KYOCERA

DF-780

SERVICE MANUAL

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Rev. 1

CAUTION

RISK OF EXPLOSION IF BATTERY IS REPLACED BY AN INCORRECT TYPE. DISPOSE OF USED BATTERIES ACCORDING TO THE INSTRUCTIONS.

It may be illegal to dispose of this battery into the municipal waste stream. Check with your local solid waste officials for details in your area for proper disposal.

ATTENTION

IL Y A UN RISQUE D'EXPLOSION SI LA BATTERIE EST REMPLACEE PAR UN MODELE DE TYPE INCORRECT. METTRE AU REBUT LES BATTERIES UTILISEES SELON LES INSTRUCTIONS DONNEES.

Il peut être illégal de jeter les batteries dans des eaux d'égout municipales. Vérifiez avec les fonctionnaires municipaux de votre région pour les détails concernant des déchets solides et une mise au rebut appropriée.

Revision history

Revision	Date	Replaced pages	Remarks
1	November 26, 2008	1-3-2, 2-4-1	-

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Safety precautions

This booklet provides safety warnings and precautions for our service personnel to ensure the safety of their customers, their machines as well as themselves during maintenance activities. Service personnel are advised to read this booklet carefully to familiarize themselves with the warnings and precautions described here before engaging in maintenance activities.

Safety warnings and precautions

Various symbols are used to protect our service personnel and customers from physical danger and to prevent damage to their property. These symbols are described below:

⚠**DANGER:** High risk of serious bodily injury or death may result from insufficient attention to or incorrect compliance with warning messages using this symbol.

⚠**WARNING:** Serious bodily injury or death may result from insufficient attention to or incorrect compliance with warning messages using this symbol.

⚠**CAUTION:** Bodily injury or damage to property may result from insufficient attention to or incorrect compliance with warning messages using this symbol.

Symbols

The triangle (△) symbol indicates a warning including danger and caution. The specific point of attention is shown inside the symbol.

 General warning.

 Warning of risk of electric shock.

 Warning of high temperature.

⃠ indicates a prohibited action. The specific prohibition is shown inside the symbol.

 General prohibited action.

 Disassembly prohibited.

● indicates that action is required. The specific action required is shown inside the symbol.

 General action required.

 Remove the power plug from the wall outlet.

 Always ground the copier.

1.Installation Precautions

⚠WARNING

- Do not use a power supply with a voltage other than that specified. Avoid multiple connections to one outlet: they may cause fire or electric shock. When using an extension cable, always check that it is adequate for the rated current. .....

- Connect the ground wire to a suitable grounding point. Not grounding the copier may cause fire or electric shock. Connecting the earth wire to an object not approved for the purpose may cause explosion or electric shock. Never connect the ground cable to any of the following: gas pipes, lightning rods, ground cables for telephone lines and water pipes or faucets not approved by the proper authorities. .....

⚠CAUTION:

- Do not place the copier on an infirm or angled surface: the copier may tip over, causing injury. .....

- Do not install the copier in a humid or dusty place. This may cause fire or electric shock. .....

- Do not install the copier near a radiator, heater, other heat source or near flammable material.

  This may cause fire. .....

- Allow sufficient space around the copier to allow the ventilation grills to keep the machine as cool as possible. Insufficient ventilation may cause heat buildup and poor copying performance. .....

- Always handle the machine by the correct locations when moving it. .....

- Always use anti-toppling and locking devices on copiers so equipped. Failure to do this may cause the copier to move unexpectedly or topple, leading to injury. .....

- Avoid inhaling toner or developer excessively. Protect the eyes. If toner or developer is accidentally ingested, drink a lot of water to dilute it in the stomach and obtain medical attention immediately. If it gets into the eyes, rinse immediately with copious amounts of water and obtain medical attention. .....

- Advice customers that they must always follow the safety warnings and precautions in the copier's instruction handbook. .....

2.Precautions for Maintenance

⚠WARNING

- Always remove the power plug from the wall outlet before starting machine disassembly. .....

- Always follow the procedures for maintenance described in the service manual and other related brochures. .....

- Under no circumstances attempt to bypass or disable safety features including safety mechanisms and protective circuits. .....

- Always use parts having the correct specifications. .....

- Always use the thermostat or thermal fuse specified in the service manual or other related brochure when replacing them. Using a piece of wire, for example, could lead to fire or other serious accident. .....

- When the service manual or other serious brochure specifies a distance or gap for installation of a part, always use the correct scale and measure carefully. .....

- Always check that the copier is correctly connected to an outlet with a ground connection. .....

- Check that the power cable covering is free of damage. Check that the power plug is dust-free. If it is dirty, clean it to remove the risk of fire or electric shock. .....

- Never attempt to disassemble the optical unit in machines using lasers. Leaking laser light may damage eyesight. .....

- Handle the charger sections with care. They are charged to high potentials and may cause electric shock if handled improperly. .....

⚠CAUTION

- Wear safe clothing. If wearing loose clothing or accessories such as ties, make sure they are safely secured so they will not be caught in rotating sections. .....

- Use utmost caution when working on a powered machine. Keep away from chains and belts. .....

- Handle the fixing section with care to avoid burns as it can be extremely hot. .....

- Check that the fixing unit thermistor, heat and press rollers are clean. Dirt on them can cause abnormally high temperatures. .....

- Do not remove the ozone filter, if any, from the copier except for routine replacement. .....

- Do not pull on the AC power cord or connector wires on high-voltage components when removing them; always hold the plug itself. .....

- Do not route the power cable where it may be stood on or trapped. If necessary, protect it with a cable cover or other appropriate item. .....

- Treat the ends of the wire carefully when installing a new charger wire to avoid electric leaks. .....

- Remove toner completely from electronic components. .....

- Run wire harnesses carefully so that wires will not be trapped or damaged. .....

- After maintenance, always check that all the parts, screws, connectors and wires that were removed, have been refitted correctly. Special attention should be paid to any forgotten connector, trapped wire and missing screws. .....

- Check that all the caution labels that should be present on the machine according to the instruction handbook are clean and not peeling. Replace with new ones if necessary. .....

- Handle greases and solvents with care by following the instructions below: .....
  · Use only a small amount of solvent at a time, being careful not to spill. Wipe spills off completely.
  · Ventilate the room well while using grease or solvents.
  · Allow applied solvents to evaporate completely before refitting the covers or turning the power switch on.
  · Always wash hands afterwards.

- Never dispose of toner or toner bottles in fire. Toner may cause sparks when exposed directly to fire in a furnace, etc. .....

- Should smoke be seen coming from the copier, remove the power plug from the wall outlet immediately. .....

3.Miscellaneous

⚠WARNING

- Never attempt to heat the drum or expose it to any organic solvents such as alcohol, other than the specified refiner; it may generate toxic gas. .....

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CONTENTS

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1-1-1 Specifications

Type	Floor model
Number of trays	One tray
Tray capacity	When not stapling: A3, B4, Ledger, Legal, Oficio II, 8.5 x 13.5", Folio, 8K: 500 sheets A4, A4R, B5, B5R, Letter, LetterR, ExecutiveR, 16K: 1000 sheets When stapling 2 or 9 sheets: A3, B4, Ledger, Legal, Oficio II, 8.5 x 13.5", Folio, 8K: 28 sets A4, A4R, B5, B5R, Letter, LetterR, ExecutiveR, 16K: 50 sets When stapling 10 or 20 sheets: A3, B4, Ledger, Legal, Oficio II, 8.5 x 13.5", Folio, 8K: 12 sets A4, A4R, B5, B5R, Letter, LetterR, ExecutiveR, 16K: 20 sets When stapling 21 or 30 sheets: A3, B4, Ledger, Legal, Oficio II, 8.5 x 13.5", Folio, 8K: 10 sets A4, A4R, B5, B5R, Letter, LetterR, ExecutiveR, 16K: 16 sets When stapling 31 or 50 sheets: A4, A4R, B5, B5R, Letter, LetterR, ExecutiveR, 16K: 12 sets
Stapling limit	A3, B4, Ledger, Legal, Oficio II, 8.5 x 13.5", Folio, 8K: 25 sheets (90 g/m^2 or less) A4, A4R, B5, B5R, Letter, LetterR, ExecutiveR, 16K: 50 sheets (90 g/m^2 or less)
Power source	Electrically connected to the machine
Dimensions	634.9 (W) x 533 (D) x 1013.5 (H) mm 25" (W) x 21" (D) x 39 7/8" (H)
Weight	Approx. 26.5 kg/58.42 lbs

NOTE: These specifications are subject to change without notice.

1-1-2 Parts names

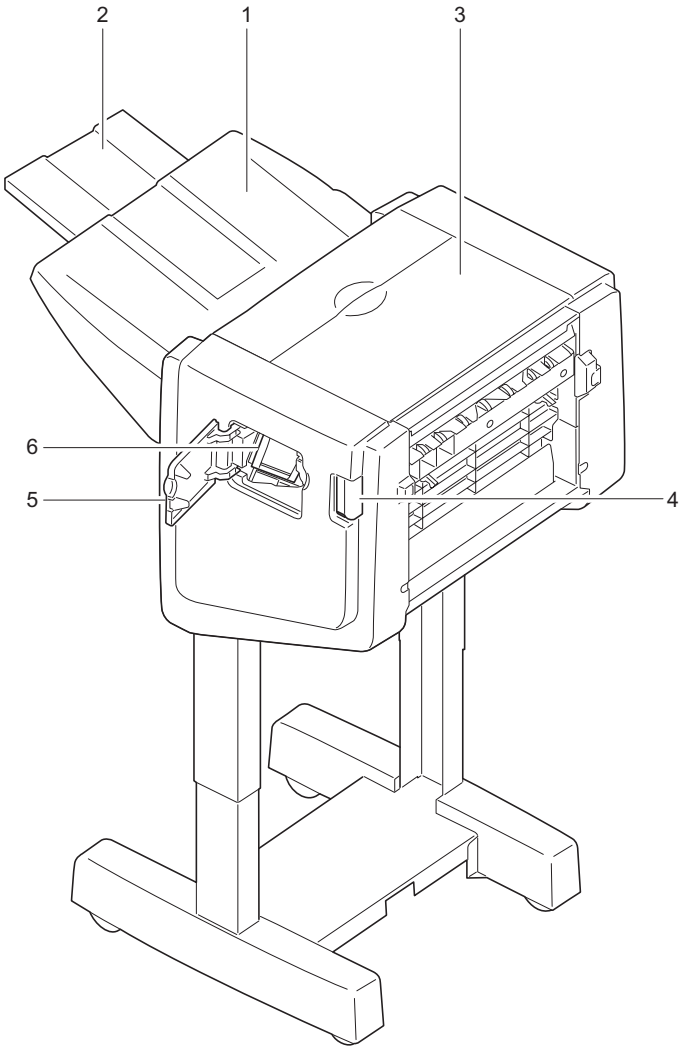

Figure 1-1-1

1. Eject tray
2. Eject tray extension
3. Switchback unit cover
4. Finisher release button
5. Stapler cover
6. Staple holder

1-1-3 Machine cross section

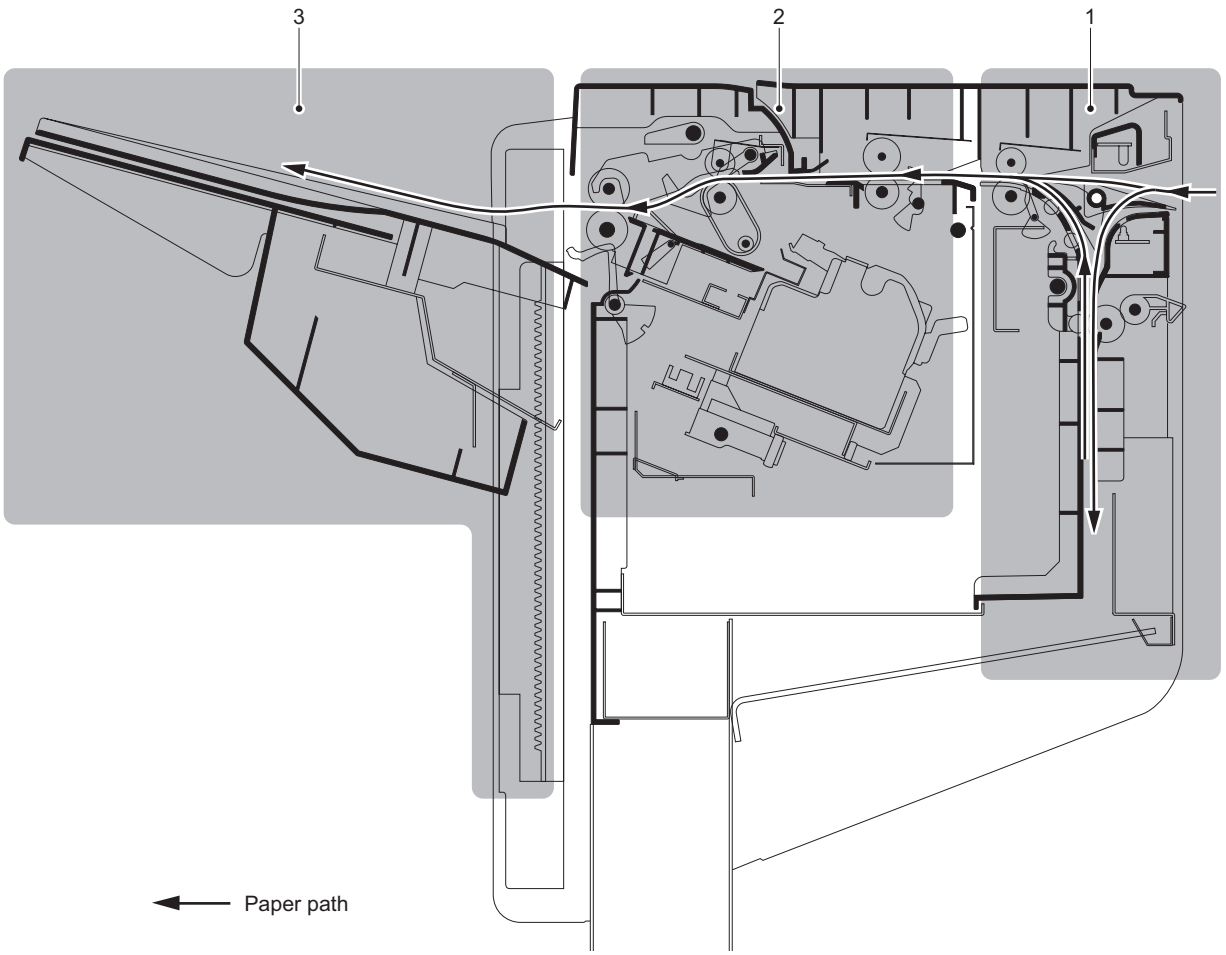

Figure 1-1-2 Machine cross section

1. Switchback section
2. Processing section
3. Eject tray section

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1-2-1 Installation environment

Installation location (Be based on the machine establishment place.)
Avoid direct sunlight or bright lighting. Ensure that the photo-conductor will not be exposed to direct sunlight or other strong light when removing paper jams.
Avoid extremes of temperature and humidity, abrupt ambient temperature changes, and hot or cold air directed onto the machine.
Avoid dust and vibration.
Choose a surface capable of supporting the weight of the machine.
Place the machine on a level surface (maximum allowance inclination: 1°).
Avoid air-borne substances that may adversely affect the machine or degrade the photo-conductor, such as mercury, acidic of alkaline vapors, inorganic gasses, NOx, SOx gases and chlorine-based organic solvents.
Select a room with good ventilation.

