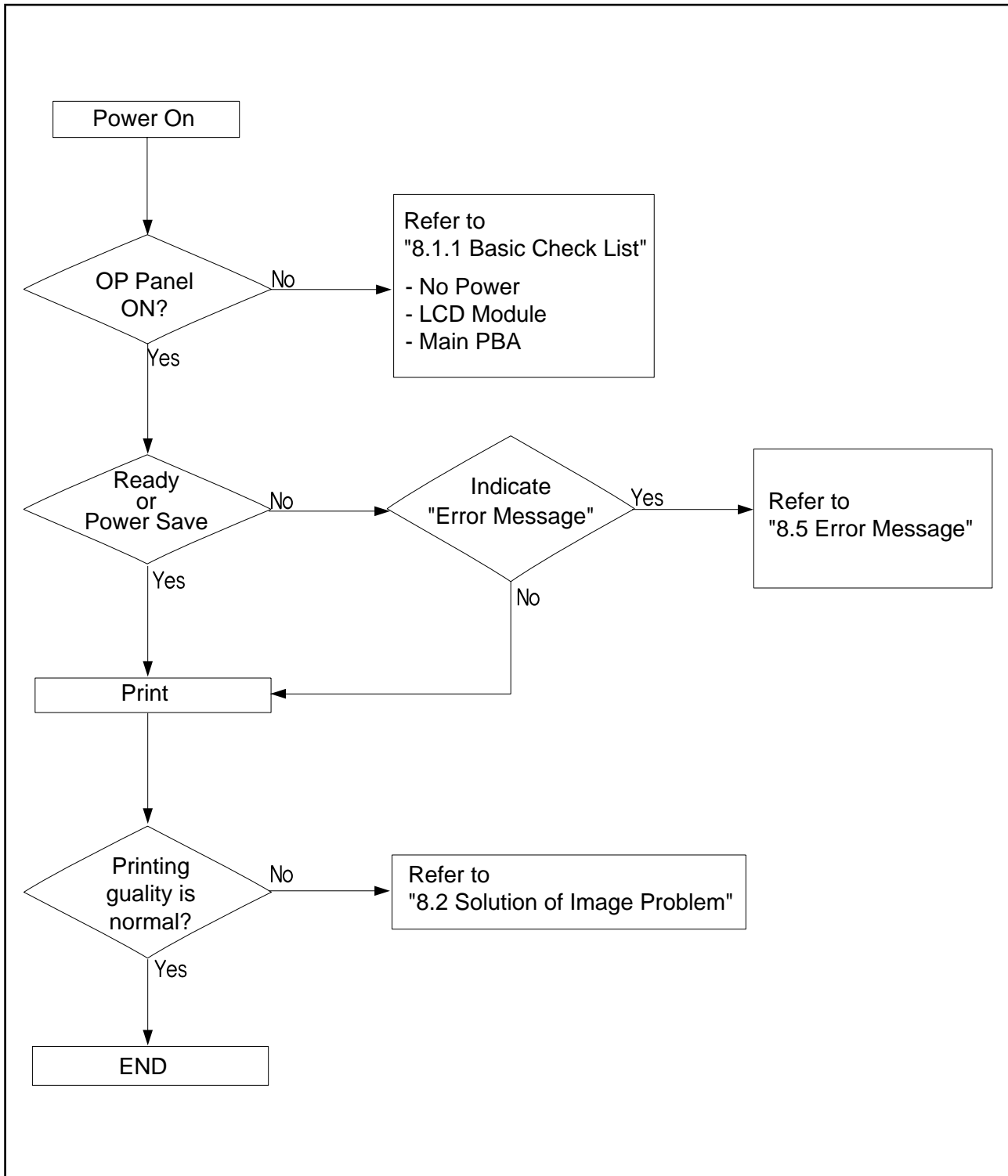


# 8. Troubleshooting

## 8.1 Procedure of Checking the Symptoms

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



### 8.1.1 Basic Check List

#### 1. Check the Power.

- Does "Warming Up" appear on the display?  
--> If not check power cable, switch or SMPS. (see section 8.1.2 below)  
--> Does the wall socket work?
- Do the Motors or other components initialize (listen for main motor, fan and LSU sounds)?  
--> If not or there are none of the normal startup sounds check cable, switch or SMPS.  
--> Does the wall socket work?

#### 2. Check the LCD Panel.

- Is there any display at all?  
--> If not check power cable, switch or SMPS. (see section 8.1.2 below)  
--> Does the wall socket work?
- Is the display a meaningful message (are there any broken or badly formed characters)?  
--> Check the main PBA and cable harness.
- Is the message on the LCD Panel a standard error message?  
--> Refer to section 8.4 or 8.5 (Page 8-14 or 8-18).

