Replacement:

- Before you unplug connectors from the circuit boards, be sure the power cord has been unplugged from the power outlet.
- When you remove a board from its conductive bag or case, do not touch the pins of the integrated circuits or the printed pattern. Place it in position by holding only the edges of the board.
- Before you plug connectors into the board, be sure the power cord has been unplugged from the power outlet.

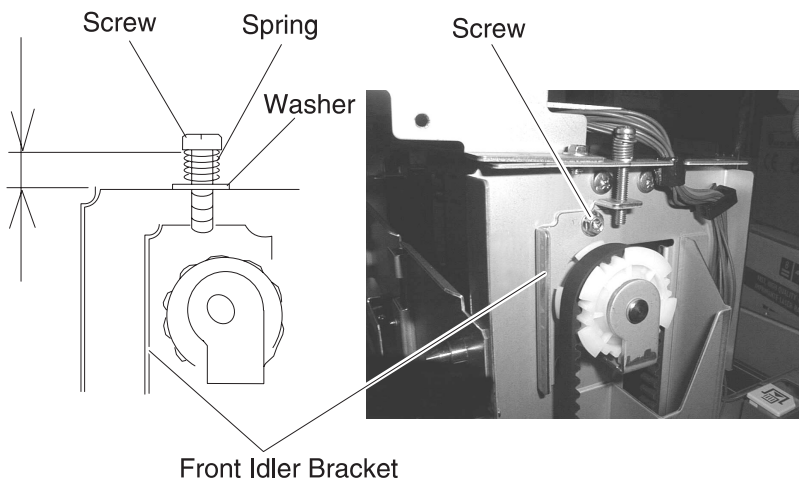
### Inspection:

- Avoid checking the integrated circuits directly with a multimeter; use connectors on the board.
- Never create a closed circuit across integrated circuits pins with a metal tool.
- When it is absolutely necessary to touch the integrated circuits and other electrical components on the board, be sure to ground your body.

## Adjustments

### High Capacity Paper Feed Timing Belt Adjustment

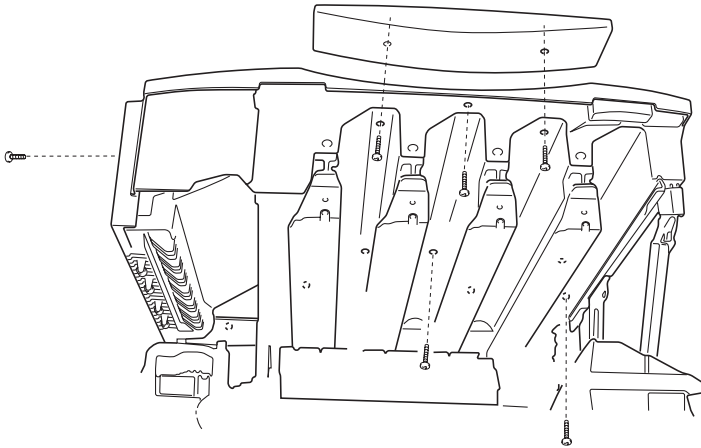
1. Secure the bracket with the screw, as shown.
2. Attach the spring and washer to the bracket with the screw.
3. Adjust the screw to 6mm +/- 1mm.
4. Tighten the screw completely.
5. Adjust the timing belt on the rear in the same manner.



---

## Removals

### Cover, Top Removal



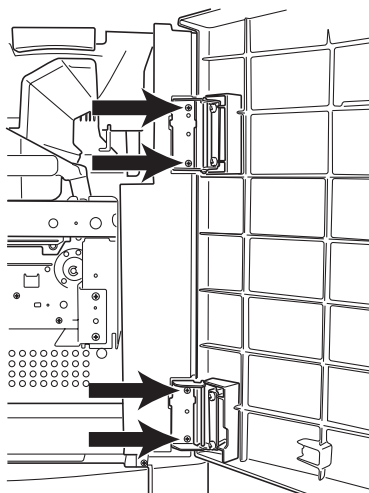
1. Open the top unit and remove the photodevelopers and toner cartridges.
2. Remove the operator panel.
3. Remove three screws from the bottom, the four screws from the back side, and the screw from the left side.

### Operator Panel Removal

1. Open the top unit and remove the toner cartridges and photodeveloper drum units.
2. Remove the operator panel.
3. Remove the two screws from the operator panel case, and remove the case.
4. Remove the cable from the operator panel.

## Cover, Front Removal

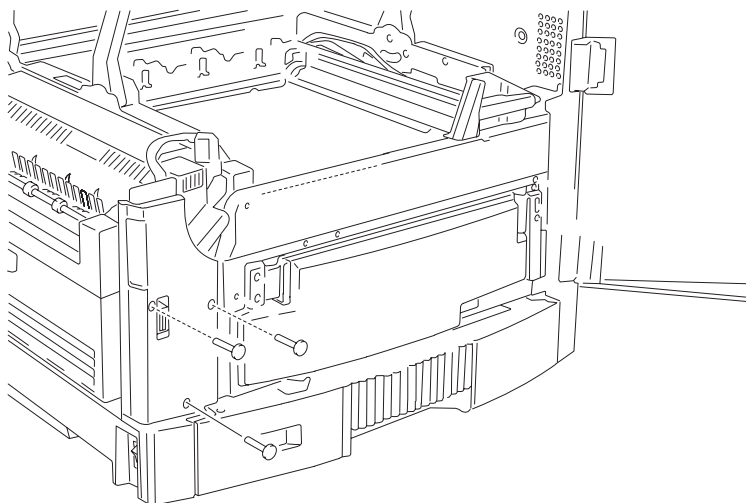
1. Remove the four hinge screws from the front cover.



2. Remove the front cover

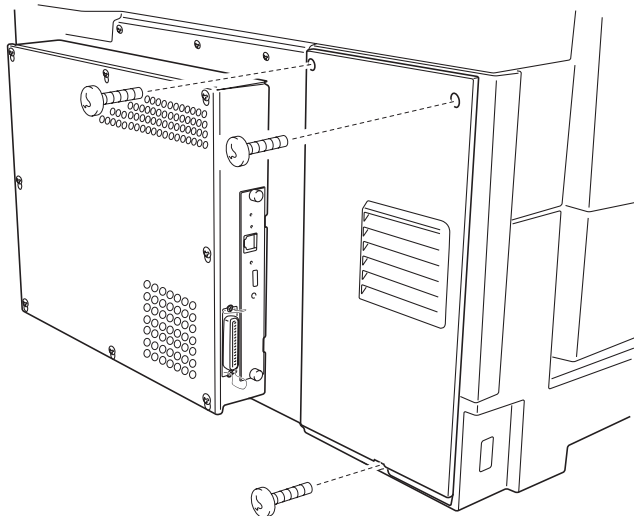
## Cover, Front Left Removal

1. Open the front cover and remove the cassette.
2. Remove the left front cover by removing the three screws.



## Cover, Rear Removal

1. Open the top unit.
2. Remove the three screws from the rear cover, and remove the cover.

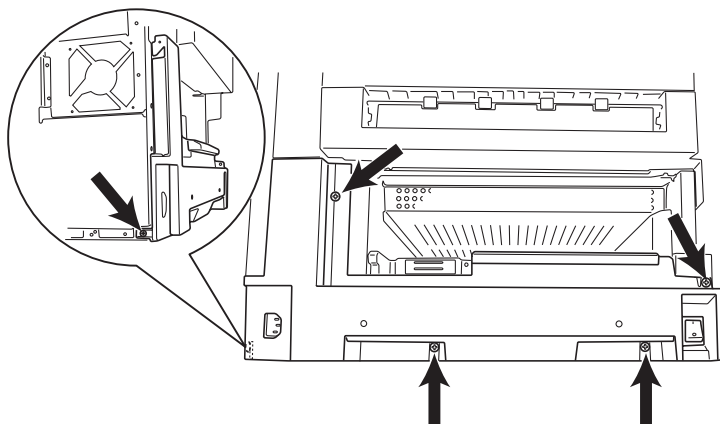




## Cover, Solenoid Removal

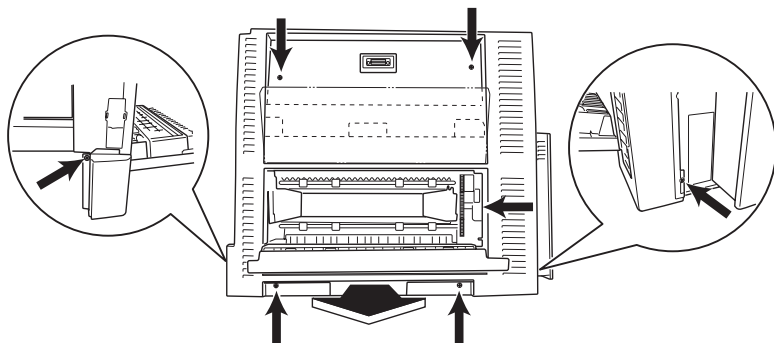
1. Remove the screw from the solenoid cover.
2. Remove the solenoid cover.

## Cover, Left Side Removal

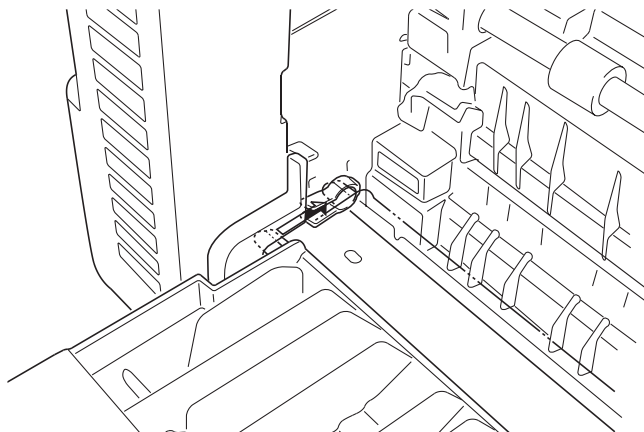


1. Remove the upper cassette, front cover, paper exit tray, and duplex unit.
2. Remove the five screws from the left side cover, and remove the cover.

## Cover, Right Side Removal

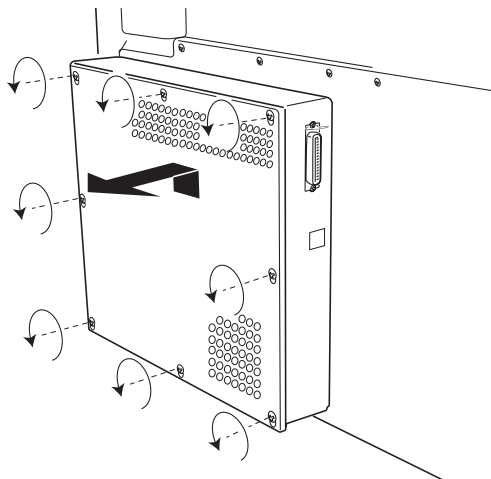


1. Open the top unit and remove the front cover and upper cassette.
2. Remove the seven screws from the right side cover together with the turn guide, and remove the cover.
3. When installing the right side cover, insert the turn guide shaft into the bearing.

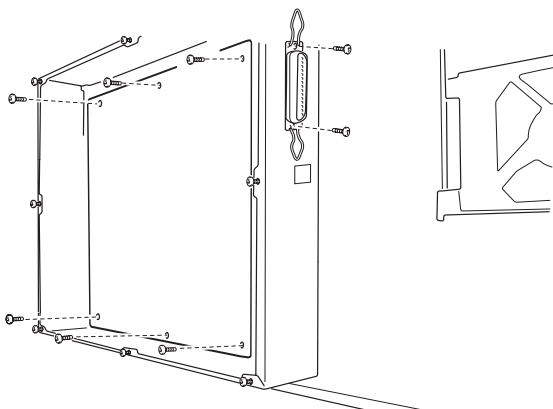


## Cover, RIP Board Removal

1. Loosen the eight screws and remove the RIP cover by sliding upward.

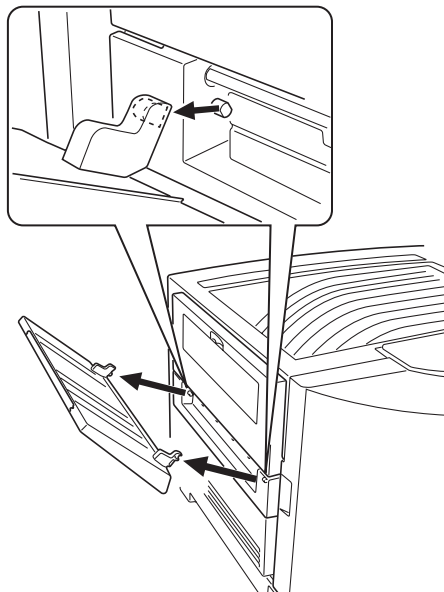


2. Remove the three harnesses and one flat cable of the RIP board connector.



3. Remove the two screws from the parallel port connector and the screw from the USB connector.
4. Remove the eight screws from the RIP board together with the parallel connector, and remove the RIP board.

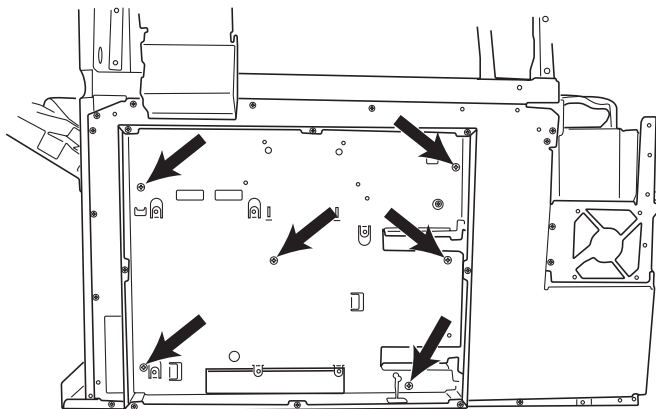
## Tray, Paper Exit Removal



1. Unlatch the hinge at the back side, then unlatch the hinge on the front side.
2. Remove the paper exit tray.

## RIP Box Removal

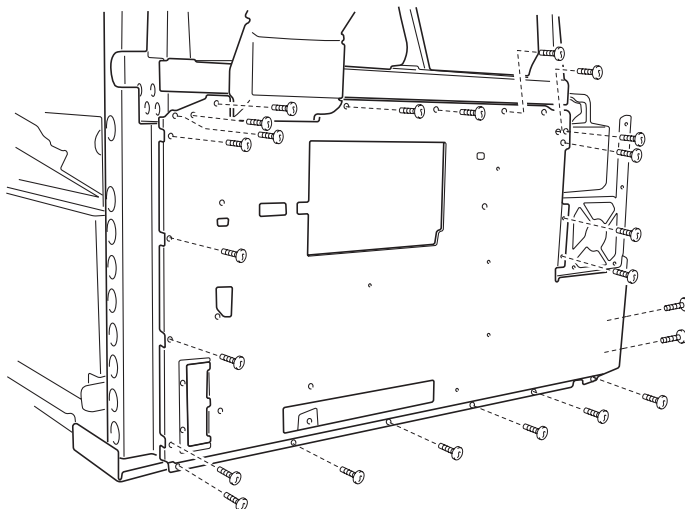
1. Remove the six screws from the RIP box.



2. Slightly lift and remove the RIP box.

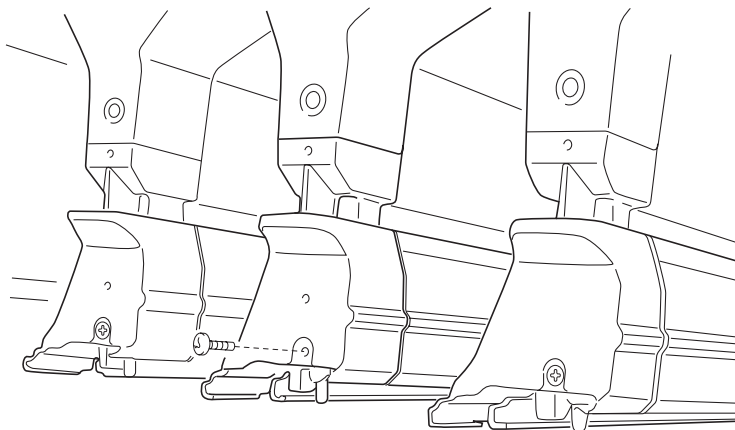
## Electronic Box Removal

1. Open the top unit and remove the back cover, front cover, cassette, turn guides and right side cover.
2. Remove the screws from the electronic box.
3. Disconnect the two cables from the rear of the electronic box and remove the box.



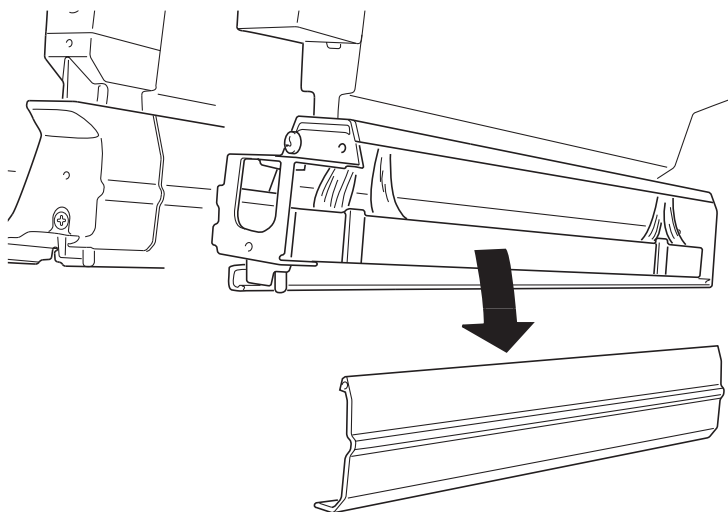
## LED Printhead Removal

1. Open the top unit, remove the top cover, toner cartridges and photodeveloper drum units.

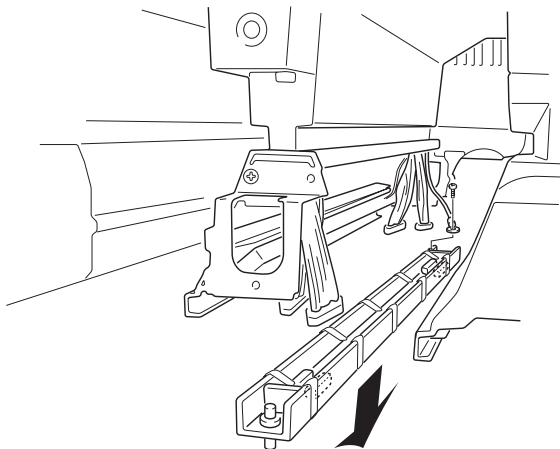


**Note:** Remove the transfer belt, or spread a cloth or paper over the transfer belt to protect it from damage.

2. Remove the screw from the printhead holder, and remove the holder.
3. Remove the front and rear printhead springs.
4. Remove the two screws (front and rear) from the right slide rail, and remove the rail.



5. Remove the four connectors from LED printhead.
6. Remove the two screws from the ground wires.

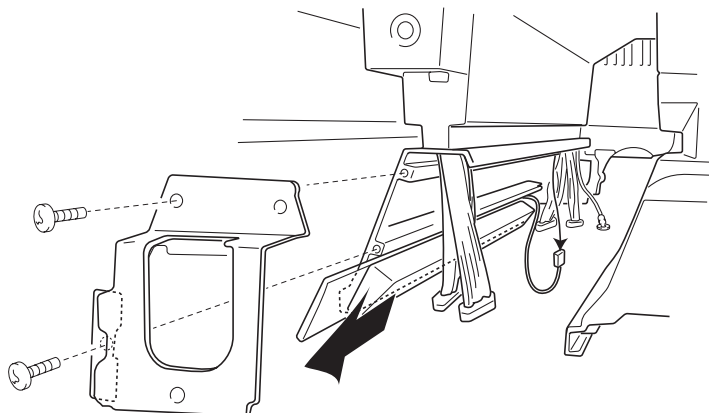


When replacing the LED printhead, replace the corresponding EEPROM shipped with the printhead, on the printhead controller board. Place the printer in **Diagnostic Mode**, input the printhead light quantity value plus **eight** (refer to note below) from the printhead label. Be sure to remove any fingerprints or stains from the printhead lens. The positioning pins at the both ends of the printhead are fixed with hexagon nuts. Do not loosen or remove either nut, as the image will un-focus.

**Note:** Light intensity value = printhead label value plus eight.

## Eraser Removal

1. Remove the appropriate printheads. Spread a cloth or paper over the transfer belt to protect it from damage.
2. Remove the two screws from HSP holder, and remove the holder.

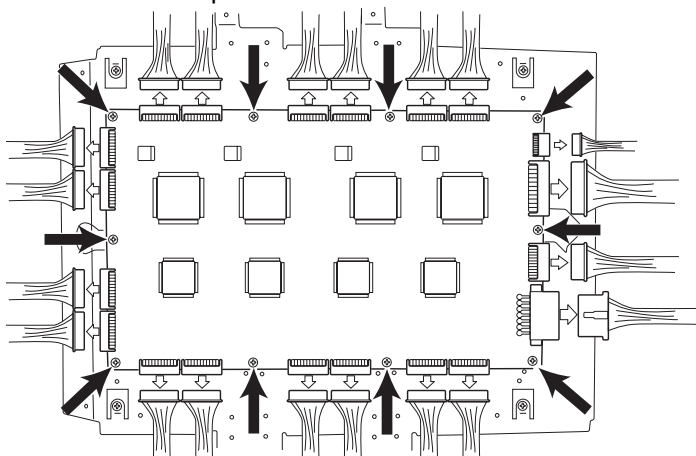


3. Remove the top cover.
4. Disconnect the connector (see arrow).
5. Remove the eraser.



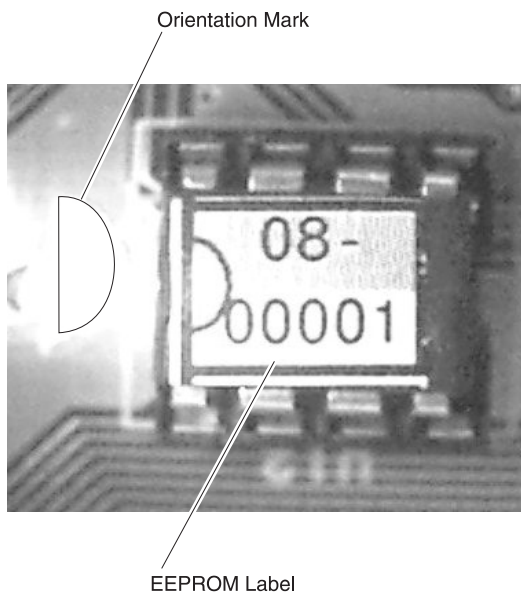
## Printhead Controller Board Removal

1. Remove the top cover.
2. Remove the 20 printhead controller board connectors.



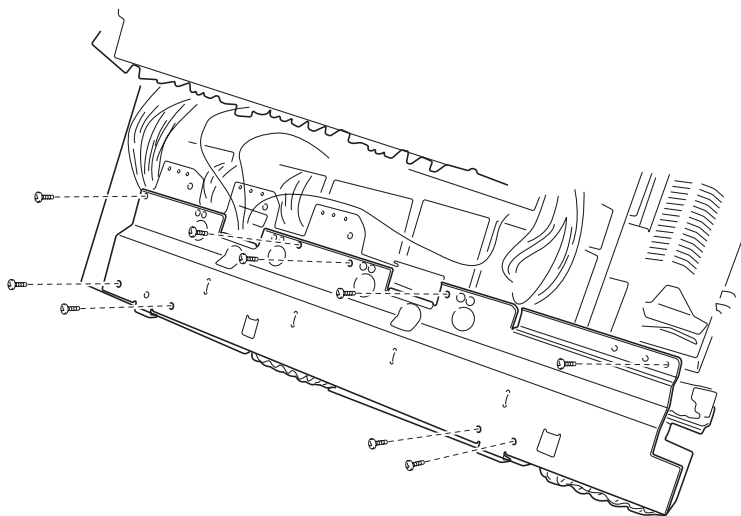
3. Remove the 10 screws from the printhead controller board, and remove the board.

**Note:** When replacing the board, be sure to return the four EEPROMs on the former board to the same positions on the new board.

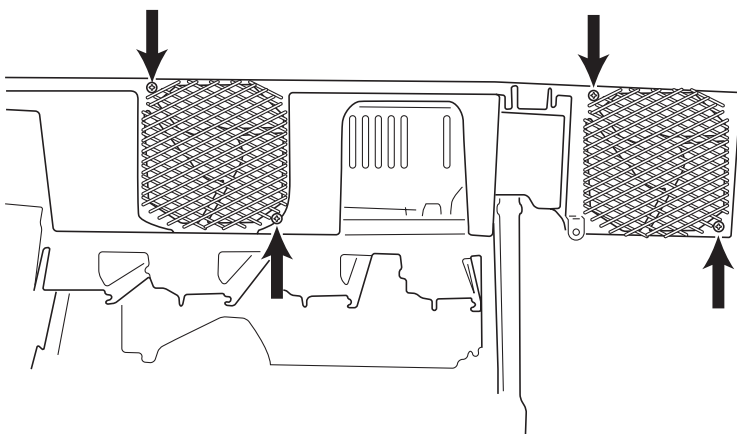


## Upper Fan Removal

1. Open the top unit and remove the toner cartridges and photodeveloper drum units, top cover, and face-down guide assembly.
2. Remove the four screws and the five screws from the upper bracket, and remove the bracket.



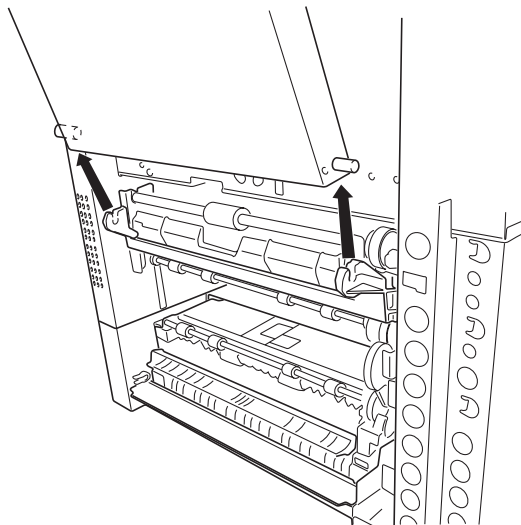
3. Remove the two screws from the left fan, and remove the fan.



4. Remove the two screws from the right fan, and remove the fan.

## Multipurpose Feeder Tray Removal

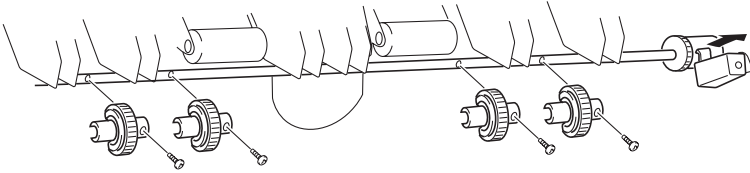
1. Open the top unit and remove the front cover, cassette feeder, turn guides and right side cover.



2. Open the multipurpose feeder and slide it toward the magnet in the direction of the arrow, removing it from the printer.

## Paper Feed Roller Removal

1. Remove the front cover.
2. Remove the manual paper feed tray.
3. Remove the right side cover and turn guide.
4. Remove the upper cassette.
5. Release the clutch until the paper feed roller screws are visible.  
Turn the paper feed roller, and remove the screws from the roller.

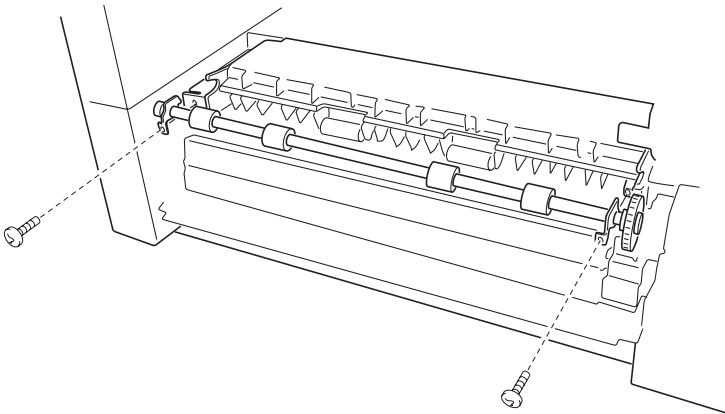


6. Remove the paper feed roller from the shaft.

**Note:** If the paper feed roller surface is stained with oil or other contaminants, clean it with cloth moistened with alcohol.

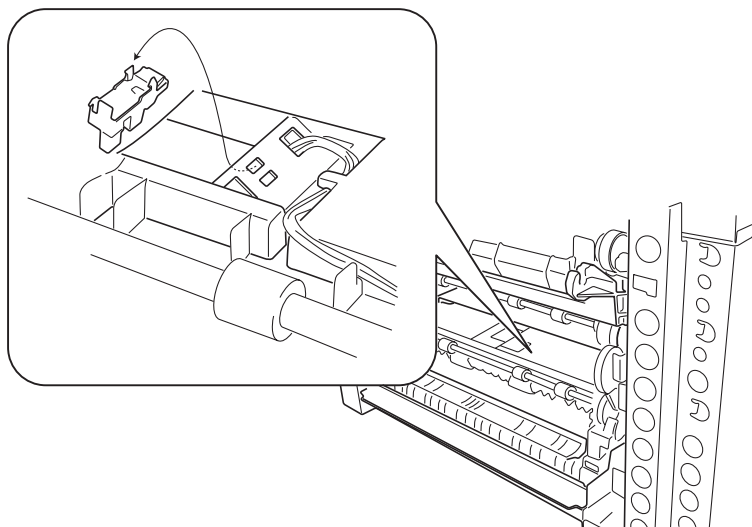
## Paper Carrying Roller Removal

1. Open the turn guide.
2. Remove the two screws from the paper carrying roller, and slide the bearing forward.



## Paper Present Sensor Removal

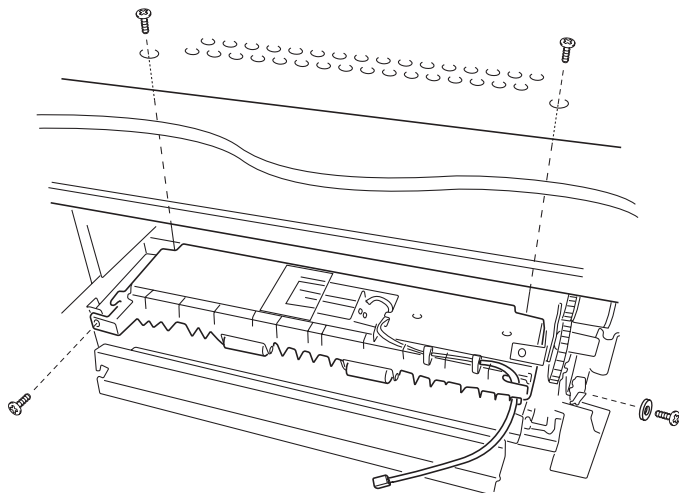
1. Open the paper feed cover and pull out the duplex unit halfway.
2. Unclip the paper present sensor from the mounting.



3. Disconnect the connector and remove the sensor.

## Paper Feed Frame Removal

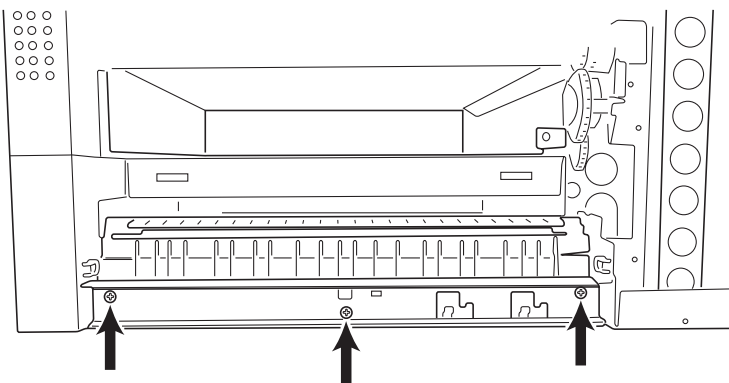
1. Open the top unit and remove the RIP board cover, RIP board, RIP box, and electronic box. Open the turn guide and paper feed cover and pull out the duplex unit halfway.
2. Remove the belt unit.
3. Disconnect the connector and remove the three screws, and the screw from the paper feed frame.



4. Remove the clip from the paper feed roller shaft and remove the gear.
5. Remove the paper feed frame.
6. Disconnect the sensor cable.

## Cassette Guide Removal

1. Remove the paper feed frame.
2. Remove the front cover, cassette, turn guide, right side cover, and paper feed frame.
3. Remove the screws from the cassette guide, and remove the guide.

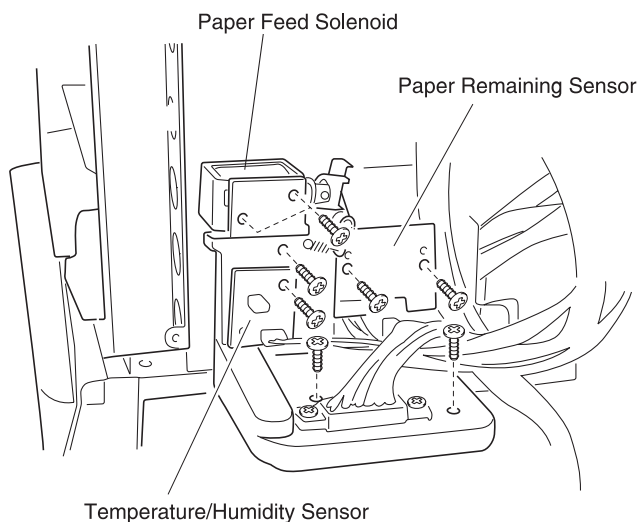


## Temperature/Humidity Sensor Removal

### Paper Feed Solenoid Removal

1. Open the top unit and remove the RIP cover, RIP board, RIP box, and electronic box.
2. Remove the screw from the temperature/humidity sensor, and remove the sensor.
3. Remove the two screws from the paper feed solenoid bracket and remove the solenoid.
4. Remove the spring from the solenoid plunger arm.

**Note:** Be sure to use the specific screws during installation. Long screws will damage the solenoid.



### Paper Remaining Sensor Removal

1. Remove the paper feed frame.
2. Remove the two screws from the paper remaining detection sensor and remove the sensor.



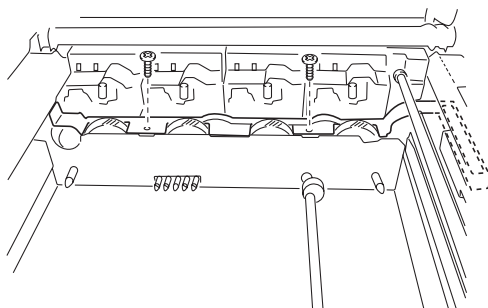
## Gear Cover Removal

## Multipurpose Feeder Roll Removal

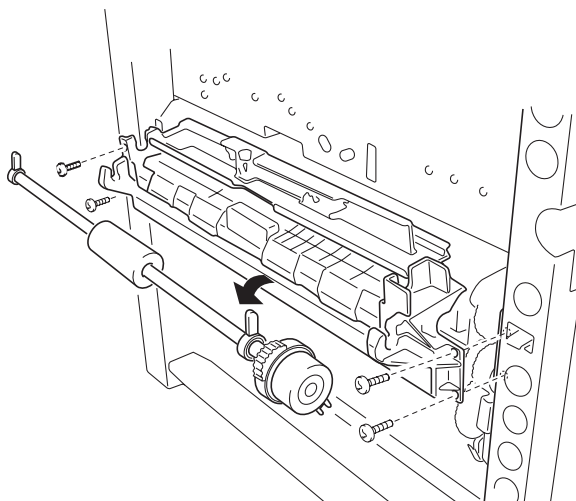
## Multipurpose Feeder Clutch Removal

## OHP Detection Sensor (Upper) Removal

1. Open the top unit, and remove the upper cassette, front cover, multipurpose feeder, right side cover, and turn guide.
2. Remove the two screws from the gear cover, and remove the cover.

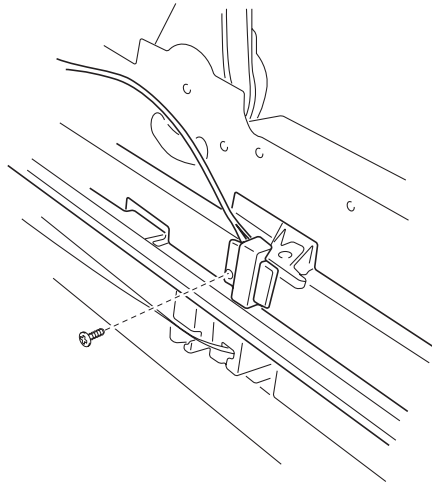


3. Remove the four screws from the multipurpose feeder frame and the ground board screw.

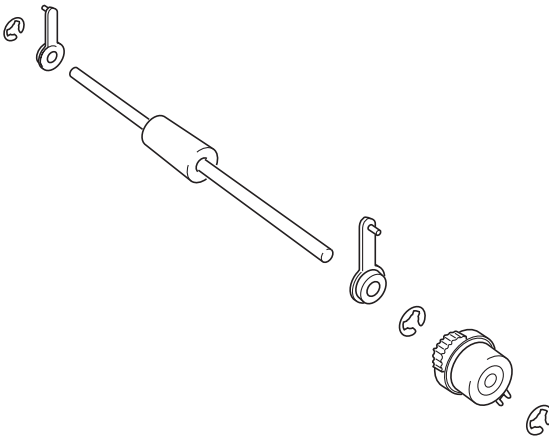


4. Disconnect the connector of the multipurpose feeder paper feed sensor.
5. Pull out the multipurpose feeder frame slightly.

6. Remove the screw from the OHP detection sensor (upper).



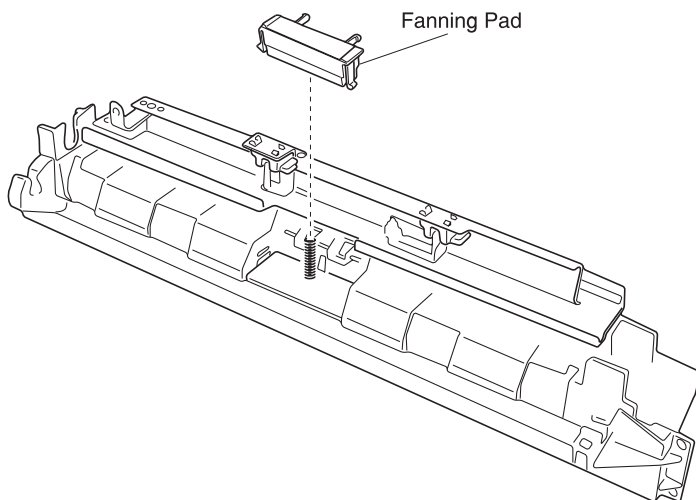
7. Turn the bearing stopper of the multipurpose feeder roll forward 1/4 turn and remove upward.
8. Remove the C-clip and remove the multipurpose feeder clutch.



**Note:** After reassembling the components, coat the contact areas of the multipurpose feeder roll shaft and multipurpose feeder ground plate with conductive grease. If the paper feed roller surface is stained by oil or other contaminant, clean with cloth moistened with alcohol.

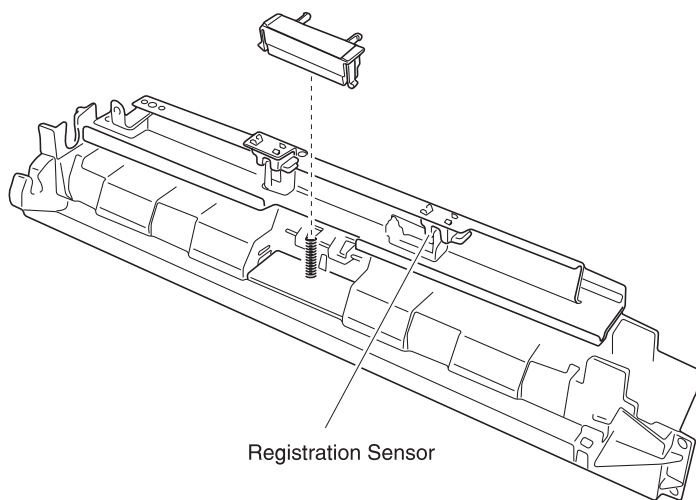
## Fanning Pad Removal

1. Open the top unit and remove the upper cassette, front cover, turn guide, multipurpose feeder, right side cover, and multipurpose feeder roll.
2. Release clips at 4 positions and remove the fanning pad.



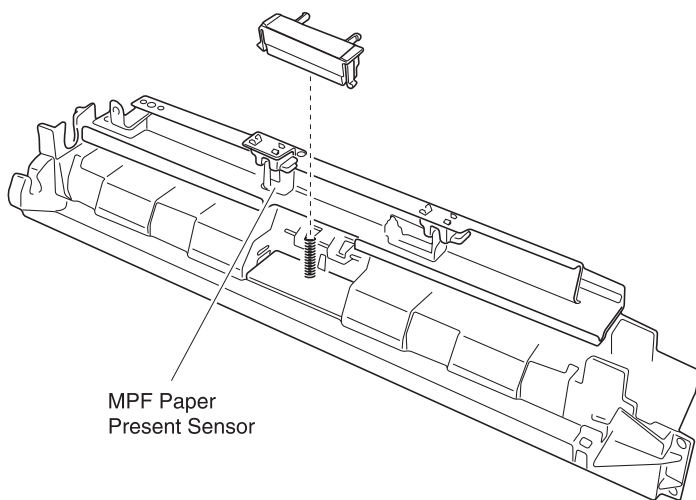
## Registration Sensor Removal

1. Open the top unit and remove the upper cassette, front cover, turn guide, multipurpose feeder, right side cover, and multipurpose feeder frame.
2. Disconnect the connector of the registration sensor and remove the sensor.



## Multipurpose Feeder Paper Present Sensor Removal

1. Open the top unit and remove the upper cassette, front cover, turn guide, multipurpose feeder, right side cover, turn guide, and multipurpose feeder frame.
2. Disconnect the connector and remove the multipurpose feeder paper present sensor.



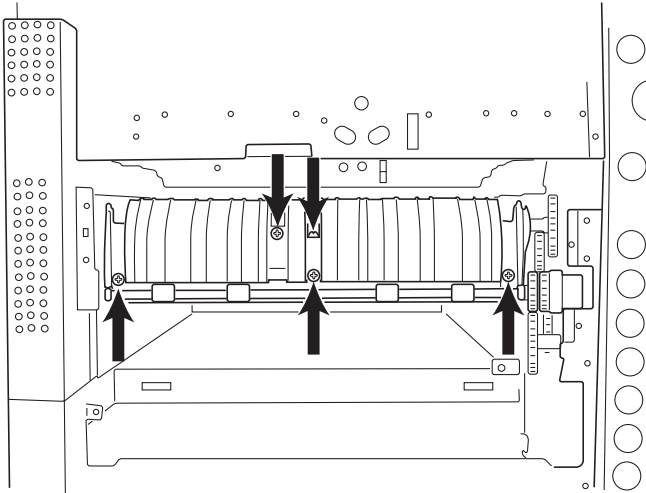
## Paper Carrying Frame Removal

## Paper Carrying Roller (Upper) Removal

## Paper Carrying Clutch Removal

## OHP Detection Sensor (Lower) Removal

1. Open the top unit and remove the upper cassette, front cover, turn guide, multipurpose feeder, right side cover, turn guide, OHP detection sensor (upper), multipurpose feeder frame, back cover, RIP cover, RIP board, RIP box, and electronic box.
2. Remove the four screws from the paper carrying frame.

