FINISHER/ SADDLE FINISHER

SERVICE HANDBOOK

REVISION 0

**FINISHER-C1, SADDLE FINISHER-C2,
FINISHER-D1, SADDLE FINISHER-D2,
FINISHER-E1,
FINISHER-F1, SADDLE FINISHER-F2,
FINISHER-G1, SADDLE FINISHER-G1,
FINISHER-H1, SADDLE FINISHER-H2,
FINISHER-J1,
FINISHER-K1, FINISHER-K2,
SADDLE FINISHER-K3, SADDLE FINISHER-K4,
FINISHER-L1**

Canon

FEB. 2002 **FY8-23BE-000**

CANON FINISHER-C1/D1/E1/F1/G1/H1/J1/K1/K2/L1, SADDLE FINISHER-C2/D2/F2/G1/H2/K2/K3 PRINTED IN USA

Finisher vs. Copier Table

Finisher Name	Copier Name
Finisher-C1 Saddle Finisher-C2 Finisher-E1	imageRUNNER 400/ 330 series
Finisher-D1 Saddle Finisher-D2	imageRUNNER 600/ 60
Finisher-F1, Saddle Finisher-F2	imageRUNNER 5000/ 6000
Finisher-G1	imageRUNNER 3250
Saddle Finisher-G1 Finisher-J1	imageRUNNER 2200/ 2800/ 3300 series
Finisher-H1, Saddle Finisher-H2	imageRUNNER C2100S imageRUNNER C2100S Color imageRUNNER C2020 Color imageRUNNER C2050
Finisher-K1/K2, Saddle Finisher-K3/K4	imageRUNNER 8500 series
Finisher-L1	imageRUNNER 1600/ 2000

Accessory vs. Finisher Table

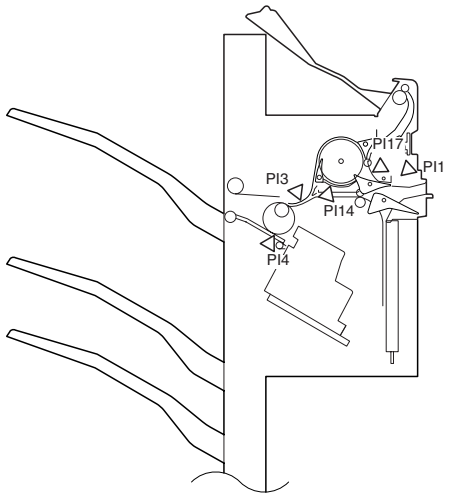
Accessory Name	Finisher Name
Cover Insertion Unit-A1	Saddle Finisher-D2
Paper Folding Unit-B1	
Cover Insertion Unit-A1	Saddle Finisher-K3/K4
Paper Folding Unit-B1	
Puncher Unit-B1	Finisher-F1, Saddle Finisher-F2
Puncher Unit-K1	Saddle Finisher-G1

CONTENTS

1. Finisher-C1, Saddle Finisher-C2, Finisher-H1, Saddle Finisher-H2, Finisher-F1, Saddle Finisher-F2, and Finisher-G1

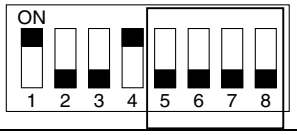
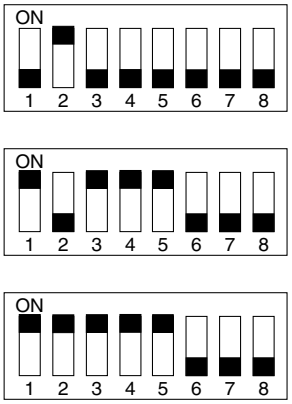
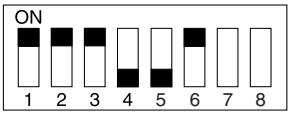
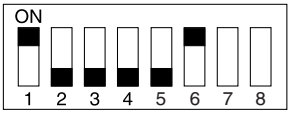
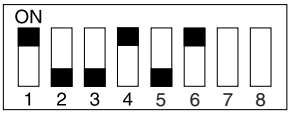
1.1 Jam Code List

C1/C2/H1/H2		G1		F1/F2		Description
Jam Code	Related Sensor	Jam Code	Related Sensor	Jam Code	Related Sensor	
0011	PI1	0011	PI1	1033	PI1	Inlet sensor delay (Entrance sensor delay for G1)
0021	PI1	0021	PI1	1133	PI1	Inlet sensor stationary (Entrance sensor stationary for G1)
0012	PI17	-	-	-	-	Buffer inlet sensor delay
0022	PI17	-	-	-	-	Buffer inlet sensor stationary
0013	PI14	-	-	1032	PI14	Buffer path paper sensor delay
0023	PI14	-	-	1132	PI14	Buffer path paper sensor stationary
0014	PI3	0014	PI3	1034	PI3	Delivery sensor delay
0024	PI3	0024	PI3	1134	PI3	Delivery sensor stationary
0025	PI4	0025	PI4	1135	PI4	Stapling tray sensor stationary
0005	-	-	-	1264	-	Timing
0006	PI21	-	-	153A	PI22	Staple
0007	All path sensors	-	-	1338	PI1, PI3, PI4, PI17	Power on
0008	PI15, PI16	-	-	143C	PI15, PI16	Door open
-	-	-	-	163E	-	Punch



Sensors in the Finisher Unit

1.2 Adjustment (Finisher Unit and Puncher Unit)

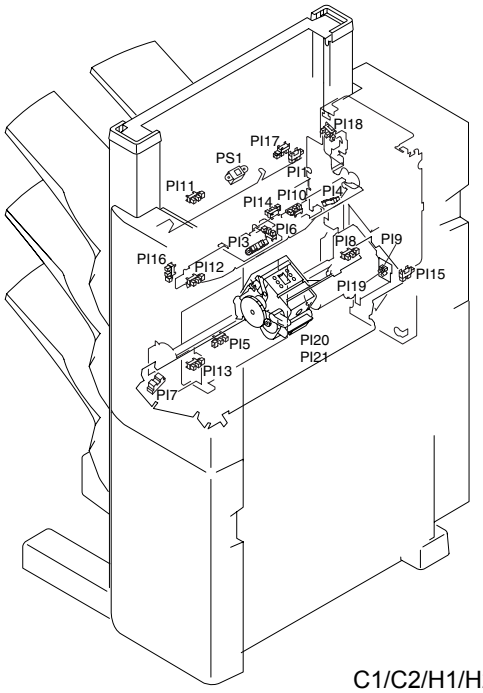
Adjustment Item	Applicable Models	DIP Switch Setting	Procedure
Height (distance) sensor PS1	C1, C2, H1, H2, F1, F2, G1		1. Set blank plain paper in all trays. 2. Press SW2 (C1/C2/H1/H2/G1) or SW1 (F1/F2) to start automatic adjustment.
Alignment position	C1, C2, H1, H2, F1, F2		1. Press SW3 (C1/C2/H1/H2) or SW2 (F1/F2) for letter-size paper. 2. Insert 10 sheets of paper. 3. Press SW2 (C1/C2/H1/H2) or SW1 (F1/F2) for forward shift. Press SW3 (C1/C2/H1/H2) or SW2 (F1/F2) for backward shift. 4. Press SW2 and SW3 (C1/C2/H1/H2) or SW1 and SW2 (F1/F2) simultaneously.
Stapling position	C1, C2, H1, H2, F1, F2		5. Press SW3 (C1/C2/H1/H2) or SW2 (F1/F2) for letter-size paper. 6. Insert a sheet of paper. 7. Press SW2 (C1/C2/H1/H2) or SW1 (F1/F2) for forward shift. Press SW3 (C1/C2/H1/H2) or SW2 (F1/F2) for backward shift. 8. Press SW2 and SW3 (C1/C2/H1/H2) or SW1 and SW2 (F1/F2) simultaneously.
Buffer roller winding amount	F1, F2		9. Check winding amount. 10. Press SW2 and observe LED1 for adjustment value. 0 : Lights for 1 second. +N : Blinks N times. -N : Lights for 1 second, then blinks N times. 11. Press SW1 to increment winding amount. Press SW2 to decrement winding amount.
Punch hole position	F1, F2	Use the service mode Sorter/Adjust/PNCH-HLE.	Increase the setting to shift the hole position in the feeding direction. Decrease the setting to shift the hole position in reverse to the feeding direction. Shift unit: 1 mm
Sensor output	F1, F2		Press SW1 for automatic adjustment of sensor output.
Number of punch holes	F1, F2		Bit 7 / Bit 8 / Number of punch holes OFF OFF 2 (Puncher Unit-A1) OFF OFF 2/3 (Puncher Unit-B1) ON OFF 4 (Puncher Unit-C1) ON ON 4 (Puncher Unit-D1) Press SW1 (or SW2 for Puncher Unit-B1).
Transmission sensor sensitivity level	F1, F2		Press SW1 and observe LED1 for sensitivity level indication. Sensor not dirty : Lights once. Sensor slightly dirty : Lights twice. Sensor dirty : Lights three times.

: Applies to F1 and F2 only.

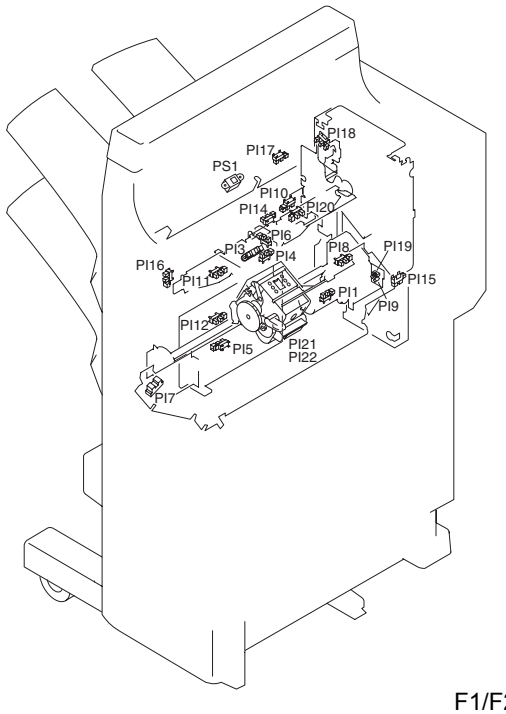
1.3 Location of Electric Parts

A. Finisher Unit

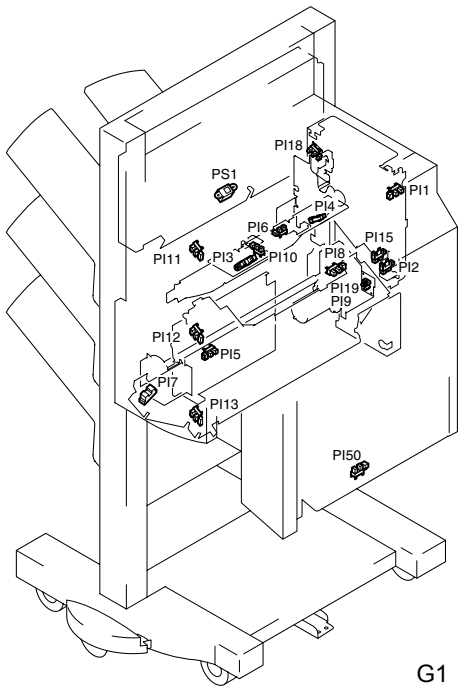
1) Sensors



C1/C2/H1/H2



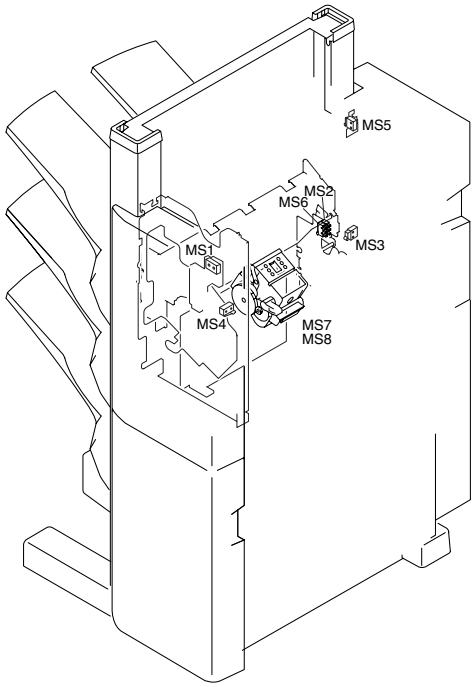
F1/F2



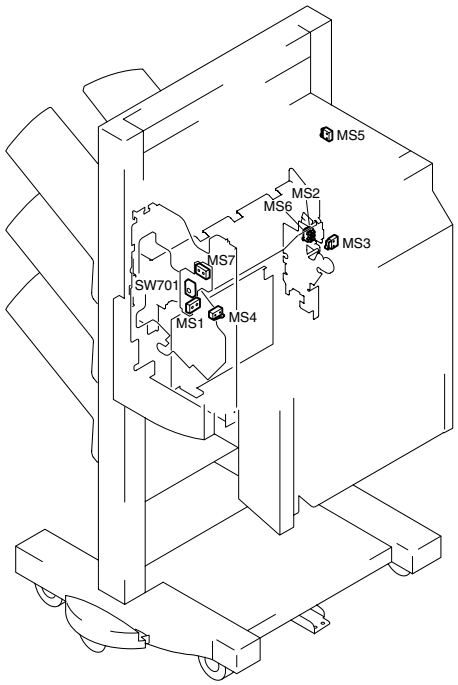
G1

Name	Notation	Function
Photointerrupter	PI1	Inlet area paper sensor
	PI2	For G1: Reversing sensor
	PI3	Delivery area paper sensor
	PI4	Stapling tray paper sensor
	PI5	Shutter close sensor
	PI6	Alignment plate home position sensor
	PI7	Stapler home position sensor
	PI8	Tray home position sensor
	PI9	For C1, C2, H1, and H2: Tray lift motor clock sensor 2
		For F1, F2, and G1: Tray lift (up/down) motor clock sensor 1
	PI10	Delivery motor clock sensor
	PI11	Tray 1 paper sensor
	PI12	Tray 2 paper sensor
	PI13	For C1, C2, H1, and H2, and G1: Tray 3 paper sensor
	PI14	For C1, C2, H1, and H2, F1, and F2: Buffer path paper sensor
	PI15	Joint sensor
	PI16	For C1, C2, H1, and H2, F1, and F2: Door open sensor
	PI17	For C1, C2, H1, and H2, F1, and F2: Inlet to the buffer path paper sensor
	PI18	Swing guide open sensor
	PI19	For C1, C2, H1, and H2: Tray lift motor clock sensor 1
		For F1, F2, and G1: Tray lift (up/down) motor clock sensor 2
	PI20	For C1, C2, H1, and H2: Staple edging sensor
		For F1 and F2: Swing guide clock sensor
	PI21	For C1, C2, H1, and H2: Stapling home position sensor
		For F1 and F2: Staple edging sensor
	PI22	For F1 and F2: Staple drive home position sensor
	PI50	For G1: Buffer path sensor
Photosensor	PS1	For C1, C2, H1, and H2, F1, and F2: Height sensor
		For G1: Distance sensor

