

4. Alignment and Troubleshooting

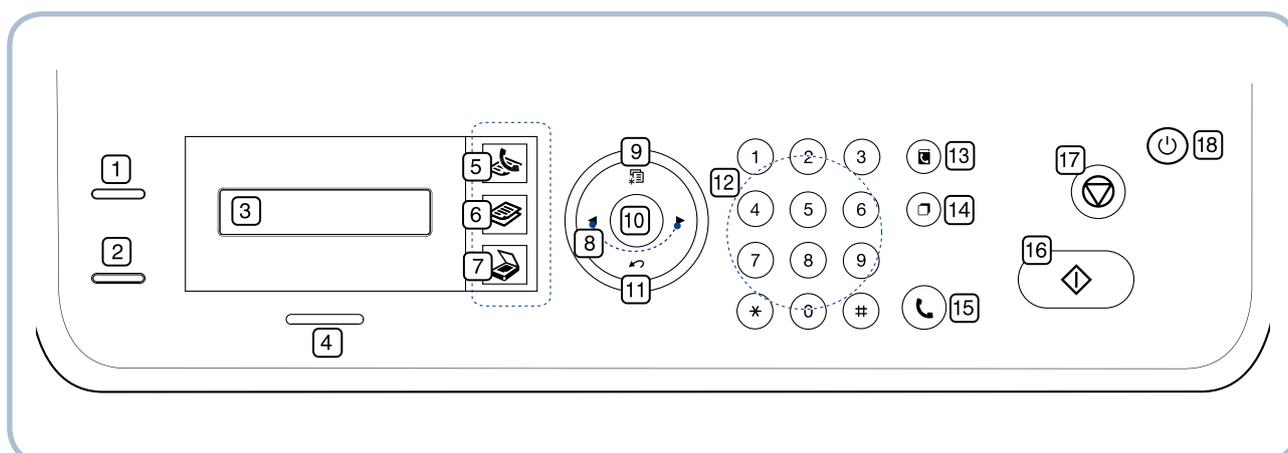
4.1 Alignment and Adjustments

This chapter describes the main functions for servicing the equipment, such as the product maintenance method, image quality proper repair procedures, jam removal procedures, and so on.

4.1.1 Control Panel

■ SCX-4623 Series

This control panel may differ from your machine depending on its model.

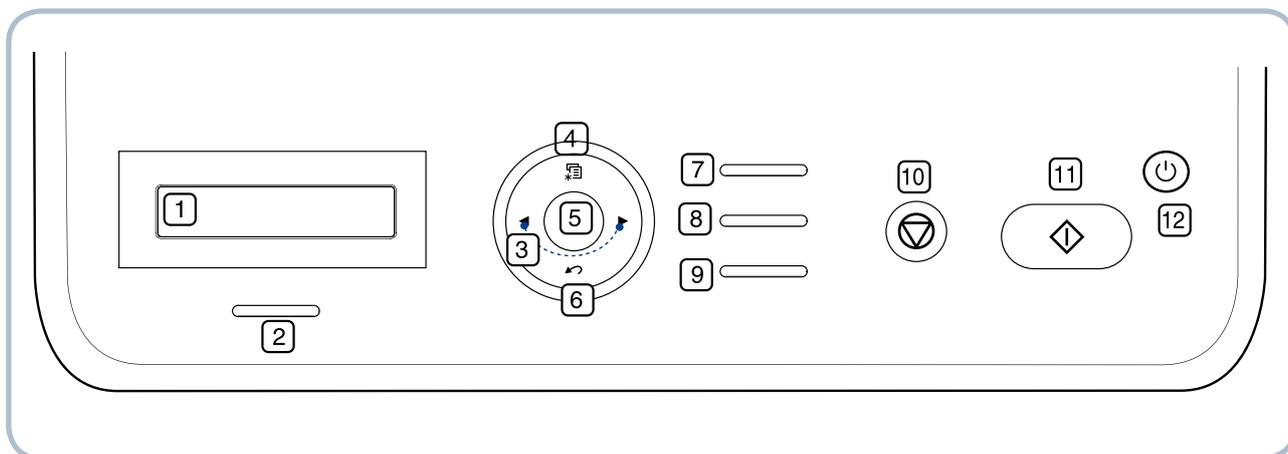


1	ID Copy	You can copy both sides of the ID Card like a driver's license to a single side of paper.
2	Print screen	Prints the active screen displayed on the monitor.
	Reduce/Enlarge	Makes a copy smaller or larger than the original.
3	Display	Shows the current status and prompts during an operation.
4	Status	Shows the status of your machine.
5	 (Fax)	Activates fax mode.
6	 (Copy)	Activates copy mode.
7	 (Scan)	Activates scan mode.
8	Arrow	Scroll through the options available in the selected menu, and increase or decrease values.

9	Menu	Enters Menu mode and scrolls through the available menus.
10	OK	Confirms the selection on the screen.
11	Back	Sends you back to the upper menu level.
12	Numeric keypad	Dials fax number, and enters the number value for document copies or other options.
13	Address Book	Allows you to store frequently used fax numbers and email addresses or search for stored fax numbers or email addresses.
14	Redial/Pause	In standby mode, redials the last number. Also in edit mode, inserts a pause into a fax number.
15	On Hook Dial	Performs same as you hold a handset under the telephone line is engaged.
16	Start	Starts a job.
17	Stop/Clear	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.
18	Power/ Energy Saver	Sends the machine into power saver mode. If you press and hold this button, you can also turn the power on and off.

■ SCX-4600 Series

This control panel may differ from your machine depending on its model.



1	Display	Shows the current status and prompts during an operation.
2	Status	Shows the status of your machine.
3	Arrow	Scroll through the options available in the selected menu, and increase or decrease values.
4	Menu	Enters Menu mode and scrolls through the available menus.
5	OK	Confirms the selection on the screen.
6	Back	Sends you back to the upper menu level.
7	ID Copy	You can copy both sides of the ID Card like a driver's license to a single side of paper.
8	Scan to	Sends scanned data.
9	Print screen	Prints the active screen displayed on the monitor.
10	Stop/Clear	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.
11	Start	Starts a job.
12	Power/ Energy Saver	Sends the machine into power saver mode. If you press and hold this button, you can also turn the power on and off.

4.1.2 Understanding the Status LED

The color of the LEDs indicates the machine's current status.

STATUS		DESCRIPTION
Off		<ul style="list-style-type: none"> The machine is off-line. The machine is in power saver mode. When data is received, or any button is pressed, it switches to on-line automatically.
Green	Blinking	<ul style="list-style-type: none"> When the backlight slowly blinks, the machine is receiving data from the computer. When the backlight blinks rapidly, the machine is printing data.
	On	The machine is on-line and can be used.
Red	Blinking	<ul style="list-style-type: none"> 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 is nearing its replacement interval. Prepare a new cartridge for replacement. You may temporarily increase the printing quality by redistributing the toner.
	On	<ul style="list-style-type: none"> 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.

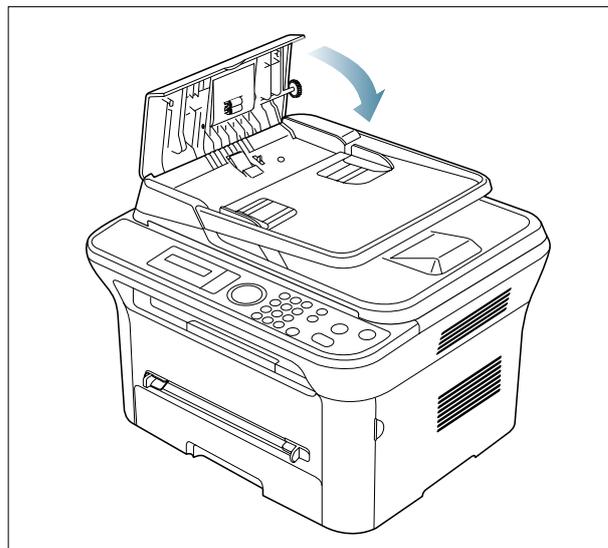
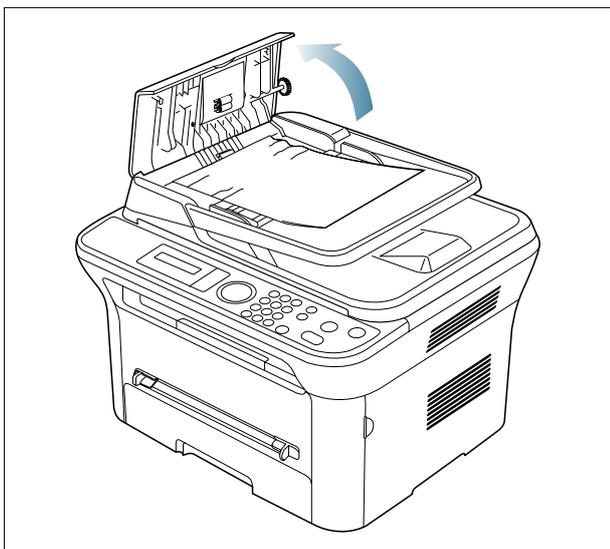
a. Estimated cartridge life means the expected or estimated toner cartridge life, which indicates the average capacity of print-outs and is designed pursuant to ISO/IEC 19752. The number of pages produced will be affected by the percent of imaged area of your original. The operating environment, printing interval, media type, and media size, may also affect the number of pages produced by your cartridge. Some amount of toner may remain in the cartridge even when End of life Replace new cart appears on the display and the printer stops printing. (See www.samsung.com/printer for current information.)

4.1.3 JAM Removal

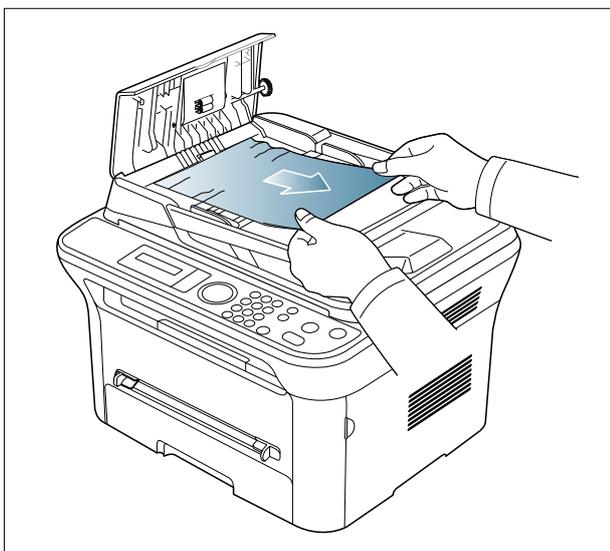
4.1.3.1 Clearing Original Document Jams

When an original jams while passing through the document feeder, a warning message appears on the display screen.

1. Remove any remaining originals from the document feeder.
2. Open the document feeder cover.
3. Gently remove the jammed original from the document feeder.
4. Close the document feeder cover. Reload the originals you removed, if any, in the document feeder.



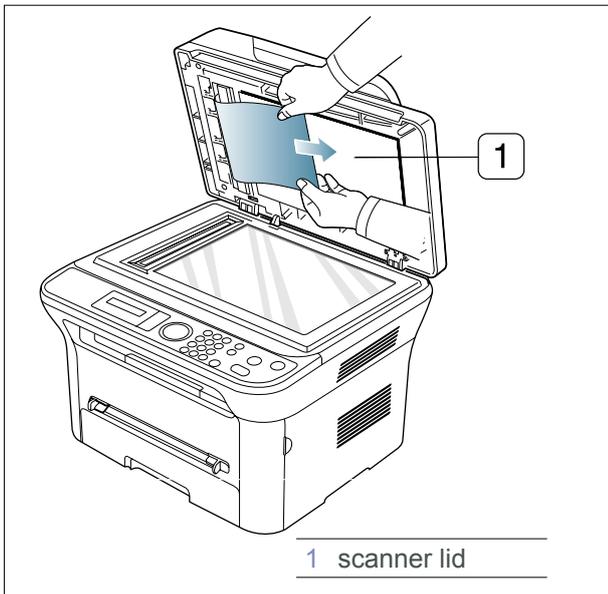
3. Gently remove the jammed original from the document feeder.



5. Open the scanner lid.

* If you see no paper in this area, go to step 5.

6. Gently remove the original from the feed area by carefully pulling it to the right using both hands.



7. Close the scanner lid. Load the removed pages back into the document feeder.

Note: Ensure the number of originals you place in the ADF does not exceed its tray capacity.

4.1.3.2 Tips for avoiding paper jams

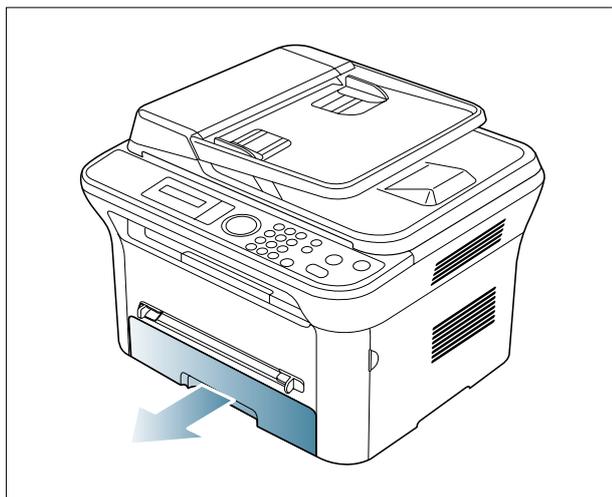
- Ensure that the adjustable guides are positioned correctly.
- Do not overload the tray. Ensure that the paper level is below the paper capacity mark on the inside of the tray.
- Do not remove paper from the tray while your machine is printing.
- Flex, fan, and straighten paper before loading.
- Do not use creased, damp, or highly curled paper.
- Do not mix paper types in a tray.
- Use only recommended print media.
- Ensure that the recommended side of the print media is facing down in the tray, or facing up in the manual tray.

4.1.3.3 Clearing paper jams

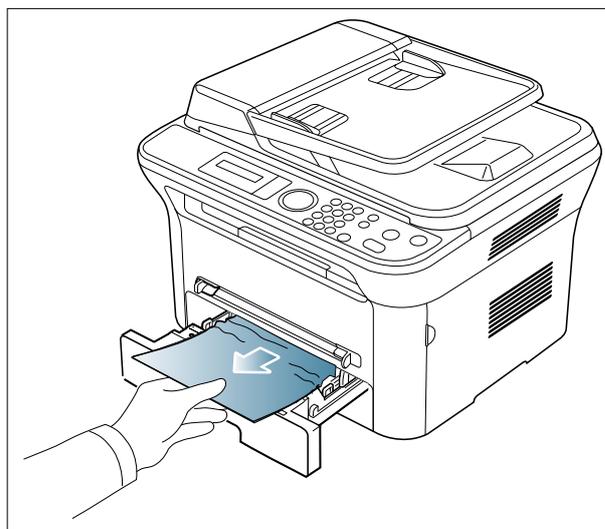
When a paper jam occurs, a warning message appears on the display. To resume printing after clearing paper jams, you must open and close the front door.

In tray 1

1. Open and close the front door. The jammed paper is automatically ejected from the machine. If the paper does not exit, go to the next step.
2. Pull out tray 1.



3. Inspect tray and clear any damaged sheets.

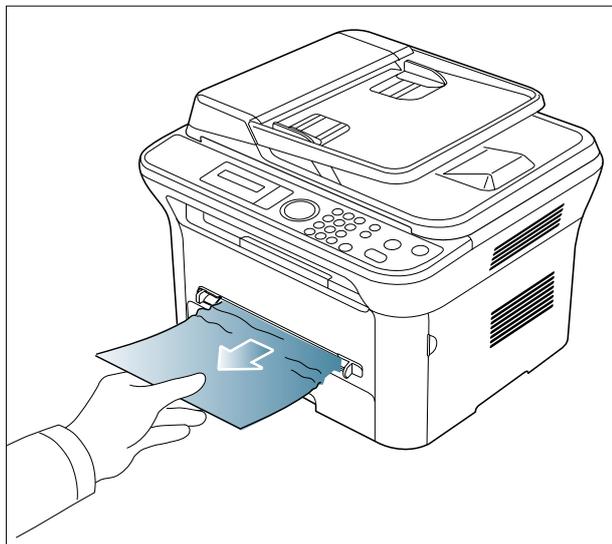


If the paper does not move when you pull, or if you do not see the paper in this area, check the fuser area around the toner cartridge.

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

In the manual tray

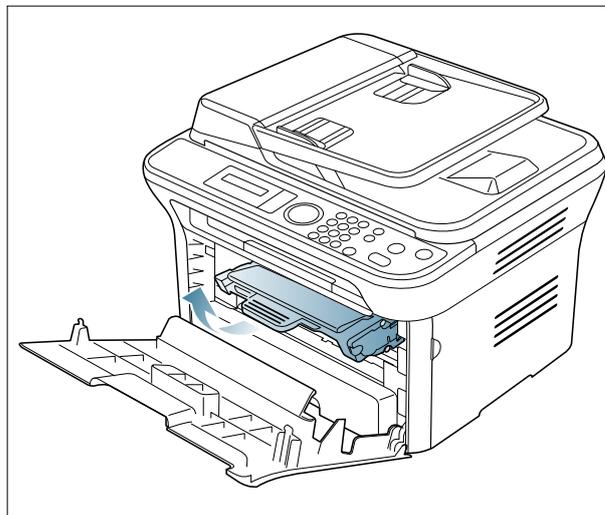
1. If the paper is not feeding properly, pull the paper out of the machine.



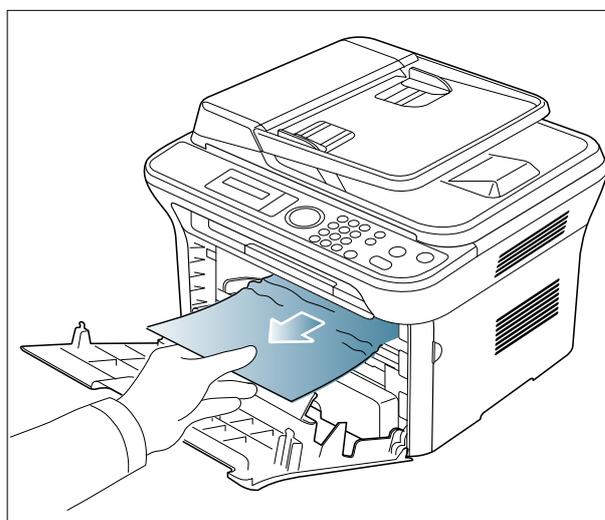
2. Open and close the front door to resume printing.

Inside the machine

1. Open the front door and pull the toner cartridge out, lightly pushing it down.



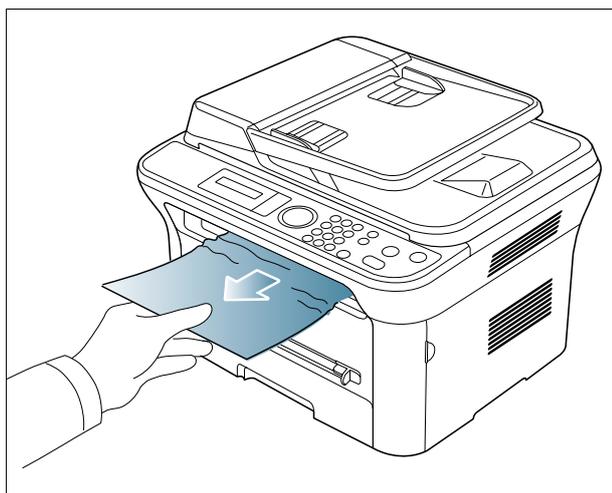
2. Remove the jammed paper by gently pulling it straight out.



3. Replace the toner cartridge and close the front door. Printing automatically resumes.

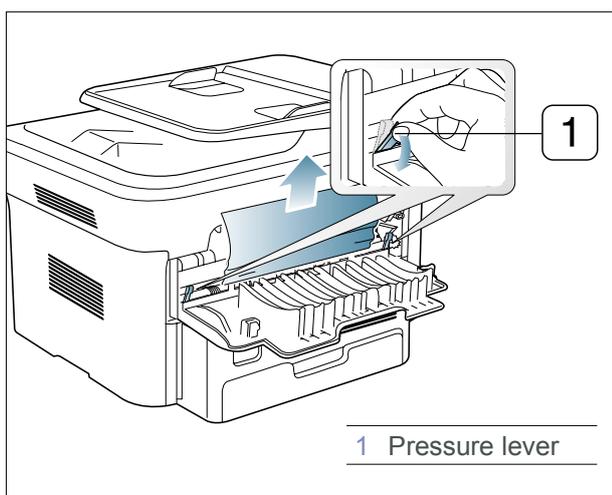
In exit area

1. Open and close the front cover. The jammed paper is automatically ejected from the machine. If you do not see the jammed paper, go to next step.
2. Gently pull the paper out of the output tray.



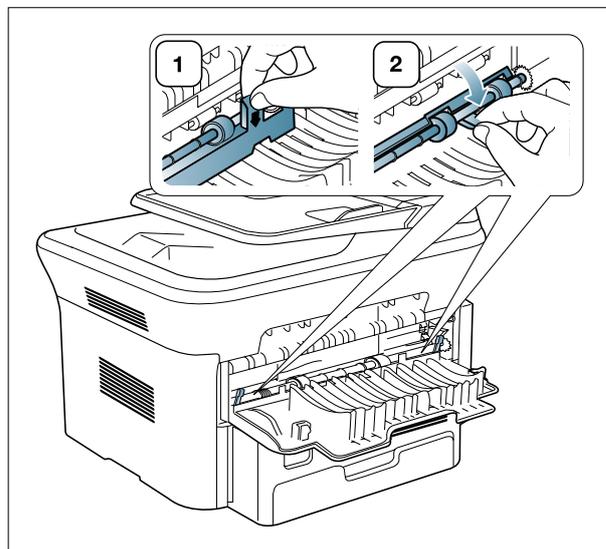
If you do not see the jammed paper or if there is any resistance when you pull, stop and go to the next step.

3. Open the rear cover.
4. Pull the pressure levers down and remove the paper. Return the pressure levers to their original position.



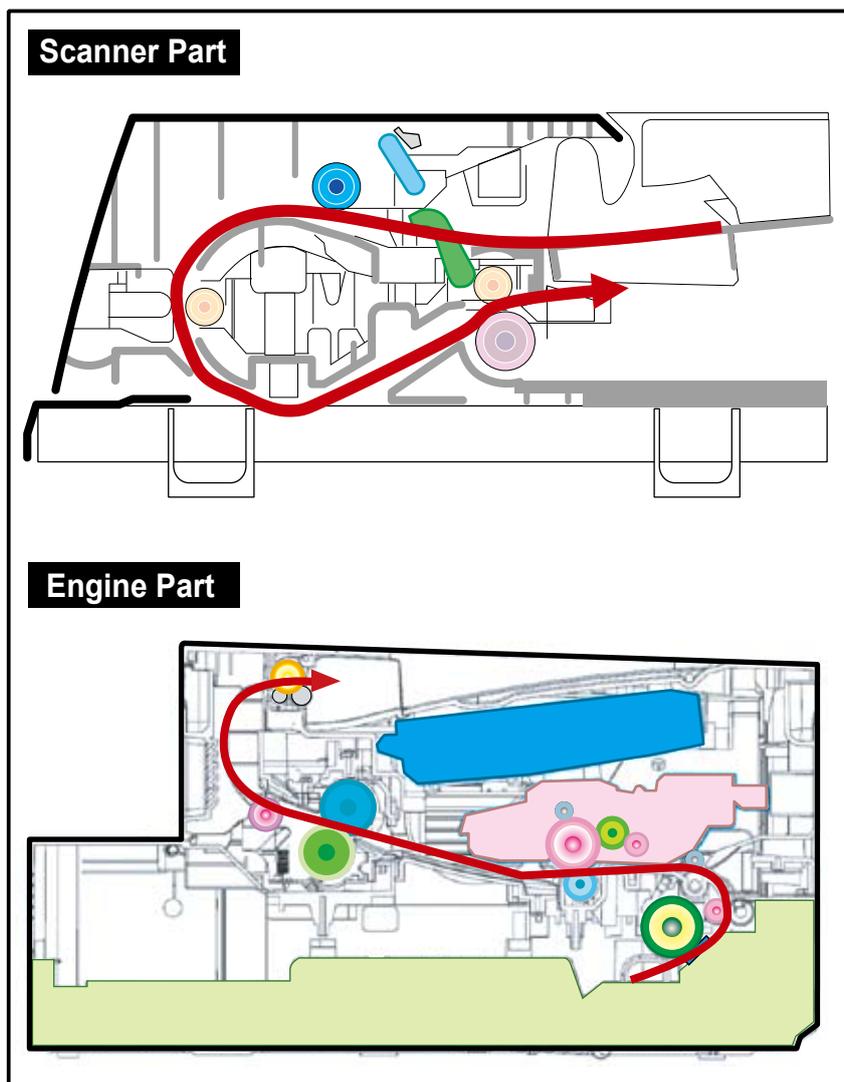
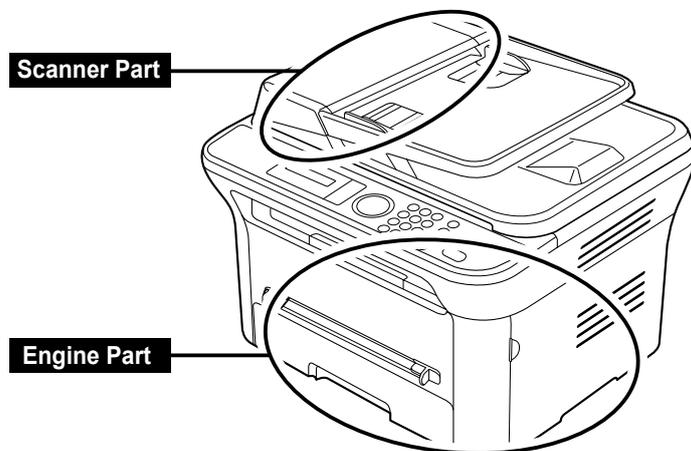
If you do not see the jammed paper, go to next step.

5. Pull the fuser cover levers down and remove the paper. Return the fuser cover levers to their original position..



6. Close the rear cover.
7. Open and close front cover, printing automatically resumes.

4.1.4 Paper Path



4.1.5 Menu Map

The control panel provides access to various menus to set up the machine or use the machine's functions. These menus can be accessed by pressing Menu.

<p>Fax Feature</p> <ul style="list-style-type: none"> Darkness Resolution Multi Send Delay Send Priority Send Forward Secure Receive Add Page Cancel Job 	<p>Fax Setup</p> <ul style="list-style-type: none"> Sending <ul style="list-style-type: none"> Redial Times Redial Term Prefix Dial ECM Mode Send Report Image TCR Dial Mode Receiving <ul style="list-style-type: none"> Receive Mode Ring to Answer Stamp Rcv Name Rcv Start Code Auto Reduction Discard Size Junk Fax Setup DRPD Mode Change Default <ul style="list-style-type: none"> Resolution Darkness Auto Report 	<p>System Setup</p> <ul style="list-style-type: none"> Machine Setup <ul style="list-style-type: none"> Machine ID Machine Fax No. Date & Time Clock Mode Language Default Mode Power Save Timeout Job Timeout Altitude Adj. Toner Save Paper Setup <ul style="list-style-type: none"> Paper Size Paper Type Paper Source Wide A4 Sound/Volume <ul style="list-style-type: none"> Key Sound Alarm Sound Speaker Ringer Reports <ul style="list-style-type: none"> All Report Configuration Phone Book Send Report Sent Report Rcv Report Schedule Jobs Junk Fax Report Network Info. Maintenance <ul style="list-style-type: none"> CLR Empty Msg Ignore Toner Supplies Life Toner Low Alert Serial Number Paper Stacking Clear Setting <ul style="list-style-type: none"> All Settings Fax Setup Copy Setup Scan Setup System Setup Network Setup Phone Book Sent Report Rcv Report
<p>Copy Feature</p> <ul style="list-style-type: none"> Reduce/Enlarge Darkness Original Type Layout 	<p>Network</p> <ul style="list-style-type: none"> TCP/IP (IPv4) <ul style="list-style-type: none"> IPv4 Activate View Host Name Set IP Address <ul style="list-style-type: none"> Manual DHCP BOOTP Show IP Address TCP/IP (IPv6) <ul style="list-style-type: none"> IPv6 Activate DHCP v6 Config <ul style="list-style-type: none"> Router DHCP Address DHCP Off Ethernet Speed <ul style="list-style-type: none"> Auto 10M Half 10M Full 100M Half 100M Full Clear Settings Network Info. 	
<p>Copy Setup</p> <ul style="list-style-type: none"> Change Default <ul style="list-style-type: none"> Copies Copy Collation Reduce/Enlarge Darkness Original Type 		

Some menus may not appear in the display depending on models.