1-2-2 Unpacking

(1) Installation procedure

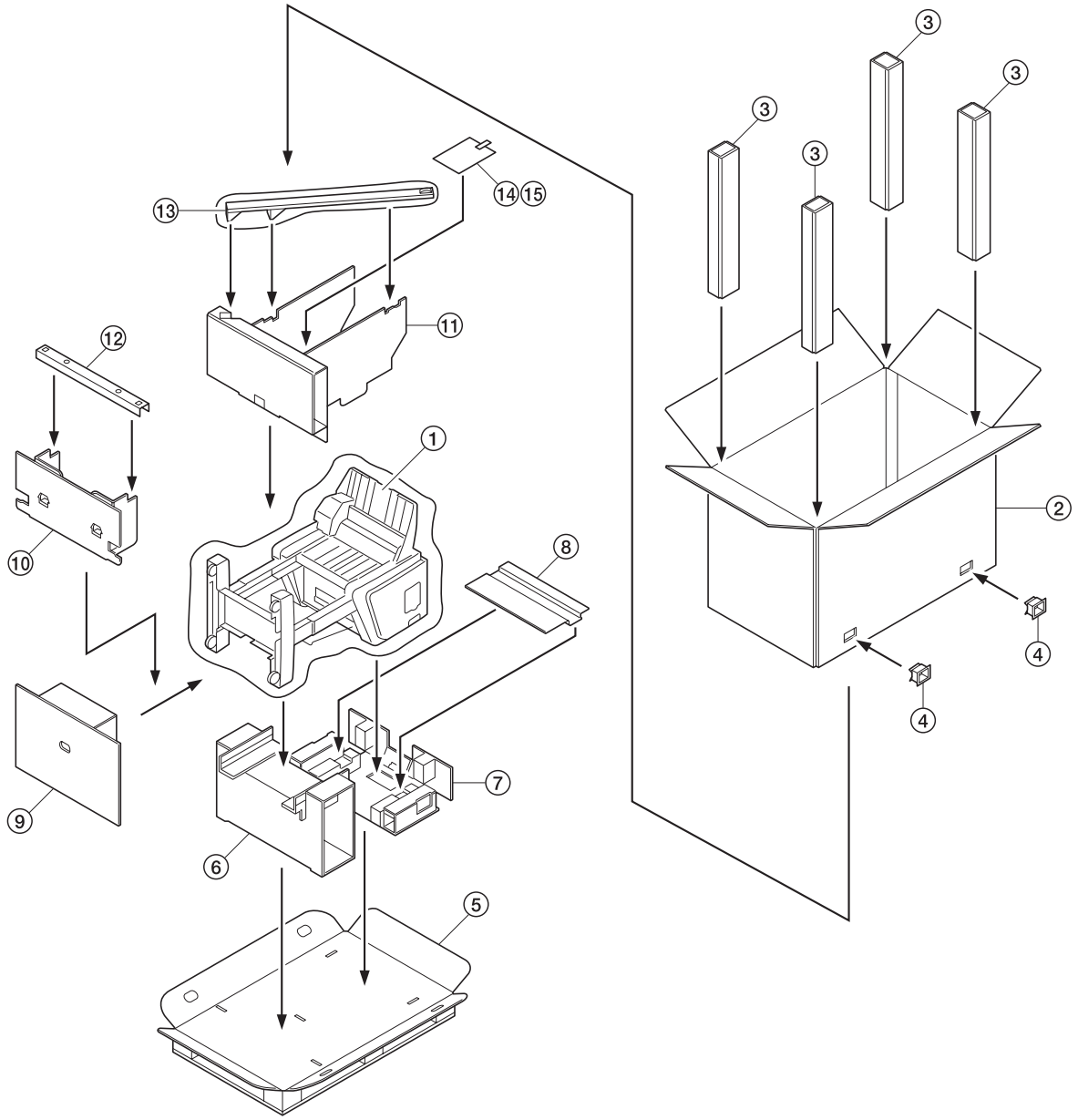


Figure 1-2-1 Unpacking

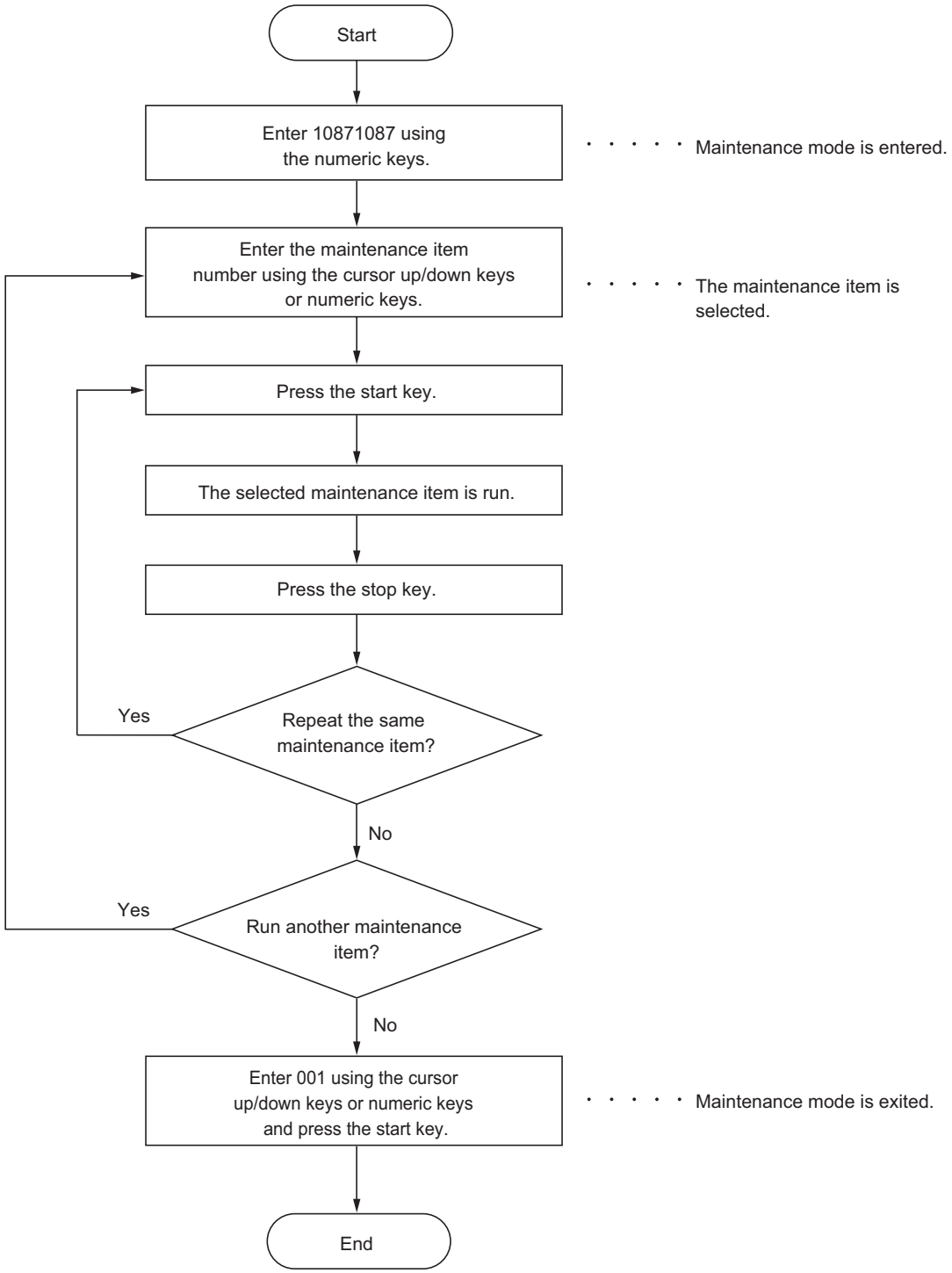
1. Document finisher
2. Outer case
3. Supports
4. Hinge joints
5. Skid
6. Pad
7. Pad
8. Pad
9. Pad
10. Pad
11. Pad
12. Pad
13. Guide rail
14. M4 x 6 binding screws
15. M4 x 14 binding screws

Caution: Place the machine on a level surface. See the Installation Guide for installation.

1-3-1 Maintenance mode

The machine is equipped with a maintenance function which can be used to maintain and service the machine.

(1) Executing a maintenance item



(2) Contents of maintenance mode items

<table>
<tr><th>Maintenance item No.</th><th>Description</th></tr>
<tr><td>U019</td><td>
Displaying the ROM version
Description
Displays the part number of the ROM fitted to each PWB.
Purpose
To check the part number or to decide, if the newest version of ROM is installed.
Method
1. Press the start key. The ROM version are displayed.
2. Change the screen using the cursor up/down keys.
<table>
<tr><th>Display</th><th>Description</th></tr>
<tr><td>MAIN</td><td>Main ROM IC</td></tr>
<tr><td>MMI</td><td>Operation ROM IC</td></tr>
<tr><td>ENGINE</td><td>Engine ROM IC</td></tr>
<tr><td>ENGINE BOOT</td><td>Engine booting</td></tr>
<tr><td>SCANNER</td><td>Scanner ROM IC</td></tr>
<tr><td>BROWSER</td><td>Browser ROM IC</td></tr>
<tr><td>OPTION LANGUAGE</td><td>Optional language ROM IC</td></tr>
<tr><td>DICTIONARY</td><td>-</td></tr>
<tr><td>DBA</td><td>Database connection</td></tr>
<tr><td>Solution Framework</td><td>Framework</td></tr>
<tr><td>MOTOR CPU</td><td>Motor CPU</td></tr>
<tr><td>MOTOR CPU BOOT</td><td>Motor CPU booting</td></tr>
<tr><td>H VLT CPU</td><td>High voltage CPU</td></tr>
<tr><td>H VLT CPU BOOT</td><td>High voltage CPU booting</td></tr>
<tr><td>SLEEP CPU</td><td>Sleep CPU</td></tr>
<tr><td>SLEEP CPU BOOT</td><td>Sleep CPU booting</td></tr>
<tr><td>DP</td><td>Optional DP ROM IC</td></tr>
<tr><td>500x2PF</td><td>Optional paper feeder ROM IC</td></tr>
<tr><td>3000PF</td><td>Optional 3000-sheet paper feeder ROM IC</td></tr>
<tr><td>1000DF</td><td>Document finisher ROM IC</td></tr>
<tr><td>3000DF MAIN</td><td>Optional 3000-sheet document finisher main ROM IC</td></tr>
<tr><td>3000DF MIDDLE</td><td>Optional 3000-sheet document finisher Inner tray ROM IC</td></tr>
<tr><td>MAIL BOX</td><td>Optional mailbox ROM IC</td></tr>
<tr><td>BOOKLET</td><td>Optional center-folding unit ROM IC</td></tr>
<tr><td>FAX BOOT1</td><td>Optional fax control PWB booting (port 1)</td></tr>
<tr><td>FAX APL1</td><td>Optional fax control PWB APL (port 1)</td></tr>
<tr><td>FAX IPL1</td><td>Optional fax control PWB IPL (port 1)</td></tr>
<tr><td>FAX BOOT2</td><td>Fax control PWB booting (port 2: optional dual FAX)</td></tr>
<tr><td>FAX APL2</td><td>Fax control PWB APL (port 2: optional dual FAX)</td></tr>
<tr><td>FAX IPL2</td><td>Fax control PWB IPL (port 2: optional dual FAX)</td></tr>
</table>
Completion
Press the stop key. The screen for selecting a maintenance item No. is displayed.
</td></tr>
</table>

Maintenance item No.	Description
U905	**Checking counts by optional devices** **Description** Displays the counts of DP or finisher. **Purpose** To check the use of DP and finisher. **Method** 1. Press the start key. 2. Select the device, the count of which is to be checked. 3. Press the start key. The count of the selected device is displayed.

Display	Description
DP	Counts of DP
FINISHER	Counts of document finisher or 3000-sheet document finisher

DP

Display	Description
ADP	No. of single-sided originals that has passed through the DP
RADP	No. of double-sided originals that has passed through the DP
CONCURRENT	No. of dual scan originals that has passed through the DP

Document finisher

Display	Description
CP CNT	No. of copies that has passed
STAPLE	Frequency the stapler has been activated

3000-sheet document finisher

Display	Description
CP CNT	No. of copies that has passed
STAPLE	Frequency the stapler has been activated
PUNCH	Frequency the punch has been activated
STACK	Frequency the stacker has been activated
SADDLE	Frequency the center holding has been activated

Completion
Press the stop key. The screen for selecting a maintenance item No. is displayed.

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1-4-1 Paper misfeed detection

(1) Paper misfeed indication

When a paper misfeed occurs, the machine immediately stops copying and displays the jam location on the operation panel.
To remove the jammed paper, detach the finisher from the machine.
To reset the paper misfeed detection, turn the joint switch (JSW) off and on.

(2) Paper misfeed detection conditions

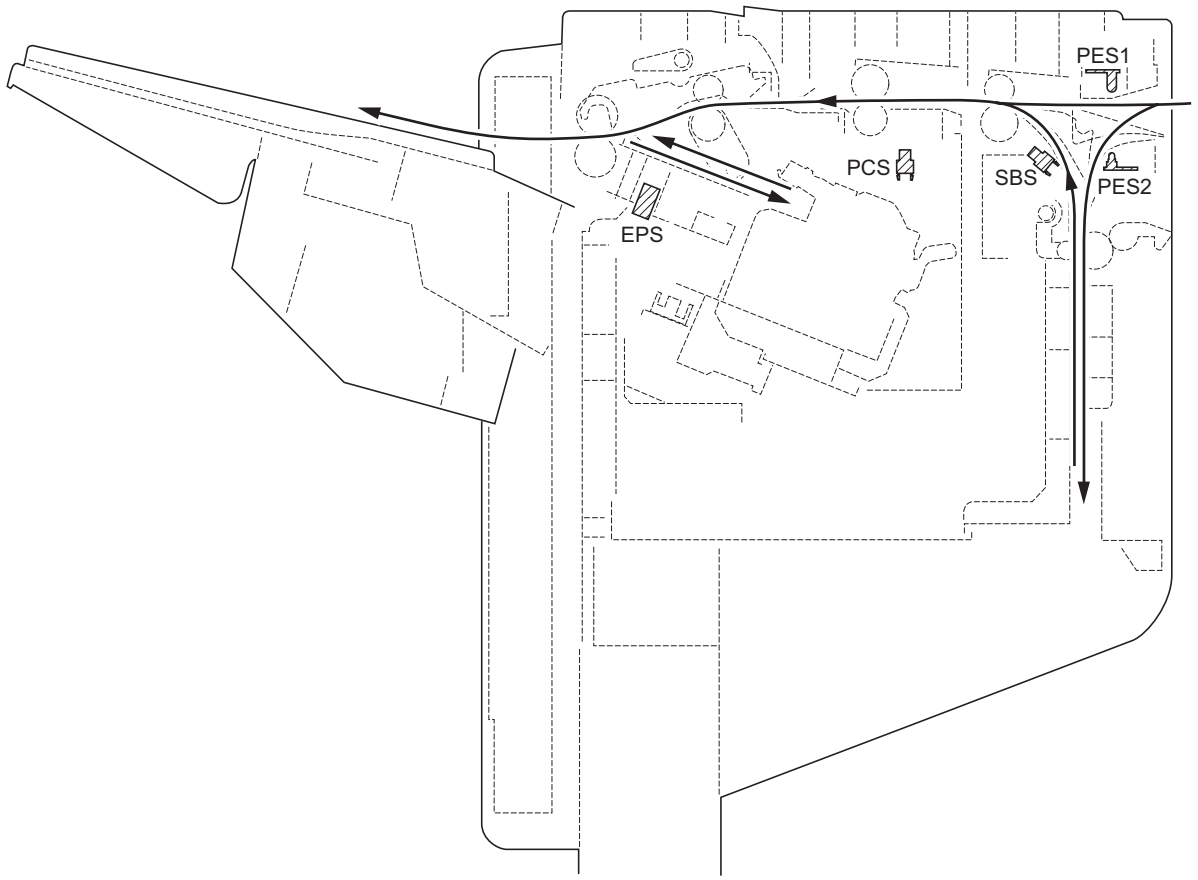

Figure 1-4-1

Section	Jam code	Conditions	Specified time		
			25/25 ppm 30/30 ppm	40/40 ppm 50/40 ppm Color	50/40 ppm B/W
Finisher	80 Jam between the finisher and machine	Paper ejection is not output from the machine to the document finisher within specified time of the paper entry sensor (PES) turning on.	15 s	15 s	15 s
	81 Paper entry sensor non arrival jam	The paper entry sensor (PES) is not turned on even if a specified time has elapsed after the machine eject signal was received.	674 ms	803 ms	1124 ms
	82 Jam in stapler	The staple home position sensor (STSPS) is not turned on within the specified time when driving the staple motor (STM).	-	-	-
	83 Eject sensor stay jam	In the straight mode, the exit sensor (EPS) is not turned off within specified time of its turning on.	-	-	-
		In the bundle discharge mode or the staple mode, bundle discharge operation does not turn off within specified time since the operation starts.	902 ms	902 ms	902 ms
	91 Finisher cover open	The finisher cover becomes open during paper is running. Paper is remaininig in paths at power on.	-	-	-
	92 Eject paper sensor non-arrival jam	In the straight mode, the eject paper sensor (EPS) is not turned on even if a specified time has elapsed after the paper entry sensor (PES) was turned on.	-	-	-
	93 Switchback sensor jam	The reverse sensor (SBS) does not turn on within specified time of paper entry sensor (PES) turning on (unfinished reversing canceled).	402 ms	479 ms	671 ms
		The reverse sensor (SBS) is not turned on within specified time (unfinished reversing set).	431 ms	431 ms	431 ms
		The reverse sensor (SBS) is not turned off within specified time its turning on (resident reversing canceled).	1680 ms	2000 ms	2800 ms
		The reverse sensor (SBS) is not turned off within specified time its turning on (resident reversing set).	700 ms	700 ms	700 ms
	94 Paper entry sensor stay/remaining jam	The paper entry sensor (PES) is not turned off within specified time its turning on.	1260 ms	1500 ms	2100 ms
	95 Paper conveying sensor jam	The paper conveying sensor (PCS) is not turned off within specified time its turning on (reversing canceled).	1260 ms	1500 ms	2100 ms
		The paper conveying sensor (PCS) is not turned off within specified time its turning on (reversing set).	656 ms	656 ms	656 ms

