Portable Manual

Finisher, Sorter, DeliveryTray
Saddle Finisher-T2

Canon

Feb 21 2005

Application

This manual has been issued by Canon Inc. for qualified persons to learn technical theory, installation, maintenance, and repair of products. This manual covers all localities where the products are sold. For this reason, there may be information in this manual that does not apply to your locality.

Corrections

This manual may contain technical inaccuracies or typographical errors due to improvements or changes in products. When changes occur in applicable products or in the contents of this manual, Canon will release technical information as the need arises. In the event of major changes in the contents of this manual over a long or short period, Canon will issue a new edition of this manual.

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Caution

Use of this manual should be strictly supervised to avoid disclosure of confidential information.

Symbols Used

This documentation uses the following symbols to indicate special information:

Symbol	Description
	Indicates an item of a non-specific nature, possibly classified as Note, Caution, or Warning.
	Indicates an item requiring care to avoid electric shocks.
	Indicates an item requiring care to avoid combustion (fire).
	Indicates an item prohibiting disassembly to avoid electric shocks or problems.
	Indicates an item requiring disconnection of the power plug from the electric outlet.
 Memo	Indicates an item intended to provide notes assisting the understanding of the topic in question.
 REF.	Indicates an item of reference assisting the understanding of the topic in question.
	Provides a description of a service mode.
	Provides a description of the nature of an error indication.

The following rules apply throughout this Service Manual:

1. Each chapter contains sections explaining the purpose of specific functions and the relationship between electrical and mechanical systems with reference to the timing of operation.

   In the diagrams, ▮▮▮▮ represents the path of mechanical drive; where a signal name accompanies the symbol , the arrow ⟶ indicates the direction of the electric signal.

   The expression "turn on the power" means flipping on the power switch, closing the front door, and closing the delivery unit door, which results in supplying the machine with power.

2. In the digital circuits, '1'is used to indicate that the voltage level of a given signal is "High", while '0' is used to indicate "Low".(The voltage value, however, differs from circuit to circuit.) In addition, the asterisk (*) as in "DRMD*" indicates that the DRMD signal goes on when '0'.

   In practically all cases, the internal mechanisms of a microprocessor cannot be checked in the field. Therefore, the operations of the microprocessors used in the machines are not discussed: they are explained in terms of from sensors to the input of the DC controller PCB and from the output of the DC controller PCB to the loads.

The descriptions in this Service Manual are subject to change without notice for product improvement or other purposes, and major changes will be communicated in the form of Service Information bulletins.

All service persons are expected to have a good understanding of the contents of this Service Manual and all relevant Service Information bulletins and be able to identify and isolate faults in the machine."

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Chapter 3 Error Code

Chapter 1 Maintenance and Inspection

Contents

1.1 Periodically Replaced Parts

1.1.1 Periodically Replaced Parts (Finisher Unit) 0009-2560

The Finisher unit does not have parts that must be replaced on a periodical basis.

1.1.2 Periodically Replaced Parts (Saddle Stitcher Unit) 0009-2571

The Saddle stitcher unit does not have parts that must be replaced on a periodical basis.

1.2 Durables

1.2.1 Durables (Finisher Unit)

0009-2561

Some of the parts of the machine may need to be replaced one or more times because of wear or tear during the machine's warranty period. Replace them as necessary.

T-1-1

No.	Name	No.	Quantity	Approx. life	As of November, 2004 Remark
1	Stapler	FM2-0665-000	1	500,000 times	1 cartridge lasts approximately 5,000 times
2	Delibery static charge eliminator (L)	FC5-3667-000	1	1,000,000 sheets	
3	Delibery static charge eliminator (R)	FC5-5571-000	1	1,000,000 sheets	
4	Inlet static charge eliminator	FL2-0822-000	1	1,000,000 sheets	
5	Swing guide inside static charge eliminator	FL2-0817-000	1	1,000,000 sheets	
6	Buffer roller	FC5-3442-000	2	1,000,000 sheets	
7	Return roller (Rear)	FC5-3457-000	1	1,000,000 sheets	Color;White
8	Return roller (Front)	FC5-6873-000	1	1,000,000 sheets	Color;Black

1.2.2 Durables (Saddle Stitcher Unit)

0009-2572

Some of the parts of the machine may need to be replaced one or more times because of wear or tear during the machine's warranty period. Replace them as necessary.

T-1-2

No.	Name	No.	Quantity	Approx. life	As of November, 2004 Remark
1	Stitcher	FL2-0846-000	2	100,000 times	1 cartridge lasts approximately 2,000 times

1.3 Periodical Servicing

1.3.1 Periodical Servicing (Finisher Unit) 0009-2562

Does not have parts that must be serviced on a periodical basis.

1.3.2 Periodical Servicing (Saddle Stitcher Unit) 0009-2573

Does not have parts that must be serviced on a periodical basis.

Chapter 2 Standards and Adjustments

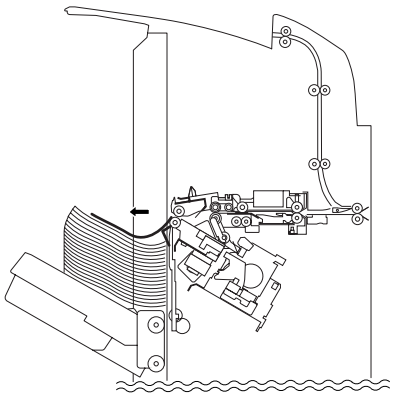
Contents

2.1 Basic Adjustment

2.1.1 Upward Curl Mode 0009-2563

a. Outline

Paper tends to curl upward in certain conditions, preventing normal delivery/stacking. (See the following figure.)



F-2-1

If such is the case,

1) Turn over the stack of paper inside the paper source (e.g., cassette). If doing so makes the upward curling worse than before, turn back over the stack. If the paper still develops upward curl and, thus, fails to deposit itself normally, try enabling the upward curl mode item.

b. Enabling the Upward Curl Mode

1) Turn off the host machine.

2) Set the bits of SW104 on the finisher controller PCB as follows:

F-2-2

3) Turn on the host machine.

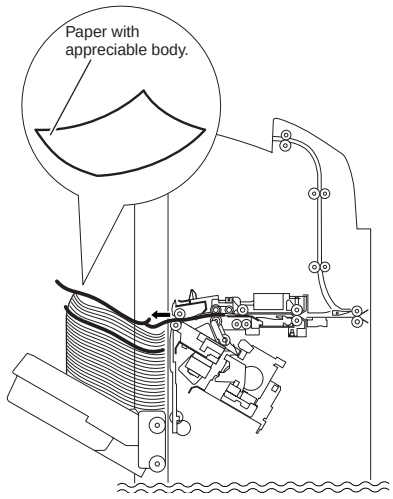
- When this mode item is enabled, the machine changes the speed of its stack delivery roller to ensure proper stacking.
- When this mode item has been enabled, changes in conditions (e.g., the use of paper with little curl or paper with downward curl) can cause improper stacking. In this regard, it is very important to study the type of paper that is most often used by the user before enabling this mode item.

2.1.2 Special Curl Mode 0009-2564

a. Outline

If paper with irregular curl is deposited*, its edges can block the delivery slot of the finisher, pushing forward the exiting stack when the next sheet arrives. (See the following figure.)

*LDR size only (mainly, Boise Cascade; 75 g/m2 in weight).



F-2-3

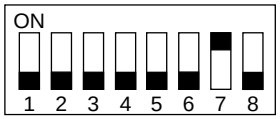
If this is the case,

1) Turn over the stack of paper inside the source (i.e., cassette). If paper starts to curl more than before, turn back over the stack. If the curling is not corrected as a result, try enabling the special curl mode item.

b. Enabling Special Curl Mode

1) Turn off the host machine.

2) Set the bits of SW104 on the finisher controller PCB as follow:



F-2-4

3) Turn on the host machine.

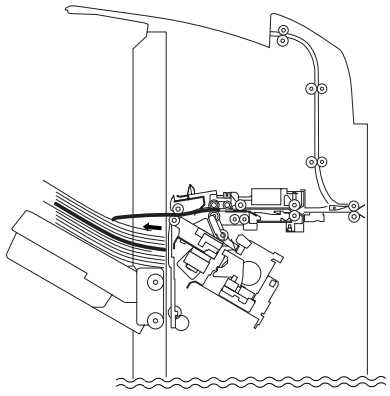
- When this mode item is enabled, the paper surface detection mechanism is executed for every sheet of paper (instead of every 5 sheets) and the timing at which the delivery tray is moved down is advanced so that the paper will be stacked properly.
- When this mode item has been enabled, changes in conditions (e.g., the use of paper with little curl) can prevent proper stacking. In the light of this, be sure to check the type of paper most frequently used by the user before enabling this mode item.

2.1.3 Downward Curl Mode

0009-2565

a. Outline

Paper tends to curl downward in certain conditions, preventing normal delivery/stacking. (See the following figure.)



F-2-5

If such is the case,

1) Turn over the stack of paper inside the paper source (e.g., cassette). If doing so makes the downward curling worse than before, turn back over the stack. If the paper still develops downward curl and, thus, fails to deposit itself normally, try enabling the downward curl mode item.

b. Enabling the Downward Curl Mode

1) Turn off the host machine.

2) Set the bits of SW104 on the finisher controller PCB as follows:

F-2-6

3) Turn on the host machine.

- When this mode item is enabled, the machine changes the speed of its stack delivery roller to ensure proper stacking.
- When this mode item has been enabled, changes in conditions (e.g., the use of paper with little curl or paper with upward curl) can cause improper stacking. In this regard, it is very important to study the type of paper that is most often used by the user before enabling this mode item.

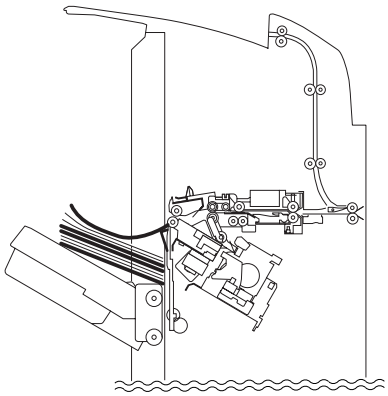
2.1.4 Heavy Paper Upward Curl Mode

0009-2566

a. Outline

Depending on the selected paper handling mode and the condition of paper*, upward curl can develop and prevent the machine from stacking the paper properly. (See the following figure.)

*For instance, heavy paper cover mode and single-side binding are selected, and the front/back cover is LDR and 157 g/m2 or more.



