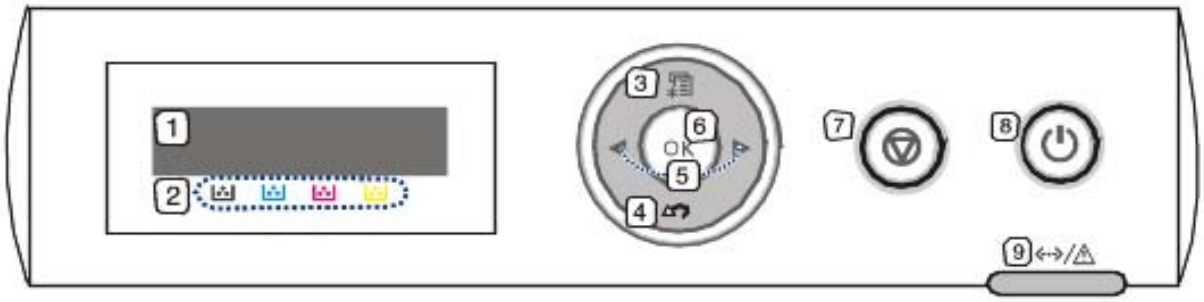
4. Alignment & Troubleshooting

4.1 Alignment and Adjustments

This chapter describes the main functions for service, such as the product maintenance method, the test output related to maintenance and repair, Jam removing method, and so on.
It includes the contents of manual.

4.1.1 Control Panel



1	Display	Shows the current status and prompts during an operation.
2	Toner colors	Show the status of each toner cartridge.
3	(menu)	Enters menu mode and scrolls through the available menus.
4	(Back)	Sends you back to the upper menu level.
5	Arrow	Scroll through the options available in the selected menu, and increase or decrease values.
6	**OK**	Confirms the selection on the screen.
7	(Stop)	Stops an operation at any time. The pop-up window appears on the screen showing the current job that the user can stop or resume.
8	(Power)	Sends the machine into power saver mode. You can also turn the power on and off with this button.
9	Status LED	Shows the status of your machine.

4.1.2 Understanding The Status LED

The color of the Status LED indicates the machine's current status.

Status		Description
Off		The machine is off-line.
Green	Blinking	• When the LED blinks slowly, the machine is receiving data from the computer. • When the LED blinks rapidly, the machine is printing data.
	On	• The machine is on-line and can be used. • The machine is in power saver mode. When data is received, or any button is pressed, it switches to on-line automatically.
Red	Blinking	• A minor error has occurred and the machine is waiting for the error to be cleared. Check the display message. When the problem is cleared, the machine resumes. • Small amount of toner is left in the cartridge. The estimated cartridge life[a] of toner is close. Prepare a new cartridge for replacement. You may temporarily increase the printing quality by redistributing the toner.
	On	• A toner cartridge has almost reached its estimated cartridge life[a]. It is recommended to replace the toner cartridge. • A paper jam has occurred. • The cover is opened. Close the cover. • There is no paper in the tray. Load paper in the tray. • The machine has stopped due to a major error. Check the display message

[a] Estimated cartridge life means the expected or estimated toner cartridge life, which indicates the average capacity of print-outs and is designed pursuant to ISO/IEC 19798. The number of pages may be affected by the percent of image area of your originals, operating environment, printing interval, media type, and media size. Some amount of toner may remain in the cartridge even when red LED is turned on and the printer stops printing.

4.1.3 Menu Overview

This chapter explains the menu item. If you want to know more information about the menu item, refer to the User Guide.

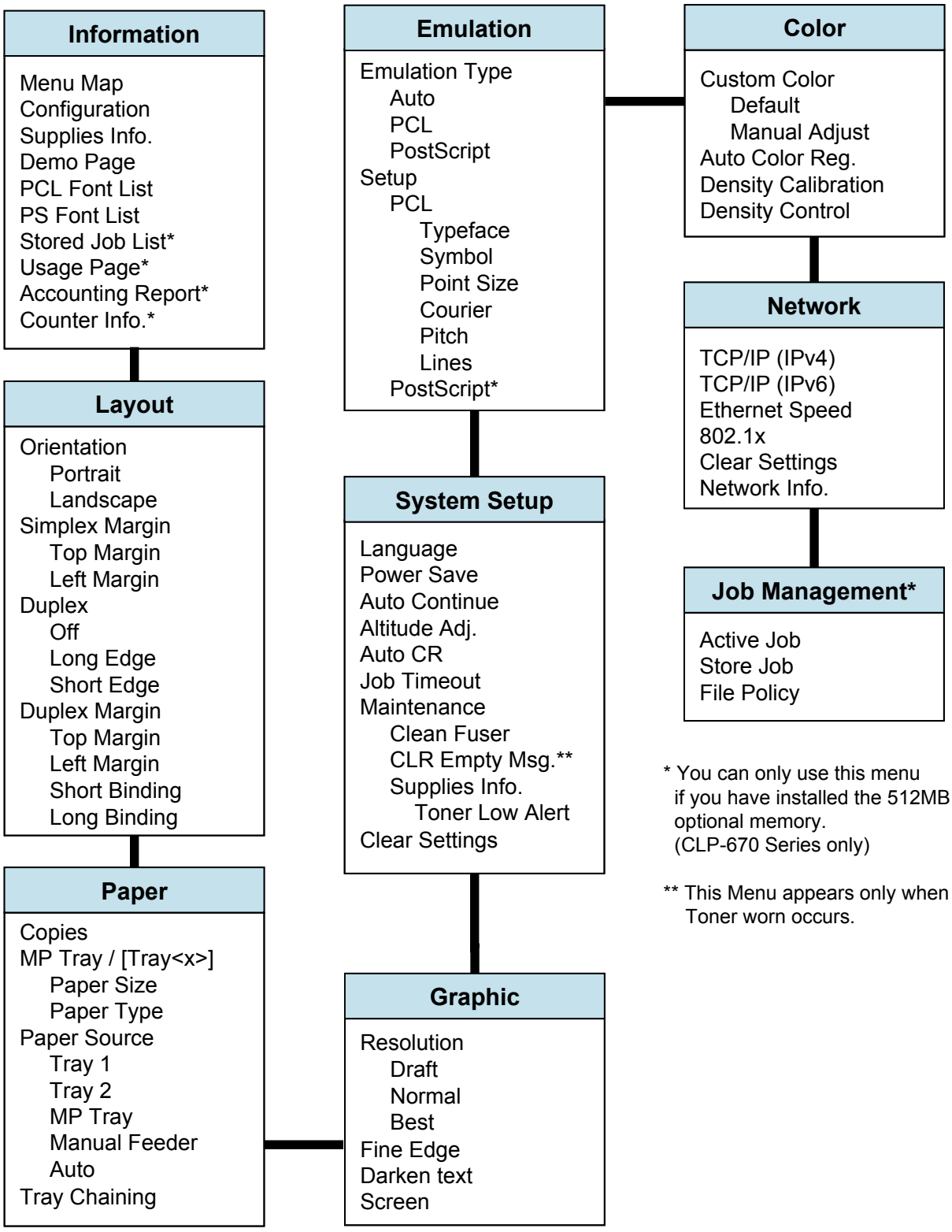
■ ACCESSING OPERATOR PANEL MENU

1. Press Menu on the control panel.
2. Press Scroll (▲ to ▼) to highlight the desired setting and press OK.
3. If the setting item has sub menus, repeat step 2.
4. Press Scroll (▲ to ▼) to access the required value.
5. Press OK to save the selection.
6. If you want to move to the upper level menus, press Back .
7. Press Stop to return to ready mode.

■ Menu Description

- Information : This menu contains information pages that you can print to give details about the printer and its configuration
- Layout : This menu allows you to adjust the paper layout setting.
- Paper : This menu allows you to select the default paper size, default paper type, the tray for printing, etc.
- Graphic : This menu can select the default resolution. If the resolution is high, the clarity of the printouts is shaper, but the print time may take longer. (Draft, Normal, Best)
- System Setup : This menu allows you to setup the machine.
- Emulation : This menu allow you to select the machine language and to set up the emulation configuration.
- Color : This menu allow you to adjust the color setting.
- Network : This menu allow you to configure the network interface.
- Job Management : This menu shows the status for printing jobs.

■ Menu Map



* You can only use this menu if you have installed the 512MB optional memory. (CLP-670 Series only)

** This Menu appears only when Toner worn occurs.

■ Network Menu Map

Depth 1	Depth 2	Depth 3	Depth 4	Depth 5
TCP/IP (IPv4)	DHCP *			
	BOOTP			
	Static	IP Address	192.0.0.192	Subnet Mask
		Primary DNS	0.0.0.0	
		Secondary DNS	0.0.0.0	
TCP/IP (IPv6)	IPv6 Activate	On *		
		Off		
	DHCPv6 Config	Router *		
		DHCPv6 Address		
		DHCPv6 Off		
Ethernet Speed	Auto *			
	10M Half			
	10M Full			
	100M Half			
	100M Full			
802.1x	Off *			
	On	EAP-MD5	User Name	Stef M
		EAP-MSCHAPv2	User Name	Stef M
		PEAP	User Name	Stef M
Clear Setting	Clear?	Clearing…		
Network Info	Print?	Printing…		

■ Useful Menu Item for service

Printing a machine report

You can print the machine's information.
Configuration : You can print a report on the machine's overall configuration.
Demo Page : You can print the demo page whether your machine is printing properly or not.

1. Press on the control panel.
2. Press up/down arrow to highlight Information and press OK.
3. Press up/down arrow to highlight Configuration and press OK.
4. The display shows Print?, then press OK to print the configuration report.

Monitoring the supplies life

To view the supply life indicators, follow the steps below:1.Press on the control panel.

1. Press on the control panel.
2. Press up/down arrow to highlight System Setup and press OK.
3. Press up/down arrow to highlight Maintenance and press OK.
4. Press up/down arrow to highlight Supplies Info. and press OK.
5. The display shows two options as you press up/down arrow.
   - Printed Pages: Displays the total number of pages printed.
   - Remains Info.: Displays how much toner remains in the cartridge.

Cleaning a fuser belt

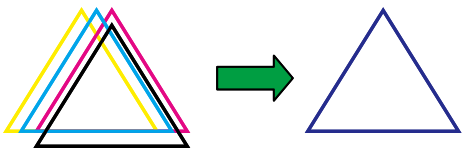
If you are experiencing blurred, faded, or smeared printouts, you can clear the problem by printing a cleaning sheet, provided by your printer.You can Print:1.Press on the control panel.

1. Press on the control panel.
2. Press up/down arrow to highlight System Setup and press OK.
3. Press up/down arrow to highlight Maintenance and press OK.
4. Press up/down arrow to highlight Clean Fuser and press OK.
   Your machine automatically picks up a sheet of paper from the tray and prints out a cleaning sheet with dust or toner particles on it.

Conducting the Auto Color Registration

You can adjust the position of color texts or graphics to match the position of the printed colors to those on your screen. When you have moved the machine or replaced some parts, it is strongly recommended to operate this menu manually.

1. Press on the control panel.
2. Press up/down arrow to highlight Color and press OK.
3. Press up/down arrow to highlight Auto Color Reg. and press OK.
4. The display shows Run Now? ◀Yes▶/ ◀No▶ , then select yes or no. And press the OK to conduct the Auto Color Registration.

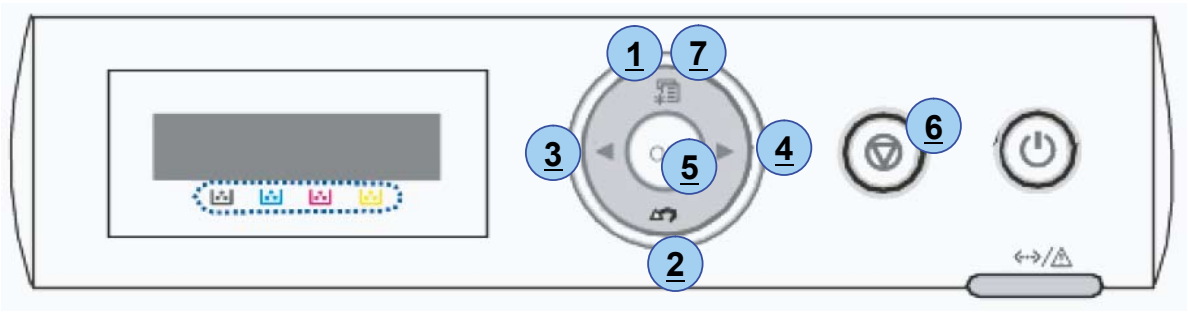


4.1.4 Tech Mode

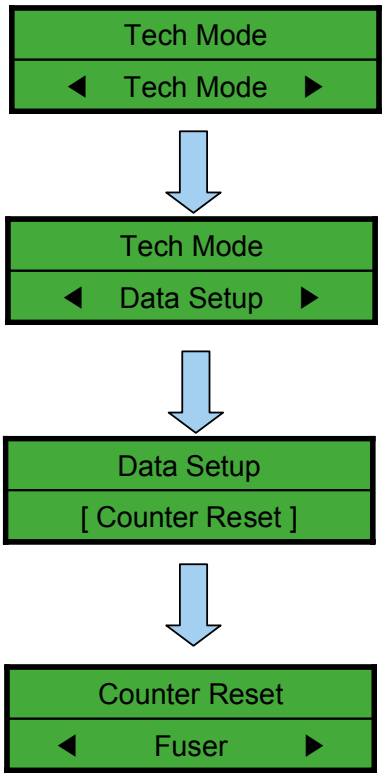
In service (tech) mode, the technician can check the machine and perform various test to isolate the cause of a malfunction. While in Tech mode, the machine still performs all normal operations.

To enter the Tech Mode

To enter the Tech Mode, press **"Menu + Back + Left + Right + OK + Stop + Menu"** in sequence, and the LCD briefly displays 'Tech Mode', the machine has entered service tech mode.



After entering the tech mode, select the item you want by using a button on control panel.
Below picture shows to select the fuser counter reset.



