Model BR-C1/P1
Machine Code:
D179/D180/D181
M263/M264

Troubleshooting

May 2015

TABLE OF CONTENTS

1. Troubleshooting

1. Troubleshooting

Servicing

Customer Engineers

Maintenance shall be done only by trained customer engineers who have completed service training for the machine and all optional devices designed for use with the machine.

Reference Material for Maintenance

- Maintenance shall be done using the special tools and procedures prescribed for maintenance of the machine described in the reference materials (service manuals, technical bulletins, operating instructions, and safety guidelines for customer engineers).
- In regard to other safety issues not described in this document, all customer engineers shall strictly obey procedures and recommendations described the "CE Safety Guide".
- Use only consumable supplies and replacement parts designed for use with the machine.

Warnings, Cautions, Notes

In this manual, the following important symbols and notations are used.

⚠WARNING

- A Warning indicates a potentially hazardous situation. Failure to obey a Warning could result in death or serious injury.

⚠CAUTION

- A Caution indicates a potentially hazardous situation. Failure to obey a Caution could result in minor or moderate injury or damage to the machine or other property.

Important

- **Obey these guidelines to avoid problems such as misfeeds, damage to originals, loss of valuable data and to prevent damage to the machine.**

Note

- This information provides tips and advice about how to best service the machine.

Before You Begin

Safety

⚠WARNING

- To prevent fire hazard, never use flammable aerosol sprays around the machine.
- Before you replace any unit, to prevent electrical shock, turn off the machine with the operation power switch at the left, front corner of the machine. Wait for the machine to shut down, and then disconnect the machine from the power supply.
- Allow the machine to cool for at least 30 minutes before replacing a part.

⚠CAUTION

- Do not remove any covers or screws other than those explicitly mentioned in a procedure. Inside this machine are high voltage components that are an electric shock hazard and laser components that could cause blindness.

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, or if the options have been installed.

- Any modification to the option settings does not take effect unless the applicable options are installed on this machine.
- Settings can be adjusted with the "Advanced Settings for Skilled Operators" (key operators who have received TCRU training), or with SP codes settings by the CE.
- In this guide, the skilled operator adjustment is given first, followed by the corresponding SP code setting which can be done by the CE only.

Important

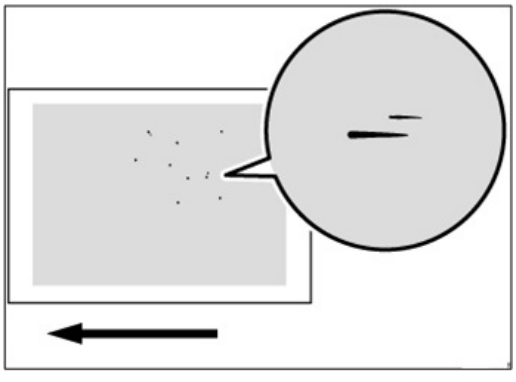
- **Always note the current setting before you make any change.**
- **If a problem persists despite the setting being changed, restore the value you made a note of.**
- **Operating the machine with the changed setting may cause problems such as reduced print quality.**
- **If the problem persists even 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.**

Image Quality Problems

Toner Spotting/Staining

Paper Is Spotted with Toner

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



d1798002

Cause:

Toner fragments have slipped through the cleaning web, which cleans the pressure roller, and re-adhered to paper.

This may occur if:

- Printing on both sides of paper
- Printing on uncoated (especially rough-textured) paper
- Printing a single-dot halftone image

Note

- To adjust the following settings, pre-register the type of paper in use as a custom paper.

Solution:

Increasing the temperature when using thin paper with a thickness equivalent to Paper Weight 0 or 1 may cause paper curling, resulting in paper jams at the fusing unit.

1. Increase the temperature by 5 °C in Fusing Heat Roller Temperature Adj in Advanced Settings for the custom paper in use. (SP1-984-001 to 100: Htg Roller Temp Setting Custom Paper 001 to 100)
2. Print the image. Is the problem resolved?

Yes	Finished!

No	Go to the next step.

3. Increase the temperature an additional 5 °C in Fusing Heat Roller Temperature Adj.
4. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

5. Have changes to the settings resulted in glossy lines or paper misfeed?

Yes	Decrease the temperature by 10 °C, and then go to the next step.
No	Go to the next step.

6. Set Adjust Cleaning Web Motor Interval to 0.01 in Advanced Settings for the custom paper in use. (SP1-992-001 to 100: Web Feed Interval Custom Paper 001 to 100)
7. Print the image. Is the problem resolved?

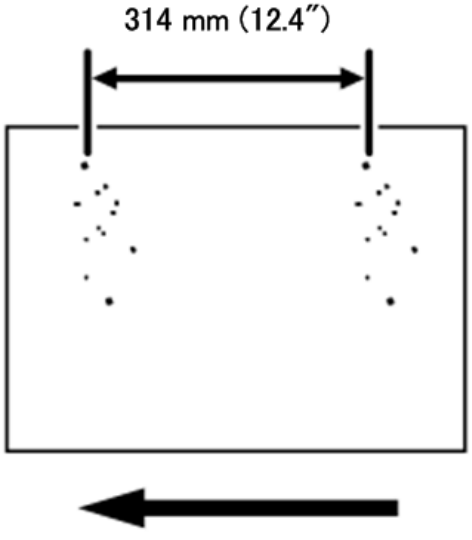
Yes	Finished!
No	Consult key operators.

Note

- Decreasing the value in Adjust Cleaning Web Motor Interval will shorten the replacement cycle of the cleaning web.

Black Spots

Black spots appear at 314 mm (12.4 inches) intervals.



d1798003

Cause:

The drum is scratched or stained.

Solution:

1. Remove the photoconductor unit and check the drum surface. Is the surface dirty?

Yes	Clean the drum surface.
No	Go to Step 3.

2. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

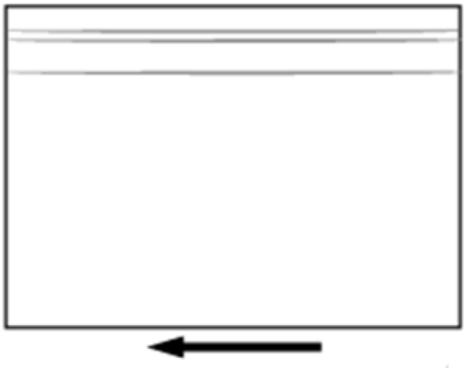
3. Is the surface of the drum scratched?

Yes	Replace the drum.
No	Consult key operators.

4. If the problem cannot be resolved, consult key operators.

Streaks (1)

Streaks parallel to the paper feed direction appear.



d1798004

Cause:

- The charger is dirty.
- The cleaning unit for PCU has worn out.
- The drum surface is scratched.

Solution:

1. Remove the charge unit and check its surface. Is the surface dirty?

Yes	Clean the charge unit.
No	Go to Step 3.

2. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

3. Replace the charge wire and cleaning pads.
4. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

5. Remove the photoconductor unit and check the drum surface. Is the surface dirty or scratched?

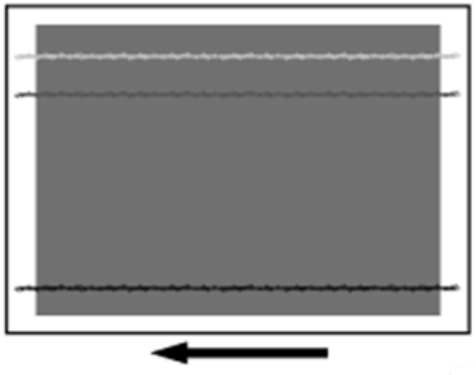
Dirty:	Replace the cleaning unit for PCDU.

Scratched:	Replace the drum.
Neither:	Consult key operators.

6. If the problem persists even after you have replaced the cleaning unit for PCU or drum, consult key operators..

Streaks (2)

Extended, blurred streaks parallel to the paper feed direction appear. The streaks also appear randomly in the margins.



d1798005

Cause:

If the temperature or humidity is low, remaining toner might be missed by the cleaning blade of the cleaning unit for intermediate transfer belt or transfer unit, causing streaks to appear sporadically.

Solution:

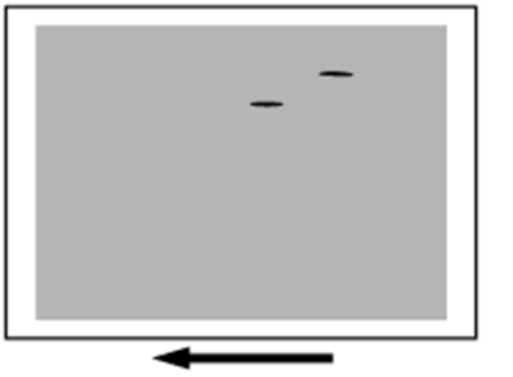
1. Is the printed side affected by the problem?

Yes	Go to the next step.
No	Consult key operators.

2. Replace the cleaning unit for intermediate transfer belt.
3. If the problem persists after you have replaced the cleaning unit for intermediate transfer belt, consult key operators.

Streaks (3)

Streaks appear in solid-filled areas.



d1798006

Cause:

If the toner contains small clumps, they disintegrate in the development unit, producing streaks.

This problem may occur if the machine is left unattended for a long period or the toner bottle is kept out of its moisture-proof bag for a long period.

Solution:

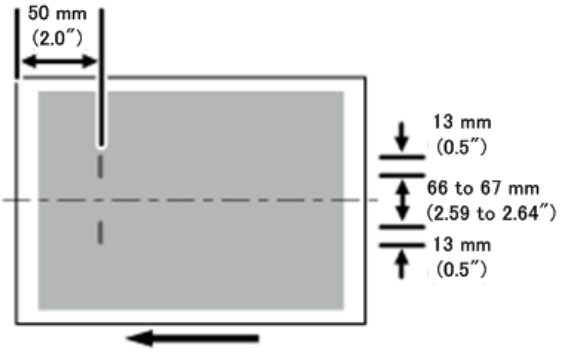
1. Print 350 full-page, solid-fill A3 or DLT sheets.
2. Print the image. Is the problem resolved?

Yes	Finished!
No	Replace the toner bottle.

3. Print 350 full-page, solid-fill A3 or DLT sheets.
4. If the problem persists, consult key operators.

Two 13-mm Long Vertical Streaks

Two 13-mm long vertical streaks appear within 50 mm (2.0 inches) from the leading edge.



d1798007

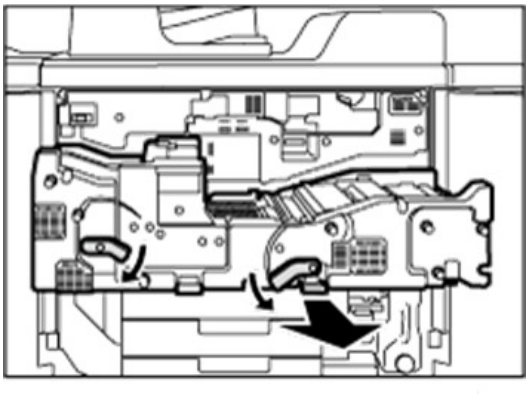
Cause:

The invert exit drive rollers or invert exit idle rollers in the drawer are soiled. This may occur if sheets are delivered face down after one-sided printing.

Solution:

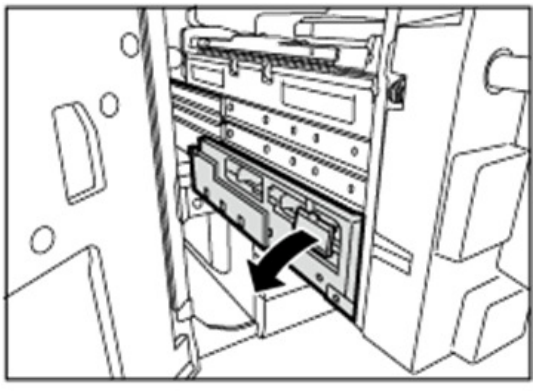
Clean the rollers, sensors, and guide boards in the drawer.