F-2-7

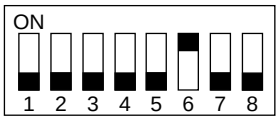
If this is the case,

1) Turn over the stack of paper in the source (i.e., cassette). If doing so has caused the paper to curl more than before, turn back over the stack. If the curling is still appreciable and the machine fails to stack the paper properly, try enabling heavy paper upward curl mode.

b. Enabling Heavy Paper Upward Curl

1) Turn off the host machine.

2) Set the bits of SW104 on the finisher controller PCB as follows:



F-2-8

3) Turn on the host machine.

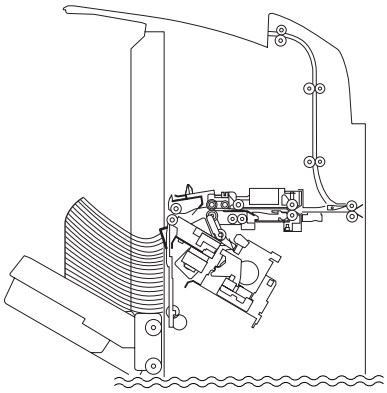
- When this mode item is enabled, the machine changes its operation it executes after the start of stack edging, thus ensuring that the paper will be stacked properly.
- When this mode item has been enabled, changes in conditions (e.g., the use of paper with little curl or delivery of paper with downward curl) can prevent the machine from stacking the paper properly. It is important, therefore, to be sure of the type of paper used by the user before enabling this mode item.

2.1.5 Stack Delivery Mode 0009-2567

a. Outline

Depending on the selected paper handling mode*, condition of paper, and environment, the trailing edge of paper can rain against the stacking wall and prevent the machine from stacking it correctly (also causing it to prematurely detect an over-stack condition; see the following figure).

*For instance, in stack delivery mode other than when the stack consists of 6 or fewer sheets of small-size paper.



F-2-9

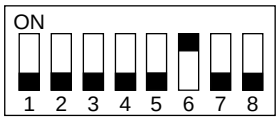
If this is the case,

1) Turn over the stack of paper inside the source (e.g., cassette). If doing so has made upward curling worse than before, turn back over the stack. If the upward curling still causes the machine to fail to stack the paper correctly, try enabling stack delivery mode:

b. Enabling Stack Delivery Mode

1) Turn off the host machine.

2) Set the bits of SW104 on the finisher controller PCB as follows:



F-2-10

3) Turn on the host machine.

- When this mode item is enabled, the machine changes its operation it executes after stack edging to

make sure that the paper will be stacked correctly.
- After this mode items has been enabled, changes in conditions (e.g., the use of paper with little upward curl or delivery of paper with downward curl) can prevent the machine from correctly stacking paper. In this light, it is very important to check the type of paper the user most often uses before enabling this mode item.

2.1.6 Offset Stack Mode 0009-4798

a. Outline

Depending on the paper condition, paper can curl and the machine can fail to deliver/stack it properly in the small size offset mode.

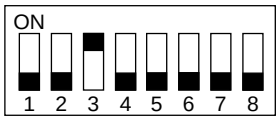
If this is the case,

1) Turn over the stack of paper in the source cassette. If doing so has caused the paper to curl much more than before, turn back over the stack. If the machine still fails to stack paper due to large curl, try enabling the offset stack mode.

b. Enabling the Offset Stack Mode

1) Turn off the host machine.

2) Set the bits of SW104 on the finisher controller PCB as follows:



F-2-11

3) Turn on the host machine.
- When this mode has been enabled, the stack delivery is performed without buffering and the speed of the stack delivery roller is changed to an appropriate one to ensure proper stacking.
- If paper with little curl is delivered after this mode has been enabled, the change in condition can cause improper stacking. In the light of this, be sure to check the type of paper that is most frequently used by the user before enabling this mode.

2.1.7 Saddle Delivery Tray Limitless Mode 0009-4821

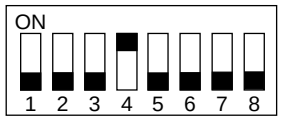
a. Outline

The user who uses the saddle mode continuously is allowed to stack saddles continuously irrespective of the sheet stacking capacity even if the number of saddles that can be stacked is exceeded.

b. Enabling the Saddle Delivery Tray Limitless Mode

1) Turn off the host machine.

2) Set the bits of SW104 on the finisher controller PCB as follows:



F-2-12

3) Turn on the host machine.
- When this mode has been enabled, stacking can be continued even after the number of saddles that can be stacked is exceeded.

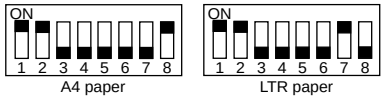
2.2 Adjustment at Time of Parts Replacement

2.2.1 Adjusting the Alignment Position 0009-2568

Perform this adjustment after replacing the finisher controller PCB or when the alignment position must be changed for some reason.

1) Remove the rear upper cover of the finisher unit.

2) Check that the power of the host machine is off and set SW104 on the finisher controller PCB as follows according to the paper used for adjustment.



F-2-13

3) Turn on the power of the host machine.

4) Press SW103 on the finisher controller PCB.

When SW103 is pressed, the swing guide opens and the alignment plate moves to prescribed position.

5) Place ten sheets of A4/LTR paper between the alignment plates and push them against the stopper.

6) Press SW101 or SW102 on the finisher controller PCB and push the alignment plate against the paper.

When SW101 is pressed, alignment plate moves 0.42 mm forward.

When SW102 is pressed, alignment plate moves 0.42 mm backward.

7) When adjustment is complete, remove paper and press SW103 on the finisher controller PCB once to store the adjustment in memory.

8) Turn off all bits of finisher controller PCB SW104.

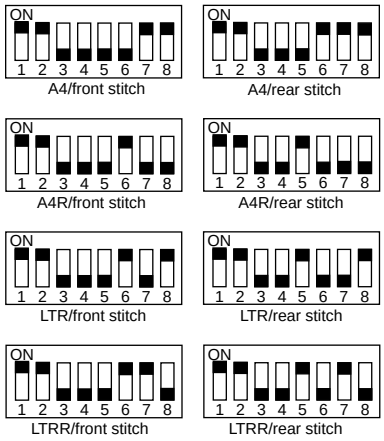
9) Turn off the power of the host machine and install the rear upper cover of the finisher unit.

2.2.2 Adjusting the Staple Position 0009-2569

Perform this adjustment after replacing the finisher controller PCB or when the staple position must be changed for some reason. This adjustment adjusts the front/rear stitches with A4/A4R when the paper used for adjustment is AB type and with LTR/LTRR when the paper is INCH type.

1) Remove the rear upper cover of the finisher unit.

2) Check that the host machine power is off and set SW104 on the finisher controller PCB as follows according to paper/stitch position used for adjustment.



F-2-14

3) Turn on the host machine power.

4) Press SW103 on the finisher controller PCB.

When SW103 is pressed, the swing guide opens and the alignment plate moves to prescribed position.

5) Place a sheet of paper between the alignment plates, push it against the stopper, and push the rear edge of the paper against the rear alignment plate.

If the gap between the front alignment plate and front edge of the paper is 1 mm or greater, end staple position adjustment and repeat staple position adjustment after completing alignment plate adjustment.

6) Press SW103 on the finisher controller PCB once to staple. However, remove the stapled paper manually to verify the staple position because it is not ejected.

7) Press SW103 on the finisher controller PCB once.

8) If the staple position is correct, insert a sheet of paper between the aligning plates and push it against the stopper, push the far end edge of the paper

to the rear aligning plate, and press SW103 once (stapling action/store adjustment value) and proceed to step 11).

9) To adjust the staple position, press SW101 or SW102 on the finisher controller PCB and adjust the staple position.

When SW101 is pressed, staple position moves 0.49 mm forward.

When SW102 is pressed, staple position moves 0.49 mm backward.

10) Repeat steps 5) and 6) and check that the staple position is adjusted correctly.

11) Turn off all bits of SW104 on the finisher controller PCB.

12) Turn off the power of the host machine and install the rear cover of the finisher unit.

2.2.3 Adjusting the Folding Position

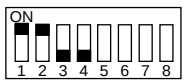
0009-2574

The folding position is adjusted by changing setting of bits 6 through 8 of SW504 on the saddle stitcher controller PCB to match the stitching position (adjusting the distance over which the paper positioning plate is moved to the folding position from the stitching position).

If you have replaced the saddle stitcher controller PCB, be sure to set the new SW504 so that the settings will be the same as those on the old DIPSW1. Perform this adjustment if, for any reason, you must change the folding position.

1) Check that the power of the host machine is off and separate the finisher from the host machine. If the optional puncher unit is installed, remove it from the finisher.

2) Remove the PCB cover and set bits 1 through 4 of SW504 on the saddle stitcher con-troller PCB as follows:

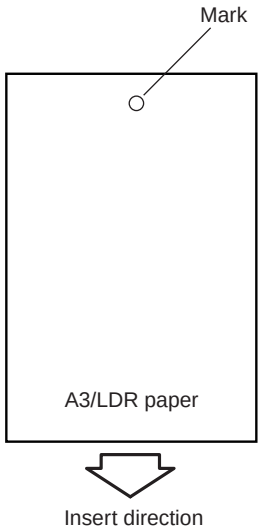


Do not change bits 5 through 8.

F-2-15

3) Remove the rear cover, open the inlet cover of the saddle stitcher unit and tape the actuator of inlet cover sensor (PI9) and inlet door switch (MSW1).

4) Before inserting the paper, mark the top of the paper. You will be using two sheets of A3 or LDR paper.



F-2-16

5) Turn on the power of the host machine.

6) Press SW1 on the saddle stitcher controller PCB so that the feed motor (M1) starts to rotate. (Press SW1 three seconds or more if LDR paper is used.)

7) Open the inlet cover and insert two sheets of paper. Push them in by hand until the front edge of the sheets push against the paper positioning plate.

8) Close the inlet cover.

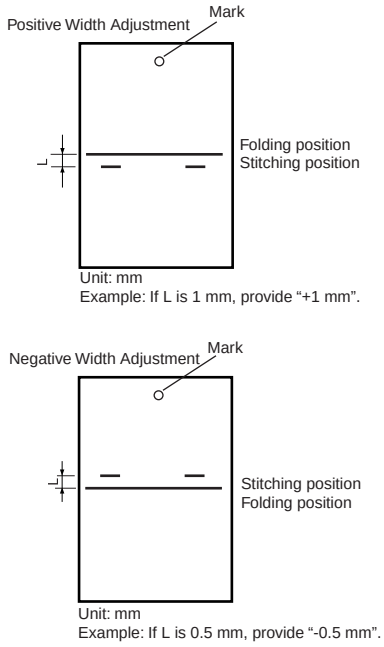
9) Press SW1 on the saddle stitcher controller PCB.

