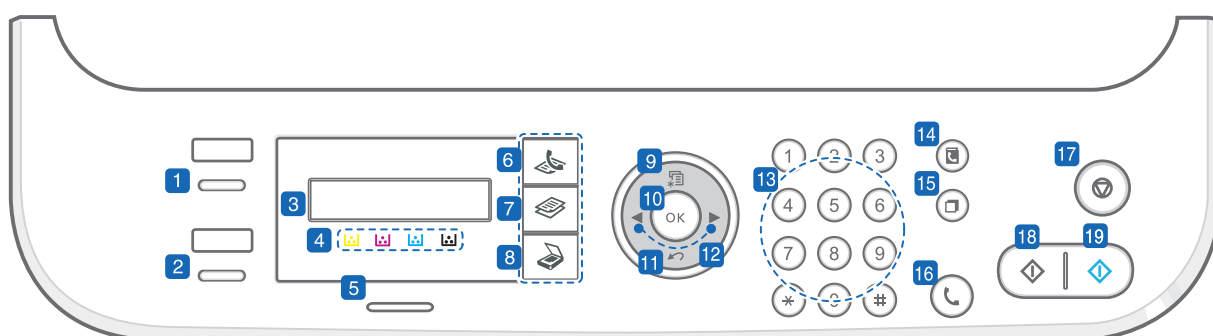


4. Alignment & Troubleshooting

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

4.1 Alignment and Adjustments

4.1.1 Control Panel overview



1. ID Copy	You can copy both sides of the ID Card like a driver's license to a single side of paper.
2. Direct USB	Allows you to directly print files stored on a USB Memory device when it is inserted into the USB memory port on the front of your machine.
3. Display	Shows the current status and prompts during an operation.
4. Toner colors	The toner colors shown below the LCD display co-works with the display messages. See Status LED with the toner cartridge messages.
5. Wireless^a/Status	Shows the status of your machine.
6. Fax	Activates Fax mode.
7. Copy	Activates Copy mode.
8. Scan/Email	Activates Scan mode.
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. Left/right arrow	Scroll through the options available in the selected menu, and increase or decrease values. When entering characters, use right key to add empty space.
13. Number keypad	Dials a number or enters alphanumeric characters.
14. Address Book	Allows you to search for stored email addresses.
15. Redial/Pause	In ready mode, redials the last number, or in Edit mode, inserts a pause into a fax number.
16. On Hook Dial	Engages the telephone line.
17. Stop/Clear	Stops an operation at any time. In ready mode, clears/cancels the copy options, such as the darkness, the document type setting, the copy size, and the number of copies.
18. Black Start	Starts a job in Black and White mode.
19. Color Start	Starts a job in Color mode.

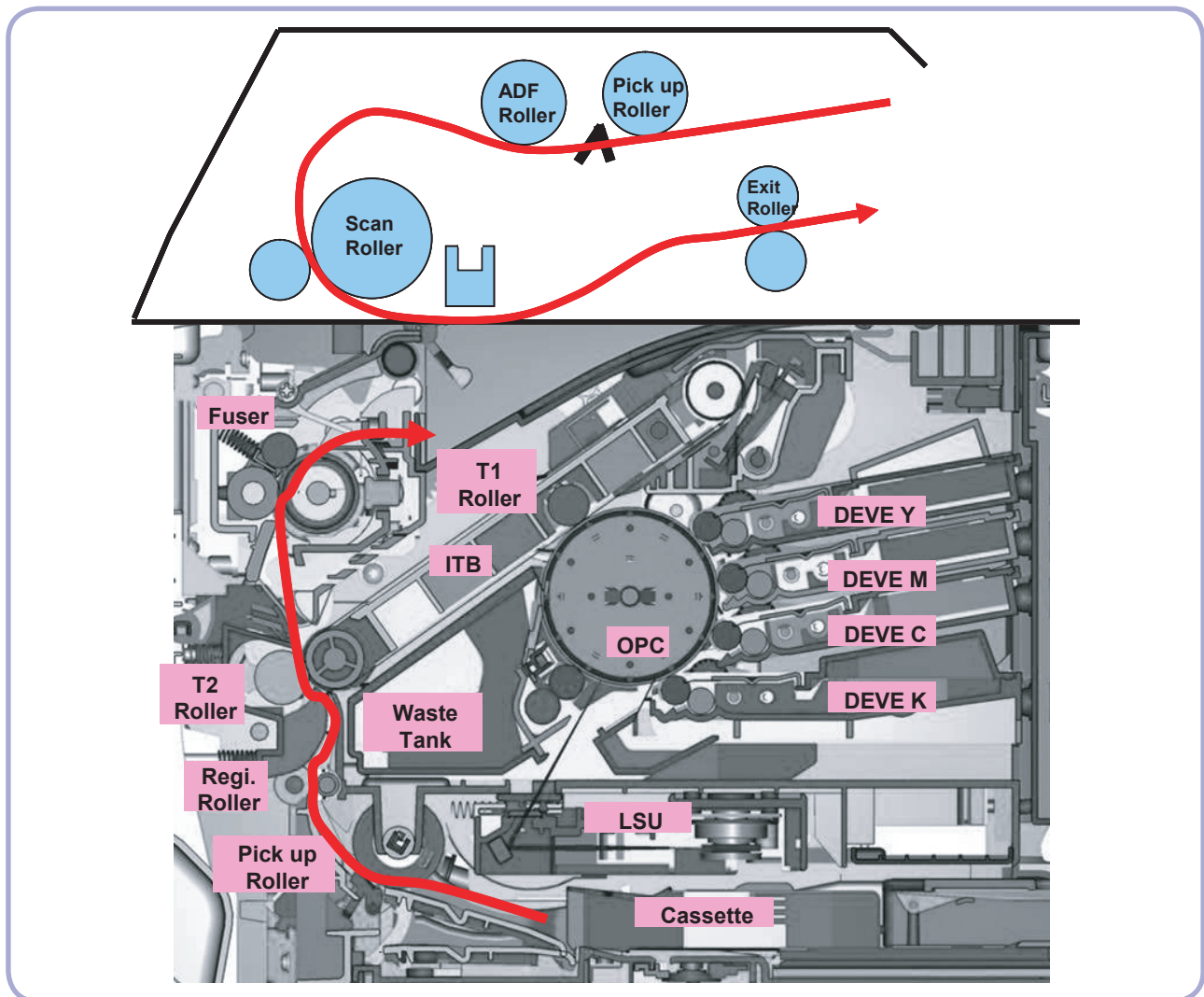
a. CLX-3175FW only.

4.1.2 Understanding The Status LED

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

Status		Description
Off		<ul style="list-style-type: none"> The machine is powered off-line. The machine is in power save mode. When data is received, or any button is pressed, it switches to on-line automatically. Wireless function can not be used.
Green	Blinking	<ul style="list-style-type: none"> When the green LED slowly blinks, the machine is receiving data from the computer. When the green LED rapidly blinks, the machine is printing data.
	On	<ul style="list-style-type: none"> The machine is powered on and can be used. Wireless function 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. The toner cartridge is low. Order a new toner cartridge. You can temporarily improve print quality by redistributing the toner.
	On	<ul style="list-style-type: none"> A problem has occurred such as a paper jam, cover is open or no paper in the tray, so that the machine cannot continue the job. The toner cartridge is empty, exhausted, or needs to be changed.

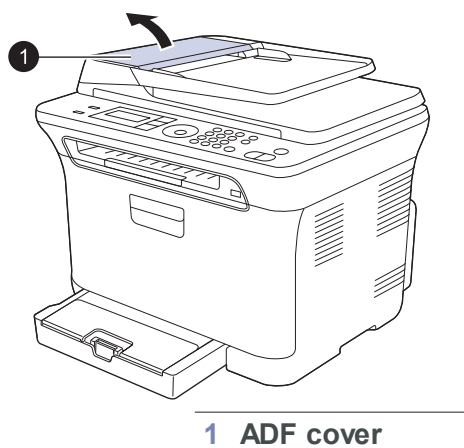
4.1.3 Paper path



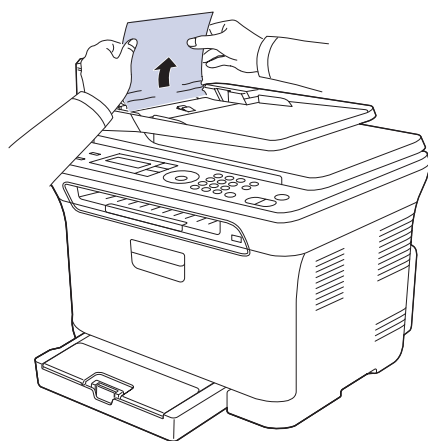
4.1.3.1 Clearing Document Jams

When an original jams while passing through the ADF, [Document Jam] appears on the display.

1. Remove any remaining pages from the ADF.
2. Open the ADF cover.



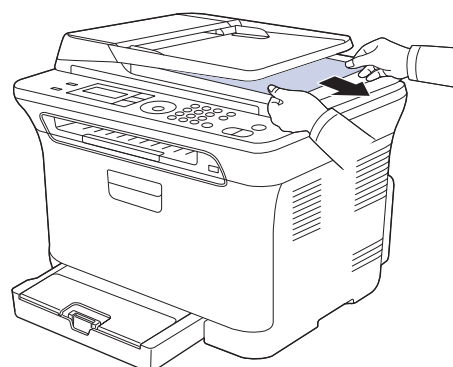
3. Pull the jammed paper gently out of the ADF.



4. Close the ADF cover. Then load the removed page(s), if any, back into the ADF.

Exit misfeed

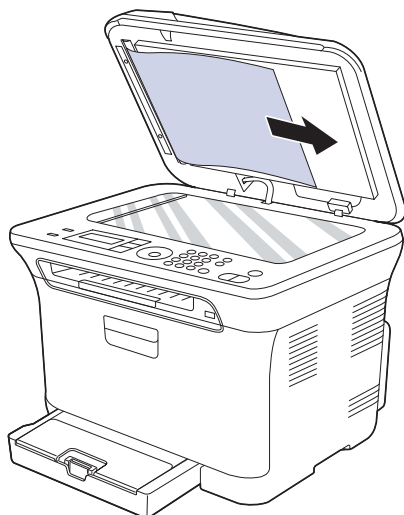
1. Remove any remaining pages from the ADF.
2. Seize the misfeed paper, and remove the paper from the document output tray by carefully pulling it to the right using both hands.



3. Load the removed pages back into the ADF.

Roller misfeed

1. Open the scanner lid.
2. Seize the misfeed paper, and remove the paper from the feed area by carefully pulling it to the right using both hands.
3. Close the scanner lid. Then load the removed pages back into the ADF.



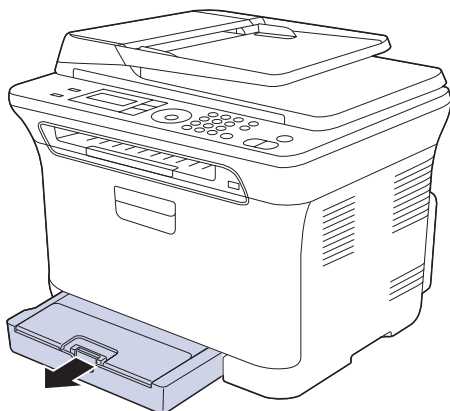
4.1.3.2 Clearing paper jams

When a paper jam occurs, the warning message appears on the display screen. Refer to the table below to locate and clear the paper jam.

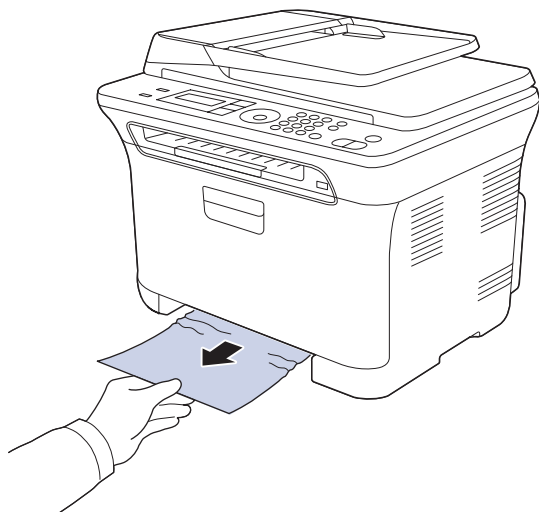
Message	Location of jam
Paper Jam 0 Open/Close Door	In the paper feed area or inside the machine
Paper Jam 1 Check Inside	Inside the machine
Paper Jam 2 Check Inside	Inside the machine and in the fuser area

In the tray 1

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



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



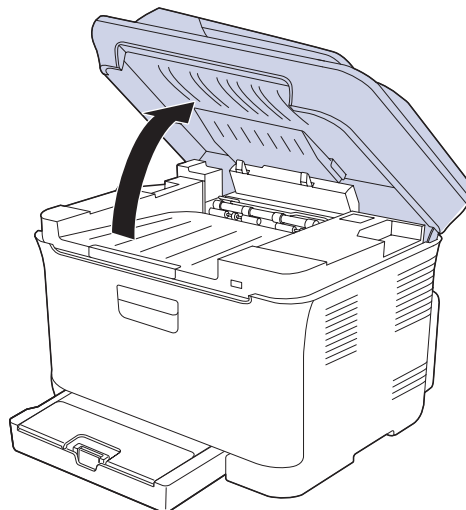
If the paper does not move when you pull, or if you do not see the paper in this area, check the paper exit area.

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

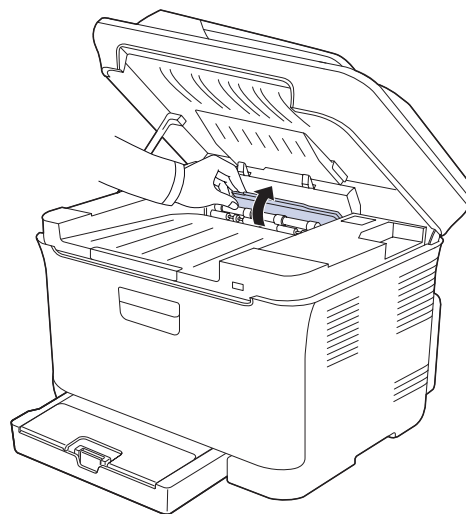
In the fuser unit area

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

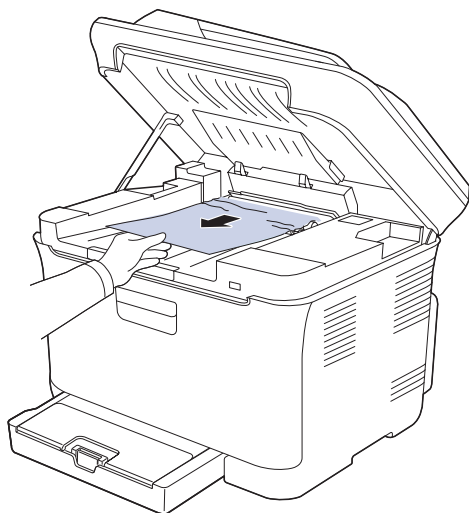
1. Open the scan unit.



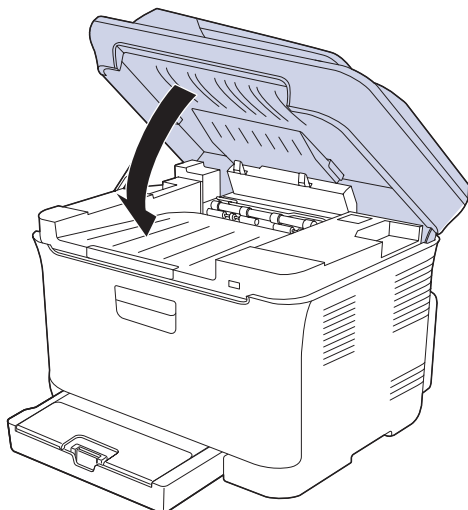
2. Open the inner cover.



3. Carefully take the jammed paper out of the machine.

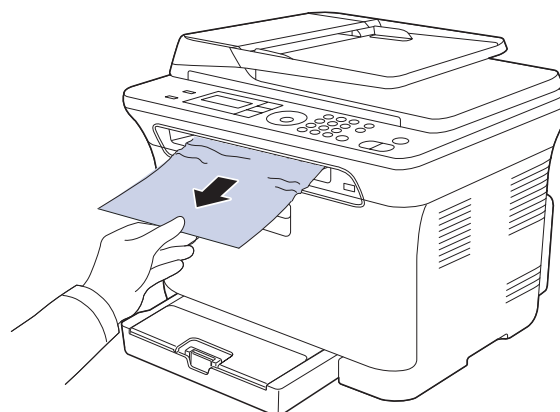


4. Close the inner cover.
5. Lowering down the scan unit gently and slowly until it is completely closed. Make sure that it is securely latched.
Be careful not to pinch your fingers!



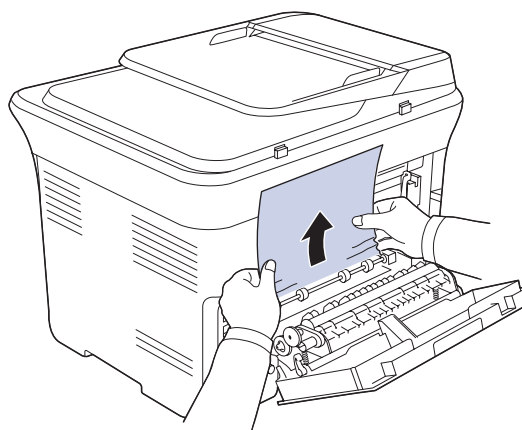
In the paper exit area

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.



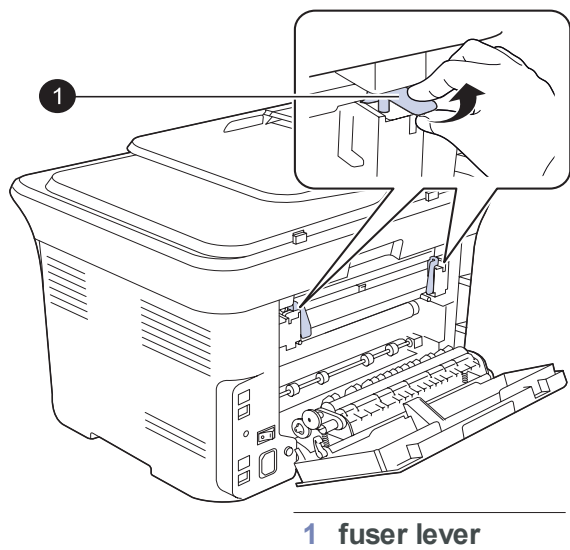
If you do not see the jammed paper or if there is any resistance when you pull, stop and go to the next step.

3. Open the rear cover.
4. If you see the jammed paper, pull it straight up. Skip to step 8.



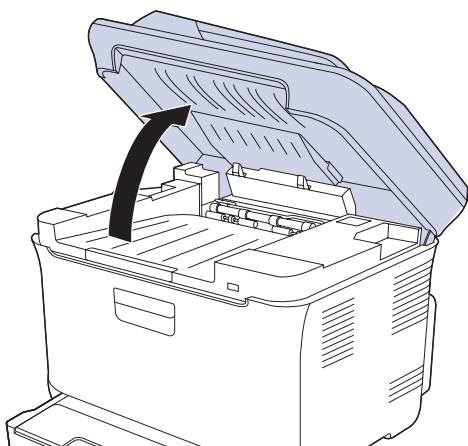
If you still do not see the paper, go to the next step.

5. Pull up the fuser lever.



8. Lowering down the scan unit gently and slowly until it is completely closed. Make sure that it is securely latched.
Be careful not to pinch your fingers!

6. Open the scan unit.



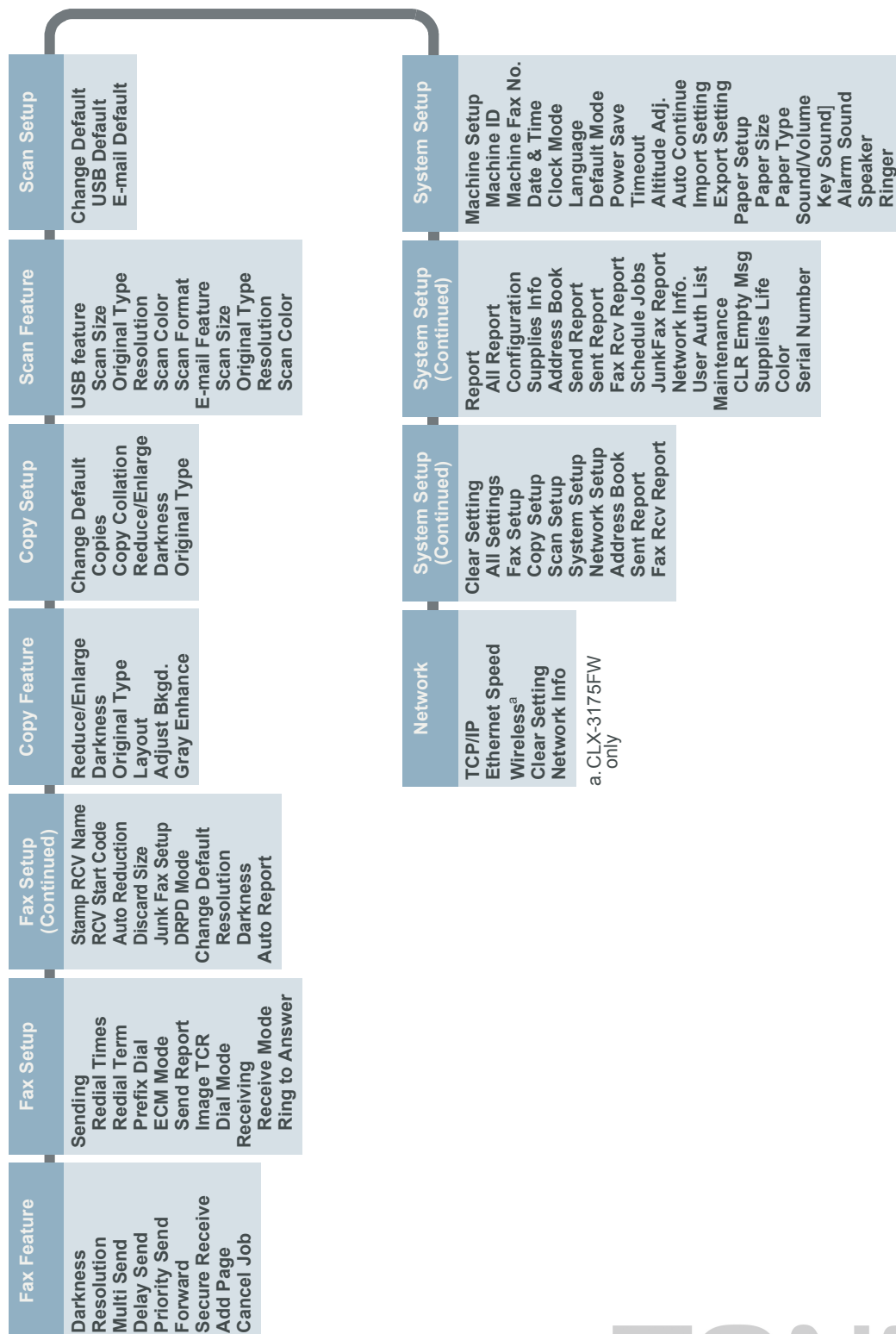
9. Pull down the fuser lever.

7. Carefully take the jammed paper out of the machine.

10. Close the rear cover. Printing automatically resumes.

4.1.4 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. Refer to the following diagram. Menus available in Fax, Copy, or Scan mode vary.



4.1.4.1 Accessing to menus

The next steps are the example to print the menu map of this machine, and they are the general way to select menu and configure your machine.

1. Make sure your machine is properly connected all the necessary cables, and turn on the machine.
2. Press the Menu button until you see the menu (ex. Information) you want on the bottom line of the display.
3. Press the OK button to access the menu.
4. Press the Left/right arrow buttons until the menu item (ex. Menu Map) you want displays on the bottom line.
5. Press the OK button to confirm the selected item.
6. Press the Left/right arrow buttons until the menu item (ex. Print?) you want displays on the bottom line.
7. Press the OK button to process your selection, save your input or selection.
An asterisk (*) appears next to the selection on the display, indicating that it is now the default.
8. To exit the menu, press the Back button repeatedly, or the Stop button.

Note - If you want to set the basic menu items, please consult the user guide.

4.1.4.2 Adjusting the color contrast.

Color menu allows you to adjust the color setting.

1. Press Menu until System Setup appears on the bottom line of the display and press OK.
2. Press OK when Maintenance appears.
3. Press the left/right arrow until Color appears and press OK.
4. Press OK when Custom Color appears.
5. Press the left/right arrow until the color menu you want appears on display and press OK.
Allows you to adjust contrast color by color. Default optimizes color automatically. Manual Adjust allows you to manually adjust the color contrast for each cartridge. Default setting is recommended for getting best color quality.
6. Press Stop/Clear to return to ready mode.

4.1.5 F/W Upgrade

1) Via USB or Network(SWS/SWAS)

- You can upgrade F/W via USB or Network whenever the printer is "Ready"
- Make sure connecting Printers to the computer with a USB cable

2) Via Using F/W Download Mode

step 1) Power on while pressing the STOP Key.

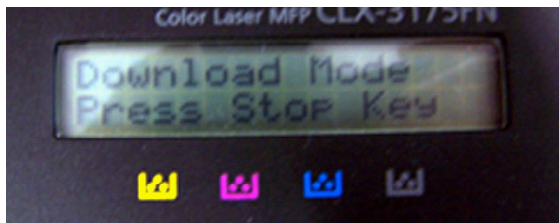
(You can see "Download mode . Press STOP key" on LCD. See picture #1)

step 2) Make sure connecting Printers to the computer with a USB cable.

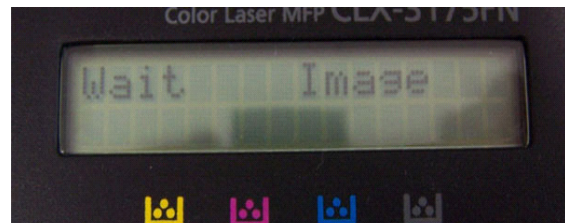
step 3) Press STOP Key one more time and display of LCD is changed "Wait Image"(See picture#2)

step 4) Download F/W via USB

- ※ In the case of Download Mode, If STOP Key is pressed when Printer is not connected to computer with USB, Error message happens (Error message : Image Error, Reset Printer)



picture#1



picture#2

```

C:\WINDOWS\system32\cmd.exe

D:\Tulip\ROM\0.82>usblast2.exe CLX3170FN_V1.00.00.82.hd
USBLIST2 Version 1.0(08/20/2002)

Printing to SPLC,FAX
Printing....<8126464/8126536>
Printing complete...!
  
```









4.1.6 Tech Mode

4.1.6.1 How to Enter 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.

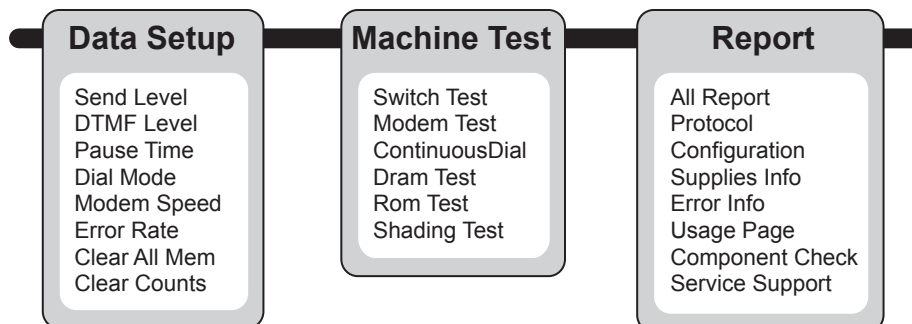
To enter the Tech mode

To enter the Tech mode, press  →  →  →  →  →  →  in sequence, and the LCD briefly displays 'TECH', the machine has entered service (tech) mode.

4.1.6.2 Setting-up System in Tech Mode

In service (tech) mode, the technician can check the machine and perform various test to isolate the cause of a malfunction.

CLX-317x series



4.1.6.3 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 in the shipment from factory. Never change settings arbitrarily.

DIAL MODE

This function can choose dial method.

*Default : Dial(Dial/Pulse)

MODEM SPEED

You can set the maximum modem speed.

Communication is done with modem speed automatically set at lower speed when communicating with a slower speed modem since communication is done on the standard of the side where modem speed is low for transmission/reception. 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 is functioning abnormally. All the values are returned to the default values, and all the information, which was set by the user, will be erased.

< Method >

1. Select the [MEMORY CLEAR] at the TECH MODE.
2. Push the OK button.
3. Select you country. (There are four country groups. Refer to the table below.)
4. Push the OK button then it will clear all memory.

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

Country Group	USA/Canada	UK	Russia	Southafrica
Country	USA/Canada Mexico Brazil	UK Germany France Italy Spain Austria Netherlands Belgium Portugal Sweden Norway Denmark Finland Switzerland Greece Ireland Turkey	Russia India Oman Poland Bangladesh Kuwait Moroco Algeria Pakistan UAE Bahrain Srilanka Saudi Arabia Chile Peru Argentina Hungary Romania Bulgaria Czech	South Africa

4.1.6.4 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.

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 part of the main board 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

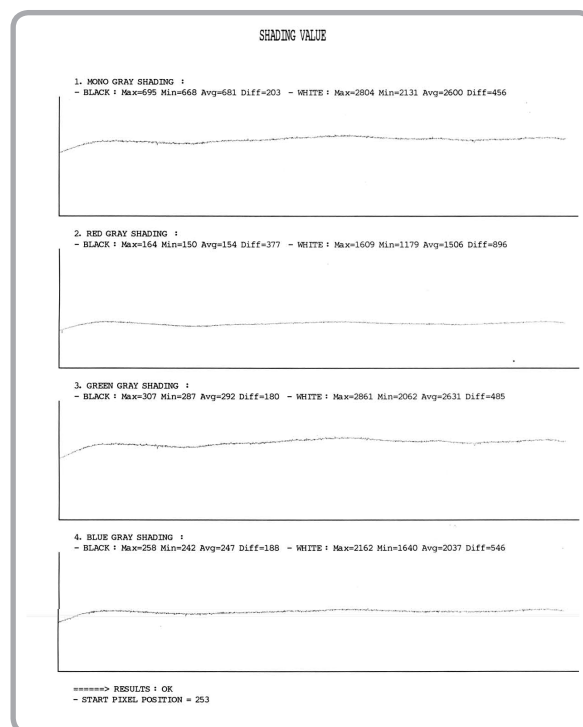
SHADING TEST

The function is to get the optimum scan quality by the specific character of the CIS(Contact Image Sensor). If the copy image quality is poor, perform this function to check the condition CIS unit.

< Method >

1. Select the [ADJUST SHADING] at the TECH MODE.
2. Push the SET UP button then an image will be scanned.
3. After the scan, CIS SHADING PROFILE will be print out.
4. If the printed image is different to the image, the CIS is defect.

NOTICE : When you test CIS, make sure that the cover is closed.



4.1.6.5 Report

PROTOCOL LIST

This list shows the sequence of the CCITT group 3 T.30 protocol during the most recent sending or receiving operation. Use this list to check for send and receive errors. If a communication error occurs while the machine is in TECH mode, the protocol list will print automatically.

OTHER ITEM

This list provides a list of the user system data settings and tech mode settings.

