# Pro C9100/C9110

## Operating Instructions

# Troubleshooting: TCRU/ORU

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# Introduction

This manual contains detailed instructions and notes on the operation and use of this machine. For your safety and benefit, read this manual carefully before using the machine. Keep this manual in a handy place for quick reference.

# How to Read This Manual

## Symbols

This manual uses the following symbols:

**Important**

Indicates points to pay attention to when using the machine, and explanations of likely causes of paper misfeeds, damage to originals, or loss of data. Be sure to read these explanations.

**Note**

Indicates supplementary explanations of the machine's functions, and instructions on resolving user errors.

**Reference**

This symbol is located at the end of sections. It indicates where you can find further relevant information.

[ ]

Indicates the names of keys on the machine's display or control panels.

## Disclaimer

To the maximum extent permitted by applicable laws, in no event will the manufacturer be liable for any damages whatsoever arising out of failures of this machine, losses of the registered data, or the use or non-use of this product and operation manuals provided with it.

Make sure that you always copy or have backups of the data registered in this machine. Documents or data might be erased due to your operational errors or malfunctions of the machine.

In no event will the manufacturer be responsible for any documents created by you using this machine or any results from the data executed by you.

## Notes

Contents of this manual are subject to change without prior notice.

The manufacturer shall not be responsible for any damage or expense that might result from the use of parts other than genuine parts from the manufacturer with your office products.

For good output quality, the manufacturer recommends that you use genuine toner from the manufacturer.

Some illustrations in this manual might be slightly different from the machine.

Certain options might not be available in some countries. For details, please contact your local dealer.

Depending on which country you are in, certain units may be optional. For details, please contact your local dealer.

Two kinds of size notation are employed in this manual.

# 1. Before You Begin



## About This Manual

If the machine will not print, does not print as expected, or exhibits any other problem, find the problem in this manual and troubleshoot accordingly.

**⚠CAUTION**

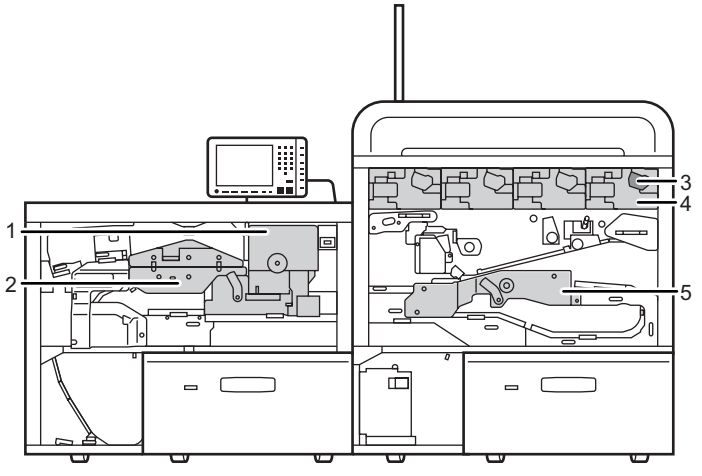
- Before you replace any unit:
  - To prevent electrical shock, turn off the color controller on the machine control panel, switch off the main power switch then the AC power switch, and then disconnect the machine from the power supply.
  - Allow the machine to cool for at least 30 minutes before replacing a part.

# Names of Components



## ⚠WARNING

- Do not remove any covers or screws other than those explicitly mentioned in this manual. Inside this machine are high voltage components that are an electric shock hazard. Contact your sales or service representative if any of the machine's internal components require maintenance, adjustment, or repair.
- Do not attempt to disassemble or modify this machine. Doing so risks burns and electric shock.




DFT046

1. **Left drawer unit**
2. **Buffer pass unit**
3. **Charge unit**
4. **Development unit**
   - Photoconductor unit
   - PCU cleaning unit
5. **Right drawer unit**

# About the Display for Options

This machine displays all of the adjustment items in the [Adjustment Settings for Skilled Operators] menu and advanced settings for custom paper regardless of whether or not the items are for options. Note that any modifications to the option settings do not take effect unless the applicable options are installed on this machine.



**Note**

- For details about the options available for this machine, see "Guide to Functions of the Machine's Options", About This Machine.

# Before You Change a Setting



Important

- If the problem persists despite the setting being changed, restore the value you made a note of.
- Operating the machine with the changed setting may cause problems such as reduced print quality.
- If the problem persists even though the setting has been changed, restore the value noted. Operating the machine with the changed setting may cause problems, such as inferior printed images.

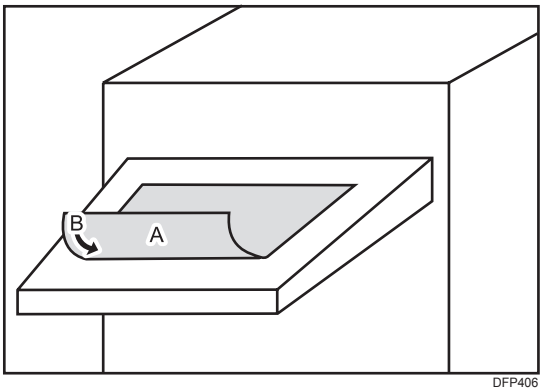
# About Printing Surfaces



Side 1 is the surface of the paper printed during one-sided printing, or the surface of the first print during duplex printing.

Side 2 is the surface of the paper printed after side 1 has been printed during duplex printing.

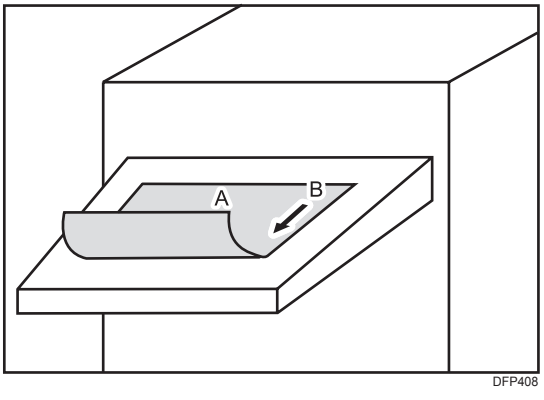
**Single-sided printing: Printed side face down**




A. Side 1

B. Paper feed direction of Side 1

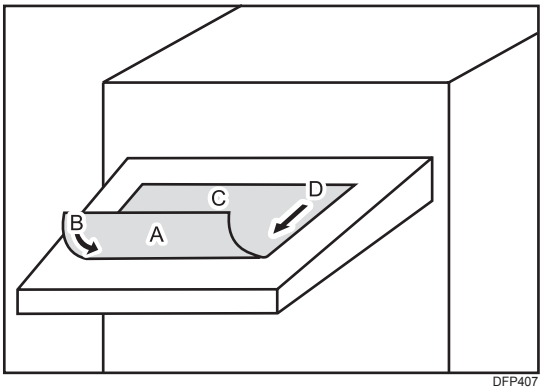
**Single-sided printing: Printed side face up**




A. Side 1

B. Paper feed direction of Side 1

### Duplex printing




A. Side 1

B. Paper feed direction of Side 1

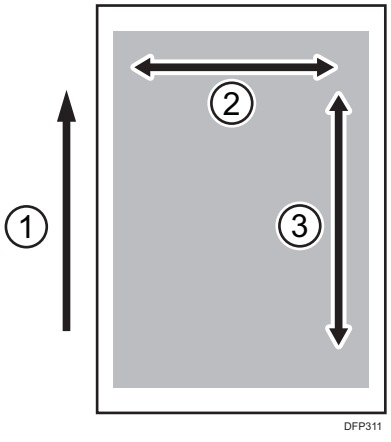
C. Side 2

D. Paper feed direction of Side 2

# Note about Vertical and Horizontal Directions

In this manual, with regard to the paper feed direction, the vertical and horizontal directions are as shown below:






1. **Paper feed direction**
2. **Horizontal**
3. **Vertical**

# 2. Troubleshooting Service Call Problems (SC Codes)

## What Are SC Codes?



If an error occurs during operation, the machine displays an SC code ("SCnnn", where "nnn" is a three-digit number). The machine stops and cannot be used when an SC code is displayed.

### If an SC Code Appears:

1. **Write down the SC number.**
2. **Turn off the main power switch.**
3. **Wait a few moments, then turn the machine on again.**

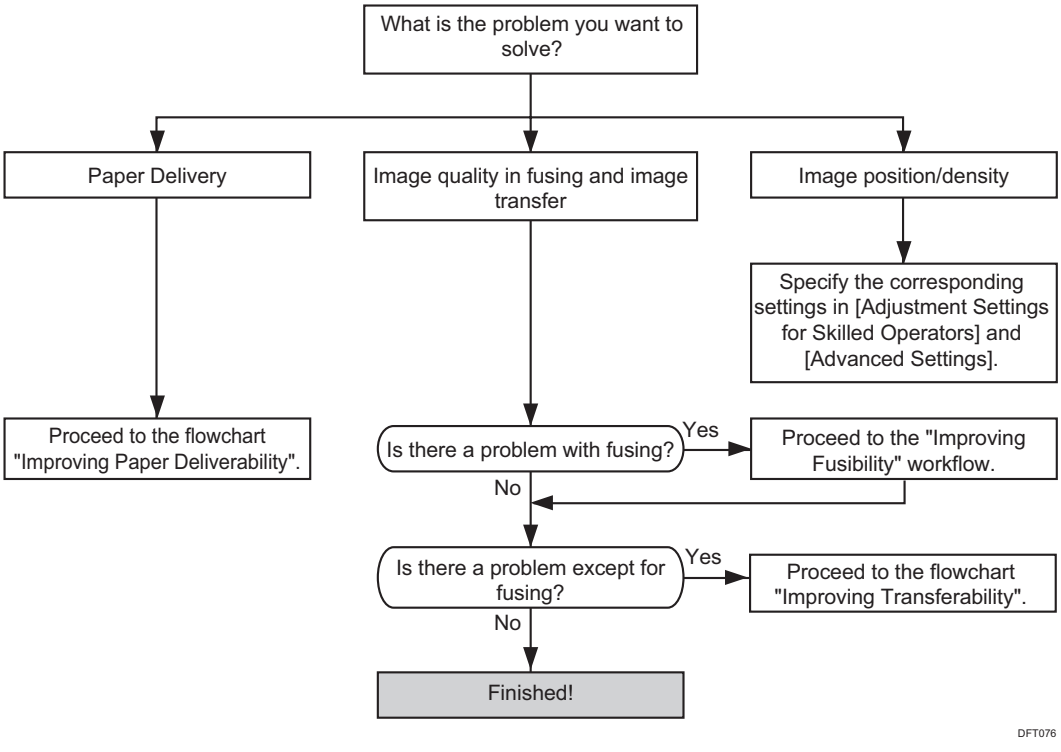
   In most cases, cycling the machine off and on will restore it to full operation.
4. **If the SC code reappears, contact your service representative.**

# 3. Specifying and Checking Paper Settings

## Adjusting Paper Settings

### Paper Setting Flowchart






### Improving Fusibility

This section explains how to resolve the problem of insufficient toner fusing on printed copies.

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

## Solution:

Carry out the following sequence of procedures. Terminate the sequence as soon as the problem is resolved.

**Procedure 1: Changing the fusing temperature**

1. **In [Advanced Settings] for the custom paper, adjust the fusing heat roller temperature.**

   **<Printing in full color >**

   Increase the value in 088: [Fusing Temp: FC] by 5 degrees.

   **<Printing in black and white>**

   Increase the value in 089: [Fusing Temp: BW] by 5 degrees.

2. **Print the image and check toner fusion. Has the problem been resolved?**

| | |
|---|---|
| Yes | Finished! |
| No | Increase the temperature an additional 5 degrees. |

3. **Repeat Step 2.**

   If the problem persists even if you increase the temperature to 190 degrees, perform "Procedure 2: Changing the process speed".

**Procedure 2: Changing the process speed**

This will slow down the printing to give the toner more time to fuse. However, because of this, throughput will be reduced.

For details about "Process Speed Setting", see "Details of Menu Items in Advanced Settings", Adjustment Item Menu Guide.

1. **In [Advanced Settings] for the custom paper, set 120: [Process Speed Setting] to [Low].**
2. **Print the image and check toner fusion. Has the problem been resolved?**

| | |
|---|---|
| Yes | Finished! |
| No | Contact your service representative. |

**Note**

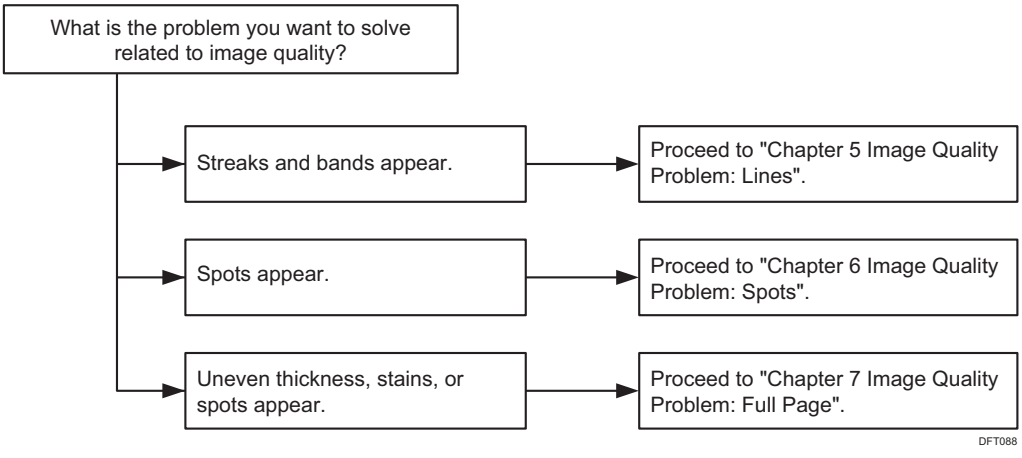
- Changing the fusing temperature or changing the process speed may produce one or more of the following side effects:
  - Paper curling
  - Paper misfeeding
  - Blister-like white spots

    - Glossy lines
    - Change of gloss
- If one or more of the above side effects occurs, adjust the fusing temperature and process speed by decreasing the fusing temperature and increasing the process speed.
- After performing the solution, it is recommended to perform the color calibration of the external controller. For details see, page 159 "Operating Procedure for Color Calibration".
- Check the toner fusibility as follows:
    - The printed image does not come off.
    - The toner does not come off even if it is lightly rubbed by a nail.
    - The toner does not come off even if it is rubbed by the optical cleaning cloth.



## Improving Transferability

To improve transferability, try the following solution:




## Improving Paper Deliverability

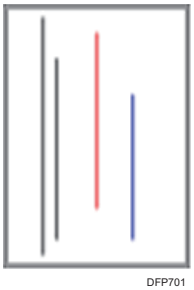
To improve paper deliverability, see page 99 "Troubleshooting Paper Delivery Problems".

# 4. Troubleshooting Image Quality Problems

## Image Index

### Large Classification: Lines/Streaks

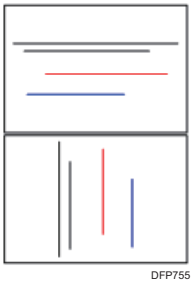
A smudge or a white area inside an image, in a linear shape appears horizontally or vertically.



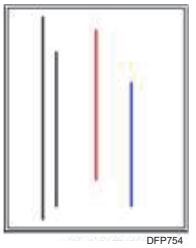
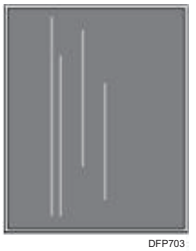
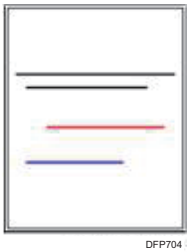
DFP701

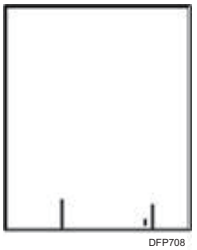
### Middle classification: Lines/Streaks

A smudge or a white area inside an image, in a linear shape with 1 mm or smaller width.



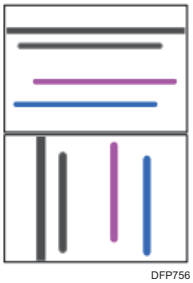
DFP755

| Small classification | Sample image | Description |
|---|---|---|
| **Vertical black (color) streaks**<br>Black (color) streaks appearing in the paper feed direction. |  <br>DFP754 | • See page 41 "Vertical Black Streaks (1)".<br>• See page 42 "Vertical Black Streaks (2)". |
| **Vertical white streaks**<br>Image missing in the shape of streaks in the paper feed direction. |  <br>DFP703 | • See page 43 "Vertical White Streaks". |
| **Horizontal black (color) streaks**<br>Black (color) streaks appearing in the direction perpendicular to the paper feed direction. |  <br>DFP704 | • See page 44 "Horizontal Streaks: When Using Thick Paper (1)".<br>• See page 46 "Horizontal Streaks: When Using Thick Paper (2)".<br>• See page 46 "Horizontal Streaks: When Using Thick Paper (3)" |
| **Horizontal white streaks**<br>Image missing in the shape of streaks in the direction perpendicular to the paper feed direction. |  <br>DFP705 | - |

| Small classification | Sample image | Description |
|---|---|---|
| **Vertical glossy streaks**<br>Glossy streaks appearing in the paper feed direction. |  <br>DFP706 | • See page 48 "Glossy Lines at the Edge of the Paper". |
| **Horizontal white streaks**<br>Glossy streaks appearing in the direction perpendicular to the paper feed direction. |  <br>DFP707 | - |
| **Image scratches**<br>Stains in the shape of vertical streaks which seem to result from being scratched by the guide plate ribs or other parts. |  <br>DFP708 | • See page 93 "Paper Edges are Stained". |

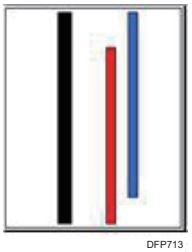
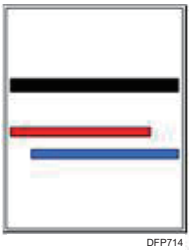
## Middle classification: Bands

A smudge or a white area inside an image, in a linear shape with 1 mm or larger width.



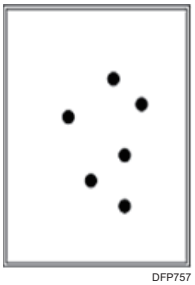
DFP756

| Small classification | Sample image | Description |
|---|---|---|
| **Jitter**<br>Blurred area visible as bands in the direction perpendicular to the paper feed direction. |  <br>DFP709 | - |
| **Banding**<br>Banding at regular intervals in the direction perpendicular to the paper feed direction. (Gear eyes: Color unevenness in the same interval as the pitch of the gear.) |  <br>DFP710 | - |
| **Vertical white bands**<br>White bands appearing in the paper feed direction. |  <br>DFP711 | • See page 51 "Vertical White Bands". |
| **Horizontal white bands**<br>White bands appearing in the direction perpendicular to the paper feed direction. |  <br>DFP712 | - |

| Small classification | Sample image | Description |
|---|---|---|
| **Vertical black (color) bands**<br>Black (color) bands appearing in the paper feed direction. |  <br>DFP713 | • See page 51 "Vertical Black Bands". |
| **Horizontal black (color) bands**<br>Black (color) bands appearing in the direction perpendicular to the paper feed direction. |  <br>DFP714 | • See page 52 "Horizontal Streaks at the Area within 20 mm (0.8 inches) from the Leading Edge". |
| **Fuzzy lines**<br>Blurred images in the shape of slightly winding bands in the paper feed direction. |  <br>DFP715 | - |
| **Roller tracks**<br>Stains on the transport rollers transferred to paper. |  <br>DFP716 | - |

## Large classification: Spots

An image quality problem either exhibiting white spots on solid areas, or black spots on the background.

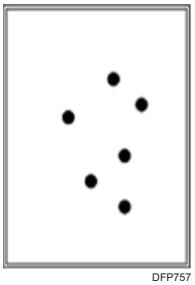

DFP757

## Middle classification: Spot

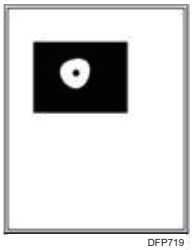


White spots seen in solid image areas or black/color spots seen where there should be nothing printed. The description "white spots" excludes those with toner cores.

White spots and Fireflies are considered different issues as the former does not consist a core in the center of the unprinted spot.


DFP757

| Small classification | Sample image | Description |
|---|---|---|
| **Black (color) spots**<br>Stains are visible as crisp black (color) spots. |  <br>DFP717 | • See page 57 "Black (color) Spots (1)"<br>• See page 58 "Black (color) Spots (2)". |

| Small classification | Sample image | Description |
|---|---|---|
| **White spots**<br>White spots are visible inside solid image or halftone image area because of missing toner. |  <br>DFP718 | • See page 60 "White Spots/ Toner Blasting". |
| **Spots with toner**<br>Toner aggregated inside the machine has been transferred to paper. |  <br>DFP702 | • See page 57 "Black (color) Spots (1)".<br>• See page 58 "Black (color) Spots (2)". |
| **White spots with toner cores**<br>White spots with pieces of aggregated toner in the center visible in solid color area. Pieces of aggregated toner may be irremovable. |  <br>DFP719 | • See page 67 "Colorless Spots". |
| **Fish-shape stains**<br>Stains in the shape of small fish which appear to be swimming in the paper feed direction. |  <br>DFP720 | • See page 62 "Medaka (White Spots)". |

## Large classification: Full page

Images and text missing from the whole sheet.

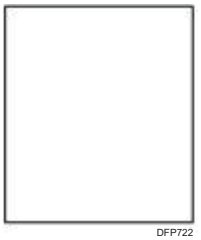
DFP758

## Middle classification: Full page



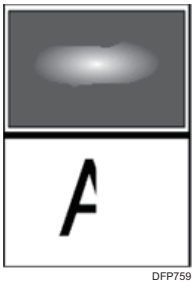
Image/text does not appear on the printout.

DFP721

| Small classification | Sample image | Description |
|---|---|---|
| **All black**<br>Printed paper is all black. |  <br>DFP721 | - |
| **Blank**<br>No image is reproduced. |  <br>DFP722 | - |

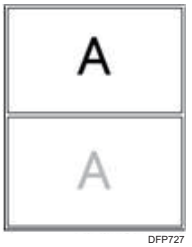
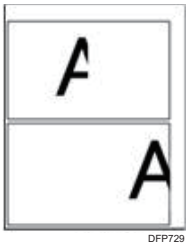
## Middle classification: Unprinted

Parts of the developed images and letters are not reproduced.


DFP759



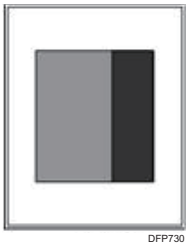
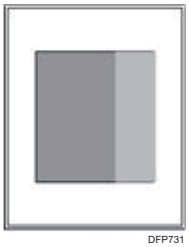
| Small classification | Sample image | Description |
|---|---|---|
| **White zone**<br>Part of a solid image or halftone is missing. |  <br>DFP723 | • See page 65 "Fainter Trailing Edge".<br>• See page 79 "White Spots on a Textured Surface". |
| **Wormholes**<br>The outline of a letter (or a line) is reproduced but the inside of it is missing. |  <br>DFP724 | - |
| **Halo**<br>There is a white line around a solid object. |  <br>DFP725 | - |

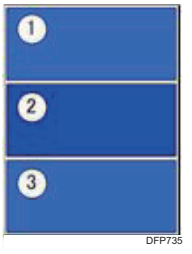
| Small classification | Sample image | Description |
|---|---|---|
| **Negative residual image**<br>Previously printed image is reproduced with its black and white reversed on the same page or the next page. |  <br>DFP726 | - |
| **Positive residual image**<br>Previously printed image is reproduced on the same page or the next page. |  <br>DFP727 | - |
| **Offset**<br>The same image is repeatedly transferred in the same interval. |  <br>DFP728 | - |
| **Missing image**<br>Developed image slid in the subscan direction or missing. |  <br>DFP729 | - |

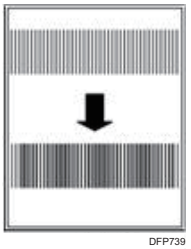
## Middle classification: Unevenness

The density of the developed image is uneven.

DFP760

| Small classification | Sample image | Description |
|---|---|---|
| **High density**<br>Image density higher than configured. |  <br>DFP730 | • See page 77 "Higher Density at the Leading Edge". |
| **Low density**<br>Image density lower than configured. |  <br>DFP731 | • See page 75 "Low Image Density". |
| **Uneven density**<br>Image density is uneven within the same page. |  <br>DFP732 | • See page 68 "Uneven Image Density".<br>• See page 70 "Density Fluctuation at the Leading Edge (When Using Thick Paper)".<br>• See page 73 "Density Fluctuation at the Trailing Edge (When Using Thick Paper)".<br>• See page 78 "Uneven Density within 107 mm (4.2 inches) of the Trailing Edge". |

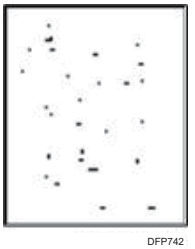
| Small classification | Sample image | Description |
|---|---|---|
| **Unevenness in indefinite shape**<br>Image density unevenness in indefinite shapes. |  <br>DFP733 | • See page 84 "Uneven Gloss: Wavy". |
| **Uneven glossiness**<br>The glossiness is uneven inside a dark solid image. Check it by looking at the paper from different angles. |  <br>DFP734 | • See page 82 "Uneven Gloss".<br>• See page 84 "Uneven Gloss: Wavy".<br>• See page 85 "Uneven Gloss: Foggy".<br>• See page 86 "Uneven Gloss: Thick Paper".<br>• See page 87 "Uneven Gloss: Orange Peel".<br>• See page 88 "Uneven Glossiness due to Cooling". |
| **Color changing**<br>During repeated printing, the color or the density changes from sheet to sheet. |  <br>DFP735 | - |
| **Color difference**<br>The colors differ between the original (1) and the output (2). |  <br>DFP736 | - |

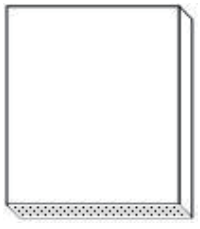
| Small classification | Sample image | Description |
|---|---|---|
| **Rough image**<br>Color is uneven and small white spots are visible inside a solid image. With color copiers, white spots may not appear when two colors are overlapped. |  <br>DFP737 | • See page 81 "Mottling". |
| **Earthworm shape**<br>White area in a shape similar to an earthworm. |  <br>DFP738 | • See page 95 "Creases, Worm Track (Wavy Streaks), or Bends Appear". |
| **Moire**<br>When superimposed regular pattern, it is a pattern of striped periodic possible by pixel to interfere with each other. Halftones may become mosaics. |  <br>DFP739 | - |
| **Blur**<br>Image seemingly blurred in all directions. |  <br>DFP740 | - |

## Middle classification: Dirtied printouts

Non-image area is dirtied.

DFP743

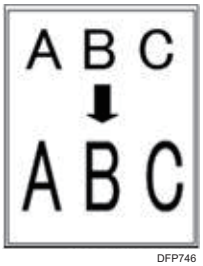
| Small classification | Sample image | Description |
|---|---|---|
| **Background stains**<br>Granular stains are visible in unprinted areas of the paper. |  <br>DFP741 | - |
| **Backside stains**<br>Granular stains are visible on the backside of the paper. |  <br>DFP742 | - |
| **Toner scattered**<br>Toner scattered around a letter. |  <br>DFP743 | • See page 90 "Toner Scattering: Trailing Edge".<br>• See page 92 "Toner Scattering: Around a Solid Fill Image". |

| Small classification | Sample image | Description |
|---|---|---|
| **Edge stains**<br>The side edges of paper are stained. |  <br>DFP744 | • See page 93 "Paper Edges are Stained". |

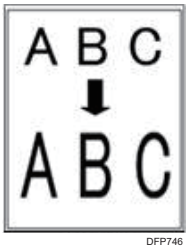
## Middle classification: Disturbed image

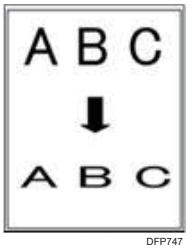
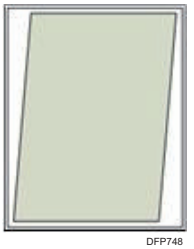


Image/text are disturbed and do not replicate the original.



DFP746

| Small classification | Sample image | Description |
|---|---|---|
| **Irregularity**<br>Image becoming irregular in comparison with the original. |  <br>DFP745 | - |
| **Image expansion**<br>Image expanded abnormally in comparison with the original. |  <br>DFP746 | - |

| Small classification | Sample image | Description |
|---|---|---|
| **Image contraction**<br>Image contracted abnormally in comparison with the original. |  <br>DFP747 | - |
| **Skew**<br>The corners of an image copied from a rectangle original are not square. |  <br>DFP748 | - |



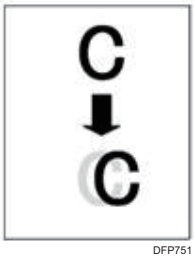
## Middle classification: Scratches

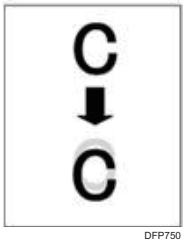
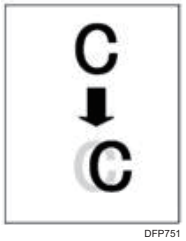
Stains in the shape of vertical streaks which seem to result from being scratched by the guide plate ribs or other parts.

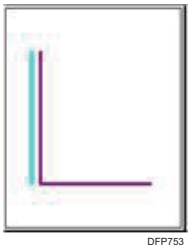
| Small classification | Sample image | Description |
|---|---|---|
| **Claw marks**<br>Stains of toner that got on the paper when it came into contact with drum/ fuser pawls. |  <br>DFP749 | - |

## Middle classification: Shifted image

Registration shift causes the images to appear longer or wider than the original.


DFP751

| Small classification | Sample image | Description |
|---|---|---|
| **Vertical image shift**<br>Images and lines shifted in the paper feed direction. |  <br>DFP750 | - |
| **Horizontal image shift**<br>Images and lines shifted in the direction perpendicular to the paper feed direction. |  <br>DFP751 | - |
| **Vertical color shift**<br>Color shifted in the paper feed direction where colors should be overlaid. |  <br>DFP752 | - |

| Small classification | Sample image | Description |
|---|---|---|
| **Horizontal color shift**<br>Color shifted in the direction perpendicular to the paper feed direction where colors should be overlaid. |  <br>DFP753 | - |



## Others

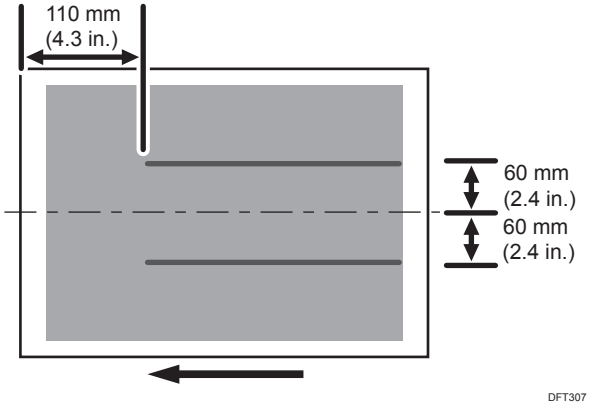
- For details see, page 48 "Oblique Wavy Streaks".
- For details see, page 50 "Streaks like defect imagery Appear on the Paper Surface".
- For details see, page 66 "Faint Printing".
- For details see, page 92 "Stained When Duplex Printing is Performed".
- For details see, page 95 "Creases, Worm Track (Wavy Streaks), or Bends Appear".