1. Make sure that the system is turned off and the machine power cord is disconnected from the power source.
2. Open the front covers.
3. Lower the levers **C1** and **C2**, and then pull the drawer out completely until it stops.



d1798008

4. Pull down and open the cover **D4**.



d1798009

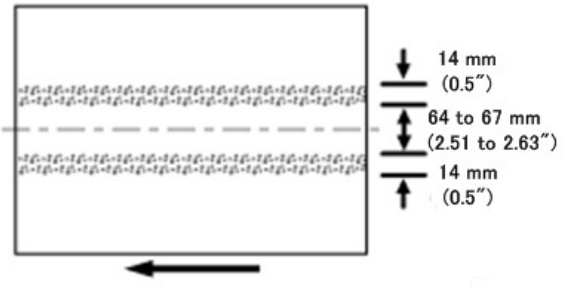
5. Clean the rollers, sensors, and guide boards. For details about cleaning the parts, see page 128.

d1798010

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

Two 14-mm Wide Streaks

Two 14-mm wide streaks parallel to the paper feed direction appear.



d1798011

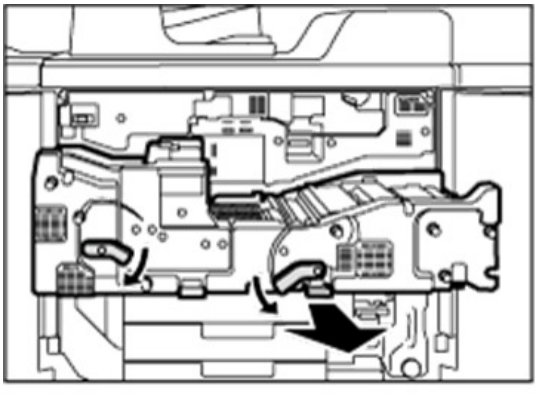
Cause:

The exit drive rollers, exit idle rollers, exit relay drive rollers, or exit relay idle rollers in the drawer are soiled.

Solution:

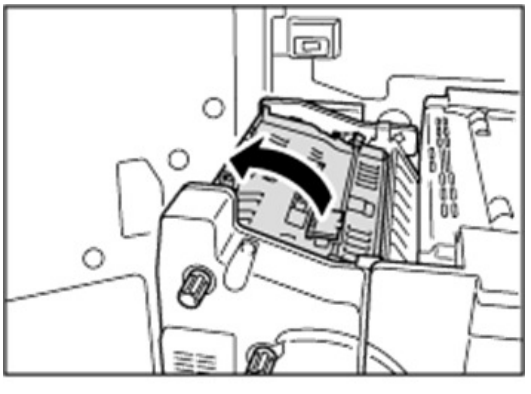
Clean the rollers, sensors, and guide boards in the drawer.

1. Make sure that the system is turned off and the machine power cord is disconnected from the power source.
2. Open the front covers.
3. Lower the levers **C1** and **C2**, and then pull the drawer out completely until it stops.



d1798012

4. Pull up and open the cover **D3**.



d1798013

5. Clean the rollers while turning the knob **D1**. Clean the sensors and guide boards. (page 128)

d1798014

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

Stained Paper Edges

Solution:

1. If the paper edges are stained, check for insufficient toner fusing. (page 73)

Stained Background

Random "powdered" dots appear, creating a dirty background. The background may be partially or completely stained.

Completely stained background

d1798015

Partially stained background

d1798016

Cause:

This may occur because of wearing of the developer, drum unit, or drum charge unit.

Solution:

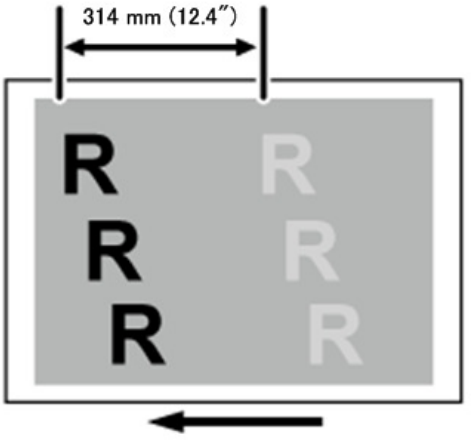
1. If a message prompting replacement of a unit has appeared, replace the unit.
2. In the Machine: Image Quality group on the Adjustment Settings for Skilled Operators menu, select Adjust Image Density and execute Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment)
3. Print the image. Is the problem resolved?

Yes	Finished!
No	On the machine operation panel: Maintenance > Adjustment Settings for Skilled Operators > Execute Process Initial Setting. (SP3-020-001: Process Setup :Ex Execute: ALL)

4. If the problem persists, consult key operators.

Ghosting

A ghost image of an image to be printed appears at a distance of 314 mm (12.4 in.) to the side of the intended image.



d1798017

Cause:

The image transfer current is transmitted to the drum, where a potential difference occurs between a developed area and non-developed area and causes the intended image to be reproduced.

This may occur if:

- Solid filled images or bold characters are printed in black on a halftone background
- Printing is done at low temperature or humidity
- Many screening lines are used

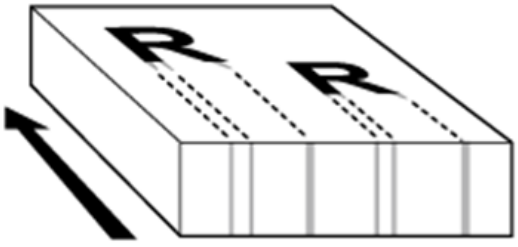
Solution:

1. On the machine operation panel: Adjustment Settings for Skilled Operators >Image Quality > Adjust Image Density > Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment)
2. Print the image. Is the problem resolved?

Yes	Finished!
No	Consult key operators.