Configuration report

Configuration Report		
1	Date/Time : MAR-27-2008 12:01AM WED Fax Number : Fax Name : Model Name : CLX-3170 Series	
2	Options	3 Item
		4 Status
	Default Copies	[1-99] 1
	Default Reduce/Enlarge	[Org.(100%)/A4->A5(71%)...] Org.(100%)
	Default Darkness	[Light/Normal...] Normal
	Default Original Type	[Text/ Text/Photo...] Text/Photo
	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] 2
	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] Off
	Paper Size	[Letter/A4...] Letter
	Paper Type	[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
	Clock Mode	[12 Hours/24 Hours] 12 Hours
	Language	[English/FRANCAIS...] English
	Default Mode	[Fax/Copy] Copy
	Power Save	[5/10/15...] 15 Min
	Timeout	[15/30/60...] 30 Sec
	Altitude Adjustment	[Normal/High 1...] Normal
	Color Adjustment	Color(Y/M/C/K) 0/0/0/0
	Send Level	[9-15] -12 dB
	Dial Mode	[Tone/Pulse] Tone
5		

1. Date& Time, Fax number, Fax Name, Model Name - shows actual printed date of configuration pages, Fax number, Fax/Model name.
2. Options - shows various options set up in the printer.
3. Item – shows the value that can be selected for each option.
4. Status – shows current value set up in the printer.
5. Firmware/ Emulation version – shows date and version of firmware/emulation(SPL-C)
USB serial – shows the serial number of the product.
IP Address/Memory Size – shows the IP address and memory installed in the printer.
Total Page Count – shows the page count since first installaion.

supplies information report

Supplies Information Report

- 1** Date/Time : MAR-27-2008 12:01AM WED
 Fax Number :
 Fax Name :
 Model Name : CLX-3170 Series
-
- 2** [General Information]
 Firmware/Engine Version : V1.01.00.85.FN Mar-21-2008 1.70.34
 Total Page Count : 25/6 Page(s) (color/mono)
 Total Image Count : 106 Image(s)
 ADF Scan Page Count : 2 Page(s)
 Platen Scan Page Count : 2 Page(s)
- 3** [Consumables Life]
 Fuser Life : 106 Page(s)
 Transfer Roller Life : 31 Page(s)
 Tray Roller Life : 31 Page(s)
 Transfer Belt Life : 106 Image(s)
- 4** [Toner Information]
- | | Yellow | Magenta | Cyan | Black |
|--|---------------------|-------------------|-------------------|-------------------|
| Toner Remaining | : 95% | 96% | 99% | 95% |
| Page Count | : 25 Page(s) | 25 Page(s) | 19 Page(s) | 31 Page(s) |
| Serial No. | : CRUM-000000000000 | CRUM-000000000000 | CRUM-000000000000 | CRUM-000000000000 |
| Supplier | : INI(INI) | INI(INI) | INI(INI) | INI(INI) |
| Product Date | : YYYY.MM.DD | YYYY.MM.DD | YYYY.MM.DD | YYYY.MM.DD |
| Last Used Date | : 2008.03.26 | 2008.03.26 | 2008.03.26 | 2008.03.26 |
| First Installed Date | : 2008.03.22 | 2008.03.22 | 2008.03.24 | 2008.03.22 |
| Equivalent Pages Printed | : 39 | 32 | 12 | 53 |
| (Based on ISO/IEC Standard Page) | | | | |
| Average Area Coverage | : 7 | 6 | 3 | 8 |
| Estimated Pages Remaining | : 400 | 500 | 700 | 500 |
| (This may vary depending on average area coverage) | | | | |
| Motor on Time(remaining) | : 170.66 Sec (97%) | 109.18 Sec (98%) | 91.55 Sec (98%) | 415.08 Sec (98%) |
| Dot Count(remaining) | : 291009 (94%) | 304299 (95%) | 120542 (98%) | 580938 (94%) |
| Real Used Dot Count | : 291009 | 304299 | 120542 | 510828 |
| Clear Toner | : 0 | 0 | 0 | 0 |
| Page Count after Replace | : 0 | 0 | 0 | 0 |
| Black Band Count | : 30 | 0 | 0 | 114 |
| Replace Toner Count | : 0 | 0 | 0 | 0 |
| Company ID | : INI | INI | INI | INI |
| Supplier ID | : INI(INI) | INI(INI) | INI(INI) | INI(INI) |
| Backup Supplier | : INI | INI | INI | INI |
| Capacity | : 0.7K | 0.7K | 0.7K | 1.0K |
| Version | : 0 | 0 | 0 | 0 |
- 5** [Imaging-Unit Information]
 Maker : Fuji
 Remaining : 99%
 Image Count : 106 Image(s)
 Last Used Date : 2008.03.26
 First Installed Date : 2008.03.22
 Black Band Count : 144
 Replace Count : 0
 BackGround : 1405.46 (mg)

1. Date& Time, Fax number, Fax Name, Model Name - shows actual printed date of configuration pages, Fax number, Fax/Model name.
2. General Information – shows Total page count, Total Image count, ADF/Platen scan page count.
3. Consumables Life – shows the replacement part such as a Fuser, Transfer roller, Tray roller, Transfer belt.
4. Toner Information – shows Toner remaining, Page count, Serial No of each toner, Last used date, First installed date etc.
5. Imaging Unit – shows Remaining, Image count, Maker(Manufacturer), Last Used Date etc.

4.1.7 EDC Mode

EDC Mode is independently controled system F/W and Diagnose printer's each function.

■ Method to enter

After Power On, wait a minute(about 30 seconds)

And, it is displayed to panel, "Ready to XXXX"

Execute EDC Program, click to Menu key.

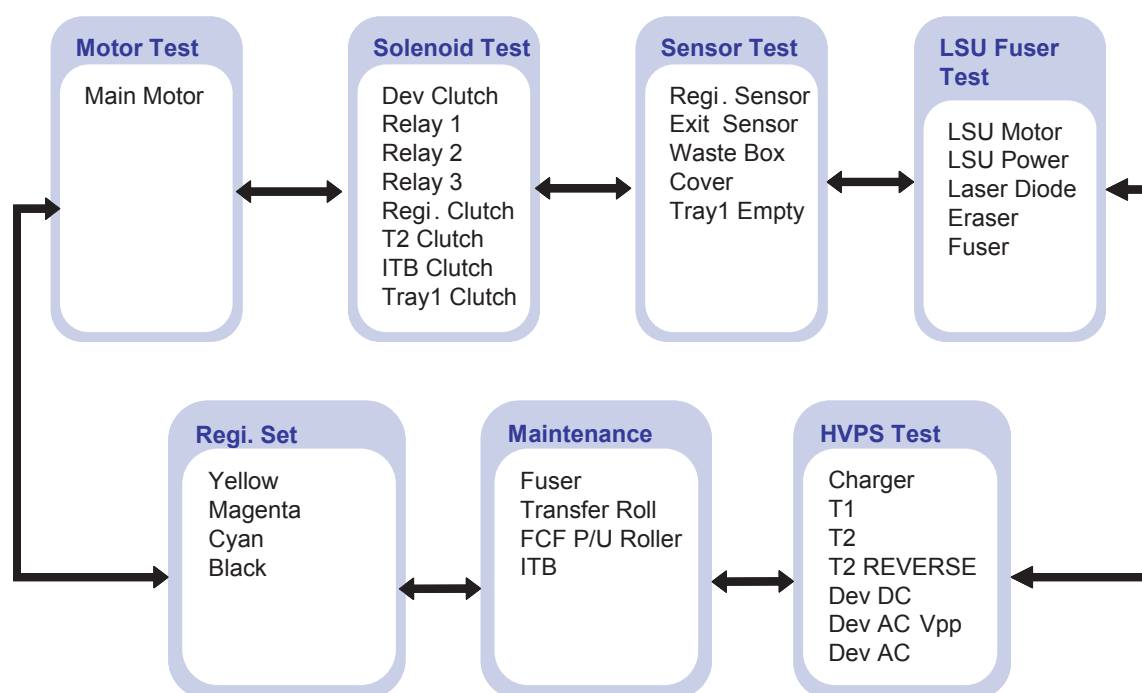
And, it is displayed to application "EDC Main <Motor Test>"

Next, to use below key, test edc mode.

■ Keys

Key	Description
Exit	Close program
Update LCD	Update value (ex : sensor value)
Menu	Move to the top menu
Left/Right arrow	Move test item
Enter	Start testing or select Sub-item
Upper level	Stop testing or the upper menu

■ Menu Organization



■ EDC Mode Menu

Motor Test

Item	Description
Main Motor	If motor lock signal is normal, "Succesed" message will be displayed. When motor lock signal is abnormal , "failed" message will be displayed. When "Upper Level" is pushed, "off" message will be displayed.

Solenoid Test

Item	Description
Dev Clutch	When "enter" key is pushed, "Dev Clutch ON" message will be displayed. "Upper Level" is pushed, "Dev Clutch Off" message will be displayed.
Relay 1	When "enter" key is pushed, "Relay 1 ON" message will be displayed. "Upper Level" is pushed, "Relay 1 Off" message will be displayed on.
Relay 2	When "enter" key is pushed, "Relay 2 ON" message will be displayed. "Upper Level" is pushed, "Relay 2 Off" message will be displayed.
Relay 3	When "enter" key is pushed, "Relay 3 ON" message will be displayed. "Upper Level" is pushed, "Relay 3 Off" message will be displayed.
Regi Clutch	When "enter" key is pushed, " REGI Clutch ON" message will be displayed. "Upper Level" is pushed, " REGI Clutch Off" message will be displayed.
T2 Clutch	When "enter" key is pushed, " T2 Clutch ON" message will be displayed. "Upper Level" is pushed, " T2 Clutch Off" message will be displayed.
ITB Clutch	When "enter" key is pushed, " ITB Clutch ON" message will be displayed. "Upper Level" is pushed, " ITB Clutch Off" message will be displayed.
Tray1 Clutch	When "enter" key is pushed, " Tray1 Clutch ON" message will be displayed. "Upper Level" is pushed, " Tray1 Clutch Off" message will be displayed.

Sensor Test

Item	Description
Regi. Sensor	If actuator is checked by sensor, "Without Paper" message will be displayed. if not, "With Paper" message will be.
Exit Sensor	If actuator is checked by sensor, "Without Paper" message will be displayed. if not, "With Paper" message will be.
Waste Box	If waste Box exists , "Installed" message will be displayed. If not, "Not Installed" message will be.
Cover	If cover is opened, " Opened" message will be displayed. If not, "Closed" message will be.
Tray1 Empty	If paper exists in the tray, "With Paper" will be displayed. If not, "Without Paper" message will be.

HVPS Test

Item	Description
Charger	When "enter" key is pushed, "DUTY : x%*" message will be displayed. And then Left/Right arrow is selected, x% is increased or decreased. And "DUTY : x%" message will be displayed. * is disappeared. And then "enter" key is pushed, x%*" message will be displayed. When "Upper Level" is pushed, * is disappeared.
T1	When "enter" key is pushed, "DUTY : x%*" message will be displayed. And then Left/Right arrow is selected, x% is increased or decreased. And "DUTY : x%" message will be displayed. * is disappeared. And then "enter" key is pushed, x%*" message will be displayed. When "Upper Level" is pushed, * is disappeared.
T2	When "enter" key is pushed, "DUTY : x%*" message will be displayed. And then Left/Right arrow is selected, x% is increased or decreased. And "DUTY : x%" message will be displayed. * is disappeared. And then "enter" key is pushed, x%*" message will be displayed. When "Upper Level" is pushed, * is disappeared.
T2 REVERSE	When "enter" key is pushed, "T2 REVERSE On" message will be displayed. If not, "T2 REVERSE Off" will be.
Charger	When "enter" key is pushed, "DUTY : x%*" message will be displayed. And then Left/Right arrow is selected, x% is increased or decreased. And "DUTY : x%" message will be displayed. * is disappeared. And then "enter" key is pushed, x%*" message will be displayed. When "Upper Level" is pushed, * is disappeared.
Dev DC	When "enter" key is pushed, "DUTY : x%*" message will be displayed. And then Left/Right arrow is selected, x% is increased or decreased. And "DUTY : x%" message will be displayed. * is disappeared. And then "enter" key is pushed, x%*" message will be displayed. When "Upper Level" is pushed, * is disappeared.
Dev AC Vpp	When "enter" key is pushed, "DUTY : x%*" message will be displayed. And then Left/Right arrow is selected, x% is increased or decreased. And "DUTY : x%" message will be displayed. * is disappeared. And then "enter" key is pushed, x%*" message will be displayed. When "Upper Level" is pushed, * is disappeared.
Dev AC	When "enter" key is pushed, "DUTY : x%*" message will be displayed. And then Left/Right arrow is selected, x% is increased or decreased. And "DUTY : x%" message will be displayed. * is disappeared. And then "enter" key is pushed, x%*" message will be displayed. When "Upper Level" is pushed, * is disappeared.

HVPS Duty Table (Example)

Item	Description
Charger	Duty : 50% -> "-789V", Range : -81V ~ -1689V
T1	Duty : 50% -> "1159V", Range : 122V ~ 2188V
T2	Duty : 50% -> "2552V", Range : 264V ~ 4730V
Supply DC	Duty : 50% -> "-269V", Range : -1V ~ -591V
AC, Vpp	Duty : 50%-> "1210V", Range : 800V ~ 2160V

Maintenance

Item	Description
Fuser	When "enter" key is pushed, "Initialized" message will be displayed. When "Upper Level" is pushed, "Off" message is disappeared.
Transfer	When "enter" key is pushed, "Initialized" message will be displayed. When "Upper Level" is pushed, "Off" message is disappeared.
FCF Pick Up Roll	When "enter" key is pushed, "Initialized" message will be displayed. When "Upper Level" is pushed, "Off" message is disappeared.
ITB	When "enter" key is pushed, "Initialized" message will be displayed. When "Upper Level" is pushed, "Off" message is disappeared.

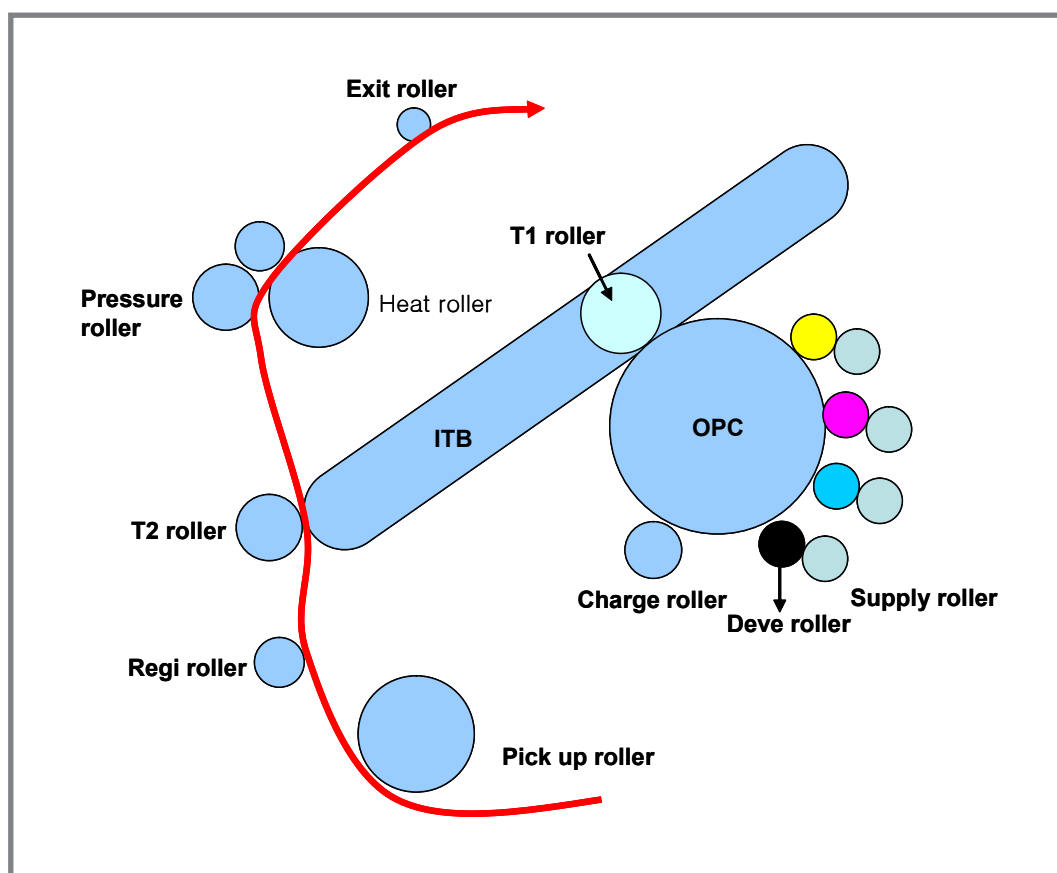
Regi. Set

Item	Description
Yellow	When "enter" key is pushed, "* xdot" message will be displayed. "*" displayed current setting. And then Left/Right arrow is selected, xdot is increased or decreased. "*" is disappeared. And then "enter" key is pushed, "*" will be displayed.
Magenta	When "enter" key is pushed, "* xdot" message will be displayed. "*" displayed current setting. And then Left/Right arrow is selected, xdot is increased or decreased. "*" is disappeared. And then "enter" key is pushed, "*" will be displayed.
Cyan	When "enter" key is pushed, "* xdot" message will be displayed. "*" displayed current setting. And then Left/Right arrow is selected, xdot is increased or decreased. "*" is disappeared. And then "enter" key is pushed, "*" will be displayed.
Black	When "enter" key is pushed, "* xdot" message will be displayed. "*" displayed current setting. And then Left/Right arrow is selected, xdot is increased or decreased. "*" is disappeared. And then "enter" key is pushed, "*" will be displayed.

4.1.8 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.

No	Roller	Period	Phenomenon
1	OPC Drum	188.5mm	White and Black Spots
2	Charge Roller	37.7mm	Black Spot and line and Periodic Band
3	Supply Roller	32.7mm	Periodic Band by little difference of density
4	Developing Roller	26.0mm	White Spot, Horizontal black band
5	1 st Transfer Roller	43.8mm	Ghost, Damaged Image by abnormal tranfer
6	2 nd Transfer Roller	54.64mm	Ghost, Damaged Image by abnormal tranfer
7	Pressure Roller	50.3mm	Background
8	Heat Roller	86.4mm	Black Spots or Vertical Black Band



4.1.9 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' meaning and correct the problem if necessary. Messages and their meanings are listed in alphabetical order.

- xxx indicates the media type.
- yyy indicates the tray.

Message	Meaning	Suggested solutions
ADC Not Confirm Error	A problem has occurred in the ADC in the machine.	Turn the power switch off and on. If the problem persists, call for service.
Cancel? ◀ Yes ▶	Your machine's memory has become full while trying to store an original into memory.	To cancel the fax job, press the OK button to accept Yes. If you want to send those pages that have been successfully stored, press the OK button to accept No. You should send the remaining pages later, when memory is available.
[COMM. Error]	The machine has a communication problem.	Ask the sender to try again.
Connection Error	Connection with the SMTP server failed.	Check the server settings and the network cable.
Data Read Fail Check USB Mem.	Time expired while reading data.	Try again.
Data Write Fail Check USB Mem.	Storing to the USB memory failed.	Check the available USB memory space.
Deve Home Sensor Error	There is a problem in the fuser unit.	Turn the power switch off and on. If the problem persists, call for service.
[Document Jam]	The loaded original has jammed in the ADF.	Clear the jam.
Door Open	The front cover or rear cover is not securely latched.	Close the cover until it locks into place.
Enter Again	You entered an unavailable item.	Enter the correct item again.
File Format Not Supported	The selected file format is not supported.	Use the correct file format.
Group Not Available	You have tried to select a group location number where only a single location number can be used, such as when adding locations for a Multiple Send operation.	Use a speed dial number or dial a number manually using the number keypad.
Install Imaging Unit	The imaging unit is not installed.	Install the imaging unit.
Install Toner	The toner cartridge is not installed.	Install the toner cartridge.

Message	Meaning	Suggested solutions
Invalid Toner	The toner cartridge you have installed is not for your machine.	Install the a Samsunggenuine toner cartridge designed for your machine.
[Incompatible]	The machine has received a fax from which is registered as a junk fax.	The received fax data will be deleted. Reconfirm junk fax setup.
IP Conflict	The network IP address you have set is being used by someone else.	Check the IP address and reset it if necessary.
Line Busy	The receiving fax machine did not answer or the line is already engaged.	Try again after a few minutes.
[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.
Low Heat Error Cycle Power	There is a problem in the fuser unit.	Turn the power switch off and on. If the problem persists, call for service.
LSU Motor Error Cycle Power	A problem has occurred in the LSU (Laser Scanning Unit.)	Turn the power switch off and on. If the problem persists, call for service.
LSU Hsync Error Cycle Power	A problem has occurred in the LSU (Laser Scanning Unit.)	Turn the power switch off and on. If the problem persists, call for service.
Mail Exceeds Server Support	The mail size is larger than the supported size by SMTP server.	Divide your mail or reduce the resolution.
Main Motor Locked	There is a problem in the main motor.	Open and then close the front cover.
Memory Full	The memory is full.	Delete unnecessary fax jobs and retransmit after more memory becomes available. Alternatively, split the transmission into more than one operation.
Network Error	There is a problem with the network.	Contact your network administrator.
[No Answer]	The receiving fax machine has not answered after several redial attempts.	Try again. Make sure that the receiving machine is operational.
NonSAMSUNG Toner	The toner cartridge which the arrow indicates is not a Samsung-genuine cartridge. Press OK to toggle the message to Stop or Continue. ◀ Stop ▶	You can select either Stop or Continue with the left/right arrow. If you select Stop by pressing OK on the control panel, the machine stops printing. If you select Continue, the machine keeps printing, but the quality cannot be guaranteed. If you do not select any, the machine will work as Stop is selected. Replace the corresponding toner cartridge with a Samsung-genuine cartridge.

Message	Meaning	Suggested solutions
Not Assigned	The speed button or speed dial number you tried to use has no number assigned to it.	Enter the number manually using the number keypad or store the number or address.
One Page is Too Large	Single page data exceeds the configured mail size.	Reduce the resolution and try again.
Open Heat Error Cycle Power	There is a problem in the fuser unit.	Turn the power switch off and on. If the problem persists, call for service.
Operation Not Assigned	You are in the Add Page/Cancel Job operation, but there are no jobs stored.	Check the display to see if there are any scheduled jobs.
Out-Bin Full	The output tray of the machine is full of paper.	Remove paper.
Over Heat Error Cycle Power	There is a problem in the fuser unit.	Turn the power switch off and on. If the problem persists, call for service.
Paper Jam 0 Open/Close Door	Paper has jammed in the feeding area of the tray.	Clear the jam.
Paper Jam 1 Check Inside	Paper has jammed in the paper exit area.	Clear the jam.
Paper Jam 2 Check Inside	Paper has jammed in the fuser area or around the toner cartridge	Clear the jam.
Refilled Toner	The toner cartridge you have installed is not genuine or refilled. The arrow indicates which color toner cartridge.	The print quality may get poor if the refilled toner cartridge is installed, since its characteristics may significantly differ from the genuine. We recommend Samsunggenuine color toner cartridge.
Replace Toner	This message appears between Toner Empty and Toner Low status.	Replace the toner cartridge with a new one.
Replace [xxx]	The life of the part expires totally.	Replace the part with a new one. Call for service.
Replace [xxx] Soon	The life of the part expires soon.	
Replace/Install Toner Waste Bin	The life span of the waste toner tank has expired and the printer will stop printing until a new waste toner tank is placed into the machine.	Replace the waste toner bank with a new one.
Retry Redial?	The machine is waiting for a specified time interval to redial a previously busy station.	You can press OK to immediately redial, or Stop/Clear to cancel the redial operation.
Scan Unit Open	The scan unit is not securely latched.	Close the scan unit it locks into place.
Scanner locked	The scanner module is locked	Turn the power switch off and on. If the problem persists, call for service.

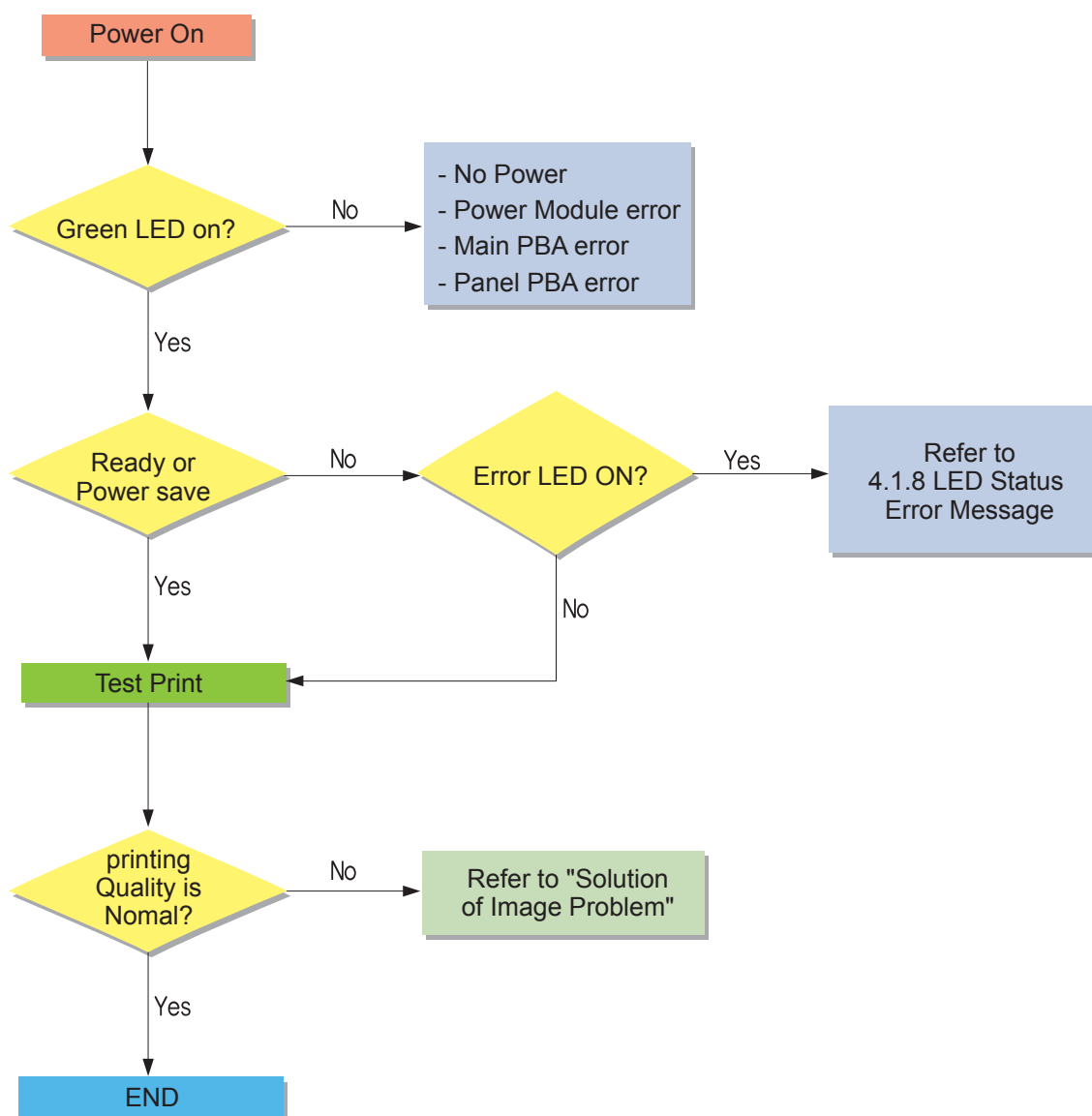
Message	Meaning	Suggested solutions
Send Error (AUTH)	There is a problem in SMTP authentication.	Configure the authentication setting.
Send Error (DNS)	There is a problem in DNS.	Configure the DNS setting.
Send Error (POP3)	There is a problem in POP3.	Configure the POP3 setting.
Send Error (SMTP)	There is a problem in SMTP.	Change to the available server.
Send Error (Wrong Config)	There is a problem on the network interface card.	Configure your network interface card correctly.
[Stop Pressed]	Stop/Clear has been pressed during an operation.	Try again.
Toner Empty	The toner cartridge has run out. The machine stops printing. Press OK to toggle the message to Stop or Continue or Black Only. ◀ Stop ▶	You can select the option among Stop, Continue or Black Only with the left/right arrow. If you select Stop by pressing OK on the control panel, the machine stops printing. If you select Continue, the machine keeps printing, but the quality cannot be guaranteed. If you select Black Only, the machine prints the data in black. In this case, the mono printing feature is preset in the printer properties. When you copy, the Black Start button will be activated only with this condition. If you do not select any, the machine will work as Stop is selected. Replace the toner cartridge with a new one.
Toner Exhausted	The lifespan of the toner cartridge which the arrow indicates is reached.	This message appears when the toner is completely empty, and your machine stops printing. Replace the corresponding toner cartridge with a Samsung-genuine cartridge.
Toner Low	The corresponding toner cartridge is almost empty.	Take out the toner cartridge and thoroughly shake it. By doing this, you can temporarily reestablish printing operations.
Transfer Belt Error	A problem has occurred in the transfer belt in the machine.	Turn the power switch off and on. If the problem persists, call for service.

Message	Meaning	Suggested solutions
Tray Paper Empty	There is no paper in the tray.	Load paper in the tray.
Tray Paper Mismatch	The paper size specified in the printer properties does not match the paper you are loading.	Load the correct paper in the tray.

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 Troubleshooting Checklist

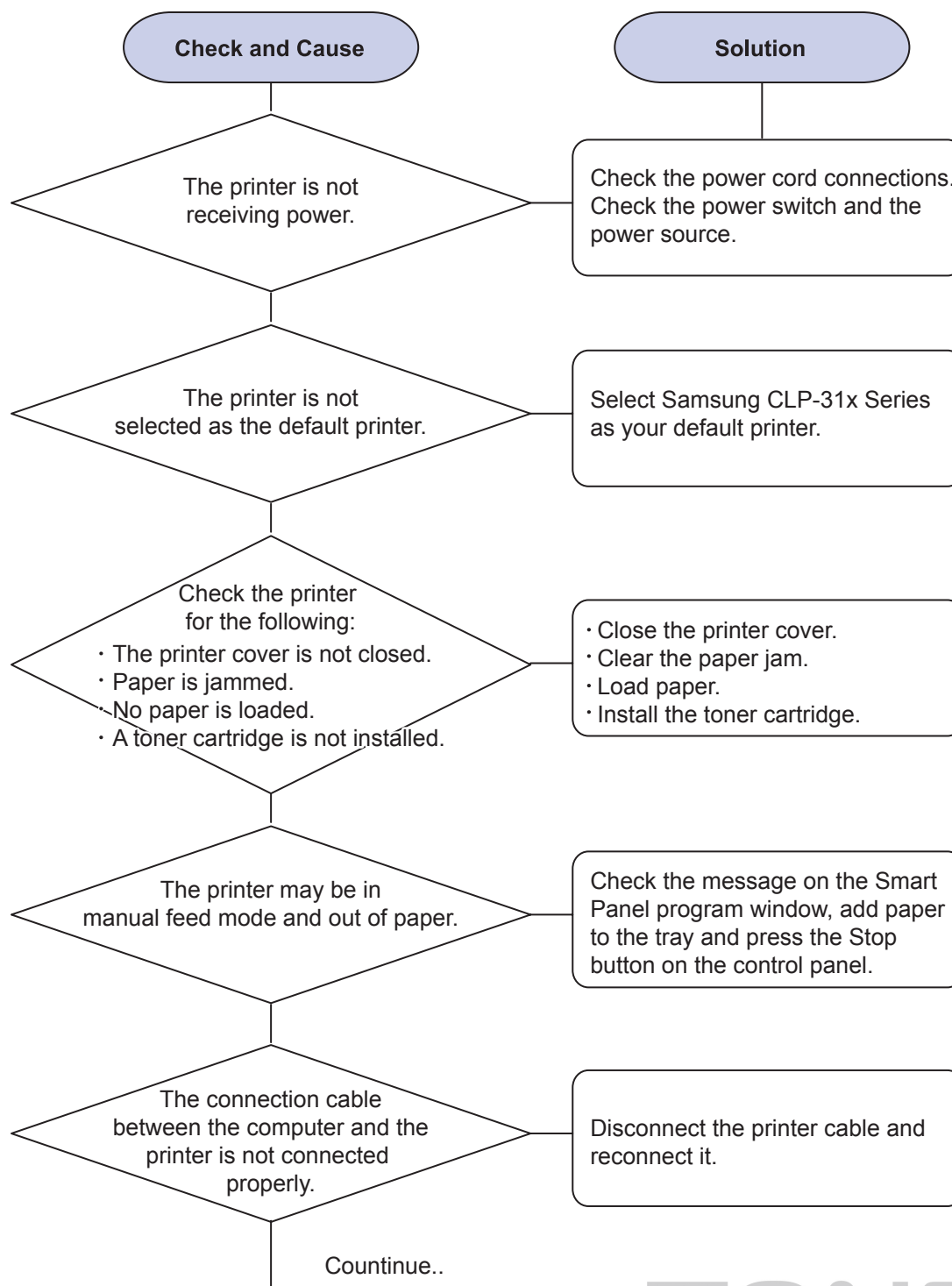
If the printer is not working properly, consult the following checklist. If the printer does not pass a step, follow the corresponding troubleshooting suggestions.