# 5. Image Quality Problem: Lines

## Streaks

### Vertical Black Streaks (1)

Black streaks appear at intervals of approximately 60 mm (2.4 inches) from the center. This occurs Side 1 only.




#### Cause:

Because of inconsistent air volumes of the suction fan of the paper tray or the use of paper from different lots, black streaks may appear on parts where the belt and paper surface come into contact.

**Note**

- Vertical black streaks do not appear in the areas within approximately 110 mm (4.3 inches) of the leading edge.
- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

#### Solution:

1. **In [Advanced Settings] for the custom paper, set 108: [Paper Tray: Vacuum Fan Level] to "70 %".**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |

| | |
|---|---|
| No | Go to the next step. |

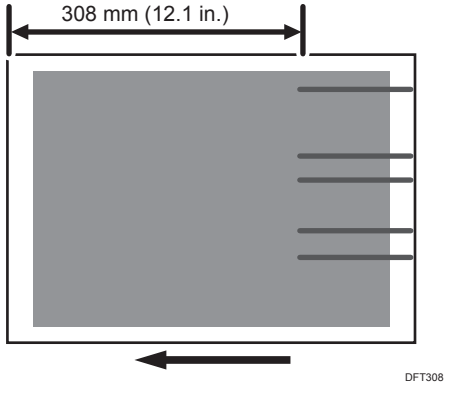
3. **Decrease the value in 108: [Paper Tray: Vacuum Fan Level] by 10 percentage point.**
4. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| Yes | Finished! |
| No | Repeat Steps 3 and 4. If the problem persists even though you have decreased the value to "50 %", contact your service representative. |

## Vertical Black Streaks (2)

Black or cyan streaks that look like something was dragged appear parallel to the paper feed direction from approximately 308 mm (12.1 inches) from the leading edge.






### Cause:

This occurs when the paper is soiled with toner if it accumulates in the cleaning unit for the photoconductor unit and falls through the lubrication blade.

### Solution:

1. **In the 05: [Machine: Maintenance] group on the [Adjustment Settings for Skilled Operators] menu, execute 0502: [Execute Photoconductor Refreshing].**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| Yes | Finished! |

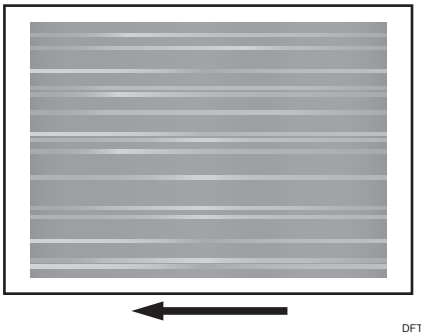
| | |
|---|---|
| No | If the streaks are black, replace the cleaning unit for the photoconductor unit for black. If the streaks are cyan, replace the cleaning unit for the photoconductor unit for cyan. |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| Yes | Finished! |
| No | Carry out the procedure in page 41 "Vertical Black Streaks (1)". If the problem persists, contact your service representative. |

## Vertical White Streaks

White streaks appear in parallel to the paper feed direction.



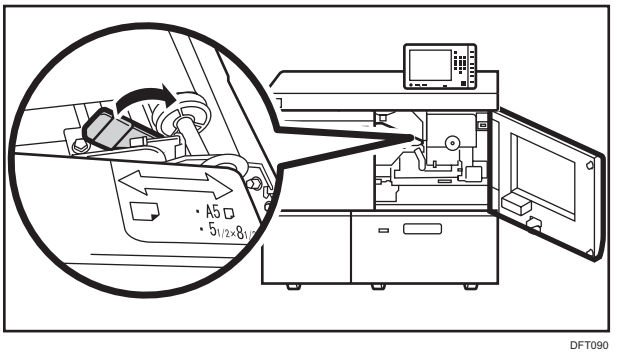
DFT091

### Cause:

This problem may occur on side 2 of the paper when printing black halftone images on both sides is performed.

### Solution:

1. **Open the right front cover of the left unit, and then lower the lever for A5/Half Letter to the right.**




DFT090

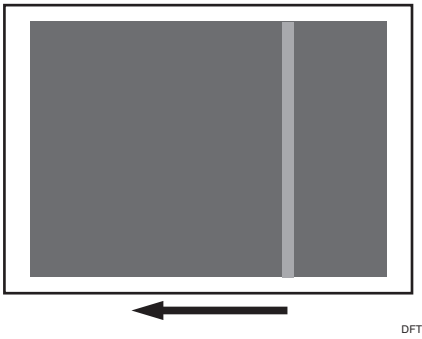
2. **Print the image.**
3. **If the problem persists, contact your service representative.**

**Note**

- If you are printing on paper whose weight is between 1 and 3 with the lever for A5/Half Letter lowered to the right, creases may appear in the center of the paper. If this happens, return the lever to its original position.

## Horizontal Streaks: When Using Thick Paper (1)

When thick paper is used, streaks appear in the horizontal direction to the paper feed direction.



DFT022

### Cause:

The jitter that occurs when paper is fed through the paper transfer roller has caused image disturbances in the image transfer unit.

Note

- The horizontal streaks which appear on thick paper do not appear on the first printed sheet.
- Streaks appear in various areas depending on the length and color of the paper.

## Solution:

Carry out the following sequence of procedures. Terminate the sequence as soon as the problem is resolved.

### Procedure 1: Adjusting the gap of paper transfer

1. **In [Advanced Settings] for the custom paper, check the present value in 084: [Ppr Trns Gap].**
2. **Increase the value in 084: [Ppr Trns Gap] by one step.**

   If [Off] is selected, change the value to [Small Gap]. If [Small Gap] is selected, change the value to [Medium Gap]. If [Medium Gap] is selected, change the value to [Large Gap].
3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| Yes | Finished! |
| No | Repeat Steps 2 to 3. If the problem persists even though you have set 084: [Ppr Trns Gap] to [Large Gap], revert the setting to the one in Step 1, and then proceed to "Procedure 2: Changing process speed". |

### Procedure 2: Changing process speed

1. **Set 120: [Process Speed Setting] to [Low] in [Advanced Settings] for the custom paper.**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| Yes | Finished! |
| No | If the problem persists, set 120: [Process Speed Setting] to [High], then proceed to "Procedure 3: Adjusting intervals between sheets". |

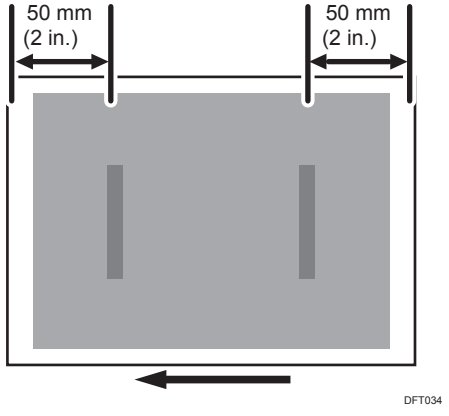
### Procedure 3: Adjusting intervals between sheets

1. **In [Advanced Settings] for the custom paper, adjust the value in 127: [Paper Feed Interval Setting].**

   Adjust the length of intervals between sheets to move streaked areas to areas with no print image or intervals between sheets. For instance, when performing black-and-white printing on A3 paper, set this value to 54 percentage points to move the streak to the interval between sheets.

## Horizontal Streaks: When Using Thick Paper (2)

Streaks appear at approximately 50 mm (2 inches) away from the leading or trailing edge of the paper.






### Cause:

This may occur if:

- Thick paper is used.
- Stiff paper is being used.

### Solution:

1. **Is the paper loaded in the long-grain direction?**

| | |
|---|---|
| **Yes** | Change the paper to paper in the short-grain direction. |
| **No** | Skip to Step 3. |

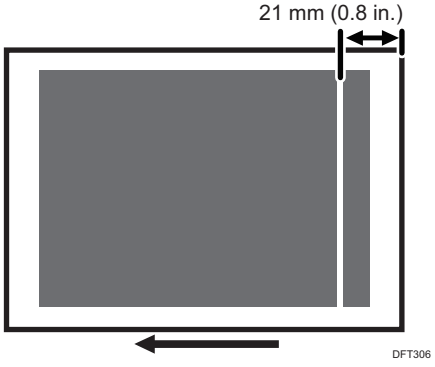
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Go to the next step. |

3. **Use another type of paper or contact your service representative.**

## Horizontal Streaks: When Using Thick Paper (3)

When using thick paper, white streaks appear in the area 20 to 22 mm (0.78 to 0.86 inches) from the trailing edge of the paper.




## Cause:

This may occur if:

- Thick paper is used
- Coated paper is used

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

## Solution:

1. **In [Advanced Settings] for the custom paper, check the present value in 087: [Ppr Trns High Pressure Setting]. Is it set to [High]?**

| | |
|---|---|
| **Yes** | No further improvement is likely. Contact your service representative. |
| **No** | Set 087: [Ppr Trns High Pressure Setting] to [High] and go to the next step. |

2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Carry out the procedure in see page 44 "Horizontal Streaks: When Using Thick Paper (1)". |

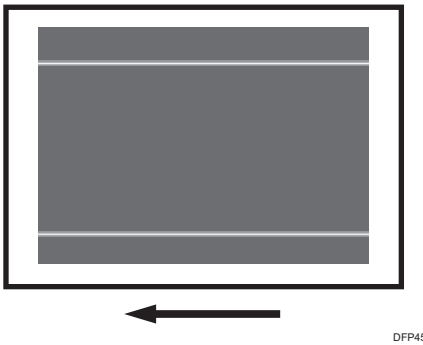
**Note**

- Changing the value in 087: [Ppr Trns High Pressure Setting] may produce either or both of the following side effects:
  - Increase in toner consumption
  - Occurrence of banding (streaks)

- White spots

## Glossy Lines at the Edge of the Paper

A glossy line appears in parallel to the paper feed direction. This may occur on solid-fill images.



DFP455



### Cause:

There is a trace (streak) of the paper edge on the fusing belt.

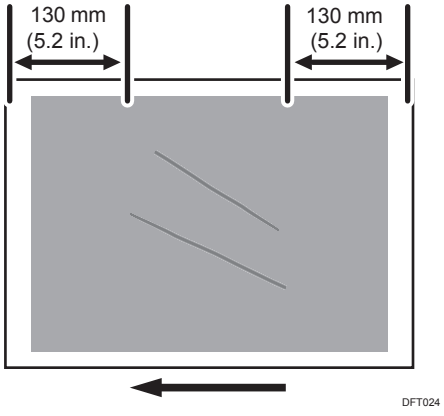
### Solution:

1. **In the 05: [Machine: Maintenance] group on the [Adjustment Settings for Skilled Operators] menu, select 0507: [Smooth Fusing Belt] and execute [For Belt Scratches].**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Repeat Step 1 to 2. If the problem persists, contact your service representative. |

## Oblique Wavy Streaks

Creases occur at the center of the paper and not in areas within 130 mm (5.2 inches) from the leading or trailing edge of the paper.




## Cause:

Due to the leading edge of the paper being curled or wavy directly after fusing, an angled force is applied to the paper until the trailing edge of the paper moves out of the fusing unit, producing oblique creases.

This may occur if:

- The thickness of the paper is equivalent to Paper Weight 3 or lower
- Paper smaller than A4 is used
- Printing solid fills
- Duplex printing

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

## Solution:

1. **In [Advanced Settings] for the custom paper, increase the value in 126: [Cooling Belt Feed Speed] by 2 percentage points.**
2. **Print the image. Has the problem been resolved?**

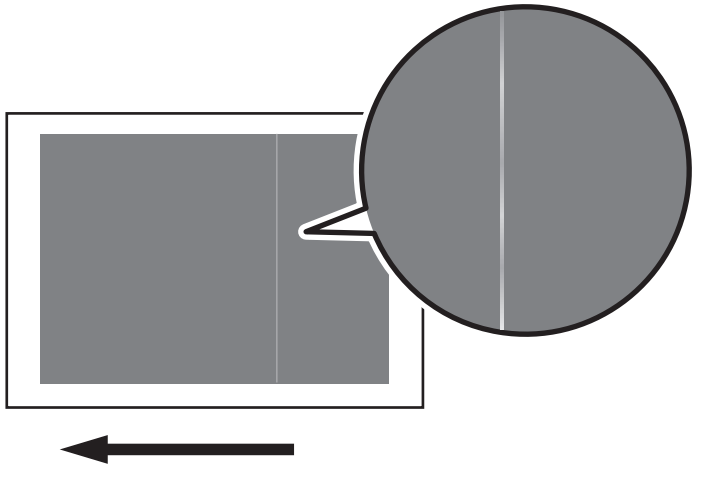
| | |
|---|---|
| **Yes** | Finished! |
| **No** | Increase the speed an additional 3 percentage points in 126: [Cooling Belt Feed Speed]. |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

## Streaks like defect imagery Appear on the Paper Surface

Streaks appear as if scratched a needle, so that the background can be seen.



DFT300

### Cause:

The paper path is stained.

### Solution:

1. **Clean the paper feed pass.**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

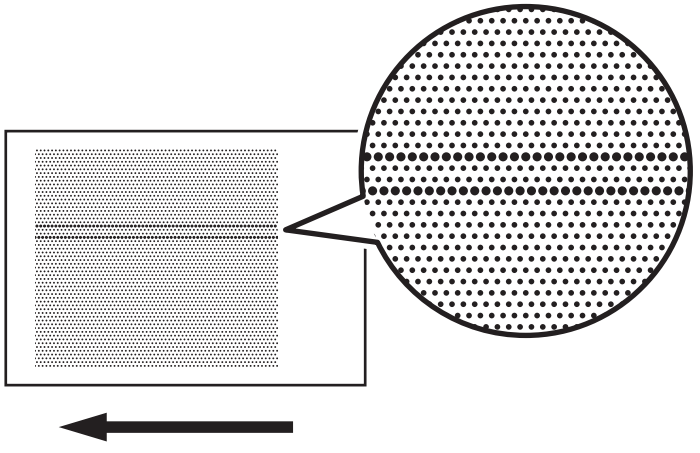
**Note**

- For details about cleaning the paper feed pass see, page 113 "Cleaning the Paper Feed Path".

# Bands

## Vertical Black Bands

Black bands that are 5 to 6 mm (0.2 inches) wide appear on a halftone image parallel to the paper feed direction.



DFT054

### Cause:

The corona wire or grid in the charge roller unit is stained.

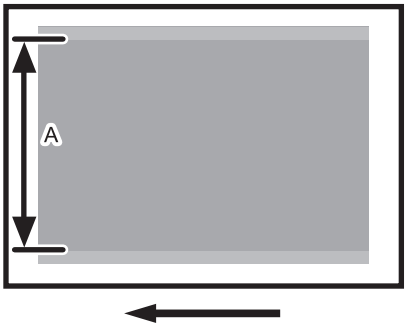
### Solution:

1. **In the 05: [Machine: Maintenance] group on the [Adjustment Settings for Skilled Operators] menu, select 0521: [Execute Charger Cleaning] and execute [All Colors].**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

## Vertical White Bands

When printing on large paper after continuously printing on small paper, concentration differences occur on the inner and outer sides of the small paper width (A).




DFT305

### Cause:

The amount of lubricant on the intermediate transfer belt is uneven.

This may occur on half-tone images.



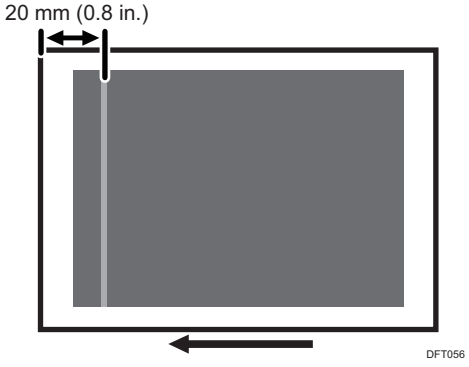
### Solution:

1. **In the 02: [Machine: Image Quality] group on the [Adjustment Settings for Skilled Operators] menu, select 0201: [Adjust Image Density/ DEMS] and execute [Image Density Adjustment: Manual Execute].**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Repeat Steps 1 and 2. If the problem persists, contact your service representative. |

## Horizontal Streaks at the Area within 20 mm (0.8 inches) from the Leading Edge

An area within approximately 20 mm (0.8 inches) from the leading edge of the paper may be affected by thick density, insufficient density, toner blasting, or streaks.




## Cause:

This may occur if:

- Thick paper is used
- Coated paper is used
- Printing is done at low temperature or humidity

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

## Solution:

Carry out the following sequence of procedures. Terminate the sequence as soon as the problem is resolved.

**Procedure 1: Adjust the image transfer current**

1. **Measure by a ruler or other device the length (in mm) of the area from the leading edge of the paper where the paper is affected by thick density, insufficient density, toner blasting, or streaks.**
2. **In [Advanced Settings] for the custom paper, check the present value of the current for the image transfer roller.**

   **<Printing in black and white>**

   Select 022: [Image Transfer Current: BW].

   **<Printing in full color>**

   Select 023: [Image Transfer Current: FC: K].

3. **Is it set to 150 μA?**

| | |
|---|---|
| **Yes** | Proceed to "Procedure 2: Adjust the transferability at the paper transfer unit". |
| **No** | Go to the next step. |

4. **Increase the value in 022: [Image Transfer Current: BW] or 023: [Image Transfer Current: FC: K] by 5 μA.**
5. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Go to the next step. |

6. **Specify the area to apply the image transfer current at the leading edge of the paper.**

   In 028: [Image Transfer Current: LE Leng.: BW] or 030: [Image Transfer Current: LE Leng.: FC: K], enter the value which is 5 mm higher than the value measured in Step 1.
7. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Repeat Steps 4 and 5. If the problem persists even though you have increased the value to 150 μA, proceed to "Procedure 2: Adjust the transferability at the paper transfer unit". |

**Procedure 2: Adjust the transferability at the paper transfer unit**

1. **In [Advanced Settings] for the custom paper, set 087: [Ppr Trns High Pressure Setting] to [High].**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Go to the next step. |

3. **Increase the value in 084: [Ppr Trns Gap] by 1 step.**

   If [Off] is selected, change the value to [Small Gap]. If [Small Gap] is selected, change the value to [Medium Gap]. If [Medium Gap] is selected, change the value to [Large Gap].
4. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |

| | |
|---|---|
| No | Decrease the value in 087: [Ppr Trns High Pressure Setting] by 1 step. If [High] is selected, change the value to [Standard]. If [Standard] is selected, change the value to [Low]. If [Low] is selected, change the value to [Off]. |

5. **Print the image. Has the problem been resolved?**

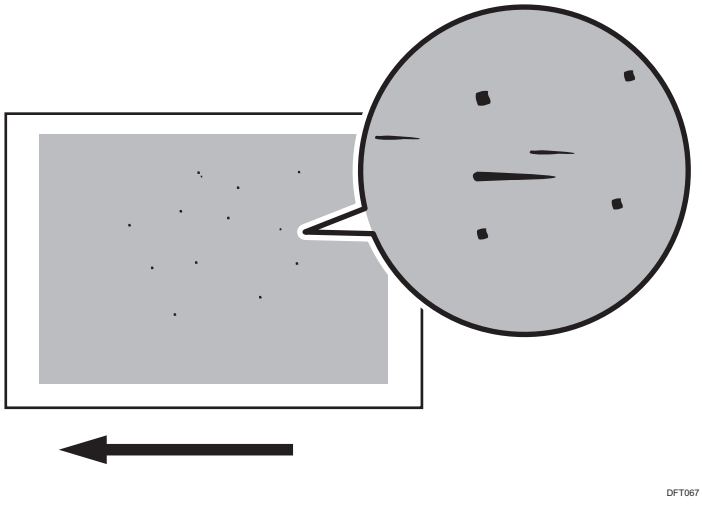
| | |
|---|---|
| Yes | Finished! |
| No | Repeat Steps 3 to 5. If the problem persists even though you have set 084: [Ppr Trns Gap] to [Large Gap], contact your service representative. |

# 6. Image Quality Problem: Spots

## Spots

### Black (color) Spots (1)

Black or colored spots appear.




### Cause:

This may occur if you use toner which has been left at high temperature and humidity.

### Solution:

1. **Has this problem occurred after replacing the toner bottle?**

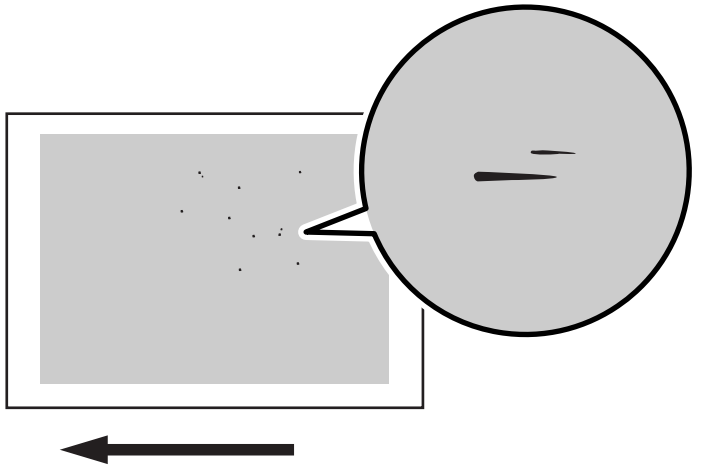
| | |
|---|---|
| **Yes** | Replace the toner bottle. |
| **No** | Go to the next step. |

2. **Print 200 full-page solid-fill A3 sheets for all colors. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

## Black (color) Spots (2)

Paper is stained with toner spots of 0.5–1 mm (0.02–0.04 inches) in diameter.



CEZ538



### Cause:

Toner fragments have slipped through the cleaning web.

This may occur if:

- Duplex printing
- Printing on uncoated (especially rough-textured) paper
- Halftone printing

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

### Solution:

1. **In [Advanced Settings] for the custom paper, adjust the fusing heat roller temperature.**

   **<Printing in full color>**

   Increase the value in 088: [Fusing Temp: FC] by 5 degrees.

   **<Printing in black and white>**

   Increase the value in 089: [Fusing Temp: BW] by 5 degrees.

2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Increase the temperature an additional 5 degrees in 088: [Fusing Temp: FC] or 089: [Fusing Temp: BW]. |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 096: [Cleaning Web Rotation Interval] to "-75 %". |

4. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 093: [Fusing Pressure Roller On Before Fusing] to [Off]. |

5. **Print the image. Does this eliminate the problem?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Go to the next step. |

6. **Adjust the pressure roller temperature.**

**<Printing in full color>**

Set the value in 090: [Fusing Pressure Roller Temp: FC] to "130 degrees".

**<Printing in black and white>**

Set the value in 091: [Fusing Pressure Roller Temp: BW] to "130 degrees".

7. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set the value in 127: [Paper Feed Interval Setting] to "70 %". |

8. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

**Note**

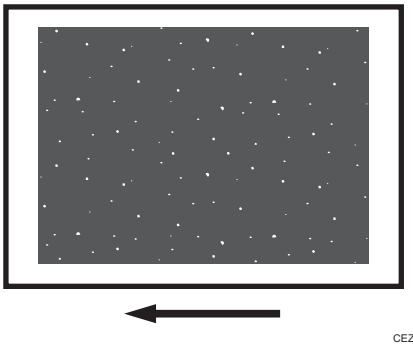
- Decreasing the value in 096: [Cleaning Web Rotation Interval] will shorten the replacement cycle of the cleaning web.

- After performing the solution, it is recommended to perform the color calibration of the external controller. For details see, page 159 "Operating Procedure for Color Calibration".

## White Spots/Toner Blasting

### White Spots

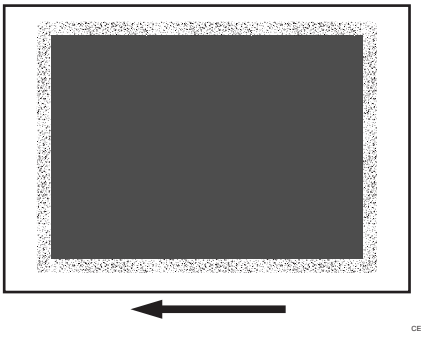
White spots of 0.2 to 0.3 mm (0.008 to 0.01 inches) in diameter appear.



CEZ527

### Toner Blasting

Toner is scattered around a solid-fill print.



CEZ545

## Cause:

This may occur if:

- Printing is done at low temperature or humidity
- Paper dust may stick to the paper and produce white spots.
- Some types of paper, such as recycled paper, roughly cut paper, and high-friction coated paper produce a lot of paper dust, which will likely stick to the paper.

**Note**

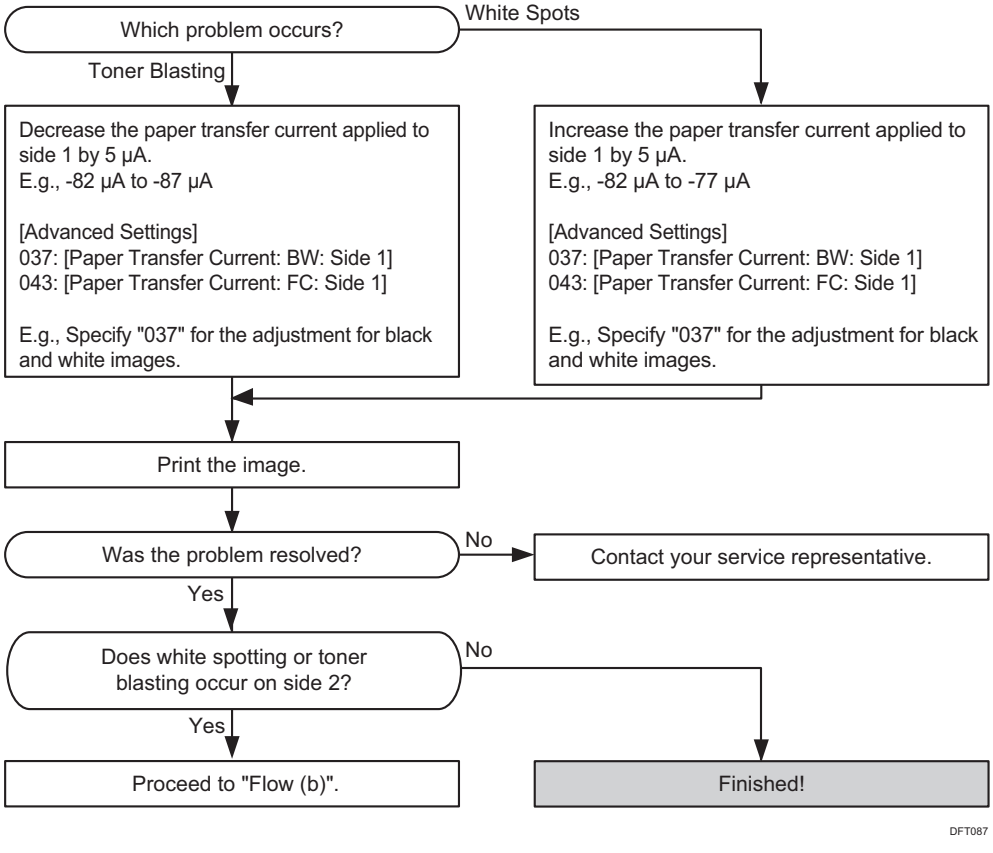
- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

## Solution:

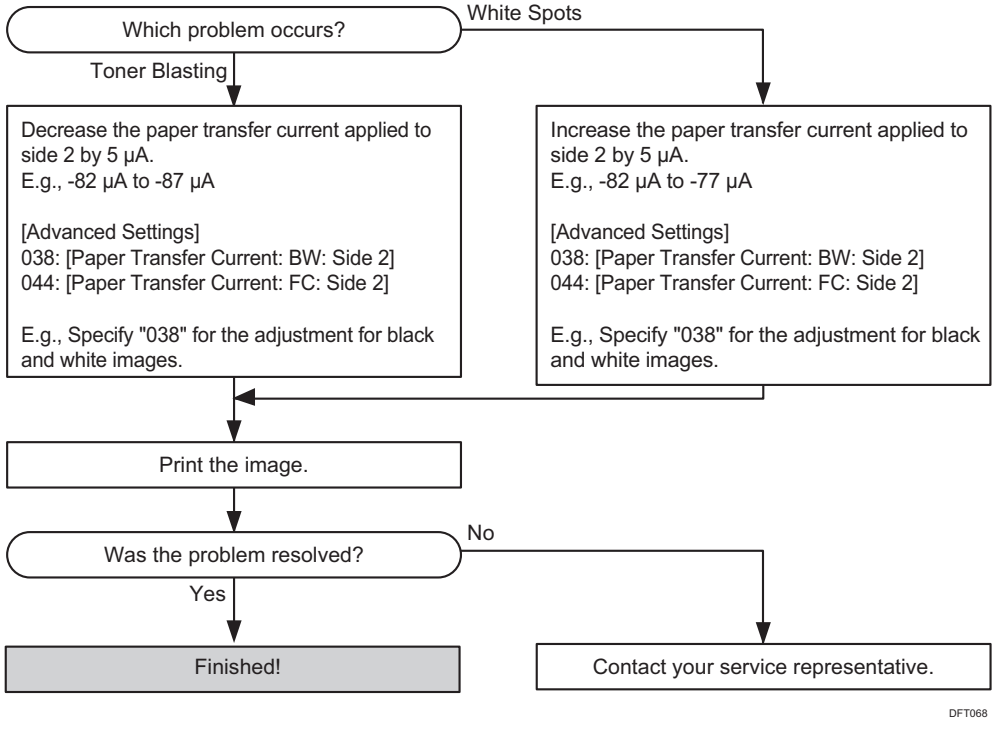
**<If paper dust is stuck to the paper>**

Clean the dust catcher, guide plate, rollers and paper feed rollers. For details about cleaning, see page 113 "Cleaning the Paper Feed Path".

**<a: If the problem occurs on side 1>**



**<b: If the problem occurs on side 2>**

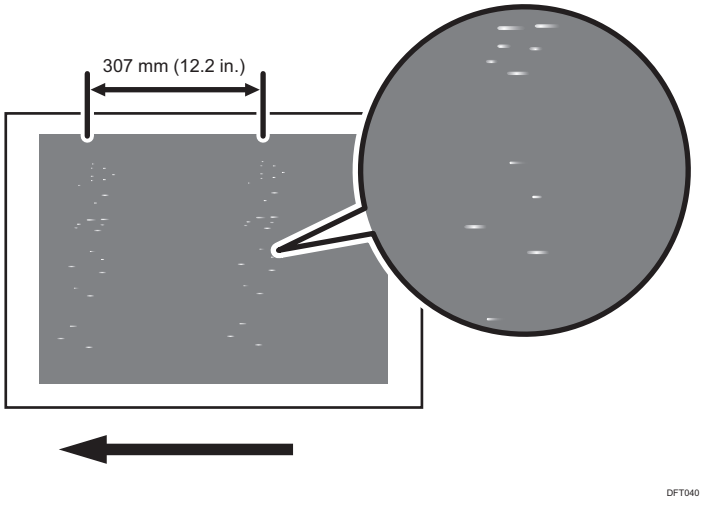



**Note**

- If you reduce the paper transfer current to eliminate white spots, copies may become too faint.
- After performing the solution, it is recommended to perform the color calibration of the external controller. For details see, page 159 "Operating Procedure for Color Calibration".
- The problem may be reduced by performing the solution specified in page 21 "Improving Transferability".

## Medaka (White Spots)

White dots or short lines appear, spaced at intervals of 307 mm (12.2 inches) in the direction of the paper feed.




## Cause:

The photoconductor unit is stained.