Scratched Images and Stained Paper Edges

Scratched images or soiled paper edges appear.



d1798018

Cause:

When a relatively stiff, thick paper is delivered, the entrance guide board for the transfer unit is warped toward the intermediate transfer belt due to the stiffness of the paper. The edge of the entrance guide board comes into contact with the toner on the belt to cause images to be scratched and paper edges to be soiled.

This may occur if:

- Paper with a thickness equivalent to Paper Weight 7 is used
- Paper with its grain parallel to the paper feed direction is used. For example, A3/DLT long grain paper is delivered, A4/LT short grain paper is delivered from its long edge, or A4/LT long grain paper is delivered from its short edge.
- Paper is stored at low temperature or humidity

Solution:

Change the direction of paper grain for paper delivery.

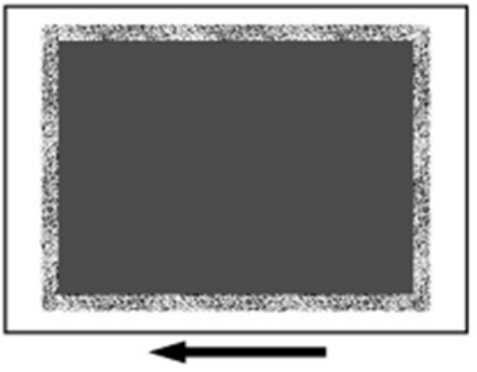
Note

- When storing paper at low humidity, wrap the paper in coated paper or a plastic sheet.

Toner Scatter

Toner Scatter (1)

Toner is scattered around a solid-fill print.



d1798019

Cause:

This may occur if printed at low temperature or humidity.

Note

- To adjust the following settings, pre-register the type of paper in use as a custom paper.

Solution:

Check both sides of the printed sheet to see which side is affected.

- If only Side 1 (front side) is affected, do Procedure (a).
- If only Side 2 (back side) is affected, do Procedure (b).
- If both sides are affected, do Procedure (a), and then do Procedure (b).

(a) Toner scatter on Side 1 only

1. In Advanced Settings for the custom paper in use, increase the absolute value of the negative current by 5% in Paper Transfer Current Setting: Side 1. (SP2-811-001 to 100: PTR Current:Side1 Custom Paper 001 to 100)

   Example: If the present current is −40 uA, change it to −42 uA.

2. Print the image. Is the problem resolved?

Yes	Finished! (Do Procedure (b) if the back side is also affected.)
No	Increase the setting another 5%.

3. If repeating Step 2 does not solve the problem, consult key operators.

(b) Toner scatter on Side 2 (or both sides)

1. In Advanced Settings for the custom paper in use, increase the absolute value of the negative current by 5% in Paper Transfer Current Setting: Side 2. (SP2-812-001 to 100: PTR Current:Side2 Custom Paper 001 to 100)

   Example: If the present current is −40 uA, change it to −42 uA.

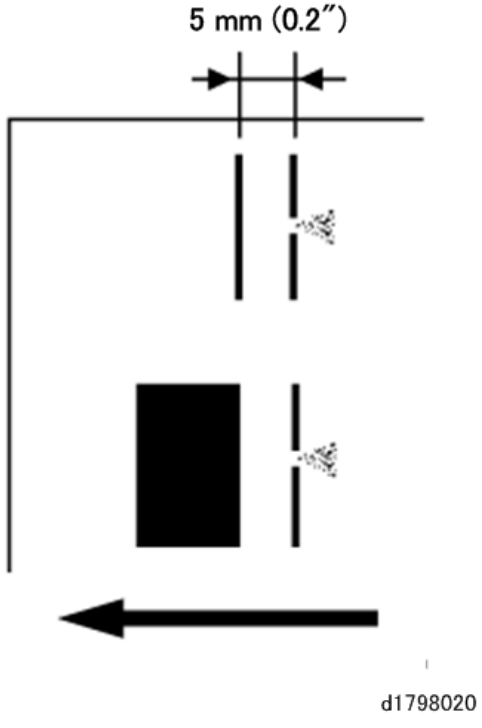
2. Print the image. Is the problem resolved?

Yes	Finished!
No	Increase the setting another 5%.

3. If repeating Step 2 does not solve the problem, consult key operators.

Toner Scatter (2) Trailing Scatter

Parts of a line that is 5 mm (0.2 inches) or less from an image exhibit splatter.



Cause:

Air contained between images is compressed and blows off parts of a line. This may occur if:

- Printing is done at high temperature or humidity
- Using coated or other slippery paper
- Printing line images at less than 5 mm (0.2 inches) intervals

Note

- To adjust the following settings, pre-register the type of paper in use as a custom paper.

Solution:

The solution depends on the area in which the line splatter occurs. If the splatter occurs 15 mm (0.6 inches) or less from the leading edge, follow Procedure (a) or follow Procedure (b).

1. **Toner scatter appears within 15 mm (0.6 inches) of the leading edge**

1. Ask the client if the image start position can be shifted more that 15 mm away from the leading edge.

Yes	Go to the next step.
No	Use different paper..

2. Adjusting the image position. In Advanced Settings for the custom paper in use:
   - Specify Adj Image Position of Side1 With Feed for the side 1 of the paper. Adjust in the "**+**" direction. (SP1-950-001 to 100: Image Pos:Sub:Side1 Custom Paper 001 to 100)
   - Adj Image Position of Side2 With Feed for the side 2. Adjust in the "**–**" direction. (SP1-951-001 to 100: Image Pos:Sub:Side2 Custom Paper 001 to 100)
3. Adjusting the mask width at the leading edge. In Advanced Settings for the custom paper in use, specify Adjust Erase Margin of Leading Edge. (SP2-122-001 to 100: Erase Margin Adj Leading Edge Custom Paper 001 to 100).
4. Adjusting the file's leading edge margin.
   - Shift the image more than 15 mm (0.6 inches) away from the trailing edge.
   - For details about adjusting the shift image and adjusting the mask width at the leading edge, see the TCRU manual "Adjustment Item Menu Guide".
   - If you cannot increase the leading edge margin to more than 15 mm (0.6 inches), Consult key operators.

b) Line splatter appears 16 mm (0.6 inches) (or more) from the leading edge

1. In Advanced Settings for the custom paper in use, select Image Transfer Current Setting. (SP2-817-001 to 100: ITB Voltage Custom Paper 001 to 100)
2. Check the present value. Is it the upper limit?

