

## 6. Alignment and Adjustments

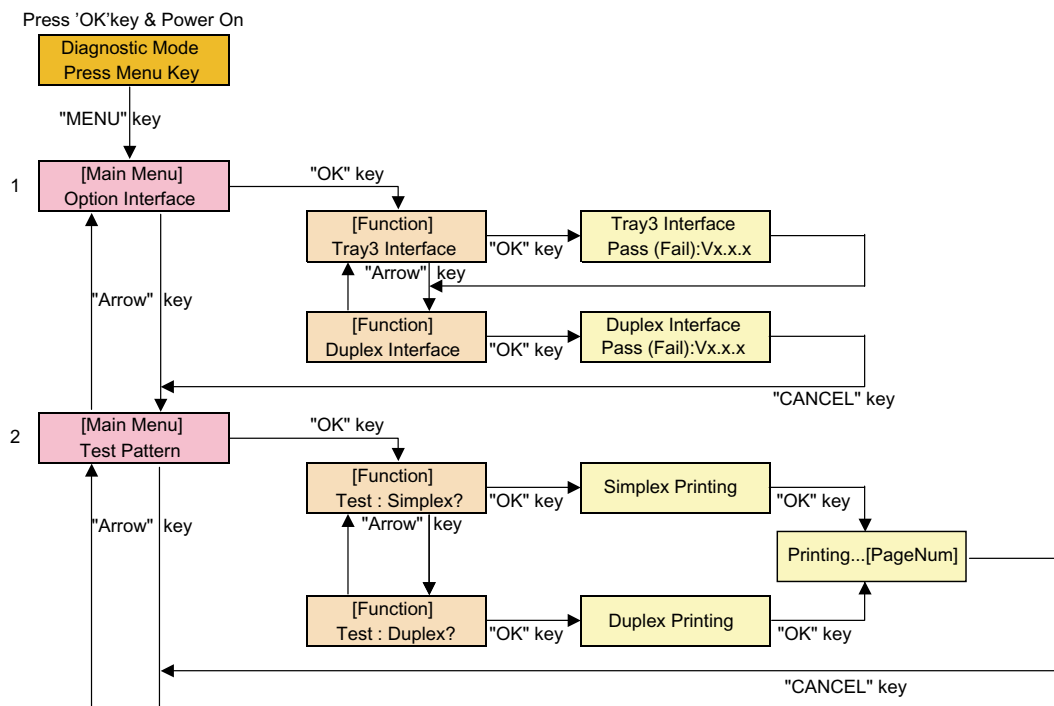
This chapter describes the main functions for service, such as the product maintenance method, the test output related to maintenance and repair, DCU using method, Jam removing method, and so on. It includes the contents of manual.

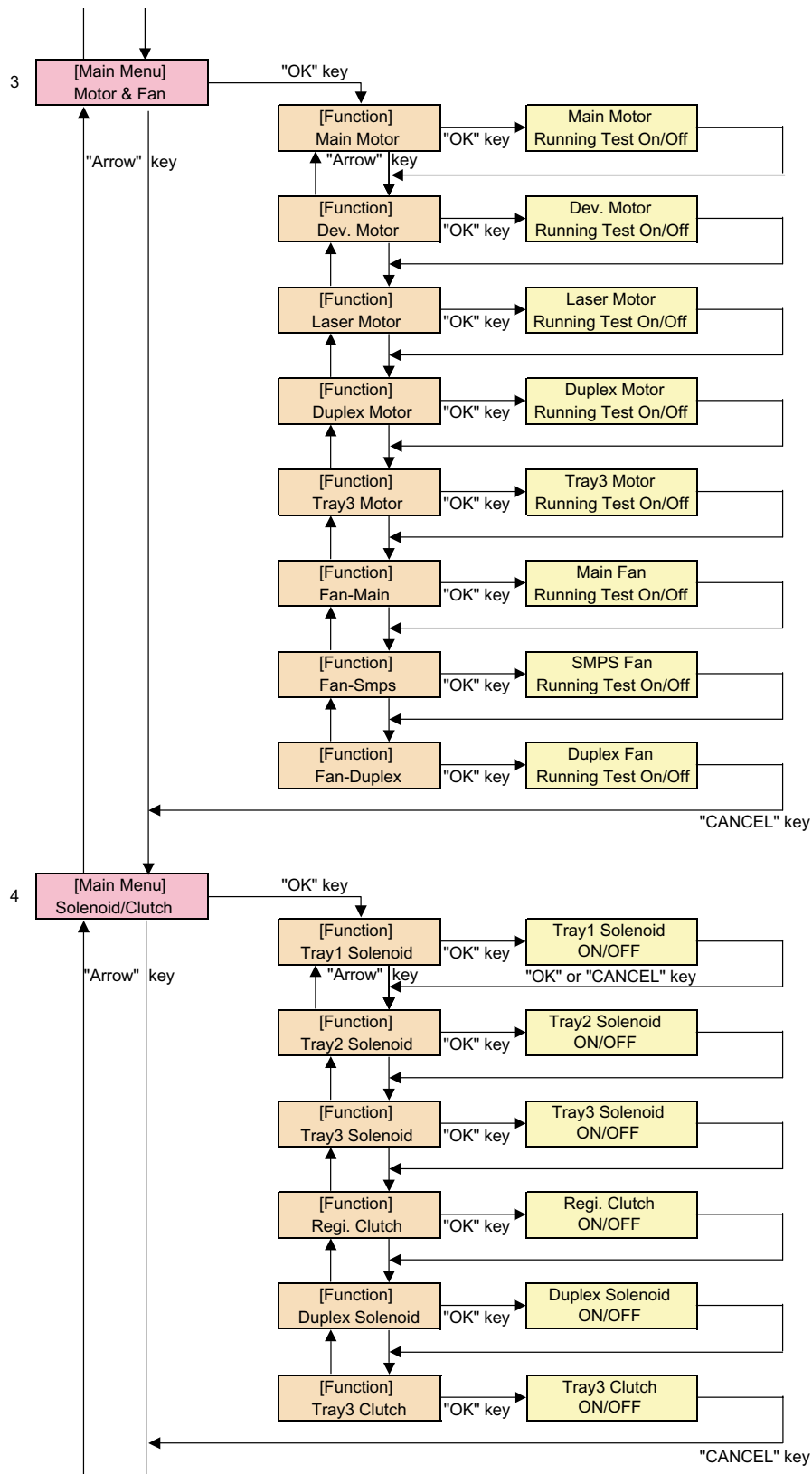
### 6.1 How to use EDC (Engine Diagnostic Control) Mode