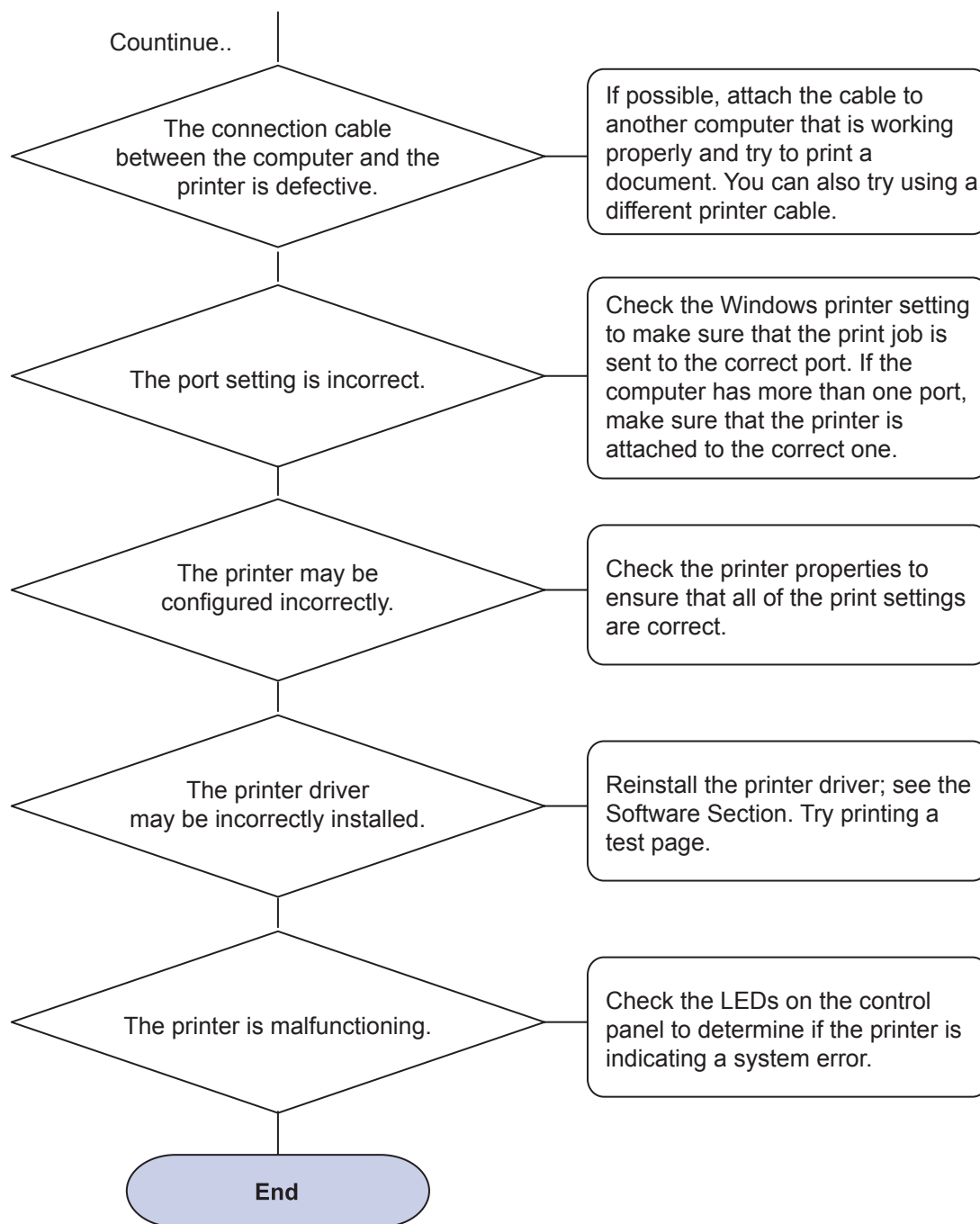
Status	Response
Make sure that the Status LED on the control panel is green and "Ready" is shown on the Smart Panel program window.	<ul style="list-style-type: none"> • If the Status LED is off, check the power cord connection. Check the power switch. Check the power source by plugging the power cord into another outlet. • If the Status LED blinks or lights red, solve the problems.
Print a demo page to verify that the printer is feeding paper correctly.	<ul style="list-style-type: none"> • If a demo page does not print, check the paper supply in the paper tray. • If the paper jams in the printer, go to "Clearing Paper Jams"
Check the demo page to see if it is printed correctly.	If there is a print quality problem, go to "Solving Print Quality Problems"
Print a short document from a software application to verify that the computer and printer are connected and communicating correctly.	<ul style="list-style-type: none"> • If the page does not print, check the cable connection between the printer and the computer. • Check the print queue or print spooler to see if the printer has been paused. • Check the software application to ensure that you are using the proper printer driver and communication port. If the page is interrupted during printing, go to "Solving General Printing Problems"
If completing the checklist does not resolve the printer problem, check the following troubleshooting sections.	<ul style="list-style-type: none"> • See "Solving General Printing Problems" • See "Solving Print Quality Problems" • See "Common Windows Problems" • See "Common Macintosh Problems" • See "Common Linux Problems"

4.2.3 Solving General Printing Problems

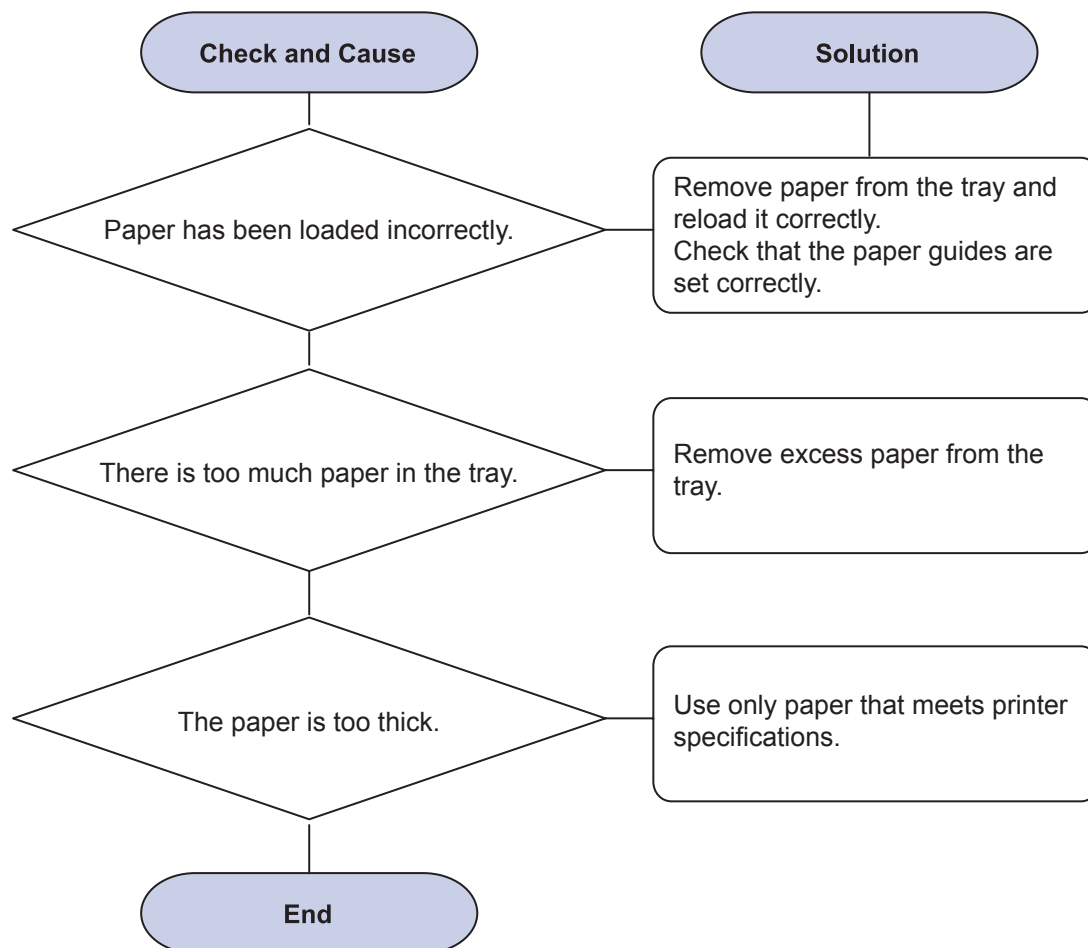
For problems with the operation of your printer, refer to the table for suggested solutions..

Description	The printer does not print.
-------------	-----------------------------

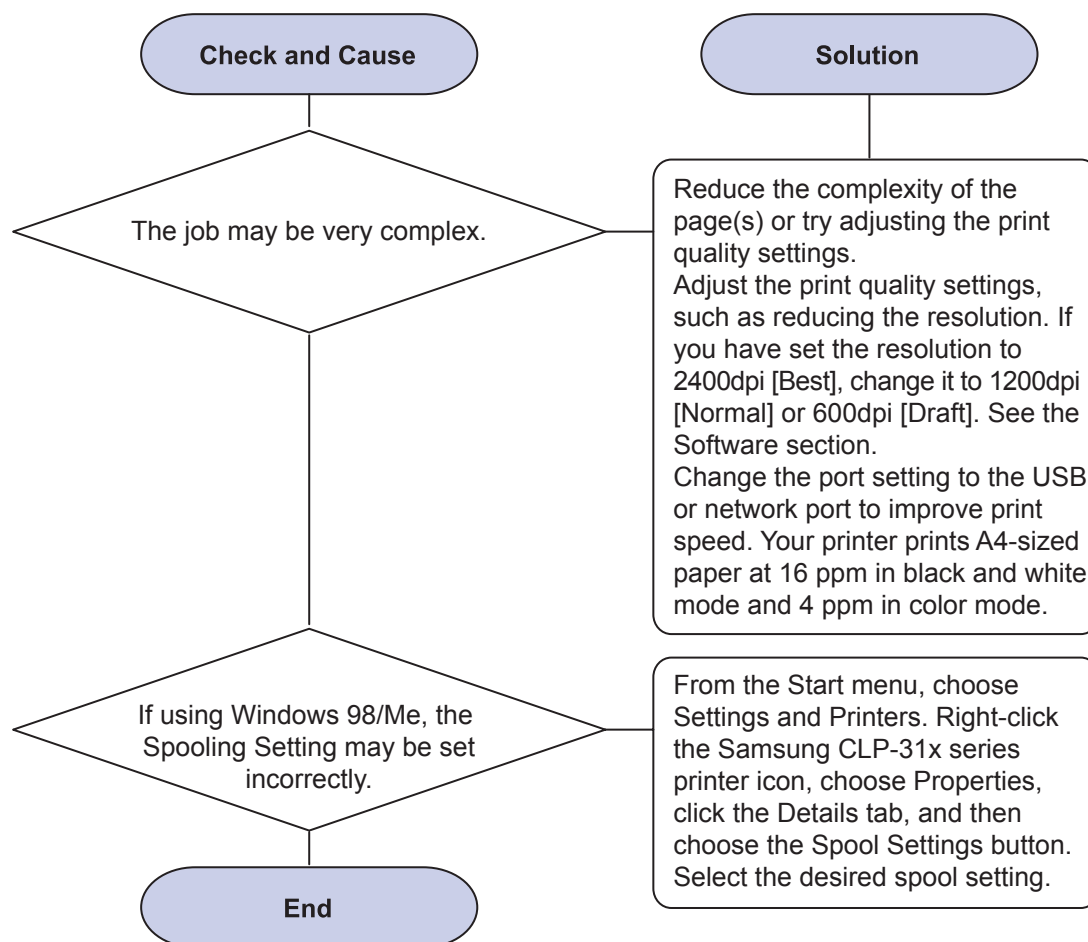




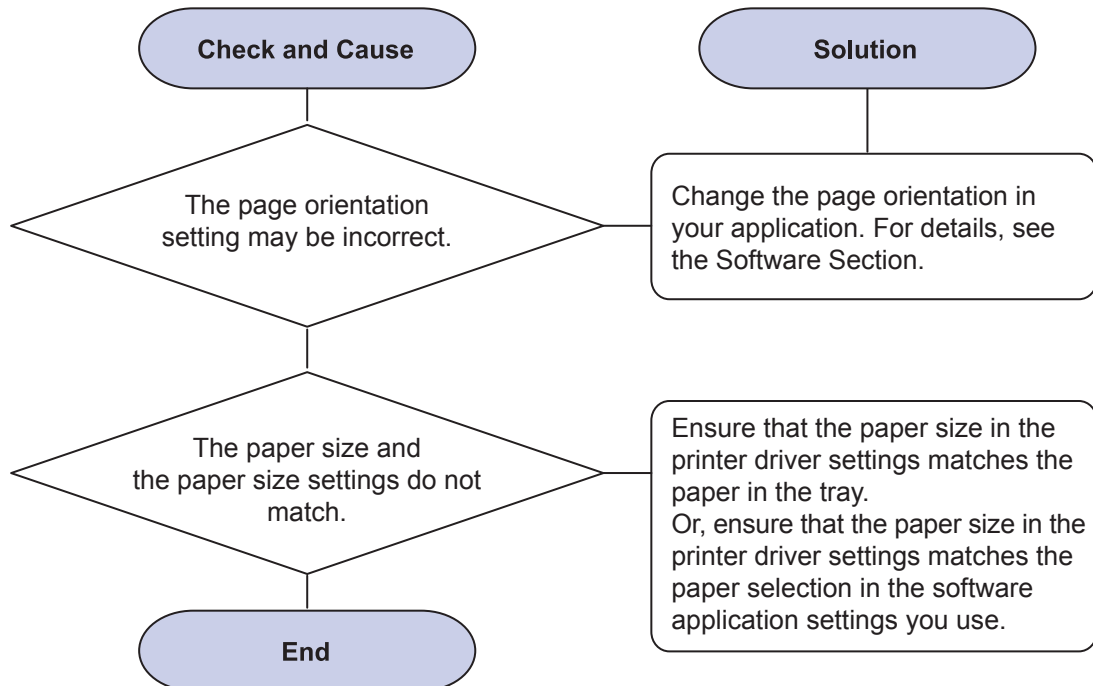
Description Paper does not feed into the printer..



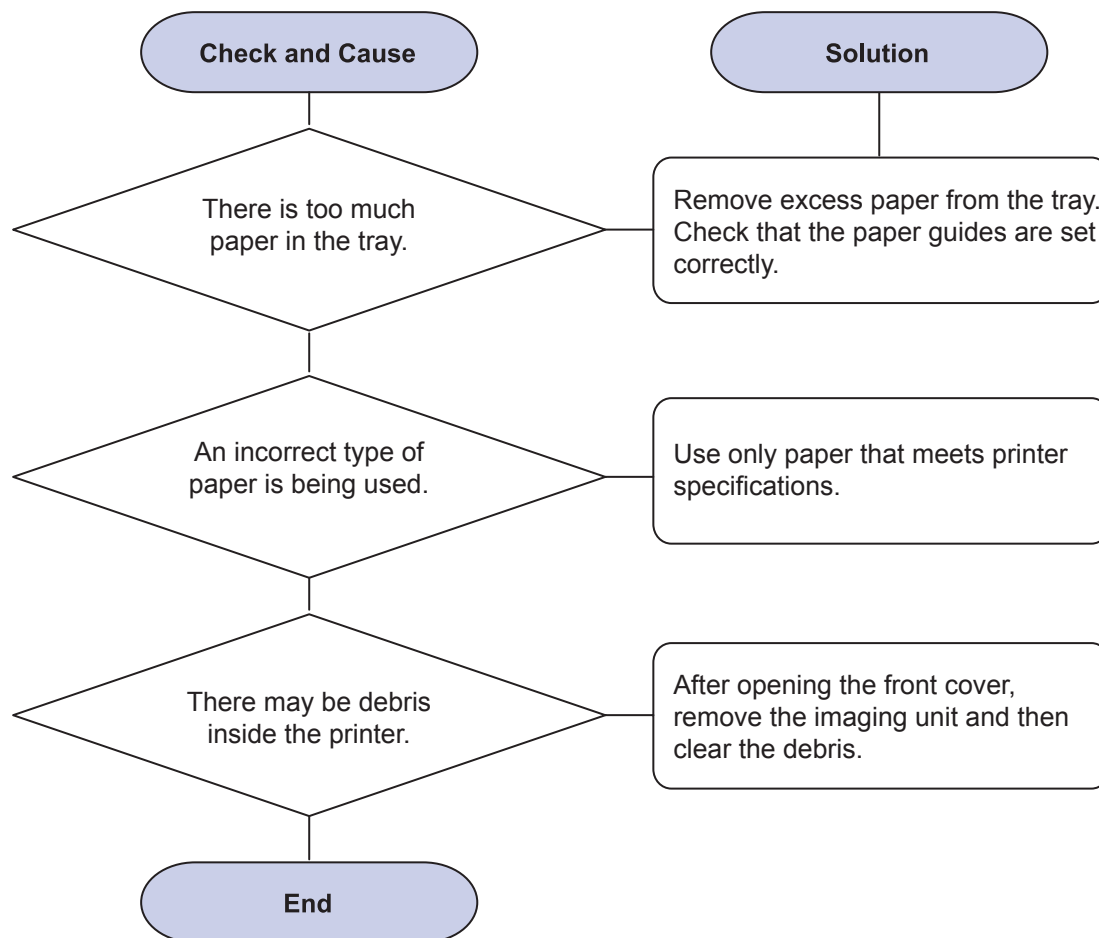
Description A print job is extremely slow.



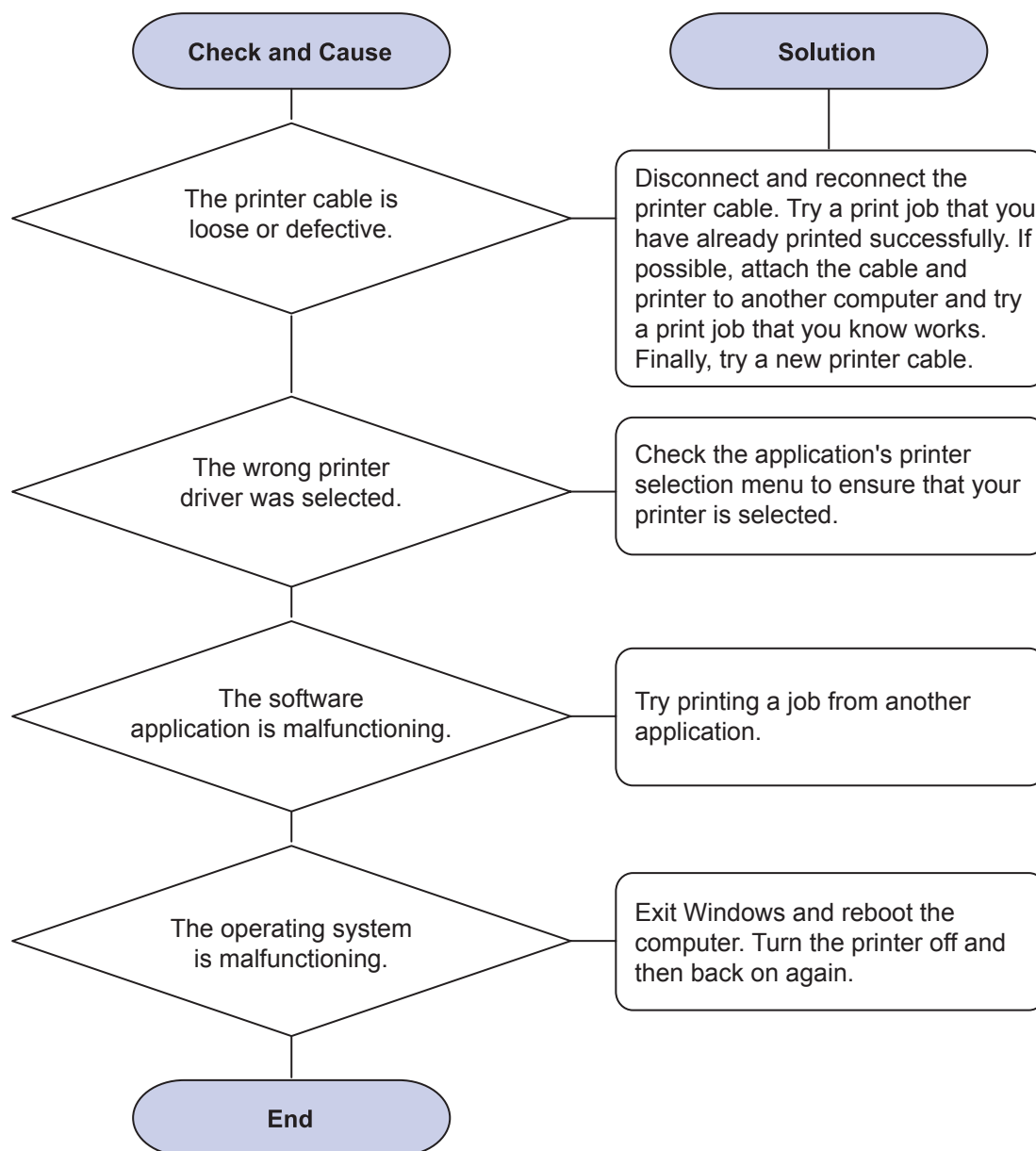
Description Half the page is blank.



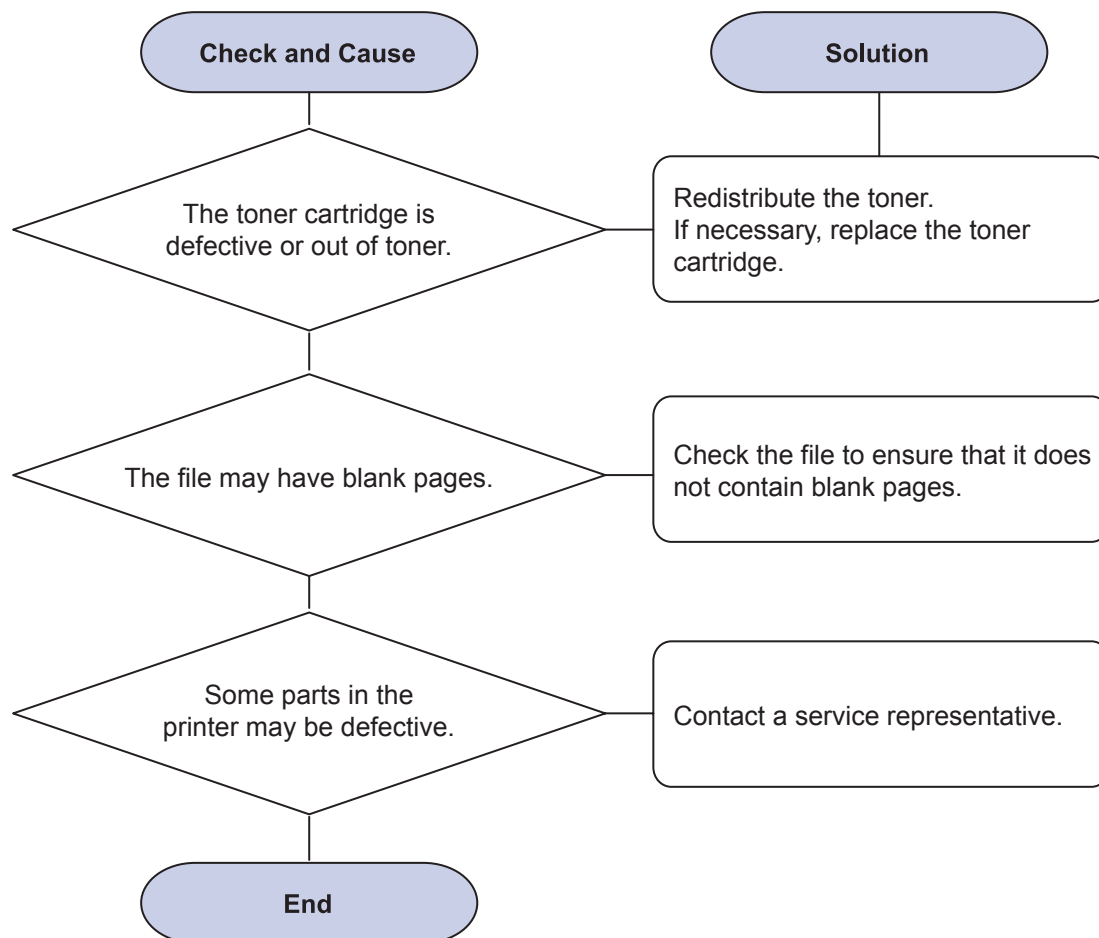
Description The paper keeps jamming.



Description The printer prints, but the text is wrong, garbled, or incomplete.

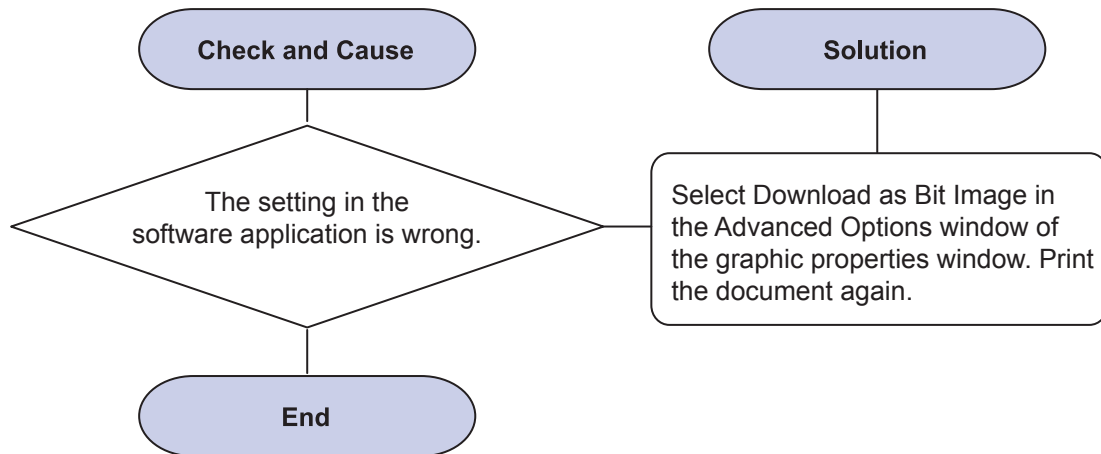


Description Pages print, but are blank.



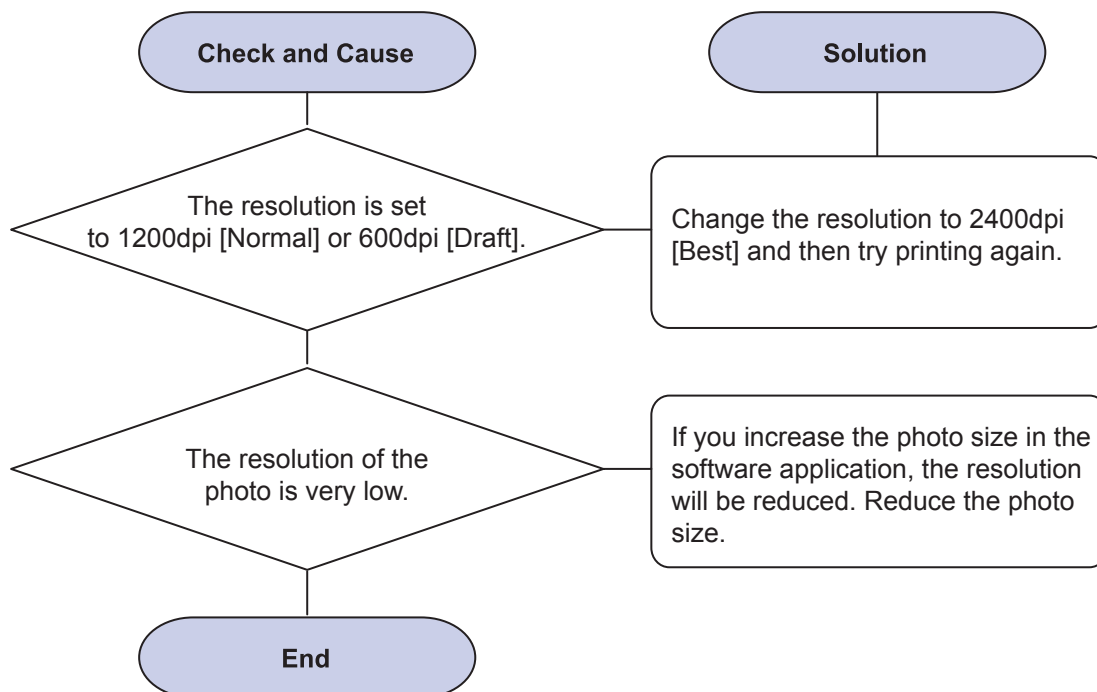
Description

When you are using Windows 98, the illustrations print incorrectly from Adobe Illustrator.

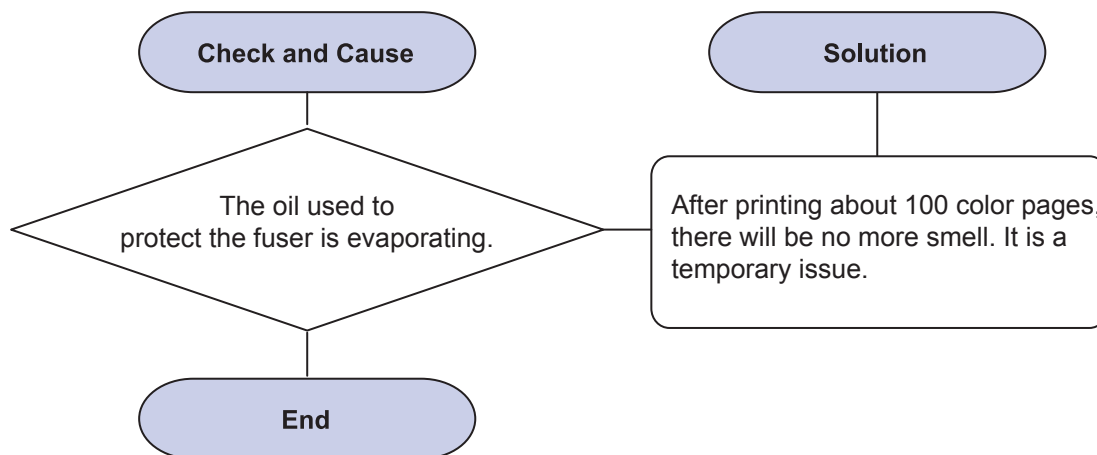


Description

The print quality of photos is not good.
Images are not clear.



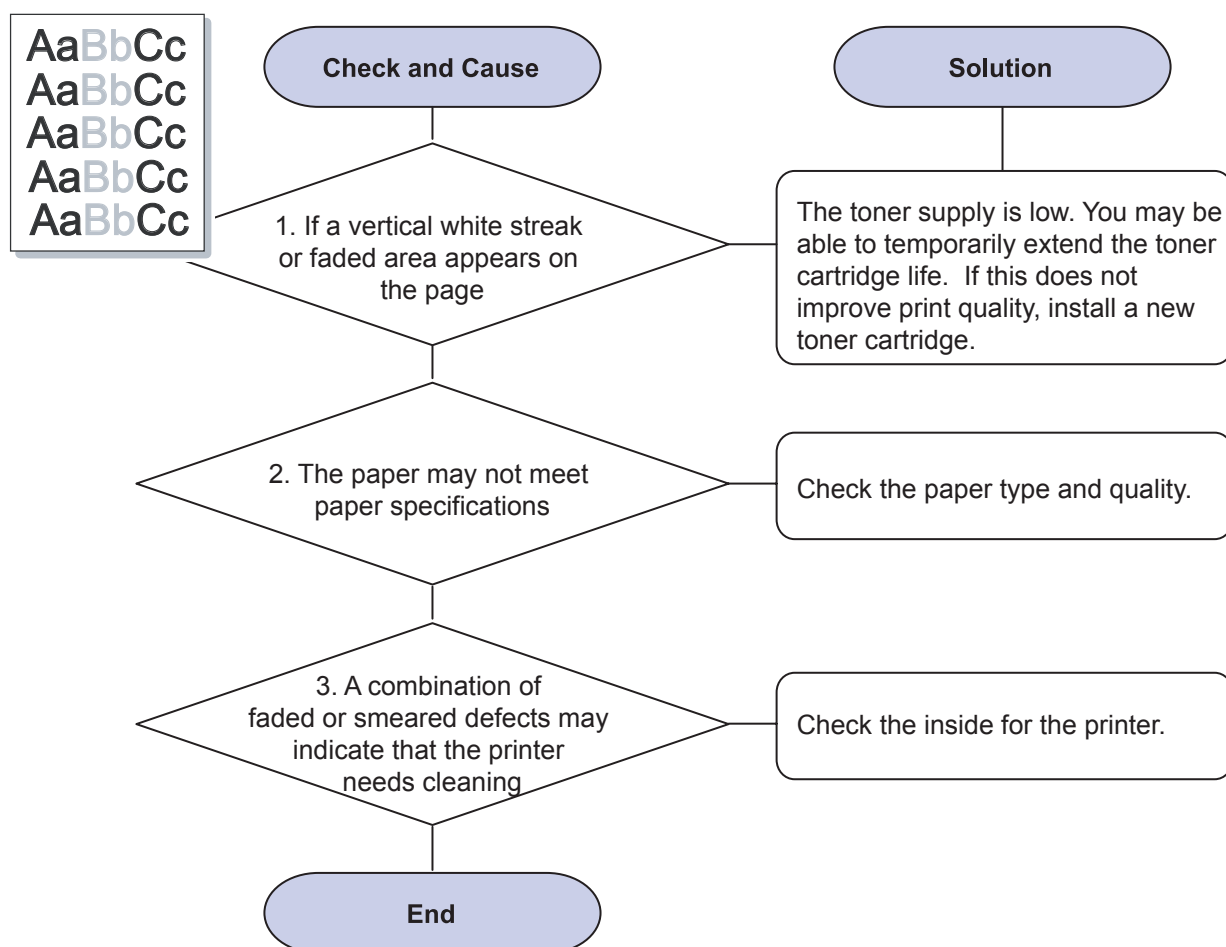
Description Your printer has an odd smell during initial use.



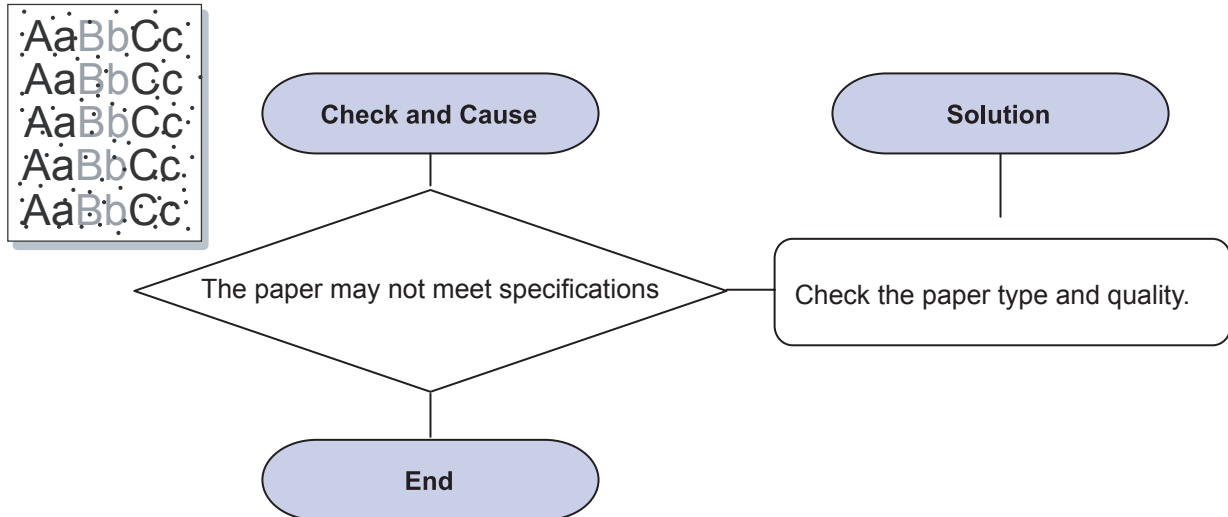
4.2.4 Solving Print Quality Problems

Dirt inside of the printer or improper paper loading may reduce print quality. See the table below to troubleshoot problems.