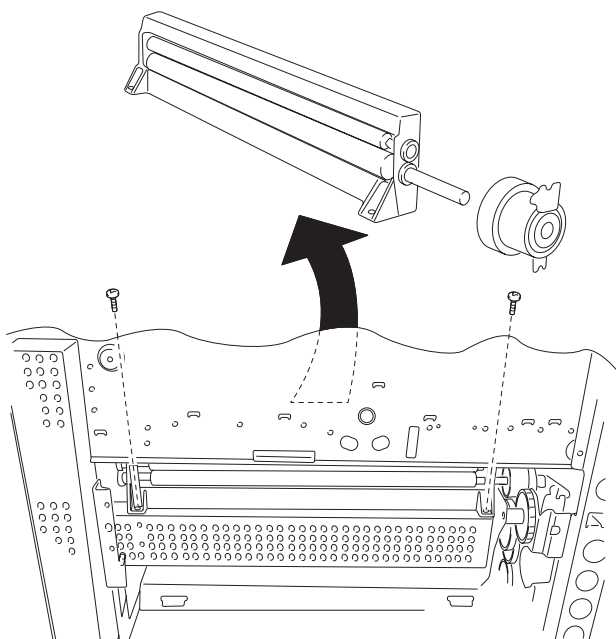


3. Remove the screw from the OHP sensor (lower).
4. Remove the paper carrying roller (upper).
5. Remove the paper carrying clutch.

**Note:** When installing, the clip of the paper carrying clutch should be securely set to the stop, and the shaft of the paper carrying clutch and spring should be securely in contact with each other.

## Registration Frame, Registration Clutch Removal

1. Open the top unit, open the turn guide, open the paper feed cover and pull out the duplex unit halfway.
2. Remove the two screws from the registration frame.



3. Remove the registration clutch.

**Note:** When installing, set the clip of the registration clutch to the stopper.

## Transfer Belt Removal

To replace the transfer belt before the **Life Warning** or **Exhausted** messages appear, open the Supplies Menu on the operator panel and select **Replace Supplies**, select **Belt**, and select **Replace Now**. If the **80 Transfer Belt Life Warning** or **Exhausted** message appears, press **Select** when the **Select = Replace** message appears. The message **Preparing for Maintenance** appears, followed by **Printer Ready for Maintenance**, then **Power Off to Replace Items**. If the operator panel is inoperable or if you have an unrecoverable error code, perform steps 1 through 4 and then:

- Remove the transfer belt cover.
- Override the front cover interlock switch.
- Turn the printer on.
- Look for the belt to lower during power on sequence.
- Turn the printer off when the belt lowers.
- Turn the printer off and proceed with step 5.

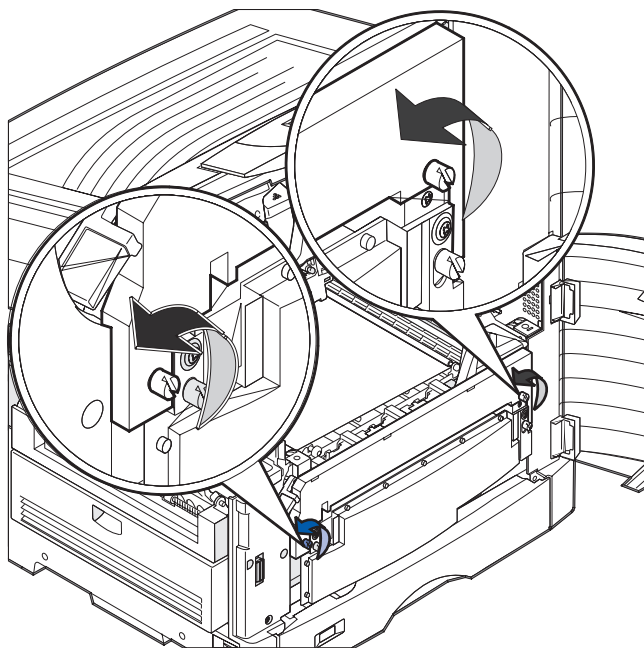
**WARNING:** Do not turn the printer off until the **Power Off to Replace Items** message appears.

1. Turn the printer off along with any optional devices connected to the printer.
2. Open the front cover and top unit.

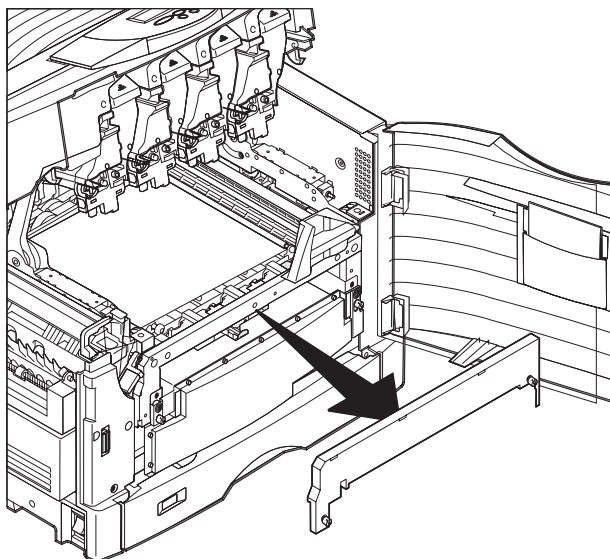
**WARNING:** Do not touch, drop or place anything on the transfer belt. Touching the surface of the transfer belt or placing items on the belt may cause damage.



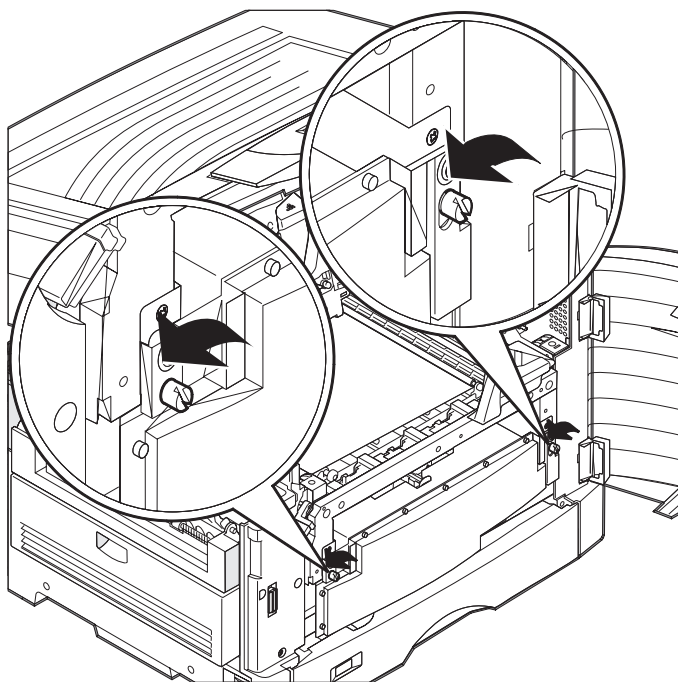
3. Loosen the thumbscrews as shown.



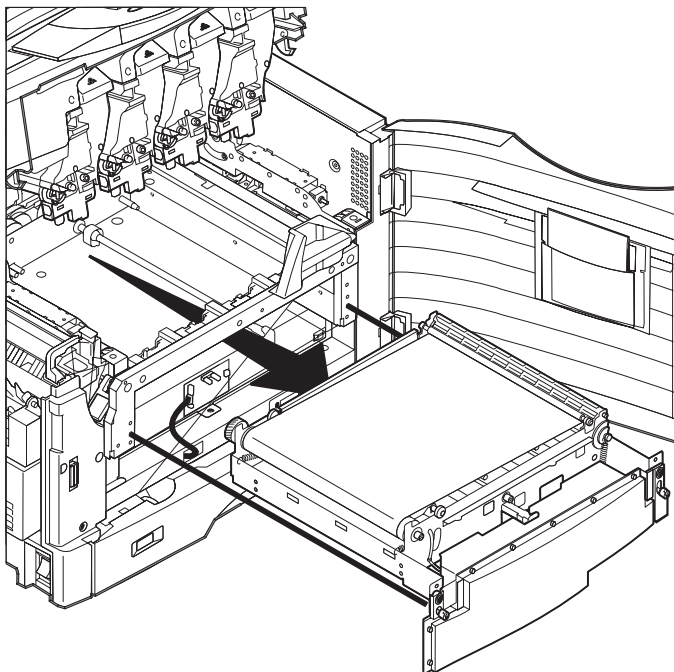
4. Lift and remove the transfer belt cover.



5. Loosen the thumbscrews as shown.



6. Pull the transfer belt out.



7. After replacing the transfer belt and removing the four shipping spacers, tighten the transfer belt thumbscrews and reinstall the transfer belt cover.
8. Close the top unit and rotate the locking lever to the right, close the front cover.
9. Turn the printer on.

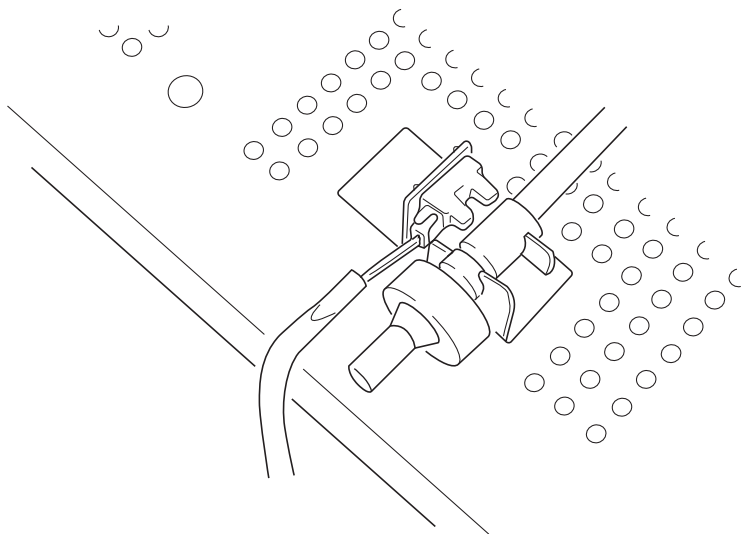
**Note:** If the message **Did you Replace Belt?** appears, wait for the message **Select = yes Stop = no** and press **Select**.

If you replaced the belt before the **Life Warning** or **Exhausted** message appeared, open the Supplies Menu on the operator panel and select **Replace Supplies**, then select **Belt**, and select **Replaced**. The message **Printing Alignment Page** appears and the printer prints the alignment page.

Follow the instructions on the display to set the alignment values for the new transfer belt.

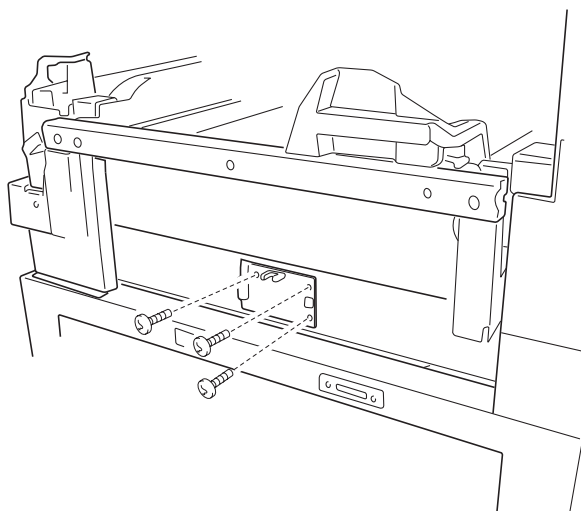
## Belt Up/Down Detection Sensor Removal

1. Open the top unit and remove the waste toner bottle and belt unit.
2. Remove the belt up/down detection sensor from the mounting board.
3. Remove the connector from the belt up/down detection sensor.



## Sensor Board Removal

1. Remove the transfer belt unit.
2. Remove the four connectors.
3. Remove the three screws from the waste toner full sensor board.

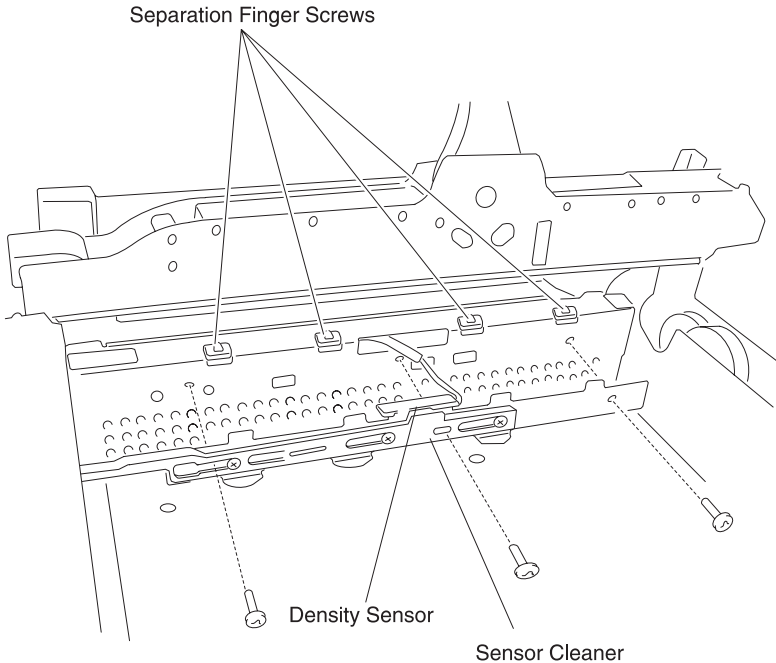


## Density Sensor Removal

### Separation Fingers Removal

### Sensor Cleaner Removal

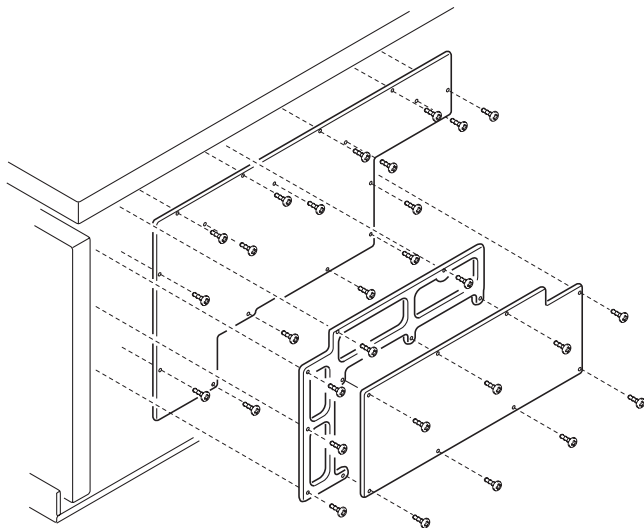
1. Open the top unit and remove the belt unit.
2. Remove the three screws from the sensor bracket.



3. Remove the harness band and remove the two screws from the density sensor from the sensor bracket.
4. Remove the three set screws from the sensor cleaner assembly from the sensor bracket.
5. Remove the four separating finger screws from the fuser entrance guide.

## Printer Controller Removal

1. Open the top unit and remove the RIP cover, RIP board, RIP box, and electronic box.
2. Remove the connectors and the eight screws from the printer controller. Pay attention to the location or label the two pin connectors when removing them from the board to avoid re-connection into the wrong location.



**Note:** When replacing the board, install the EPROM (U5) of the former board to the new board. Also, when replacing the EPROM, set the light intensity in the diagnostic mode and set the counter and printer alignment.

## High Voltage Power Supply Board (HVU) Removal

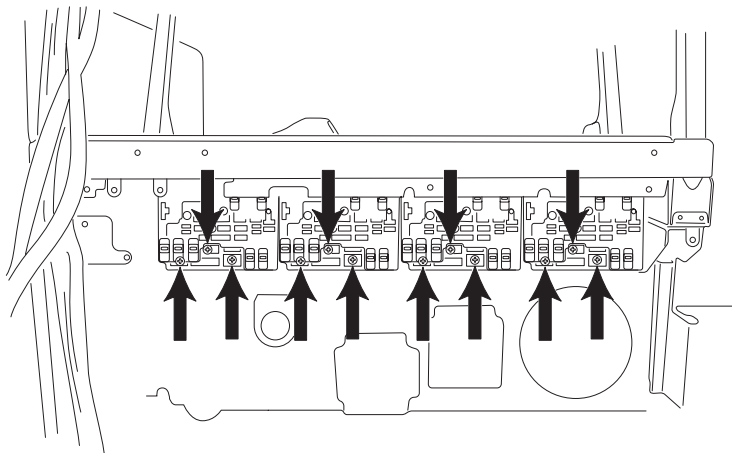
1. Open the top unit and remove the RIP cover, RIP board, RIP box, electronic box, and printer controller board.
2. Remove the five screws from the printer controller board bracket.
3. Remove the connectors and remove the 12 screws.
4. Remove the high voltage power supply board.



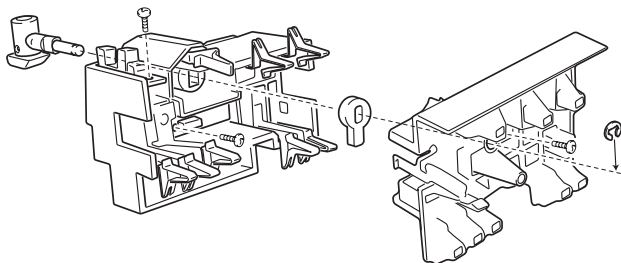
## R Sub Frame Removal

### Toner Remaining Sensor Removal

### Drum Gear Sensor Removal



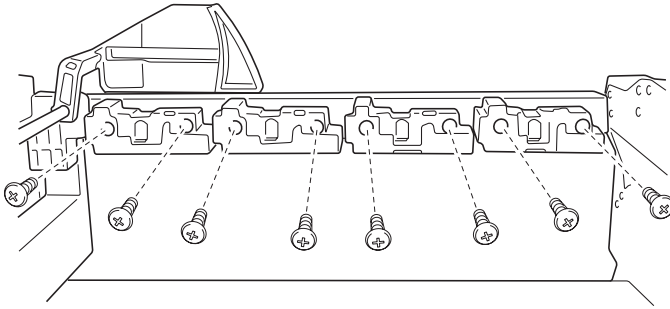
1. Open the top unit, and remove the RIP cover, RIP board, RIP box, electronic box, printer controller, printer controller bracket, and high voltage power supply board.
2. Remove the two screws from the sub frame R from inside of the main unit.
3. Remove the screw and C-clip from the sub frame cover.
4. Remove the screw from the toner remaining sensor. A different toner remaining sensor is used for each color.
5. Remove the screw from the drum gear sensor.



**Note:** Install the drum gear sensor to the colors specified.

- Yellow: Y-drum sensor assembly
- Black: K-drum sensor assembly

## Sub Frame F1, Sub Frame F2 Removal



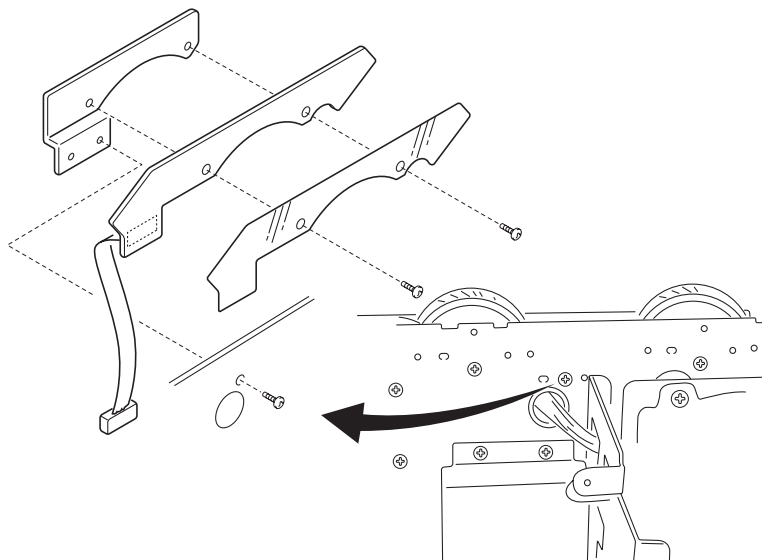
1. Open the top unit.
2. Remove the two screws from the sub frames F1 and F2.

**Note:** Spread a paper or cloth over the belt to protect the belt. Set the sub frame F to the position of the following colors depending on presence of upper detection button.

- Magenta: Sub frame F1 (Detection button available)
- Cyan: Sub frame F2 (Detection button unavailable)
- Yellow: Sub frame F2 (Detection button unavailable)
- Black: Sub frame F1 (Detection button available)

## Drive Gear Unit Sensor Assembly Removal

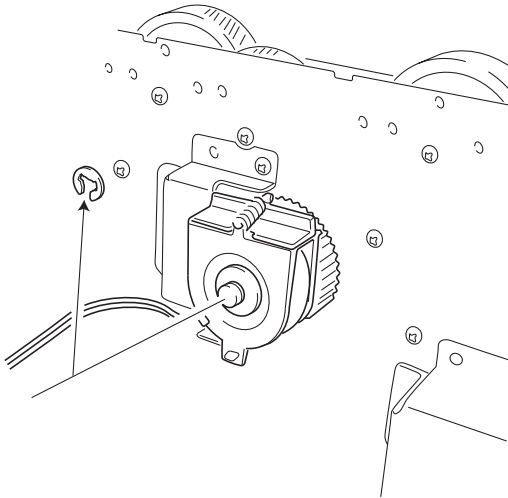
1. Open the top unit and remove the gear cover, RIP cover, RIP board, RIP box, electronic box, printer controller, and high voltage power supply board.
2. Remove the screw from the drive gear unit sensor assembly.



3. Remove the two screws of the drive gear unit sensor from the drum drive gear sensor assembly.

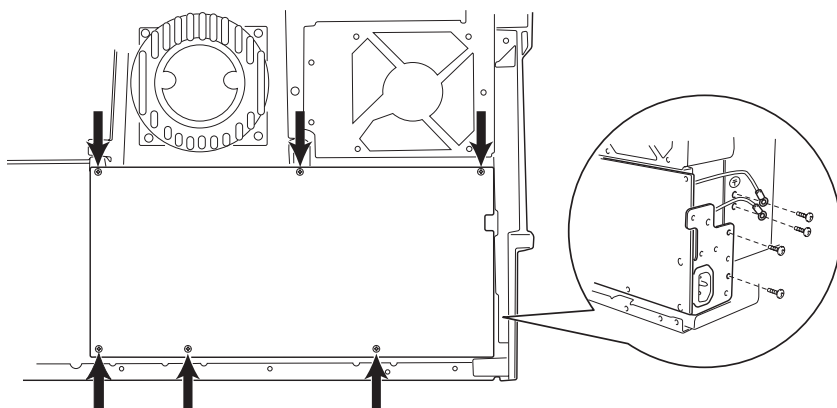
## Belt Up/Down Clutch Removal

1. Open the top unit and remove the RIP cover, RIP board, RIP box, and electronic box. Remove the printer controller. Remove the printer controller bracket and the high voltage power supply board.
2. Remove the C-clip from the belt up/down clutch, and remove the clutch.



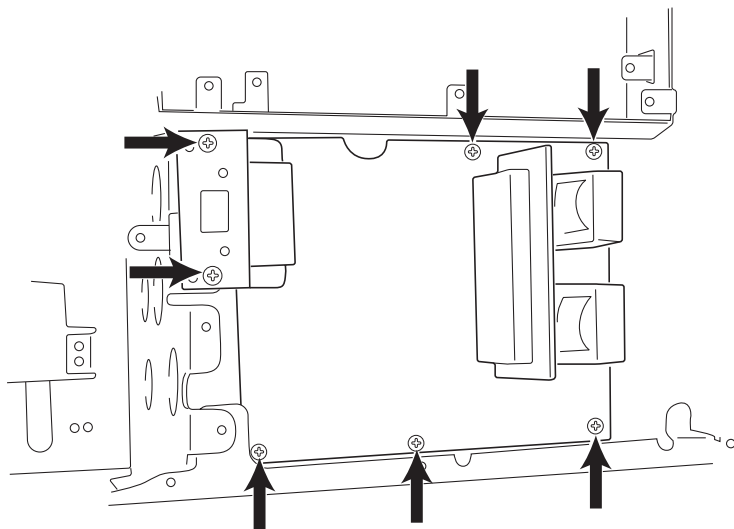
## Power Supply 1 Removal

1. Open the top unit and remove the RIP cover, RIP board, RIP box, and electronic box. Remove the cassette, left front cover, and back cover. Remove the left side cover.
2. Remove the insulation sheet connector, two ground wires, five screws, two screws with washers, two screws with spring washers and remove the power supply. (When installing, incline the ground wire by 45 degrees.)



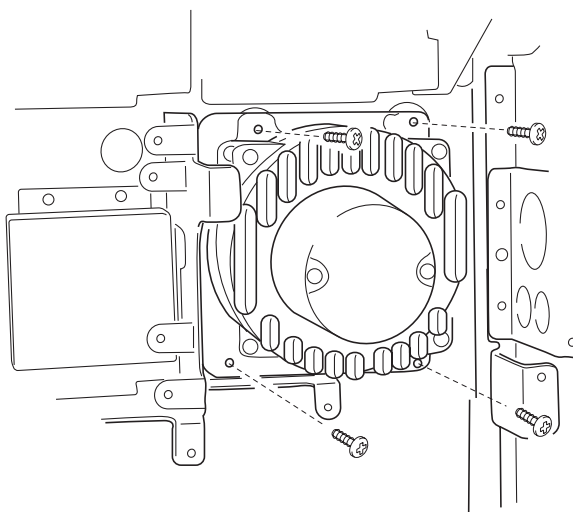
## Power Supply 2 Removal

1. Open the top unit and remove the RIP cover, RIP board, RIP box, and electronic box.
2. Disconnect the connector and remove the seven screws from Power Supply 2, and remove the power supply.



## Drive Motor Assembly Removal

1. Open the top unit and remove the RIP cover, RIP board, RIP box, and electronic box.
2. Remove the upper cassette, left front cover, and back cover.
3. Remove the turn guide.
4. Open the paper feed cover and remove the duplex unit.
5. Remove the side left cover. Remove the connector, two ground wires, and power supply 1.
6. Remove the connector (CN2, CN4 and CN5) from the motor drive board.
7. Remove the four screws with spring washers from the drive motor.



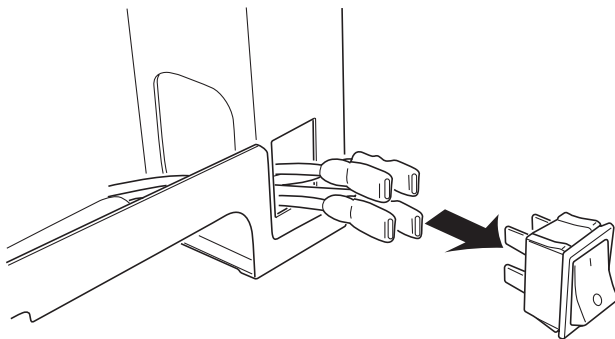
**Note:** When installing, hold the motor securely and mount the screws.

## Motor Drive Board Removal

1. Remove the upper cassette, front cover B, paper feed cover, and the left side cover.
2. Disconnect the five connectors and remove five screws, and two screws from the motor drive board.

## Power Switch Removal

1. Remove the upper cassette, left front cover, paper feed cover, and left side cover.
2. Unlock the power switch and pull out the power switch.



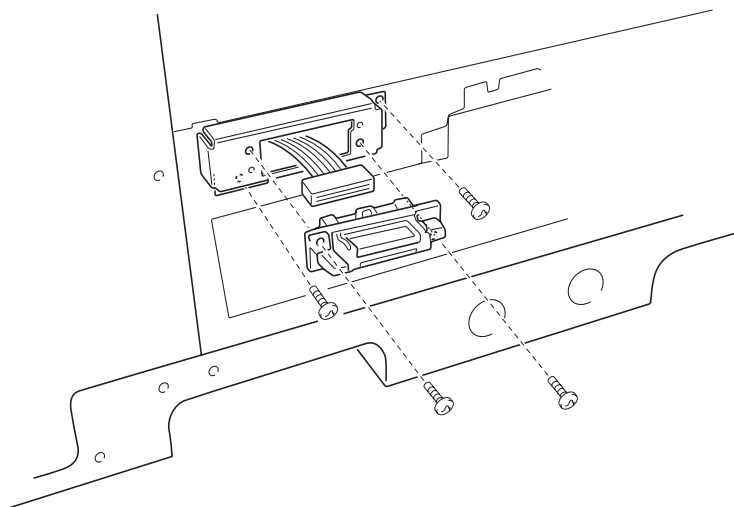
3. Remove each terminal connected to the power switch.

**Note:** When connecting, be careful to connect the connectors correctly. Insert the insulator cover completely covering the terminal.



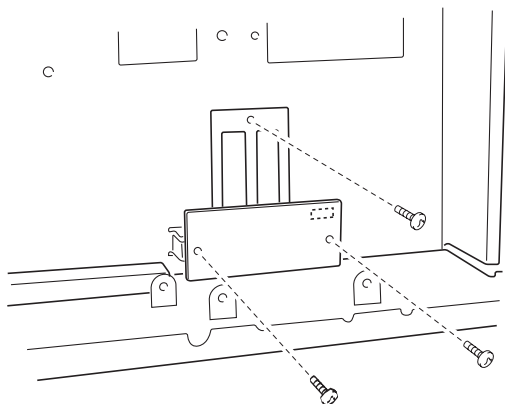
## Connector, Duplex Unit Removal

1. Open the top unit and remove the upper cassette, left front cover, paper feed cover, left side cover, RIP cover, RIP board, RIP box, and the electronic box. Remove the turn guide and open the paper feed cover and remove the duplex unit. Remove the left side cover and power supply A.
2. Disconnect the connector and remove the two screws from the mounting plate.
3. Remove the two screws of the drawer connector from the mounting plate drawer bracket.



## Paper Size Sensor Board Assembly Removal

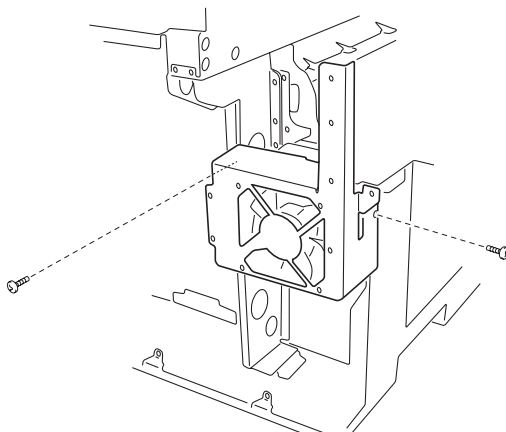
1. Open the top unit and remove the RIP cover, RIP board, RIP box, and electronic box. Remove the upper cassette, front cover B, and back cover. Open the turn guide and paper feed cover and remove the duplex unit. Remove the left side cover and power supply A.



2. Disconnect the connector and remove the two screws from the paper size sensor board, and remove the board.
3. Remove the screw from the size detection lever, and remove the lever.

## Main Unit Fan Removal

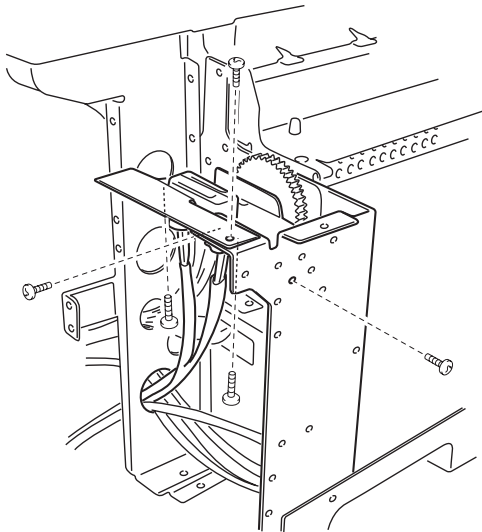
1. Remove the left side cover, the solenoid cover, and the rear cover.
2. Remove the two screws from the main unit fan bracket.



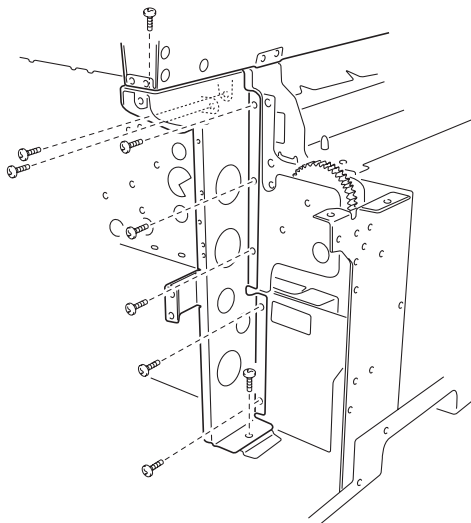
3. Remove the fan.

## Main Drive Unit Removal

1. Open the top unit and remove the gear cover, upper cassette, left front cover, paper feed cover, RIP cover, RIP board, RIP box, electronic box, and rear cover.
2. Open the turn guide and paper feed cover and remove the duplex unit.
3. Remove the left side cover, power unit 1, and power unit 2.
4. Remove the printer controller board.
5. Remove the bracket, high voltage power supply board, and sub frame R.
6. Remove the fuser unit, face up paper delivery unit, belt up/down clutch, and DC drive motor.
7. Remove the multipurpose feeder roll, registration roll, and paper carrying frame.
8. Remove the eight screws from the power supply 2 bracket.
9. Remove the two screws from the belt power supply 2.
10. Remove the two screws from the fan bracket.
11. Remove the three screws from the fuser connector plate.



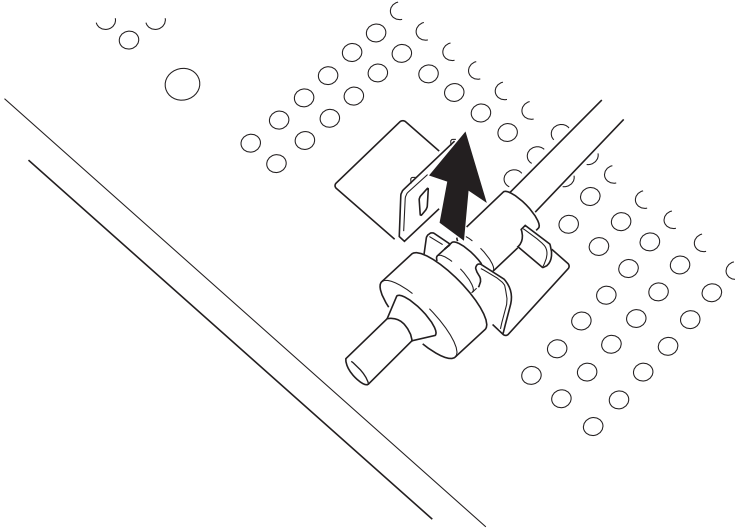
12. Remove the two screws of the fuser connector cable assembly from the fuser connector plate.



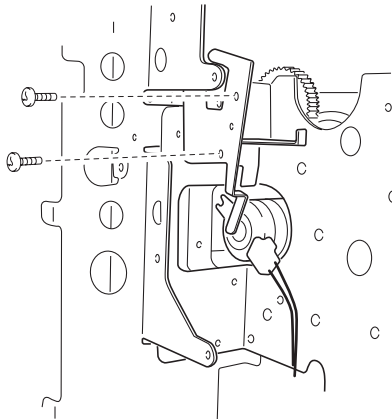
**Note:** Note the direction, when installing.

13. After removing the two screws on the bracket that attaches the rear side and paper exit side of the machine, remove the nine screws, from the bracket.

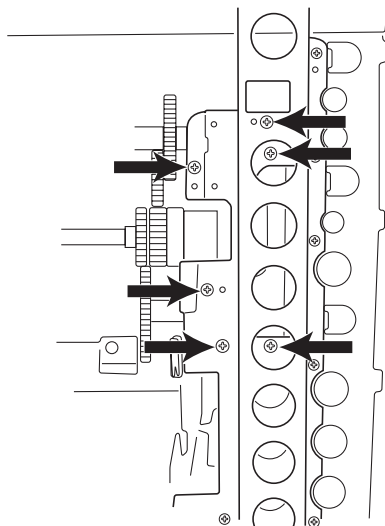
14. Remove the bearing from the belt up/down switching shaft and remove the belt up/down switching shaft.



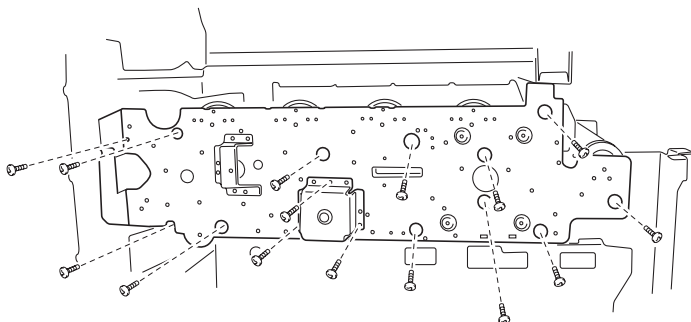
15. Remove the screw from the clutch stopper. The clutch stopper is attached to the ground plate with two screws.



16. Remove the six screws on the right side.



17. Remove the two screws from the drive unit, and remove the unit.
18. Remove the three screws from the belt up/down clutch box and remove the belt up/down clutch.



19. Remove the screw from the drum gear sensor and remove the sensor.

## Face Up Paper Exit Assembly Removal

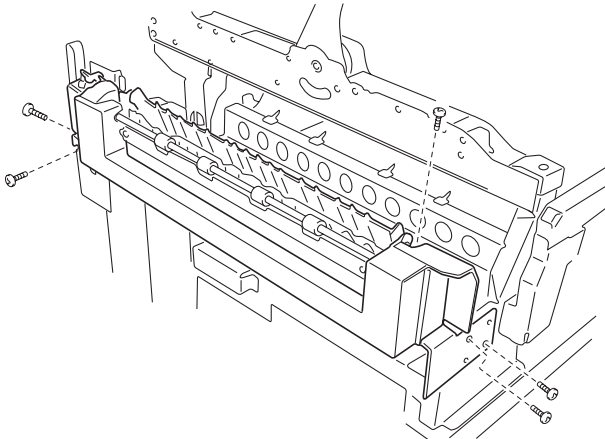
## Face Up/Down (Flapper Detection) Sensor Removal

## Face Up/Down Solenoid Removal

## Paper Delivery Sensor Removal

## Paper Exit Tray Switch Removal

1. Open the top unit and remove the upper cassette. Open the duplex cover and remove the duplex unit.
2. Remove the left front cover, left side cover and rear cover.
3. Remove the three screws from the face up delivery assembly and remove the assembly.



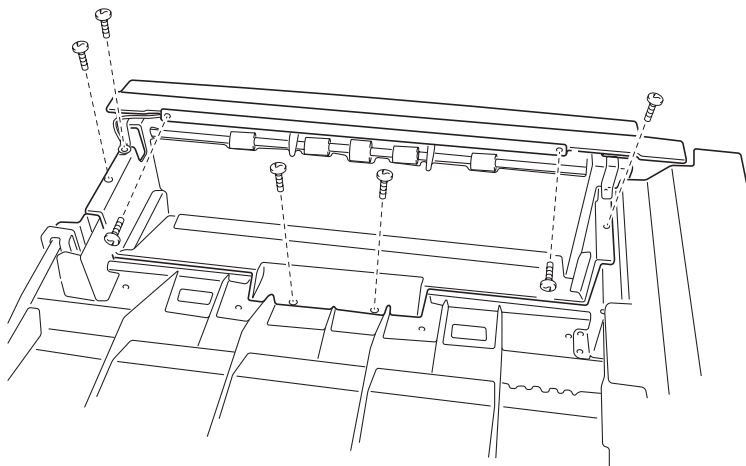
4. Remove the paper delivery sensor from the face up paper delivery assembly.
5. Remove the face up/down sensor from the face up paper delivery.
6. Remove the two screws from the face up/down solenoid and the face up paper delivery assembly. Remove the assembly.
7. Remove the screw from the paper exit tray switch and the face up paper delivery assembly. Remove the assembly.



## Face Down Guide Assembly Removal

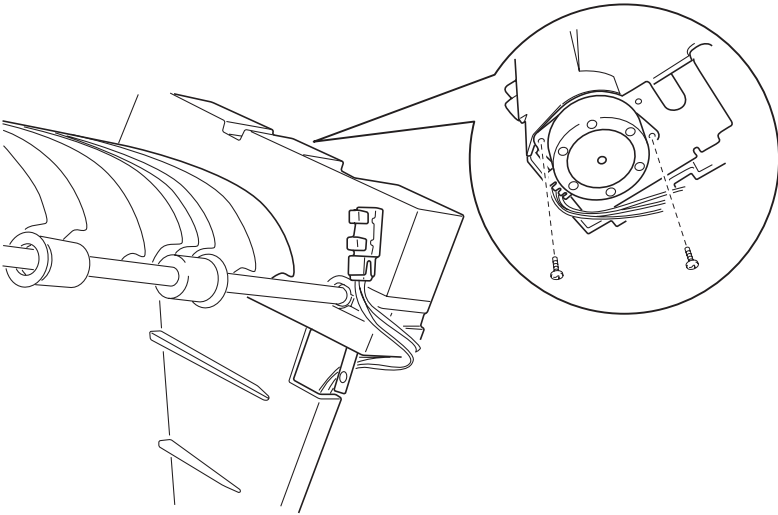
### Paper Exit Motor & Full Sensor Removal

1. Open the top unit and remove the toner cartridges, photodeveloper drum units, and upper cover.
2. Remove the top cover.
3. Disconnect the connector and remove the five screws and two snap bands from the face down guide assembly. Remove the assembly.



4. Remove the four screws from the face down cover and the face down guide assembly, and remove the assembly.

5. Remove the two screws of the motor from the face down guide assembly. Remove the assembly.

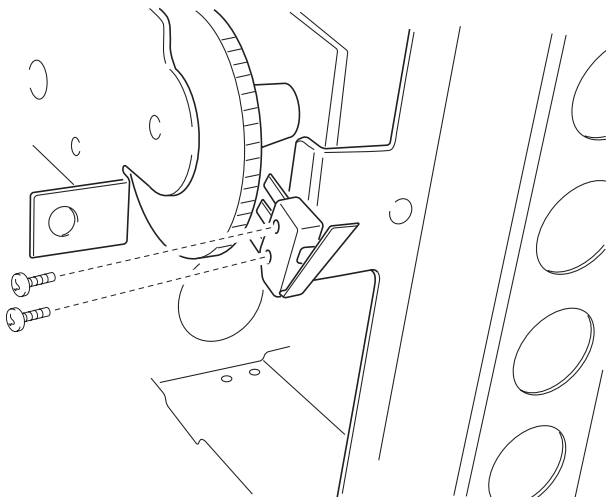


**Note:** When the motor is installed, press the motor 45 degrees in an upward direction when viewing from the rear.

6. Remove the face down paper delivery full sensor from the face down guide assembly.

## Turn Guide Cover Sensor Removal

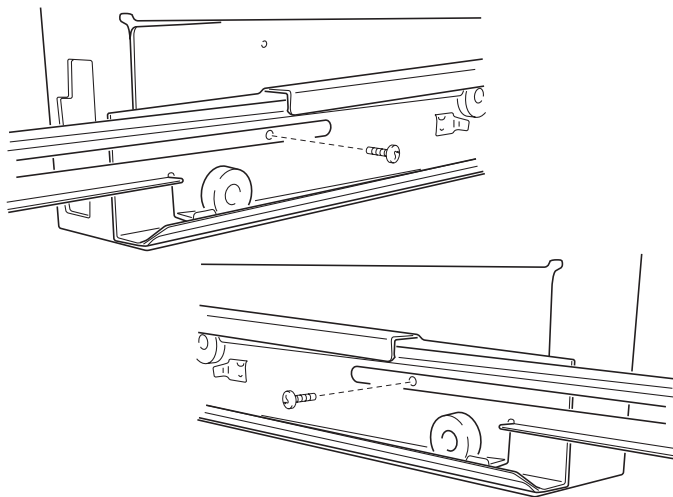
1. Open the top unit and remove the upper cassette, front cover, multipurpose feeder, right side cover, and turn guide.
2. Remove the two screws from turn guide sensor, and remove the sensor.