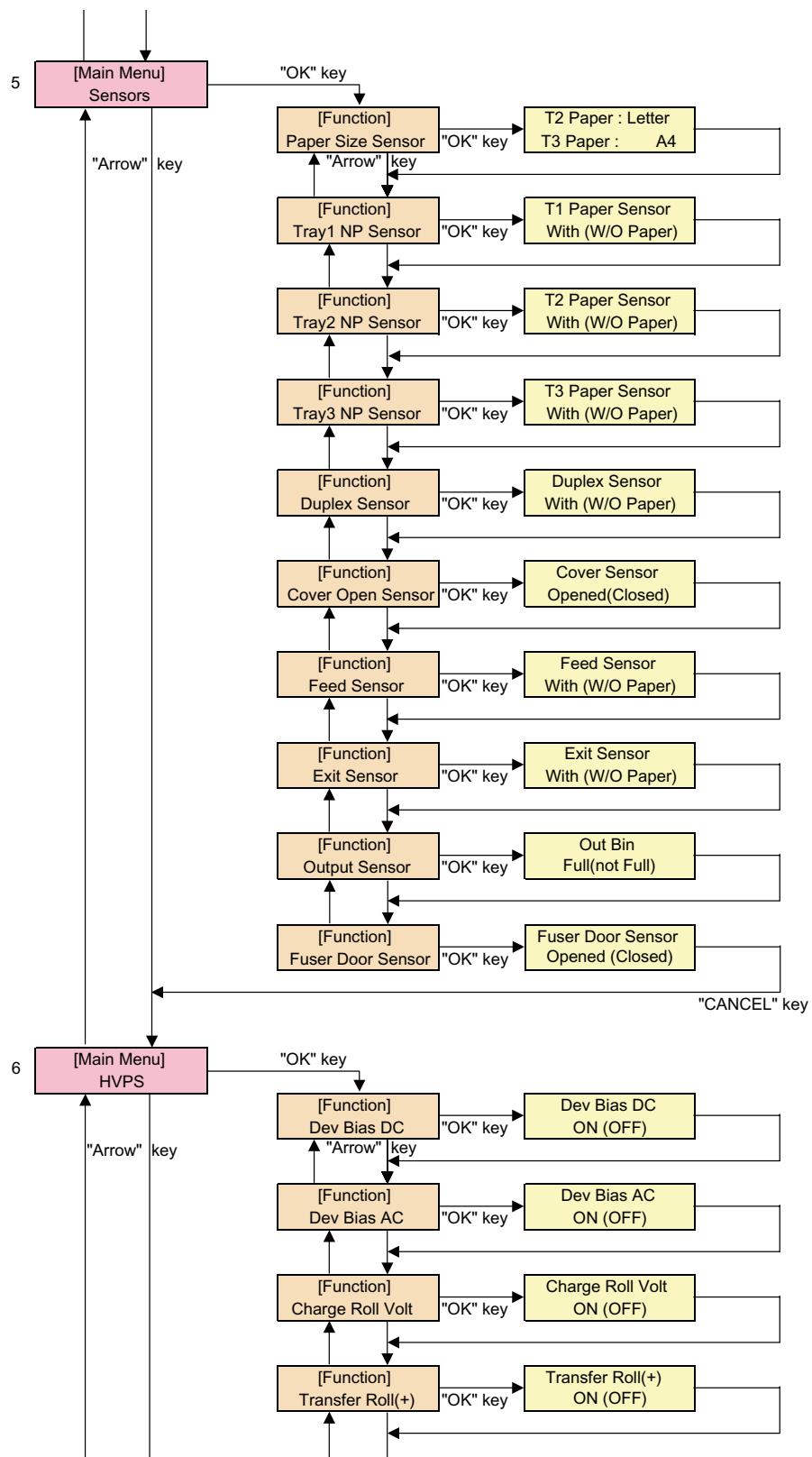
#### 6.1.1 EDC Setup

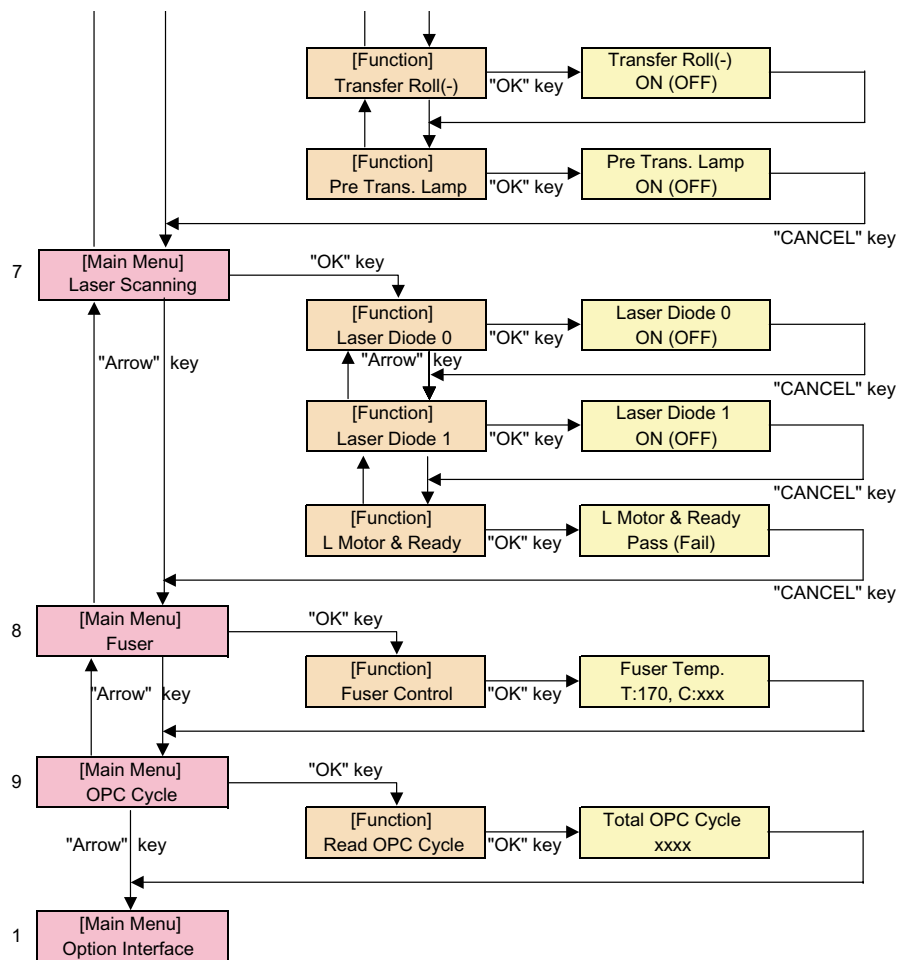
EDC(Engine Diagnostic Control, EDC will be used below) is considered to test and check whether each functions of machinery and h/w module are normal or not. All of the test function are able to be controlled by the keys and LCD window on the panel without any other kits. It's developed for related engineers, not for users.

#### ■ Engine Diagnostic Control UI Flow Chart









## 6.1.2 Entrance method for EDC

In order to enter the “EDC” mode, the entering method should be special because this mode is developed for the related engineers, not for end users.

- Entering the mode, the message, “Diagnostic Mode (Top Line)” is displayed.
- In this mode, an operator should press the ‘Menu’ Key to search each function he would like to test.

### • Usage

1. Checking whether printer is powered off or not.
2. Pressing the ‘OK’ key and turn on the power.
3. Continue to press the button until the message “Diagnostic Mode” is displayed.
4. Wait until the message “Press Menu key” is displayed. And then when the message is displayed, press the ‘Menu’ key.
5. A usage method for a function you would like to test is following.

## 6.1.3 Interface (Options)

This function is to check a communication state between the main controller and the option controller.

### • Usage

1. Press the “Arrow Keys (▲/▼)” until finding “[Main Menu]/ Option Interface” message on the panel.
2. Press the “OK Key” for executing this function, when it is found.
3. Searching the sub function for testing by Arrow Key.
4. When the desired function is found, press the ‘OK’ key to test.
5. The sub function is following.
  - [Function]/MANUAL TRAY Interface
  - [Function]/Duplex Interface

### • Function

| Function Name           | Description   | Display(LCD)                          | Remarks         |
|-------------------------|---|---------------------------------------|-----------------|
| Optional Tray Interface | After it is in the correct mode, a message is displayed on the panel.<br>If the I/F is normal, “Pass” message will be displayed and abnormal, “Fail” displayed. | Pass (Fail): x.x.x<br>Tray3           | Xs are version. |
| Duplex Interface        | After it is in the correct mode, a message is displayed on the panel.<br>If the I/F is normal, “Pass” message will be displayed and abnormal, “Fail” displayed. | Duplex Interface Pass<br>(Fail):x.x.x | Xs are version. |

\* The procedure and content above can be changed according to the situation.

## 6.1.4 Test pattern and paper path

- This function is to check a total print process state for engine side.
- In the EDC mode, a test pattern can be printed. While the printing job is processing, a location of a paper is continuously displayed on LCD.

### • Usage

1. Press the "Arrow Keys (▲/▼)" until finding "[Main Menu]/ Print Pattern" message on the panel.
2. Press the "OK Key", when it is found.
3. Searching the sub function for testing by Arrow key
4. When the desired function is found, press the 'OK' key to test.
5. The sub function is following.
  - [Function]/Simplex Print
  - [Function]/Duplex Print

### • Function

| Function Name | Description   | Display(LCD)  | Remarks                    |
|---------------|---|---------------|----------------------------|
| Simplex Print | When the operator selects this mode, the page is printed out by simplex mode. | Simplex Print | <Example><br>Simplex Print |
| Duplex Print  | When the operator selects this mode, the page is printed out by duplex mode.  | Duplex Print  | <Example><br>Duplex Print  |

If printing the test image, the printer continues to print the test image until pressing the stop button.