2) Microswitches



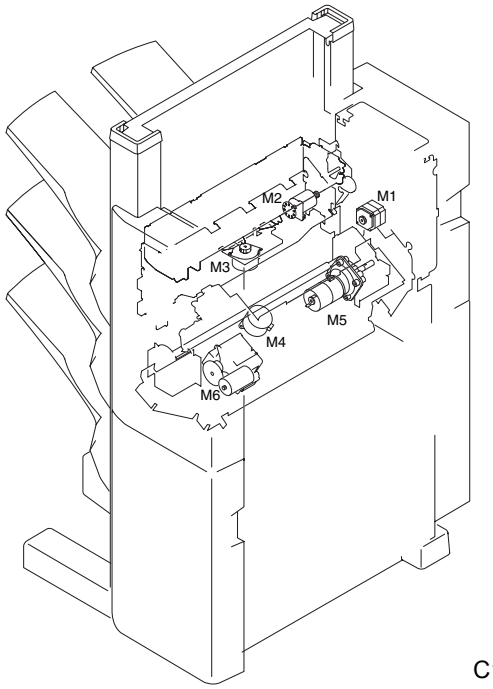
C1/C2/H1/H2F1/F2



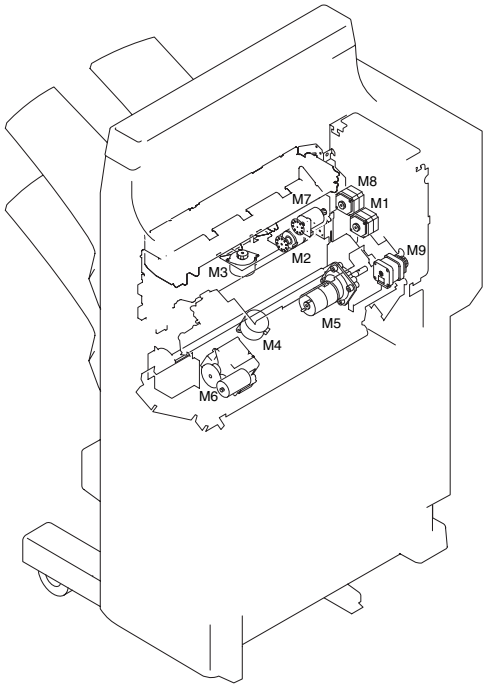
G1

Name	Notation	Function
Microswitch	MS1	Front door open detection switch
	MS2	Swing guide closed detection switch 1
	MS3	Safety area detection switch
	MS4	Shutter closed detection switch
	MS5	Tray upper limit detection switch
	MS6	Swing guide closed detection switch 2
	MS7	For C1, C2, H1, H2, F1, and F2: Cartridge detection switch (inside stapler)
		For G1: Top cover open detection switch
	MS8	For C1, C2, H1, H2, F1, and F2: Staple detection switch
Switch PCB	SW701	For G1: Staple test switch
Thermal switch	TP1	Tray lift (up/down) motor high temperature detection switch

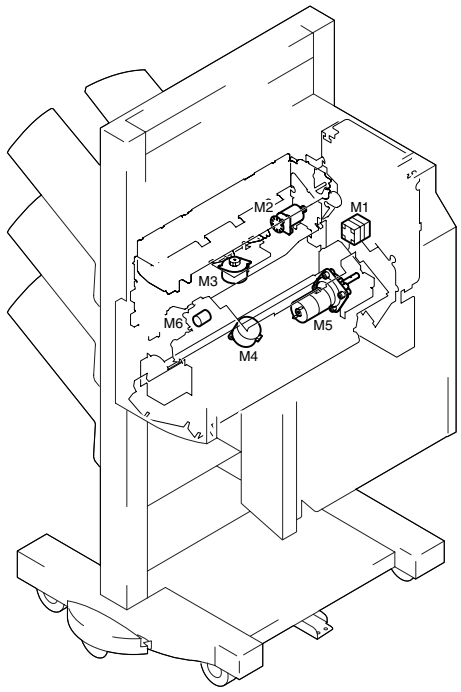
3) Motors



C1/C2/H1/H2



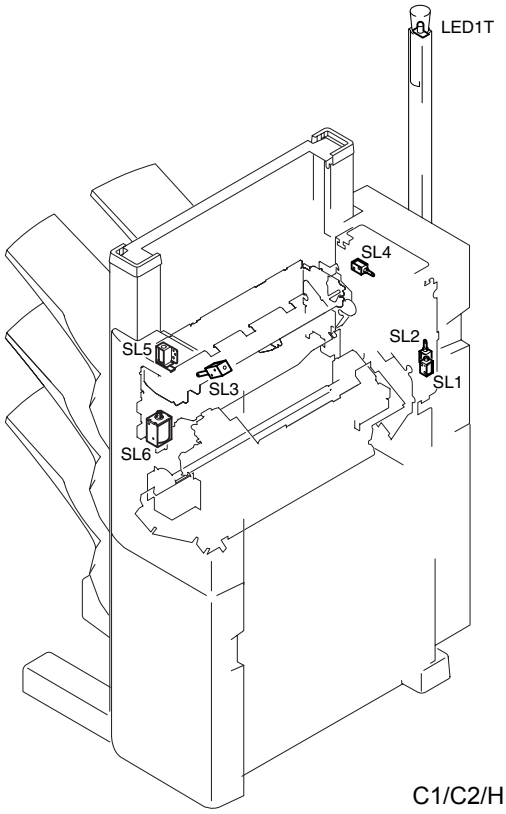
F1/F2



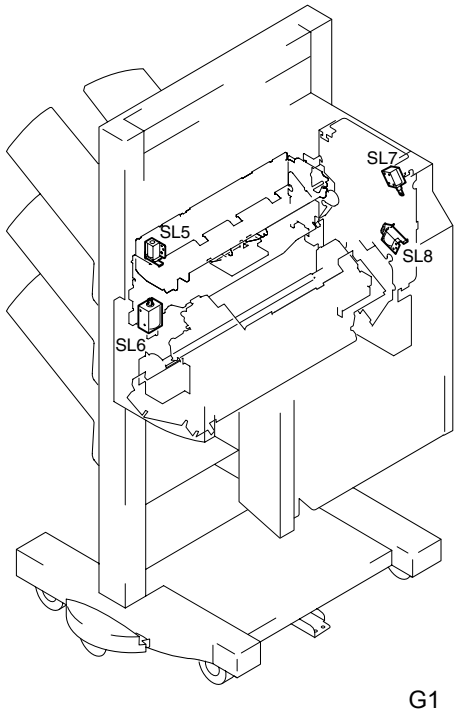
G1

Name	Notation	Function
Motor	M1	For C1, C2, H1, H2, and G1: Feed motor
		For F1 and F2: First feed motor
	M2	Delivery motor
	M3	Alignment motor
	M4	Stapler shift (transfer) motor
	M5	Tray lift (up/down) motor
	M6	Staple motor (inside stapler)
	M7	For F1 and F2: Swing motor
	M8	For F1 and F2: Second feed motor
	M9	Inlet feed motor

4) Solenoids and LED



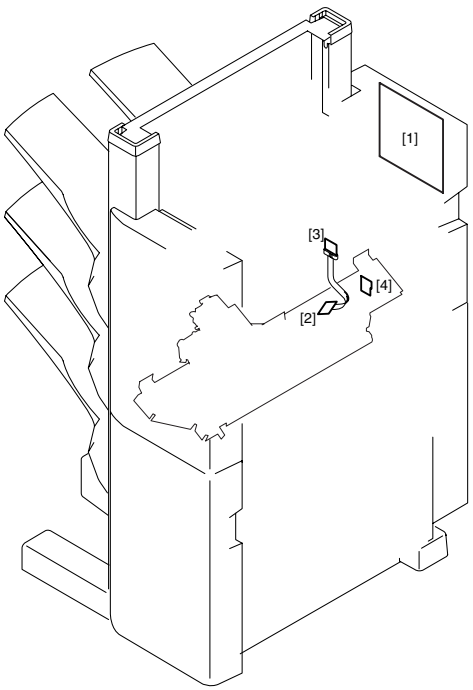
C1/C2/H1/H2/F1/F2



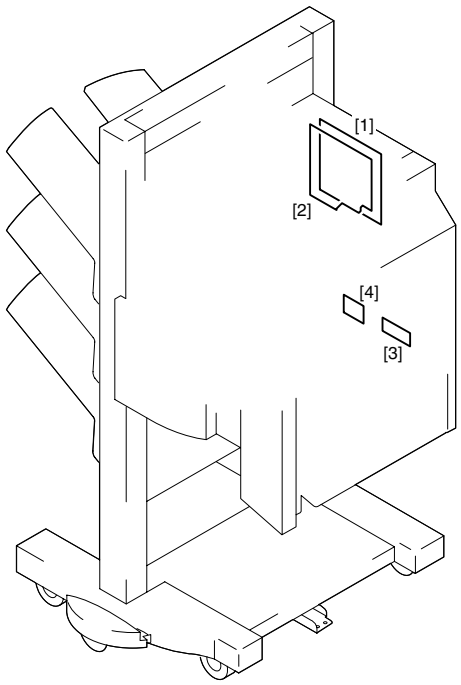
G1

Name	Notation	Function
Solenoid	SL1	For C1, C2, H1, H2, F1, and F2: Flapper solenoid
	SL2	For C1, C2, H1, H2, F1, and F2: Buffer inlet solenoid
	SL3	For C1, C2, H1, H2, F1, and F2: Buffer outlet solenoid
	SL4	For C1, C2, H1, and H2: Interrupt tray solenoid
	SL5	Paddle solenoid
	SL6	For C1, C2, H1, H2, F1, and F2: Escape solenoid For G1: Reference plate withdrawal solenoid
	SL7	For F1 and F2: Belt escape solenoid For G1: Flapper solenoid
	SL8	For G1: Reversing roller solenoid
LED	LED1T	For C1, C2, H1, and H2: Incoming fax indicator lamp

5) PCBs



C1/C2/H1/H2F1/F2



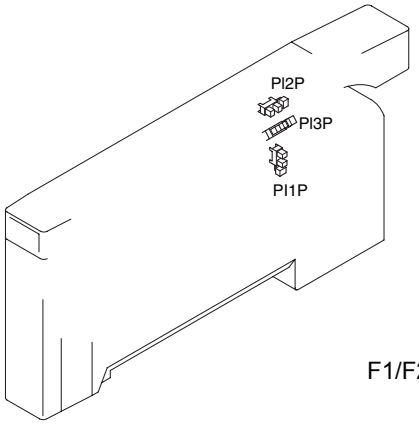
G1

Reference	Function
[1]	Finisher controller PCB
[2]	For C1, C2, H1, H2, F1, and F2: Relay PCB 4 For G1: Power supply unit
[3]	For C1, C2, H1, H2, F1, and F2: Relay PCB 3 For G1: Interface PCB
[4]	For C1, C2, H1, H2, F1, and F2: Sensor PCB For G1: Tray up/down motor clock sensor PCB

B. Puncher Unit-B1

(The following information only applies to Finisher-F1 and Saddle Finisher-F2)

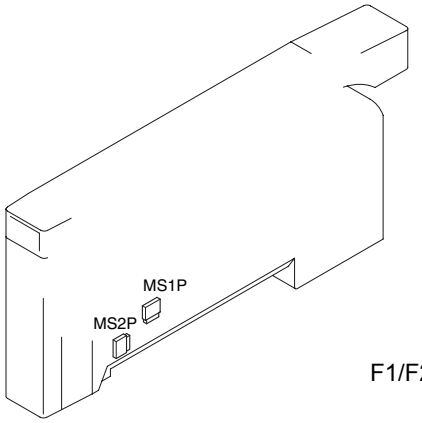
1) Sensors



F1/F2

Name	Notation	Function
Photointerrupter	PI1P	Horizontal registration home position sensor
	PI2P	Push motor clock sensor
	PI3P	Punch home position sensor

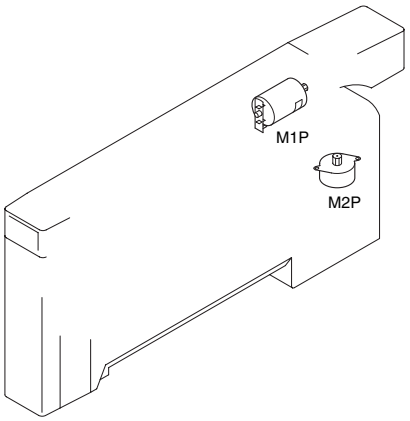
2) Microswitches



F1/F2

Name	Notation	Function
Microswitch	MS1P	Upper door open detection switch
	MS2P	Front door open detection switch

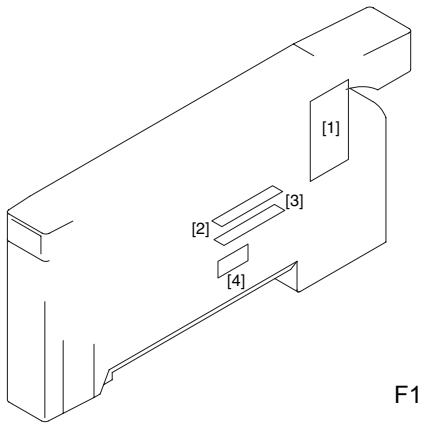
3) Motors



F1/F2

Name	Notation	Function
Motor	M1P	Punch motor
	M2P	Horizontal registration motor

4) PCBs



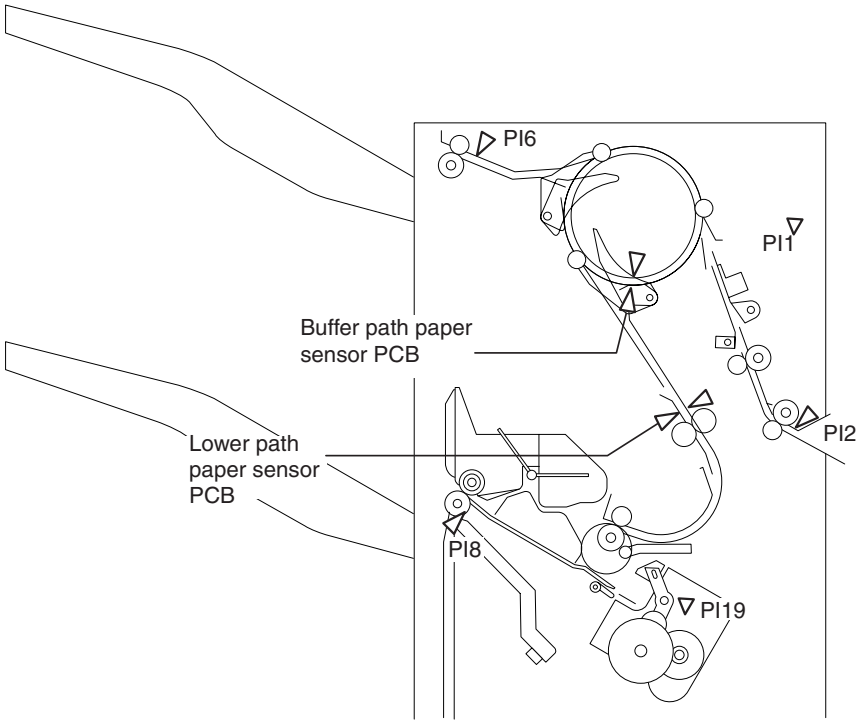
F1/F2

Reference	Function
[1]	Punch driver PCB
[2]	Photosensor PCB
[3]	LED PCB
[4]	Scrap full detector PCB