3. Remove the terminal.

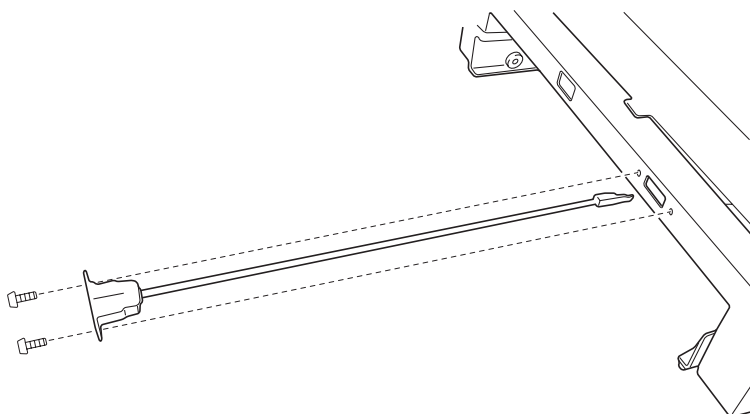
## Right Slide Rail Removal

1. Remove the upper cassette.
2. Remove the screw from both left and right slide rails.



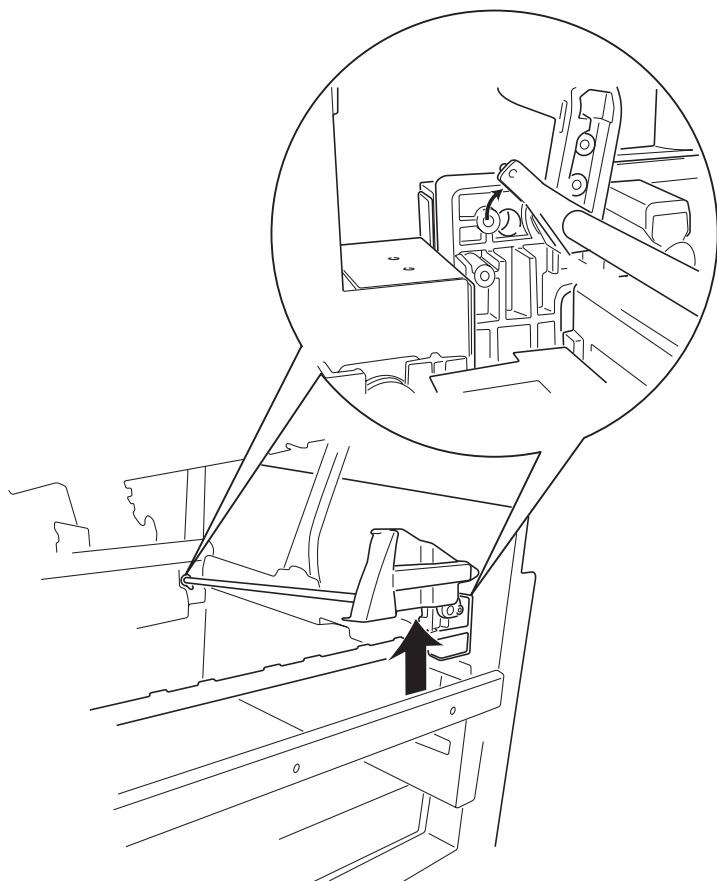
## Front Cover Open Switch Actuator Removal

1. Open the front cover.
2. Remove the two screws from the front cover open switch actuator.



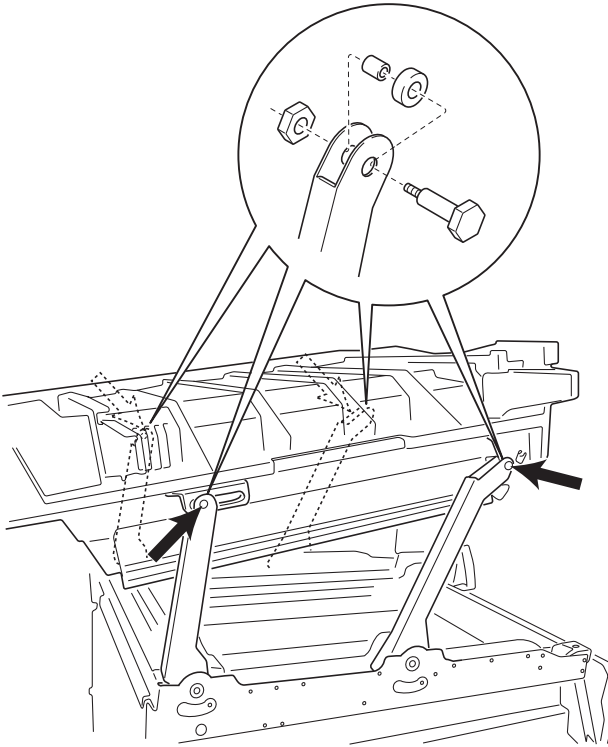
## Lock Handle Assembly Removal

1. Open the top unit.
2. Turn the plastic latch on the front and rear sides 90 degrees.
3. Remove the spring.
4. Remove the lock handle assembly.



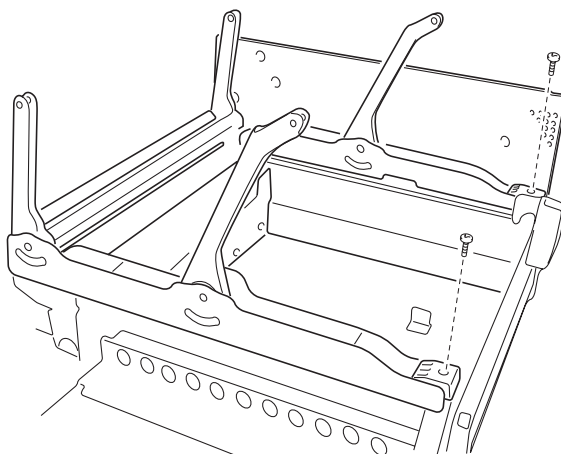
## Top Unit Removal

1. Open the top unit and remove the top cover and face-down guide assembly.
2. Remove the screws and remove the top unit.



## Stay Arm Removal

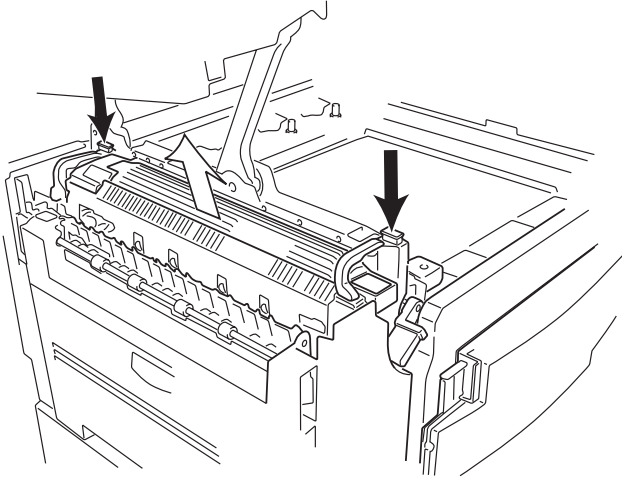
1. Open the top unit and remove the face down paper guide assembly.
2. Remove the yellow and black sub frame.
3. Remove the screw from the right stopper, and remove the stopper.



4. Remove the screw from the left stopper, and remove the stopper.
5. Remove the clip from the lock shaft.
6. Remove the 17 screws from the stay arm, and remove the arm.

## Fuser Removal

1. Open the top unit.
2. Pushing the front and back lock, hold the handle, raise and remove the fuser.



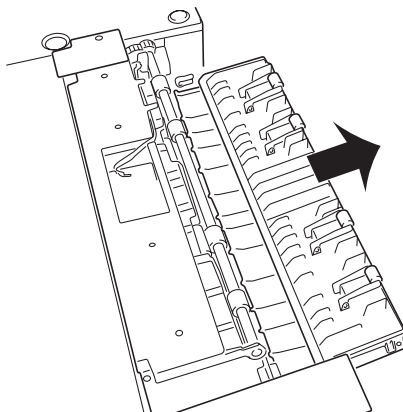


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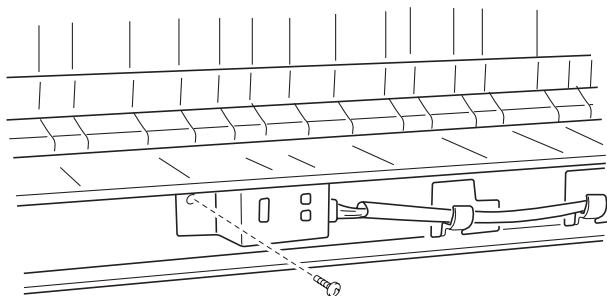
## Options Removals

### Expansion Paper Feeder Removal

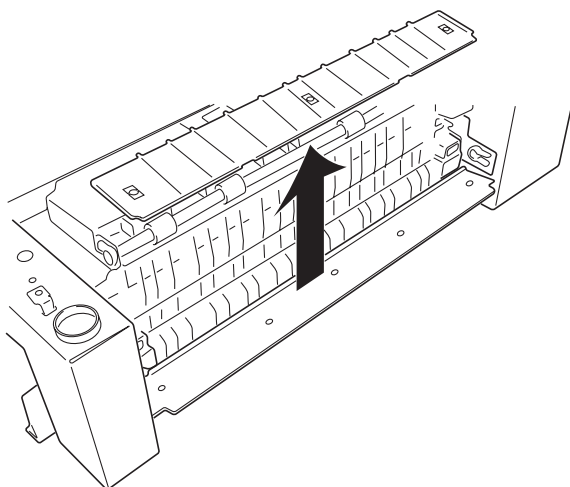
1. Remove the cassette.
2. Remove the two screws from the front cover, and remove the cover.
3. Remove the two screws from left side cover, and remove the cover.
4. Remove the two screws from right side cover A, and remove the cover.
5. Remove the two screws from right side cover B, and remove the cover.
6. Remove the screw from right side cover C, and remove the cover.
7. Remove the six screws from rear cover, and remove the cover.
8. Remove the turn guide. The cover is hinged in place.



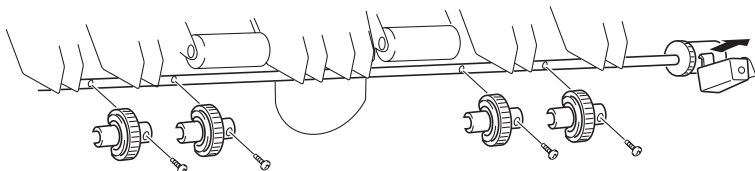
9. Remove the screw from the paper detection cover, and remove the cover.



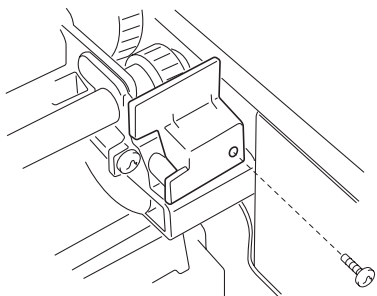
10. Remove the paper detection sensor.



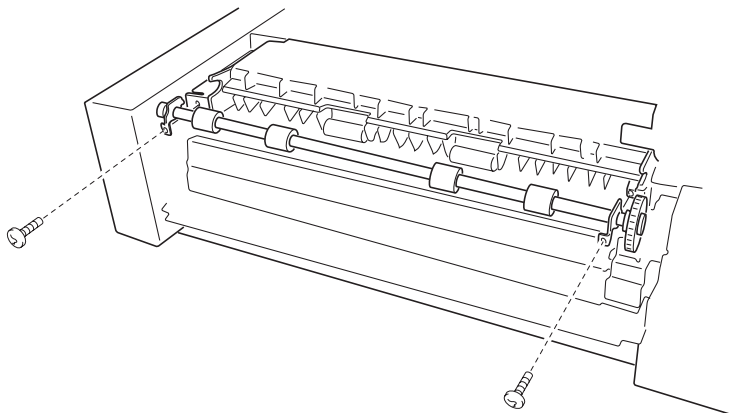
11. Remove the high capacity feeder guide. The cover is hinged in place.
12. Remove the four screws from the paper feed roller assembly N5 and remove the roller.



13. Remove the screw from the gear cover, and remove the cover.

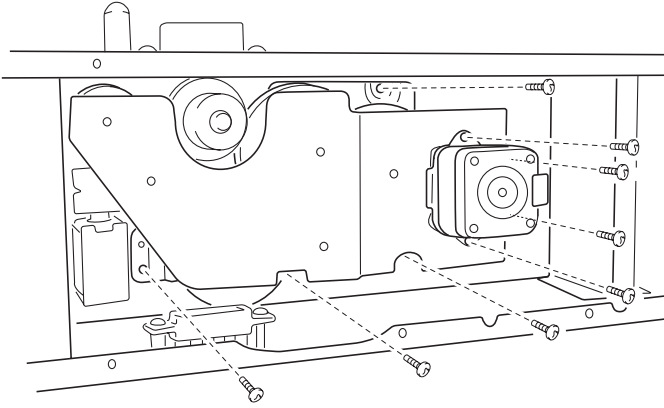


14. Remove the two screws from the paper carrying roller, and remove the roller.

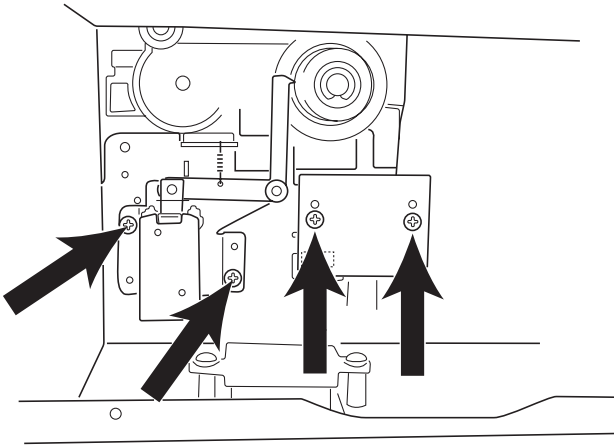


15. Remove the connector and remove the two screws from the drive motor, and remove the motor.

16. Remove the six screws from the drive assembly, and remove the assembly.

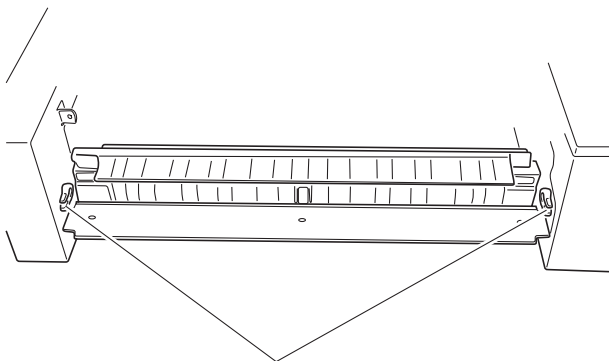


17. Remove the two screws from the paper remaining detection board, and remove the board.
18. Remove the four screws from the solenoid assembly, and remove the assembly.

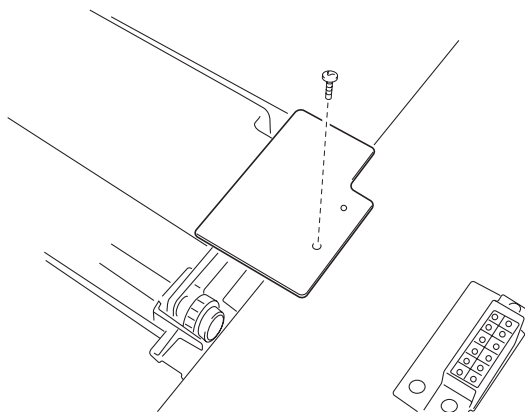


## 5055-01X

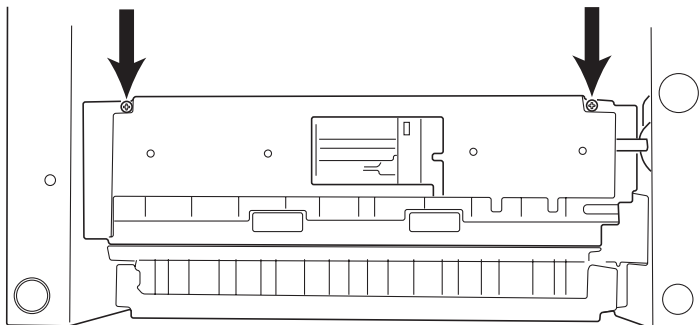
19. Remove the two bearings from the turn guide. The cover is hinged in place.



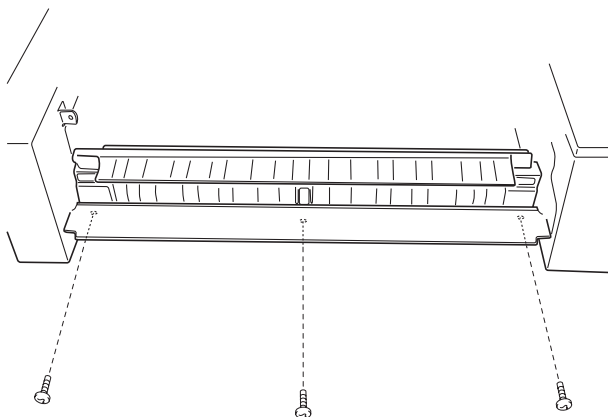
20. Remove the screw from the paper feed frame fuser plate, and remove the plate.



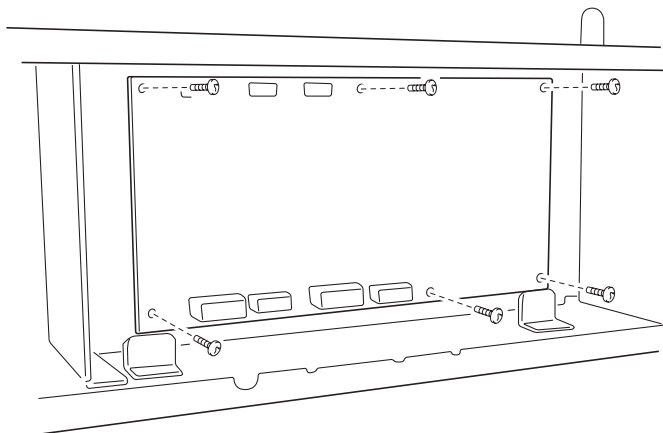
21. Remove the two screws from the fuser frame assembly, and remove the assembly.



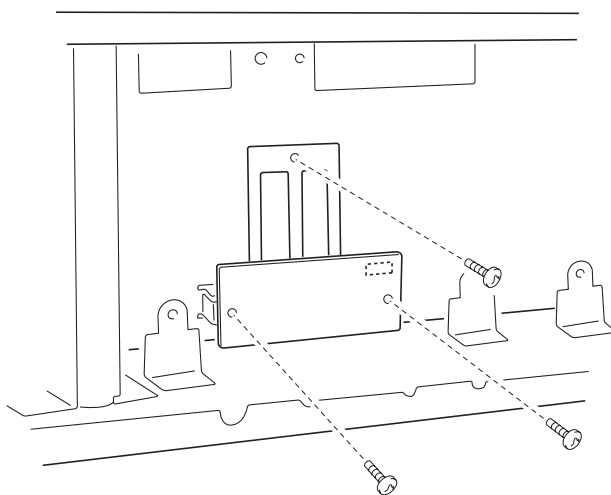
22. Remove the three screws from the cassette guide assembly, and remove the assembly.



23. Remove the six screws from the second drive board assembly, and remove the assembly.

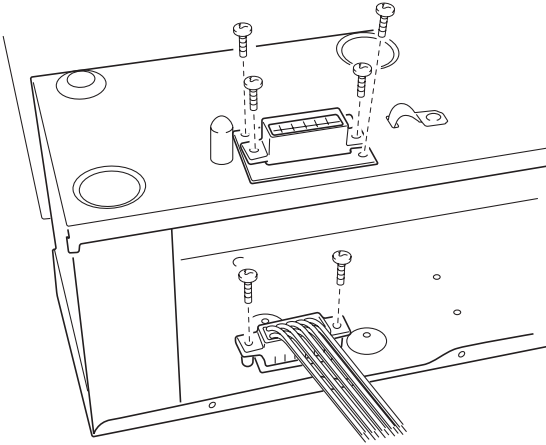


24. Remove the two screws from the paper size detection board, and remove the board.



25. Remove the screw from the size detection lever spring, and remove the spring.

26. Remove the two screws from the connector plate, and remove the plate.
27. Remove the two screws from the upper drawer connector (male), and remove the connector.
28. Remove the two screws from the lower drawer connector (female), and remove the connector.

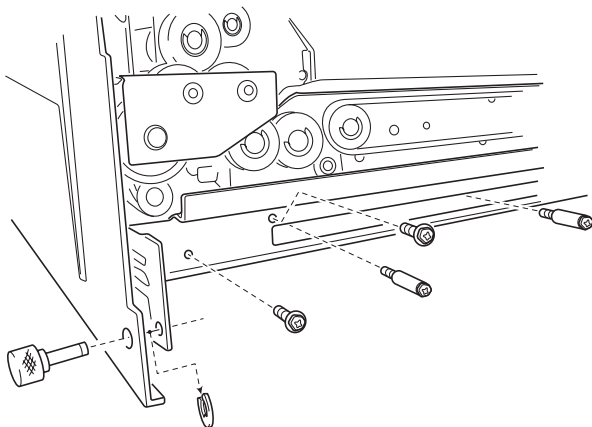




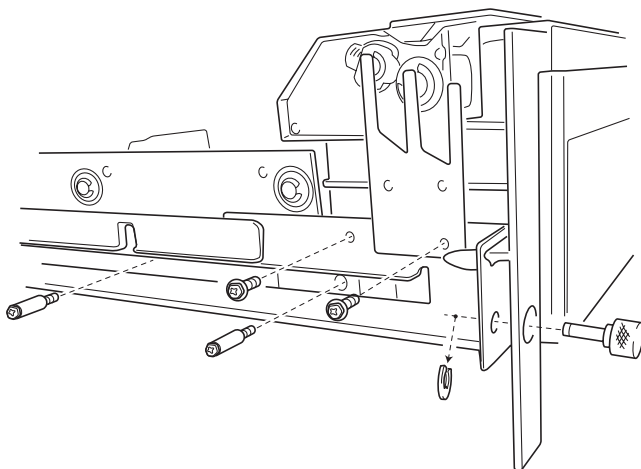
## Duplex Removals

### Duplex Unit Separation Removal

1. Remove the thumbscrews, C-clips, and screws as shown from both sides.

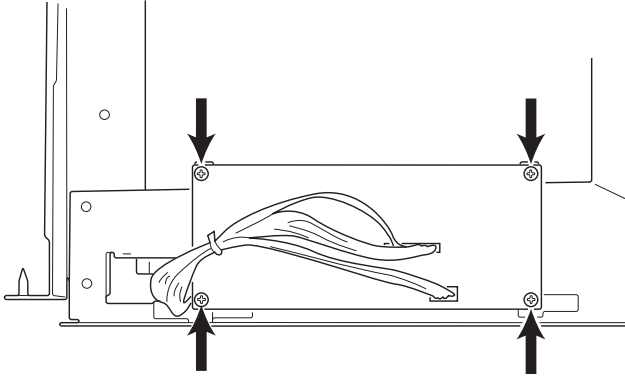


2. Remove the connectors and separate the duplex frame from the duplex unit.

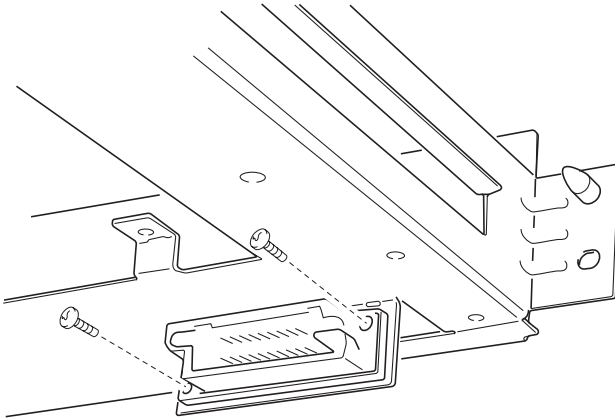


## Duplex Unit Removal

1. Remove the four screws from the interface board, and remove the board.



2. Remove the two screws from the duplex connector, and remove the connector.

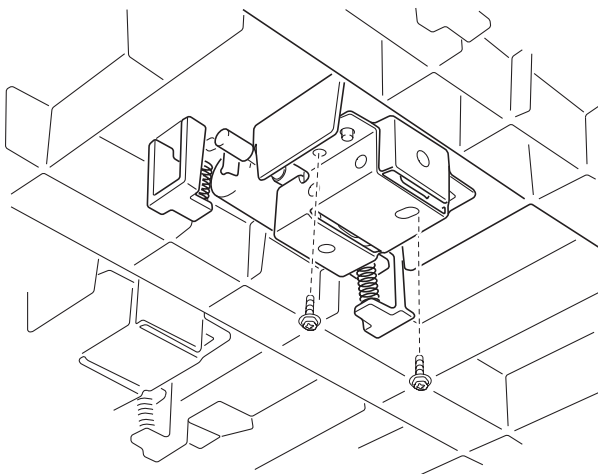


## Duplex Timing Belt Removal

1. Remove the three C-clips from the three timing gears and remove the timing belts.
2. Remove the knob screw and remove the timing belt.

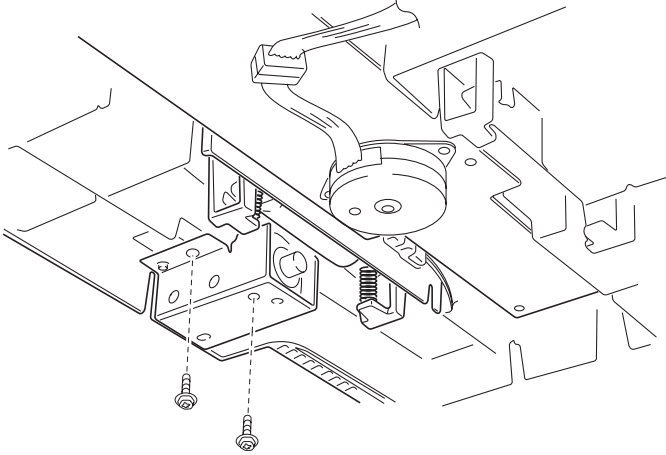
## Duplex Pressure Roller and Solenoid Removal

1. Remove the two screws securing the pressure roller solenoid assembly.



## Duplex Feed Roller and Solenoid Removal

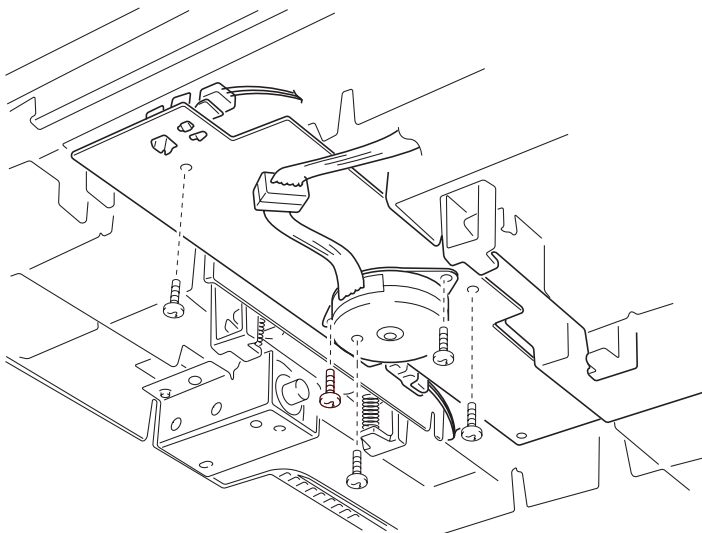
1. Remove the two screws securing the feed roll solenoid assembly.



2. Remove the pressure roller and springs.
3. Remove the feed roller and springs.

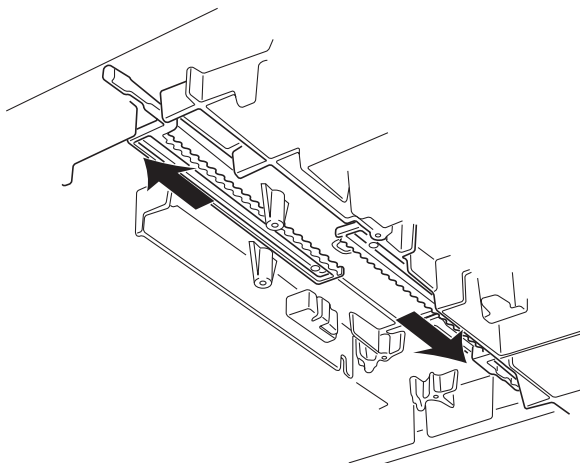
## Duplex Side Fence Motor Assembly / Side Fence Removal

1. Remove the three screws and remove the side fence motor assembly.



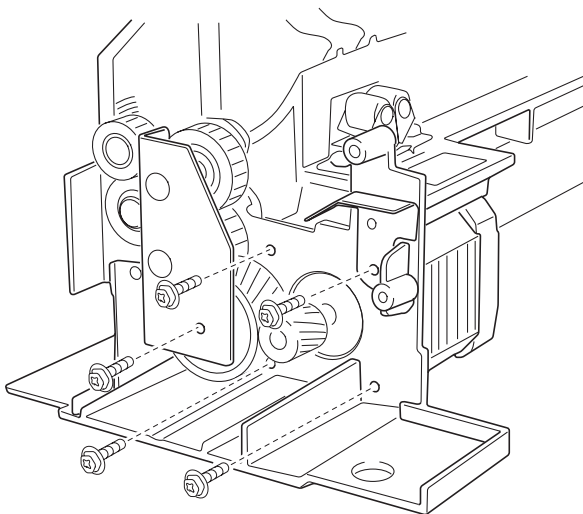
2. Remove the front and rear side fences.

**Note:** When installing, spread the front and rear side fences to the sides and install.



## Duplex Paper Carrying Motor Removal

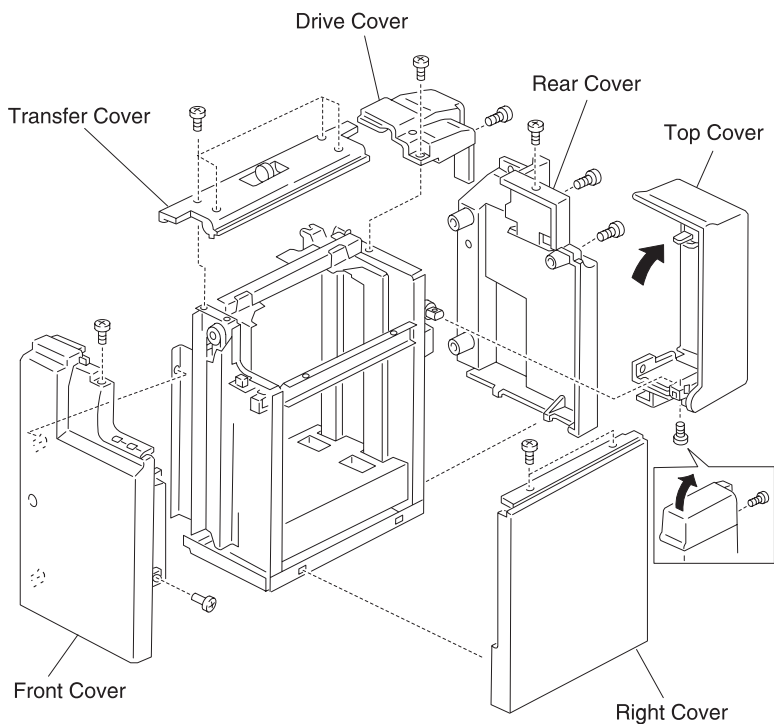
1. Remove the gear cover.
2. Remove the screws from the duplex paper carrying motor and remove the motor.



## High Capacity Feeder (HCF) Removals

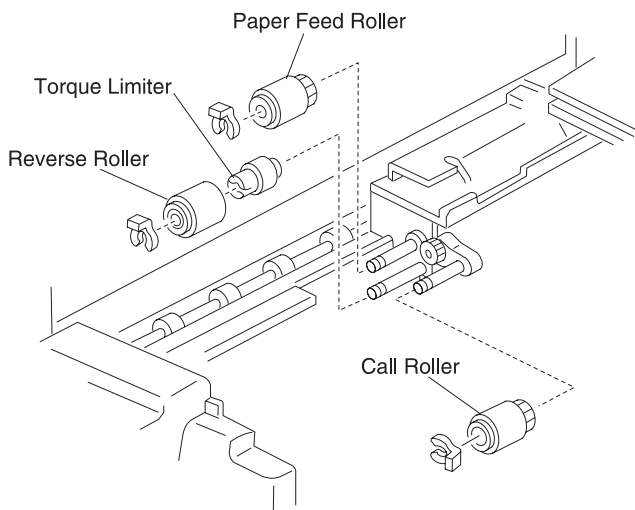
### HCF Covers Removal

1. Remove the two screws from the drive cover, and remove the cover.
2. Remove the front cover.
3. Remove the two screws from the right cover, and remove the cover.
4. Remove the top cover.
5. Remove the rear cover.
6. Remove the four screws from the transfer cover, and remove the cover.



## HCF Call Roller, Paper Feed Roller, Reverse Roller Removal

1. Open the top cover on the tray.
2. Remove the two screws from the transfer cover, and remove the cover.
3. Remove the retaining rings on the rollers, and remove the rollers.

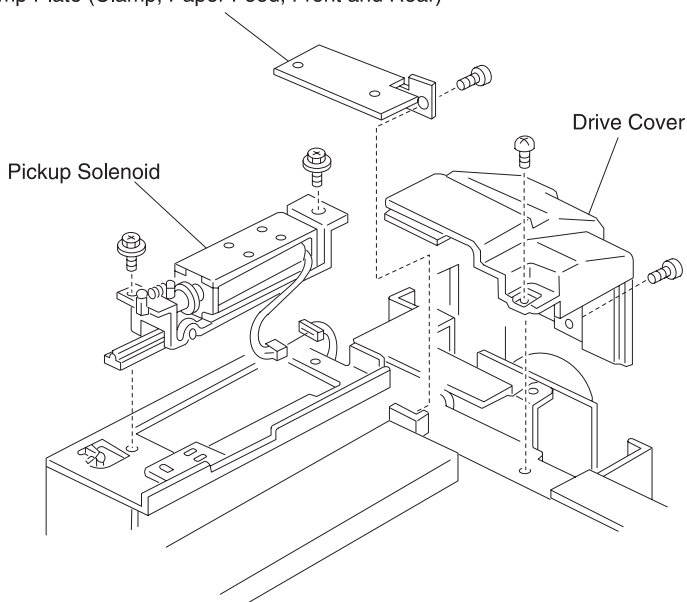




## HCF Pickup Solenoid Removal

1. Remove the four screws from the transfer cover, and remove the cover.
2. Remove the two screws from the drive cover, and remove the cover.
3. Remove the screw from the clamp plate, and remove the plate.
4. Remove the connector and the two screws from the pickup solenoid, and remove the solenoid.

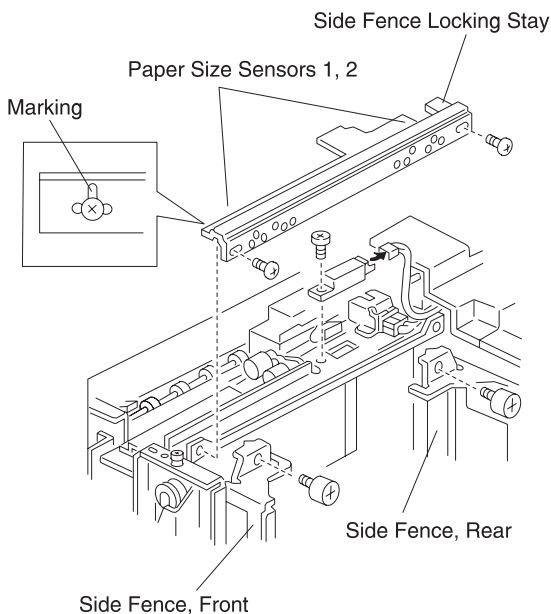
Clamp Plate (Clamp; Paper Feed; Front and Rear)



## HCF Paper End Sensor Removal

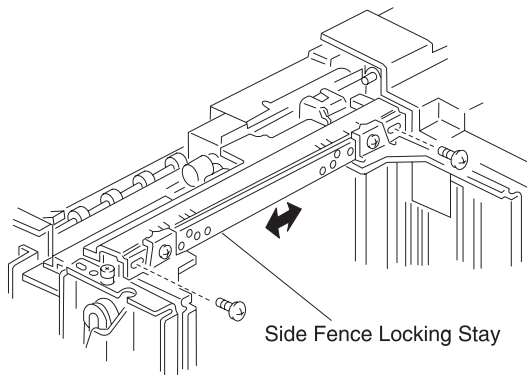
### HCF Paper Size Sensors (1, 2) Removal

1. Cover the paper level sensor with your hand and press the down button. The tray moves down. Lower the tray until the down sensor turns on.
2. Remove the front cover and transfer cover.
3. Remove the two screws on the front and rear sides of the side fence.
4. Mark the locking position of the side fence locking stay.
5. Remove the two screws on the side fence locking stay.
6. Remove the screw and connector from paper end sensor, and remove the sensor.
7. Remove the screw and connector from the clamp plane and remove the paper size sensors 1 and 2.

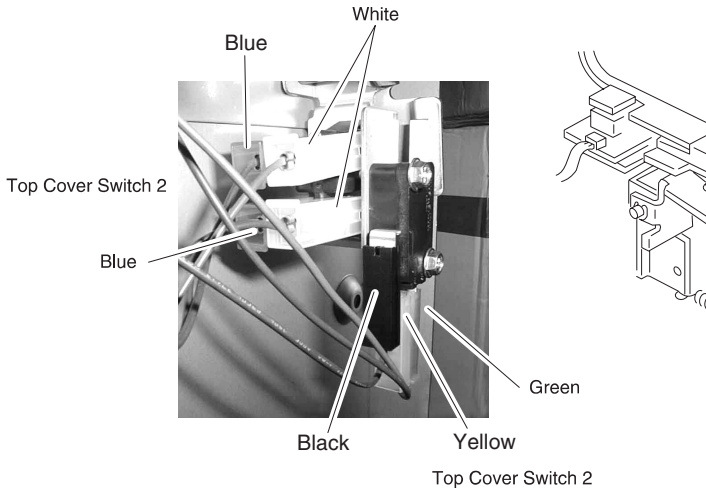


**Notes:**

- To prevent damage to the stay, hold the stay when removing the sensors.
- Be sure the side registration is not shifted, which may occur with the dismantling and mounting of the locking stay. If it is shifted, relocate the stay toward the front or rear to adjust.

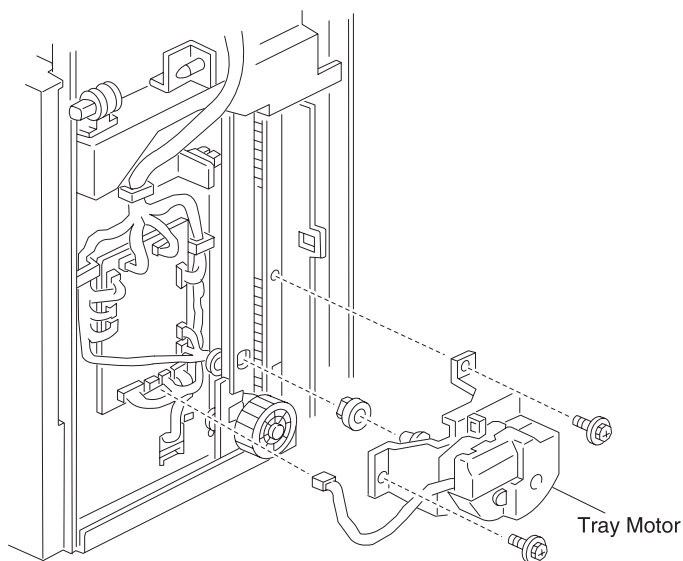


**8. Remove the top cover switches.**



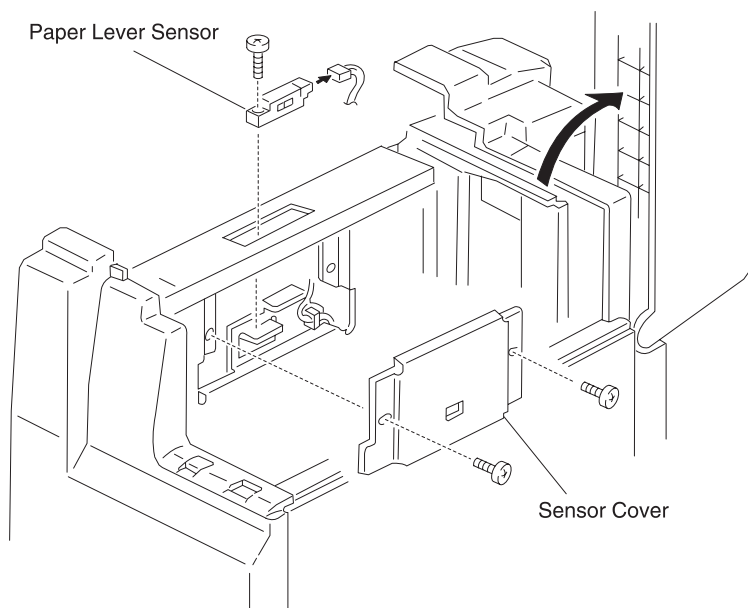
## HCF Tray Motor Removal

1. Remove the rear cover and the drive cover.
2. Remove the two screws of the tray motor, and remove the motor.



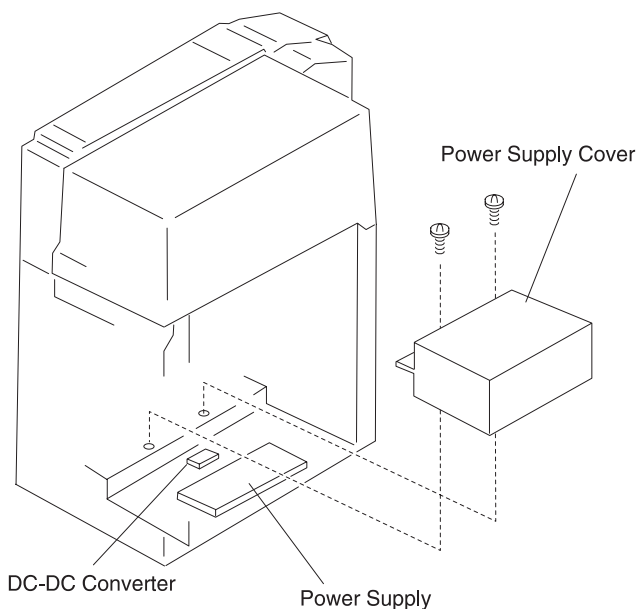
## HCF Paper Level Sensor Removal

1. Remove the four screws from the transfer cover, and remove the cover.
2. Remove the two screws from the sensor, and remove the cover.
3. Remove the connector and screw from paper level sensor, and remove the sensor.



## HCF Power Supply Removal

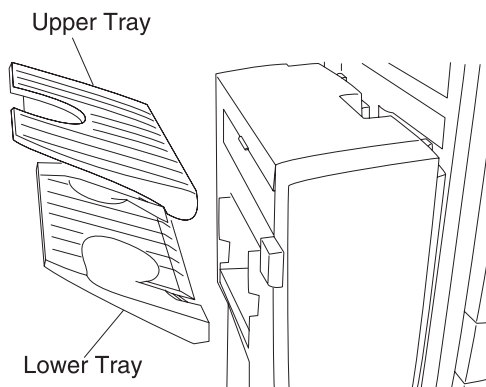
1. Move the paper tray upward.
2. Disconnect the power cord.
3. Remove the front cover.
4. Remove the two screws from the power supply cover, and remove the cover.
5. Remove the four screws from the power supply unit and remove the unit.
6. Remove the two screws from the DC-DC converter, and remove the converter.