*\* The procedure and content above can be changed according to the situation.*

## 6.1.5 Motor and Fan

These functions are to check a current status (normal or not) of the motors and the fans.

### • Usage

1. Press the "Arrow Keys (▲/▼)" until finding "[Main Menu]/ Motor/ Fan" at main menu mode.
2. Press the "OK" key, when it is found.
3. Searching the sub function for testing by Arrow key
4. Press the "OK" key, when it is found.
5. Press the "OK" key for execution or the "Cancel" key for stop for the selected sub function.
6. The sub function is following.
  - [Function]/Main Motor
  - [Function]/Dev. Motor
  - [Function]/Laser Motor
  - [Function]/Duplex Motor

- [Function]/MANUAL TRAY Motor
- [Function]/Main Fan
- [Function]/Cru Fan
- [Function]/SMPS Fan
- [Function]/Duplex Fan

• **Function**

| Function Name       | Description   | Display(LCD)                          | Remarks |
|---------------------|---|---------------------------------------|---------|
| Main Motor          | When the operator executes this function by pressing 'OK' key, the main motor is running, and it is stopped when 'Cancel' key is pressed.   | Main Motor<br>Running Test On/Off     |         |
| Dev Motor           | When the operator executes this function by pressing 'OK' key, the Dev motor is running, and it is stopped when 'Cancel' key is pressed.  | Dev Motor<br>Running Test On/Off      |         |
| Laser Motor         | The laser motor function processes just like the main motor function.   | Laser Motor Running<br>Test On/Off    |         |
| Duplex Motor        | The Duplex motor function processes just like the main motor function.  | Duplex Motor<br>Running Test On/Off   |         |
| Optional Tray Motor | The MANUAL TRAY motor function processes just like the main motor function. When a MANUAL TRAY is not installed, this function is not processed and "Tray3 Not Installed" is shown. | Tray3<br>Motor Running Test<br>On/Off |         |
| Main Fan            | When the operator executes this function by pressing 'OK' key, the main fan is running, and it is stopped when 'Cancel' key is pressed.   | Main Fan<br>Running Test On/Off       |         |
| SMPS Fan            | When the operator executes this function by pressing 'OK' key, the SMPS fan is running, and it is stopped when 'Cancel' key is pressed.   | Smps Fan<br>Running Test On/Off       |         |
| Duplex. Fan         | The duplex-fan function processes just like the fan-main function.  | Duplex Fan<br>Running Test On/Off     |         |

\* The procedure and content above can be changed according to the situation.

## 6.1.6 Solenoid and Clutch

These functions are to check a current state (normal or not) of the solenoids and clutches.

### • Usage

1. Press the "Arrow Keys (▲/▼)" until finding "[Main Menu]/ Solenoid/Clutch" message on the panel.
2. Press the "OK Key", when it is found.
- 3 Searching the sub function for testing by Arrow key
4. Press the "OK" key, when it is found.
5. Press the "OK" key for execution or the "Cancel" key for stop for the selected sub function.
6. The sub function is following.
  - [Function]/Tray1 Solenoid
  - [Function]/MP Tray Solenoid
  - [Function]/MANUAL TRAY Solenoid
  - [Function]/Regi. Clutch
  - [Function]/ Duplex Solenoid
  - [Function]/ MANUAL TRAY Clutch

### • Function

| Function Name          | Description   | Display(LCD)               | Remarks |
|------------------------|---|----------------------------|---------|
| Tray1 Solenoid         | When the operator executes this function, the Tray1 Solenoid is turned on for 200ms, and then it is automatically stopped.  | Tray1 Solenoid<br>ON/OFF   |         |
| MP Tray Solenoid       | When the operator executes this function, the MP Tray Solenoid is turned on for 200ms, and then it is automatically stopped.  | MP Tray Solenoid<br>ON/OFF |         |
| Optional Tray Solenoid | When the operator executes this function, the MANUAL TRAY solenoid is turned on for 200ms, and then it is automatically stopped. a When the MANUAL TRAY is not installed, this function is not processed and "Tray3 Not installed" is shown | Tray3<br>Solenoid ON/OFF   |         |
| Regi. Clutch           | When the operator executes this function, the Regi Clutch is turned on for 200ms, and then it is automatically stopped.   | Regi. Clutch ON/OFF        |         |
| Duplex Solenoid        | When the operator executes this function, the Duplex Solenoid is turned on for 200ms, and then it is automatically stopped.   | Duplex Solenoid<br>ON/OFF  |         |
| Optional Tray Clutch   | When the operator executes this function, the Optional Tray Clutch is turned on for 200ms, and then it is automatically stopped.  | Tray3<br>Clutch ON/OFF     |         |

\* The procedure and content above can be changed according to the situation.



## 6.1.7 Sensors

These Functions are to check a current state (normal or not) of the Sensors.

### • Usage

#### Paper Size Sensor

1. Press the "Arrow Keys (▲/▼)" until finding "[Main Menu]/ Sensors" message on the panel.
2. Press the "OK Key", when it is found.
3. Press the "Arrow keys" until finding "[Function]/ Paper Size Sensor".
4. Press the "OK Key", when it is found.
5. Pull out a tray (2 or 3, not 1) you would like to test.
6. Check the message, "MP Tray: Out (MANUAL TRAY: Empty/Out)" is displayed.
7. Fill the tray with one or more papers.
8. Put the tray back.
9. Check the message on the LCD window.  
(The top line for MP Tray and the bottom line for MANUAL TRAY)
10. Compare the paper message on the window with the real paper size.

#### The other sensors

1. Press the "Arrow Keys (▲/▼)" until finding "[Main Menu]/ Sensors" message on the panel.
2. Press the "OK Key" for executing this function, when it is found.
3. Searching the sub function for testing by Arrow key
4. Press the "OK" key, when it is found.
5. The sub function is following.
  - [Function]/Tray1 Paper Sensor
  - [Function]/MP Tray Paper Sensor
  - [Function]/Manual Tray Paper Sensor
  - [Function]/ Duplex Sensor
  - [Function]/ Cover Sensor
  - [Function]/ Feed Sensor
  - [Function]/ Exit Sensor
  - [Function]/ Output Bin Sensor
  - [Function]/ MP Tray Out Sensor
  - [Function]/ Manual Tray Out Sensor
  - [Function]/Fuser Door Sensor
6. Check the message that is displayed on the LCD window for the state of each sensor as touching the sensor's actuator.

- **Function**

**Paper Size Sensor**

| Sensor            | Description   | Example                               |                 | Remarks |
|-------------------|---|---------------------------------------|-----------------|---------|
|                   |   | Message                               | Real Paper      |         |
| Paper Size Sensor | After a tray is filled with papers, confirm the paper size and compare it with the real size. | MP Tray: Letter<br>Manual Tray: LEGAL | Letter<br>LEGAL |         |

**The other sensors**

| Sensor                 | Description   | Display (LCD)                    |                                 | Remarks |
|------------------------|---|----------------------------------|---------------------------------|---------|
|                        |   | Before touching                  | After touching                  |         |
| Tray1 Paper Sensor     | After the tray 1 is pulled out, touch the sensor and confirm the message is changed or not.                         | Tray1 Paper Sensor W/Out Paper   | Tray1 Paper Sensor With Paper   |         |
| MP Tray Paper Sensor   | After the MP Tray is pulled out, touch the sensor and confirm the message is changed or not.                        | MP Tray Paper Sensor W/Out Paper | MP Tray Paper Sensor With Paper |         |
| Duplex Sensor          | After the back cover is opened, push a paper into the duplex path and confirm the message is changed or not.        | Duplex Sensor W/Out Paper        | Duplex Sensor With Paper        |         |
| Cover Sensor           | After the cover is open, touch the sensor and confirm the message is changed or not.                                | Cover Sensor Opened              | Cover Sensor Closed             |         |
| Feed Sensor            | After the cover is open and the toner cartridge is out, touch the sensor and confirm the message is changed or not. | Feed Sensor W/Out Paper          | Feed Sensor With Paper          |         |
| Exit Sensor            | After the back cover is open, push a paper into the exit path and confirm the message is changed or not.            | Exit Sensor W/Out Paper          | Exit Sensor With Paper          |         |
| Out Bin Sensor         | Touch the sensor in the output Bin and confirm the message changed.   | Output Bin Not Full              | Output Bin Full                 |         |
| MP Tray Out Sensor     | Remove the MP Tray and confirm the message changed.   | MP Tray In                       | MP Tray Out                     |         |
| Manual Tray Out Sensor | Remove the MANUAL TRAY and confirm the message changed.   | Manual Tray In                   | Manual Tray Out                 |         |

| Sensor            | Description  | Display (LCD)           |                         | Remarks |
|-------------------|--|-------------------------|-------------------------|---------|
|                   |  | Before touching         | After touching          |         |
| Fuser Door Sensor | After the rear cover is open, touch the fuser door sensor and confirm the message. | Fuser Door Senor Closed | Fuser Door Senor Opened |         |

\* The procedure and content above can be changed according to the situation.