2. Finisher-D1, Saddle Finisher-D2, Finisher-K1, Finisher-K2, Saddle Finisher-K3, and Saddle Finisher-K4

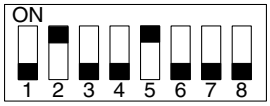
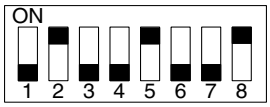
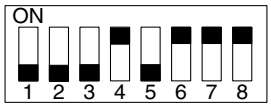
2.1 Jam Code List

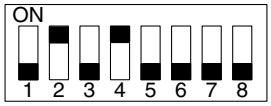
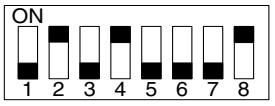
Jam Code	Related Sensor			Description
	D1	D2	K1/K2/K3/K4	
0016	PI2	PI2	PI2	Inlet delay
0026	PI2	PI2	PI2	Inlet stationary
0017	Buffer path paper sensor (S2)	Buffer path paper sensor (S2)	Buffer path paper sensor (S2)	Buffer path delay
0027	Buffer path paper sensor (S2)	Buffer path paper sensor (S2)	Buffer path paper sensor (S2)	Buffer path stationary
0018	PI6	PI6	PI6	Non-sort delay
0028	PI6	PI6	PI6	Non-sort stationary
0019	Lower path paper sensor (S3)	Lower path paper sensor (S3)	Lower path paper sensor (S3)	Lower path delay
0029	Lower path paper sensor (S3)	Lower path paper sensor (S3)	Lower path paper sensor (S3)	Lower path stationary
0008	PI1	PI1	PI1	Door open
0007	PI2, PI6, buffer path paper sensor (S2), lower path paper sensor (S3)	PI2, PI6, buffer path paper sensor (S2), lower path paper sensor (S3)	PI2, PI6, buffer path paper sensor (S2), lower path paper sensor (S3)	Power on
0006	PI19	PI19	Stapler home position sensor (inside the stapler unit)	Staple



Sensors in the Finisher Unit

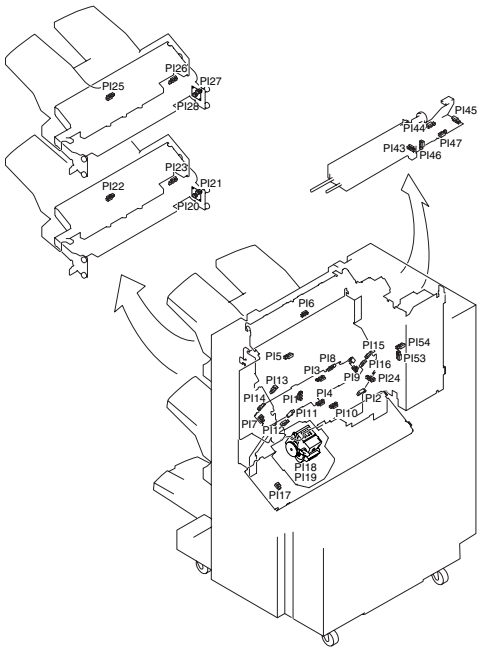
2.2 Adjustment

Adjustment Item	DIP Switch	DIP Switch Setting	Procedure
Alignment/ jogging width	SW103 in D1/D2; SW973 in K1/K2/ K3/K4	 (For letter-size paper)	12. Press SW104 (D1/D2) or SW976 (K1/K2/K3/KK4). 13. Set a stack of paper in the processing/handling tray. 14. Press SW105 (D1/D2) or SW975 (K1/K2/K3/K4) repeatedly until there is no gap between the paper stack and front aligning/jogging plate. 15. Press SW104 (D1/D2) or SW976 (K1/K2/K3/K4) to store setting.
Stapling position (front, 1-point)	SW103 in D1/D2; SW973 in K1/K2/ K3/K4	 (For letter-size paper)	Stapling 16. Press SW104 (D1/D2) or SW976 (K1/K2/K3/KK4). 17. Set a stack of paper in the processing/handling tray. 18. Press SW104 (D1/D2) or SW976 (K1/K2/K3/K4) to staple the stack. Adjusting the stapling position 19. Press SW104 (D1/D2) or SW976 (K1/K2/K3/KK4). 20. Press SW105 (D1/D2) or SW975 (K1/K2/K3/K4) for forward shift. Press SW106 (D1/D2) or SW974 (K1/K2/K3/K4) for backward shift. 21. Set a stack of paper in the processing/handling tray. 22. Press SW104 (D1/D2) or SW976 (K1/K2/K3/K4) to store new setting and staple the stack.
Stapling position (2-point) (Not applicable to K1/K2/K3/K4)	SW103 in D1/D2	 (For letter-size paper)	Same as above.
Stapling position (rear, 1-point)	SW103 in D1/D2; SW973 in K1/K2/ K3/K4	 (For letter-size paper)	Same as above.
Wrapping on buffer roller	SW103 in D1/D2; SW973 in K1/K2/ K3/K4		Wrapping check Press the Copy key with copy count = 2, original count = 3, and sort mode selected.
			Adjusting wrapping 23. Press SW104 (D1/D2) or SW976 (K1/K2/K3/KK4). 24. Press SW105 (D1/D2) or SW975 (K1/K2/K3/K4) to increase the degree of wrapping. Press SW106 (D1/D2) or SW974 (K1/K2/K3/K4) to decrease the degree of wrapping. 25. Press SW104 (D1/D2) or SW976 (K1/K2/K3/K4) to store new setting.

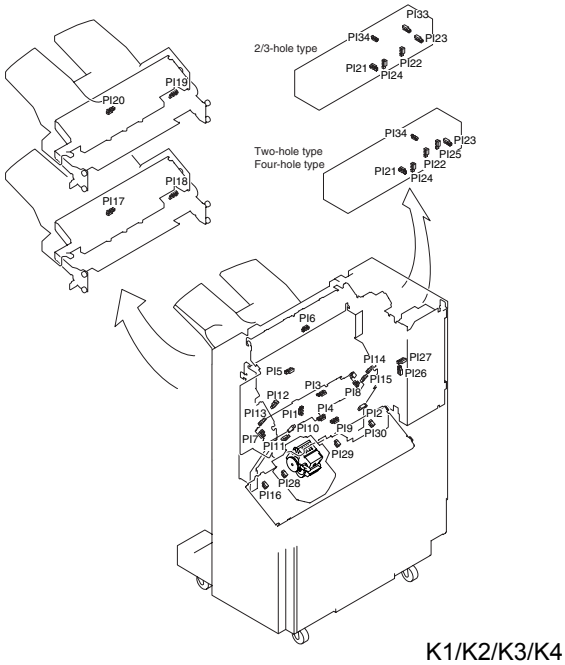
<table>
<tr><th>Adjustment Item</th><th>DIP Switch</th><th>DIP Switch Setting</th><th>Procedure</th></tr>
<tr><td>Sensor initial</td><td>SW103 in D1/D2; SW973 in K1/K2/ K3/K4</td><td> 
</td><td>26. Be sure that there is no paper in the paper path or sort tray.
27. Press SW104 (D1/D2) or SW976 (K1/K2/K3/KK4) to start automatic adjustment.
28. Observe LED101 indication for the result of adjustment.
<table>
<tr><th>LED101</th><th>Description</th></tr>
<tr><td>1</td><td>Inlet path paper sensor (S1) being adjusted</td></tr>
<tr><td>2</td><td>Buffer path paper sensor (S2) being adjusted</td></tr>
<tr><td>3</td><td>Lower path paper sensor (S3) being adjusted</td></tr>
<tr><td>4</td><td>Tray B paper sensor (S4) being adjusted</td></tr>
<tr><td>5</td><td>Tray A paper sensor (S5) being adjusted</td></tr>
<tr><td>6</td><td>Punch waste sensor, warning (S6)</td></tr>
<tr><td>7</td><td>Punch waste sensor, full (S6)</td></tr>
<tr><td>0</td><td>All sensors are normal</td></tr>
<tr><td>F</td><td>Check result details to find dirty sensors</td></tr>
</table>
29. To check result details, press either SW105 or SW106 (D1/D2); or either SW975 or SW974 (K1/K2/K3/K4).
<table>
<tr><th>LED101</th><th>Result details</th></tr>
<tr><td>■□</td><td>Sensor output level 3: Adequate</td></tr>
<tr><td>□■</td><td>Sensor output level 2: Low but usable</td></tr>
<tr><td>□□</td><td>Sensor output level 1: Almost unusable</td></tr>
<tr><td>■■</td><td>Sensor output level 0: Unusable</td></tr>
</table>
30. Press SW105 (D1/D2) or SW975 (K1/K2/K3/K4) to select a next sensor.
Press SW106 (D1/D2) or SW974 (K1/K2/K3/K4) to select a previous sensor.
31. Press SW104 (D1/D2) or SW976 (K1/K2/K3/KK4) to complete adjustment.</td></tr>
<tr><td>Swing guide speed adjustment</td><td>SW103 in D1/D2; SW973 in K1/K2/ K3/K4</td><td> 
</td><td>32. Press SW104 (for D1/D2) or SW976 (for K1/K2/K3/K4) to start automatic swing speed adjustment.
33. Observe LED101 indication for the result of adjustment.
<table>
<tr><th>LED101</th><th>Description</th></tr>
<tr><td>3 digits in sequence</td><td>Swing motor driver output voltage adjusted for optimum swing motion time</td></tr>
<tr><td>F and 1 in sequence</td><td>Swing motion time shorter than optimum</td></tr>
<tr><td>F and 2 in sequence</td><td>Swing motion time longer than optimum</td></tr>
</table>
34. Press SW104 (D1/D2) or SW976 (K1/K2/K3/KK4) to complete adjustment.</td></tr>
<tr><td>Swing guide speed indication</td><td>SW103 in D1/D2; SW973 in K1/K2/ K3/K4</td><td> 
</td><td>35. Press SW104 (for D1/D2) or SW976 (for K1/K2/K3/K4) to start automatic swing speed measurement.
36. Observe LED101 indication for the result of measurement.
<table>
<tr><th>LED101</th><th>Description</th></tr>
<tr><td>0</td><td>Swing motion time is within the standard (250 ±15 msec for upward motion; 320 ±20 msec for downward motion).</td></tr>
<tr><td>F</td><td>Swing motion time is outside the standard.</td></tr>
</table>
37. Press SW105 (D1/D2) or SW975 (K1/K2/K3/K4) to indicate the upward motion time.
Press SW106 (D1/D2) or SW974 (K1/K2/K3/K4) to indicate the downward motion time.
(An LED101 indication sequence of a, b, and c represents abc msec.)</td></tr>
</table>

2.3 Location of Electric Parts

1) Sensors



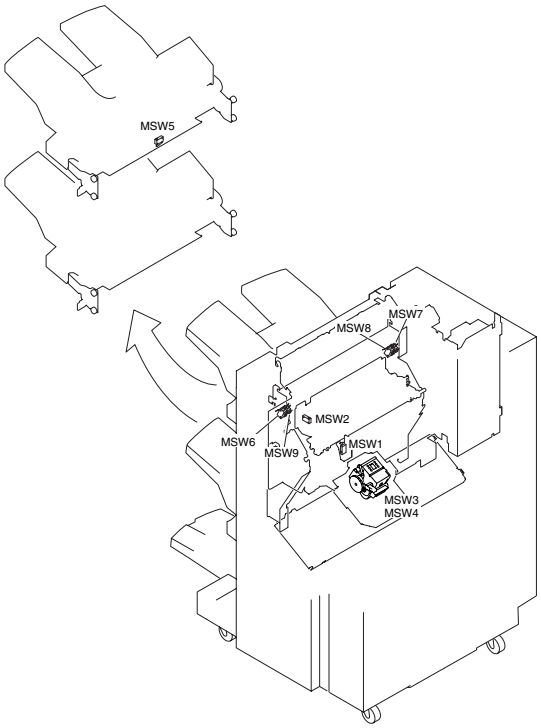
D1/D2



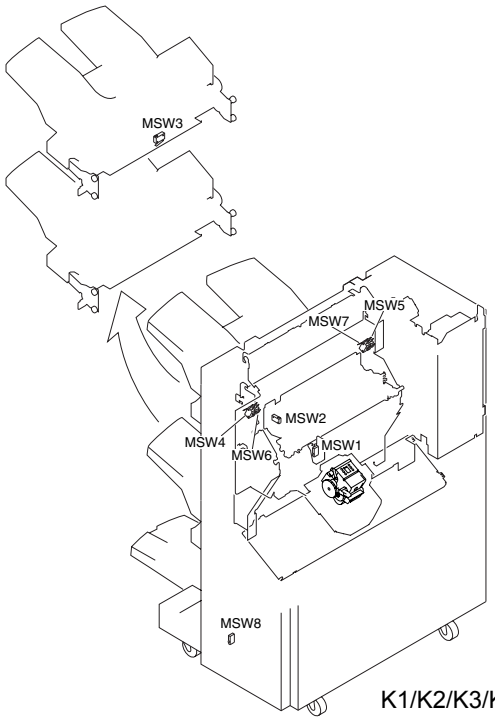
K1/K2/K3/K4

Name	Notation				Function
	D1	D2	K1	K2/K3/K4	
Photointerrupter	PI1	PI1	PI1	PI1	Front door sensor
	PI2	PI2	PI2	PI2	Inlet path paper sensor
	PI3	PI3	PI3	PI3	Buffer path rear paper sensor
	PI4	PI4	PI4	PI4	Sort delivery sensor
	PI5	PI5	PI5	PI5	Upper cover open sensor
	PI6	PI6	PI6	PI6	Non-sort delivery paper sensor
	PI7	PI7	PI7	PI7	Front aligning/jogging plate home position sensor
	PI8	PI8	-	-	Stack delivery sensor
	PI9	PI9	PI8	PI8	Rear aligning/jogging plate home position sensor
	PI10	PI10	PI9	PI9	Swing motor clock sensor
	PI11	PI11	PI10	PI10	Tray auxiliary plate retraction sensor
	PI12	PI12	PI11	PI11	Stack feed motor clock sensor
	-	PI13	PI12	PI12	Shutter home position sensor
	PI14	PI14	PI13	PI13	Paddle home position sensor
	PI15	PI15	PI14	PI14	Swing guide closed sensor
	PI16	PI16	PI15	PI15	Swing guide open sensor
	PI17	PI17	PI16	PI16	Stapler shift home position sensor
	PI18	PI18	-	-	Staple edging sensor (inside the stapler)
	PI19	PI19	-	-	Stapling home position sensor (inside the stapler)
	PI20	PI20	-	-	Tray B upper position sensor
	PI21	PI21	-	-	Tray B lower position sensor
	PI22	PI22	PI17	PI17	Tray B paper sensor
	PI23	PI23	PI18	PI18	Tray B idle rotation sensor
	PI24	PI24	-	-	Tray B lower limit sensor
	-	PI25	PI20	PI20	Tray A paper sensor
	-	PI26	PI19	PI19	Tray A idle rotation sensor
	-	PI27	-	-	Tray A upper position sensor
	-	PI28	-	-	Tray A lower position sensor
	-	PI43	-	PI21	Punch paper edge sensor
	-	PI44	-	PI22	Punch motor/rotation home position sensor
	-	PI45	-	PI23	Punch sensor home position sensor
	-	PI46	-	PI24	Punch home position sensor
	-	PI47	-	PI25	Punch completion/front sensor
	-	PI53	-	PI26	Punch waste container/set sensor
	-	PI54	-	PI27	Punch waste feed sensor
	-	-	PI28	PI28	Knurled belt shift enable sensor 1
	-	-	PI29	PI29	Knurled belt shift enable sensor 2
	-	-	PI30	PI30	Knurled belt shift enable sensor 3
	-	-	PI31	PI31	Knurled belt home position sensor
	-	-	PI32	PI32	Stack delivery sensor
	-	-	-	PI33	Punch 2/3-hole sensor
	-	-	-	PI34	Punch motor clock sensor