(3) Paper misfeeds

Problem	Causes/check procedures	Corrective measures
(1) A paper jam in document finisher is indicated during copying (jam between finisher and machine). Jam code 80	Defective paper entry sensor.	With 5 V DC present at CN3-1 and CN3-3 on the finisher main PWB, check if CN3-2and CN3-4 on the finisher main PWB remains low or high when the paper entry sensor is turned on and off. If it does, replace the paper entry sensor.
(2) A paper jam in document finisher is indicated during copying (paper jam during paper insertion to the finisher). Jam code 81	Extremely curled paper.	Change the paper.
	Defective paper entry sensor.	With 5 V DC present at CN3-1 and CN3-3 on the finisher main PWB, check if CN3-2and CN3-4 on the finisher main PWB remains low or high when the paper entry sensor is turned on and off. If it does, replace the paper entry sensor.
	Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
(3) A paper jam in document finisher is indicated during copying (finisher stapler jam). Jam code 82	Defective staple home position sensor.	Run maintenance item U241 and turn the staple home position sensor on and off manually. Replace the sensor if indication of the corresponding sensor on the touch panel is not displayed in reverse.
(4) A paper jam in document finisher is indicated during copying (eject sensor stay jam). Jam code 83	Defective eject paper sensor.	With 5 V DC present at CN7-1 on the finisher main PWB, check if CN7-3 on the finisher main PWB remains low or high when the eject paper sensor is turned on and off. If it does, replace the eject paper sensor.
	Check if the paper conveying motor malfunctions.	Check and remedy.
	Check if the eject roller and eject pulley contact each other.	Check and remedy.
	Check if the eject guide is deformed.	Check and remedy.
	Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
(5) A paper jam in document finisher is indicated during copying (eject sensor non-arrival jam). Jam code 92	Defective eject paper sensor.	With 5 V DC present at CN7-1 on the finisher main PWB, check if CN7-3 on the finisher main PWB remains low or high when the eject paper sensor is turned on and off. If it does, replace the eject paper sensor.
	Check if the paper conveying motor malfunctions.	Check.
	Check if the eject roller and eject pulley contact each other.	Check and remedy.
	Check if the eject guide is deformed.	Check and remedy.
	Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.

Problem	Causes/check procedures	Corrective measures
(6) A paper jam in document finisher is indicated during copying (switchback sensor jam). Jam code 93	Defective switchback sensor.	With 5 V DC present at CN3-5 on the finisher main PWB, check if CN3-7 on the finisher main PWB remains low or high when the switchback sensor is turned on and off. If it does, replace the switchback sensor.
	Check if the switchback motor malfunctions.	Check.
	Check if the switchback roller and switchback pulley contact each other.	Check and remedy.
	Check if the switchback guide is deformed.	Check and remedy.
	Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
(7) A paper jam in document finisher is indicated during copying (paper entry sensor stay jam). Jam code 94	Extremely curled paper.	Change the paper.
	Defective paper entry sensor.	With 5 V DC present at CN3-1and CN3-3 on the finisher main PWB, check if CN3-2 and CN3-4 on the main PCB remains low or high when the paper entry sensor is turned on and off. If it does, replace the paper entry sensor.
	Check if the paper entry guide is deformed.	Check and remedy.
	Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
(8) A paper jam in document finisher is indicated during copying (paper conveying sensor jam). Jam code 95	Defective paper conveying sensor.	With 5 V DC present at CN9-1 on the finisher main PWB, check if CN9-3 on the finisher main PWB remains low or high when the paper conveying sensor is turned on and off. If it does, replace the paper conveying sensor.
	Check if the paper conveying motor malfunctions.	Check.
	Check if the paper conveying roller and paper conveying pulley contact each other.	Check and remedy.
	Check if the paper conveying guide is deformed.	Check and remedy.
	Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.

1-4-2 Self-diagnosis

(1) Self-diagnostic function

This unit is equipped with a self-diagnostic function. When a problem is detected, copying is disabled and the problem displayed as a code consisting of C followed by a number, indicating the nature of the problem. A message is also displayed requesting the user to call for service.
After removing the problem, the self-diagnostic function can be reset by turning cover switch off and back on.

(2) Self diagnostic codes

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C8030	**Tray upper limit detection problem** When the tray elevation motor raises a tray, the ON status of the tray upper limit sensor is detected.	The tray upper limit sensor, paper surface sensor 1/2 connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective tray upper limit sensor, paper surface sensor 1/2.	Replace the sensor.
		Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
C8040	**Belt problem** The belt sensor does not turn on/off within specified time of the belt solenoid turning on.	The belt sensor, belt solenoid connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective belt sensor.	Replace the belt sensor.
		Defective belt solenoid.	Replace the belt solenoid.
		Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
C8140	**Tray elevation motor problem (optional document finisher)** The tray low limit sensor or paper surface sensor 1/2 cannot be detected to be on within 10 s since the tray elevation motor is activated.	The tray elevation motor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		The tray elevation motor malfunctions.	Replace the tray elevation motor.
		The tray lower limit sensor, paper surface sensor 1/2 connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective tray lower limit sensor, paper surface sensor 1/2.	Replace the sensor.
		Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C8210	**Stapler problem** When the stapler motor is driving, the ON status of the stapler home position sensor cannot be detected even if 1 s passed.	The stapler connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		The stapler is blocked with a staple.	Remove the stapler cartridge, and check the cartridge and the stapling section of the stapler.
		The stapler is broken.	Replace the stapler and check for correct operation.
		Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
C8320	**Adjustment motor 2 problem** The adjustment sensor 2 does not turn on/off within specified time of the adjustment motor 2 turning on.	The adjustment sensor 2, adjustment motor 2 connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective adjustment sensor 2.	Replace the adjustment sensor 2.
		Defective adjustment motor 2.	Replace the adjustment motor 2.
		Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
C8330	**Adjustment motor 1 problem** The adjustment sensor 1 does not turn on/off within specified time of the adjustment motor 1 turning on.	The adjustment sensor 1, adjustment motor 1 connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective adjustment sensor 1.	Replace the adjustment sensor 1.
		Defective adjustment motor 1.	Replace the adjustment motor 1.
		Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
C8350	**Roller motor problem)** The roller sensor does not turn on/off within specified time of the roller motor turning on.	The roller sensor, roller motor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective roller sensor.	Replace the roller sensor.
		Defective roller motor.	Replace the roller motor.
		Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.

Code	Contents	Remarks	
		Causes	Check procedures/corrective measures
C8360	**Slide motor problem** The slide sensor does not turn on/off within specified time of the slide motor turning on.	The slide sensor, slide motor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective slide sensor.	Replace the slide sensor.
		Defective slide motor.	Replace the slide motor.
		Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
C8440	**Sensor adjusting problem** The sensor cannot be adjusted within the specified range.	The paper entry sensor connector makes poor contact.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
		Defective paper entry sensor.	Replace the paper entry sensor and check for correct operation.
		The optical path of the paper entry sensor is blocked by foreign matter.	Remove the foreign matter.
		Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
C8460	**EEPROM problem** Read and write data does not match 3 times in succession.	Defective EEPROM or finisher main PWB.	Replace the finisher main PWB and check for correct operation.

1-4-3 Electric problems

Troubleshooting to each failure must be in the order of the numbered symptoms.

Problem	Causes	Check procedures/corrective measures
(1) The switchback motor does not operate.	1. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	2. Defective switchback motor.	Check if the switchback motor rotates when 24 V DC is present at CN23-2 and CN23-5, and drive pulses are at CN23-1, CN23-3, CN23-4 and CN23-6 on the finisher main PWB. If not, replace the switchback motor.
	3. Defective finisher main PWB.	Check if CN23-1, CN23-3, CN23-4 and CN23-6 on the finisher main PWB goes low. If not, replace the finisher main PWB.
(2) The paper conveying motor does not operate.	1. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	2. Defective paper conveying motor.	Check if the paper conveying motor rotates when 24 V DC is present at CN19-2 and CN19-5, and drive pulses are at CN19-1, CN19-3, CN19-4 and CN19-6 on the finisher main PWB. If not, replace the paper conveying motor.
	3. Defective finisher main PWB.	Check if CN19-1, CN19-3, CN19-4 and CN19-6 on the finisher main PWB go low. If not, replace the finisher main PWB.
(3) The bundle discharge motor does not operate.	1. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	2. Defective bundle discharge motor.	Check if the bundle discharge motor rotates when 24 V DC is present at CN19-8 and CN19-11, and drive pulses are at CN19-7, CN19-9, CN19-10 and CN19-12 on the finisher main PWB. If not, replace the bundle discharge motor.
	3. Defective finisher main PWB.	Check if CN19-7, CN19-9, CN19-10 and CN19-12 on the finisher main PWB go low. If not, replace the finisher main PWB.
(4) The roller motor does not operate.	1. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	2. Defective roller motor.	Check if the roller motor rotates when 24 V DC is present at CN20-2 and CN20-5, and drive pulses are at CN20-1, CN20-3, CN20-4 and CN20-6 on the finisher main PWB. If not, replace the roller motor.
	3. Defective finisher main PWB.	Check if CN20-1, CN20-3, CN20-4 and CN20-6 on the finisher main PWB go low. If not, replace the finisher main PWB.
(5) The adjustment motor 1/2 does not operate.	1. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	2. Defective adjustment motor 1/2.	Check if the adjustment motor 1 or 2 rotates when drive pulses are at CN18-1, CN18-2, CN18-3 and CN18-4 or CN18-5, CN18-6, CN18-7 and CN18-8 on the finisher main PWB. If not, replace the adjustment motor 1 or 2.
	3. Defective finisher main PWB.	Check if CN18-1, CN18-2, CN18-3 and CN18-4 or CN18-5, CN18-6, CN18-7 and CN18-8 on the finisher main PWB go low. If not, replace the finisher main PWB.
(6) The slide motor does not operate.	1. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	2. Defective slide motor.	Check if the slide motor rotates when drive pulses are at CN14-1, CN14-2, CN14-3 and CN14-4 on the finisher main PWB. If not, replace the slide motor.
	3. Defective finisher main PWB.	Check if CN14-1, CN14-2, CN14-3 and CN14-4 on the finisher main PWB go low. If not, replace the finisher main PWB.

Problem	Causes	Check procedures/corrective measures
(7) The tray elevation motor does not operate.	1. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	2. Defective tray elevation motor.	Check if the tray elevation motor rotates when 24 V DC is present at CN15-1 and CN15-2 on the finisher main PWB. If not, replace the tray elevation motor.
	3. Defective finisher main PWB.	Check if 24 V DC is present at CN15-1 and CN15-2 on the finisher main PWB. If not, replace the finisher main PWB.
(8) The switchback solenoid does not operate.	1. Defective switchback solenoid coil.	Check for continuity across the coil. If none, replace the switchback solenoid.
	2. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	3. Defective finisher main PWB.	Check if CN24-3 on the finisher main PWB goes low. If not, replace the finisher main PWB.
(9) The flapper solenoid does not operate.	1. Defective flapper solenoid coil.	Check for continuity across the coil. If none, replace the flapper solenoid.
	2. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	3. Defective finisher main PWB.	Check if CN24-1 on the finisher main PWB goes low. If not, replace the finisher main PWB.
(10) The belt solenoid does not operate.	1. Defective belt solenoid coil.	Check for continuity across the coil. If none, replace the belt solenoid.
	2. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	3. Defective finisher main PWB.	Check if CN21-2 on the finisher main PWB goes low. If not, replace the finisher main PWB.
(11) The paddle solenoid does not operate.	1. Defective paddle solenoid coil.	Check for continuity across the coil. If none, replace the paddle solenoid.
	2. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	3. Defective finisher main PWB.	Check if CN16-2 on the finisher main PWB goes low. If not, replace the finisher main PWB.
(12) The paper surface solenoid does not operate.	1. Defective paper surface solenoid coil.	Check for continuity across the coil. If none, replace the paper surface solenoid.
	2. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	3. Defective finisher main PWB.	Check if CN17-2 on the finisher main PWB goes low. If not, replace the finisher main PWB.

Problem	Causes	Check procedures/corrective measures
(13) Paper jams when the main power switch is turned on.	1. A piece of paper torn from an paper is caught around the paper entry sensor, switchback sensor, paper conveying sensor or eject paper sensor.	Check visually and remove it, if any.
	2. Defective paper entry sensor.	With 5 V DC present at CN3-1 and CN3-3 on the finisher main PWB, check if CN3-2 and CN3-4 on the finisher main PWB remains low or high when the paper entry sensor is turned on and off. If it does, replace the paper entry sensor.
	3. Defective switchback sensor.	With 5 V DC present at CN3-5 on the finisher main PWB, check if CN3-7 on the finisher main PWB remains low or high when the switchback sensor is turned on and off. If it does, replace the switchback sensor.
	4. Defective paper conveying sensor.	With 5 V DC present at CN9-1 on the finisher main PWB, check if CN9-3 on the finisher main PWB remains low or high when the paper conveying sensor is turned on and off. If it does, replace the paper conveying sensor.
	5. Defective eject paper sensor.	With 5 V DC present at CN7-1 on the finisher main PWB, check if CN7-3 on the finisher main PWB remains low or high when the eject paper sensor is turned on and off. If it does, replace the eject paper sensor.
	6. Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.
(14) [Out of staples. Add staples.] is displayed when the main power switch is turned on.	1. Defective stapler empty sensor.	With 5 V DC present at CN12-5 on the finisher main PWB, check if CN12-8 on the finisher main PWB remains low or high when the stapler empty sensor is turned on and off. If it does, replace the stapler empty sensor.
	2. Poor contact in the connector terminals.	Reinsert the connector. Also check for continuity within the connector cable. If none, remedy or replace the cable.
	3. Defective finisher main PWB.	Replace the finisher main PWB and check for correct operation.

1-4-4 Mechanical problems

Problem	Causes/check procedures	Corrective measures
(1) No paper conveying.	Paper outside specifications is used.	Use only paper conforming to the specifications.
	Check if the surfaces of the paper conveying roller, paper conveying pulleys, switchback roller and switchback pulleys are soiled with paper powder.	Clean with isopropyl alcohol, if they are soiled.
	Check if the paper conveying roller, paper conveying pulleys, switchback roller and switchback pulleys are deformed.	Replace any deformed or worn pulleys or roller.
(2) No paper ejection to the exit tray.	Paper outside specifications is used.	Use only paper conforming to the specifications.
	Check if the surfaces of the eject roller and pulleys are soiled with paper powder.	Clean with isopropyl alcohol, if they are soiled.
	Check if the eject roller and pulleys are deformed.	Replace any deformed or worn pulleys or roller.
(3) Paper jams.	Paper outside specifications is used.	Use only paper conforming to the specifications.
	Check if the paper is extremely curled.	Change the paper.
	Check if the paper conveying roller and pulleys, or switchback roller and pulleys make proper contact.	Remedy if there are any problems.
	Check if the eject roller and pulleys make proper contact.	Remedy if there are any problems.
(4) Abnormal noise is heard.	Check if rollers, pulleys and gears all operate smoothly.	Apply grease to the bushings and gears.
	Check to see if the vibration noise of each motor is abnormally high.	Readjust the tension of the motor bracket.

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1-5-1 Precautions for assembly and disassembly

(1) Precautions

Before starting disassembly, press the Power key on the operation panel to off. Make sure that the Power lamp is off before turning off the main power switch. And then unplug the power cable from the wall outlet. Turning off the main power switch before pressing the Power key to off may cause damage to the equipped hard disk.
When handling PWBs (printed wiring boards), do not touch parts with bare hands. The PWBs are susceptible to static charge.
Do not touch any PWB containing ICs with bare hands or any object prone to static charge.
When removing the hook of the connector, be sure to release the hook.
Take care not to get the cables caught.
To reassemble the parts, use the original screws. If the types and the sizes of screws are not known, refer to the PARTS LIST.