## 6.1.8 HVPS

These functions are to check whether the control for HVPS is normal or not.

### • Usage

1. Press the "Arrow Keys (▲/▼)" until finding "[Main Menu]/ HVPS" message on the panel.
2. Press the "OK Key", when it is found.
3. Searching the sub function for testing by Arrow key
4. Press the "OK" key, when it is found.
5. The sub function is following.
  - [Function]/Dev. Bias DC
  - [Function]/Dev. Bias AC
  - [Function]/Charge Roll Volt
  - [Function]/Transfer Roller(+)
  - [Function]/Transfer Roller(-)
  - [Function]/Pre Trans. Lamp
6. Press the "OK Key" for executing or the "Cancel key" for stopping of the sub function.

- **Function**

| Function Name       | Description  | Display(LCD)                     | Remarks                      |
|---------------------|--|----------------------------------|------------------------------|
| Dev Bias DC         | Dev bias DC is supplied after the execution (link with OK Button) key is chosen and stops when the Cancel Button is chosen.  | Dev Bias DC<br>On / Off          |                              |
| Dev Bias AC         | Dev bias AC is supplied after the execution (link with OK button key is chosen and stops when the Cancel button is chosen.   | Dev Bias AC<br>On / Off          |                              |
| Charge Roll Voltage | Charge roller voltage is supplied after the execution (Link with OK button) key is chosen and stops when the Cancel button is chosen.  | Charge Roll Volt<br>On / Off     |                              |
| Transfer Roller (+) | Transfer positive voltage is supplied after the OK button is chosen and stops when the Cancel button is chosen.  | Transfer Roll(+)<br>On / Off[%d] | [%d] is the value of the ADC |
| Transfer Roll (-)   | Transfer negative voltage is supplied after the OK button is chosen and stops when the Cancel button is chosen.  | Transfer Roll (-)<br>On / Off    |                              |
| Pre Transfer Lamp   | The Pre-Transfer Lamp is on after the OK button is chosen and stops when the Cancel button key is chosen. It is possible to confirm the lamp is on after the cover is opened and the cartridge is removed. | Pre Trans. Lamp<br>On / Off      |                              |

\* The procedure and content above can be changed according to the situation.

## 6.1.9 Laser Scan Unit

These functions are to check a current state (normal or not) of the Laser Scanning Unit.

### • Usage

1. Press the "Arrow Keys (▲/▼)" until finding "[Main Menu]/ Laser Scanning" message on the panel.
2. Press the "OK Key", when it is found.
3. Searching the sub function for testing by Arrow key
4. Press the "OK" key, when it is found.
5. The sub function is following.
  - [Function]/Laser Diode 0
  - [Function]/Laser Diode 1
  - [Function]/L Motor & Ready
6. Press the "OK Key" for executing or the "Cancel key" for stopping of the sub function.

### • Function

| Function Name   | Description  | Display(LCD)                                    | Remarks |
|-----------------|--|---|---------|
| Laser Diode_0   | "Laser Diode0 On" is displayed, when the laser diode is on. On the other case "Laser Diode0 Off" is displayed.   | Laser Diode0<br>On ( Off )                      |         |
| Laser Diode_1   | "Laser Diode1 On" is displayed, when the laser diode is on. On the other case "Laser Diode1 Off" is displayed.   | Laser Diode1<br>On ( Off )                      |         |
| L Motor & Ready | When Laser Scanning Unit is ready to print (Laser diode on, Stable polygon motor speed) the message, "Laser Ready" is displayed. On the other case "Laser Error" | L Motor & Ready<br>Laser Ready<br>(Laser Error) |         |

\* The procedure and content above can be changed according to the situation.

## 6.1.10 Fuser

This function is to check a current state (normal or not) of the fuser.

### • Usage

1. Press the "Arrow Keys (▲/▼)" until finding "[Main Menu]/ Fuser" message on the panel.
2. Press the "OK Key", when it is found.
3. Confirm the message, "[Function]/ Fuser Temp.".
4. Press the "OK Key".
5. Set the temperature with arrow keys. (Default: 170°C, Range: 150 -190°C)
6. Press the "OK Key" for executing or the "Cancel key" for stopping this function.
7. Compare a target temperature with a real temperature.

### • Function

| Function Name | Description  | Display(LCD)                 | Remarks |
|---------------|--|------------------------------|---------|
| Fuser Temp.   | When "Target Temp" is displayed, Input a temperature you would like to set with the "arrow keys (▲ / ▼)" and Press the "Ok key". The target temperature and a real temperature will be displayed on the bottom line.(Default T is 170) | Fuser Temp.<br>T: 170, C: XX |         |

\* The procedure and content above can be changed according to the situation.

## 6.1.11 Opc Cycle

-This function is to check a total rotating number of OPC drum as of the entering point.  
The entering point means the time when the power is on, not the initial point of the OPC Cycle test.

### • Usage

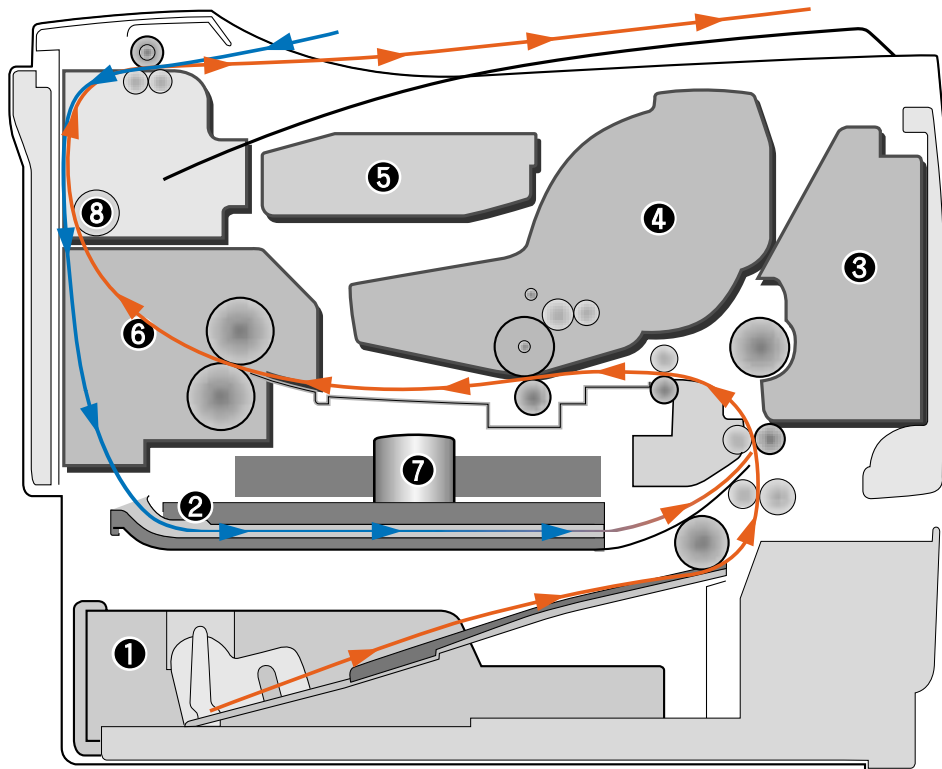
1. Press the "Arrow Keys (▲/▼)" until finding "[Main Menu]/ OPC cycle" message on the panel.
2. Press the "OK Key", when it is found.
3. Confirming the "[Function]/ Read OPC cycle" message, press the 'OK key'.
4. Press the "Cancel key" for stopping this function.