Tech Mode Structrue

Depth 1	Depth 2	Depth 3	Depth 4
Data Setup	Counter Reset	Fuser	
		Pickup Roller	Tray1
			Tray2
			MP Tray
	Margin	Top Margin	[-10-10]:0
		Left Margin	[-10-10]:0
	B2B Mode	0-99	
	Toner Low Level	[1~30]: 10 %*	
	Paper Substitution	Off *	
		On	
Report	Suppilies Info	Printing…	
	Event Log	Printing…	
	ACR Report	Printing…	
	Job Duty Report	Printing…	
	Density Report	Printing…	
	CTD Report	Printing…	
Machine Test	Fuser Offset	StandBy Temp.	[-20-0]:0*,-5,-10,-15,-20
		Run Temp.	[-20-0]:0*,-5,-10,-15,-20
		101-185mm Temp.	[-20-0]:0*,-5,-10,-15,-20
		186-216mm Temp.	[-20-0]:0*,-5,-10,-15,-20
		90 gms Temp.	[-20-0]:0*,-5,-10,-15,-20
		Bond Temp.	[-20-0]:0*,-5,-10,-15,-20
		OHP Temp.	[-20-0]:0*,-5,-10,-15,-20
		Cardstock Temp.	[-20-0]:0*,-5,-10,-15,-20
		Env. Temp.	[-20-0]:0*,-5,-10,-15,-20
		Label Temp.	[-20-0]:0*,-5,-10,-15,-20
EDC Mode	NVM Read Write		
	NVM Initialize		
	Test Routines		

Tech Mode Item description

Item	Description
Counter Reset	This menu can reset the counts for the Fuser or Pick up roller. When replacing the fuser or pick up roller, you must do this menu.
Margin	This menu can adjust the paper margin.
Toner Low Level	When the toner remains less than setting up level, the machine notify user of toner low.
B2B Mode	You can set B2B mode
Suppilies Info	You can print the supplies information page.
Event Log	You can print the Event Log that is occurred for specific period.
ACR Report	You can print the ACR Report.
NVM Read/ Write	Engine parameter read/write
NVM Initialization	This menu can initialize all NVM values.
Test Routine	You can check status of the machine coponents.

NVM Read/ Write Table

Code	LCD display	Meaning	Default	Min. / Max	Description
105-0030	0030-MHV DC K	Charger HV Black DC Duty	0	-15 ~ +15	+ : Optical Density decrease - : Opticla Density increase
106-0000	0000-Deve DC Y	Deve DC Yellow	0	-25 ~ +25	+ : Optical Density decrease - : Opticla Density increase
106-0010	0010-Deve DC M	Deve DC Magenta	0	-25 ~ +25	+ : Optical Density decrease - : Opticla Density increase
106-0020	0020-Deve DC C	Deve DC Cyan	0	-25 ~ +25	+ : Optical Density decrease - : Opticla Density increase
106-0030	0030-Deve DC K	Deve DC Black	0	-25 ~ +25	+ : Optical Density decrease - : Opticla Density increase
106-0040	0040-Deve VPP Y	Deve VPP Yellow	0	-25 ~ +25	+ : Optical Density decrease - : Opticla Density increase
106-0050	0050-Deve VPP M	Deve VPP Magenta	0	-25 ~ +25	+ : Optical Density decrease - : Opticla Density increase
106-0060	0060-Deve VPP C	Deve VPP Cyan	0	-25 ~ +25	+ : Optical Density decrease - : Opticla Density increase
106-0070	0070-Deve VPP K	Deve VPP Black	0	-25 ~ +25	+ : Optical Density decrease - : Opticla Density increase
106-0080	0080-Deve AC Y	Deve AC Yellow	0	-25 ~ +25	+ : Optical Density slightly increase - : Opticla Density slightly decrease
106-0090	0090-Deve AC M	Deve AC Magenta	0	-25 ~ +25	+ : Optical Density slightly increase - : Opticla Density slightly decrease

Code	LCD display	Meaning	Default	Min. / Max	Description
106-0100	0100-Deve AC C	Deve AC Cyan	0	-25 ~ +25	+ : Optical Density slightly increase - : Opticla Density slightly decrease
106-0110	0110-Deve AC K	Deve AC Black	0	-25 ~ +25	+ : Optical Density slightly increase - : Opticla Density slightly decrease
106-0120	0120-Deve AC Freq	Deve AC Frequency	0	0 ~ +500	+ : Optical Density slightly increase - : Opticla Density slightly decrease
107-0000	0000-THV Y	Transfer1 HV Yellow Duty	0	-25 ~ +25	+ : Toner Retransfer - : Image Delition
107-0010	0010-THV M	Transfer1 HV Magenta Duty	0	-25 ~ +25	+ : Toner Retransfer - : Image Delition
107-0020	0020-THV C	Transfer1 HV Cyan Duty	0	-25 ~ +25	+ : Toner Retransfer - : Image Delition
107-0030	0030-THV K	Transfer1 HV Black Duty	0	-25 ~ +25	+ : Toner Retransfer - : Image Delition
107-0040	0040-THV Low Y	Transfer1 Low HV Yellow Duty In None Image Area	0	-10 ~ +10	+ : OPC Damage - : Voltage overshoot
107-0050	0050-THV Low M	Transfer1 Low HV Magenta Duty In None Image Area	0	-10 ~ +10	+ : OPC Damage - : Voltage overshoot
107-0060	0060-THV Low C	Transfer1 Low HV Cyan Duty In None Image Area	0	-10 ~ +10	+ : OPC Damage - : Voltage overshoot
107-0070	0070-THV Low K	Transfer1 Low HV Black Duty In None Image Area	0	-10 ~ +10	+ : OPC Damage - : Voltage overshoot
107-0130	0130-ATTR+ Bias	ATTR plus bias voltage on at normal drive level	0	-10 ~ +10	+ : paper Charging ↑ - : paper Charging ↓
107-0140	0140-THV Y_Dup	Transfer1 HV Yellow Duplex Duty	0	-25 ~ +25	+ : Toner Retransfer - : Image Delition
107-0150	0150-THV M_Dup	Transfer1 HV Magenta Duplex Duty	0	-25 ~ +25	+ : Toner Retransfer - : Image Delition
107-0160	0160-THV C_Dup	Transfer1 HV Cyan Duplex Duty	0	-25 ~ +25	+ : Toner Retransfer - : Image Delition
107-0170	0170-THV K_Dup	Transfer1 HV Black Duplex Duty	0	-25 ~ +25	+ : Toner Retransfer - : Image Delition

Code	LCD display	Meaning	Default	Min. / Max	Description
109-0010	0010-Print Temp	Target Temperature during run mode.	0	-10 ~ 0	1. Description : As (-) value increases, fusing temperature goes down in normal mode. 2. Trouble : Hot offset takes place, or printed paper is too hot. ※ Hot offset : When Fusing temperture is too high, printed image appears again in 95mm cycle 3. Trobleshoot : Drop Fusing temperature by increasing (-) value.
109-0020	0020-Low Power Temp	Target Temperature during Power save mode.	0	-10 ~ 0	Reserved
109-0070	0070-Bond Temp	Media type offset for fuser roll temperature.	0	-10 ~ 0	1. Description : As (-) value increases, fusing temperature goes down in bond paper mode. 2. Trouble : Hot offset takes place, or printed paper is too hot when bond paper is printed. ※ Hot offset : When Fusing temperture is too high, printed image appears again in 95mm cycle 3. Trobleshoot : Drop Fusing temperature by increasing (-) value.
109-0080	0080-Trans Temp	Media type offset for fuser roll temperature.	0	-10 ~ 0	1. Description : As (-) value increases, fusing temperature goes down in OHP mode. 2. Trouble : Hot offset takes place, or printed paper is too hot when OHP is printed. ※ Hot offset : When Fusing temperture is too high, printed image appears again in 95mm cycle 3. Trobleshoot : Drop Fusing temperature by increasing (-) value.

Code	LCD display	Meaning	Default	Min. / Max	Description
109-0100	0100-Envelopes Temp	Media type offset for fuser roll temperature.	0	-10 ~ 0	1. Description : As (-) value increases, fusing temperature goes down in Envelope mode. 2. Trouble : Hot offset takes place, or printed paper is too hot when Envelope is printed. ※ Hot offset : When Fusing temperture is too high, printed image appears again in 95mm cycle 3. Trobleshoot : Drop Fusing temperature by increasing (-) value.
109-0110	0110-Labels Temp	Media type offset for fuser roll temperature.	0	-10 ~ 0	1. Description : As (-) value increases, fusing temperature goes down in label mode. 2. Trouble : Hot offset takes place, or printed paper is too hot when label is printed. ※ Hot offset : When Fusing temperture is too high, printed image appears again in 95mm cycle 3. Trobleshoot : Drop Fusing temperature by increasing (-) value.
109-0120	0120-Fuser Bias Duty	Fuser Bias Duty	0	-10 ~ +10	1. Description : As the digit value increases, fuser bias increases. 2. Trouble : When it is cold and dry, printed image of pastel tone appeas again in 95mm cycle. 3. Trobleshoot : Increase fuser bias by increasing the digit.
109-0130	0130-Thick Temp	Media type offset for fuser roll temperature.	0	-10 ~ 0	1. Description : As (-) value increases, fusing temperature goes down in thick mode. 2. Trouble : Hot offset takes place, or printed paper is too hot when thick paper is printed. ※ Hot offset : When Fusing temperture is too high, printed image appears again in 95mm cycle 3. Trobleshoot : Drop Fusing temperature by increasing (-) value.

Code	LCD display	Meaning	Default	Min. / Max	Description
110-0040	0040-LD Power Y	Yellow LD Power at Normal Speed	0	-10 ~ +10	+ : Optical Density increase - : Opticla Density decrease
110-0050	0050-LD Power M	Magenta LD Power at Normal Speed	0	-10 ~ +10	+ : Optical Density increase - : Opticla Density decrease
110-0060	0060-LD Power C	Cyan LD Power at Normal Speed	0	-10 ~ +10	+ : Optical Density increase - : Opticla Density decrease
110-0070	0070-LD Power K	Black LD Power at Normal Speed	0	-10 ~ +10	+ : Optical Density increase - : Opticla Density decrease
112-0000	0000-ACR condition	All Condition of ACR On/ Off	On	On/Off	On : ACR will be executed when environment changes. Off : ACR will be not executed in spite of environmental changes. ※ ACR means Auto Color Registration.
112-0115	0115-Fuser Motor Speed	Fuser Motor Speed For Regi.	0	-10 ~ +10 (step : 2)	+ : Fuser motor speed increase - : Fuser motor speed decrease
112-0116	0116-Feed Motor Speed	Feed Motor Speed For Regi.	0	-10 ~ +10 (step : 1)	+ : Fuser motor speed increase - : Fuser motor speed decrease

Test Routines Menu Item (Engine Diagnostic Test)

Code	LCD Display	Meaning	State Displayed
100-0040	0040-Color OPC	Color OPC BLDC Motor is On/Off	On[Off]
100-0050	0050-Color OPC Rdy	Detect if Color DEV BLDC Motor runs at normal speed	High[Low]
100-0060	0060-Color Dev	Color DEV BLDC Motor is On/Off	On[Off]
100-0070	0070-Color Dev Rdy	Detect if Color DEV BLDC Motor runs at normal speed	High[Low]
100-0120	0120-Exit Mot Fwd	Exit Motor Forward Fast On/Off	On[Off]
100-0130	0130-Exit Mot Slow	Exit Motor Forward Slow On/Off	On[Off]
100-0131	0131-Exit Mot Bwd	Exit Motor Forward Backward On/Off	On[Off]
100-0191	0191-System Fan Run	Start/Stop System Fan run	On[Off]
100-0192	0192-System Fan Rdy	Detects if System Fan runs at normal speed.	High[Low]
101-0000	0000-MP Feed Clutch	Engages drive to pick up a paper from bypass Tray(MP Tray).	On[Off]
101-0010	0010-Tray1 Pickup	Engages drive to pick up a paper from tray1.	On[Off]
101-0020	0020-Tray2 Pickup	Engages drive to pick up a paper from tray2. (Optional)	On[Off]
101-0120	0120-Tray1 Feed Mot	T1 Feed Motor On/Off	On[Off]
101-0130	0130-Tray2 Feed Mot	T2 Feed Motor On/Off	On[Off]
101-0200	0200-K Dev Clutch	Engages drive to Color, Motor dev	On[Off]
102-0000	0000-Tray1 Home Pos	Detect when tray1 is closed.	Closed[Opened]
102-0010	0010-Tray1 Empty	Detect when paper is in Tray1.	High[low]
102-0070	0070-Tray2 Home Pos	Detect when tray2 is closed.	Closed[Opened]
102-0080	0080-Tray2 Empty	Detect when paper is in tray2.	High[low]
102-0090	0090-Tray2 Size1	Detects whether auto size1 sensor of tray2 is high or low.	High[low]
102-0100	0100-Tray2 Size2	Detects whether auto size2 sensor of tray2 is high or low.	High[low]
102-0110	0110-Tray2 Size3	Detects whether auto size3 sensor of tray2 is high or low.	High[low]
102-0280	0280-MP Empty	Detects when paper is in Bypass Tray(MP Tray).	High[low]
102-0290	0290-Feed Sensor	Detect when a paper is at Feed sensor.	High[low]
102-0370	0370-Exit Sens	Detect when a paper is at Exit. sensor.	High[low]
105-0030	0030-K MHV Bias	Black MHV bias voltage on at normal drive level	On[Off]
105-0031	0031-Color MHV Bias	Color MHV bias voltage on at normal drive level	On[Off]
106-0000	0000-Y Dev Bias	Yellow Dev bias voltage on at normal drive level	On[Off]
106-0010	0010-M Dev Bias	Magenta Dev bias voltage on at normal drive level	On[Off]
106-0020	0020-C Dev Bias	Cyan Dev bias voltage on at normal drive level	On[Off]
106-0030	0030-K Dev Bias	Black Dev bias voltage on at normal drive level	On[Off]
106-0031	0031-K Dev AC	Black Dev bias AC voltage on at normal drive level	On[Off]
106-0032	0032-C Dev AC	Cyan Dev bias AC voltage on at normal drive level	On[Off]
106-0033	0033-M Dev AC	Magenta Dev bias AC voltage on at normal drive level	On[Off]
106-0034	0034-Y Dev AC	Yelllow Dev bias AC voltage on at normal drive level	On[Off]
107-0000	0000-Y THV Bias	Yellow THV bias voltage on at normal drive level	On[Off]
107-0010	0010-M THV Bias	Magenta THV bias voltage on at normal drive level	On[Off]

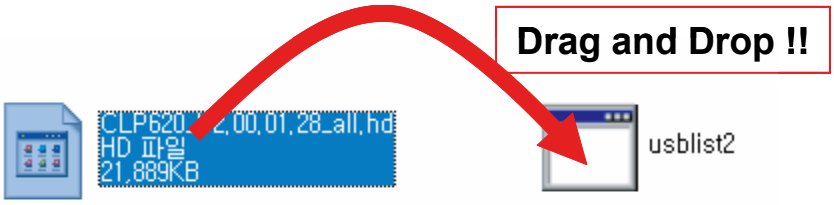
Code	LCD Display	Meaning	State Displayed
107-0020	0020-C THV Bias	Cyan THV bias voltage on at normal drive level	On[Off]
107-0030	0030-K THV Bias	Black THV bias voltage on at normal drive level	On[Off]
107-0040	0040-Y THV Bias R	Detect what the THV value is on the THV Roller	Numeric 3 digits
107-0120	0120-ATTR+ Bias	ATTR plus bias voltage on at normal drive level	On[Off]
107-0140	0140-ATTR- Bias	ATTR Minus bias voltage on at normal drive level	On[Off]
107-0150	0150-PTL	Pre Transfer Lamp 1	On[Off]
107-0160	0160-Erase Lamp	Erase Lamp 1	On[Off]
109-0000	0000-Temp A	Detects what the temperature A is on fuser.	Numeric 3 digits
109-0010	0000-Temp B	Detects what the temperature B is on fuser.	Numeric 3 digits
109-0030	0030-Fuser Mot Fwd	Fuser Motor Forward On/Off	On[Off]
109-0040	0040-Fuser Fan Run	Fuser Fan Motor On/Off	On[Off]
109-0050	0050-Fuser Bias	Fuser bias voltage on at normal drive level	On[Off]
109-0090	0090-Fuser Power On	It controls temperature of fuser as 180 degrees.	On[Off]
110-0000	0000-LSU Motor1 Rdy	Detects if LSU motor1 runs at normal speed.	High[Low]
110-0010	0010-LSU Motor2 Rdy	Detects if LSU motor2 runs at normal speed.	High[Low]
110-0060	0060-LSU Motor1 Run	LSU Motor1 On/Off	On[Off]
110-0070	0070-LSU Motor2 Run	LSU Motor2 On/Off	On[Off]
110-0080	0080-LD Power1	LSU LD1 Power On/Off (yellow)	On[Off]
110-0090	0090-LD Power2	LSU LD2 Power On/Off (magenta)	On[Off]
110-0100	0100-LD Power3	LSU LD3 Power On/Off (cyan)	On[Off]
110-0110	0110-LD Power4	LSU LD4 Power On/Off (black)	On[Off]
112-0000	0000-ACR Exec Now	Start Auto Color Registration	On[Off]
112-0010	0010-Manu Regi Clear	Clear Manual Offset Value of Color Regi.	On[Off]

4.1.5 Firmware Upgrade

• USB and Network port are used to F/W upgrade.
• Network applications (SWAS, SWS) can be used for network port upgrade.