## Solution:

1. **To identify the affected color, print three full-page, solid-fill A3 or DLT sheets for each of cyan, magenta, black, and green, and three full-page, halftone A3 or DLT sheets for each of cyan, magenta, and yellow.**

   Because it is difficult to identify white spots on yellow, green is used instead of yellow.

2. **Detach the photoconductor unit of the affected color and check the drum surface. Is the surface stained?**

| | |
|---|---|
| Yes | Wipe the photoconductor unit surface with a clean dry cloth to remove the stain. Then in the 05: [Machine: Maintenance] group on the [Adjustment Settings for Skilled Operators] menu, select the affected color and execute 0501: [Execute Cleaning Initial Setting for PCU]. |
| No | Replace the photoconductor unit. |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| Yes | Finished! |
| No | Replace the PCU cleaning unit and photoconductor unit. |

4. **If the problem persists, contact your service representative.**

**Note**

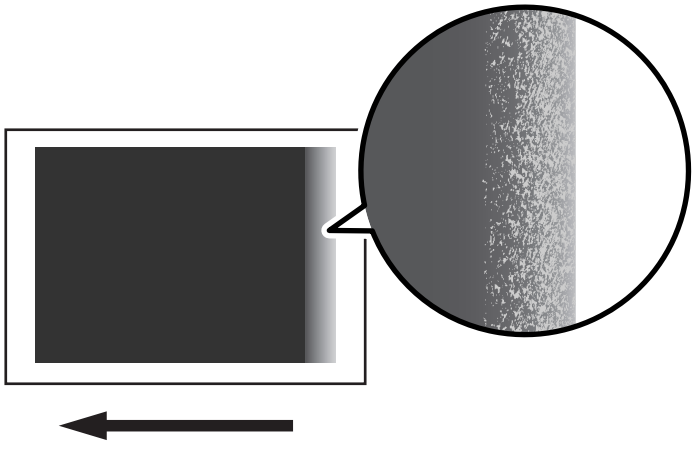
- For details about replacing the PCU cleaning unit and photoconductor unit, see Replacement Guide.

# 7. Image Quality Problem: Full Page

## Unprinted

### Fainter Trailing Edge

The trailing edge is fainter.



CEZ563



#### Cause:

This may occur if:

- Printing is done at low temperature or humidity
- Halftone printing
- Thick paper is used
- Coated paper is used

**Note**

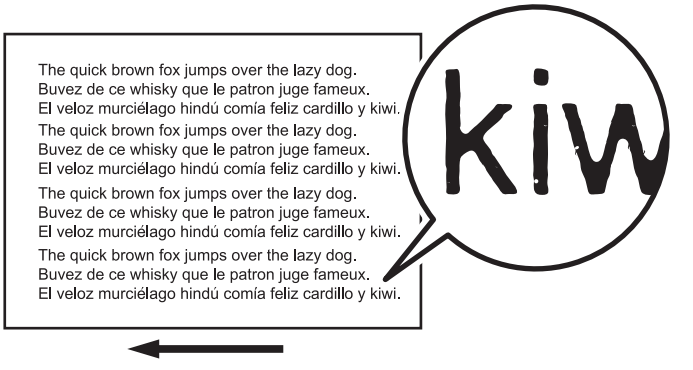
- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

#### Solution:

For details see, page 73 "Density Fluctuation at the Trailing Edge (When Using Thick Paper)".

## Faint Printing

Small text and lines are printed faintly.




DFT057

### Cause:

When the machine setting is specified to print text and lines thinly, small text and lines may be printed faintly.

### Solution:

1. **In the 02: [Machine: Image Quality] group on the [Adjustment Settings for Skilled Operators] menu, select 0201: [Adjust Image Density/ DEMS] and execute [Image Density Adjustment: Manual Execute].**
2. **Print the image. Has the problem been resolved?**

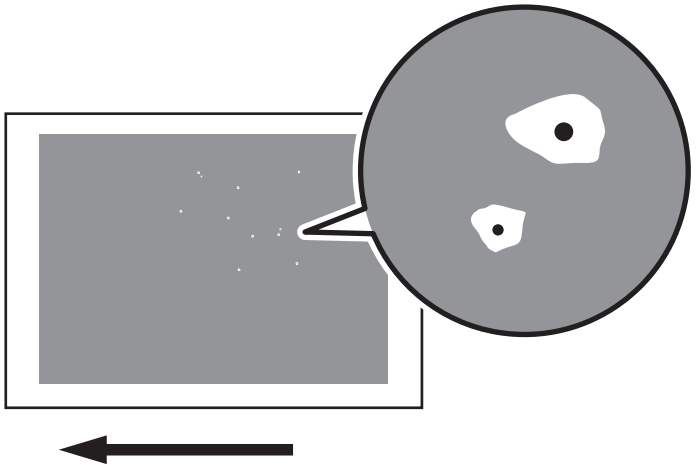
| | |
|---|---|
| **Yes** | Finished! |
| **No** | Go to the next step. |

3. **Check the present value in 0204: [Adjust Line Width]. Is the setting set to "+5"?**

| | |
|---|---|
| **Yes** | Contact your service representative. |
| **No** | In 0204: [Adjust Line Width], increase the all colors' value by 1 step. If the problem persists even though you have increased the value to "+5", contact your service representative. |

## Colorless Spots

White spots appear randomly.



DFT058

### Cause:

This occurs due to the paper being stained with granular toner.

### Solution:

Replace the toner bottle to a new one.

# Uneven Density

## Uneven Image Density

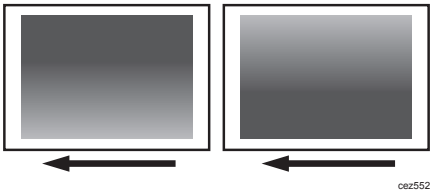
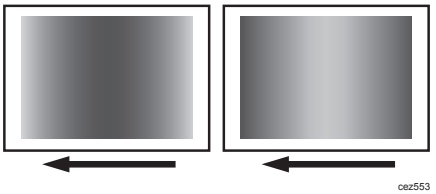
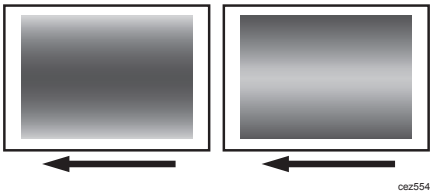
The density is uneven.

### Solution:

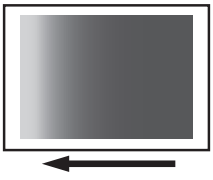
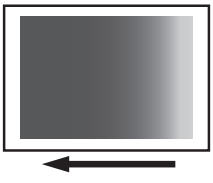
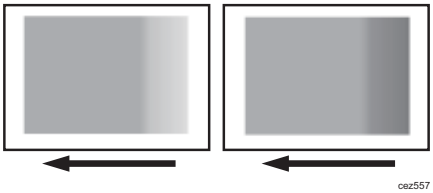
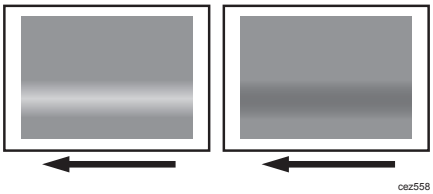
The solution depends on the type of unevenness.

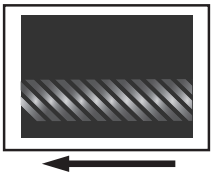
Carry out the appropriate procedure from those in the following table:

**(A) The density is uneven across the entire image.**

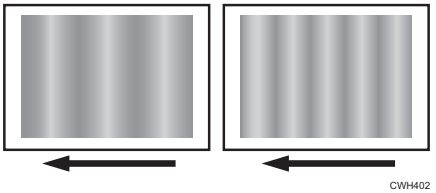
| Affected area | Solution |
|---|---|
| The density from top to bottom is uneven.<br>  <br>cez552 | 1. In the 02: [Machine: Image Quality] group on the [Adjustment Settings for Skilled Operators] menu, select 0205: [Adjust Density Difference Across Feed Direction] and adjust the value for the affected color.<br>2. If the problem persists, contact your service representative. |
| The sides are fainter or denser.<br>  <br>cez553 | 1. In the 02: [Machine: Image Quality] group on the [Adjustment Settings for Skilled Operators] menu, select 0201: [Adjust Image Density/ DEMS] and execute [Image Density Adjustment: Manual Execute].<br>2. If the problem persists, contact your service representative. |
| The top and bottom are fainter or denser.<br>  <br>cez554 | 1. In the 02: [Machine: Image Quality] group on the [Adjustment Settings for Skilled Operators] menu, select 0205: [Adjust Density Difference Across Feed Direction] and execute the auto adjustment for the affected color.<br>2. If the problem persists, contact your service representative. |

**(B) The density is uneven in a part of the image.**

| Affected area | Solution |
|---|---|
| The leading edge is fainter.<br>  <br>cez555 | 1. In the 02: [Machine: Image Quality] group on the [Adjustment Settings for Skilled Operators] menu, select 0201: [Adjust Image Density/ DEMS] and execute [Image Density Adjustment: Manual Execute].<br>2. If the problem persists, contact your service representative.<br>When thick paper is used, see page 70 "Density Fluctuation at the Leading Edge (When Using Thick Paper)". |
| The trailing edge is fainter.<br>  <br>cez556 | 1. In the 02: [Machine: Image Quality] group on the [Adjustment Settings for Skilled Operators] menu, select 0201: [Adjust Image Density/ DEMS] and execute [Image Density Adjustment: Manual Execute].<br>2. If the problem persists, contact your service representative.<br>When thick paper is used, see page 73 "Density Fluctuation at the Trailing Edge (When Using Thick Paper)". |
| The area within 90 mm (3.5 inches) of the trailing edge is fainter or denser.<br>  <br>cez557 | 1. In the 02: [Machine: Image Quality] group on the [Adjustment Settings for Skilled Operators] menu, select 0201: [Adjust Image Density/ DEMS] and execute [Image Density Adjustment: Manual Execute].<br>2. If the problem persists, see page 78 "Uneven Density within 107 mm (4.2 inches) of the Trailing Edge". |
| The center is fainter or denser<br>  <br>cez558 | 1. In the 02: [Machine: Image Quality] group on the [Adjustment Settings for Skilled Operators] menu, select 0205: [Adjust Density Difference Across Feed Direction] and execute the auto adjustment for the affected color.<br>2. If the problem persists, contact your service representative. |

| Affected area | Solution |
|---|---|
| Wavy unevenness<br>  <br>cez559 | 1. In the 02: [Machine: Image Quality] group on the [Adjustment Settings for Skilled Operators] menu, select 0201: [Adjust Image Density/ DEMS] and execute [Image Density Adjustment: Manual Execute].<br>2. If the problem persists, contact your service representative. |

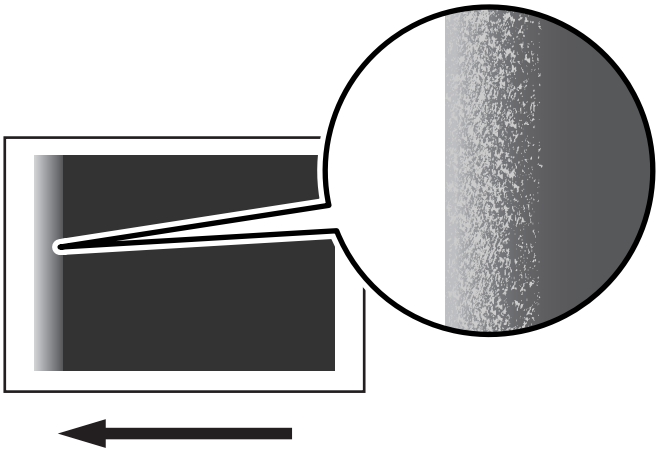
**(C) The density is uneven in the direction perpendicular to the paper feed direction at regular intervals.**

| Affected area | Solution |
|---|---|
| Periodic vertical density fluctuation<br>  <br>CWH402 | 1. In the 02: [Machine: Image Quality] group on the [Adjustment Settings for Skilled Operators] menu, select 0201: [Adjust Image Density/ DEMS] and execute [Image Density Adjustment: Manual Execute].<br>2. If the problem persists, contact your service representative. |



## Density Fluctuation at the Leading Edge (When Using Thick Paper)

The leading edge is fainter or denser when using thick paper.



CEZ562

## Cause:

This may occur if:

- Printing is done at low temperature or humidity

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

## Solution:

Carry out the following sequence of procedures. Terminate the sequence as soon as the problem is resolved.

### Procedure 1: Specifying the area to be adjusted

1. **Measure by a ruler or other device the length (in mm) of the area from the leading edge of the paper where the print is faint or dense.**
2. **In [Advanced Settings] for the custom paper, specify the area to apply the transfer current at the leading edge of the paper.**

   **<Printing in black and white>**

   In 028: [Image Transfer Current: LE Leng.: BW], 040: [Paper Transfer Current: LE Leng.: BW] and 062: [AC Transfer Mode: LE Leng.: BW], enter the value which is 5 mm higher than the value measured in Step 1.

   **<Printing in full color>**

   In 030: [Image Transfer Current: LE Leng.: FC: K], 032: [Image Transfer Current: LE Leng.: FC: C], 034: [Image Transfer Current: LE Leng.: FC: M], 036: [Image Transfer Current: LE Leng.: FC: Y], 046: [Paper Transfer Current: LE Leng.: FC], and 065: [AC Transfer Mode: LE Leng.: FC], enter the value which is 5 mm higher than the value measured in Step 1.
3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Proceed to "Procedure 2: Increasing the current". |

### Procedure 2: Increasing the current

1. **In [Advanced Settings] for the custom paper, make a note of the following values:**

   **<Printing in black and white>**

   027: [Image Transfer Current: LE: BW], 039: [Paper Transfer Current: LE: BW], 060: [AC Transfer Mode: Voltage: LE: BW], and 061: [AC Transfer Mode: Current: LE: BW]

**<Printing in full color>**

029: [Image Transfer Current: LE: FC: K], 031: [Image Transfer Current: LE: FC: C], 033: [Image Transfer Current: LE: FC: M], 035: [Image Transfer Current: LE: FC: Y], 045: [Paper Transfer Current: LE: FC], 063: [AC Transfer Mode: Voltage: LE: FC], and 064: [AC Transfer Mode: Current: LE: FC]

2. **Increase these values by 10 percentage points.**
3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Increase the value by 5 percentage points. |

4. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Proceed to "Procedure 3: Decreasing the current". |

**Procedure 3: Decreasing the current**

1. **In [Advanced Settings] for the custom paper, make a note of the following values:**

**<Printing in black and white>**

027: [Image Transfer Current: LE: BW], 039: [Paper Transfer Current: LE: BW], 060: [AC Transfer Mode: Voltage: LE: BW], and 061: [AC Transfer Mode: Current: LE: BW]

**<Printing in full color>**

029: [Image Transfer Current: LE: FC: K], 031: [Image Transfer Current: LE: FC: C], 033: [Image Transfer Current: LE: FC: M], 035: [Image Transfer Current: LE: FC: Y], 045: [Paper Transfer Current: LE: FC], 063: [AC Transfer Mode: Voltage: LE: FC], and 064: [AC Transfer Mode: Current: LE: FC]

2. **Decrease the value by 10 percentage points.**
3. **Print the image. Has the problem been resolved?**

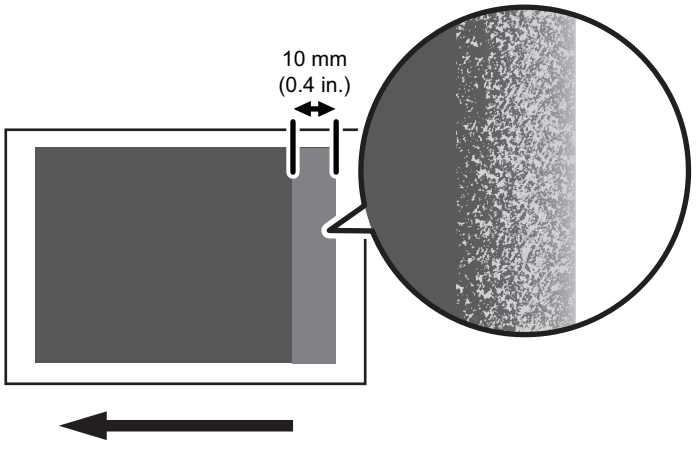
| | |
|---|---|
| **Yes** | Finished! |
| **No** | Decrease the value by 5 percentage points. |

4. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

## Density Fluctuation at the Trailing Edge (When Using Thick Paper)

The trailing edge is fainter or denser when using thick paper.




DFT059

### Cause:

This may occur if:

- Printing is done at low temperature or humidity
- Halfttone printing

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

### Solution:

Carry out the following sequence of procedures. Terminate the sequence as soon as the problem is resolved.

**Procedure 1: Specifying the area to be adjusted**

1. **Measure by a ruler or other device the length (in mm) of the area from the trailing edge of the paper where the print is faint or dense.**

2. **In [Advanced Settings] for the custom paper, specify the area to apply the paper transfer current at the trailing edge of the paper values.**

   **<Printing in black and white>**

   In 042: [Paper Transfer Current: TE Leng.: BW] or 068: [AC Transfer Mode: TE Leng.: BW], enter the value which is 10 mm higher than the value measured in Step 1.

   **<Printing in full color>**

   In 048: [Paper Transfer Current: TE Leng.: FC] or 071: [AC Transfer Mode: TE Leng.: FC], enter the value which is 10 mm higher than the value measured in Step 1.

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Proceed to "Procedure 2: Increasing the current". |

**Procedure 2: Increasing the current**

1. **In [Advanced Settings] for the custom paper, make a note of the following values:**

   **<Printing in black and white>**

   041: [Paper Transfer Current: TE: BW], 066: [AC Transfer Mode: Voltage: TE: BW], and 067: [AC Transfer Mode: Current: TE: BW]

   **<Printing in full color>**

   047: [Paper Transfer Current: TE: FC], 069: [AC Transfer Mode: Voltage: TE: FC], and 070: [AC Transfer Mode: Current: TE: FC]

2. **Increase these values by 10 percentage points.**
3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Increase the value by 5 percentage points. |

4. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Proceed to "Procedure 3: Decreasing the current". |

**Procedure 3: Decreasing the current**

1. **In [Advanced Settings] for the custom paper, make a note of the following values:**

   **<Printing in black and white>**

   041: [Paper Transfer Current: TE: BW], 066: [AC Transfer Mode: Voltage: TE: BW], and 067: [AC Transfer Mode: Current: TE: BW]

   **<Printing in full color>**

   047: [Paper Transfer Current: TE: FC], 069: [AC Transfer Mode: Voltage: TE: FC], and 070: [AC Transfer Mode: Current: TE: FC]

2. **Decrease the value by 10 percentage points.**
3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Decrease the value by 5 percentage points. |

4. **Print the image. Has the problem been resolved?**

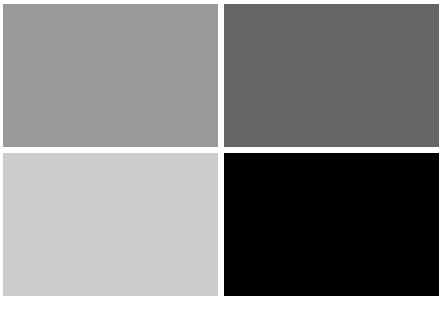
| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |



## Low Image Density

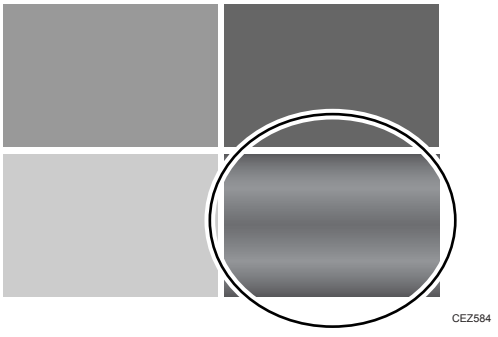
Black is fainter than normal during full color printing.

**Normal**



CEZ566

### Black is fainter




## Cause:

This may occur if:

- Printing is done at high temperature or humidity
- Coated paper is used

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.



## Solution:

Carry out the following sequence of procedures. Terminate the sequence as soon as the problem is resolved.

### Procedure 1: Enable the AC mode

1. **Set 049: [AC Transfer Mode] to [On] in [Advanced Settings] for the custom paper.**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Proceed to "Procedure 2: Adjust the density". |

### Procedure 2: Adjust the density

1. **In the 02: [Machine: Image Quality] group on the [Adjustment Settings for Skilled Operators] menu, select 0203: [Maximum Image Density] and increase the all colors' value by 1 step.**
2. **Select 0201: [Adjust Image Density/ DEMS] and execute [Image Density Adjustment: Manual Execute].**

3. **Print the image. Has the problem been resolved?**

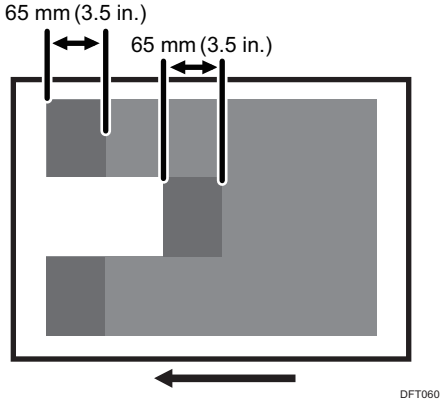
| | |
|---|---|
| **Yes** | Finished! |
| **No** | Repeat Steps 1 to 3. If the problem persists even though you have increased the value in 0203: [Maximum Image Density] to "5", contact your service representative. |

**Note**

- After performing the solution, it is recommended to perform the color calibration of the external controller. For details see, page 159 "Operating Procedure for Color Calibration".

## Higher Density at the Leading Edge

The area within approximately 65 mm (3.5 inches) from the leading edge of the image or at the trailing edge of the blank area is dense.




### Cause:

Printing is done at low temperature or humidity.

### Solution:

1. **Load the sheets the other way up.**
2. **Print the image. Has the problem been resolved?**

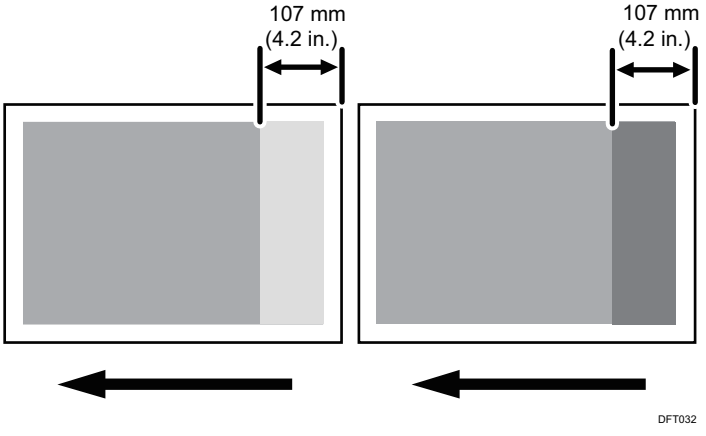
| | |
|---|---|
| **Yes** | Finished! |
| **No** | In the 02: [Machine: Image Quality] group on the [Adjustment Settings for Skilled Operators] menu, select 0201: [Adjust Image Density/ DEMS] and execute [Image Density Adjustment: Manual Execute]. |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

## Uneven Density within 107 mm (4.2 inches) of the Trailing Edge

Printing in the area extending approximately 107 mm (4.2 inches) from the trailing edge is fainter or denser.




### Cause:

This may occur if:

- Printing is done at low temperature or humidity
- Halfttone printing

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

### Solution:

The solution depends on whether the area within 107 mm (4.2 inches) of the trailing edge is denser or fainter.

**<If the area within 107 mm (4.2 inches) of the trailing edge is fainter>**

1. **In [Advanced Settings] for the custom paper, check the present value in 016: [Transfer Timing Roller Feed Speed]. Is it higher than +0.5%?**

| | |
|---|---|
| **Yes** | Contact your service representative. |
| **No** | Increase the value by 0.1 percentage point. |

2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Repeat Steps 1 and 2. If the problem persists even though you have increased the value to +0.5%, contact your service representative. |

**<If the area within 107 mm (4.2 inches) of the trailing edge is denser>**

1. **In [Advanced Settings] for the custom paper, check the present value in 016: [Transfer Timing Roller Feed Speed]. Is it lower than -0.5%?**

| | |
|---|---|
| **Yes** | Contact your service representative. |
| **No** | Decrease the value by 0.1 percentage point. |

2. **Print the image. Has the problem been resolved?**

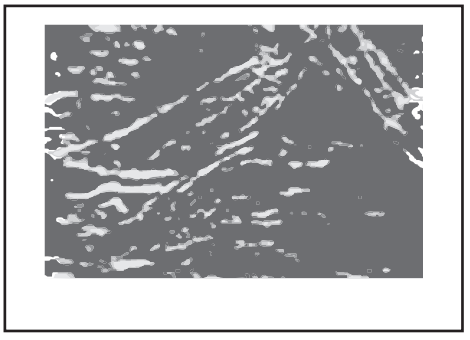
| | |
|---|---|
| **Yes** | Finished! |
| **No** | Repeat Steps 1 and 2. If the problem persists even though you have decreased the value to -0.5%, contact your service representative. |

**Note**

- After performing the solution, it is recommended to perform the color calibration of the external controller. For details see, page 159 "Operating Procedure for Color Calibration".

## White Spots on a Textured Surface

White spots appear on indentations.



CXM001

## Cause:

This may occur if:

- Heavily textured paper is used.
- Thick paper is used.
- Documents with a small image area are printed continuously.

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.



## Solution:

Adjust the paper transfer roller voltage.

1. **In [Advanced Settings] for the custom paper, increase the value in 043: [Paper Transfer Current: FC: Side 1] or 044: [Paper Transfer Current: FC: Side 2] by -20 μA.**

   Eg., -100 μA to -120 μA

2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Go to the next step. |

3. **Does other than black become faint?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Go to the next step. |

4. **Increase the value in 043: [Paper Transfer Current: FC: Side 1] or 044: [Paper Transfer Current: FC: Side 2] by -20 µA.**

   Eg., -120 µA to -100 µA

5. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Decrease the value in 087: [Ppr Trns High Pressure Setting] by one step. If [High] is selected, change the value to [Standard]. If [Standard] is selected, change the value to [Low]. If [Low] is selected, change the value to [Off]. |

6. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

**Note**

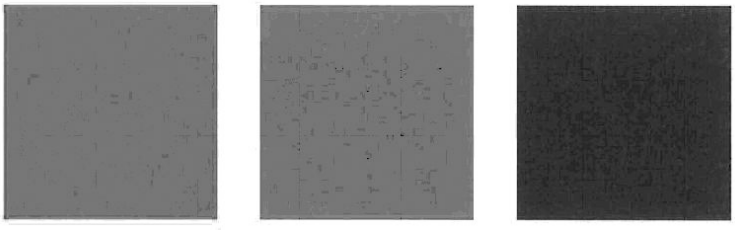
- After performing the solution, it is recommended to perform the color calibration of the external controller. For details see, page 159 "Operating Procedure for Color Calibration".



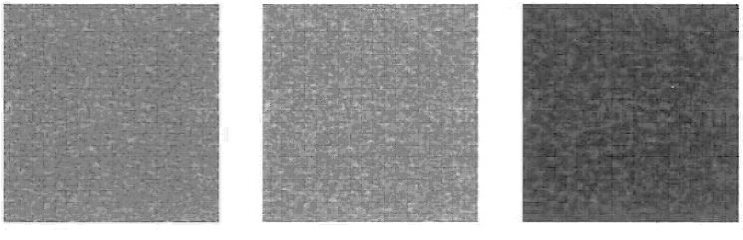
## Mottling

Mottling occurs in solid-filled areas.

**Normal**



**Mottled**



### Cause:

This may occur if:

- Using paper with a rough surface
- Continuously printing solid fills covering small areas
- Printing in a low humidity environment
- Printing in a high humidity environment

### Solution:

Perform the color calibration of the external controller. For details see, page 159 "Operating Procedure for Color Calibration".

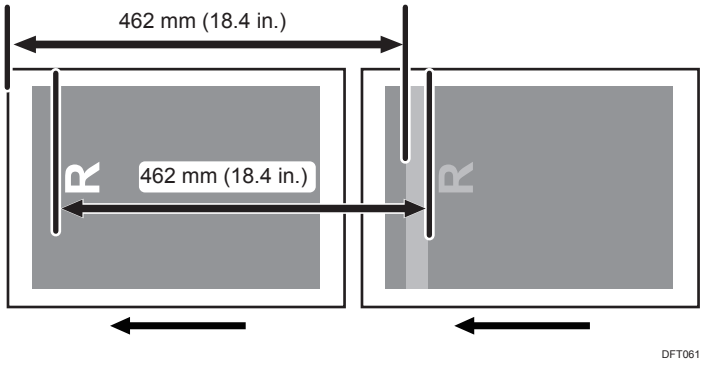
**Note**

- If the problem occurs only if black is used when printing in full-color mode, carry out the procedure in see page 75 "Low Image Density".

## Uneven Gloss



A ghost image of a printed image appears at a distance of 462 mm (18.4 inches) to the side of the image.




### Cause:

This may occur if:

- Printing solid fills
- At the start of the paper transfer

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

## Solution:

1. **In [Advanced Settings] for the custom paper, adjust the fusing heat roller temperature.**

   **<Printing in full color>**

   Decrease the value in 088: [Fusing Temp: FC] by 5 degrees.

   **<Printing in black and white>**

   Decrease the value in 089: [Fusing Temp: BW] by 5 degrees.

2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Decrease the value by 5 degrees in 088: [Fusing Temp: FC] or 089: [Fusing Temp: BW]. |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 120: [Process Speed Setting] to [Low]. |

4. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Decrease the value by 5 degrees in 088: [Fusing Temp: FC] or 089: [Fusing Temp: BW]. |

5. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Decrease the value by 5 degrees in 088: [Fusing Temp: FC] or 089: [Fusing Temp: BW]. |

6. **Print the image. Has the problem been resolved?**

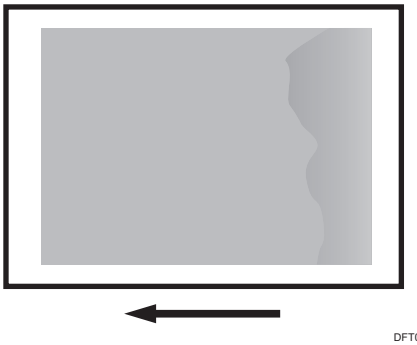
| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

**Note**

- After performing the solution, it is recommended to perform the color calibration of the external controller. For details see, page 159 "Operating Procedure for Color Calibration".

## Uneven Gloss: Wavy

When duplex printing is performed on paper whose paper thickness level is between 1 and 4, wavy density fluctuations may occur on side 2.



DFT042



### Cause:

When printing solid fill or other image that consumes lots of toner, the fusing unit temperature rises, affecting the paper separation from the pressure roller, resulting in glossiness.

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

### Solution:

Carry out the following sequence of procedures. Terminate the sequence as soon as the problem is resolved.

**Procedure 1: Decrease the nip width**

1. **In [Advanced Settings] for the custom paper, set 092: [Fusing Nip Width Setting] to "3".**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 092: [Fusing Nip Width Setting] to "2". |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Proceed to "Procedure 2: Increase the fusing heat roller temperature". |

**Procedure 2: Increase the fusing heat roller temperature**

1. **In [Advanced Settings] for the custom paper, adjust the fusing heat roller temperature.**

   **<Printing in full color>**

   Increase the value in 088: [Fusing Temp: FC] by 5 degrees.