### • Function

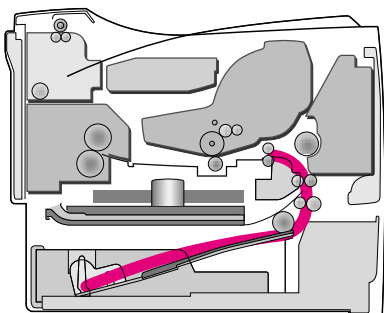
| Function Name  | Description  | Display(LCD)            | Remarks |
|----------------|--|-------------------------|---------|
| Read OPC Cycle | A total rotating number of OPC drum is displayed on the bottom line of LCD window, when the process is on. | Total OPC-Cycle<br>XXXX |         |

\* The procedure and content above can be changed according to the situation.

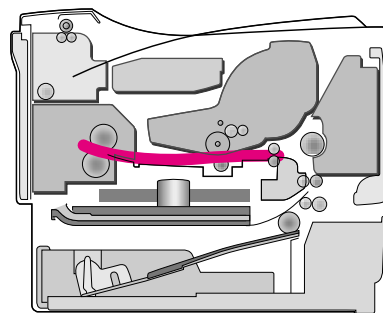
## 6.2 Paper Path



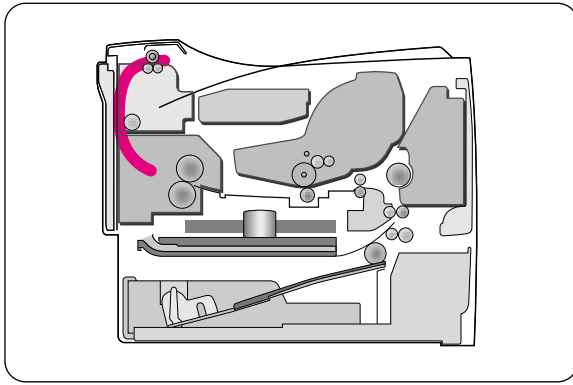
- |                     |                   |
|---------------------|-------------------|
| ❶ Cassette          | ❷ Duplex          |
| ❸ MPF               | ❹ Print Cartridge |
| ❺ LSU               | ❻ Fuser           |
| ❼ SMPS & HVPS Board | ❽ Duplex Solenoid |



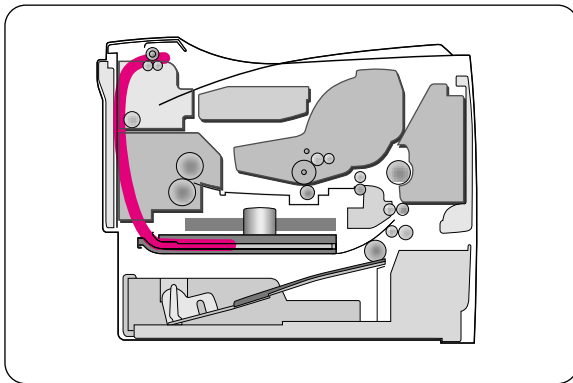
&lt;Jam 0&gt;



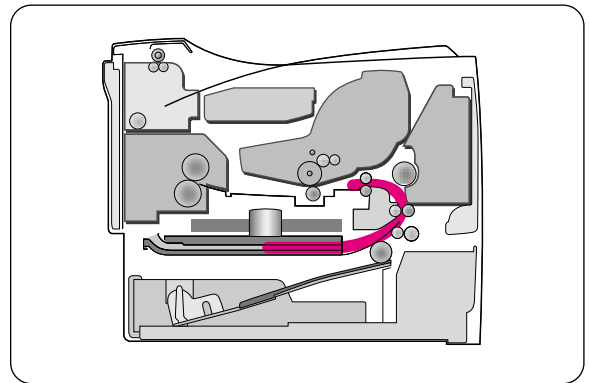
&lt;Jam 1&gt;



<Jam 2>



<Jam Duplex 1>



<Jam Duplex 2>

### • Simplex

- 1) A paper is fed from a cassette or MPF by a printing order.
- 2) The fed paper passes a paper feeding sensor.
  - If the sensor does not operate after feeding the paper, the Jam0 occurs.
- 3) The paper passes a paper exit sensor, and it comes out from a machine.
  - If the trailing edge of the paper does not come out from a machine after the leading edge of the paper passes the sensor, then certain time later, a Jam2 occurs.

### • Duplex

- 1) A paper is fed from a cassette or MPF by a printing order.
- 2) The fed paper passes a paper feeding sensor.
  - If the sensor does not operate after feeding the paper, a Jam0 occurs.
- 3) The paper that passes a paper exit sensor takes several printing processes, and moves to a paper exit sensor.
  - If the sensor does not operate after certain time, a Jam 1 occurs.
- 4) If the paper does not discharge until the paper passes an exit roller and a Roller-Exit-F/Down, a Jam 2 occurs.
- 5) The printing paper starts to be printed for duplex only by reversing rotation by an exit motor. The printing paper enters to a machine through an exit roller, and reaches to duplex sensor.
  - If the printing paper cannot reach to the duplex sensor after certain time, a duplex Jam 1 occurs.
- 6) The printing paper that passes the duplex sensor reaches to a feed sensor again and a printing operation is tried over again.
  - If the printing paper cannot reach to a feed sensor after certain time later, a duplex Jam 2 occurs.



## 6.2.1 Clearing Paper Jams

When a paper jam occurs, the display on the control panel shows the message indicating the corresponding location of the paper jam.

### 6.2.1.1 Tips for Avoiding Paper Jams

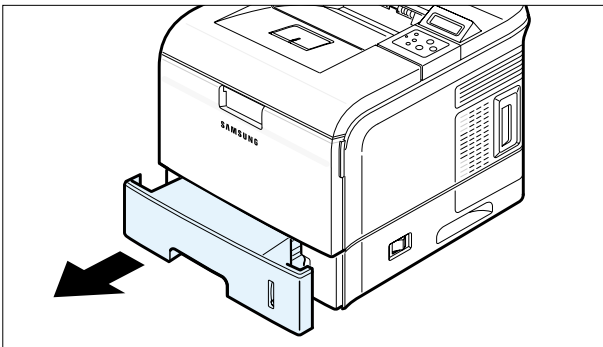
By selecting the correct paper types, most paper jams can be avoided. If a paper jam occurs, follow the steps outlined in

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

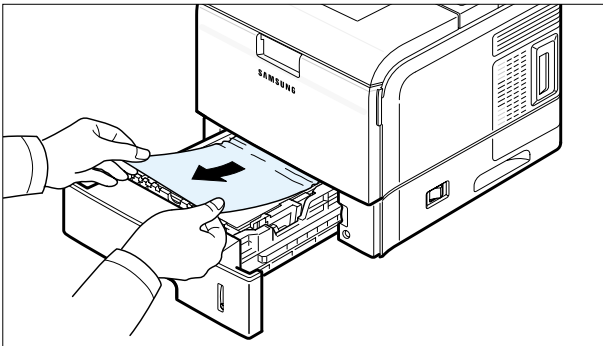
### 6.2.1.2 In the Paper Feed Area(Jam 0)

#### • In the Tray1

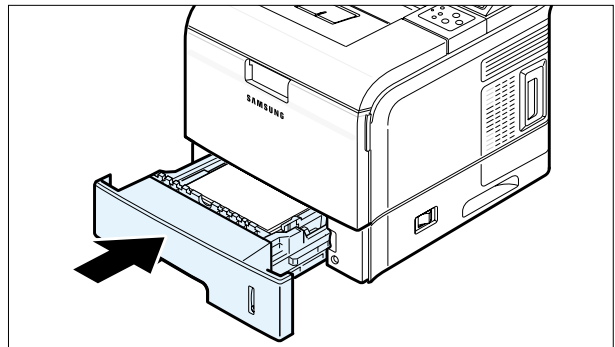
1. Slide out the Tray1 to expose the jammed paper.



2. Remove any misfed paper by pulling it out by the visible edge from the tray. Make sure that all of the paper is properly aligned in the tray.