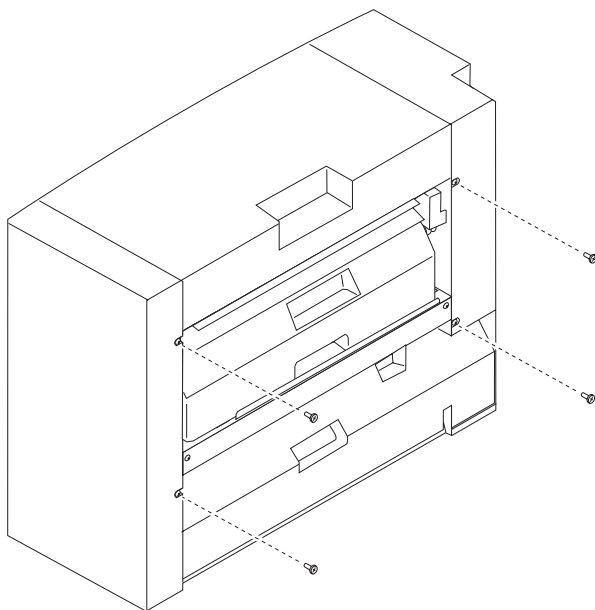
## Finisher Removals

### External Covers Removals

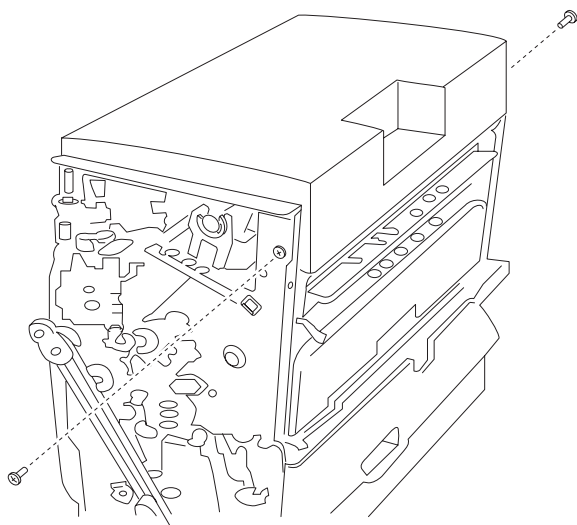
1. Remove the finisher trays.



2. Remove the two screws from the front cover and remove the cover.
3. Remove the two screws of the rear cover and remove the cover.



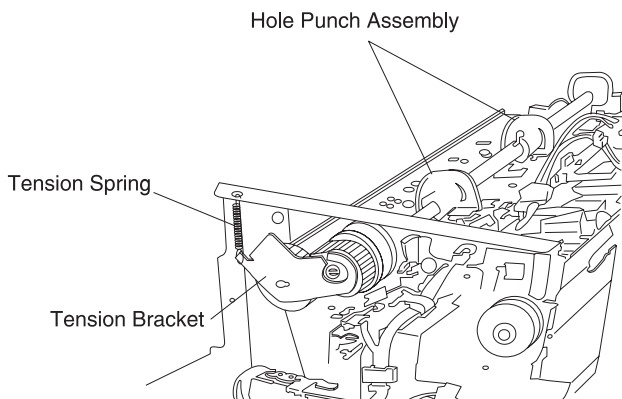
4. Remove the two screws from the top cover and remove the cover.





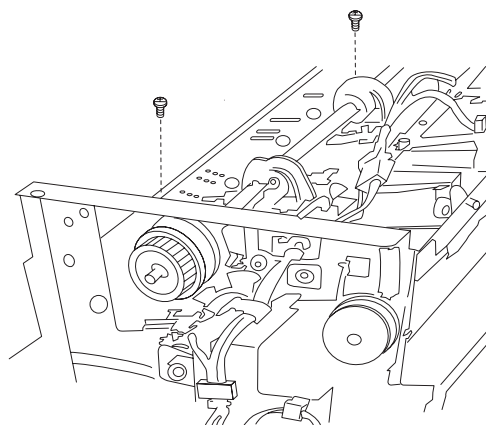
## Hole Punch Removal

1. Remove the external covers.
2. Remove the hole punch unit cables.
3. Remove the tension spring.
4. Remove the screw and E-ring from the tension bracket and remove the bracket.



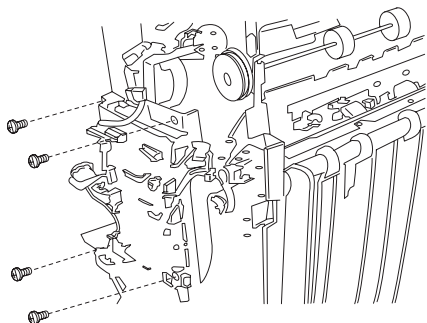
**Note:** When installing the tension bracket, use the left side screw hole for the three hole punch unit and the right side screw hole for the four hole punch unit.

5. Remove the two hole punch unit screws and remove the unit.



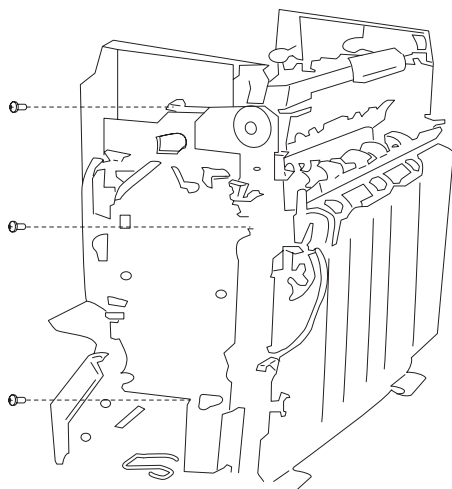
## Finisher Control Board Removal

1. Remove the external covers.
2. Disconnect all of the associated connectors.
3. Remove the four finisher control board mounting screws and remove the board.

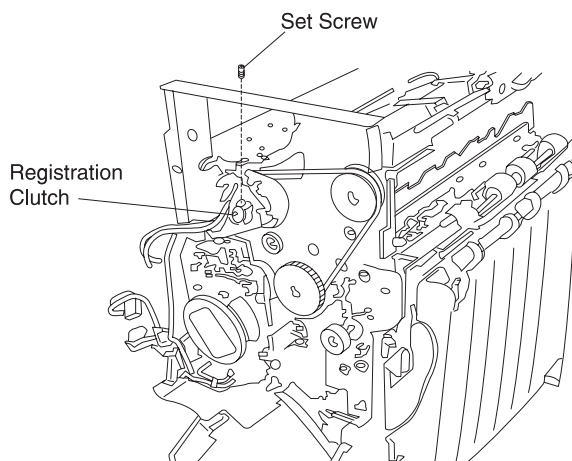


## Registration Roller Clutch Removal

1. Remove the harness from the clamp.
2. Remove the three control board mounting bracket screws and remove the bracket.



3. Remove the registration roller clutch set screw.
4. Remove the registration roller clutch connector.
5. Remove the registration roller clutch.

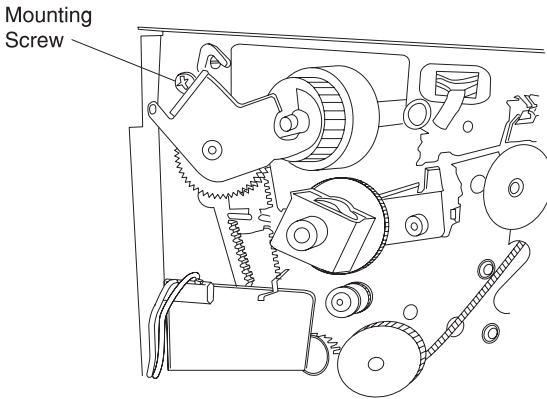


## Registration Roller Removal

1. Remove the hole punch unit.
2. Remove the registration roller clutch.
3. Remove the registration roller bushing.
4. Remove the registration roller.

## Feed Motor Assembly Removal

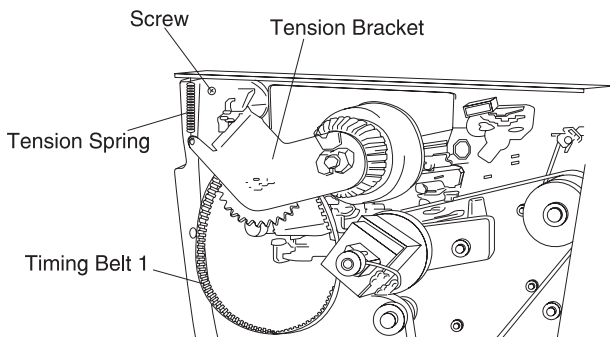
1. Remove the finisher control board mounting bracket.
2. Loosen the tension bracket mounting screw.



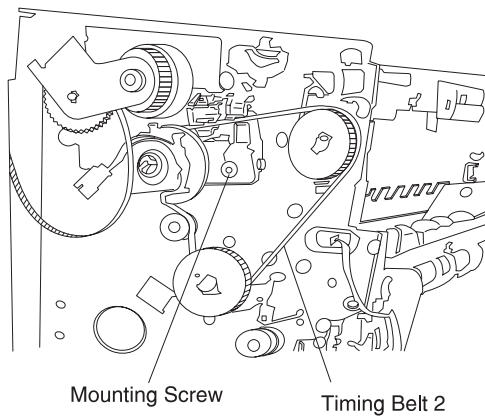
3. Disconnect the feed motor connector.
4. Remove the three screws and connector from the feed motor mounting bracket and remove the feed motor assembly.
5. Remove the feed motor pulley.

## Timing Belts 1 and 2 Removal

1. Remove the finisher control board mounting bracket.
2. Remove the feed motor mounting bracket.
3. Remove the tension bracket mounting screw.
4. Remove the tension spring.
5. Remove the timing belt 1.

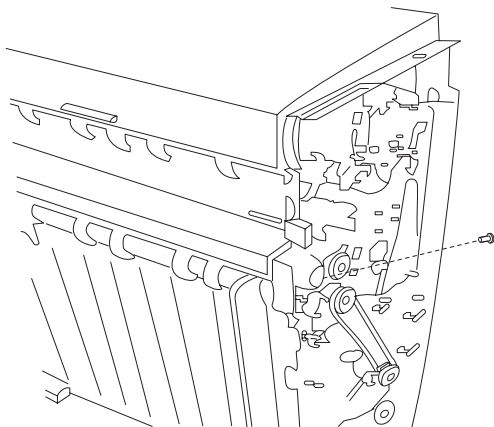


6. Loosen the tension bracket mounting screw for timing belt 2.
7. Remove the timing belt 2.

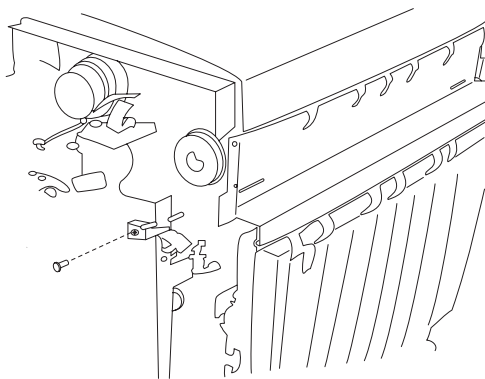


## Patting Roller Removal

1. Remove the front and rear covers.
2. Remove the finisher control board mounting bracket.

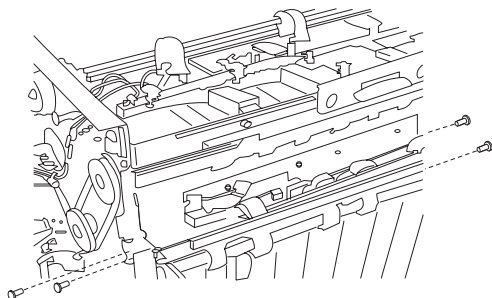


3. Remove the two screws from the upper left panel and remove the panel.

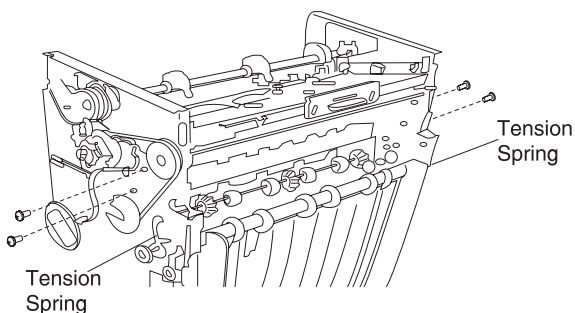


4. Disconnect the sensor connector.
5. Remove the sensor harness from the harness clamp.

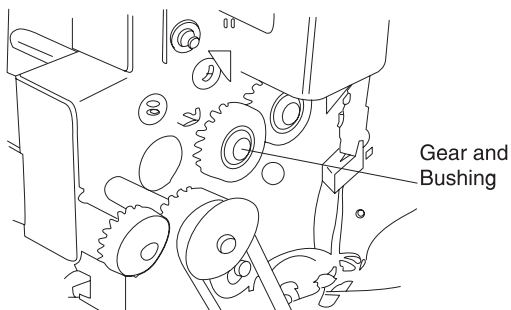
6. Remove the four upper guide plate screws from the inverter paper exit and remove the plate.



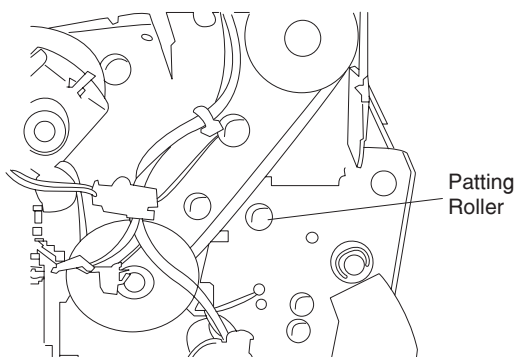
7. Remove the four screws from the inverter guide plate and remove the plate.
8. Remove the tension springs. Use the upper hole when installing the spring.



9. Remove the gear and bushing.

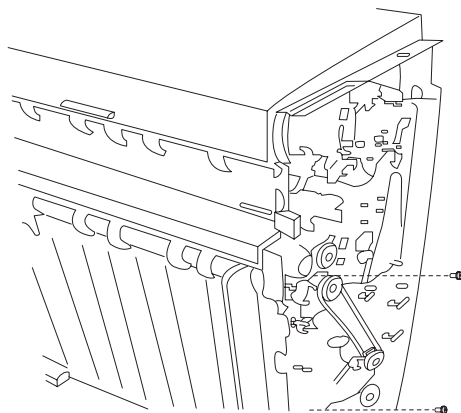


10. Remove the patting roller.



## Inverter Paper Exit Roller Removal

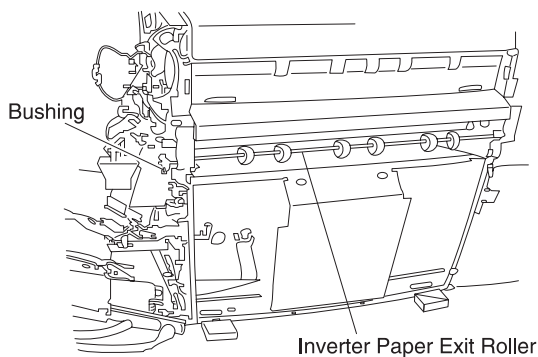
1. Remove the front and rear external covers.
2. Remove the four lower left panel screws and remove the panel.



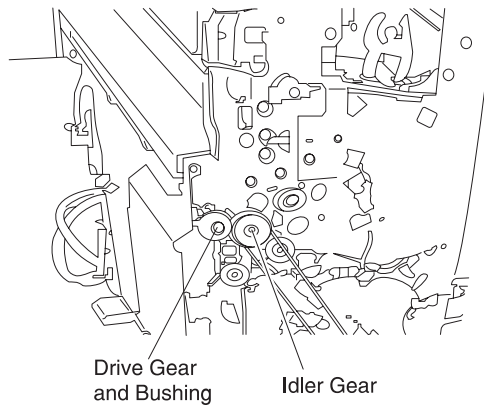
3. Disconnect the harness connect from the lower left panel.



4. Remove the inverter paper exit roller bushing.



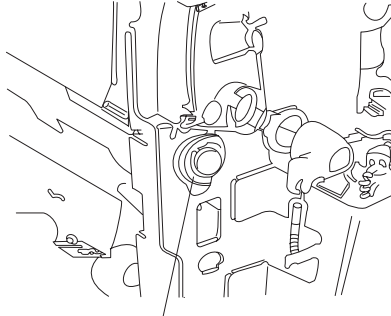
5. Remove the inverter idle gear.
6. Remove the inverter drive gear and bushing.



7. Remove the inverter paper exit roller.

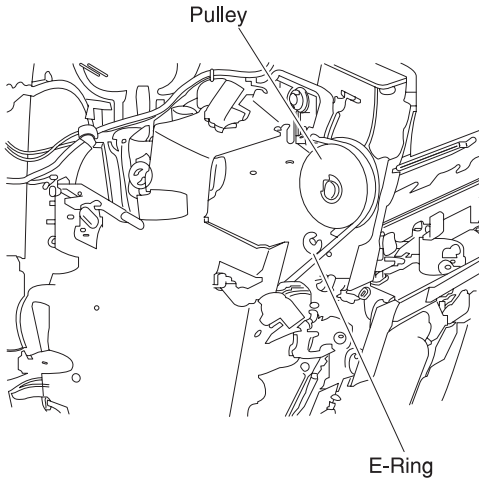
## Straight Paper Exit Roller Removal

1. Remove the external covers.
2. Remove the finisher control board.
3. Remove the upper left panel.
4. Remove the front straight paper exit roller bushing.

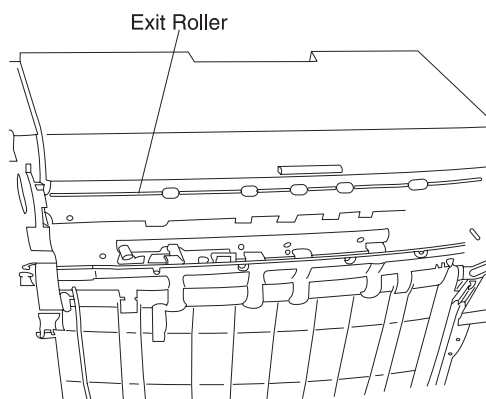


Bushing

5. Remove the belt and pulley.
6. Remove the rear straight paper exit roller E-ring and bushing.

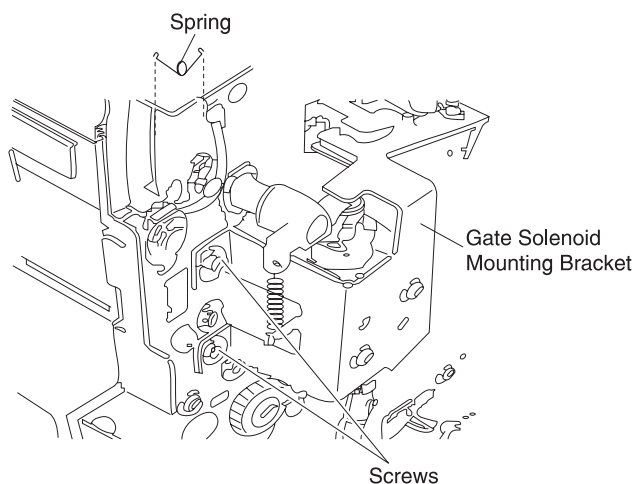


7. Remove the straight paper exit roller.

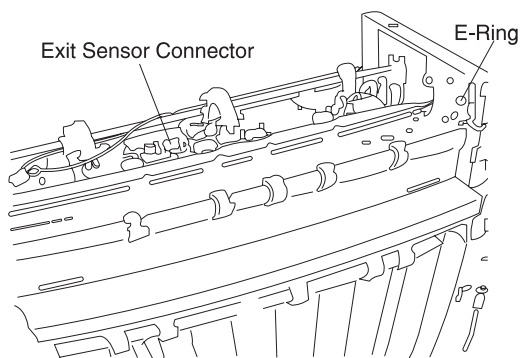


## Path Select Gate Removal

1. Remove the external covers.
2. Remove the two screws from the top cover and remove the cover.
3. Remove the gate solenoid with mounting bracket.
4. Remove the straight paper exit sensor connector.
5. Remove the upper guide plate for the straight paper exit.
6. Remove the two screws and two springs for the upper guide plate.



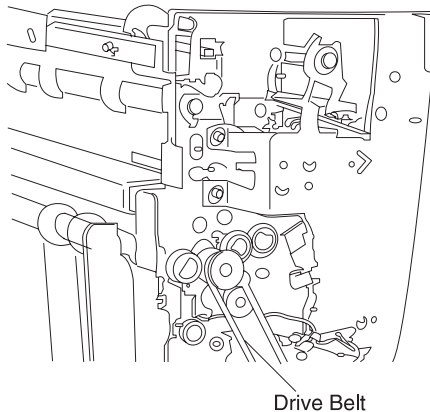
7. Remove the path select gate.



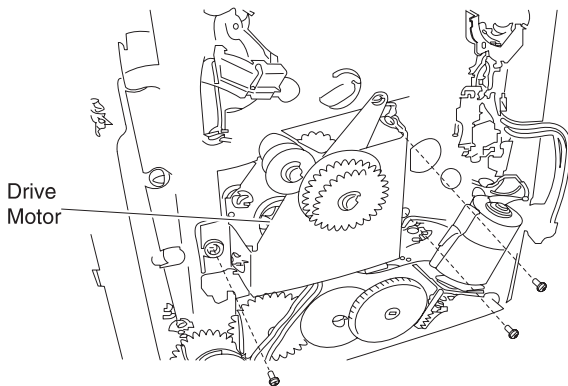
**Note:** Adjust the solenoid bracket mounting position so that the gate arm is contacting the solenoid.

## Tractor Drive Motor Assembly Removal

1. Remove the outer covers.
2. Remove the drive belt.



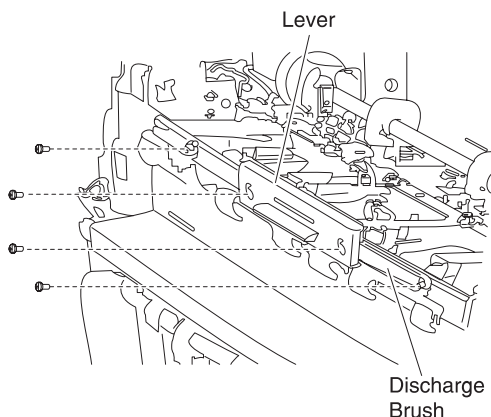
3. Remove the three screws and disconnect the connector from the tractor drive motor assembly.



4. Remove the tractor drive motor assembly.

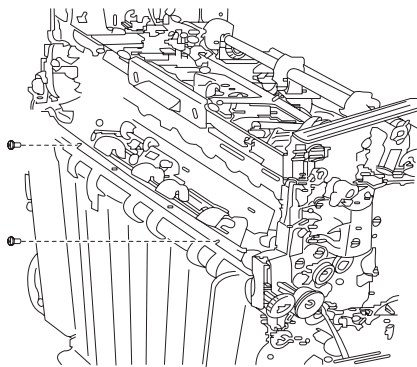
## Straight Paper Exit Discharge Brush Removal

1. Remove the external covers.
2. Remove the two screws from the top cover and remove the cover.
3. Remove the two lever screws and remove the lever.
4. Remove the two discharge brush screws and remove the brush.



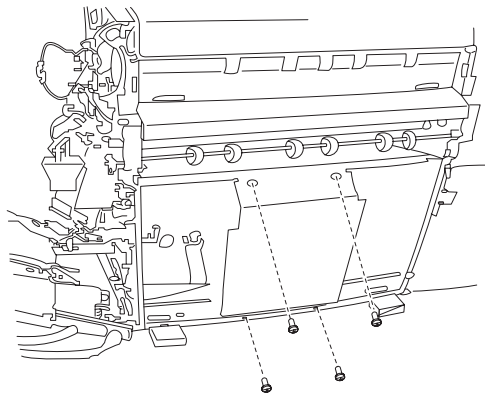
## Inverter Paper Exit Discharge Brush Removal

1. Remove the external covers.
2. Remove the finisher control board.
3. Remove the upper left panel.
4. Remove the two discharge brush screws and remove the brush.

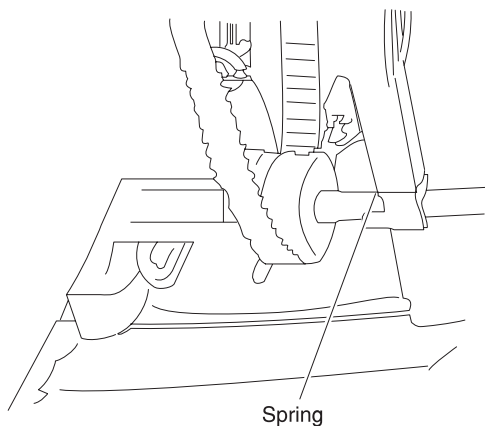


## Tractor Belt Removal

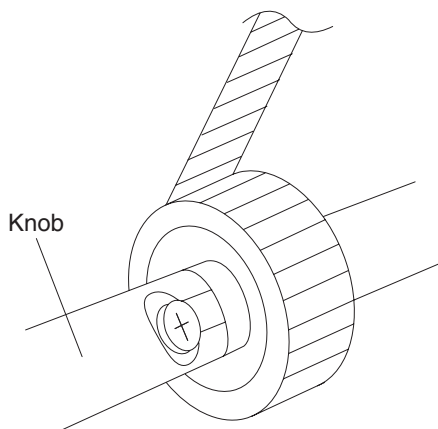
1. Remove the external covers.
2. Remove the lower left panel.
3. Remove the cable connector of the left panel.
4. Remove the belt motor unit.
5. Remove the four lower guide support plate screws for the invert paper exit.



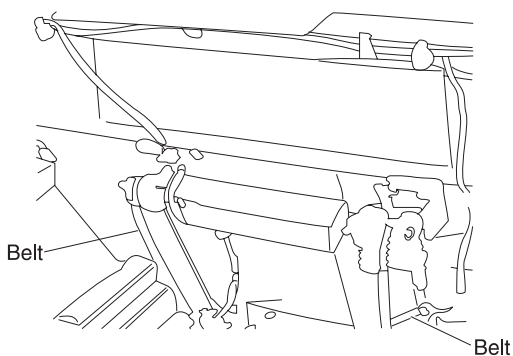
6. Remove the tension spring from the shaft.



7. Remove the paper jam removal knob.



8. Remove the tractor belts.

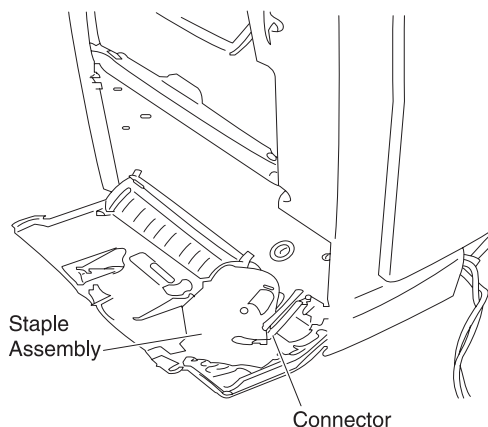


**Note:** Install the belt so that the belt tooth just under the plastic hook aligns with the hook on the other belt.



## Staple Unit Removal

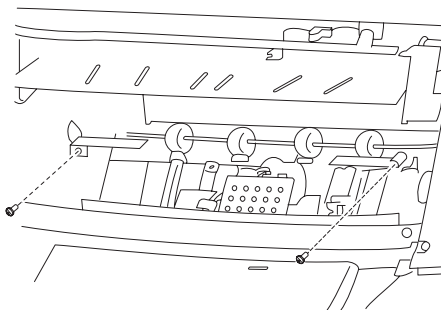
1. Remove the staple unit connector.



2. Pull outward on the staple cover and remove the staple unit.

## Stack Area Discharge Brush Removal

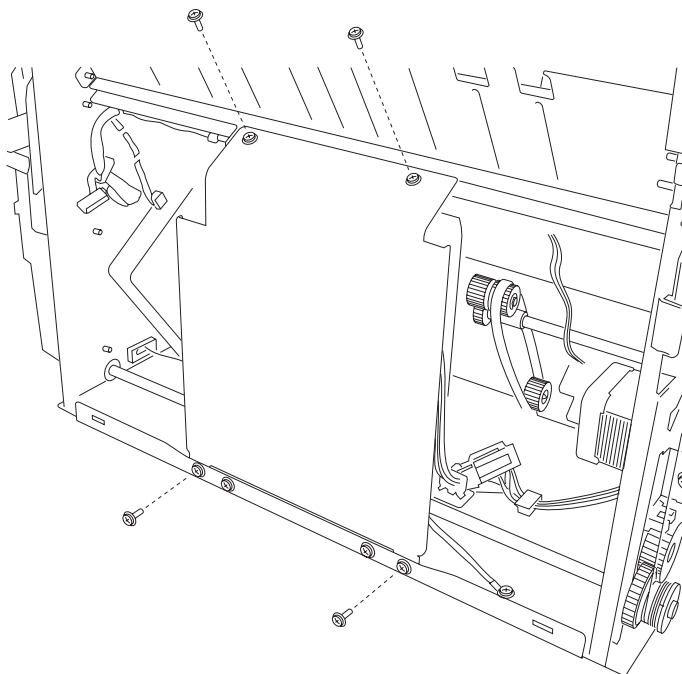
1. Remove the dust box.
2. Remove the stack area discharge brushes.



## Power Supply Removal

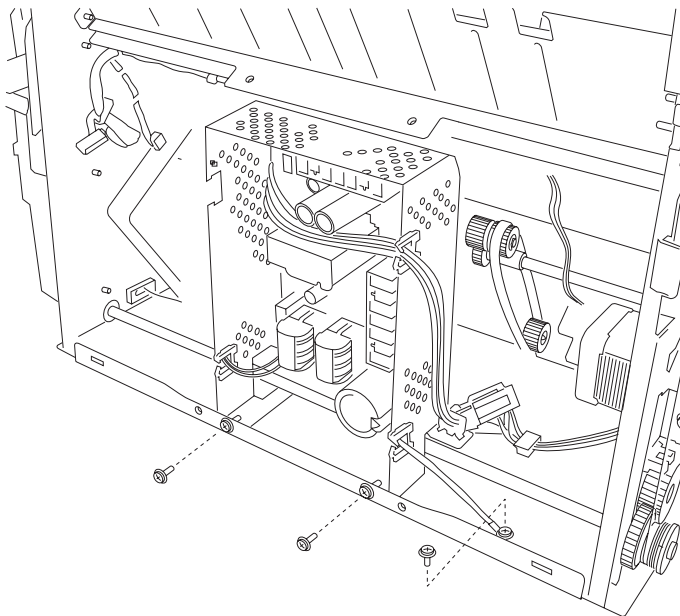
1. Remove the external covers.
2. Remove the lower left panel.
3. Remove the cable connector for the left panel.

4. Remove the four lower guide support plate screws and remove the plate.



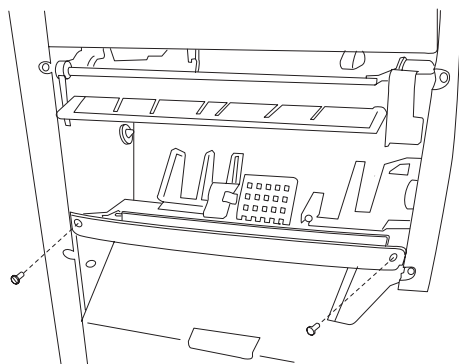
5. Remove the two power supply screws.
6. Remove the screw from the ground wire.

7. Disconnect the power supply connector and remove the power supply.



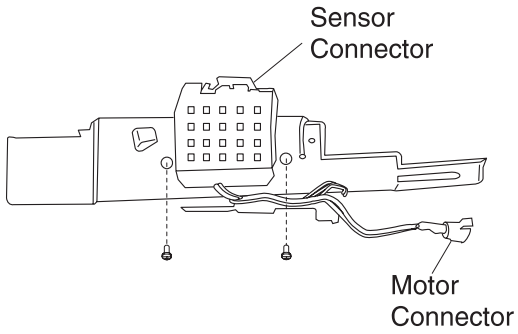
## **Jogging Unit Removal**

1. Remove the dust box.
2. Remove the two screws and remove the cover.



3. Disconnect the jogging motor connector.

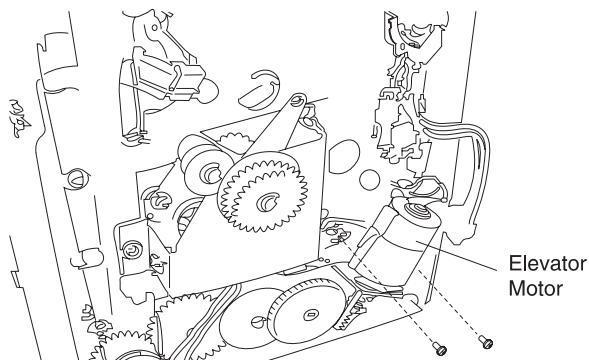
4. Disconnect the jogging home position sensor connector.



5. Remove the jogging unit.

## Elevator Motor Removal

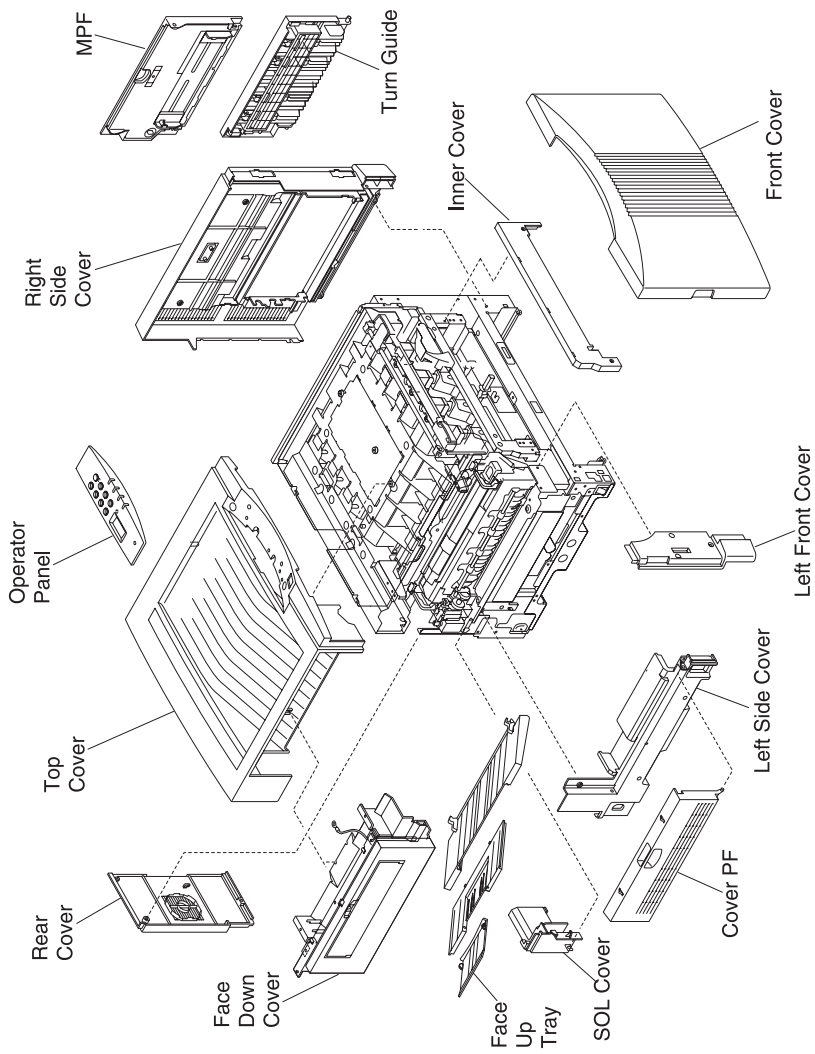
1. Disconnect the elevator motor connector.
2. Remove the two elevator motor bracket screws from the bracket.
3. Remove the elevator motor assembly.



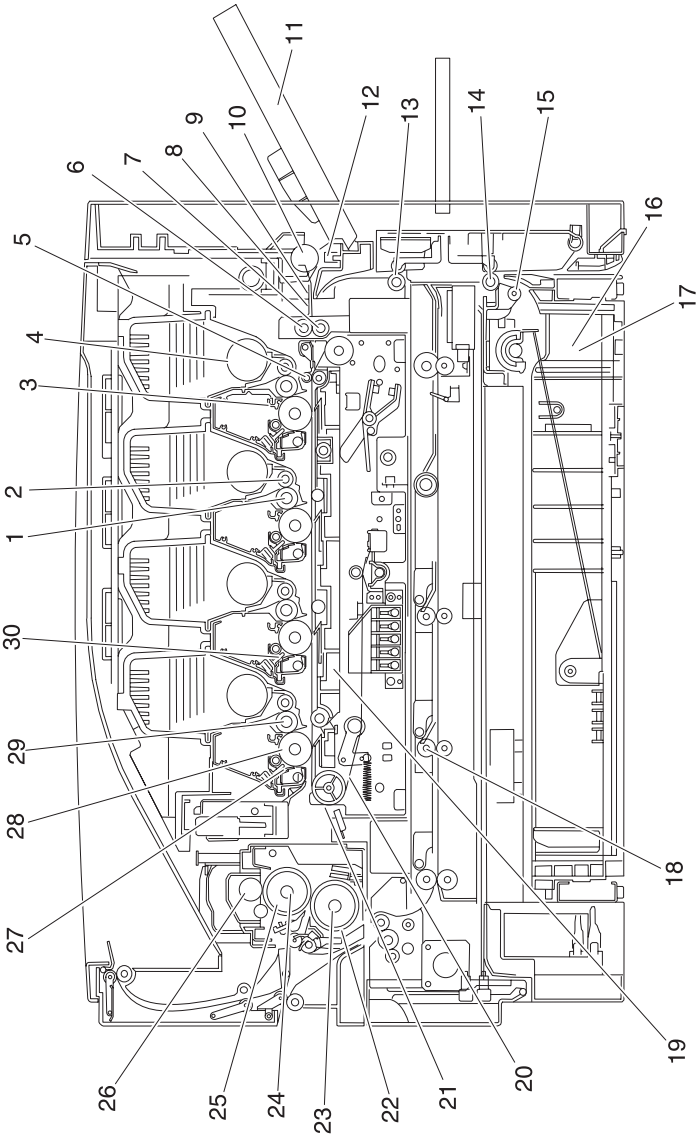


5. Locations

Covers Diagram



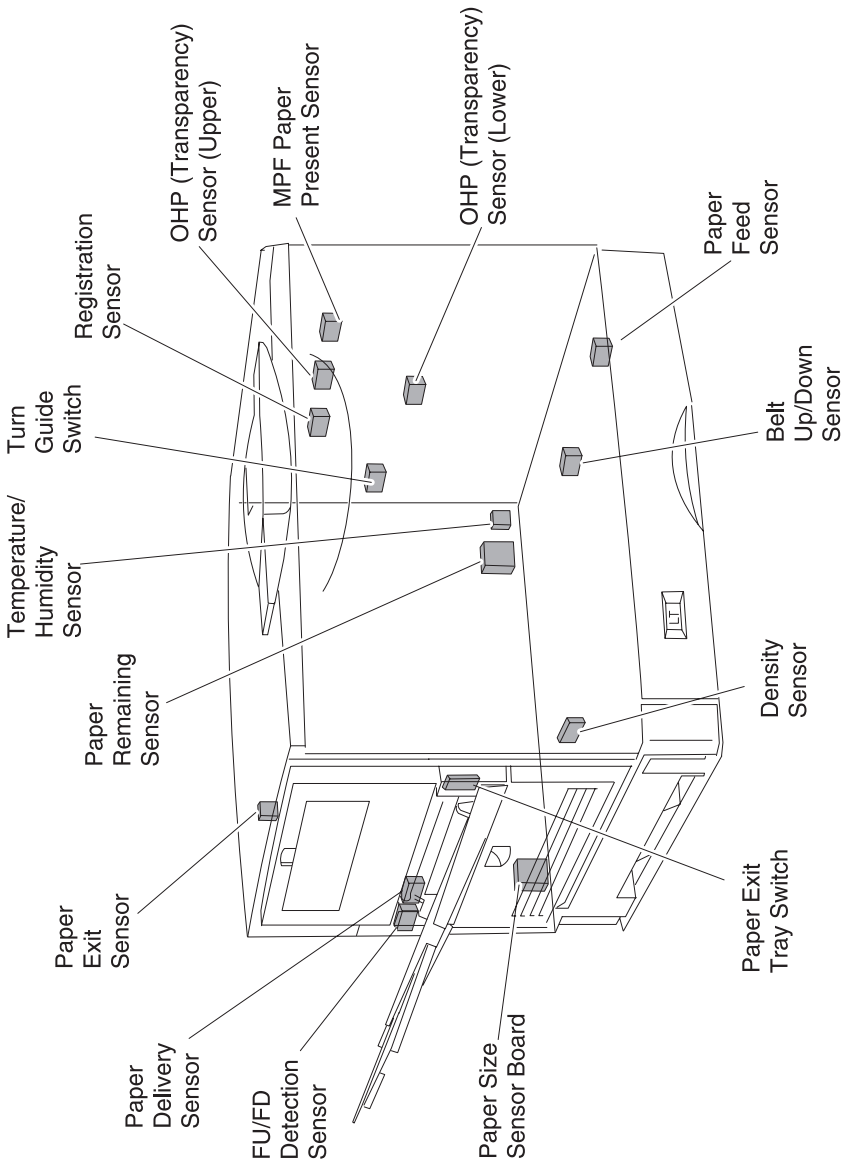
Major Parts Diagram

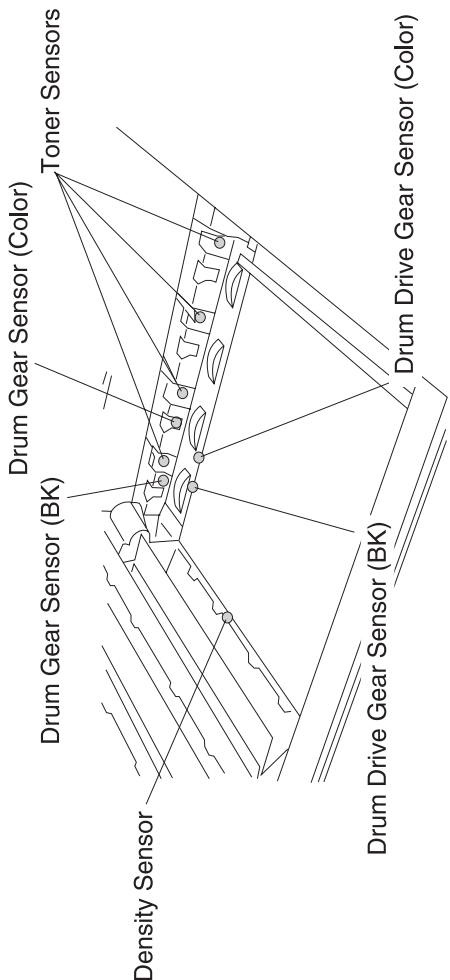




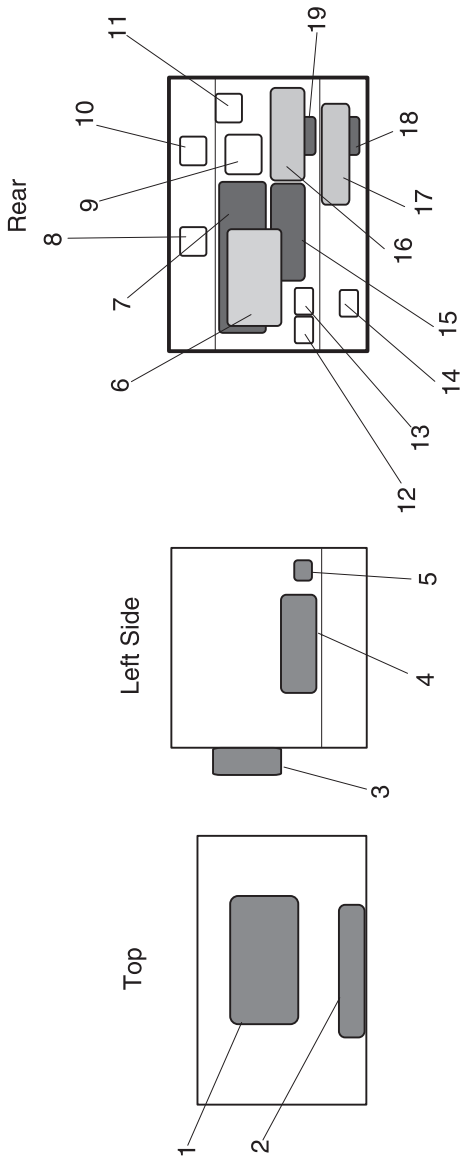
	Part		Part
1	Development Roll	16	Paper Out Detection Lever
2	Supply Roll	17	Paper Out Detection Sensor
3	Doctor Blade	18	Duplex Unit
4	Agitator	19	Transfer Sheet
5	Absorption Roll	20	Transfer Belt
6	Registration Upper Roll	21	Belt Drive Roller
7	Registration Lower Roll	22	Paper Delivery Detection Lever
8	Registration Sensor	23	Press Roll
9	Registration Detection Lever	24	Heater
10	MPF Roll	25	Fuser Roller
11	MPF Unit	26	Oil Coating Roller
12	Fanning Pad	27	Cleaning Blade
13	Upper Feed Roll	28	Photosensitive Drum
14	Lower Feed Roll	29	Charged Roll
15	Paper Feed Roll	30	LED Head