   **<Printing in black and white>**

   Increase the value in 089: [Fusing Temp: BW] by 5 degrees.

2. **Print the image. Has the problem been resolved?**

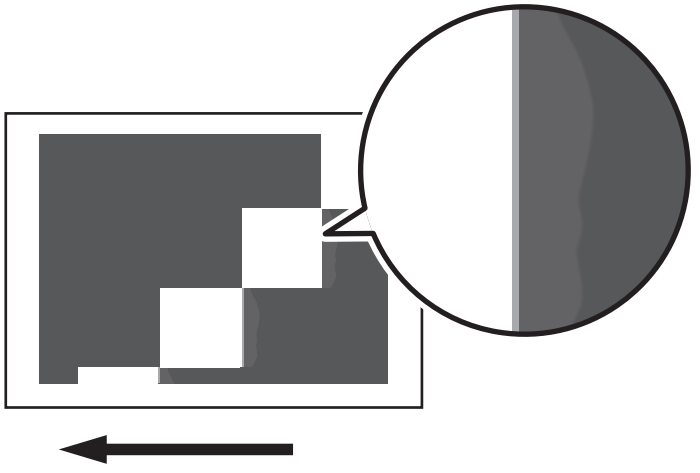
| | |
|---|---|
| **Yes** | Finished! |
| **No** | Increase the value by 5 degrees in 088: [Fusing Temp: FC] or 089: [Fusing Temp: BW]. If the problem persists even though you have increased the value by 185 degrees, contact your service representative. |

**Note**

- After performing the solution, it is recommended to perform the color calibration of the external controller. For details see, page 159 "Operating Procedure for Color Calibration".

## Uneven Gloss: Foggy

Glossiness is insufficient at the trailing edge of the blank area.



DFT047

### Cause:

This may be due to paper coiling around the fusing belt at the fusing nip exit.

**Note**

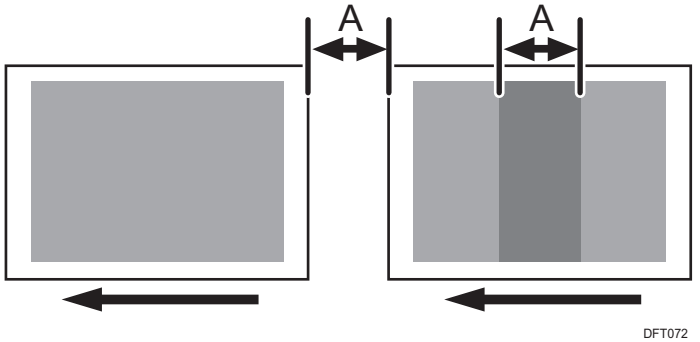
- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

### Solution:

Carry out the procedure in page 84 "Uneven Gloss: Wavy".

## Uneven Gloss: Thick Paper

When duplex printing is performed on thick paper, uneven glossiness having the same width as the interval between the previous sheet (A) appears on Side 1.




DFT072

### Cause:

This may occur if:

- Paper with a thickness equivalent to Paper Weight 7 or 8 is used
- Duplex printing
- Printing solid fills

**Note**

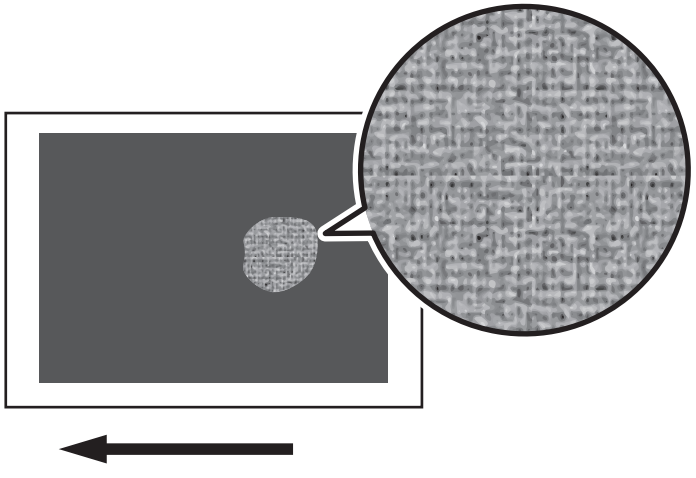
- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

### Solution:

Carry out the procedure in page 82 "Uneven Gloss".

## Uneven Gloss: Orange Peel

Uneven glossiness occurs when solid-fill images are printed.



DFT048

### Cause:

This may occur if:

- Using paper with a rough surface

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

### Solution:

1. **In [Advanced Settings] for the custom paper, increase all the value in 018: [Maximum Image Density: K], 019: [Maximum Image Density: C], 020: [Maximum Image Density: M] and 021: [Maximum Image Density: Y] by one step.**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Increase the value an additional one step. |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Go to the next step. |

4. **In [Advanced Settings] for the custom paper, adjust the fusing heat roller temperature.**

   **<Printing in full color>**

   Decrease the value in 088: [Fusing Temp: FC] by 5 degrees.

   **<Printing in black and white>**

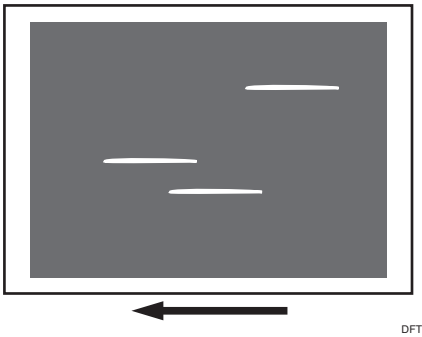
   Decrease the value in 089: [Fusing Temp: BW] by 5 degrees.

5. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Decrease the temperature an additional 5 degrees. If the problem persists, contact your service representative. |

## Uneven Glossiness due to Cooling

Image-defect-like glossy streaks appear randomly.



DFT026

## Cause:

When the paper comes into contact with the cooling belt and the toner's surface temperature is 95°C (203°F) or higher, uneven glossiness may occur.

This may occur if:

- Coated paper is used
- Paper with paper weight 4 or 5 is used
- Printing is done at high temperature or humidity
- Printing solid fills
- Printing on the first sheet of paper

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

## Solution:

Carry out the procedure in page 82 "Uneven Gloss".

# Dirtied Printouts

## Toner Scattering: Trailing Edge

Parts of a line or character exhibit splatter. This may occur in a line or character that is 8 to 13 mm (0.3 to 0.5 inches) from the trailing edge and 20 mm (0.8 inches) or less from the left edge facing the paper feed direction.


### Cause:

A shock jitter occurs when the trailing edge of the paper leaves the paper guide during paper transfer and causes toner scattering.

This may occur if paper with a thickness equivalent to Paper Weight 4 or higher is used.

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

## Solution:

**<Printing in black and white>**

1. **In [Advanced Settings] for the custom paper, check the present value in 022: [Image Transfer Current: BW]. Is it lower than 150 μA?**

| | |
|---|---|
| **Yes** | Carry out all of the following:<br>• Increase the value by 5 μA in 022: [Image Transfer Current: BW].<br>• Set 041: [Paper Transfer Current: TE: BW] to "200%".<br>• Set 042: [Paper Transfer Current: TE Leng.: BW] to "30 mm". |
| **No** | No further improvement is likely. Contact your service representative. |

2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Repeat Steps 1 to 2. If the problem persists even though you have increased the value in 022: [Image Transfer Current: BW] to 150 μA, contact your service representative. |

**<Printing in full color only>**

1. **In [Advanced Settings] for the custom paper, check the present value in 023: [Image Transfer Current: FC: K]. Is it lower than 150 μA?**

| | |
|---|---|
| **Yes** | Carry out all of the following:<br>• Increase the value by 5 μA in 023: [Image Transfer Current: FC: K].<br>• Set 047: [Paper Transfer Current: TE: FC] to "200%".<br>• Set 048: [Paper Transfer Current: TE Leng.: FC] to "30 mm". |
| **No** | No further improvement is likely. Contact your service representative. |

2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Repeat Steps 1 to 2. If the problem persists even though you have increased the value in 023: [Image Transfer Current: FC: K] to 150 μA, contact your service representative. |

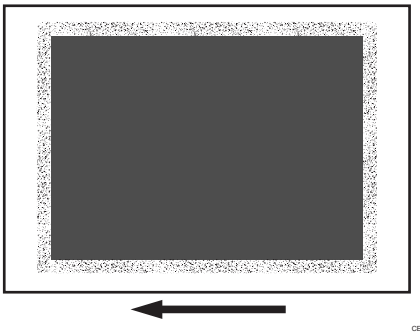
**Note**

- Changing the transfer current may produce either or both of the following side effects:
  - Increase in toner consumption
  - Occurrence of banding (streaks)

- After performing the solution, it is recommended to perform the color calibration of the external controller. For details see, page 159 "Operating Procedure for Color Calibration".

## Toner Scattering: Around a Solid Fill Image

Toner is scattered around a solid-fill print.



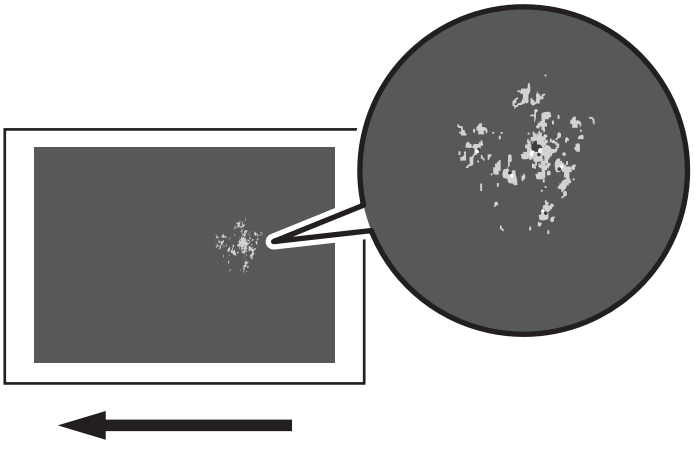
CEZ545

For details, see page 60 "White Spots/Toner Blasting".



## Stained When Duplex Printing is Performed

When duplex printing is performed, side 1 of the paper becomes stained.



DFT062

### Cause:

Paper dust or toner is on the separation claw.

### Solution:

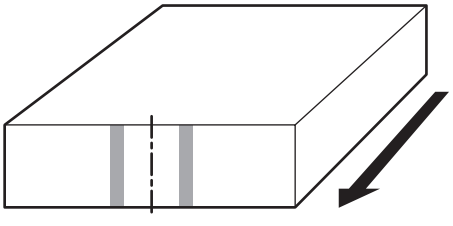
1. **Apply duplex printing to 5 full-page solid-fill sheets.**

   Using coated paper with a thickness of 2 to 3 is effective.

2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

## Paper Edges are Stained



DFT322



### Cause:

The paper path is stained.

### Solution:

1. **Remove the paper from the paper tray, ruffle it, and reload it.**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Clean the paper feed pass. |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | In [Advanced Settings] for the custom paper, increase the value in 094: [Additional Fusing Temp 1] and 095: [Additional Fusing Temp 2] by 5 degrees. |

4. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Increase the value in 094: [Additional Fusing Temp 1] and 095: [Additional Fusing Temp 2] by 5 degrees. |

5. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | If the problem persists, proceed the steps in page 130 "Paper Edges Are Stained (1)", page 131 "Paper Edges Are Stained (2)" or page 131 "Paper Edges Are Stained (3)". |

**Note**

- For details about cleaning the paper feed pass see, page 113 "Cleaning the Paper Feed Path".

# Others

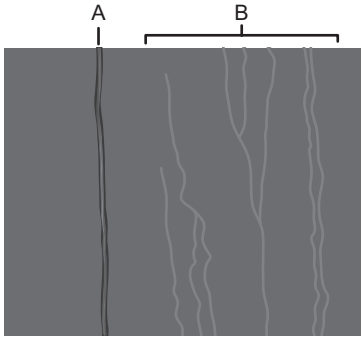
## Creases, Worm Track (Wavy Streaks), or Bends Appear

**A. Crease**

Creases appear.

**B. Worm track**

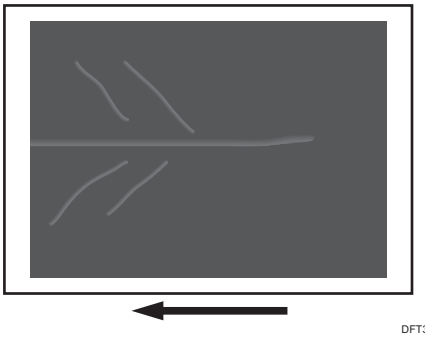
Wavy streaks appear.




DFT303

**Bent**

Umbrella-like creases appear at the center of the paper.



DFT304

## Cause:

This may occur if:

- Thin paper is used
- Printing solid fills
- Duplex printing

- A3 or DLT size paper is used
- An envelope is used

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

## Solution:

If no envelope is used, follow Procedure 1 and Procedure 2 as specified. If an envelope is used, carry out "Procedure 1: Decrease the nip width" only. Terminate the sequence as soon as the problem is resolved.

**Procedure 1: Decrease the nip width**

**When printing on paper other than envelopes:**

1. **In [Advanced Settings] for the custom paper, set 092: [Fusing Nip Width Setting] to "3".**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 092: [Fusing Nip Width Setting] to "2". |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 093: [Fusing Pressure Roller On Before Fusing] to [Off] and proceed to "Procedure 2: Decrease the pressure roller temperature". |

**When printing on envelopes:**

1. **In [Advanced Settings] for the custom paper, set 092: [Fusing Nip Width Setting] to "1".**
2. **Increase the value in 123: [Fusing Belt Feed Speed] by 5%.**
3. **Decrease the value in 102: [Fusing Nip Width Adjustment: Envelope] by 50 milliseconds.**
4. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Decrease the value in 102: [Fusing Nip Width Adjustment: Envelope] by another 50 milliseconds. |

5. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Repeat Steps 3 to 4. If the problem persists after the value in 102: [Fusing Nip Width Adjustment: Envelope] is reduced to 400 milliseconds, contact your service representative. |

**Procedure 2: Decrease the pressure roller temperature**

1. **In [Advanced Settings] for the custom paper, adjust the pressure roller temperature.**

   **<Printing in full color>**

   Decrease the value in 090: [Fusing Pressure Roller Temp: FC] by 20 degrees.

   **<Printing in black and white>**

   Decrease the value in 091: [Fusing Pressure Roller Temp: BW] by 20 degrees.

2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Repeat Steps 1 to 2. If the problem persists even though you have decreased the value in 090: [Fusing Pressure Roller Temp: FC] or 091: [Fusing Pressure Roller Temp: BW] to 30 degrees, contact your service representative. |

**Note**

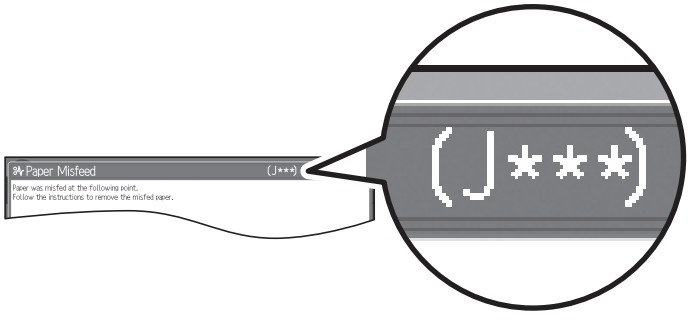
- If decreased values affect fusibility, proceed to the solution in page 19 "Improving Fusibility".
- If a paper jam occurs when print is performed on envelopes, in [Advanced Settings] for the custom paper you are using, adjust 123: [Fusing Belt Feed Speed] by 0.5%.
- After performing the solution, it is recommended to perform the color calibration of the external controller. For details see, page 159 "Operating Procedure for Color Calibration".

# 8. Troubleshooting Paper Delivery Problems

## The Jam Code Appears

Paper misfeeds are reported by messages and jam codes.

Resolve the problem according to the jam code.




CWH406

### If (J038) Appears

#### Cause:

When thin paper is used, paper jam occurs at the fusing unit.

This may occur if:

- Paper whose thickness is 105 g/m$^2$ or less is used.

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

#### Solution:

1. **In [Advanced Settings] for the custom paper, specify 013: [Erase Margin: Leading Edge] to set its leading edge margin to "10 mm".**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |

| | |
|---|---|
| No | Contact your service representative. |

## If (J040/J042/J090) Appears

### Cause:

A paper jam has occurred in the area around the separation claw.

### Solution:

1. **Remove the scrap of paper in the paper feed path in the area around the separation claw.**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| Yes | Finished! |
| No | Load the sheets the other way up. |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| Yes | Finished! |
| No | In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, adjust the value in 0301:[Adjust Paper Curl]. |

4. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| Yes | Finished! |
| No | Contact your service representative. |

## If (J048) Appears

### Cause:

This may occur if:

- In [Advanced Settings] for the custom paper you are using, 114: [Registration Gate Position Setting] is set to "–3" or above.
- Paper with a width of 160 mm (6.3 inches) is being used.

Note

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.
- When prepunched paper is used, see page 176 "Prepunched Paper".

### Solution:

1. **In [Advanced Settings] for the custom paper, set 114: [Registration Gate Position Setting] to"-2".**
2. **Print the image on both sides of 50 sheets.**
3. **Has the jam code J097, J098 or J048 appeared?**

| | |
|---|---|
| If (J097) or (J098) appears | Contact your service representative. |
| If (J048) appears | Set 114: [Registration Gate Position Setting] to"-1". |
| If no jam code appears | Finished! |

4. **Print the image on both sides of 50 sheets.**
5. **Has the jam code J097, J098 or J048 appeared?**

| | |
|---|---|
| Yes | Contact your service representative. |
| No | Finished! |

## If (J086) Appears

### Cause:

Paper is jammed near the fusing unit exit.

Note

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

### Solution:

1. **In [Advanced Settings] for the custom paper, decrease the value in 095: [Additional Fusing Temp 2] by 5 degrees.**

2. **Print the image. Has the jam code J086 appeared?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Go to the next step. |

3. **Adjust the fusing heat roller temperature.**

**<Printing in full color>**

Decrease the value in 088: [Fusing Temp: FC] by 5 degrees.

**<Printing in black and white>**

Decrease the value in 089: [Fusing Temp: BW] by 5 degrees.

4. **Print the image. Has the jam code J086 appeared?**

| | |
|---|---|
| **Yes** | Go to the next step. |
| **No** | Set 120: [Process Speed Setting] to [Low]. |

5. **Print the image. Has the jam code J086 appeared?**

| | |
|---|---|
| **Yes** | Go to the next step. |
| **No** | Decrease the value by 5 degrees in 088: [Fusing Temp: FC], 089: [Fusing Temp: BW]. |

6. **Print the image. Has the jam code J086 appeared?**

| | |
|---|---|
| **Yes** | Contact your service representative. |
| **No** | Finished! |

**Note**

- Changing the fusing temperature may reduce toner fusibility.

## If (J097) Appears

### Cause:

This may occur if:

- Paper is skewed. For details see, page 107 "Paper Skew".
- Skew may be wrongly detected. For details see, page 108 "Wrong Detection of Skew".

## If (J098) Appears

### Cause:

Sheets cannot be positioned properly by image position adjustment.

### Solution:

Depending on the cause of the problem, do one of the following:

#### The side fences in the paper trays are not positioned correctly.

Adjust the side fences to match the paper width.

When you close the paper tray, the side fences may become misaligned due to the weight of the paper. To prevent this, close the paper tray slowly.

For details about loading paper, see "Loading Paper", About This Machine.

#### The paper size/orientation/type is not specified correctly.

In tray paper settings, specify the size, orientation, and type of the paper in use.

For details about tray paper settings, see "Changing Tray Paper Settings", Paper Settings.

#### Sheets of mixed type, thickness, or color are loaded in the paper tray.

Load identical sheets in the paper tray.

When printing from a tray containing sheets of mixed color, you can prevent paper misfeeding by specifying the following settings:

To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

**<If custom paper is used>**

1. In [Advanced Settings] for the custom paper, set 115: [Ppr Edge Detection: Sensing Duration] to [Long Time].
2. Print the image.
3. If the problem persists, set 118: [Registration Adjustment: Across Feed] to [Activate].
4. Print the image.
5. If the problem persists, set 015: [Skew Detection] to [Off].

#### Colored paper or transparencies are loaded in the paper tray.

Paper edges may not have been detected correctly.

Adjust the color paper edge detection.

To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

The solution varies depending on the 115: [Ppr Edge Detection: Sensing Duration] setting.

In [Advanced Settings] for the custom paper, check the 115: [Ppr Edge Detection: Sensing Duration] setting. If it is set to [Long Time], proceed to " Procedure 1: If set to [Long Time]".

If it is set to [Short Time], proceed to " Procedure 2: If set to [Short Time]".

**Procedure 1: If set to [Long Time]**

1. In [Advanced Settings] for the custom paper, set the value in 116: [Ppr Edge Detection: Sensitivity] to "3".
2. Print 50 sheets on one side. Has the jam code J098 appeared?

| | |
|---|---|
| Yes | Increase the value in 116: [Ppr Edge Detection: Sensitivity] by 1 point and go to the next step. |
| No | Skip to Step 4. |

3. Print 50 sheets on one side. Has the jam code J098 appeared?

| | |
|---|---|
| Yes | Repeat Step 2. If the problem persists even though you have increased the value by "10", perform the following solution.<br>• Set 015: [Skew Detection] to [Off].<br>• Set 118: [Registration Adjustment: Across Feed] to [Deactivate]. |
| No | Go to the next step. |

4. Decrease the value in 116: [Ppr Edge Detection: Sensitivity] by 0.5 points.
5. Print 50 sheets on one side. Has the jam code J098 appeared?

| | |
|---|---|
| Yes | Increase the value in 116: [Ppr Edge Detection: Sensitivity] by 0.5 points. |
| No | Repeat Steps 4 and 5. |

**Procedure 2: If set to [Short Time]**

1. In [Advanced Settings] for the custom paper, set the value in 116: [Ppr Edge Detection: Sensitivity] to "3".
2. Print 50 sheets on one side. Has the jam code J098 appeared?

| | |
|---|---|
| Yes | Increase the value in 116: [Ppr Edge Detection: Sensitivity] by 1 point and go to the next step. |
| No | Skip to Step 4. |

3. Print 50 sheets on one side. Has the jam code J098 appeared?

| | |
|---|---|
| Yes | Repeat Step 2. If the problem persists even though you have increased the value by "10", set 115: [Ppr Edge Detection: Sensing Duration] to [Long Time] and proceed the steps in "Procedure 2: If set to [Long Time]". |
| No | Go to the next step. |

4. Decrease the value in 116: [Ppr Edge Detection: Sensitivity] by 0.5 points.
5. Print 50 sheets on one side. Has the jam code J098 appeared?

| | |
|---|---|
| Yes | Increase the value in 116: [Ppr Edge Detection: Sensitivity] by 0.5 points. |
| No | Repeat Steps 4 and 5. |

**Paper with a width of 160 mm (6.3 inches) is being used.**

Perform the solution in page 107 "Paper Skew", "Paper with a width of 160 mm (6.3 inches) is being used.".

## If (J430/J431/J445/J446/J460/J461) Appears

This indicates a paper misfeed when using the two-tray wide LCT (Vacuum Feed LCIT RT5100).

Paper misfeeding may be resolved by printing an original repeatedly.

If the jam code (J430/J431/J445/J446/J460/J461) appears more than 3 times, follow the procedure below:

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

### Solution:

The factory- set airflow of the wide LCT may not be strong enough to separate the sheets.

Increase the airflow.

1. **Set 112: [Paper Tray: Paper Feed Mode] to [Moderate Nonfdg Red. (Higher)] in [Advanced Settings] for the custom paper.**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| Yes | Finished! |
| No | Repeat Step 2. If the jam code appears more than 3 times, set 112: [Paper Tray: Paper Feed Mode] to [Max Nonfdng Reduc. (Highest)]. |

3. **Set 111: [Paper Tray: Paper Feed Position] to [High].**
4. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | If the problem persists, contact your service representative. |

# Troubleshooting Paper Delivery Problems

## Paper Skew

Depending on the cause of the problem, do one of the following:

### The side fences in the paper tray are too far apart.

If the side fences are too far apart, the paper may be skewed.

Adjust the side fences to match the paper width.

When you close the paper tray, the side fences may become misaligned due to the weight of the paper. To prevent this, close the paper tray slowly.

For details about loading paper, see "Loading Paper", About This Machine.

### A scrap of paper or some other small fragment is jammed in the paper feed path.

Remove the fragment.

For details about cleaning the paper feed path, see page 113 "Cleaning the Paper Feed Path".

### The correct degree of paper arching has not been specified.

Adjust the degree of paper arching at the registration gate.

In the [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, change the value in 0303: [Registration Gate: Paper Buckle Amount].

Increase the value for the paper tray in use, and then print the image. If the problem persists even though the setting has reached its maximum value, try decreasing the setting. If the problem persists even though you have tried the complete range of settings from minimum to maximum, contact your service representative.

### The skew detection level is too low.

Increase the skew detection level.

In the [Machine: Image Position] group on the [Adjustment Settings for Skilled Operators] menu, select 0105: [Skew Detection Level] and reduce the value.

Reduce the value to increase the detection level.

This will allow the machine to report a paper misfeed and stop printing even for a slight skew.

### Paper with a width of 160 mm (6.3 inches) is being used.

To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

When prepunched paper is used, see page 176 "Prepunched Paper".

1. In [Advanced Settings] for the custom paper, set 114: [Registration Gate Position Setting] to"-3".

2. Print the image on both sides of 50 sheets.
3. Has the jam code J097, J098 or J048 appeared?

| | |
|---|---|
| **If (J097) or (J098) appears** | Carry out the procedure in page 107 "Paper Skew" or page 108 "Wrong Detection of Skew", and then go to the next step. |
| **If (J048) appears** | Carry out the procedure in page 100 "If (J048) Appears". |
| **If no jam code appears** | Finished! |

4. Print the image on both sides of 50 sheets.
5. Has the jam code J097, J098 or J048 appeared?

| | |
|---|---|
| **If (J097) or (J098) appears** | Set 114: [Registration Gate Position Setting] to"-4". |
| **If (J048) appears** | Carry out the procedure in page 100 "If (J048) Appears". |
| **If no jam code appears** | Finished! |

6. Print the image on both sides of 50 sheets.
7. Has the jam code J097, J098 or J048 appeared?

| | |
|---|---|
| **Yes** | Contact your service representative. |
| **No** | Finished! |



## Wrong Detection of Skew

Depending on the cause of the problem, do one of the following:

### Sheets of mixed type, thickness, or color are loaded in the paper tray.

Load identical sheets in the paper tray.

### Sheets of mixed color are loaded in the paper tray.

When printing from a tray containing sheets of mixed color, you can prevent paper misfeeding by specifying the following settings:

1. In the [Machine: Image Position] group on the [Adjustment Settings for Skilled Operators] menu, set 0103: [Registration Adjustment: Across Feed] to [On].
2. Disable skew detection function.

   **<If custom paper is used>**

   In [Advanced Settings] for the custom paper, set 015: [Skew Detection] to [Off].

**<If custom paper is not used>**

In the [Machine: Image Position] group on the [Adjustment Settings for Skilled Operators] menu, set 0104: [Skew Detection] to [Off].

### An envelope is used.

If an envelope flap at the trailing edge is oblique, a skew may be wrongly detected when the envelope is transferred with its flap open.

Disable skew detection function.

**<If custom paper is used>**

In [Advanced Settings] for the custom paper, set 015: [Skew Detection] to [Off].

**<If custom paper is not used>**

In the [Machine: Image Position] group on the [Adjustment Settings for Skilled Operators] menu, set 0104: [Skew Detection] to [Off].

### The skew detection level is too high.

In the [Machine: Image Position] group on the [Adjustment Settings for Skilled Operators] menu, select 0105: [Skew Detection Level] and increase the value.

**Note**

- Disabling the skew detection function will allow skewed printing. If this is not acceptable, contact your service representative.

## Double Feeding

Depending on the cause of the problem, do one of the following:

### Have you ruffled the paper sufficiently?

Double feeding may result if the paper is not ruffled properly.

Remove the paper, ruffle it, and reload it.

For details about ruffling the paper, see "Fanning the Paper", About This Machine.

### The edges of the sheets are rough.

Turn the sheets the other way up or smooth the edges before loading.

### Two-tray wide LCT (Vacuum Feed LCIT RT5100) is used.

The factory-set airflow of the wide LCT may not be strong enough to separate the sheets.

Increase the airflow.

To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

1. If the jam code J099 appears more than three times, in [Advanced Settings] for the custom paper, set 112: [Paper Tray: Paper Feed Mode] to [Modrate Dble Fd Red. (Lower)].
2. Print the image. Has the problem been resolved?

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 112: [Paper Tray: Paper Feed Mode] to [Max Dble Fd Reduc. (Lowest)]. |

3. Print the image. Has the problem been resolved?

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Increase the value in 106: [Paper Tray: Blower Fan Level] by 10 percentage points. |

4. Print the image. Has the problem been resolved?

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Increase the value an additional 20 percentage points in 106: [Paper Tray: Blower Fan Level]. |

5. Print the image. Has the problem been resolved?

| | |
|---|---|
| **Yes** | Finished! |
| **No** | If the problem persists, set 111: [Paper Tray: Paper Feed Position] to [Low]. |

6. Print the image. Has the problem been resolved?

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

### Is the paper feed roller covered with paper dust?

Paper dust may decrease the traction of the paper feed roller and result in double feeding due to paper slippage or insufficient separation.

Cleaning the paper feed roller will restore traction and so prevent double feeding.

For details about cleaning the paper feed roller, see page 113 "Cleaning the Paper Feed Path".

## Paper Misfeeding

Depending on the cause of the problem, do one of the following:

### Have you ruffled the paper properly?

Not ruffling the paper properly may cause paper misfeeding.

Remove the paper, ruffle it, and reload it.

For details about ruffling paper, see "Fanning the Paper", About This Machine.

### Have you ruffled the paper sufficiently?

Double feeding may result if the paper is not ruffled properly.

Remove the paper, ruffle it, and reload it.

For details about ruffling the paper, see "Fanning the Paper", About This Machine.

### The side fences in the paper tray are too close together.

If the distance between the side fences is less than the paper width, it may interfere with paper transfer and so cause paper misfeeds.

Adjust the paper guides to match the paper width.

When you close the paper tray, the side fences may become misaligned due to the weight of the paper. To prevent this, close the paper tray slowly.

For details about loading paper, see "Loading Paper", About This Machine.

### Special or coated paper is used.

Is the paper feed roller covered with paper dust?

Paper dust on the surface of paper may reduce the traction of the paper feed roller and cause paper misfeeding due to paper slippage or insufficient separation.

By cleaning the paper feed roller, the frictional force can be restored so that paper misfeeding will not occur.

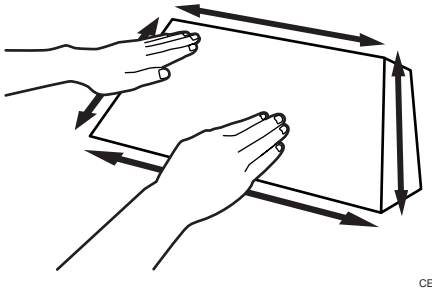


### An envelope is used.

Depending on the type of envelope, air trapped inside may be squeezed out when the paper feed roller picks up the envelope and cause slippage leading to a misfeed.

- Have you flattened the envelope?

  Flatten the envelope and all its edges to eliminate air before loading. If the envelope is curled, decurl it before loading.