4.1.5.1 Using the USB cable

1. Delete all processing job.
2. Confirm USB connection.
   If the network cable is connected, unplug it and connect the USB cable to the machine.
3. Download the firmware file from GSPN or other site and store it to your PC.
4. Decompress the file in some folder.
5. Drag the F/W file and Drop down on the usblist2.exe file.
   (CLP-620/670 series ROM have file name like 'CLP620_VA.BB.CC.DD.hd'.)

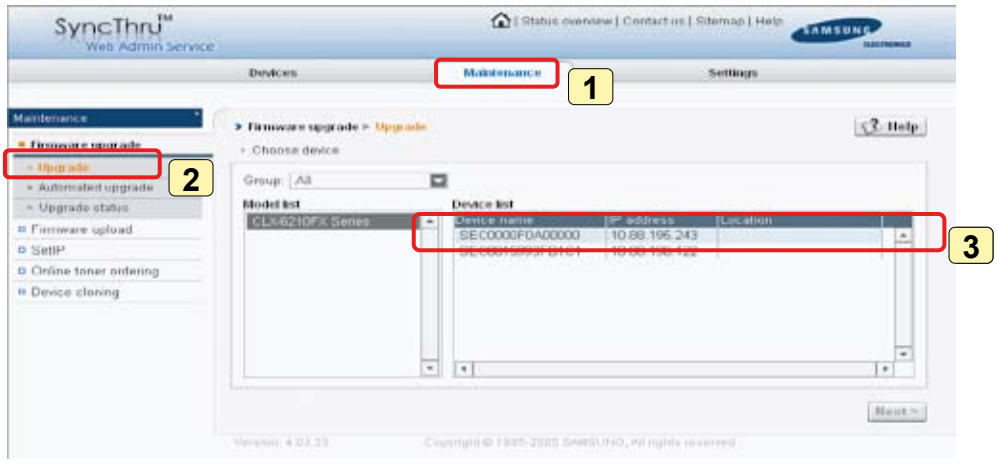


6. It will automatically update and reset.

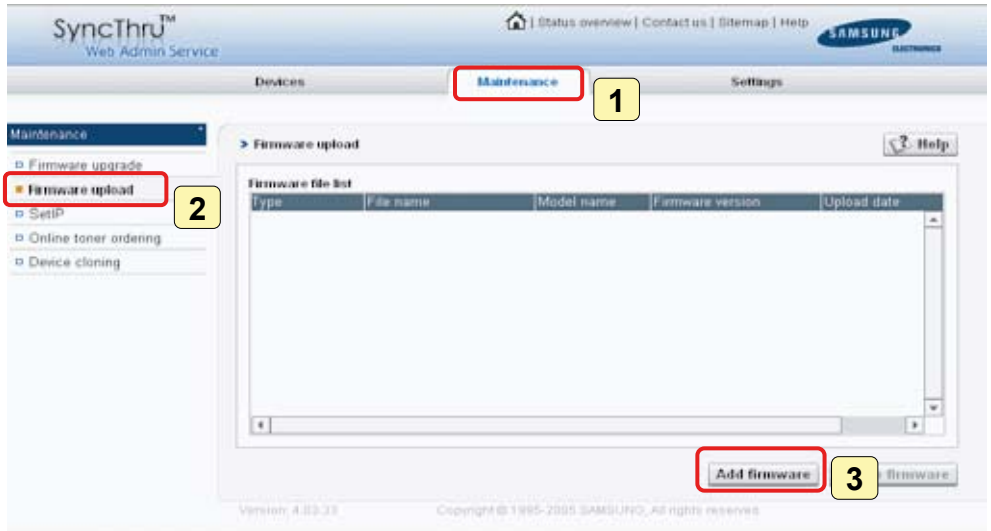
4.1.5.2 F/W upgrade using SWAS (SyncThru Web Admin Service)

To use below method, SWAS program is installed in PC.
Start the SWAS program.
(Windows Start menu > Programs > Samsung Netowork Printer Utilities > SyncThru Web Admin Service)

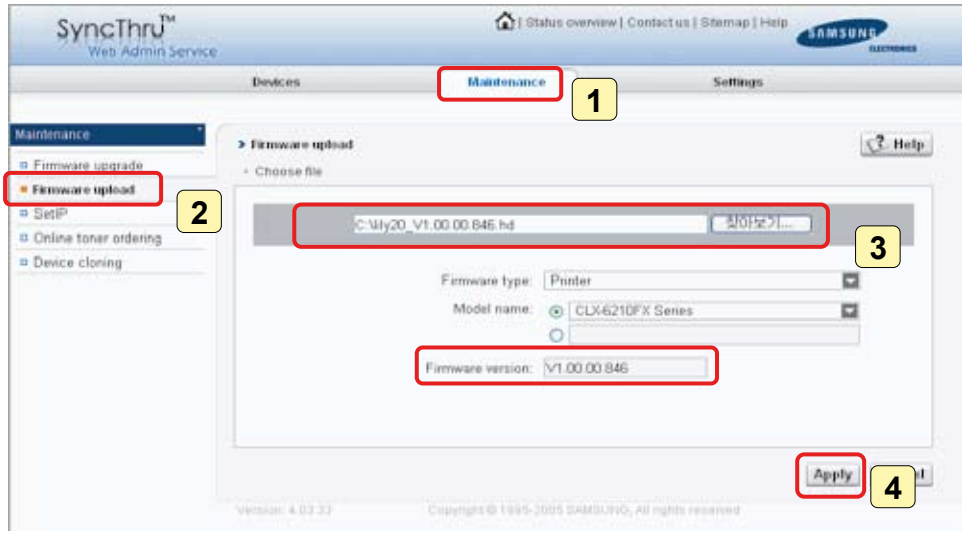
1. Firmware Upgrade → Upgrade (check device using IP address)



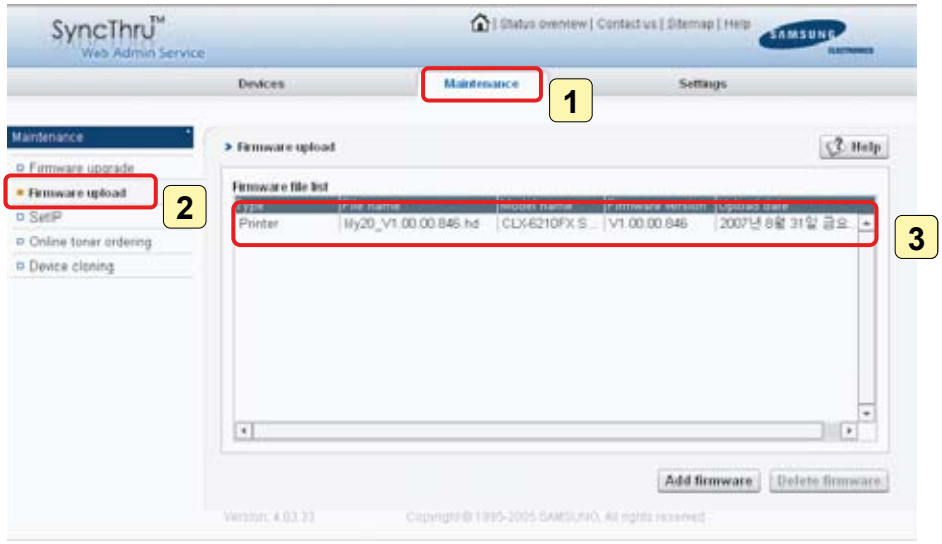
2. Maintenance → Firmware upload (register firmware)



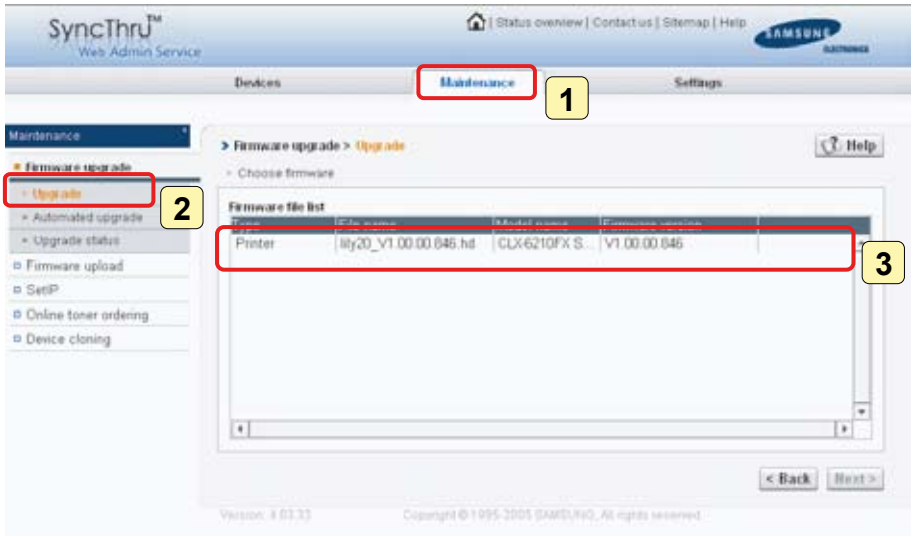
3. Maintenance → Firmware Upload (upload firmware)



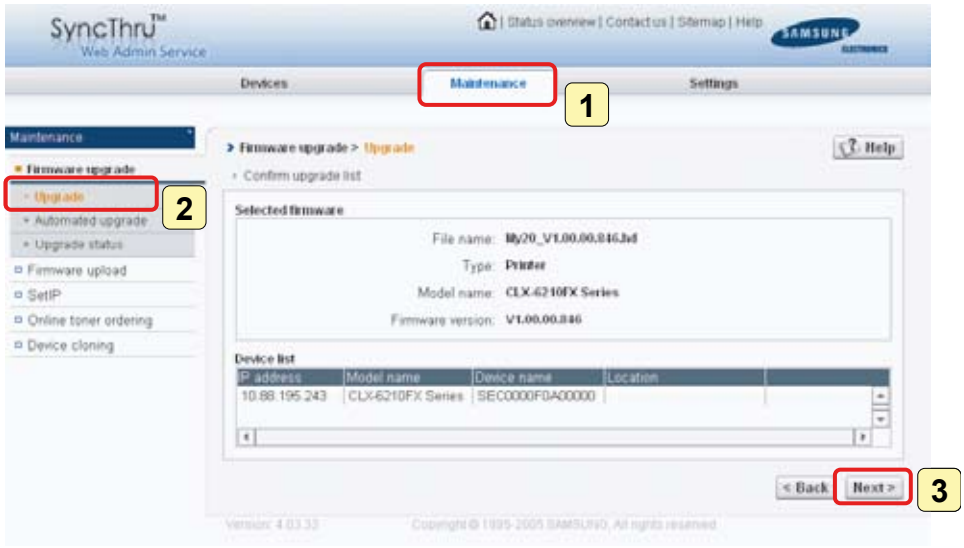
4. Maintenance → Firmware Upload (confirm uploaded firmware)