3. Slide the tray back into the printer.

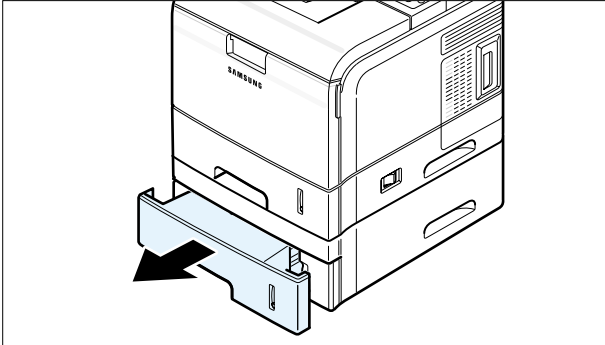


4. Open and close the top cover to resume printing.

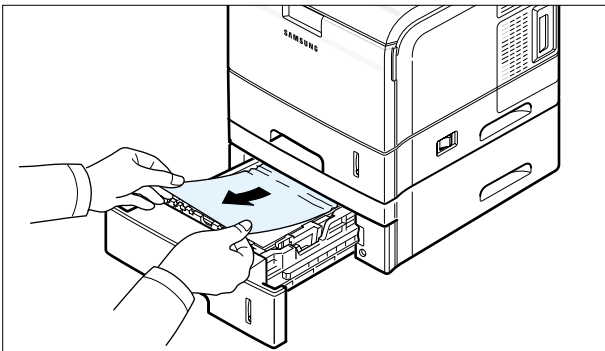
**NOTE :** If the jammed paper is not invisible or if there is resistance when you pull the paper, remove the tray from the printer and carefully pull the jammed paper free from the printer.

### • In the Optional MP Tray

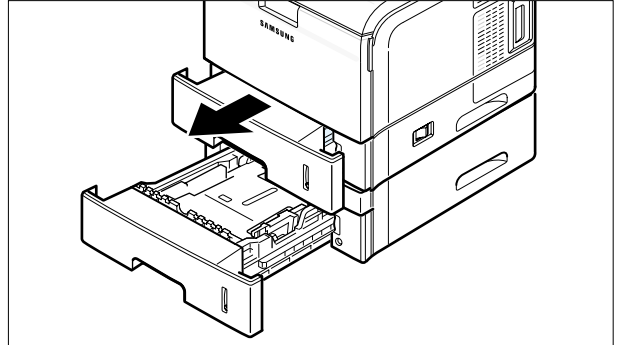
1. Pull the optional MP Tray out of the printer.



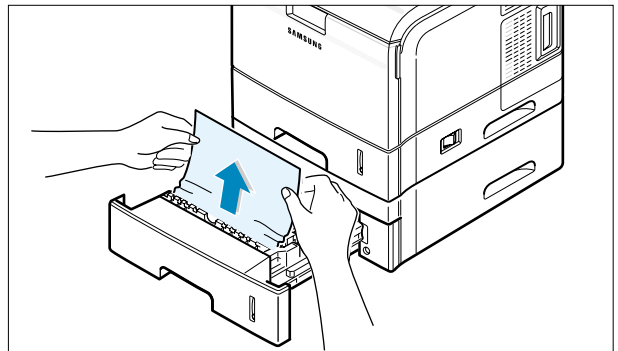
2. If you see the jammed paper, remove the paper from the tray.



3. If you cannot find the jammed paper in the MP Tray, pull the Tray1 half way out of the printer, and remove the paper.



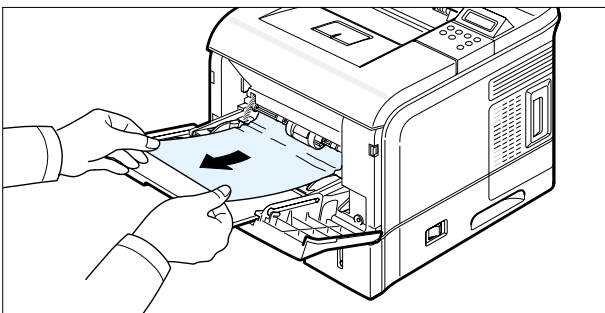
4. Slide the trays back into the printer. Open and close the top cover. Printing can be resumed.



### • In the Multi-Purpose Tray

1. Open the Multi-Purpose Tray.

2. Carefully remove the jammed paper from the tray.



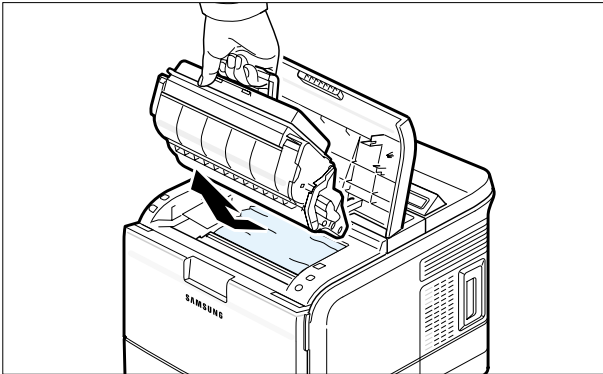
3. Open and close the top cover. Printing can be resumed.

### 6.2.1.3 Around the Print Cartridge (Jam1)

1. Open and close the top cover, and the jammed paper should exit the printer.

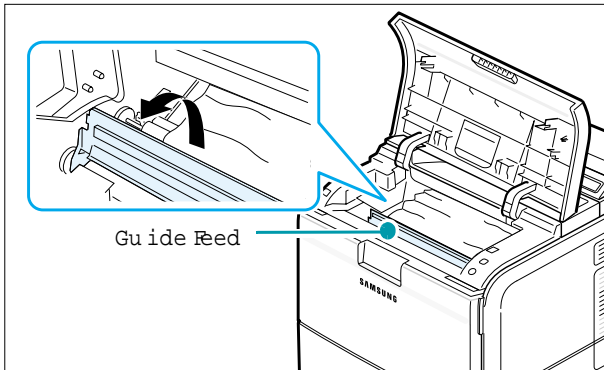
If not, continue to Step 2.

2. Open the top cover and remove the print cartridge.

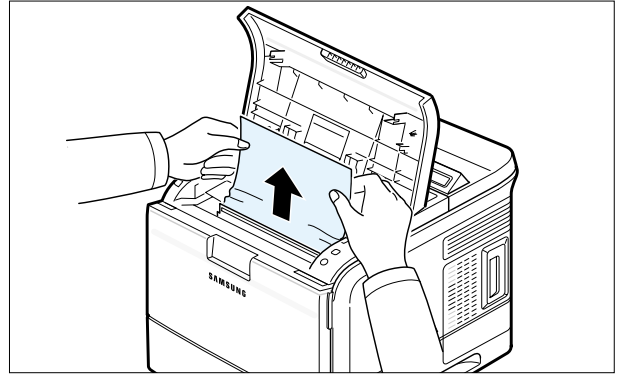


**CAUTION :** To prevent damage to the print cartridge, do not expose it to light for more than a few minutes. Place a piece of paper over the top of the print cartridge to shield it while it is out of the printer.

3. Carefully lift up the guide feed.

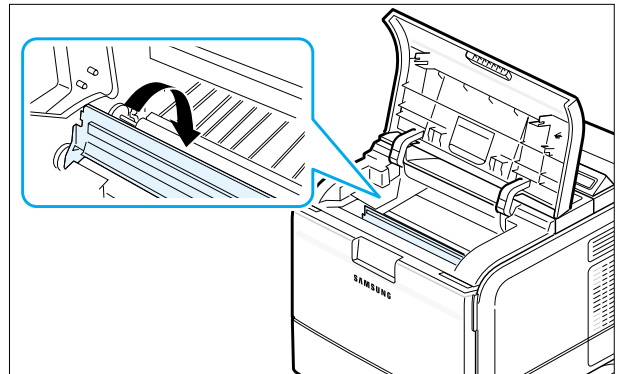


4. Gently pull the jammed paper towards you to remove it from the printer.



If the jammed paper is not visible or there is resistance when you pull the paper, go to "In the Paper Exit Area".