Yes	Go to Step 5.
No	Go to the next step.

3. Increase the absolute value of the current by 5 uA in Image Transfer Current Setting.
4. Print the image. Is the problem resolved?

Yes	Finished!
No	Increase the value by 5 uA. If the problem persists even though you have increased the value to the upper limit (150 uA), go to the next step.

5. Does the client mind if image density is lower?

Yes	Go to the next step.
No	Use different paper..

6. In Advanced Settings for the custom paper in use, select Adjust Toner Adhesion. (SP3-921-001 to 100: Procon Target M/A Custom Paper 1 to 100)
7. Check the present value. Is it the lower limit?

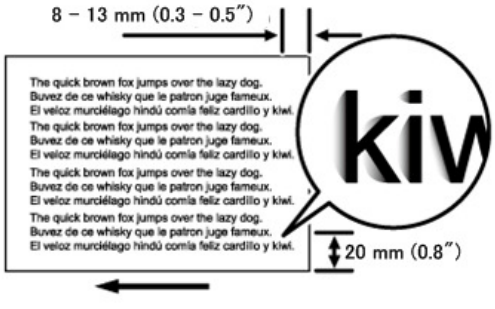
Yes	Consult key operators.
No	Decrease the value by 1 in Adjust Toner Adhesion.

8. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat Steps 5 to 7. If the problem persists even though you have decreased the value to the lower limit, consult key operators..

Toner Scatter (3)

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.



d1798021

Cause:

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 see "3. Custom Paper Settings for Administrator" in the TCRU "Adjustment Item Menu Guide".

- Changing the transfer current may produce either or both of the following side effects: 1) Reduction in toner yields, 2) Occurrence of banding (streaks)

Solution:

1. In Advanced Settings for the custom paper in use, select Image Transfer Current Setting. (SP2-817-001 to 100: ITB Voltage Custom Paper 001 to 100)
2. Check the present value. Is it lower than 100 uA?

Yes	Carry out all of the following: (1) Increase the value by 5 uA in Image Transfer Current Setting. (2) Set Paper Transfer Current; Trail Edge to "200%". (SP2-815-001 to 100: Trail Edge Corr Coef:2nd Custom Paper 001 to 100) (3) Set Paper Transfer Current; Trail Edge Dist to "30 mm". (SP2-816-001: Trail Edge Corr Switch:2nd Custom Paper 001)
No	Consult key operators.

3. Print the image. Is the problem resolved?

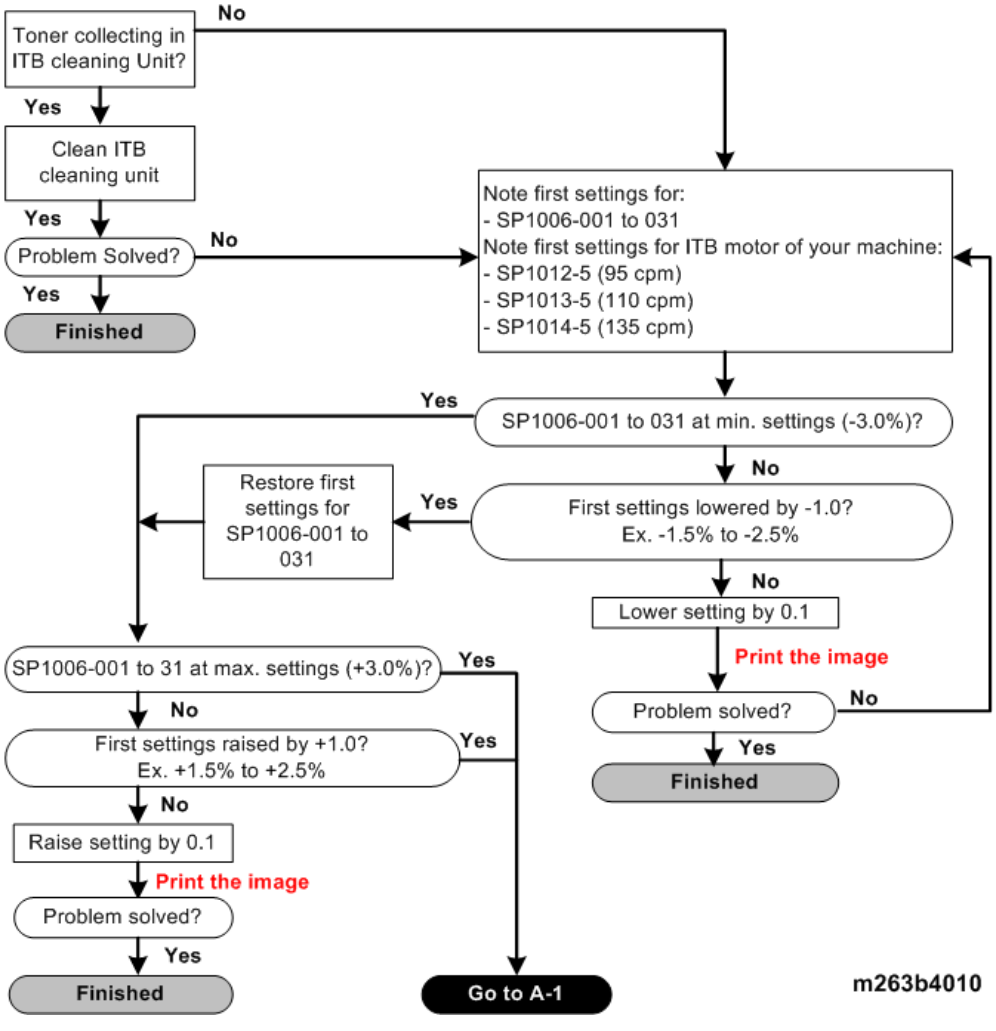
Yes	Finished!
No	Repeat Steps 1 to 3. If the problem persists even though you have increased the value to 100 uA, consult key operators.