- SCX-4600 : 3 in 1 Model (Print, Copy, Scan)
- SCX-4623F : 4 in 1 Model (Print, Copy, Scan, Fax)
- SCX-4623FN : 4 in 1 Network Model (Print, Copy, Scan, Fax, Network)

4.1.6 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 the buttons as following

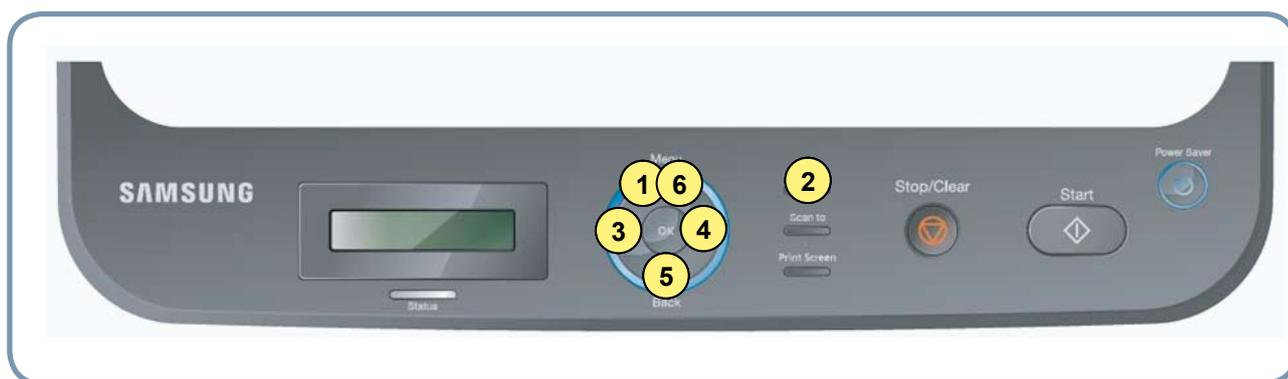
■ 4 in 1 Model

“ Menu → # → 1 → 9 → 3 → 4 → Menu ”



■ 3 in 1 Model

“Menu → ID Copy → Left → Right → Menu → Back”



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.

■ Tech mode Menu Map

Depth1	Depth2	Depth3	Depth4	Common
Data Setup	Send Level	-9~-15	-12	4-in-1
	DTMF Level	[Hi]=xx, [Lo]=xx		4-in-1
	Pause Time	0~9		4-in-1
	Dial Mode	Tone,Pulse	Tone	4-in-1
	Modem Speed	33.6, 28.8, 14.4, 12.0, 9.6, 4.8	33.6	4-in-1
	Error Rate	5%, 10%	10%	4-in-1
	Clear All Mem.			Common
	Toner Low Level	[1-30]% : 10		Common
	Clear Count	Total Page Count	Enter Password	Common
				Common
				4-in-1
	Engine Footer	Off*		Common
			On	Common
Width Sensor	On*		Common	
		Off	Common	
Machine Test	Switch Test	REDUCE_PANEL		Common
		COMPLETE_PANEL		Common
	Modem Test			4-in-1
	Dram Test			Common
	Rom Test			Common
	Shading Test	Adjust Shading ?	Shading&Print	Common
	Restart Machine			Common
Report	All Report			Common
	Configuration			Common
	Supplies Info			Common
	Error Info			Common
	Protocol Dump			4-in-1
	Usage Page			Common
	ComponentCheck			Common
	Service Support			Common

Data Setup

Send Level

You can set the level of the transmission signal. Typically, the Tx level should be under -12 dBm.

Caution : The Send Fax Level is set at the best condition from factory. Never change settings arbitrarily.

DTMF Level

This is a setting value of the High level tone and low level tone at DTMF mode. (Not dial mode)

Pause Time

It shows the delay time when receiving the pause input at auto dial.

Dial Mode

This function can choose dial method.

*Default : Dial (Dial/Pulse)

Modem Speed

You can set the maximum modem speed. However, outbound communication is switched automatically to match the standard of the receiving fax. Therefore, when communicating with a lower speed modem, the outbound communication speed will be set to low. This will allow for better transmission/reception by the receiving fax. It is best set 33.6Kbps as default setting.

Error Rate

When the error rate is about exceed the set value, the Baud rate automatically adjusts to 2400 bps. This ensures that the error rate remains below the set value. You can select the rate between 5% and 10%.

Clear All Memory

The function resets the system to factory default settings. This function is used to reset the system to the initial value when the product was functioning normally. All the values are returned to the default values, and all the information, which was set by the user, will be erased.

NOTICE : Always perform a memory clear after replacing the main board. Otherwise, the system may not operate properly.

Toner Low Level

The function is to set up the time to inform toner low status. This function can provide user convenience for replacing the toner cartridge.

Clear Count

This function resets Total Page Count, Flatbed Scan Count, ADF Scan Count.

Engine Footer

This function is for monitoring the engine status. If you perform this function, at printing, the setting value for engine is shown on the bottom of the printed page.

Machine Test

Switch Test

Use this feature to test all keys on the operation control panel. The result is displayed on the LCD window each time you press a key.

Test Param Set (Handset Model only)

You can set the parameter for handset standard.

Caution : The parameter value is set at the best condition in the shipment from factory.

Modem Test

Use this feature to hear various transmission signals to the telephone line from the modem and to check the modem. If no transmission signal sound is heard, it means the modem portion of the mainboard malfunctioned has malfunctioned.

Dram Test

Use this feature to test the machine's DRAM. The result appears in the LCD display. If all memory is working normally, the LCD shows << O K >>ROM TEST

Use this feature to test the machine's ROM. The result and the software version appear in the LCD display.

- FLASH VER : 1.00 V
- ENGINE VER :1.00V

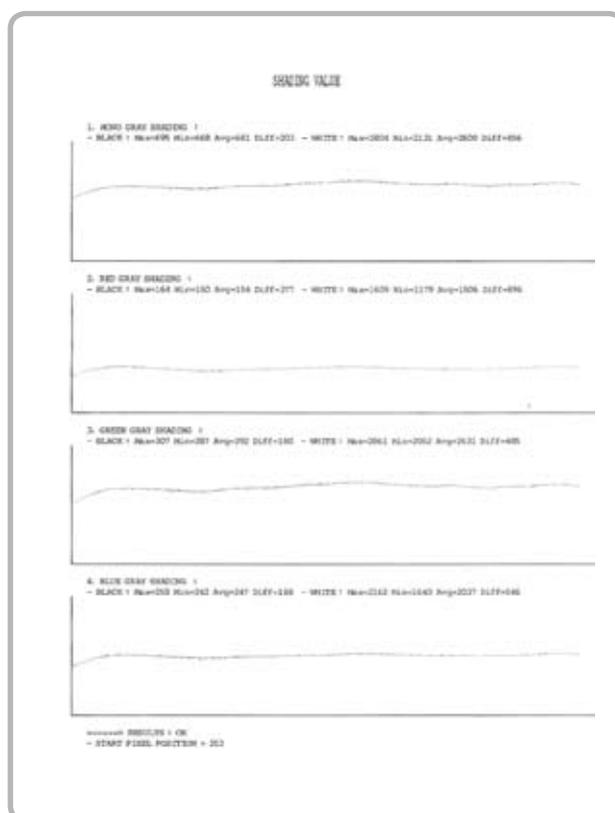
Shading Test

This function is to get the optimum scan quality out of the CCD(Charge Coupled Device).

If the copy image quality is poor, perform this function to check the condition of the CCD unit.

Restart Machine

You can reboot the machine by using a key without mechanically rebooting.



Report

■ Configuration Report

This report shows the status of the user-selectable options. You may print this list to confirm your changes after changing settings.

- SCX-4623FN

Configuration Report			
Date & Time	:	27-MAY-2009 11:37 WED	
Fax Number	:		
Fax Name	:		
Model Name	:	SCX-4623FN Series	
Options	Item	Status	
Default Copies	[1-99]	1	
Default Reduce/Enlarge	[Org.(100%)/LGL->LTR(78%)...]	Org.(100%)	
Default Darkness	[Light/Normal...]	Normal	
Default Original Type	[Text/ Text/Photo...]	Text	
Darkness	[Light/Normal...]	Normal	
Resolution	[Standard/Fine...]	Standard	
Ring To Answer	[1-7]	1	
Receive Mode	[Fax/Tel...]	Fax	
Redial Term	[1-15]	3	
Redial Times	[0-13]	7	
Send Report	[On/Off...]	On-Err	
Auto Report	[On/Off]	On	
Auto Reduction	[On/Off]	On	
Discard Size	[0-30]	20 mm	
RCV Start Code	[0-9]	+9*	
DRPD Mode	[On/Off]	On	
Paper Size(Tray 1)	[Letter/A4...]	A4	
Paper Size(Manual Feeder)	[Letter/A4...]	A4	
Copy Tray	[Tray 1/Manual Feeder...]	Auto	
Fax Tray	[Tray 1]	Auto	
Paper Type(Tray 1)	[Plain Paper/Bond...]	Plain Paper	
Paper Type(Manual Feeder)	[Plain Paper/Bond...]	Plain Paper	
Send Forward/RCV Forward	[On/Off...]	Off/Off	
Junk Fax Setup	[On/Off]	Off	
Secure Receive	[On/Off]	Off	
Prefix Dial	[Fax Number]		
Stamp RCV Name	[On/Off]	Off	
ECM Mode	[On/Off]	On	
Image TCR	[On/Off]	On	
Speaker	[On/Off...]	Comm.	
Ringer	[Off/Low...]	Mid	
Key Sound	[On/Off]	Off	
Alarm Sound	[On/Off]	On	
Dial Mode	[Tone/Pulse]	Tone	
Clock Mode	[12 Hours/24 Hours]	24 Hours	
Language	[English/Francais...]	English	
Default Mode	[Fax/Copy]	Copy	
Power Save	[1/5/10...]	1 Min	
Timeout	[15/30/60...]	30 Sec	
Altitude Adjustment	[Normal/High 1...]	Normal	
Firmware/Engine Version	:	2.01.00.53itt1 05-21-2009	0.02.22
Emulation Version	:	SPL 5.33 12-16-2008	
Installed Date	:	YYYYMMDD	
Total Page Count	:	0	
CRU Prints/Toner Remaining	:	70	63% (P26.61)
Capacity/Serial	:	1.0 K	CRUM-INIT_TONER
ADF/Platen Scan Page Counts	:	0	
USB Serial	:		
Country	:	UAE	
IP Address/Memory Size	:	10.88.198.203	128 Mbyte

Usage Meter Count

Simplex Print Count	2(impressions)	2(sheets)
Simplex Copy Count	0(impressions)	0(sheets)
Simplex Fax-in Count	0(impressions)	0(sheets)
Simplex Report Count	4(impressions)	4(sheets)

Maintenance Parts

Document feeder rubber pad	: 20,000 pages
Fuser unit	: 50,000 pages
Transfer Roller	: 50,000 pages
Pickup Roller	: 50,000 pages
Cassette Unit	: 50,000 pages
Product Life Time	: 50,000 pages or 5 years, whichever comes first

-  The item in green box appear when performing the memory clear.
-  The item in blue box appear in common with SCX-4600.
-  The item in red box appear when printing a configuration report in Tech mode

■ Supplies Information Report

This report shows the status of toner cartridge. This report includes toner remaining, average area coverage, installed date etc.

Supplies Information Report

Date & Time : 2009-JUN-18 09:55AM THU
Fax Number :
Fax Name :
Model Name : SCX-4623FN Series

Cartridge Information

Toner Remaining : 100%
Equivalent pages printed : 6 (pages)
Average Area Coverage : 3.33%

Dot Counts : 7807900
Page Counts : 10
Motor on time : 101 sec 100%(Life Remaining)
Clear Toner : 0
Replaced Toner Counts : 0
Supplier ID : PT252INI

Capacity : 1.0 K
Supplier : SAMSUNG(INIT)
Serial : CRUM-INIT__TONER
Product Date : yyymmdd
Installed Date : 20070102

Scan Information

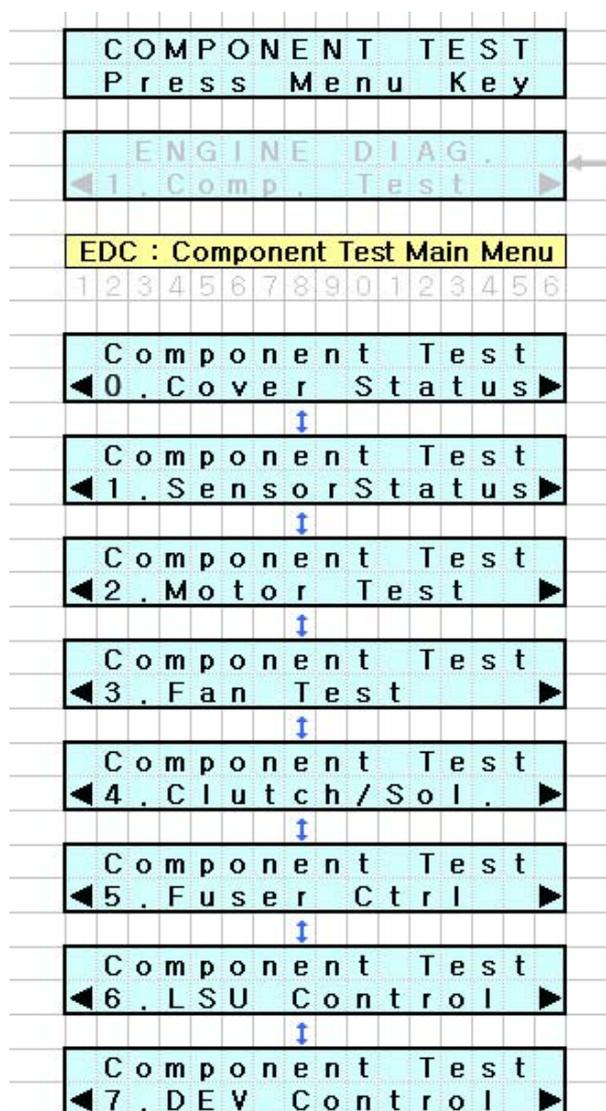
ADF Scan Page Counts : 1
Platen Scan Page Counts : 1

4.1.7 EDC Mode

The EDC Mode is used to independently control and test each sensor and driver component, so as to more easily service the printer.

■ Method to enter

1. After turn on the system power, check the “Ready” message on the LCD.
2. To enter the EDC Mode, Push the buttons outlined below in the order outlined.
“Menu → Stop → Left arrow → Back → OK → Right arrow”
3. The message “**COMPONENT TEST Press Menu Key**” display on the LCD.
4. To get out of the EDC Mode, Press the “Stop” key



■ EDC Mode Menu

0. Cover Status

Item	Description
Front Cover	When the front cover opened, "Open" message display LCD. If the front cover closed, "Closed" message display LCD.

1. Sensor Status

Item	Description
Regi/Feed/Exit Sensor	Manually open and close the actuator of the sensor [Regi, Feed, and/or Exit Sensor] you wish to check, the message "Without Paper" and "With Paper" message will be displayed.
Empty	Manually open and close the actuator of the Empty Sensor, the message "Present" and "Empty" message will be displayed.

2. Motor Test

Item	Description
Main Mtr Nor.	If "OK" key is pushed after "ON" displayed, motor will be run. Main motor will auto - stop after 60 seconds and "OFF" message will be displayed.
Slow	If "OK" key is pushed after "ON" displayed, motor will be slowly run. Main motor will auto - stop after 60 seconds and "OFF" message will be displayed.

3. Fan Test

Item	Description
Fuser Fan	If "OK" key is pushed after "ON" displayed, fan will be run. Fuser fan will auto - stop after 10 seconds and "OFF" message will be displayed.

4. Clutch Test

Item	Description
Pick up Clutch	When "OK" key is pushed after "ON" message displayed, clutch turns on. Pick up Clutch will be turn off after 3 seconds and "OFF" message will be displayed.
Regi Clutch	When "OK" key is pushed after "ON" message displayed, clutch turns on. Regi Clutch will be turn off after 3 seconds and "OFF" message will be displayed.

5. Fuser Ctrl

Item	Description
Temp Control	Fuser on and off. "ON" is selected, fuser will be active and display the fuser temperature [XXX] but "OFF" is selected, fuser will be stop.
Fuser Temp.	Fuser temperature displayed on LCD (example: [170])

6. LSU Control

Item	Description
LD Power	When "OK" key is pushed after "ON" message displayed, "OFF" message will be displayed after 10 seconds
LSU Motor	If "OK" key is pushed after "ON" displayed, motor will be run. LSU motor will auto - stop after 10 seconds and "OFF" message will be displayed.
LSU Ready	If "OK" key is pushed after "ON" displayed, motor will be run. "1" message will be displayed.
Hsync	If "OK" key is pushed after "ON" displayed, motor will be run. "1" message will be displayed.

7. DEV Control

Item	Description
THV (+)	If "OK" key is pushed after "ON" displayed, THV (+) will be turned on.
THV (-)	If "OK" key is pushed after "ON" displayed, THV (-) will be turned on.
Dev Bias	If "OK" key is pushed after "ON" displayed, Dev Bias will be turned on.
MHV Bias	If "OK" key is pushed after "ON" displayed, MHV Bias will be turned on.

■ ACRONYMS AND Explanation

- DEV – Developing High Voltage
- EDC – Embedded Diagnostic Control
- F/W – Firmware
- HVPS – High Voltage Power Supply
- H/W – Hardware
- LD – Laser Diode
- LSU – Laser Scanning Unit
- MHV – Main High Voltage (Charge Voltage)
- OPC – Optical Photo Conductor
- SCF – Second Cassette Feeder
- THV – Transfer High Voltage

4.1.8 Firmware Upgrade

- ◆ USB and Network port are used to update the firmware.
Network applications (SWAS, SWS) can be used to update the firmware.

- ◆ Normal Update

Send ROM file via USB, network port in Ready state.
It will automatically update and reset.

- ◆ Special Mode Update

1. Power On While Pressing “Stop / Clear” Button.
- It displays download mode message.
2. Send ROM file via USB.
3. It will automatically update and reset.

Note

* You can refer to the F/W Version Info. by pressing “ Menu → # → 1 → 9 → 3 → # ”

* If the machine is still not fyou cannot necessary you should perform factory clearing

“ Menu → # → 1 → 9 → 3 → Start ” (SCX-4623series)

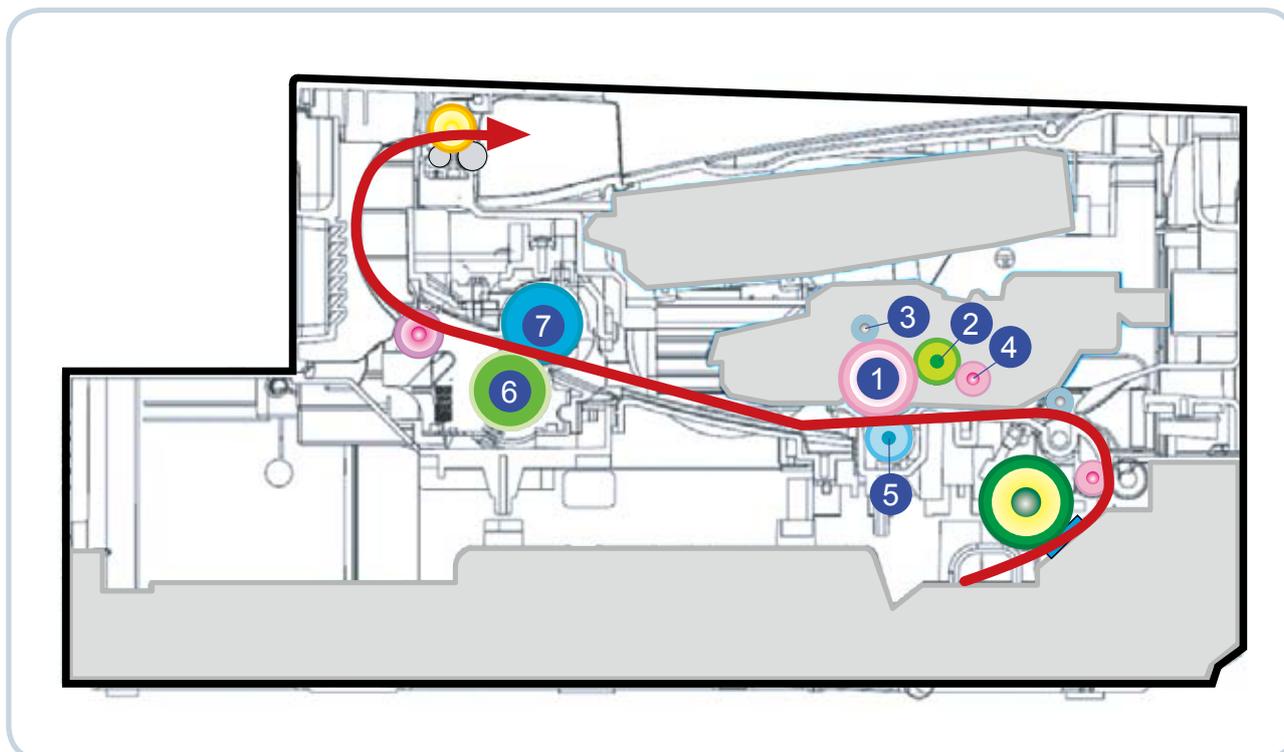
“ Menu → ID Copy → Left → Right → Menu → Start ” (SCX-4600series) after updating Rom file.

Notice : All of count values and data saved in MFP will be cleared.

4.1.9 Periodic Defective Image

If an image defects appears at regular intervals on the printed-paper, it is due to a faulty or damaged roller. Refer to the table below and check the condition of the appropriate roller.

Roller	Period (mm)	Phenomenon	Defective part
OPC Drum	75.6mm	White and Black Spots	Toner Cartridge
Developing Roller	35mm	White spot, Horizontal black band	
Charging Roller	37.5mm	Black Spot and line and periodic band	
Supply Roller	49mm	Periodic Band by little difference of density	
Transfer Roller	47mm	Ghost, Damaged image by abnormal transfer	Transfer roller
Pressure Roller	75.4mm	Background	Fuser
Fusing Roller	77.5mm	Black spot and image ghost	



1	OPC	5	Transfer roller
2	Developing Roller	6	Pressure roller
3	Charging roller	7	Fusing roller
4	Supply Roller		

4.1.10 Error Message

Messages appear on the control panel display to indicate the machine's status or errors. Refer to the tables below to understand the messages' and their meaning, and correct the problem, as is necessary.

Checking display messages

- If a message is not in the table, reboot the power and try the printing job again.
- Some messages may not appear in the display depending on the options or models.
- [error number] indicates the error number.
- [tray type] indicates the tray number.
- [media type] indicates the media type.
- [media size] indicates the media size.
- [color] indicates the color of toner or imaging unit.

Message	Meaning	Suggested solutions
[COMM. Error]	The machine has a communication problem.	Ask the sender to try again.
[Incompatible]	The machine has received a fax which is registered as a junk fax.	The received fax data will be deleted. Reconfirm junk fax setup.
[Line Error]	Your machine cannot connect with the receiving fax machine or has lost contact because of a problem with the phone line.	Try again. If the problem persists, wait an hour or so for the line to clear and try again. Or, turn the ECM mode on.
[No Answer]	The receiving fax machine has not answered after several redial ttempts.	Try again. Make sure that the receiving machine is operational and has paper.
[Stop Pressed]	Stop/Clear has been pressed during an operation.	Try again.
ADF COVER OPEN ERROR	The ADF cover is opened.	Close the ADF cover.
BOOTP problem Auto IP Run	The IP address assignment is failed. This happens, when Auto IP for BOOTP is set in SyncThru Web Service.	Change the IP address assignment method to DHCP or Static. If you do not change this option, the BOOTP server continually asks to assign the IP Address.
BOOTP problem Reconfigure DHCP	The IP address assignment is failed. This happens, when Auto IP for BOOTP is not set in SyncThru Web Service.	Change the IP address assignment method to DHCP or Static. If you do not change this option, the BOOTP server continually asks to assign the IP Address.
DHCP problem Reconfigure BOOTP	The IP address assignment is failed. This happens, when Auto IP for DHCP is set in SyncThru Web Service.	Change the IP address assignment method to BOOTP or Static. If you do not change this option, the DHCP server continually asks to assign the IP Address.

Message	Meaning	Suggested solutions
DHCP problem: Auto IP Run	The IP address assignment is failed. This happens, when Auto IP for DHCP is not set in SyncThru Web Service.	Change the IP address assignment method to BOOTP or Static. If you do not change this option, the DHCP server continually asks to assign the IP Address.
Document Jam. Remove Jam	The loaded original has jammed in the ADF.	Open the ADF cover and clear the jam.
Door Open. Close it	The front cover is not securely latched.	<ol style="list-style-type: none"> 1. Close the cover until it locks into place. 2. Enter the EDC mode and check the cover status.
Error #02-000~2 Turn off then on	A fuser error has occurred.	<ol style="list-style-type: none"> 1. Turn the printer off and back on to continue. 2. Reconnect the cable between the fuser and SMPS board. 3. Remove the fuser and re-install it. 4. Check the thermostat. If it is defective, replace it. 5. If error persists, replace the fuser. 6. If error persists, replace the SMPS/ HVPS board.
Install Toner Install it	The toner cartridge is installed improperly, or not installed.	Reinstall the toner cartridge two or three times to confirm it is seated properly. If the problem persists, the toner cartridge is not being detected.
Memory Full Remove Job	The memory is full.	Press the left/right arrow to highlight Cancel or Start, then press OK. If you select Cancel, the machine stops the fax job. If you select Start, the machine only sends scanned documents of the fax job.
Network Problem: IP Conflict	The IP address is used elsewhere.	Check the IP address or obtain a new IP address.
Not Compatible Toner cartridge	The indicated toner cartridge is not suitable for your machine.	Install the corresponding toner cartridge with a Samsung-genuine cartridge.
Output bin Full Remove paper	The output tray is full. Or the sensor is not facing down.	Remove papers from the output tray, the machine resumes printing. Or make sure the sensor is facing down.