Sensor and Switch Locations



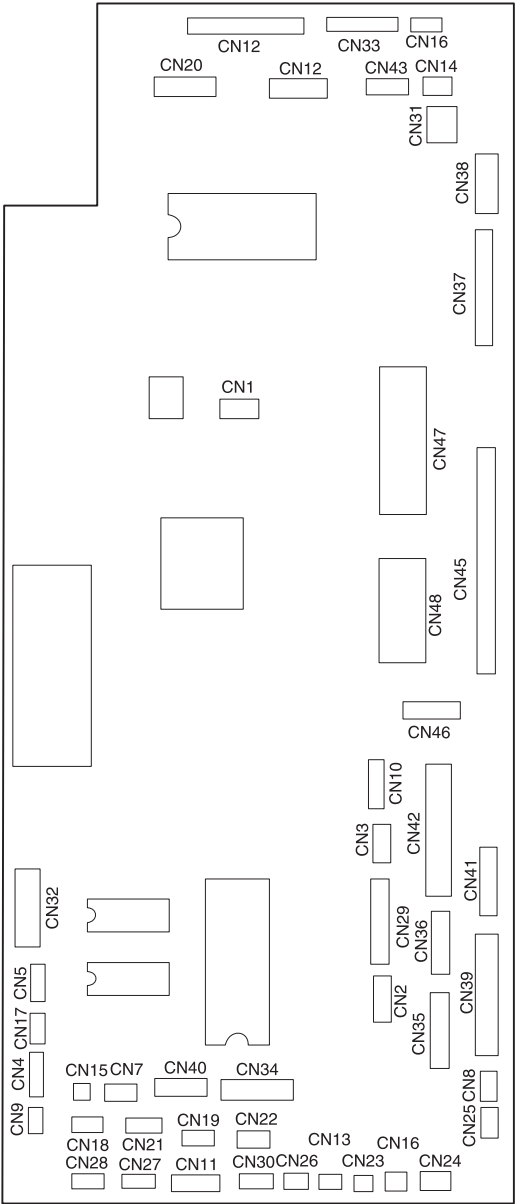


Component Locations

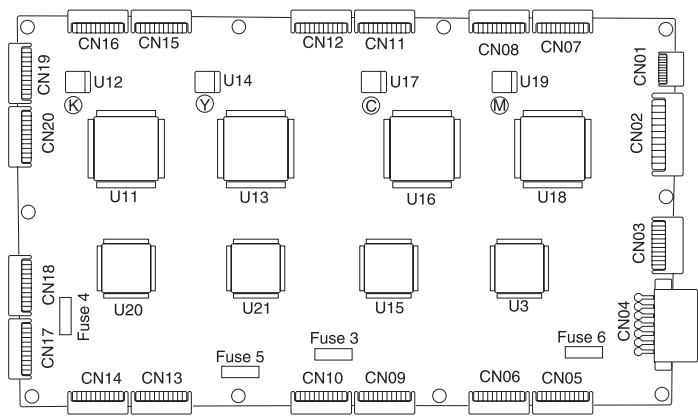


<b>Number</b>	<b>Component</b>
1	Printhead Controller Board
2	Operator Panel
3	RIP Box
4	Motor Driver Board
5	Power Switch
6	Printer Controller Board
7	High Voltage Unit (HVU)
8	Upper Left Fan
9	Main Drive Motor
10	Upper Right Fan
11	Power Supply Fan
12	Temperature/Humidity Sensor
13	Paper Remaining Detection Sensor (Main Unit)
14	Paper Remaining Detection Sensor (Expansion Feeder)
15	Power Supply 2
16	Power Supply 1
17	Expansion Feeder Control Board
18	Paper Size Sensor Board (Expansion Feeder)
19	Paper Size Sensor Board (Main Unit)

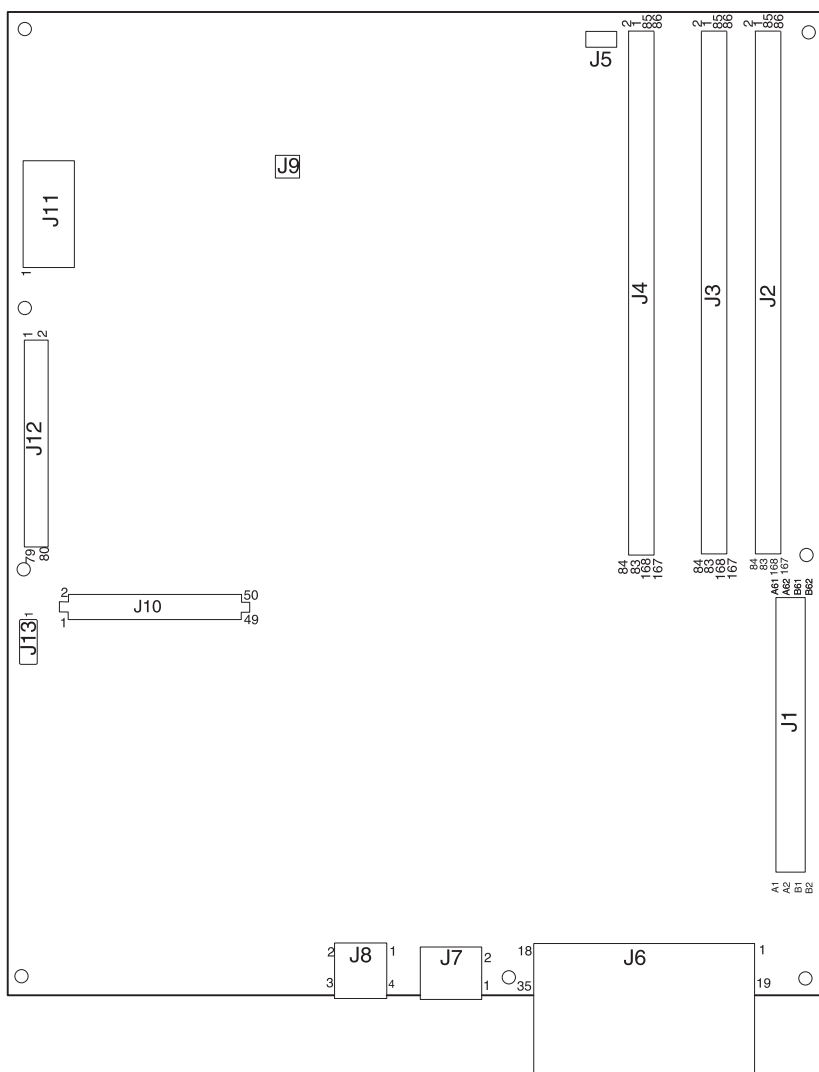
Printer Controller Board



Printhead Controller Board

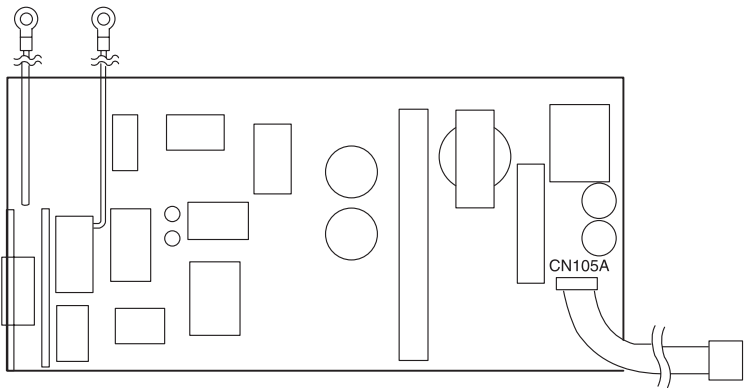


## RIP Board

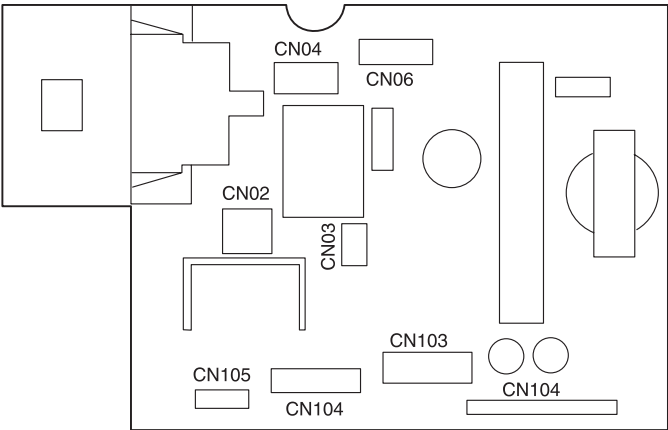




Power Source Unit 1 Board

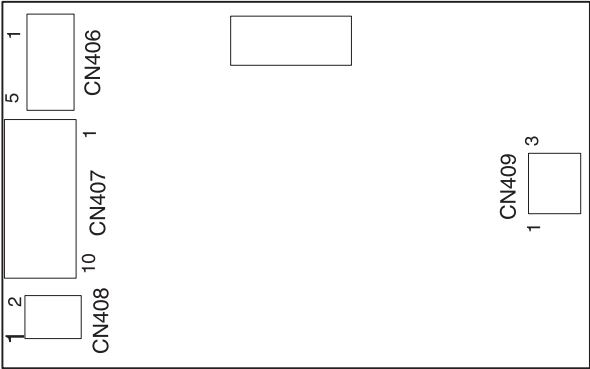


Power Source Unit 2 Board

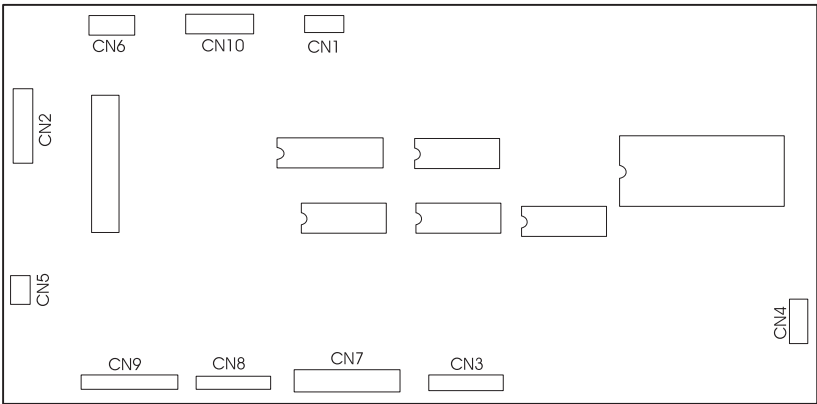




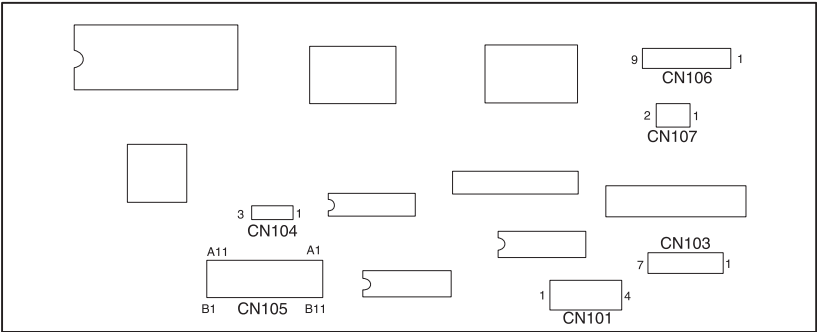
Sensor Board



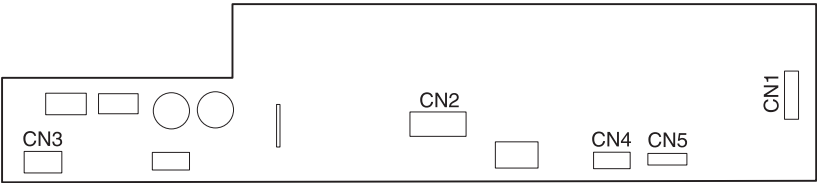
Expansion Paper Feeder Controller Board



Duplex Unit Controller Board



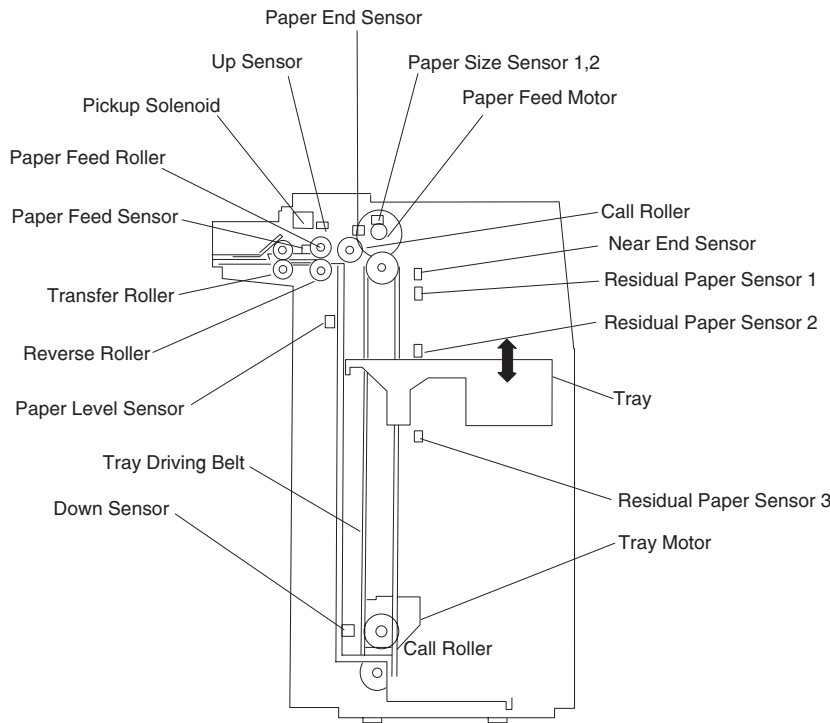
Motor Drive Board



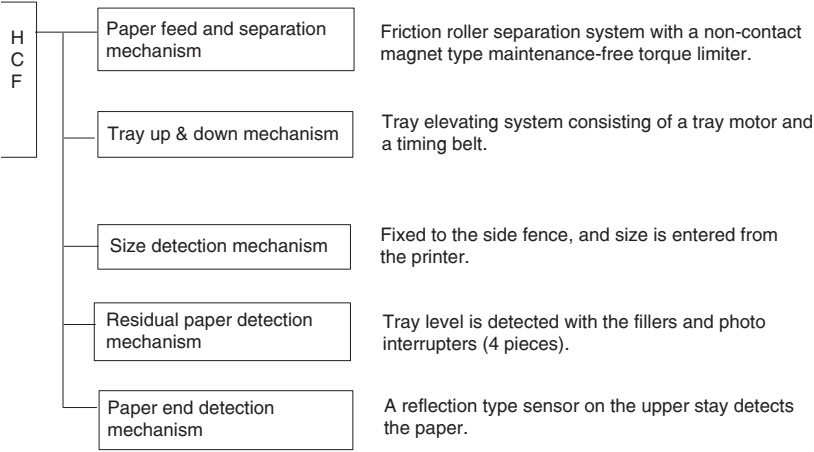
Size Sensor Board



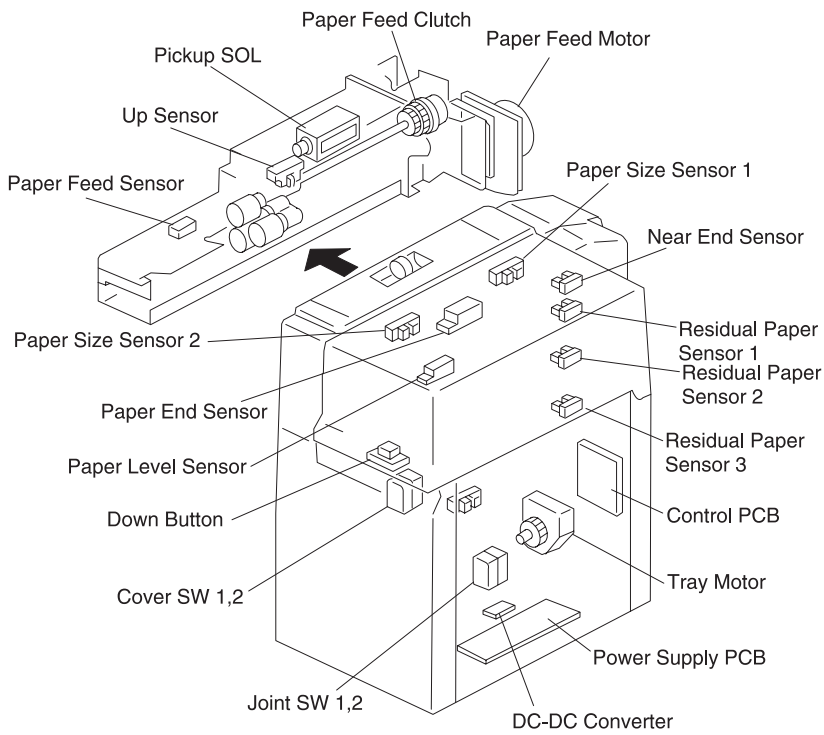
High Capacity Feeder (HCF)



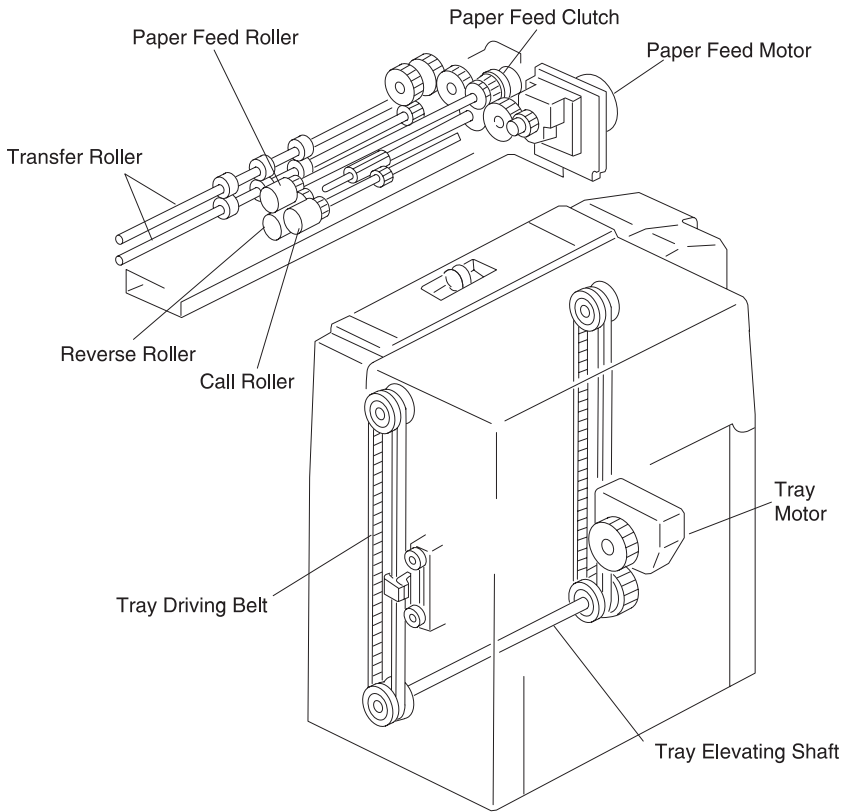
# High Capacity Paper Feed Configuration



Electrical Parts Layout

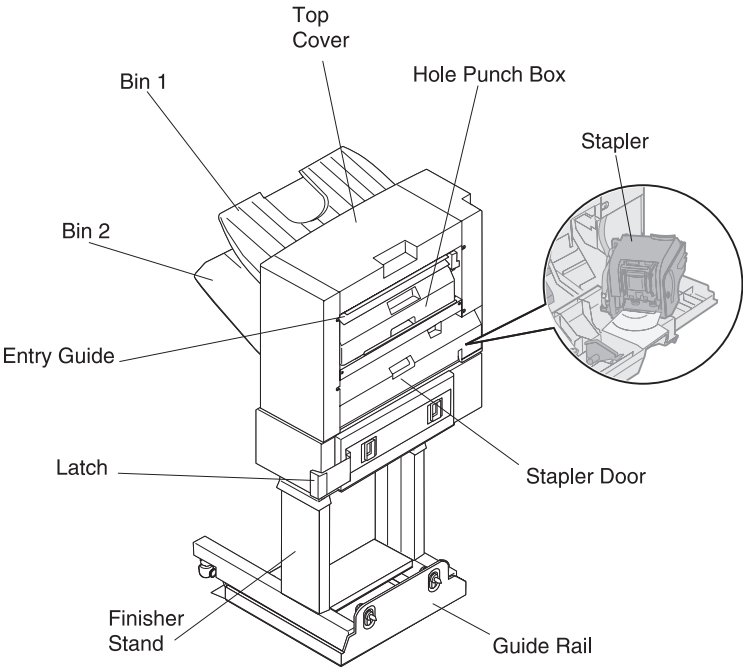


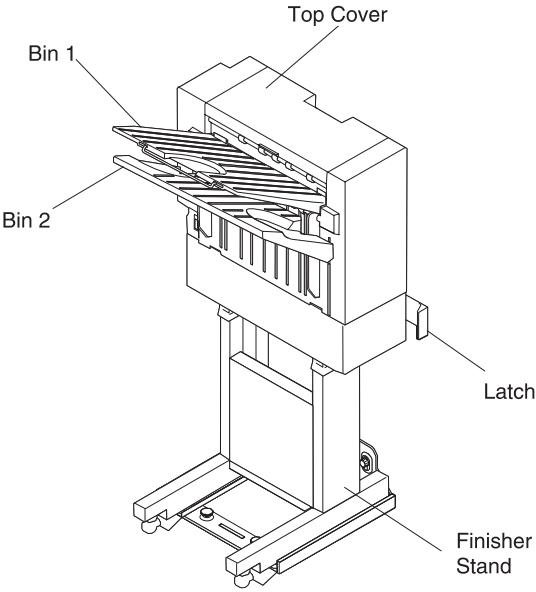
# Driving Parts Layout

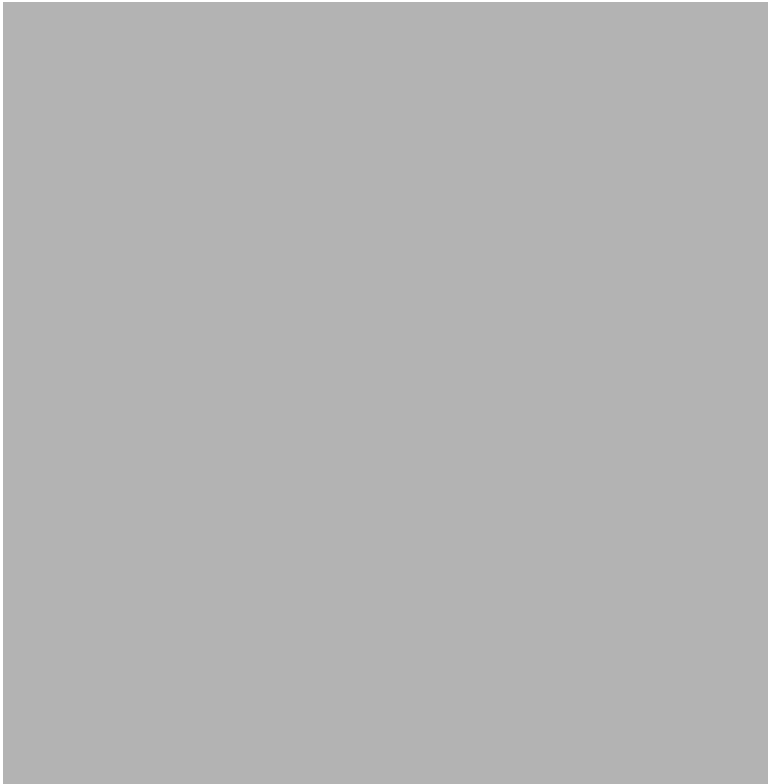




Finisher Locations

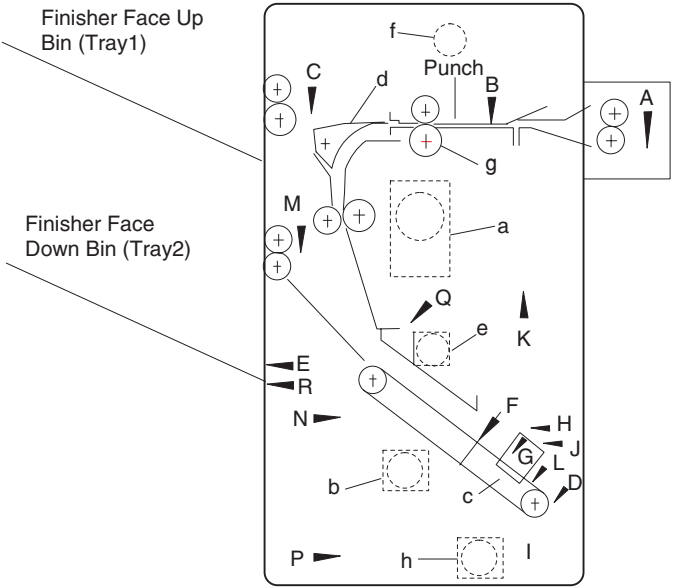






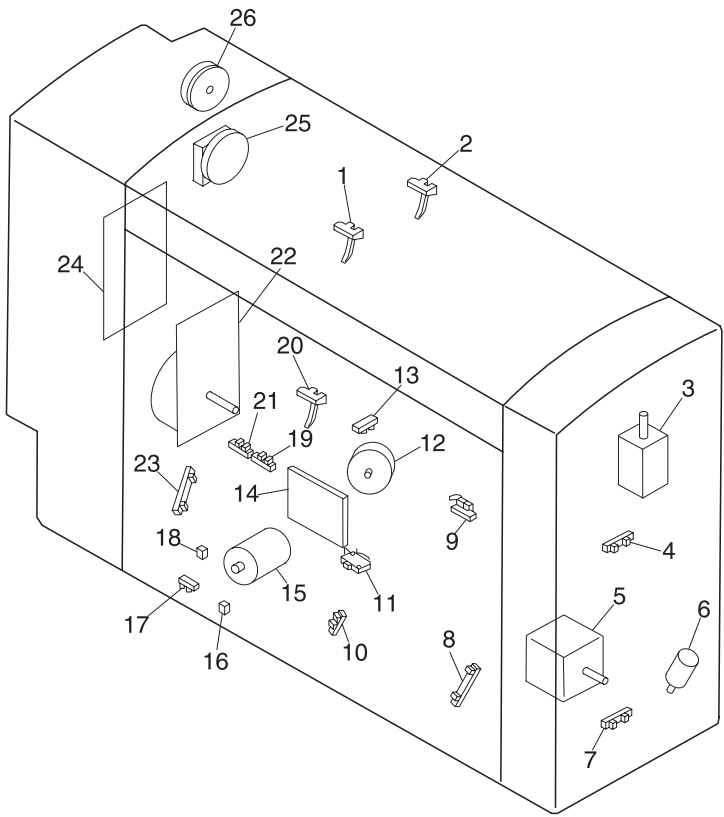
	<b>Sensor, Switch</b>	<b>Purpose</b>
A	Paper Input Path Sensor	Detects paper input from printer
B	Paper Registration Sensor	Trigger for punching
C	Paper Exit Sensor (face up bin)	Confirming paper path
D	Tractor Home Position Sensor	Finds home position for driving belt
E	Paper Full Sensor A	Detecting paper full on tray 2
F	Paper Detecting Sensor	Detects paper for stapling
G	Staple Home Position Sensor	Finds home position for stapling
H	No Staple Sensor	Detects staple empty
I	Finisher Set Switch	Detects connection with printer
J	Staple Cartridge Set Switch	Detects staple cartridge open
K	Punch Box Detect Sensor	Detects punch box
L	Invert Path Sensor	Detects invert paper jam
M	Paper Exit Sensor (face down bin)	Confirming paper path
N	Elevator Upper Limit Sensor	Detecting face down bin
P	Elevator Lower Limit Sensor	Detecting face down bin
Q	Jogging Home Position Sensor	Jogging home position for driving bar
R	Paper Upper Level Sensor B	Detecting paper upper level

	Motor, Solenoid, Clutch	Purpose
a	Paper Feed Motor	Paper feeding and inverting
b	Tractor Drive Motor	Tractor drive for paper feeding
c	Staple Motor	Stapling
d	Path Select Solenoid	Path changing
e	Paper Jogging Motor	Jogging of paper
f	Punch Clutch	Punching
g	Registration Clutch	Paper registration/feeding
h	Elevator Motor	Face down bin movement



**Finisher Electrical Parts**

<b>Number</b>	<b>Part Name</b>	<b>Number</b>	<b>Part Name</b>
1	Paper Exit Sensor (Upper Tray)	14	Power Supply PWBA
2	Paper Register Sensor	15	Staple Motor
3	Path Select Solenoid	16	Staple Existence Sensor
4	Elevator Upper Limit Sensor	17	Staple Home Position Sensor
5	Tractor Drive Motor	18	Staple Cartridge Set Switch
6	Elevator Motor	19	Paper Upper Level Sensor B
7	Elevator Lower Limit Sensor	20	Paper Exit Sensor (Lower Tray)
8	Invert Path Sensor	21	Paper Full Sensor A
9	Punch Box Detect Sensor	22	Paper Feed Motor
10	Belt Home Position Sensor	23	Paper Detecting Sensor
11	Finisher Set Switch	24	Finisher Control Board
12	Paper Jogging Motor	25	Registration Clutch
13	Jogging Home Position Sensor	26	Punch Clutch







## 6. Preventive Maintenance

### Maintenance Kit

When nearing the end-of-life of the fuser or transfer belt, the following message appears, indicating that it's time to replace the fuser unit and/or transfer belt unit:

**80 Belt Life Warning and/or 80 Fuser Life Warning**

Routine replacement of these parts ensures peak printer performance and helps prevent print quality problems and paper feed problems resulting from worn parts. The parts are in the maintenance kits listed.

Maintenance Kit P/N	Unit	Printer Power Supply
56P9903	Transfer Belt	115 V - 230 V
56P9900	Fuser	115 V
56P9901	Fuser	230 V

The status message appears until the appropriate part(s) is replaced.

## Periodic Maintenance

This table lists the parts to be periodically cleaned by the servicer.

Part Name	Method
Paper Feed Unit: <ul style="list-style-type: none"> <li>• Paper Feed Roller</li> <li>• MPF Roll</li> </ul>	Remove any dust or dirt, and wipe the surface lightly with a dry cloth. If it is still dirty, clean with a soft cloth and alcohol.
Registration Unit: Registration Roller, Upper and Lower	Remove any dust or dirt, and wipe the surface lightly with a dry cloth. If it is still dirty, clean with a soft cloth and alcohol.
Charge/Exposure Unit: LED Head	Remove any dust or dirt, and wipe the surface lightly with a dry cloth. If it is still dirty, clean with a soft cloth and alcohol.
Transfer Unit: Transfer Belt	Remove any dust or dirt, and wipe the surface lightly with a dry cloth. If it is still dirty, clean with a soft cloth and alcohol.
Fuser Unit: Heat Rollers	Clean with a soft cloth, silicon oil, or alcohol.
Outer Covers	Use a synthetic detergent and a damp cloth.

## Lubricants and Cleaners

Lubricating	Cleaning
<ul style="list-style-type: none"> <li>• Oil - #10 Apply between gears and shafts.</li> <li>• Grease - # 23 Apply to gears.</li> </ul>	Alcohol or Isopropyl on plastic, rubber, and external parts.

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## 7. Parts Catalog

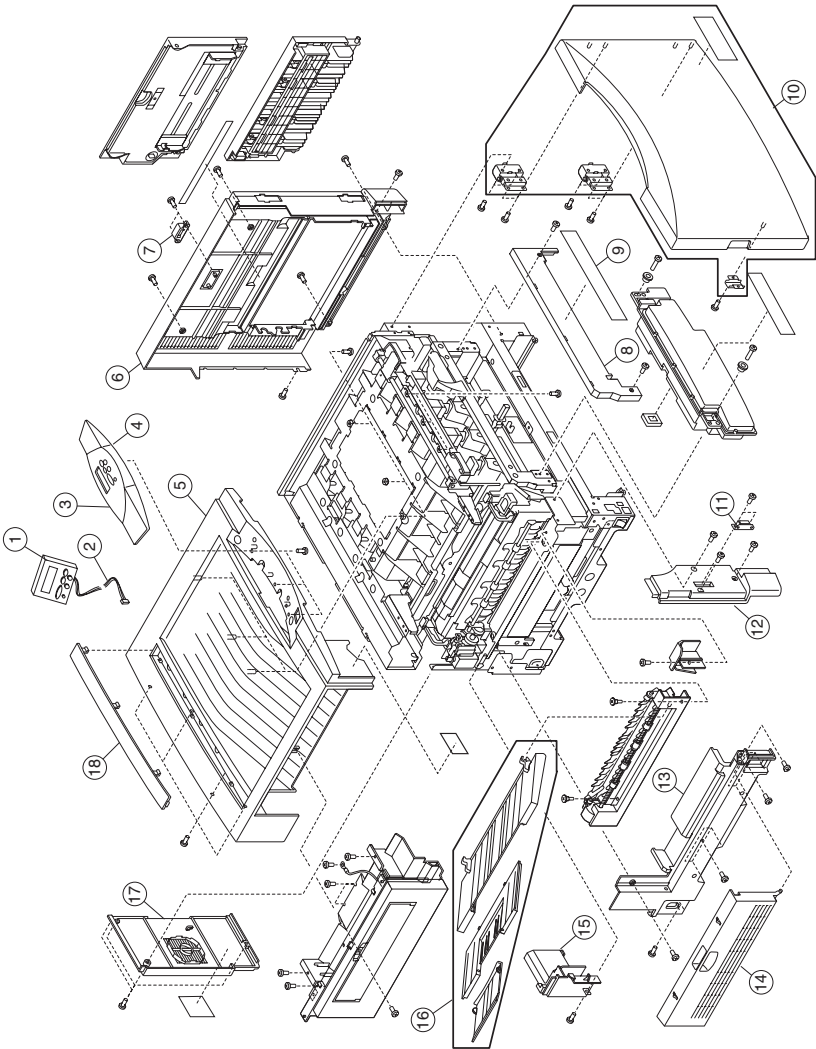
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### How to Use This Parts Catalog

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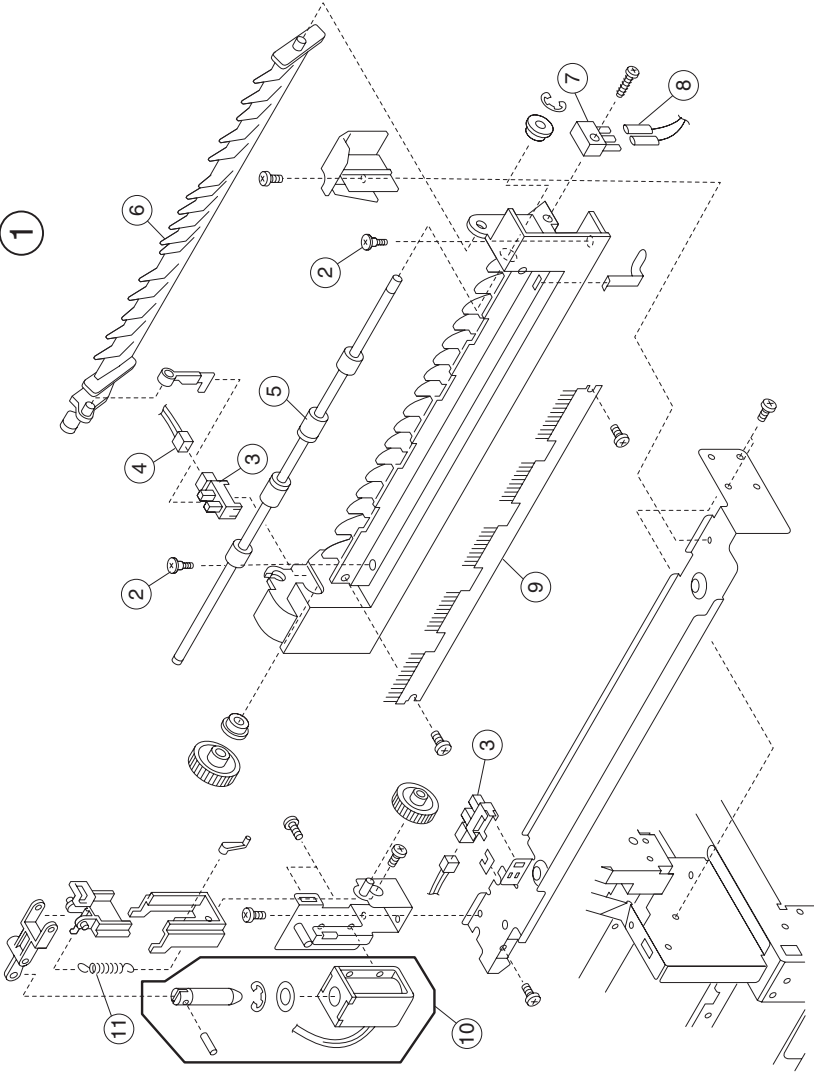
- **SIMILAR ASSEMBLIES:** If two assemblies contain a majority of identical parts, they are shown on the same list. Common parts are shown by one index number. Parts peculiar to one or the other of the assemblies are listed separately and identified by description.
- **NS: (Not Shown)** in the Asm-Index column indicates that the part is procurable but is not pictured in the illustration.