#### 3. Check the Paper Path

- Is there a Paper Jam?  
--> Remove any paper fragments caught in the paper path.  
--> Refer to section 8.3 (Page 8-10).
- Paper Jam occurs repeatedly at a specific point in the Paper Path  
--> Dismantle the machine and carefully inspect the region where the jam occurs.  
(Especially, check if paper fragments are caught in the Fuser)

#### 4. Print the Information Page (Configuration).

- Is there a problem?  
--> If there is an error see section 2) or 3) above.
- Try printing a test page from a computer.  
--> If there is an error check cables and driver installation.

#### 5. Check the Print Quality.

- Is there are a Print Quality Problem?  
--> Refer to section 8.2 (Page 8-5).

#### 6. Check consumables (toner etc.).

- Using the keys print the Information Page.  
--> Refer to 8.1.4 below and to section 3.5 (Page 3-3) for expected life of various consumable parts, compare this with the figures printed and replace as required

## 8.1.2 Initial Inspection

### 1. Check Power part

1. The printer does not work no matter how long you wait.
  - A. Is the Power Switch (printer and wall socket) turned on ?
  - B. Is the Power Cord connected to the printer correctly ?
  - C. Is the Power cord connected to the wall socket correctly ?
  - D. Is wall socket working ?
  - E. Is the unit rated at the same voltage as the supply ?
2. Does the Fan work when power is turned on?
  - A. Check the connectors on the SMPS.
  - B. Check the fuses in the SMPS.
  - C. Check any error message display on the LCD panel and refer to the troubleshooting section 8.4 or 8.5 (Page 8-14 or 8-18).

### 2. Check the Installation Environment.

1. Ensure the installation surface is flat, level and free from vibration.  
If necessary move the printer.
2. Ensure that the temperature and humidity of the surroundings are within specification  
If necessary move the printer.
3. Ensure that the printer is position away from any air conditioning or other heating or cooling equipment. Also ensure that is not positioned in a direct draft from any air conditioning, fan or open window.  
If necessary move the printer.
4. Ensure the printer is not positioned in direct sunlight.  
If it is unavoidable use a curtain to shade the printer.
5. Ensure the printer is installed in a clean dust free environment.  
Move the printer to clean area if necessary.
6. Some industrial or cleaning processes give of fumes which can affect the printer.  
Move the printer away from this type of air pollution

### 3. Check paper type.

1. Use only paper which is of a suitable quality, weight and size?  
See the user guide.

### 4. Check the overall condition of the printer

1. Is the printer properly maintained ?  
Clean the Paper Transport Passages.  
Any rollers with dirt surfaces should be cleaned or replaced.

### 8.1.3 Check the length of life of components

---


The length of life of consumable components is displayed either by operating time (% of life) or quantity of output. The printer will not work if any of these parts have exceeded their expected life. When a user replaces any of these consumable parts they must reset the appropriate counter using the maintenance menus (see section 7.4, page 7-13).

The printer calculates the working time and quantity of output for each component and saves this information.


1. The Working time for each component (OPC Drum, Toner Cartridge, Image Transfer Belt, Fuser Unit) is measured every 30 seconds when the Transport Motor and Fusing Contact Motor are active.
2. In order to calculate the number of images printed 1 is added to the appropriate counter every 30 seconds. The amount of waste toner is calculated based on the number of pixels in the image.
3. When the user replaces any of the consumable parts and resets the appropriate counter it starts again from 0.

## 8.2 Solution of Image Problem


### - No Image

	Cause	Sequence of Treatment
	Driver Installation Problem.	Try printing a Demo Page. Check that the operating system driver was installed correctly.
	Toner cartridge contacts dirty or not making good contact or empty Toner Cartridge (when printing a single color image)	Check and clean the toner contacts. Re-seat the Toner Cartridge. Replace the Toner cartridge
	ITB cartridge contacts dirty or not making good contact or Faulty ITB unit	Check and clean the ITB contacts. Re-seat the ITB Unit. Replace ITB Unit
	LSU cable harness plugs not fitted properly or faulty LSU.	Check the connectors on the LSU Unit and main PWA are properly inserted. Replace the LSU Unit, cables or MAIN PWA as required
	Toner transfer problem	Check all HV contacts and cables. Replace the HVPS.

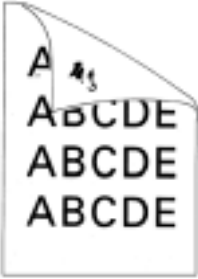
### - Completely Black Image

	Cause	Sequence of Treatment
	OPC Drum BIAS contacts dirty or not making good contact.	Clean Drum contacts.. Replace the OPC Drum.
	Charge Voltage of the OPC Drum is unstable.	Replace the HVPS Board.


### - White Spots / Black Spots / Colored Spots

	Cause	Sequence of Treatment
	Contamination of the internal mechanism of the toner cartridge	Replace the Toner Cartridge.
	OPC Drum surface contaminated or damaged.	Replace the OPC Drum.
	ITB Unit belt is contaminated or damaged.	Replace the ITB Unit Belt.
	Fuser Unit is contaminated.	Clean or replace the Fuser Unit.