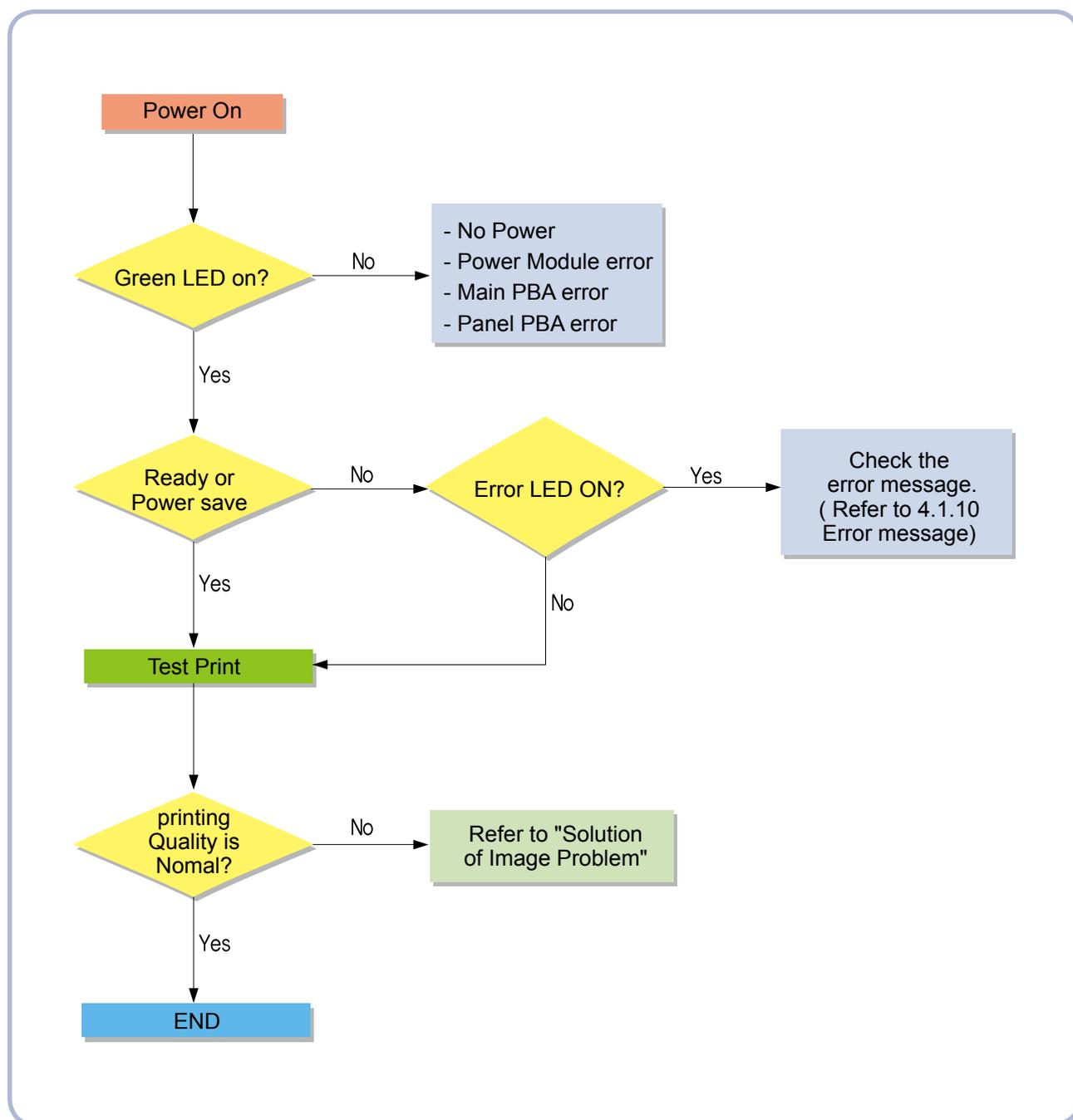
Message	Meaning	Suggested solutions
Paper Empty in Tray1	There is no paper in the indicated tray.	<ol style="list-style-type: none"> 1. Load paper in the tray. 2. If the message does not clear, enter the EDC mode and check the empty sensor. Replace empty sensor if defective.
Paper Jam in exit area	Special print media has jammed in the paper exit area.	<ol style="list-style-type: none"> 1. Clear the jam. 2. If the message does not clear, enter the EDC mode and check the exit sensor. Replace exit sensor.
Paper Jam in MP Tray	Paper has jammed in the manual tray area.	<ol style="list-style-type: none"> 1. Clear the jam. 2. If the message does not clear, check the following. <ul style="list-style-type: none"> - If pick up roller does not rotate and paper does not feed, check the pick up clutch. 3. If Pickup roller is rotating but the paper is not feeding, replace the pick up rubber. 4. Check the feed sensor in EDC mode. If it is defective, replace it.
Paper Jam in Tray1	Paper has jammed in the tray1 area.	<ol style="list-style-type: none"> 1. Clear the jam. 2. If the message does not clear, check the following. <ul style="list-style-type: none"> - If pick up roller does not rotate and paper does not feed, check the pick up clutch. 3. If Pickup roller is rotating but the paper is not feeding, replace the pick up rubber. 4. Check the feed sensor in EDC mode. If it is defective, replace it.
Paper Jam inside machine	Paper has jammed inside the machine.	<ol style="list-style-type: none"> 1. Clear the jam. 2. If the message does not clear, check the feed sensor or exit sensor. Replace the defective sensor.
Prepare new cartridge	Small amount of toner is left in the indicated cartridge. The cartridge is getting low on toner.	Prepare a new cartridge for a replacement. You may temporarily increase the printing quality by redistributing the toner.
Replace new cartridge	The cartridge is almost empty.	Replace the toner cartridge for the best print quality when this message appears.

Message	Meaning	Suggested solutions
Replace Toner	The cartridge is out of toner.	Replace the toner cartridge with a Samsung-genuine toner cartridge.
Self Diagnostics Please wait	The engine in your printer is checking some problems detected.	Please wait a few minutes.
Sleeping...	The machine is in the power save mode.	When data is received, it switches to on-line automatically.
Too many Faxes Remove Job	Too many faxes are received.	Remove received fax.

4.2 Troubleshooting

4.2.1 Procedure of Checking the Symptoms

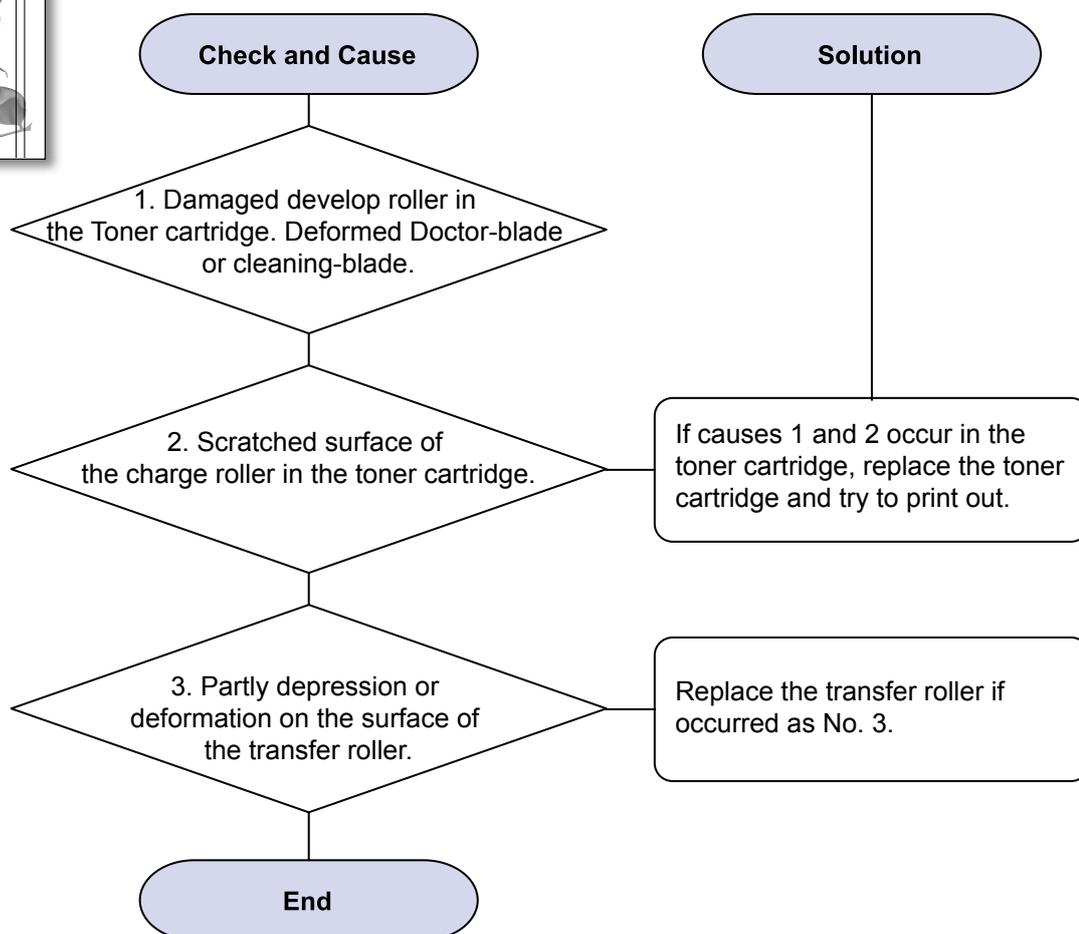
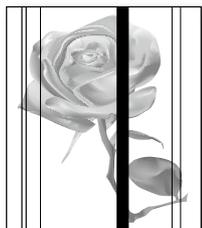
Before attempting to repair the printer first obtain a detailed description of the problem from the customer.



4.2.2 The cause and solution of Bad image

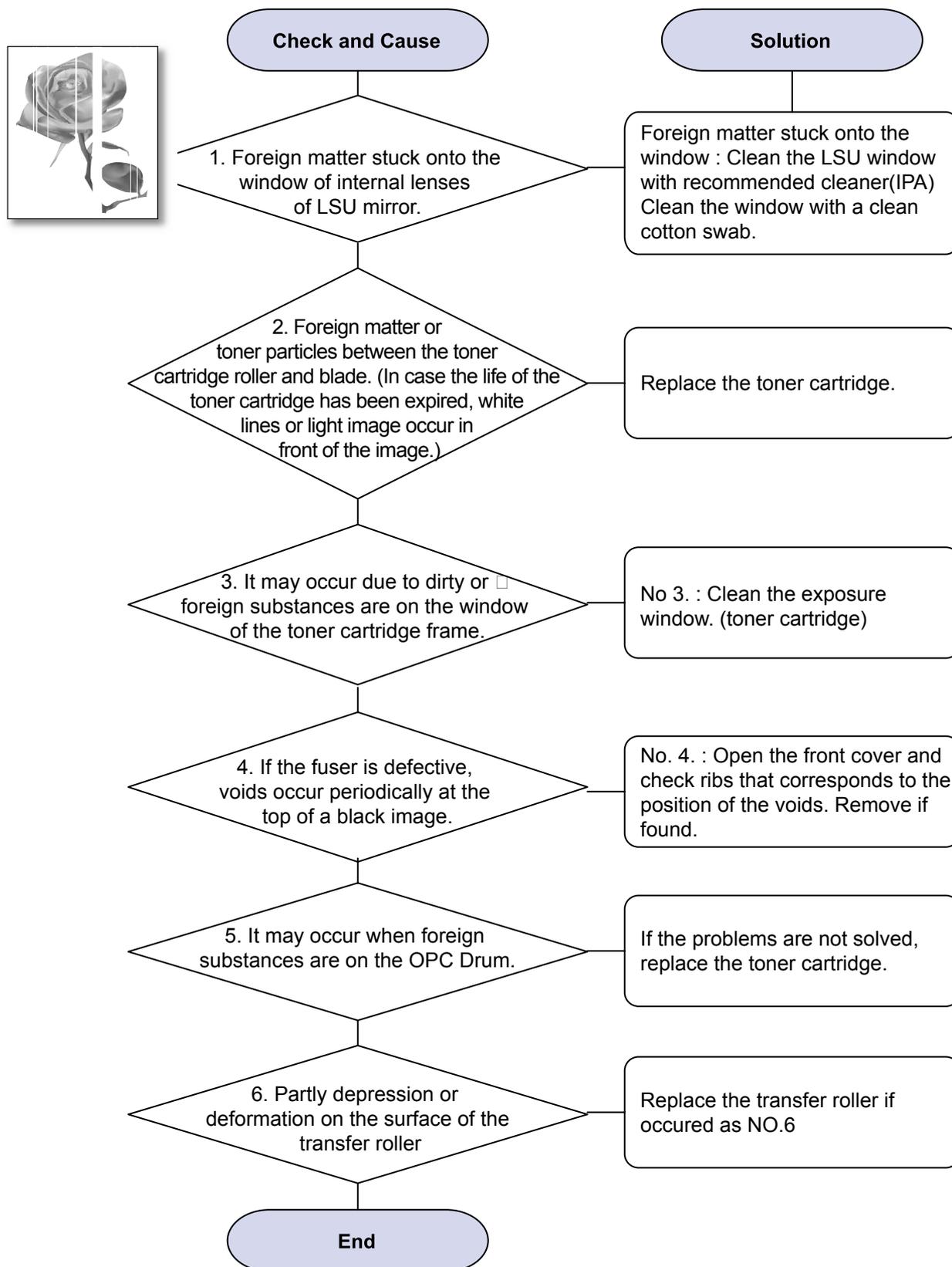
1) Vertical Black Line and Band

Description : 1. Straight thin black vertical line occurs in the printing.
2. Dark black vertical band occur in the printing.



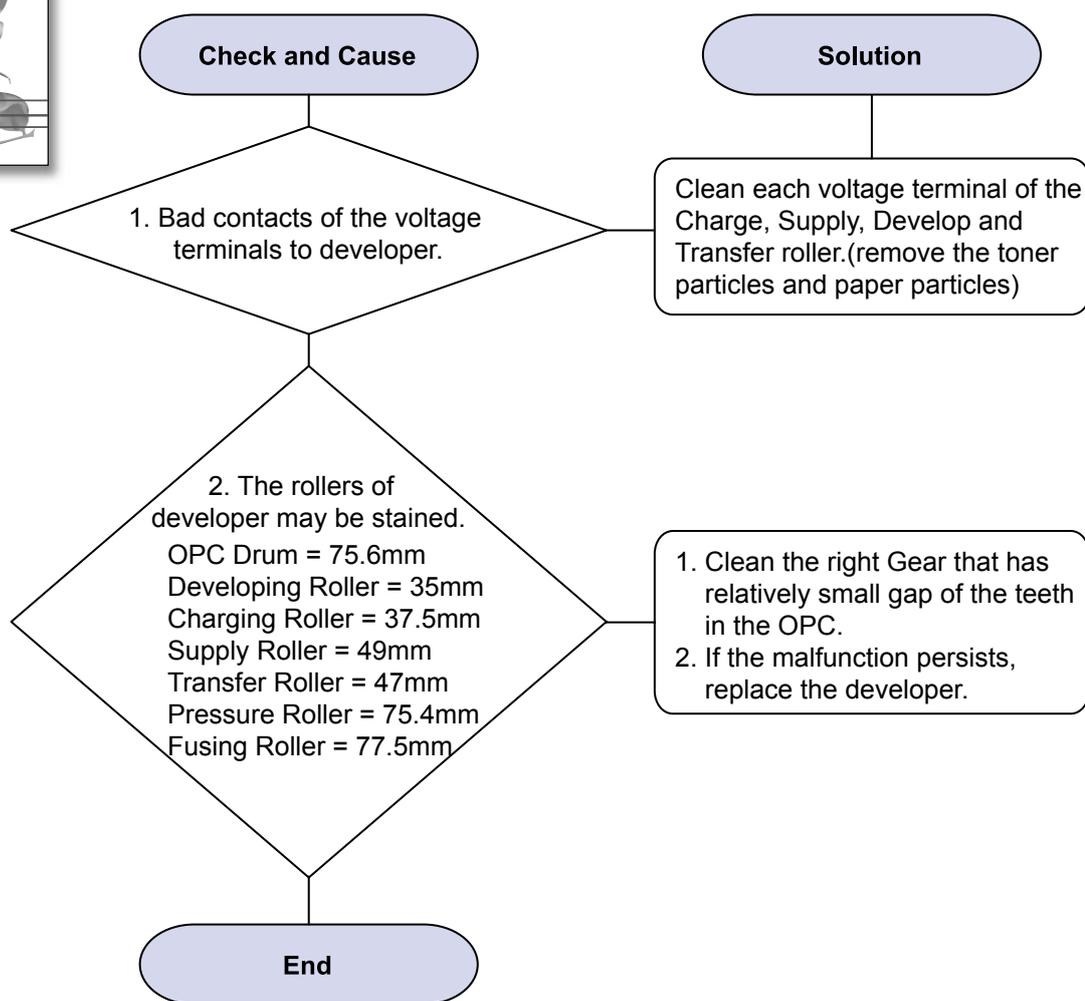
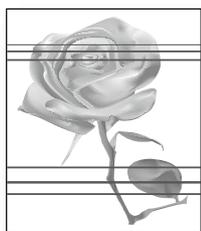
2) Vertical White Line

Description : White vertical voids in the image.



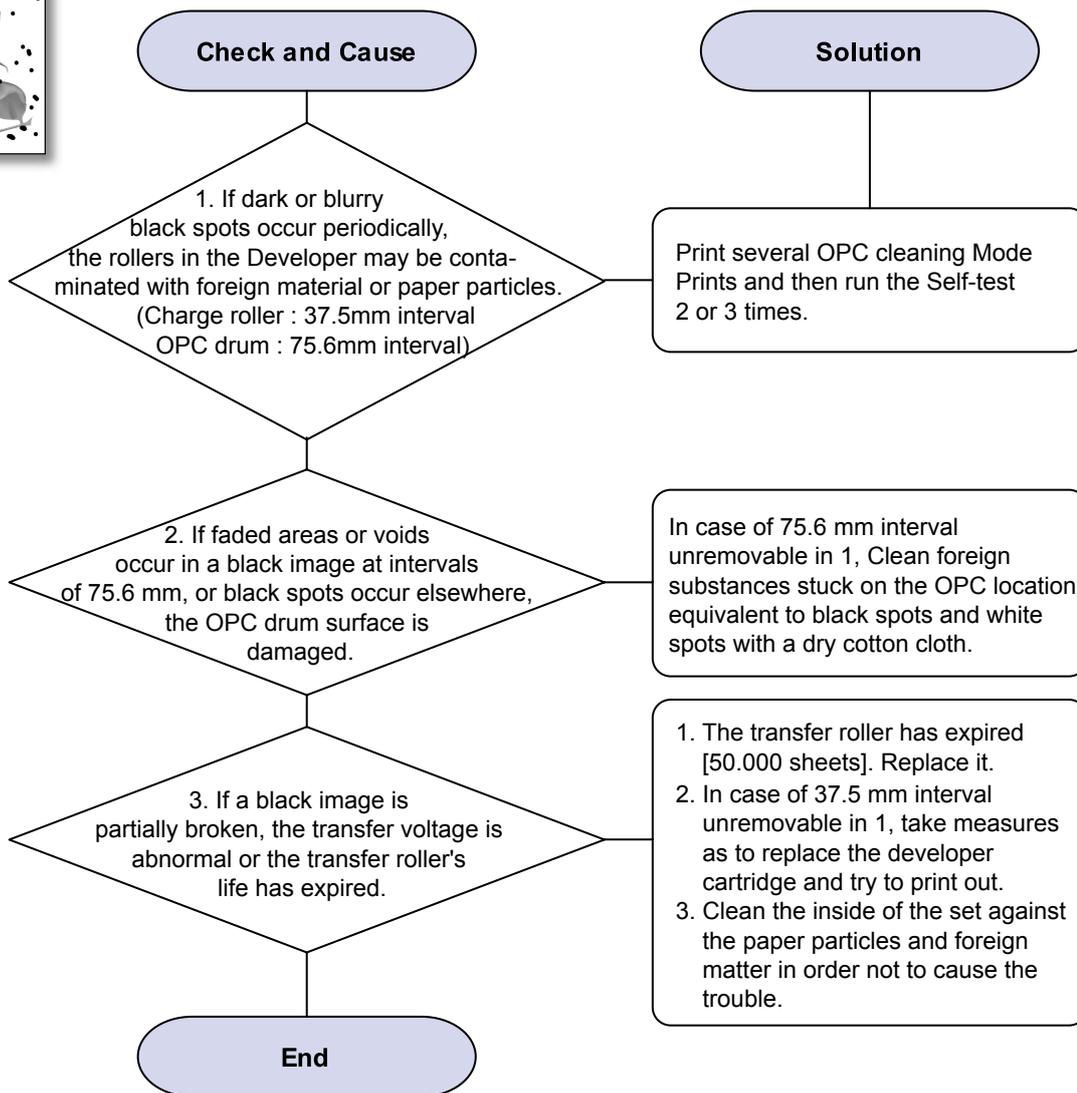
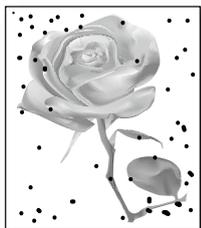
3) Horizontal Black Band

Description : Dark or blurry horizontal stripes occur in the printing periodically.
(They may not occur periodically.)



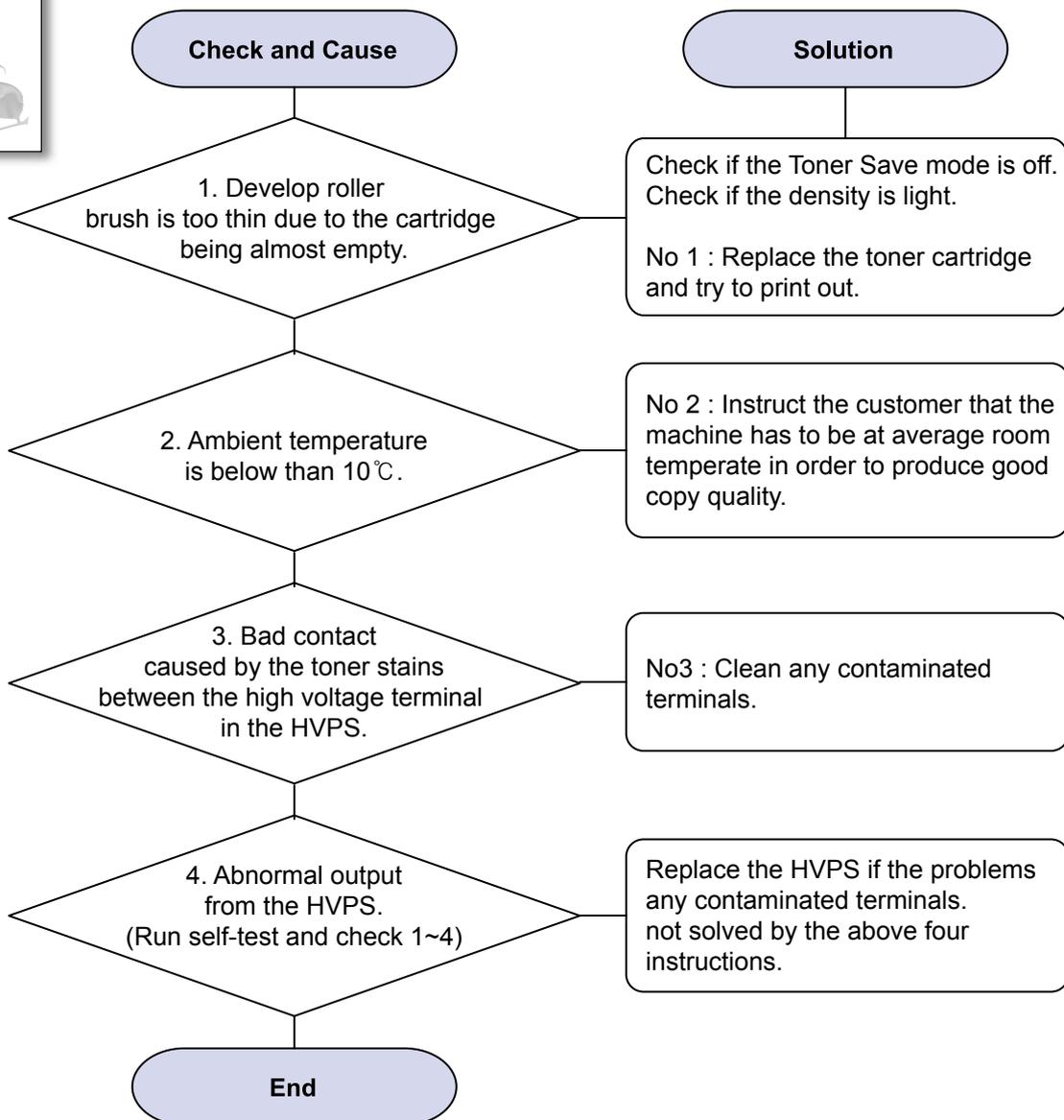
4) Black/White Spot

Description : 1. Dark or blurry spots occur periodically in the printing
 2. White spots occur periodically in the printing



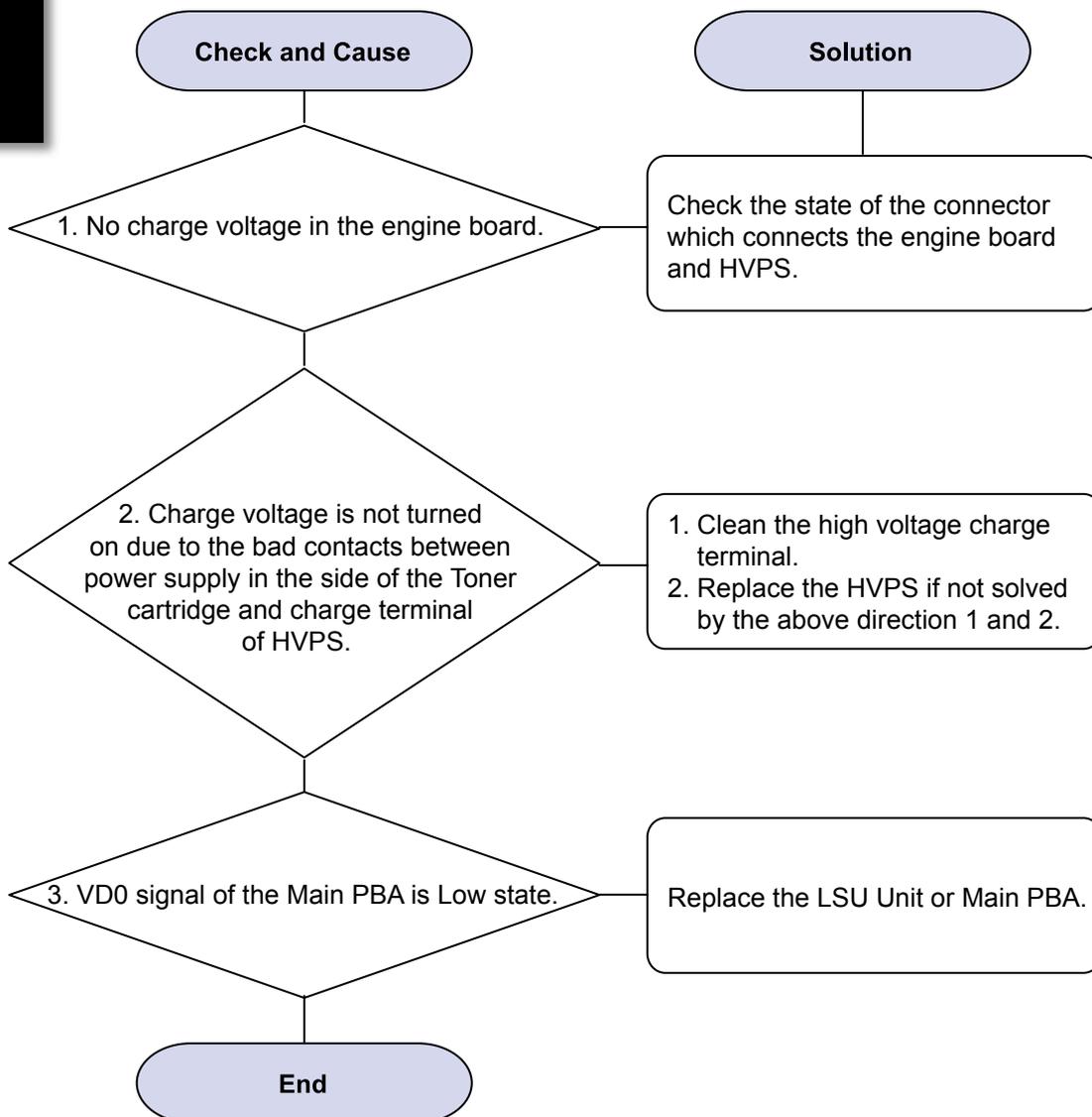
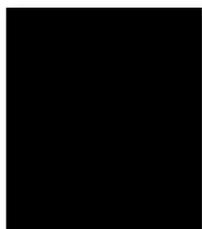
5) Light Image

Description : The printed image is light, with no ghost.