Output Connector for Interconnecting Cable is non-LPS.
Output: 587 VA max.
Please use the item below Interconnecting Cable/
P/N: 305JA71610

1-5-2 Outer covers

(1) Detaching and refitting the front cover and rear cover

Procedure

1. Open the staple cover.
1. Remove three screws and remove the front cover.

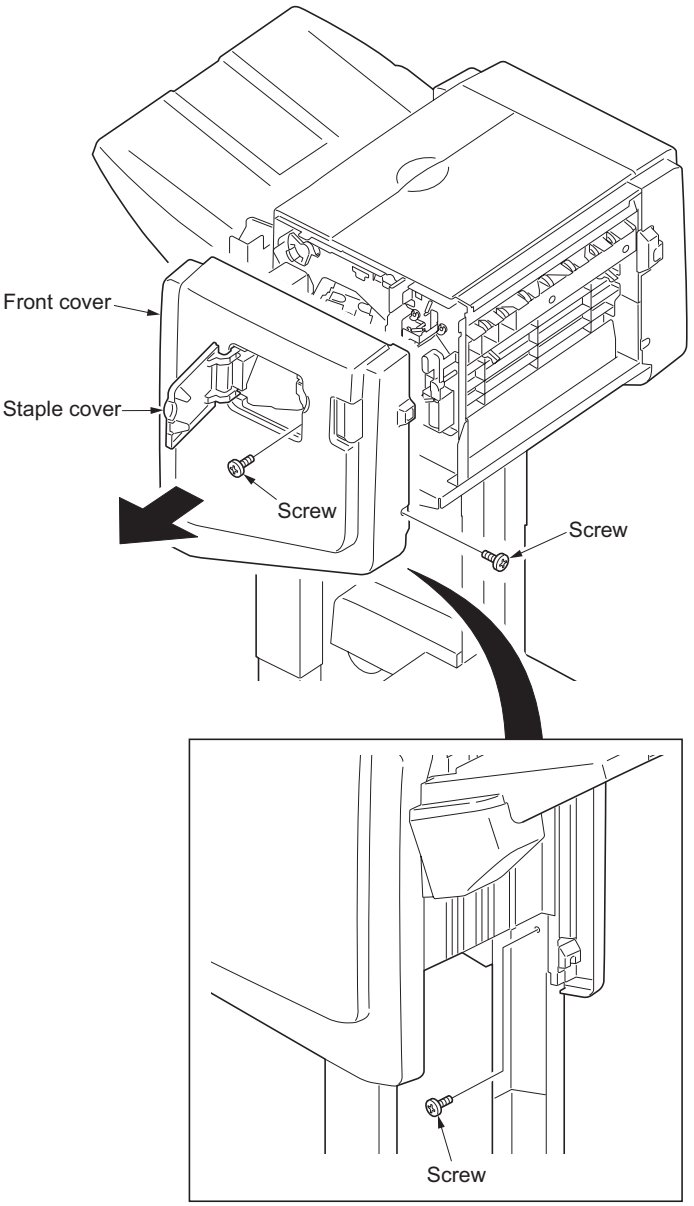

Figure 1-5-1

2. Remove two screws and remove the rear cover.

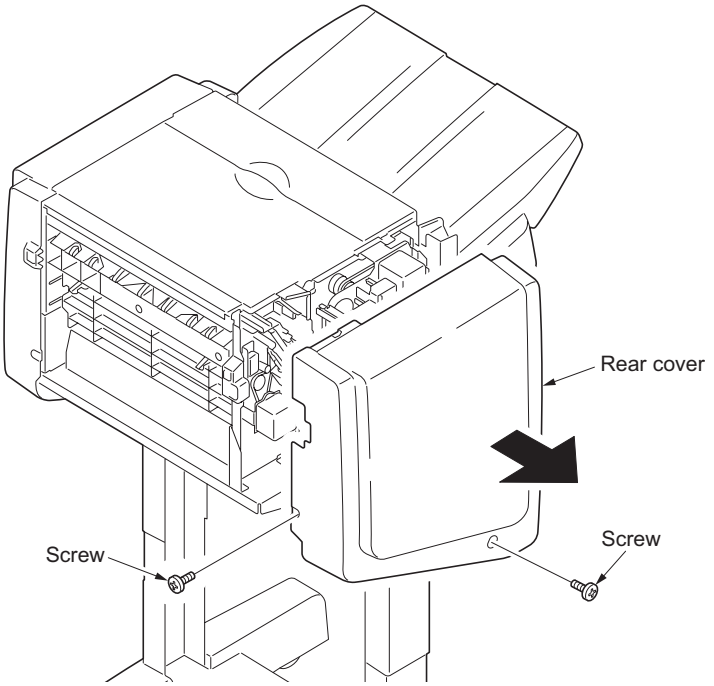

Figure 1-5-2

(2) Gear phase adjustment for vertical driving of bundle discharge belt

When fitting the gear for vertical driving of bundle discharge belt, adjust the phase so that the ribs are aligned.

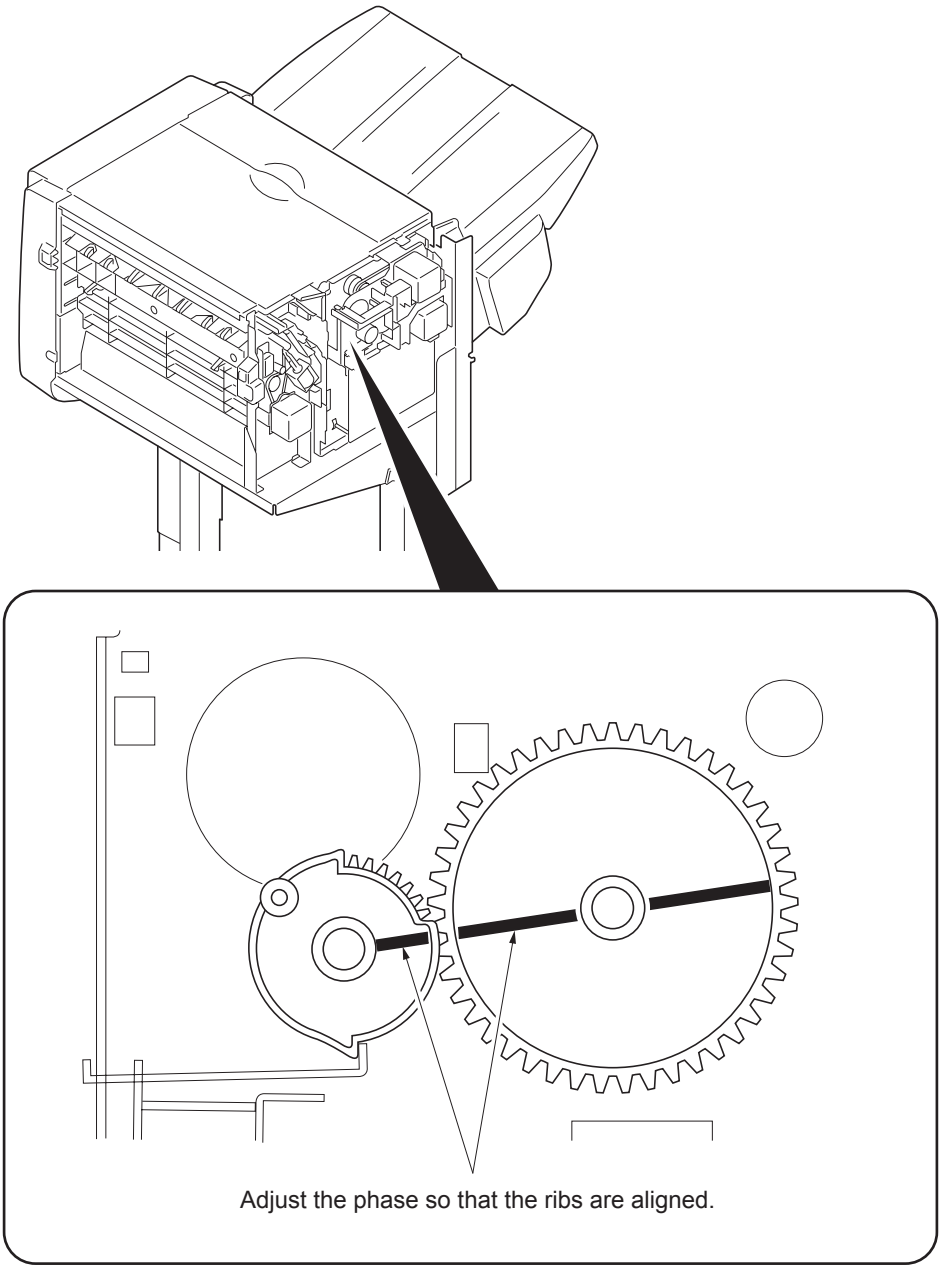

Figure 1-5-3

2-1-1 Switchback section

The switchback section consists of the parts shown in figure below. In the switchback mode, paper conveyed into the finisher is fed to the switchback section by switching the path with flapper operation. Then, the paper is fed to the processing section by reverse rotation of the switchback roller.

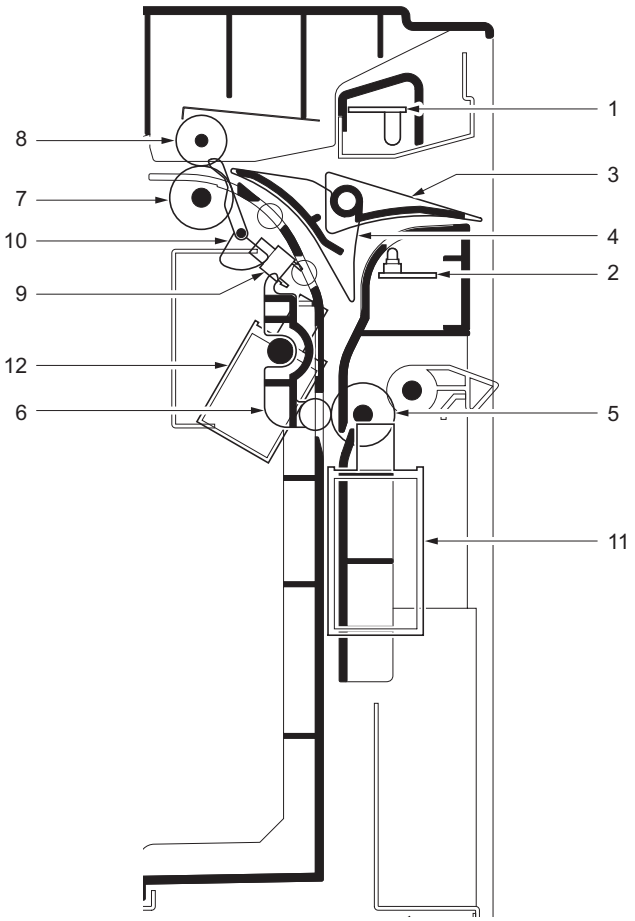

Figure 2-1-1 Switchback section

(1) Paper entry sensor 1 (PES1)
(2) Paper entry sensor 2 (PES2)
(3) Flapper
(4) Flapper
(5) Switchback roller
(6) Switchback pulley
(7) Switchback eject roller
(8) Paper coveying pulley
(9) Switchback sensor (SBS)
(10) Actuator (switchback sensor)
(11) Switchback solenoid (SBSOL)
(12) Flapper solenoid (FLSOL)

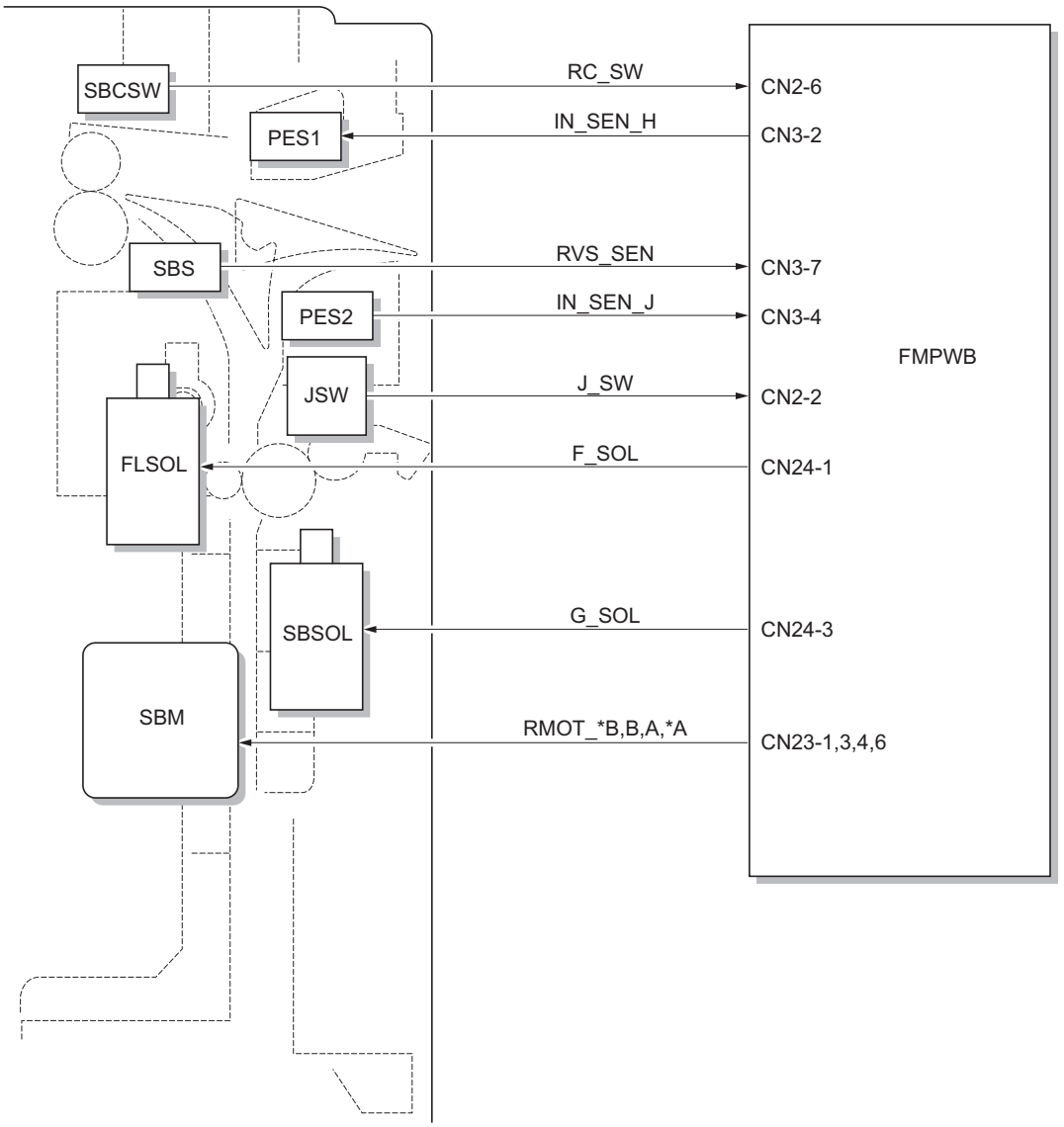

Figure 2-1-2 Switchback section block diagram

(1) Switchback operation

1. The flapper solenoid activates the flapper to switch the paper path to feed the paper conveyed into the finisher to the switchback section.
2. The switchback solenoid activates the switchback pulley to convey the paper into the switchback section with the switchback roller and the switchback pulley.
3. When the paper reaches the switchback stop position, the switchback roller rotates in the reverse direction to convey the paper to the processing section. When the leading edge of paper reaches the switchback sensor, the switchback solenoid activates the switchback pulley and the machine is ready for accepting the next paper.