**- Toner Smudges on the reverse side.**

	Cause	Sequence of Treatment
	Paper Path is contaminated.	Open covers fully and clean the Paper Path.
	ITB Unit Belt is contaminated.	Clean or replace the ITB Unit.
	Pressure Roller of Fuser Unit is contaminated.	Clean or replace the Fuser Unit.


**- Foggy back ground**

	Cause	Sequence of Treatment
	If the background is contaminated with only one color.	Replace the appropriate Toner Cartridge
	If the background is generally contaminated with all color.	Ensure TDC process is enabled. If problem persists replace the OPC Drum
	If Printing Density is dark(one color only).	Replace the appropriate Toner Cartridge
	If Printing Density is dark(all colors).	Ensure TDC process is enabled. If problem persists replace the OPC Drum


**- Low image density**

	Cause	Sequence of Treatment
	Poor toner transfer to OPC-one color only	Check and clean Toner contacts Replace the appropriate Toner Cartridge
	Poor toner transfer to OPC- al colors	Check and clean Toner, ITB and OPC unit contacts Ensure TDC process is enabled. If problem persists replace the OPC Drum
	Poor toner transfer to ITB Unit	Check and clean ITB Unit contacts. Re-install or replace the ITB Unit.
	ITB Bias voltage incorrect.	Check and clean ITB Unit contact. Replace the HVPS.


**- Black / White / Colored Lines and Bands**

	Cause	Sequence of Treatment
	Developing process is contaminated.	Replace the Toner Cartridge. Replace the OPC Drum.
	ITB Unit is damaged or dirty	Replace the ITB Unit.
	Fuser Unit is damaged or dirty	Clean or Replace the Fuser Unit.
	Lens Cover of LSU is damaged or dirty.	Clean the Lens Cover of LSU. Replace the LSU if the glass is damaged

**- Offset Image**

	Cause	Sequence of Treatment
	Afterimage on the OPC	Replace the OPC Drum.
	Afterimage on the ITB Unit.	Re-install or replace the ITB Unit.
	Toner Cartridge is installed incorrectly.	Re-set the Toner Cartridge.
	Individual color layers offset.	Replace ITB Unit.


**- Deterioration of Print Quality for all Colors.**

	Cause	Sequence of Treatment
	Problem transferring intermediate images to the ITB .	Check and clean ITB contacts Re-install or replace the ITB Unit.
	Contamination of the Paper Path.	Open the covers, check and clean the Paper Path.
	Problem transferring intermediate image onto paper	Check and clean T2 roller contacts Check T2 Solenoid and cam operation - ensure T2 comes properly into contact when solenoid operates.






- Lateral Lines

	Cause	Sequence of Treatment
	Contamination or damage to rollers. Measure distance between lines.	Refer to Table of Circumferences of Rollers. - Mark in same position on every page. Replace ITB Unit Replace OPC Drum - Mark every 75.36 mm Replace T2 roller - Mark every 29.28 mm Replace Toner cartridge
	Laser Unit damaged	Line repeats every 1~2 mm- Replace the LSU Unit.
	Damage or contamination of OPC drum	Random line spacing- Replace the OPC Drum.

- Regularly repeating image defect

	Cause	Sequence of Treatment
	Contamination or damage to rollers. Measure distance between lines.	Refer to Table of Circumferences of Rollers. - Mark in same position on every page. Replace ITB Unit Replace OPC Drum - Mark every 75.36 mm Replace T2 roller - Mark every 29.28 mm Replace Toner cartridge
	Laser Unit damaged	Line repeats every 1~2 mm- Replace the LSU Unit.
	Damage or contamination of OPC drum	Random line spacing- Replace the OPC Drum.

## 8.3 Paper Feeding Problems and Troubleshooting

### 8.3.1 Top Margin Error.

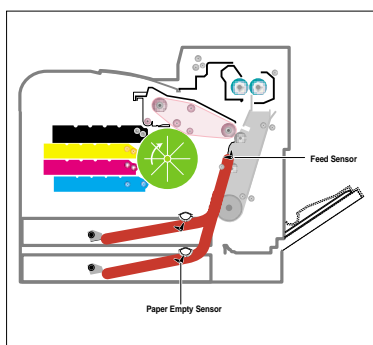
**Symptoms :** Printing begins at wrong position on the paper.

Check and Cause	Solution
Wrong sensor timing caused by defective feed sensor actuator.	Replace the defective actuator

### 8.3.2 JAM 0

**Symptoms**

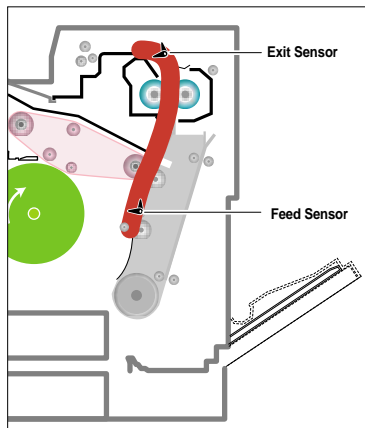
1. Paper has not exited from the cassette.
2. "Jam-0" occurs even though the paper feeds into the printer.



Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Check the Feed Solenoid or Pick-Up using EDS Mode.</li> <li>2. Check that the Separator Pad has not become loose.</li> <li>3. Check if the surface of the Pick-Up Roller is clean.</li> <li>4. Check the Feed Sensor is not sticking by using the EDC Mode (When "JAM-0" occurs even though the paper feeds into the printer.)</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the Solenoid.</li> <li>2. Replace the Separator - Pad (inside the Cassette).</li> <li>3. Clean the surface of the Pick-Up Roller with IPA or water.</li> <li>4. Replace the main PBA or Sensor.</li> </ol>

### 8.3.3 JAM1(JAM inside pinter)

**Symptoms** Paper is jammed in front of the Fuser or under the T2 Roller.

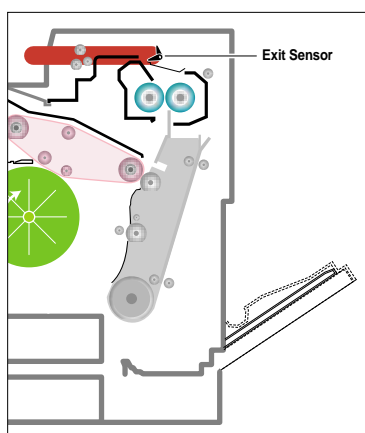


Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. If the paper is jammed in front of or inside the Fuser</li> <li>2. If the paper is caught in the Exit Roller and the Fuser check the Feed Sensor actuator opens and closes freely.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the SMPS.</li> <li>2. - Re-assembly the Feed Actuator and Spring, or clean the Hinge with a lint free cloth. - Replace the Main PBA.</li> </ol>

### 8.3.4 JAM 2 (Jam in Exit Area)

**Symptoms**

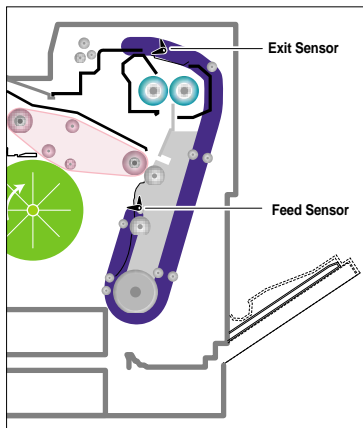
1. Paper is jammed inside the Fuser.
2. Paper is caught in the Exit Sensor Actuator.
3. Paper is caught in the Exit Roller and Fuser, after passing through the Feed Sensor actuator



Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. The Exit Sensor is defective if Jam 2 occurs after the paper is completely fed out of the printer. This can happen if the actuator sticks open or is slow to close.</li> <li>2. Paper is rolled into the Fuser. <ul style="list-style-type: none"> <li>• "Accordion" folding occurs repeatedly.</li> <li>• Fuser temperature is too high due to failure or other abnormal conditions.</li> <li>• If the Heat Roller or Pressure Roller is contaminated hard because of Toner.</li> </ul> </li> <li>3. If there are "Accordion" paper folds inside the Fuser.</li> <li>4. If the Exit Sensor is defective. a Jam In Exit Area will occur and printing will stop.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check if the Exit Sensor Actuator is broken or damaged. <ul style="list-style-type: none"> <li>• Check if the Exit Sensor Actuator is deformed (Check that the sensor arms are not deformed).</li> <li>• Check for Burrs or rough edges in the Exit Actuator assembly, and check that the sensor arms are free to move.</li> <li>• Check for foreign objects obstructing the Exit actuator.</li> </ul> </li> <li>2. Replace the Fuser.</li> <li>3. • Replace the Exit Guide. <ul style="list-style-type: none"> <li>• Check that the Exit unit is assembled properly and full functioning and replace if necessary.</li> </ul> </li> <li>4. Replace the Exit Sensor.</li> </ol>

### 8.3.5 JAM Duplex

**Symptoms** Indicated "Jam in Duplex Area" on the LCD indicator.



Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Paper in the duplex path fails to operate the Feed Sensor.</li> <li>2. Paper in the duplex path fails to reach the Feed Sensor because of jamming in the Duplex Path.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the Feed Sensor or Exit Sensor.</li> <li>2. Check that there are no foreign objects or fragments of paper in the Duplex Path. If necessary replace the Duplex Unit.</li> </ol>