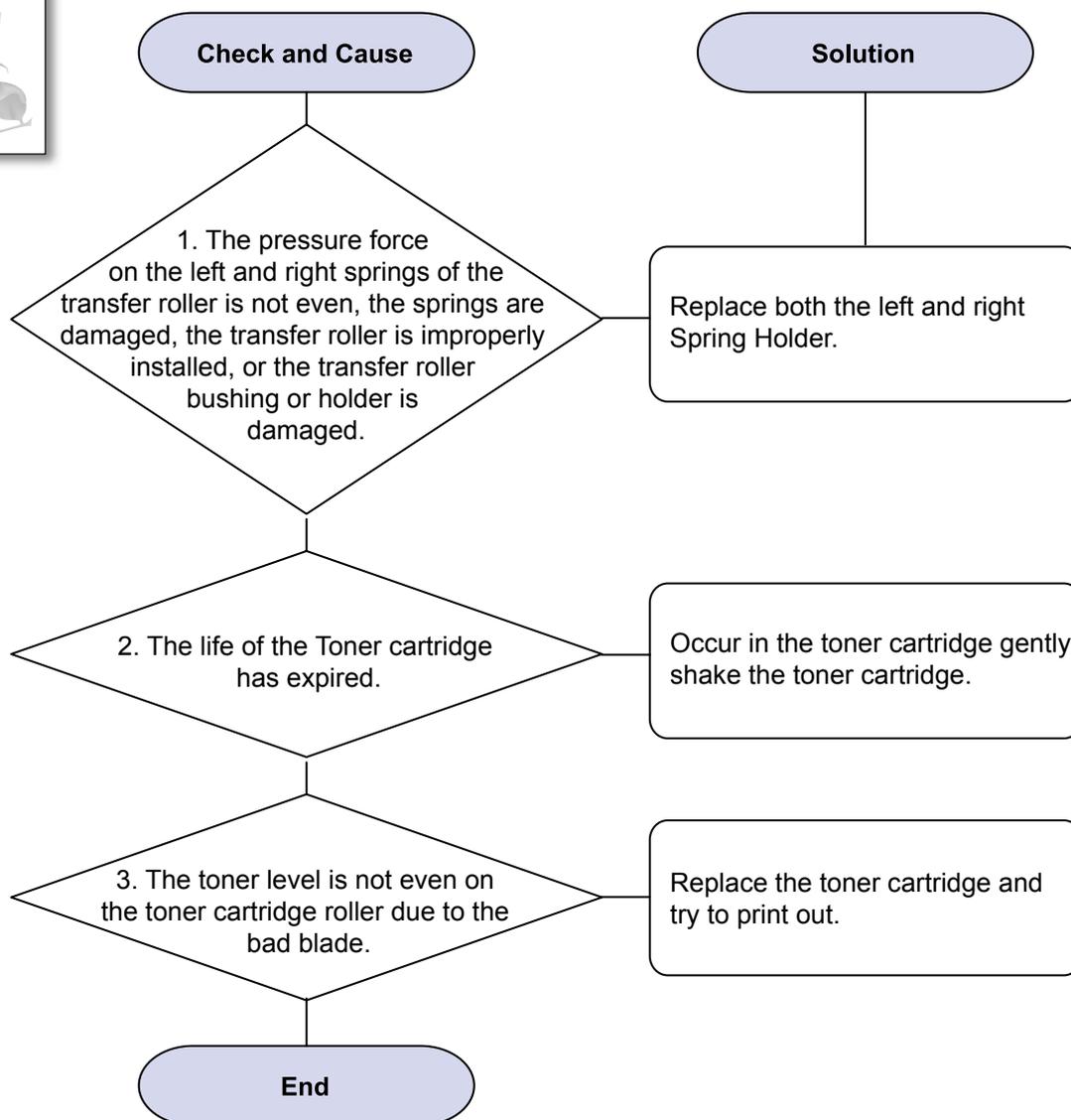
6) Dark Image or a Black Page

Description : The printed image is dark.



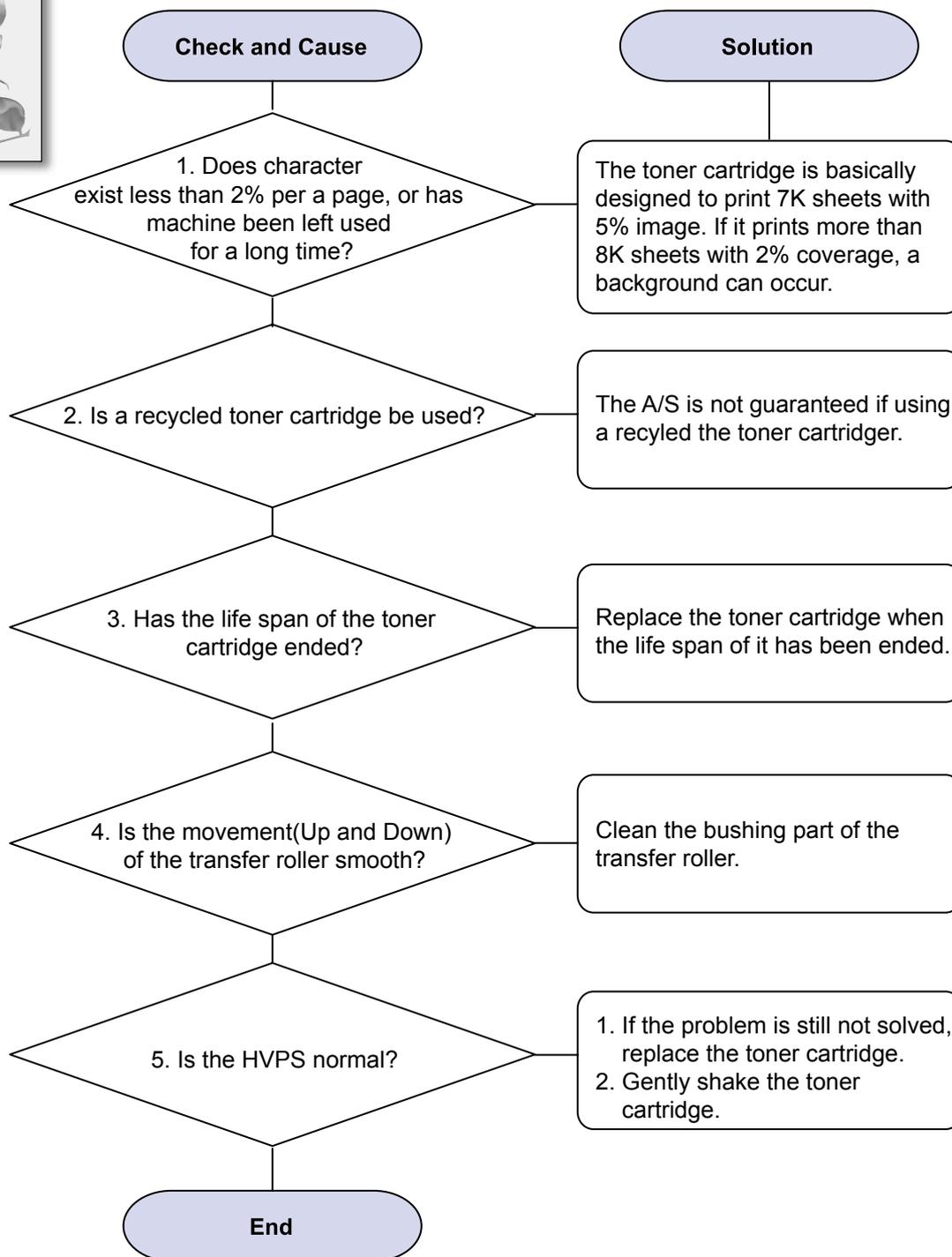
7) Uneven Density

Description : Print Density is uneven between left and right.



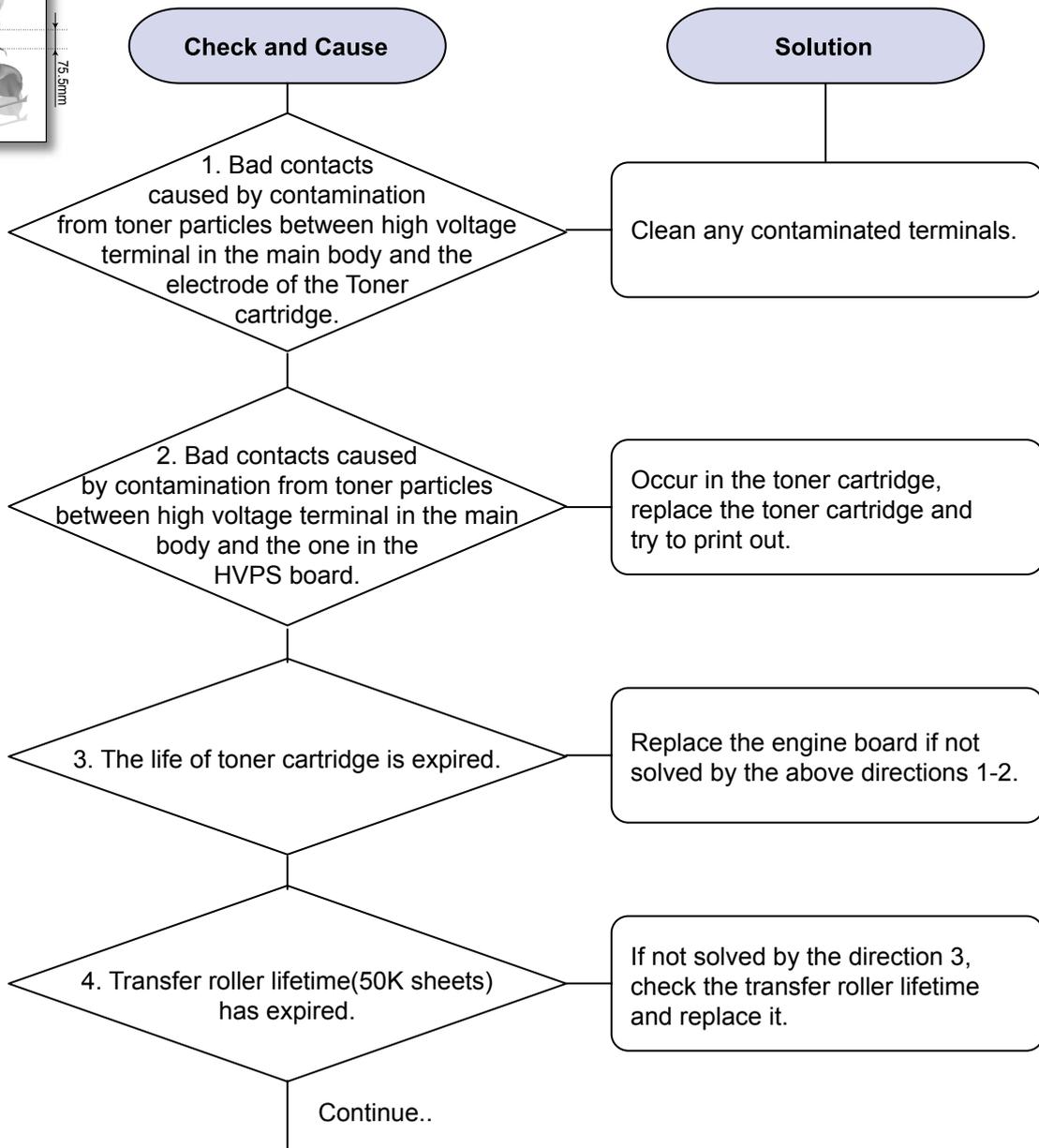
8) Background

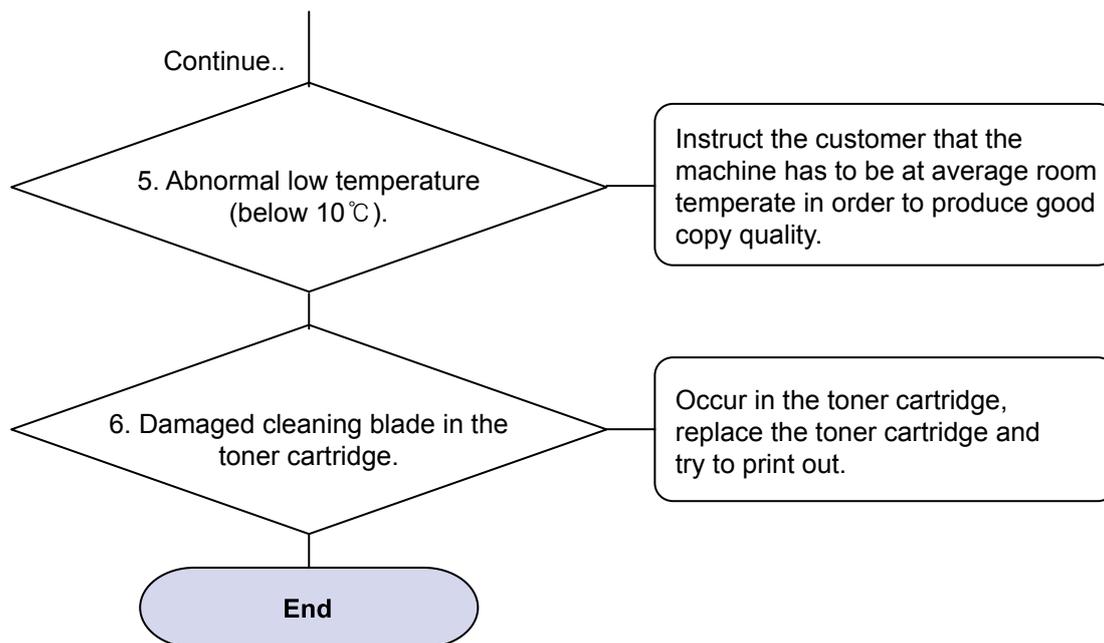
Description : Light dark background appears in whole area of the printing.



9) Ghost (1)

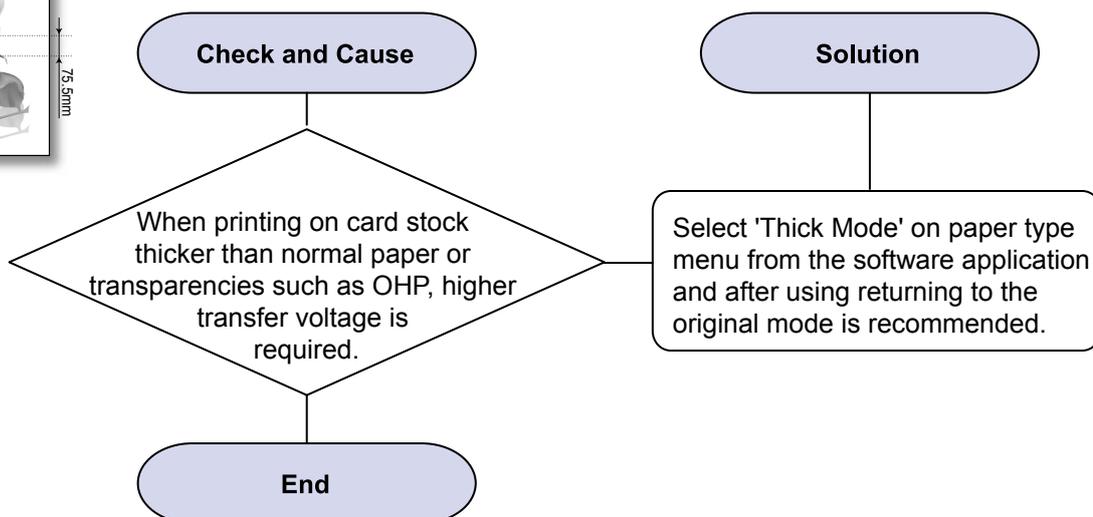
Description : Ghost occurs at 75.5 mm intervals of the OPC drum in the whole printing.





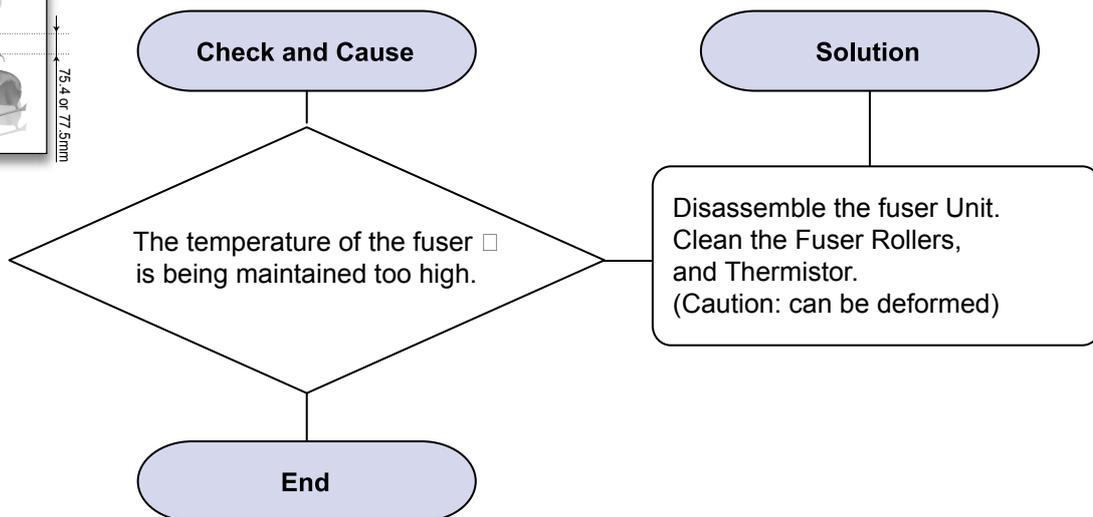
10) Ghost (2)

Description : Ghost occurs at 75.5 mm intervals of the OPC drum in the whole printing.
(When printing on card stock or transparencies using manual feeder)



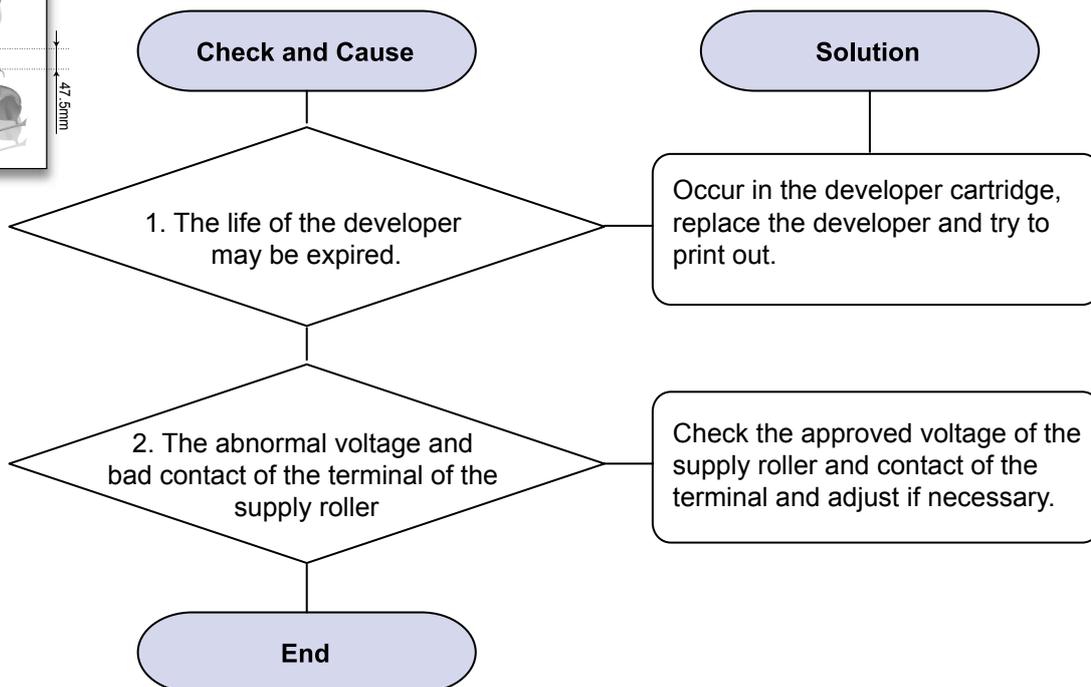
11) Ghost (3) : Fuser

Description : Ghost occurs at 75.4 mm or 77.5mm intervals.



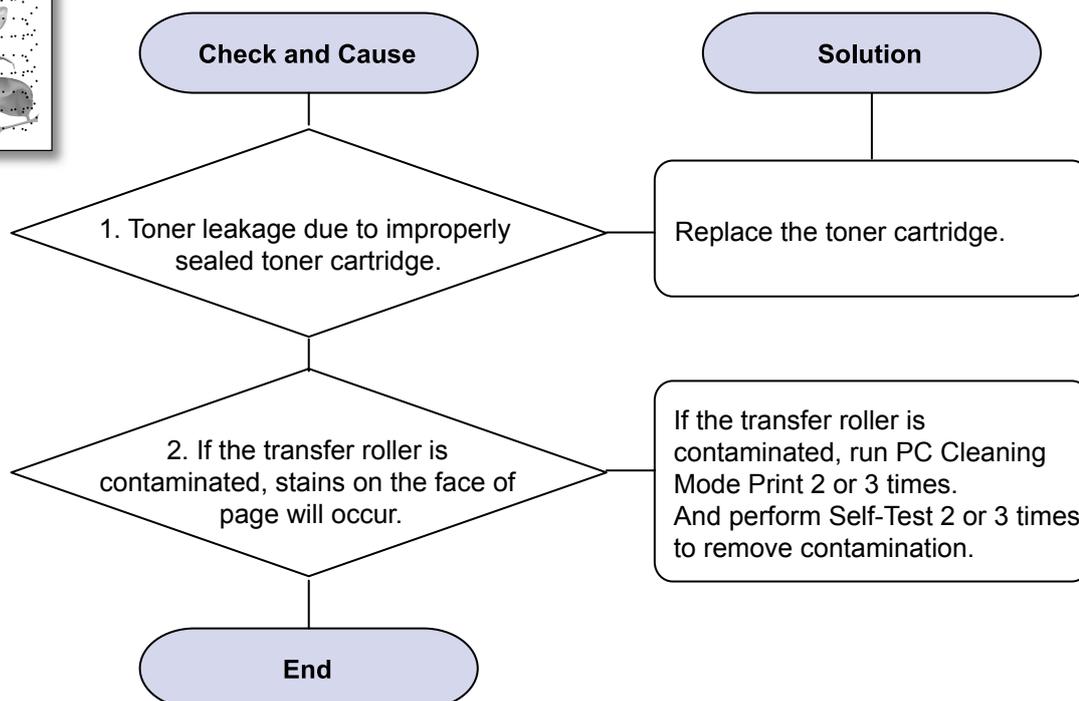
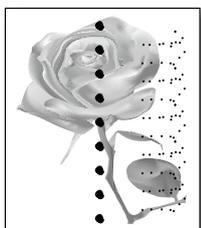
12) Ghost (4)

Description : White ghost occurs in the black image printing at 47.5mm intervals.



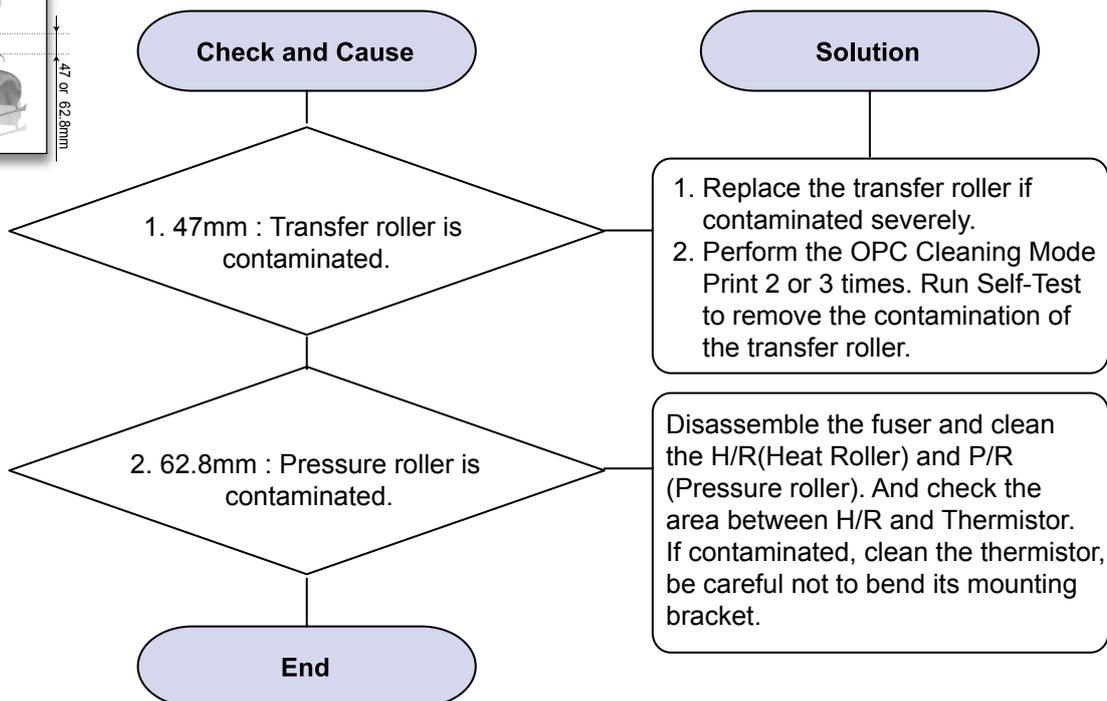
13) Stains on the Face of Page

Description : The background on the face of the printed page is stained.



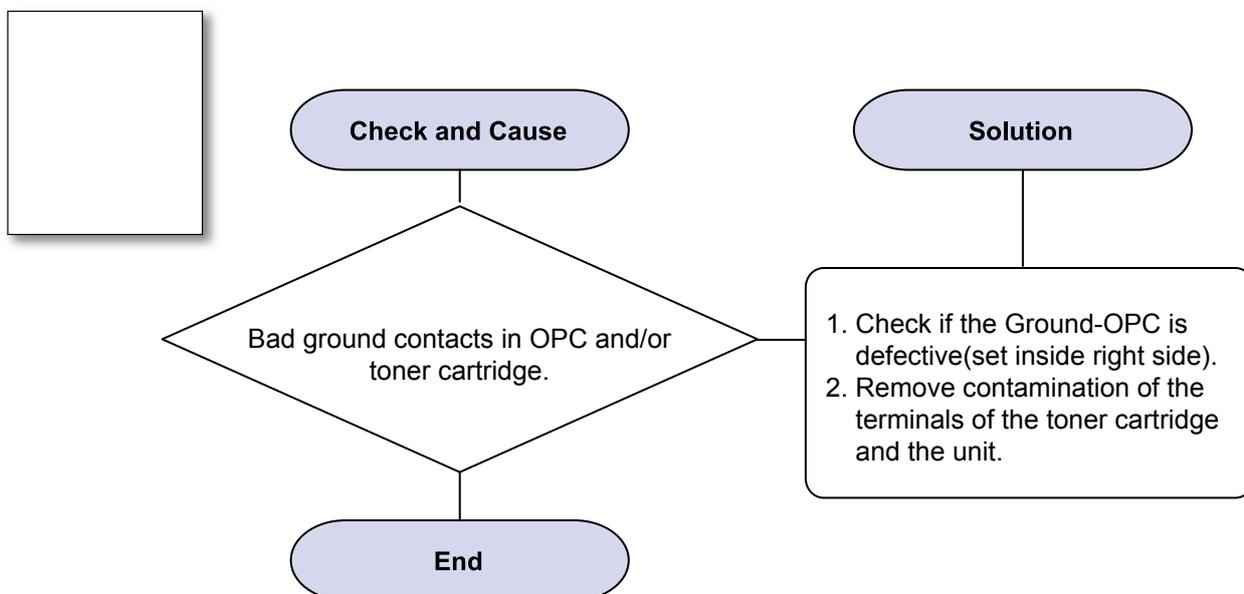
14) Stains on Back of Page

Description : The back of the page is stained at 47 mm or 62.8mm intervals.