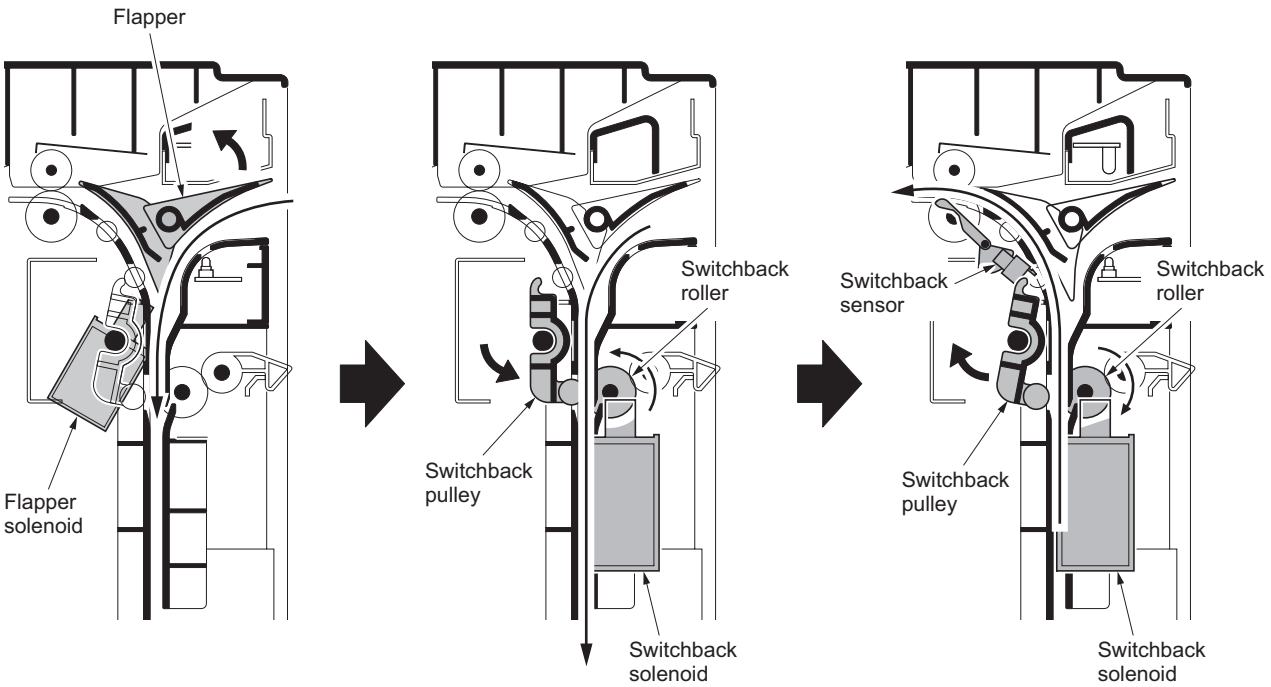

Figure 2-1-3

2-1-2 Processing section

The processing section consists of the parts shown in figure below and discharges paper conveyed from the switchback section to the eject tray. Also this section performs processing in the bundle discharge mode and the staple mode.

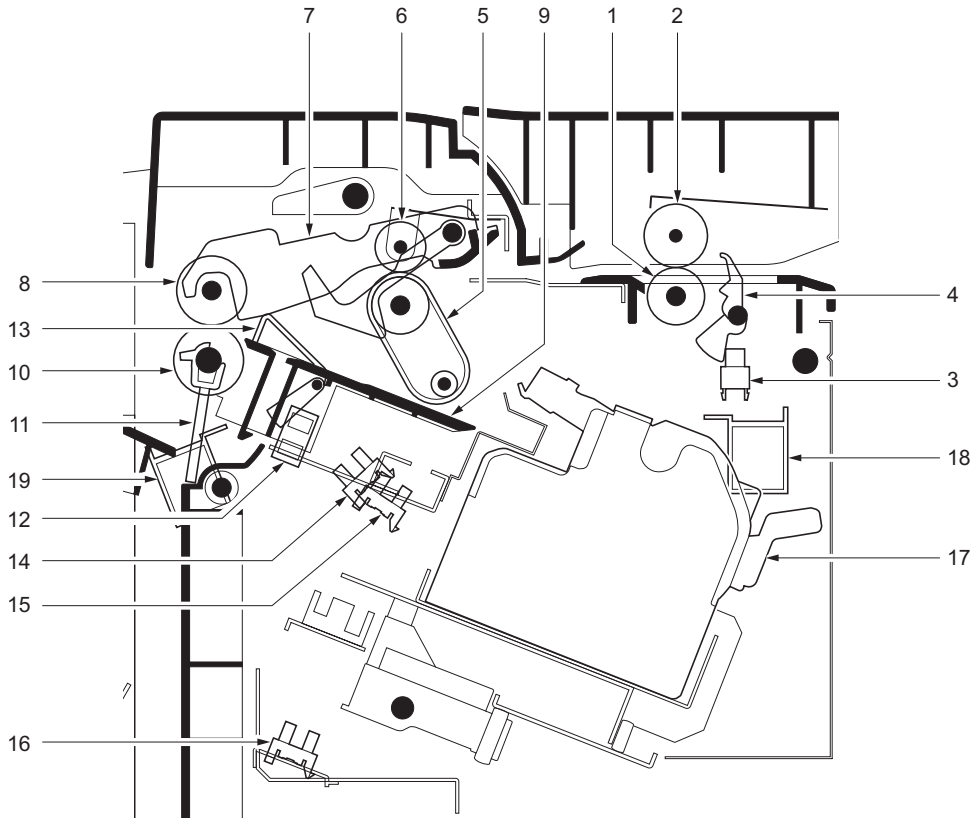

Figure 2-1-4 Processing section

(1) Paper conveying roller
(2) Paper conveying pulley
(3) Paper conveying sensor (PCS)
(4) Actuator (paper conveying sensor)
(5) Bundle discharge belt
(6) Paper conveying pulley
(7) Bundle discharge unit
(8) Eject roller
(9) Adjustment tray
(10) Eject pulley
(11) Paddle
(12) Eject paper sensor (EPS)
(13) Actuator (eject paper sensor)
(14) Adjustment sensor 1 (ADS1)
(15) Adjustment sensor 2 (ADS2)
(16) Slide sensor (SLS)
(17) Staple unit
(18) Belt solenoid (BLSOL)
(19) Paddle solenoid (PDSOL)

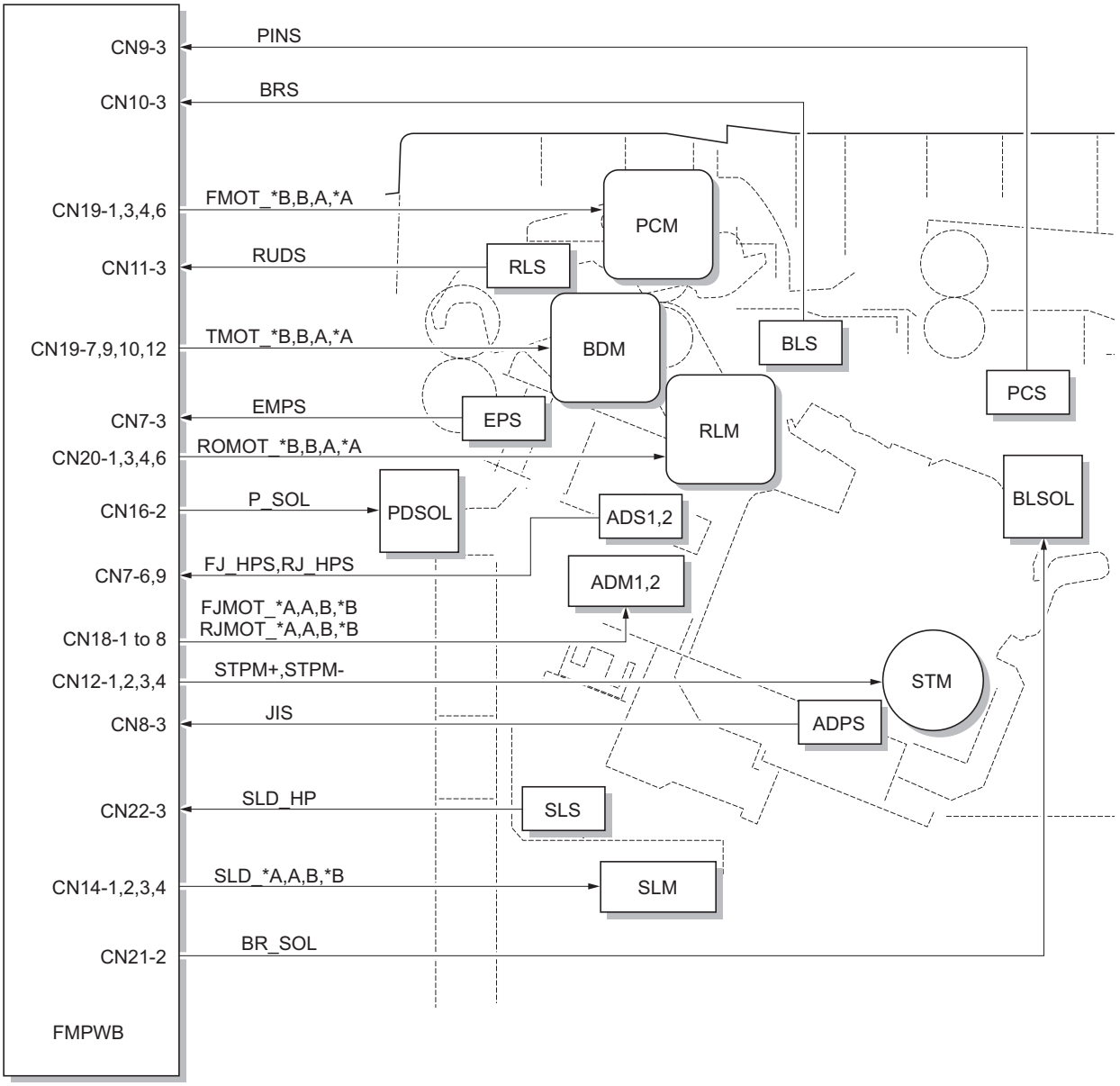

Figure 2-1-5 Processing section block diagram

(1) Bundle discharge operation

1. Paper is fed to the processing section by rotation of the paper conveying roller and the bundle discharge belt. When the paper is conveyed into the processing section, the roller motor is driven to raise the bundle discharge unit.

2. When the trailing edge of paper passes through the bundle discharge belt, the bundle discharge unit lowers and the paper is fed to the adjustment tray by the eject roller and the bundle discharge belt. Adjustment motors 1 and 2 activate the adjustment guide to adjust the paper.

3. When adjustment of the last sheet of the bundle is completed, the eject roller and the paddle rotate to discharge the bundle of paper to the eject tray.

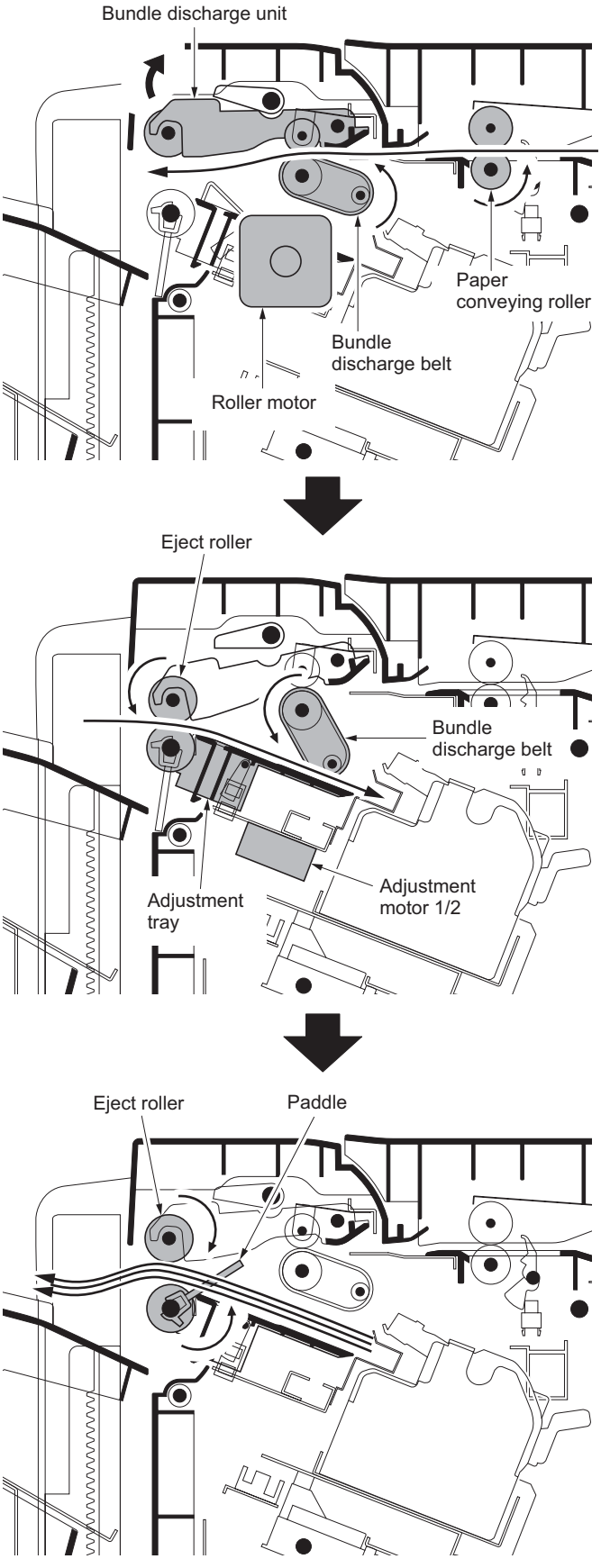

Figure 2-1-6

2-1-3 Eject tray section

The eject tray section consists of the parts shown in figure below and stocks paper discharged from the processing section.
The upper limit position and the lower limit position of the eject tray are detected with the tray upper limit sensor (TULS) and the tray lower limit sensor (TLLS). Also the paper stock quantity is detected with paper surface sensor 1/2 (PSS1/2).

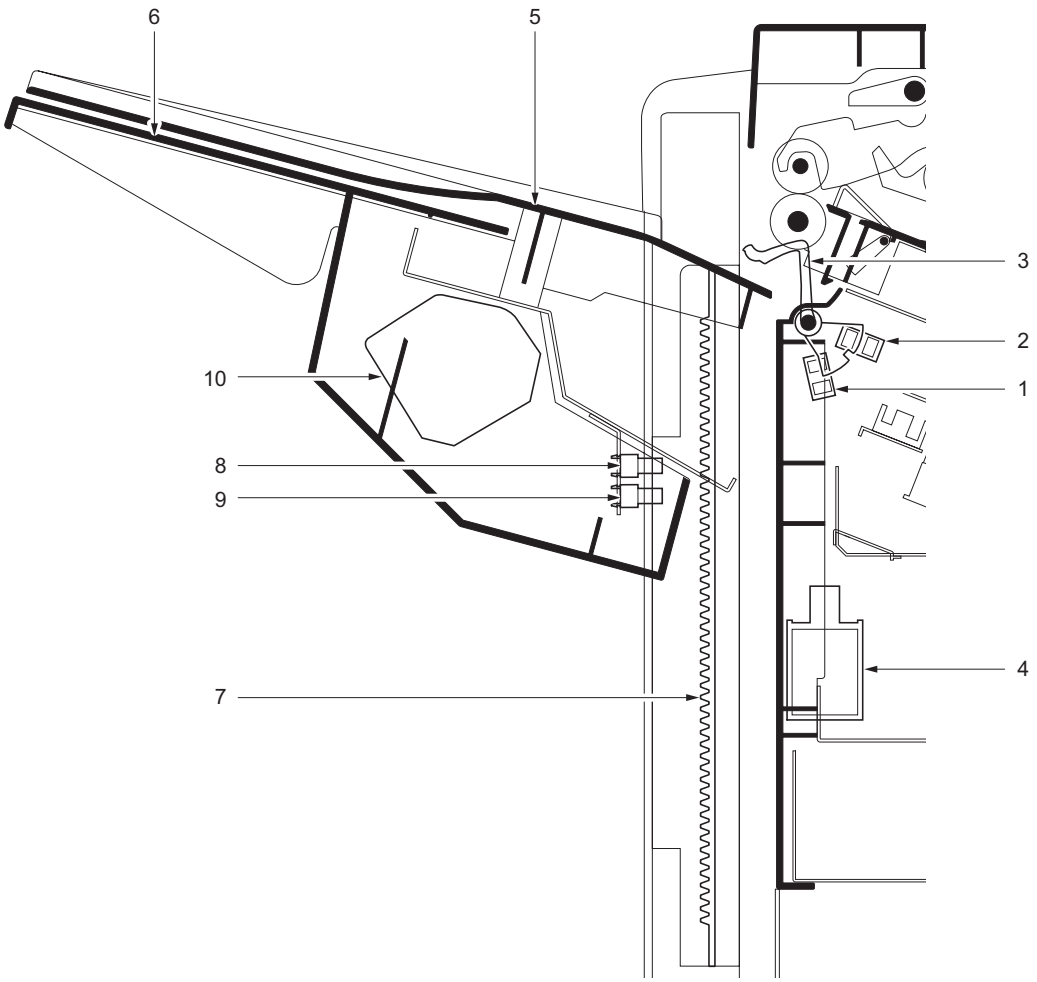

Figure 2-1-7 Eject tray section

(1) Paper surface sensor 1 (PSS1)
(2) Paper surface sensor 2 (PSS2)
(3) Push paper lever
(4) Paper surface solenoid (PSSOL)
(5) Eject tray
(6) Sub eject tray
(7) Rack
(8) Tray upper limit sensor (TULS)
(9) Tray lower limit sensor (TLLS)
(10) Tray elevation motor (TEM)