2) Microswitches



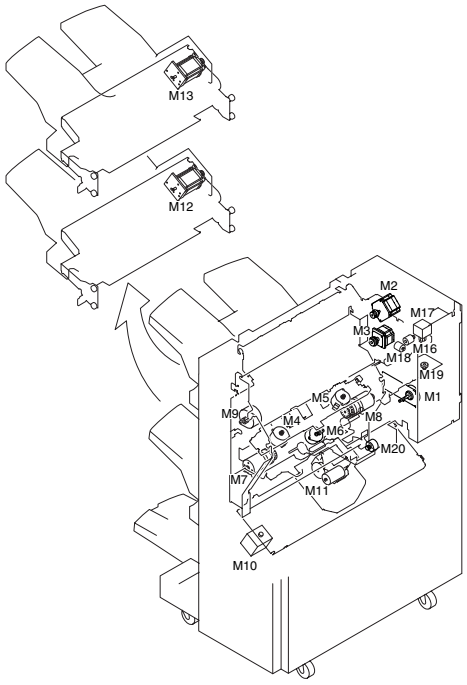
D1/D2



K1/K2/K3/K4

Name	Notation			Function
	D1	D2	K1/K2/K3/K4	
Microswitch	MSW1	MSW1	-	Front door open sensor
	-	-	MSW1	Front door open sensor 1
	-	-	MSW8	Front door open sensor 2
	MSW2	MSW2	MSW2	Swing guide open sensor
	MSW3	MSW3	-	Staple sensor (inside the stapler)
	MSW4	MSW4	-	Cartridge sensor (inside the stapler)
	-	MSW5	MSW3	Tray approach/proximity switch
	MSW6	MSW6	MSW4	Tray safety sensor (front)
	MSW7	MSW7	MSW5	Tray safety sensor (rear)
	MSW8	MSW8	MSW7	Stapler safety sensor (rear)
	MSW9	MSW9	MSW6	Stapler safety sensor (front)

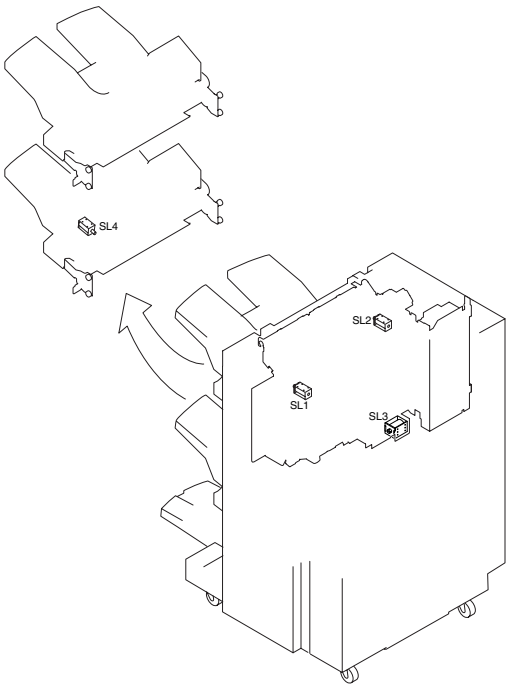
3) Motors



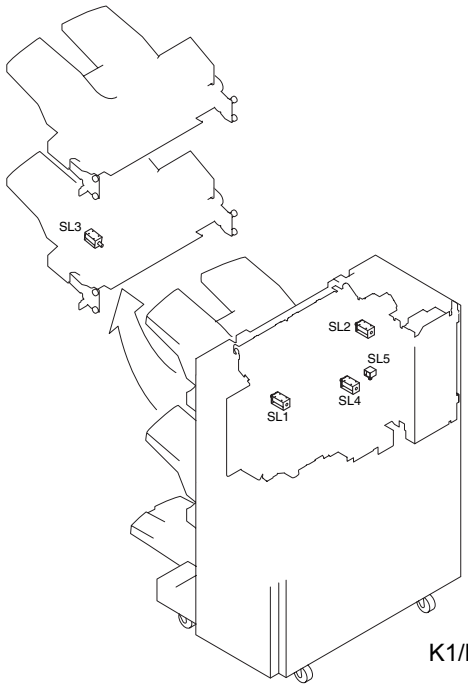
Name	Notation				Function
	D1	D2	K1	K2/K3/K4	
Motor	M1	M1	M1	M1	Inlet motor
	M2	M2	M2	M2	Buffer motor
	M3	M3	M3	M3	Delivery motor
	M4	M4	M4	M4	Front aligning/jogging plate motor
	M5	M5	M5	M5	Rear aligning/jogging plate motor
	M6	M6	M6	M6	Tray auxiliary motor
	M7	M7	M7	M7	Stack delivery motor
	M8	M8	M8	M8	Swing motor
	M9	M9	M9	M9	Paddle motor
	M10	M10	M10	M10	Stapler shift motor
	M11	M11	M11	M11	Stapler motor (inside the stapler)
	M12	M12	M12	M12	Tray B lift motor
	-	M13	M13	M13	Tray A lift motor
	-	M16	-	M16	Punch waste feed motor
	-	M17	-	M17	Punch registration motor
	-	M18	-	M18	Punch motor
	-	M19	-	M19	Punch sensor shift motor
	-	-	M20	M20	Knurled belt motor

D1/D2/K1/K2/K3/K4

4) Solenoids



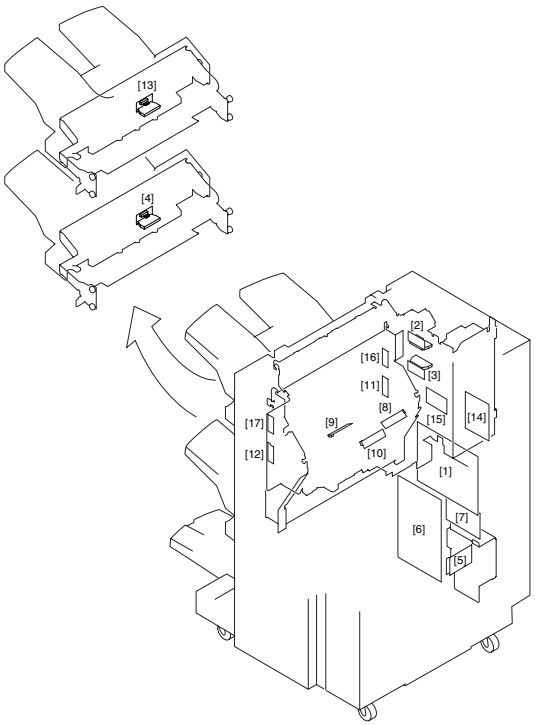
D1/D2



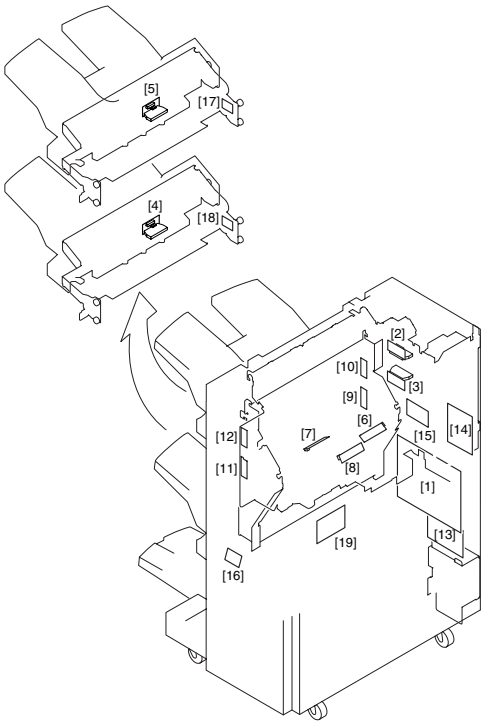
K1/K2/K3/K4

Name	Notation			Function
	D1	D2	K1/K2/K3/K4	
Solenoid	SL1	SL1	SL1	Buffer path switching solenoid
	SL2	SL2	SL2	Upper path switching solenoid
	SL3	SL3	-	Knurled belt solenoid (with folder installed)
	-	SL4	SL3	Subtray solenoid (with folder installed)
	-	-	SL4	Delivery auxiliary rib solenoid
	-	-	SL5	Rear edge drop solenoid

5) PCBs



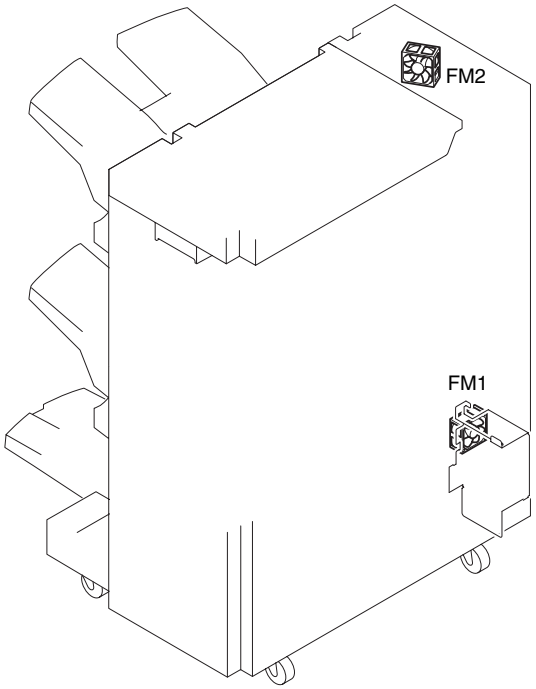
D1/D2



K1/K2/K3/K4

Reference				Function
D1	D2	K1	K2/K3/K4	
[1]	[1]	[1]	[1]	Finisher controller PCB
[2]	[2]	[2]	[2]	Buffer motor driver PCB
[3]	[3]	[3]	[3]	Delivery motor driver PCB
[4]	[4]	[4]	[4]	Tray B lifer motor driver PCB
[5]	[5]	-	-	AC fuse PCB
[6]	[6]	[16]	[16]	Switching regulator (Switch PCB)
[7]	[7]	[13]	[13]	Fuse PCB
[8]	[8]	[6]	[6]	Inlet path paper sensor (S1)
[9]	[9]	[7]	[7]	Buffer path paper sensor (S2)
[10]	[10]	[8]	[8]	Lower path paper sensor (S3)
[11]	[11]	[9]	[9]	Tray B paper sensor LED
[12]	[12]	[11]	[11]	Tray B paper sensor PCB (S4)
-	[13]	[5]	[5]	Tray A lifter motor driver PCB
-	[14]	-	[14]	Punch driver PCB
-	[15]	-	[15]	Punch waste sensor PCB
-	[16]	[10]	[10]	Tray A paper sensor LED
-	[17]	[12]	[12]	Tray A paper sensor PCB (S5)
-	-	[17]	[17]	Tray A area sensor PCB
-	-	[18]	[18]	Tray B area sensor PCB
-	-	[19]	[19]	Stapler driver PCB

6) Fans



D1/D2/K1/K2/K3/K4

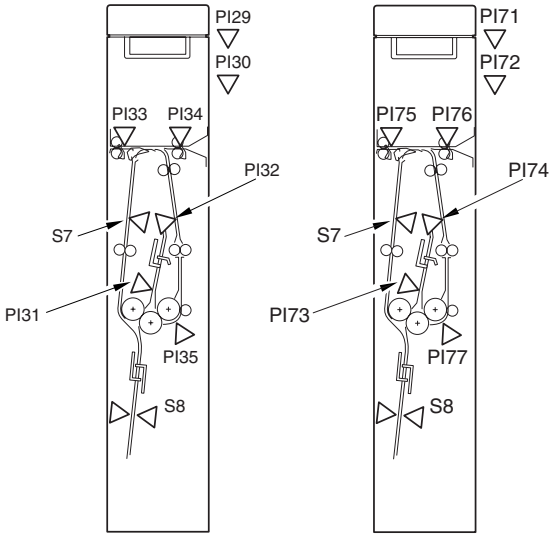
Name	Notation		Function
	D1	D2/K1/K2/K3/K4	
Fan	FM1	FM1	Power supply fan
	-	FM2	Feeder/punch cooling fan

3. Paper Folding Unit-B1/C1 (Folder)

(This unit is provided in Saddle Finisher-D2, Saddle Finisher-K3, and Saddle Finisher-K4)

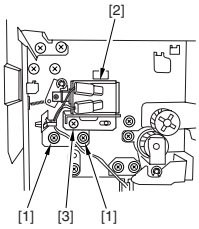
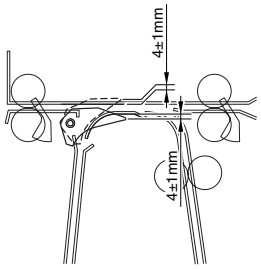
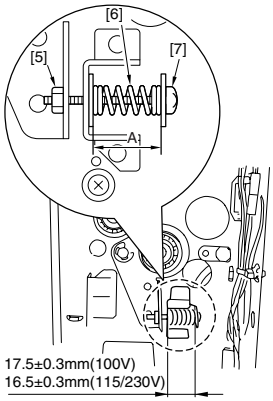
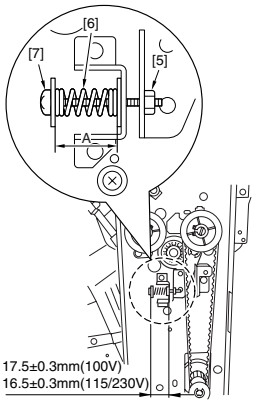
3.1 Jam Code List

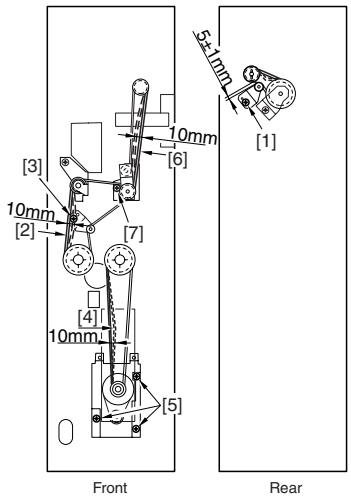
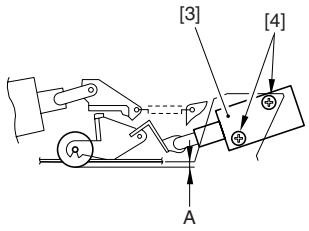
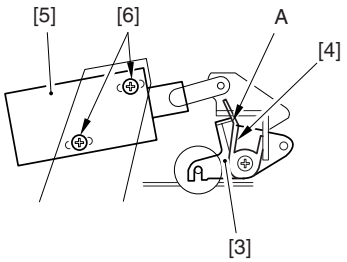
Jam Code	D2 Related Sensor	K3/K4 Related Sensor	Description
0011	PI34	PI76	Feed path paper sensor 1 delay
0021	PI34	PI76	Feed path paper sensor 1 stationary
0012	S7	S7	Feed path paper sensor 2 delay
0022	S7	S7	Feed path paper sensor 2 stationary
0013	S8	S8	Feed path paper sensor 3 delay
0023	S8	S8	Feed path paper sensor 3 stationary
0014	PI33	PI75	Feed path paper sensor 4 delay
0024	PI33	PI75	Feed path paper sensor 4 stationary
0007	PI29	PI71	Door open
0008	PI30	PI72	Top cover open