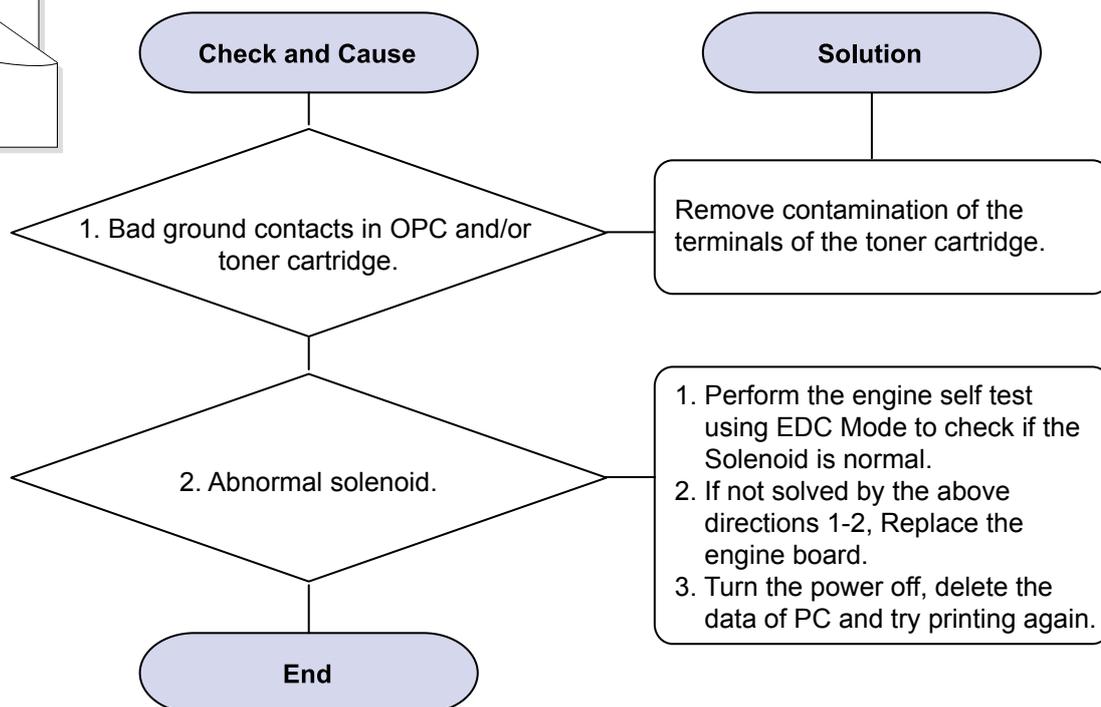
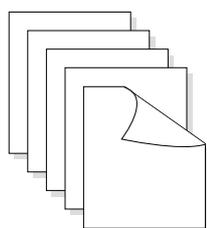
15) Blank Page Print out (1)

Description : Blank page is printed.



16) Blank Page Print out (2)

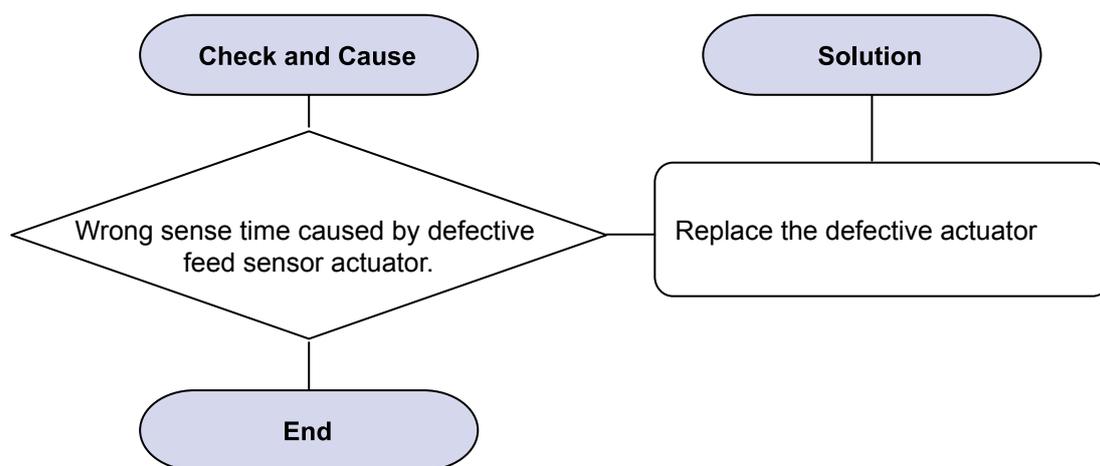
Description : 1. Blank page is printed.
 2. One or several blank pages are printed.
 3. When the printer turns on, several blank pages print.



4.2.3 The cause and solution of the bad discharge

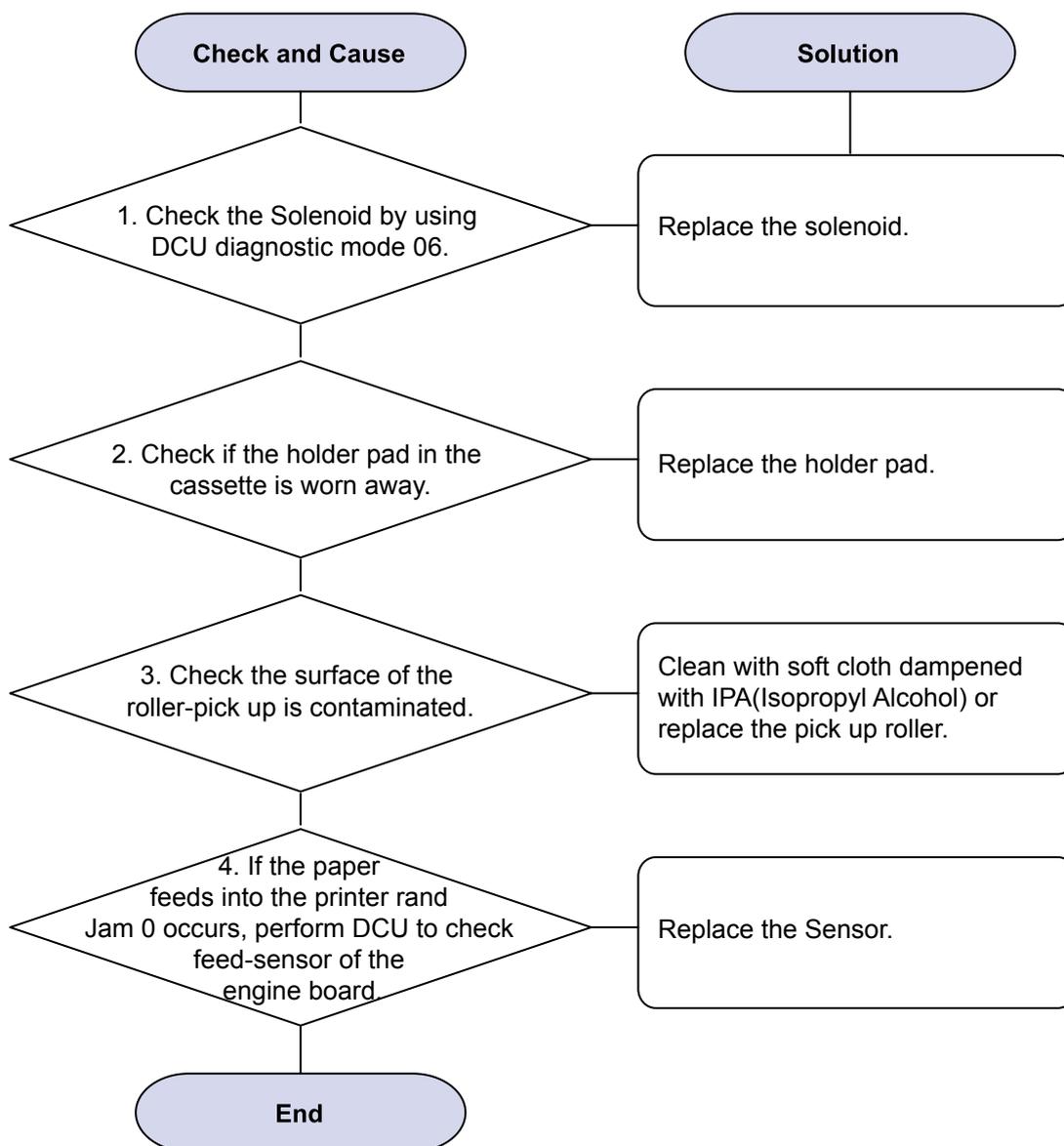
1) Wrong Print Position

Description : Printing begins at wrong position on the paper.



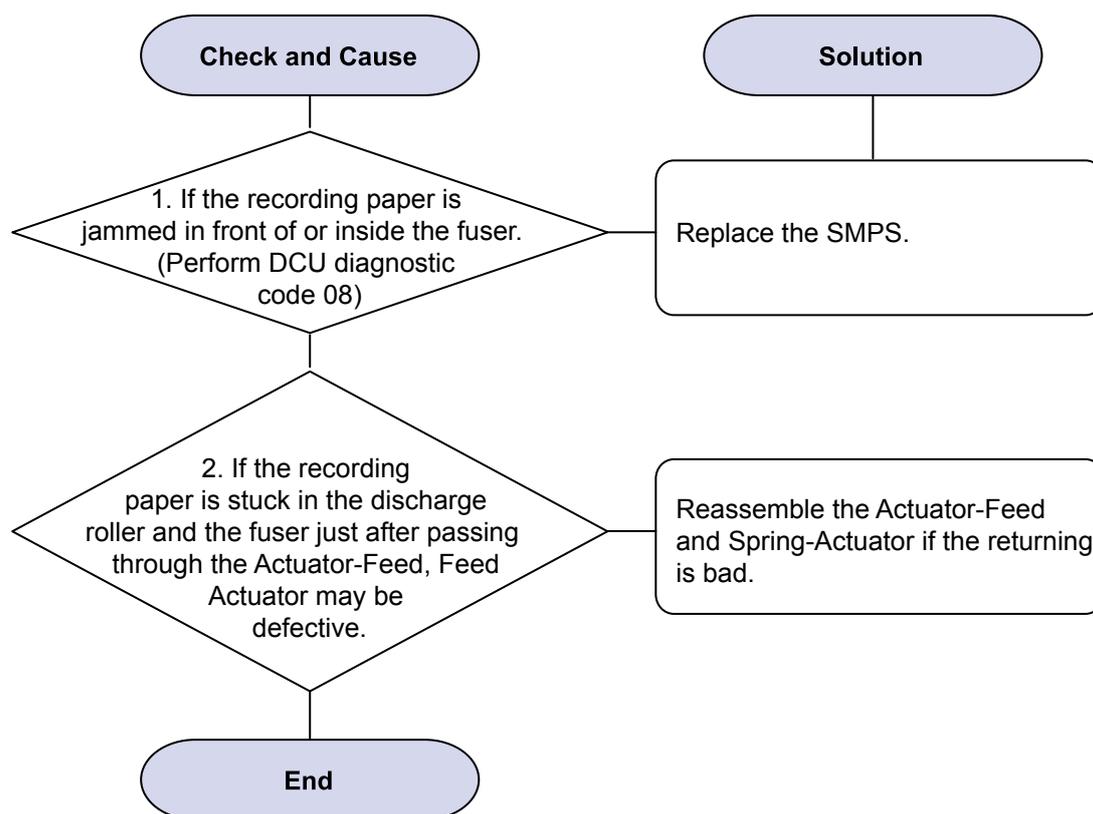
2) JAM 0

Description : 1. Paper is not exited from the cassette.
2. Jam-0 occurs when the paper feeds into the printer



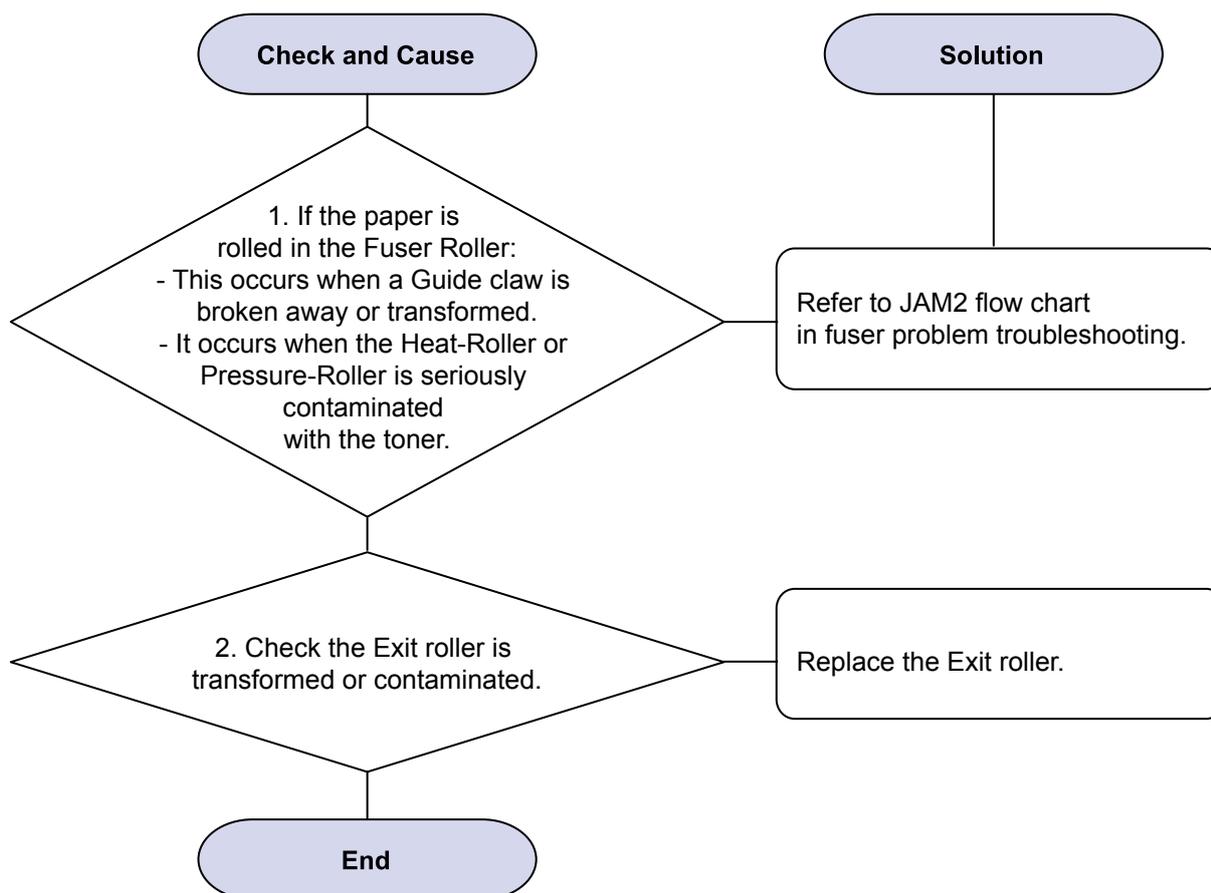
3) JAM 1

Description : 1. Recording paper is jammed in front of or inside the fuser.
 2. Recording paper is stuck in the discharge roller and in the fuser just after passing through the Actuator-Feed.



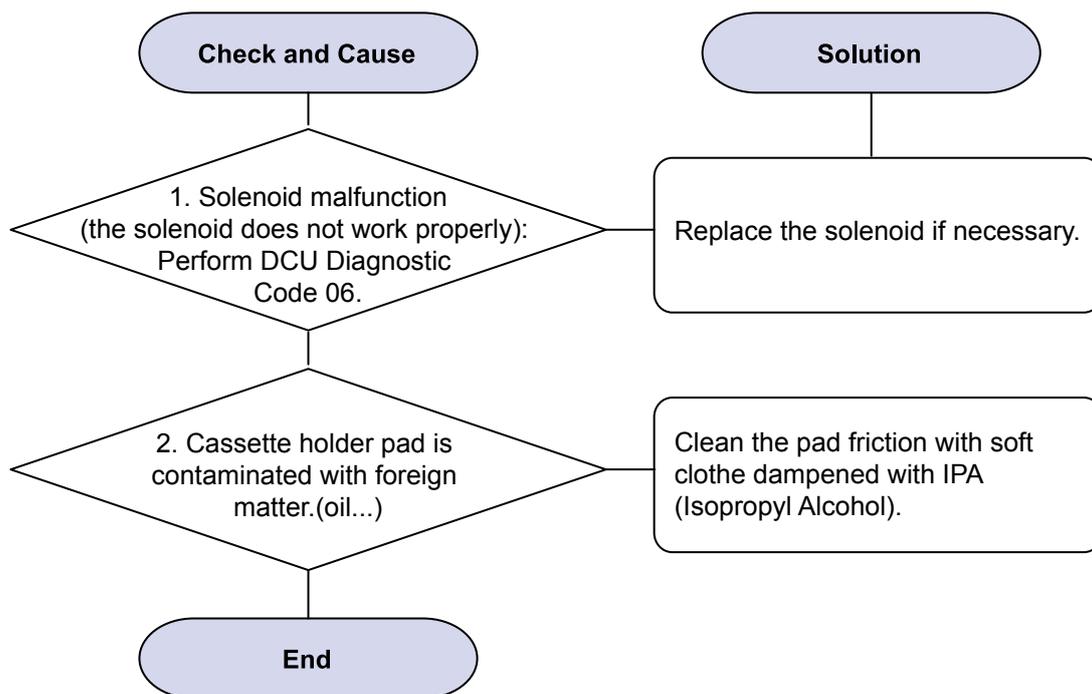
4) JAM 2

Description : 1. Recording paper is jammed in front of or inside the fuser.
 2. Recording paper is stuck in the discharge roller and in the fuser just after passing through the Actuator-Feed.



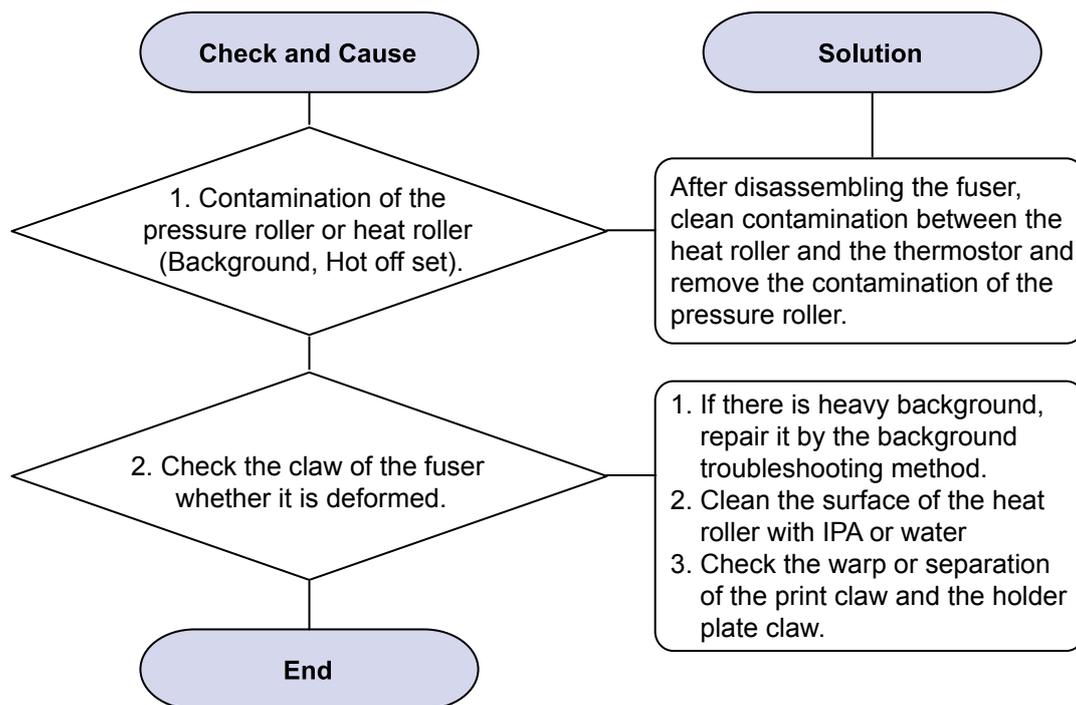
5) Multi-Feeding

Description : Multiple sheets of paper are fed at once.



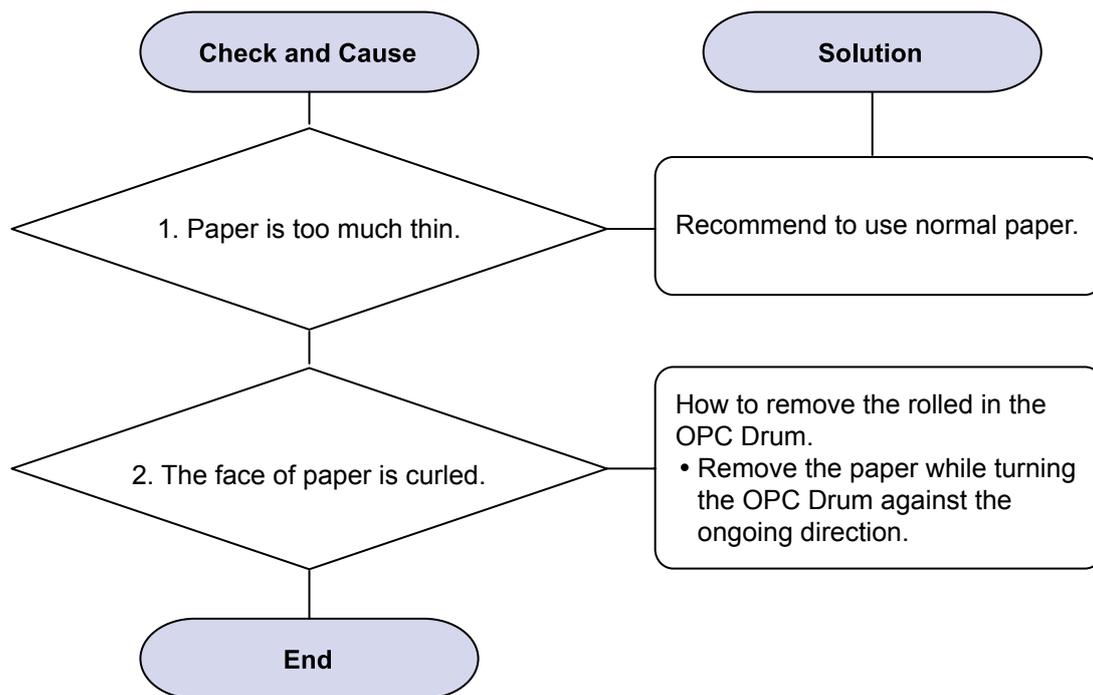
6) Paper rolled in the fuser

Description : If contaminated at intervals of 77.6mm on the back of a paper.



7) Paper rolled on the OPC Drum

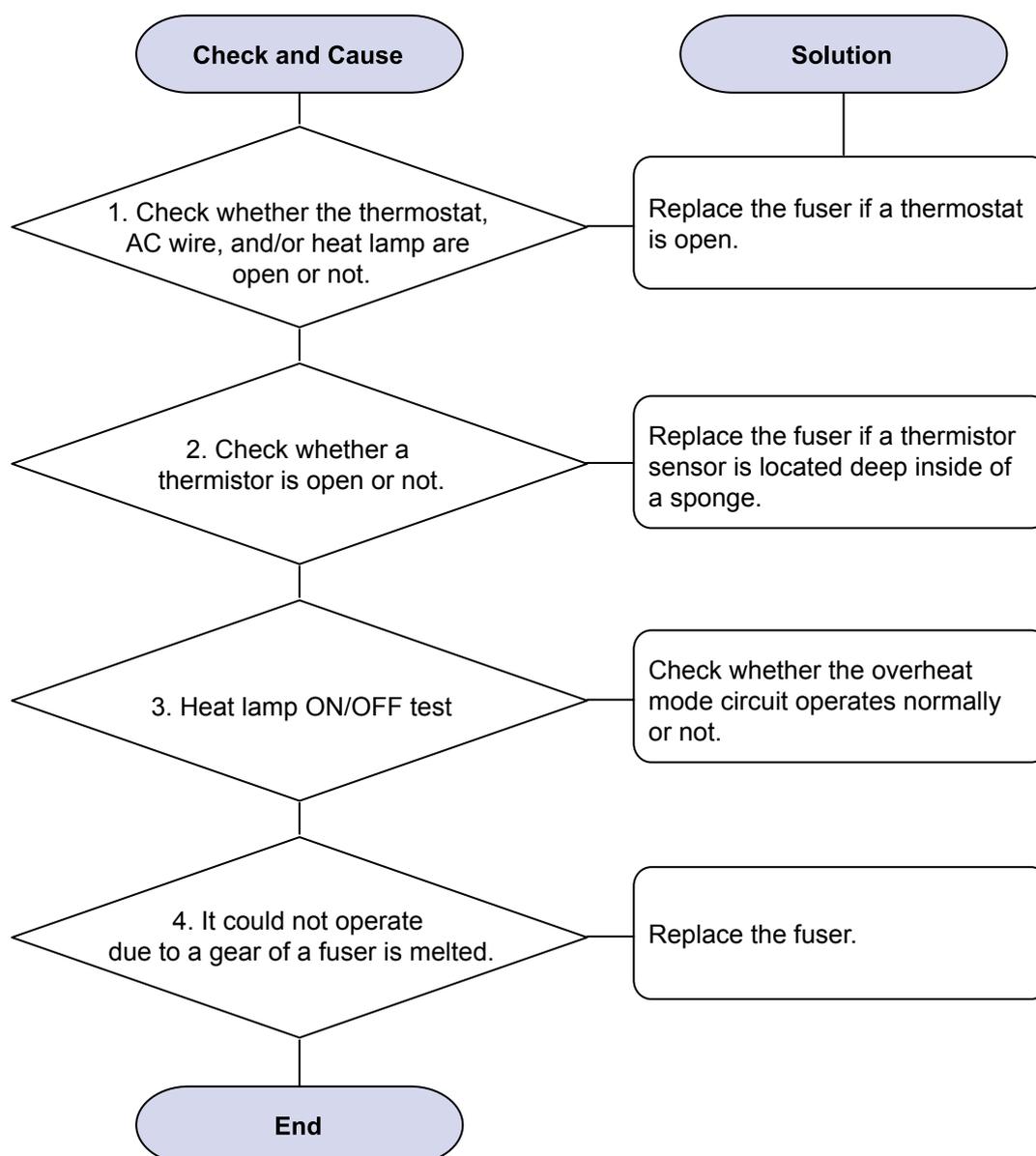
Description : Paper is rolled up in the OPC.