# Assembly 1: Covers 1



Asm-Index	Part Number	Units	Description
1 - 1	12G7360	1	Board, Operator Panel
1	99A1501	1	Board Operator Panel (Japan)
2	56P9736	1	Cable, Operator Panel
3	56P9555	1	Housing, Upper Operator Panel
4	56P9556	1	Housing, Lower Operator Panel
5	56P9539	1	Cover, Top
6	56P9533	1	Cover Assembly, Right Side
7	56P9534	1	Magnet, Right Side Latch
8	56P9540	1	Cover, Waste Toner Bottle
9	56P9545	1	Label, Operator Guide
10	56P9532	1	Cover Assembly, Front
11	56P9543	1	Magnet, Front Cover Latch
12	56P9542	1	Cover, Left Front
13	56P9536	1	Cover, Left Side
14	56P9537	1	Cover, Paper Feed
15	56P9535	1	Cover, Solenoid
16	56P9531	1	Tray Assembly, Exit
17	56P9538	1	Cover, Rear
18	56P9551	1	Cover, Adjustment
NS	56P9544	1	Label, MPT
NS	56P9554	3	Core, Ferrite
NS	56P9905	1	Kit, Operator Panel Overlay
NS	56P9945	1	Parts Packet

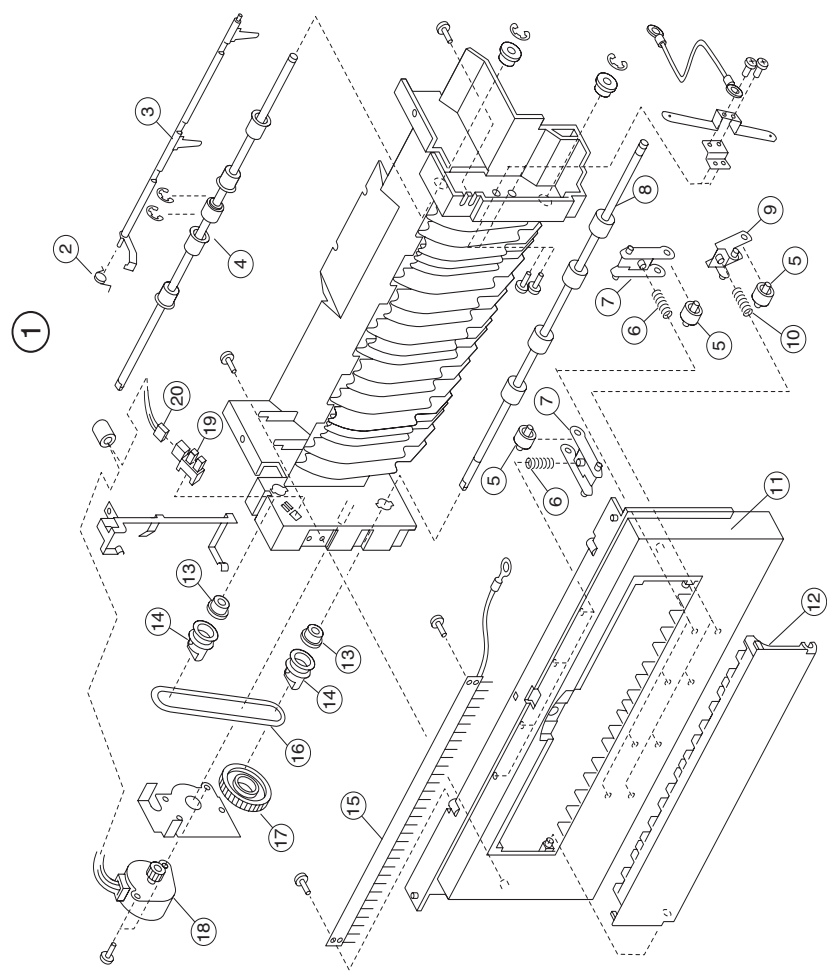
Assembly 2: Covers 2



**5055-01X**

<b>Asm-Index</b>	<b>Part Number</b>	<b>Units</b>	<b>Description</b>
2 - 1	56P9557	1	Exit Assembly, Face Up
2	11G0347	2	Screw, Stopper
3	11G0243	2	Interrupter, Photo
4	56P9564	1	Cable, Face Up Sensor
5	56P9559	1	Roller, Paper Exit
6	56P9561	1	Deflector, Face Up
7	56P9502	1	Switch, Paper Exit Tray
8	56P9565	1	Cable, Paper Exit Switch
9	56P9560	1	Brush, Face Up Static Discharge
10	56P9563	1	Solenoid Assembly, Face Up Deflector
11	56P9562	1	Spring, Face Up Deflector

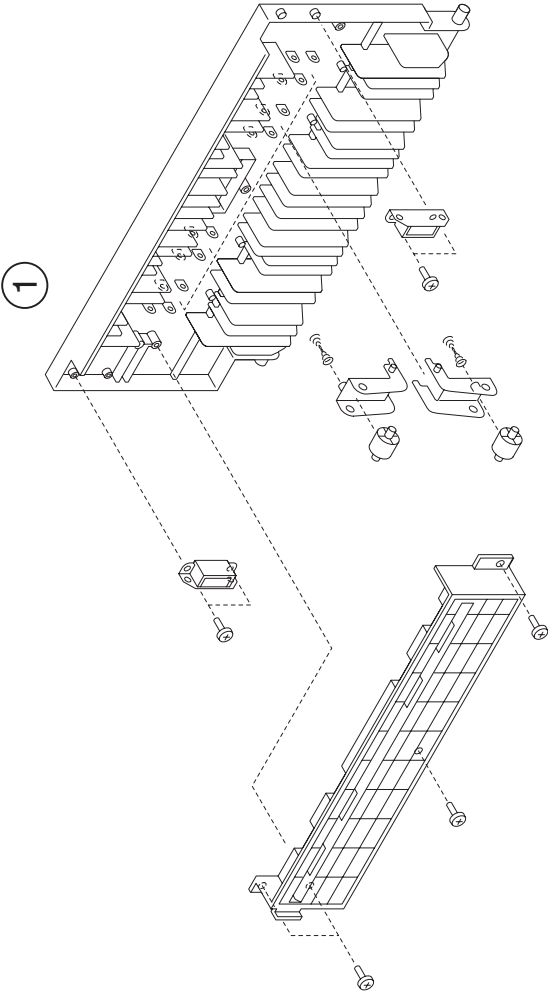
Assembly 3: Covers 3





Asm-Index	Part Number	Units	Description
3 - 1	56P9566	1	Guide Assembly, Face-Down
2	56P9572	1	Spring, Face Down Paper Full
3	56P9573	1	Lever, Face Down Paper Full
4	56P9574	1	Roller, Face Down Upper Feed
5	11G0135	8	Roller, Face Down Pinch
6	56P9568	8	Spring, Face Down Pinch Roller
7	56P9569	8	Arm, Face Down Pinch Roller
8	56P9577	1	Roller, Face Down Lower Feed
9	56P9571	4	Arm, Face Down Lower Pinch Roller
10	56P9570	4	Spring, Face Down Lower Pinch Roller
11	56P9583	1	Cover, Face Down
12	56P9567	1	Door, Face Down Jam Access
13	56P9575	4	Bushing, Face Down Pinch Roller
14	56P9576	2	Pulley, Face Down Feed Roller
15	56P9582	1	Brush, Face Down Static Discharge
16	56P9578	1	Belt, Face Down Roller
17	56P9579	1	Gear, Face Down Roller Drive
18	56P9580	1	Motor, Paper Exit
19	11G0219	1	Interrupter, Photo
20	56P9581	1	Cable Assembly, Exit Sensor

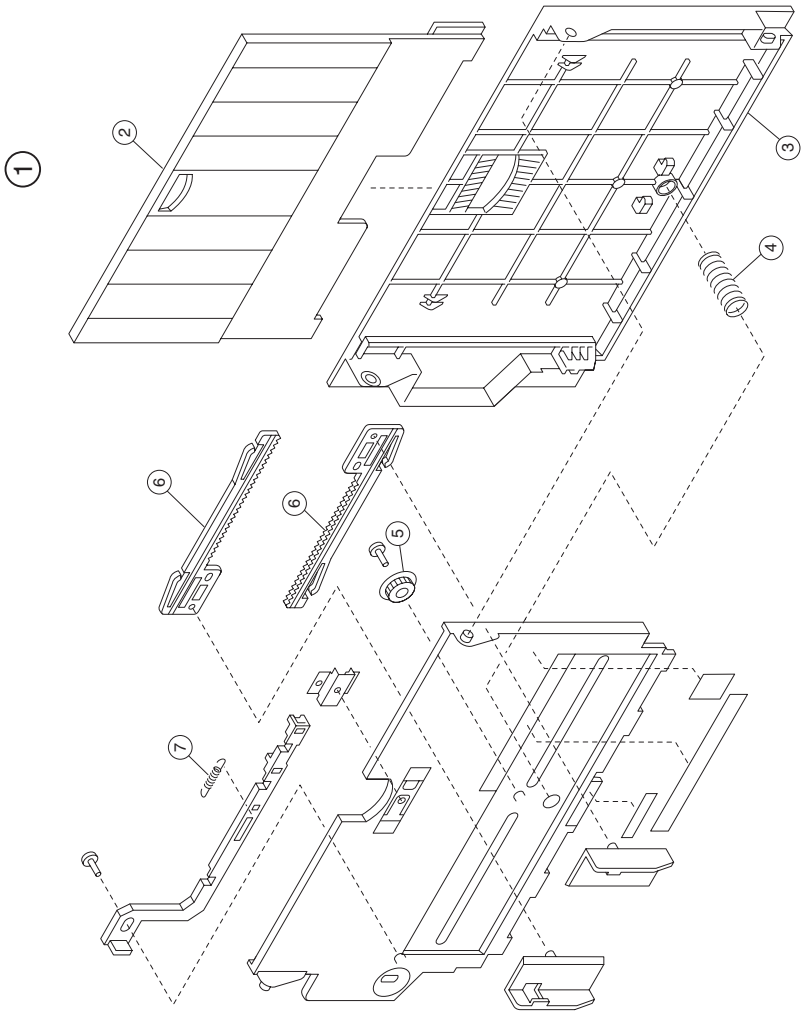
Assembly 4: Covers 4



**5055-01X**

<b>Asm- Index</b>	<b>Part Number</b>	<b>Units</b>	<b>Description</b>
4 - 1	56P9584	1	Guide Assembly, Turn

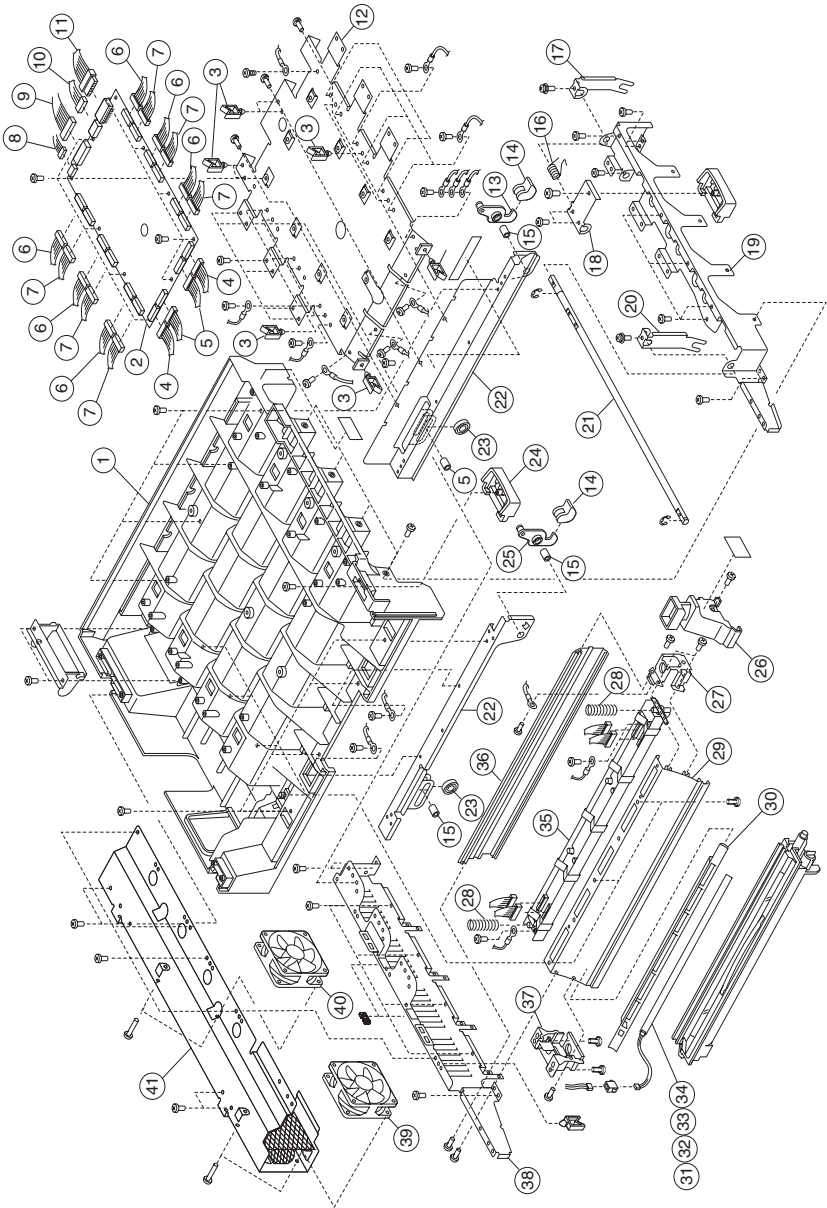
## Assembly 5: Covers 5



**5055-01X**

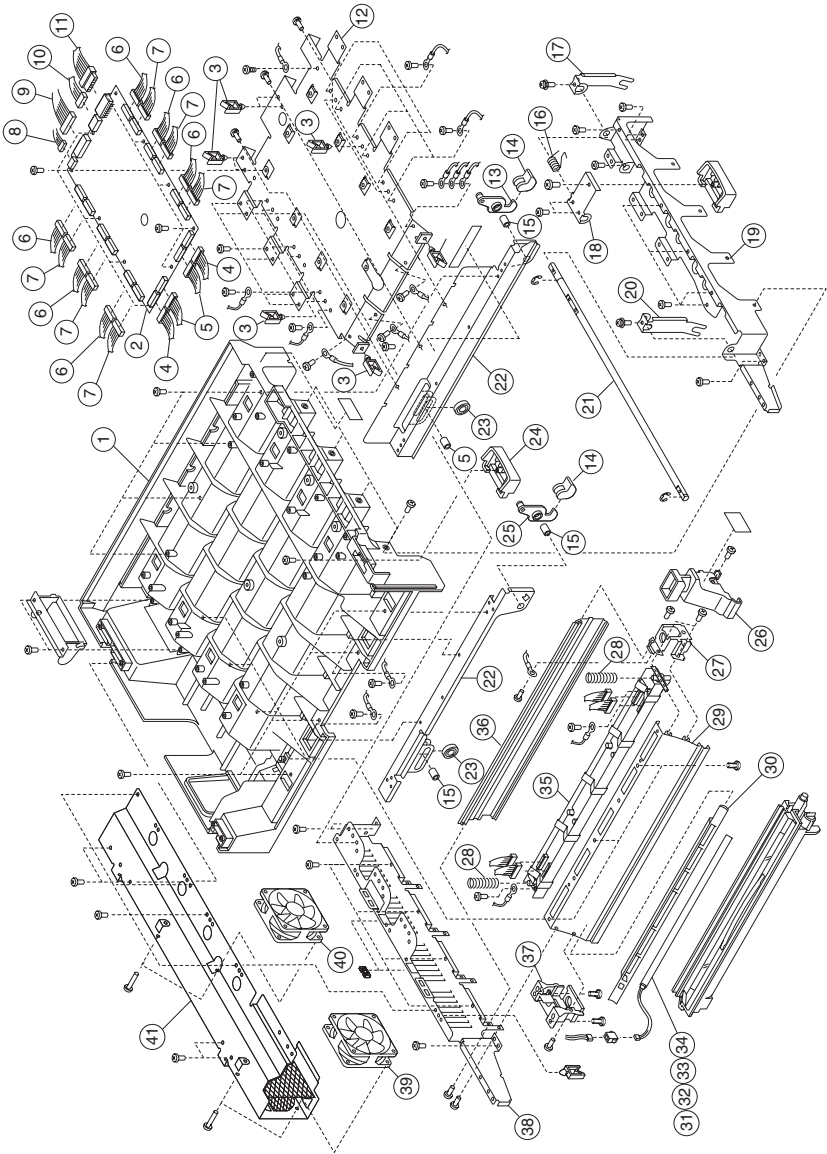
<b>Asm- Index</b>	<b>Part Number</b>	<b>Units</b>	<b>Description</b>
5 - 1	56P9587	1	Feeder Assembly, Multipurpose
2	56P9589	1	Extender, MPF
3	56P9588	1	Cover, MPF
4	56P9590	1	Spring, MPF
5	11G0118	1	Pinion, MPF
6	11G0117	1	Rack, MPF
7	11G0120	1	Spring, Feeder Lock
NS	56P9946	1	Parts Packet

# Assembly 6: Upper Unit



Asm-Index	Part Number	Units	Description
6 - 1	56P9591	1	Frame, Upper
2	56P9620	1	Board, Printhead Controller
3	56P9638	6	Holder, Cable
4	56P9600	2	Cable Assembly, K13
5	56P9601	2	Cable Assembly, K24
6	56P9602	6	Cable Assembly, CL13
7	56P9603	6	Cable Assembly, CL24
8	56P9716	1	Cable Assembly, 8 Pin PH Controller
9	56P9718	1	Cable Assembly, 30 Pin PH Controller
10	56P9717	1	Cable Assembly, 18 Pin PH Controller
11	56P9720	1	Cable Assembly, PH Controller Power
12	56P9637	1	Frame, Printhead Controller
13	56P9625	1	Hook, Right Link
14	56P9626	2	Cover, Hook
15	56P9628	4	Pivot, Color Link
16	56P9614	1	Spring, Return
17	56P9618	1	Hook, Right
18	56P9615	1	Hook, Middle
19	56P9612	1	Bracket, Front Upper
20	56P9617	1	Hook, Left
21	56P9613	1	Rod, Interlocking
22	56P9624	1	Link, Frame
23	56P9627	2	Bearing, Roller
24	56P9616	2	Handle, Upper Opening
25	56P9630	1	Hook, Left Link
26	56P9611	4	Holder, Front Printhead
27	56P9608	4	Holder, Front HSP
28	56P9609	8	Spring, Printhead
29	56P9592	4	Rail, Left Side
30	56P9594	4	Cover, Eraser
31	56P9595	1	Lamp, M Erase
32	56P9596	1	Lamp, C Erase
33	56P9597	1	Lamp, Y Erase
34	56P9598	1	Lamp, K Erase

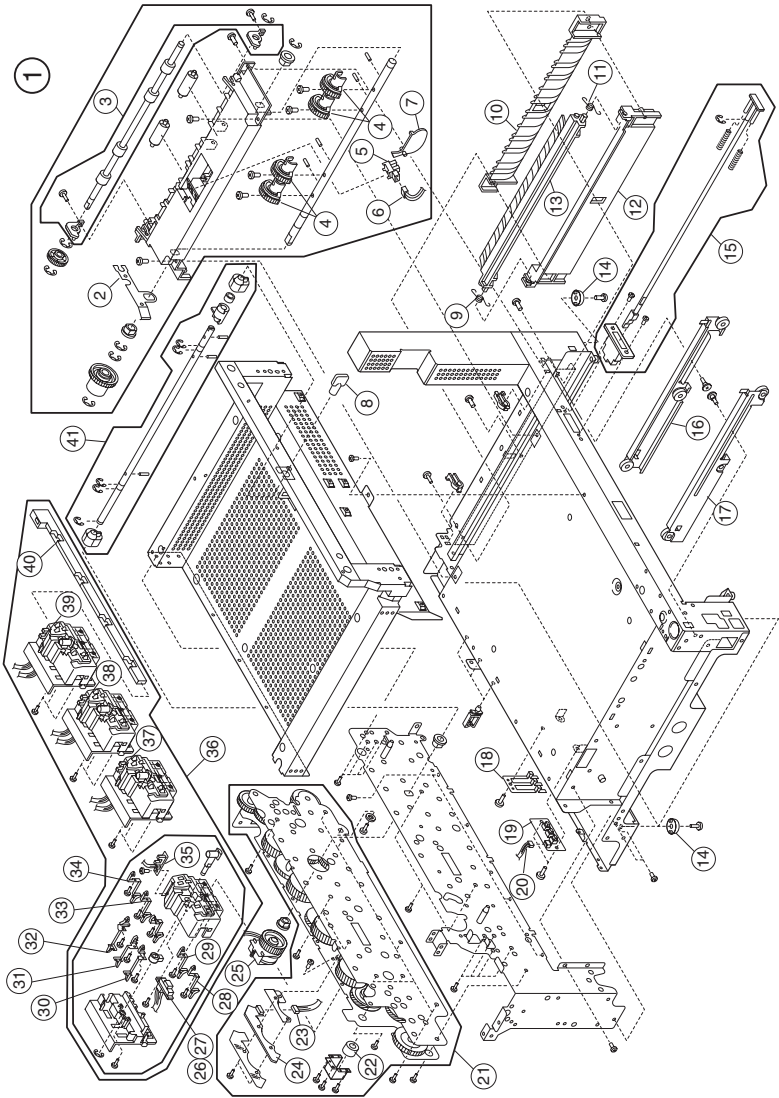
# Assembly 6: Upper Unit (Continued)





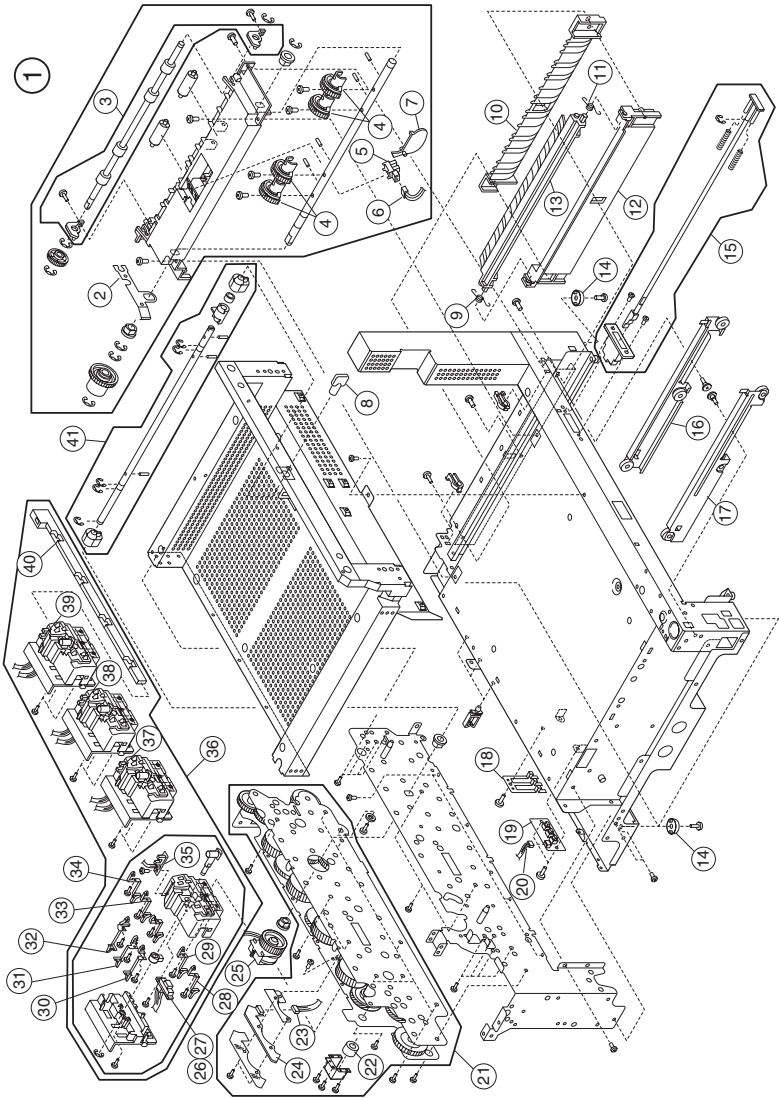
Asm-Index	Part Number	Units	Description
6 - 35	56P9599	4	Printhead, LED
36	56P9610	4	Rail, Right Side
37	56P9593	4	Holder, Rear Printhead
38	56P9619	1	Bracket, Rear Upper
39	56P9622	1	Fan, Upper Right
40	56P9623	1	Fan, Upper Left
41	56P9621	1	Bracket, Fan Holder
NS	56P9629	1	Frame, Link
NS	56P9639	4	Connector, Upper
NS	56P9604	8	Core, Ferrite
NS	56P9605	8	Cable Assembly, HDFG
NS	56P9606	4	Cable Assembly, RSPFG
NS	56P9607	2	Cable Assembly, LFG
NS	56P9947	1	Parts Packet

## Assembly 7: Base 1



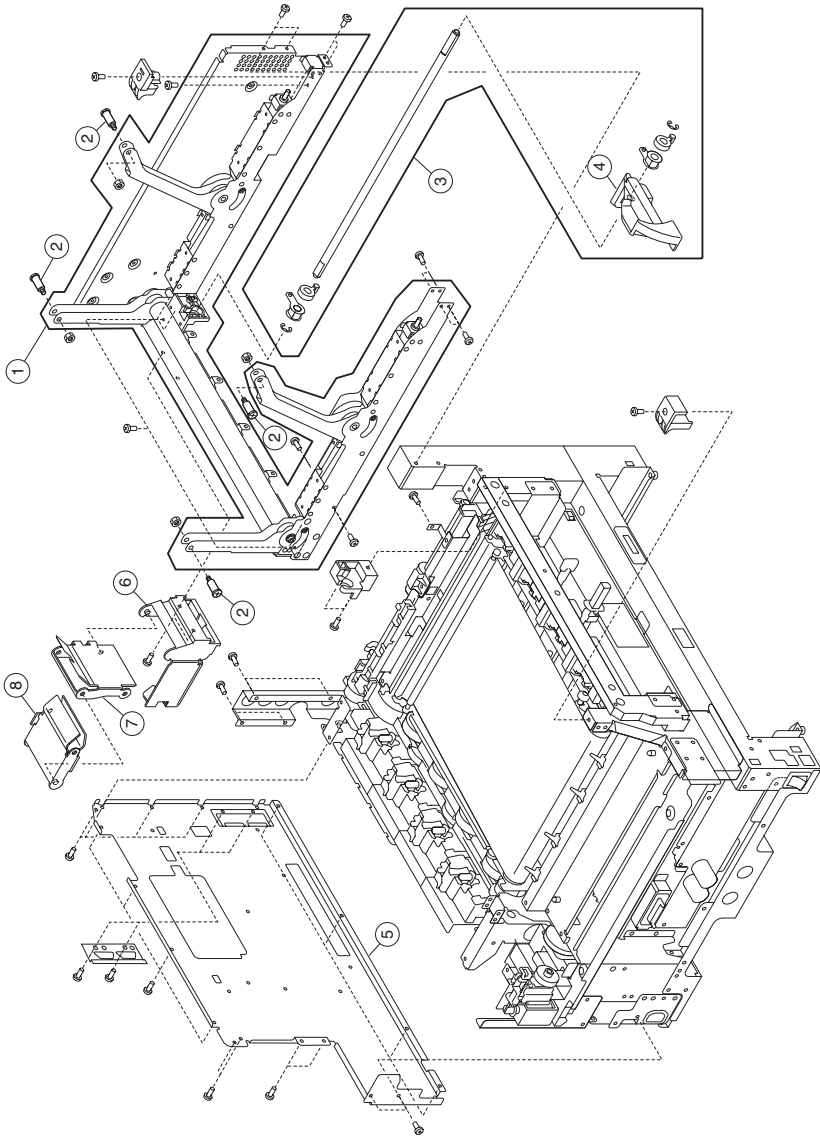
Asm-Index	Part Number	Units	Description
7 - 1	56P9664	1	Frame, Paper Feed
2	56P9508	4	Bracket, Ground
3	56P9512	1	Roller Assembly, Paper Carrying
4	56P9511	1	Roller Assembly, Paper Feed
5	11G0243	1	Interrupter, Photo
6	56P9665	1	Sensor, Paper Feed
7	56P9507	1	Actuator, Paper Feed Sensor
8	56P9520	1	Handle, Waste Bottle Cam
9	56P9517	1	Spring, Right Cassette Guide
10	56P9519	1	Guide, Lower Right Cassette
11	56P9516	1	Spring, Left Cassette Guide
12	56P9518	1	Guide, Lower Left Cassette
13	56P9515	1	Guide, Upper Cassette
14	56P9503	4	Foot, Rubber
15	56P9641	1	Actuator, Front Cover Open Switch
16	56P9505	1	Rail, Base Left Side
17	56P9504	1	Rail, Base Right Side
18	56P9521	1	Lever, Size Sensor
19	56P9522	1	Board, Size Sensor
20	56P9523	1	Cable Assembly, Size Sensor
21	56P9642	1	Unit, Drive
22	56P9643	1	Clutch, Drive Unit
23	56P9644	1	Cable Assembly, Drive Unit Sensor
24	56P9645	1	Sensor, Drive Unit Gear
25	56P9663	1	Clutch, Belt Up/Down
26	56P9659	1	Sensor Assembly, Y Drum Gear
27	56P9660	1	Sensor Assembly, K Drum Gear
28	56P9654	4	Sensor, Right Drum
29	56P9653	4	Sensor, Left Drum
30	56P9652	4	Power Supply (T)
31	56P9649	4	Power Supply (G)
32	56P9648	4	Power Supply (D)
33	56P9651	4	Power Supply (S)
34	56P9650	4	Power Supply (K)

## Assembly 7: Base 1 (Continued)



<b>Asm-Index</b>	<b>Part Number</b>	<b>Units</b>	<b>Description</b>
7-35	56P9658	1	Sensor Assembly, K Toner Remaining
36	56P9646	1	Frame, Sub
37	56P9657	1	Sensor Assembly, Y Toner Remaining
38	56P9656	1	Sensor Assembly, C Toner Remaining
39	56P9655	1	Sensor Assembly, M Toner Remaining
40	56P9661	1	Rod, Lock
41	56P9662	1	Shaft, Changing
NS	56P9524	2	Screw, Slide Rail
NS	56P9948	1	Parts Packet

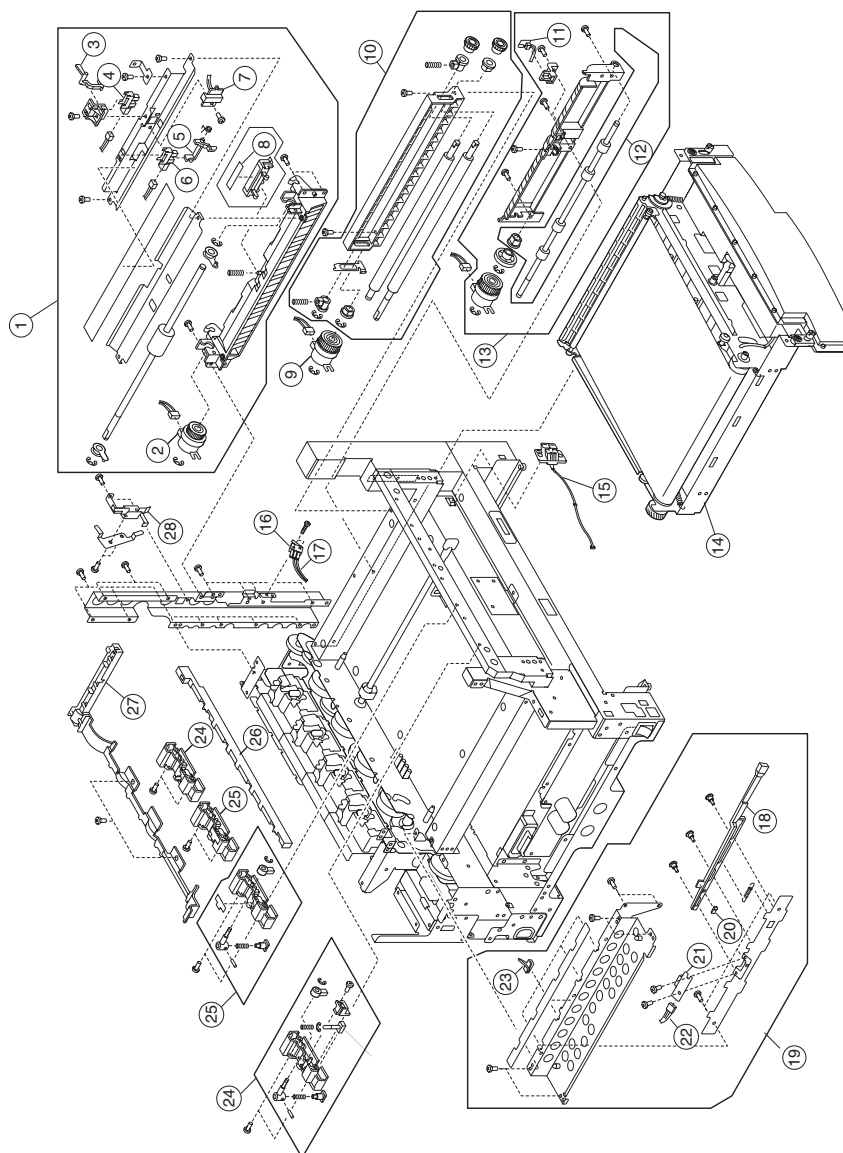
## Assembly 8: Base 2



**5055-01X**

<b>Asm- Index</b>	<b>Part Number</b>	<b>Units</b>	<b>Description</b>
8 - 1	56P9666	1	Support Assembly, Upper Unit
2	56P9667	4	Pin, Upper Unit Support
3	56P9668	1	Handle Assembly, Lock
4	56P9669	1	Handle, Lock
5	56P9673	1	Cover, Electronic
6	56P9670	1	Shroud, Cable
7	56P9672	1	Guide, Cable
8	56P9671	1	Guide, Cable
NS	56P9949	1	Parts Packet

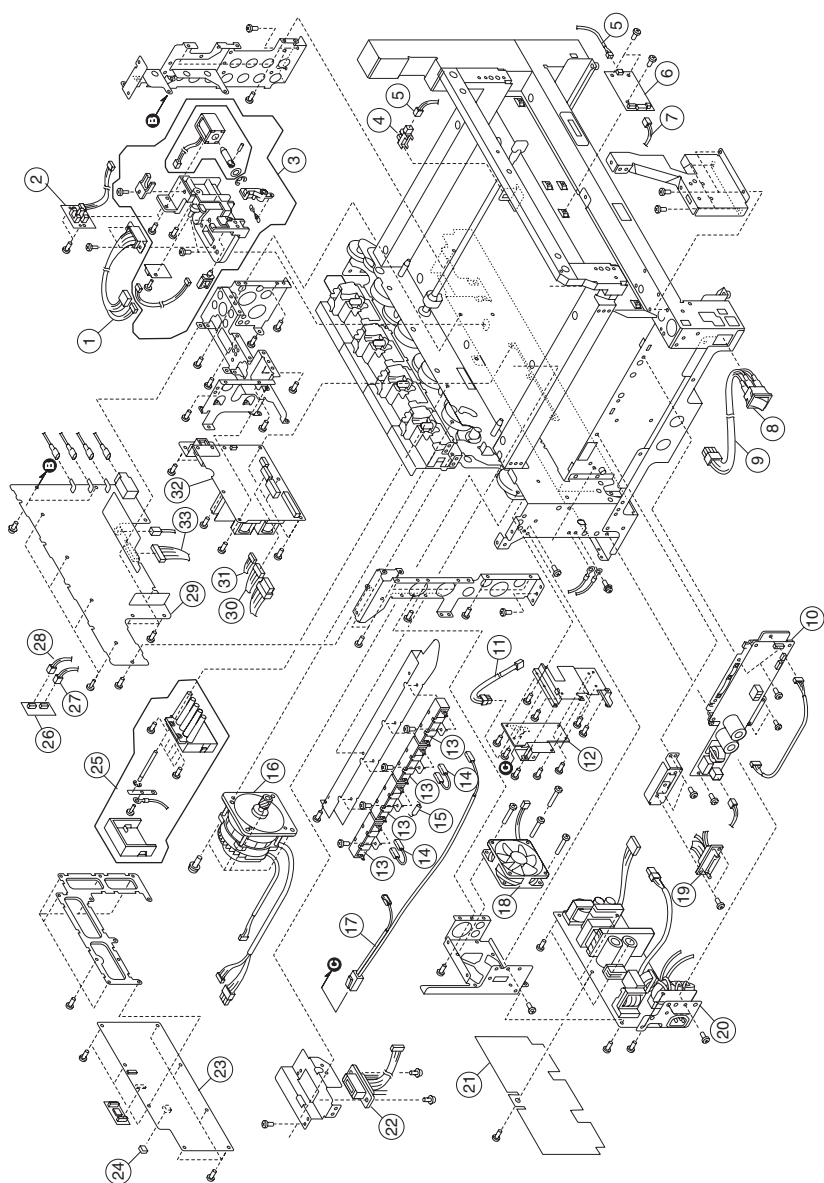
## Assembly 9: Base 3





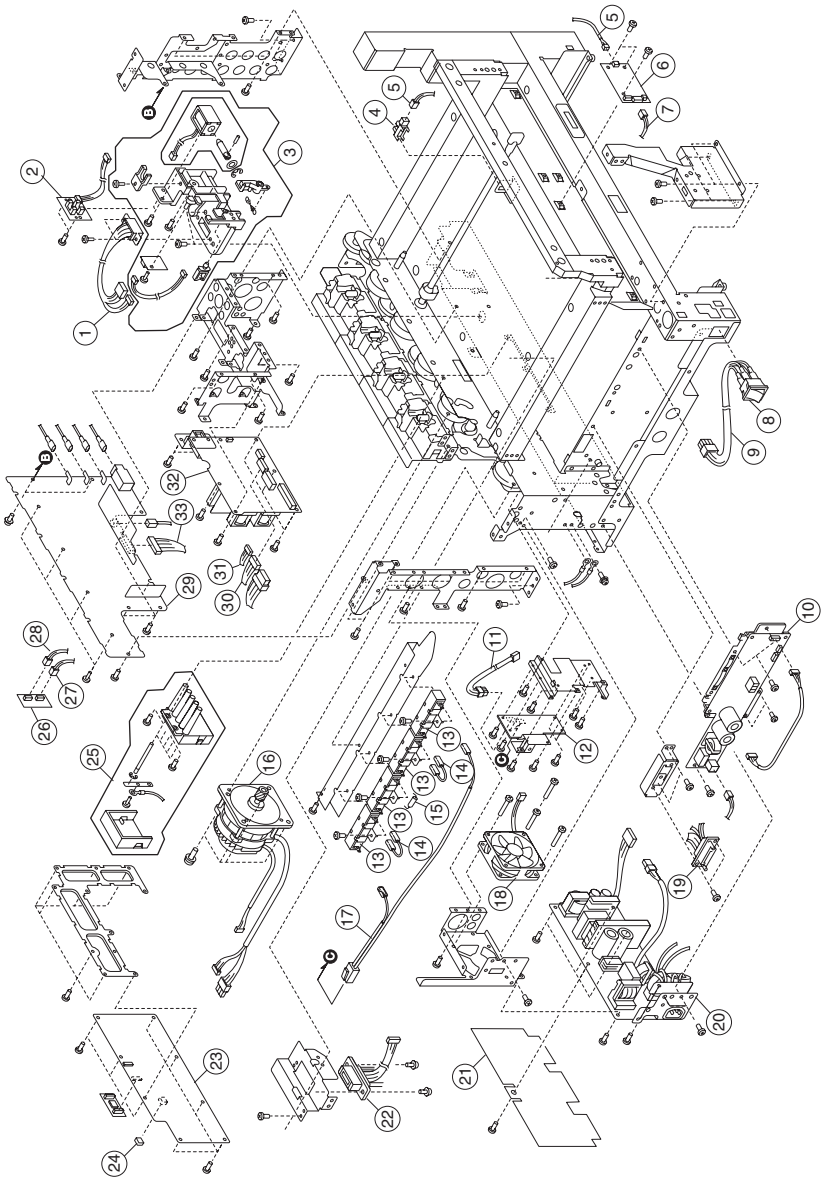
Asm-Index	Part Number	Units	Description
9 - 1	56P9688	1	Frame Assembly, MPF
2	56P9689	1	Clutch, MPF
3	56P9690	1	Actuator, MPF
4	11G0243	1	Interrupter, Photo
5	56P9691	1	Actuator, Resist
6	11G0219	1	Interrupter, Photo
7	56P9899	1	Sensor, Upper Transparency
8	11G0283	1	Pad, Framing
9	56P9681	1	Clutch, Registration
10	56P9680	1	Frame Assembly, Registration
11	56P9898	1	Sensor, Lower Transparency
12	56P9683	1	Roller Assembly, Upper Carrying
13	56P9682	1	Frame Assembly, Carrying
14	56P9694	1	Unit, Transfer Belt
15	56P9696	1	Cable Assembly, Belt Thermistor
16	56P9502	1	Sensor, Turn Guide Door
17	56P9695	1	Cable, Turn Guide Door Sensor
18	56P9679	1	Rod Cleaner
19	56P9674	1	Guide Assembly, Fuser Entrance
20	56P9678	1	Sensor Cleaner
21	56P9676	1	Sensor, Density
22	56P9677	1	Cable, Density Sensor
23	11G0698	4	Pawl, Separation
24	56P9684	2	Frame Assembly, F1 Sub
25	56P9685	2	Frame Assembly, F2 Sub
26	56P9686	1	Rod, Lock
27	56P9687	1	Cover, Gear
28	56P9693	1	Stopper, Clutch
NS	56P9697	1	Bushing
NS	56P9692	1	Cable Assembly, Reg MPF Sensor
NS	56P9950	1	Parts Packet

## Assembly 10: Electrical



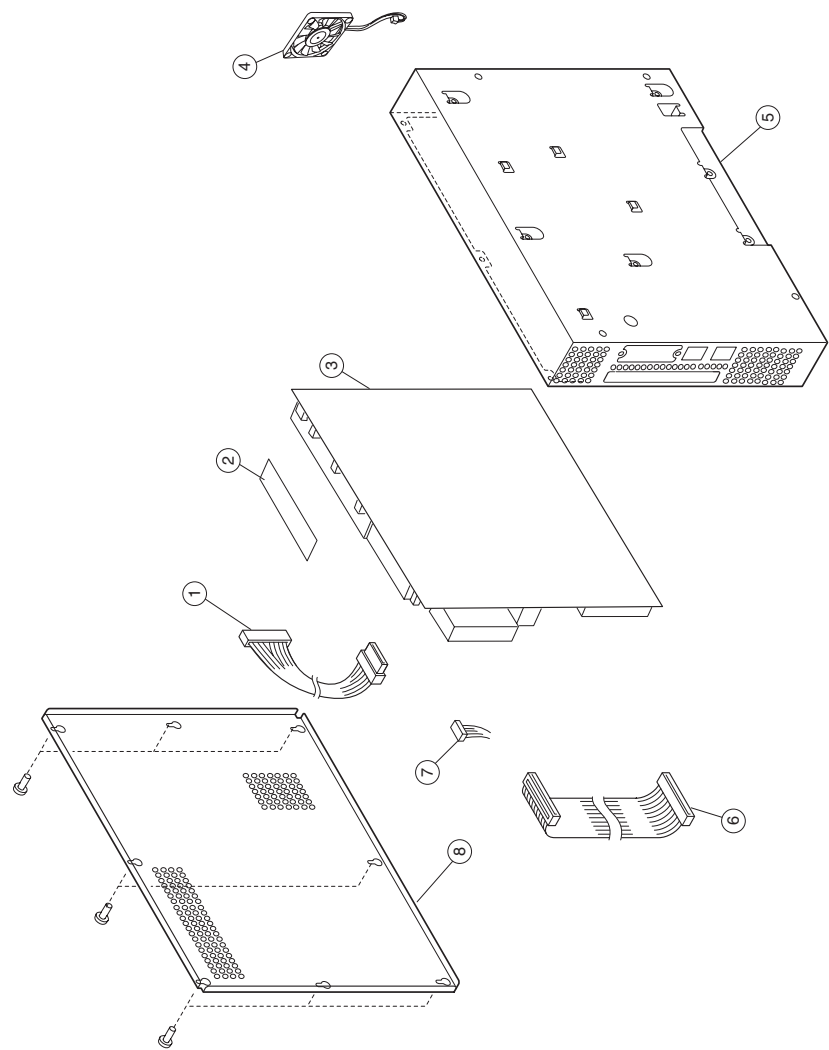
Asm-Index	Part Number	Units	Description
10 - 1	56P9705	1	Cable Assembly, Feeder
2	56P9704	1	Cable Assembly, Paper Remaining Sensor
3	56P9700	1	Solenoid Assembly, Paper Feed
4	11G0243	1	Interrupter, Photo
5	56P9702	1	Cable, Belt Up/Down Sensor
6	56P9701	1	Board, Sensor
7	56P9703	1	Cable Assembly, Sensor Board
8	56P9707	1	Switch, Power
9	56P9706	1	Cable, Power Switch
10	56P9709	1	Board, 120 V Motor Driver
10	56P9710	1	Board, 230 V Motor Driver
11	56P9739	1	Cable Asm., Conditioning Printer Controller
12	56P9742	1	Board, Heater Drive
13	56P9741	1	Resistor, Conditioning (230 V only)
14	56P9738	1	Cable Assembly, Conditioning Joint (230 V only)
15	56P9943	1	Fuse, Thermal (230 V only)
16	56P9698	1	Motor Assembly, 120 V
16	56P9699	1	Motor Assembly, 230 V
17	56P9740	1	Cable, Conditioning Resistor
18	56P9713	1	Fan, Power Supply
19	56P9708	1	Cable Assembly, Duplex Connector
20	56P9722	1	Power Supply, 120 V (1)
20	56P9723	1	Power Supply, 230 V (1)
21	56P9737	1	Insulator, Sheet
22	56P9711	1	Cable, THB Drawer
22	56P9712	1	Cable, THB Drawer (EMEA)
23	56P9728	1	Board, Printer Controller
24	56P9729	1	EPROM, Printer Controller
25	56P9732	1	Belt, Power Supply
26	56P9734	1	HCF/Finisher D-sub Assembly
27	56P9731	1	Cable Assembly, Finisher
28	56P9730	1	Cable Assembly, HCF
NS	56P9964	1	Transformer, Power (Japan only)

# Assembly 10: Electrical (Continued)



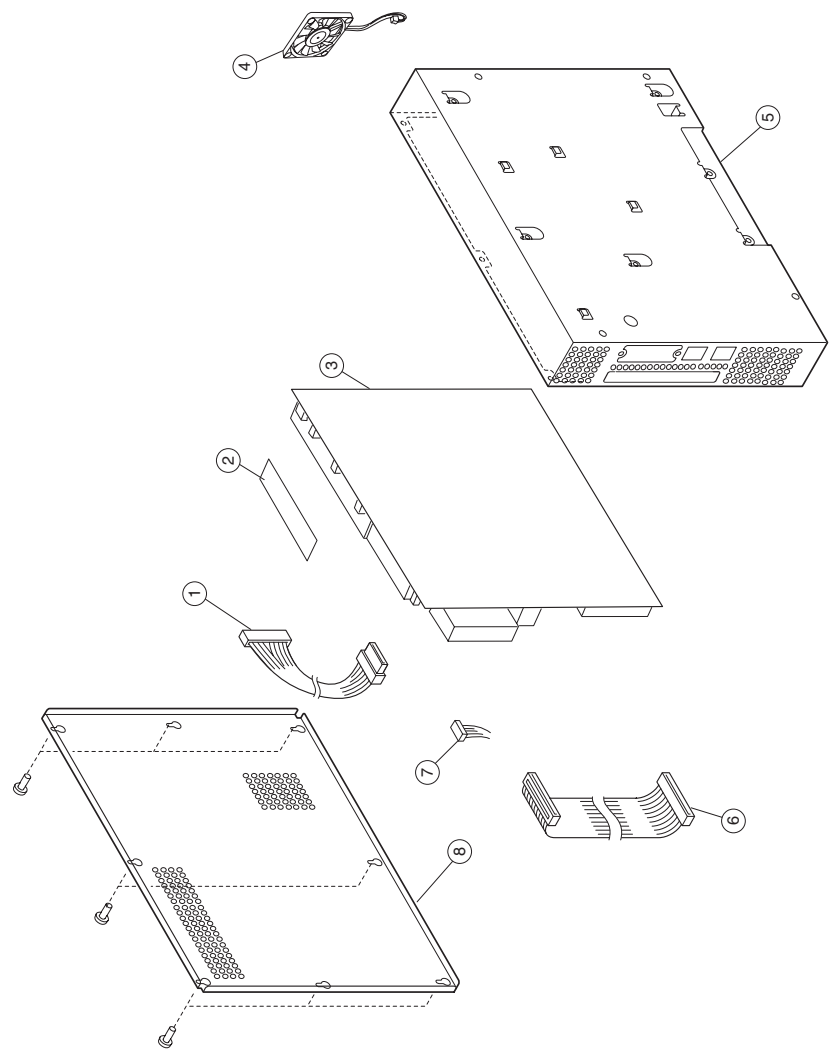
Asm-Index	Part Number	Units	Description
10 -29	56P9714	1	Board, High Voltage Power Supply
30	56P9727	1	Cable Assembly, Printer Controller Power 2
31	56P9726	1	Cable Assembly, Printer Controller Power 1
32	56P9724	1	Power Supply, 120 V (2)
32	56P9725	1	Power Supply, 230 V (2)
33	56P9715	1	Cable High Voltage Power Supply Board
NS	11D0328	1	Power Cord - USA, Canada, APG, LAD
NS	11D0329	1	Power Cord - Peru
NS	11D0330	1	Power Cord - Argentina
NS	11D0331	1	Power Cord - Brazil
NS	11D0332	1	Power Cord - Chile
NS	11D0333	1	Power Cord - Denmark
NS	11D0334	1	Power Cord - Belgium, Europe, England, France, Germany, Spain
NS	11D0335	1	Power Cord - Italy
NS	11D0336	1	Power Cord - Swiss/French, German, Italian
NS	11D0337	1	Power Cord - UK, Israel, South Africa
NS	56P9951	1	Parts Packet