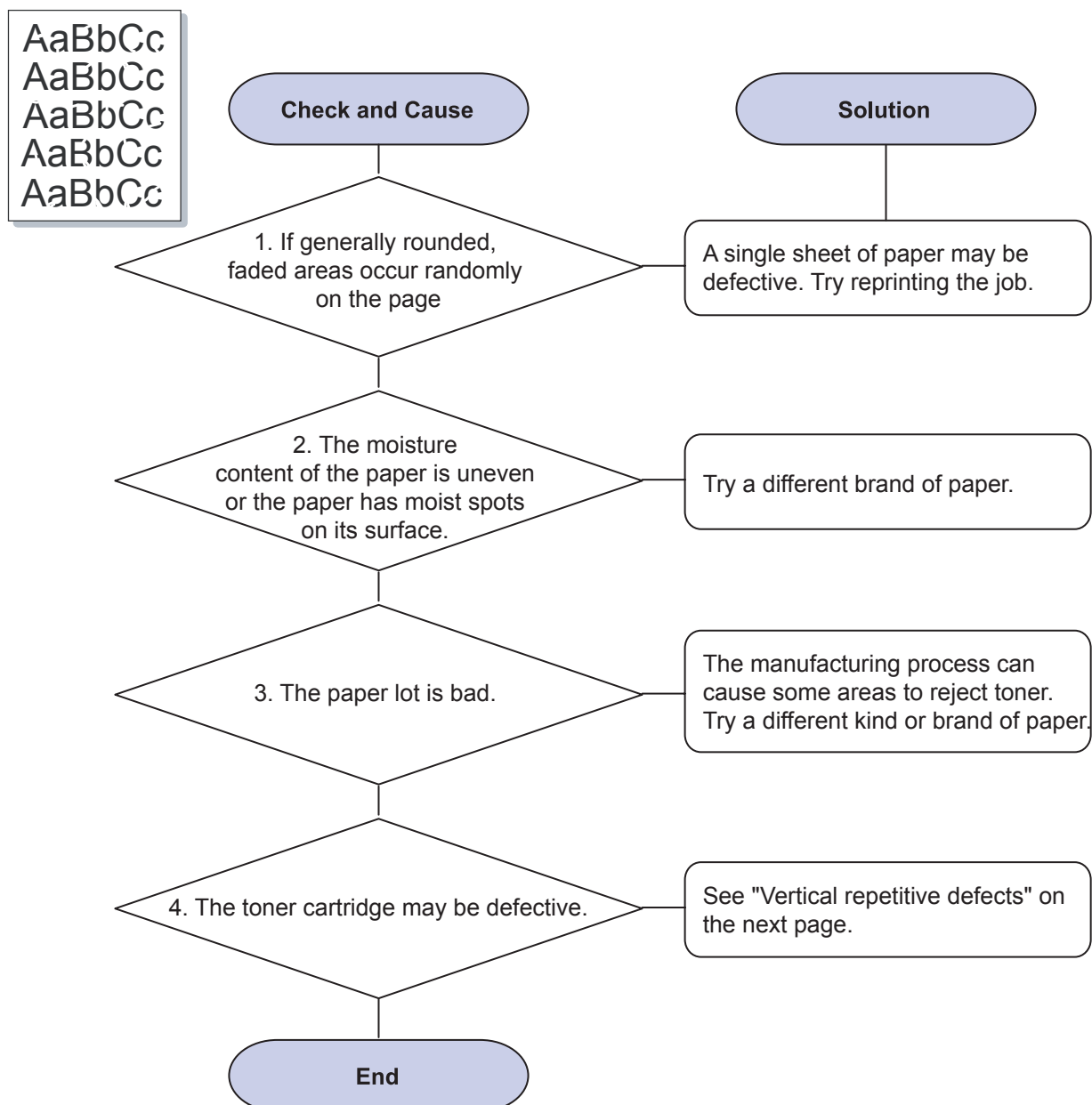
1) Light or faded print



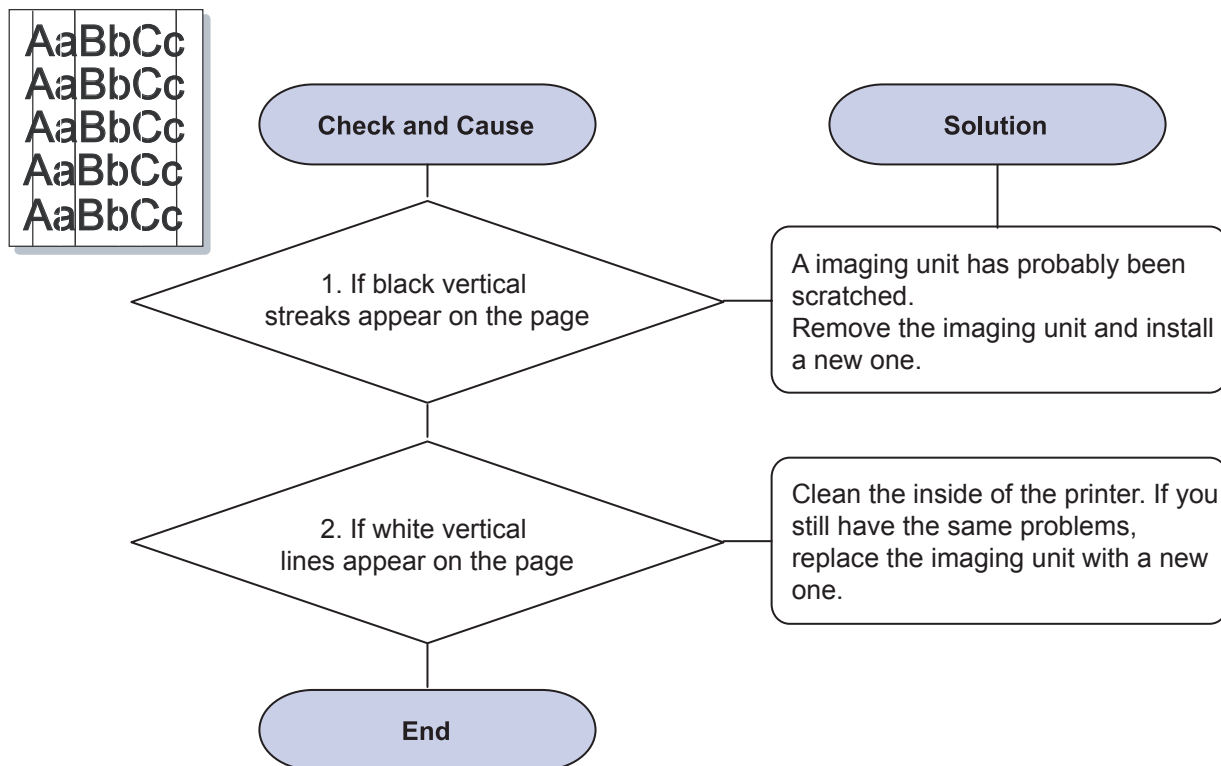
2) Toner specks



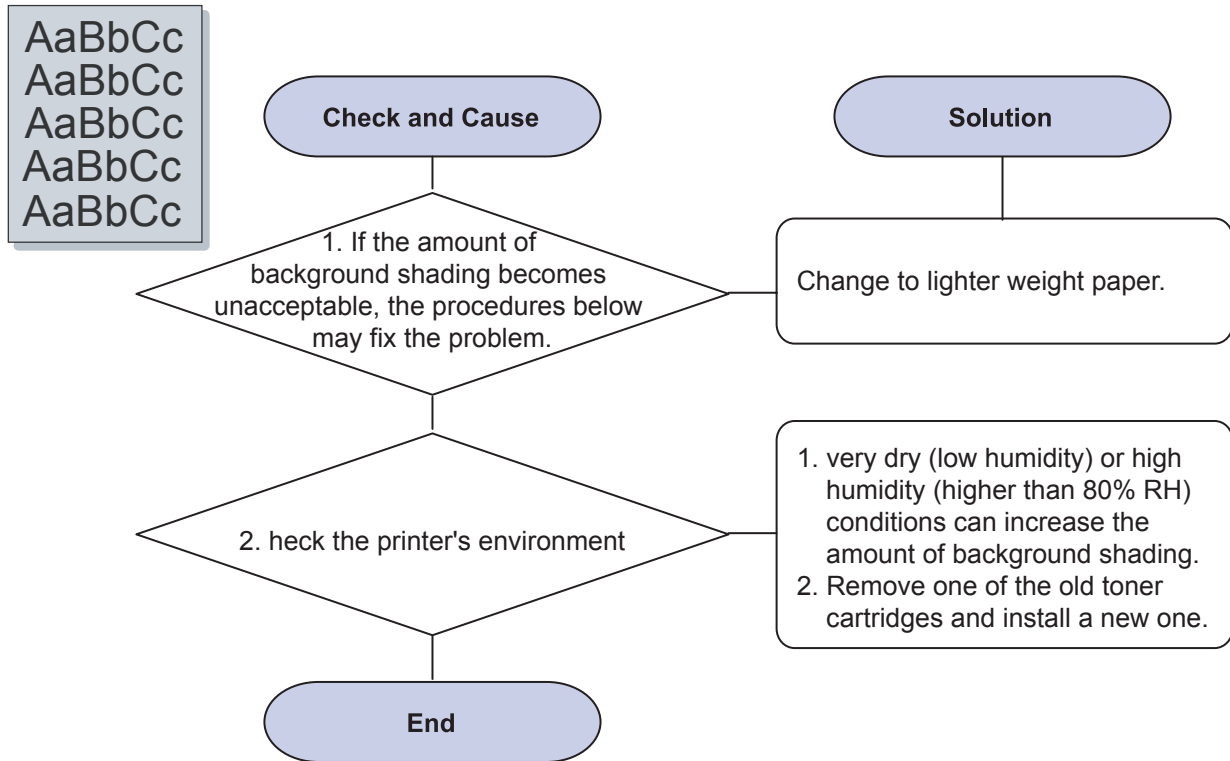
3) Dropouts



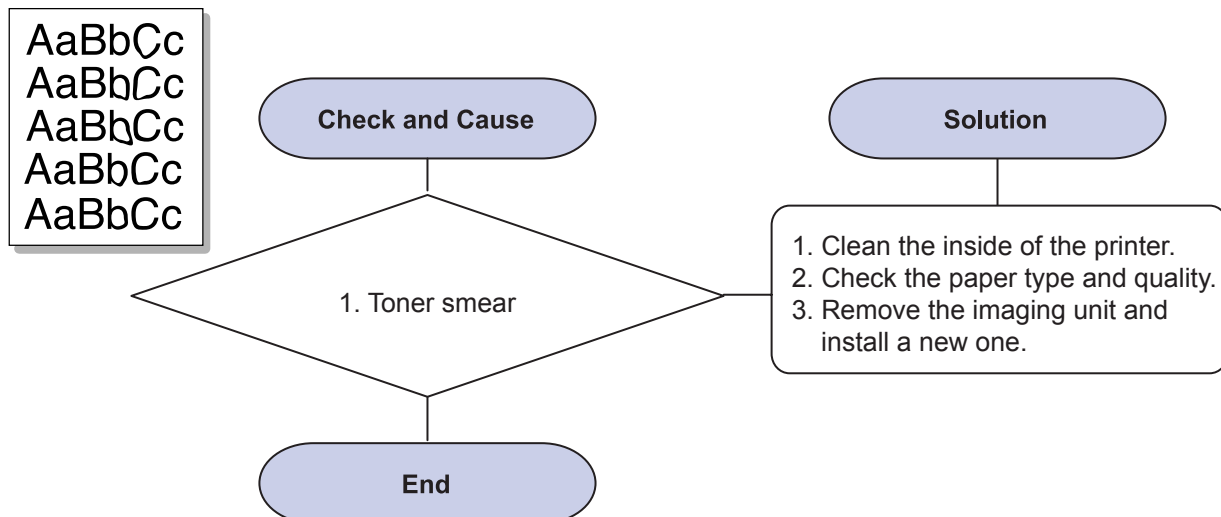
4) Vertical lines



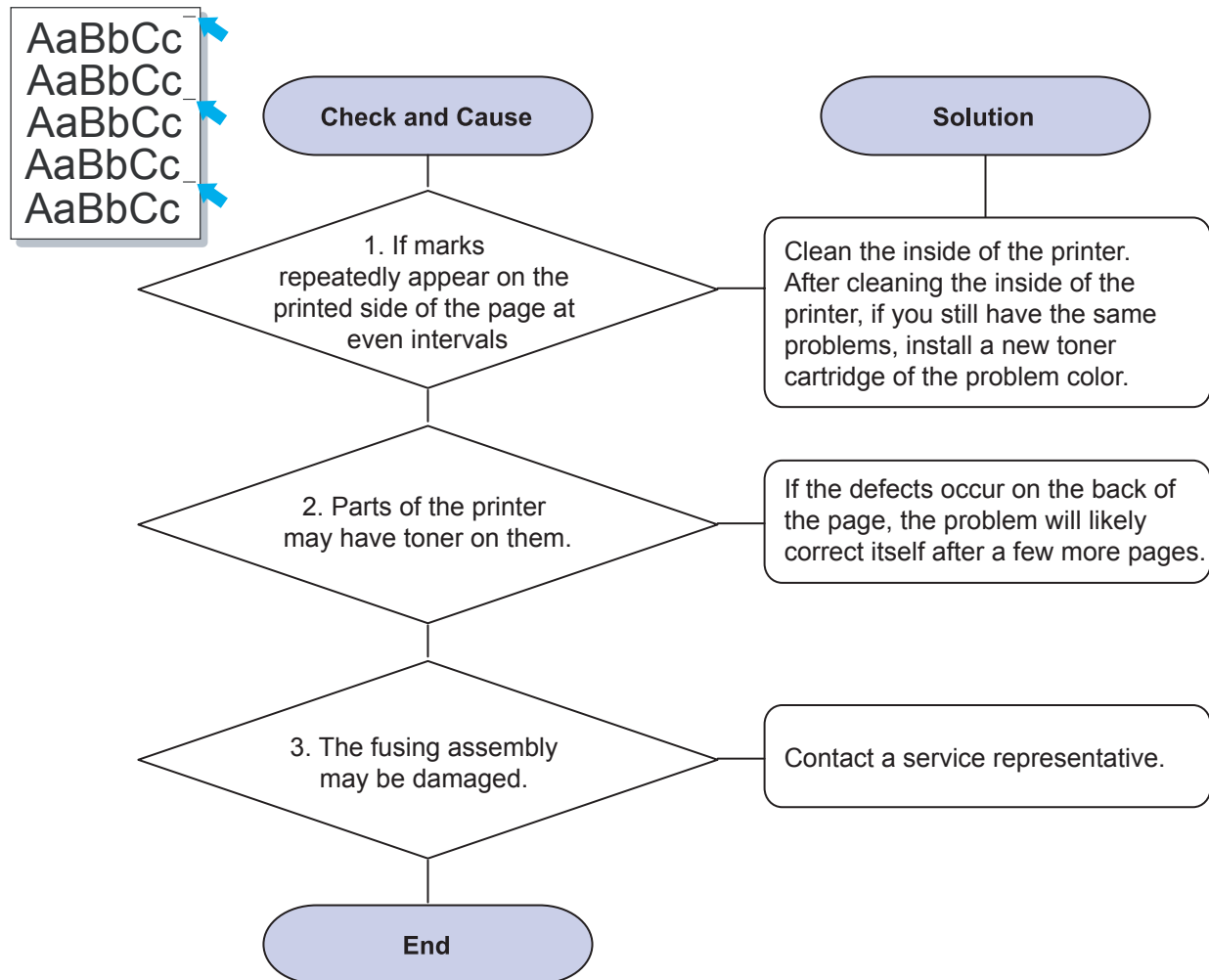
5) Color or Black background



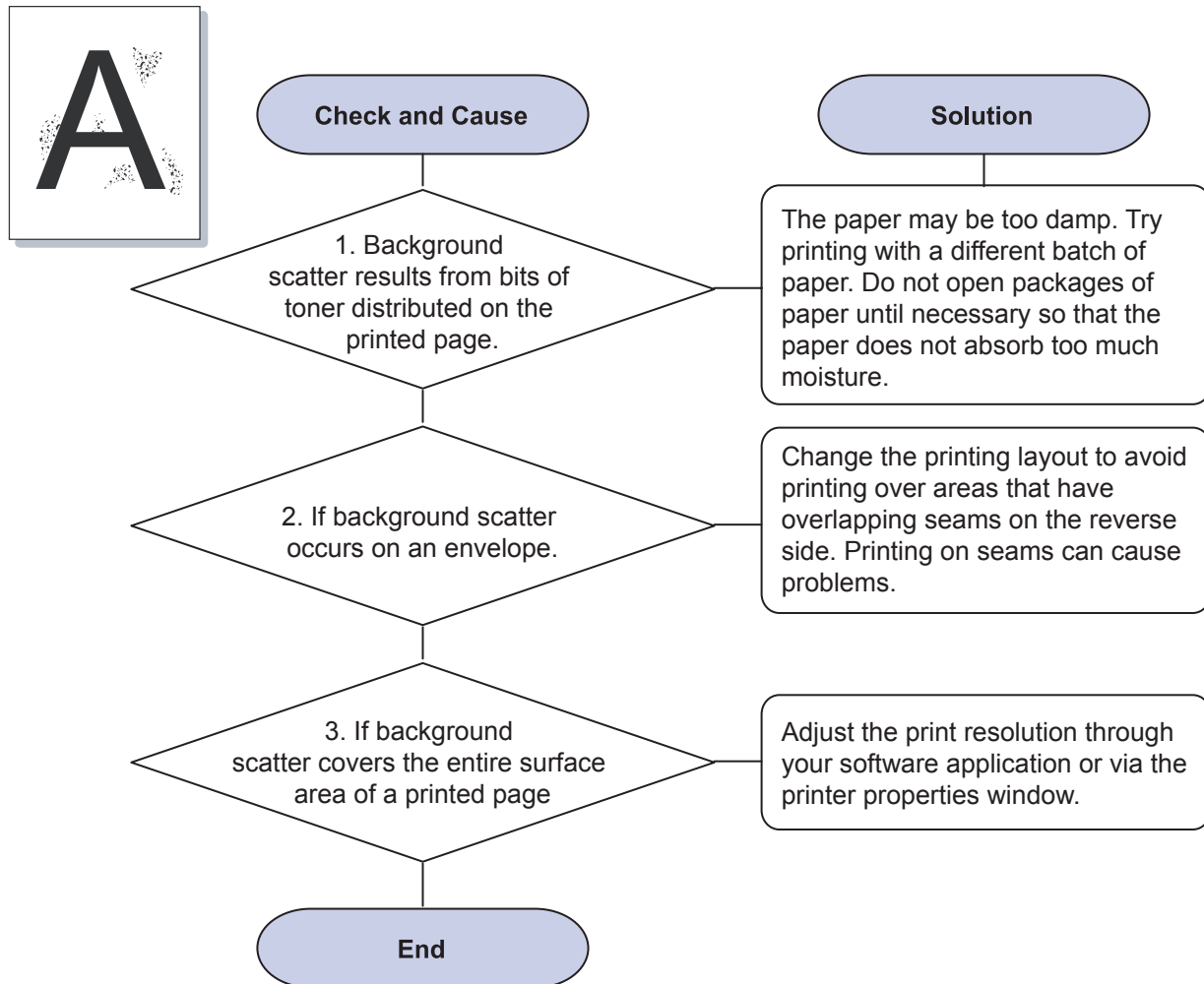
6) Toner smear



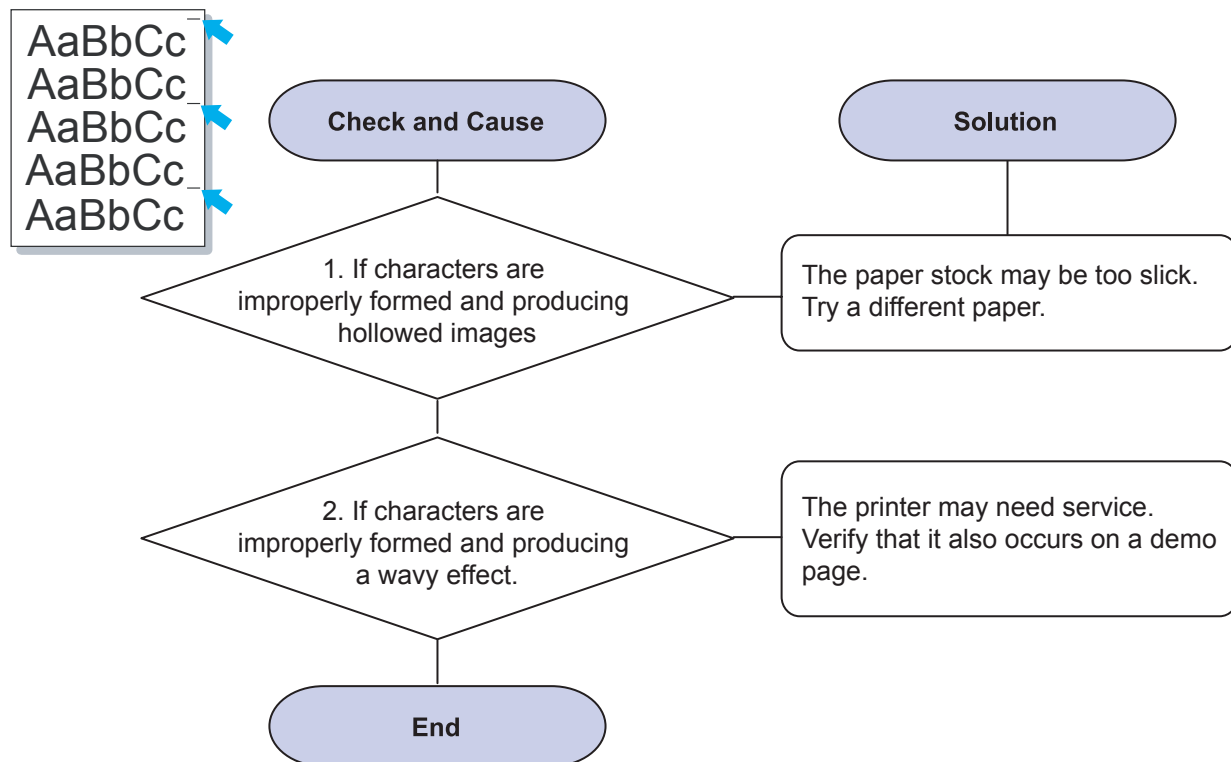
7) Vertical repetitive defects



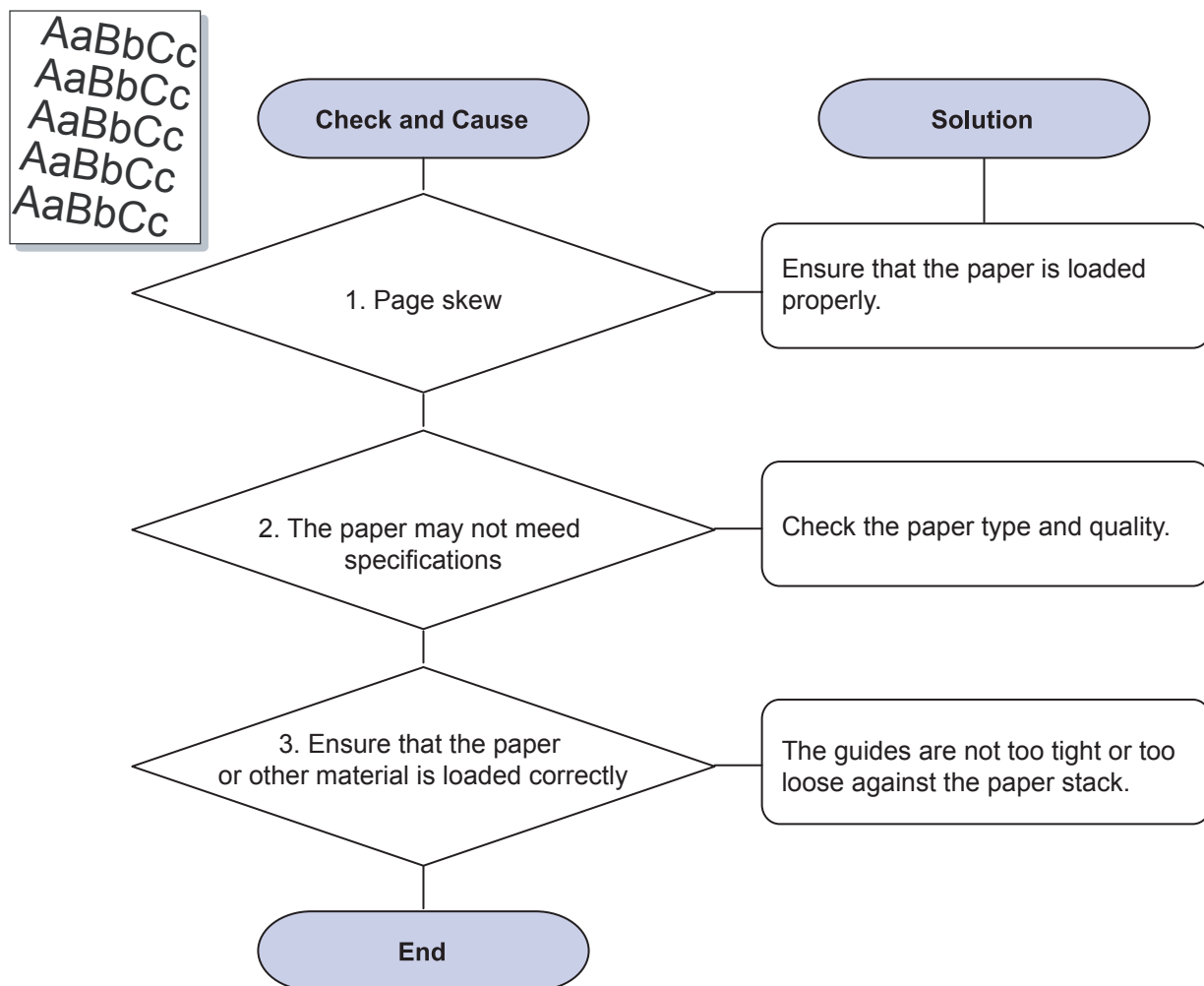
8) Background scatter



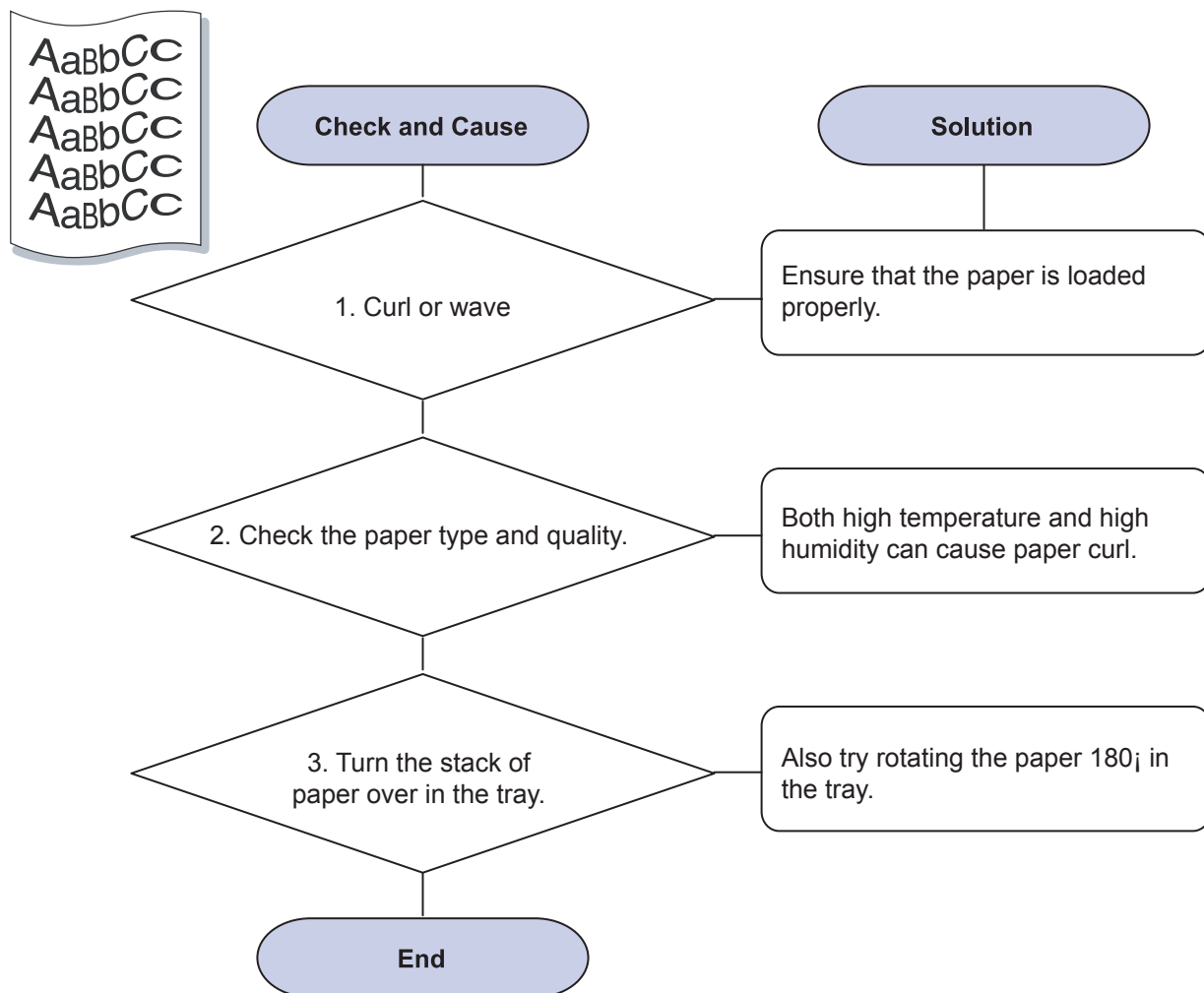
9) Misformed characters



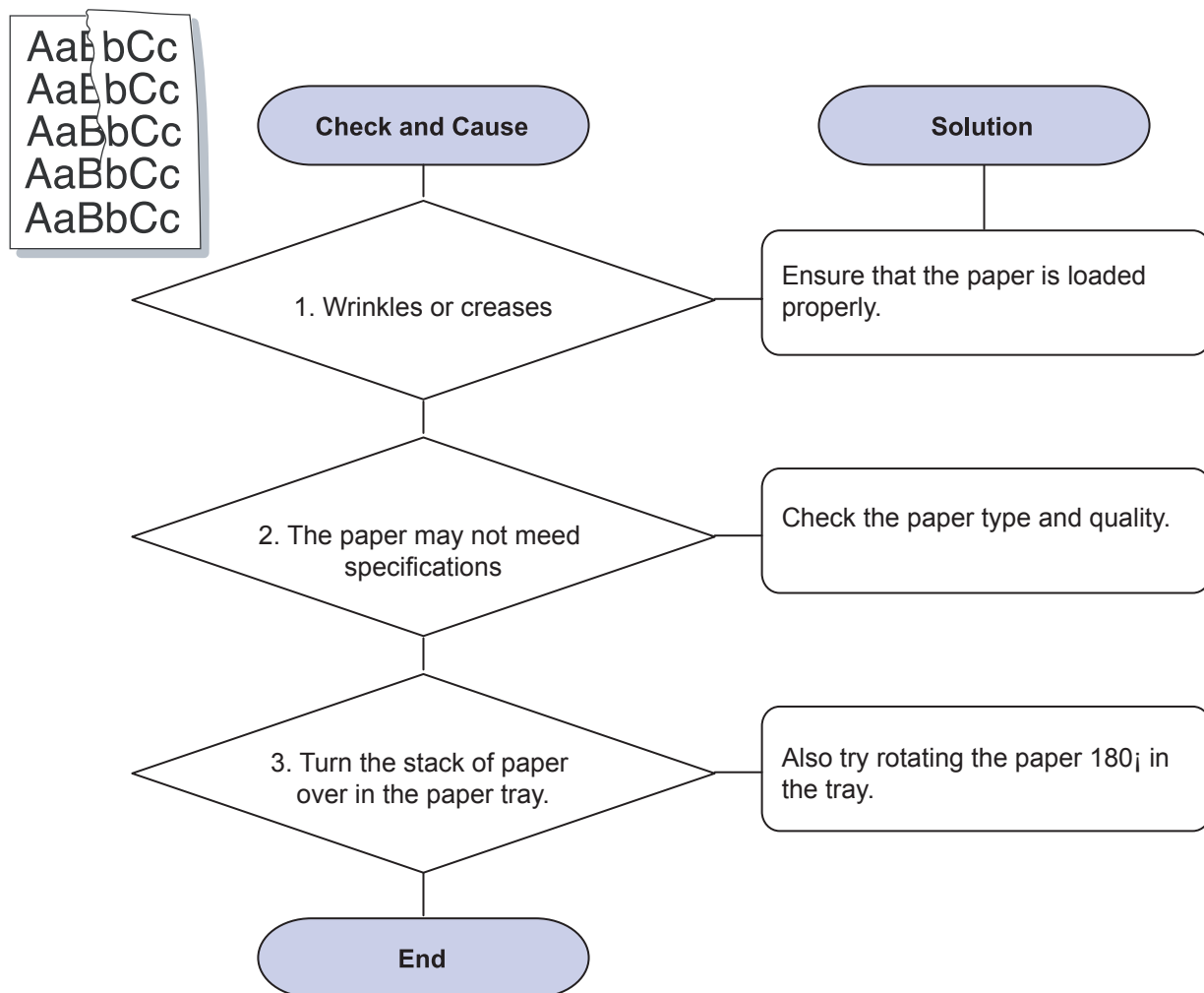
10) Page skew



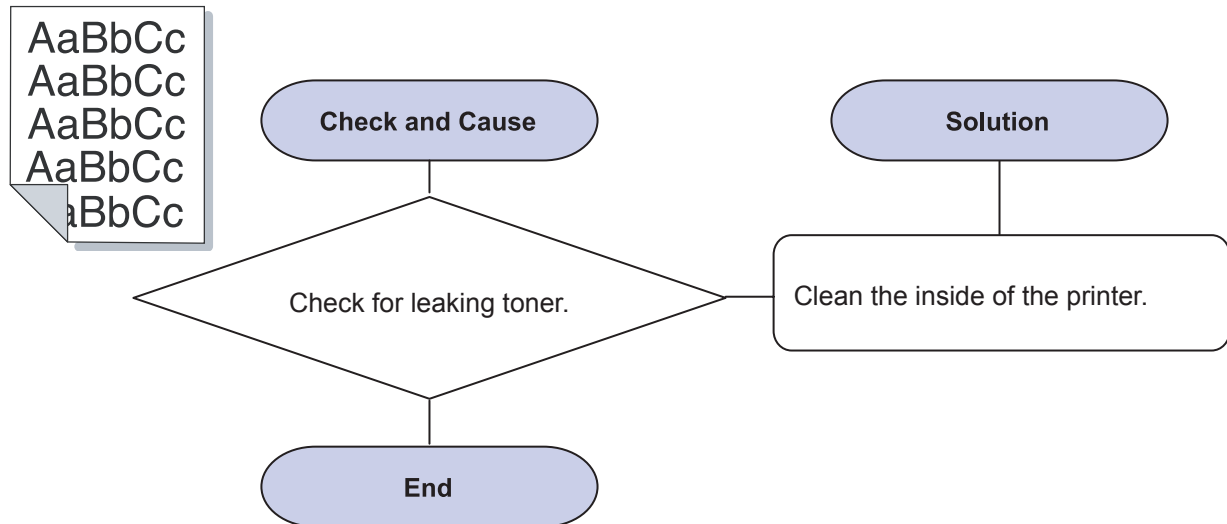
11) Curl or wave



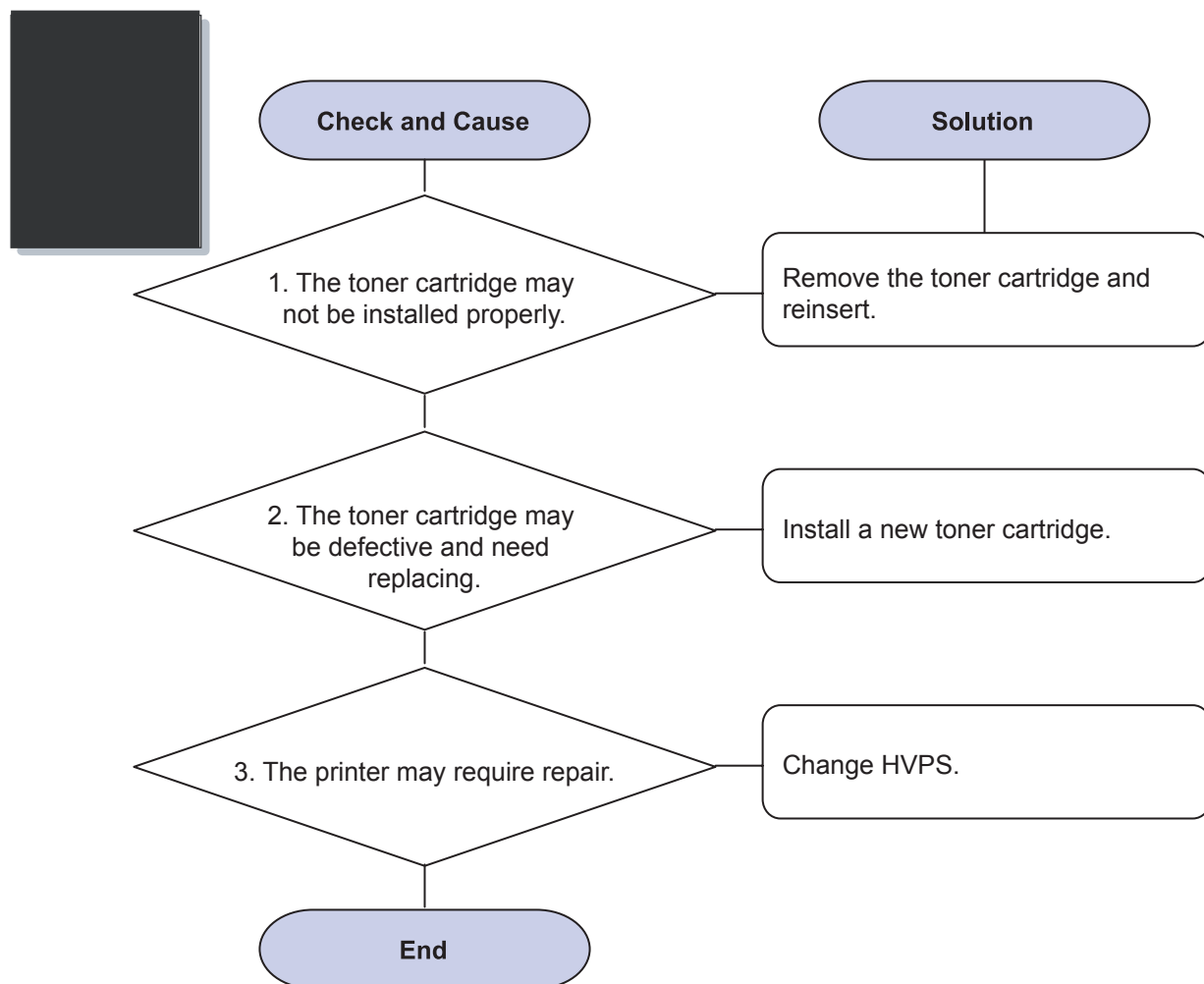