4.2.4 The cause and solution of the malfunction

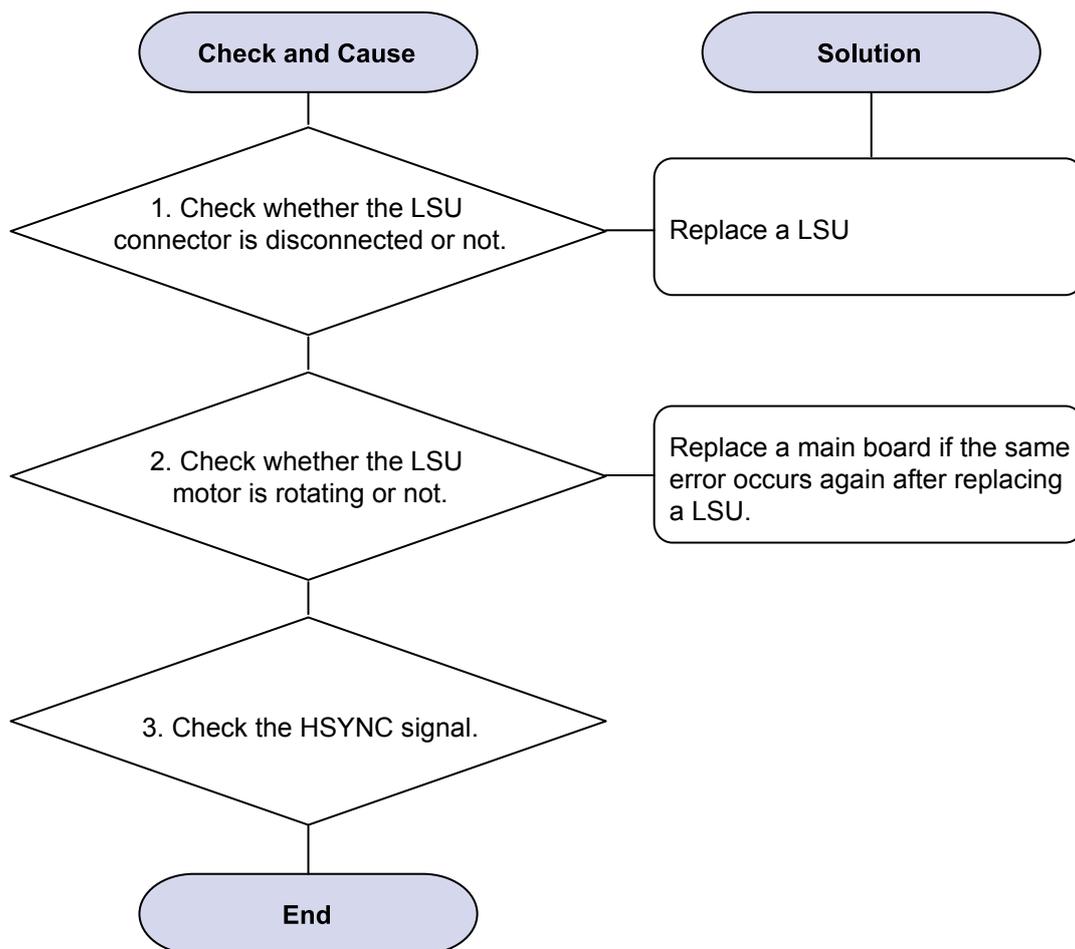
1) Fuser Error

Description : Fuser error is displayed on LCD



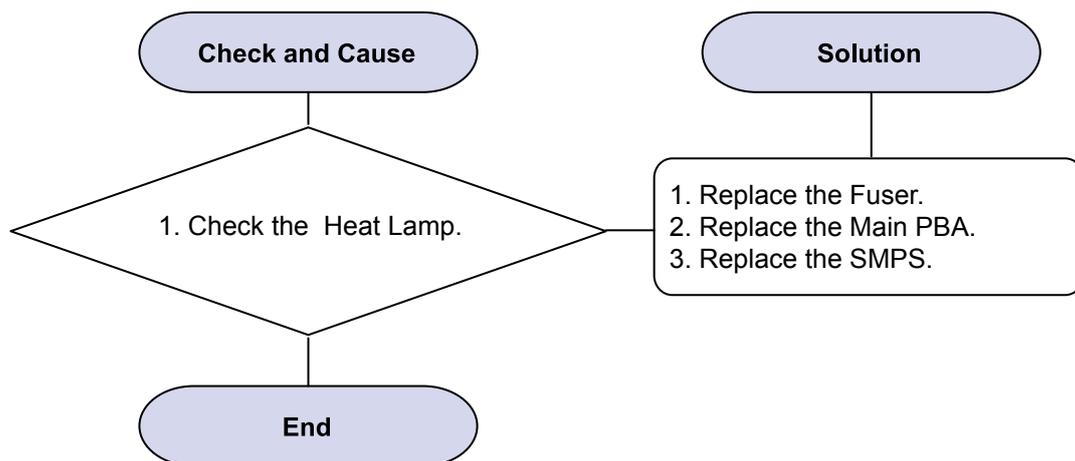
2) LSU Error

Description : "PMOTOR ERROR/HSYNC ERROR"



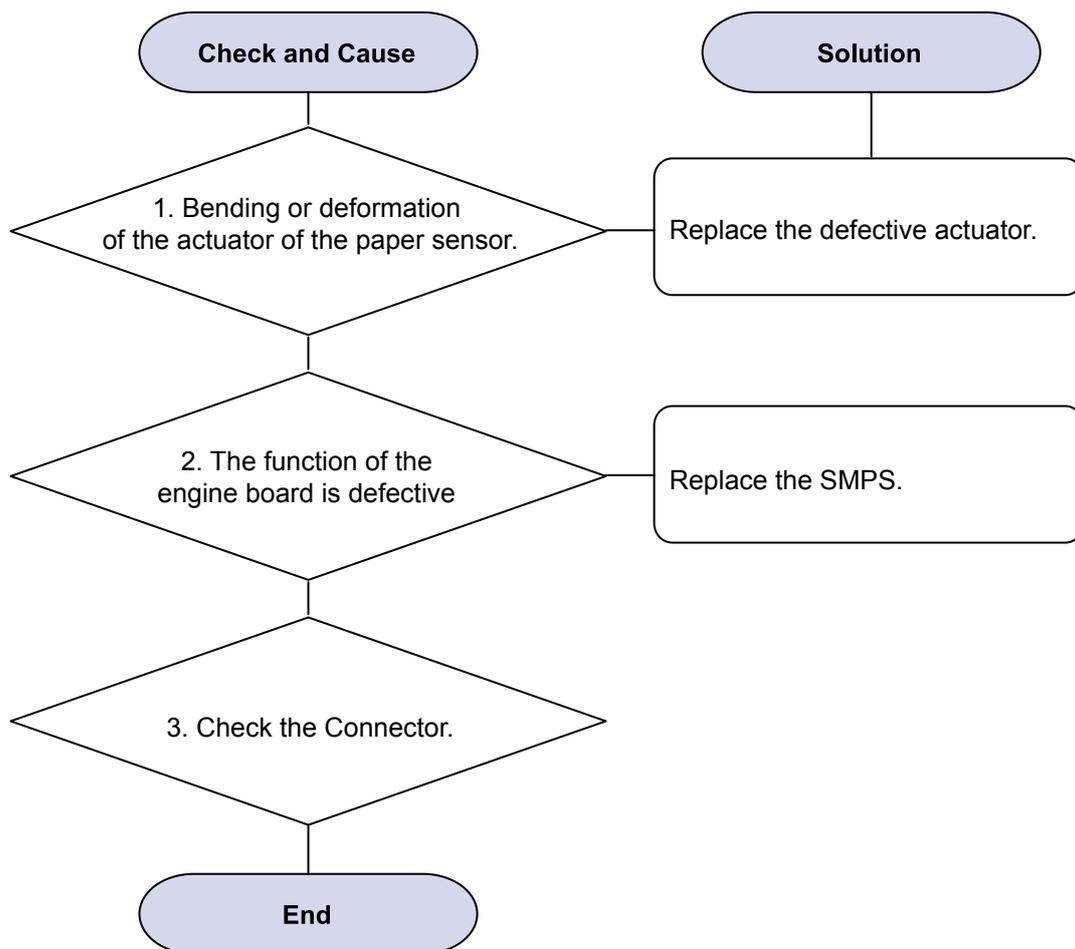
3) Not function of the gear of the fuser due to melting away

Description : The motor breaks away from its place due to gear melting away.



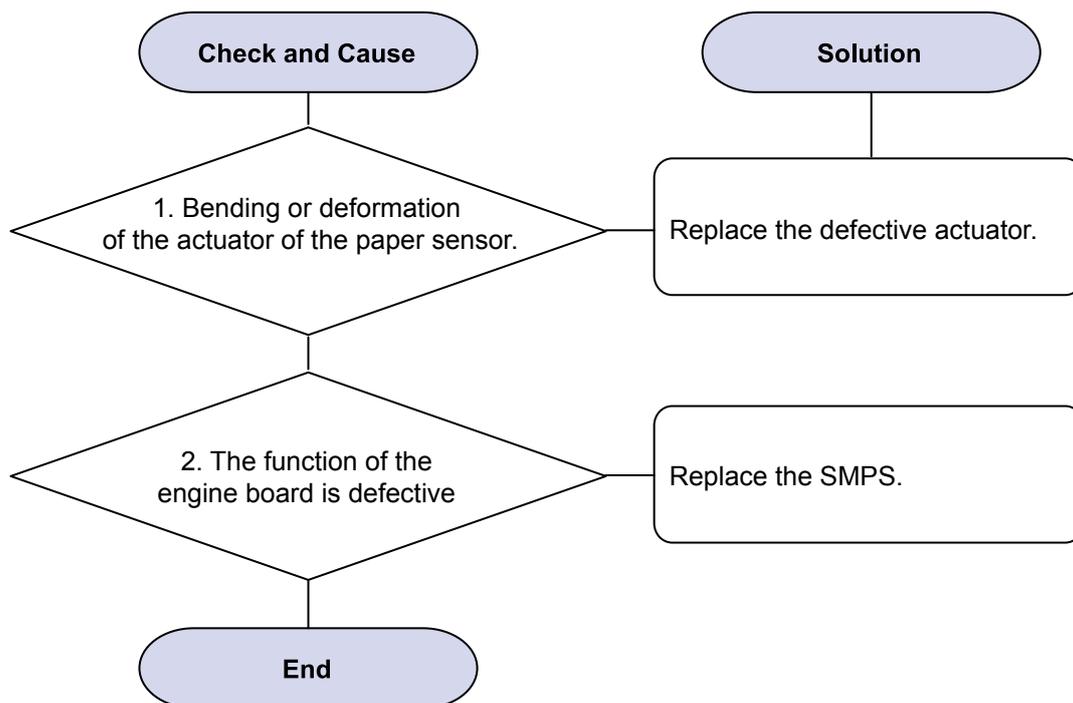
4) Paper Empty

Description : Paper empty error message is displayed on LCD when paper is loaded in the cassette.



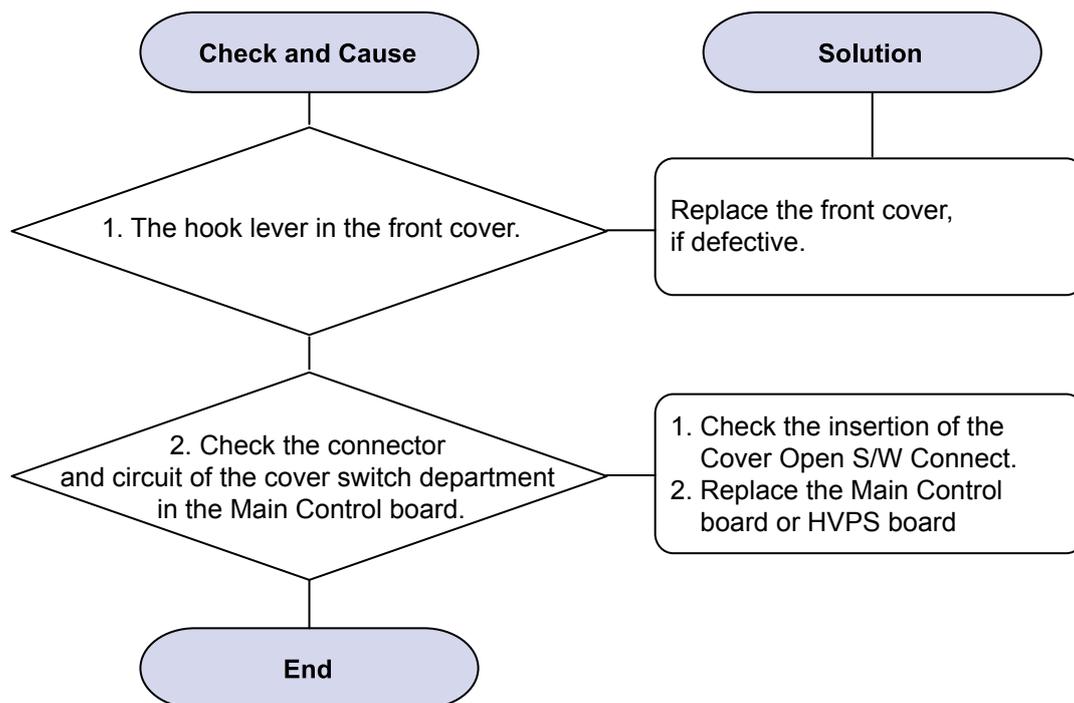
5) Paper Empty without indication

Description : Paper empty error message does not display when the paper cassette is empty.



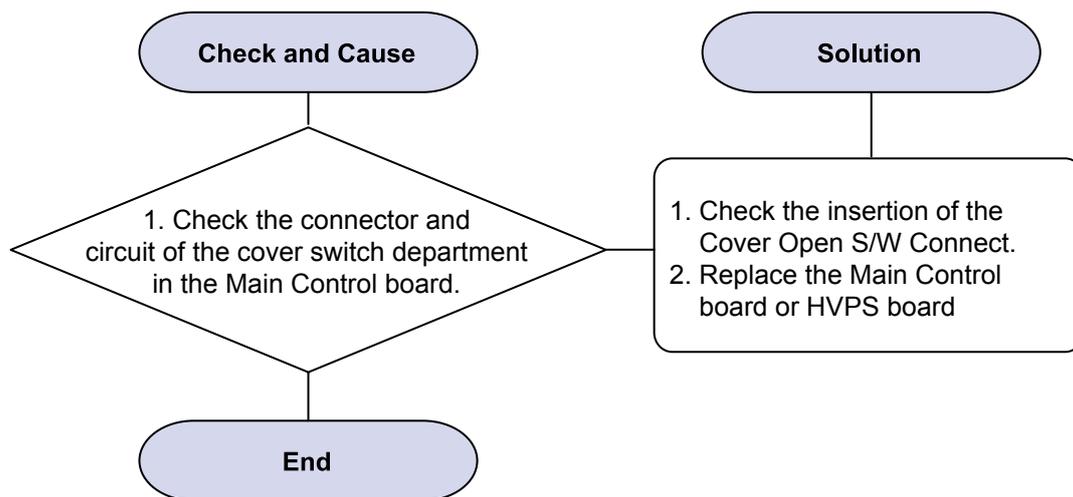
6) Cover Open

Description : The ERROR lamp is on even when the print cover is closed.



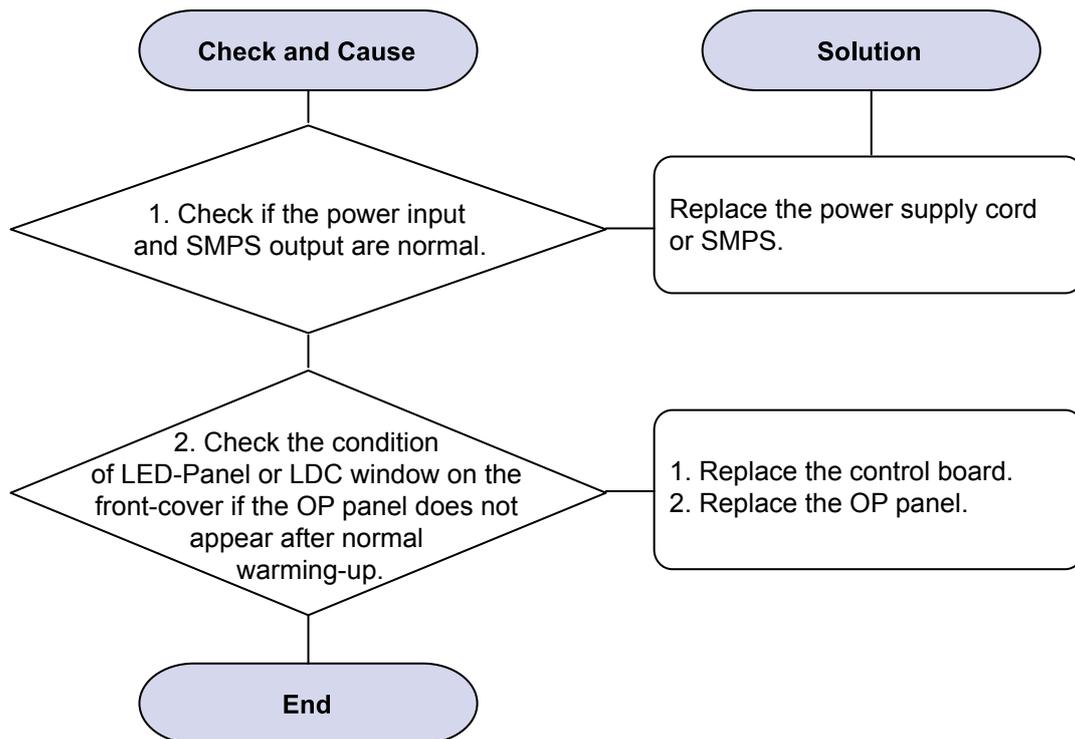
7) No error LED when the cover is open

Description : The Error LED does not come on even when the printer cover is open



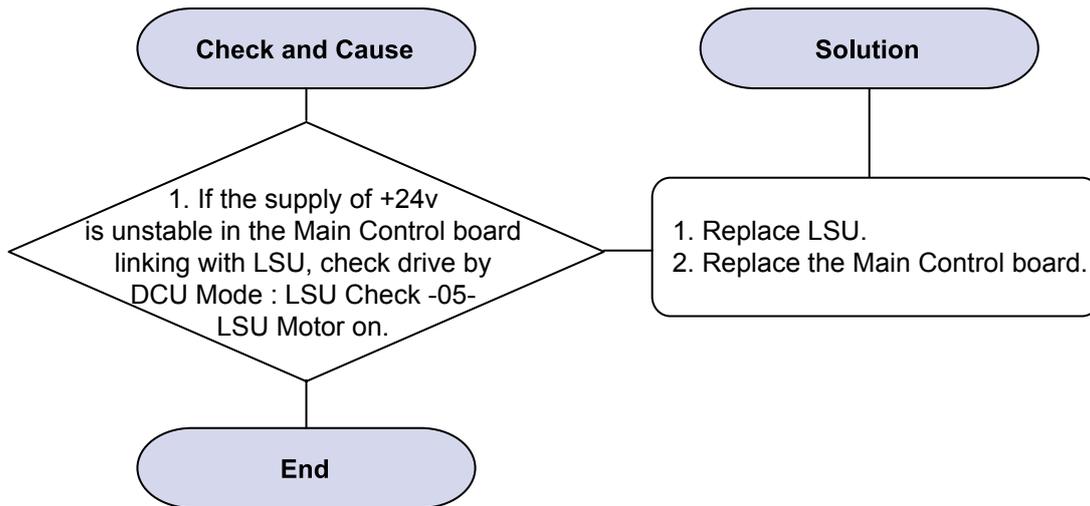
8) No Power

Description : When system power is turned on, all lamps on the operator panel do not come on.



9) Vertical Line Getting Curved

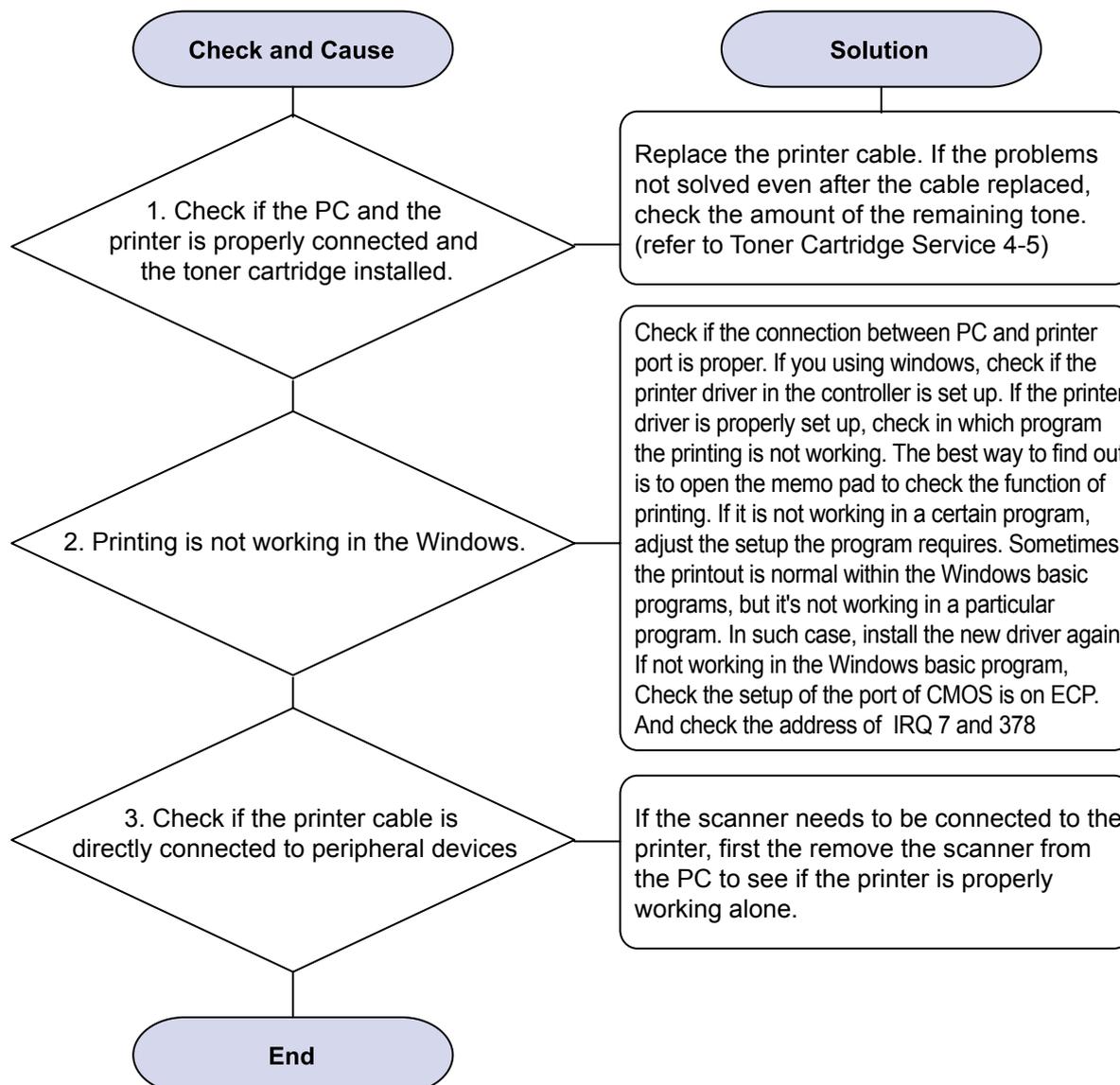
Description : When printing, vertical line gets curved.



4.2.5 The cause and solutions of bad environment of the software

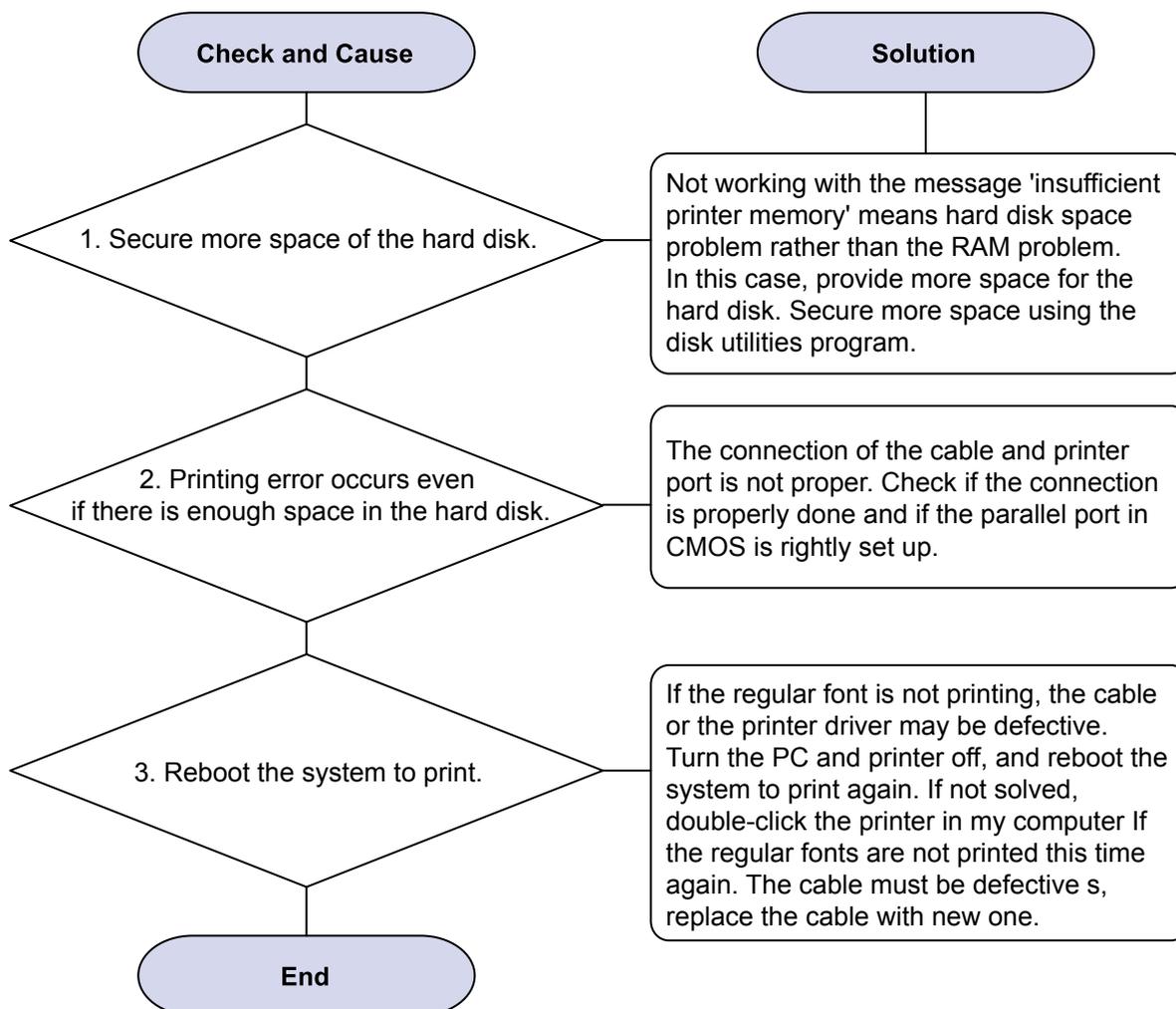
1) The printer is not working (1)

Description : While Power turned on, the printer is not working in the printing mode.



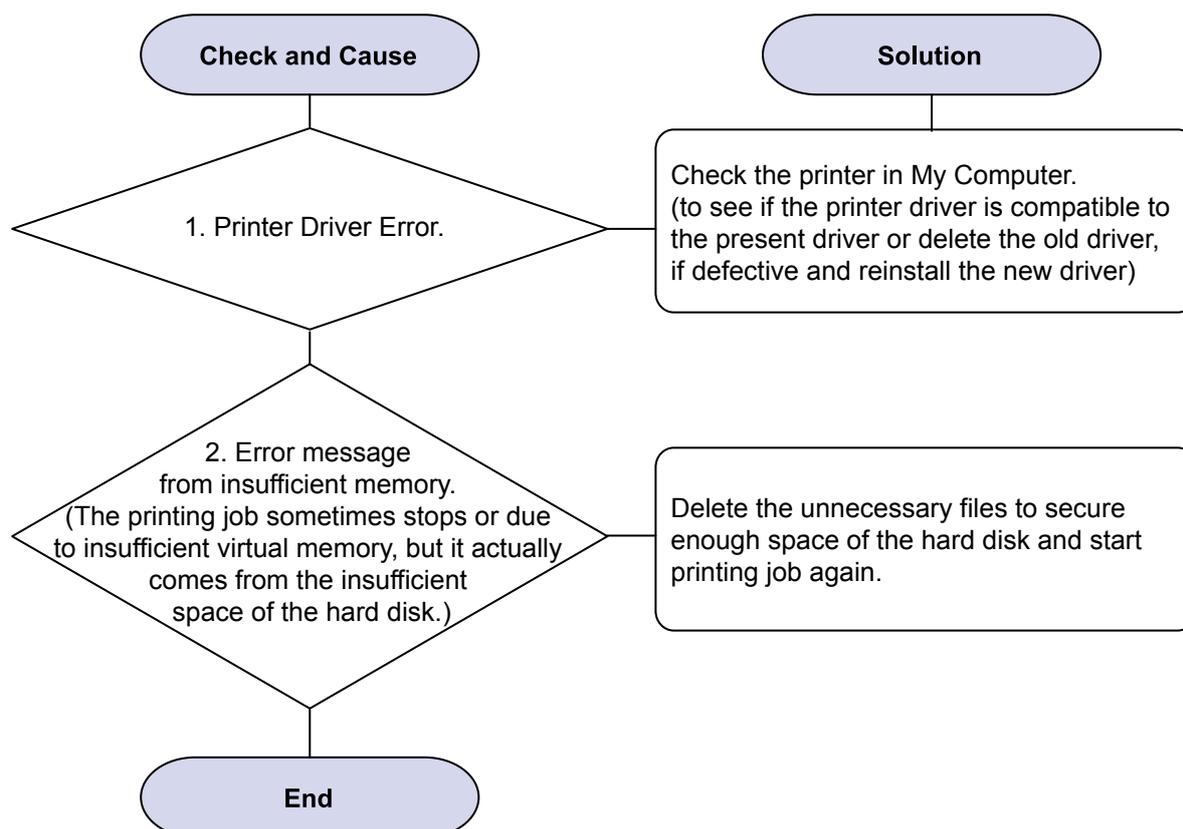
2) The printer is not working (2)

Description : After receiving the printing order, no response at all or the low speed of printing occurs due to wrong setup of the environment rather than malfunction of the printer itself.