The saddle stitcher unit will "stitch" the sheets, and fold and deliver the stack automatically.

10) Measure the distance (L) between the stitching position and the folding position. Then perform "positive width adjustment" or "negative width adjustment" to suit the relationship between the stitching position and the folding position.

If the stitching position is below the folding position, perform "positive width adjustment."

If the stitching position is above the folding position, perform "negative width adjustment."



F-2-17

11) Change the settings of bits 6 through 8 on SW504 referring to the following table.

If the width adjustment is 0

The stitching position and the folding position match, requiring no change.

If for "positive width adjustment"

Set SW504 so that the difference resulting from subtraction of the interval from the appropriate setting in the above figure is provided.

Example: If SW504 is currently set to +2 and the interval is +1 mm, set SW504 to reflect -2.

If for "negative width adjustment"

Set SW504 so that the sum resulting from addition of the interval from the appropriate setting in the above fingure is provided.

Example: If SW504 is currently set to -1 and the interval is -0.5mm, set SW504 to reflect +1.

T-2-1

SW504 bit settings			Setting (in units of 0.5 mm)
Bit 6	Bit 7	Bit 8	
OFF	ON	ON	+3
OFF	ON	OFF	+2
OFF	OFF	ON	+1
OFF	OFF	OFF	0
ON	OFF	ON	-1
ON	ON	OFF	-2
ON	ON	ON	-3

Do not use the following setting.

T-2-2

Bit 6	**Bit 7**	**Bit 8**
ON	OFF	OFF

12) Set SW504 bits 1 to 4 to OFF.

2.2.4 Adjusting the Stitching Position (adjusting center stitching) 0009-2575

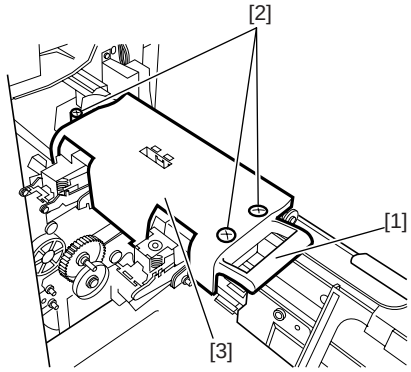
Use the host machine user mode to perform this adjustment.

2.2.5 Adjusting the Stitcher Unit 0009-2576

1) Open the front door.

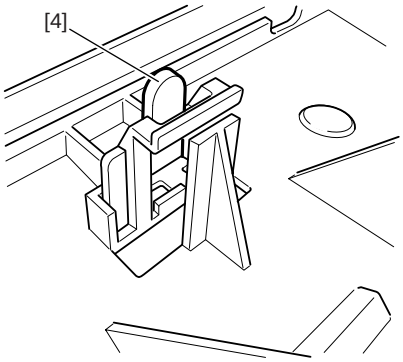
2) Pull out the stitcher mount unit to the front, then pull out the stitcher towards yourself and then pull up the stitcher.

3) Remove three screws [2] and remove the stitcher cover [3].



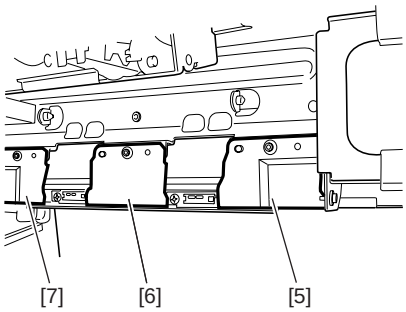
F-2-18

4) Remove the stitcher positioning tool [4] from the back of the cover.



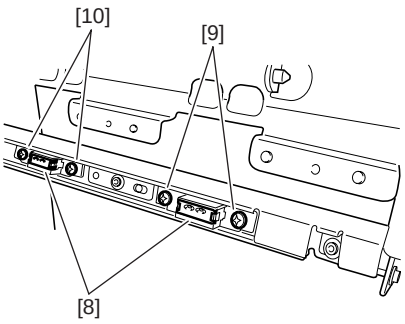
F-2-19

5) To adjust the front stitcher, remove the front guide plate [4] and center guide plate [6]. To adjust the rear stitcher, remove the center guide plate [6] and the rear guide plate [7]. (one screw each)



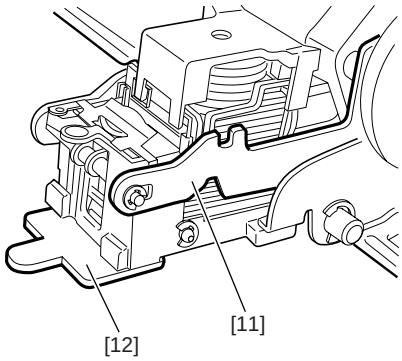
F-2-20

6) To adjust the front stitcher, loosen the two screws [9] on the stitcher mount [8]. To adjust the rear stitcher, loosen the two screws [10] on the stitcher mount [8].



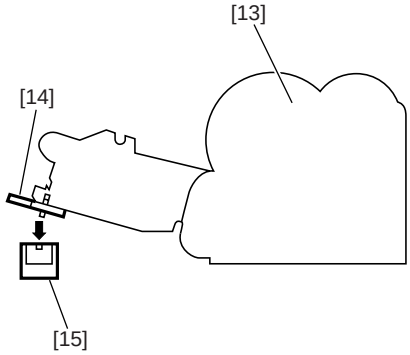
F-2-21

7) Insert the tool [12] into the staple slot of the stitcher [11].



F-2-22

8) Tilt the stitcher, and turn the stitcher gear [13] to match the recess of the tool [14] and the mount [15] and then tighten the screws on the mount [15] to secure.



F-2-23

Chapter 3 Error Code

Contents

3.1 User Error Code

3.1.1 Staple is absent

0009-2670

T-3-1

Error Description	Condition	Detection timing	Machine operation	Resetting
Staple is absent	The staple cartridge has run out of staples.	Always monitored	Normal operation can be continued. However, whether to operate or not depends on the instruction from the host machine.	Replace the staple cartridge; or, set it correctly.

3.1.2 Stapler safety protection function activated

0009-2672

T-3-2

Error Description	Condition	Detection timing	Machine operation	Resetting
Stapler safety protection function activated	Stapler safety protection function was activated.	When starting staple operation.	Stop staple motor (M41).	Stack ejection without stapling.

3.1.3 Stack tray overstacking

0009-2673

T-3-3

Error Description	Condition	Detection timing	Machine operation	Resetting
Stack tray over-stacking	The number of sheets on the ejection tray has exceeded the stackable sheet or set count.	After ejecting the sheet/set exceeding the limit.	Normal operation will continue.	Remove paper from ejection tray.

3.1.4 Staple is absent (Saddle Stitcher Unit)

0009-2698

T-3-4

Error Description	Condition	Detection timing	Machine operation	Resetting
Staple is absent	The staple cartridge has run out of staples.	Always monitored	Normal operation will continue. However, operation is subject to instruction from host machine.	Replace the staple cartridge; or, set it correctly.

3.1.5 Mixed paper sizes (Saddle Stitcher Unit)

0009-2699

T-3-5

Error Description	Condition	Detection timing	Machine operation	Resetting
Mixed paper sizes	Sheets of different sizes are output in the holding area.	When the sheet that causes the fault is output to the holding area.	Stitching is prohibited. Alignment is prohibited.	Remove the sheets from the holding area.

3.1.6 Stack exceeded (Saddle Stitcher Unit)

0009-2700

T-3-6

Error Description	Condition	Detection timing	Machine operation	Resetting
Stack exceeded	The stack of sheets on the output tray exceeds the maximum number of sheets that can be stacked.	When output of the sheet that cause an excess is output on the output tray.	Normal operation is continued.	Remove the stack of sheets from the tray.

3.1.7 Stitching capacity error (Saddle Stitcher Unit)

0009-2701

T-3-7

Error Description	Condition	Detection timing	Machine operation	Resetting
Stitching capacity error	The number of sheets in the holding area has exceeded 15.	When the sheet that causes an excess is output to the holding area.	Stitching is prohibited.	Remove the sheets from the holding area.

3.2 Service Error Code

3.2.1 E500

0009-2677

T-3-8

Code	Detail	Error Description	Detection timing
E500	0001	Communication error	The communication with the host machine is interrupted.

3.2.2 E503

0009-2694

T-3-9

Code	Detail	Error Description	Detection timing
E503	0002	Communication error	The communication with the saddle stitcher is interrupted.

3.2.3 E505

0009-2678

T-3-10

Code	Detail	Error Description	Detection timing
E505	0001	Backup RAM	The checksum for the finisher controller PCB has an error when the power is turned on.

3.2.4 E514

0009-2679

T-3-11

Code	Detail	Error Description	Detection timing
E514	8001	Rear end assist motor(M109)/ Rear end assist homeposition sensor (PI109)	The stapler does not leave the rear end assist home position when the rear end assist motorhas been driven for 3 seconds.
	8002		The stapler does not return to the rear end assist home position when the rear end assist motor has been driven for 3 seconds.

3.2.5 E530

0009-2681

T-3-12

Code	Detail	Error Description	Detection timing
E530	8001	Aligning plate frontmotor (M103)/ Aligning plate fronthome position sensor(PI106)	The aligning plate does not return to aligning plate front home position sensor when the alignment plate front motor has been driven for 4 seconds.
	8002		The aligning plate does not leave the aligningplate front home position sensor when thealignment plate front motor has been driven for 4 seconds.

3.2.6 E531

0009-2683

T-3-13

Code	Detail	Error Description	Detection timing
E531	8001	Staple motor(M111)/ Staple home position detect sensor(PI50)	The stapler does not return to the staple home position when the staple motor has been driven for 0.5 sec.
	8002		The stapler does not leave the staple home positionwhen the staple motor has been driven for 0.5 sec.

3.2.7 E532

0009-2684

T-3-14

Code	Detail	Error Description	Detection timing
E532	8001	Stapler shift motor(M105)/ Stapler shift homeposition sensor (PI110)	The stapler does not leave the stapler shifthome position when the stapler shift motor hasbeen driven for 5 seconds.
	8002		The stapler does not return to the stapler shift home position when the stapler shift motor has been driven for 20 seconds. The stapler is caught in the way of its travel route and the sensor flag of the stapler alignment interference sensor is activated:

3.2.8 E535

0009-2686

T-3-15

Code	Detail	Error Description	Detection timing
E535	8001	Swing motor (M106)/Swing home positionsensor (PI105)	The stapler does not return to the swing home position when the swing motor has bee driven for 3 seconds.
	8002		The stapler does not leave the swing home position when the swing motor has been driven for 3 seconds.