### 8.3.6 Multi-Feeding

**Symptoms** Multiple sheets of paper are picked up and fed simultaneously.

Check and Cause	Solution
<ol style="list-style-type: none"> <li>1. Check the On/Off operation of the pick-up Solenoid using the EDC Mode.</li> <li>2. Check the Friction Pad surface for dirt or other contamination.</li> <li>3. Check that the paper is not creased, folded or curved.</li> <li>4. Check that the Paper Guide in the cassette is properly adjusted and that paper is properly loaded.</li> <li>5. Influence of Static Electricity.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the Solenoid, harness or Main PBA.</li> <li>2. Clean the Pad-Friction using a lint free cloth and water or IPA.</li> <li>3. Use fresh paper.</li> <li>4. Adjust the Paper Guide and load paper under the Finger.</li> <li>5. Fan paper before loading to reduce the effects of static electricity.</li> </ol>

### 8.3.7 Paper rolling in the Fuser.

**Symptoms** Paper is rolled in the Fuser.

Check and Cause	Solution
1. If the Heat Roller is contaminated. (Background, Hot off set)	1. Replace the Fuser.
2. If "Accordion" folding occurs between the Fuser and the Exit Unit repeatedly.	2. Check if the Paper Guide Ribs on the Exit Unit are damaged or contaminated, and check the condition and operation of the Exit Roller.
3. If the Bearing - Fuser or Gear - Fuser is damaged or melted by excessive heat.	3. Check the SMPS and Main PBA if the Bearing Gear is melted.

## 8.4 Symptoms of Bad Operation and Troubleshooting.

### 8.4.1 Fuser Error

**Symptoms** Open Fuser / Over Heat / Low Heat displayed on the LCD Panel.

Check and Cause	Solution
1. Check the continuity of the Thermostat, AC Wire and Heat Lamp.	1. Replace the whole Fuser assembly if the Thermostat is open circuit, otherwise replace heat lamps as required..
2. Check the continuity of the Thermistor and thermistor harness / contacts.	2. Replace broken thermistor or cables as necessary.
3. Test the Heat Lamps and the overheat circuitry.	3. Replace the main PBA id the overheat circuit is faulty..
4. Check the fuser for any evidence of damage due to overheating or melting.	4. Replace the Fuser.

### 8.4.2 LSU Error

**Symptoms** Engine LSU Error displayed on the LCD Panel.

Check and Cause	Solution
1. Check the LSU Connector.	1. Replace the LSU.
2. Check the LSU Motor.	2. If the same error recurs replace the main PBA.
3. Check the HSYNC signal.	
4. Check the Deve Cover Micro switch.	

### 8.4.3 Fuser does not work due to the drive gear melting.

**Symptoms** The fuser gears melt and the roller drive fails.

Check and Cause	Solution
1. The Fuser makes a noise and fails to operate, rollers may not rotate.	<ul style="list-style-type: none"> <li>- Replace the Fuser.</li> <li>- Replace the Main PBA.</li> <li>- Replace the SMPS.</li> </ul>

### 8.4.4 Paper Empty

**Symptoms** LCD shows "Paper Empty" even though paper is ready.

Check and Cause	Solution
1. Check for a broken or distorted paper empty sensor actuator. Check that the actuator is not jammed	1. Replace the Paper Empty Sensor actuator.
2. Check the sensor connectors and cable harness. Ensure that a signal reaches the main PBA	2. Replace the harness.
3. Use the EDC mode to test the actuator.	3. Replace the Sensor Board.

### 8.4.5 Paper Empty without indication.

**Symptoms** The machine remains 'Ready; even when the paper cassette is empty.

Check and Cause	Solution
1. Check for a broken or distorted paper empty sensor actuator. Check that the actuator is not jammed.	1. Replace the Paper Empty Sensor actuator.
2. Check the sensor connectors and cable harness. Ensure that a signal reaches the main PBA	2. Replace the harness.
3. Use the EDC mode to test the actuator.	3. Replace the Sensor Board.

### 8.4.6 Cover Open

**Symptoms** LCD displays "Cover Open" error even though the cover is closed.

Check and Cause	Solution
1. Check if the Hook Lever inside the Duplex Cover is broken or distorted.	1. Replace the Duplex Cover.
2. Check the Cover Open sensor, connectors and cable harness. Ensure that a signal reaches the main PBA	2. Replace the harness or microswitch as necessary.
3. Use the EDC mode to test the actuator.	3. Replace the Sensor Board.

#### 8.4.7. Can not sense when the Cover is Opened.

**Symptoms** LCD Indicates "Ready" even when cover is opened.

Check and Cause	Solution
1. Check if the Hook Lever inside the Duplex Cover is broken or distorted.	1. Replace the Duplex Cover.
2. Check the Cover Open sensor, connectors and cable harness. Ensure that a signal reaches the main PBA	2. Replace the harness or microswitch as necessary.
3. Use the EDC mode to test the actuator.	3. Replace the Sensor Board.

#### 8.4.8 Defective Motor

**Symptoms** Main Motor does not work and paper does not feed when printing. Jam 0 is displayed.

Check and Cause	Solution
1. Check if the Motor Harness or Motor PCB is broken or not.	1. Replace the Motor or Motor Harness.
2. Test the Motor using EDC Mode.	2. Replace the Main PBA.