12) Wrinkles or creases



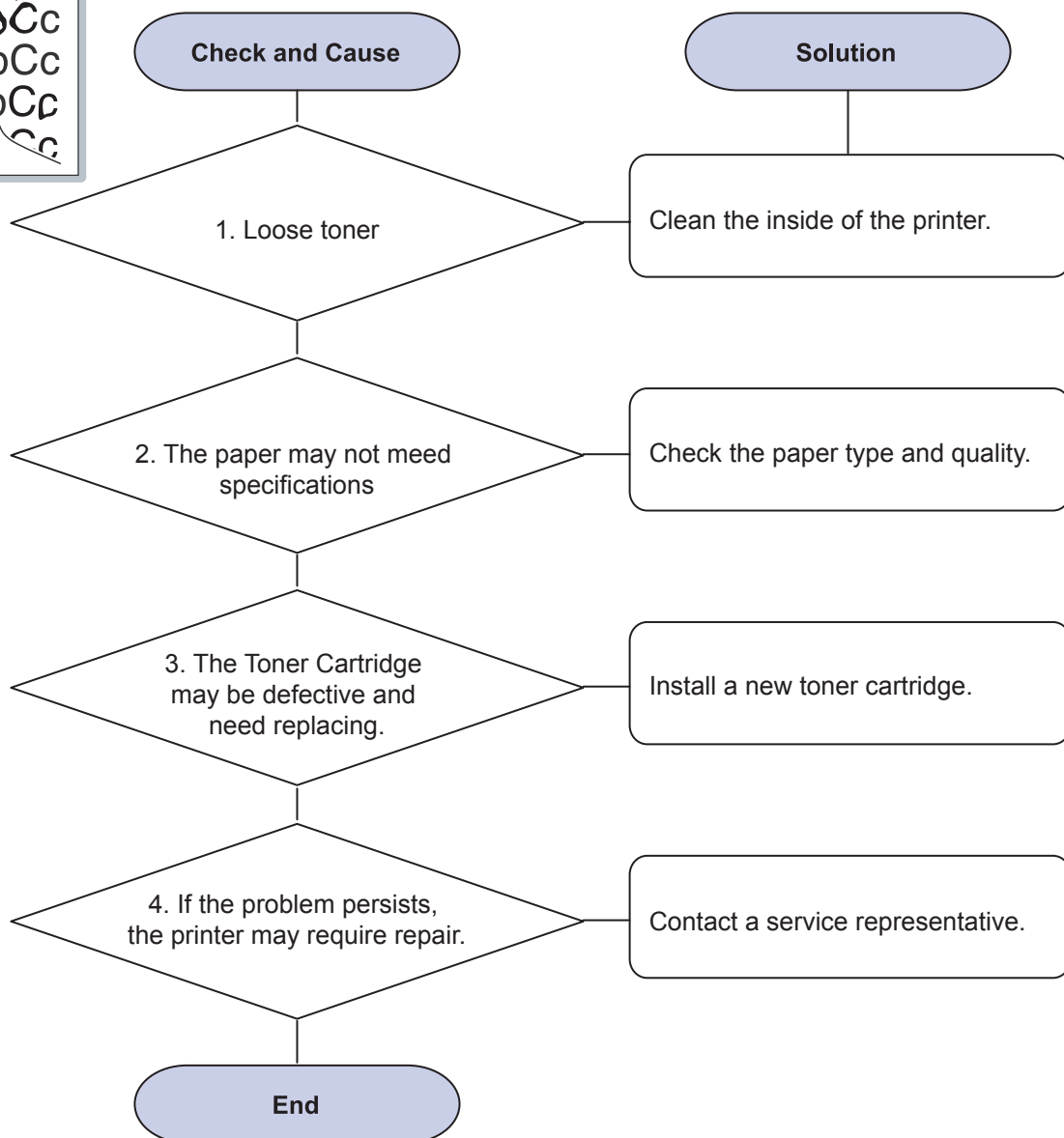
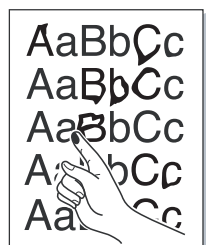
13) Back of printouts are dirty



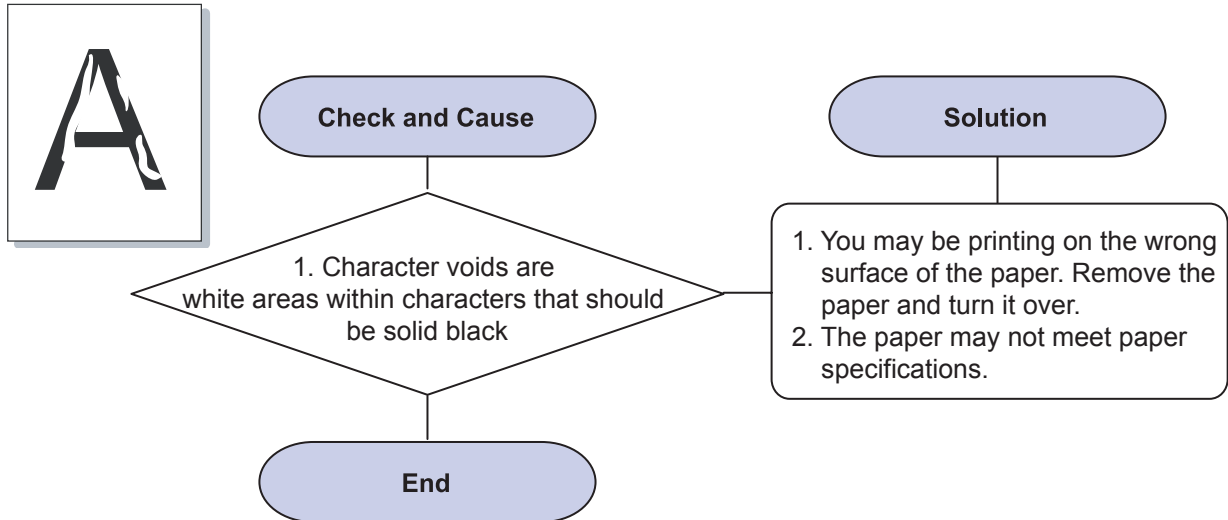
14) Solid Color or Black pages



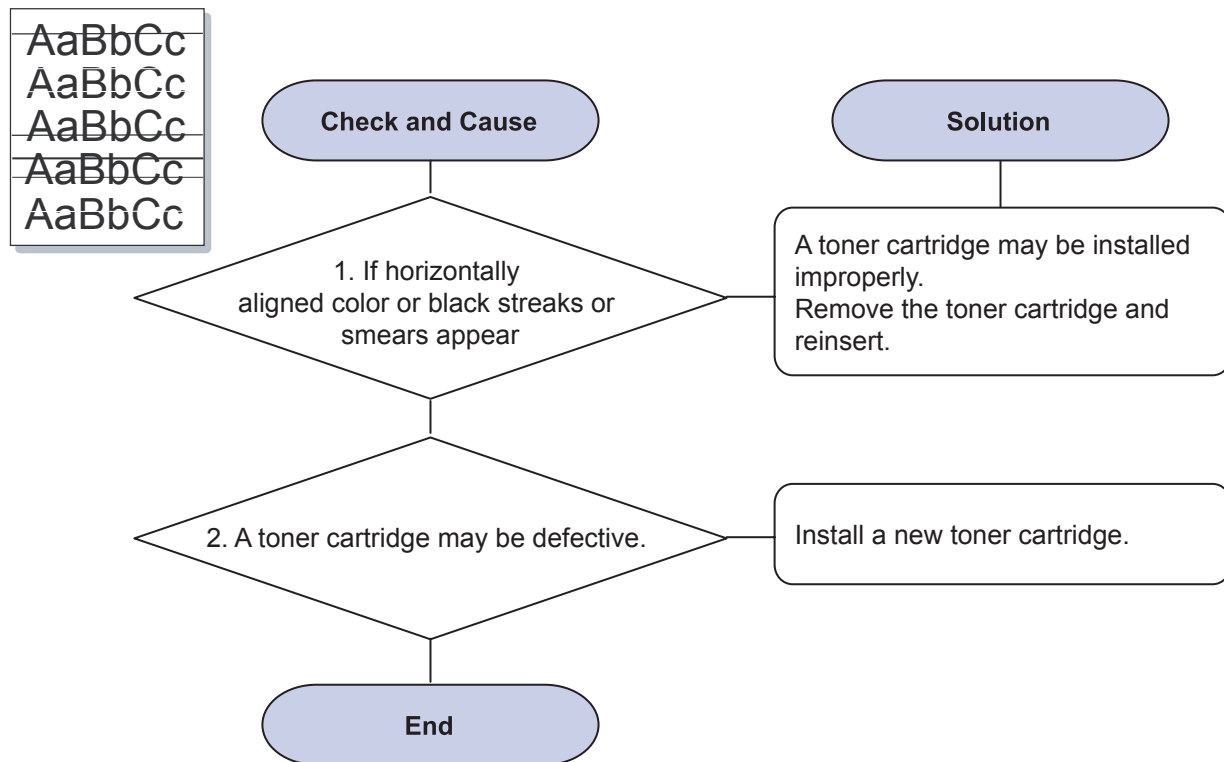
15) Loose toner



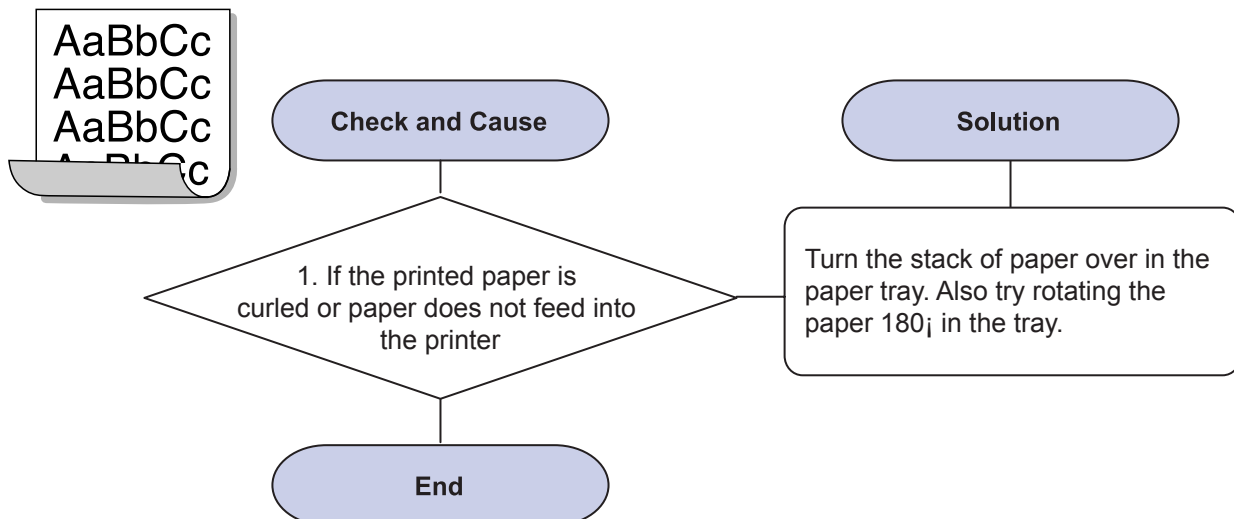
16) Character Voids



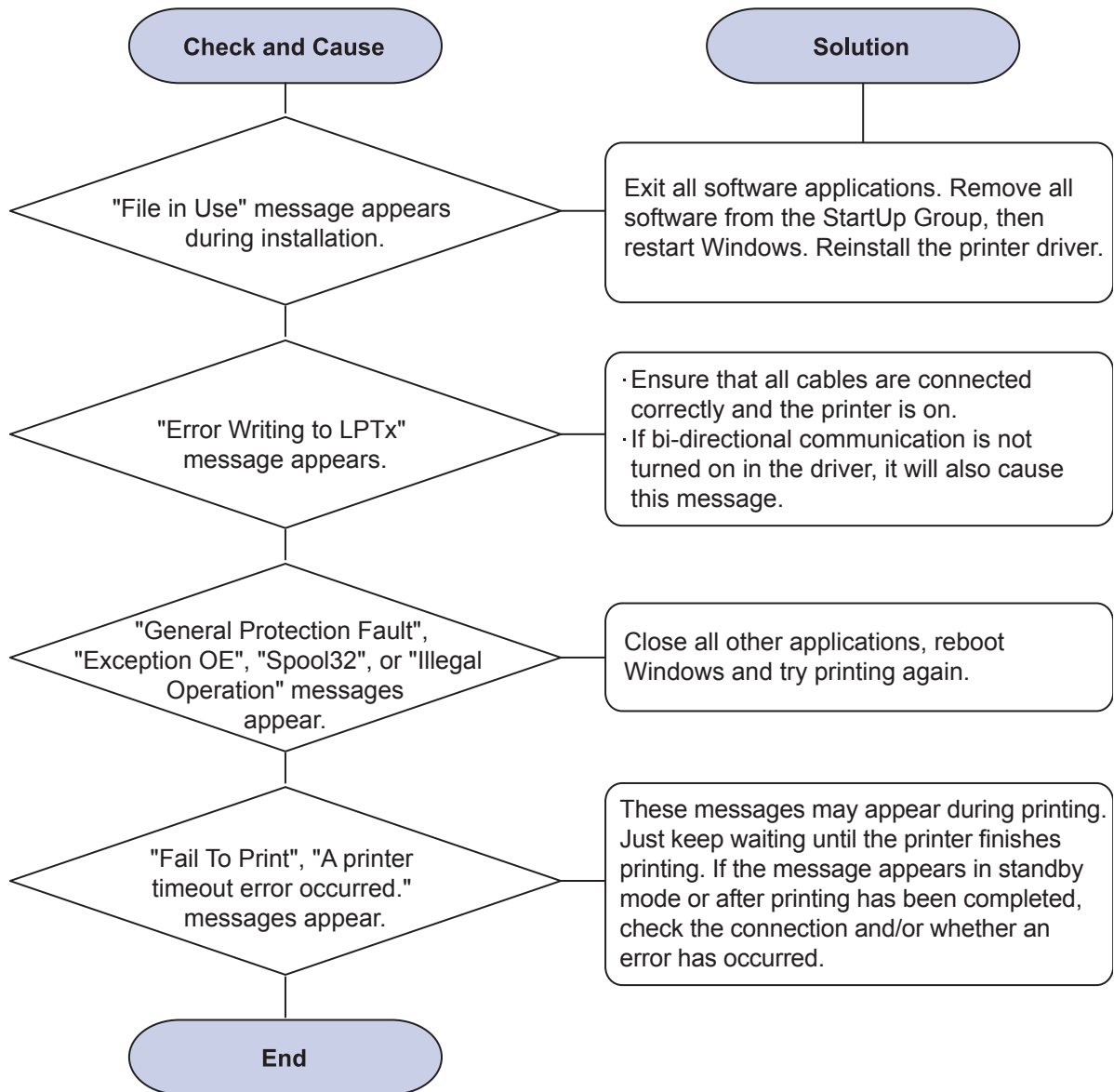
17) Horizontal stripes



18) Curl

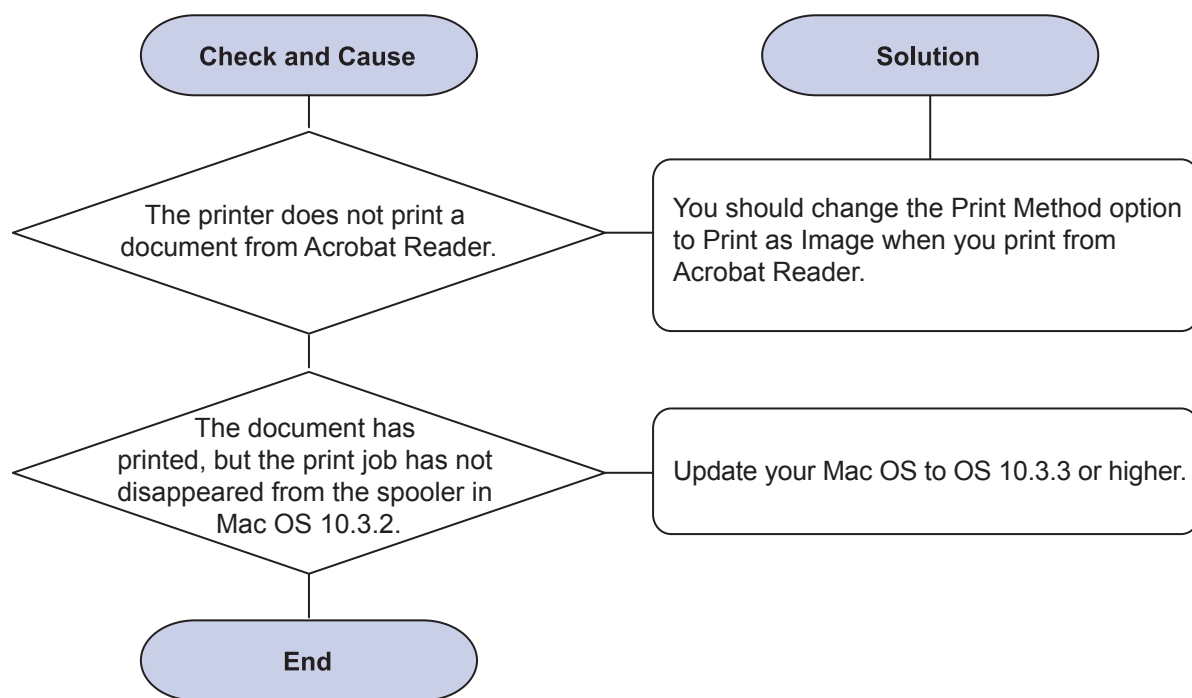


4.2.5 Common Windows Problems

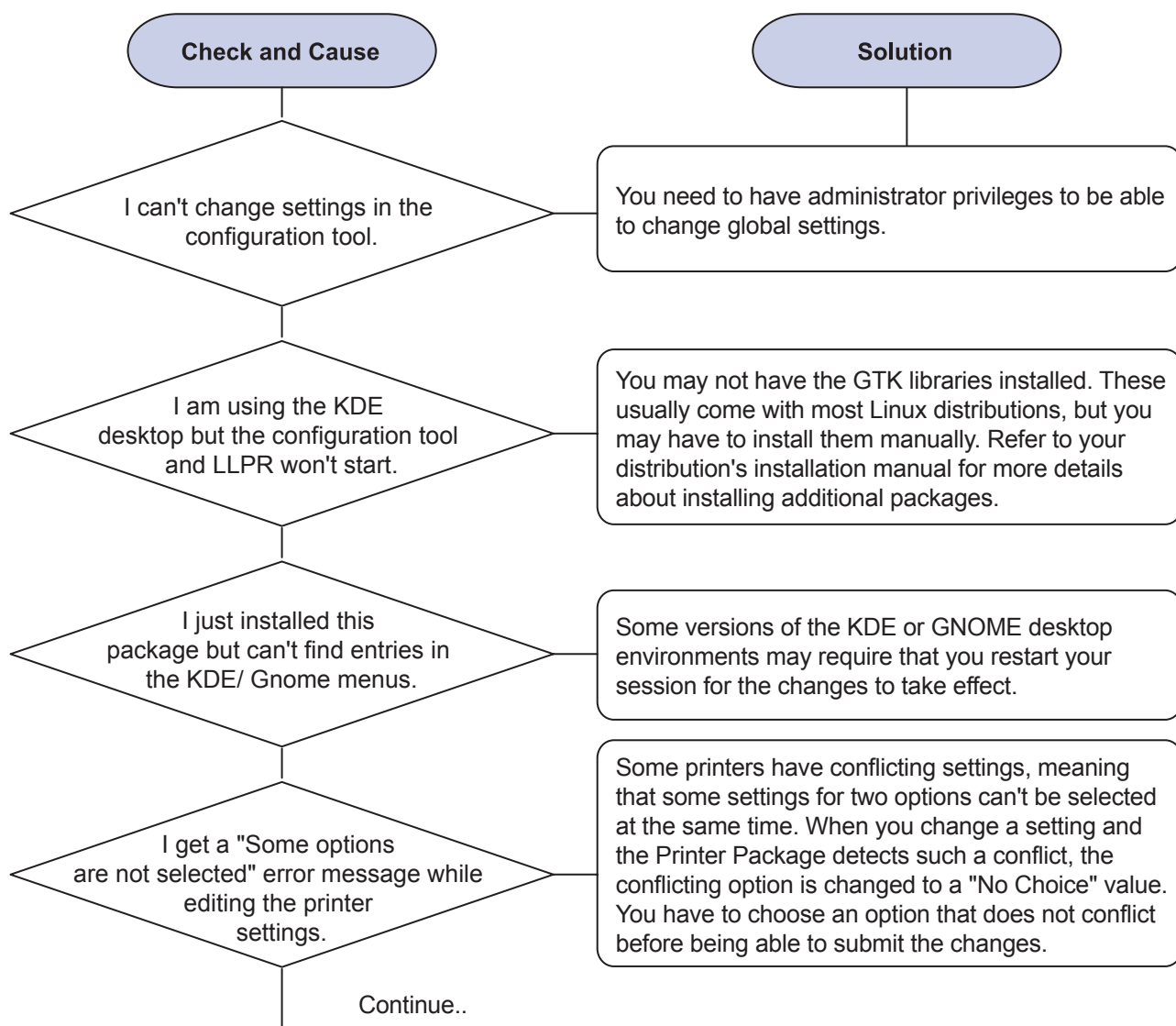


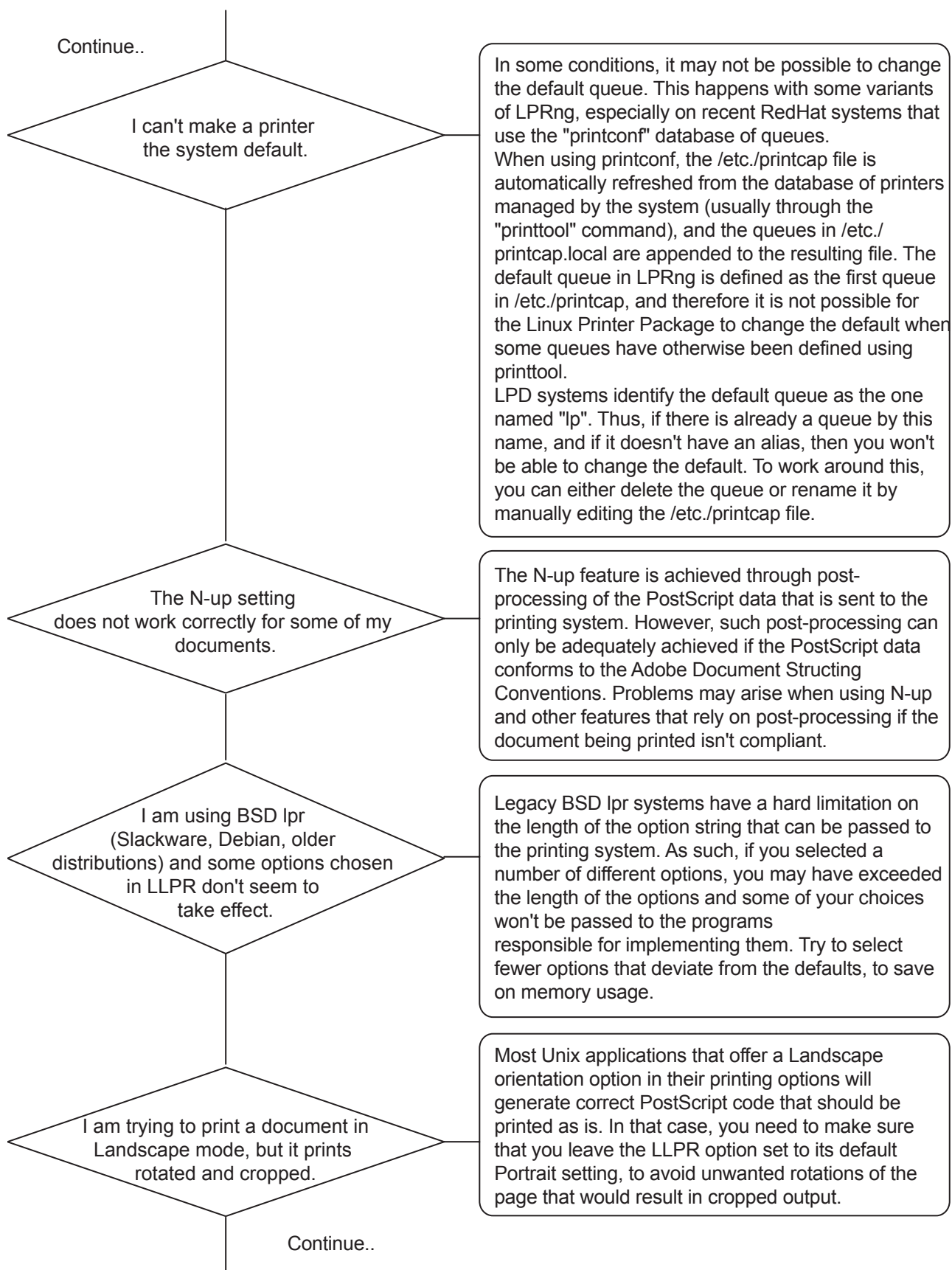
NOTE: Refer to the Microsoft Windows 98/Me/NT 4.0/2000/2003/XP User's Guide that came with your PC for further information on Windows error messages.