5. Maintenance → Firmware Upgrade → Upgrade (choose firmware)

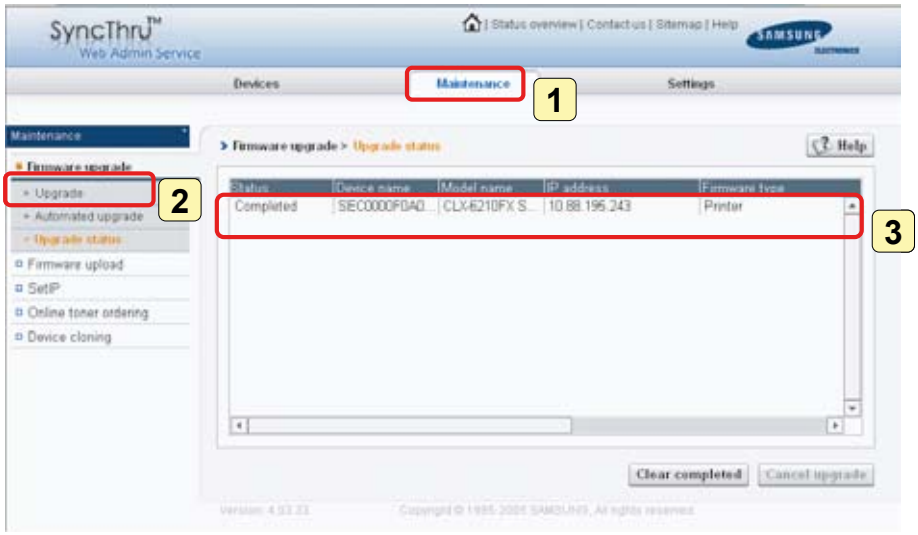


6. Maintenance → Firmware Upgrade → Upgrade (choose firmware)



7. Maintenance → Firmware Upgrade → Upgrade

8. Maintenance → Firmware Upgrade → Upgrade (Done)



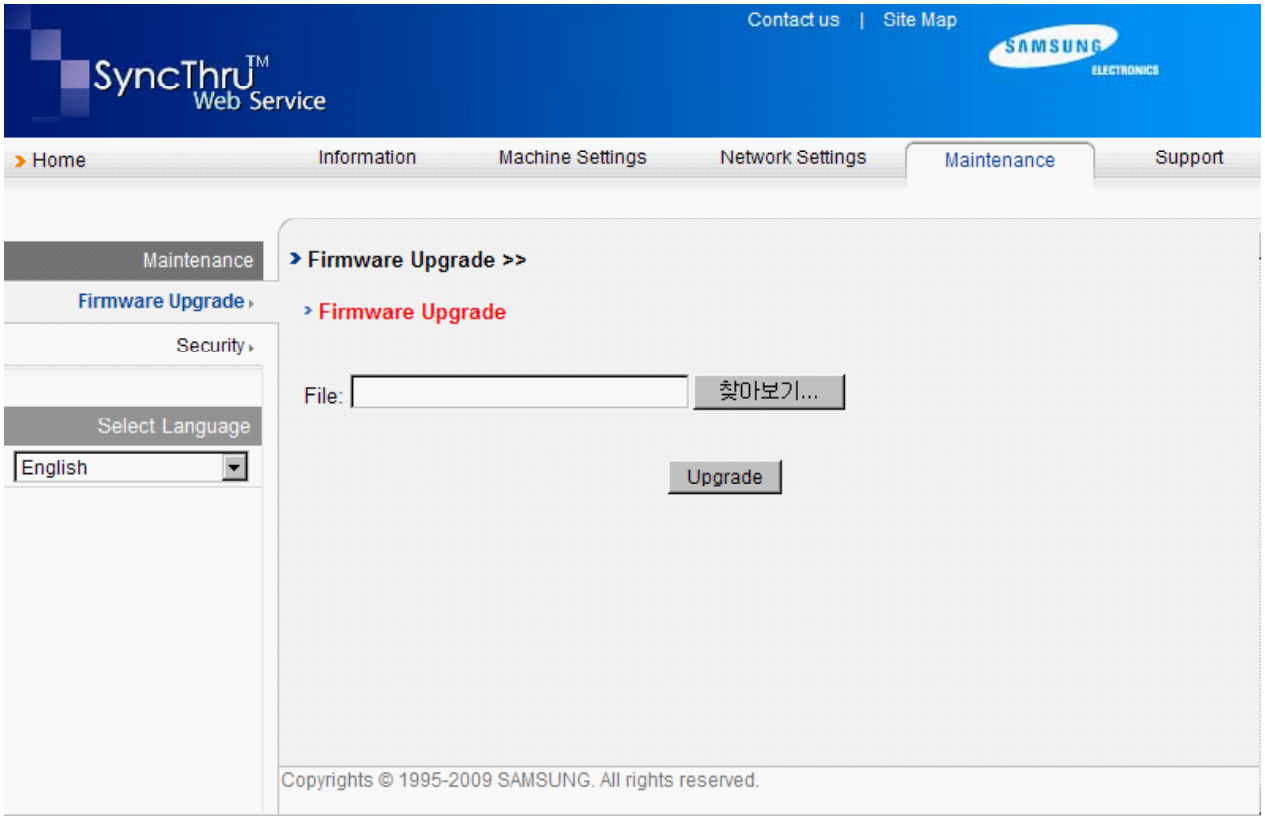
4.1.5.3 F/W upgrade using SWS (SyncThru Web Service)

To use below method,

1. Start a web browser such as Internet Explorer, Safari or Firefox and enter your machine's new IP address in the browser window.

For example,

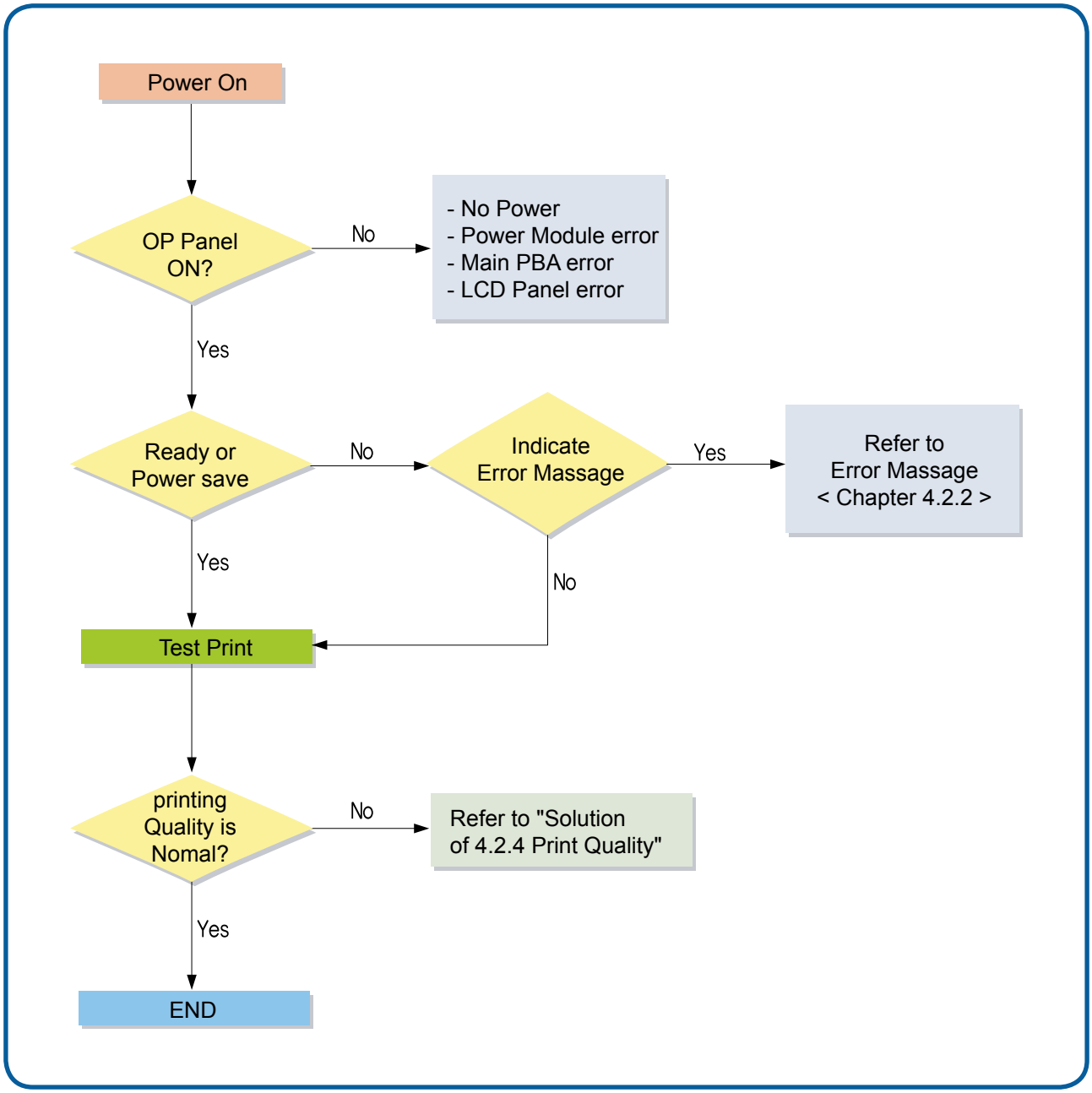
2. When the SyncThru™ Web Service window opens, click Maintenance, Then, click "Find" and selet a firmware file.
3. Click "Upgrade"



4.2 Troubleshooting

4.2.1 Procedure of Checking the Symptoms

Before attempting to repair the printer first obtain a detailed description of the problem from the customer.



4.2.2 Error Message and Troubleshooting

Messages appear on the Smart Panel program window or on the control panel to indicate machine status or errors. Refer to the tables below to correct the problem.

Error Code	Error Message	Troubleshooting Page
01-000	Door Open/Check Transfer Belt	21 page
01-004	Paper Jam in MP Tray	22 page
01-005	Paper Jam in Tray1	23 page
01-006, 01-018	Paper Jam in tray2	24 page
01-009	Paper Jam inside machine	25 page
01-010	Paper Jam in exit area	26 page
01-014	Paper Jam bottom of duplex	27 page
01-017	Output bin Full Remove paper	28 page
02-000	Error #02-000. Turn off then on	29 page
02-001, 02-006	Error #02-001/02-006. Turn off then on	30 page
02-002	Error #02-002. Turn off then on	31 page
02-005	Error #02-005. Turn off then on	31 page
03-007	Error #03-007. Turn off then on	32 page
03-008	Error #03-008. Turn off then on	32 page
03-009	Error #03-009. Turn off then on	32 page
03-015	Error #03-015. Turn off then on	33 page
04-001	Error #04-001. Turn off then on	34 page
04-002	Error #04-002. Turn off then on	34 page
06/25/26/27-006	Error #06/25/26/27-006 [XXX] toner ※ [XXX] : color	35 page
06/25/26/27-007	Error #06/25/26/27-007 [XXX] toner ※ [XXX] : color	35 page
06/25/26/27-020	Error #06/25/26/27-020 [XXX] toner ※ [XXX] : color	35 page
12-000	Load [Letter] in Tray1	36 page
12-001	Load [Letter] in Tray2	36 page
12-004	Load [Letter] in MP	37 page
21-002	Paper Empty in Tray1	38 page
21-003	Pulled Out Tray1 Cassette	39 page
21-010	Paper Empty in MP Tray	40 page
21-018	Paper Empty in Tray2	41 page
21-019	Pulled Out Tray2 Cassette	42 page
28-001	Not installed Transfer belt	43 page
28-002	Not Compatible Transfer belt	44 page
28-004	Replace new Fuser unit	44 page
28-005	Not Installed Fuser unit	44 page

● Code	● Error message
01-000	Door Open/Check Transfer Belt

● Symptom

The front cover or the top cover is not securely latched or the transfer belt is not installed.

● Possible Cause

1. Harness is defective, Connector is not connected properly.
2. Sensor is defective.

● Troubleshooting method :

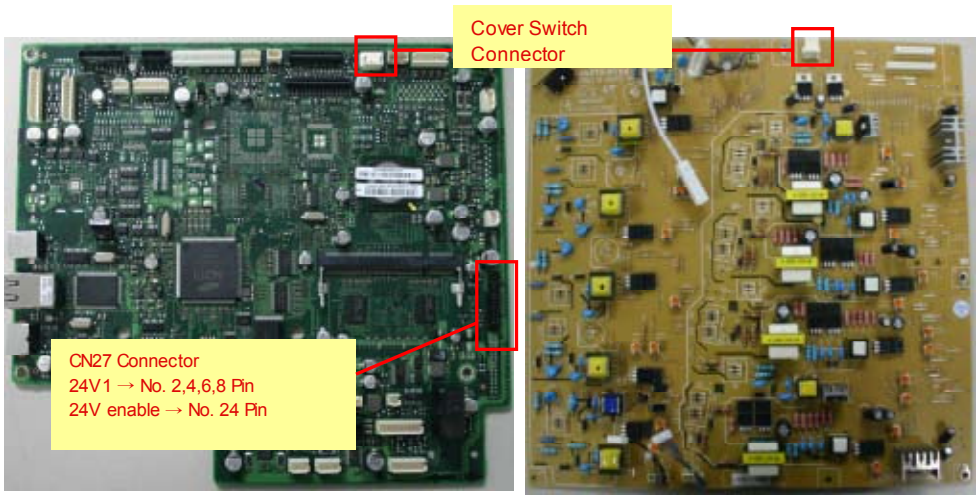
1. Close the front cover or top cover perfectly.

2. If the PTB is not installed, install it.

3. Check the cover switch harness between Main PBA and HVPS.

4. Check the 24V enable signal on Main PBA. If the voltage is high(5V), replace the Main PBA.

5. Check the 24V1 on SMPS. If there is no output, replace the SMPS board.



● Code	● Error message
01-004	Paper Jam in MP tray

● Symptom

At printing, the paper from the MP tray has not reached to the feed sensor within a programmed period of time after pick up.

● Possible Cause

1. Pickup Clutch does not work.
2. Pickup roller rubber is worn out.
3. Feed Sensor is defective.

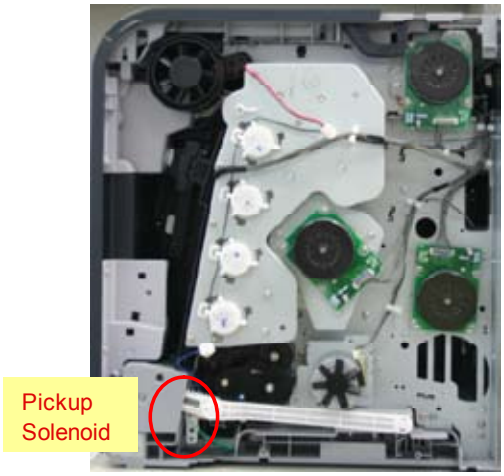
● Troubleshooting method

1. Remove the jammed paper in MP tray.

2. Check the MP empty sensor of the Cassette. If it is defective, replace it.

3. If the pick up roller does not rotate, replace the pick up solenoid.

4. Check the feed sensor by using EDC mode after feed a paper from Cassette. Reconnect the harness. If the problem persists, replace the defective part.
   * Actuator-Feed (JC66-02294A)
   * Photo-Interrupter (0604-001095)



● Code	● Error message
01-005	Paper jam in tray 1

● Symptom

At printing, the paper from the tray1 has not reached to a feed sensor within a programmed period of time after pick up.

● Possible Cause

1. Pickup Clutch does not work.
2. Pickup roller rubber is worn out.
3. Feed Sensor is defective.

● Troubleshooting method

1. Take out the cassette and remove the jammed paper.

2. Check if the Guide-adjust is adjusted for paper accurately.

3. Check the separator pad of the cassette. If it become loose or life has expired, replace it.
 * MEA-HOLDER PAD SHEET (JC97-03077A)

4. If the pick up roller does not rotate, check the MEA-GEAR PICK UP(JC97-02895A) and SOLENOID-PICK UP(JC33-00022A). If it is defective, replace it.

5. If the pick up roller rotates but the paper is not feeding, replace the Feed motor (JC31-00112A).

6. Reconnect connector of CN4,5,9 on HVPS.

7. Reconnect connector of CN1,2 on HVPS and check the flat cable.

8. Check if the life of pick up roller(JC90-00932A) has expired. If so, replace it.
 After replacing the pick up roller, enter the tech mode and reset the count of the pick up roller.

9. Check Actuator-Feed. If it does not work correctly, check the feed-sensor.

10. Check if the MEA-KNOCK UP PLATE (JC97-02888A) is deformed.

● Code	● Error message
01-006 01-018	Paper jam in tray 2

● Symptom

At printing, the paper from the tray2 has not reached to a feed sensor within a programmed period of time after pick up.

● Possible Cause

1. Pickup Clutch does not work.
2. Pickup roller rubber is worn out.
3. Feed Sensor is defective.

● Troubleshooting method :

1. Take out the 2nd cassette and remove the jammed paper.

2. If the pick up roller does not rotate, check the Gear Pick up(JC97-03228A). If it is defective, replace it.

3. If the pick up roller rotates but the paper is not feeding, replace the Clutch-Feed(JC97-03270A).

4. Reconnect the CN9 connector on Main PBA.

5. Check the sensor and connector in SCF.

● Code	● Error message
01-009	Paper jam inside of machine

● Symptom

Paper jam inside of machine

1. At Warm-up, the paper is jamming at Regi sensor or Feed sensor.
2. At printing, the paper is detecting at Regi sensor or Feed sensor continually.
3. At printing, the paper is not detected at exit sensor within a regular time.