5. Flip down the guide feed and reinstall the print cartridge.

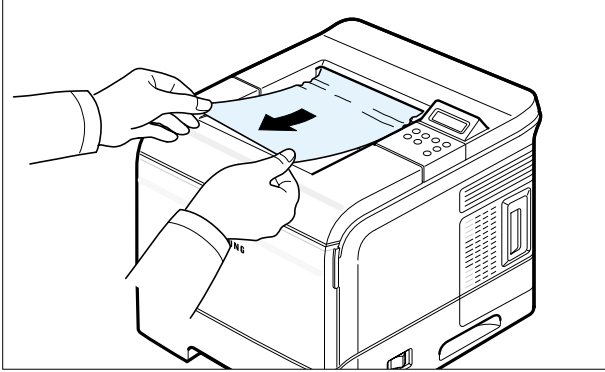


**NOTE :** If the print cartridge is difficult to reinstall, make sure that the guide feed has been flipped back down into position.

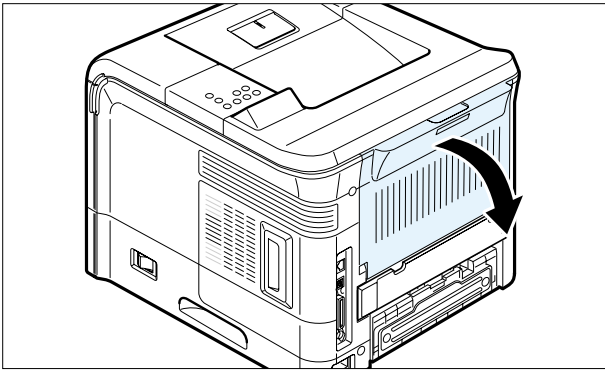
6. Close the top cover. Printing can be resumed.

#### 6.2.1.4 In the Paper Exit Area (Jam 2)

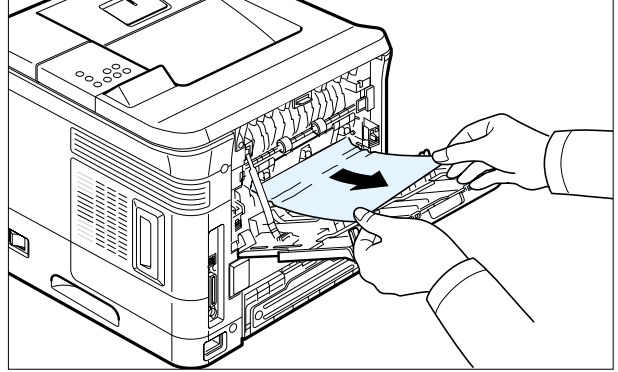
1. If a long portion of the paper is visible, pull it straight out. If not, continue to Step 2.



2. Open the rear output tray.



- ※ 3. Loosen the paper if it is caught in the feed rollers. Then gently pull the paper out.



4. Close the rear output tray.

5. Open and close the top cover. Printing can be resumed.

#### ※ NOTE

**>> In case the roller of fuser assembly is contaminated, clean it as follows**

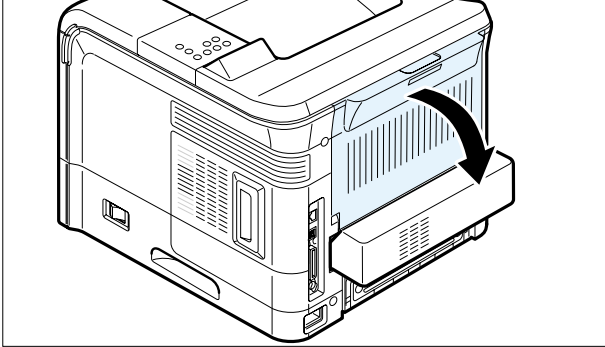
1. In case for Fuser Cleaning
  - Select as follows: Menu -> Setup -> Maintenance -> Fuser Cleaning
2. In case for OPC Cleaning
  - Select as follows: Menu -> Setup -> Maintenance -> OPC Cleaning

**>> If contamination is still found, do clean in accordance with above method several times.**

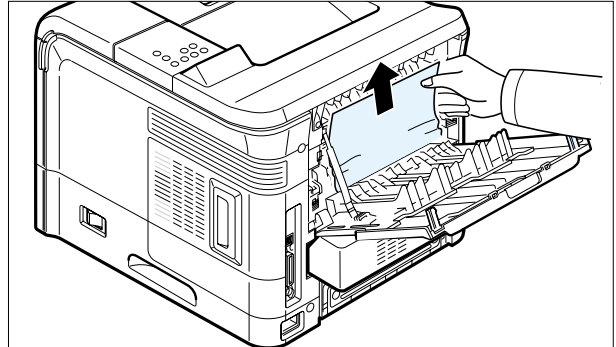
### 6.2.1.5 In the Duplex Area

#### • Duplex Jam 1

1. Open the rear output tray.



2. Remove the jammed paper.

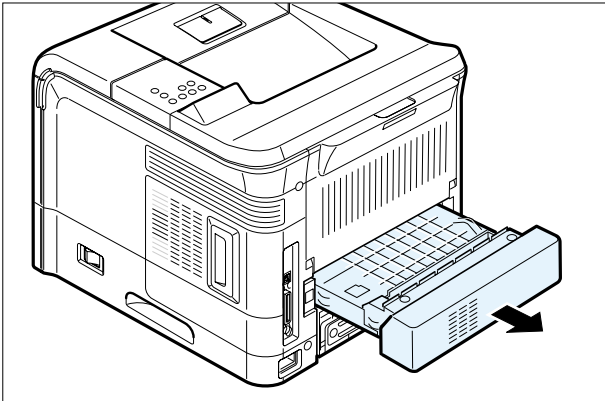


3. Close the rear output cover.

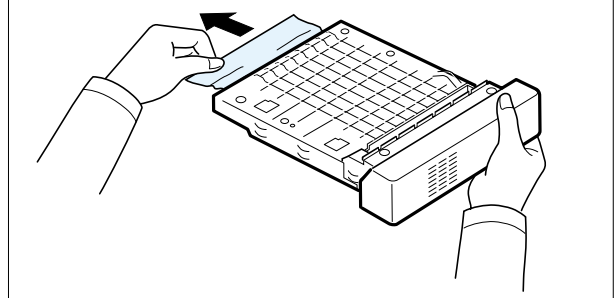
4. Open and close the top cover. Printing can be resumed.

#### • Duplex Jam 2

1. Pull the duplex unit out of the printer.



2. Locate the jammed paper and remove it.



3. Insert the duplex unit into the slot.

4. Open and close the top cover. The printer will resume printing.

## 6.3 Sample Pattern

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This product has the several sample patterns for maintenance. With the sample patterns, check the existence of the abnormality. The patterns help to regularly maintain the product.

### 6.3.1 Information Pages

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Your printer comes with a set of information pages that helps you solve printing problems and obtain the best results from your printer. You can access these pages from the printer's front panel.

To print information pages:

1. On the printer's front panel, press the Menu button, then press the Enter button to select Information.
2. Select Info Pages, then press the Enter button.
  - ① Slect key(← , →), tind to information menu.
  - ② Press Enter key, sutch to information page.
  - ③ Press Enter key, the printing.
- \* 3. Select the appropriate information page, then press the Enter button to print.

\* If installed The HDD, select press(1~3 times), then display information menu.

**Note :** Print the "Menu Map" to see other information pages available for printing.

### 6.3.2 Demo Pages

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Your printer comes with a set of sample pages which demonstrate different functions.