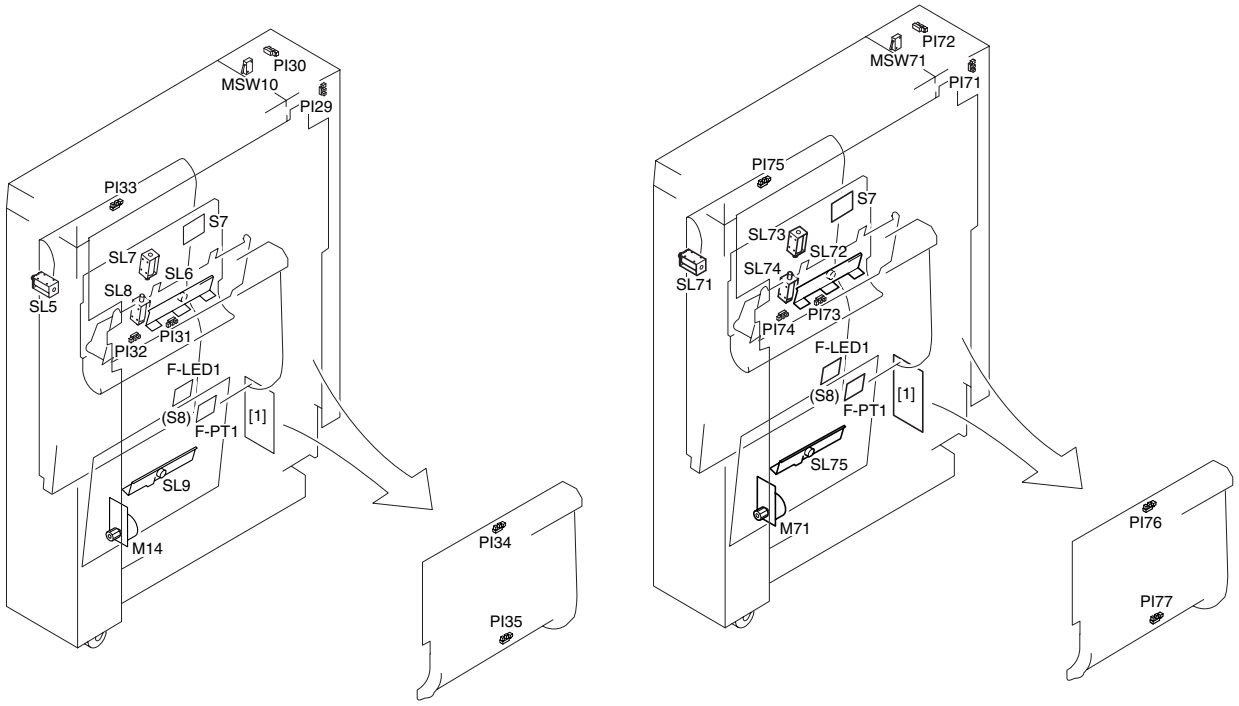
D2 K3/K4

3.2 Adjustment

Adjustment Item	Applicable Models	Procedure
Inlet guide	D2, K3, K4	38. Loosen the two adjusting screws [1] and turn them so that the tip of the inlet guide is 4 ± 1mm from the lower guide plate (not the top of the rib). 39. Loosen the adjusting screw [3] and turn it so that the upper guide plate is 4 ± 1 mm from the inlet guide when the inlet solenoid (SL5 in D2 or SL71 in K3/K4) ([2]) is turned on.  
Folding roller pressure	D2, K3, K4	Loosen the fixing nut [5] and turn the adjusting screw [7] so that length A of the pressure spring [6] is 17.5 ± 0.3 mm (100V model) or 16.5 ± 0.3 mm (115/230V model).  

Adjustment Item	Applicable Models	Procedure
Feeding belt tension	D2, K3, K4	Feeding belt A Secure the screw [1] in place so that the flange distance is 5 ± 1 mm. Feeding belt B Secure the screw [3] in place so that the slack of the feeding belt B [2] is 10 mm when it is pushed using a tension gauge with a force of 500 ± 100 g. Feeding belt C Secure the screw [5] in place so that the slack of the feeding belt C [4] is 10 mm when it is pushed using a tension gauge with a force of 500 ± 100 mm. Feeding belt D Secure the screw [7] so that the slack of the feeding belt D [6] is 10 mm when it is pushed using a tension gauge with a force of 500 ± 100 g. 
Position of releasing solenoid	D2, K3, K4	Loosen the two adjusting screws [4] to adjust the position of the pressure releasing solenoid (SL4 in D2 or SL73 in K3/K4 ([3]) so that the value of A is 2 ± 0.3 mm when the solenoid is turned on. 
Position of pressure solenoid	D2, K3, K4	Loosen the two adjusting screws [6] to adjust the position of the pressure solenoid (SL8 in D2 or SL74 in K3/K4) ([5]) so that the pressure roller arm [3] and the pressure spring [4] will come into contact at A when the solenoid is turned on. 

3.3 Location of Electric Parts



D2 K3/K4

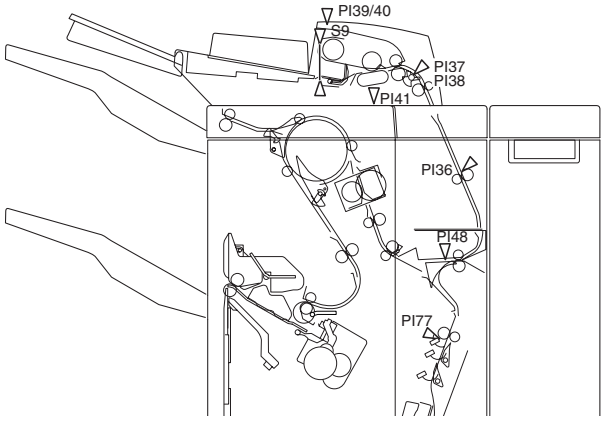
Name	Notation		Function
	D2	K3/K4	
Motor	M14	M71	Folder motor
Solenoid	SL5	SL71	Folder inlet solenoid
	SL6	SL72	B4 Z-folding stopper 2 solenoid
	SL7	SL73	Releasing/depressurization solenoid
	SL8	SL74	Locking/pressurization solenoid
	SL9	SL75	B4 Z-folding stopper 1 solenoid
Photointerrupter	PI29	PI71	Folder set sensor
	PI30	PI72	Top cover open/closed sensor
	PI31	PI73	Folding path residual paper sensor 1
	PI32	PI74	Folding path residual paper sensor 3
	PI33	PI75	Feed path paper sensor 4
	PI34	PI76	Feed path paper sensor 1
	PI35	PI77	Folding path residual paper sensor 2
Sensor	S7	S7	Feed path paper sensor 2
	F-LED1 (S8)	F-LED1 (S8)	Feed path paper sensor 3
	F-PT1 (S8)	F-PT1 (S8)	Feed path paper sensor 3
Microswitch	MSW10	MSW71	Folder upper door switch
PCB	[1]	[1]	Folder driver PCB

4. Cover Insertion Unit-A1/B1 (Inserter)

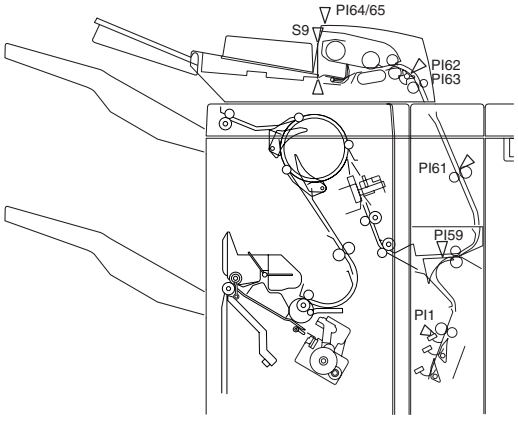
(This unit is provided in Saddle Finisher-D2, Saddle Finisher-K3, and Saddle Finisher-K4)

4.1 Jam Code List

Jam Code	D2	K3/K4	Description
	Related Sensor	Related Sensor	
0031	S9	S9	No pick-up paper
0033	PI37, PI38	PI62, PI63	Feed skew
001A	PI37, PI38	PI62, PI63	Feed delay A
002A	PI37, PI38	PI62, PI63	Feed stationary A
001B	PI36	PI61	Feed delay B
002B	PI36	PI61	Feed stationary B
0008	PI39, PI40	PI64, PI65	Inserter cover open
0008	PI41	PI66	Inserter open

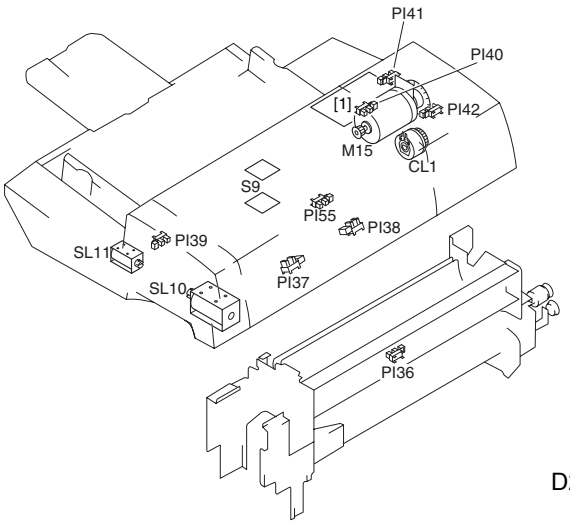


D2

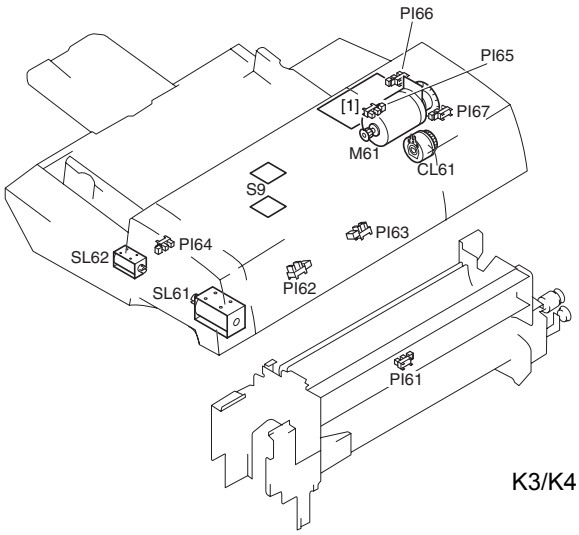


K3/K4

4.2 Location of Electric Parts



D2



K3/K4

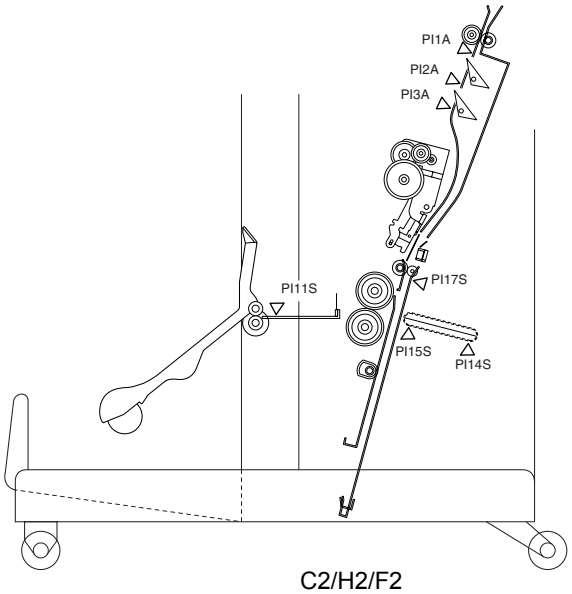
Name	Notation		Function
	D2	K3/K4	
Photointerrupter	PI36	PI61	Inserter feed sensor 3
	PI37	PI62	Inserter separation/feed sensor 1
	PI38	PI63	Inserter separation/feed sensor 2
	PI39	PI64	Inserter cover open sensor (front)
	PI40	PI65	Inserter cover open sensor (rear)
	PI41	PI66	Inserter open sensor
	PI42	PI67	Inserter motor clock sensor
	PI55	-	Inserter pickup sensor
Sensor	S9	S9	Inserter paper set sensor (photoemitter)
			Inserter paper set sensor (photodetector)
Motor	M15	M61	Inserter motor
Solenoid	SL10	SL61	Inserter pickup solenoid
	SL11	SL62	Inserter stopper plate solenoid
Clutch	CL1	CL61	Inserter separation clutch
PCB	[1]	[1]	Inserter driver PCB

5. Saddle Stitcher Unit

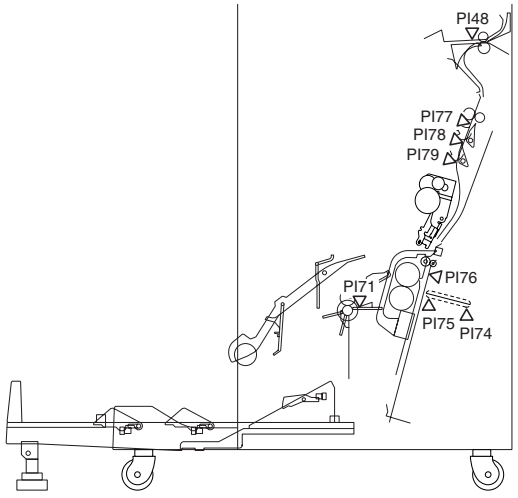
(This unit is provided in Saddle Finisher-C2, Saddle Finisher-H2, Saddle Finisher-D2, Saddle Finisher-K3, Saddle Finisher-K4, and Saddle Finisher-F2)

5.1 Jam Code List

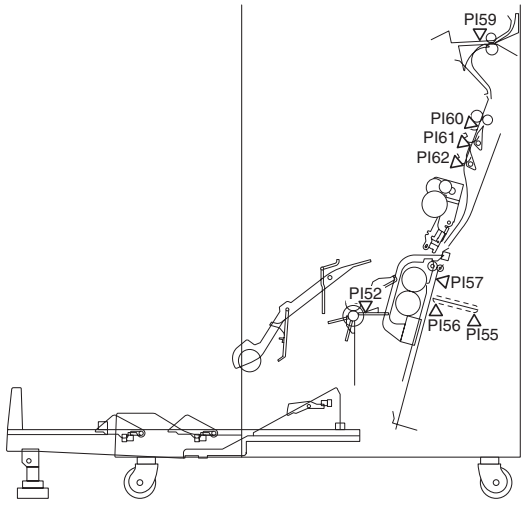
Jam Code	Related Sensor			Jam Code	Related Sensor	Description
	C2/H2	D2	K3/K4		F2	
0091	PI1A	PI77	PI60	1036	PI18S	Inlet delay
00A1	PI1A, PI2A, PI3A	PI77, PI78, PI79	PI60, PI61, PI62	1136	PI18S, PI19S, PI20S	Inlet stationary
0092	PI11S, PI17S	PI71, PI75, PI76	PI52, PI56, PI57	1037	PI11S	Delivery delay
00A2	PI11S	PI71	PI52	1137	PI11S/PI17S	Delivery stationary
0087	PI1A, PI11S	PI77, PI71	PI60, PI52	1339	PI11S, PI17S, PI18S, PI19S, PI20S	Power on
0088	PI2S, PI3S, PI9S	PI63, PI69	PI46, PI51	143D	PI2S, PI3S, PI9S	Door open
0086	PI4S, PS2S	MS34, MS32	MS34, MS32	153B	MS7S, MS5S	Stitcher staple
0015	-	PI48	PI59	-	-	Saddle inlet delay
0025	-	PI48	PI59	-	-	Saddle inlet stationary