3) Abnormal Printing

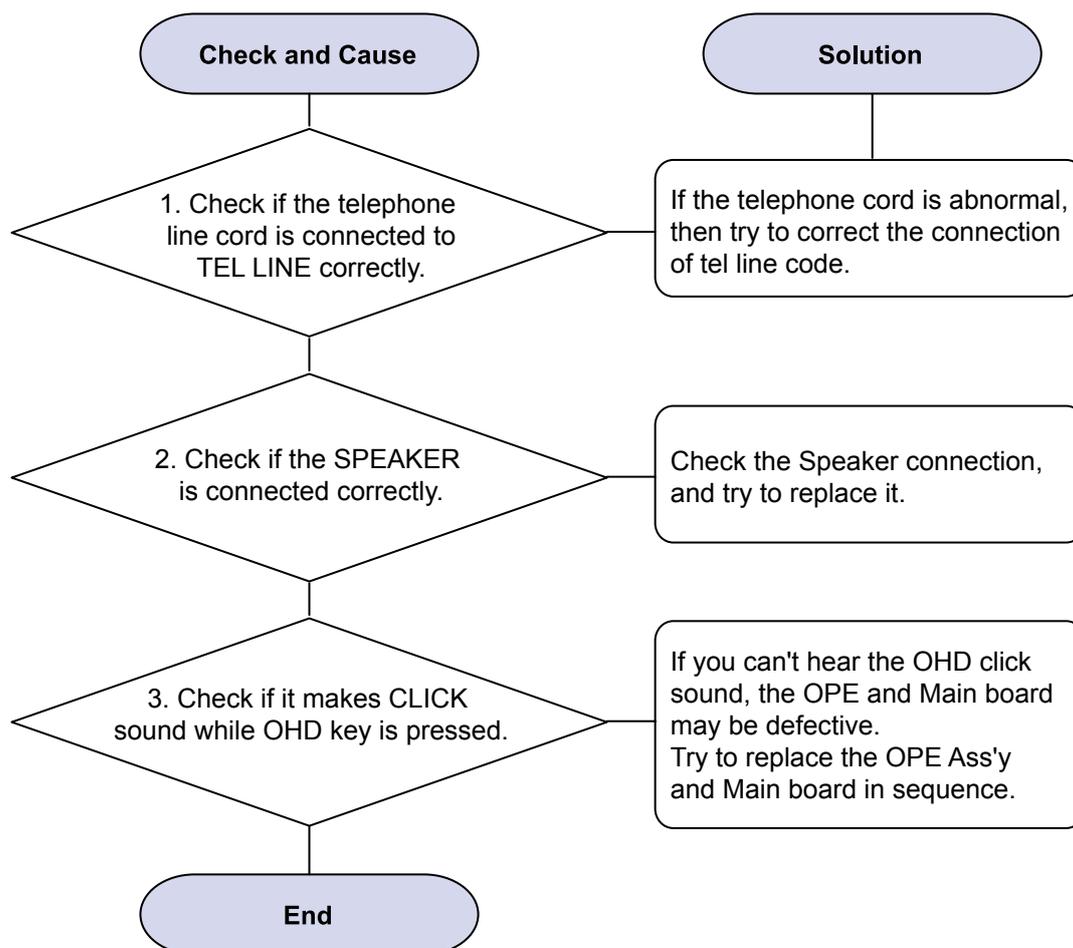
Description : The printer is not working properly even when the cable has no problem (even after the cable is replaced). If the printer will not work at all or the strange fonts are repeated, the printer driver may be defective or wrong setup in the CMOS Setup.



4.2.6 Fax & Phone Problems

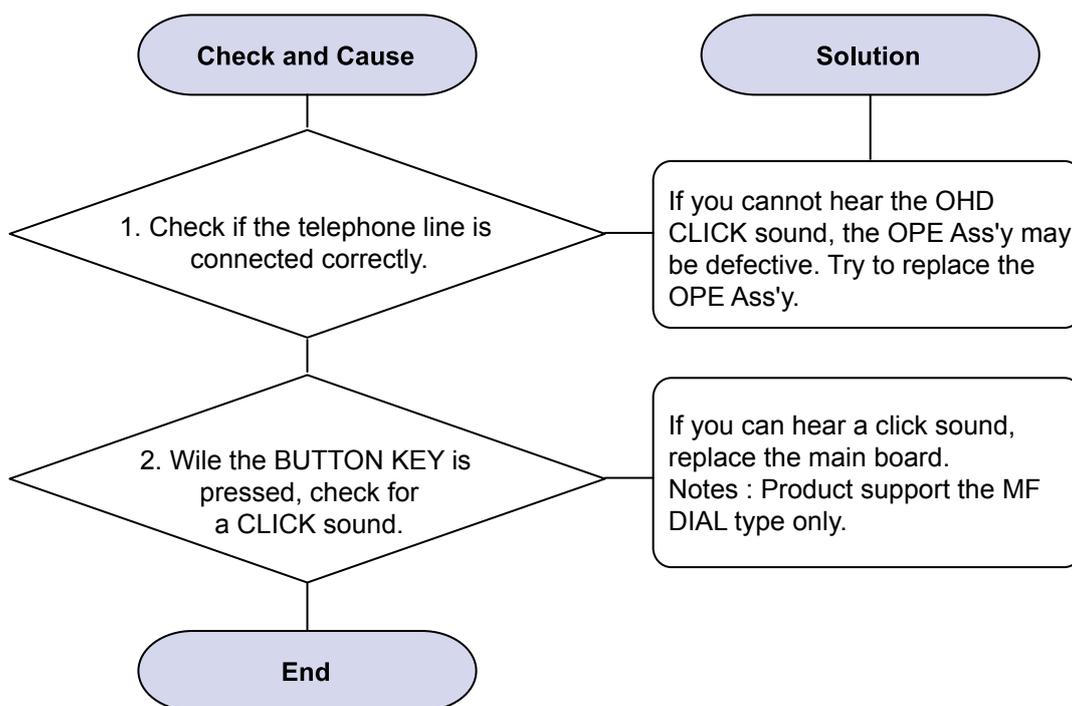
1) No Dial Tone

Description : While on-hook button is pressed, there is no dial tone.



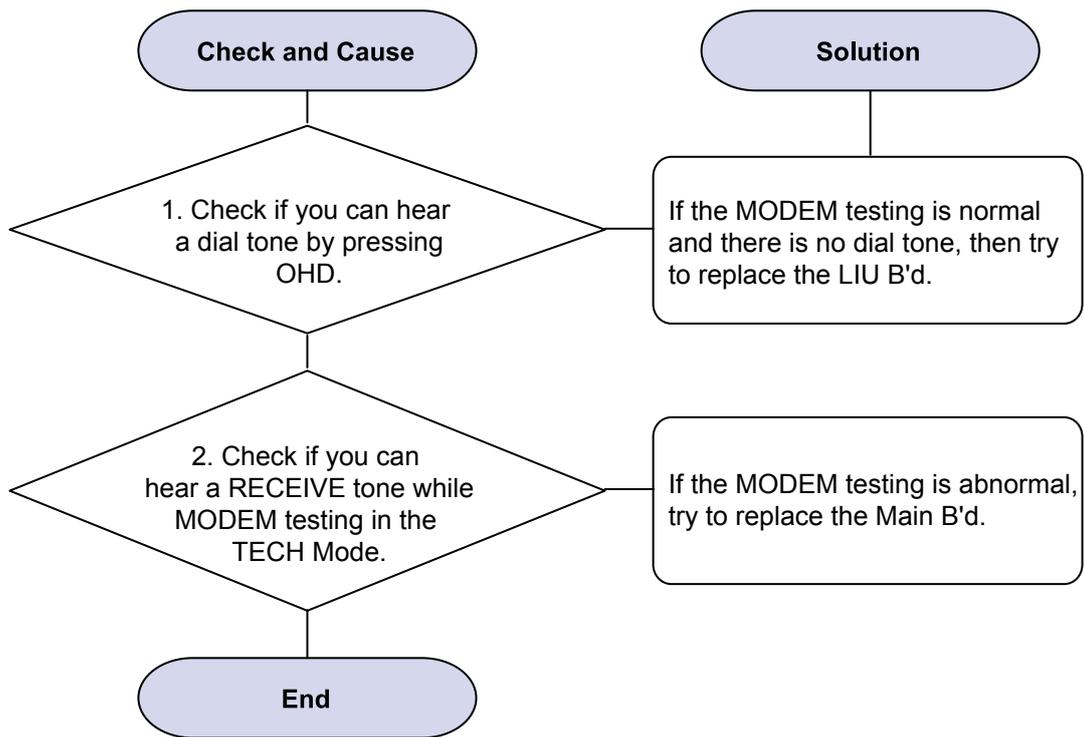
2) Defective MF DIAL

Description : The MF DIAL is not functioning.



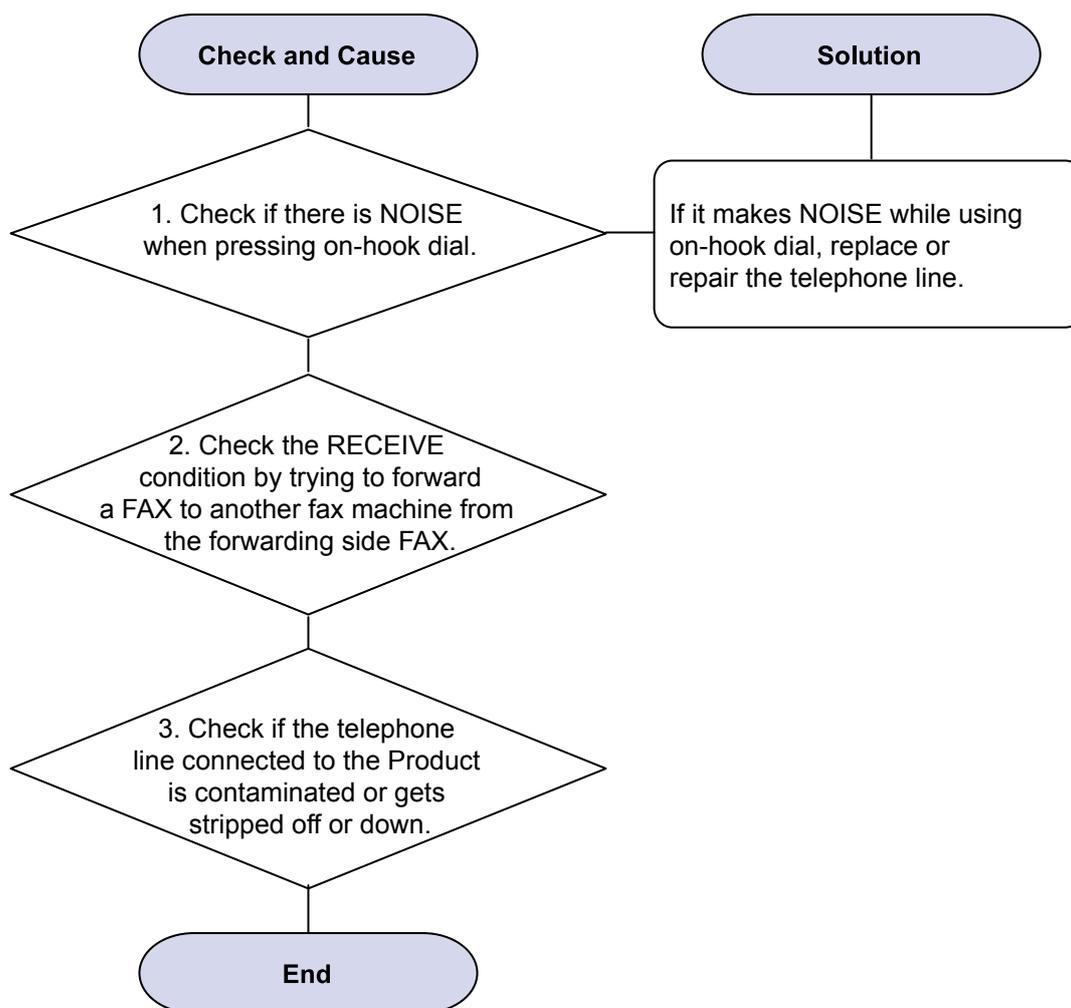
3) Defective FAX FORWARD/RECEIVE

Description : The FAX FORWARD/RECEIVE is not functioning.



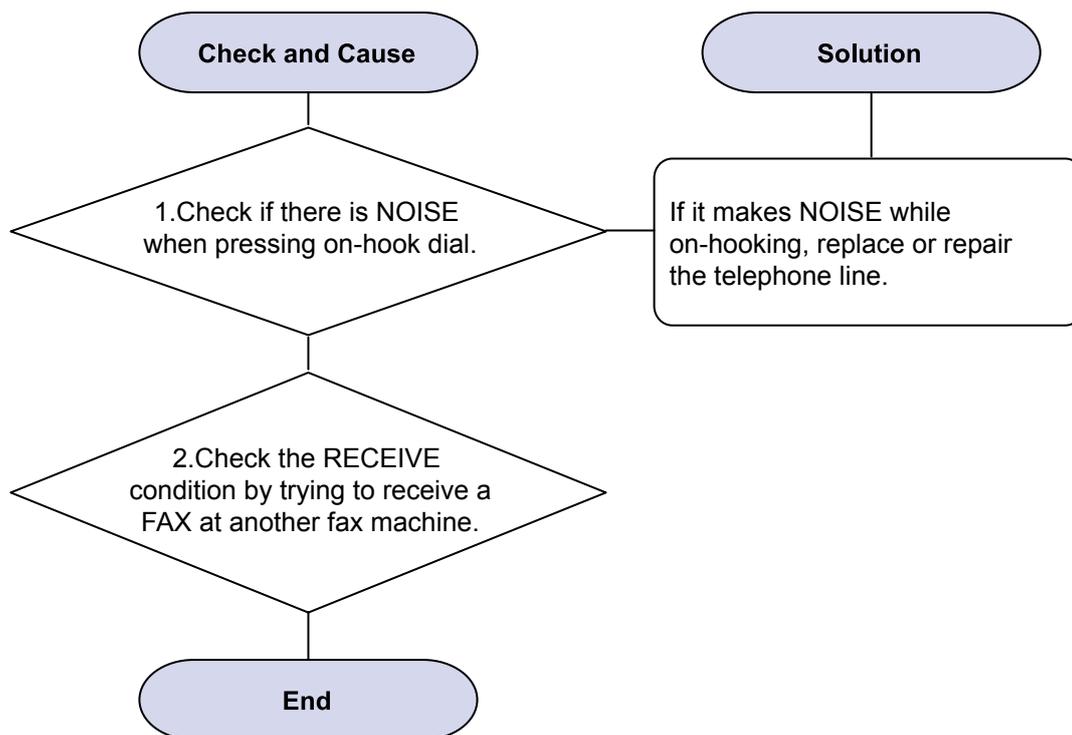
4) Defective FAX FORWARD

Description : RECEIVE is functioning, but FORWARD is not functioning or the received data is broken.



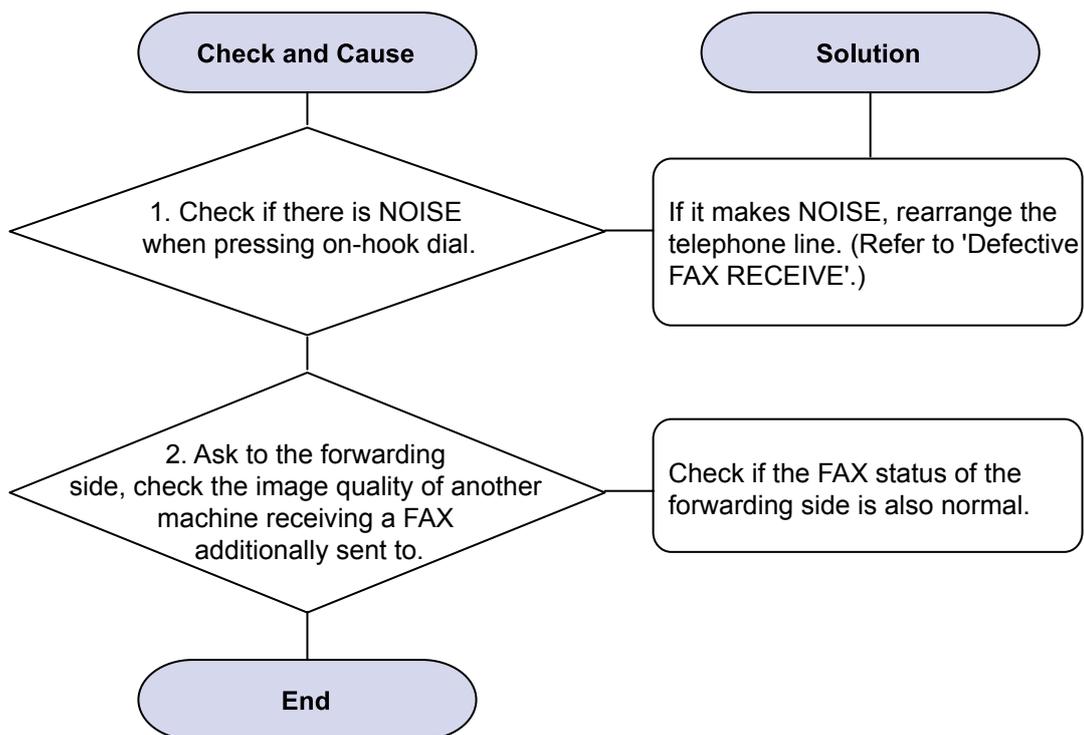
5) Defective FAX RECEIVE (1)

Description : FORWARD is functioning, but RECEIVE is not functioning or the received data is broken.



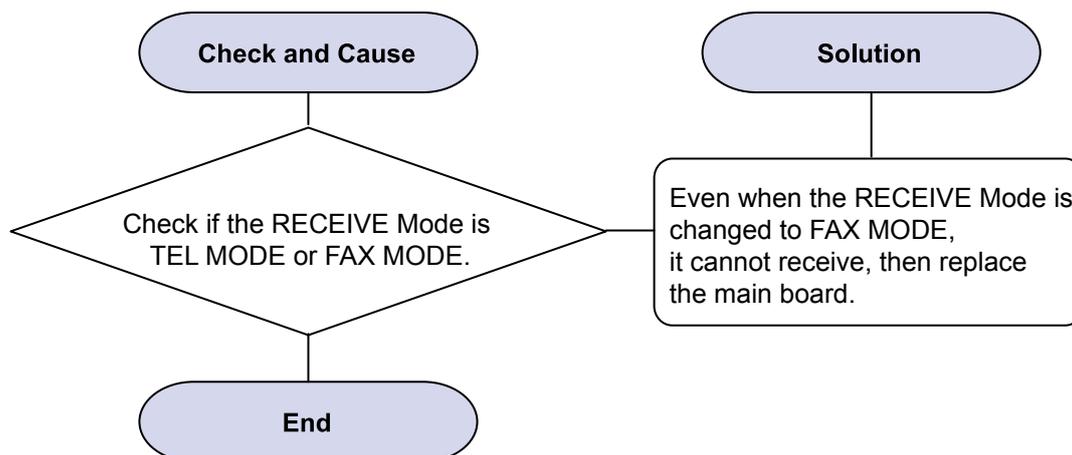
6) Defective FAX RECEIVE (2)

Description : The received data are lengthened or cut in the printing.



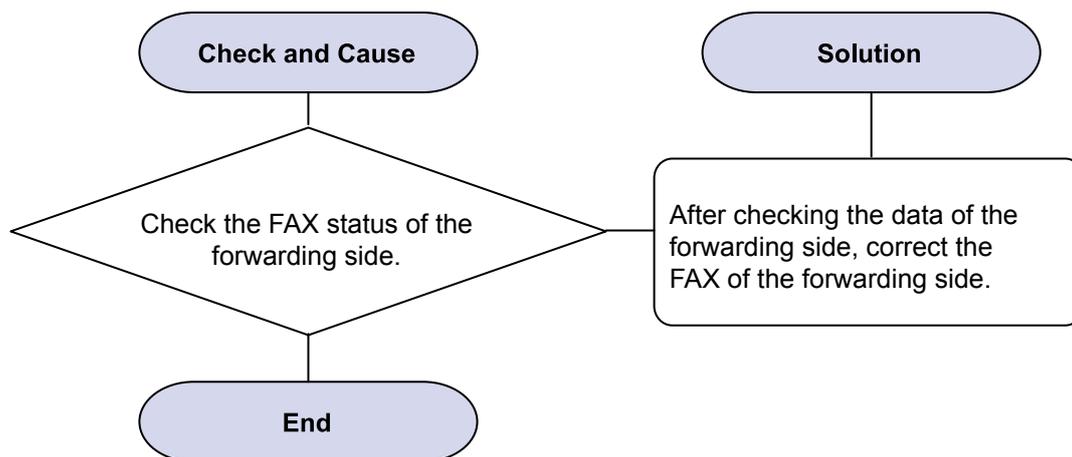
7) Defective FAX RECEIVE (3)

Description : The phone is ringing continuously, but it cannot receive.



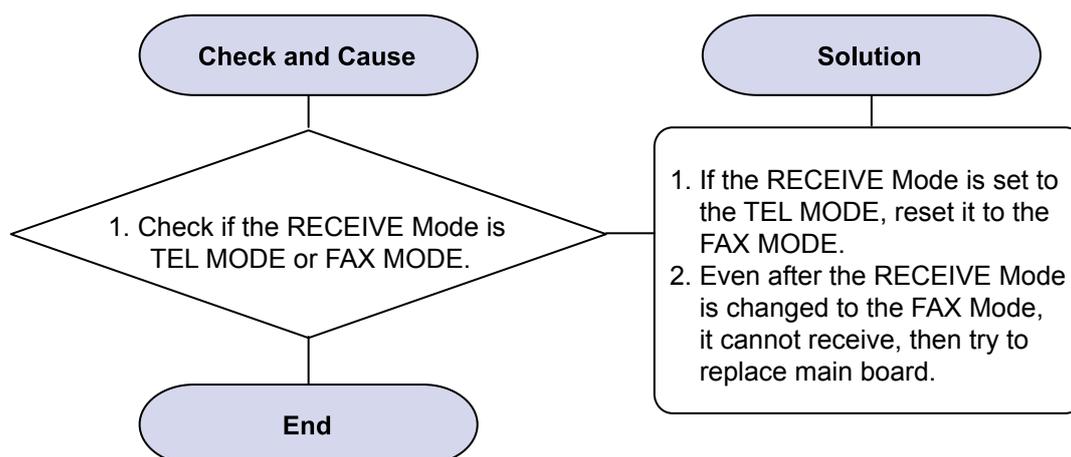
8) Defective FAX RECEIVE (4)

Description : The received data is reduced by more than 50% in the printing.



9) Defective Automatic Receiving

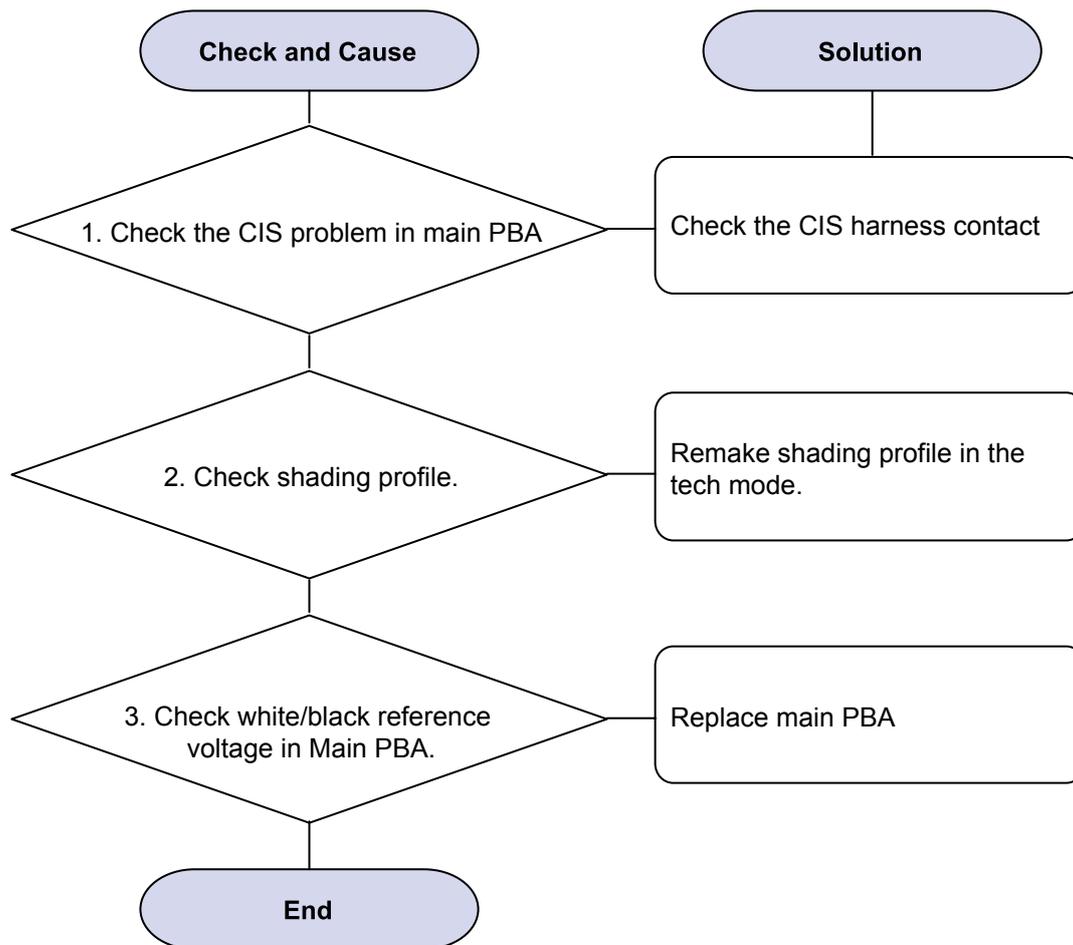
Description : The automatic receiving function is not working.



4.2.7 Copy Problems

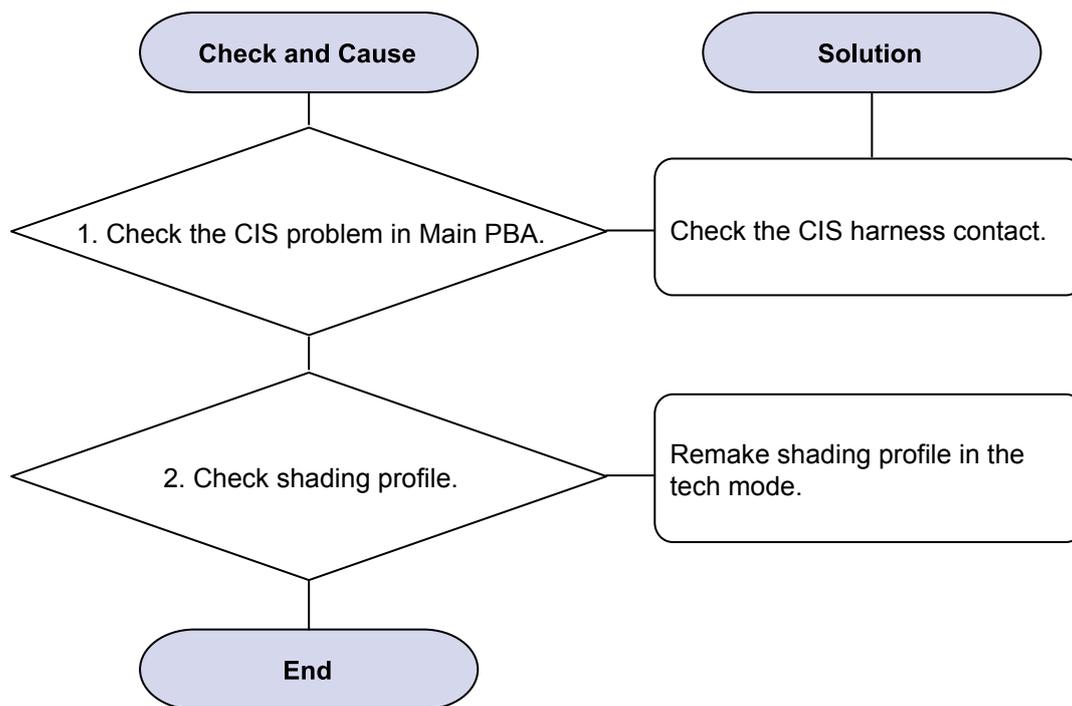
1) Black Copy

Description : Black page is printed out when copy.