Assembly 11: Rip Board



Asm-Index	Part Number	Units	Description
11 - 1	56P9749	1	Cable Assembly, Power RIP
2	56P9916	1	Card, Riser
3	56P9897	1	Board, RIP Controller
4	56P9750	1	Fan, RIP
5	56P9745	1	Box, RIP
6	56P9719	1	Cable Assembly, 80 Pin RIP Printer Controller
7	56P9736	1	Cable, Operator Panel
8	56P9746	1	Cover, RIP Box
NS	56P9747	1	Cable Assembly, Power MAC
NS	56P9748	1	Cable Assembly, MIF
NS	56P9904	1	Board, RIP Controller (Network)
NS	12G6509	1	Card, SDRAM DIMM
NS	56P9910	1	Card Assembly, 128MB SDRAM memory
NS	56P9911	1	Card Assembly, 256MB SDRAM memory
NS	56P9912	1	Card Assembly, 4MB Flash DIMM memory
NS	56P9913	1	Card Assembly, 8MB Flash DIMM memory
NS	56P9914	1	Card Assembly, 16MB Flash DIMM memory
NS	56P9938	1	Hard Disk, 5+ GB w/Mounting Kit (formatted)
NS	56P9934	1	Card, Token-Ring
NS	12G1695	1	Card, Ethernet 10/100Base-TX
NS	12G1696	1	Card, Ethernet 10BaseT/2
NS	56P0161	1	Card, RS-232C Serial/Parallel 1284 A-C Interface
NS	99A0560	1	Card, Tri-Port Adapter
NS	99A0424	1	Card, Infrared Adapter
NS	99A0545	1	Card, External Serial Adapter
NS	99A0629	1	Card, Coax/Twinax Adapter for SCS
NS	56P0162	1	Adapter, Parallel 1284 C-B
NS	13A0296	1	Cable, Twinax
NS	13A0297	1	Cable, Coax
NS	56P0598	1	Card, CGM

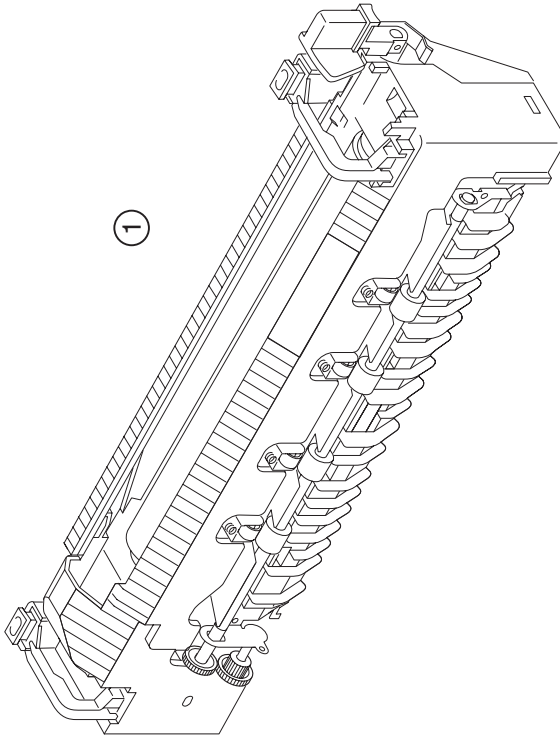
Assembly 11: RIP Board (Continued)





Asm-Index	Part Number	Units	Description
11-NS	56P9922	1	IPDS/SCSS/TNe
NS	56P9923	1	Card, ImageQuick™
NS	56P9924	1	Card, Bar Code
NS	56P9925	1	Card, PRESCRIBE
NS	56P9926	1	Software, Optra Forms™
NS	56P9927	1	Software, Optra Forms Director
NS	56P9928	1	DIMM, Lexmark Forms 4MB Flash
NS	56P9929	1	DIMM, Lexmark Forms 8MB Flash
NS	56P9930	1	DIMM, Lexmark Forms 16MB Flash
NS	56P9932	1	Hard Disk, Lexmark Forms 5+ GB
NS	56P9942	1	Mounting Kit, Hard Drive
NS	56P9952	1	Parts Packet

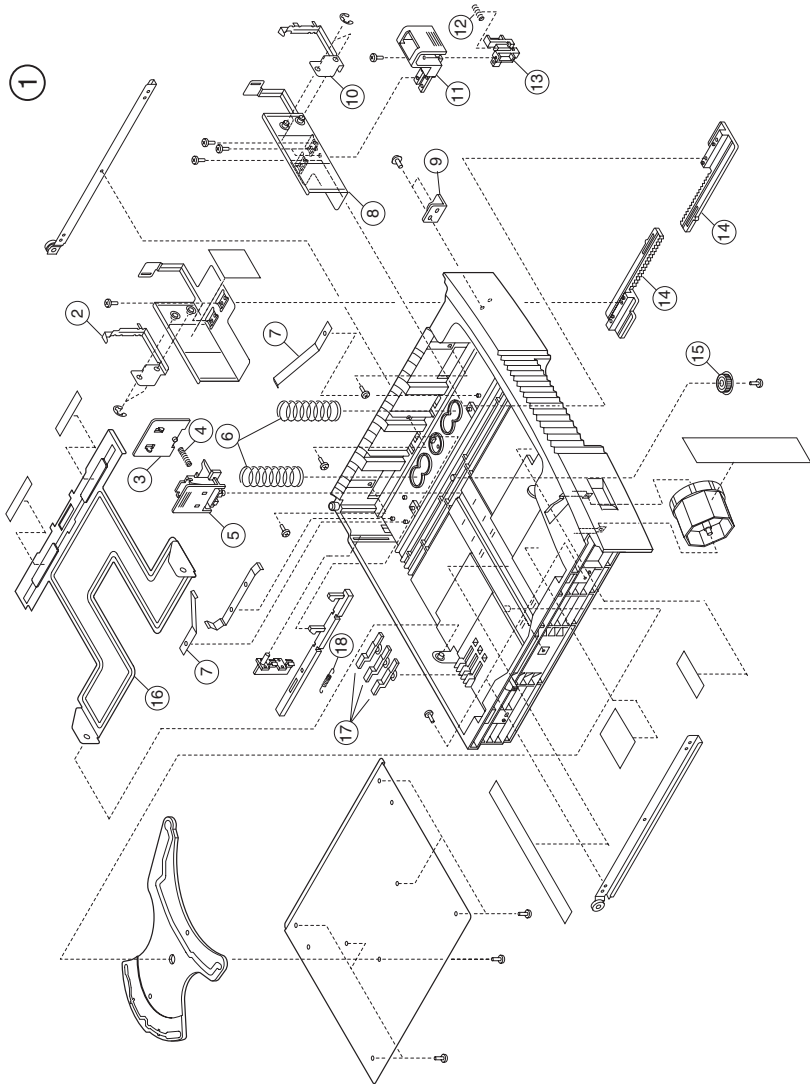
## Assembly 12: Fuser Unit



**5055-01X**

<b>Asm- Index</b>	<b>Part Number</b>	<b>Units</b>	<b>Description</b>
12 - 1	56P9751	1	Fuser, 120 V
1	56P9752	1	Fuser, 230 V
NS	56P9953	1	Parts Packet

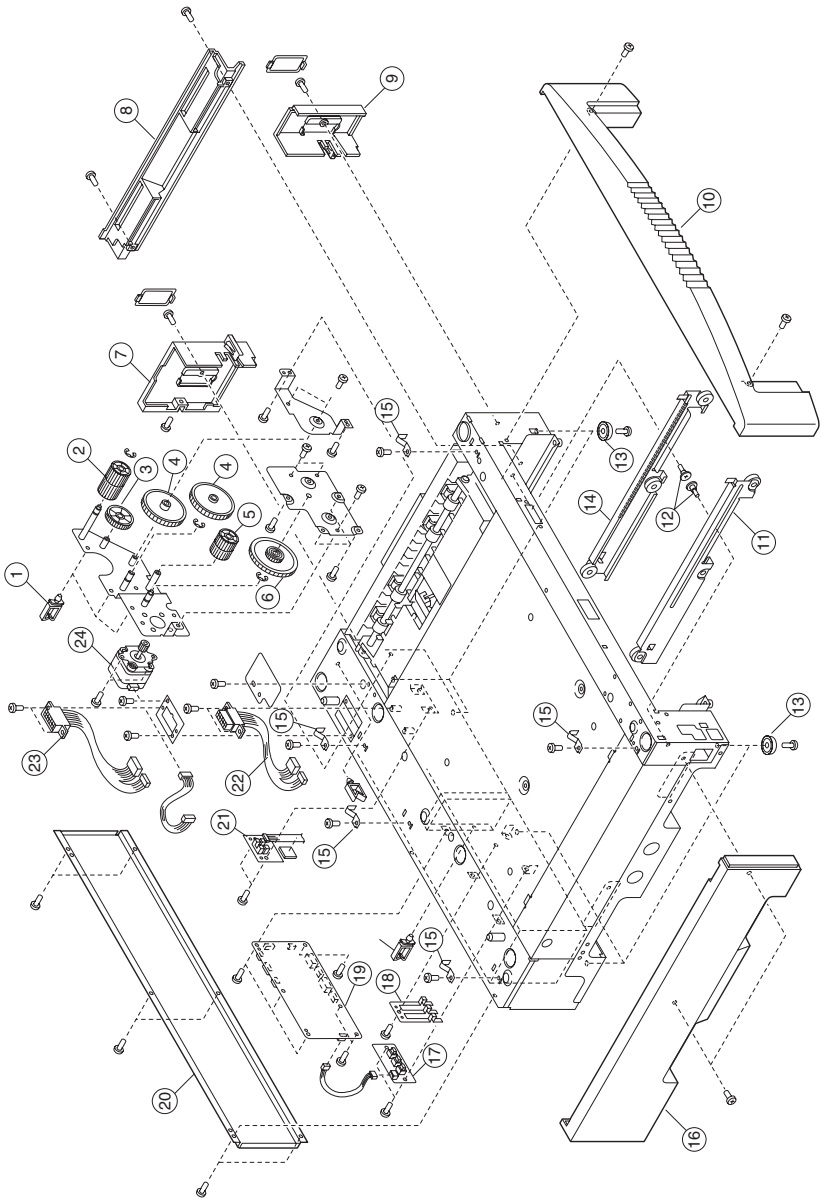
# Assembly 13: Cassette



**5055-01X**

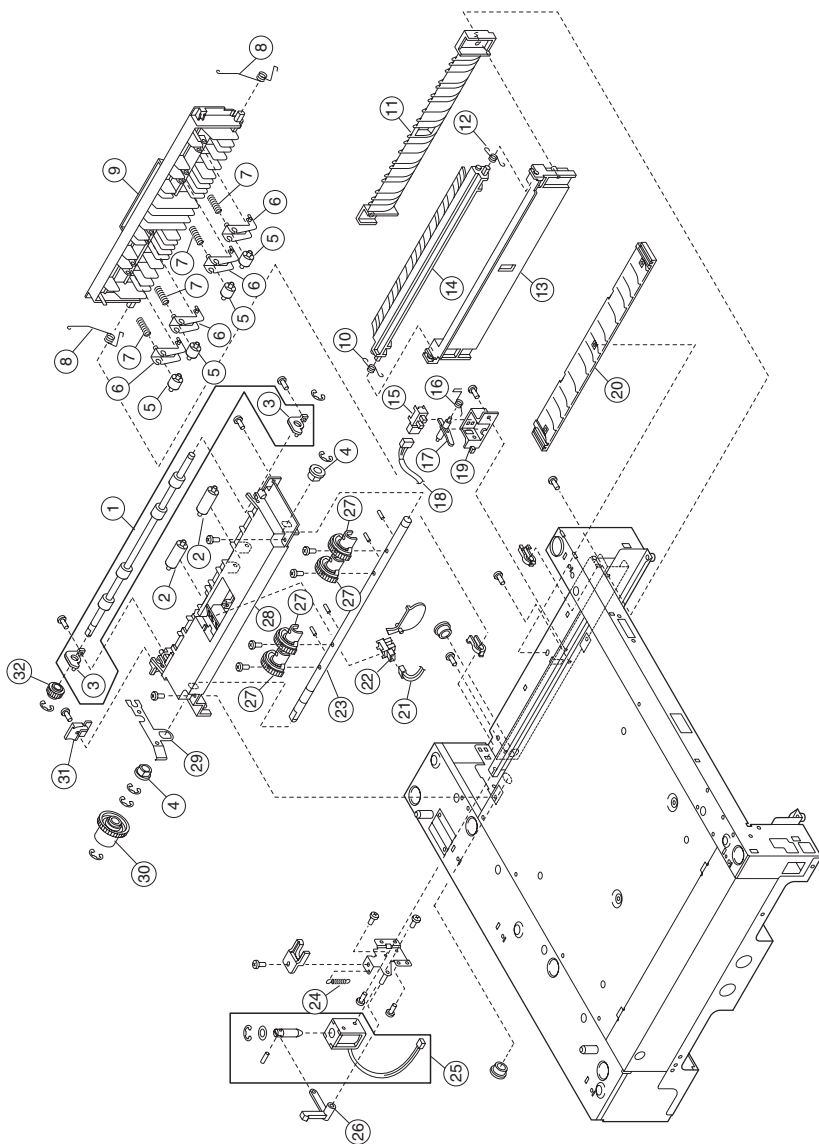
<b>Asm-Index</b>	<b>Part Number</b>	<b>Units</b>	<b>Description</b>
13 - 1	56P9500	1	Cassette, Paper Feed
2	56P9761	1	Pawl, Rear
3	56P9754	1	Plate, Right Rear Location
4	56P9755	1	Spring, Location Plate
5	56P9753	1	Plate, Left Rear Location
6	56P9763	2	Spring, A Push Up
7	56P9764	2	Spring, B Push Up
8	56P9757	1	Locator, Front Side
9	56P9944	1	Guide, Stop
10	56P9758	1	Pawl, Front
11	56P9759	1	Lock, A Side
12	11G0284	1	Spring, Lock
13	56P9760	1	Lock, B Side
14	56P9756	2	Rack, PF Cassette
15	11G0118	1	Pinion, PF Cassette
16	56P9762	1	Plate, Lower
17	11G0385	3	Sensor, Actuator
18	11G0120	1	Spring, Tray Lock
NS	56P9954	1	Parts Packet

# Assembly 14: Expansion Feeder 1



Asm-Index	Part Number	Units	Description
14 - 1	56P9780	4	Guide, Wire
2	11G0199	1	Gear, Feeder E
3	56P9771	1	Gear, Feeder C
4	11G0422	2	Gear, Feeder B
5	56P9772	1	Gear, Feeder D
6	11G0423	1	Gear, Feeder A
7	56P9770	1	Cover, Right Side C
8	56P9769	1	Cover, Right Side B
9	56P9767	1	Cover, Right Side A
10	56P9765	1	Cover, Front Feeder
11	56P9504	1	Rail, Left Side
12	56P9524	2	Screw, Slide Rail
13	56P9503	6	Foot, Rubber
14	56P9505	1	Rail, Right Side
15	11G0399	5	Plate, Ground
16	56P9766	1	Cover, Left Side
17	56P9522	1	Board, Size Sensor
18	56P9521	1	Lever, Size Sensor
19	56P9779	1	Board, Expansion Feeder Control
20	56P9768	1	Cover, Rear
21	56P9776	1	Board, Paper Remaining Sensor
22	56P9778	1	Cable Assembly, Lower Optional Drawer
23	56P9777	1	Cable Assembly, Upper Optional Drawer
24	56P9774	1	Motor, Feeder Drive
NS	56P9775	1	Cable Assembly, Size Sensor
NS	56P9955	1	Parts Packet

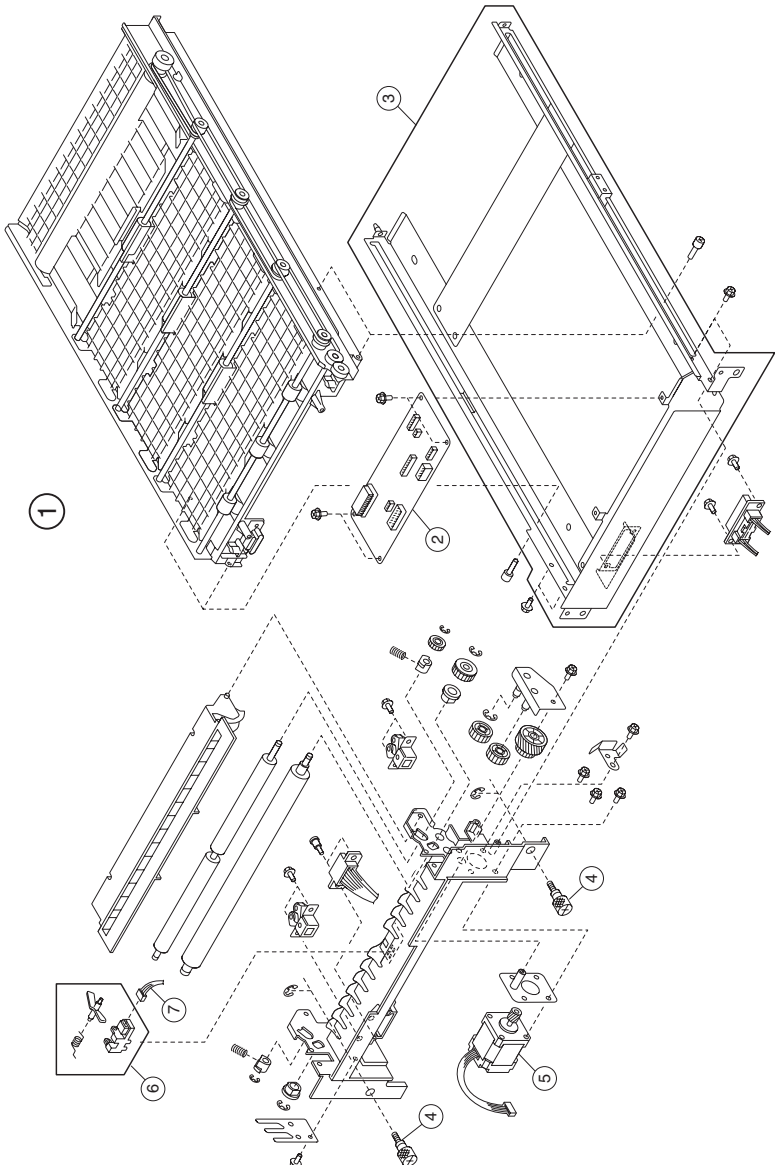
# Assembly 15: Expansion Feeder 2





Asm-Index	Part Number	Units	Description
15 - 1	56P9796	1	Roller Assembly, Carrying
2	56P9514	2	Roller, Noise Reduction
3	56P9513	2	Bushing, Carrying
4	56P9509	2	Bushing, Metal
5	56P9790	4	Roller, Paper Carrying
6	56P9792	4	Holder, Roller
7	56P9791	4	Spring, Paper Carrying
8	56P9794	1	Spring, Right Turn Guide
9	56P9789	1	Guide, Turn
10	56P9517	1	Spring, Right Cassette Guide
11	56P9519	1	Guide, Lower Right Cassette
12	56P9516	1	Spring, Left Cassette Guide
13	56P9518	1	Guide, Lower Left Cassette
14	56P9515	1	Guide, Upper Cassette
15	11G0563	1	Interrupter, Photo
16	56P9786	1	Spring, Paper Detection Sensor
17	56P9784	1	Actuator, Paper Detection
18	56P9787	1	Cable, Paper Present Sensor
19	56P9785	1	Cover, Paper Present Sensor
20	56P9788	1	Guide, HCF
21	56P9795	1	Cable, Paper Present Sensor
22	11G0219	1	Interrupter, Photo
23	56P9510	1	Shaft, Paper Feed
24	56P9782	1	Spring, Solenoid
25	56P9783	1	Solenoid, Feeder
26	56P9781	1	Lever, Clutch
27	56P9511	4	Roller Assembly, Paper Feed
28	56P9506	1	Frame, Paper Feed
29	56P9508	1	Bracket, Ground
30	11G0291	1	Clutch, Paper Feed
31	56P9797	1	Cover, Gear
32	11G0297	1	Gear, Paper Carrying
NS	56P9793	1	Spring, Left Turn Guide
NS	56P9507	1	Actuator, Paper Feed Sensor
NS	56P9956	1	Parts Packet

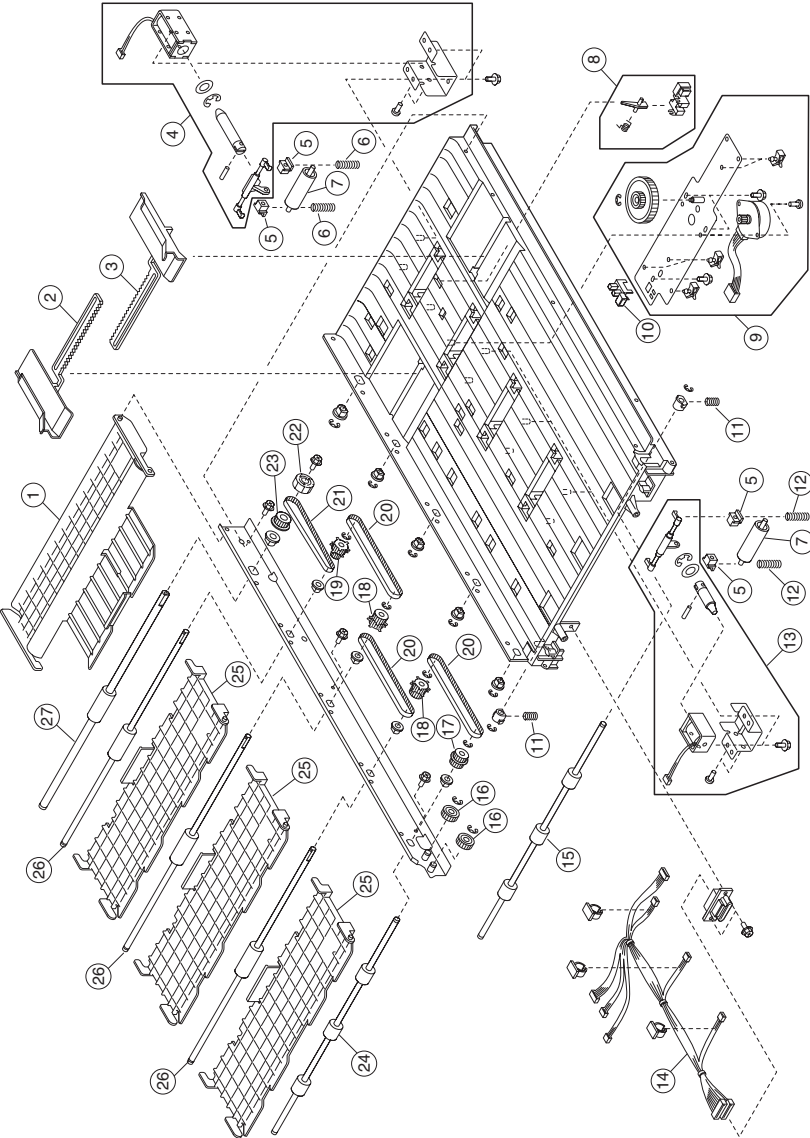
# Assembly 16: Duplex Unit 1



**5055-01X**

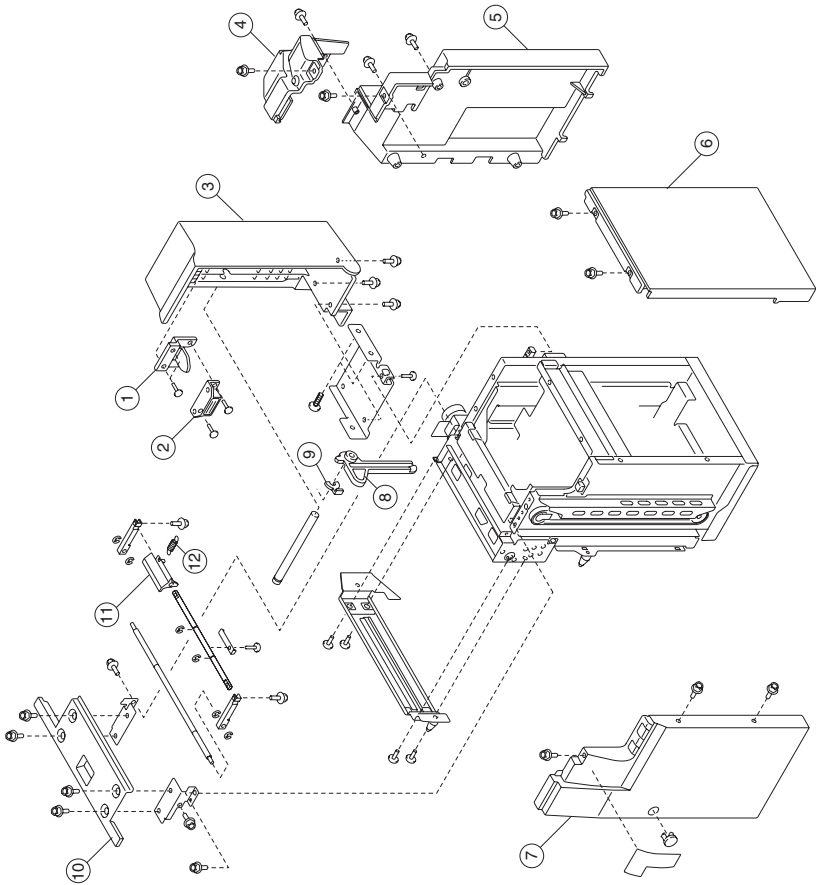
<b>Asm- Index</b>	<b>Part Number</b>	<b>Units</b>	<b>Description</b>
16 - 1	56P9798	1	Duplex Assembly
2	56P9804	1	Board, Duplex Interface
3	56P9799	1	Frame, Duplex
4	56P9800	2	Screw, Duplex Mounting
5	56P9803	1	Motor, Duplex Stepping
6	56P9525	1	Interrupter, Photo
7	56P9806	1	Cable Assembly, Paper Detection
NS	56P9807	1	Cable Assembly, Duplex Interface
NS	56P9805	1	Cable Assembly, Duplex Connection

Assembly 17: Duplex Unit 2



Asm-Index	Part Number	Units	Description
17 - 1	56P9825	1	Plate, Paper Re-Feed Drawer
2	56P9827	1	Guide, Rear Side
3	56P9826	1	Guide, Front Side
4	56P9830	1	Solenoid Assembly, Paper Re-feed
5	56P9814	8	Bearing, Release
6	56P9816	2	Spring, Re-feed Roller
7	56P9813	4	Roll, Release
8	56P9525	1	Interrupter Assembly, Photo
9	56P9828	1	Motor Assembly, Paper Guide
10	56P9808	1	Interrupter, Photo
11	56P9526	2	Spring, Feed Roller
12	56P9815	6	Spring, Feed Roller
13	56P9829	3	Solenoid Assembly, Feed Roller
14	56P9831	1	Cable Assembly, Duplex Drawer
15	56P9810	1	Roller, Follow-up Feed
16	56P9527	2	Gear, Idler
17	56P9817	1	Gear, Carrying Roller
18	56P9818	2	Pulley, Carrying Roller Timing
19	56P9819	1	Pulley, Feed Roller
20	56P9822	3	Belt, Timing
21	56P9823	1	Belt, Timing
22	56P9821	1	Knob, Paper Re-feed
23	56P9820	1	Pulley, Re-feed Roller
24	56P9809	1	Roller, Drive Feed
25	56P9824	3	Plate, Paper Carrying Drawer
26	56P9811	3	Roller, Middle Feed
27	56P9812	1	Roller, Re-feed
NS	56P9957	1	Parts Packet

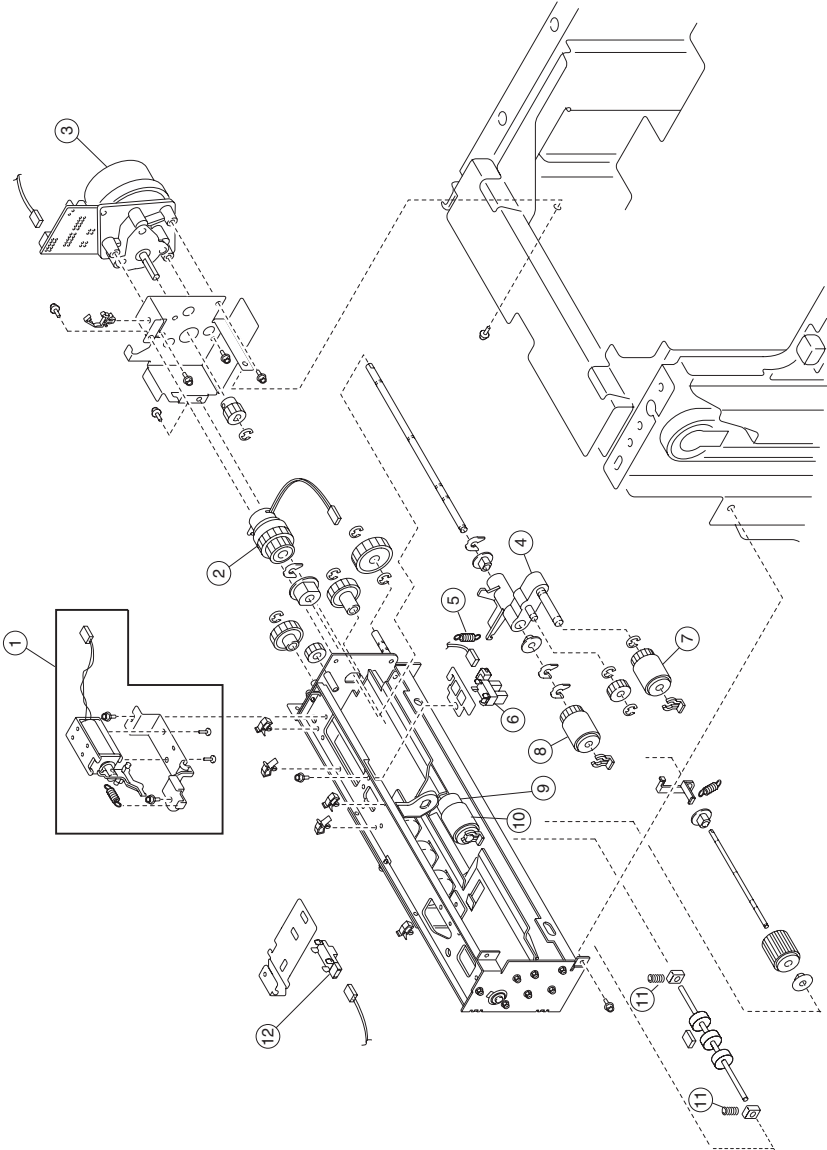
# Assembly 18: High Capacity Feeder 1



**5055-01X**

<b>Asm-Index</b>	<b>Part Number</b>	<b>Units</b>	<b>Description</b>
18 - 1	56P9838	1	Catch, Door
2	56P9835	1	Magnet, Latch
3	56P9837	1	Cover, Upper
4	56P9834	1	Cover, Upper Rear
5	56P9843	1	Cover, Lower Rear
6	56P9839	1	Cover, Right
7	56P9833	1	Cover, Front
8	56P9836	1	Fence, End
9	56P9940	1	Ring, Snap
10	56P9841	1	Cover Assembly, Upper
11	56P9840	1	Lever, Vertical Transport
12	56P9842	1	Spring, Tension
NS	56P9958	1	Parts Packet

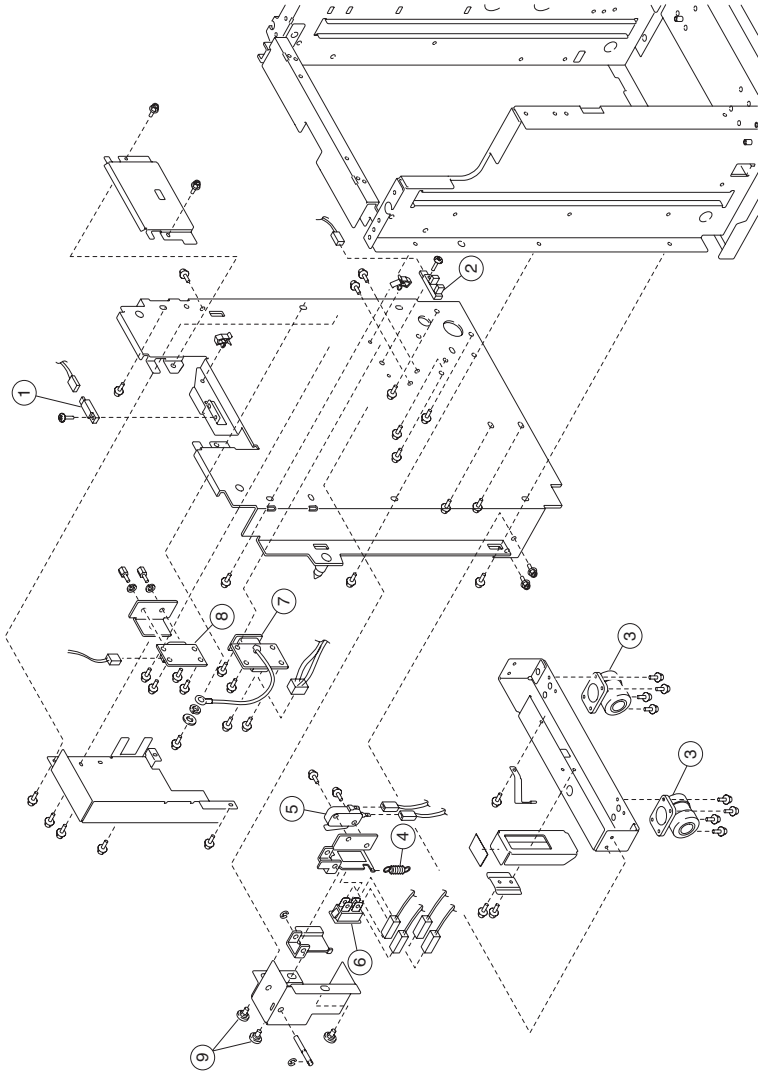
## Assembly 19: High Capacity Feeder 2





Asm- Index	Part Number	Units	Description
19 - 1	56P9846	1	Solenoid Assembly, Paper Pickup
2	56P9848	1	Clutch, Paper Feed
3	56P9844	1	Motor Assembly, Transport
4	56P9941	1	Arm, Pick-up
5	56P9501	1	Spring, Pressure
6	56P9528	1	Interrupter, Photo
7	56P9849	1	Roller, Manual Feed Pickup
8	56P9850	1	Roller, Manual Feed
9	56P9852	1	Limiter, Torque
10	56P9851	1	Roller, Manual Feed Separate
11	56P9847	2	Spring, Compression
12	56P9845	1	Sensor Assembly, Paper Feed
NS	56P9959	1	Parts Packet

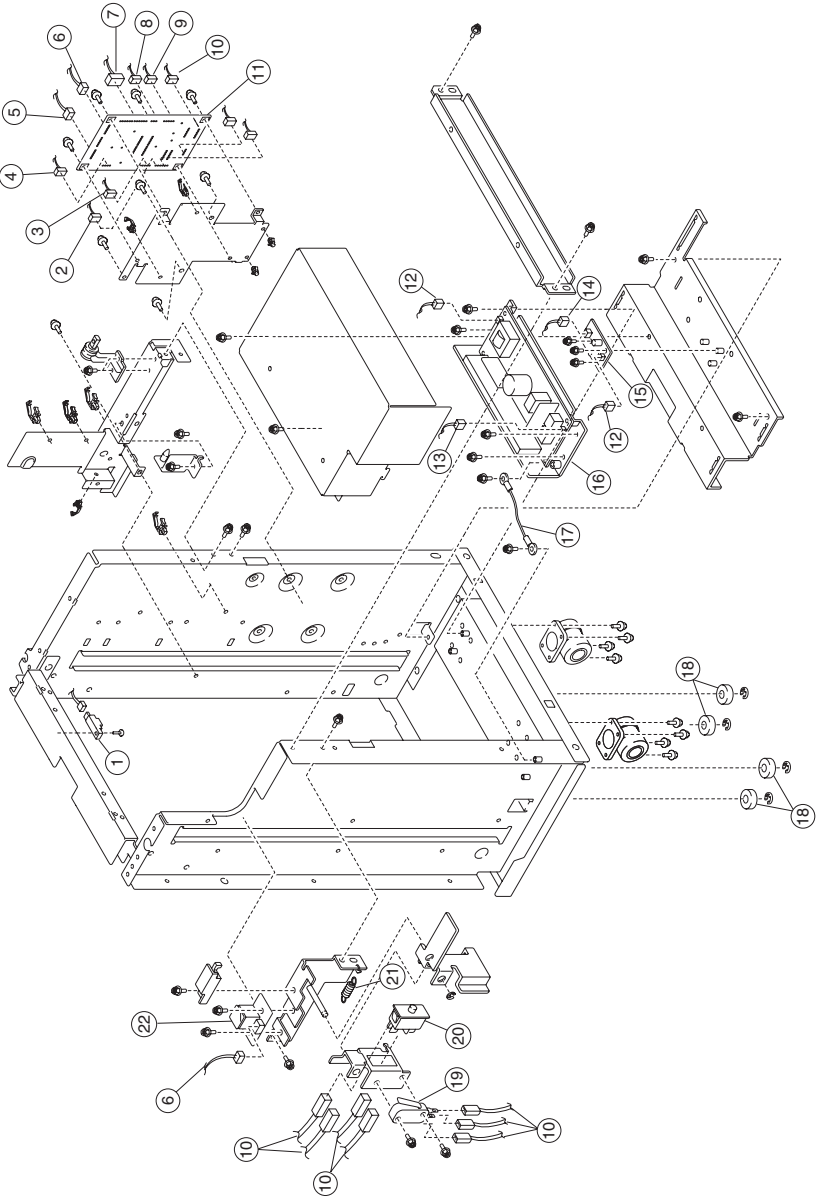
## Assembly 20: High Capacity Feeder 3



**5055-01X**

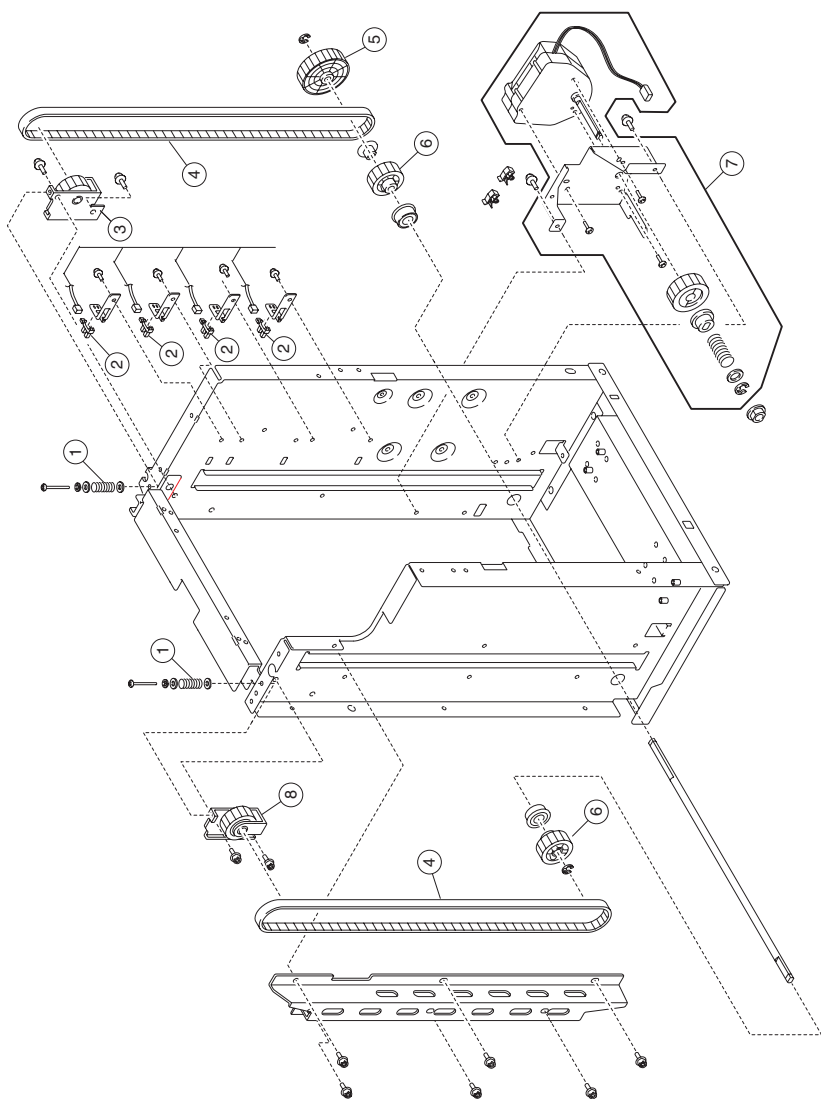
<b>Asm-Index</b>	<b>Part Number</b>	<b>Units</b>	<b>Description</b>
20 - 1	56P9854	1	Sensor Assembly, Photo
2	56P9855	1	Interrupter, Photo
3	56P9529	1	Caster, HCF
4	56P9856	1	Spring, Tension
5	56P9857	1	Switch, Micro
6	56P9530	1	Switch, Push
7	56P9859	1	Connector, Inlet
8	56P9858	1	Connector, I/F
9	56P9853	3	Screw, Shoulder
NS	56P9960	1	Parts Packet

## Assembly 21: High Capacity Feeder 4



Asm-Index	Part Number	Units	Description
21 - 1	56P9541	1	Sensor, Resistor
2	56P9875	1	Cable Assembly, Safety Switch
3	56P9865	1	Cable Assembly, HCF Motor
4	56P9871	1	Cable Assembly, I/F
5	56P9866	1	Cable Assembly, Paper Feed Sensor
6	56P9880	1	Cable, Up/Down Switch
7	56P9879	1	Cable, Paper Volume
8	56P9878	1	Cable Assembly, Sensor
9	56P9877	1	Cable Assembly, Paper Size Sensor
10	56P9876	1	Cable Assembly, Lift Motor
11	56P9868	1	Board, High Capacity Feed
12	56P9873	1	Cable Assembly, Power Supply Out
13	56P9872	1	Cable Assembly, Power Supply In
14	56P9874	1	Cable Assembly, Power Supply
15	56P9870	1	Converter, DC/DC
16	56P9869	1	Power Supply, HCF
17	56P9867	1	Cable Assembly, Drawer Ground
18	56P9861	4	Roller, Track
19	56P9864	1	Switch, Micro
20	56P9530	1	Switch, Push
21	56P9501	1	Spring, Pressure Pickup
22	56P9863	1	Switch, HCF Push
NS	56P9961	1	Parts Packet