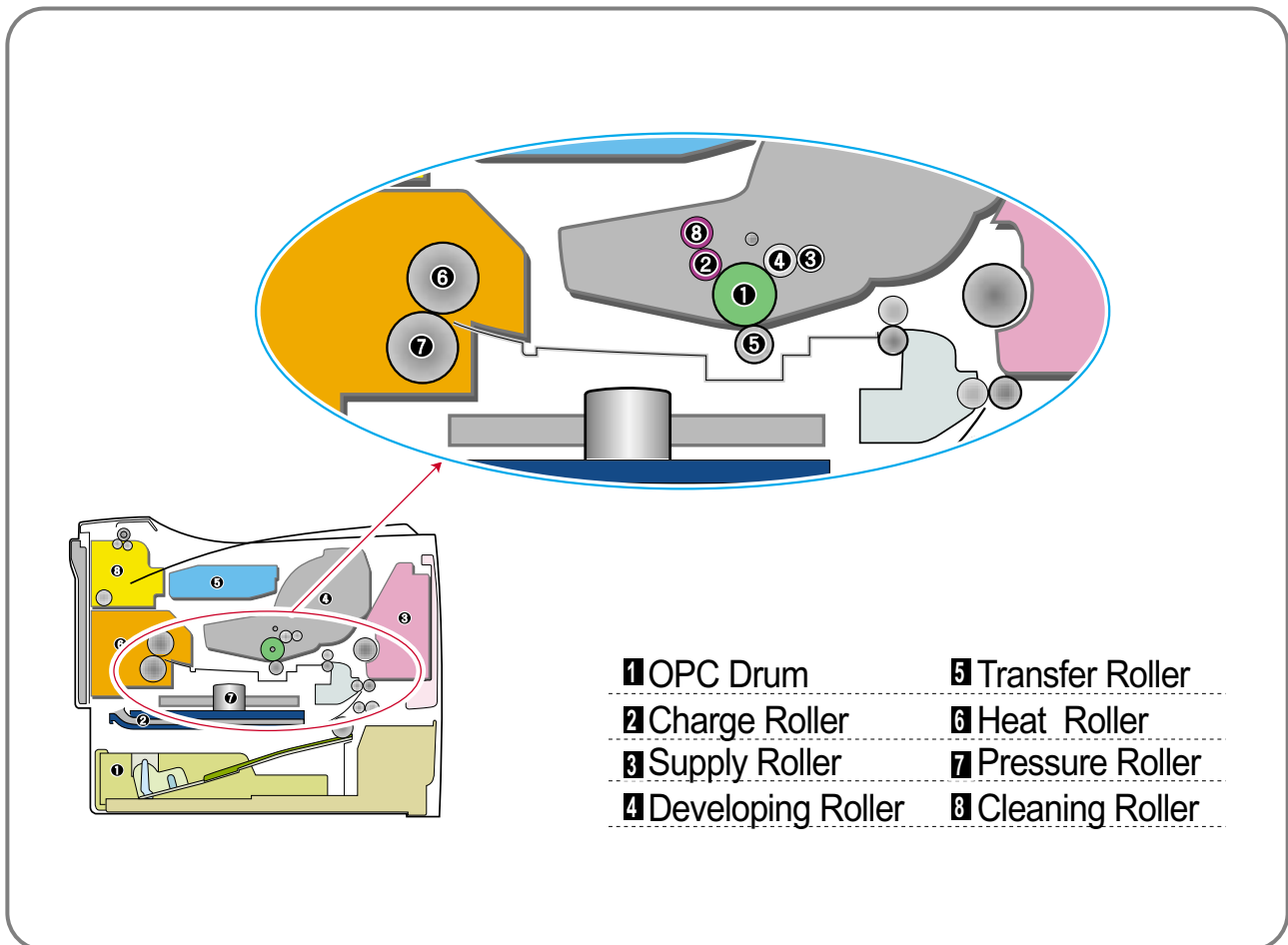
To print sample pages:

1. On the printer's front panel, press the Menu button, then press the OK button to select Information.
2. Select Demo Pages, then press the OK button.
3. Select the desired sample page, then press the OK button to print.

## 6.4 Periodic Defective Image

If the delinquent image regularly occurs in the printed-paper, it is due to delinquent or damaged roller. Refer to the table in below and check the condition of the roller.

| No | Roller            | Defective image | Typical defect                          |
|----|-------------------|-----------------|---|
| 1  | OPC Drum          | 95 mm           | white spot on black image or black spot |
| 2  | Charge Roller     | 38 mm           | black spot                              |
| 3  | Supply Roller     | 45 mm           | light or dark horizontal image band     |
| 4  | Developing Roller | 43 mm           | horizontal image band                   |
| 5  | Transfer Roller   | 55 mm           | image ghost                             |
| 6  | Heat Roller       | 126 mm          | Black spot and image ghost              |
| 7  | Pressure Roller   | 126 mm          | black spot on the backside              |



<Rollers Layout>

## 6.5 Error Messages

The front panel displays the printer's status or error messages. Refer to the list below for an explanation of these messages and how to clear problems. The messages and their meanings are listed in alphabetical order, with numbered messages following.

| Message                                 | Meaning   | Suggested solutions  |
|---|---|--|
| <b>Door Open</b>                        | The front cover or rear cover is not securely latched.          | Close the cover until it locks into place.   |
| <b>Duplex Jam 0<br/>Check Inside</b>    | Paper has jammed during duplex printing.                        | Clear the jam.   |
| <b>Duplex Jam 1<br/>Open/Close Door</b> | Paper has jammed during duplex printing.                        | Clear the jam.   |
| <b>Fuser Door Open</b>                  | The fuser door is not securely latched.                         | Open the rear cover and close the fuser door until it locks into place.<br>For the location of the fuser door.   |
| <b>Install Toner</b>                    | A toner cartridge is not installed.                             | Install a toner cartridge.   |
| <b>Invalid Toner</b>                    | The toner cartridge you have installed is not for your printer. | Install a Samsung-genuine toner cartridge, designed for your printer.  |
| <b>Load Manual<br/>Press Stop Key</b>   | The multi-purpose tray is empty in manual feed mode.            | Load a sheet of print material and press <b>Stop</b> (if you use the ML-3050) or <b>OK</b> (if you use the ML-3051N or ML-3051ND). You need to press <b>Stop</b> or <b>OK</b> each page to be printed. |



| Message                                | Meaning  | Suggested solutions  |
|--|--|--|
| <b>Low Heat Error<br/>Cycle Power</b>  | There is a problem in the fuser unit.                      | Unplug the power cord and plug it back in. If the problem persists, replace to the Fuser unit. |
| <b>LSU Hsync Error<br/>Cycle Power</b> | A problem has occurred in the LSU (Laser Scanning Unit).   | Unplug the power cord and plug it back in. If the problem persists, replace to the LSU-unit.   |
| <b>LSU Motor Error<br/>Cycle Power</b> | A problem has occurred in the LSU (Laser Scanning Unit).   | Unplug the power cord and plug it back in. If the problem persists, replace to the LSU-unit.   |
| <b>Main Motor Locked</b>               | There is a problem in the main motor.                      | Open and then close the front cover.   |
| <b>Open Heat Error<br/>Cycle Power</b> | There is a problem in the fuser unit.                      | Unplug the power cord and plug it back in. If the problem persists, replace to the Fuser unit. |
| <b>Over Heat Error<br/>Cycle Power</b> | There is a problem in the fuser unit.                      | Unplug the power cord and plug it back in. If the problem persists, replace to the Fuser unit. |
| <b>Paper Jam 0<br/>Open/Close Door</b> | Paper has jammed in the feeding area of the tray.          | Clear the jam.   |
| <b>Paper Jam 1<br/>Open/Close Door</b> | Paper has jammed in the fuser area.                        | Clear the jam.   |
| <b>Paper Jam 2<br/>Check Inside</b>    | Paper has jammed in the paper exit area.                   | Clear the jam.   |
| <b>Printing...</b>                     | The printer is printing jobs using the displayed language. | Complete your printing.  |
| <b>Ready</b>                           | The printer is on-line and ready to printer.               | Use your printer.  |

| Message                       | Meaning  | Suggested solutions   |
|-------------------------------|--|---|
| <b>Replace Toner</b>          | This message appears between the <b>Toner Empty</b> and <b>Toner Low</b> status. | Replace the toner cartridge with a new one.   |
| <b>Self Diagnostic...</b>     | The engine in your printer is checking some problems detected.                   | Please wait a few minutes.  |
| <b>Sleeping...</b>            | The printer is on power save mode.   | When data is received, it switches to on-line automatically.  |
| <b>Toner Empty</b>            | The toner cartridge has run out. The printer stops printing.                     | Replace the toner cartridge with a new one.   |
| <b>Toner Low</b>              | The toner cartridge is almost empty.   | Take out the toner cartridge and thoroughly shake it. By doing this, you can temporarily reestablish printing operations. |
| <b>Tray 1<br/>Paper Empty</b> | There is no paper in the tray 1.   | Load paper in the tray 1.   |
| <b>Tray 2<br/>Paper Empty</b> | There is no paper in the optional tray 2.  | Load paper in the optional tray 2.  |