Toner Scatter 4

Cause:

The belt cleaning unit entrance seal in contact with the ITB prevents toner scatter, but toner can still accumulate on the surface of the belt. Also, toner scatter occurs more easily as the adhesion of toner to the belt weakens when the belt nears the end of its service life. When printing under these conditions, the vibration from operation of the drive system can cause more toner scatter when using some types of paper.

Solution:


Toner collecting in ITB cleaning Unit?
No
Yes
Clean ITB cleaning unit
Yes
Problem Solved?
No
Yes
Finished
Note first settings for:
- SP1006-001 to 031
Note first settings for ITB motor of your machine:
- SP1012-5 (95 cpm)
- SP1013-5 (110 cpm)
- SP1014-5 (135 cpm)
Yes
SP1006-001 to 031 at min. settings (-3.0%)?
No
Restore first settings for SP1006-001 to 031
Yes
First settings lowered by -1.0?
Ex. -1.5% to -2.5%
No
Lower setting by 0.1
Print the image
Problem solved?
No
Yes
Finished
SP1006-001 to 31 at max. settings (+3.0%)?
Yes
No
First settings raised by +1.0?
Ex. +1.5% to +2.5%
Yes
No
Raise setting by 0.1
Print the image
Problem solved?
Yes
Finished
Go to A-1
m263b4010

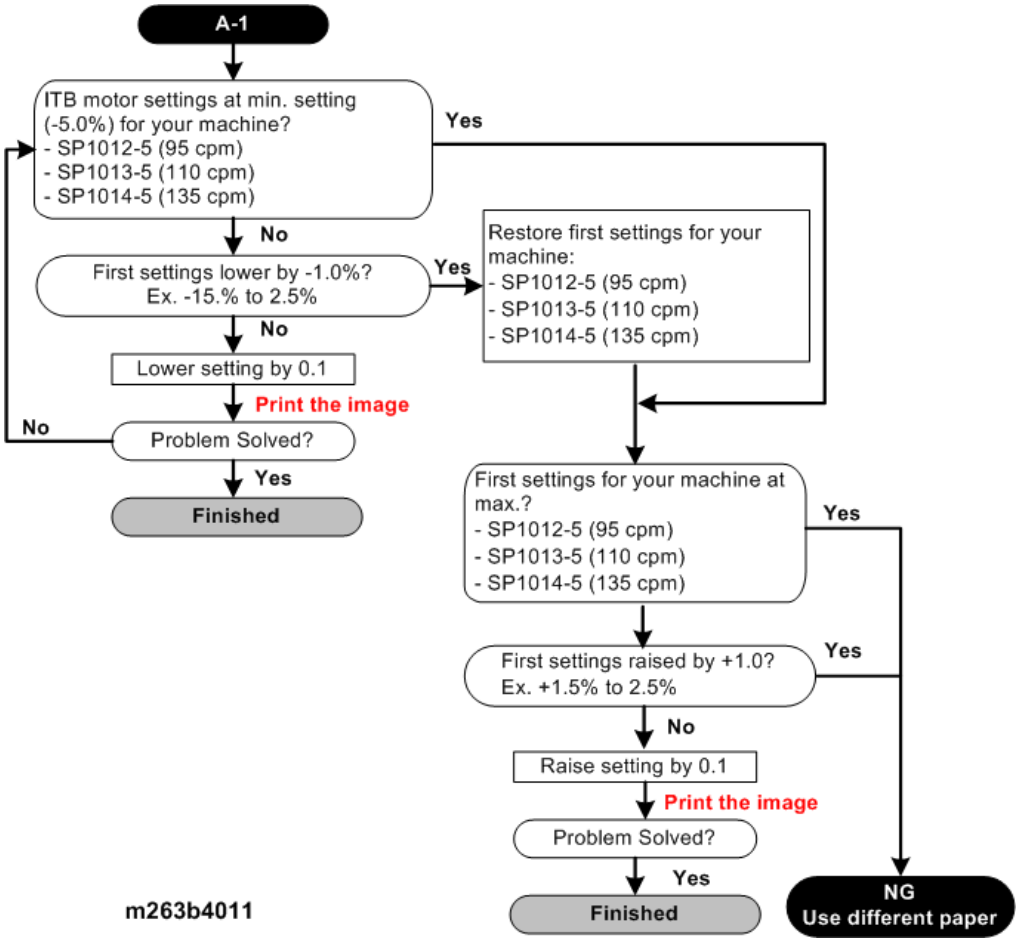
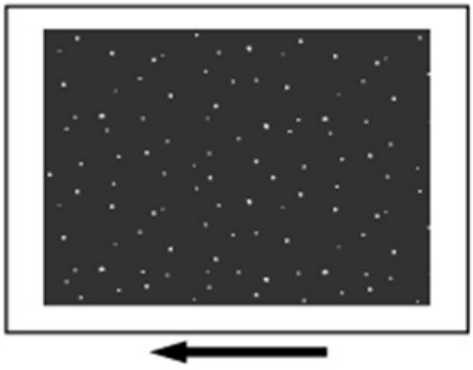


Image Loss

White Spots 1

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



d1798022

Cause:

This may occur if printed 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 see "3. Custom Paper Settings for Administrator" in the TCRU "Adjustment Item Menu Guide".
- If you reduce the paper transfer current to eliminate white spots, copies may become too faint.

Solution:

Check both sides of the paper for the problem.

- If the problem appears only Side 1 do Procedure (a).
- If the problem appears on Side 2, do Procedure (b).
- If the problem appears on both sides of the paper, do Procedure (a), and then do Procedure (b).