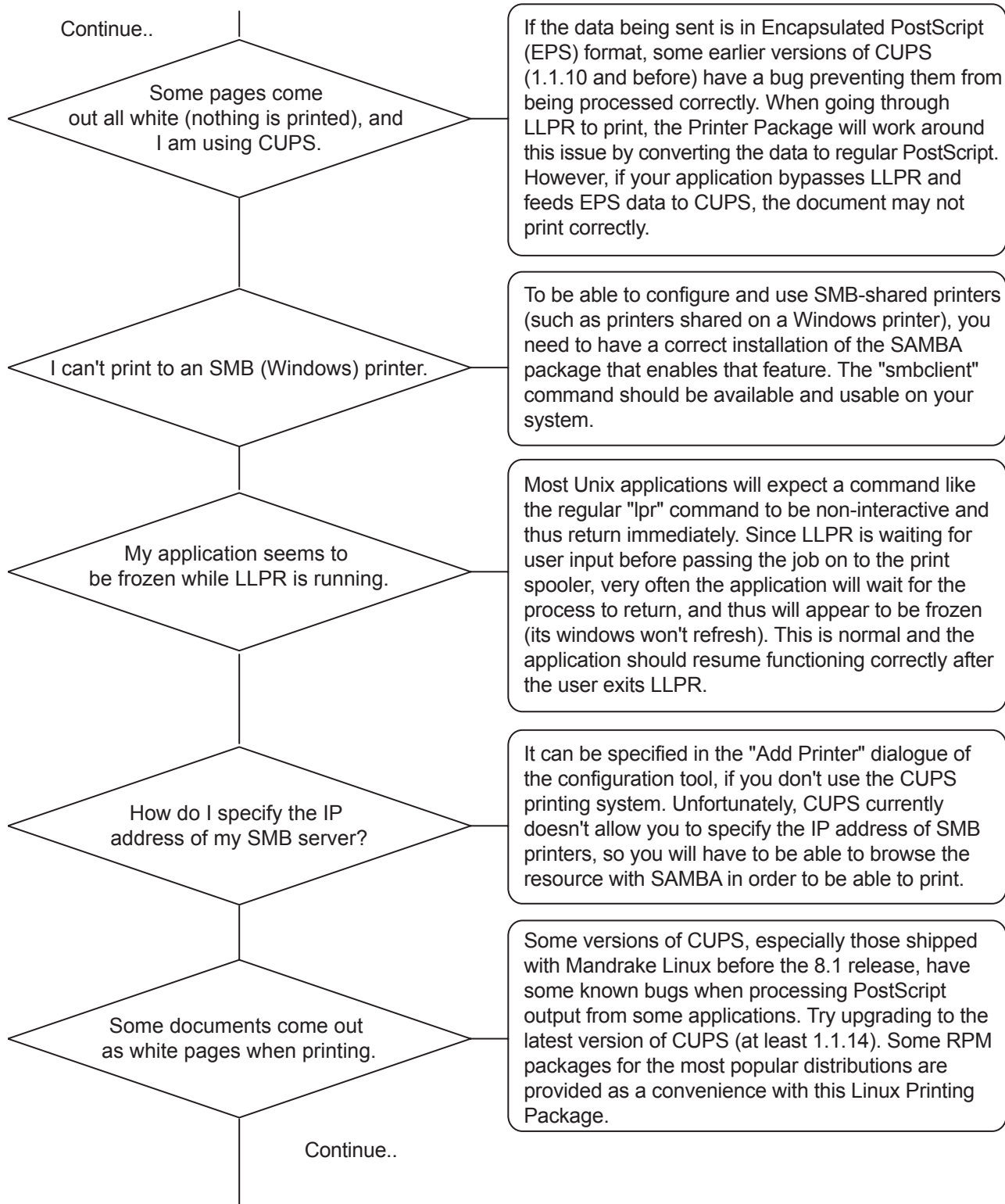
4.2.6 Common Macintosh Problems

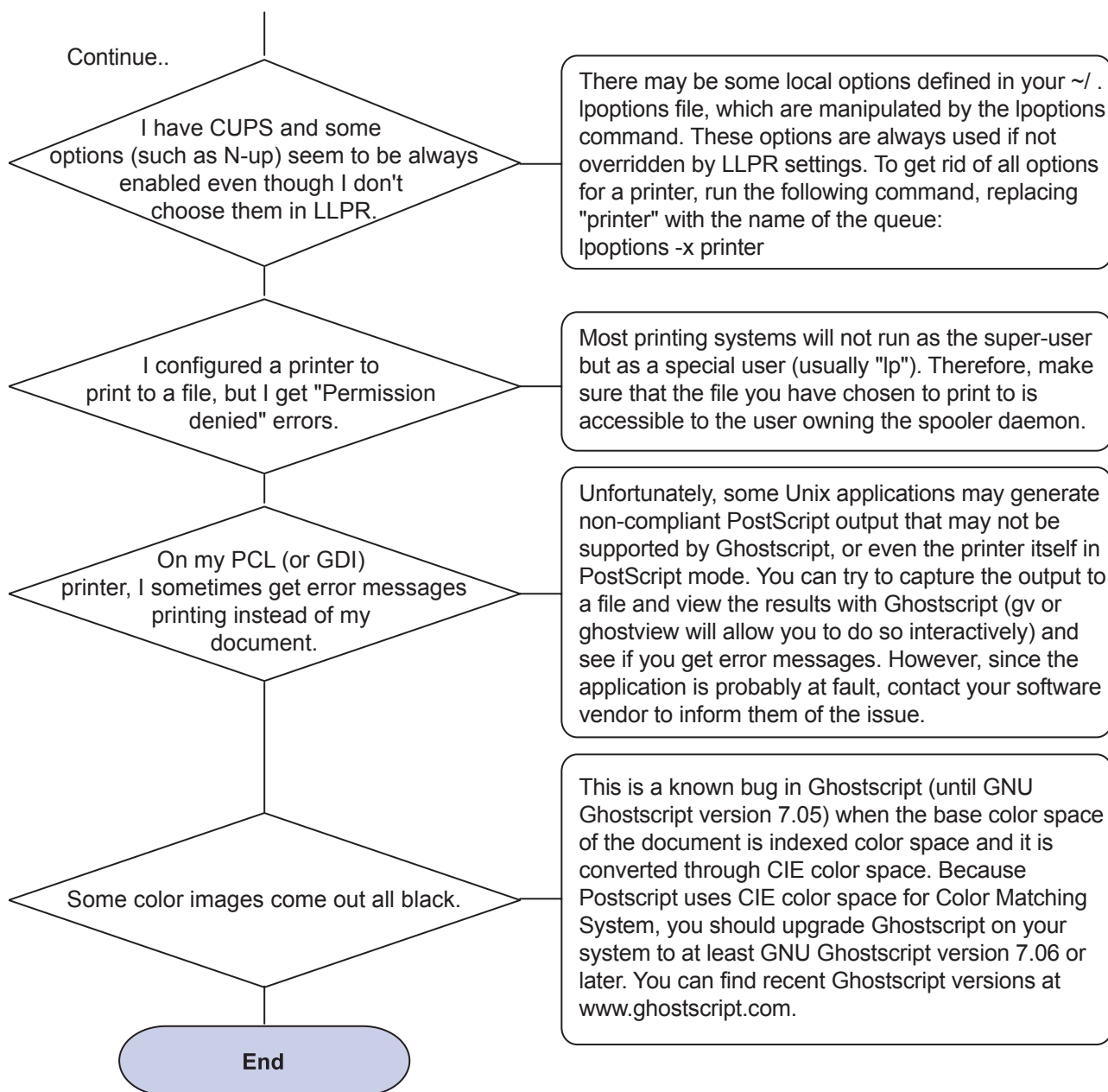


4.2.7 Common Linux Problems







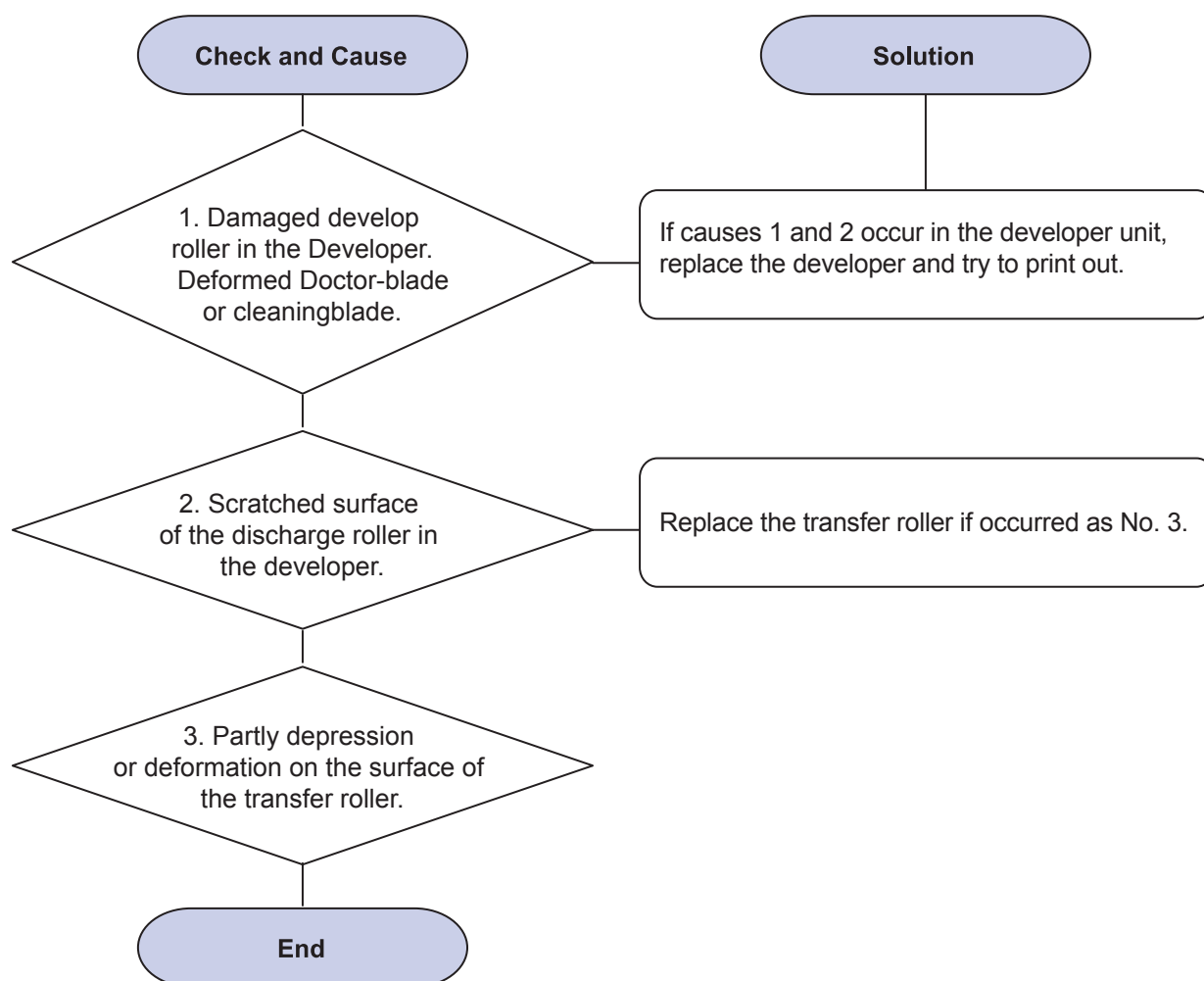


4.2.8 Major Problems Trouble shooting

1) Vertical Line and Band

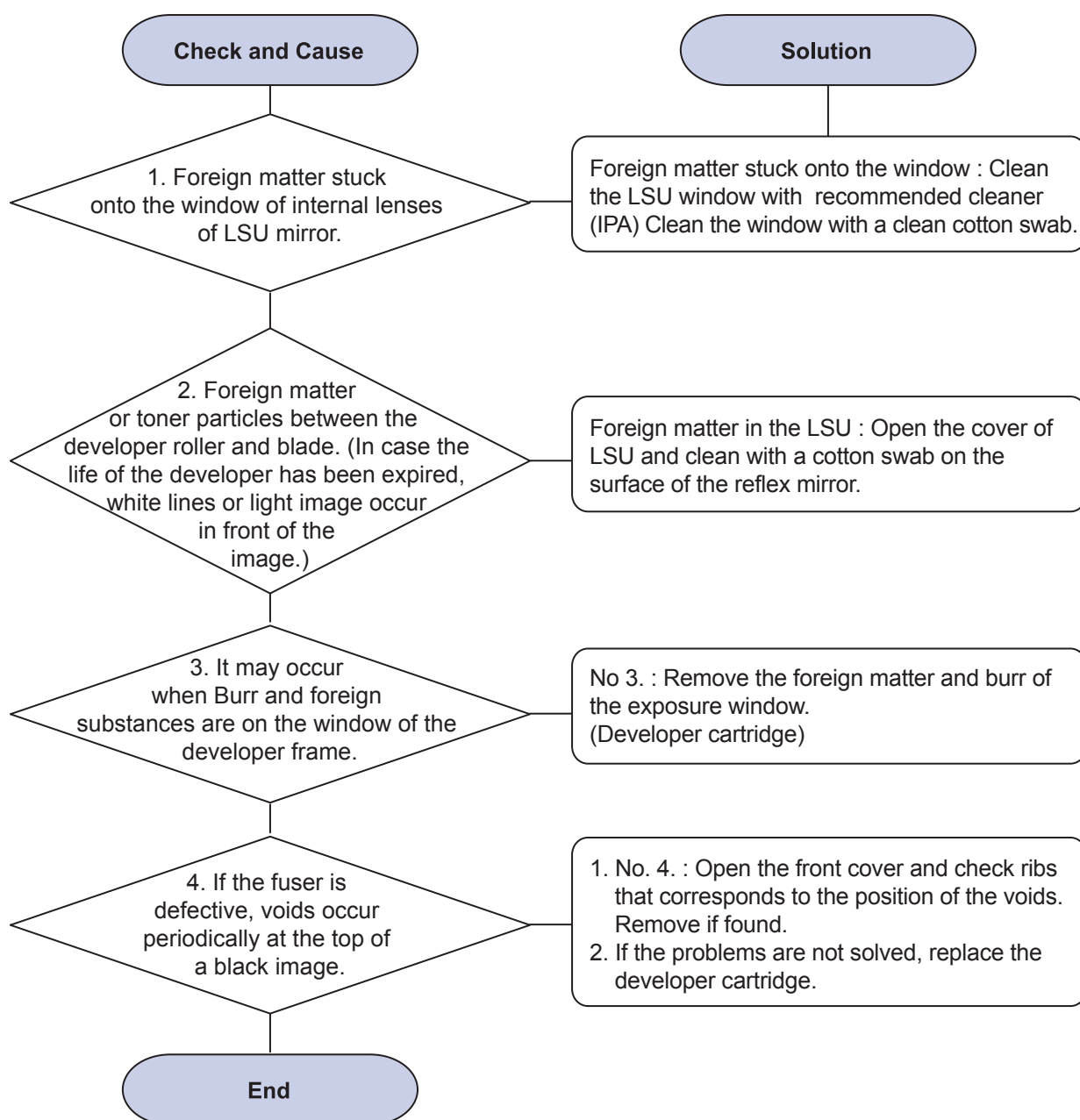
Description

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



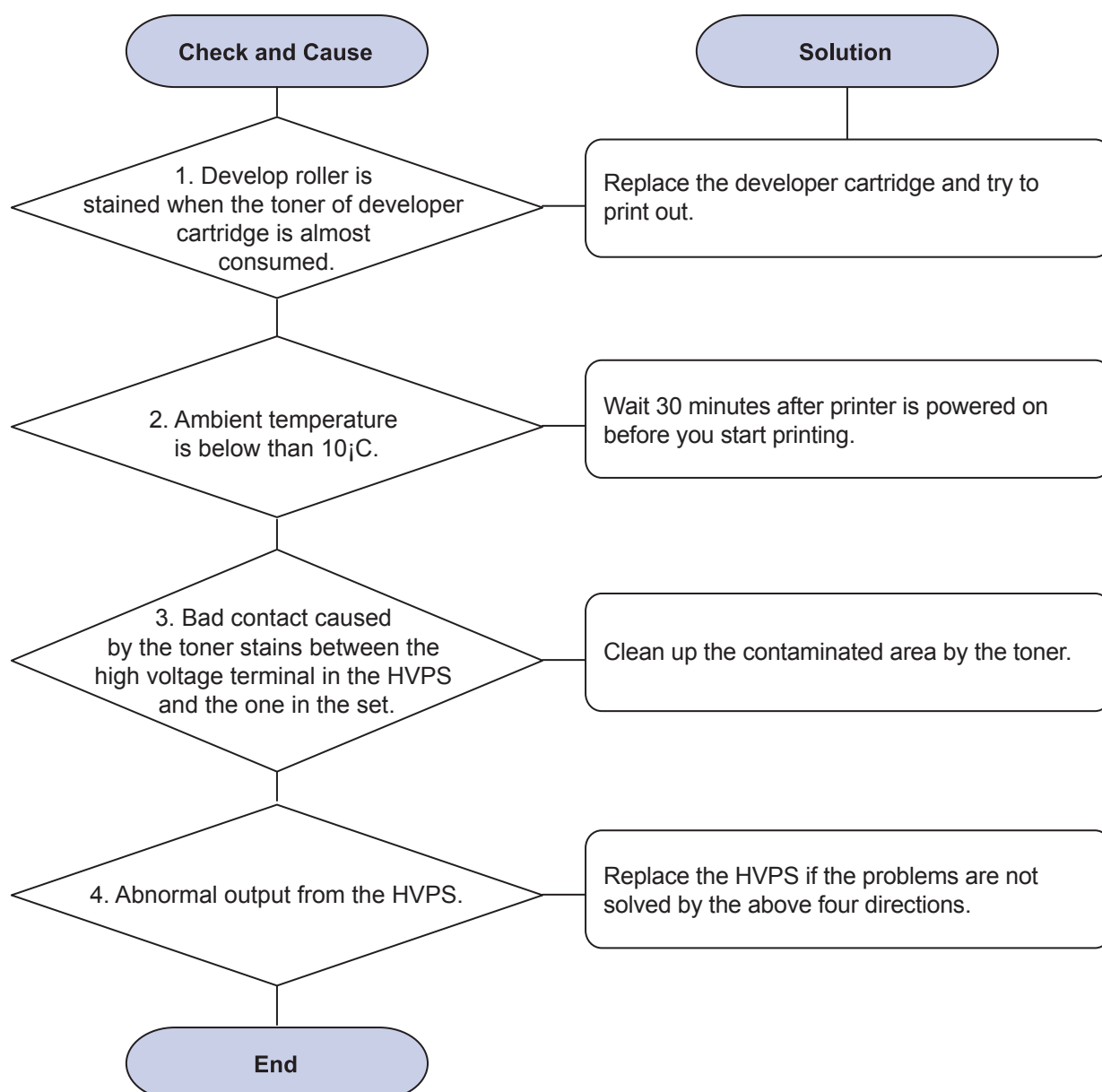
2) Vertical White Line

Description White vertical voids in the image.



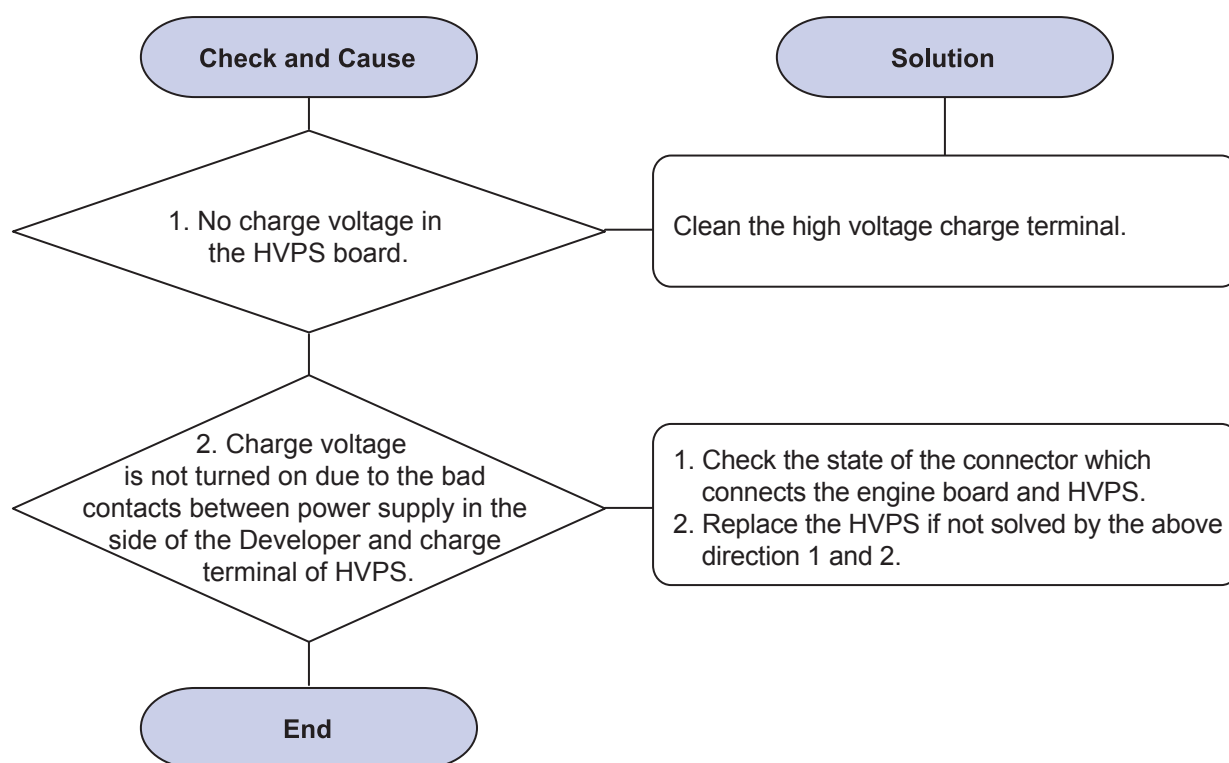
3) Light Image

Description The printed image is light, with no ghost.



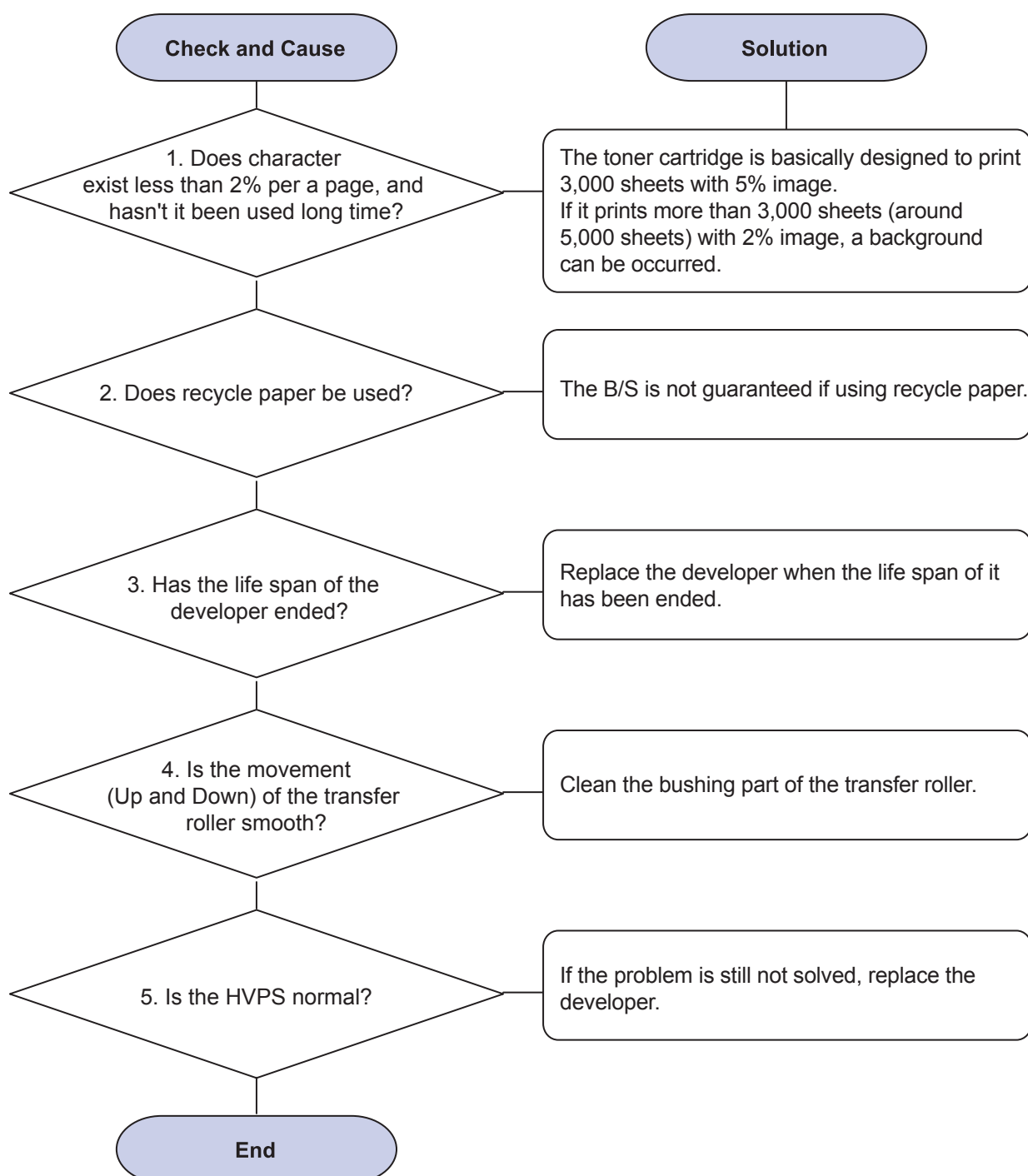
4) Dark Image or black

Description The printed image is dark.



5) Background

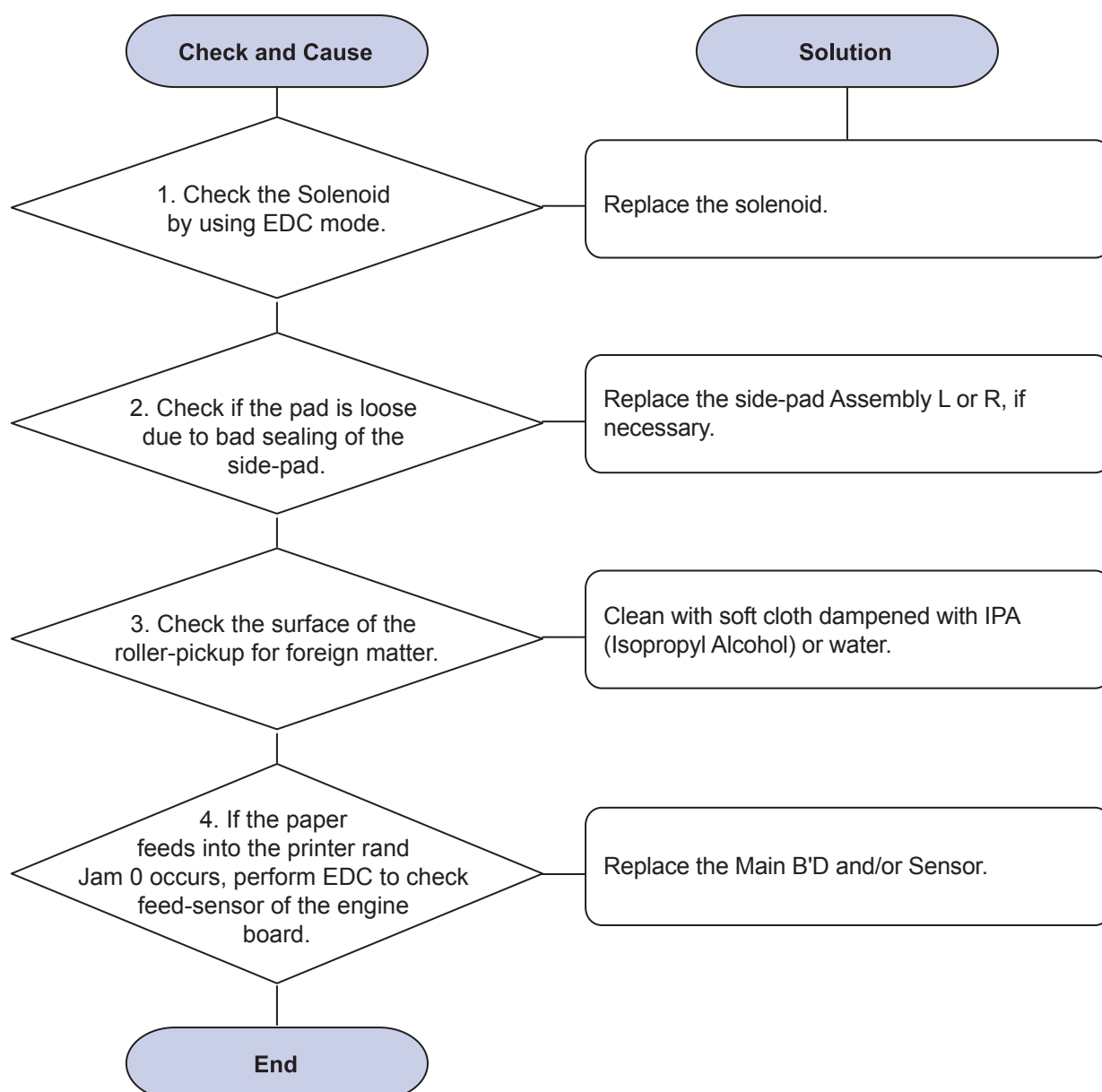
Description Light dark background appears in whole area of the printing.



6) JAM 0

Description

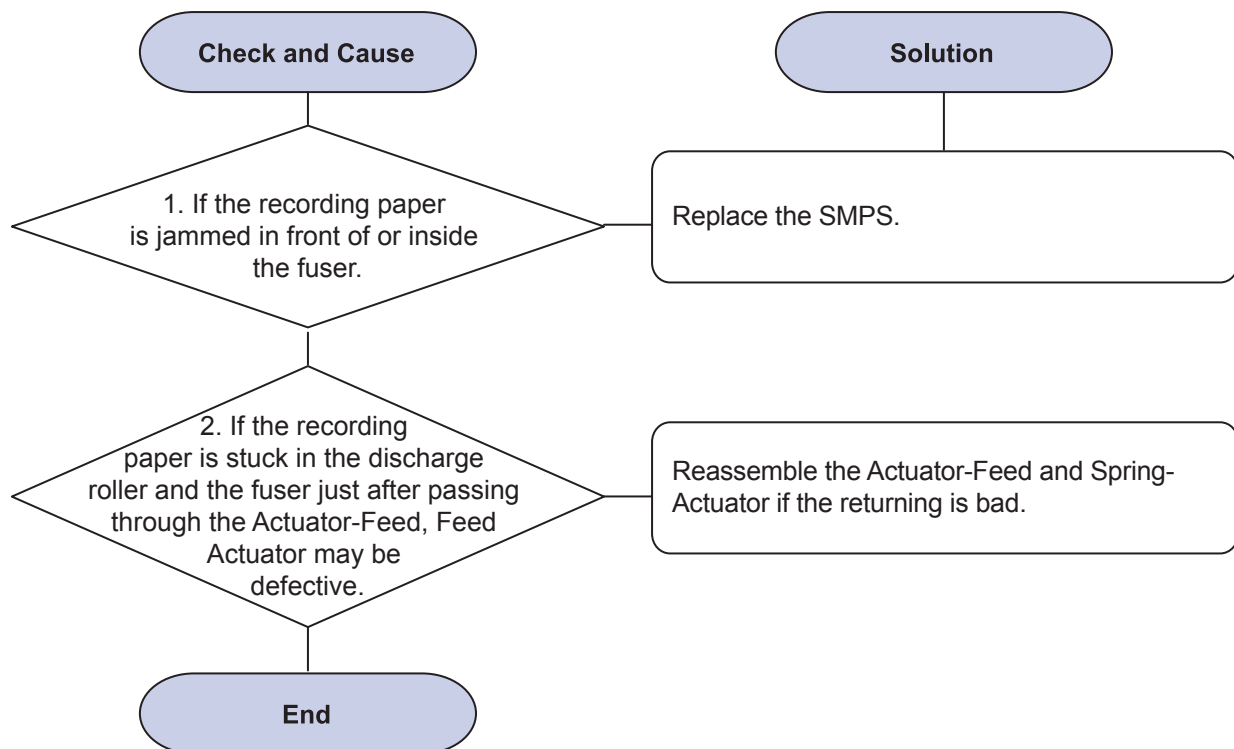
1. Paper is not exited from the cassette.
2. Jam-0 occurs if the paper feeds into the printer.



7 JAM 1

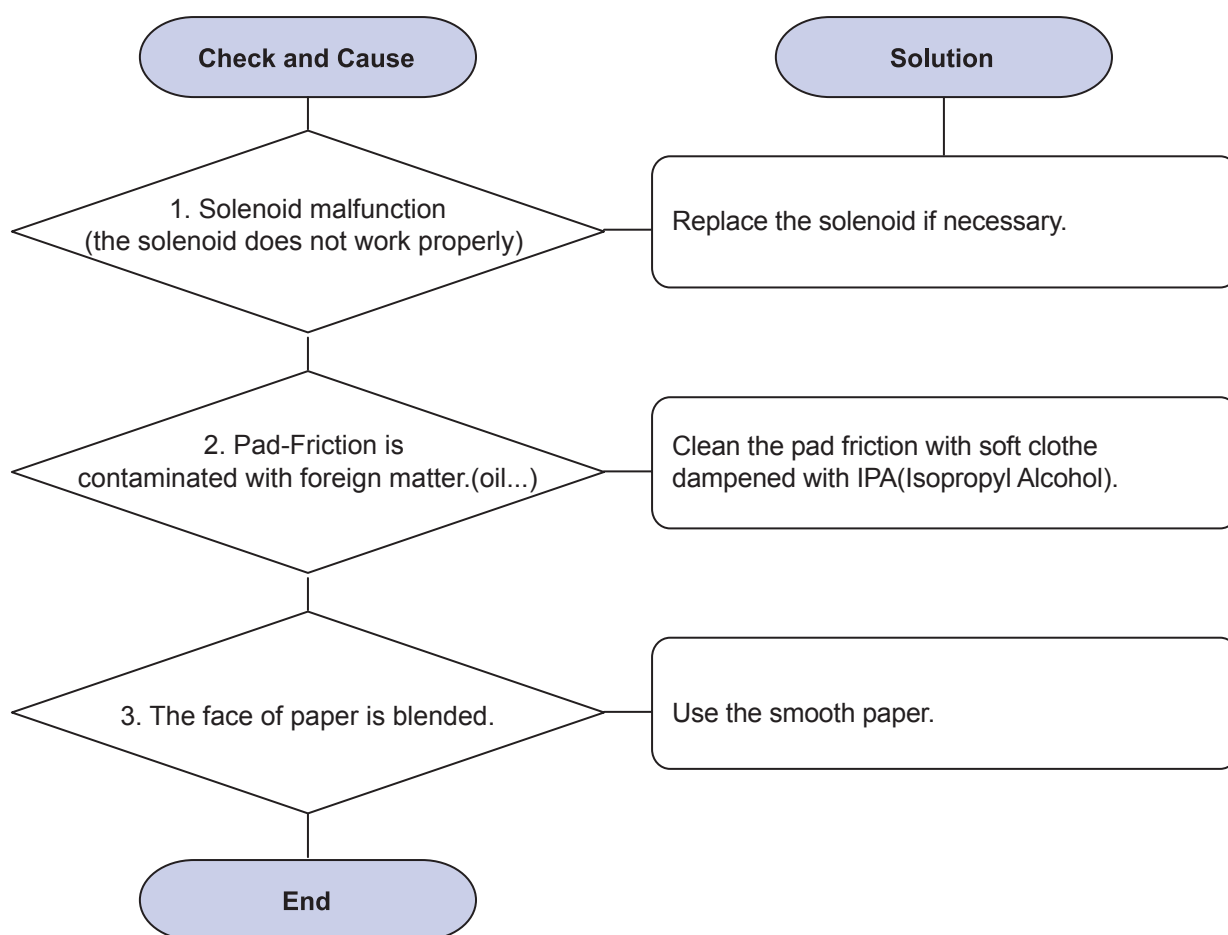
Description

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.