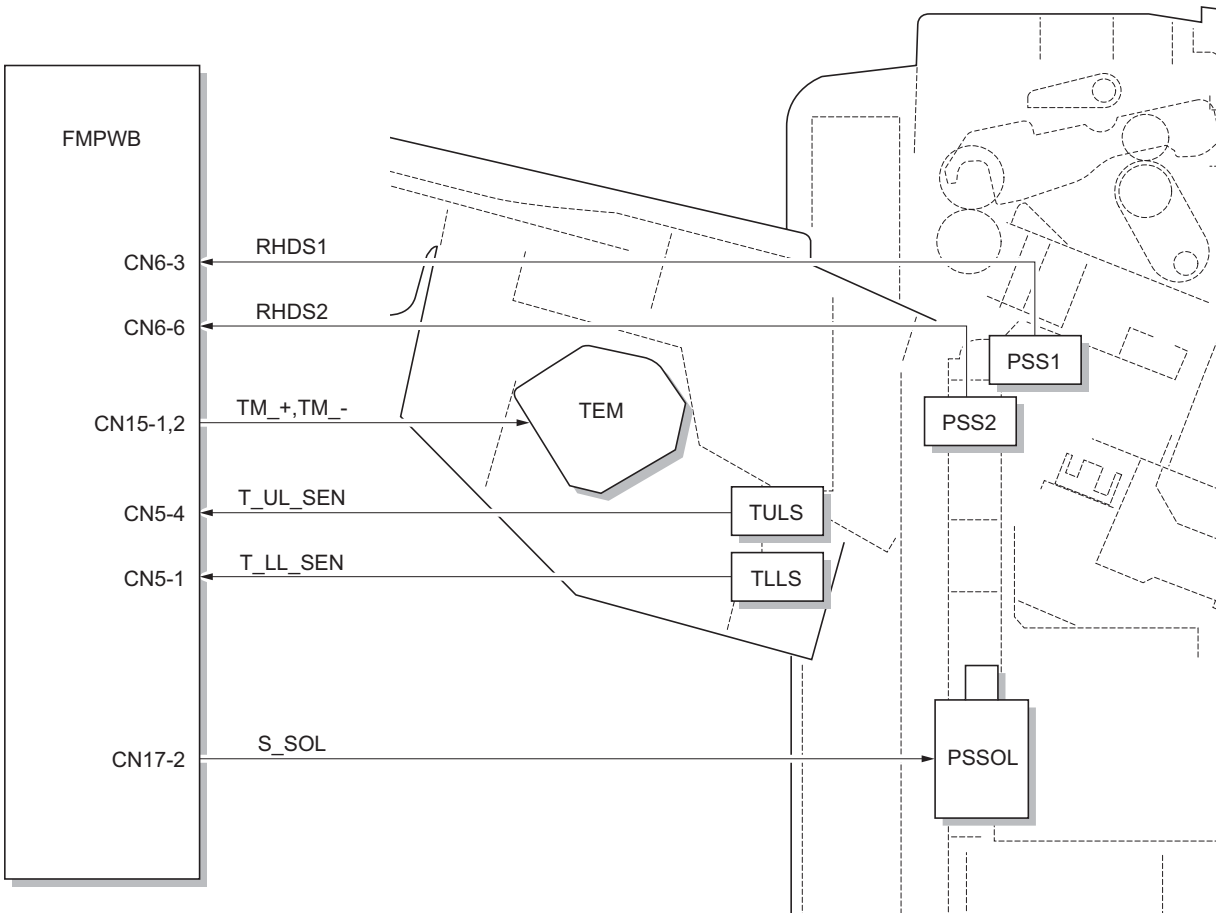

Figure 2-1-8 Eject tray section block diagram

2-2-1 Electrical parts layout

(1) PWBs

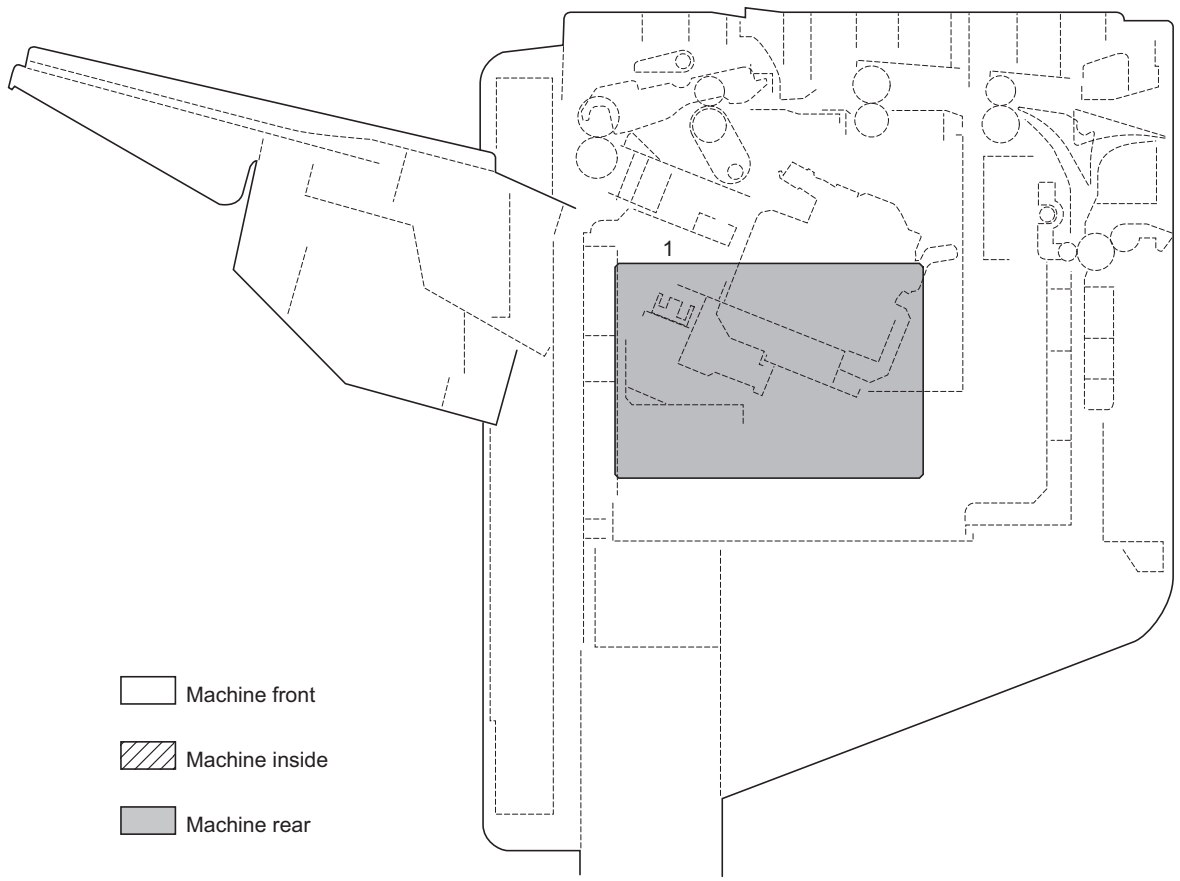

Figure 2-2-1 PWBs

1. Finisher main PWB (FMPWB) ..... Controls electrical components.

(2) Switches and sensors

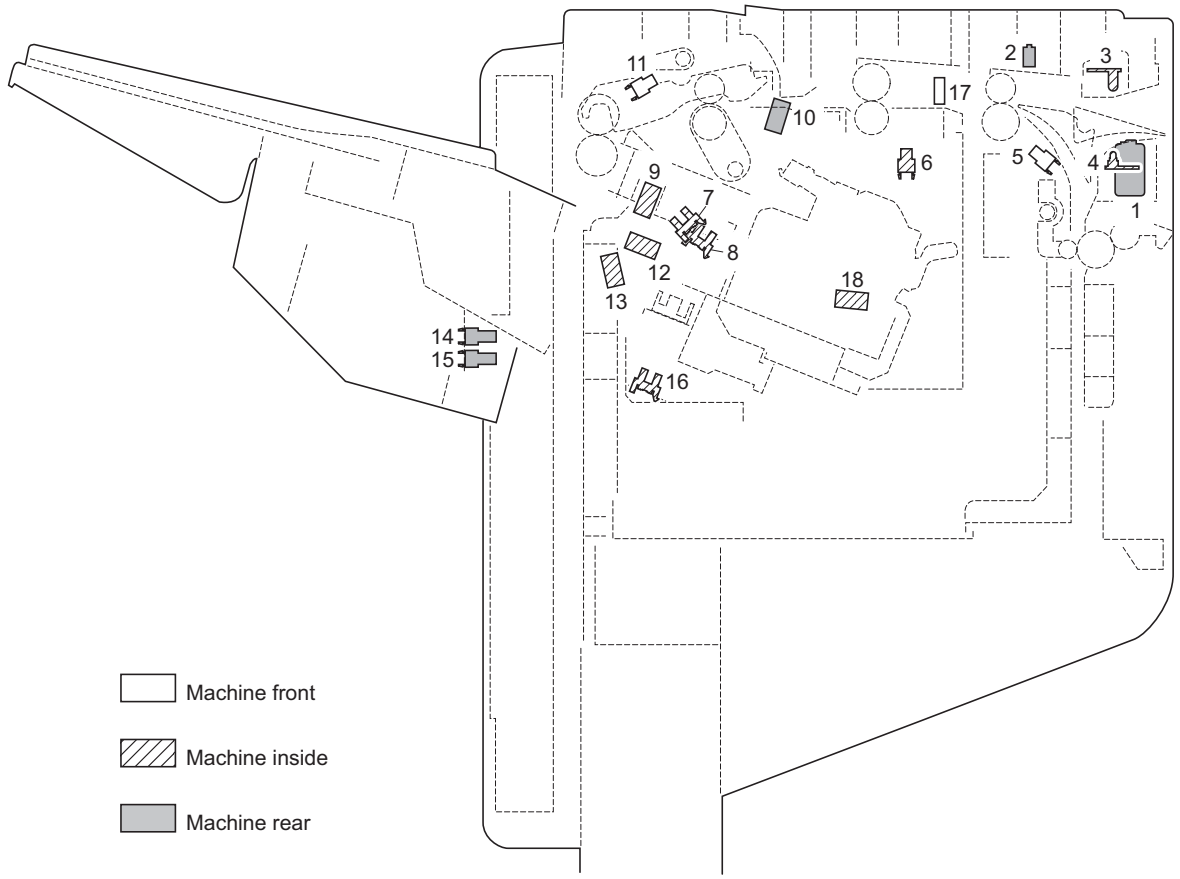

Figure 2-2-2 Switches and sensors

1. Joint switch (JSW) ..... Detects the finisher attached to the machine.
2. Switchback cover switch (SBCSW) ..... Detects opening/closing of the switchback cover.
3. Paper entry sensor 1 (PES1) ..... Detects paper entering the finisher (emitter).
4. Paper entry sensor 2 (PES2) ..... Detects paper entering the finisher (receiver).
5. Switchback sensor (SBS) ..... Detects a paper misfeed in the switchback section.
6. Paper conveying sensor (PCS) ..... Detects a paper misfeed in the processing section.
7. Adjustment sensor 1 (ADS1) ..... Detects the front adjustment plate in the home position.
8. Adjustment sensor 2 (ADS2) ..... Detects the rear adjustment plate in the home position.
9. Eject paper sensor (EPS) ..... Detects a paper in the eject section.
10. Belt sensor (BLS) ..... Detects the position of the bundle discharge belt.
11. Roller sensor (RLS) ..... Detects the position of the bundle discharge unit.
12. Paper surface sensor 1 (PSS1) ..... Detects the position of the push paper lever.
13. Paper surface sensor 2 (PSS2) ..... Detects the position of the push paper lever.
14. Tray upper limit sensor (TULS) ..... Detects the eject tray reaching the upper limit.
15. Tray lower limit sensor (TLLS) ..... Detects the eject tray reaching the lower limit.
16. Slide sensor (SLS) ..... Detects the slide position of the staple unit.
17. Staple cover switch (STCSW) ..... Detects opening/closing of the staple cover.
18. Staple position sensor (SPS) ..... Detects the position of the staple unit in the processing section.

(3) Motors

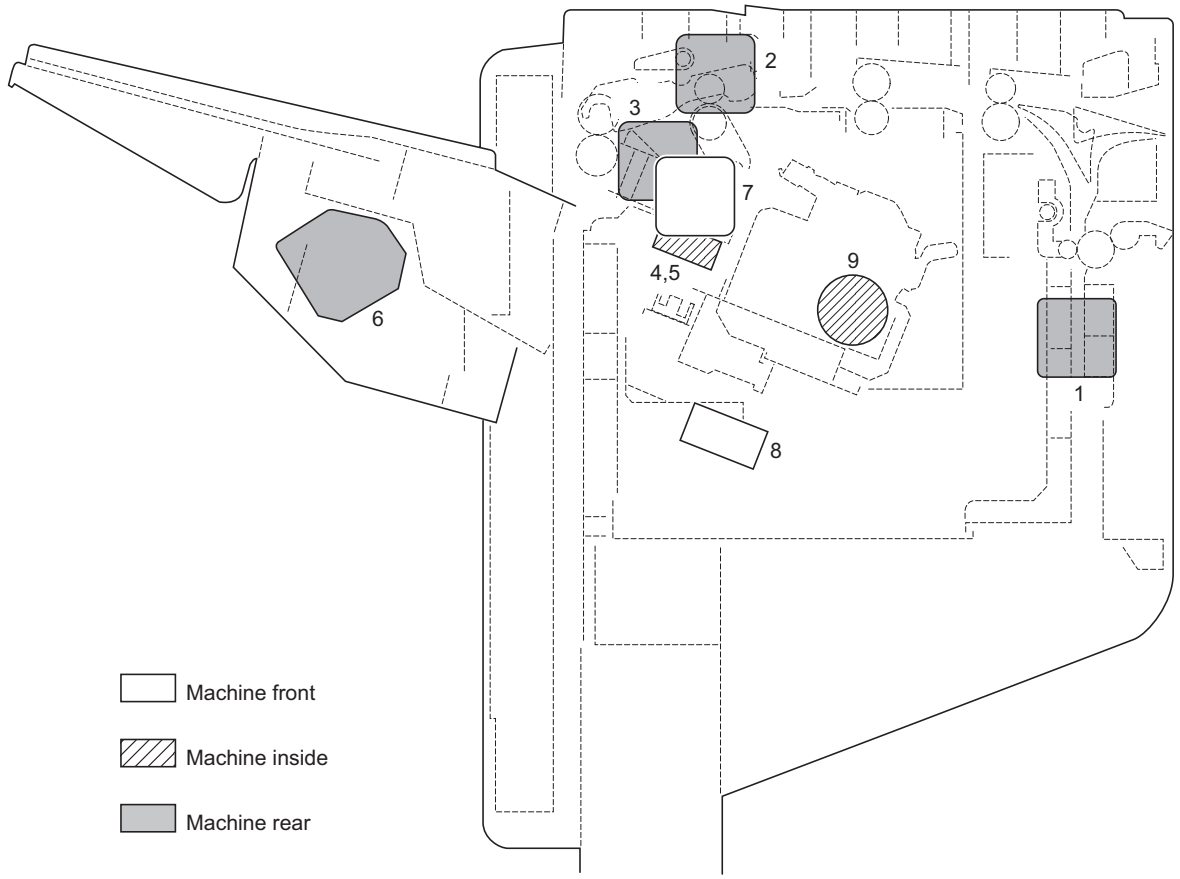

Figure 2-2-3 Motors

1. Switchback motor (SBM) ..... Drives the switchback section.
2. Paper conveying motor (PCM)..... Drives the paper conveying roller.
3. Bundle discharge motor (BDM)..... Drives the eject roller.
4. Adjustment motor 1 (ADM1) ..... Drives the front adjustment plate.
5. Adjustment motor 2 (ADM2) ..... Drives the rear adjustment plate.
6. Tray elevation motor (TEM) ..... Raises and lowers the eject tray.
7. Roller motor (RLM) ..... Drives the bundle discharge unit.
8. Slide motor (SLM)..... Drives the staple unit.
9. Staple motor (STM)..... Drives the staple.