3.2.9 E537

0009-2688

T-3-16

Code	Detail	Error Description	Detection timing
E537	8001	Aligning plate rear motor (M104)/ Aligning plate rear home position sensor(PI107)	The aligning plate does not leave the aligning plate rear home position sensor when the alignment plate rear motor has been driven for 4 seconds.
	8002		The aligning plate does not return to aligning plate rear home position sensor when the alignment plate rear motor has been driven for 4 seconds.

3.2.10 E540

0009-2689

T-3-17

Code	Detail	Error Description	Detection timing
E540	8001	Tray 1 shift motor(M107)/ Tray 1 shift area sensor PCB	If the tray does not return to home position when the tray 1 shift motor is driven for 20 seconds. If the tray does not move to other area when tray 1 shift motor is driven for 4 seconds.
	8002		- The dangerous area is reached before the tray 1 paper surface sensor detects paper surface during the paper surface detection operation.- A discontinuous area is detected during tray operation.
	8003		- The tray 1 closing detect switch is activated while the tray 1 is operating.
	8004		- Clock signal input cannot be detected when the tray 1 shift motor has been driven for 0.2 second.
	8005		- The lock detection signal turns OFF 150 ms after the lock detection signal turned ON.
	8006		- The lock detection signal does not turn ON when the tray 1 shift motor has been driven for 1 second.
	8007		- The lock detection signal does not turn OFF when the tray 1 shift motor is at a stop.

3.2.11 E542

0009-2690

T-3-18

Code	Detail	Error Description	Detection timing
E542	8001	Tray 2 shift motor (M108)/ Tray 2 shift area sensor PCB	If the tray does not return to home position when the tray 2 shift motor is driven for 20 seconds. If the tray does not move to other area when tray 2 shift motor is driven for 4 seconds.
	8002		- The upper limit area is reached before the tray 2 paper surface sensor 1 detects the paper surface during paper surface detection operation.- A discontinuous area is detected during tray operation.- During evacuation operation, arrival at the area beyond the tray 2 paper surface sensor 2 is detected before this sensor detects paper surface.
	8004		- Clock signal input cannot be detected when the tray 2 shift motor has been driven for 0.2 second.
	8005		- The lock detection signal turns OFF 150 ms after the lock detection signal turned ON.
	8006		- The lock detection signal does not turn ON when the tray 2 shift motor has been driven for 1 second.
	8007		- The lock detection signal does not turn OFF when the tray 2 shift motor is at a stop.

3.2.12 E584

0009-2692

T-3-19

Code	Detail	Error Description	Detection timing
E584	8001	Stack ejection motor (M102)/ Shutter open/ close clutch (CL101)/ Shutter home position sensor (PI113)/Stack ejection lower roller clutch (CL102)	The stapler does not leave the shutter home position when the stack ejection motor has been driven for 3 seconds.
	0002		The stapler does not return to the shutter home position when the stack ejection motor has been driven for 3 seconds.

3.2.13 E5F0

0009-2702

T-3-20

Code	Detail	Error Description	Detection timing
E5F0	8001	Paper positioning plate motor (M4)/Paper positioning plate home position sensor (PI7)	The paper positioning plate home positio sensor does not turn ON when the paper positioning plate motor has been driven for 1500 pulses.
	8002		The paper positioning plate home position sensor does not turn OFF when the paper positioning plate motor has been driven for 300 pulses.

3.2.14 E5F1

0009-2703

T-3-21

Code	Detail	Error Description	Detection timing
E5F1	8001	Paper fold motor (M2)/ Paper fold motor clock sensor (PI4)/ Paper fold home position sensor (PI21)	The number of pulses detected by the paper fold motor clock sensor is less than standard value.
	8002		The status of the paper fold home position sensor does not change when the paper fold motor has been driven for 3 seconds.

3.2.15 E5F2

0009-2704

T-3-22

Code	Detail	Error Description	Detection timing
E5F2	8001	Guide motor (M3)/Guide home position sensor (PI13)	The guide home position sensor does not turn ON when the guide motor has been driven for 700 pulses.
	8002		The guide home position sensor does not turn OFF when the guide motor has been driven for 50 pulses.

3.2.16 E5F3

0009-2705

T-3-23

Code	Detail	Error Description	Detection timing
E5F3	8001	Aligning motor (M5)/ Aligning plate home position sensor (PI5)	The aligning plate home position sensor does not turn ON when the aligning plate motor has been driven for 500 pulses.
	8002		The aligning plate home position sensor does not turn OFF when the aligning plate motor has been driven for 50 pulses.

3.2.17 E5F4

0009-2706

T-3-24

Code	Detail	Error Description	Detection timing
E5F4	8001	Stitch motor (rear)(M6)/ Stitching home position sensor (rear)(SW5)	The stitching home position sensor does not turn ON when the stitch motor (rear) has been driven backward for 0.5 sec.
	8002		The stitching home position sensor does not turn OFF when the stitch motor (rear) has been driven forward for 0.5 sec.

3.2.18 E5F5

0009-2707

T-3-25

Code	Detail	Error Description	Detection timing
E5F5	8001	Stitch motor (front)(M7)/ Stitching home position sensor (front)(SW7)	The stitching home position sensor does not turn ON when the stitch motor (front) has been driven forward for 0.5 sec.
	8002		The stitching home position sensor does not turn OFF when the stitch motor (front) has been driven backward for 0.5 sec.

3.2.19 E5F6

0009-2708

T-3-26

Code	Detail	Error Description	Detection timing
E5F6	8001	Paper pushing plate motor (M8)/Paper pushing plate home position sensor(PI14)/ Paper pushing plate leading edge position sensor (PI15)/ Paper pushing plate motor clock sensor(PI1)	The paper pushing plate home position sensor does not turn ON when the paper pushing plate motor has been driven for 0.3 sec.
	8002		The paper pushing plate home position sensor does not turn OFF when the paper pushing plate motor has been driven for 80 ms.
	8003		The number of pulses detected by the paper pushing plate motor clock sensor is less than standard value.
	8004		The paper pushing plate leading edge position sensor does not turn OFF when the paper pushing plate motor has been driven for 80 ms.
	8005		The paper pushing plate leading edge position sensor does not turn ON when the paper pushing plate motor has been driven for 0.3 sec.

3.2.20 E5F9

0009-2711

T-3-27

Code	Detail	Error Description	Detection timing
E5F9	8001	Inlet door switch(MSW1) /Ejection door switch(MSW3) /Front cover close detect switch (MSE101)	The inlet door switch is in open state when all covers are closed.
	8002		The ejection door switch is in open state when all covers are closed.
	8003		The front cover close detect door switch is in open state when all covers are closed.

3.2.21 Temporary Functional Limit

0009-2712

1. Overview

The machine has a feature to temporarily enter the limited operation mode to perform only paper delivery, when an error is encountered. The machine can continue to operate in this limited mode until the error is removed.

In the limited operation mode, stapling, alignment, and punching (only applicable when equipped with optional puncher unit) are not performed, while the inlet sensor (PI103), escape tray path sensor (PI118), and feed path sensor (PI104) remain enabled to detect any jam.

2. Operation

1) When the host machine has started up, use service mode or user mode as follows:

1-a) Service Mode

Set '1' for the following: SORTER>OPTION>MD-SPRTN.

1-b) User Mode

Press [limit function mode]; when a Confirmation screen has appeared, press [yes].

3) Turn off and then on the main power switch of the host machine.

3. Communication with the Host Machine

1) When the main power switch is turned on, the DC controller PCB will communicate to the main controller PCB that a functional limit has been imposed. The control panel will indicate that a functional limit has been imposed on the finisher.

2) The DC controller PCB backs up information on the functional limit.

3) Each time pickup occurs, the main controller PCB communicates the presence of a functional limit to the DC controller PCB.

4) The DC controller PCB executes control only on delivery operation.

Functional Limit and Error Code	
E514	Rear end assist motor error
E530	Front aligning plate motor error
E531	Staple motor error
E532	Stapler shift motor error
E535	Swing motor error
E537	Rear aligning plate motor error
E540	Tray 1 shift motor error
E542	Tray 2 shift motor error
E5F0	Paper positioning plate motor error
E5F1	Paper folding motor error
E5F2	Guide motor error
E5F3	Aligning motor error
E5F4	Stitcher (rear) error
E5F5	Stitcher (front) error
E5F6	Paper pushing plate motor error
E5F9	Micro switch error
E590	Punch motor error
E591	Scrap full detector sensor error
E592	Trailing edge/Horizontal registration sensor error
E593	Horizontal registration motor error

* E590 to E593 are when equipped puncher unit (option).