C2/H2/F2



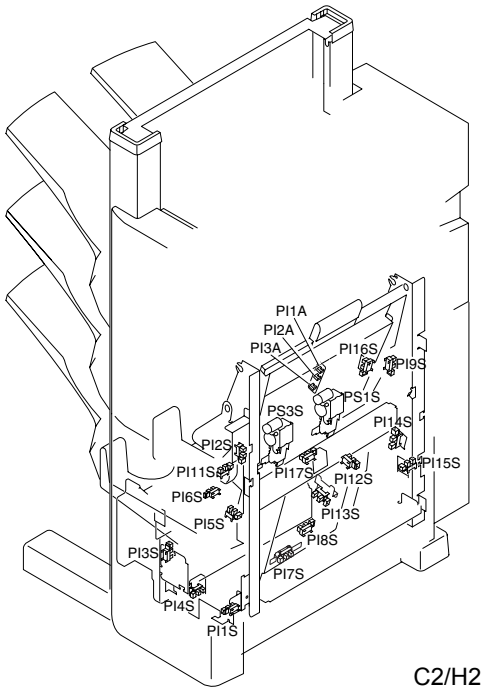
D2



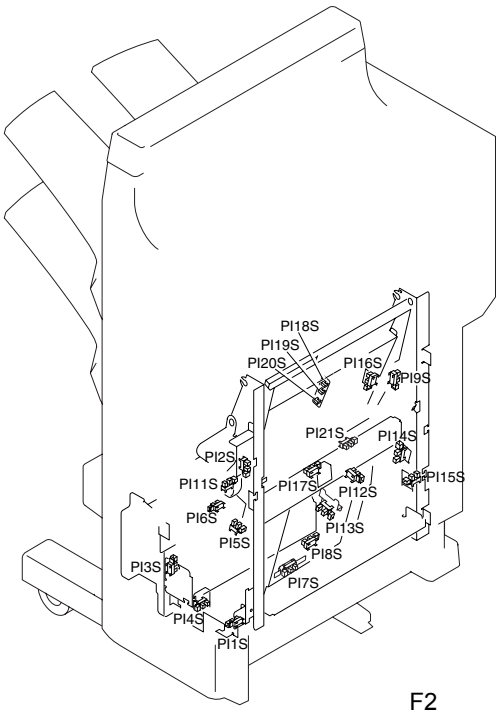
K3/K4

5.2 Location of Electric Parts

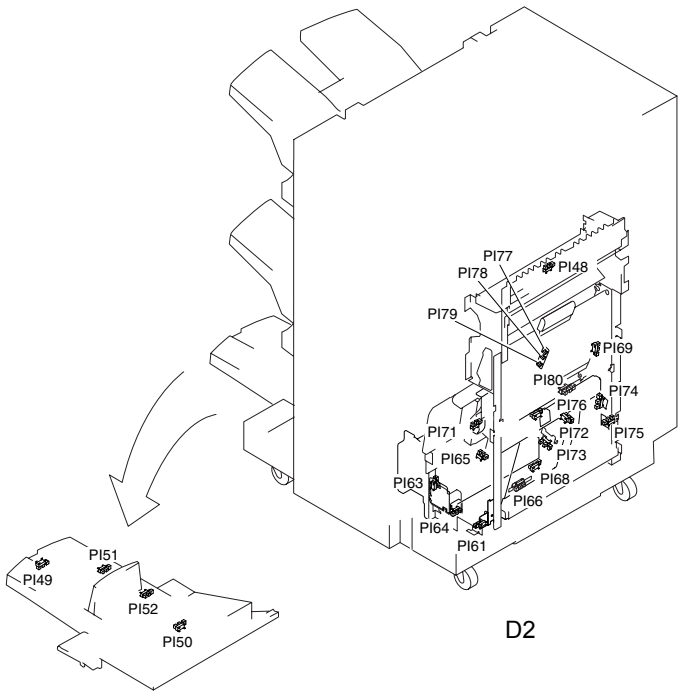
1) Sensors



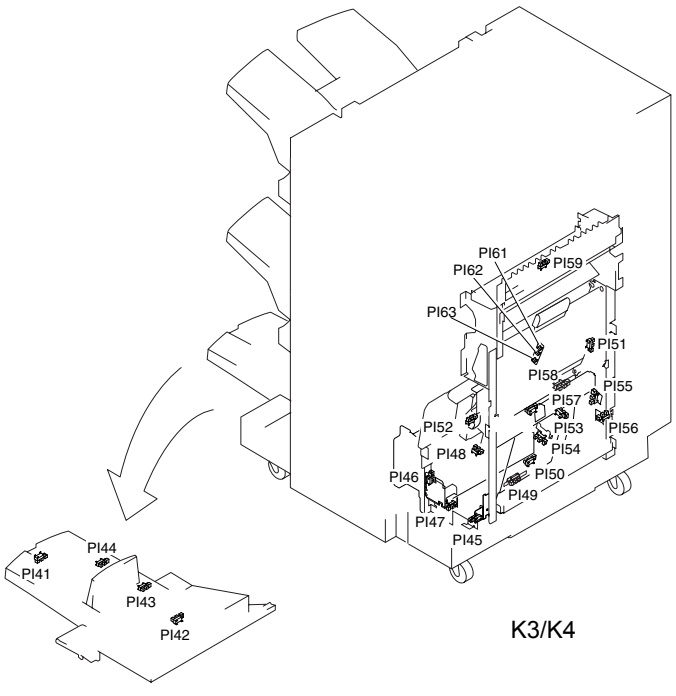
C2/H2



F2



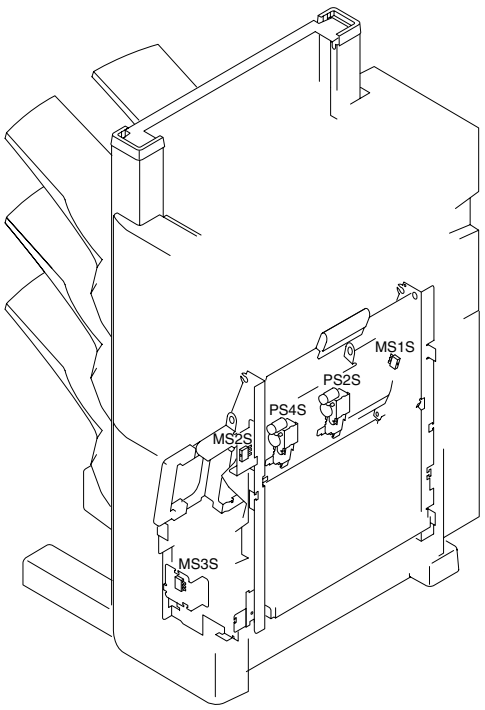
D2



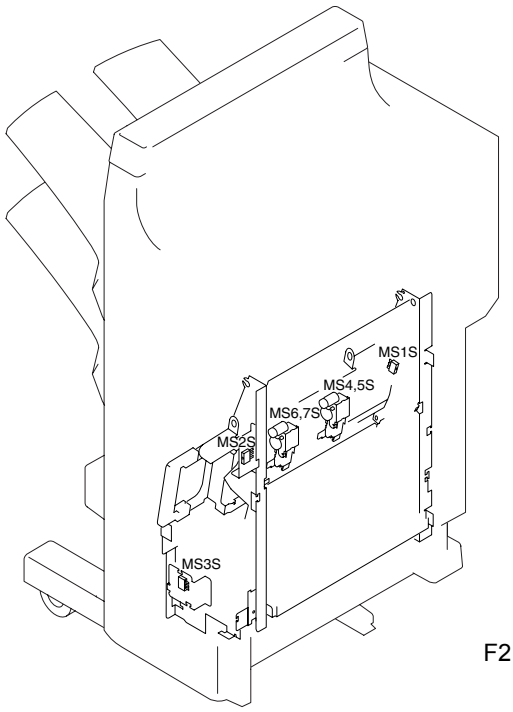
K3/K4

Name	Notation				Function
	C2/H2	F2	D2	K3/K4	
Photointerrupter	PI16S	PI16S	PI48	PI59	Saddle inlet paper (Stitcher unit IN) sensor
	-	-	PI49	PI41	Saddle tray home position sensor
	-	-	PI50	PI42	Saddle tray paper sensor 1
	-	-	PI51	PI44	Saddle tray paper sensor 3
	-	-	PI52	PI43	Saddle tray paper sensor 2
	PI1S	PI1S	PI61	PI45	Paper pressure plate motor clock sensor
	PI2S	PI2S	-	-	Front door open sensor
	PI3S	PI3S	PI63	PI46	Outlet/delivery/exit cover open sensor
	PI4S	PI4S	PI64	PI47	Folding motor clock sensor
	PI5S	PI5S	PI65	PI48	Aligning/jogging plate home position sensor
	PI6S	PI6S	-	-	Tray paper sensor
	PI7S	PI7S	PI66	PI49	Paper positioning plate home position sensor
	PI8S	PI8S	PI68	PI50	Paper positioning plate paper sensor
	PI9S	PI9S	PI69	PI51	Inlet cover open sensor
	PI11S	PI11S	PI71	PI52	Paper delivery sensor
	PI12S	PI12S	PI72	PI45	Crescent roller phase sensor
	PI13S	PI13S	PI73	PI53	Guide home position sensor
	PI14S	PI14S	PI74	PI55	Paper pressure plate home position sensor
	PI15S	PI15S	PI75	PI56	Paper pressure plate leading edge (/top position) sensor
	PI17S	PI17S	PI76	PI57	Vertical path paper sensor
	PI1A	PI18S	PI77	PI61	Paper sensor 1 (on paper sensor PCB)
	PI2A	PI19S	PI78	PI62	Paper sensor 2 (on paper sensor PCB)
	PI3A	PI20S	PI79	PI63	Paper sensor 3 (on paper sensor PCB)
	-	PI21S	PI80	PI58	Paper folding home position sensor
	PS1S	-	-	-	Staple sensor (rear)
	PS3S	-	-	-	Staple sensor (front)

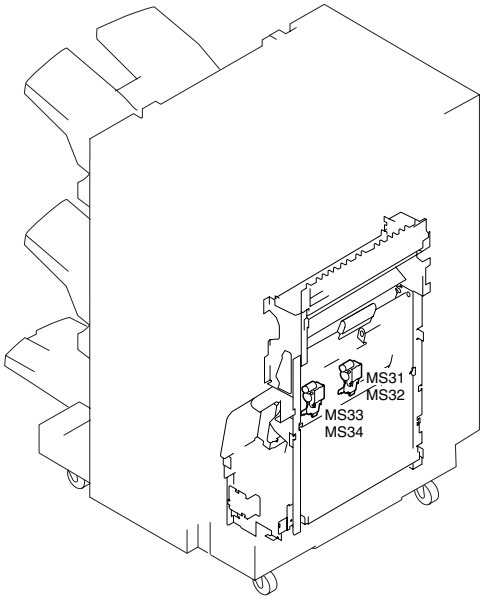
2) Microswitches



C2/H2



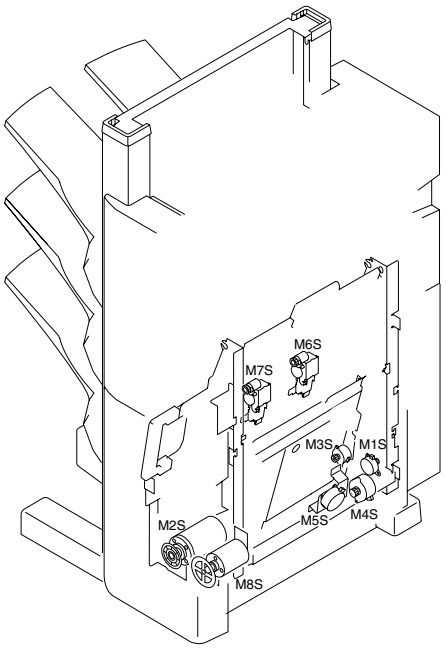
F2



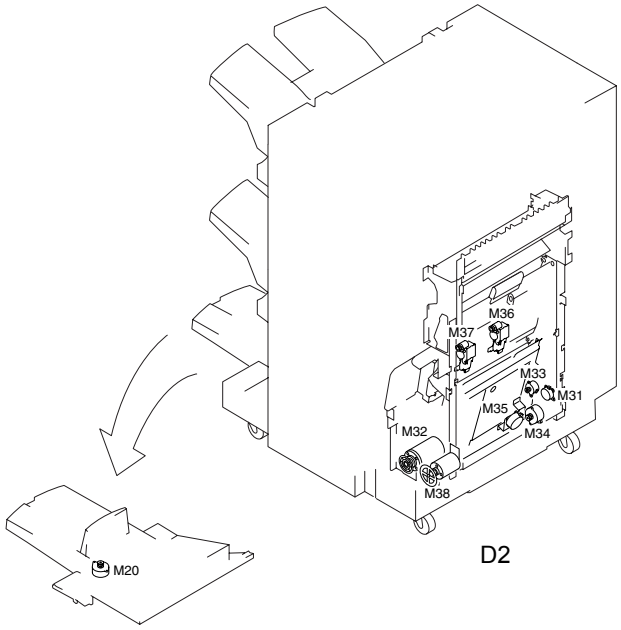
D2/K3/K4

Name	Notation			Function
	C2/H2	F2	D2/K3/K4	
Microswitch	MS1S	MS1S	-	Inlet door open detection switch
	MS2S	MS2S	-	Front door open detection switch
	MS3S	MS3S	-	Delivery door open detection switch
	-	MS4S	MS31	Staple detection switch (rear)
	PS2S	MS5S	MS32	Stitcher home position detection switch (rear)
	-	MS6S	MS33	Staple detection switch (front)
	PS4S	MS7S	MS34	Stitcher home position detection switch (front)