● Possible Cause

1. Feed sensor or Regi Sensor is defective.
2. Exit sensor is defective.
3. Feed Clutch is defective.
4. Regi Clutch is defective.

● Troubleshooting method

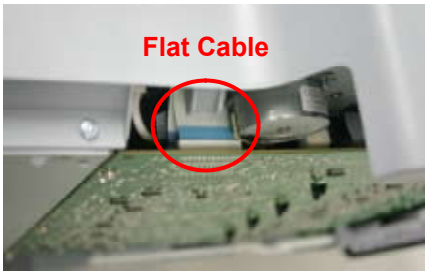
1. Check the Spring tension of the Regi. roller and Regi shaft. If the spring is defective, replace it.

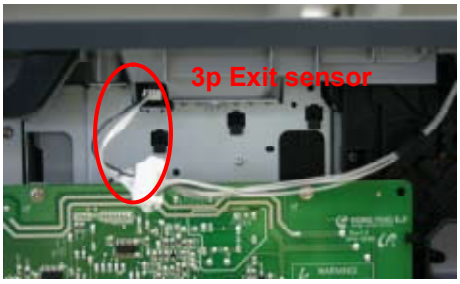
2. Replace the actuator fuser and exit sensor.

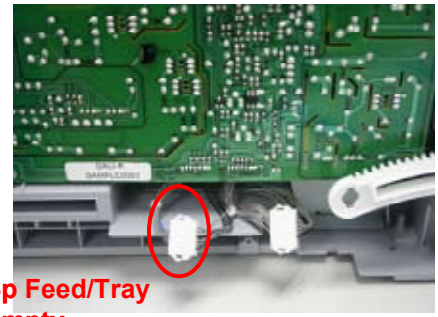
3. Reconnect the flat cable / exit sensor harness / Feed sensor harness.

4. Check the OPC motor working. / OPC lock.

5. Check PTB working condition, if PTB-Belt is torn.







● Code 01-010	● Error message Paper jam in exit area

● Symptom

Paper jam in exit area

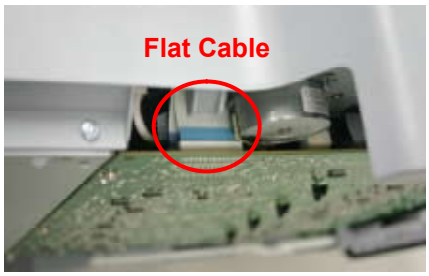
● Possible Cause

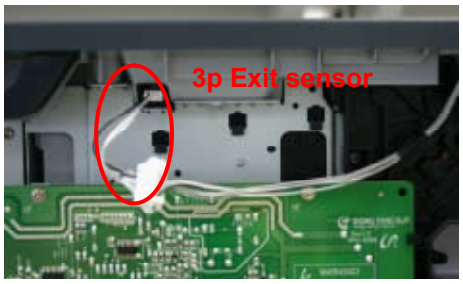
- If there is no jammed paper but error has occurred at warm-up, exit sensor is defective.

● Troubleshooting method

1. If the actuator fuser sensing part has some problems, replace the actuator fuser and exit sensor.

2. Reconnect the flat cable / Exit sensor harness.





● Code	● Error message
01-014	Paper jam at the bottom of duplex path

● Symptom

1. At Warm-up, Duplex Ready sensor has detected the paper.
2. At Printing, Duplex sensor is not off within a programmed period of time after paper moves into duplex path.

● Possible Cause

1. Check the Duplex Ready Sensor Harness and Connector.
2. Check if the UI message is changed by the Duplex Ready Sensor operation.
3. Check the duplex ready sensor.

● Troubleshooting method

1. Open the Front Cover and separate the PTB unit. Remove the Jammed paper.

2. If the paper is not reached to the duplex path after the exit sensor sensing, check the Clutch-BK deve. If it is defective, replace it.

3. Check if exit actuator's replace time is not accuracy. If so, check if the spring of exit actuator exists or not.

4. Check if exit motor reverses when the paper needs to reload to the printer.

● Code	● Error message
01-017	Output bin Full. Remove paper

● Symptom

The out-bin full sensor is on for 600ms.

● Possible Cause

1. Check the Out-Bin Full Sensor Harness and Connector.
2. Check if the UI message is changed by the Out-Bin Full Sensor operation.
3. Check the Out-Bin Full Sensor.

● Troubleshooting method

1. Clear the paper on exit tray.

2. Reconnect the CN3 connector on Main-PBA.

3. Replace the Actuator-Stacker and Actuator-OutFull.
 * Actuator-Stacker (JC66-02065A)
 * Actuator-Outfull (JC66-02064A)
 * Photo-Interrupter (0604-001095)

● Code	● Error message
02-000	Error :#02-000 Please turn off then on.

● Symptom

At Warm-up, this error has occurred. The machine does not work until power off/on.

● Possible Cause

Fuser Unit is not installed and AC is not supplied to the Heat Lamp.

● Troubleshooting method

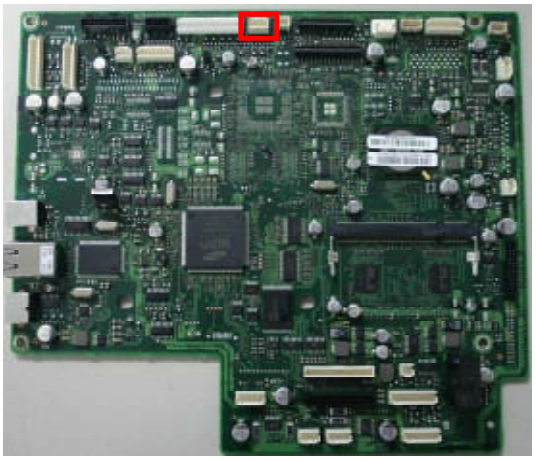
1. Turn off the power. And turn on the power.

2. If the problem persists, replace the fuser unit.

3. If the problem persists after replacing the fuser unit, reconnect the CN35 connector on Main-PBA.

4. If the problem persists, replace the Main-PBA.

CN35 →Thermistor



● Code	● Error message
02-001 02-006	Error :#02-001 Please turn off then on.

● Symptom

At Warm-up, this error has occurred. The machine does not work until power off/on.

● Possible Cause

Fuser Unit is not installed and AC is not supplied to the Heat Lamp.

● Troubleshooting method

1. Turn off the power. And turn on the power.

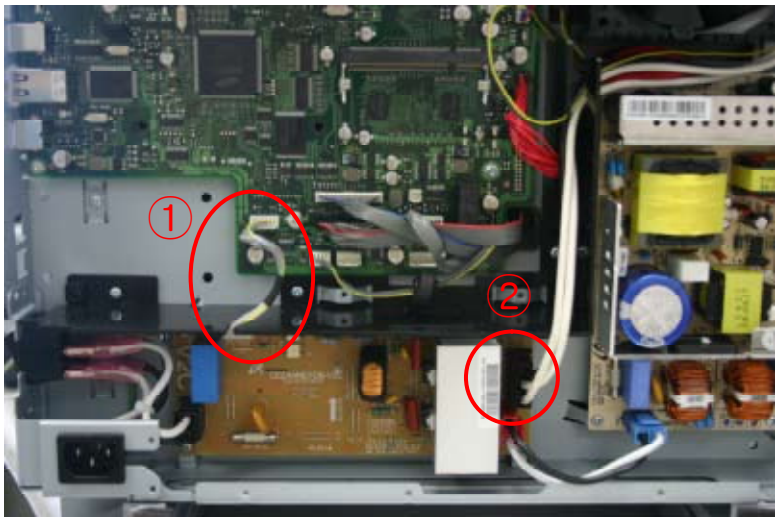
2. Check the connection of the Fuser AC on FDB ②.

3. Check the Fuser control harness ①.

4. Remove the resistance value of the thermostat. If the value is infinite, replace the thermostat.

5. If the problem persists, replace the Fuser unit.

6. Replace the SMPS board or FDB (Fuser drive board).



● Code 02-002	● Error message System Error :#02-002 Please turn off then on.
● Symptom The fuser unit is overheated. The machine does not work until power off/on.	
● Possible Cause The machine can not control fuser temperature.	
● Troubleshooting method 1. Turn off the power. And turn on the power. 2. Replace the Fuser unit. 3. Replace the FDB. 4. Replace the Main-PBA.	

● Code 02-005	● Error message System Error :#02-005 Please turn off then on.
● Symptom The ADC port is short.	
● Possible Cause The machine can not control fuser temperature.	
● Troubleshooting method 1. Turn the power off then on again. 2. If the problem persists, replace the Main PBA.	

● Code	● Error message
03-007 03-008 03-009	Error: #03-007 / 008 / 009 Turn off then on

● Symptom

Motor Signal is abnormal.

● Possible Cause

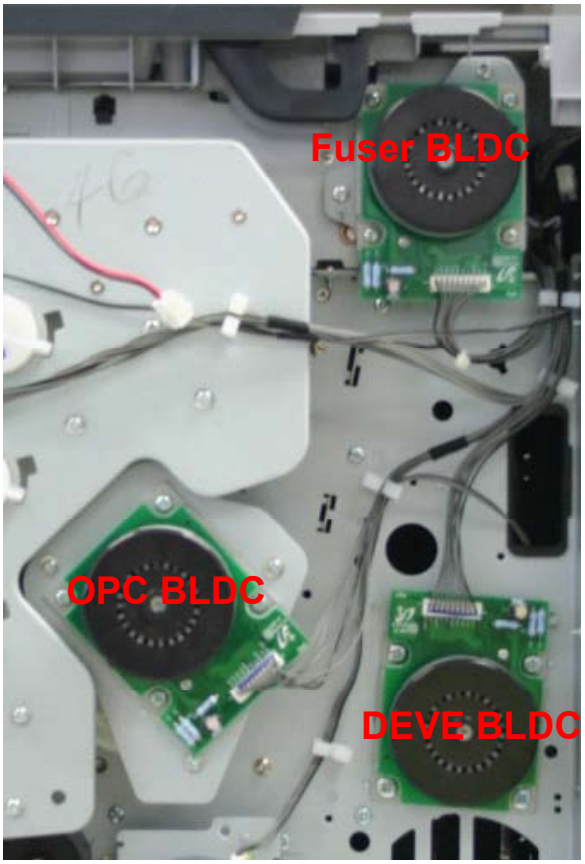
1. Harness is defective, Connector is not connected properly.
2. Corresponding motor is defective.
3. Main Board is defective.

● Troubleshooting method

1. Check the motor connector. Reconnect the harness.

2. If the problem persists, replace the BLDC motor.

3. If the problem persists after replacing BLDC motor, replace the Main PBA.



● Code	● Error message
03-015	Error: #03-015 Turn off then on

● Symptom

Fan does not operate.

● Possible Cause

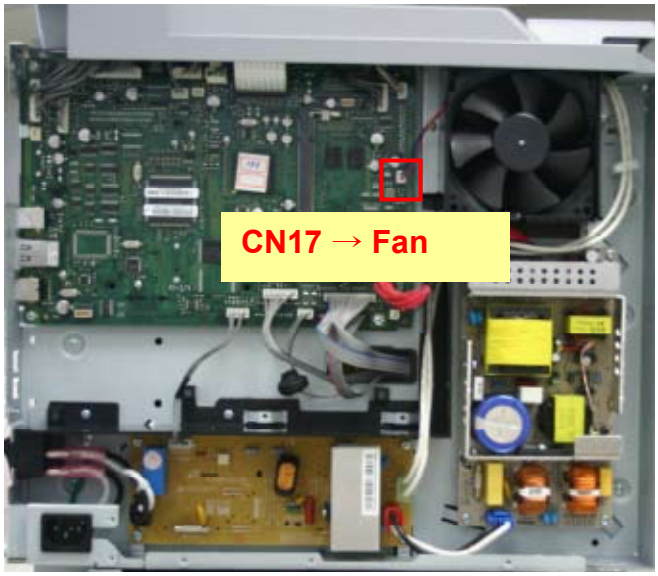
Fan is defective.

● Troubleshooting method

1. Check the CN17 connector (FAN) on Main PBA.

2. If the FAN is defective, replace it.

3. If the problem persists, replace the Main PBA.



● Code	● Error message
04-001 04-002	Error: #04-001. Turn off then on. Error: #04-002. Turn off then on.

● Symptom

Laser beam detect signal has not occurred or is irregular.
LSU motor does not operate.

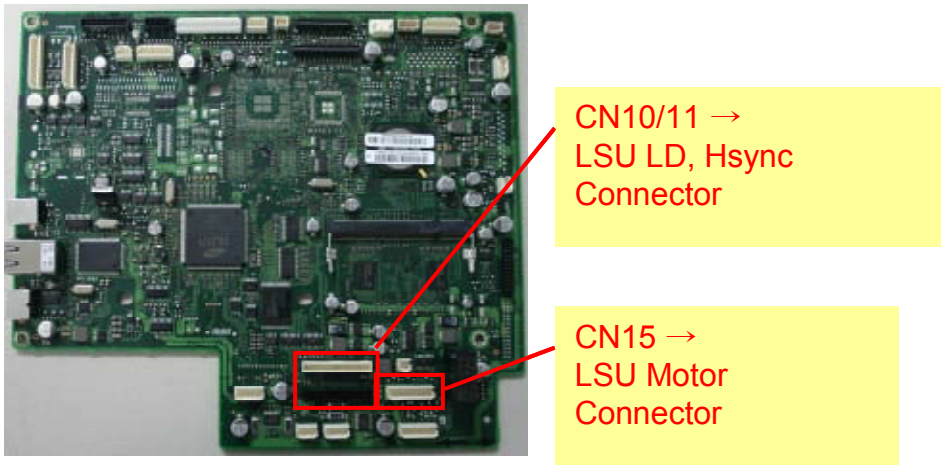
● Possible Cause

1. Harness is defective, Connector is not connected properly.
2. LSU is defective.
3. Main Board is defective.

● Troubleshooting method

1. Check the LSU connector on Main PBA. Reconnect it. If necessary, replace it.

2. If the problem persists, replace the LSU or Main PBA.



● Code	● Error message
06-006/7/20 25-006/7/20 26-006/7/20 27-006/7/20	Error: #06/25/26/27-006/7/20 [XXX] toner ※ [XXX] : color

● Symptom and Possible Cause

The toner cartridge is not installed properly or its connector is contaminated.
(006 : Write Error / 007 : Communication Error / 020 : Read Error)

6 : K Cartridge
25 : Cyan Cartridge
26 : Magenta Cartridge
27 : Yellow Cartridge

● Troubleshooting method

1. Open the front cover.

2. Reinstall Cartridge.

3. Close the front cover perfectly.

● Code	● Error message
12-000 12-001	Load [Letter] in Tray 1 Load [Letter] in Tray 2

● Symptom

The paper in tray is not proper.