CEZ500

**Two-tray wide LCT (Vacuum Feed LCIT RT5100) is used.**

The factory-set airflow of the wide LCT may not be strong enough to separate the sheets.

Increase the airflow.

For details see, page 105 "If (J430/J431/J445/J446/J460/J461) Appears".

## Other Paper Delivery Problems

### If the Paper Jams in the Fusing Unit during Duplex Printing

A paper jam has occurred at the separation claw.

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

1. **In [Advanced Settings] for the custom paper, check the present value in 014: [Erase Margin: Trailing Edge]. Is it lower than 3 mm?**

| | |
|---|---|
| **Yes** | In 014: [Erase Margin: Trailing Edge], adjust the trailing edge margin to make it 3 mm or longer. |
| **No** | Contact your service representative. |

2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

# Cleaning the Paper Feed Path

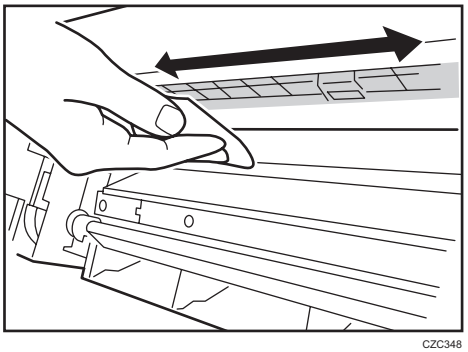
Paper dust sticking to the paper transfer guide plate, roller, paper feed roller, or sensor may cause white spots, paper jam, or double feeding. Clean the paper feed path from the paper tray to the paper exit in the drawer.

**Important**

- **Turn off the main power before performing the operations described in this manual. See "Turning Off/On the Power", Replacement Guide.**

### Guide Plate

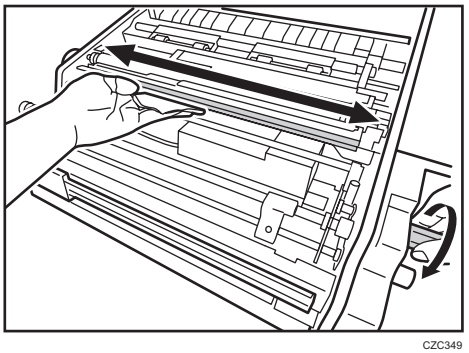
Wipe the guide plate with a well-wrung-out damp cloth. To clean the innermost recesses, use a cloth that is as large as your palm.



CZC348

### Roller

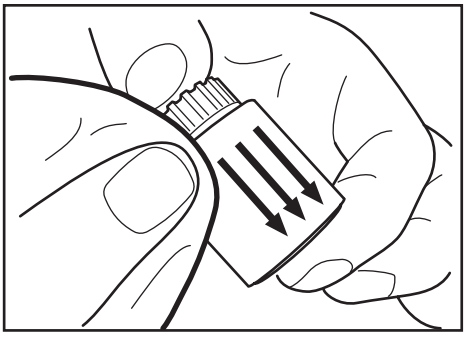
Wipe the roller with a well-wrung-out damp cloth, and then wipe with a dry, unused, lint-free cloth until no moisture remains.



CZC349

### Paper Feed Roller

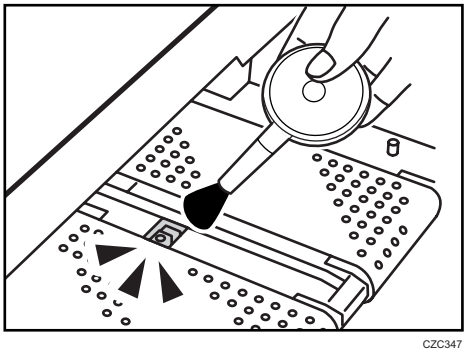
Wipe the entire surface of the paper feed roller lengthwise with a well-wrung-out damp cloth, and then wipe with a dry, unused, lint-free cloth until no moisture remains.



CZC350

**Sensor**

Remove dust with a blower brush.

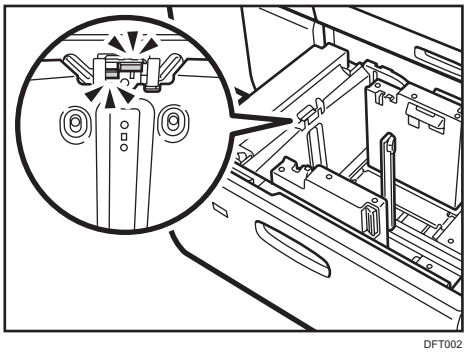


CZC347



## Cleaning Paper Trays

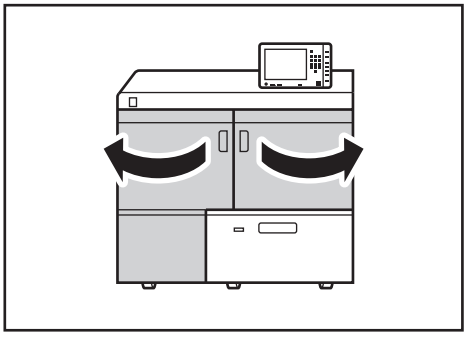
1. **Remove the paper tray.**
2. **Clean the sensors.**



DFT002

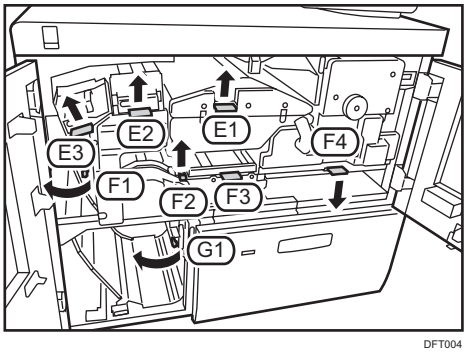
## Cleaning the Paper Feed Path for Paper Tray 1

1. **Open the front cover of the left unit.**



DFT003

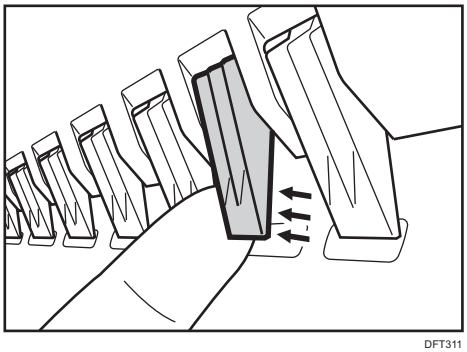
2. **Open the plates.**




DFT004

3. **Clean the rollers, sensors, and guide plates.**
4. **Open the F1 plate and clean the separation claw.**

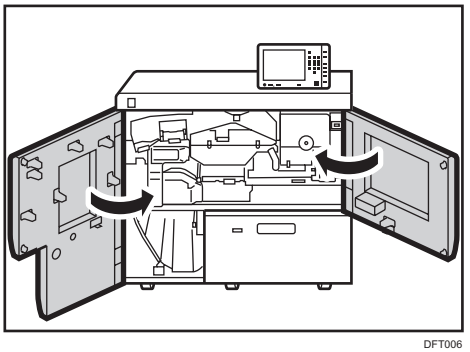
   Lift the separation claw and clean the area around the tip on the side which comes into contact with the paper. Clean 7 claws.



DFT311

5. **Close the plates opened in Step 2.**

6. Close the front covers.

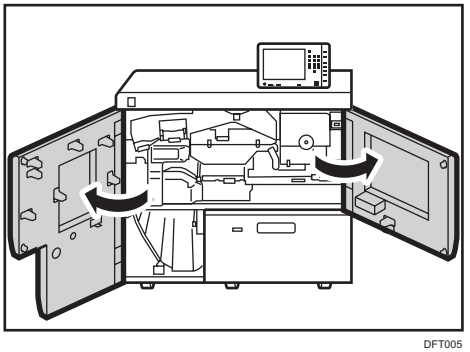


DFT006

## Cleaning the Paper Feed Path in the Drawer

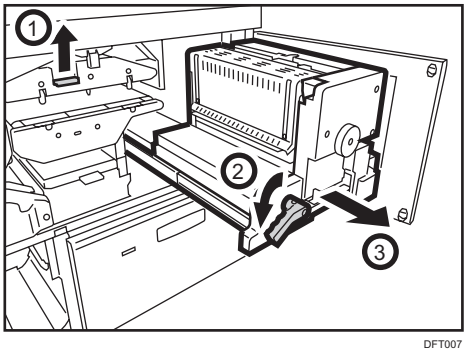
### Left drawer unit

1. Open the front cover of the left unit.



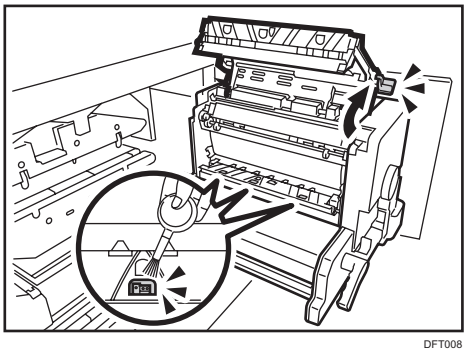
DFT005

2. Raise the E1 plate, lower the lever D1, and then pull out the unit in the left drawer until it stops.



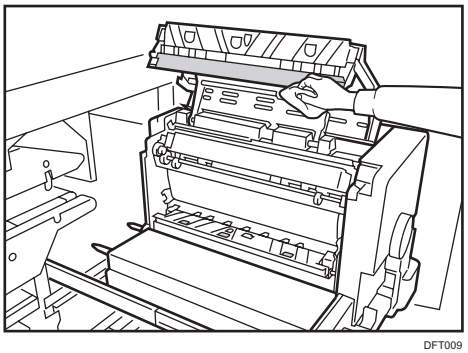

DFT007

3. Pull up the lever D2 and clean the sensors.



DFT008

4. Use a dry cloth to clean the plate.

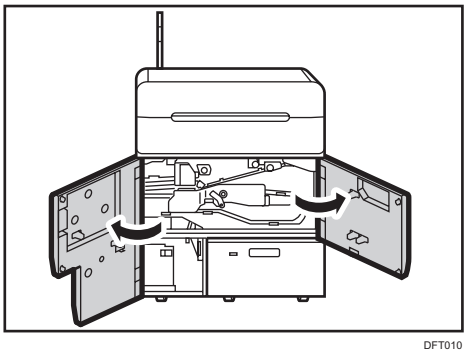


DFT009

5. Push down the lever D2.
6. Push the left drawer into the main unit until it stops, and then pull up the lever D1.
7. Close the E1 plate.
8. Close the front covers.

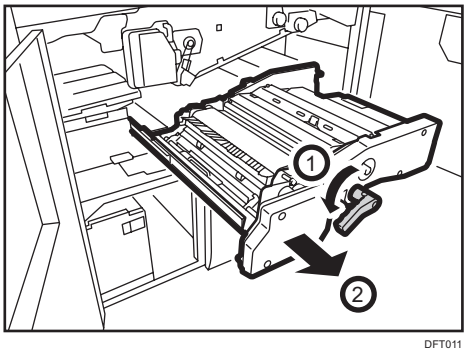
## Right drawer unit

1. Open the front cover of the right unit.



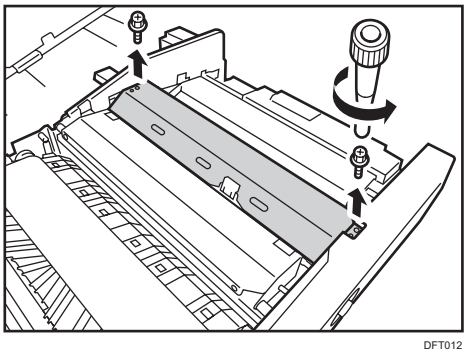
DFT010

2. **Pull down the lever C2 and pull out the right drawer until it stops.**




DFT011

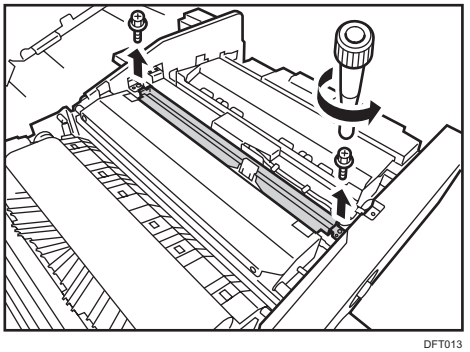
3. **Remove the two screws and then remove the cover plate.**



DFT012

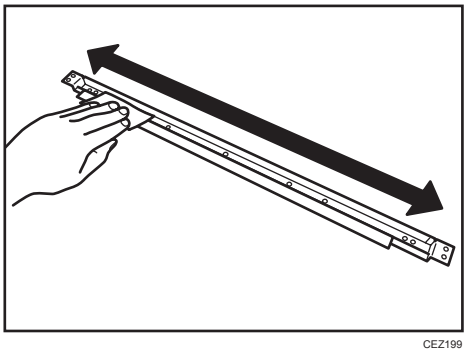


4. **Remove the two screws and then remove the dust catcher.**



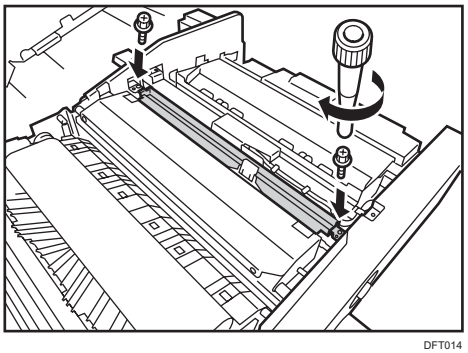
DFT013

5. Use a clean dry cloth to remove any dust remaining in the dust catcher.



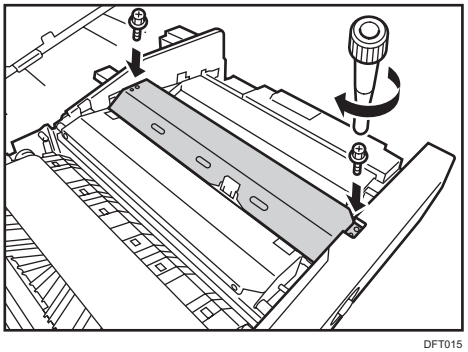
CEZ199

6. Reattach the dust catcher with the two screws.



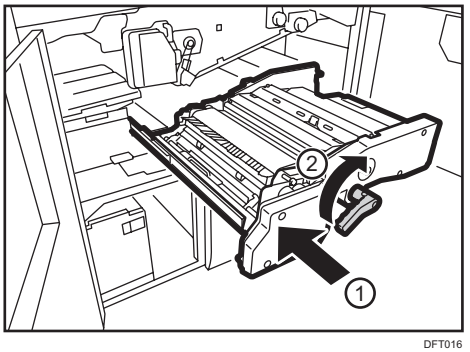
DFT014

7. Reattach the cover plate with the two screws.



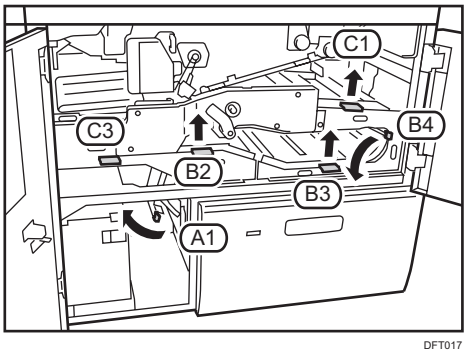
DFT015

8. Push the right drawer into the main unit until it stops, and then pull up the lever C2.




DFT016

9. Open the plates.



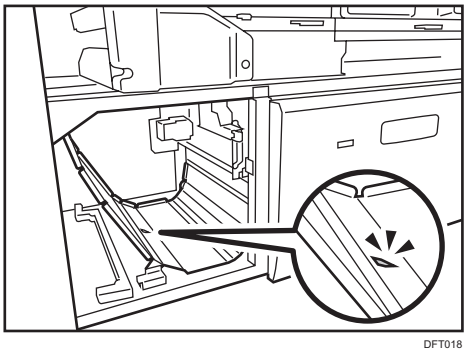

DFT017

10. Clean the rollers, sensors, and guide plates.
11. Close the plates opened in Step 9.
12. Close the front covers.

## Purged Paper Sensor

1. Open the left front cover of the left unit.
2. If there is any paper in the purge tray, remove it.

3. Clean the sensors.

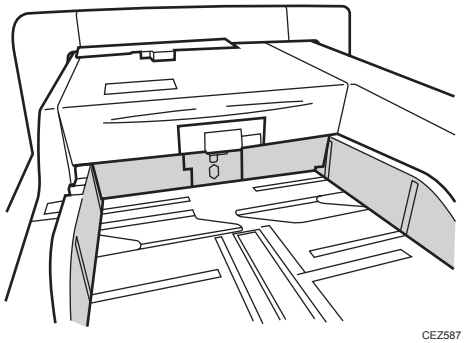


DFT018

4. Close the left front cover.

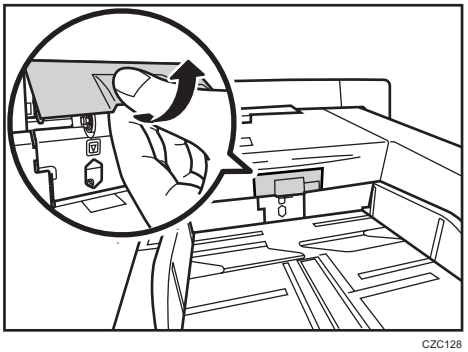
## Cleaning the Paper Feed Path in the Multi Bypass Tray

1. Clean the side fences and front guide.



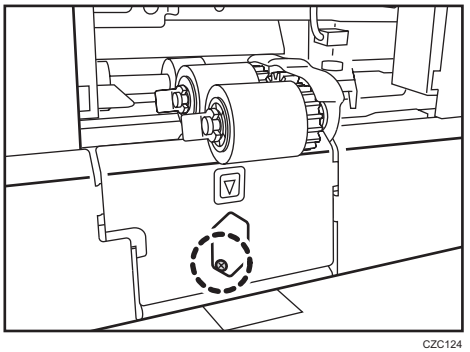
CEZ587

2. Remove the cover.



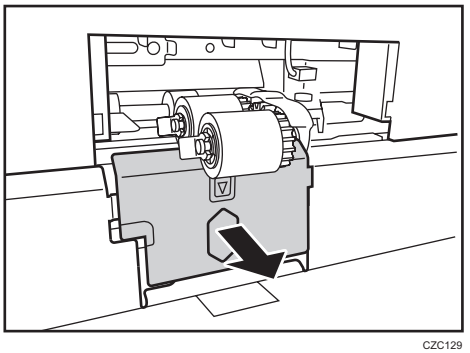
CZC128

3. **Remove one screw.**



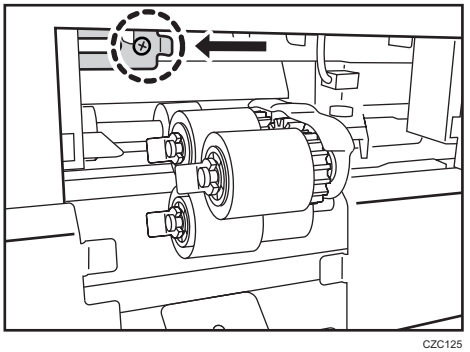
CZC124

4. **Remove the plate.**



CZC129

5. **Remove one screw and slide the bracket.**



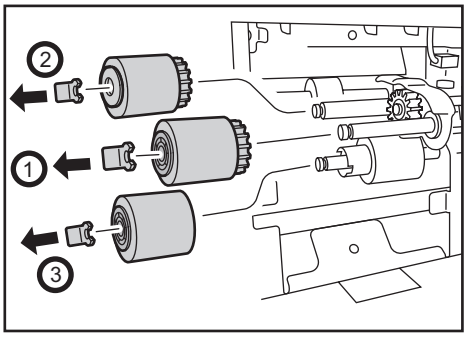
CZC125

6. **Remove the paper feed rollers as follows:**

   (1) Snap ring and pick-up roller

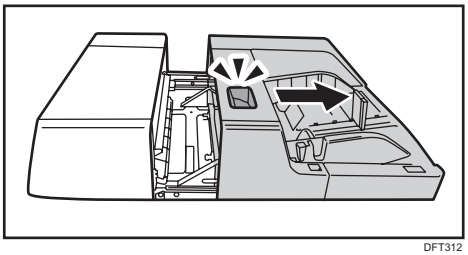
   (2) Snap ring and feed roller

   (3) Snap ring and separation roller

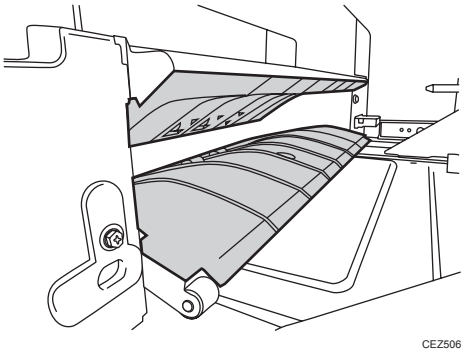


CZC132

7. **Clean the paper feed rollers.**
8. **Attach the paper feed rollers, bracket, plate, and cover in the reverse order from the procedure to remove them.**
9. **Release the lock and slide the unit to the right.**


DFT312

10. **Clean the guide plate.**


CEZ506

11. **Move the unit back to its original position.**

## Cleaning the Paper Feed Rollers and Paper Feed Belt in the Interposer

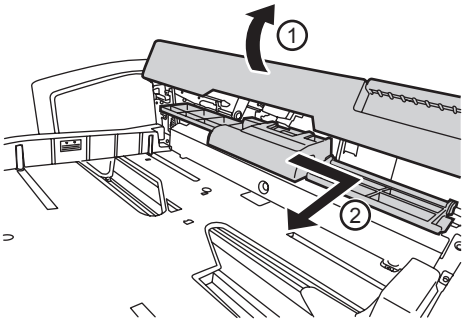
Clean the paper feed belt and paper feed rollers in the interposer.

The procedure is explained using the interposer upper tray. The procedure is the same for the lower tray.

1. **Remove the loaded paper.**

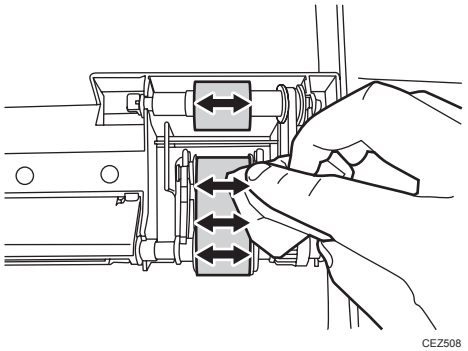
2. **Open the upper cover, and then detach the paper feed unit.**

   Pull it out slightly, release the metal shaft, and then detach it.




CEZ507

3. **Clean the paper feed belt and paper feed rollers in the detached paper feed unit.**



CEZ508

4. **After cleaning, restore the machine so that it resumes operation.**

# 9. Post-Processing Option Troubleshooting

## Finisher

### Delivered Sheets Are Not Stacked Properly

#### Solution:

Depending on the cause of the problem, do one of the following:

**Coated paper is being used.**

In the 06: [Finishing: Finisher] group on the [Adjustment Settings for Skilled Operators] menu, set 0617: [Adjust Output Fan Level] to [Increase Air Volume].

**There is airflow in the room.**

Minimize the airflow. For instance, turn the air conditioner off.

**Printed sheets are curled.**

1. Load the sheets the other way up.
2. Print the image. Has the problem been resolved?

| | |
|---|---|
| Yes | Finished! |
| No | Go to the next step. |

3. In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, select 0301: [Adjust Paper Curl] and adjust the degree of decurling.

**<Single-sided printing: Printed side face down>**

To correct curls facing up, specify "Adjust ⌒ Curl".

To correct curls facing down, specify "Adjust ⌣ Curl".

**<Single-sided printing: Printed side face up/Duplex printing>**

To correct curls facing up, specify "Adjust ⌣ Curl".

To correct curls facing down, specify "Adjust ⌒ Curl".

Select "Strong", "Medium" or "Weak" depending on the degree of decurling required.

### There are too many stacked sheets.

Reduce the number of the stacked sheets. To do this, suspend printing and remove the stacked sheets, and then resume printing.

To suspend printing, press the [Suspend/Resume] key on the finisher.

To resume printing, press the [Suspend/Resume] key on the finisher.

### Thin coated paper is used.

When stapling thin coated paper, the stapled sheets may be scratched or they may jam.

In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, set 0301: [Adjust Paper Curl] to "Adjust ⌒ Curl". To control the level of decurling, select "Weak" if the present setting is "Off", "Medium" if the present value is "Weak", or "Strong" if the present value is "Medium".

## Large Delivered Sheets Are Not Stacked Properly

### Cause:

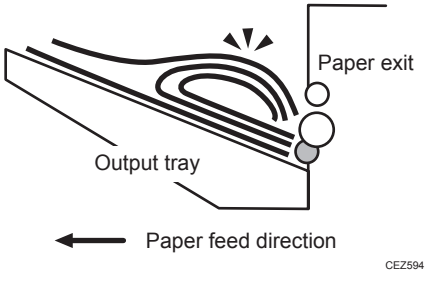
When using large-size or coated and paper-to-paper friction is very high, a sheet may push against another or paper deflection may occur.

This may occur if:

- B4⊐, $8\frac{1}{2}$" × 14"⊐, or larger size of paper is used.
- Paper that produces high paper-to-paper friction is used.
- The temperature or humidity is high.

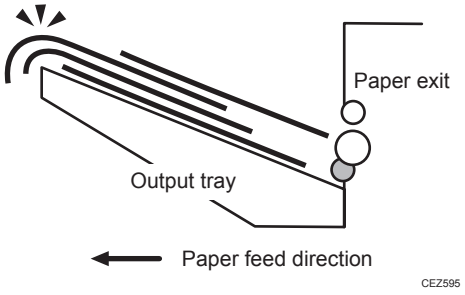
**Sheet bending**

The leading edge of the delivered sheet bends upward and backward.



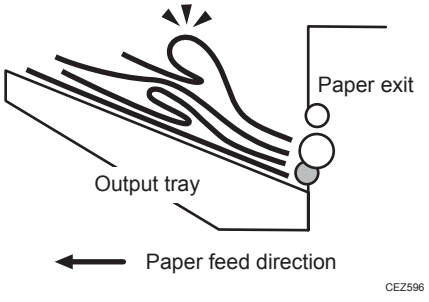

**One sheet pushing out another**

Because of high paper friction, the delivered sheet may get stuck and push out other sheets of paper.




**Paper deflection**

Because of high paper friction, the delivered sheet may arch up and become crimped.




## Solution:

Depending on the cause of the problem, do one of the following:

**<Sheet bending>**

**There is airflow in the room.**

Minimize the airflow. For instance, turn the air conditioner off.

**Sheets are curled upward.**

1. Load the sheets the other way up.
2. Print the image. Has the problem been resolved?

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Go to the next step. |

3. In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, select 0301: [Adjust Paper Curl] and specify "Adjust ⌣ Curl".

If "Off" is selected, change the value to "Weak". If "Weak" is selected, change the value to "Medium". If "Medium" is selected, change the value to "Strong".

**Coated paper is being used.**

In the 06: [Finishing: Finisher] group on the [Adjustment Settings for Skilled Operators] menu, set 0617: [Adjust Output Fan Level] to [Increase Air Volume].

**Standard paper is being used.**

1. In the 06: [Finishing: Finisher] group on the [Adjustment Settings for Skilled Operators] menu, set 0615: [Output Trail Edge Press Setting] to [On].
2. In the 06: [Finishing: Finisher] group on the [Adjustment Settings for Skilled Operators] menu, set 0616: [Output Fan Setting] to [On].

**<One sheet pushing out another or sheets becoming crimped>**

**Sheets are curled downward.**

1. Load the sheets the other way up.
2. Print the image. Has the problem been resolved?

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Go to the next step. |

3. In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, select 0301: [Adjust Paper Curl] and specify "Adjust ⌒ Curl".

   If "Off" is selected, change the value to "Weak". If "Weak" is selected, change the value to "Medium". If "Medium" is selected, change the value to "Strong".

**Coated paper is being used.**

In the 06: [Finishing: Finisher] group on the [Adjustment Settings for Skilled Operators] menu, set 0617: [Adjust Output Fan Level] to [Increase Air Volume].

**Standard paper is being used.**

1. In the 06: [Finishing: Finisher] group on the [Adjustment Settings for Skilled Operators] menu, set 0615: [Output Trail Edge Press Setting] to [On].
2. In the 06: [Finishing: Finisher] group on the [Adjustment Settings for Skilled Operators] menu, set 0616: [Output Fan Setting] to [On].

## Trailing Edge of Stapled Sheets Close to the Paper Exit

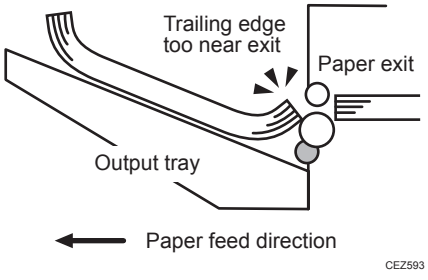
### Cause:

If the stapled sheets are curled strongly or become limp after delivery, the trailing edge of the sheets may be too close to the paper exit when the paper is stacked.

If this happens, stapled sheets, when delivered, may push the previously delivered sheet, resulting in paper bending or misfeeding.

This may occur if:

- There is a tight curl on a delivered set of stapled sheets.
- Limp paper such as thin or recycled paper is used.




### Solution:

1. **Load the sheets the other way up.**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Go to the next step. |

3. **In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, set 0301: [Adjust Paper Curl] to [Adjust ⌣ Curl].**

   Select "Strong", "Medium" or "Weak" to control the level of decurling as required.

4. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

## Sheets Cannot Be Stapled Properly

### Cause:

When the sheets are fed to the staple unit inside the finisher, they may be overlaid, resulting in a misalignment of 5 mm (0.2 inches) relative to each other after stapling.

When coated or other paper producing higher paper-to-paper friction is used, the paper edges are not aligned properly, resulting in misaligned stapling.

This may occur if:

- Coated or other paper producing higher paper-to-paper friction is used.
- Thin or other limp paper is used.

### Solution:

Reduce the number of sheets to be stapled.

1. **In the 06: [Finishing: Finisher] group on the [Adjustment Settings for Skilled Operators] menu, select 0606: [Number of Sheet Align for Stapling], and reduce the number of sheets to be stapled.**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| Yes | Finished! |
| No | If the problem persists even though the setting has reached its minimum value, contact your service representative. |

**Note**

- If the number of sheets to be stapled is reduced, paper alignment will take longer, compromising the machine's throughput.

## Paper Edges Are Stained (1)

### Cause:

While upward curls are removed, toner adhesion becomes insufficient when the fusing pressure roller is applied to the paper, making the anti-static brush stained with toner.

This may occur if:

- Downward curled paper is used.
- Sheets are delivered with their printed side facing up in the post-processing machine.

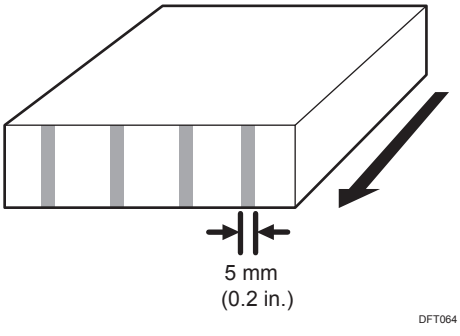
### Solution:

1. **In the 03: [Machine: Paper Feed/ Output] group of the [Adjustment Settings for Skilled Operators] menu, set 0301: [Adjust Paper Curl] to [Adjust ⌣ Curl].**

   If "Curl: Off" is selected, change the value to Curl: Weak". If "Curl: Weak" is selected, change the value to "Curl: Strong".