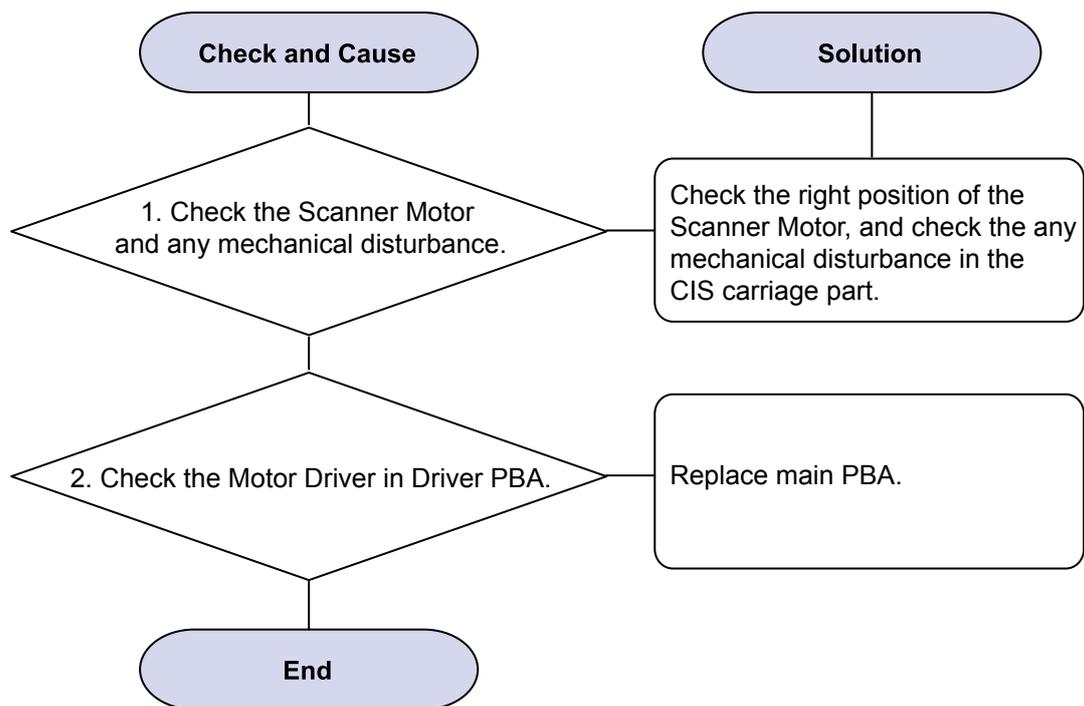
2) White Copy

Description : White page is printed out when Copy.



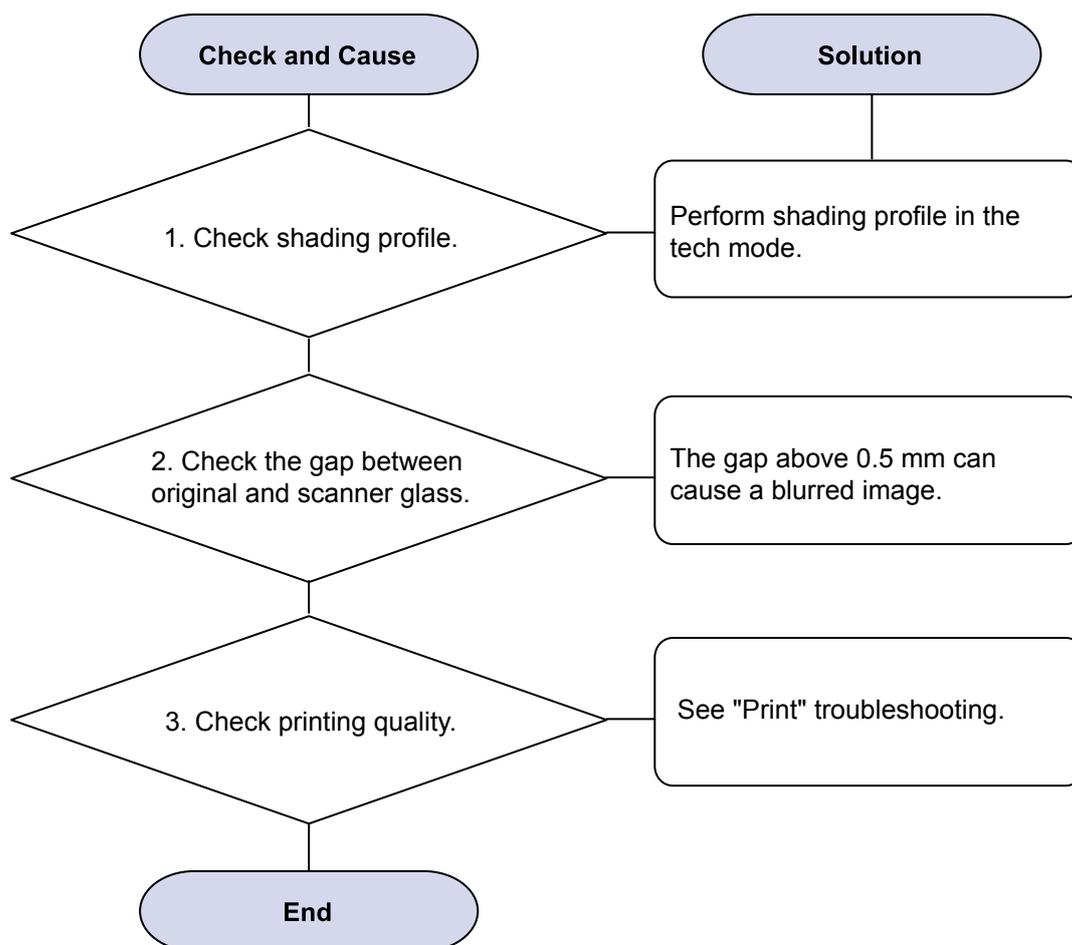
3) Abnormal noise

Description : There is noise when copy.



4) Defective Image Quality

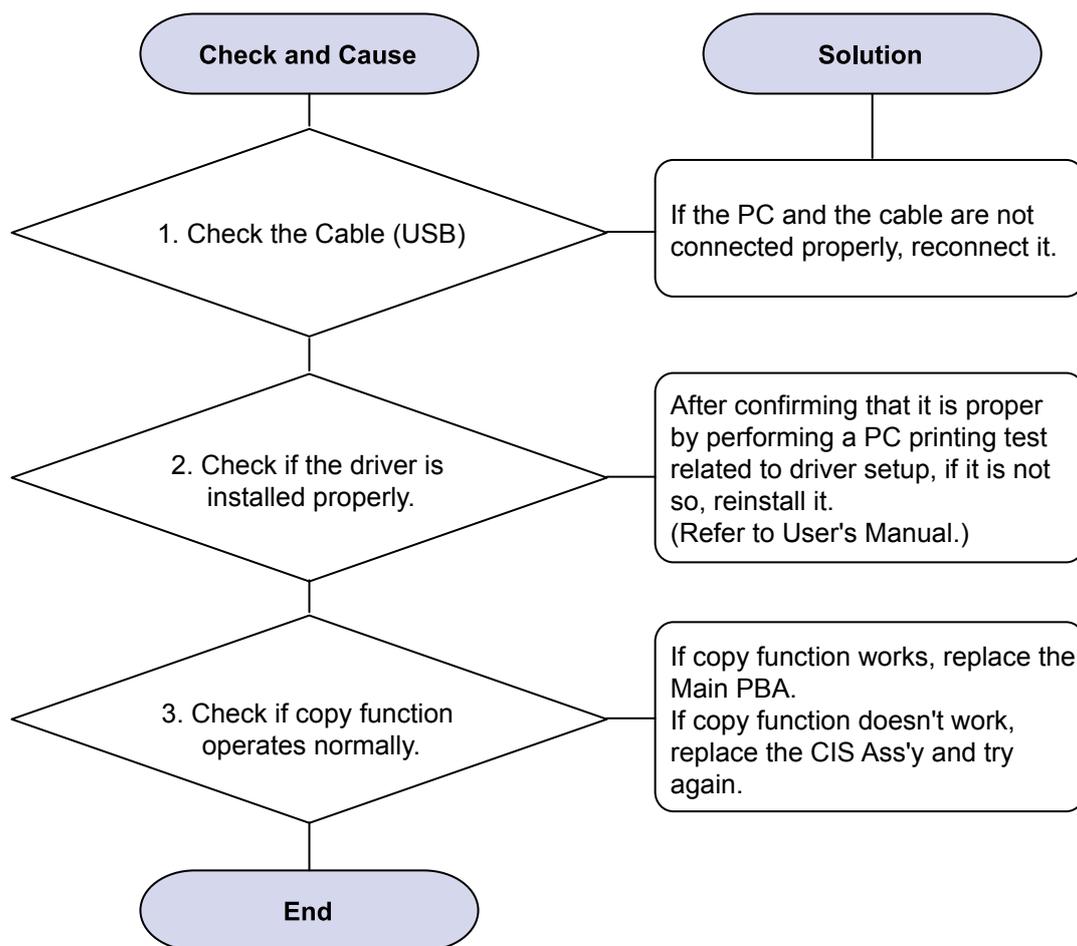
Description : The copied image is light or bad.



4.2.8 Scanning Problems

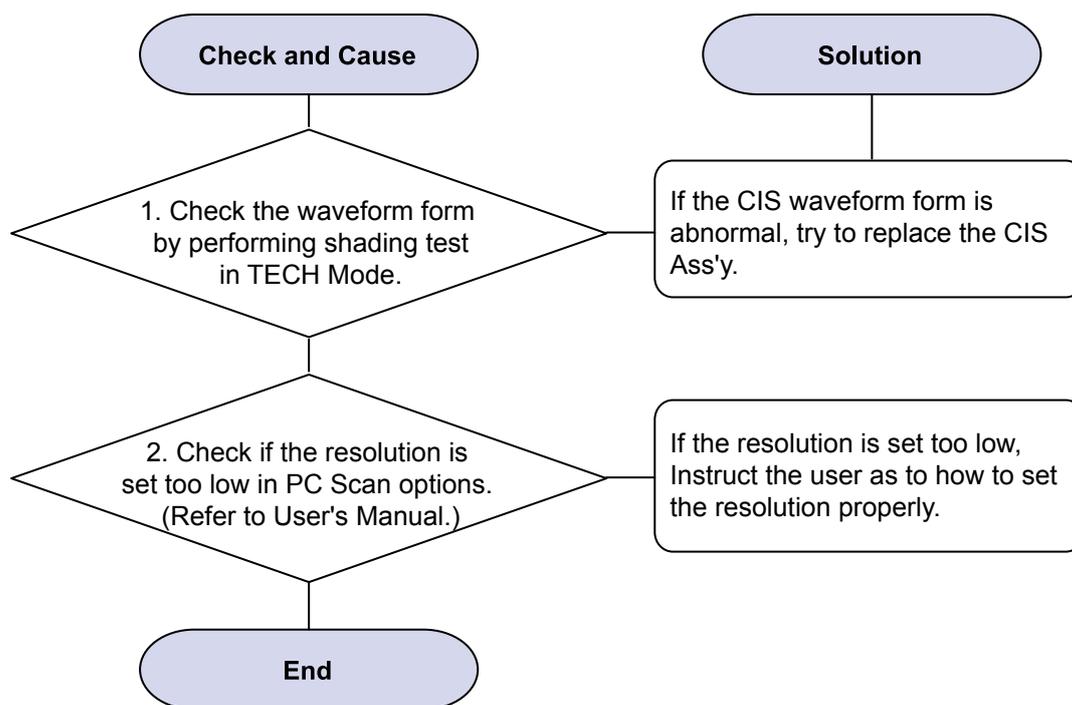
1) Defective PC Scan

Description : The PC Scan is not functioning at all.



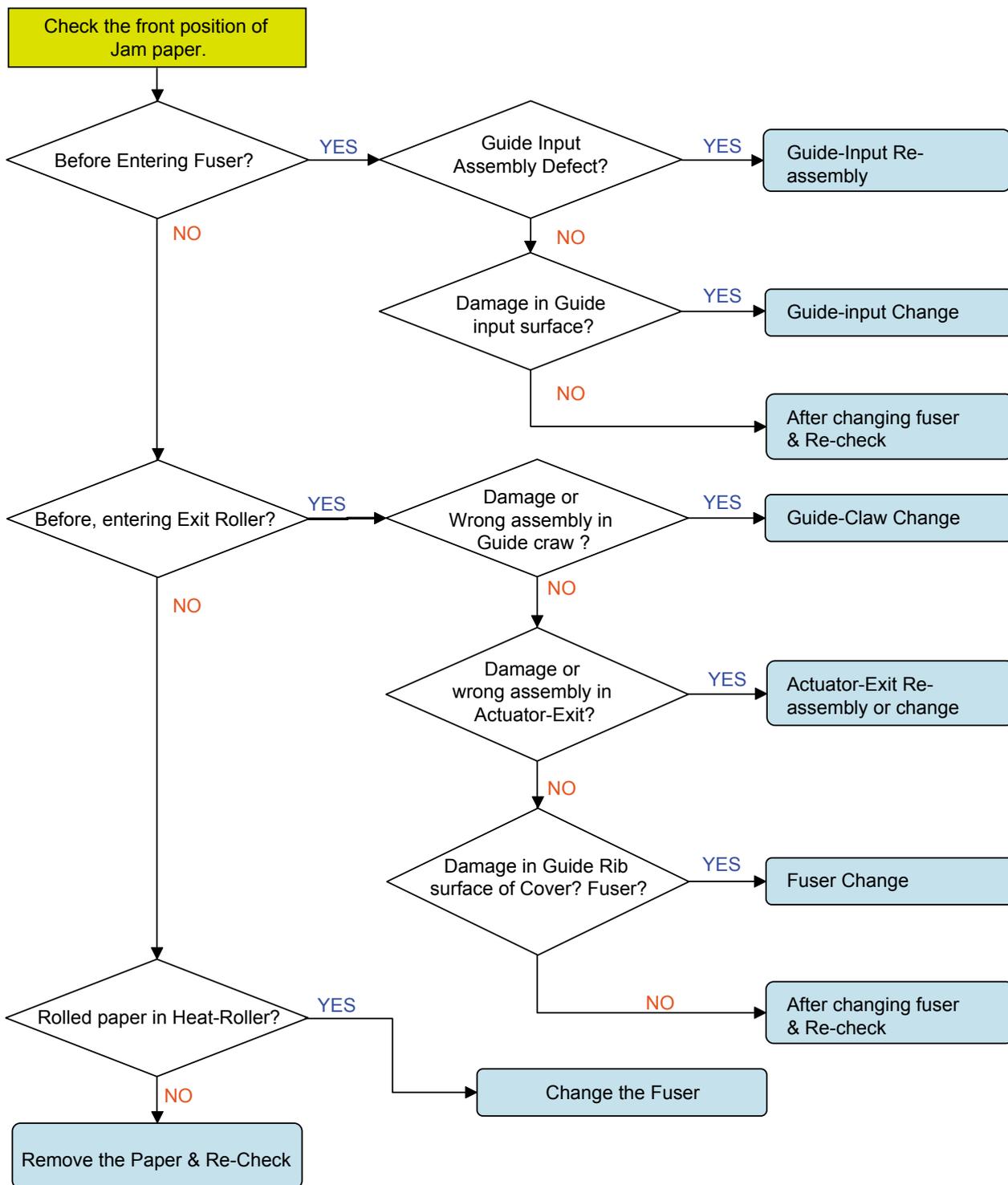
2) Defective Image Quality of PC Scan

Description : The image PC scanned is not clear or bad.

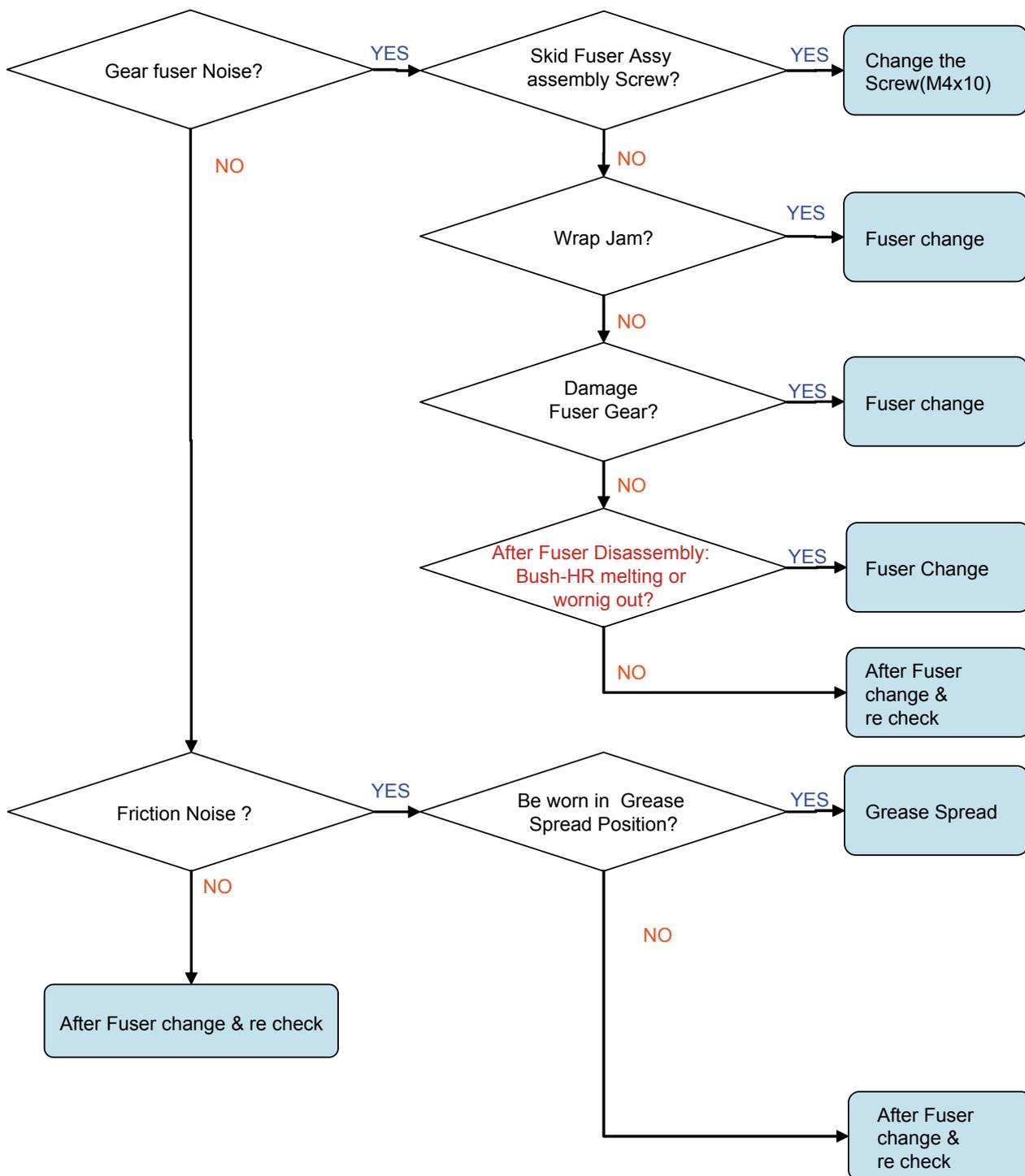


4.2.9 Fuser Problems and solutions

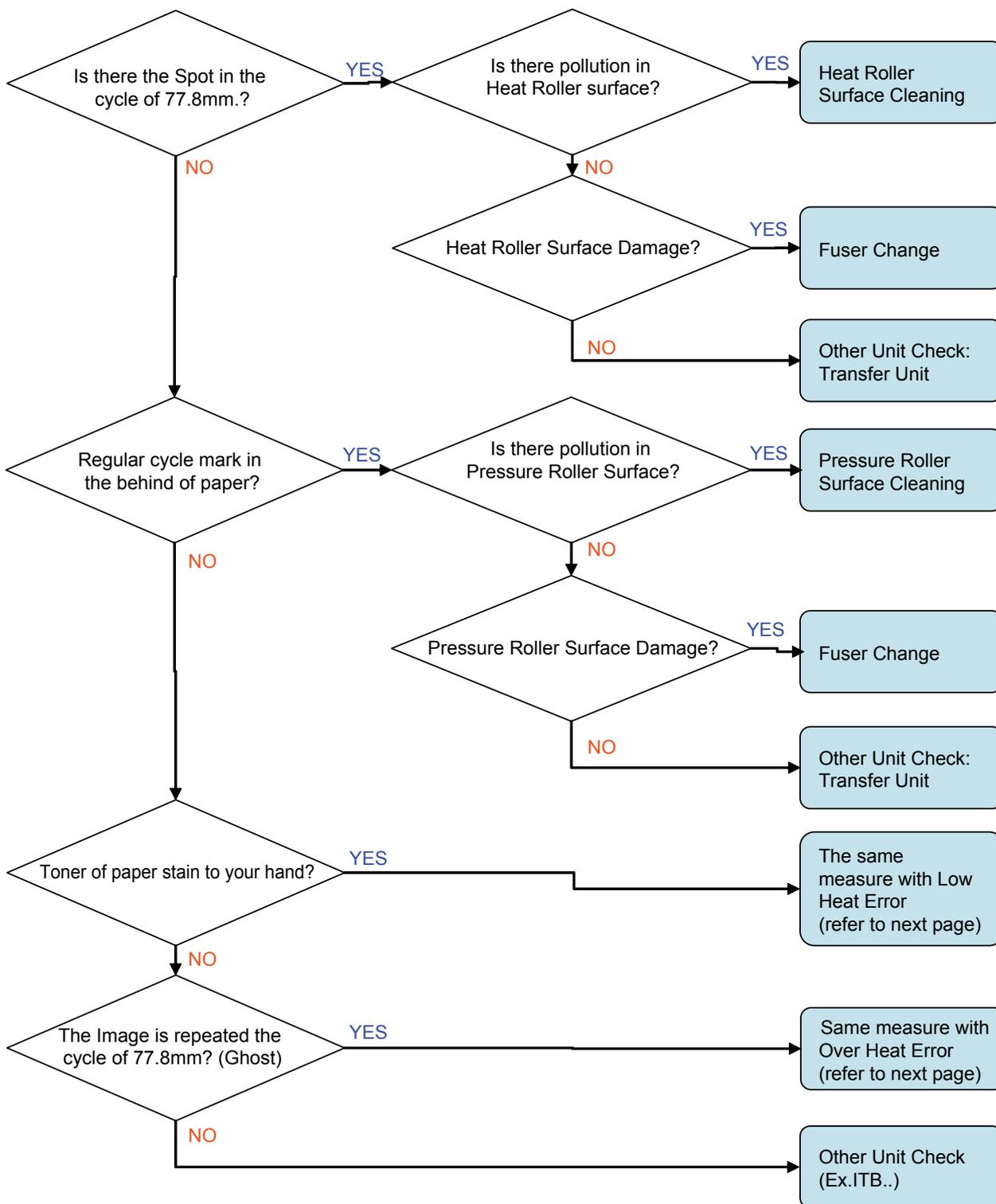
1. Jam 2



2. Abnormal Noise

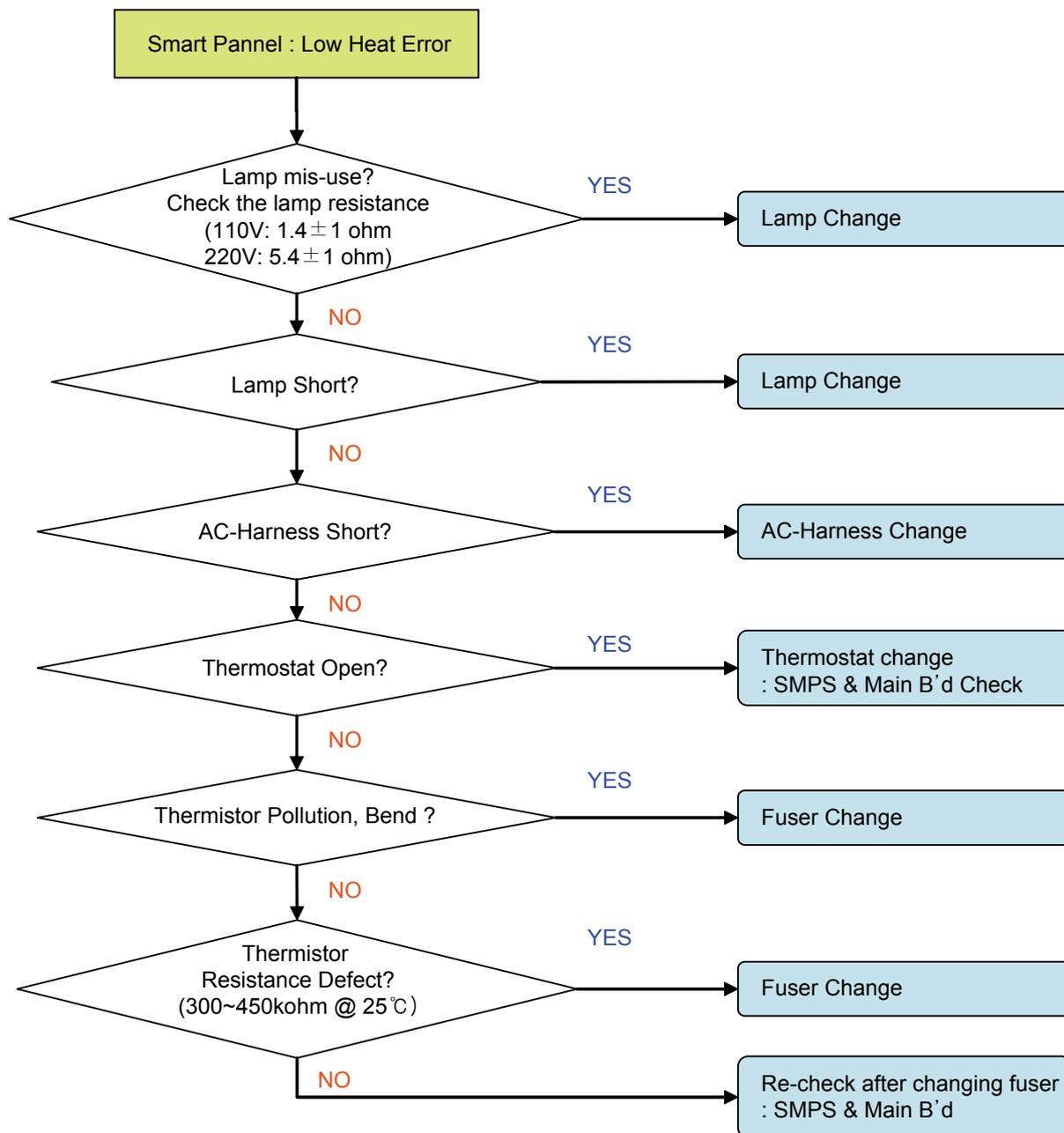


3. Image Defect



4. System Defect

1) Low Heat Error



2) Except Low Heat Error