(4) Solenoids

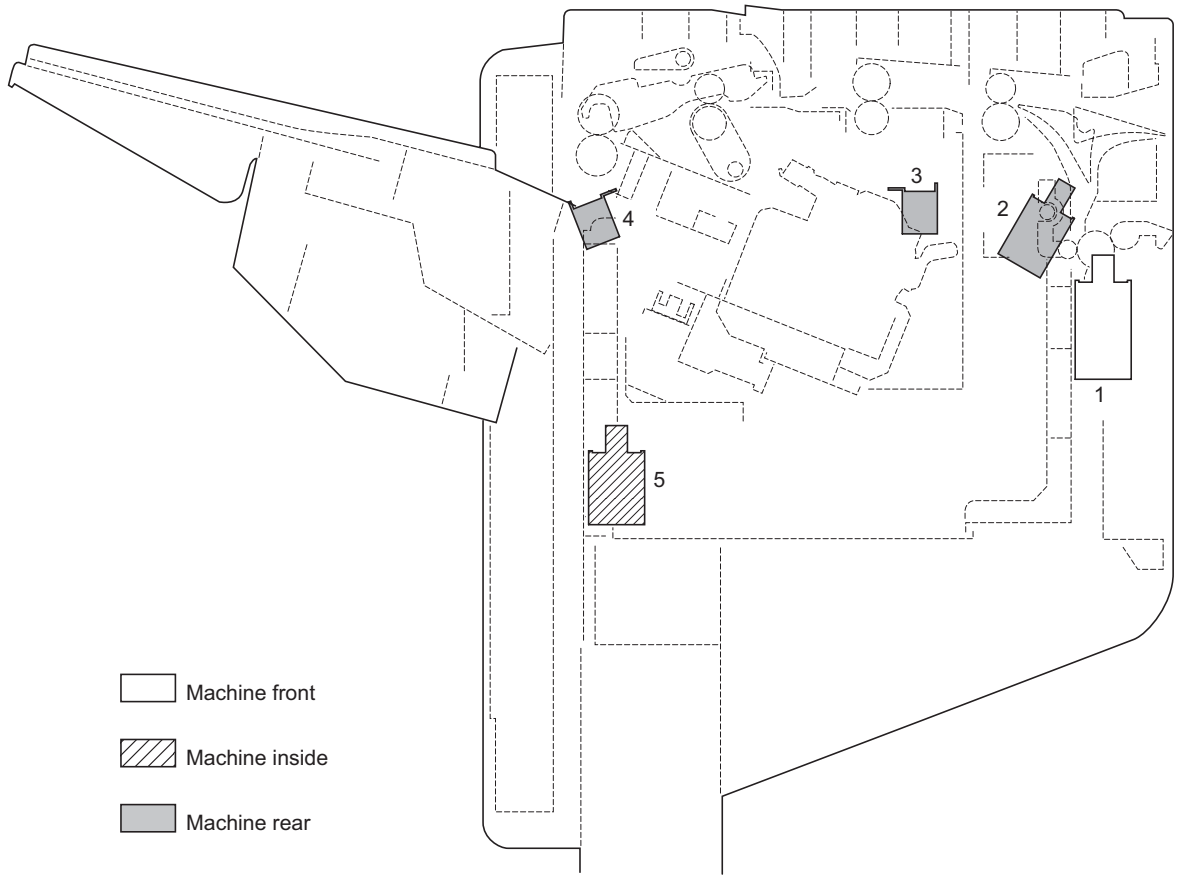

Figure 2-2-4 Solenoids

1. Switchback solenoid (SBSOL)..... Operates the switchback pulley.
2. Flapper solenoid (FLSOL)..... Operates the flapper.
3. Belt solenoid (BLSOL) ..... Operates the bundle discharge belt.
4. Paddle solenoid (PDSOL)..... Operates the paddle.
5. Paper surface solenoid (PSSOL)..... Operates the push paper lever.

2-3-1 Finisher main PWB

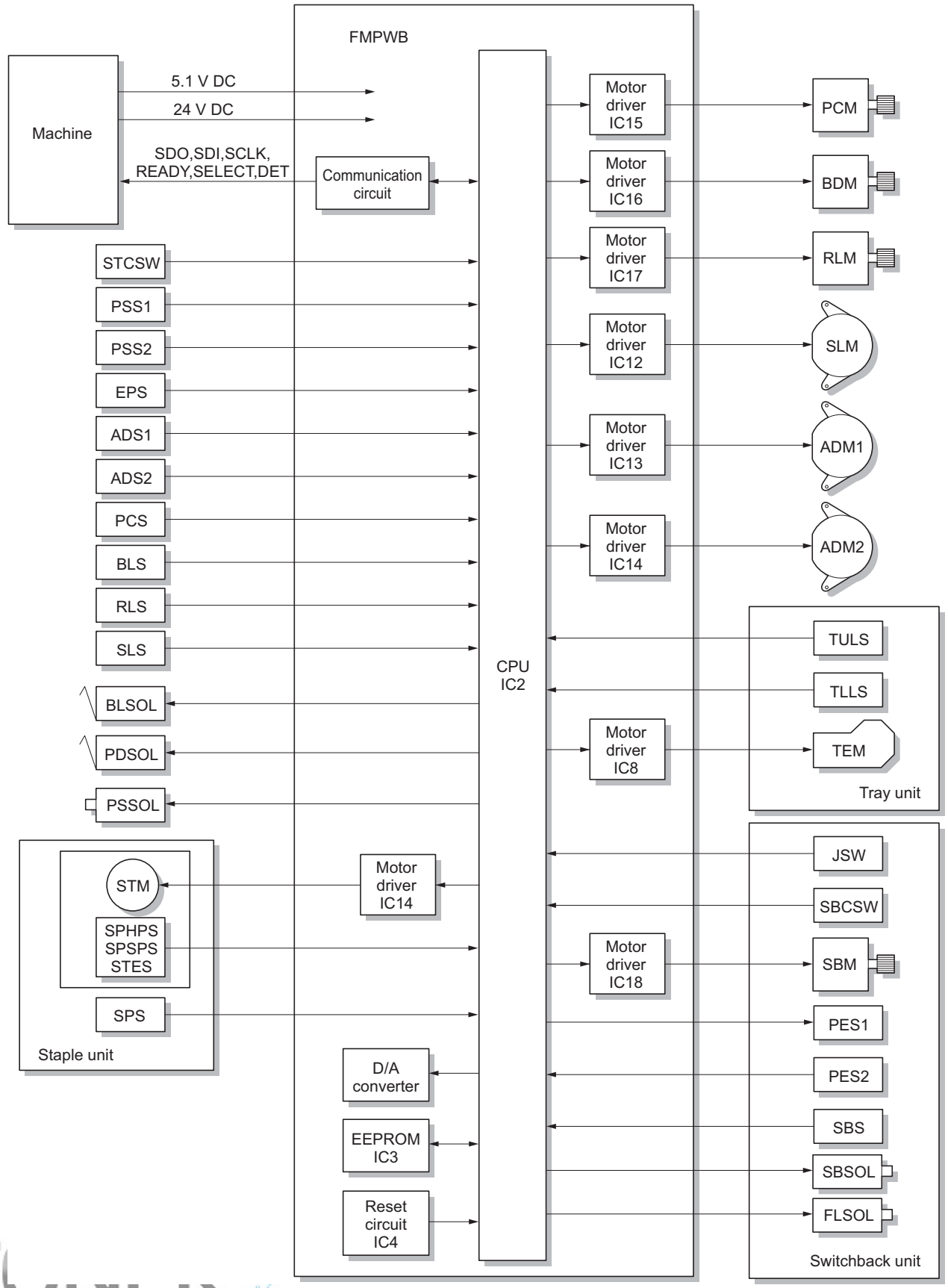

Figure 2-3-1 Finisher main PWB block diagram

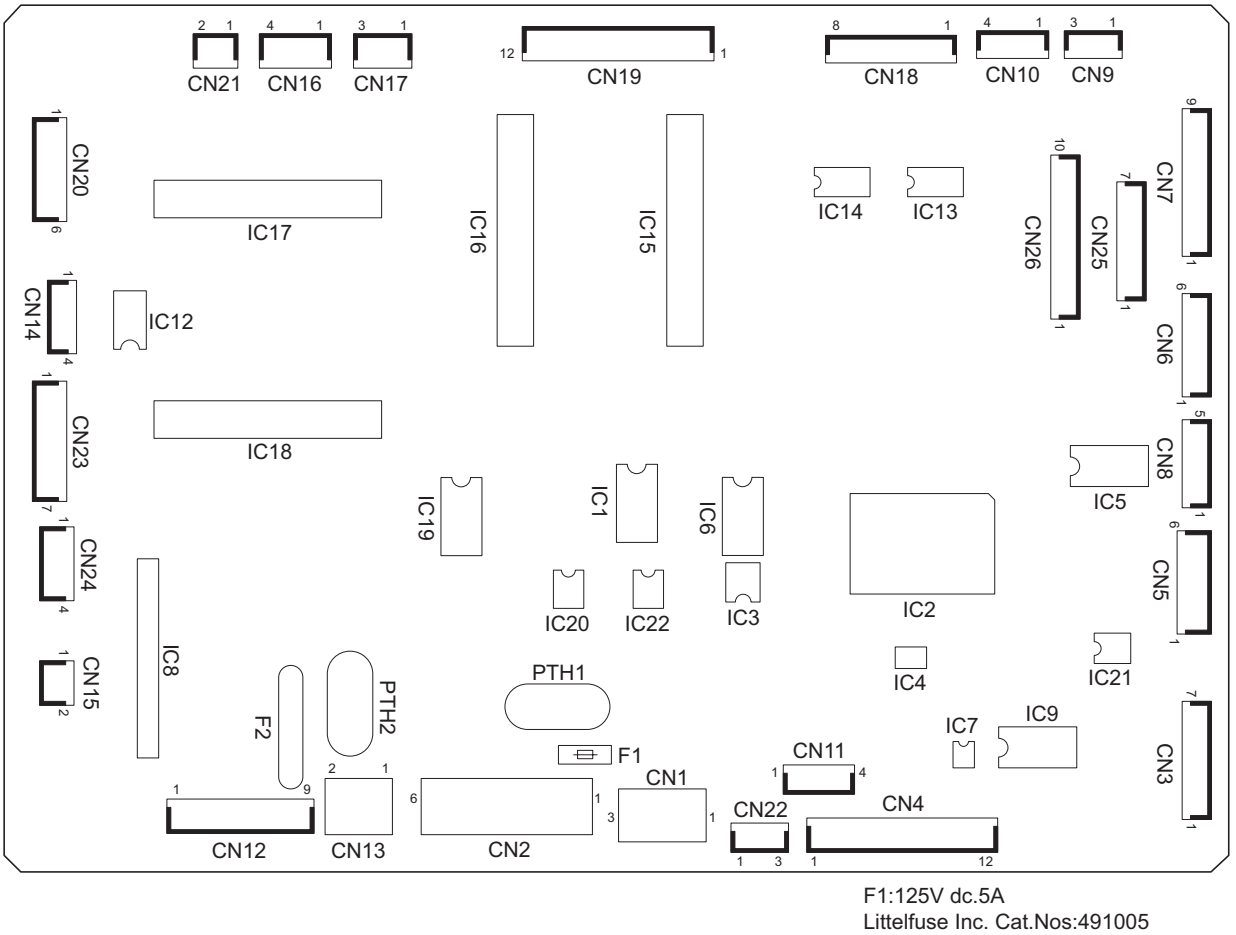

Figure 2-3-2 Finisher main PWB silk-screen diagram

Connector	Pin No.	Signal	I/O	Voltage	Description
CN1	1	DC+5V	I	5 V DC	5 V DC power input
Connected to the machine	2	PGND	-	-	Ground
	3	DC+24V	I	24 V DC	24 V DC power input
CN2	1	+24V	O	24 V DC	5 V DC power to JSW
Connected to the joint switch and switchback cover switch	2	J_SW	I	0/24 V DC	JSW: On/Off
	3	PGND	-	-	Ground
	4	PGND	-	-	Ground
	5	J_SW(+24V)	O	24 V DC	24 V DC power to SBCSW
	6	RC_SW	I	0/24 V DC	SBCSW: On/Off
CN3	1	+5V	O	5 V DC	5 V DC power to PES1
Connected to the paper entry sensor and switchback sensor	2	IN_SEN_H	O	5/0 V DC (pulse)	PES1 (emitting)
	3	+5V	O	5 V DC	5 V DC power to PES2
	4	IN_SEN_J	I	5/0 V DC (pulse) /0 V DC	PES2: Off/On (receiving)
	5	+5V	O	5 V DC	5 V DC power to SBS
	6	SGND	-	-	Ground
	7	RVS_SEN	I	0/5 V DC	SBS: On/Off

Connector	Pin No.	Signal	I/O	Voltage	Description
CN4	1	SGND	-	-	Ground
Connected to the machine	2	SGND	-	-	Ground
	3	SGND	-	-	Ground
	4	SGND	-	-	Ground
	5	SGND	-	-	Ground
	6	SGND	-	-	Ground
	7	DET	O	0/5 V DC	Finisher set signal
	8	SDO	I	0/5 V DC (pulse)	Serial communication signal reception
	9	SDI	O	0/5 V DC (pulse)	Serial communication signal transmission
	10	SCLK	I	0/5 V DC (pulse)	Serial clock
	11	SELECT	I	0/5 V DC	Select signal from the machine
	12	READY	O	0/5 V DC	Ready signal to the machine
CN5	1	T_LL_SEN	I	0/5 V DC	TLLS: On/Off
Connected to the tray upper limit sensor and tray lower limit sensor	2	SGND	-	-	Ground
	3	+5V	O	5 V DC	5 V DC power to TLLS
	4	T_UL_SEN	I	0/5 V DC	TULS: On/Off
	5	SGND	-	-	Ground
	6	+5V	O	5 V DC	5 V DC power to TULS
CN6	1	+5V	O	5 V DC	5 V DC power to PSS1
Connected to the paper surface sensor 1/2	2	SGND	-	-	Ground
	3	RHDS1	I	0/5 V DC	PSS1: On/Off
	4	+5V	O	5 V DC	5 V DC power to PSS2
	5	SGND	-	-	Ground
	6	RHDS2	I	0/5 V DC	PSS2: On/Off
CN7	1	+5V	O	5 V DC	5 V DC power to EPS
Connected to the eject paper sensor and adjustment sensor 1/2	2	SGND	-	-	Ground
	3	EMPS	I	0/5 V DC	EPS: On/Off
	4	+5V	O	5 V DC	5 V DC power to ADS1
	5	SGND	-	-	Ground
	6	FJ_HPS	I	0/5 V DC	ADS1: On/Off
	7	+5V	O	5 V DC	5 V DC power to ADS2
	8	SGND	-	-	Ground
	9	RJ_HPS	I	0/5 V DC	ADS2: On/Off
CN8	1	+5V	O	5 V DC	5 V DC power to SPS
Connected to the staple position sensor	2	SGND	-	-	Ground
	3	JIS	I	0/5 V DC	SPS: On/Off
	4	NC	-	-	Not used
	5	NC	-	-	Not used
CN9	1	+5V	O	5 V DC	5 V DC power to PCS
Connected to the paper conveying sensor	2	SGND	-	-	Ground
	3	PINS	I	0/5 V DC	PCS: On/Off