2. **If you cannot remove back curls, print with the printed side face up for single-sided printing.**

## Paper Edges Are Stained (2)




### Cause:

When a particularly dense image is printed, the paper feed rollers may become soiled with toner and the paper edges may in turn be soiled by the toner on the paper feed rollers.

### Solution:

For details about cleaning the paper feed rollers, see page 113 "Cleaning the Paper Feed Path".

## Paper Edges Are Stained (3)

### Cause:

When Z-folded paper is punched, the paper edges may become stained.

### Solution:

1. **In the 06: [Finishing: Finisher] group on the [Adjustment Settings for Skilled Operators] menu, set 0623: [Z-fold Skew Correction] to [On].**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 0624: [Correct Z-fold Skew] to "-6.0". |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

## When Z-folded Paper is Punched, Jam Code J125 Appears

### Cause:

When Z-folded paper is punched, the center of the paper may be arched and the paper may be creased or bent at corners, resulting in a paper jam.

### Solution:



If the jam code J125 appears, carry out the following sequence of procedures.

1. **In the 06: [Finishing: Finisher] group on the [Adjustment Settings for Skilled Operators] menu, set 0623: [Z-fold Skew Correction] to [On].**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 0624: [Correct Z-fold Skew] to "-6.0". |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

## Jam code J122 appears when envelopes are delivered

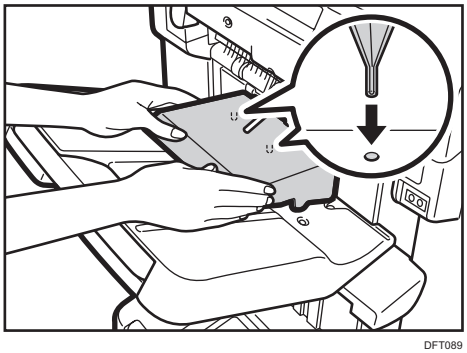
### Cause:

When 120 to 130 large-size envelopes with flaps at the trailing edges are delivered to the finisher shift tray, a jam may occur because a flap may be caught with the paper delivery rollers.

### Solution:

Attach the Z-fold support tray to the finisher shift tray.

Attach the Z-fold support tray by inserting the two protrusions on its underside into the holes on the finisher shift tray.



DFT089

# Multi-Folding Unit

## Inaccurate Folding (Folding Deviation)

### Cause:

Depending on paper hardness, inaccurate folds may result. This is referred to as folding deviation.

### Solution:

Change the folding position by adjusting the position of the paper edge stopper for folding.

- For multi-sheet folding, change the folding position using the following settings in the 07: [Finishing: Fold] group on the [Adjustment Settings for Skilled Operators] menu:

  0701: [Half Fold Position (Multi-sheet Fold)]

  0702: [Letter Fold-out Position 1 (Multi-sheet Fold)]

  0703: [Letter Fold-out Position 2 (Multi-sheet Fold)]

  0704: [Letter Fold-in Position 1 (Multi-sheet Fold)]

  0705: [Letter Fold-in Position 2 (Multi-sheet Fold)]

- For single-sheet folding, change the folding position using the following settings in the [Advanced Settings] for the custom paper:

  To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

  137: [Z-fold Position 1]

  138: [Z-fold Position 2]

  139: [Half Fold Position: 1 sheet Fold]

  140: [Letter Fold-out Position 1: 1 sheet Fold]

  141: [Letter Fold-out Position 2: 1 sheet Fold]

  142: [Letter Fold-in Position 1: 1 sheet Fold]

  143: [Letter Fold-in Position 2: 1 sheet Fold]

  144: [Double Parallel Fold Position 1]

  145: [Double Parallel Fold Position 2]

  146: [Gate Fold Position 1]

  147: [Gate Fold Position 2]

  148: [Gate Fold Position 3]

## Folding Deviation

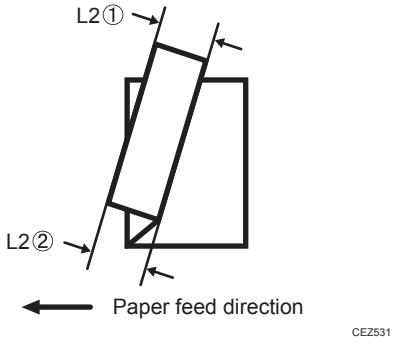
### Cause:

Depending on paper hardness, folding deviations (skewed folding) may appear.

A deviation may appear if the edge dimensions of the parts between folds are different.

For example, in the following illustration, the dimensional difference between the top (L2[2]) and bottom (L2[1]) edges is a deviation.

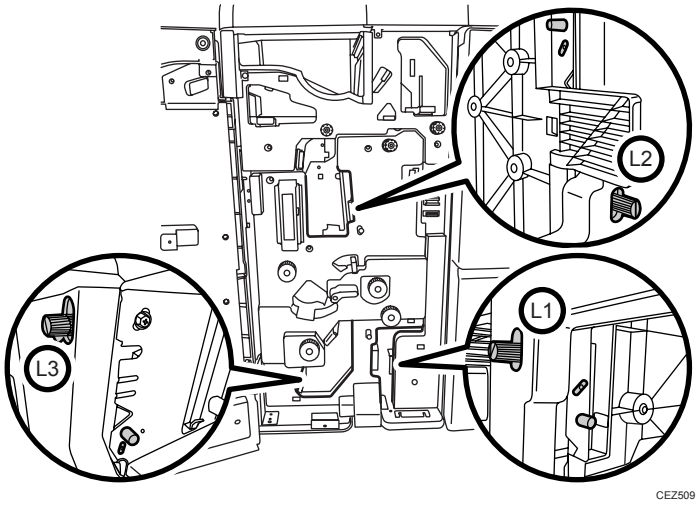
**<Folding deviation sample of L2 for Z-fold>**



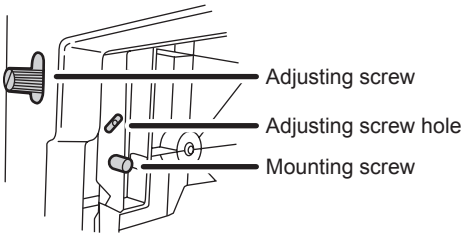

### Solution:

Adjust the deviation.

The multi-folding unit has three adjusting screws (L1, L2, and L3) to adjust deviation.

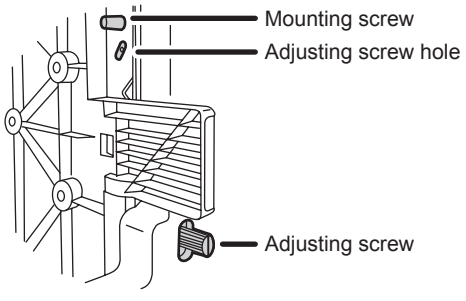


**L1**



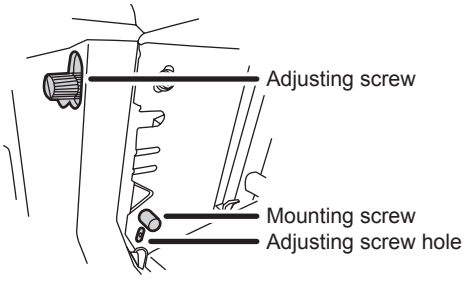

CEZ599

**L2**




CEZ600

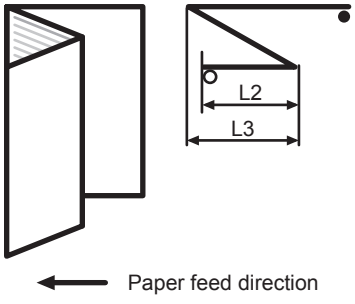
**L3**



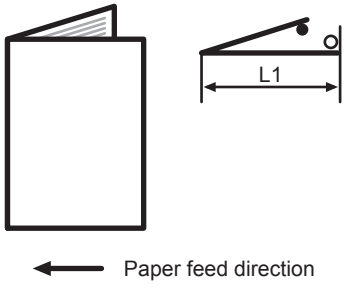

CEZ601

The screws adjust the folding deviations of the following parts:

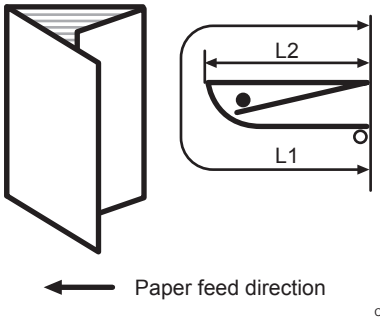
### Z-fold



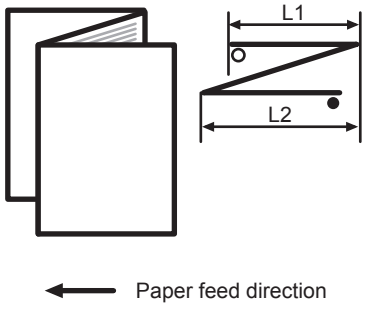

### Half Fold



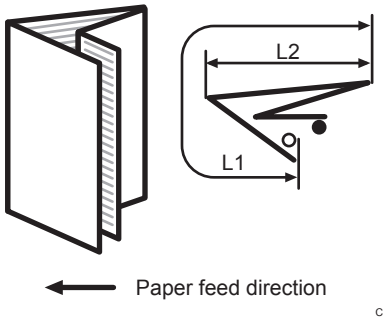

### Letter Fold-in



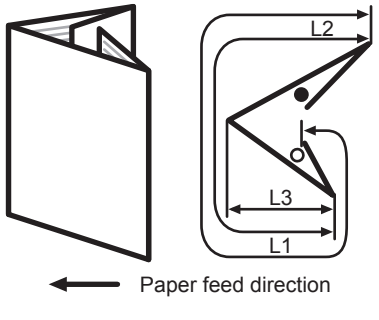
**Letter Fold-out**




**Double Parallel**




**Gate Fold**




The ○ mark indicates the leading edge (relative to the paper feed direction), and the ● mark indicates the trailing edge.

**<How to adjust the folding deviation>**

This procedure is the same for L1, L2, and L3.

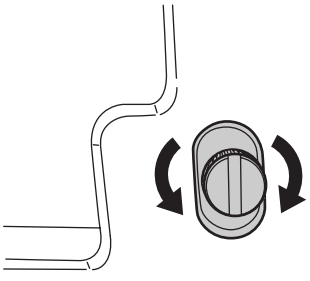
1. **Open the front cover of the multi-folding unit.**

2. **Remove the mounting screw.**

   If the mounting screw is attached to the adjusting screw hole, unfasten it.

3. **Turn the adjusting screw to adjust the deviation.**

   - To increase the length at the bottom part of paper, turn the screw clockwise.
   - To decrease the length at the bottom part of paper, turn the screw counterclockwise.



CEZ510

4. **Attach the mounting screw to fasten the adjusting screw.**

   If the mounting screw is attached to the adjusting screw hole, fasten it.

5. **Close the front cover of the multi-folding unit.**

**Note**

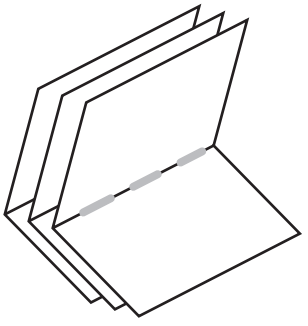
- For multi-sheet folding, the folding deviation that appears in the center of paper will be adjusted.
- If the deviation is large, the paper may be skewed. For further information, about skewing, see "Details of Menu Items in Advanced Settings", Adjustment Item Menu Guide.



## Folds Stained by Multi-sheet Folding

### Cause:

If multi-sheet folding is performed after a large number of Z-folds have been performed, the tip of the blade used for the multi-sheet folding may be stained, resulting in stained paper.



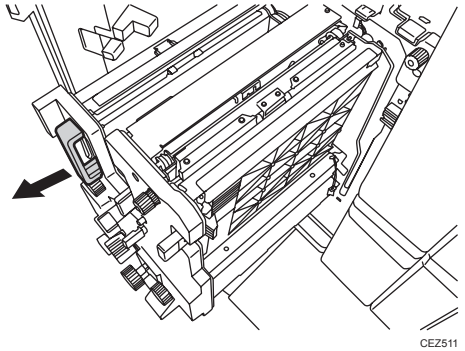
CEZ571

This will produce paper stain of 1-3 cm (0.4-1.2 inches) in width (equal to the width of the blade) in the fold in the center of paper.

## Solution:

Clean the blade.

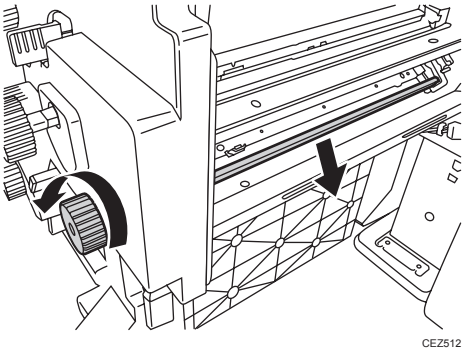
1. **Open the front cover of the multi-folding unit.**
2. **Pull the multi-folding unit out.**



CEZ511

3. **Turn the N11 dial counterclockwise until the blade appears.**

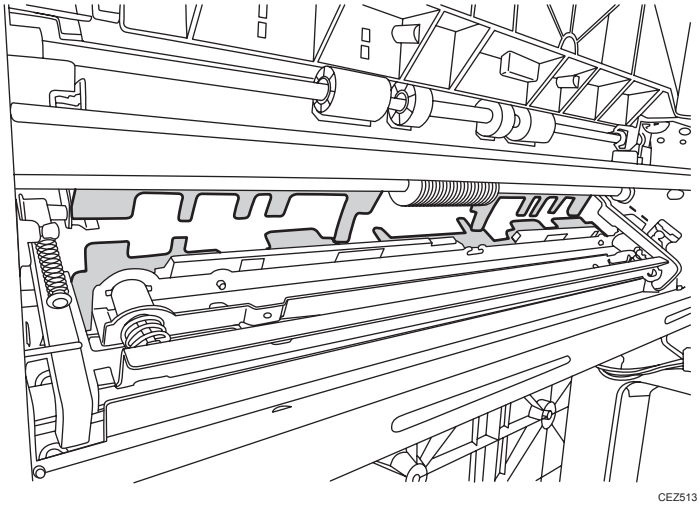
   The blade is located in the right part of the multi-folding unit.



CEZ512

4. **Wipe the tip and top of the blade with a soft dry cloth.**

   Be careful not to damage the blade.



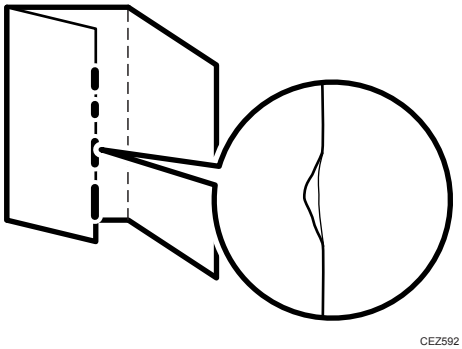
CEZ513

5. **After cleaning, restore the machine so that it resumes operation.**

   Apply multi-sheet folding and print 3-5 copies. The paper stain will disappear.

## Edges of Letter Fold Bent

When letter folding is applied, the edge of the inner flap may become bent.



CEZ592

### Solution:

1. **In the 07: [Finishing: Fold] group on the [Adjustment Settings for Skilled Operators] menu, set 0704: [Letter Fold-in Position 1 (Multi-sheet Fold)] to "0.0 mm".**
2. **In [General Features] in [System Settings], set [Letter Fold-in Position] for multiple sheets to "7 mm".**

3. **Print the image. Has the problem been resolved?**

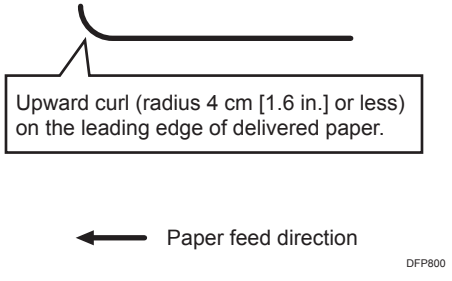
| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

## Z-Folding is Not Performed Properly

### Cause:

If a sheet is curled and its edge touches the guide plate, proper folding may not be possible.

This may occur if:




### Solution:

1. **Load the paper the other way up.**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Go to the next step. |

3. **In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, set 0301: [Adjust Paper Curl] to "Adjust ⌣ Curl".**

   To control the level of decurling, select "Weak" if the present setting is "Off", "Medium" if the present value is "Weak" or "Strong" if the present value is "Medium".

4. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |

| | |
|---|---|
| No | Contact your service representative. |

**Note**

- This folding error will not occur if uncurled paper is used or sheets that curl downward.

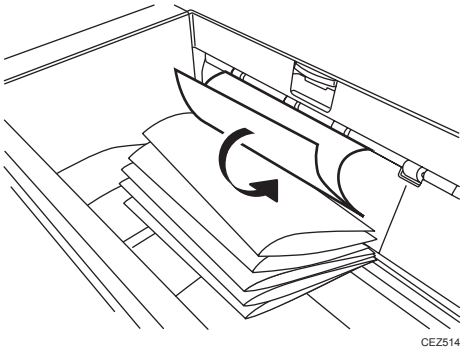
## Folded Sheets Are Not Stacked Properly

### Cause:

If a large number of half-folded multi-sheet is delivered, the edge of the sheets may bulge and some part of the edge will be swollen. If this happens, other sheets loaded on the bulged paper may turn over in the output tray.

This may occur if:

- Thick, relatively stiff paper is used.
- When 120: [Process Speed Setting] is set to [Low] in the [Advanced Settings] for the custom paper.

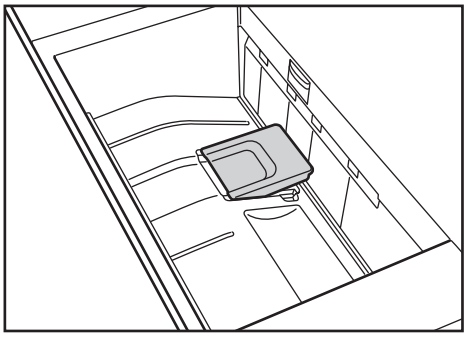



As a bundle is delivered, its folded edge may droop and catch on the stacked bundles, causing the delivered bundle to flip over.

### Solution:

Use the Z-fold support tray for multi-folding unit.

This will reduce the angle of stacked bundles and prevent bundles flipping over as they are delivered.



DFP351

For details about attaching the Z-fold support tray for multi-folding unit, see "About This Machine" supplied with the machine.

**Note**

- If the Z-fold support tray for the multi-folding unit is attached, folded paper such as letter-folded paper or gate-folded paper will not turn over in the output tray when delivered.

# Ring Binding

Important

- Be sure not to exit from Energy Saver mode or to switch the machine on when the ring binder door is open and the binding unit is disconnected. Doing so will affect initialization, causing the ring binder function to become unavailable (although other functions will be unaffected).
- If you inadvertently do this, connect the ring binder's binding unit again, close the door, and then turn the power off and back on to restore normal operation.

## SC756-48 Appears

### Cause:

This may occur if the machine recovers from Energy Saver mode or the power is turned on while the ring binder tray is pulled out.

### Solution:

1. Push the ring binder tray in.
2. Close the cover.
3. Turn the machine on.
4. If the problem persists, contact your service representative.

# High Capacity Stacker

## Delivered Sheets Are Severely Curled

### Cause:

Sheets with downward curls cause strong friction on the leading edges. This may result in paper misfeeds. Sheets will not be ejected completely and the trailing edges will be left inside the paper exit.

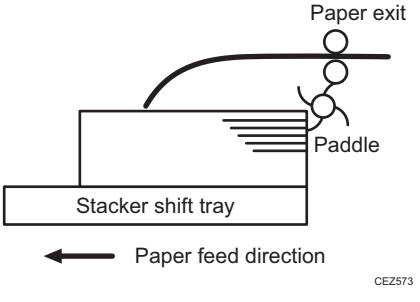
If this happens, other sheets may slip under the delivered sheets, so that the delivered sheets may be curled when loaded.

This may occur if:

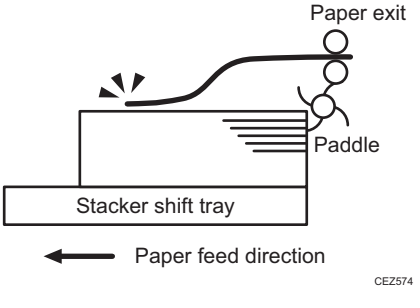
- A4 or larger coated paper weighing up to 135 g/m$^2$ (50 lb. Cover) is used.

**<How the problem occurs>**

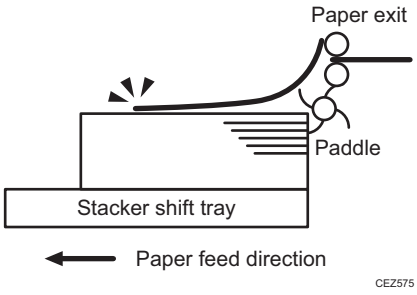
1. Downward curled paper is delivered to the stacker tray.



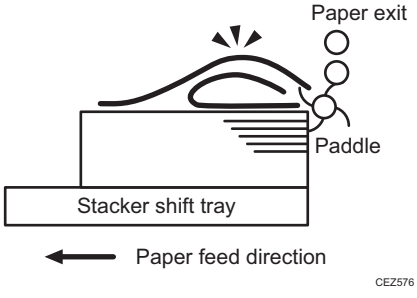

2. The leading edge of the sheet, while delivered, causes strong paper-to-paper friction against the top sheet of the stack. As there is no air gap between the sheets, and the delivered sheet becomes stuck.




3. The trailing edge of the sheet, while delivered, is left in the paper exit.




4. The next sheet to be delivered slips under the sheet still in the paper exit and bends back.




## Solution:

Straighten out the sheet by decurling it upward.

1. **Load the sheets the other way up.**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, set 0301: [Adjust Paper Curl] to [Adjust ⌒ Curl: Weak]. |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 0301: [Adjust Paper Curl] to [Adjust ⌒ Curl: Medium]. |

4. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |

| | |
|---|---|
| No | Set 0301: [Adjust Paper Curl] to [Adjust ⌒ Curl: Strong]. |

5. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| Yes | Finished! |
| No | Contact your service representative. |

## Delivered Sheets Are Not Aligned

### Cause:

When sheets are delivered to the stacker tray, because of paper-to-paper friction, the paddle fails to pull the trailing edge back into the front guide, resulting in misalignment.

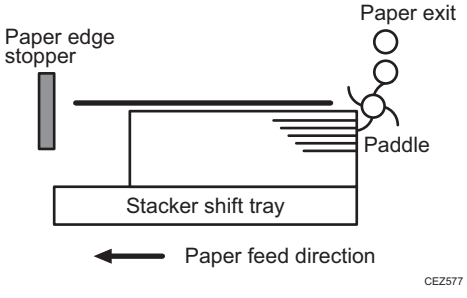
The paper edge stopper also fails to push back the protruding leading edge.

This may occur if:

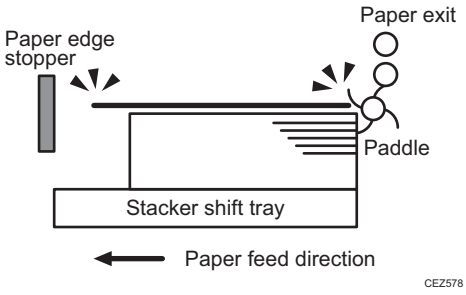
- Thick (280 g/m$^2$ [105 lb. Cover] or heavier), uncurled A3 or larger paper is used.

**<How the problem occurs>**

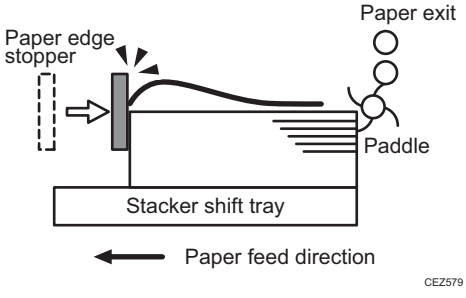
1. An uncurled sheet is delivered to the stacker shift tray.



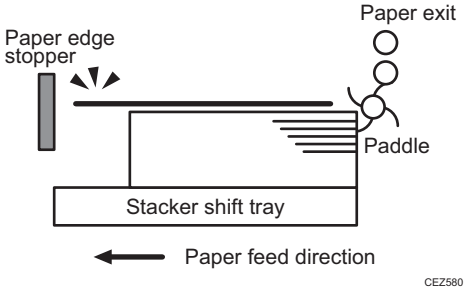

2. Strong friction occurs on the trailing edge so that the paddle cannot pull the sheet back and align the edges of the sheet with those of the stack.




3. The paper edge stopper fails to push back the protruding leading edge and align the sheet as required.




4. Stacked sheets are not aligned properly.




## Solution:

Curl the sheet upward.

1. **Load the sheets the other way up.**

2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, set 0301: [Adjust Paper Curl] to [Adjust ⌒ Curl: Weak]. |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 0301: [Adjust Paper Curl] to [Adjust ⌒ Curl: Medium]. |

4. **Print the image. Has the problem been resolved?**

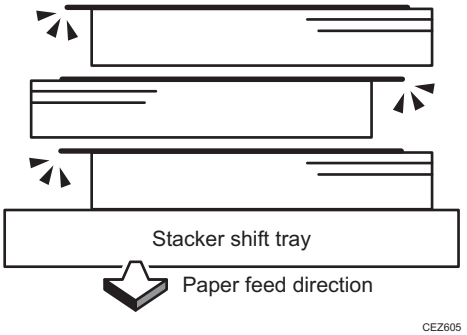
| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 0301: [Adjust Paper Curl] to [Adjust ⌒ Curl: Strong]. |

5. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

**Note**

- The top sheet of each offset bundle of delivered sheets may protrude above the rest of the bundle by about 7 mm (0.2 inches).



## The Machine Wrongly Detects That the Tray Is Full

### Cause:

Depending on the paper size, the machine may detect that the shift tray has reached the maximum number of sheets that can be stacked on it.

This may occur if:

- Paper with a width of 191–261 mm (7.6-10.4 inches) is being used.

### Solution:

1. **Load the sheets the other way up.**
2. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | In the 03: [Machine: Paper Feed/ Output] group of the [Adjustment Settings for Skilled Operators] menu, set 0301: [Adjust Paper Curl] to [Adjust ⌣ Curl: Off]. |

3. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 0301: [Adjust Paper Curl] to [Adjust ⌣ Curl: Weak]. |

4. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 0301: [Adjust Paper Curl] to [Adjust ⌣ Curl: Medium]. |

5. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 0301: [Adjust Paper Curl] to [Adjust ⌣ Curl: Strong]. |

6. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 0301: [Adjust Paper Curl] to [Adjust ⌢ Curl: Weak]. |

7. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 0301: [Adjust Paper Curl] to [Adjust ⌒ Curl: Medium]. |

8. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Set 0301: [Adjust Paper Curl] to [Adjust ⌒ Curl: Strong]. |

9. **Print the image. Has the problem been resolved?**

| | |
|---|---|
| **Yes** | Finished! |
| **No** | Contact your service representative. |

## The Paper Press Leaves an Impression on the Paper

### Cause:

The pressure applied by the paper press leaves an impression on the paper.

### Solution:

Insert an extra sheet of paper between the paper press and the paper stack.

## Paper Pressed Down Insufficiently

### Cause:

The screws on the handle of the paper cart and the bolts at its bottom are loose.

### Solution:

Tighten the screws on the handle and the bolts at the bottom of the paper cart.

## Sheets Becoming Misaligned When the Paper Cart Is Pulled Out

### Cause:

When the machine prompts the user to pull out the paper cart as the paper tray becomes full, the sheet of paper at the top comes into contact with the paddle and the paper will be misaligned.

### Solution:

1. **After the machine notifies you that the paper tray is full, lower the paper tray.**
2. **Set the paper holder.**
3. **Pull out the paper cart.**

# 10. Improving Throughput

## Reducing the Waiting Time Prior to Printing

After receiving a print job, the machine usually stops to let the fusing temperature reach an appropriate level for printing.

The waiting time for the fusing unit to cool down may be quite long, especially before printing on thin paper. By decreasing the fusing temperature during standby, you can reduce the waiting time.

By changing the fusing temperature to feed paper after warm-up, you can also reduce the waiting time.

**Note**

- When printing on paper other than thin paper, we recommend leaving the fusing temperature settings unchanged.
- After performing the solution, it is recommended to perform the color calibration of the external controller. For details see, page 159 "Operating Procedure for Color Calibration".

1. **In the 02: [Machine: Image Quality] group on the [Adjustment Settings for Skilled Operators] menu, select 0206: [Adjust Fusing Temperature on Standby].**
2. **Decrease the temperature by 15 degrees.**

# Improving Throughput when Continuously Printing on Paper of Different Types or Thicknesses

When printing is performed continuously on paper of different types or thicknesses, the waiting time prior to printing may be long due to the temperature to allow paper feeding, resulting in lower throughput.

1. **In [Advanced Settings] for the custom paper, adjust the value in 103: [Fusing Temp to Feed Ppr].**

   Press [+] to reduce the waiting time, or [−] to increase.

2. **In [Advanced Settings] for the custom paper, set the fusing heat roller temperature to 180 degrees.**

   **<Printing in full color>**

   Select 088: [Fusing Temp: FC].

   **<Printing in black and white>**

   Select 089: [Fusing Temp: BW].

3. **Print the image. Has any image quality problem occurred?**

| | |
|---|---|
| Yes | You cannot improve throughput under the present condition. Restore the previous setting. |
| No | You can operate the machine using this setting. |

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.
- If waiting time becomes shorter, a paper jam or glossy ghosting may occur.

# Improving Throughput when Continuously Performing Black and White and Color Printing

When printing intermixed black-and-white and full-color print jobs, switching from full-color mode to black-and-white mode takes time, causing loss of throughput each time the mode is switched.

When the machine prints a full-color print job followed by a black-and-white job, you can improve throughput by adjusting the number of black-and-white sheets the machine prints in full-color mode before switching to black-and-white mode.

Because switching color modes takes time, increasing the amount of sheets before modes are switched will improve throughput.

1. **In the 04: [Machine: Productivity] group on the [Adjustment Settings for Skilled Operators] menu, change the value in 0401: [Auto Color Selection Setting].**

   Optimize the amount of sheets for your operating environment.

| Value | Behavior |
|---|---|
| 1 (Minimum) | When black-and-white printing is performed after full color printing, full color mode switches to black-and-white mode after 1 black-and-white sheet is printed in full color mode. Although throughput is not improved by this setting, cyan, magenta, and yellow development units are not used for black-and-white printing. |
| 10 (Maximum) | When black-and-white printing is performed after full color printing, full color mode switches to black-and-white mode after 10 black-and-white sheets are printed in full color mode. You can improve throughput. |

**Note**

- If black-and-white printing is performed in full-color mode, cyan, magenta, and yellow development units are used for black-and-white printing, so that the photoconductor unit needs to be replaced in a shorter period of time.
- When black-and-white printing is performed after full color printing, full color mode is always enabled as color printing cannot be performed in black-and-white mode.
- If "0" is specified, switching is canceled and the throughput increases, affecting the print image quality.

# 11. Advanced Instructions

## Operating Procedure for Color Calibration

To improve color reproduction and achieve color output with consistent quality, follow this procedure. It is recommended to perform color calibration for each print job. You can improve CMYK image reproduction by adjusting image density and performing calibration. Also, you can improve mixed color reproduction by adjusting image density and color registration and performing calibration. An optional EFI Spectrometer ES-2000 is required to perform calibration.