● Possible Cause

1. Check the harness and connector of the Tray1/2 Size Sensor.
2. Tray1/2 Size Sensor is defective.

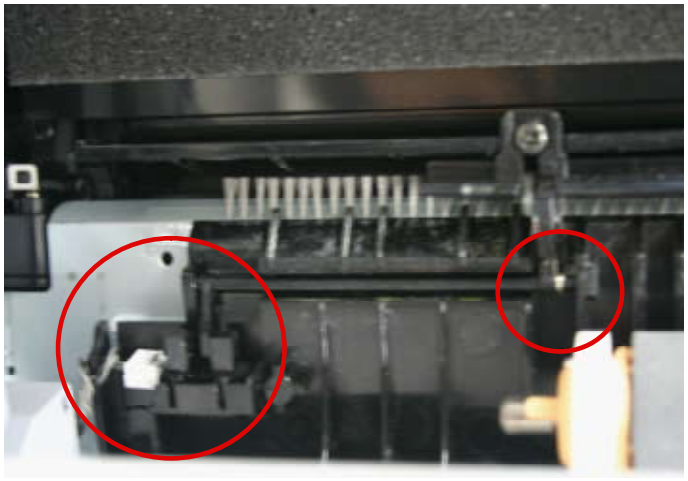
● Troubleshooting method

1. Pull out Tray1 Cassette.

2. Load [Letter] paper in Tray1 Cassette.

3. Install Tray1 Cassette.

4. If the problem persists, check if Feed-Actuator works correctly.
   a. Check the spring is put in right place of Actuator Feed.
   b. Check the connector fits on photo sensor.



● Code	● Error message
12-004	Load [Letter] in MP

● Symptom

The paper in MP tray is not proper.

● Possible Cause

1. Check the harness and connector of the MP Size Sensor.
2. MP Size Sensor is defective.

● Troubleshooting method

1. Open MP Tray.

2. Load [Letter] paper in MP Tray.

● Code	● Error message
21-002	Paper Empty in tray1

● Symptom

There is the paper in tray1 but error message is displayed.

● Possible Cause

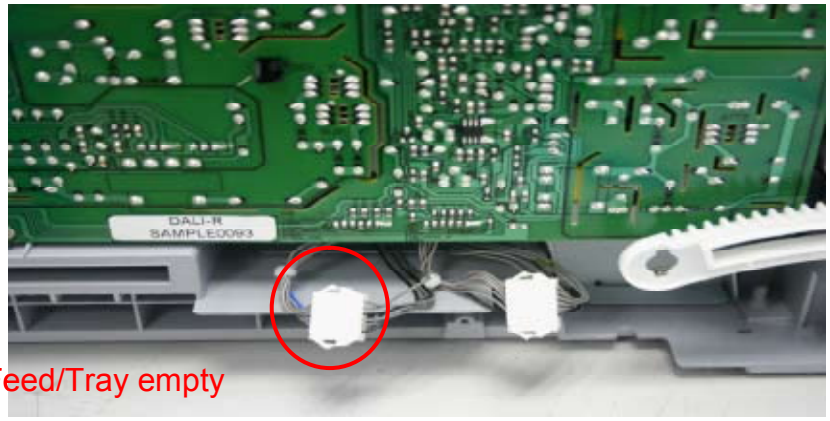
1. Tray1 empty sensor harness is not connected properly. .
2. Empty Sensor is defective.

● Troubleshooting method

1. Check the paper empty sensor connector. Reconnect it.

2. Check the paper empty sensor. If it is defective, replace it.

3. Check if the actuator is broken.



● Code	● Error message
21-003	Pulled Out Tray1 Cassette

● Symptom

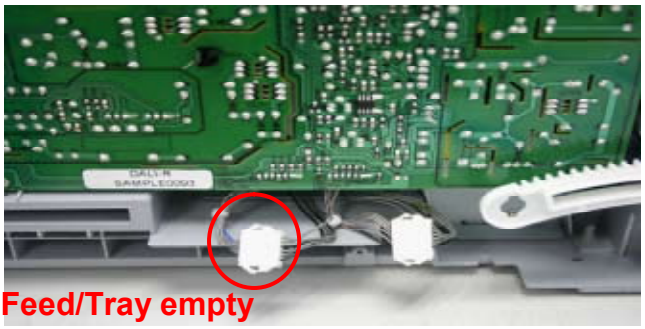
Tray1 cassette is inserted in machine but error message is displayed.

● Possible Cause

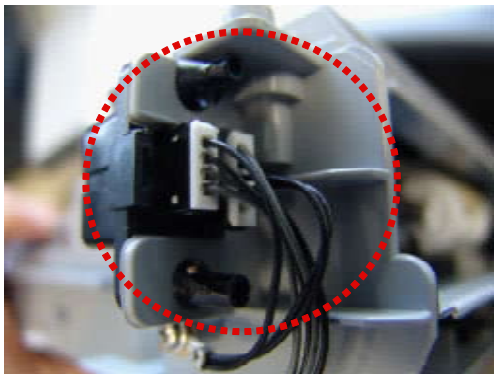
1. The connector of the Tray1 Home Position Sensor is not connected properly.
2. Tray1 Home Position Sensor is defective.

● Troubleshooting method

1. Reinstall the tray1 cassette.
2. Reconnect the / Feed sensor harness.



3.Check the CST Draw connector. Reconnect it.



● Code	● Error message
21-010	Paper Empty in MP tray

● Symptom

There is the paper in MP tray but error message is displayed.

● Possible Cause

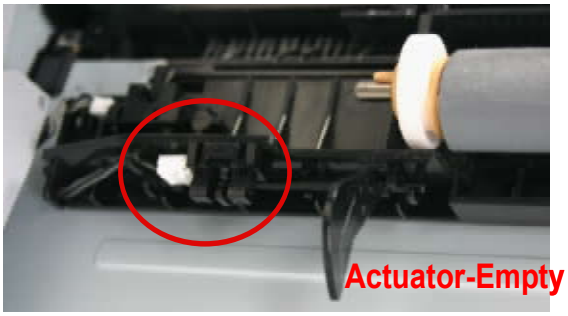
1. MP Paper Empty Sensor harness is not connected properly.
2. MP Paper Empty Sensor is defective.

● Troubleshooting method

1. Check the MP paper empty sensor connector. Reconnect it.

2. Check the MP paper empty sensor. If it is defective, replace it.

3. Check if the MP Empty actuator is broken.



● Code	● Error message
21-018	Paper Empty in Tray2

● Symptom

There is the paper in tray2 but error message is displayed.

● Possible Cause

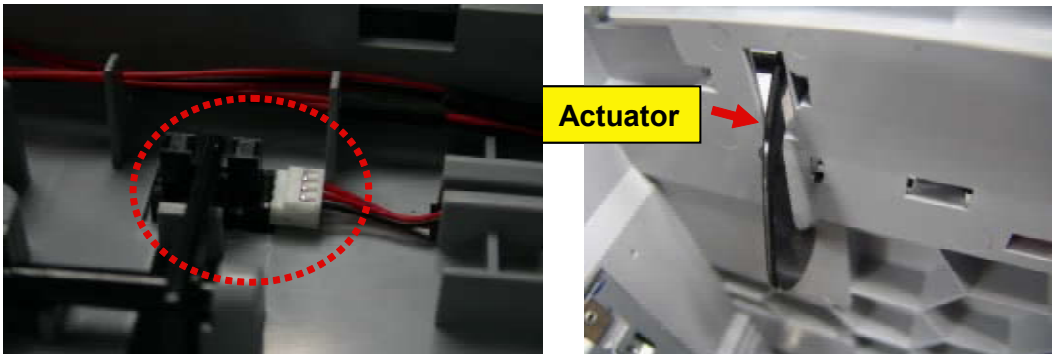
1. Tray2 empty sensor harness is not connected properly. .
2. Empty Sensor is defective.

● Troubleshooting method

1. Check the paper Tray2 empty sensor connector. Reconnect it.

2. Check the paper Tray2 empty sensor. If it is defective, replace it.

3. Check if the Tray2 actuator is broken.



● Code	● Error message
21-019	Pulled Out Tray2 Cassette

● Symptom

Tray2 cassette is inserted in machine but error message is displayed.

● Possible Cause

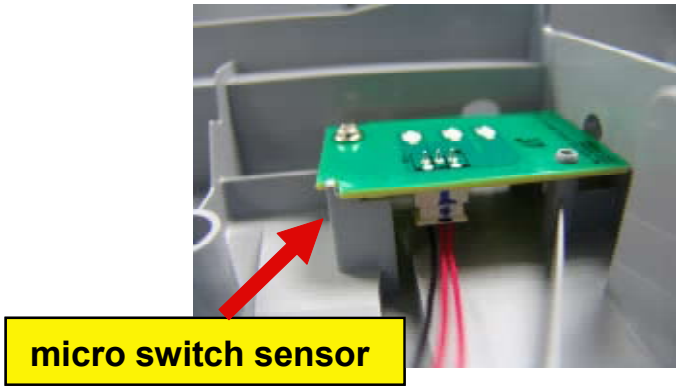
1. The connector of the Tray2 Home Position Sensor is not connected properly.
2. Tray2 Home Position Sensor is defective.

● Troubleshooting method

1. Reinstall the tray2 cassette.

2. Check the Tray2 Open micro sensor connector. Reconnect it.

3. Check the Tray2 Open micro sensor. If it is defective, replace it



● Code	● Error message
28-001	Not installed Transfer belt

● Symptom

The red LED is turning on and the machine does not operate.

● Possible Cause

1. Transfer belt is not installed properly.
2. Connector pin deformation or damaged harness
3. CRUM PBA or main board malfunction

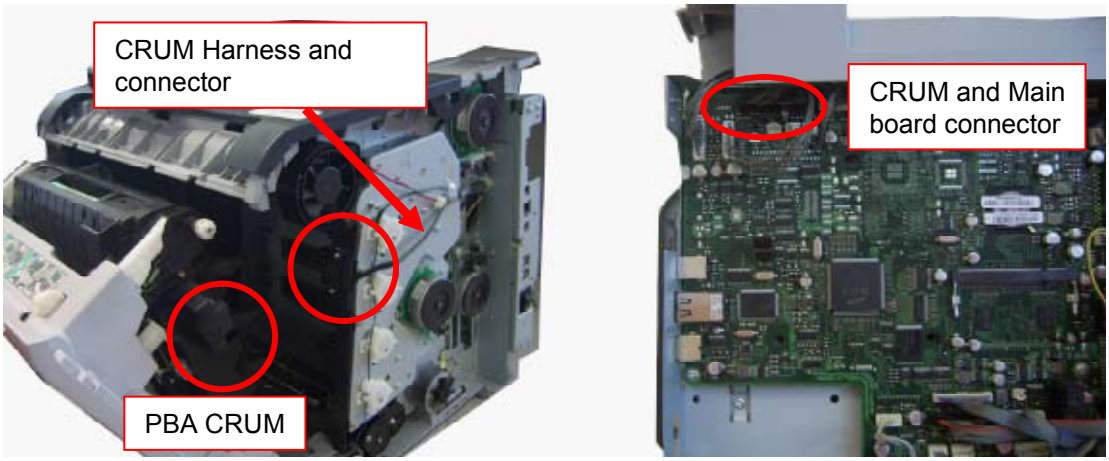
● Troubleshooting method

1.Check if transfer belt unit is properly installed.

2. Check CRUM PBA connector pins.
   Replace the CRUM PBA with normal thing and test it. If the CRUM PBA is defective, replace the transfer belt unit or CRUM PBA.

3. Check if the Transfer Belt CRUM Harness is defective and connected on engine board properly.

4. Replace the main board with normal one and test it. If it works replace main board.



● Code 28-002	● Error message Not Compatible Transfer belt
● Symptom The red LED is turning on and the machine does not operate.	
● Possible Cause F/W or Transfer belt CRUM data is not installed correctly.	
● Troubleshooting method 1. Reinstall F/W on the printer and check if machine works properly. 2. Replace Transfer belt CRUM and check if machine works properly.	

● Code 28-004	● Error message Replace new Fuser unit
● Possible Cause Fuser unit over a lifetime.	
● Troubleshooting method Replace a current fuser unit with a new one	

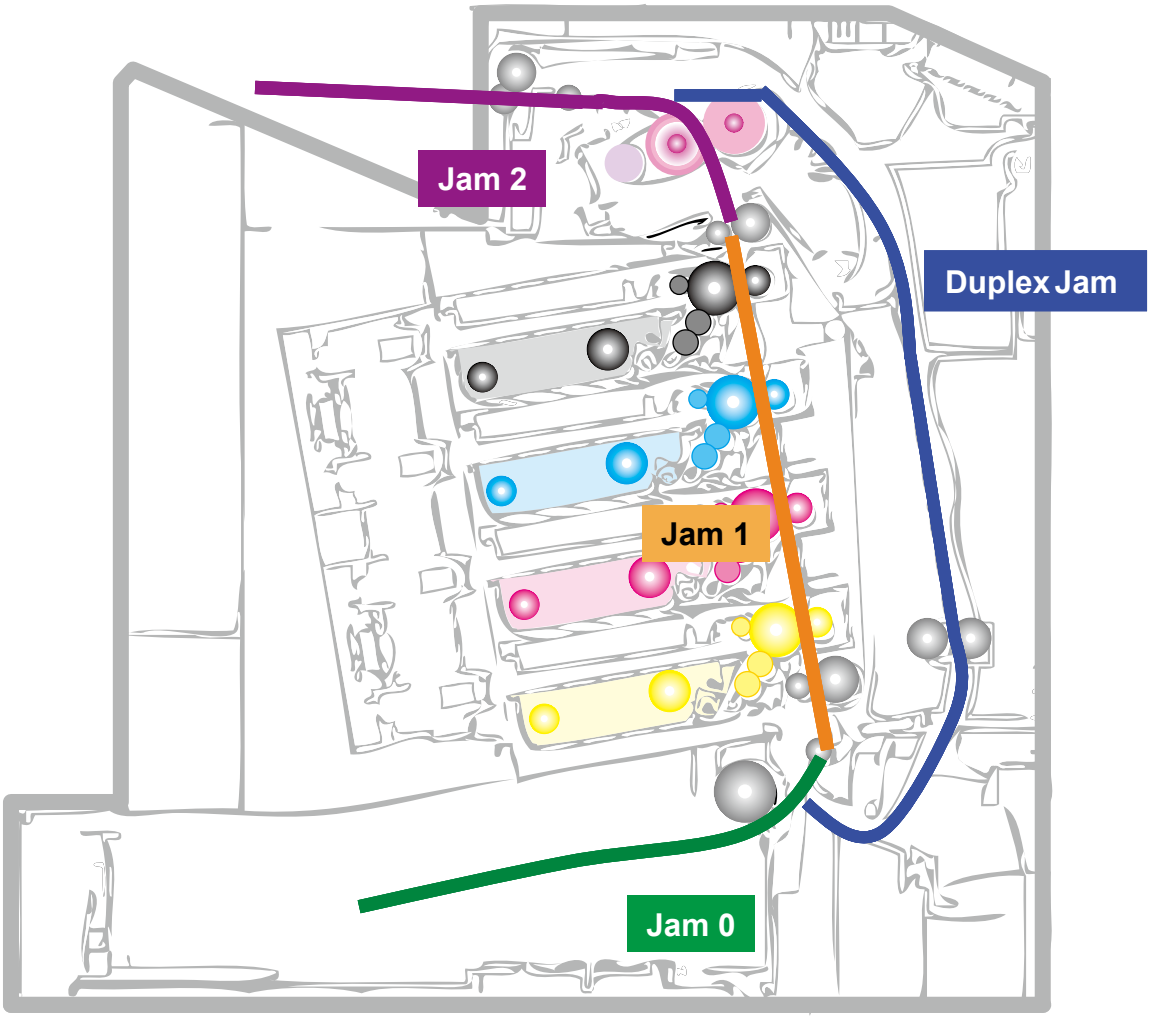
● Code 28-005	● Error message Not Installed Fuser Unit
● Possible Cause Fuser unit is not installed properly.	
● Troubleshooting method Install the fuser unit.	