Connector	Pin No.	Signal	I/O	Voltage	Description
CN10	1	+5V	O	5 V DC	5 V DC power to BLS
Connected to the belt sensor	2	SGND	-	-	Ground
	3	BRS	I	0/5 V DC	BLS: On/Off
	4	NC	-	-	Not used
CN11	1	+5V	O	5 V DC	5 V DC power to RLS
Connected to the roller sensor	2	SGND	-	-	Ground
	3	RUDS	I	0/5 V DC	RLS: On/Off
	4	NC	-	-	Not used
CN12	1	STPM+	O	0/24 V DC (pulse)	STM drive control signal
Connected to the staple motor, stapler home position sensor, stapler self priming sensor and stapler empty sensor	2	STPM+	O	0/24 V DC (pulse)	STM drive control signal
	3	STPM-	O	0/24 V DC (pulse)	STM drive control signal
	4	STPM-	O	0/24 V DC (pulse)	STM drive control signal
	5	+5V	O	5 V DC	5 V DC power to staple
	6	STP_HPS	I	0/5 V DC	STHPS: On/Off
	7	SELF_P	I	0/5 V DC	STSPS: On/Off
	8	LS	I	0/5 V DC	STES: On/Off
	9	SGND	-	-	Ground
CN13	1	+24V	O	24 V DC	24 V DC power to STCSW
Connected to the staple cover switch	2	H_SW	I	0/5 V DC	STCSW: On/Off
CN14	1	SLD_*A	O	0/24 V DC (pulse)	SLM drive control signal
Connected to the slide motor	2	SLD_A	O	0/24 V DC (pulse)	SLM drive control signal
	3	SLD_B	O	0/24 V DC (pulse)	SLM drive control signal
	4	SLD_*B	O	0/24 V DC (pulse)	SLM drive control signal
CN15	1	TM_+	O	0/24 V DC	TEM drive control signal
Connected to the tray elevation motor	2	TM_-	O	0/24 V DC	TEM drive control signal
CN16	1	+24V	O	24 V DC	24 V DC power to PDSOL
Connected to the paddle solenoid	2	P_SOL	O	0/24 V DC	PDSOL: On/Off
	3	NC	-	-	Not used
	4	NC	-	-	Not used
CN17	1	+24V	O	24 V DC	24 V DC power to PSSOL
Connected to the paper surface solenoid	2	S_SOL	O	0/24 V DC	PSSOL: On/Off
	3	NC	-	-	Not used
CN18	1	FJMOT_*A	O	0/24 V DC (pulse)	ADM1 drive control signal
Connected to the adjustment motor 1/2	2	FJMOT_A	O	0/24 V DC (pulse)	ADM1 drive control signal
	3	FJMOT_B	O	0/24 V DC (pulse)	ADM1 drive control signal
	4	FJMOT_*B	O	0/24 V DC (pulse)	ADM1 drive control signal
	5	RJMOT_*A	O	0/24 V DC (pulse)	ADM2 drive control signal
	6	RJMOT_A	O	0/24 V DC (pulse)	ADM2 drive control signal
	7	RJMOT_B	O	0/24 V DC (pulse)	ADM2 drive control signal
	8	RJMOT_*B	O	0/24 V DC (pulse)	ADM2 drive control signal

Connector	Pin No.	Signal	I/O	Voltage	Description
CN19	1	FMOT_*B	O	0/24 V DC (pulse)	PCM drive control signal
Connected to the paper conveying motor and bundle discharge motor	2	+24V	O	24 V DC	24 V DC power to PCM
	3	FMOT_B	O	0/24 V DC (pulse)	PCM drive control signal
	4	FMOT_A	O	0/24 V DC (pulse)	PCM drive control signal
	5	+24V	O	24 V DC	24 V DC power to PCM
	6	FMOT_*A	O	0/24 V DC (pulse)	PCM drive control signal
	7	TMOT_*B	O	0/24 V DC (pulse)	BDM drive control signal
	8	+24V	O	24 V DC	24 V DC power to BDM
	9	TMOT_B	O	0/24 V DC (pulse)	BDM drive control signal
	10	TMOT_A	O	0/24 V DC (pulse)	BDM drive control signal
	11	+24V	O	24 V DC	24 V DC power to BDM
	12	TMOT_*A	O	0/24 V DC (pulse)	BDM drive control signal
CN20	1	ROMOT_*B	O	0/24 V DC (pulse)	RLM drive control signal
Connected to the roller motor	2	+24V	O	24 V DC	24 V DC power to RLM
	3	ROMOT_B	O	0/24 V DC (pulse)	RLM drive control signal
	4	ROMOT_A	O	0/24 V DC (pulse)	RLM drive control signal
	5	+24V	O	24 V DC	24 V DC power to RLM
	6	ROMOT_*A	O	0/24 V DC (pulse)	RLM drive control signal
CN21	1	+24V	O	24 V DC	24 V DC power to BLSOL
Connected to the belt solenoid	2	BR_SOL	O	0/24 V DC	BLSOL: On/Off
CN22	1	+5V	O	5 V DC	5 V DC power to SLS
Connected to the slide sensor	2	SGND	-	-	Ground
	3	SLD_HP	I	0/5 V DC	SLS: On/Off
CN23	1	RMOT_*B	O	0/24 V DC (pulse)	SBM drive control signal
Connected to the switchback motor	2	+24V	O	24 V DC	24 V DC power to SBM
	3	RMOT_B	O	0/24 V DC (pulse)	SBM drive control signal
	4	RMOT_A	O	0/24 V DC (pulse)	SBM drive control signal
	5	+24V	O	24 V DC	24 V DC power to SBM
	6	RMOT_*A	O	0/24 V DC (pulse)	SBM drive control signal
	7	NC	-	-	Not used
CN24	1	F_SOL	O	0/24 V DC	FLSOL: On/Off
Connected to the flapper solenoid and switchback solenoid	2	+24V	O	24 V DC	24 V DC power to FLSOL
	3	G_SOL	O	0/24 V DC	SBSOL: On/Off
	4	+24V	O	24 V DC	24 V DC power to SBSOL

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List of maintenance parts

Maintenance part name		Part No.	Alternative part No.	Fig. No.	Ref. No.
Name used in service manual	Name used in parts list				
Switchback roller	ROLLER,SWITH BACK	5HL11980	-	4	23
Switchback eject roller	ROL-RV-UP	5HL12190	-	4	36
Paper conveying roller	ROL-FE-FEED-ENT	305JA71360	5JA71360	6	6
Bundle discharge belt unit	ASY-BLT-KM	305JA71580	5JA71580	6	1
Eject roller	ROL-FE-PICK	305JA70310	5JA70310	6	50
Static eliminator	BRSH-PICK-1	305JA71410	5JA71410	6	18
Static eliminator	BRSH-PICK-2	305JA71420	5JA71420	6	48
Static eliminator	BRSH-PICK-3	305JA71430	5JA71430	6	47
Push paper lever cushion	CUSH-YO	305JA70280	5JA70280	5	33

Periodic maintenance procedures

Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Exterior	Overall exterior cover	Clean	Every service	Clean with alcohol or a dry cloth.	

Section	Maintenance part/location	Method	Maintenance cycle	Points and cautions	Page
Paper conveying section	Switchback roller	Clean	Every service	Clean with alcohol.	
	Switchback eject roller	Clean	Every service	Clean with alcohol.	
	Paper conveying roller	Clean	Every service	Clean with alcohol.	
	Bundle discharge belt unit	Clean	Every service	Clean with alcohol.	
	Eject roller	Clean	Every service	Clean with alcohol.	
	Static eliminator	Check	Every service	If paper powder or dust adheres to tip of brush, remove it.	
	Push paper lever cushion	Clean	Every service	Clean with alcohol.	

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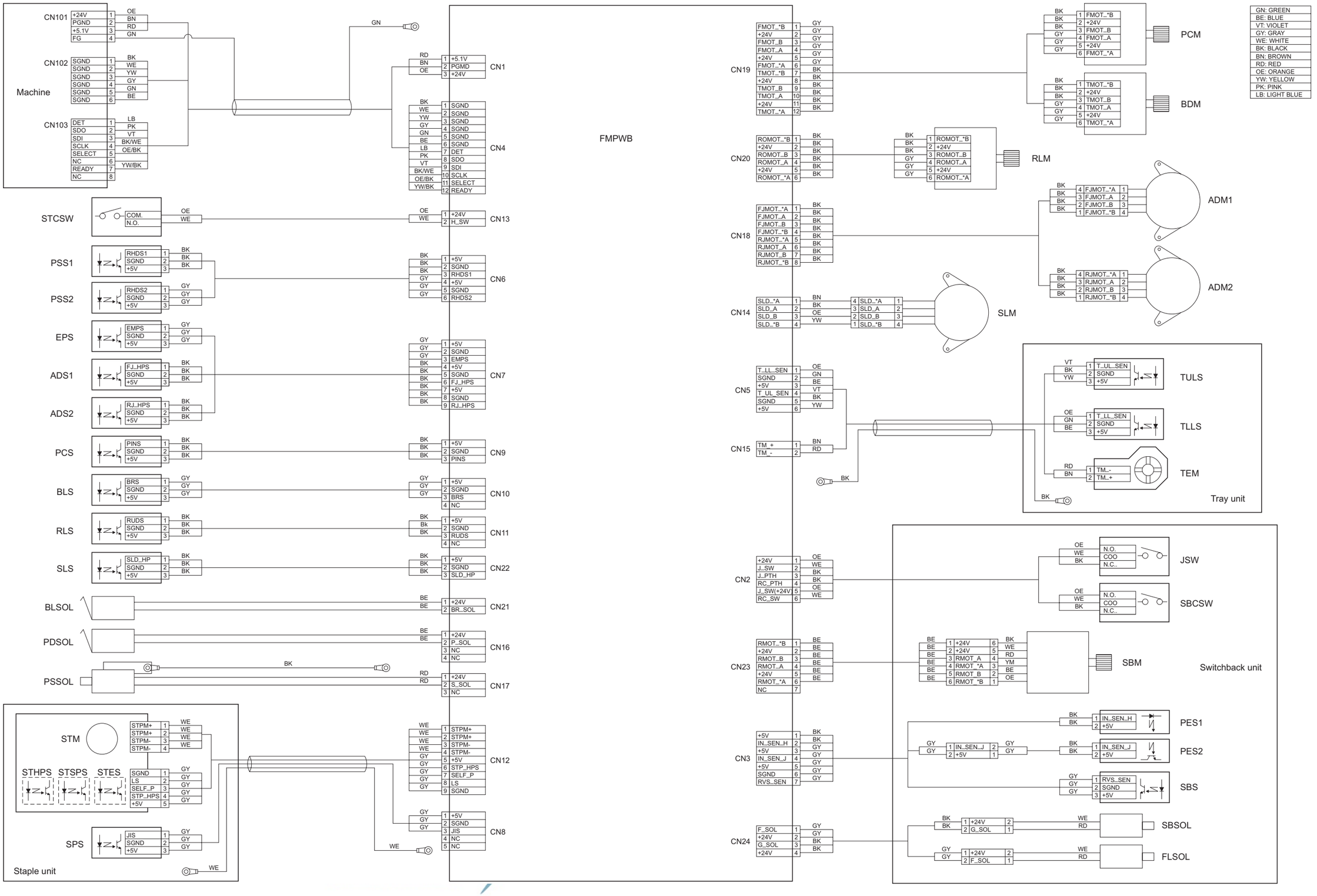
Wiring diagram



KYOCERA MITA EUROPE B.V.

Hoeksteen 40, 2132 MS Hoofddorp,
The Netherlands
Phone: +31.20.654.0000
Home page: http://www.kyoceramita-europe.com
Email: info@kyoceramita-europe.com

KYOCERA MITA NEDERLAND B.V.
Beechavenue 25, 1119 RA Schiphol-Rijk
The Netherlands
Phone: +31.20.58.77.200

KYOCERA MITA (UK) LTD
8 Beacontree Plaza
Gillette Way Reading Berks RG2 0BS,
U.K.
Phone: +44.1189.311.500

KYOCERA MITA ITALIA S.p.A.
Via G. Verdi, 89 / 91, 20063 Cernusco s/N
Milano, Italy
Phone: +39.02.92179.1

S.A. KYOCERA MITA BELGIUM N.V.
Hermesstraat 8A, 1930 Zaventem,
Belgium
Phone: +32.2.720.9270

KYOCERA MITA FRANCE S.A.
Parc Les Algorithmes Saint Aubin
91194 GIF-SUR-YVETTE,
France
Phone: +33.1.6985.2600

KYOCERA MITA ESPAÑA S.A.
Edificio Kyocera, Avda de Manacor No. 2,
28290 Las Matas (Madrid),
Spain
Phone: +34.91.631.8392

KYOCERA MITA FINLAND OY
Kirvesmiehenkatu 4, 00880 Helsinki,
Finland
Phone: +358.9.4780.5200

KYOCERA MITA (SCHWEIZ)
Hohlstrasse 614, 8048 Zürich
Switzerland
Phone: +41.1.908.4949

KYOCERA MITA DEUTSCHLAND GMBH
Otto-Hahn-Str. 12 D-40670 Meerbusch,
Germany
Phone: +49.2159.918.0

KYOCERA MITA GMBH AUSTRIA
Eduard-Kittenberger-Gasse 95,
1230 Wien,
Austria
Phone: +43.1.86338.210

KYOCERA MITA SVENSKA AB
Esbogatan 16B 164 75 Kista,
Sweden
Phone: +46.8.546.55000

KYOCERA MITA NORGE
Postboks 150 Oppsal, NO 0619 Oslo
Olaf Helsetsvei 6, NO 0694 Oslo,
Norway
Phone: +47.22.62.73.00

KYOCERA MITA DANMARK A/S
Ejby Industrivej 1, DK-2600 Glostrup,
Denmark
Phone: +45.5687.1100

KYOCERA MITA PORTUGAL LDA.
Rua do Centro Cultural, 41 (Alvalade) 1700-106 Lisbon,
Portugal
Phone: +351.21.842.9100

KYOCERA MITA SOUTH AFRICA (PTY) LTD.
527 Kyalami Boulevard,
Kyalami Business Park Midrand,
South Africa
Phone: +27.(0)11.540.2600

KYOCERA MITA AMERICA, INC.

Headquarters:
225 Sand Road,
Fairfield, New Jersey 07004-0008,
U.S.A.
Phone: (973) 808-8444

KYOCERA MITA AUSTRALIA PTY. LTD.
Level 3, 6-10 Talavera Road, North Ryde,
N.S.W. 2113 Australia
Phone: (02) 9888-9999

KYOCERA MITA NEW ZEALAND LTD.
1-3 Parkhead Place, Albany
P.O. Box 302 125 NHPC, Auckland,
New Zealand
Phone: (09) 415-4517

KYOCERA MITA (THAILAND) CORP., LTD.
9/209 Ratchada-Prachachem Road,
Bang Sue, Bangkok 10800, Thailand
Phone: (02) 586-0320

KYOCERA MITA SINGAPORE PTE LTD.
121 Genting Lane, 3rd Level,
Singapore 349572
Phone: 67418733

KYOCERA MITA HONG KONG LIMITED
11/F., Mita Centre,
552-566, Castle Peak Road,
Tsuen Wan, New Territories,
Hong Kong
Phone: 24297422

KYOCERA MITA TAIWAN Corporation.
7F-1~2, No.41, Lane 221, Gangchi Rd.
Neihu District, Taipei, Taiwan, 114. R.O.C.
Phone: (02) 87511560

KYOCERA MITA Corporation

2-28, 1-chome, Tamatsukuri, Chuo-ku
Osaka 540-8585, Japan
Phone: (06) 6764-3555
http://www.kyoceramita.com

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KYOCERA MITA AMERICA, INC.

Headquarters:
225 Sand Road,
Fairfield, New Jersey 07004-0008
TEL : (973) 808-8444
FAX : (973) 882-6000

New York Branch:
1410 Broadway 23rd floor
New York, NY 10018
TEL : (917) 286-5400
FAX : (917) 286-5402

Northeastern Region:
225 Sand Road,
Fairfield, New Jersey 07004-0008
TEL : (973) 808-8444
FAX : (973) 882-4401

Midwestern Region:
201 Hansen Court Suite 119
Wood Dale, Illinois 60191
TEL : (630) 238-9982
FAX : (630) 238-9487

Western Region:
14101 Alton Parkway,
Irvine, California 92618-7006
TEL : (949) 457-9000
FAX : (949) 457-9119

Southeastern Region:
1500 Oakbrook Drive,
Norcross, Georgia 30093
TEL : (770) 729-9786
FAX : (770) 729-9873

Southwestern Region:
2825 West Story Road,
Irving, Texas 75038-5299
TEL : (972) 550-8987
FAX : (972) 252-9786

National Operation Center & National Training Center:
2825 West Story Road,
Irving, Texas 75038-5299
TEL : (972) 659-0055
FAX : (972) 570-5816

Latin America Division:
8240 N.W. 52nd. Terrace Dawson Building,
Suite 108 Miami, Florida 33166
TEL : (305) 421-6640
FAX : (305) 421-6666

KYOCERA MITA CANADA, LTD.

6120 Kestrel Road, Mississauga,
Ontario L5T 1S8, Canada
TEL : (905) 670-4425
FAX : (905) 670-8116

KYOCERA MITA MEXICO, S.A. DE C.V.

Av. 16 de Septiembre #407
Col. Santa Inés,
Azcapotzalco México,
D.F. 02130, México
TEL : (55) 5383-2741
FAX : (55) 5383-7804

http://www.kyoceramita.com

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