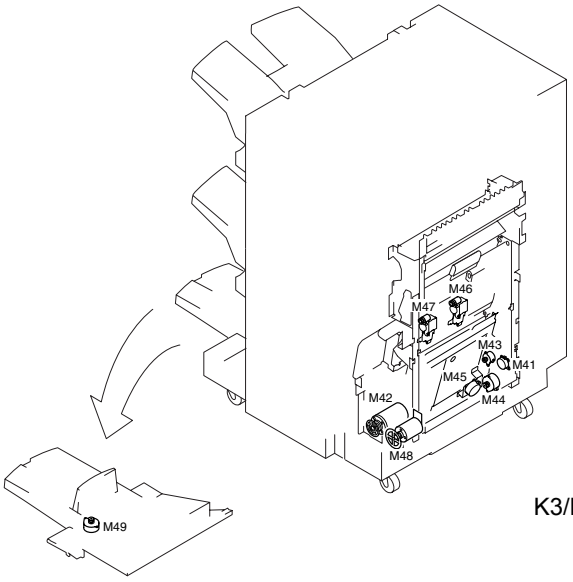
3) Motors



C2/H2/F2



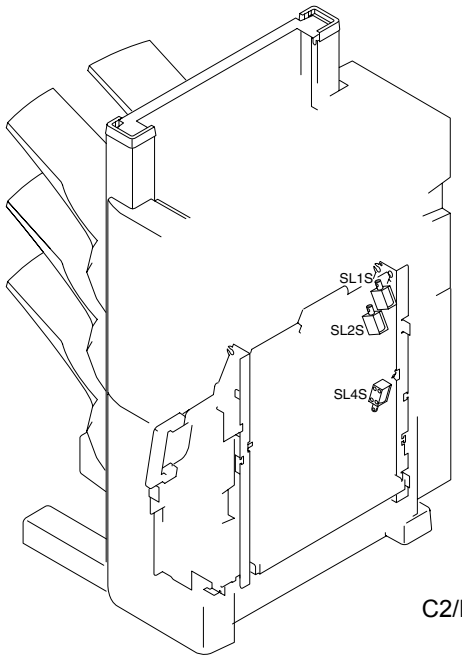
D2



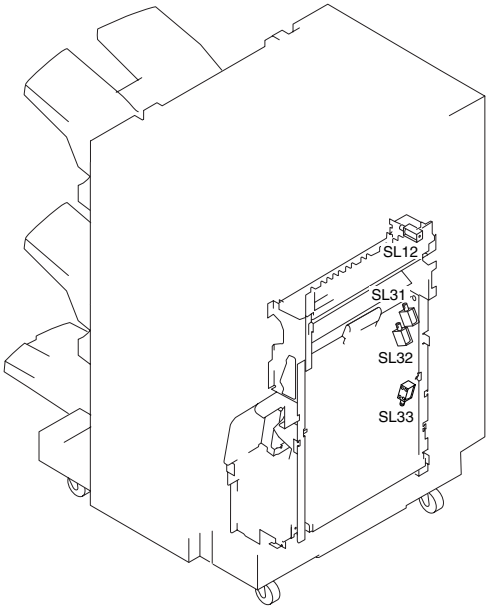
K3/K4

Name	Notation			Function
	C2/H2/F2	D2	K3/K4	
Motor	-	M20	M49	Saddle tray motor
	M1S	M31	M41	Feed motor
	M2S	M32	M42	Paper folding motor
	M3S	M33	M43	Guide motor
	M4S	M34	M44	Paper positioning plate motor
	M5S	M35	M45	Alignment/jogging motor
	M6S	M36	M46	Stitcher motor (rear)
	M7S	M37	M47	Stitcher motor (front)
	M8S	M38	M48	Paper pressure plate motor

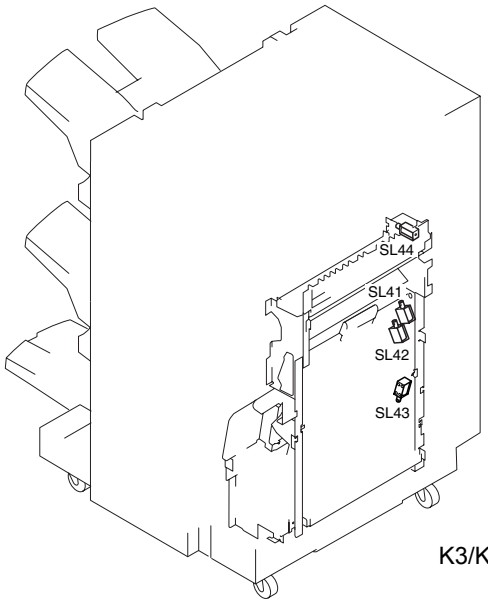
4) Solenoids



C2/H2/F2



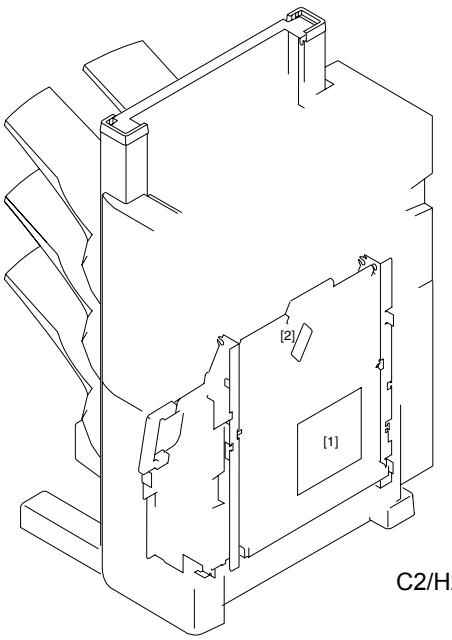
D2



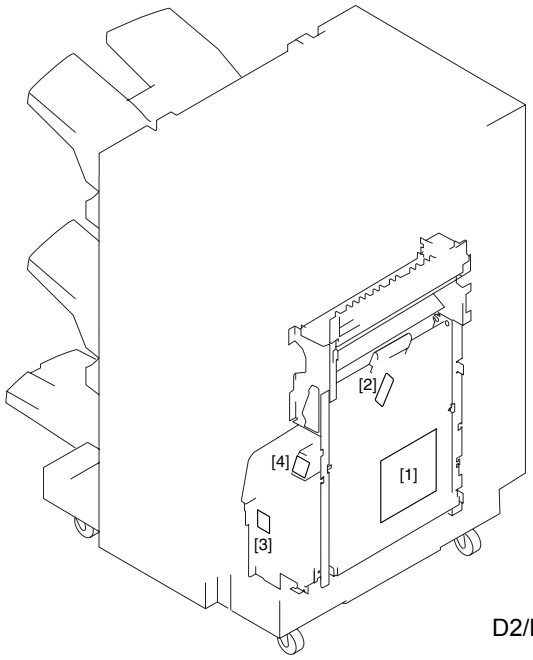
K3/K4

Name	Notation			Function
	C2/H2/F2	D2	K3/K4	
Solenoid	-	SL12	SL44	Saddle inlet solenoid
	SL1S	SL31	SL41	Paper deflecting plate 1 solenoid
	SL2S	SL32	SL42	Paper deflecting plate 2 solenoid
	SL4S	SL33	SL43	Feeding roller (plate) contact solenoid

5) PCBs



C2/H2/F2



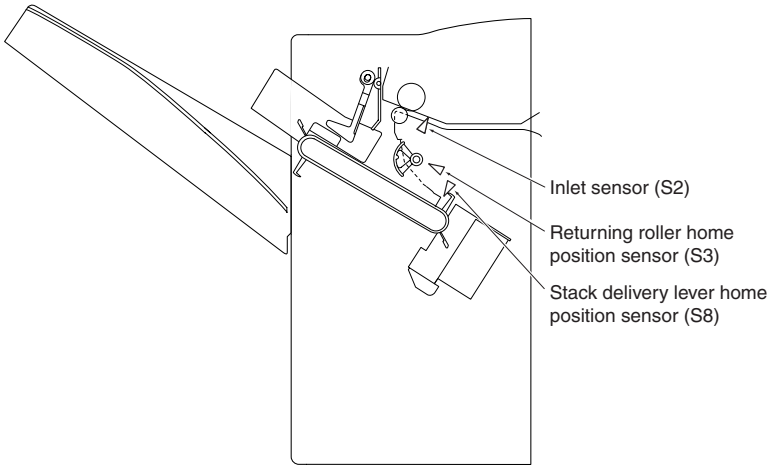
D2/K3/K4

Reference			Function
C2/H2/F2	D2	K3/K4	
[1]	[1]	[1]	Saddle stitcher controller PCB
[2]	[2]	[2]	Paper sensor PCB
-	[3]	[3]	Saddle jam LED PCB
-	[4]	-	Option PCB

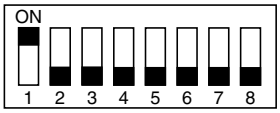
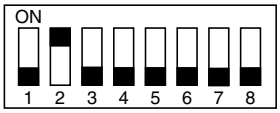
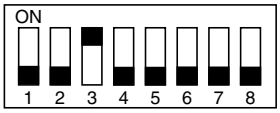
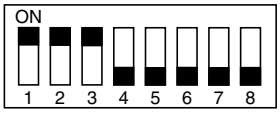
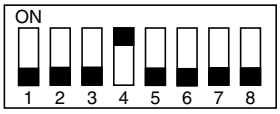
6. Finisher-E1

6.1 Jam Code List

Jam Code	Related Sensor	Description
0003	S2	Inlet sensor delay
0004	S2	Inlet sensor stationary
0006	S17	Stapler staple
0007	S2	Power on
0081	S8	Stack delivery
0082	S3	Stack return

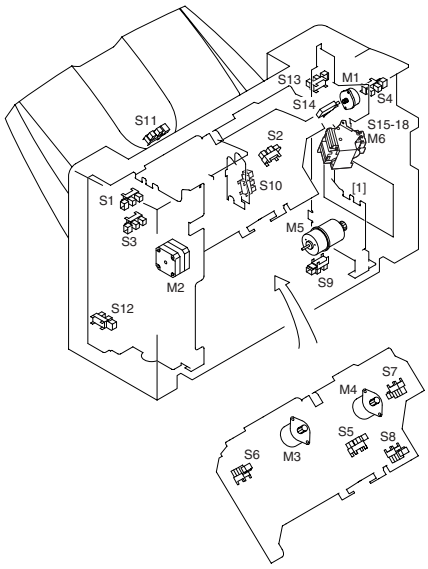


6.2 Adjustment

Adjustment Item	DIP Switch Setting	Procedure
Delivery motor (delivery roller)		Press SW1. The delivery roller rotates a specific amount and then stops. Pressing SW1 again or turning off the joint sensor S4 also stops the delivery roller.
Stack processing motor (stack delivery lever)		Press SW1. The stack delivery lever moves to the home position and stops. Turning off the joint sensor S4 also stops the stack delivery lever.
Stack processing motor (returning roller)		Press SW1. The returning roller moves to the home position and stops. Turning off the joint sensor S4 also stops the returning roller.
Front jogging plate motor		Press SW1. The front jogging plate moves to the home position and stops (after moving over a specific distance if it was in the home position). Turning off the joint sensor S4 also stops the motor.
Rear jogging plate motor		Press SW1. The rear jogging plate moves to the home position and stops (after moving over a specific distance if it was in the home position). Turning off the joint sensor S4 also stops the motor.
Stack tray motor (up)		Press SW1. The stack tray moves up and stops when the stack tray upper limit sensor turns on. Pressing SW1 again or turning off the joint sensor S4 also stops the tray.
Stack tray motor (down)		Press SW1. The stack tray moves down and stops when the stack tray lower limit sensor turns on. Pressing SW1 again or turning off the joint sensor S4 also stops the tray.
Stapler motor		Press SW1. The stapler motor stops after stapling operation. Pressing the stapler safety switch S14 or the joint sensor S4 also stops the stapler motor.

6.3 Location of Electric Parts

1) Sensors, Microswitches, Motors, and PCBs

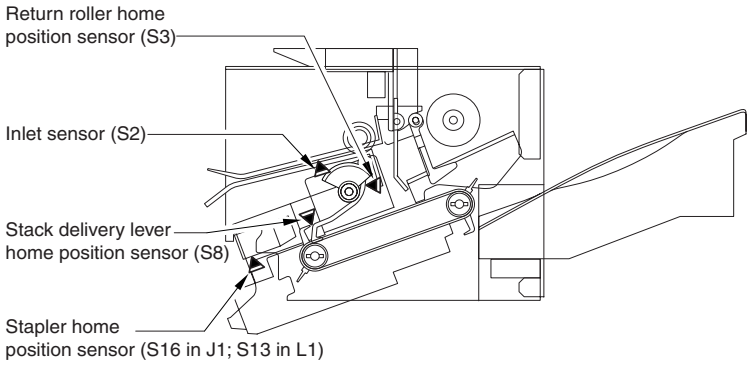


Name	Notation	Function
Photointerrupter	S1	Delivery motor clock sensor
	S2	Inlet paper sensor
	S3	Returning roller home position sensor
	S4	Finisher joint sensor
	S5	Intermediate processing tray paper sensor
	S6	Front jogging plate home position sensor
	S7	Rear jogging plate home position sensor
	S8	Stack lever home position sensor
	S9	Stack tray lifter motor clock sensor
	S10	Stack tray paper height sensor
	S11	Stack tray paper sensor
	S12	Stack tray lower limit sensor
	S13	Stack tray upper limit sensor
	S16	Stapler edging staple sensor (inside the stapler unit)
	S17	Stapler home position sensor (inside the stapler unit)
Microswitch	S14	Stapler safety switch
	S15	Stapler staple switch (inside the stapler unit)
	S18	Stapler cartridge sensor (inside the stapler unit)
Motor	M1	Delivery motor
	M2	Stack processing motor
	M3	Front jogging plate motor
	M4	Rear jogging plate motor
	M5	Stack tray lift motor
	M6	Stapler motor
PCB	[1]	Finisher controller PCB

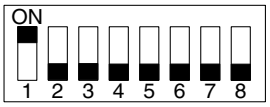
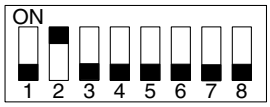
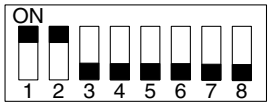
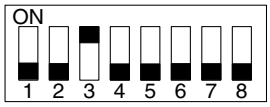
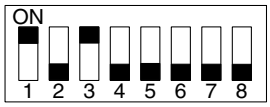
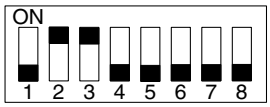
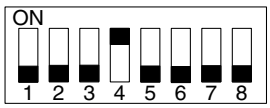
7. Finisher-J1 and Finisher-L1

7.1 Jam Code List

J1		L1		Description
Jam Code	Related Sensor	Jam Code	Related Sensor	
0003	S2	0021	S2	Inlet sensor delay
0004	S2	0022	S2	Inlet sensor stationary
0006	S16	0023	S13	Stapler staple
0007	S2	0024	S2	Power on
0081	S8	0025	S8	Stack delivery
0082	S3	0026	S3	Stack return
-	-	0027	S4	Stack retain
0114	PS19Z	-	-	Relay delivery sensor delay
0214	PS19Z	-	-	Relay delivery
0B35	PS24Z	-	-	Door open

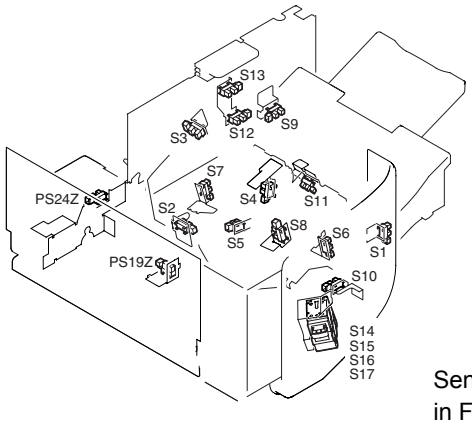


7.2 Adjustment

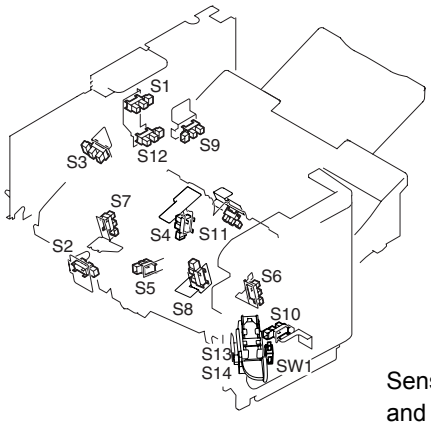
Adjustment Item	DIP Switch Setting	Procedure
Delivery motor (delivery roller)		Press SW1 (J1) or SW2 (L1). The delivery roller rotates a specific amount and then stops. Pressing SW1 (J1) or SW2 (L1) again also stops the delivery roller.
Stack delivery motor (stack delivery lever)		Press SW1 (J1) or SW2 (L1). The stack delivery lever moves to the home position and stops (if it was not in the home position); it moves to the stack delivery position and stops (if it was in the home position).
Stack handling/ processing motor (stack retaining lever)		Press SW1 (J1) or SW2 (L1). The stack retaining lever moves to the home position and stops.
Rear alignment motor		Press SW1 (J1) or SW2 (L1). The rear aligning plate moves to the home position and stops (after moving over a specific distance if it was in the home position).
Front alignment motor		Press SW1 (J1) or SW2 (L1). The front aligning plate moves to the home position and stops (after moving over a specific distance if it was in the home position).
Stack tray motor (up)		Press SW1 (J1) or SW2 (L1). The stack tray moves up and stops when the stack tray upper limit sensor turns on.
Stack tray motor (down)		Press SW1 (J1) or SW2 (L1). The stack tray moves down and stops when the stack tray lower limit sensor turns on.
Stapler motor		Press SW1 (J1) or SW2 (L1). The stapler performs a stapling operation and stops.
Delivery motor (return roller)		Press SW1 (J1) or SW2 (L1). The return roller moves to the home position and stops.