4.2.3 Feeding Problems and solutions

4.2.3.1 Clearing paper JAMS

If a paper jam occurs an error message appears in the LCD display. Find and remove the jammed paper. If you don't see the paper, open the covers. Do not use a tweezers, pincers or other metal tools when clearing a paper jam. This could damage the internal mechanism causing print quality problems or possibly electrical shock.

JAM type



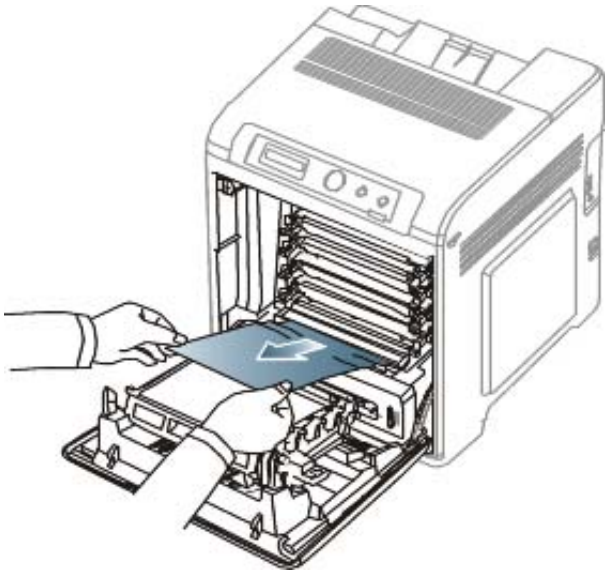
Jam type	Displayed error message
JAM0	Paper Jam in tray1
JAM1	Jam inside machine
JAM2	Jam in exit area
Duplex JAM	Jam bottom of duplex Jam top of duplex

In tray 1

If paper is jammed in the paper feed area, follow the next steps to release the jammed paper.

1. Using the handle, completely open the front cover.

2. Remove the jammed paper by pulling in the direction shown. To avoid tearing the paper, pull it out gently and slowly.



3. Close the front cover.

4. Pull out tray 1.

5. Remove the jammed paper by pulling in the direction shown. To avoid tearing the paper, pull it out gently and slowly.

6. Insert tray 1 back into the machine until it snaps into place. Printing automatically resumes.

In optional tray

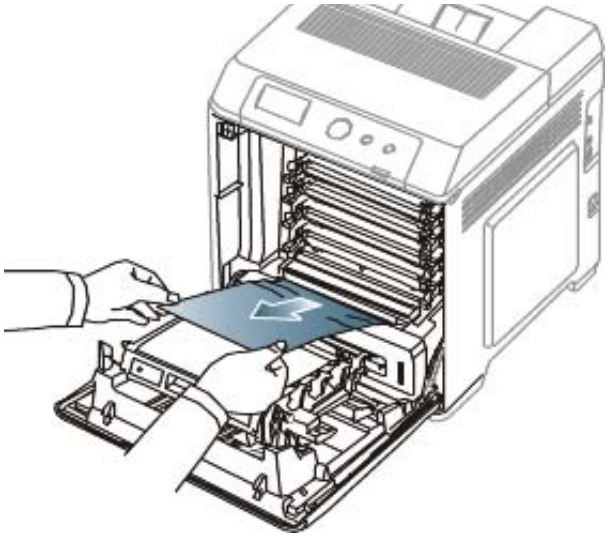
1. Pull out optional tray 2 open.

2. Remove the jammed paper by pulling in the direction shown. To avoid tearing the paper, pull it out gently and slowly.

If the paper does not move when you pull or if you do not see the paper in this area, stop and go to the next step.

3. Using the handle, completely open the front cover.

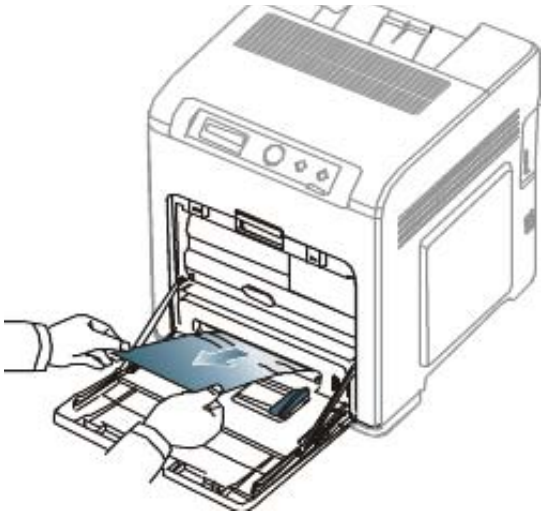
4. Remove the jammed paper by pulling in the direction shown. To avoid tearing the paper, pull it out gently and slowly.



5. Close the front cover and insert the trays back into the machine. Printing automatically resumes.

In the multi-purpose tray

1. If the paper is not feeding properly, pull the paper out of the machine.

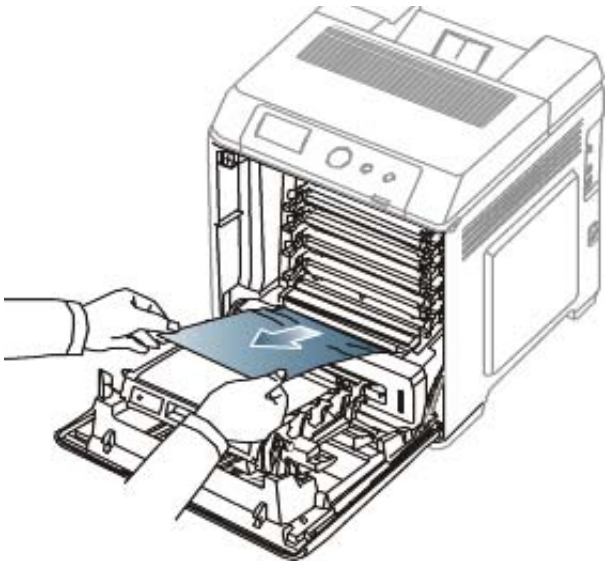


If you do not see the jammed paper or if there is any resistance when you pull, stop and go to step 3.

2. Open and close the front cover to resume printing.

3. Using the handle, completely open the front cover.

4. Remove the jammed paper by pulling in the direction shown. To avoid tearing the paper, pull it out gently and slowly.

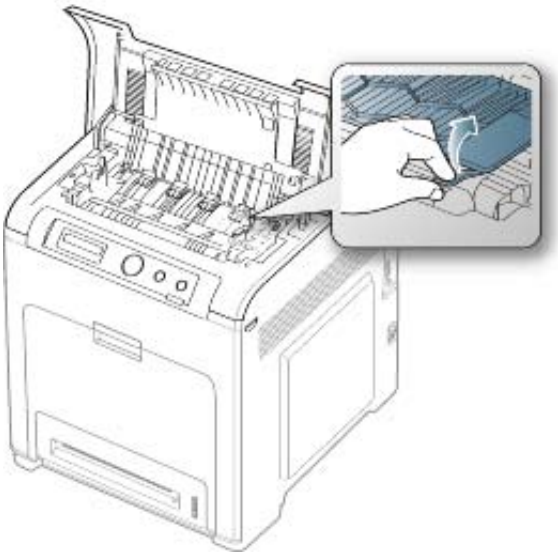


5. Close the front cover to resume printing.

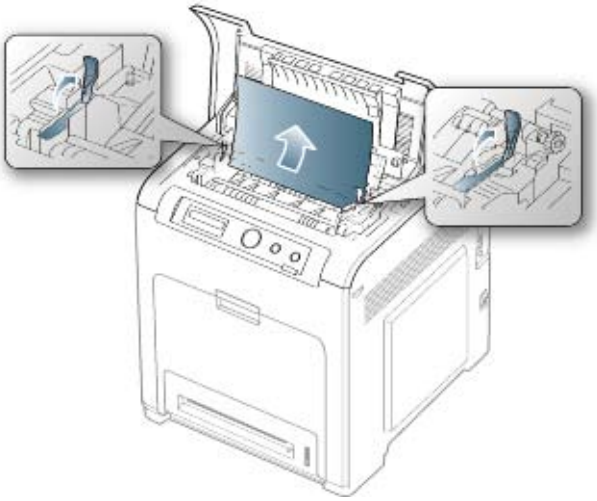
In the fuser unit area

1. Open the top cover.

2. Open the inner cover using the handle on it.



3. Pull up the paper jam lever to loose the fusing part of the fuser unit and carefully take the jammed paper out of the machine.



4. Press down the paper jam lever to fasten the fusing part.

5. Close the inner cover.

6. After removing the jammed paper, check for paper which may be jammed in other parts of the machine.

7. Close the top cover. Ensure that the cover is securely closed.

In exit area

1. Open and close the front cover. The jammed paper is automatically ejected from the machine.

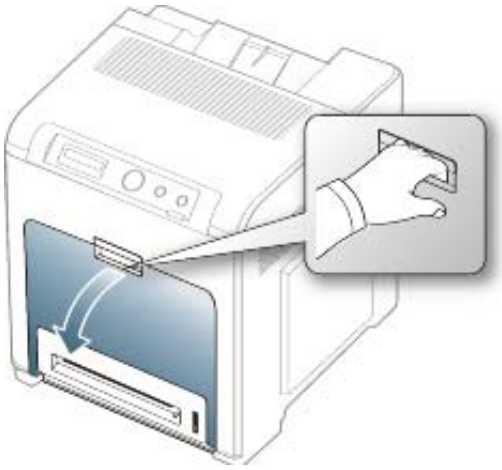
2. Gently pull the paper out of the output tray. If you do not see the jammed paper or if there is

any resistance when you pull, stop and see In the fuser unit area.

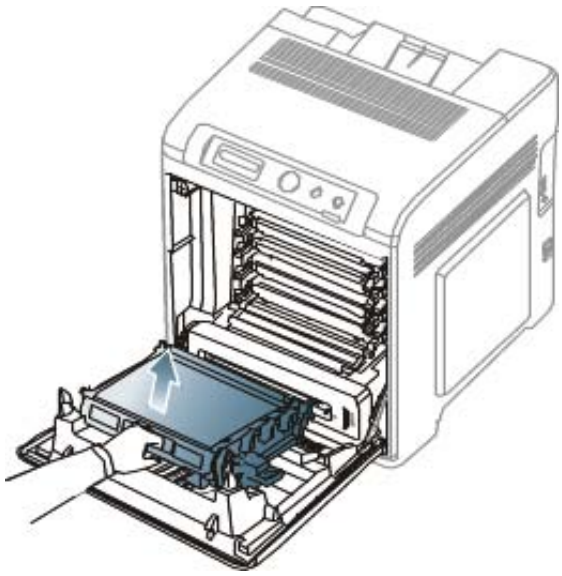
3. Open and close the front cover to resume printing.

In the duplex unit area

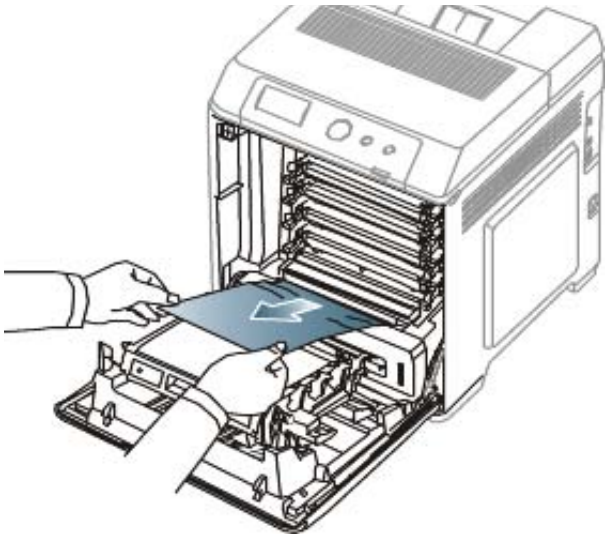
1. Using the handle, completely open the front cover.



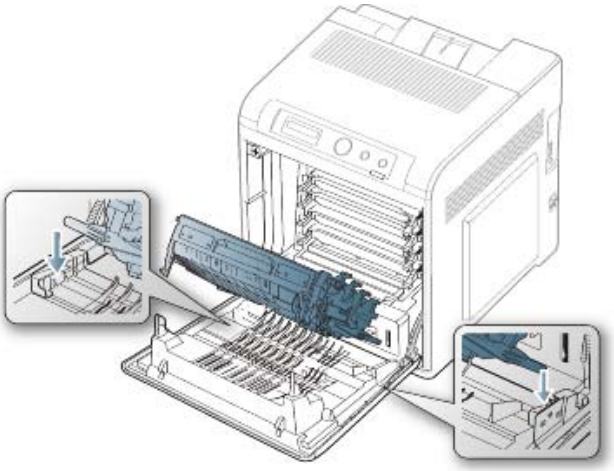
2. Press the green release handle to release the paper transfer belt. Holding the handle on the paper transfer belt, lift it out of the machine.



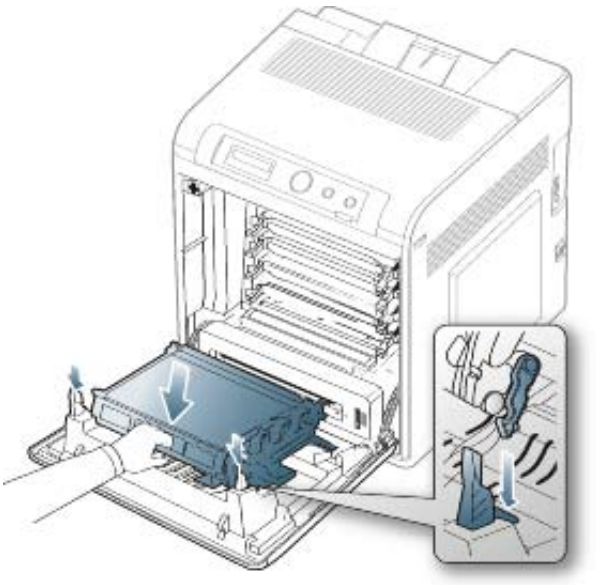
3. Remove the jammed paper by pulling in the direction shown. To avoid tearing the paper, pull it out gently and slowly.