#### 8.4.9 No Power

**Symptoms** Power is not supplied to the set, or the LCD display is not on.

Check and Cause	Solution
1. Check the power supply input and DC voltage output from the SMPS. Check the fuses in the SMPS. Check the wall socket.	1. Replace the Power Cable. Replace SMPS fuses. If the fault recurs replace the SMPS.
2. If the SMPS supply is OK, and the LCD still does not work check the display connectors and cable harness	2. Replace cables or LCD Panel Ass'y. Replace the Main PBA.
3. Check if +24VDC or other Power Supplies are shorted out.	3. Replace the components used for +24VDC.



#### 8.4.10 Curved or Distorted Vertical Lines

**Symptoms** Curved, wavy or distorted vertical lines.

Check and Cause	Solution
1. Use EDC Mode to test the LSU. Check that the +24VCD signal between the main PBA and the LSU is stable	1. Replace the LSU or Main PBA.
2. Check that the LSU clock is stable.	2. Replace the Main PBA.

#### 8.4.11 Low Toner

**Symptoms** "Ready Replace [Color]" is displayed on the LCD Panel.

Check and Cause	Solution
1. "Low Toner" is displayed when under 500page or less toner remains (in any of the cartridges).	1. Using the keypad check which toner is empty and replace the Toner Cartridge.
2. Check the condition of the contacts on the DEVE PBA.	- Replace the Toner Joint PBA. - Replace the Main PBA.

#### 8.4.12 Replace Toner[CART].

**Symptoms** LCD displays "Ready Replace [CART]".

Check and Cause	Solution
1. "Ready Replace CART" is displayed when the OPC Image Count value is over 50,000. Image Density may be reduced. It is possible to continue to print one Page at a time by pressing the "On-Line" button when it flashes.	1. Replace the OPC Drum.

## 8.5 Treatment of Error Message.

### ADC Not Confirm Error

The ADC(Analog -to - Digital Conversion) is defective.

1. Turn the printer off, wait 30 secs and then turn it back on.
2. Replace the Main PBA if the same symptoms recur.

### Cover Open

One of the covers is not properly closed

1. DEVE Cover or Duplex Cover is open. Check and close it correctly.
2. Check the condition of the Cover Open Sensor assembly.  
--> Replace if it is damaged or not correctly fitted.

### Dev. Motor Error

The developer motor may stop working because of a harness or connector fault, increased torque in any one of the toner cartridges due to rollers sticking, a power supply fault or a fault on the main PBA.

1. Open the Deve Cover and check each Toner Cartridge to ensure that the rollers rotate.  
--> Turn the rollers by hand and check how difficult it is to rotate the rollers.  
--> Replace the toner cartridge if it seems excessively tight.
2. Open the Rear Cover and check if the Deve Motor Harness is assembled correctly.
3. Open the Main PBA Cover and check if the Harness (20pins) connected to the Deve Drive PBA is assembled correctly.  
--> Replace the Harness if there are damaged or badly fitted parts.
4. Check the Power Supply to the Main PBA.  
--> Replace the SMPS if the Power Supply is out of specification.  
--> Replace the Main PBA if the Power Supply from the SMPS is OK.

### Engine Fuser Low Heat Error

- \* The temperature of the Fuser is lower than the Printing temperature.
- \* The Fuser harness is not connected properly.

1. Check that the Fuser is installed correctly.  
--> If not, re-install.
2. Check the AC power to the Fuser (Copper contact.)  
--> If it is no good go to step 3 below otherwise go to step 5.
3. Check the Thermostat on the Fuser.  
--> If it is open circuit replace the Thermostat.
4. Check that the Thermostat on the Fuser is properly positioned and assembled.  
--> Replace the Thermostat if it is not.
5. Check both of the fuser Heat Lamps.  
--> Replace any faulty lamps.
6. Check the Harness connected to the SMPS and Fuser.  
--> Refit the harness or replace if damaged.
7. Replace the Main PBA.
8. Replace the SMPS.

### Engine FuserOver Heat Error

The temperature of Fuser is higher than the Printing temperature.

1. Check both of the Thermostats on the Fuser.  
--> If it is open circuit replace the Thermostat.
2. Check that the Thermostat on the Fuser is properly positioned and assembled.  
--> Replace the Thermostat if it is not.
3. Check the Harness connected to the SMPS and Fuser.  
--> Refit the harness or replace if damaged.
4. Check the Fan and the Fan Harness  
--> Refit or replace as required
5. Replace the Main PBA.
6. Replace the SMPS.

*Warning : You must replace the complete Fuser Ass'y if Over Heat Error has occurred.  
Do not replace only the Thermistor.*

### Engine LSU Error

There is a fault in the LSU unit.

1. Use EDC mode to test the HSYNC signal and LSU Motor.
2. Check the Harness connected to the Engine Controller and LSU.  
--> Refit the harness or replace it if it is damaged..
3. Replace the LSU.