1. **In the 02: [Machine: Image Quality] group on the [Adjustment Settings for Skilled Operators] menu, select 0201: [Adjust Image Density/ DEMS] and execute [Image Density Adjustment: Manual Execute].**
2. **When the color density adjustment is completed, press [Exit].**
3. **Press [Exit].**
4. **Press the [User Tools] key.**
5. **Press [Maintenance].**
6. **Press [Color Registration].**
7. **Press [OK].**

   Auto color registration takes about 20 seconds.
8. **When the color registration is completed, press [Exit].**
9. **Start Fiery Command WorkStation 5.**
10. **Click [Calibrate] in the [Job Center] tab.**
11. **Click [Expert] in the upper right corner of the "Calibrator" dialog box.**
12. **Specify the following settings in the [Calibrator] dialog box.**
    - In the [1. Select Measurement Method] menu, select [ES-2000].
    - In the [2. Check Print Settings] menu, select the paper type you are using from the [NAME] pull-down menu.
    - In the [3. Generate Measurement Page] menu, click [Print].
13. **Specify the following settings in the Print Option dialog box.**
    - In the [Page Type] menu, select [21 Sorted Patches] or [34 Sorted Patches].
    - In the [Paper Size] menu, select the paper size you want to use to print a test page. The paper size you select must conform to the patches you select in the [Page Type] menu.

      [21 Sorted Patches]: A4 or LTR

      [34 Sorted Patches]: A3, 11 × 17, 12 × 18, 13 × 19
    - In the [Input Tray] menu, select the paper tray loaded with the paper for patch printing.

- Click [Print].

**14. When patch printing is completed, click [Measure] in the [4. Get Measurements] menu.**

**15. Check that the page type and size are correct, and then click [Measure].**

**16. Check the printed patches using ES-2000.**

**17. After checking all the patches, select [Measurement vs. Target] in the [6. View Measurements (optional)] menu, and then click [View].**

**18. Using the "Measurement vs. Target" screen, calculate the difference between each color's D-Max value in the measurement column and that in the target column.**

- If the difference is equal to +0.3 or lower and -0.3 or higher for cyan, magenta, and black, or if the difference is equal to +0.1 or lower and -0.1 or higher for yellow, go to the next step.
- If the difference is equal to +0.31 or higher and -0.31 or lower for cyan, magenta, and black, or if the difference is equal to +0.11 or higher and -0.11 or lower for yellow, return to Step 1.

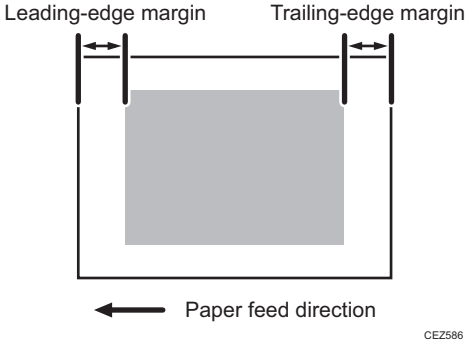
**19. Click [Done] two times to close "Calibrator" dialog box.**

**Note**

- After this procedure is repeated three times, the difference between each color's [D-Max] value in the measurement column and that in the target column may not be equal to +0.3 or lower and -0.3 or higher for cyan, magenta, and black, or +0.1 or lower and -0.1 or higher for yellow. If this is the case, print solid images on both sides of 100 sheets of A4 or LTR paper continuously. Desired results may be obtained.
- If the difference between each color's [D-Max] value in the measurement column and that in the target column may not be equal to +0.3 or lower and -0.3 or higher for cyan, magenta, and black, or +0.1 or lower and -0.1 or higher for yellow, color reproducibility may be improved after printing solid images on both sides of 100 sheets of A4 or LTR paper continuously.

# Shortening the Leading/Trailing Edge Margins

Depending on the paper being used, the margins on the copy vary. You can shorten the leading/trailing edge margins.




**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.
- The adjusted margin cannot be applied to masked images that are solid-filled or contain ruled lines at the leading/trailing edges.
- Reducing the leading/trailing edge margin may result in a paper jam on the fusing belt stripper plate.

1. **In [Advanced Settings] for the custom paper, reduce the value by 0.5 mm in 013: [Erase Margin: Leading Edge] or 014: [Erase Margin: Trailing Edge].**
2. **Keep reducing the value by 0.5 mm, checking that paper is not jammed.**

# Adjusting the Image Position of the Either Side of the Paper

## Adjusting the Image Position on Side 1

**<If custom paper is used>**

Perform the solution described in "(a) Adjust the image skew", "(b) Adjust the image position (If custom paper is used)", "(c) Adjust the magnification (Across feed direction)" and then "(d) Adjust the magnification (With feed direction)".

**<If custom paper is not used>**

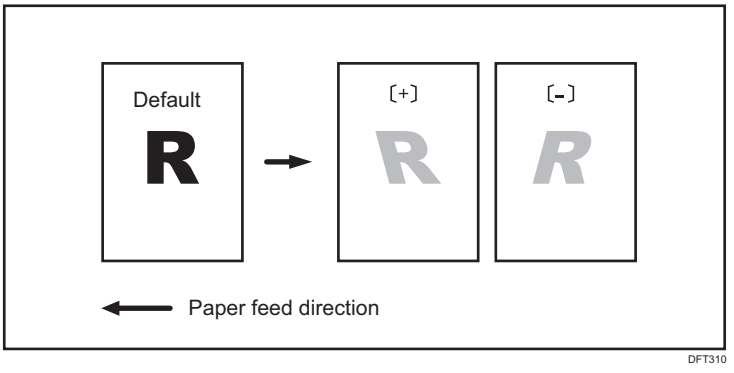
Perform the solution described in "(a) Adjust the image skew", "(e) Adjust the image position (If custom paper is not used)".

**Note**

- You cannot adjust the vertical magnification and horizontal magnification of all types of paper other than custom paper. Therefore, it is recommended to pre-register the type of paper in use as a custom paper.
- For details about specifying settings, see "Details of Menu Items in Adjustment Settings for Skilled Operators" and "Details of Menu Items in Advanced Settings", Adjustment Item Menu Guide.
- If the problem persists even though you have adjusted the setting to its maximum and minimum values, contact your service representative.
- If it is difficult to check and adjust the image position on the printed sheet, print one side of the format used in page 168 "Aligning the Image Position on Side 2 to That on Side 1 (Using a Template to Align the Image Position on Side 1 and 2)".

**(a) Adjust the image skew**

Adjust the vertical position of the print image.




1. **Print the image in black and white.**

2. **Check the direction of the skew.**
3. **In the 01: [Machine: Image Position] group on the [Adjustment Settings for Skilled Operators] menu, select 0107: [Perpendicularity Adjustment] and adjust the value.**

   Move the cursor to [+] to skew the image counterclockwise or to [−] to skew it clockwise.
4. **Print the image in black and white. Check the image skew. If the problem persists, increase the value slightly.**
5. **Execute color registration.**

   In executing color registration, the black adjustment will also be applied to cyan, magenta, and yellow.

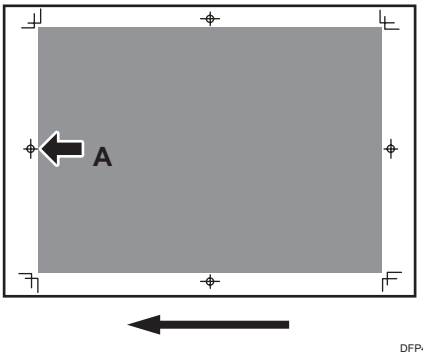
   For details about color registration, see "When the Color Registration Shifts" in the Troubleshooting guide supplied with the machine.

**Note**

- In 0107: [Perpendicularity Adjustment], you cannot individually adjust the image position on sides 1 and 2.

**(b) Adjust the image position (If custom paper is used)**

Adjust the vertical and horizontal image position so that the center (A) of the leading edge of the image is aligned to the registration mark.



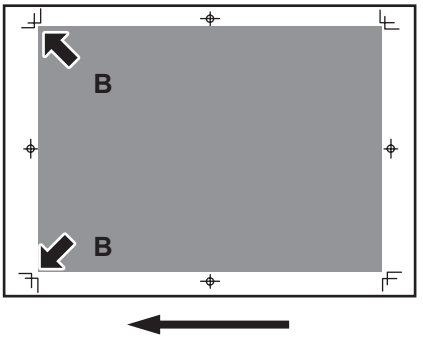

DFP492

In [Advanced Settings] for the custom paper, adjust the image position.

- 001: [Image Position: Across Feed: Side 1]
- 003: [Image Position: With Feed: Side 1]

**(c) Adjust the magnification (Across feed direction)**

Adjust the horizontal magnification to adjust the width between the front (B) and back corners (B) on the leading edge of the image.



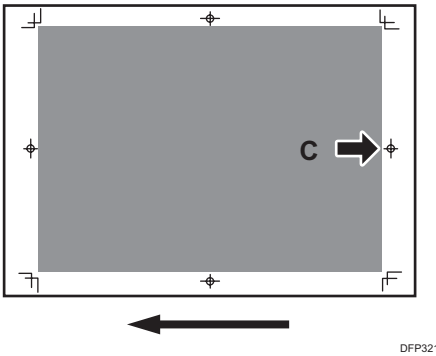

DFP320

In [Advanced Settings] for the custom paper, adjust the value in 005: [Magnification: Across Feed: Side 1].

Press [+] to increase the scaling and [−] to reduce it.

**(d) Adjust the magnification (With feed direction)**

Adjust the vertical magnification to adjust the length (position of (C)) of the image.



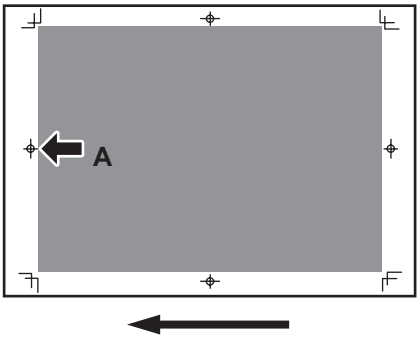

DFP321

In [Advanced Settings] for the custom paper, adjust the value in 007: [Magnification: With Feed: Side 1].

Press [+] to increase the scaling and [−] to reduce it.

**(e) Adjust the image position (If custom paper is not used)**

Adjust the vertical and horizontal image position so that the center (A) of the leading edge of the image is aligned to the registration mark.




DFP492

In the 01: [Machine: Image Position] group on the [Adjustment Settings for Skilled Operators] menu, adjust the image position.

- 0101: [Image Position: Across Feed]
- 0102: [Image Position: With Feed]

## Adjusting the Image Position on Side 2

If you want to align an image position on Side 2 to an image position on Side 1 that has been adjusted, see page 168 "Aligning the Image Position on Side 2 to That on Side 1 (Using a Template to Align the Image Position on Side 1 and 2)".

**<If custom paper is used>**

Perform the solution described in "(a) Adjust the image skew", "(b) Adjust the image position (If custom paper is used)", "(c) Adjust the magnification (Across feed direction)" and then "(d) Adjust the magnification (With feed direction)".

**<If custom paper is not used>**

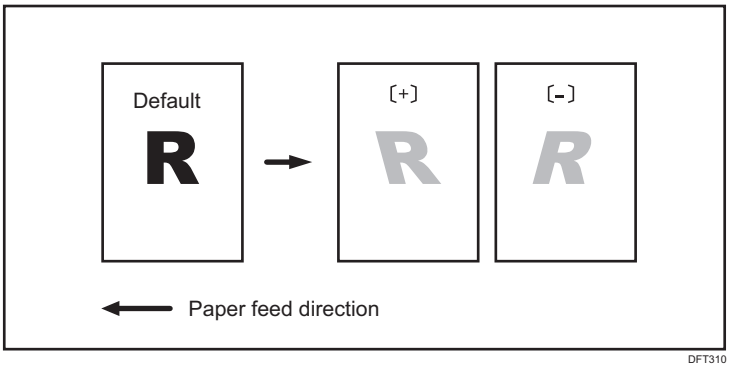
Perform the solution described in "(a) Adjust the image skew", "(e) Adjust the image position (If custom paper is not used)"

**Note**

- You cannot adjust the vertical magnification and horizontal magnification of all types of paper other than custom paper. Therefore, it is recommended to pre-register the type of paper in use as a custom paper.
- For details about specifying settings, see "Details of Menu Items in Adjustment Settings for Skilled Operators" and "Details of Menu Items in Advanced Settings", Adjustment Item Menu Guide.
- If the problem persists even though you have adjusted the setting to its maximum and minimum values, contact your service representative.
- If it is difficult to check and adjust the image position on the printed sheet, print one side of the format used in page 168 "Aligning the Image Position on Side 2 to That on Side 1 (Using a Template to Align the Image Position on Side 1 and 2)".

### (a) Adjust the image skew

Adjust the vertical position of the print image.




1. **Print the image in black and white.**
2. **Check the direction of the skew.**
3. **In the 01: [Machine: Image Position] group on the [Adjustment Settings for Skilled Operators] menu, select 0107: [Perpendicularity Adjustment] and adjust the value.**

   Move the cursor to [+] to skew the image counterclockwise or to [−] to skew it clockwise.
4. **Print the image in black and white. Check the image skew. If the problem persists, increase the value slightly.**
5. **Execute color registration.**

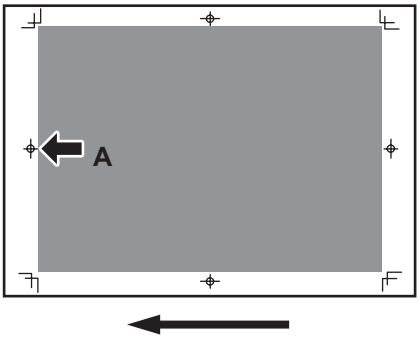
   In executing color registration, the black adjustment will also be applied to cyan, magenta, and yellow. For details about color registration, see "When the Color Registration Shifts" in the Troubleshooting guide supplied with the machine.

**Note**

- In 0107: [Perpendicularity Adjustment], you cannot individually adjust the image position on sides 1 and 2.

### (b) Adjust the image position (If custom paper is used)

Adjust the vertical and horizontal image position so that the center (A) of the leading edge of the image is aligned to the registration mark.



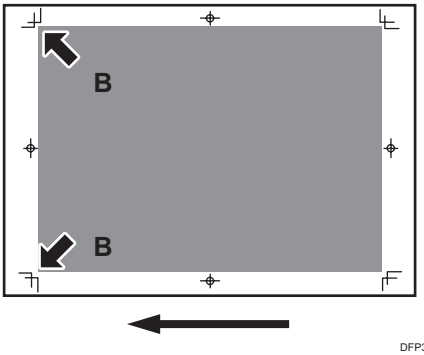

DFP492

In [Advanced Settings] for the custom paper, adjust the image position.

- 002: [Image Position: Across Feed: Side 2]
- 004: [Image Position: With Feed: Side 2]

**(c) Adjust the magnification (Across feed direction)**

Adjust the horizontal magnification to adjust the width between the front (B) and back corners (B) on the leading edge of the image.



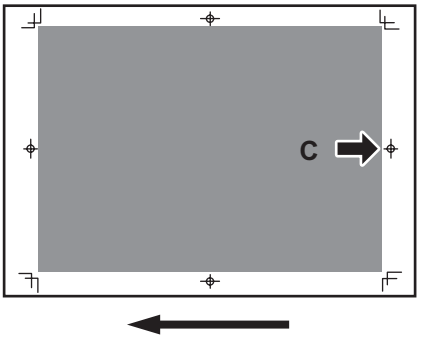

DFP320

In [Advanced Settings] for the custom paper, select 006: [Magnification: Across Feed: Side 2].

Press [+] to increase the scaling and [−] to reduce it.

**(d) Adjust the magnification (With feed direction)**

Adjust the vertical magnification to adjust the length (position of (C)) of the image.



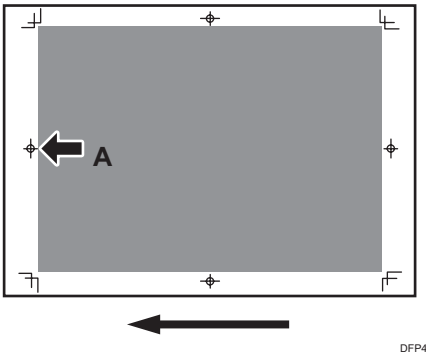

DFP321

In [Advanced Settings] for the custom paper, select 008: [Magnification: With Feed: Side 2].

Press [+] to increase the scaling and [−] to reduce it.

**(e) Adjust the image position (If custom paper is not used)**

Adjust the vertical and horizontal image position so that the center (A) of the leading edge of the image is aligned to the registration mark.




DFP492

In the 01: [Machine: Image Position] group on the [Adjustment Settings for Skilled Operators] menu, adjust the image position.

- 0101: [Image Position: Across Feed]
- 0102: [Image Position: With Feed]



## Aligning the Image Position on Side 2 to That on Side 1 (Using a Template to Align the Image Position on Side 1 and 2)

This section explains how to adjust settings so that images on both sides are aligned using duplex printing.

First, print the format and measure the length of specified parts. By specifying the measured length on the machine, you can adjust the image position automatically.

It is necessary to specify the settings for each paper size being used. The adjusted settings are stored as custom paper presets and can be applied again in the future.

To adjust the image position, the machine administrator privilege is required.

## Supported paper size and paper type

### Supported Paper Size

A3□, A4□, A4□, B4□, B5□, B5□, DLT□, Legal□, Letter□, Letter□, Government LG□, 8K□, 16K□, 16K□, 12 × 18□, 13 × 19.2□, 13 × 19□, 13 × 18□, SRA3□, SRA4□, SRA4□

### Unsupported Paper Type

Index paper, tracing paper, label paper, envelope, magnet paper, clear file

**Note**

- There is no limit to paper thickness.

## Preparation

To adjust the image position, you need to:

- Prepare a 500 mm or longer stainless steel ruler (with the scale in 0.5 mm) and magnifier (for measuring the format)
- Check the supported paper size and paper type.
- From the supplied CD, print the file of the format matching the size of the paper requiring image position adjustment.
- Adjust the image position on Side 1. For details about adjusting the position, see page 162 "Adjusting the Image Position on Side 1".
- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.
- In [Advanced Settings] for the custom paper, set the value in the following settings to "0.000".

  002: [Image Position: Across Feed: Side 2]

  004: [Image Position: With Feed: Side 2]

  006: [Magnification: Across Feed: Side 2]

  008: [Magnification: With Feed: Side 2]
- In [Advanced Settings] for the custom paper, note the values in the following settings, and then adjust the value on one side to match the larger value on the other side.

  013: [Erase Margin: Leading Edge]

  014: [Erase Margin: Trailing Edge]

## Printing the Format

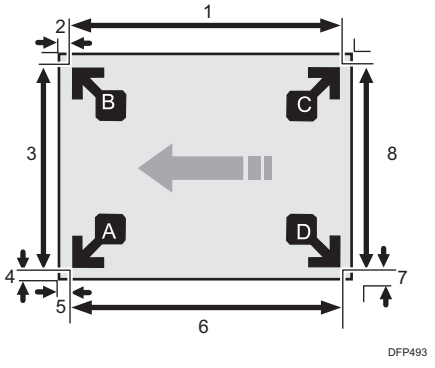
Using the computer and the machine, print the format matching the size of the paper requiring image position adjustment.

1. **Continuously print the format on both sides of 10 sheets.**

   The format has arrows on 4 corners.

2. **Measure the length of specified parts on the 6th sheet among the printed copies of the format.**

   Using the ruler and magnifier, measure the length between each corner of the paper and the top of its adjoining arrow, and the length between the top of arrows with the scale in 0.1 mm.




   1. **Length between the top of each arrow**
   2. **Length between each corner and the top of its adjoining arrow**
   3. **Length between the top of each arrow**
   4. **Length between each corner and the top of its adjoining arrow**
   5. **Length between each corner and the top of its adjoining arrow**
   6. **Length between the top of each arrow**
   7. **Length between each corner and the top of its adjoining arrow**
   8. **Length between the top of each arrow**

3. **Write the measured value within the framework of the format.**

   In total (including both sides of the sheet), measure the position of 16 parts.

**Note**

- Depending on the paper size, when you print continuously, the feeding interval differs for each sheet of the first and last 3 to 4 sheets and the sheets in the middle (in the case of printing 10 sheets, the 5th and 6th sheets). Therefore, it is recommended to use the 6th sheet for measurement.
- First, check that the arrow direction and paper feed direction on the printed sheet are correct. If they are incorrect, change the print setting.

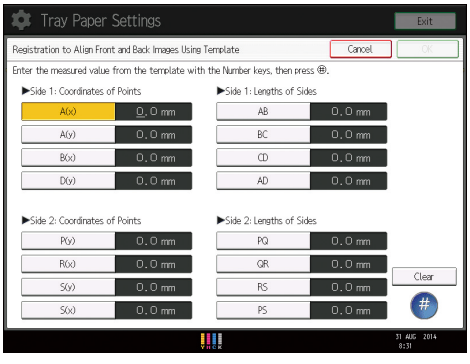
## Entering the Value

When you specify the lengths of the template after measuring them, the values to adjust the image position are automatically calculated and applied.

1. **In [Advanced Settings] for the custom paper, select [Registration to Align Front and Back Images Using Template].**
2. **Enter the value you wrote on the printed template.**

   Select the item, enter the value using the number keys, and then press [#].

   You can enter values from 0.1 to 999.9 mm in 0.1-mm increments.




3. **Press [OK].**
4. **Press [Exit].**
5. **Press [OK].**
6. **Press [Overwrite].**
7. **Press [Yes].**
8. **Press [Exit].**

## Checking Adjusted Results

1. **From the supplied CD, print the file of the format matching the size of the paper requiring image position adjustment. Continuously print the format on both sides of 10 sheets.**
2. **Using the 6th sheet among the printed copies, check whether any misregistration occurs on the front and back of the paper.**
   - When using thin paper, check for misregistration by seeing through the paper.
   - When using thick paper or paper that cannot be seen through, pierce the paper with a tool such as an eyeleteer and check for misregistration.
3. **After adjusting the position, return the values in the following settings to those checked in page 169 "Preparation".**

   013: [Erase Margin: Leading Edge]

014: [Erase Margin: Trailing Edge]

## Eliminating misregistrations on the front and back of the paper

Adjust the image position and magnification on Side 2 to match those on Side 1. Carry out the following sequence of procedures. Terminate the sequence as soon as the problem is resolved.

**Note**

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

1. **From the supplied CD, print the file of the format matching the size of the paper requiring image position adjustment. Continuously print the format on both sides of 10 sheets.**

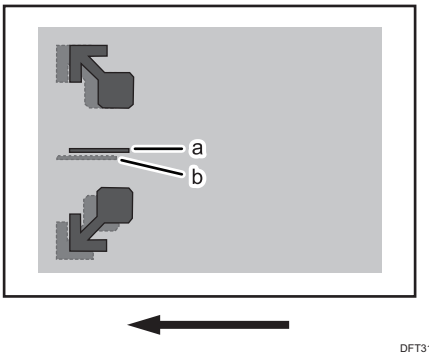
   Use the 6th sheet among the printed copies for adjustment.

2. **Through visual inspection of the 4th, 5th, and 6th sheets, check that misregistrations on Side 1 and 2 are almost the same.**

   If not, adjust the misregistrations according to the usual method.

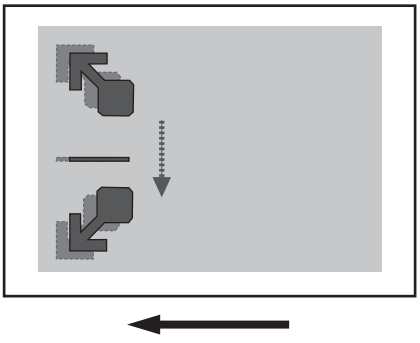
3. **In [Advanced Settings] for the custom paper, select 002: [Image Position: Across Feed: Side 2] and adjust the vertical position of the image to be printed on Side 2 of the paper to match the image position on Side 1.**

   Eg., Adjusting the center line of the leading edge on Side 2 (a) to match the center line (b) on Side 1




DFT314

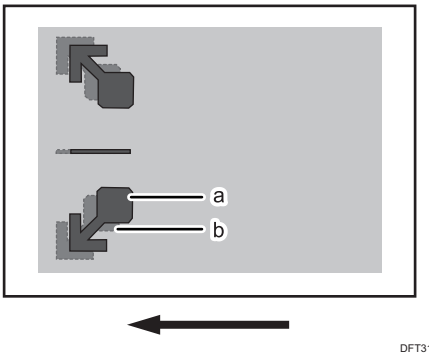
Press [−] to shift the image to the bottom. (Press [+] to shift the image to the top.)



DFT315

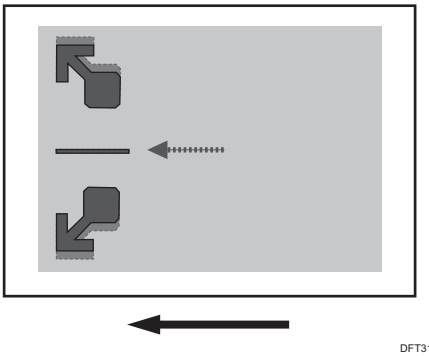
4. **Select 004: [Image Position: With Feed: Side 2] and adjust the horizontal position of the image to be printed on Side 2 of the paper to match the image position on Side 1.**

   Eg., Adjusting the image (a) on the leading edge of the paper on Side 2 to match the corresponding image (b) on Side 1




DFT316

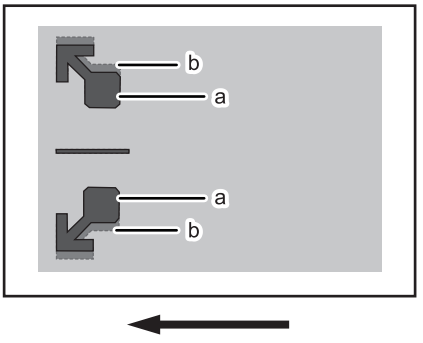
Press [–] to shift the image to the left (leading edge). (Press [+] to shift the image to the right (trailing edge).)



DFT317

5. **Select 006: [Magnification: Across Feed: Side 2] and adjust the vertical image scaling on Side 2 of the paper to match the image scaling on Side 1.**

   Eg., Adjusting magnification to match the length between the arrows (a) on the leading edge of the paper on Side 2 to the length between the arrows (b) on Side 1

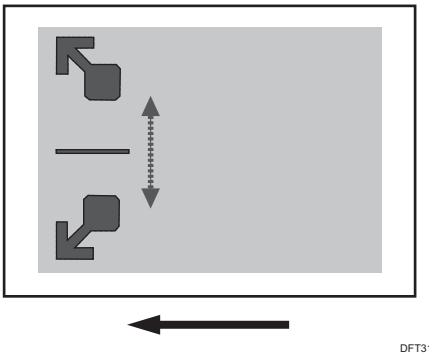



DFT318

Press [+] to increase the scaling. (Press [–] to reduce the scaling.)

The adjustment value is applied evenly both upward and downward.

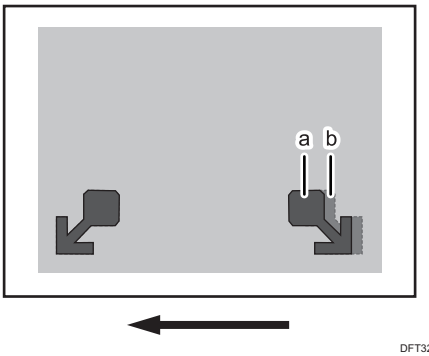
To feed A3 paper with its short side parallel to the paper feed direction, increase the value by 0.025 percentage point to move the image by approximately 0.1 mm (0.004 inches).



DFT319

6. **Select 008: [Magnification: With Feed: Side 2] and adjust the horizontal image scaling on Side 2 of the paper to match the image scaling on Side 1.**

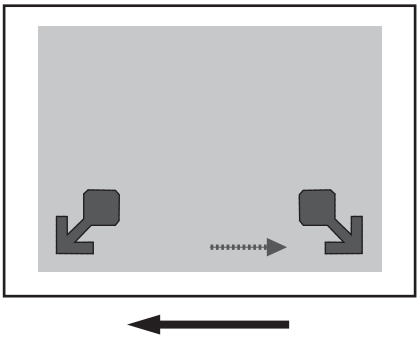
   Eg., Adjusting magnification to match the position of the arrow (a) on the trailing edge of the paper on Side 2 to the position of the arrow (b) on Side 1




DFT320

Press [+] to increase the scaling. (Press [–] to reduce the scaling.)

To feed A3 paper with its long side parallel to the paper feed direction, increase the value by 0.025 percentage point to move the image by approximately 0.07 mm (0.0028 inches).



DFT321

## When to check for misregistrations on the front and back of the paper

Check for misregistrations on the front and back of the paper when:

- Using paper of a different lot, means of acquisition, or storage condition
- Changing an advanced fusing settings
- The machine's ambient temperature has changed drastically. For instance, the machine's adjustment values and settings are checked in summer while the machine is used in winter)
- Changing the paper size in a custom paper preset
- Registering a custom paper preset based on an already registered custom paper preset

# Prepunched Paper

When using pre-punched paper, the pre-punched holes may be wrongly detected as paper edge and jam code J097 or J098 appears.

If this happens, carry out the following settings;

**Note**

- For details about specifying settings in the [Advanced Settings] menu, see "Details of Menu Items in Advanced Settings", Adjustment Item Menu Guide.