4. Holding the handle on the paper transfer belt, align it with the slots on the inside of the front cover.



5. Lower the paper transfer belt until it is parallel with the front cover and firmly seated.



6. Close the front cover to resume printing.

Multi-Feeding

Description When the paper is feeding, multiple pages are fed.

Step	Cause and Check Point	Yes	No
1	Check that the power code is plugged into electrical outlet. Is it plugged?	Go to step2	Plug the power code.
2	Is the on/off switch in the ON position?	Go to step3	Turn the switch on.
3	Check if the power input and SMPS output are normal. Is it normal?	Go to step4	Replace the SMPS.
4	Check the LCD panel. Is it normal?	Replace the OPE PBA or the Main PBA.	Replace the LCD panel.

Skew paper

Description Paper is skewed.

Step	Cause and Check Point	Yes	No
1	Check the paper is loaded properly.	Go to step 2.	Adjust the paper guide in paper size.
2	Check the rollers on paper path is dirty. Is it dirty?	Clean the rollers.	Go to step 3.
3	Pick up roller, feed roller is defective.	Replace the pick up roller, feed roller together.	Replace the SMPS.

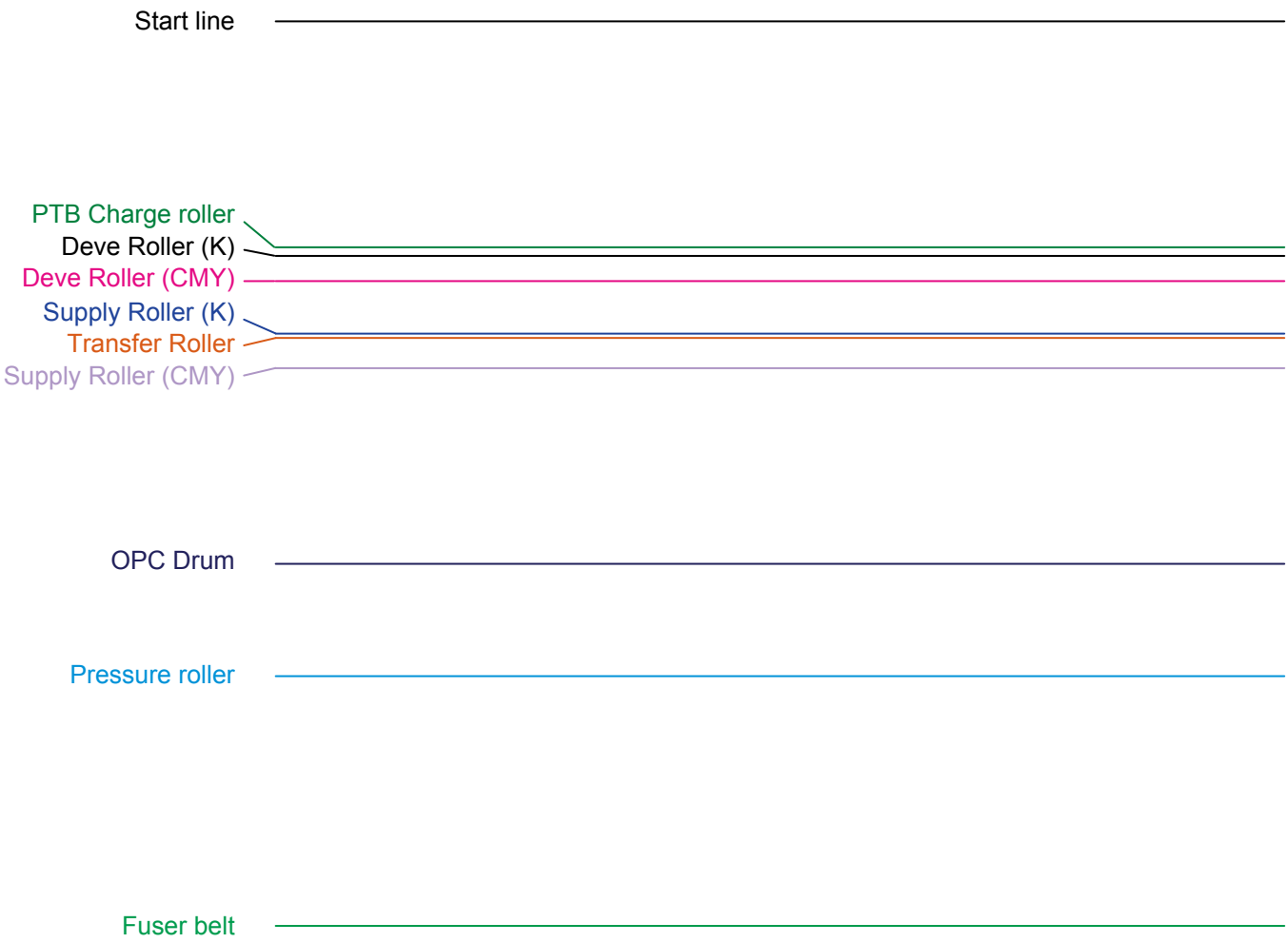
4.2.4 Image Quality Problems and solutions

If a mark or other printing defects occur at regular intervals down on the page, they may be caused by damaged or contaminated rollers. Use the table below to find which roller causes the defect from the periods of the rollers.
If the roller is dirty, try to clean it. If the problem still remains after cleaning, replace the part including the defective roller.

NO	Roller	Period (mm)	Yes	No
1	Fuser Belt	125.7	Waving, Offset, Spot, Line Burst	Fuser Unit
2	Pressure roller	91	Offset, Spot, Line Burst	Fuser Unit
3	OPC Drum	75.39	White and Black Spot, Periodic Banding, Ghost, Color Registration	CMYK toner cartridge
4	Deve Roller	36.1 (CMY)	White Spot, Horizontal Band	CMY toner cartridge
		32.6 (K)	Offset, Spot, Line Burst	K toner cartridge
5	Supply Roller	48.2 (CMY)	Periodic Band (by little difference of density)	CMY toner cartridge
		43.4 (K)		K toner cartridge
6	Transfer Roller	44	White and Black Spot, Periodic Banding	PTB Unit
7	PTB Charge roller	31.4		PTB Unit

Repetitive defect Image check page

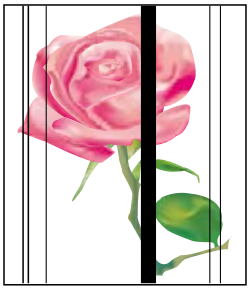
Print this page. Align the start line on this page with the printed defect image, and measure to the next occurrence of the defect to determine which roller, drum, or belt causes the defect.



Vertical Black Line and Band

Description
1. Straight thin vertical black lines occur in the printed image
2. Dark black vertical bands occurs in the printed image

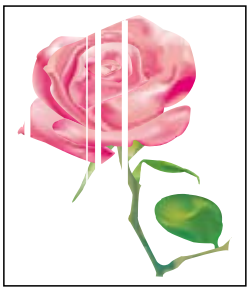
Cause and Check Point	Solution
Check if the surface of the charge roller is scratched or contaminated.	Replace the toner cartridge and test again
Check if there are grooves on the circumference of the OPC drum.	Replace the toner cartridge and test again
Check if the cleaning blade is damaged	Replace the toner cartridge and test again
Is the charge roller of PTB unit damaged?	Clean the charge roller of PTB unit, or replace the PTB unit.
Check if paper transfer belt is damaged or contaminated.	Replace the PTB unit and test again.



Vertical White Line

Description White vertical voids in the image.

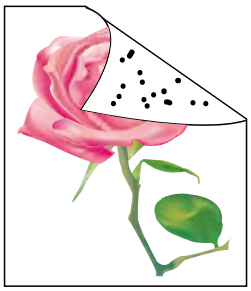
Cause and Check Point	Solution
Check if the LSU window or internal lenses of LSU is contaminated.	Clean the LSU window with recommended cleaner(IPA). Clean the window with a clean cotton swab. If dirt is inside the LSU, replace the LSU.
Check if there are scratches on the circumference of the OPC drum.	Replace the toner cartridge.
Check if there are scratches on the circumference of the developing roller.	Replace the toner cartridge.
Foreign objects inside the toner cartridge.	Replace the toner cartridge.
Check if there are vertical scratches on the transfer unit.	Replace the PTB unit.



Contamination on back of page

Description The back of the page is contaminated.

Cause and Check Point	Solution
Dirty registration roller, pressure roller, feed roller, etc. Any dirty rollers through the path of the paper.	Identify the roller which may cause the problem by comparing the period of the contamination on images with the size of rollers. Clean any dirt from the roller or replace the dirty roller.
Dirty PTB belt or damaged PTB belt.	Clean PTB or replace the PTB unit.
Dirty feed guide, or any paper delivery guide.	Clean the part which cause the contamination.



Dark or Black image

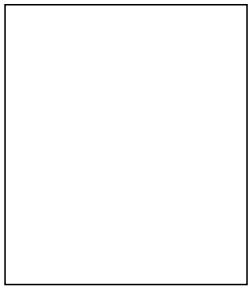
Description The back of the page is contaminated.

Cause and Check Point	Solution
No charging voltage in the HVPS	Check the connecting state between the Main PBA and HVPS. Reconnect the harness.
Poor contact between toner cartridge and set contacts.	Clean the contacts as necessary. Replace any deformed or damaged contacts.
HVPS is defective.	Replace the HVPS.

Blank Page

Description Blank page is printed.

Cause and Check Point	Solution
Bad contacts from OPC drum and/or toner cartridge to ground.	Check the terminal of Ground-OPC.
Not working the LSU	Check the connecter of LSU
Not working the developing bias voltage on HVPS	Check the HVPS B'd and replace it.



Uneven Density

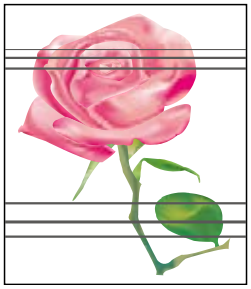
Description Print Density is uneven between left and right.

Cause and Check Point	Solution
The pressure force in the left and right springs of the transfer roller is not even, the springs are damaged, the transfer roller is improperly installed	Replace the PTB Unit
The toner layer is not even in the developing roller due to the damaged blade or low toner level.	Replace the toner cartridge
Poor the pressure spring force of the toner cartridge.	Replace the toner cartridge
The life of the Toner Cartridge has expired.	Replace the toner cartridge

Horizontal Bands

Description	Dark or white horizontal stripes appear in the page. (These may occur at regular intervals down the page.)

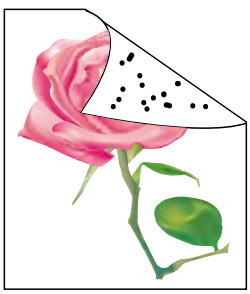
Cause and Check Point	Solution
The developing roller, OPC drum or other rollers in the toner cartridge may be contaminated or deformed.	Replace the toner cartridge.
Contamination of the Gap-Ring - regular intervals 38.9mm	Clean the gap ring, or replace it. Or replace the toner cartridge
Bad contacts of HV terminals of the toner cartridge with high voltage terminals from printer set.	Clean all HV terminals in the cartridge and on the set frame. Ensure all toner or paper dust, particles are removed.



Contamination on the front of the page

Description	The front page of the printed page is stained.

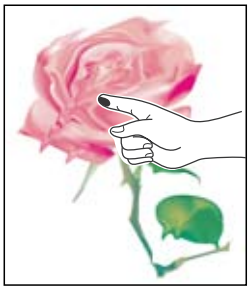
Cause and Check Point	Solution
Toner leakage due to improperly sealed toner cartridge.	Replace the toner cartridge.
Poor OPC cleaning.	Replace the toner cartridge.
Rollers and drum are dirty or defective.	Identify the roller which may cause the problem by comparing the period of the contamination on images with the size of rollers. Clean any dirt from the roller or replace the dirty roller or part.



Poor fusing

Description	Toner is not properly fixed on paper.

Cause and Check Point	Solution
The media doesn't meet specification	Use the proper media in specifications.
Fuser is defective	Replace the fuser unit.
FDB (Fuser drive board) is defective.	Replace the FDB.



4.2.5 Common Problems and solutions

No Power

Description	When system power is turned on, the printer does not warm up or LCD panel is blank.

Step	Cause and Check Point	Yes	No
1	Check that the power code is plugged into electrical outlet. Is it plugged?	Go to step2	Plug the power code.
2	Is the on/off switch in the ON position?	Go to step3	Turn the switch on.
3	Check if the power input and SMPS output are normal. Is it normal?	Go to step4	Replace the SMPS.
4	Check the LCD panel. Is it normal?	Replace the OPE PBA or the Main PBA.	Replace the LCD panel.

4.2.6 Network problems and soltutions

Before Troubleshooting, check below check point.

Check Point	Action
LAN cable check	A. Connected or Not connected B. Wrong cable (defected cable, crossover cable) C. Connection connector (Link partner check)
Network LED check	A. Link LED check (Link LED On when connected) B. Activity LED check (No packet Regularly blinking, packet random blinking depend on Printer Model)
Print Network test page	A. Printed correctly. If not, NIC is in lock up state or NIC can not communicate with printer B. Network address value check : IP address, Subnet Mask, Gateway, MAC address C. NIC F/W version (Correct or not) 1) V1.0x.xx : NPC3 2)V2.0x.xx : NPC3H 3)V3.0x.xx : PHY Board 4)V4.0x.xx : On Board D. Protocol Enable / Disable E. WLAN module / Status check if WLAN available.
Printer SET status check	A. Toner Empty, Paper Empty and so on : Hard Stop cases (Job can be finished completely)

Network Printer Configuration check

1. Address Conflict check
   A. IP address Conflict : Same IP address in a network
      • Unplug network cable and PING test
   B. MAC address Conflict : Same MAC address in a physical network
      • Default MAC address or same MAC address (PING and ARP –a)

2. IP get method check (Panel or SWS)
   A.DHCP/BOOTP : IP can be changed after rebooting
   B. Auto IP address : Xerox Model default on

3. Protocol Enable / Disable, Port Number (In SWS)

4. IP filtering On/Off

5. SNMP community name check (When SNMP no response)

Host PC Configuration check

1. Address Conflict check
   A. IP address Conflict : Same IP address in a network
      • Unplug network cable and PING test at other PC
2. Protocol Enable / Disable, Port Number in printer driver

Factory Default

1. Network Value changed to default value
   A. Some of Network value will not be changed immediately.
   B. Factory default operation will be done after Power Off / Power On