### Main Motor Error

The Main Motor that drives the OPC, ITB and Pick-Up is faulty.

1. Open the Deve Cover and Top Cover and then check the OPC Unit and ITB Unit.  
--> Re-install if they are not correctly fitted or are damaged.
2. Open the Rear Cover and then check the Main Motor Harness.  
--> Refit the harness or replace it if it is damaged.
3. Check if the Power Supply from the SMPS to the Main PBA.  
--> Replace the SMPS if the voltages are outside specification.
4. Check if the No. 7 of CN27 on the Main PBA is near 0V while Main Motor is powered on under the Mode EDC.  
--> Replace the Main PBA if the voltage is near 5V
5. Check if the Motor Clock is generated at the No. 9 of CN27 on the Main PBA while Main Motor is powered on under the Mode EDC.  
--> Replace the Main PBA if isn't generated.

### Waste Motor Error

This error is caused by open circuit of Waste Motor Harness or the motor stalling due to increased Waste Motor torque during operation.

1. Open the Front Cover and then check if the Waste Toner Tank is full or the waste inlets are blocked with the Waste Toner.  
--> Replace the Waste Toner Tank and unblock waste inlet feeds.
2. Open the Top Cover and then remove the ITB Unit and OPC Unit and check if the OPC waste toner outlet blocked.
3. Remove the Front Cover and then check the Waste Motor Harness.  
--> Refit or replace the harness if it is damaged.
4. Remove the HVPS Cover and then check that the HVPS OEM Harness is correctly fitted.  
--> Refit or replace the harness if it is damaged.
5. Measure the Voltage on CN2 Pin1 and Pin3 of OEM PBA. (Normal : Over +10VDC)  
--> replace the OEM PBA if there is no output.

### Image Transfer Error

This is caused by a badly fitted or unlocked ITB unit or a faulty ITB Home Sensor.

1. Open Top Cover and then check that the ITB unit properly fitted and locked in position.  
--> Remove, replace and re-lock the ITB unit.  
--> If the same fault recurs regularly replace the ITB unit.
2. Check the condition of the ITB Harness (especially if replacing the ITB does not resolve the problem).  
--> Refit or replace the harness if it is damaged.
3. Check the signal on Pin 1 of CN10 on the Main PBA.  
--> Replace the Main PBA if the signal is Active Low.

### Invalid Drum Cartridge

Can not communicate with the OPC Unit.

- \*This is caused by a wrong value of OEM Resistor in the OPC Unit.  
\*It is also caused by miss-reading the value of the OEM Resistor because of contamination of the contact points.
1. Check that an original Samsung Drum Cartridge is fitted.  
--> If not replace the OPC drum.
  2. Clean the OPC unit contact points.
  3. Check the Harness connected between the Main PBA and Toner OPC Unit.  
--> Refit or replace the harness if it is damaged.
  4. Check the "R150" on the Engine Controller.  
--> Replace the Engine Controller.

### Invalid Image Transfer

Can not communicate with ITB Unit.

\*This may be caused by a wrong value of OEM Resistor in the OPC Unit.

1. Open the Top Cover and then check that it is correctly locked in position.  
--> Remove, replace and re-lock the ITB unit.
2. Replace the ITB Unit.
3. If the fault continues after re-fitting the ITB unit several times check the voltage on Pin4 of CN10 on the Main PBA.  
--> Replace the ITB Harness if the voltage is not correct.
4. Replace the Main PBA.

### Invalid Toner [Color]

This is caused by a wrong value of OEM Resistor in the Toner Cartridge.

1. Clean the 3 contact points on the Toner Cartridge and then re-install.
2. Replace the Toner Cartridge if the same error recurs.
3. Remove the Front Cover and then check the condition of the contacts between the OEM PBA and Terminal if the same error occurs.  
--> Clean or Re-assemble.
4. Replace the OEM PBA, HVPS and Main PBA in order if the same error recurs.

### Invalid NEW Toner [Color]

This occurs when the Fusible Resistor in the Toner Cartridge does not become open circuit within regulation time.

1. Clean the 3 contact points on the Toner Cartridge and then re-install.
2. Replace the Toner Cartridge if the same error recurs.
3. Replace the OEM PBA, HVPS and Main PBA in order if the same error recurs.

### Jam 0 In [Tray]

Paper is caught in the tray.

1. Open the Duplex Cover and then remove the paper stuck in the machine.
2. Open the Cassette and after removing any trapped paper ensure that the cassette is properly loaded, not overfilled and that paper guides are properly adjusted.
3. Check that the location of Lever of the Feed Sensor is normal.
4. Check that the operation of the Pick-Up Clutch under the Cassette is normal.
5. If the Clutch does not work check the condition of the cable harness to the Main PBA.
6. Replace the Main PBA if the voltage on Pin 2 of CN32, CN25 on the Main PBA is +24VDC.  
(Normal Output : Pin 1 = +24VDC, Pin 2 = 0V)

**Jam In Duplex Path**

Paper is caught while printing side 2.