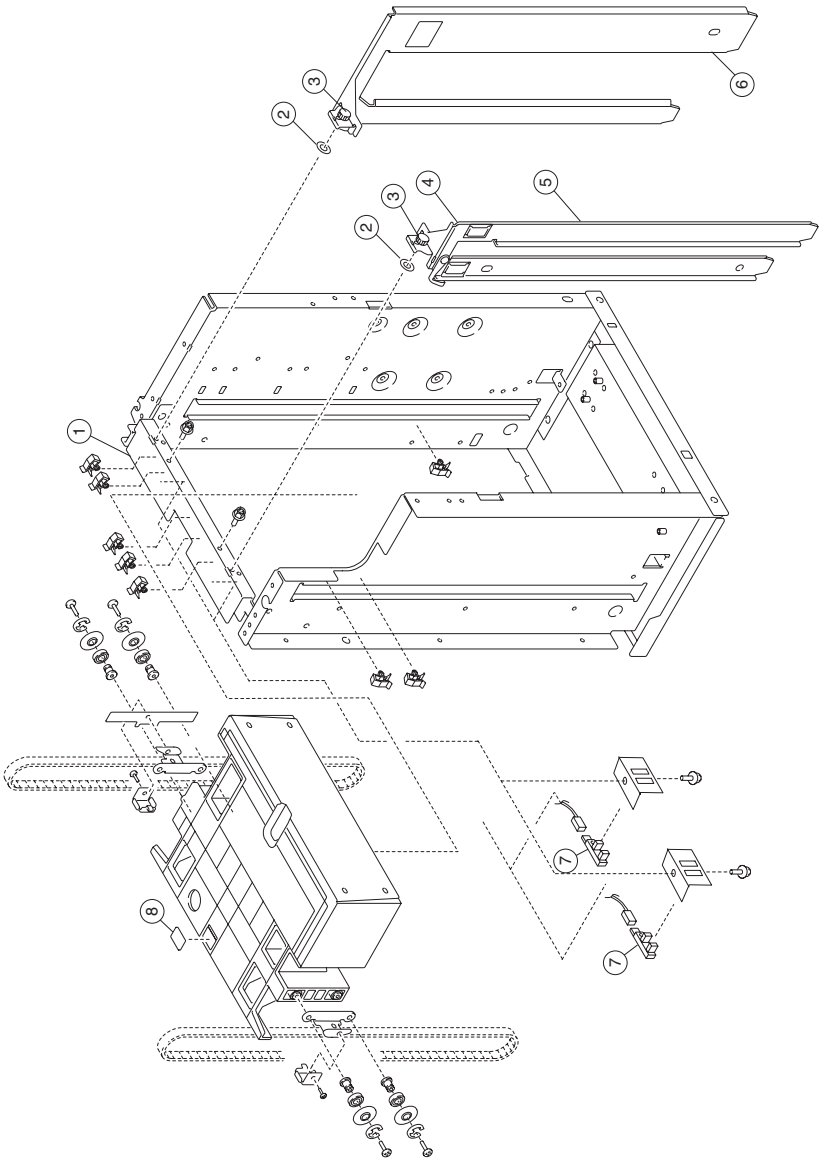
## Assembly 22: High Capacity Feeder 5



**5055-01X**

<b>Asm- Index</b>	<b>Part Number</b>	<b>Units</b>	<b>Description</b>
22 - 1	56P9883	2	Spring, Pressure
2	56P9528	4	Interrupter, Photo
3	56P9888	1	Bracket, Rear Idler
4	56P9884	2	Belt, Timing
5	56P9886	1	Gear, Drive
6	56P9885	2	Pulley, Timing
7	56P9882	1	Motor, HCF DC
8	56P9887	1	Bracket, Front Idler
NS	56P9962	1	Parts Packet

# Assembly 23: High Capacity Feeder 6

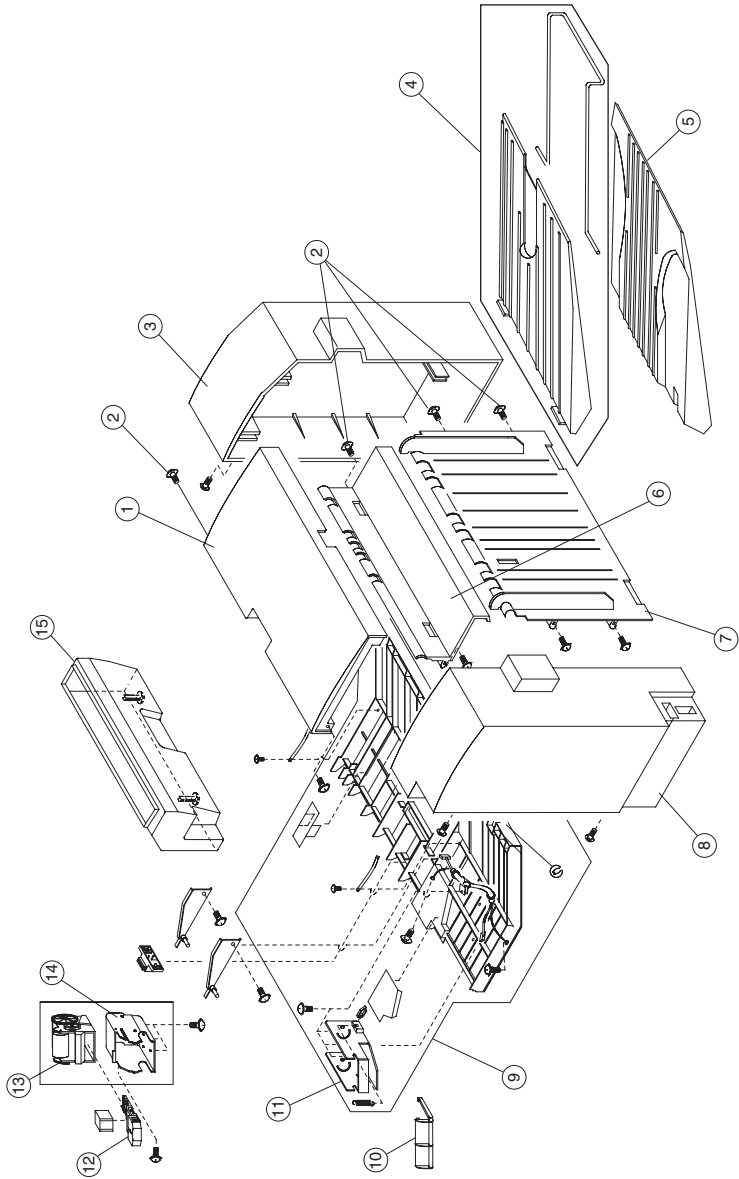




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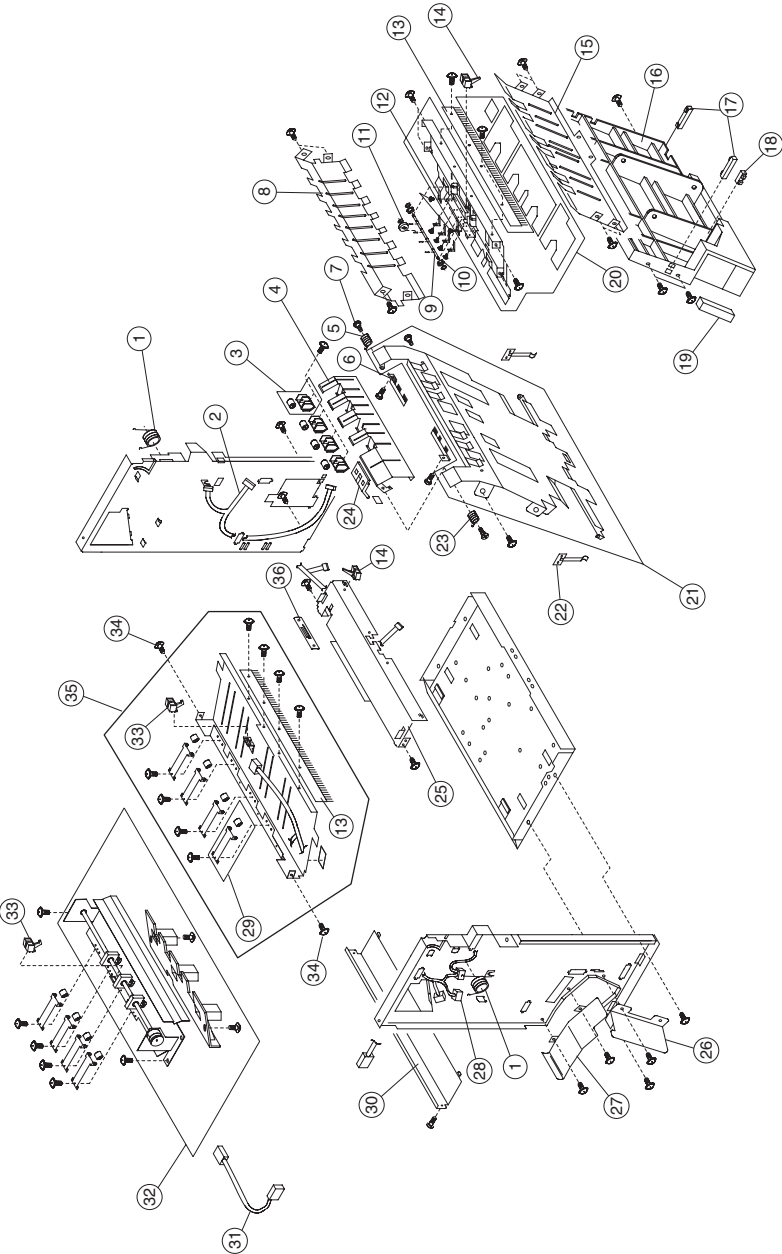
<b>Asm- Index</b>	<b>Part Number</b>	<b>Units</b>	<b>Description</b>
23 - 1	56P9892	1	Plate, Upper Side Fence
2	56P9893	2	Knob
3	56P9891	2	Knob, Tray
4	56P9890	2	Plate, Paper Adhesion
5	56P9915	1	Fence Assembly, Front Side
6	56P9894	1	Fence Assembly, Rear Side
7	56P9528	2	Interrupter, Photo
8	56P9889	1	Pad, Friction
NS	56P9963	1	Parts Packet

Assembly 24: Finisher Covers



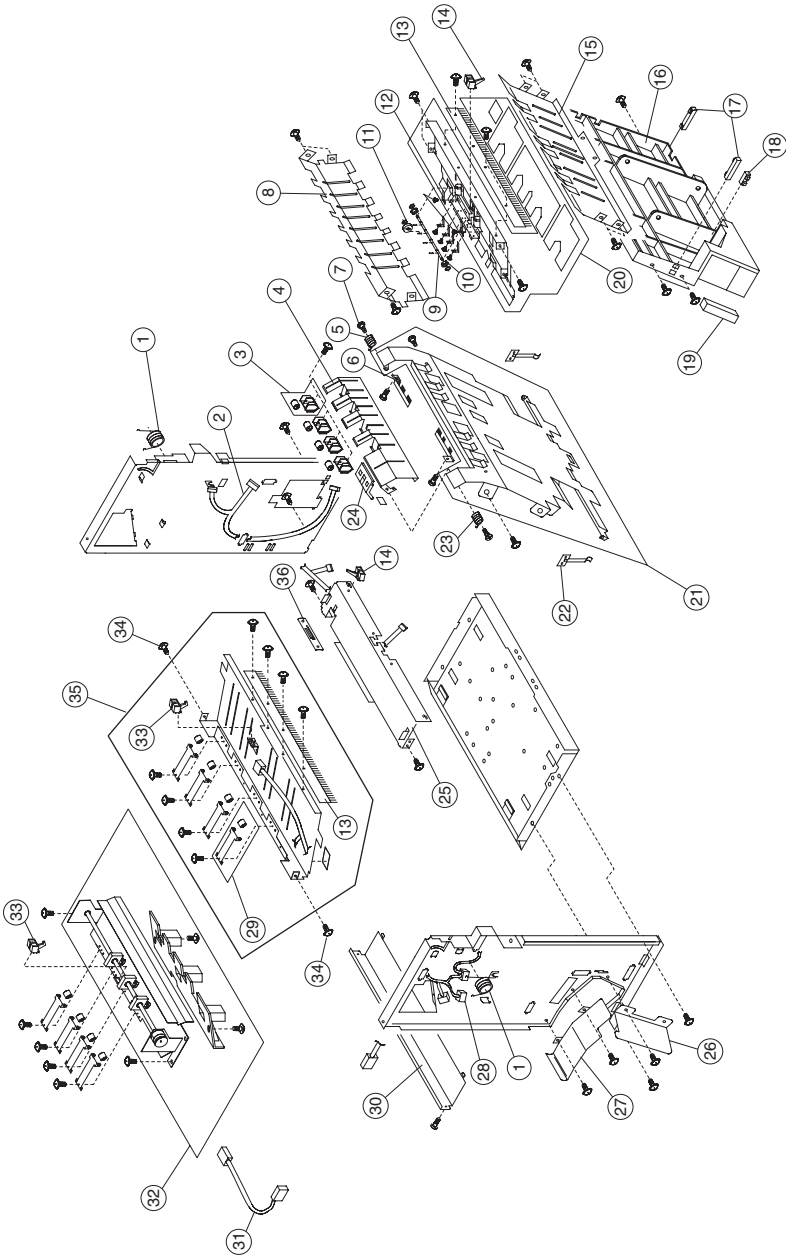
Asm-Index	Part Number	Units	Description
24-1	56P9353	1	Cover, Top
2	56P9348	5	Screw, A
3	56P9355	1	Cover, Front
4	56P9359	1	Tray, Upper
5	56P9360	1	Tray, Lower
6	56P9347	1	Panel, Left Upper
7	56P9352	1	Assembly, Lower Left Panel
8	56P9356	1	Cover, Rear
9	56P9350	1	Assembly, Staple Cover
10	56P9366	1	Lever, B
11	56P9365	1	Cover, Staple A
12	56P9367	1	Cartridge, Staple
13	56P9363	1	Stapler
14	56P9364	1	Cover, Staple B
15	56P9354	1	Assembly, Dust Box

Assembly 25: Finisher Frame



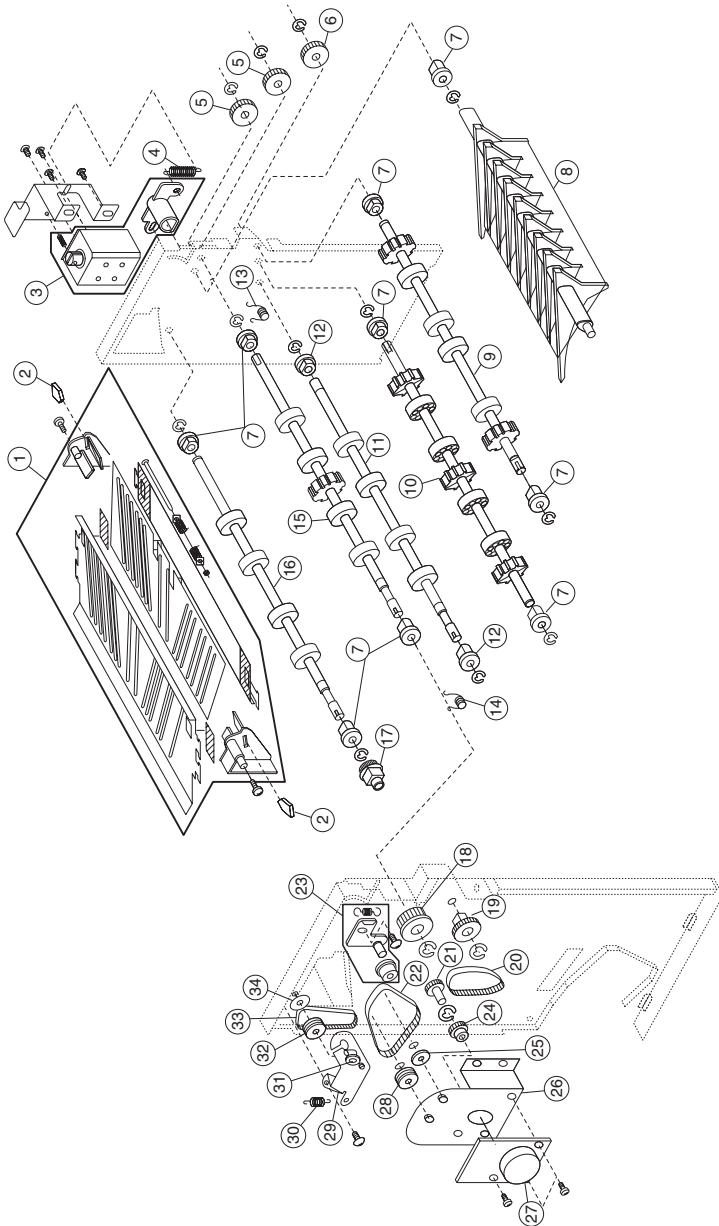
Asm-Index	Part Number	Units	Description
25-1	56P9321	2	Spring, I
2	56P9324	1	Cable, Sensor Relay
3	56P9369	12	Assembly, Spring Plate C
4	56P9370	1	Frame, Guide
5	56P9371	1	Spring
6	56P9372	1	Brush, Static Discharge
7	56P9373	2	Screw, M4
8	56P9374	2	Frame, C Guide
9	56P9375	1	Shaft, D
10	56P9376	1	Bushing
11	56P9377	1	Roller, D
12	56P9378	1	Plate, E Spring
13	56P9379	2	Brush, Static Discharge
14	56P9380	1	Sensor, Photo
15	56P9381	1	Frame, B Guide
16	56P9418	1	Guide, Stack
17	56P9399	1	Sensor, Photo
18	56P9382	1	Sensor, Photo
19	56P9383	1	Cushion
20	56P9309	1	Assembly, Exit Guide Inverter
21	56P9302	1	Assembly, Center Guide
22	56P9384	1	Plate, B Spring
23	56P9386	1	Spring
24	56P9387	1	Handle, Jam
25	56P9389	1	Bracket
26	56P9345	1	Cover, Staple Inner B
27	56P9344	1	Cover, Staple Inner A
28	56P9327	1	Cable, Upper Side Panel

## Assembly 25: Finisher Frame (Continued)



<b>Asm- Index</b>	<b>Part Number</b>	<b>Units</b>	<b>Description</b>
25-29	56P9391	1	Assembly, Roller
30	56P9390	1	Plate, Cover
31	56P9436	1	Cable
32	56P9313	1	Unit, 3 Hole Punch (U.S. only)
32	56P9314	1	Unit, 4 Hole Punch (non U.S.)
33	56P9388	1	Sensor, 1 Photo
34	56P9320	2	Screw, B
35	56P9319	1	Assembly, Exit Guide Straight
36	56P9394	1	Knob

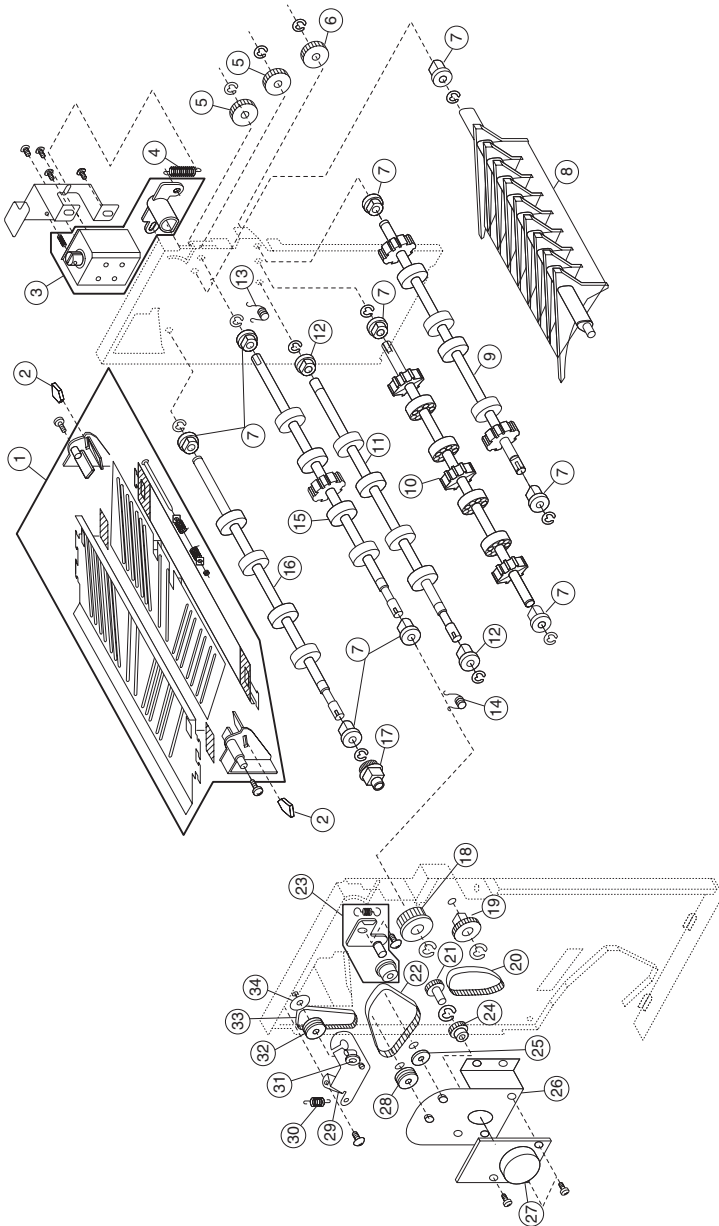
# Assembly 26: Finisher Feed 1





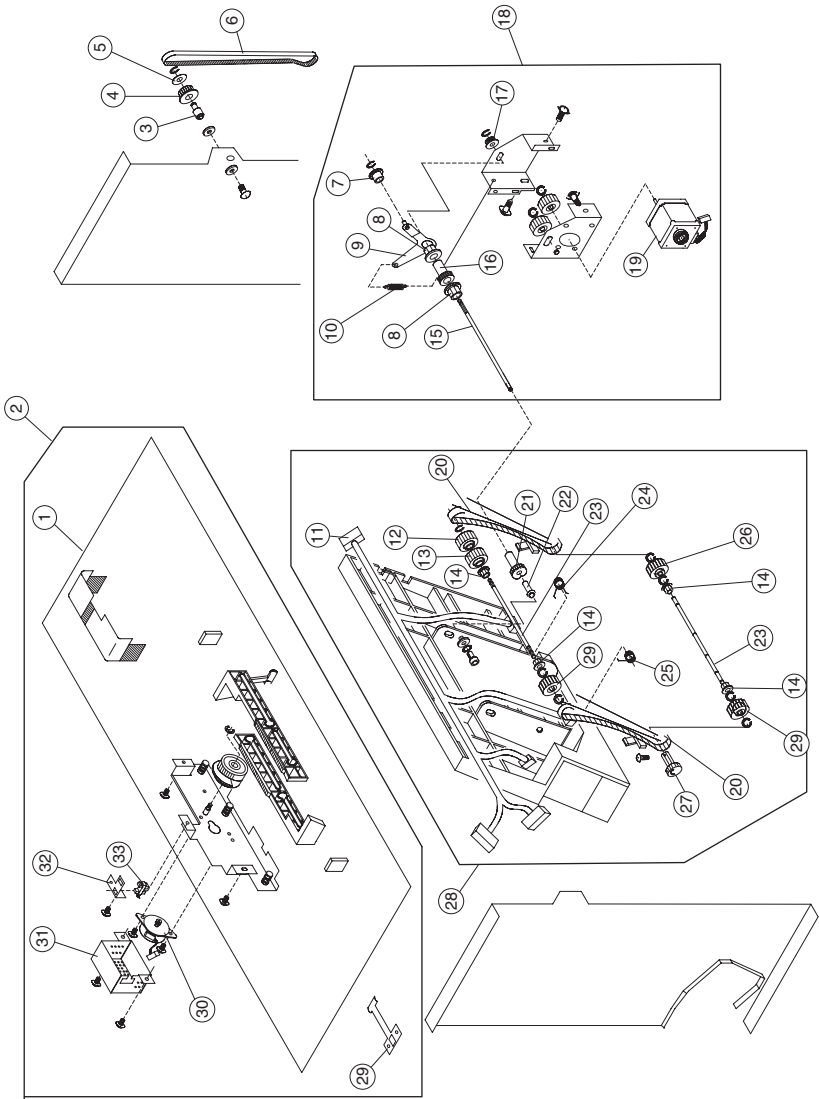
Asm-Index	Part Number	Units	Description
26-1	56P9395	1	Assembly, Guide Plate
2	56P9393	2	Plate, Guide Holder
3	56P9334	1	Assembly, Solenoid
4	56P9396	2	Spring, H
5	56P9397	1	Gear, Z20
6	56P9398	1	Gear, Z19
7	56P9311	4	Bushing
8	56P9310	1	Gate
9	56P9400	1	Roller
10	56P9361	1	Roller, Patting
11	56P9401	1	Roller, I
12	56P9402	1	Bushing
13	56P9403	1	Spring, A
14	56P9404	1	Spring, F
15	56P9312	1	Roller, F
16	56P9405	1	Roller, G
17	56P9335	1	Clutch, Registration
18	56P9338	1	Pulley, T56
19	56P9406	1	Pulley, Z24/T42 Gear
20	56P9407	1	Belt, Timing 60S2M184
21	56P9408	1	Knob
22	56P9339	1	Belt, Timing 60S2M334
23	56P9305	1	Assembly, Tension D
24	56P9411	1	Pulley
25	56P9412	1	Spacer
26	56P9413	1	Assembly, Motor Bracket
27	56P9341	1	Assembly, Feed Motor
28	56P9414	1	Pulley
29	56P9315	1	Assembly, Punch Drive
30	56P9318	1	Spring, B

# Assembly 26: Finisher Feed 1 (Continued)



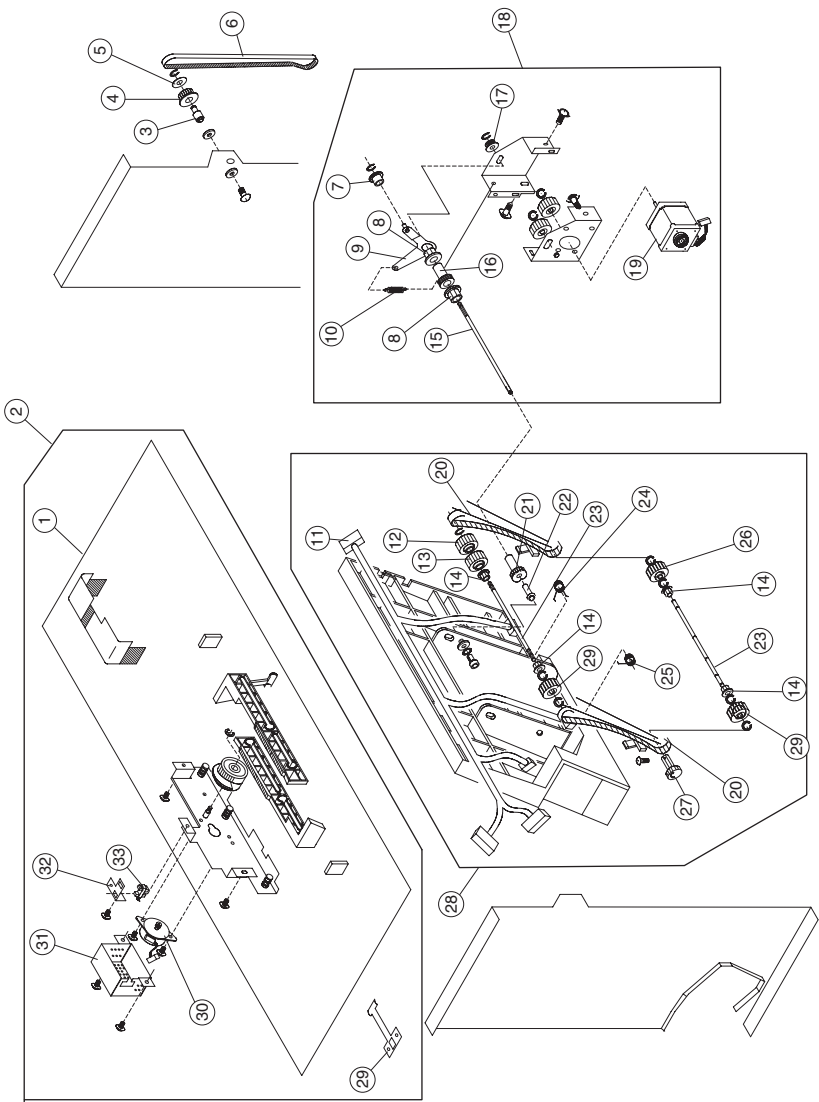
<b>Asm- Index</b>	<b>Part Number</b>	<b>Units</b>	<b>Description</b>
26-31	56P9316	1	Bushing
32	56P9415	1	Pulley, GearZ36/T24
33	56P9317	1	Belt
34	56P9417	1	Flange

## Assembly 27: Finisher Feed 2



Asm-Index	Part Number	Units	Description
27-1	56P9421	1	Unit, Jogging
2	56P9300	1	Assembly, Jogging Unit
3	56P9422	1	Pin, N
4	56P9423	1	Pulley, Z19/Z20
5	56P9417	1	Flange
6	56P9333	1	Belt, Timing (60S3M408)
7	56P9425	1	Roller, A
8	56P9316	1	Bushing, 6
9	56P9426	1	Assembly, Bracket H
10	56P9427	1	Spring, E
11	56P9428	1	Cable
12	56P9336	1	Pulley, T20
13	56P9429	1	Gear
14	56P9430	1	Bushing, 6 2
15	56P9431	1	Shaft
16	56P9433	1	Gear, Z18
17	56P9434	1	Pulley, T31
18	56P9329	1	Assembly, Tractor Motor
19	56P9416	1	Motor, Tractor Motor
20	56P9437	1	Belt, Timing
21	56P9328	1	Gear, Z16
22	56P9438	1	Pin
23	56P9439	1	Shaft, B
24	56P9403	1	Spring, A
25	56P9404	1	Spring, F
26	56P9336	1	Pulley, T20
27	56P9408	1	Knob

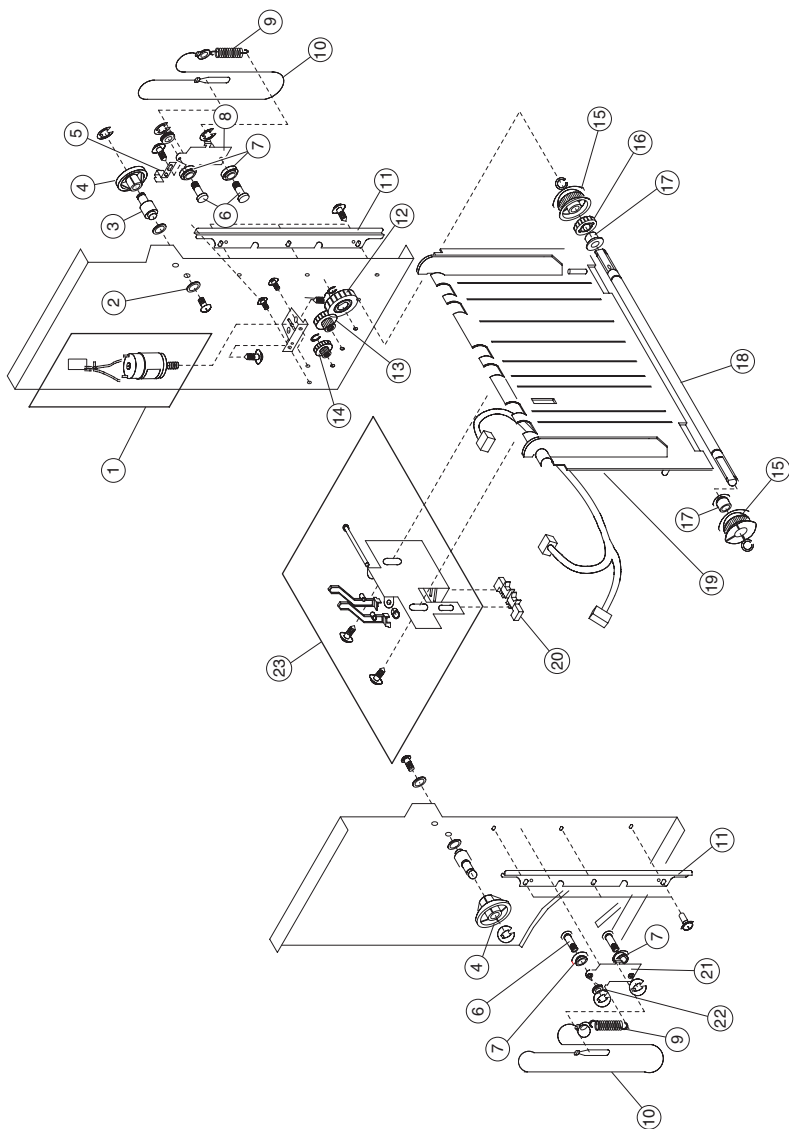
# Assembly 27: Finisher Feed 2 (Continued)



**5055-01X**

<b>Asm- Index</b>	<b>Part Number</b>	<b>Units</b>	<b>Description</b>
27-28	56P9301	1	Assembly, Guide Stack
29	56P9384	1	Plate
30	56P9444	1	Motor, Jogging
31	56P9445	1	Cover, Motor
32	56P9446	1	Bracket, O

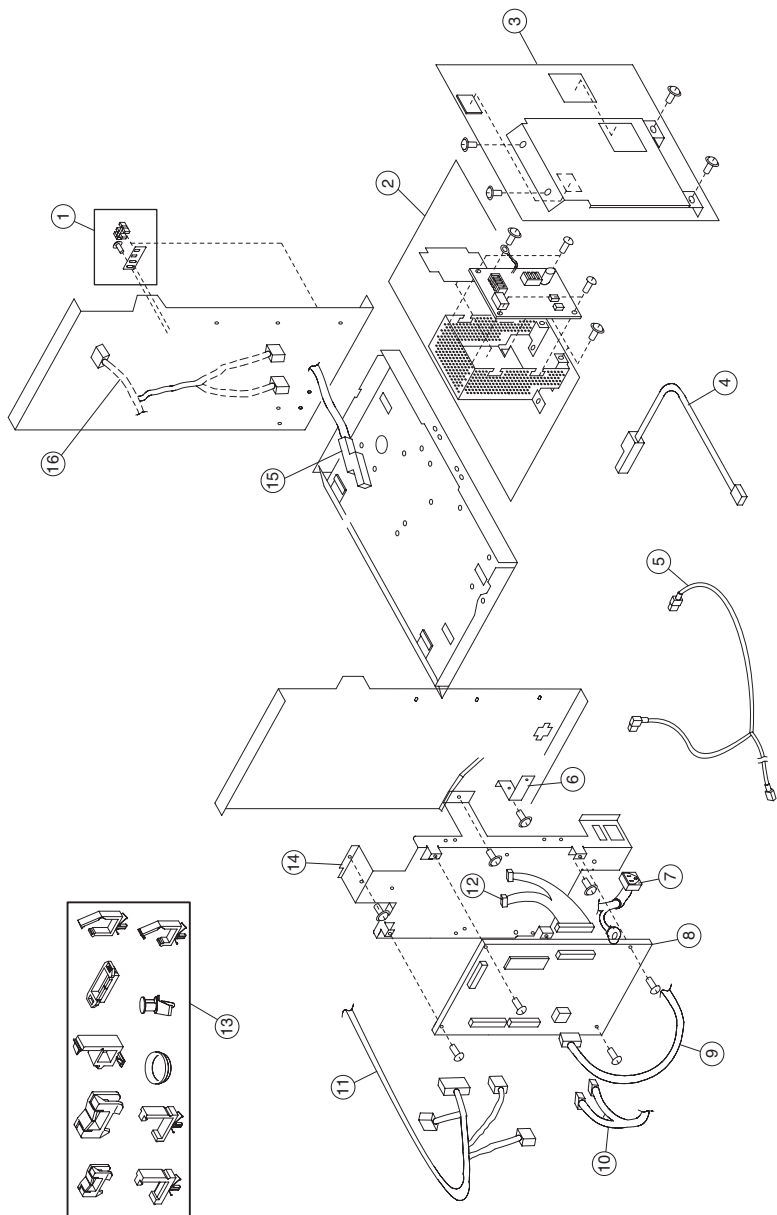
## Assembly 28: Finisher Elevator





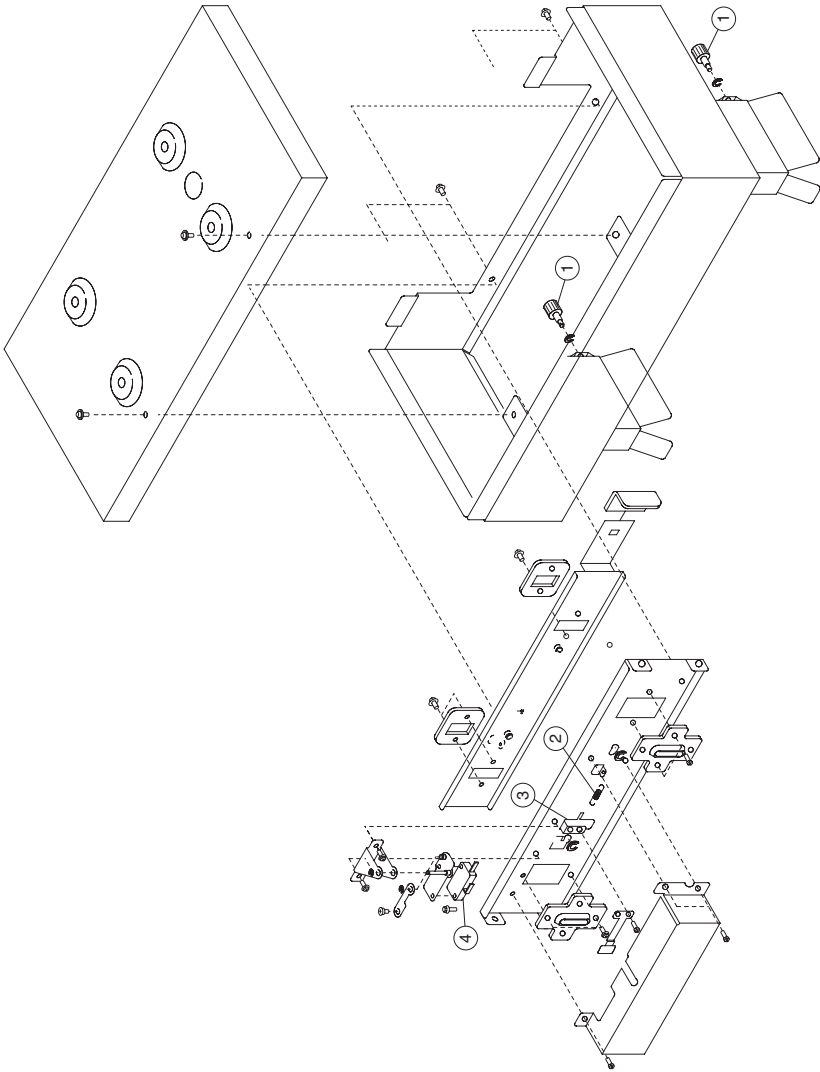
Asm-Index	Part Number	Units	Description
28-1	56P9308	1	Assembly, Elevator Motor
2	56P9448	1	Washer
3	56P9449	1	Pin
4	56P9450	1	Pulley, Wire A
5	56P9451	1	Shutter
6	56P9452	1	Pin, O
7	56P9453	4	Roller, C
8	56P9304	1	Assembly, Hook Front
9	56P9332	2	Spring, C
10	56P9331	2	Wire
11	56P9455	2	Bracket
12	56P9456	1	Gear, Z46/Z33
13	56P9457	1	Gear, Z90/Z14
14	56P9458	1	Gear, Z25/Z20
15	56P9459	2	Drum, Wire
16	56P9460	1	Gear, Z30
17	56P9311	2	Bushing
18	56P9482	1	Shaft, A
19	56P9352	1	Panel, Lower Left
20	56P9382	1	Sensor
21	56P9307	1	Assembly, Hook Rear
22	56P9463	2	Pulley, Wire B
23	56P9465	1	Assembly, Sensor

# Assembly 29: Finisher Electronics



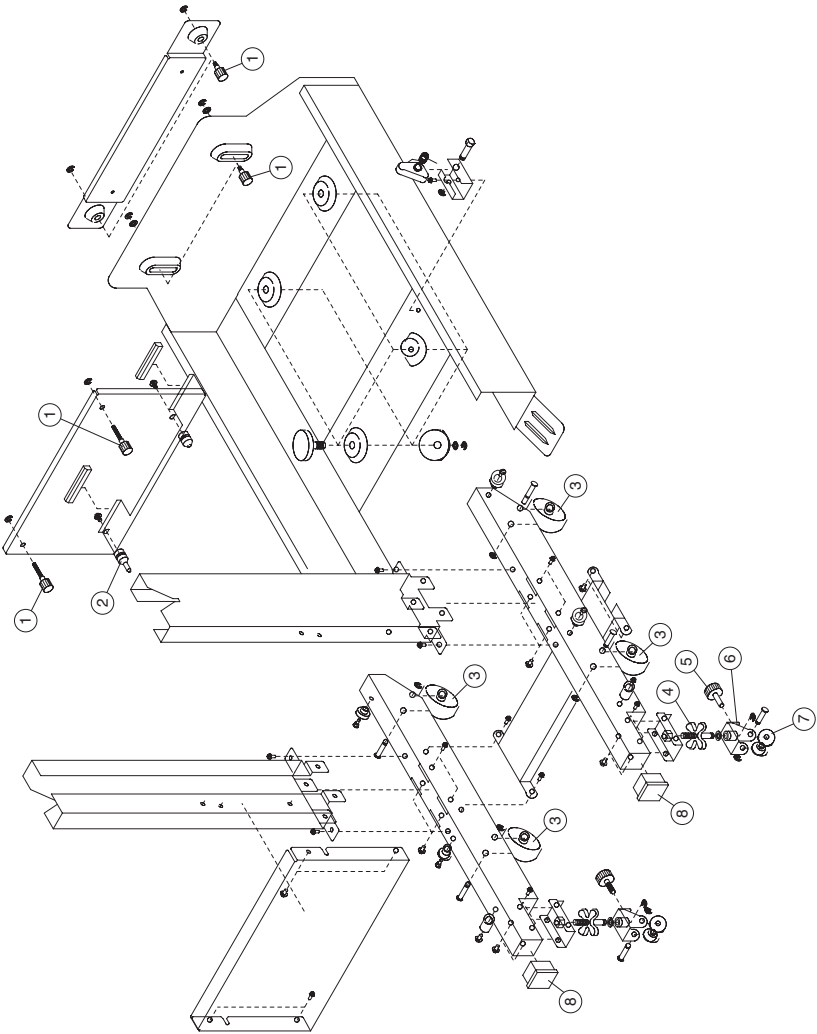
Asm-Index	Part Number	Units	Description
29-1	56P9306	1	Assembly, Upper Limit Sensor
2	56P9303	1	Supply, Power
3	56P9351	1	Assembly, Power Supply Plate
4	56P9435	1	Cable, Set Switch
5	56P9358	1	Cord, Y Power
5	56P9368	1	Cord, Y Power (230 V only)
6	56P9342	1	Assembly, Bridge
7	56P9326	1	Cable, DC Power Supply
8	56P9349	1	Board, Finisher Control
9	56P9428	1	Cable
10	56P9410	1	Cable
11	56P9325	1	Cable, Front Side Panel
12	56P9343	1	Assembly, Sensor Cable
13	56P9340	1	Packet, Parts
14	56P9420	1	Bracket, Finisher Control Board
15	56P9409	1	Cable
16	56P9324	1	Cable, Sensor Relay
NS	56P9357	1	Cable, Interface

# Assembly 30: Finisher Docking 1



















Asm- Index	Part Number	Units	Description
30-1	56P9467	2	Screw, Thumb
2	56P9468	1	Spring
3	56P9469	1	Bracket
4	56P9470	1	Switch, Set

## Assembly 31: Finisher Docking 2






Asm- Index	Part Number	Units	Description
31-1	56P9472	2	Screw, Lock
2	56P9473	1	Stud, Lock
3	56P9474	4	Roller
4	56P9475	2	Knob, Caster
5	56P9476	2	Stop, Caster
6	56P9477	2	Housing, Caster
7	56P9478	4	Caster
8	56P9479	2	Cap

Finisher Parts Packet P/N 56P9480

Pin		Retaining Ring -E Type	
Screw		Spring Pin	
Screw		Screw	
Tapping Screw		Spring Lock Washer	
Tapping Screw		Toothed Lock Washer	
Tapping Screw		Resin Ring	
Tapping Screw		Nut	
Set Screw		Tapping Screw	



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Plain Washer		Tapping Screw	
		Screw	



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