Procedure (a) White Spots on Side 1

1. Adjust the setting for the side 1 of the paper. In Advanced Settings for the custom paper in use, decrease the absolute value of the negative current by 5% in Paper Transfer Current Setting: Side 1. (SP2-811-001 to 100: PTR Current:Side1 Custom Paper 001 to 100)

   Example: If the present current is −40 uA, change it to −38 uA.

2. Print the image. Is the problem resolved?

Yes	Finished! If Side 2 was also affected do Procedure (b).
No	Lower the setting by 5%..

3. Repeat Step 2. If this does not solve the problem, consult key operators.

Procedure (b) White Spots on Side 2

1. Adjust the setting for the side 2 of the paper. In Advanced Settings for the custom paper in use, decrease the absolute value of the negative current by 5% in Paper Transfer Current Setting: Side 2. (SP2-812-001 to 100: PTR Current:Side2 Custom Paper 001 to 100

Example: If the present current is −40 uA, change it to −38 uA.

2. Print the image. Is the problem resolved?

Yes	Finished!
No	Lower the setting another 5%.

3. If repeating Step 2 does not solve the problem, consult key operators.

White Spots 2

Random white specks appear in shaded areas.

d1808008

Cause:

The charge on the image transfer roller is high, and the problem is caused at the pre-nip and nip area of the roller. This can occur if the machine is in an area where ambient temperature and humidity are very low.

Solution:

Check the voltage levels of the image transfer roller and paper transfer roller, and then apply "R+3" to the displayed settings.

Procedure (a) Problem at Image Transfer Roller

1. Check the resistance level of the image transfer roller with SP2-312-001: Current Resist Level Disp ITB.
2. If the value is "R+3", connect the ITB unit heater and allow the machine to remain idle for one hour.
3. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

4. Replace the image transfer roller.
5. Print the image. Is the problem resolved?

Yes	Finished!
No	Check with other units. Consult key operators.

Procedure (b) Problem at Paper Transfer Roller

1. Check the resistance level of the paper transfer roller with SP2-322-001: Current Resist Level Disp PTR.
2. If the value is "R+3", replace the PTR unit.
3. Print the image. Is the problem resolved?

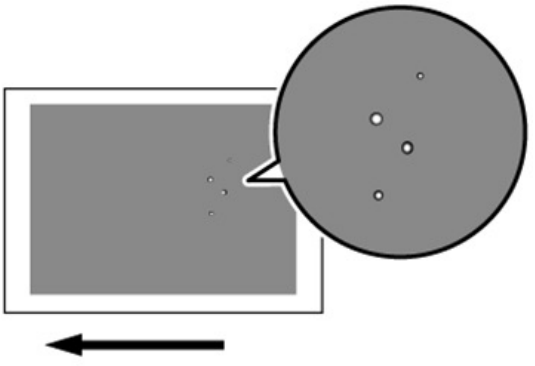
Yes	Finished!
No	Go to the next step.

4. Replace the paper transfer roller.
5. Print the image. Is the problem resolved?

Yes	Finished!
No	Check with units. Consult key operators.

White Spot Blisters

White spots 0.3–0.5 mm (0.01–0.02 inches) in diameter surrounded by denser spots (blister-like white spots) appear.



d1798023

Cause:

This may occur if a solid image is printed on coated paper, if a solid image is printed during duplex printing, or if printing is done at low temperature.

Solution:

If these white spots appear, check for insufficient toner fusing. (page 73)

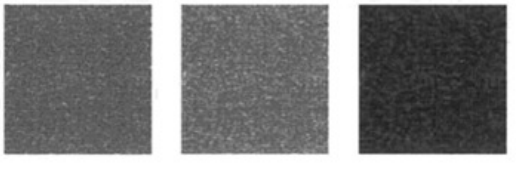
Mottling

Mottling occurs in solid-filled areas.

Normal

d1798024

Mottled



d1798025

Cause:

The transfer electric field on the concave portion of paper is weak, causing a decrease in image transfer. This may occur when:

- Using paper with a rough surface

- Continuously printing an image that consumes little toner
- Printing at high temperature or humidity

Solution:

Before you perform the solution procedure, make sure that the periodic replacement parts have not reached their expiration period. If the replacement parts have reached the end of their service life, replace them.

1. Check to see if any replacement parts have exceeded the expiration date.

Yes	Replace parts that have exceeded service life.
No	Go to the next step.

2. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

3. In the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Image Density > Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment)
4. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

5. Print 100 full-page, solid-fill A4 or LT sheets. Is the problem resolved?

Yes	Finished!
No	Reload with paper that is dry.

6. Print the image. Is the problem resolved?

Yes	Finished!
No	Replace the paper with smoother paper.

7. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

8. Is the paper smaller than A4 SEF (210 mm)?

Yes	Go to the next step.
No	Go to Step 10.

1

9. Use wider paper. Is the problem resolved?

Yes	Do the procedure in the next section: "Rough Images with Paper Smaller Than A4 SEF (210 mm)"
No	Go to the next step.

10. In Advanced Settings for the custom paper in use, select Adjust Toner Adhesion and check the setting. (SP3-921-001 to 100: Procon Target M/A Custom Paper 1 to 100)
11. Is the setting for coverage (M/A) at the upper limit?

Yes	Use different paper..
No	Raise the setting one point.

12. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat Steps 11, 12. If this does not solve the problem, do the next step.

13. Open the SC log. Is there a logged SC code?

Yes	If either of the following SC codes were logged, do the procedure to solve the problem: • SC443-00: Image Transfer Roller Error • SC453-00: Paper Transfer Roller Error
No	Go to Step 15

14. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

15. Is it possible to raise the toner density setting?

Yes	In Advanced Settings for the paper in use, select Adjust Toner Adhesion, and raise the setting (+). (SP3-921-001 to 100: Procon Target M/A Custom Paper 1 to 100
No	Consult key operators.