1. Open the Duplex Cover and then remove the paper.
2. Remove any foreign objects in the Duplex Path.

**Jam In Exit Area**

Paper is caught in the Exit Area.

1. Check the Exit Sensor actuator.  
--> Replace the Fuser if the Exit Sensor actuator is damaged or bent.
2. Check that the Paper Guide Rib of the Output Guide is clean, and not damaged or distorted.  
--> Replace the Fuser or Exit Ass'y if it is not normal.
3. Check the condition and operation of the Fuser Rollers.

**Jam Inside Printer**

Paper is caught inside printer

1. Open the Duplex Cover and then remove the paper.
2. Check the Feed sensor actuator.  
--> Replace the Feed Sensor if it is damaged or distorted.

**Load Manual  
Press Cont Key**

This is only displayed when printing in Manual Feed mode and the MPF tray is empty..

Load a sheet of print material and press the On-Line/Continue button. You need to press the button for each page to be printed.

**Load [Size] In [Tray]**

The size of paper in the tray and the size of paper required by the document being printed are different.

\*In this case the size of paper and tray is indicated.

Load the correct size of paper.

**Memory Overflow**

Not enough Memory Capacity.

The printer has insufficient memory to build the page image. The print process will be cancelled automatically and the printer will return to the Wait Mode. Add more memory to the printer.

**Page Too Complex**

The layout of document is too complex.

Try to print again after making the layout simpler and erasing any unnecessary images. If the message is repeated you will need to add extra memory to the printer.

**Press Cont Key  
Replace [Ctrl]**

Not enough Toner

- \* Press the [On-Line/Continue] button to continue printing.
- \* Replace the Toner Cartridge when the image quality becomes unacceptable.
- \* You can select if this message will be displayed on the LCD Pane or not.

**Press Cont Key  
Replace Drum**

The OPC drum is coming to the end of its usable life and will need replacing soon.

- \* Press the [On-Line/Continue] button to continue printing.
- \* Replace the OPC Drum when the image quality becomes unacceptable.
- \* You can select if this message will be displayed on the LCD Pane or not.

**Press Cont Key  
Replace Transfer**

The ITB Unit is coming to the end of its usable life and will need replacing soon.

- \* Press the [On-Line/Continue] button to continue printing.
- \* Replace the ITB Unit when the image quality becomes unacceptable.
- \* You can select if this message will be displayed on the LCD Pane or not.

### Press Cont Key Replace T2 Roller

The T2 roller is coming to the end of its usable life and will need replacing soon.

- \* Press the [On-Line/Continue] button to continue printing.
- \* Replace the T2 roller when the image quality becomes unacceptable.
- \* You can select if this message will be displayed on the LCD Pane or not.

### Ready IP Conflict

IP address conflict with the address of another device on the network.

This only occurs when the optional network interface is connected and configured for TCP/IP support. Change the IP Address.

### Ready [CMYK] Low Toner

The indicated Toner Color cartridge is almost empty.

Replace the indicated Color Toner Cartridge.

To temporarily improve printing for a short time remove the indicated toner cartridge and rock it gently from side to side for a short time before replacing it.

### Replace Drum Cartridge

This occurs when the OPC drum is not correctly installed.

1. Check that the OPC Unit is installed and locked correctly.
2. Check the OPC OEM Harness to the Main PBA.  
--> Refit or replace the harness if it is damaged.
3. Replace the Main PBA.

### Replace Image Transfer

There is a problem with the ITB Unit installation.

- \* This occurs when the ITB Unit is not correctly installed and locked
- \* This occurs when the value of the OEM Resistor in the ITB Unit is incorrectly detected due to contamination of the contact.

1. Open the Top Cover and then check that the ITB Unit is installed and locked correctly.
2. Clean the contacts on the ITB Unit
3. Replace the ITB unit.



**Replace Toner [Color]**

It occurs when the Toner Cartridge of indicated Color is not installed.

\*If the Toner Cartridge does not be installed

\*The value of OEM Resistor be recognized by the value of opened due to the contamination of Contact point.

1. Open the Deve Cover and then check if the Toner Cartridge is installed.
2. Check if the contact point is contaminated.
3. Replace the Toner Cartridge.
4. Replace the OEM PBA, HVPS and Main PBA in order.

**Tray2 Error**

This occurs when Tray2 is not installed correctly.

Turn the printer off and re-install Tray2.

**Tray2 Jam Cover Open**

The cover on Tray 2 is open.

Check and ensure that the cover of Tray2 is closed properly.

**Waste Toner Full/Not Install**

Waste Toner Tank is full or not installed.

1. Check and replace the Waste Toner Tank or install it correctly.
2. Check that the Waste Toner Sensor actuator lever is free and not damaged or distorted.
3. Check the condition of the waste toner sensor cable harness and refit or replace if it is damaged.

*MEMO*