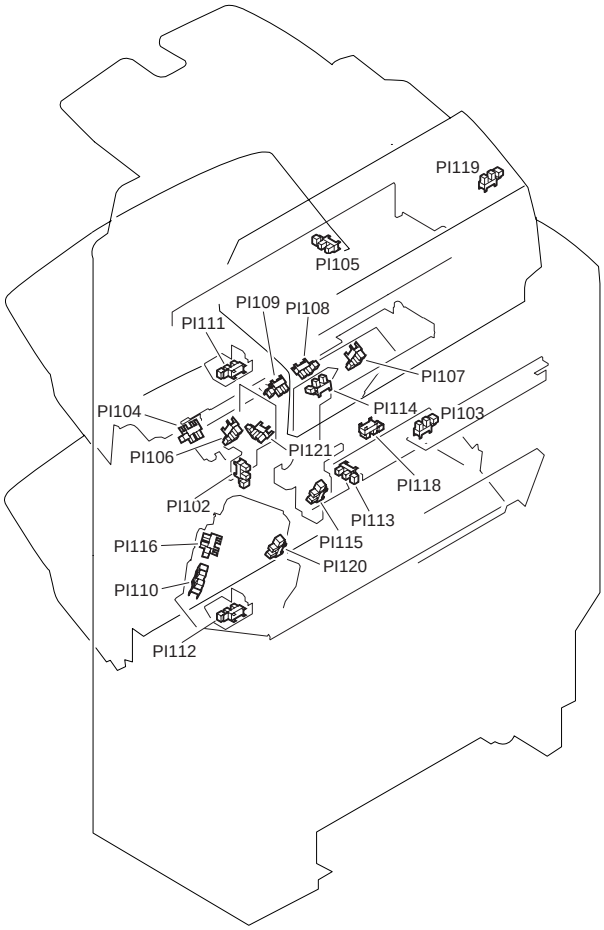
Chapter 4 Outline of Components

Contents

4.1 Outline of Electrical Components

4.1.1 Sensors (Finisher Unit)

0009-2613



F-4-1

T-4-1

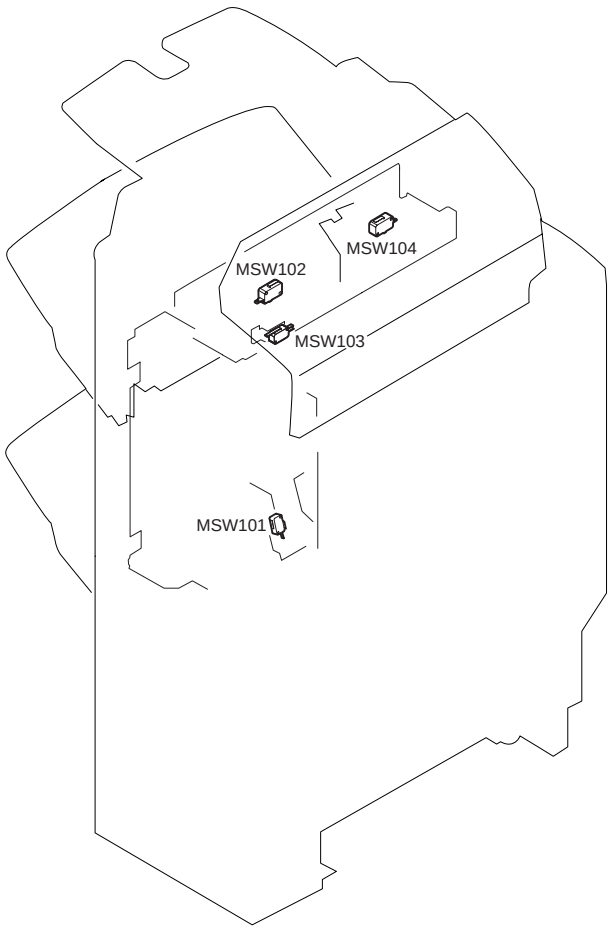
Ref.	Name	Description	Parts No.	Jam	Error
PI102	Front cover sensor	Detects front cover open/ close	WG8-5593	1400/ 1788	
PI103	Inlet sensor	Detects paper in inlet	WG8-5509	1001/ 1101/ 1200/ 1300	

Ref.	Name	Description	Parts No.	Jam	Error
PI104	Feed path sensor	Detects paper in feed path	WG8-5509	1004/ 1104/ 1300	
PI105	Swing guide HP sensor	Detects swing guide HP	WG8-5509		E535
PI106	Front aligning plate HP sensor	Detects aligning plate front HP	WG8-5593		E530
PI107	Rear aligning plate HP sensor	Detects aligning plate front HP	WG8-5593		E537
PI108	Processing tray sensor	Detects paper in processing tray	WG8-5593		
PI109	Rear end assist HP sensor	detects rear end assist HP	WG8-5593		E514
PI110	Stapler shift HP sensor	Detects stapler HP	WG8-5509		E532
PI111	Tray 1 paper sensor	Detects paper on tray 1	WG8-5593		
PI112	Tray 2 paper sensor	Detects paper on tray 2	WG8-5593		
PI113	Shutter HP sensor	Detects shutter HP	WG8-5509		E584
PI114	Tray 1 paper surface sensor	Detects paper surface on tray 1	WG8-5593		
PI115	Tray 2 paper surface sensor 1	Detects paper surface on tray 2	WG8-5593		
PI116	Stapler alignment interference sensor	Detects stapler alignment interference	WG8-5509		E532
PI118	Escape tray path sensor	Detect paper in escape tray path	WG8-5593		
PI119	Escape tray full sensor	Detects paper full in escape tray	WG8-5593		
PI120	Tray 2 paper surface sensor 2	Detects 1700 sheets in tray 2	WG8-5593		
PI121	Escape door sensor	Detects escape door open/ close	WG8-5593		

Ref.	Stapler PCB 2	Stapler PCB 1	Feed driver PCB	Finisher controller PCB
PI102			J887 / J886A	J708B
PI103				J712
PI104				J731
PI105				J731
PI106				J721B
PI107				J721B
PI108				J721B
PI109				J721B
PI110				J721A
PI111				J718B
PI112				J719B
PI113				J721A
PI114				J721A
PI115				J721A
PI116	J994 / J993	J992 / J991		J720
PI118			J887 / J886A	J708B
PI119			J887 / J886A	J708B
PI120				J721A
PI121			J887 / J886A	J708B

4.1.2 Microswitches (Finisher Unit)

0009-2614



F-4-2

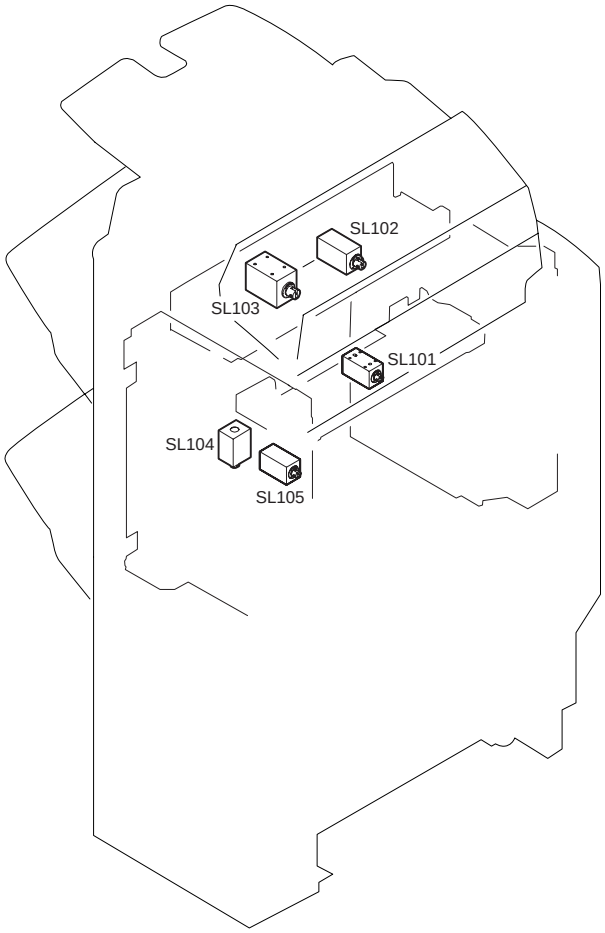
T-4-3

Ref.	Name	Description	Parts No.	Jam	Error	Finisher controller PCB
MSW101	Front cover switch	Detects front cover close	FH7-6379	1400	E5F9	J707
MSW102	Swing guide switch	Detects swing guide open	FH7-6379			J714
MSW103	Tray 1 switch	Detects tray 1	FH7-6377			J715

Ref.	Name	Description	Parts No.	Jam	Error	Finisher controller PCB
MS W1 04	Staple safety switch	Detects swing guide open	FH7-6379			J714

4.1.3 Solenoids (Finisher Unit)

0009-2615



F-4-3

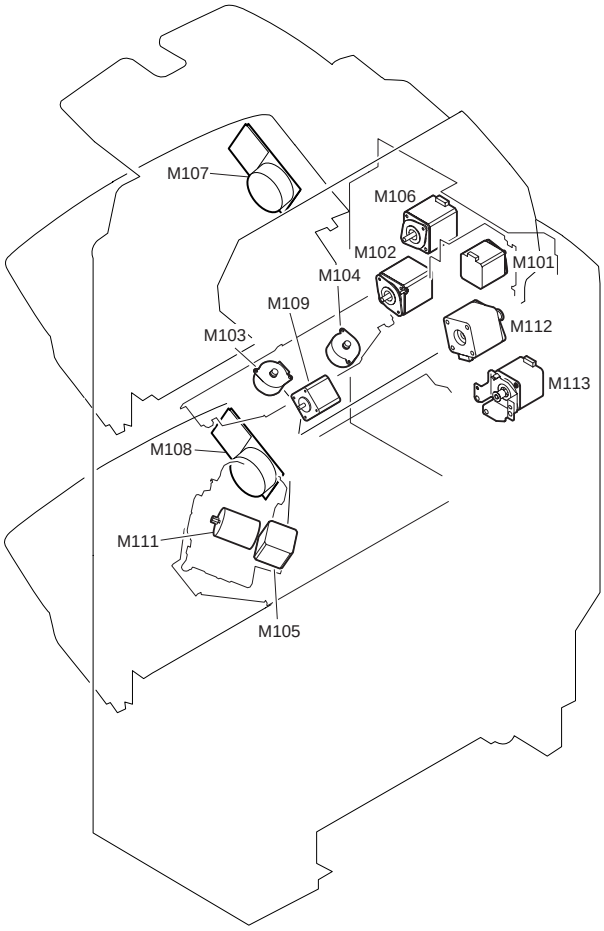
T-4-4

Ref.	Name	Parts No.	Feed driver PCB	Finisher controller PCB
SL 101	Feed roller separation solenoid	FL2-0811		J713
SL 102	Buffer roller separation solenoid	FL2-0813		J713

Ref.	Name	Parts No.	Feed driver PCB	Finisher controller PCB
SL 103	1st delivery roller separation solenoid	FL2-0812		J713
SL 104	Buffer rear end holding solenoid	FL2-0821		J713
SL 105	Escape solenoid	FH6-5089	J889 / J881B	J705B

4.1.4 Motors (Finisher Unit)

0009-2616



F-4-4

T-4-5

Ref.	Name	Parts No.	Error
M101	Feed motor	FH5-1034	
M102	Stack ejection motor	4K1-1106	E584

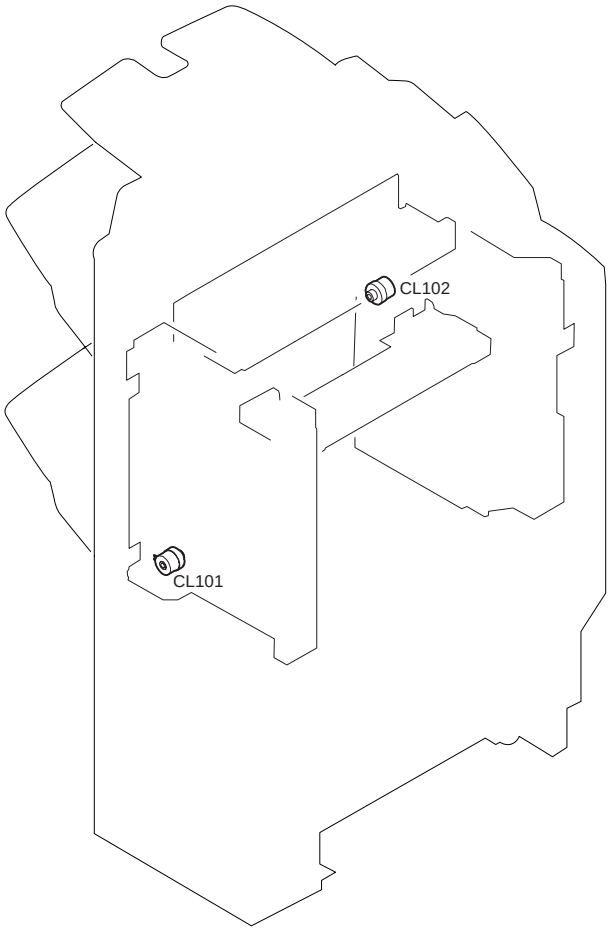
Ref.	Name	Parts No.	Error
M103	Front aligning plate motor	FH5-1040	E530
M104	Rear aligning plate motor	FH5-1040	E537
M105	Stapler shift motor	FH5-1037	E532
M106	Swing motor	FH5-1036	E535
M107	Tray 1 shift motor	4K1-1102	E540
M108	Tray 2 shift motor	4K1-1102	E542
M109	Rear end assist motor	FH5-1039	E514
M111	Stapler motor	FM2-0665	E531
M112	Escape feed motor	4K1-1105	
M113	Inlet motor	FH5-1043	