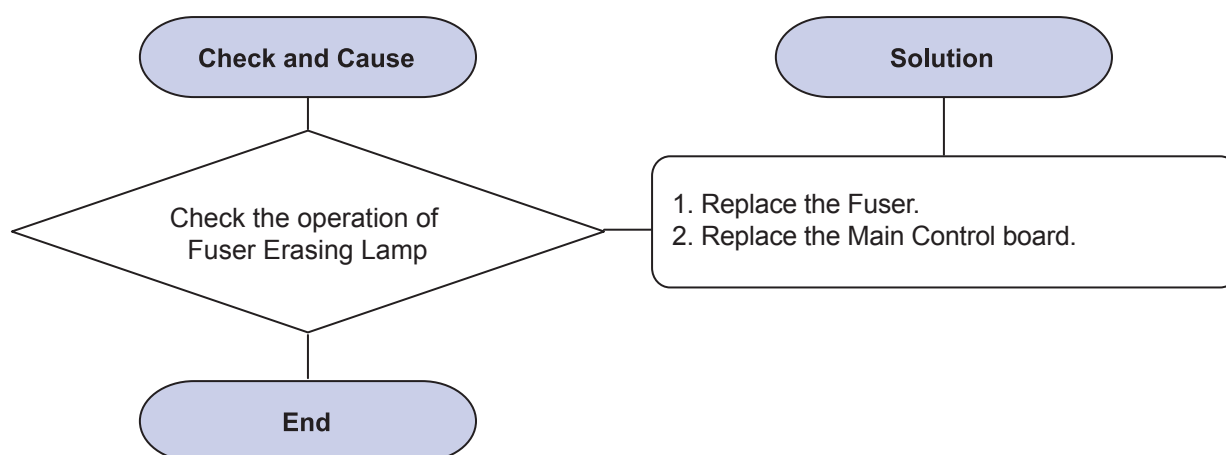
8) Multi-Feeding

Description Multiple sheets of paper are fed at once.



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

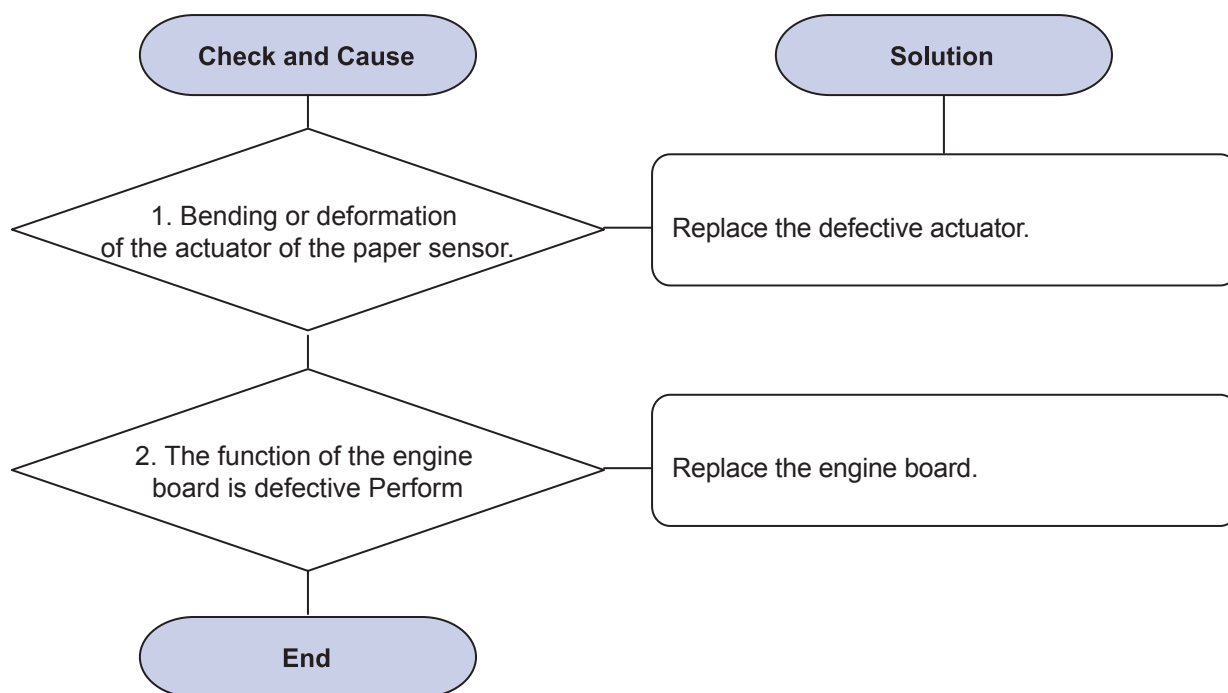
Description The motor breaks away from it's place due to gear melting away.



10) Paper Empty

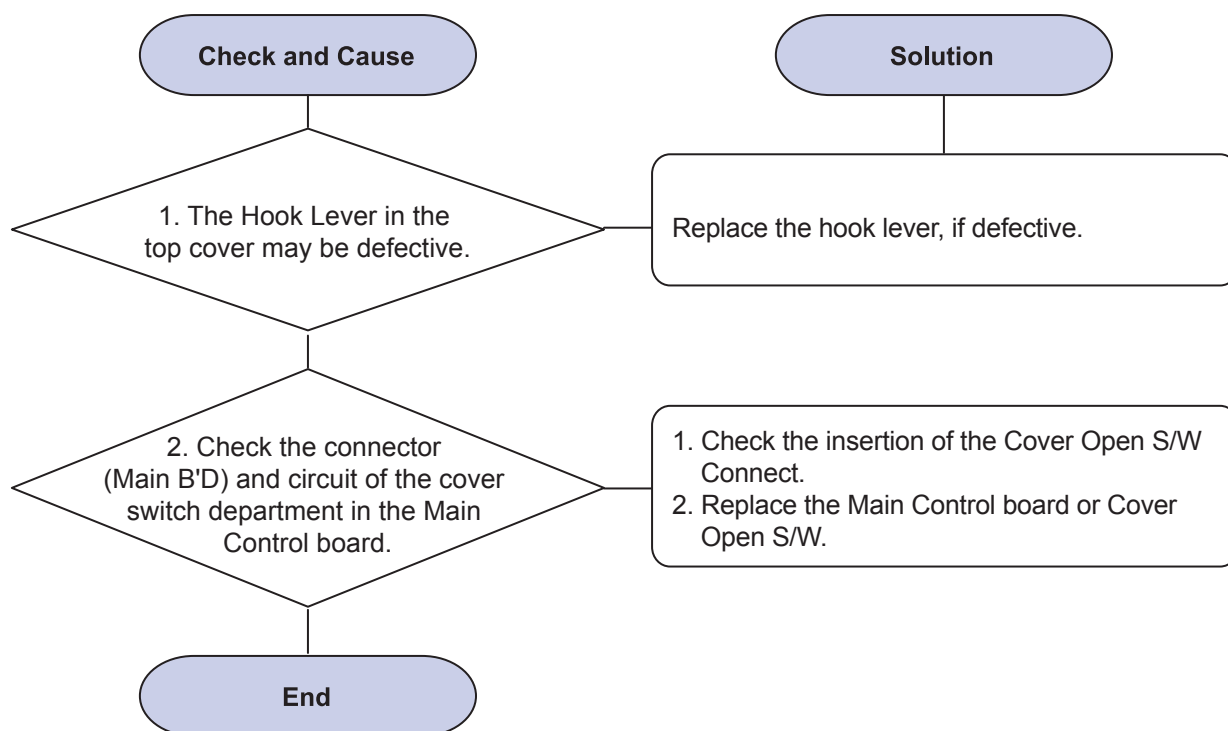
Description

The paper lamp on the operator panel is on even when paper is loaded in the cassette.



11) Cover Open

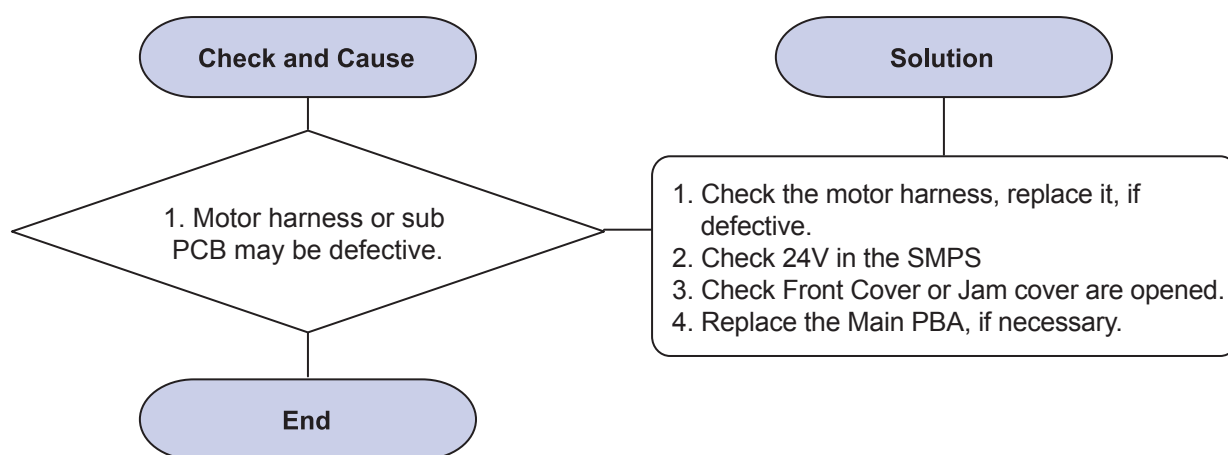
Description The ERROR lamp is on even when the print cover is closed.



12) Defective motor operation

Description

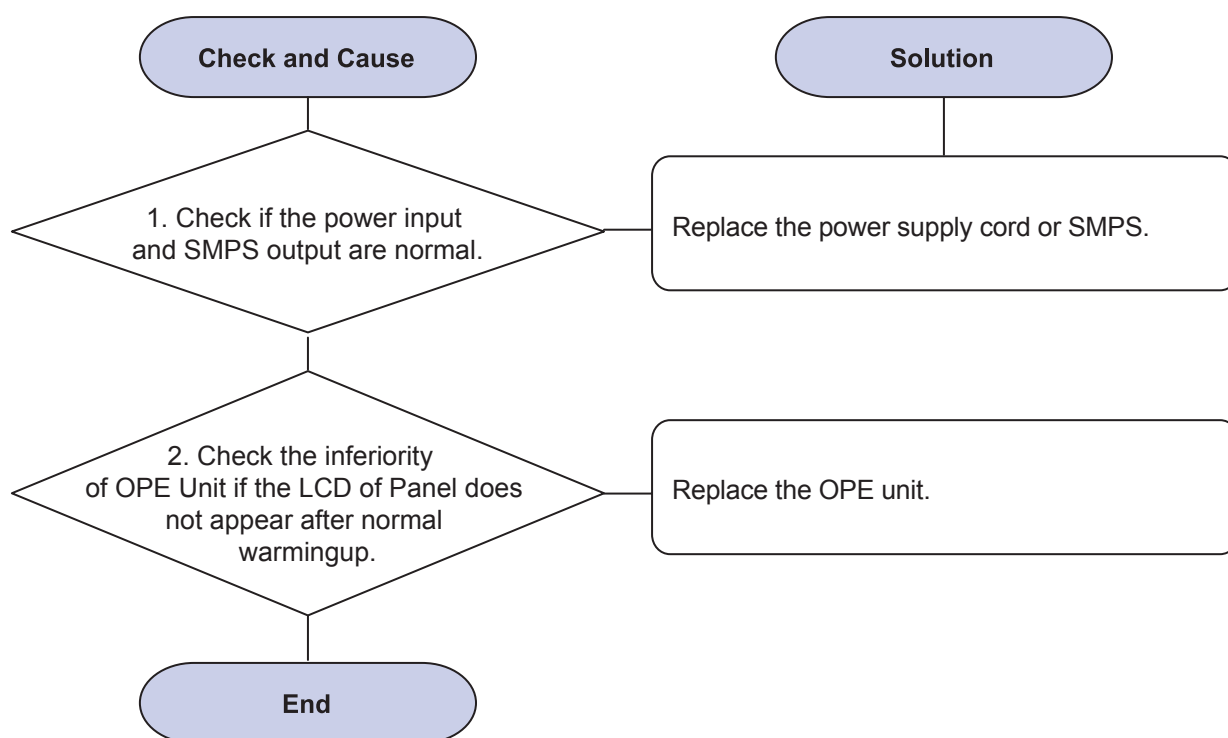
Main motor is not driving when printing, and paper does not feed into the printer, resulting 'Jam 0'.



13) No Power

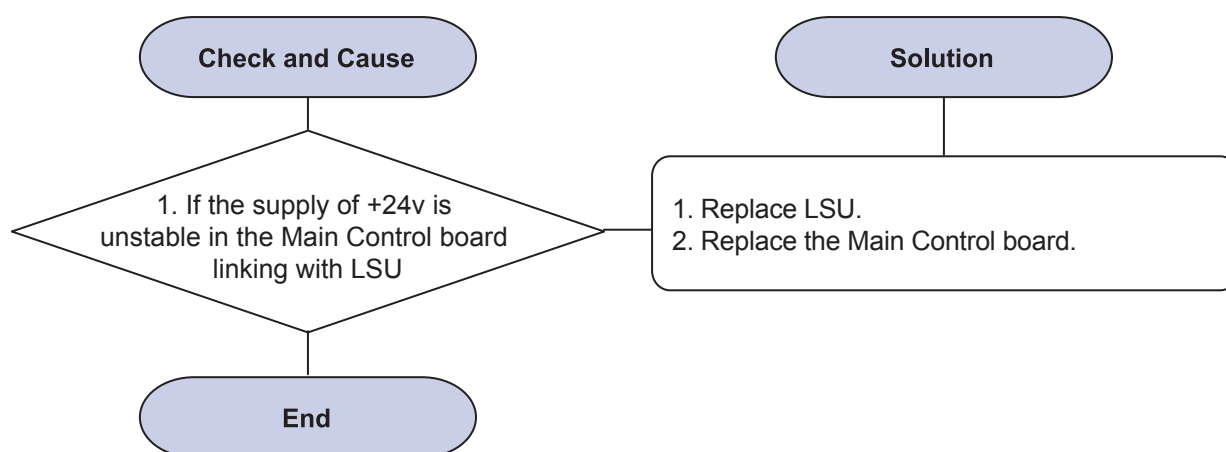
Description

When system power is turned on, The LCD and status LED on the operator panel do not come on.



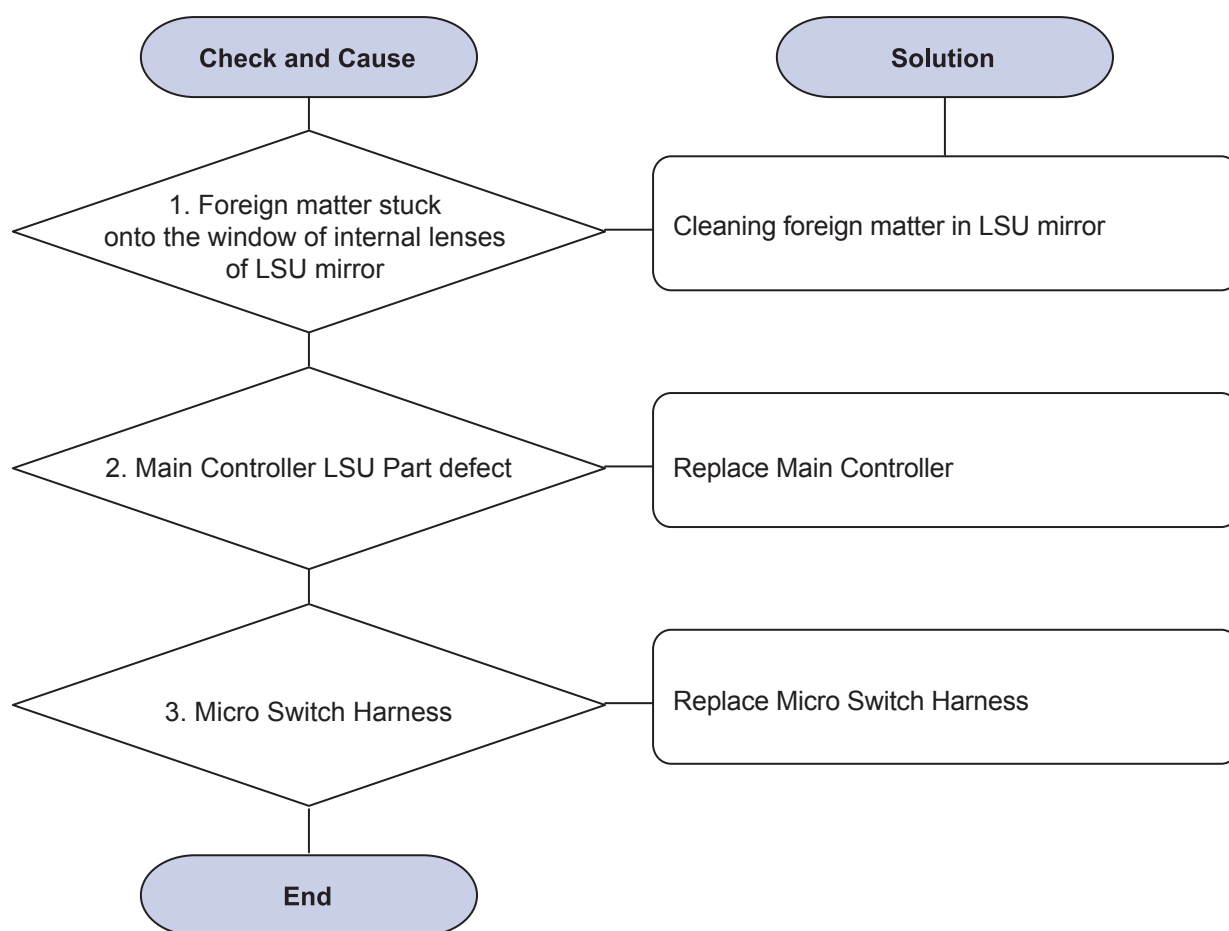
14) Vertical Line Getting Curved

Description When printing, vertical line gets curved.



15) LSU Error

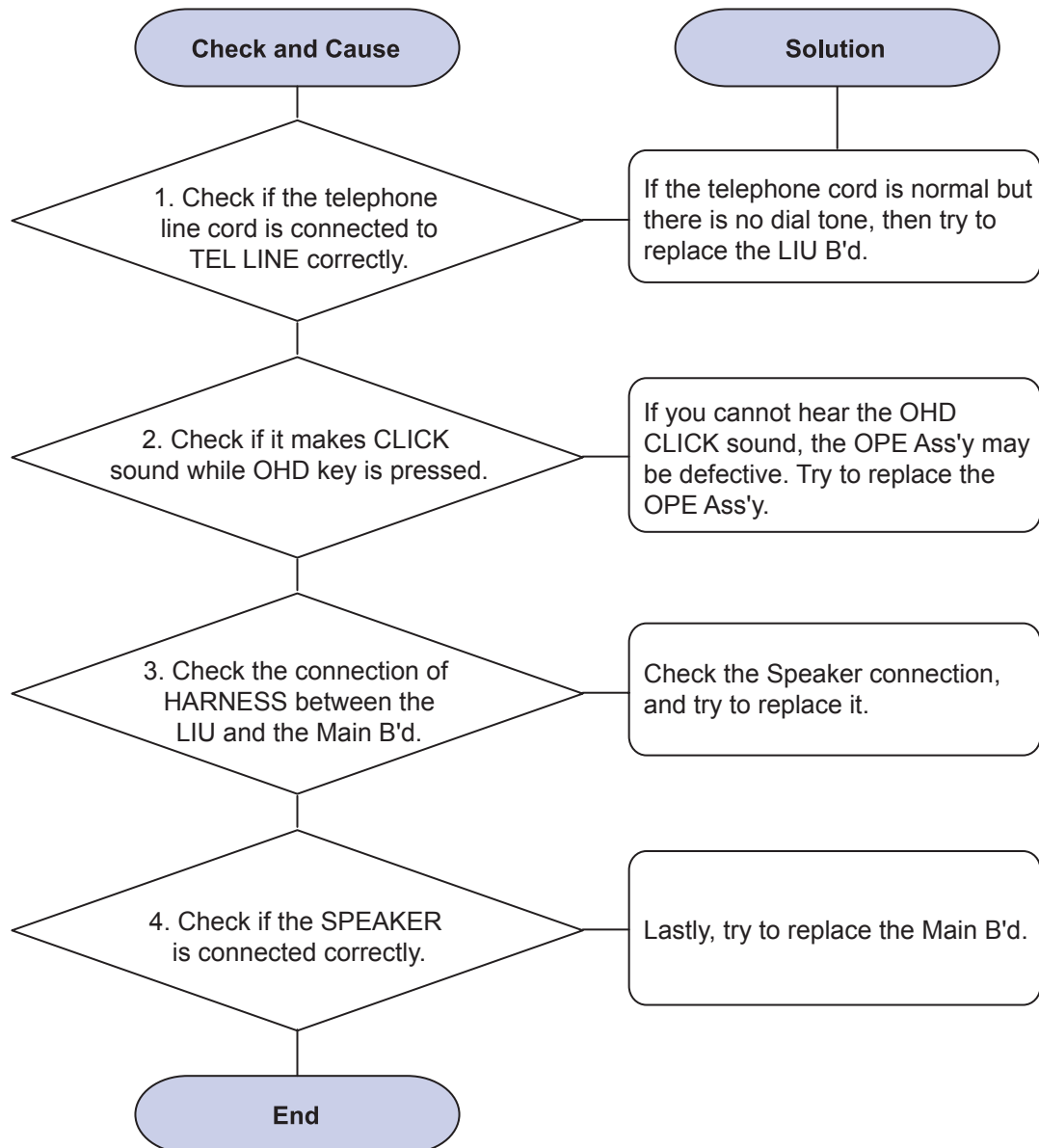
Description The printing is stop in the fad status, With LSU Error SM Message.



4.2.9 Fax & Phone Problems

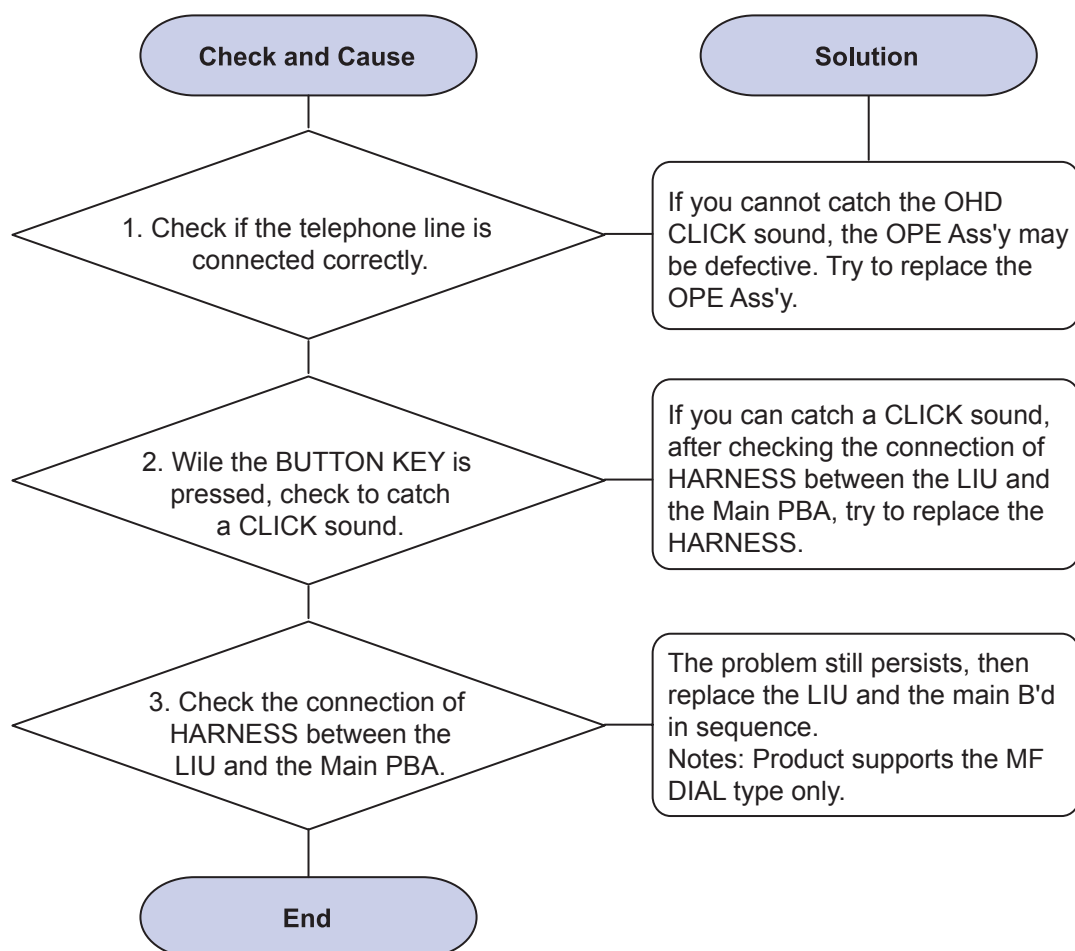
1) No Dial Tone

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



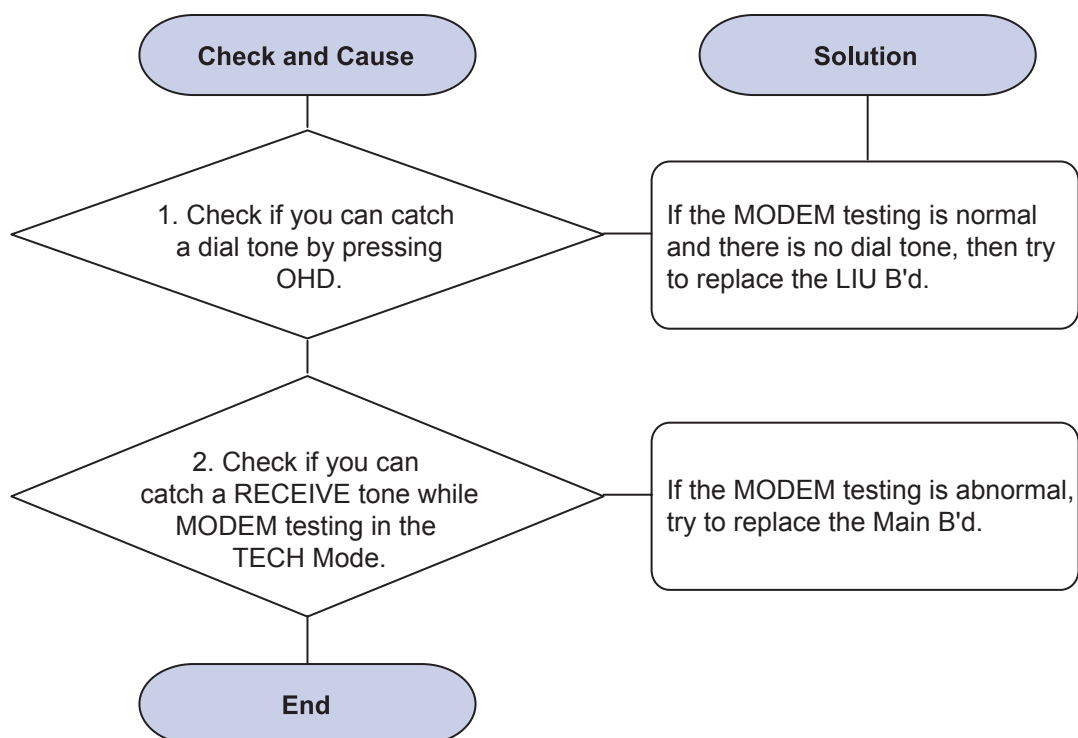
2) Defective MF DIAL

Description The MF DIAL is not functioning.



3) Defective FAX FORWARD/RECEIVE

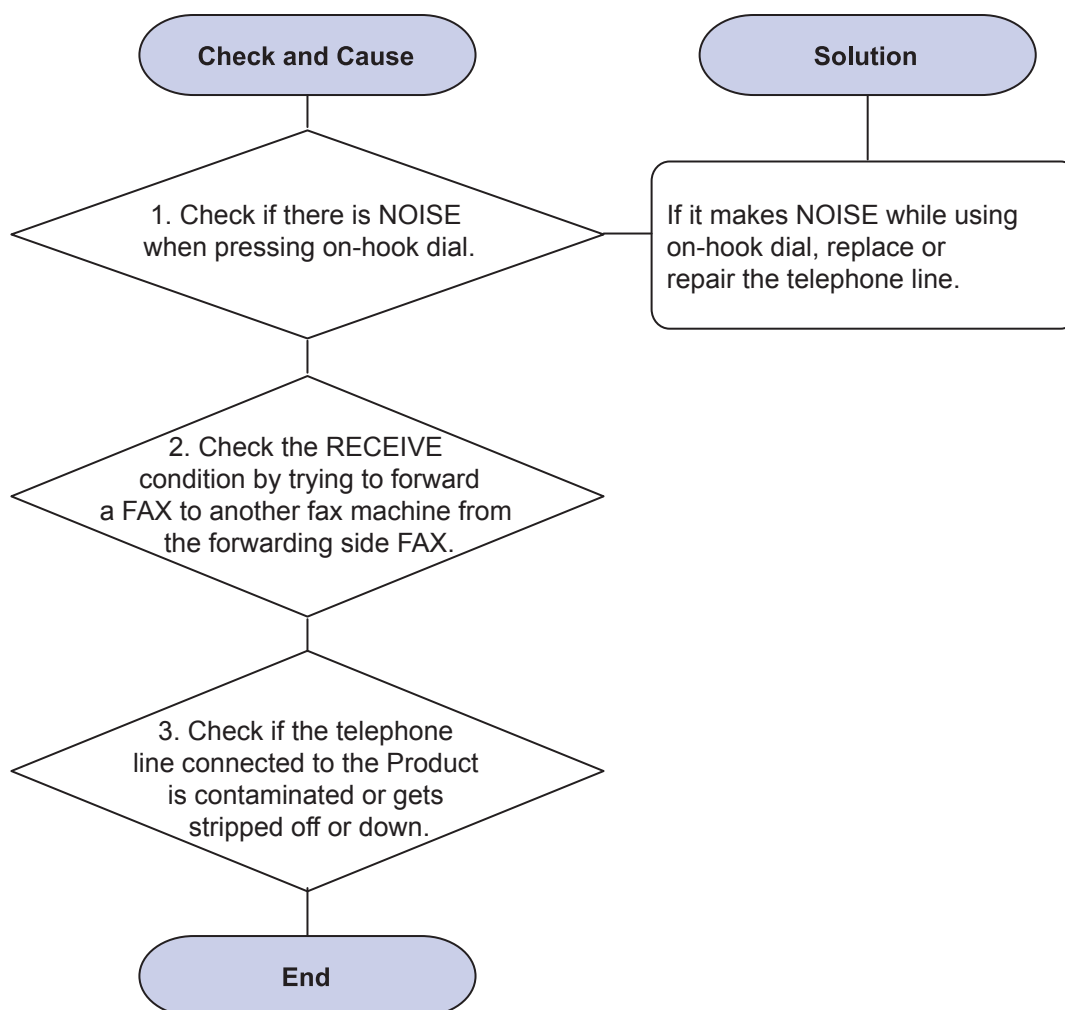
Description The FAX FORWARD/RECEIVE is not functioning.



4) Defective FAX FORWARD

Description

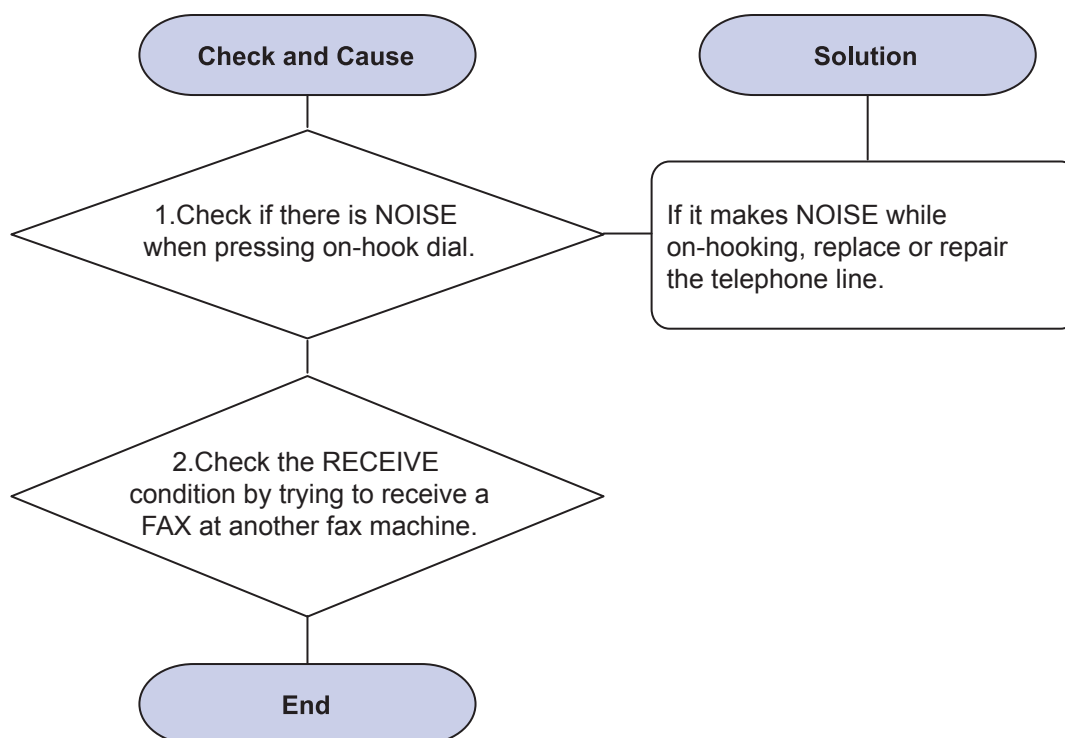
RECEIVE is functioning, but FORWARD is not functioning or the received data are broken.