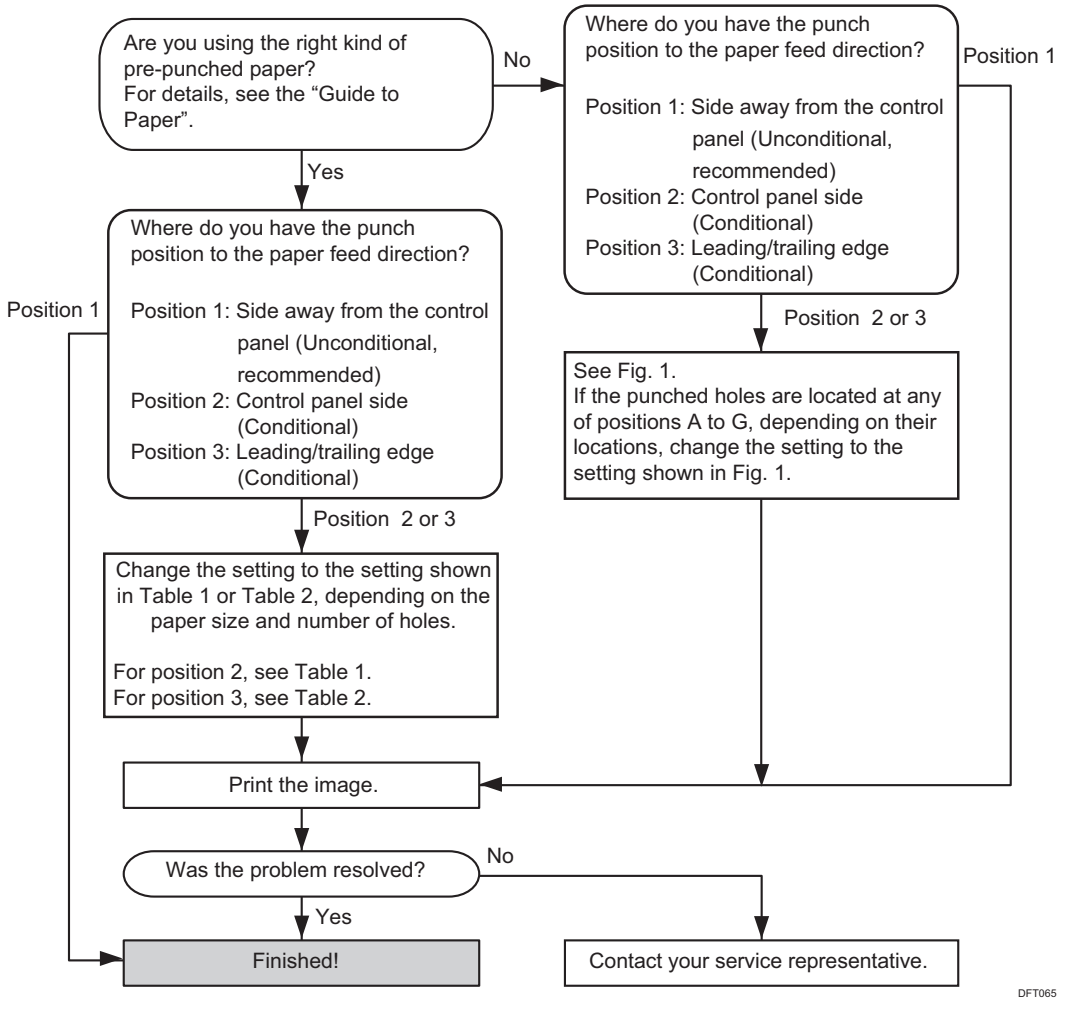


**Table 1: When the punching position is on the control panel (For Position 2)**

**(Mainly North America)**

| Paper Size | Number of holes | 015: [Skew Detection] | 118: [Registration Adjustment: Across Feed] | 119: [Image Magnification Auto Adjustment] |
|---|---|---|---|---|
| HLT/LEF | 2 | [Off] | [Activate] | [Deactivate] |
| HLT/SEF<br>LT/LEF | 2 | [Off] | [Activate] | [Deactivate] |
| LT/SEF | 2 | [On] | [Activate] | [Activate] |
| | 3 | [Off] | [Activate] | [Deactivate] |
| | 7 | [Off] | [Activate] | [Deactivate] |
| LG | 2 | [On] | [Activate] | [Activate] |
| | 3 | [Off] | [Activate] | [Activate] |
| | 7 | [Off] | [Activate] | [Activate] |
| DLT | 2 | [On] | [Activate] | [Activate] |
| | 3 | [On] | [Activate] | [Activate] |
| | 7 | [Off] | [Activate] | [Activate] |
| 12 × 18 | 2 | [Off] | [Activate] | [Activate] |
| | 3 | [On] | [Activate] | [Activate] |
| | 7 | [Off] | [Activate] | [Activate] |
| 13 × 19 | 2 | [Off] | [Activate] | [Activate] |
| | 3 | [On] | [Activate] | [Activate] |
| | 7 | [On] | [Activate] | [Activate] |

**(Mainly Europe and Asia)**

| Paper Size | Number of holes | 015: [Skew Detection] | 118: [Registration Adjustment: Across Feed] | 119: [Image Magnification Auto Adjustment] |
|---|---|---|---|---|
| A5/LEF | 2 | [On] | [Activate] | [Activate] |
| B5/LEF | 2 | [On] | [Activate] | [Activate] |
| A5/SEF<br>A4/LEF | 2 | [On] | [Activate] | [Activate] |
| B5/SEF | 2 | [On] | [Activate] | [Activate] |
| | 4 | [On] | [Deactivate] | [Deactivate] |
| A4/SEF | 2 | [On] | [Activate] | [Activate] |
| | 4 | [Off] | [Activate] | [Deactivate] |
| B4 | 2 | [On] | [Activate] | [Activate] |
| | 4 | [On] | [Activate] | [Activate] |
| A3 | 2 | [On] | [Activate] | [Activate] |
| | 4 | [On] | [Activate] | [Activate] |
| SRA3 | 2 | [On] | [Activate] | [Activate] |
| | 4 | [On] | [Activate] | [Activate] |

**(Mainly North Europe)**

| Paper Size | Number of holes | 015: [Skew Detection] | 118: [Registration Adjustment: Across Feed] | 119: [Image Magnification Auto Adjustment] |
|---|---|---|---|---|
| A5/LEF | 2 | [On] | [Activate] | [Activate] |
| | 4 | [Off] | [Deactivate] | [Deactivate] |
| B5/LEF | 2 | [On] | [Activate] | [Activate] |
| | 4 | [On] | [Activate] | [Activate] |

| Paper Size | Number of holes | 015: [Skew Detection] | 118: [Registration Adjustment: Across Feed] | 119: [Image Magnification Auto Adjustment] |
|---|---|---|---|---|
| A5/SEF<br>A4/LEF | 2 | [On] | [Activate] | [Activate] |
| | 4 | [On] | [Activate] | [Activate] |
| B5/SEF | 2 | [On] | [Activate] | [Activate] |
| | 4 | [Off] | [Activate] | [Activate] |
| A4/SEF | 2 | [On] | [Activate] | [Activate] |
| | 4 | [On] | [Activate] | [Activate] |
| B4 | 2 | [On] | [Activate] | [Activate] |
| | 4 | [On] | [Activate] | [Activate] |
| A3 | 2 | [On] | [Activate] | [Activate] |
| | 4 | [Off] | [Activate] | [Activate] |
| SRA3 | 2 | [On] | [Activate] | [Activate] |
| | 4 | [Off] | [Activate] | [Activate] |

**Table 2: When the punching position is on the leading/trailing edge (For Position 3)**

**(Mainly North America)**

| Paper Size | Number of holes | 015: [Skew Detection] | 118: [Registration Adjustment: Across Feed] | 119: [Image Magnification Auto Adjustment] |
|---|---|---|---|---|
| HLT/SEF | 2 | [On] | [Activate] | [Activate] |
| HLT/LEF<br>LT/SEF<br>LG | 2 | [On] | [Activate] | [Activate] |

| Paper Size | Number of holes | 015: [Skew Detection] | 118: [Registration Adjustment: Across Feed] | 119: [Image Magnification Auto Adjustment] |
|---|---|---|---|---|
| DLT<br>LT/LEF | 2 | [On] | [Activate] | [Activate] |
| | 3 | [On] | [Activate] | [Activate] |
| | 7 | [On] | [Activate] | [Activate] |
| 12 × 18 | 2 | [On] | [Activate] | [Activate] |
| | 3 | [On] | [Activate] | [Activate] |
| | 7 | [On] | [Activate] | [Activate] |
| 13 × 19 | 2 | [On] | [Activate] | [Activate] |
| | 3 | [On] | [Activate] | [Activate] |
| | 7 | [On] | [Activate] | [Activate] |

**(Mainly Europe and Asia)**

| Paper Size | Number of holes | 015: [Skew Detection] | 118: [Registration Adjustment: Across Feed] | 119: [Image Magnification Auto Adjustment] |
|---|---|---|---|---|
| A5/SEF | 2 | [On] | [Activate] | [Activate] |
| B5/SEF | 2 | [On] | [Activate] | [Activate] |
| A5/LEF<br>A4/SEF | 2 | [On] | [Activate] | [Activate] |
| B5/LEF<br>B4 | 2 | [On] | [Activate] | [Activate] |
| | 4 | [Off] | [Deactivate] | [Deactivate] |
| A4/LEF<br>A3 | 2 | [On] | [Activate] | [Activate] |
| | 4 | [On] | [Activate] | [Activate] |
| SRA3 | 2 | [On] | [Activate] | [Activate] |
| | 4 | [On] | [Activate] | [Activate] |

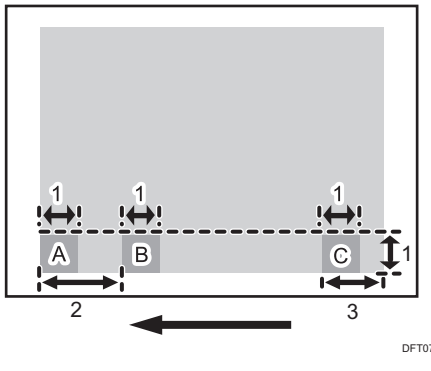
**(Mainly North Europe)**

| Paper Size | Number of holes | 015: [Skew Detection] | 118: [Registration Adjustment: Across Feed] | 119: [Image Magnification Auto Adjustment] |
|---|---|---|---|---|
| A5/SEF | 2 | [On] | [Activate] | [Activate] |
| | 4 | [Off] | [Deactivate] | [Deactivate] |
| B5/SEF | 2 | [On] | [Activate] | [Activate] |
| | 4 | [On] | [Activate] | [Activate] |
| A5/LEF<br>A4/SEF | 2 | [On] | [Activate] | [Activate] |
| | 4 | [On] | [Activate] | [Activate] |
| B5/LEF<br>B4 | 2 | [On] | [Activate] | [Activate] |
| | 4 | [On] | [Activate] | [Activate] |
| A4/LEF<br>A3 | 2 | [On] | [Activate] | [Activate] |
| | 4 | [On] | [Activate] | [Activate] |
| SRA3 | 2 | [On] | [Activate] | [Activate] |
| | 4 | [On] | [Activate] | [Activate] |

**Fig. 1**

When the punched holes are located at any of positions A to G in the following figure, depending on their locations, adjust the settings in [Advanced Settings] for the custom paper as follows;

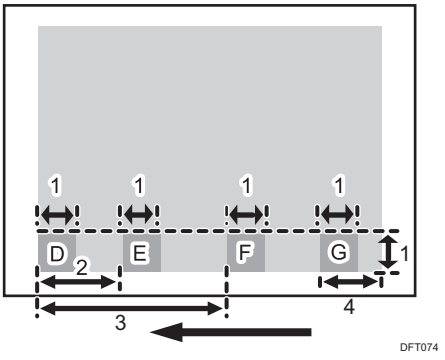
**When paper length between 269.9 mm to 297 mm (10.7 to 11.8 inches) is used.**




DFT073

1. **15 mm (0.6 inches)**
2. **70 mm (0.8 inches)**
3. **30 mm (1.2 inches)**

**When paper length longer than 297 mm (11.8 inches) is used.**




1. **15 mm (0.6 inches)**
2. **70 mm (0.8 inches)**
3. **270 mm (10.8 inches)**
4. **30 mm (1.2 inches)**

| Location of holes | Settings to adjust | What to do |
|---|---|---|
| A | 118: [Registration Adjustment: Across Feed] | Set to [Activate]. |
| | 119: [Image Magnification Auto Adjustment] | Set to [Deactivate]. |
| B | 015: [Skew Detection] | Set to [Off]. |
| C | 015: [Skew Detection] | Set to [Off]. |
| | 119: [Image Magnification Auto Adjustment] | Set to [Deactivate]. |
| D | 118: [Registration Adjustment: Across Feed] | Set to [Activate]. |
| | 119: [Image Magnification Auto Adjustment] | Set to [Deactivate]. |
| E | 015: [Skew Detection] | Set to [Off]. |
| F | 015: [Skew Detection] | Set to [Off]. |
| G | 119: [Image Magnification Auto Adjustment] | Set to [Deactivate]. |

# Preprinted Paper

When printing is performed on pre-printed paper, the machine may wrongly detect the pre-printed area as the edge of the paper and display the jam code J097 or J098.

Carry out the following settings;

**Procedure 1: Wrong masking**

**<If custom paper is used>**

To adjust the following settings, pre-register the type of paper in use as a custom paper. For details about registering custom papers, see "Registering a Custom Paper", Paper Settings.

1. **In [Advanced Settings] for the custom paper, set 015: [Skew Detection] to [Off].**
2. **Set 118: [Registration Adjustment: Across Feed] to [Activate].**

**<If custom paper is not used>**

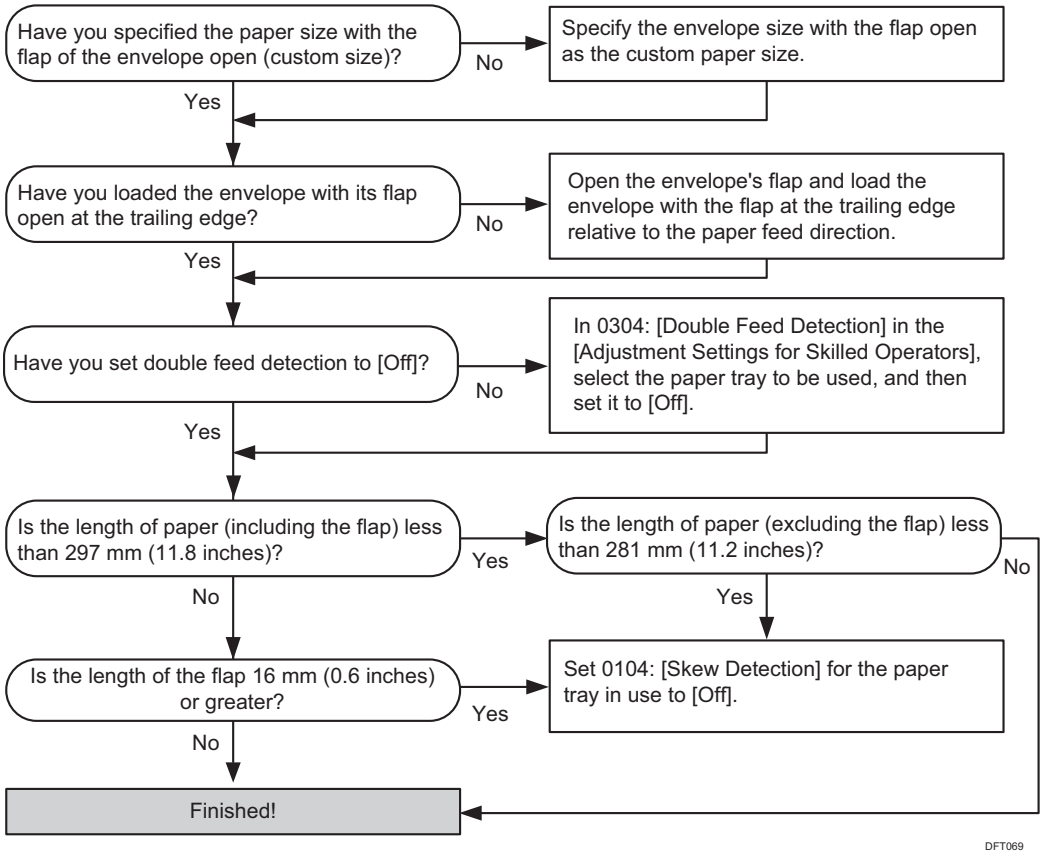
1. **In the 01: [Machine: Image Position] group on the [Adjustment Settings for Skilled Operators] menu, set 0104: [Skew Detection] to [Off].**
2. **Set 0103: [Registration Adjustment: Across Feed] to [On].**

**Procedure 2: Using pre-printed paper as color paper.**

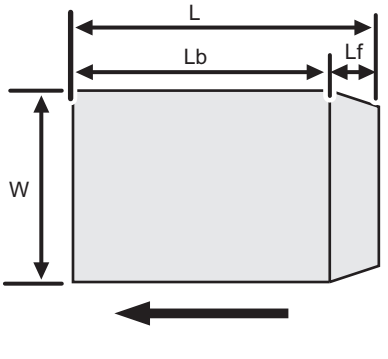
For details see, page 103 "If (J098) Appears".

# Envelopes

Before printing on envelops, carry out the following settings;




### Specifying the Paper Size and Orientation




W: Paper width

L: Paper length

Lf: Flap length

Lb: Length without the flap

# Adjust Paper Curl

This section explains how to use the decurling function of 0301: [Adjust Paper Curl] in the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu.

## Decurling Workflow

This shows how to select the type of decurling.

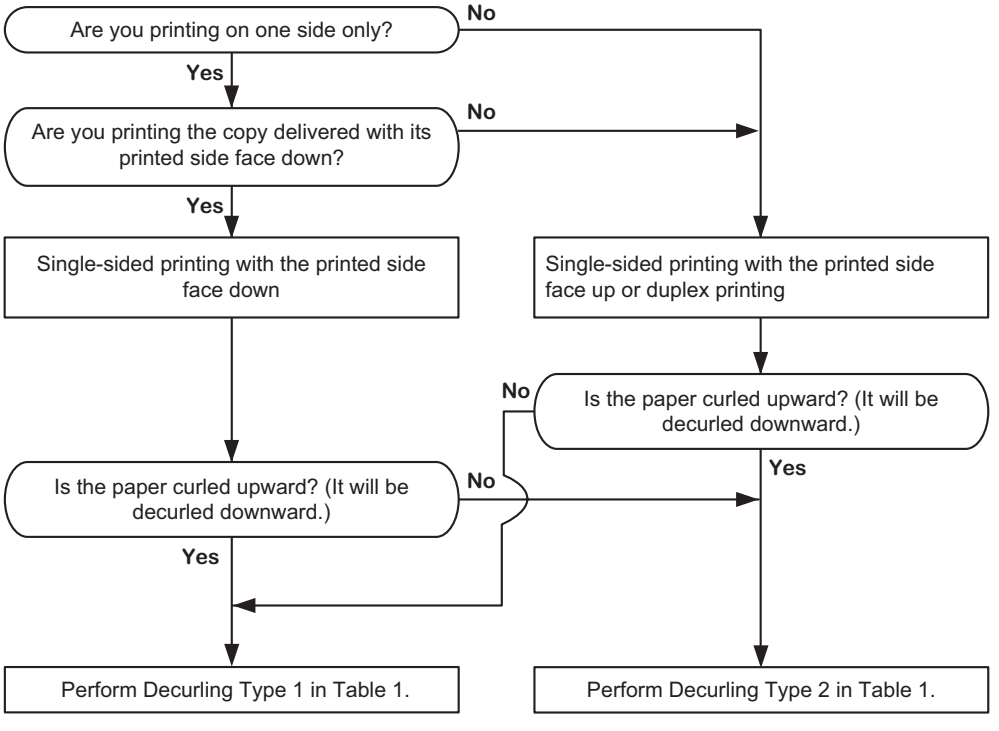
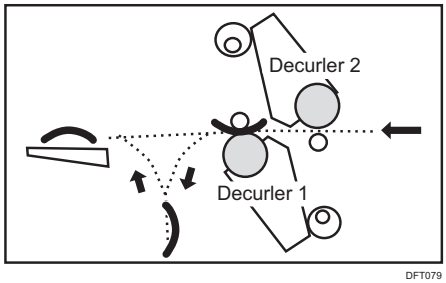
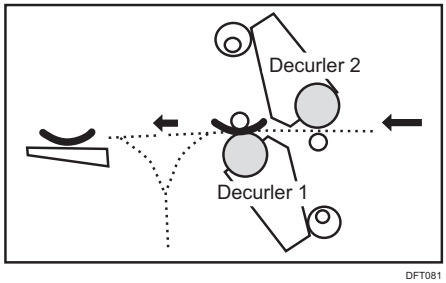
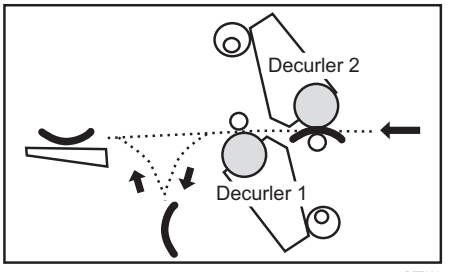
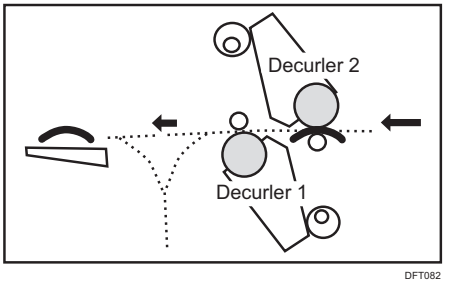


**Table 1**

| Type of decurling | Item to select in 0301: [Adjust Paper Curl] | Machine's operation |
|---|---|---|
| Decurling Type 1 | [Adjust ⌣ Curl: Weak]<br>[Adjust ⌣ Curl: Medium]<br>[Adjust ⌣ Curl: Strong] | **- Single-sided printing: printed side face down**<br>**- Duplex printing: printing on side 1**<br>The paper is decurled downward.<br>  <br>DFT079<br>**- Single-sided printing: printed side face up**<br>**- Duplex printing: printing on side 2**<br>The paper is decurled upward.<br>  <br>DFT081 |

| Type of decurling | Item to select in 0301: [Adjust Paper Curl] | Machine's operation |
|---|---|---|
| Decurling Type 2 | [Adjust ⌒ Curl: Weak]<br>[Adjust ⌒ Curl: Medium]<br>[Adjust ⌒ Curl: Strong] | **- Single-sided printing: printed side face down**<br>**- Duplex printing: printing on side 1**<br>The paper is decurled upward.<br>  <br><br>DFT080<br>**- Single-sided printing: printed side face up**<br>**- Duplex printing: printing on side 2**<br>The paper is decurled downward.<br>  <br><br>DFT082 |

**Selecting "1 Sided" or "2 Sided"**

For each paper tray on which to perform decurling, select "1 Sided" or "2 Sided".

- 1 Sided: Decurling is applied to side 1 for single-sided or duplex printing.
- 2 Sided: Decurling is applied to side 2 for duplex printing.

**Note**

- Decurling is applied to the printed side of the paper.
- If you select "1 Sided" for duplex printing, decurling is applied to side 1 after printing on side 1 and before printing on side 2.
- If you select "2 Sided", decurling is applied to side 2 after printing on both sides 1 and 2.

### Selecting the degree of decurling

Select the degree of decurling from "Weak", "Medium", and "Strong" according to the degree of curling. If you cannot assess the degree of curling, try decurling in the order of "Weak", "Medium", and "Strong".

Decurling more than necessary may cause a paper jam, scratches, or sheets being bent at corners.

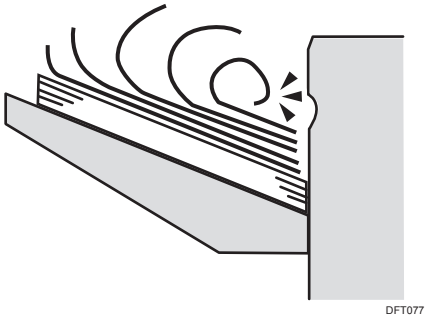
## Decurling Examples

### Example 1: The paper delivered to the output tray is curled and cannot be stacked. The machine detects that the maximum stackable limit has been reached after only a few sheets are delivered

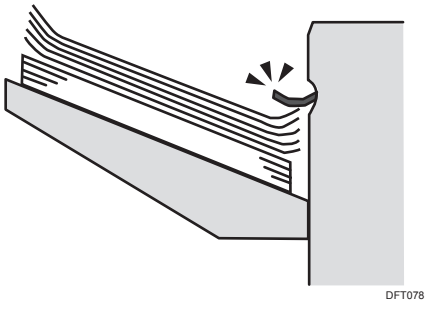
The jam code which appears when a problem occurs varies depending on the finisher being used.

Status of paper:

- The paper is curled at the finisher or stacker's output tray, allowing only a few sheets to be stacked.




- The curling at the trailing edge of the paper is severe, so that only a few sheets can be stacked.




### Decurling method

<When printing on one side and delivering the paper with its printed side face down>

Perform "Decurling Type 1" in Table 1 to decurl the paper downward when it is delivered to the output tray.

1. **In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, select 0301: [Adjust Paper Curl].**
2. **Select [The paper tray' name (1 Sided)].**

   For example, to decurl the paper fed from Tray 1, select [Tray 1 (1 Sided)].
3. **Select [Adjust ⌣ Curl: Weak], [Adjust ⌣ Curl: Medium], or [Adjust ⌣ Curl: Strong].** *1

<When printing on one side and delivering the paper with its printed side face down/ When duplex printing>

Perform "Decurling Type 2" in Table 1 to decurl the paper downward when it is delivered to the output tray.

1. **In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, select 0301: [Adjust Paper Curl].**
2. **Select [The paper tray' name (1 Sided)] for single-sided printing and [The paper tray' name (2 Sided)] for duplex printing.**

   For example, to decurl the paper fed from Tray 1, select [Tray 1 (1 Sided)] or [Tray 1 (2 Sided)].
3. **Select [Adjust ⌢ Curl: Weak], [Adjust ⌢ Curl: Medium], or [Adjust ⌢ Curl: Strong].** *1

*1 Select the degree of decurling from "Weak", "Medium", and "Strong" according to the degree of curling. If you cannot assess the degree of curling, try decurling in the order of "Weak", "Medium", and "Strong". Decurling more than necessary may cause a paper jam, scratches, or sheets being bent at corners.

## Example 2: Jam code J036 or J086 appears when duplex printing

When printing on side 2 for duplex printing, due to upward curling, paper may be caught at the upper part of the fusing unit, causing a paper jam.

Upward creases or other damage remains on the paper.



**Decurling method**

Because this problem occurs while printing is performed, paper needs to be decurled before printing on side 2.

Perform "Decurling Type 1" in Table 1 on side 1.

By decurling side 1 of the paper upward, you can print on side 2 with the paper decurled downward.

**Note**

- Decurling for jam codes J036 and J086 is effective for duplex printing only. This type of decurling is not effective for single-sided printing.

1. **In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, select 0301: [Adjust Paper Curl].**
2. **Select [The paper tray' name (1 Sided)].**

   For example, to decurl the paper fed from Tray 1, select [Tray 1 (1 Sided)].
3. **Select [Adjust ⌣ Curl: Weak], [Adjust ⌣ Curl: Medium], or [Adjust ⌣ Curl: Strong].**

   Select the degree of decurling from "Weak", "Medium", and "Strong" according to the degree of curling. If you cannot assess the degree of curling, try decurling in the order of "Weak", "Medium", and "Strong". Decurling more than necessary may cause a paper jam, scratches, or sheets being bent at corners.

## Example 3: Jam code J031 appears when duplex printing is performed (upward curling)

When printing on side 2 for duplex printing, due to upward curling, paper is caught at the intermediate transfer belt, causing a paper jam.

**Decurling method**

Because this problem occurs while printing, the paper needs to be decurled before printing on side 2.

Perform "Decurling Type 1" in Table 1 on side 1.

By decurling side 1 of the paper upward, you can print on side 2 with the paper decurled downward.

**Note**

- Decurling for jam code J031 is effective for duplex printing only. This type of decurling is not effective for single-sided printing.

1. **In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, select 0301: [Adjust Paper Curl].**
2. **Select [The paper tray' name (1 Sided)].**

   For example, to decurl the paper fed from Tray 1, select [Tray 1 (1 Sided)].
3. **Select [Adjust ⌣ Curl: Weak], [Adjust ⌣ Curl: Medium], or [Adjust ⌣ Curl: Strong].**

   Select the degree of decurling from "Weak", "Medium", and "Strong" according to the degree of curling. If you cannot assess the degree of curling, try decurling in the order of "Weak", "Medium", and "Strong". Decurling more than necessary may cause a paper jam, scratches, or sheets being bent at corners.

## Example 4: Jam code J031 appears when duplex printing is performed (downward curling)

When printing on side 2 for duplex printing, due to downward curling, paper is caught at the paper transfer belt, causing a paper jam.

**Decurling method**

Because this problem occurs while printing, the paper needs to be decurled before printing on side 2.

Perform "Decurling Type 1" in Table 1 on side 2.

By decurling side 1 of the paper downward, you can print on side 2 with the paper decurled upward.

**Note**

- Decurling for jam codes J031 is effective for duplex printing only. This type of decurling is not effective for single-sided printing.

1. **In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, select 0301: [Adjust Paper Curl].**
2. **Select [The paper tray' name (1 Sided)].**

   For example, to decurl the paper fed from Tray 1, select [Tray 1 (1 Sided)].
3. **Select [Adjust ⌒ Curl: Weak], [Adjust ⌒ Curl: Medium], or [Adjust ⌒ Curl: Strong].**

   Select the degree of decurling from "Weak", "Medium", and "Strong" according to the degree of curling. If you cannot assess the degree of curling, try decurling in the order of "Weak", "Medium", and "Strong". Decurling more than necessary may cause a paper jam, scratches, or sheets being bent at corners.

## Example 5: Jam code J040, J042, or J089 appears (downward curling)

Paper jam occurs at the separation claw due to paper curling, bending paper corners. This problem occurs when thin paper of 52.3-80 g/m$^2$ is used. Paper bent at corners will be delivered.

**Decurling method**

Perform "Decurling Type 1" in Table 1 to decurl the paper upward when it enters the separation claw.

1. **In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, select 0301: [Adjust Paper Curl].**
2. **If the problem occurs on side 1 for single-sided or duplex printing, select [The paper tray' name (1 Sided)]. If the problem occurs on side 2 for duplex printing, select [The paper tray' name (2 Sided)].**

   For example, to decurl the paper fed from Tray 1, select [Tray 1 (1 Sided)] or [Tray 1 (2 Sided)].

3. **Select [Adjust ⌣ Curl: Weak], [Adjust ⌣ Curl: Medium], or [Adjust ⌣ Curl: Strong].**

   Select the degree of decurling from "Weak", "Medium", and "Strong" according to the degree of curling. If you cannot assess the degree of curling, try decurling in the order of "Weak", "Medium", and "Strong". Decurling more than necessary may cause a paper jam, scratches, or sheets being bent at corners.

## Example 6: Jam code J040, J042, or J089 appears (upward curling)

Paper jam occurs at the separation claw due to paper curling, bending paper corners. This problem occurs when thin paper of 52.3-80 g/m$^2$ is used. Paper bent at corners will be delivered.

**Decurling method**

Perform "Decurling Type 2" in Table 1 to decurl the paper downward when it enters the separation claw.

1. **In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, select 0301: [Adjust Paper Curl].**
2. **If the problem occurs on side 1 for single-sided or duplex printing, select [The paper tray' name (1 Sided)]. If the problem occurs on side 2 for duplex printing, select [The paper tray' name (2 Sided)].**

   For example, to decurl the paper fed from Tray 1, select [Tray 1 (1 Sided)] or [Tray 1 (2 Sided)].
3. **Select [Adjust ⌢ Curl: Weak], [Adjust ⌢ Curl: Medium], or [Adjust ⌢ Curl: Strong].**

   Select the degree of decurling from "Weak", "Medium", and "Strong" according to the degree of curling. If you cannot assess the degree of curling, try decurling in the order of "Weak", "Medium", and "Strong". Decurling more than necessary may cause a paper jam, scratches, or sheets being bent at corners.

## Example 7: Jam code J042 or J090 appears when printing is performed on one side to deliver the paper with its printed side face down

When printing is performed on one side to deliver the paper with its printed side face down, the paper is bent at corners when it is turned over. This problem occurs when thin paper of 52.3-80 g/m$^2$ is used. Paper bent at corners will be delivered.

**Decurling method**

Perform "Decurling Type 1" in Table 1 to deliver the paper along the switch back guide plate.

1. **In the 03: [Machine: Paper Feed/ Output] group on the [Adjustment Settings for Skilled Operators] menu, select 0301: [Adjust Paper Curl].**
2. **Select [The paper tray' name (1 Sided)].**

   For example, to decurl the paper fed from Tray 1, select [Tray 1 (1 Sided)].

3. **Select [Adjust ⌣ Curl: Weak], [Adjust ⌣ Curl: Medium], or [Adjust ⌣ Curl: Strong].**

   Select the degree of decurling from "Weak", "Medium", and "Strong" according to the degree of curling. If you cannot assess the degree of curling, try decurling in the order of "Weak", "Medium", and "Strong". Decurling more than necessary may cause a paper jam, scratches, or sheets being bent at corners.

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