T-4-6

Ref.	Stapler PCB 2	Stapler PCB 1	Feed driver PCB	Finisher controller PCB
M101				J709
M102				J717
M103				J722
M104				J722
M105	J995 / J993	J992 / J991		J720
M106				J711
M107				J718A
M108				J719A
M109				J722
M111	J994,995 / J993	J992 / J991		J720
M112			J888 / J886A	J708A
M113			J883 / J881A	J705A

4.1.5 Clutches (Finisher Unit)

0009-2617



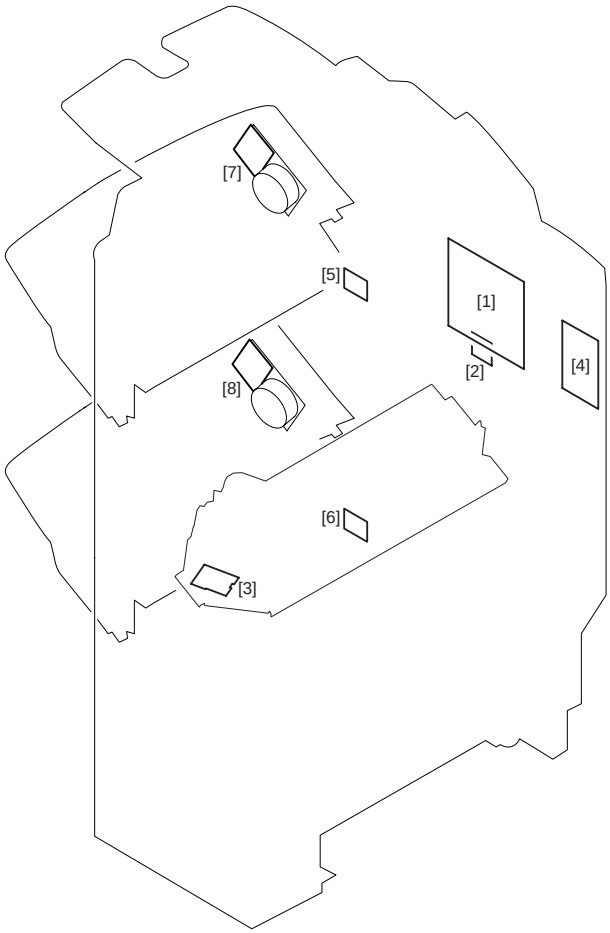
F-4-5

T-4-7

Ref.	Name	Parts No.	Error	Finisher controller PCB
CL101	Shutter clutch	FH6-5101	E584	J732
CL102	Stack ejection lower roller clutch	FH6-5101	E584	J716

4.1.6 PCBs (Finisher Unit)

0009-2618



F-4-6

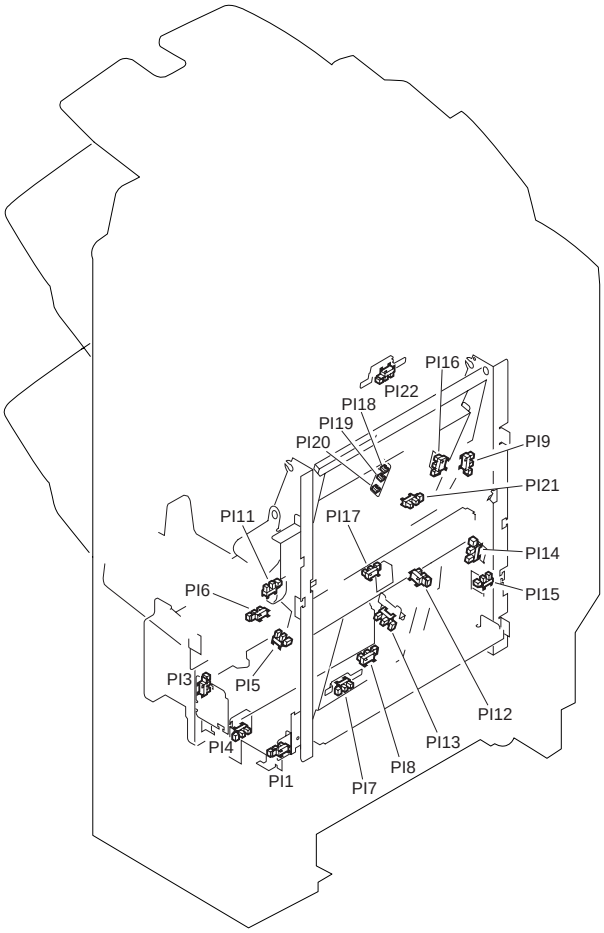
T-4-8

Ref.	Name	Parts No.	Error
[1]	Finisher controller PCB	4G1-1487	
[2]	Stapler PCB 1	FM2-1426(CABLE, STAPLE CONNECTING ASS'Y)	E531/ E532
[3]	Stapler PCB 2	FM2-1426(CABLE, STAPLE CONNECTING ASS'Y)	E531/ E532
[4]	Feed driver PCB	4G1-1488	
[5]	Tray 1 shift area sensor PCB	FG3-2886	E540
[6]	Tray 2 shift area sensor PCB	FG3-2886	E542
[7]	Tray 1 shift motor PCB	4K1-1102	E540

Ref.	Name	Parts No.	Error
[8]	Tray 2 shift motor PCB	4K1-1102	E542

4.1.7 Sensors (Saddle Stitcher Unit)

0009-2646



F-4-7

T-4-9

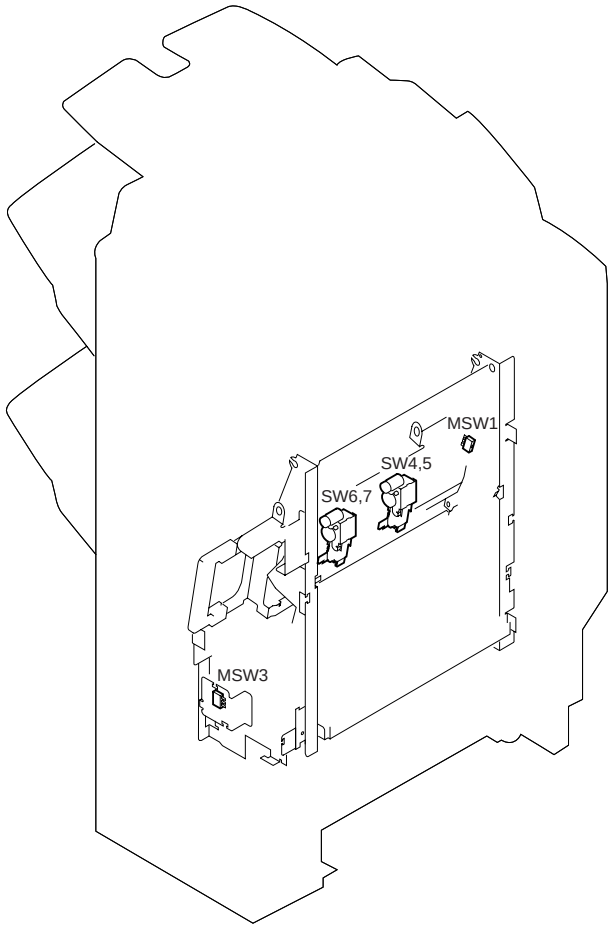
Ref.	Name	Description	Parts No.	Jam	Error	Saddle stitcher controller PCB
PI1	Paper pushing plate motor clock sensor	Detects paper pushing plate motor clock	FK2-0149		E5F6	J11
PI3	Delivery cover sensor	Detects delivery cover open	WG8-5593	1788		J11

Ref.	Name	Description	Parts No.	Jam	Error	Saddle stitcher controller PCB
PI4	Paper folding motor clock sensor	Detects paper folding motor clock	FK2-0149		E5F1	J11
PI5	Alignment plate HP sensor	Dtects alignment plate HP	WG8-5593		E5F3	J11
PI6	Tray paper sensor	Detects paper on tray	WG8-5593			J6
PI7	Paper positioning plate HP sensor	Dtects paper positioning plate HP	WG8-5593		E5F0	J6
PI8	Paper positioning plate paper sensor	Detects paper on paper positioning plate	WG8-5593	1787		J6
PI9	Inlet cover sensor	Detects inlet cover open	WG8-5593	1788		J10
PI11	Delivery sensor	Detects paper ejection	WG8-5593	1792/ 17A2/ 1787		J9
PI12	Crescent roller phase sensor	Detects crescent roller phase	WG8-5593			J9
PI13	Guide HP sensor	Detects guide HP	WG8-5593		E5F2	J9
PI14	Paper pushing plate HP sensor	Detects paper pushing plate HP	WG8-5593		E5F6	J9
PI15	Paper pushing plate top position sensor	Detects paper pushing plate top position	WG8-5593		E5F6	J9
PI16	Stitcher unit IN sensor	Detects stitcher unit storage	WG8-5593			J13
PI17	Vertical path paper sensor	Detects paper in vertical path	WG8-5593	17A2/ 1787		J13
PI18	No.1 paper sensor	Detects paper (No.1; on paper sensor PCB)	FG3-3106	1791/ 17A1/ 1787		J10
PI19	No.2 paper sensor	Detects paper (No.2; on paper sensor PCB)	FG3-3106	17A1/ 1787		J10

Ref.	Name	Description	Parts No.	Jam	Error	Saddle stitcher controller PCB
PI20	No.3 paper sensor	Detects paper (No.3; on paper sensor PCB)	FG3-3106	17A1/ 1787		J10
PI21	Paper folding HP sensor	Detects paper fold HP	WG8-5593		E5F1	J18
PI22	Saddle inlet sensor	Detects saddle inlet paper	WG8-5593	1793/ 17A3/ 1787		J21