5) Defective FAX RECEIVE (1)

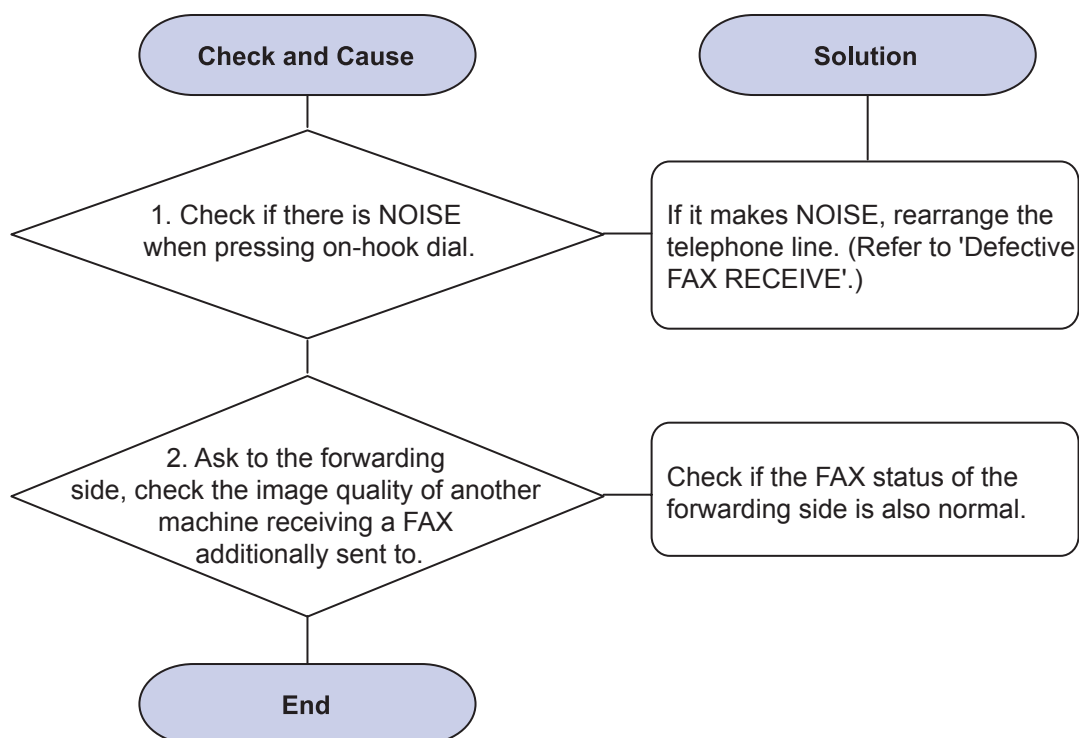
Description

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



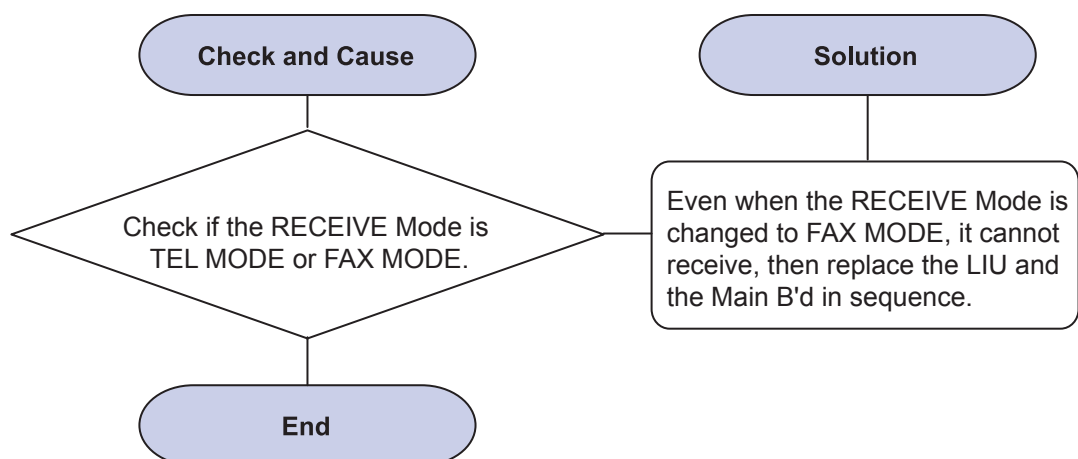
6) Defective FAX RECEIVE (2)

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



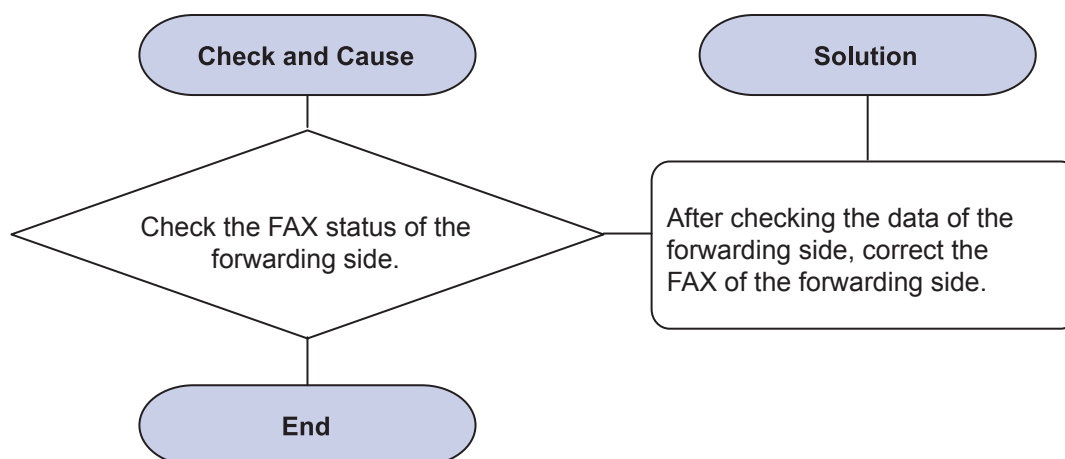
7) Defective FAX RECEIVE (3)

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



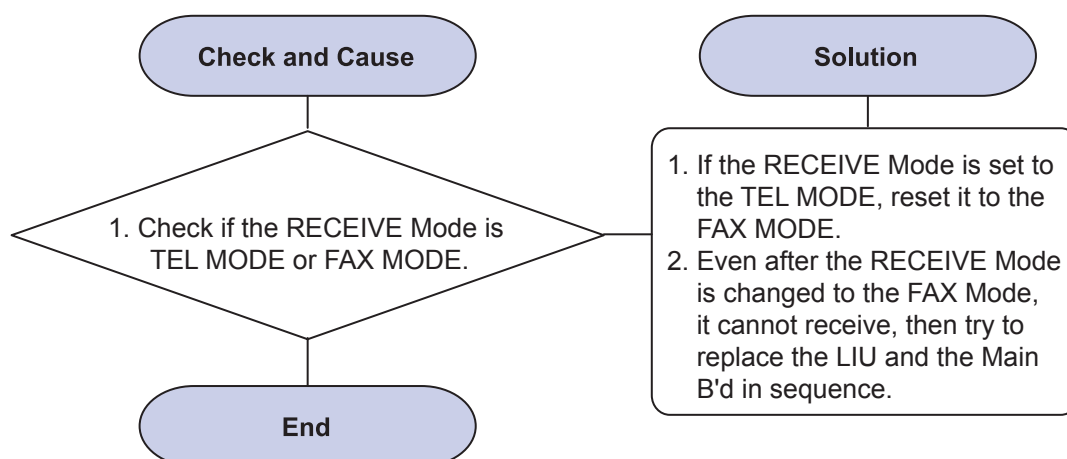
8) Defective FAX RECEIVE (4)

Description	The received data is reduced by more than 50% in the printing.
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9) Defective Automatic Receiving

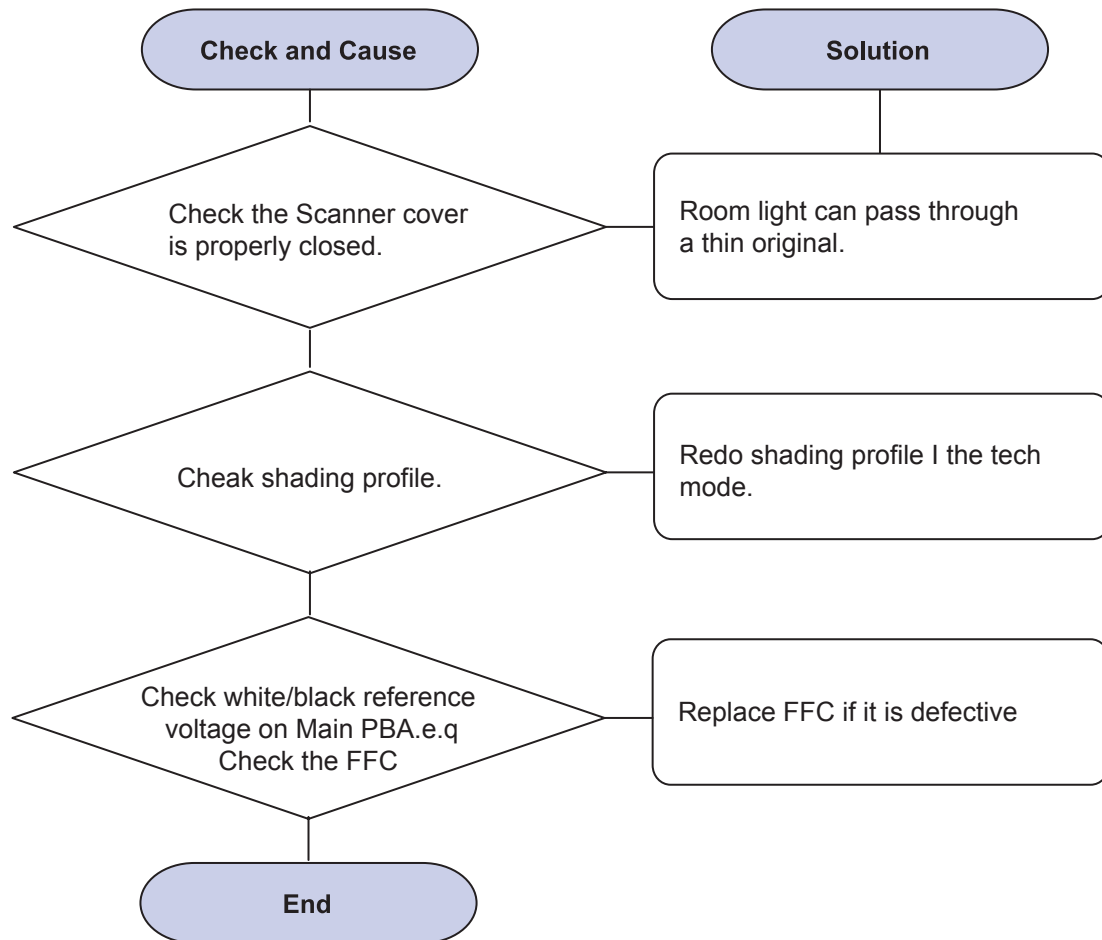
Description The automatic receiving function is not working.



4.2.10 Copy Problems

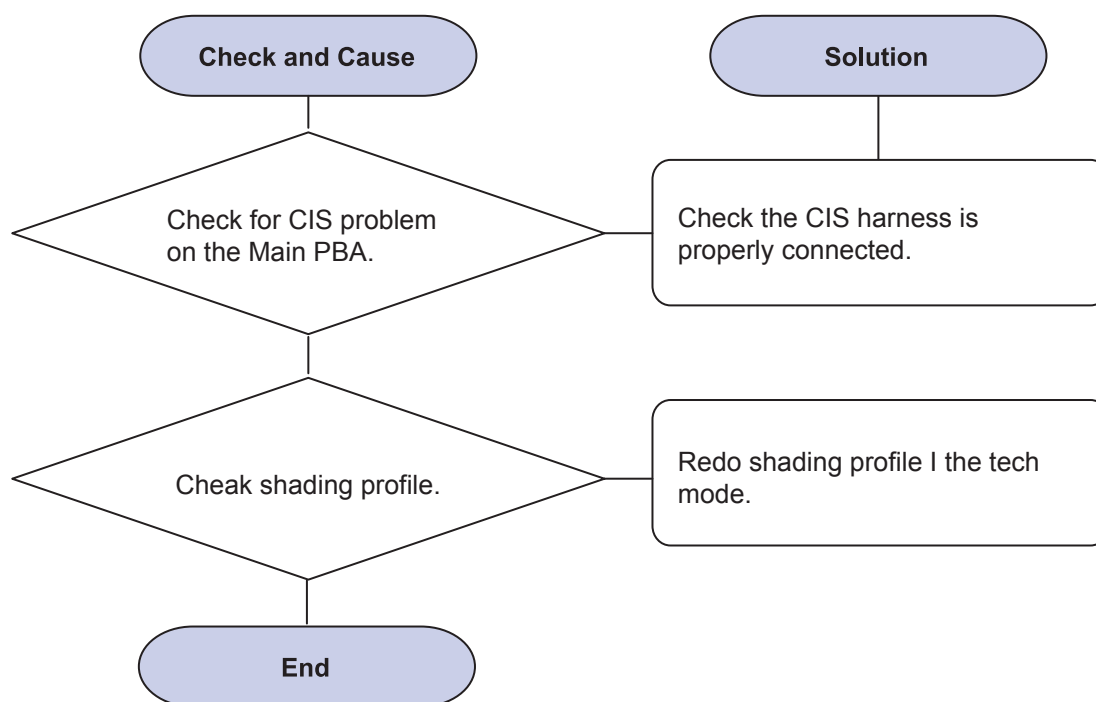
1) White Copy

Description	Blank page is printed out when copying
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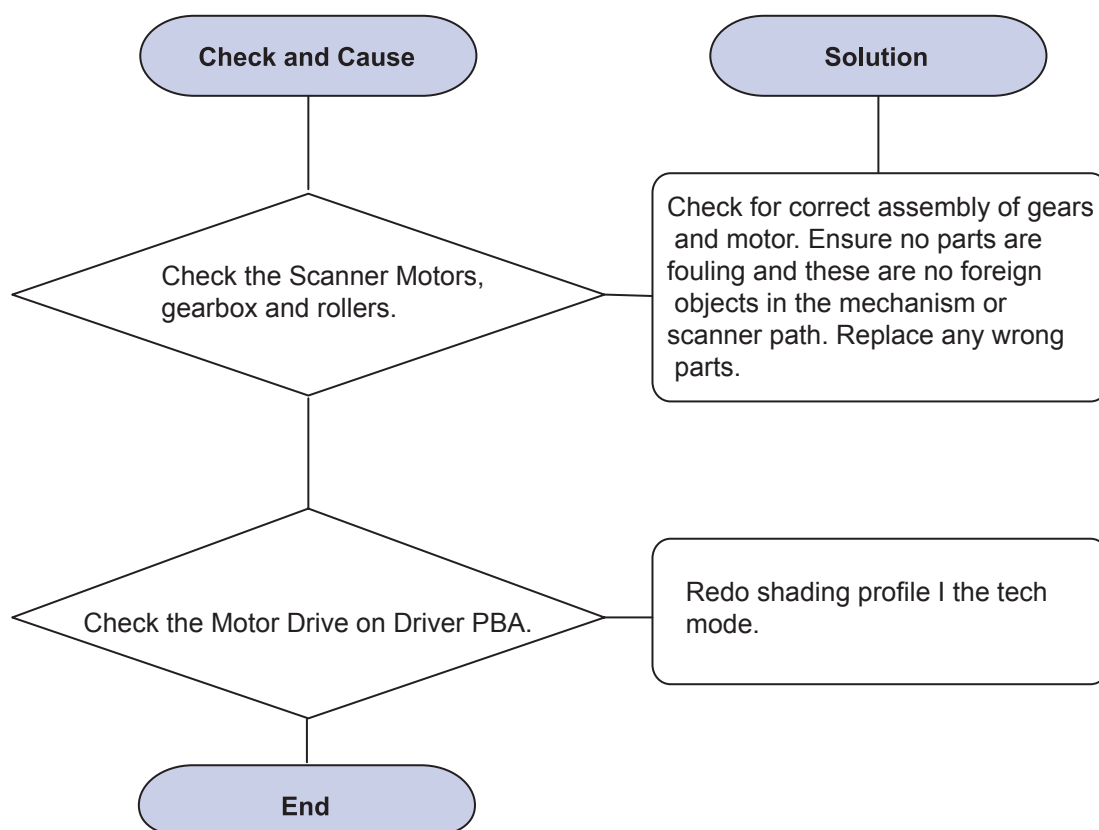
2) Black Copy

Description Blank page is printed out when copying



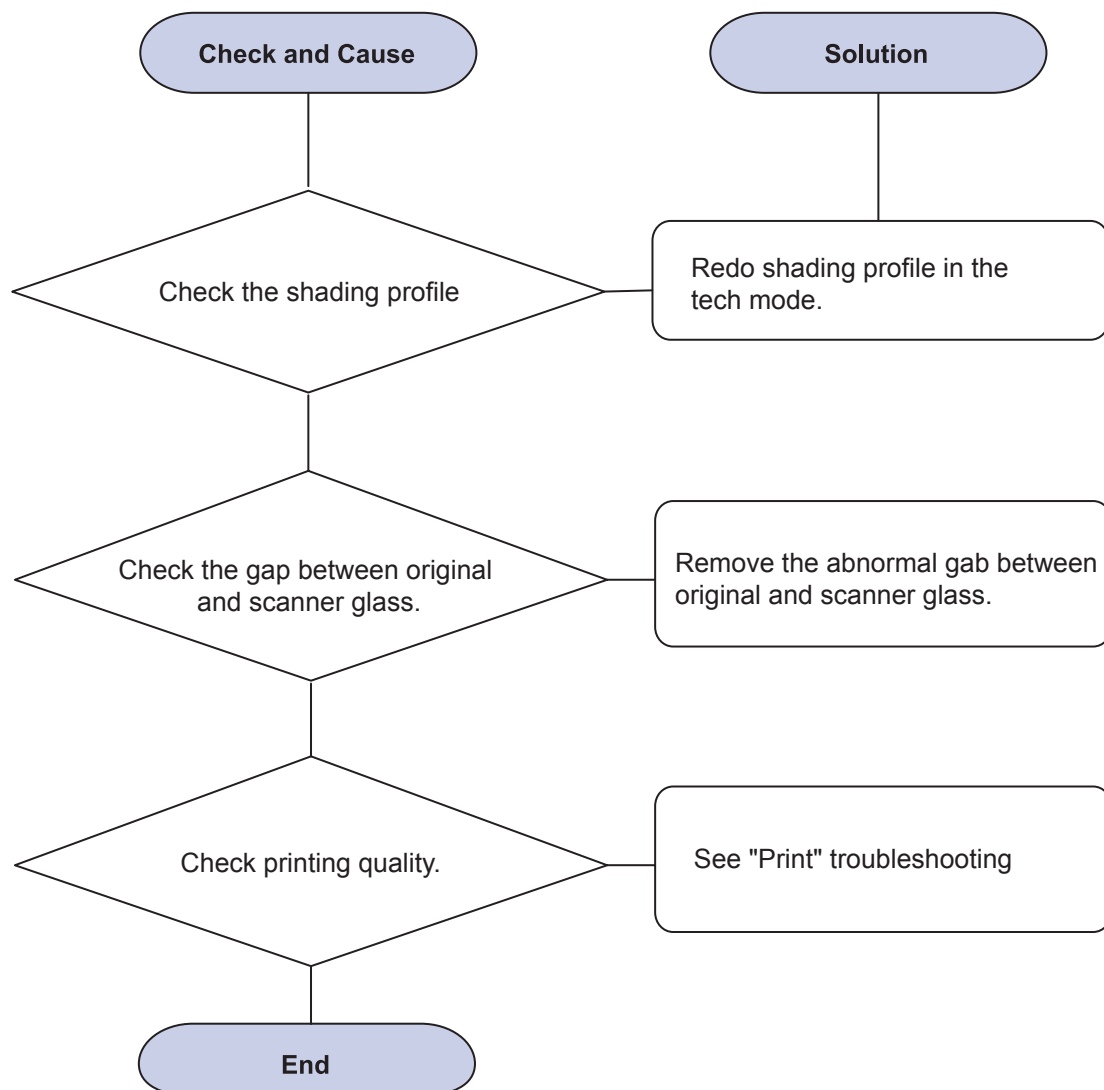
3) Abnormal Noise

Description There is noise when copying.



4) Defective Image Quality

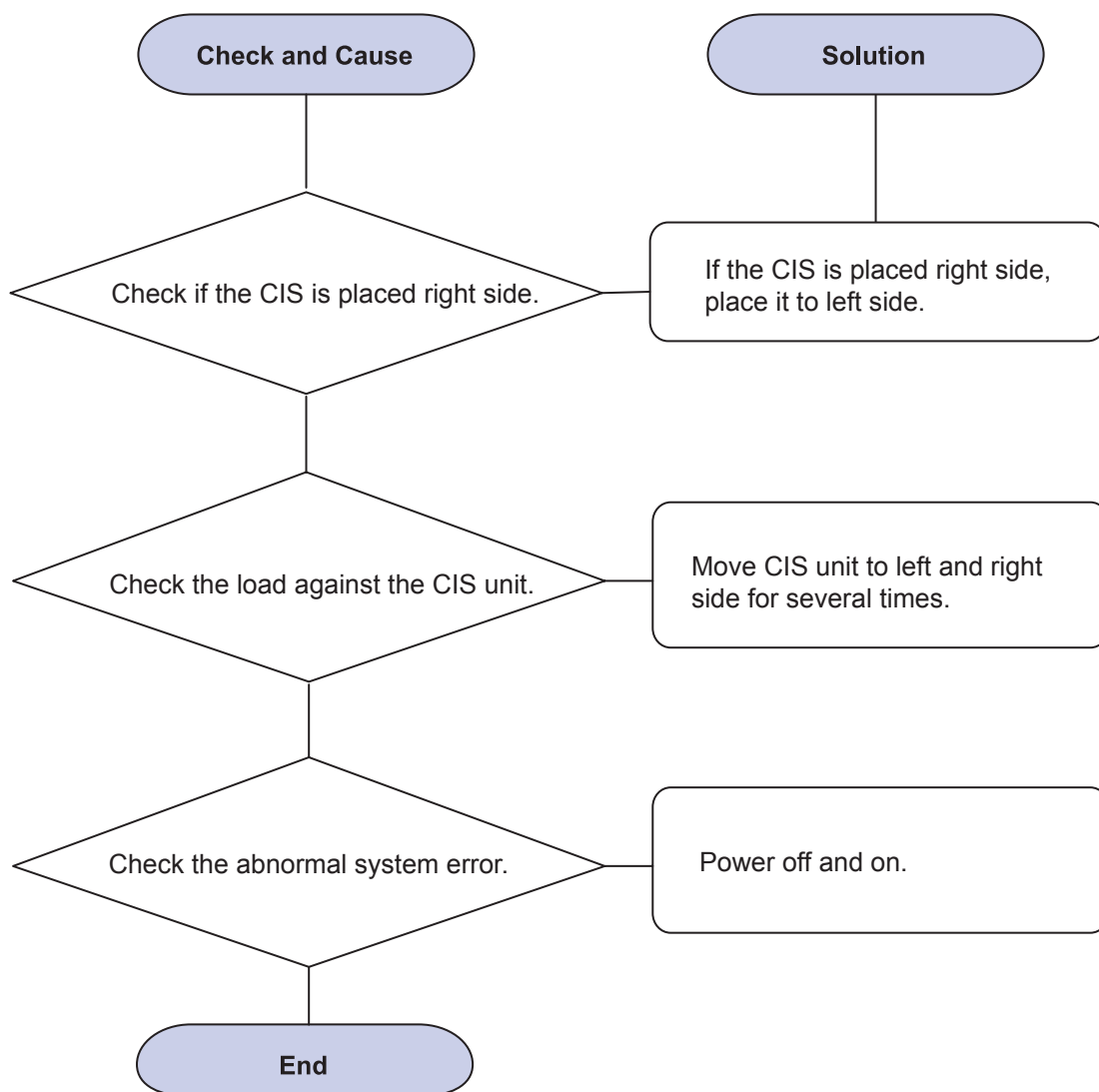
Description The copied image is excessively light or dark.



4.2.11 Scanner, OPE problems

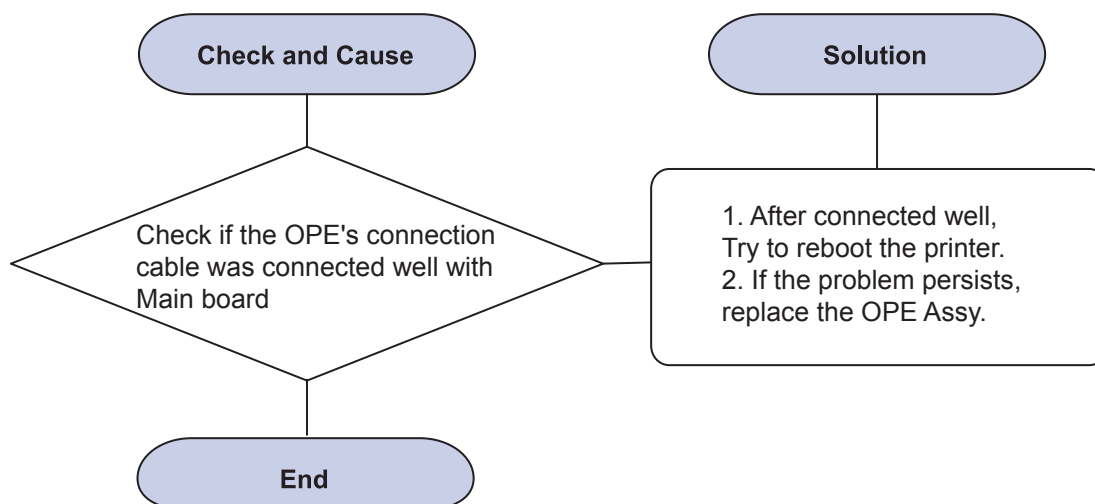
1) Scan Lock Error

Description CIS does not move. Display "scanner lock" on LCD.



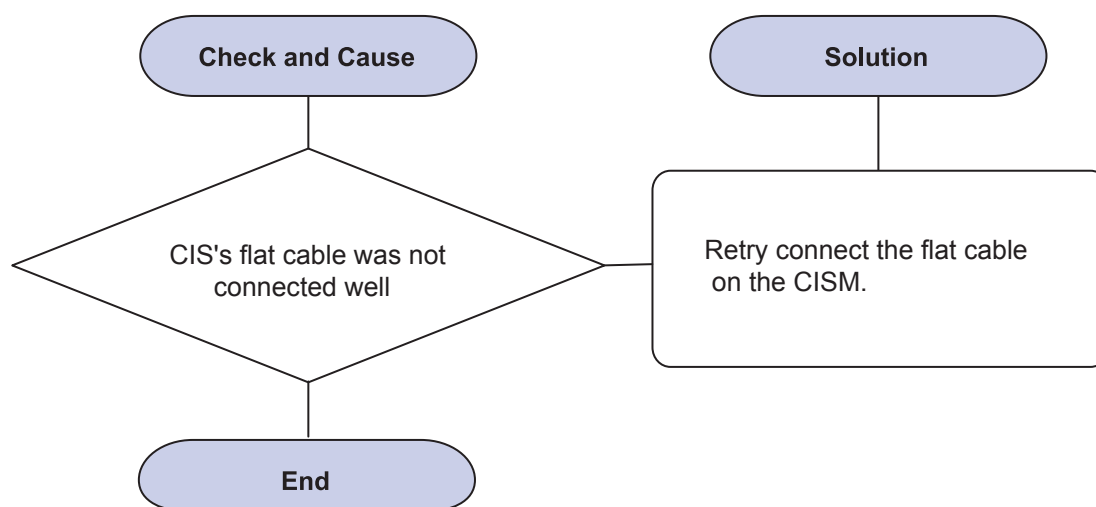
2) Nothing Displayed on LCD

Description LCD does not display anything.



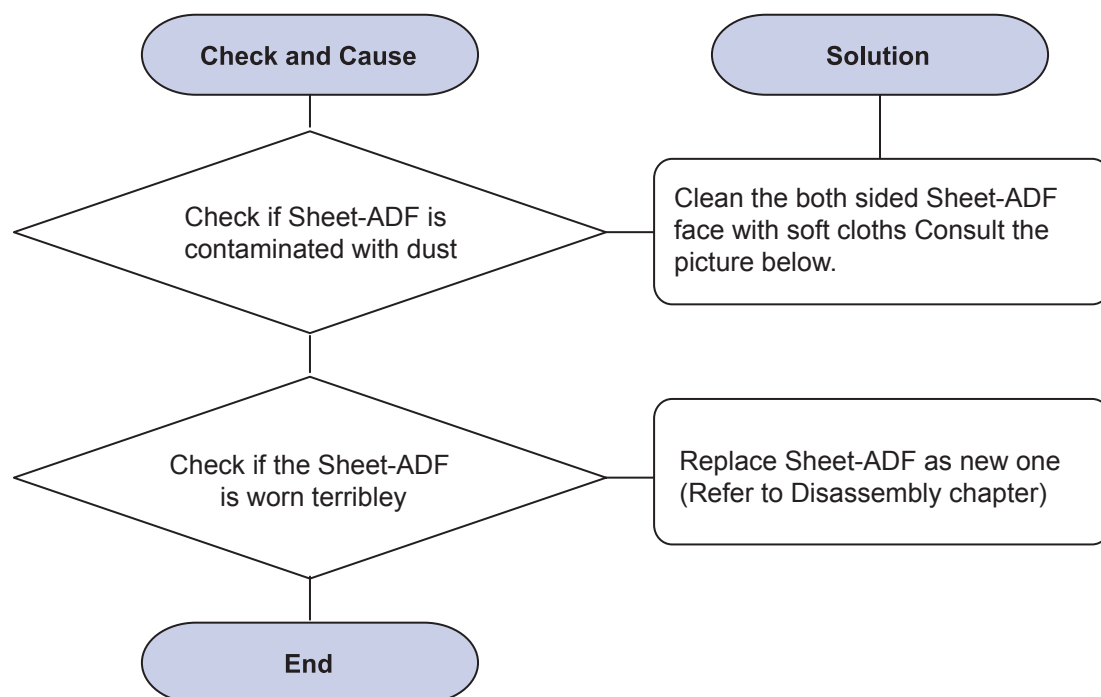
3) Copy image can't identify.

Description Copy image look like 'haze line'.



4) Light Image

Description The printed image is light, with no ghost.



Cleaning the Sheet-ADF without separating.

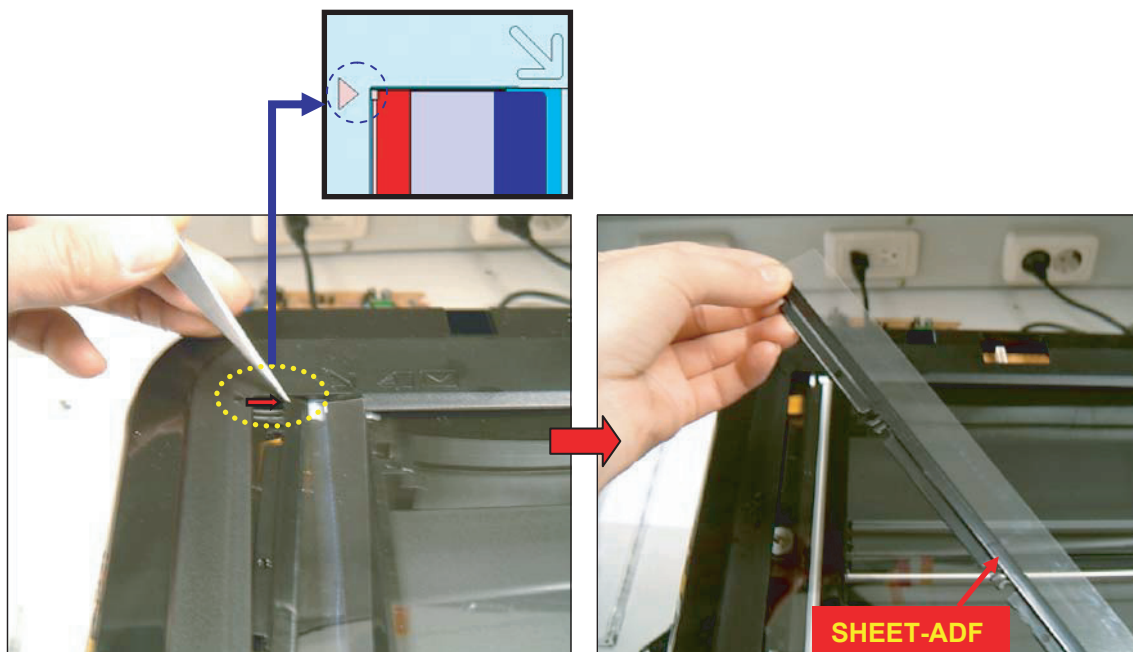
Clean the surface of the Sheet-ADF with soft cloth.



Continue...

Cleaning the Sheet-ADF by separating.

1. Open the ADF cover. And remove the ADF sheet by using a sharp tool like tweezers.



2. Clean the both faces of the Sheet with soft cloth.



3. Assemble the sheet ADF to the original place.



5) Document Jam

Description
Document Jam was occurred.