7.3 Location of Electric Parts

1) Sensors and Microswitches



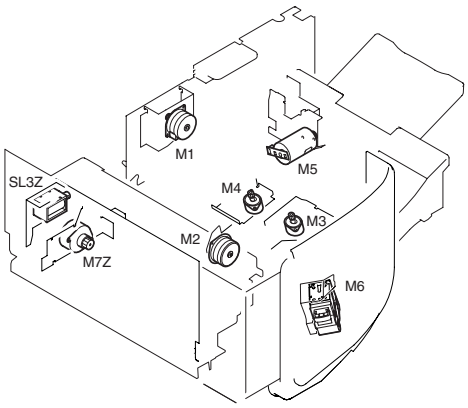
Sensors
in Finisher-J1



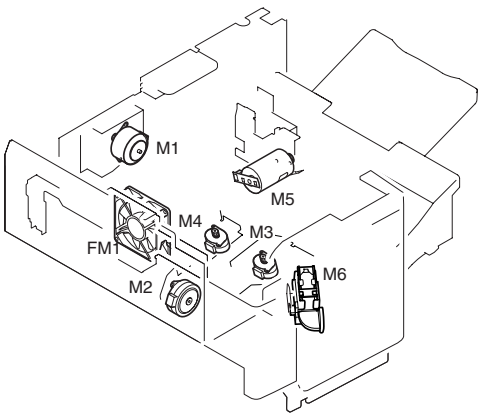
Sensors
and microswitch
in Finisher-L1

Name	Notation		Function
	J1	L1	
Photointerrupter	S1	-	Finisher front cover sensor
	S2	S2	Inlet sensor
	S3	S3	Returning roller home position sensor
	S4	S4	Stack retaining lever home position sensor
	S5	S5	Intermediate handling/processing tray paper sensor
	S6	S6	Front aligning plate home position sensor
	S7	S7	Rear aligning plate home position sensor
	S8	S8	Stack delivery lever home position sensor
	S9	S9	Stack tray lift (up/down) clock sensor
	S10	S10	Stack tray paper height sensor
	S11	S11	Stack tray paper sensor
	S12	S12	Stack tray lower limit sensor
	S13	S1	Stack tray upper limit sensor
	PS19Z	-	Relay delivery sensor (in the relay delivery assembly)
	PS24Z	-	Relay delivery open/close sensor (in the relay delivery assembly)
	S14	S14	Staple cartridge sensor
	S15	-	Stapler staple absent sensor
	S16	S13	Stapler punching home position sensor
	S17	-	Stapler edging staple sensor
Microswitch	-	SW1	Stapler safety switch

2) Motors, Solenoids, and Fan



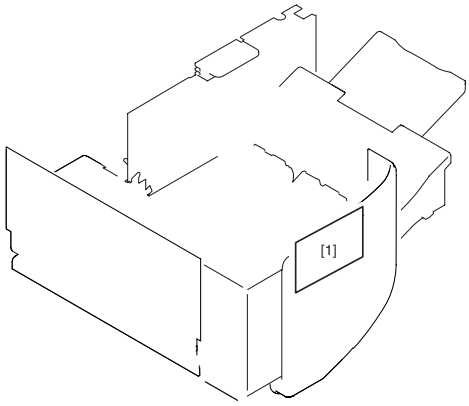
Motors and solenoids in Finisher-J1



Motors and fan in Finisher-L1

Name	Notation		Function
	J1	L1	
Motor	M1	M1	Delivery motor
	M2	M2	Stack processing/delivery motor
	M3	M3	Front alignment motor
	M4	M4	Rear alignment motor
	M5	M5	Stack tray lift (up/down) motor
	M6	M6	Stapler motor
	M7Z	-	Relay delivery motor (in the relay delivery assembly)
Solenoid	SL3Z	-	Relay delivery solenoid (in the relay delivery assembly)
Fan	-	FM1	Exhaust fan

3) PCB

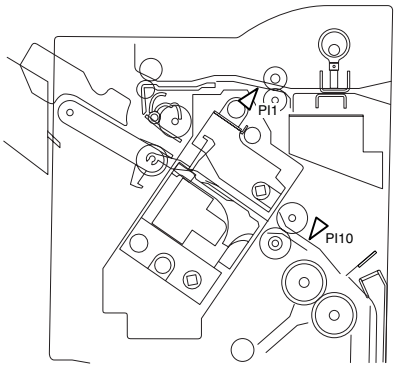


[Reference]	Function
[1]	Finisher controller PCB

8. Saddle Finisher-G1

8.1 Jam Code List

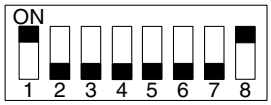
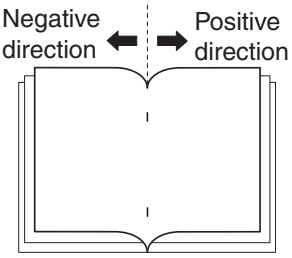
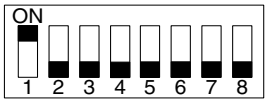
Jam Code	Related Sensor	Description
1006	PI19	Stapler staple
1007	-	Power on
1008	-	Door open
1011	PI1	Inlet sensor delay
1012	PI10	Folding position sensor delay
1021	PI1	Inlet sensor stationary
1022	PI10	Folding position sensor stationary



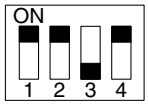
PI1: inlet sensor.
PI10 Folding position sensor

8.2 Adjustment

A. Finisher and Saddle Unit

Adjustment Item	DIP Switch	DIP Switch Setting	Procedure	
Folding position	SW1 on the finisher controller PCB		Press PSW1 to shift the folding position in the negative direction. Press PSW2 to shift the folding position in the positive direction.	
Middle 2-point stapling position	SW1 on the finisher controller PCB		Press PSW1 to shift the stapling position in the negative direction. Press PSW2 to shift the stapling position in the positive direction.	Note: Pressing PSW1 and PSW2 simultaneously clears the adjustment value.

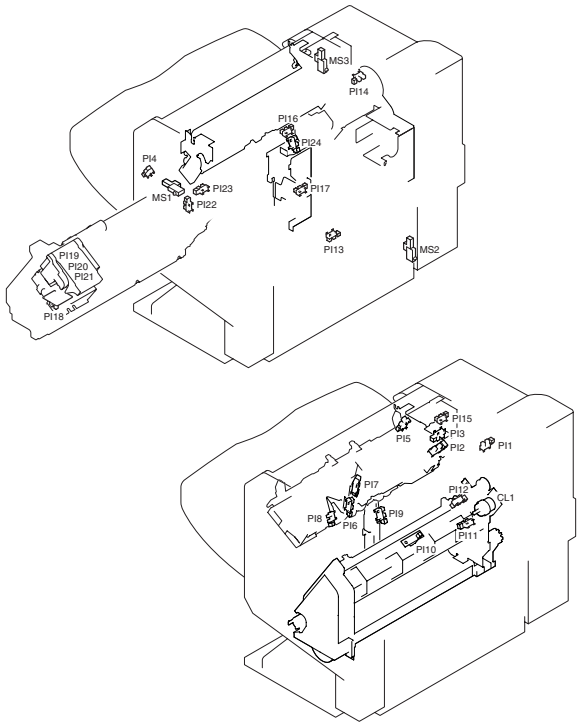
B. Puncher Unit-K1

Adjustment Item	DIP Switch	DIP Switch Setting	Procedure
Punch hole position	-	Use the service mode Sorter/Adjust/PNCH-HLE.	Increase the setting to shift the hole position in the feeding direction. Decrease the setting to shift the hole position in reverse to the feeding direction. Shift unit: 1 mm
Sensor output	SW1001 on the punch controller PCB		Press SW1002 or SW1003 for automatic adjustment of sensor output.
Number of punch holes	SW1001 on the punch controller PCB		40. Press SW1002 to select the number of punch holes. LED1001 / LED1002 / LED1003 / Number of punch holes ON / OFF / OFF / 2 (Puncher Unit-J1) ON / ON / OFF / 2/3 (Puncher Unit-K1) OFF / OFF / OFF / 4 (Puncher Unit-G1) OFF / OFF / ON / 4 (Puncher Unit-H1) 41. Press SW1003 twice to store the selection.

8.3 Location of Electric Parts

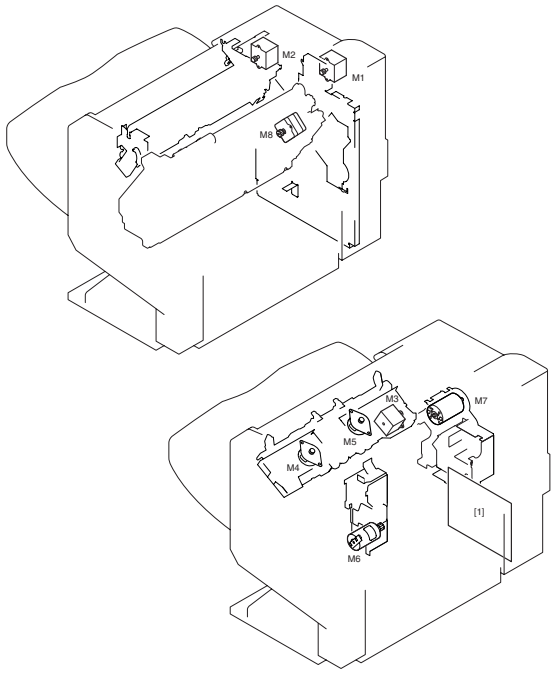
A. Finisher and Saddle Unit

1) Sensors, Microswitches, and Clutch



Name	Notation	Function
Photo-interrupter	PI1	Inlet paper sensor
	PI2	Paddle home position sensor
	PI3	Stack roller home position sensor
	PI4	Front aligning plate home position sensor
	PI5	Rear aligning plate home position sensor
	PI6	Processing tray paper sensor
	PI7	Delivery belt home position sensor
	PI8	Tray paper sensor
	PI9	Paper surface sensor
	PI10	Folding position sensor
	PI11	Folding home position sensor
	PI12	Folding roller home position sensor
	PI13	Bind tray paper sensor
	PI14	Stapler/fold motor clock sensor
	PI15	Shift upper limit sensor
	PI16	Shift lower limit sensor
	PI17	Shift motor clock sensor
	PI18	Slide home position sensor (inside the stapler)
	PI19	Stapler drive home position sensor (inside the stapler)
	PI20	Staple sensor (inside the stapler)
	PI21	Staple top position sensor (inside the stapler)
	PI22	Front door open sensor
	PI23	Upper cover open sensor
	PI24	Paper full sensor
Microswitch	MS1	Front door open switch
	MS2	Joint open switch
	MS3	Staple safety switch
Clutch	CL1	Bind clutch

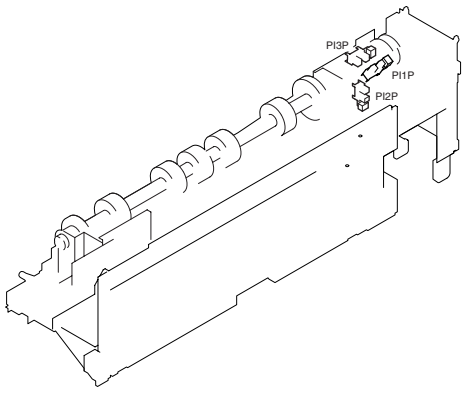
2) Motors and PCB



Name	Notation	Function
Motor	M1	Feed motor
	M2	Paddle motor
	M3	Delivery motor
	M4	Front alignment motor
	M5	Rear alignment motor
	M6	Shift motor
	M7	Staple/fold motor
	M8	Slide motor
PCB	[1]	Finisher control PCB

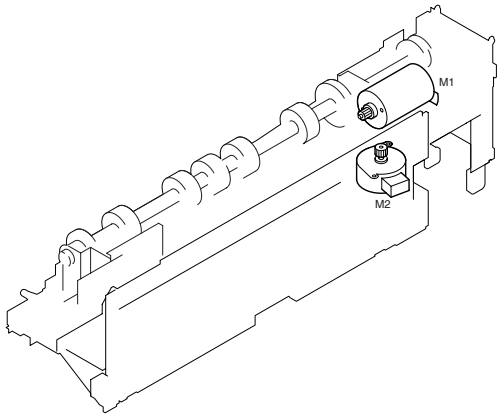
B. Puncher Unit-K1

1) Sensors



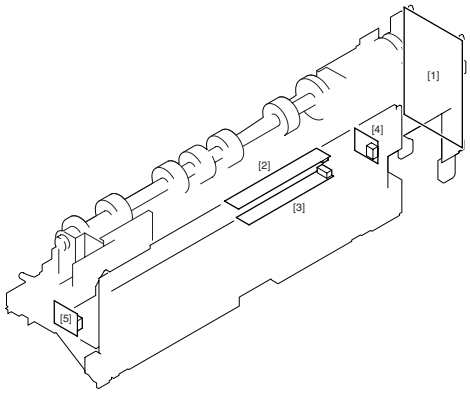
Name	Notation	Function
Photo-interrupter	PI1P	Puncher home position sensor
	PI2P	Horizontal registration home position sensor
	PI3P	Punch motor clock sensor

2) Motors



Name	Notation	Function
Motor	M1P	Punch motor
	M2P	Horizontal registration motor

3) PCB



Reference	Function
[1]	Punch controller PCB
[2]	Photosensor PCB
[3]	LED PCB
[4]	Waste full photosensor PCB
[5]	Waste full LED PCB

Canon

CANON FINISHER-C1/D1/E1/F1/G1/H1/J1/K1/K2/L1, SADDLE FINISHER-C2/D2/F2/G1/H2/K2/K3 PRINTED IN USA