4.1.8 Microswitches (saddle Stitcher Unit)

0009-2647



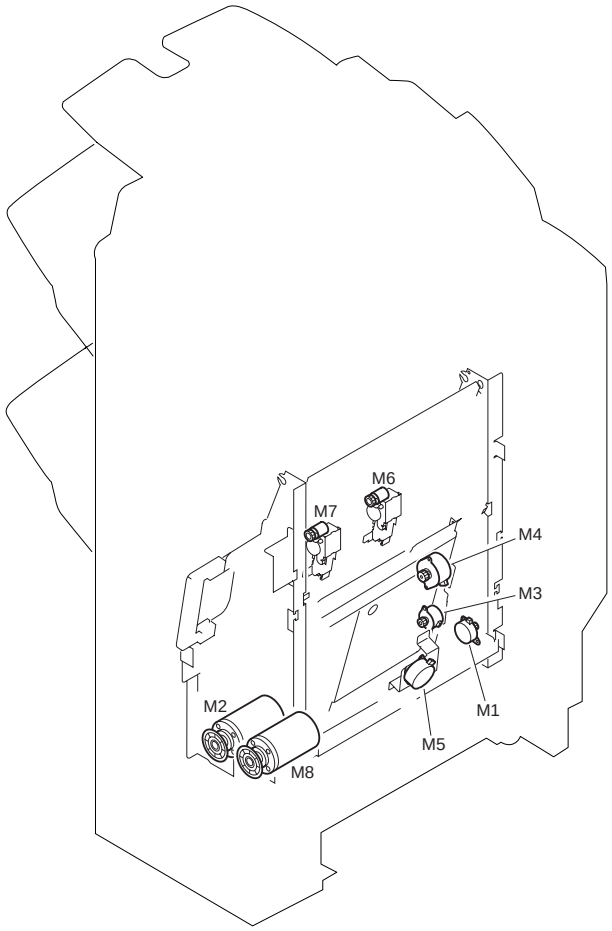
F-4-8

T-4-10

Ref.	Name	Description	Parts No.	Jam	Error	Saddle stitcher controller PCB
MSW1	Inlet door switch	Detects inlet door open	WC4-5128		E5F9	J4
MSW3	Delivery door switch	Detects delivery door open	WC4-5128		E5F9	J4
SW4	Staple sensor (rear)	Detects presence of staples (rear)	FL2-0846-000 (STAPLER UNIT)			J8
SW5	Stitcher HP sensor (rear)	Detects stitching HP (rear)	FL2-0846-000 (STAPLER UNIT)	1786	E5F4	J8
SW6	Staple sensor (front)	Detects presence of staples (front)	FL2-0846-000 (STAPLER UNIT)			J8
SW7	Stitcher HP sensor (front)	Detects stitching HP (front)	FL2-0846-000 (STAPLER UNIT)	1786	E5F5	J8

4.1.9 Motors (Saddle Stitcher Unit)

0009-2648



F-4-9

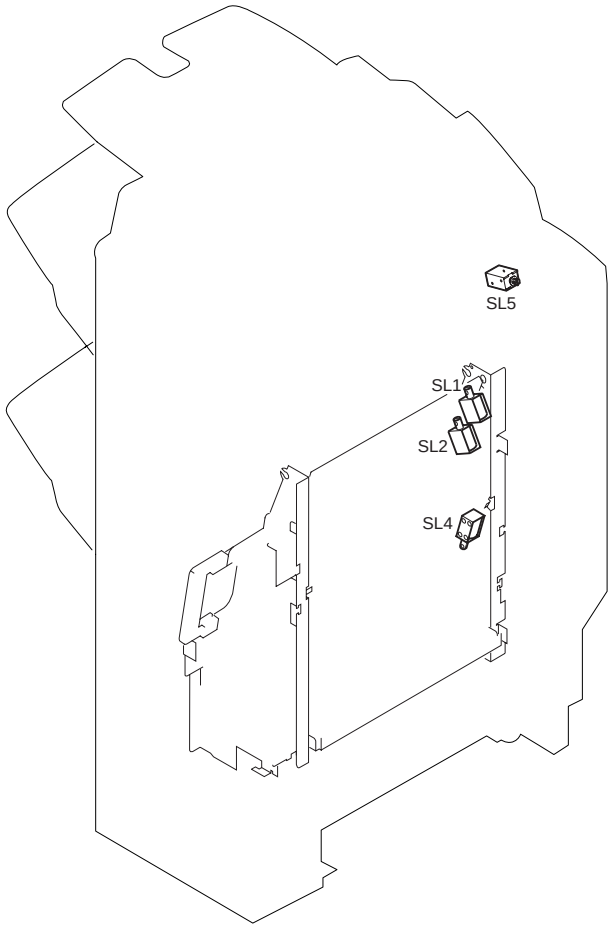
T-4-11

Ref.	Name	Parts No.	Error	Saddle stitcher controller PCB
M1	Feed motor	FH5-1042		J5
M2	Paper folding motor	FH5-1068	E5F1	J23
M3	Guide motor	4K1-1103	E5F2	J12
M4	Paper positioning plate motor	4K1-1104	E5F0	J7
M5	Alignment motor	4K1-1103	E5F3	J7
M6	Stitcher motor (rear)	FL2-0846(STAPLER UNIT)	E5F4	J8
M7	Stitcher motor (front)	FL2-0846(STAPLER UNIT)	E5F5	J8

Ref.	Name	Parts No.	Error	Saddle stitcher controller PCB
M8	Paper pushing plate motor	FH5-1068	E5F6	J23

4.1.10 Solenoids (Saddle Stitcher Unit)

0009-2649



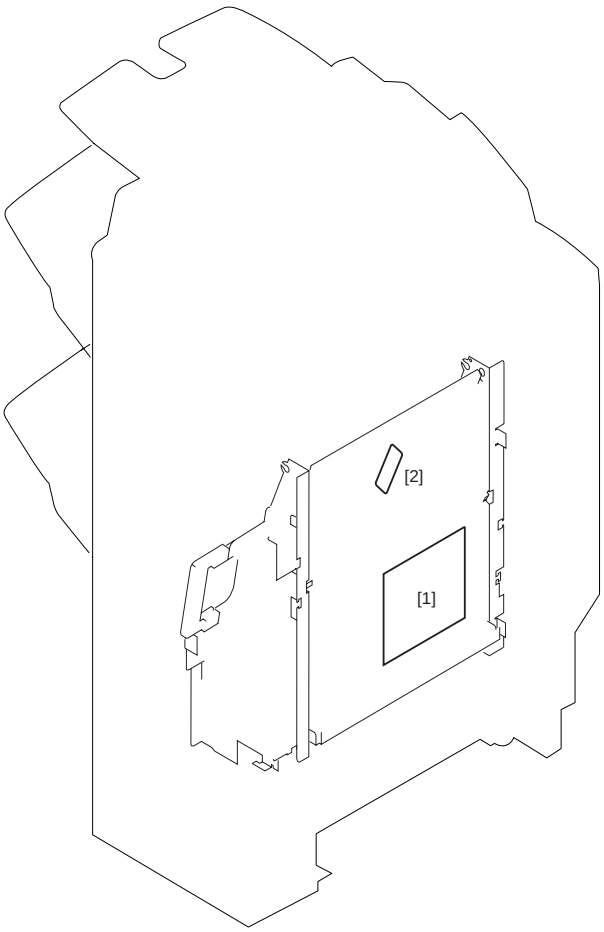
F-4-10

T-4-12

Ref.	Name	Parts No.	Saddle stitcher controller PCB
SL1	No.1 paper deflecting solenoid	FH6-5089	J15
SL2	No.2 paper deflecting solenoid	FH6-5089	J15
SL4	Feed plate contact solenoid	FH6-5090	J15
SL5	Saddle inlet solenoid	FH6-5089	J19

4.1.11 PCBs (Saddle Stitcher Unit)

0009-2650



F-4-11

T-4-13

Ref.	Name	Parts No.
[1]	Saddle stitcher controller PCB	4G1-1489
[2]	Paper sensor PCB	FG3-3106

4.2 Variable Resistors (VR), Light-Emitting Diodes (LED), and Check Pins by PCB

4.2.1 Overview

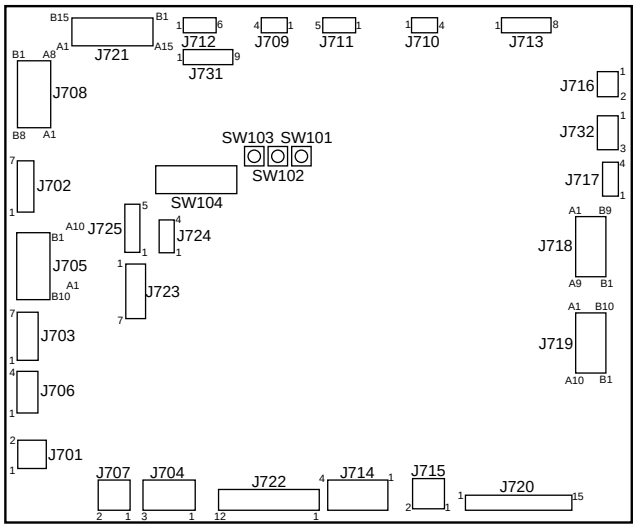
0009-2619

Of the LEDs and check pins used in the machine, those needed during servicing in the field are discussed.

⚠Do not touch the check pins not found in the list herein. They are exclusively for factory use, and require special tools and a high degree of accuracy.

4.2.2 Finisher Controller PCB

0009-2620



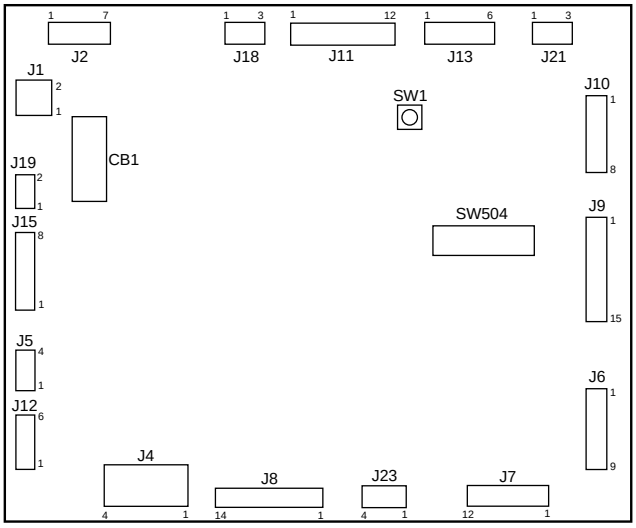
F-4-12

T-4-14

Switch	Switch Function
SW101	Used for making adjustments to the alignment position/stapling position.
SW102	Used for making adjustments to the alignment position/stapling position.
SW103	Used to start operation for alignment position adjustment/stapling position adjustment.
SW104	Used to start operation for alignment position adjustment/stapling position adjustment.

4.2.3 Saddle Stitcher Controller PCB

0009-2651



F-4-13

T-4-15

Switch	Function
SW504,Bit 1 to 2	Starts correction of discrepancy between stitching position and folding position.
SW504,Bit 6 to 8	Stores corrected settings for stitching position and folding position.
SW1	Starts correction of discrepancy between stitching position and folding position.

Chapter 5 System Construction

Contents

5.1 Product Specifications

5.1.1 Finisher Unit

0009-2527

T-5-1

Item	Specifications
Stacking method	Escape tray: fixed type Trays 1 and 2: Independently move up and down
Stacking orientation	Face up Face down
Stacking size*1	A3, A4, A4R, A5R, B4, B5, B5R, 279 mm x 432 mm (11 x 17), LGL, LTR, LTRR, STMTR, others
Paper weight	64g/m2 to 200g/m2
Modes	Non sort:Escape tray :Trays 1 and 2 Sort: Trays 1 and 2 Staple: Trays 1 and 2
Stacking capacity*2, *3	Escape tray: Non sort Large size: 43 mm high (125 sheets) Small size: 43 mm high (250 sheets) Tray 1: Non sort Large size: 96 mm high (650 sheets) Small size: 188 mm high (1300 sheets) Tray 2: Non sort Large size: 96 mm high (650 sheets) Small size: 243 mm high (1700 sheets) Small size: 347 mm high (2450 sheets)*4 Tray 1: Staple sort Large size: 96 mm high/50 sets Small size: 188 mm high/100 sets Tray 2: Staple sort

Item	Specifications
	Large size: 96 mm high/50 sets
	Small size: 188 mm high/100 sets
Mixed stacking capac-ity	Size mixing:
	Escape tray: 43 mm high
	Tray 1 and 2: 96 mm high (650 sheets)
	Stapling:
	96 mm high/50 sets
	Mode mixing:
	Large size: 96 mm high/50 sets
	Small size: 188 mm high/100 sets
Stapling	By rotating cam
Stapling capacity	Small size: 50 sheets
	Large size: 30 sheets

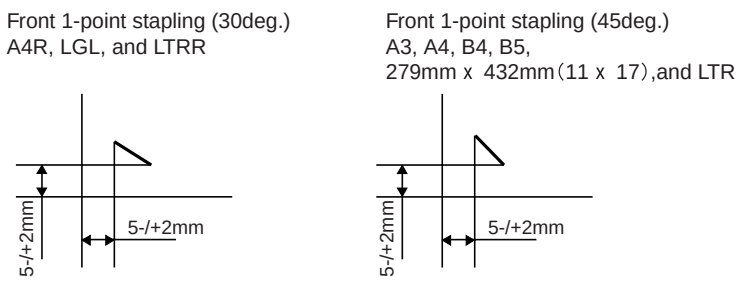
*1 Feed direction: 139.7 to 420.0 mm: cross feed direction: 98.4 to 297.0 mm
*2 Equivalent of 80g/m2 paper.
*3 Alignment accuracy and stacking capacity for stacks of 1700 or more sheets are not specified.
*4 This applies when sheets (A4, B5, or LTR) of the same size are stacked in the non-sort mode.
*5 Stacking capacity is not guaranteed.
*6 The paper thickness is 5.5 mm or less.

T-5-2

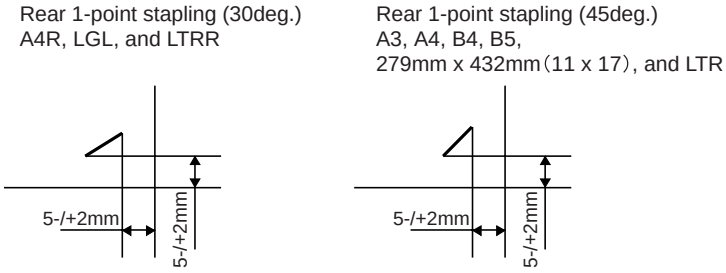
Item	Specifications	Remarks
Staple supply	Special staple cartridge (5000 staples)	
Staple detection	Provided	0 to 20 remaining staples
Manual stapling	Not provided	
Stapling size	Front 1-point stapling (30 deg.)	

Item	Specifications	Remarks
	A4R, LGL, LTRR	
	Front 1-point stapling (45 deg.)	
	A3, B4, A4, B5, 279mm x 432mm (11 x 17), LTR	
	Rear 1-point stapling (30 deg.)	
	A4R, LGL, LTRR	
	Rear 1-point stapling (45 deg.)	
	A3, B4, A4, B5, 279mm x 432mm (11 x 17), LTR	
	2-point stapling	
	A3, A4, A4R, B4, B5, 279mm x 432mm (11 x 17), LGL, LTR, LTRR	
Paper detection	Provided	
Control panel	Not provided	
Display	Not provided	
Dimensions	W:649(761) x D:656 x H:1108mm	If within parentheses, with the tray extended.
Weight	Approx. 70.5 kg	
Power supply	From host machine (24VDC)	
Maximum power consumption	7.5 W or less during standby/114 W or less operating	

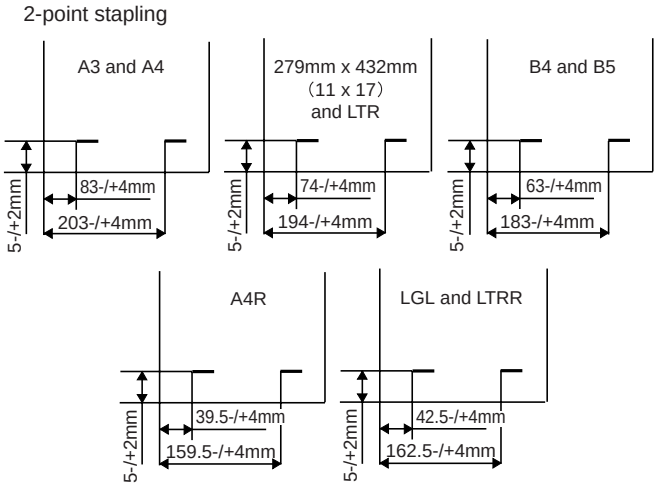
<Stapling Positions>



F-5-1



F-5-2



F-5-3

5.1.2 Saddle Stitcher Unit

0009-2528

T-5-3

Item	Specifications
Stapling method	Center binding (double folding)
Paper size	A3, B4, A4R, 279mm x 432mm (11 x 17), LGL, LTRR
Capacity*1	81g/m2 to 90g/m2: 1 to 10 sheets
	64g/m2 to 80g/m2: 1 to 15 sheets
Paper weight*2	Plain paper: 64g/m2 to 90g/m2 Material for cover: 64g/m2 to 200g/m2

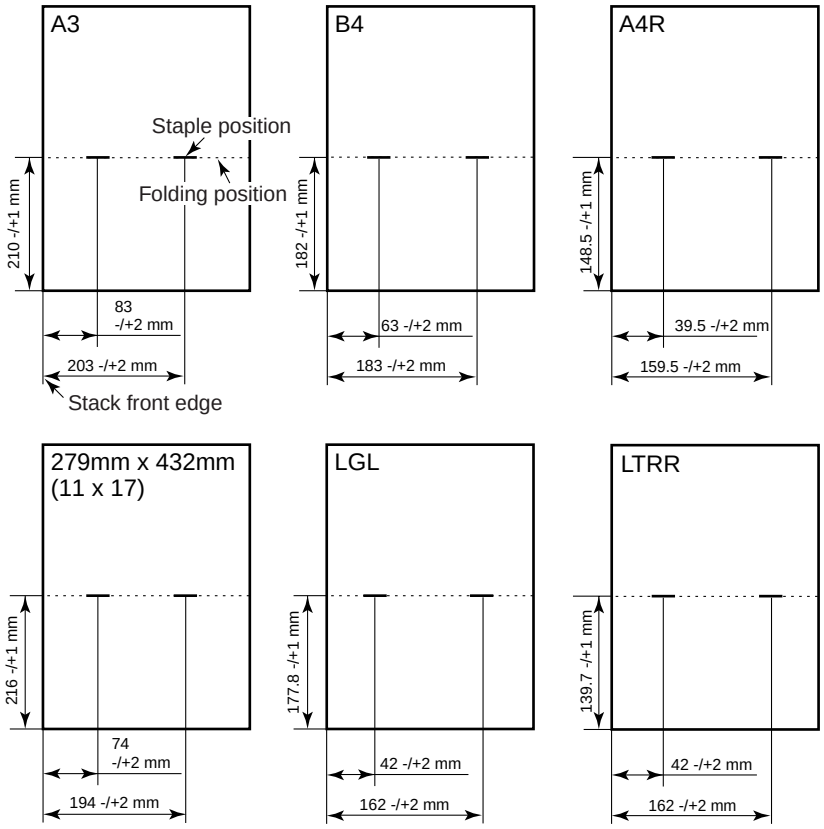
Item	Specifications
Stacking capacity	Plain paper(64g/m2 to 90g/m2) 1 to 5 sheets; 25 copies 6 to 10 sheets; 15 copies 11 to 15 sheets; 10 copies
Stapling position	2 points (center distribution; fixed interval)
Staple accommoda-tion	2000 staples
Staple supply	Special cartridge
Staples	Special staple (Staple-D3)
Staple detection	Provided
Manual stapling	Not provided
Folding method	Roller contact
Folding mode	Double folding
Folding position	Paper center
Position adjustment	Provided
Power supply	From finisher unit (24VDC)

*1 Cover mode; including 1 cover page.

*2 Special paper, postcards, transparencies, or elongation size can not be handled

*1 Cover mode; including 1 cover page.
*2 Special paper, postcards, transparencies, or elongation size can not be handled.

<Staple and Folding Position>


A3
Staple position
Folding position
210 -/+1 mm
83
-/+2 mm
203 -/+2 mm
Stack front edge
B4
182 -/+1 mm
63 -/+2 mm
183 -/+2 mm
A4R
148.5 -/+1 mm
39.5 -/+2 mm
159.5 -/+2 mm
279mm x 432mm
(11 x 17)
216 -/+1 mm
74
-/+2 mm
194 -/+2 mm
LGL
177.8 -/+1 mm
42 -/+2 mm
162 -/+2 mm
LTRR
139.7 -/+1 mm
42 -/+2 mm
162 -/+2 mm

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Feb 21 2005

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