16. Print the image. Is the problem resolved?

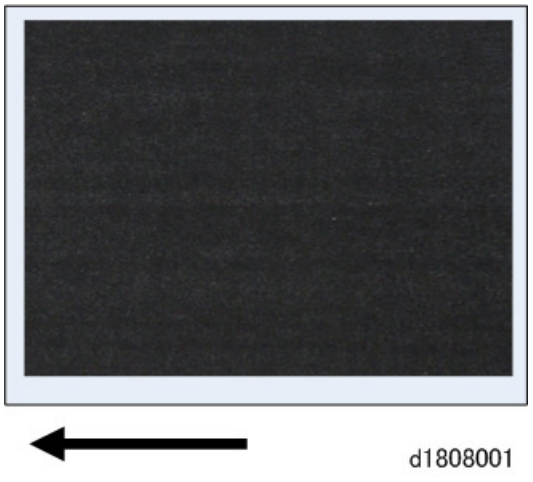
Yes	Finished!
No	Consult key operators.

Note

- Adjust the toner adhesion setting carefully. Raising the toner adhesion setting increases the amount of toner consumption and reduces toner yield.

Rough Images with Paper Smaller Than A4 SEF (210 mm)

Texture of filled image areas appears rough.



Cause:

Paper with a smaller width leaves more of the roller exposed where there is no paper, and this allows leakage of charge from the transfer electrical field thus reducing the efficiency of image transfer. This effect can also occur when:

- Ambient temperature and humidity are low
- Paper is extremely thick
- Electrical resistance of paper is high
- Duplex printing (occurs on Side 2).

Note

- Please remember that before it can be used, paper requires setting by the operator, especially if adjustments for a different type of paper (custom paper) are used.

Solution:

Check duplex prints and determine on which side the problem occurs. If the problem is occurring on both sides, do the adjust for Side 1 first and then the adjustment for Side 2.

1. In Advanced Settings for the custom paper in use, check the settings for Paper Transfer Current Setting: Side 1 (SP2-811-001 to 100: PTR Current:Side1 Custom Paper 001 to 100), or Paper Transfer Current Setting: Side 2 (2-812-001 to 100: PTR Current:Side2 Custom Paper 001 to 100).
2. Either or both settings at the upper limit?

Yes	Go to Step 6
No	Go to the next step.

3. Are the white spots on labels allowed for use by the client?

Yes	Go to the next step.
No	Go to Step 6.

4. Raise the transfer current setting by 5 points?
5. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat Steps 2 to 5.

6. Can you change the orientation of the paper (SEF to LEF, for example), or change the paper size (A4 SEF to A3 SEF)?

Yes	Go to the next step.
No	Use a different paper.

7. Use wider paper.
8. Restore the image transfer voltage to its default setting, and then go back to Step 4.
9. If the problem is not resolved, consult key operators.

Note

- Raising the image transfer voltage can cause white spots to occur in filled areas, so keep this in mind when doing the adjustments. If white spots appear, make some output samples and choose the best from among the test prints and use those settings.

Rough Images Appear During Low Duty Use

During low duty use of the machine, air can become mixed with the developer/toner mixture during agitation and cause rough patches to appear.

Cause:

When the machine is consistently used for low duty printing, air can mix with the developer/toner mixture during agitation which can cause developer deterioration and cause rough patches to appear in images. Low duty is generally defined when:

- Jobs are consistently 5 pages or less
- Pages have less than 4% coverage

Note

- Please remember that before paper can be used, it requires setting by the operator, especially if adjustments for a different type of paper (custom paper) are used.

Solution

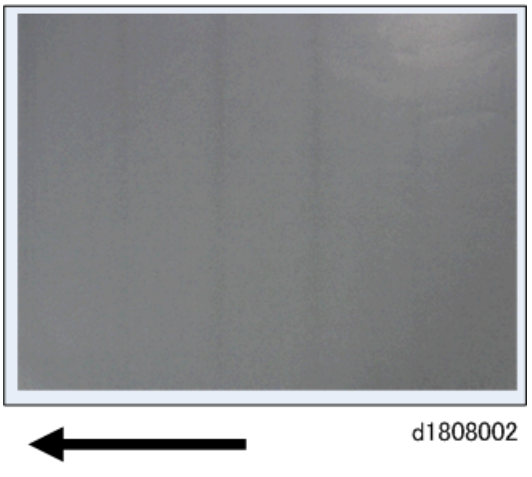
1. Replace the developer.
2. Select Advanced Settings > Main: Image Quality Adjustment > Toner Refresh Mode, and then change the “2” setting to “3”. (SP3-820-001 Tnr Refresh Mode Img Area Thresh:K).
3. If the problem persists, consult key operators.

Note

- If the toner refresh mode is set to "3", the amount of toner consumed will be equivalent to operating the machine under normal conditions at 6% coverage.
- Raising the setting higher than "3" could increase the occurrence of mottled images, increase toner consumption, and lower toner yield.

Vertical Lines at 60 mm Pitch

Faint black bands appear at 60 mm (2.4”) intervals vertical to the direction of paper feed.



Cause:

Periodically changing the speed of paper feed can affect the elasticity of images and lead to unevenness in image texture in the shape of black vertical lines. This can also occur when:

- Ambient humidity is high
- Thick paper (above Thickness 3) is used
- There are large areas of halftone coverage

Solution

1. Enter the SP mode.
2. Check the fine adjustment settings of the PTR motor.
    - SP1-012-005: Motor Adj: 95 ppm PTR Motor
    - SP1-013-005: Motor Adj: 110 ppm PTR Motor
    - SP1-014-005: Motor Adj: 135 ppm PTR Motor
3. Check the fine adjustment settings of the transfer timing roller with SP1-006-001 to 31: Fine Adj Trans Tmg Roll Speed (Type): (Weight)
4. Are the settings at their lower limits?

Yes	Go to the next step.
No	Go to Step 8.

5. Is the ambient temperature higher than 23°C (73.4°F)?

Yes	Go to the next step.
No	Use different paper.

6. Is it possible to lower ambient temperature?

Yes	Lower room temperature.
No	Use different paper.

7. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat Steps 6 and 7. If the problem persists, go to the next step.

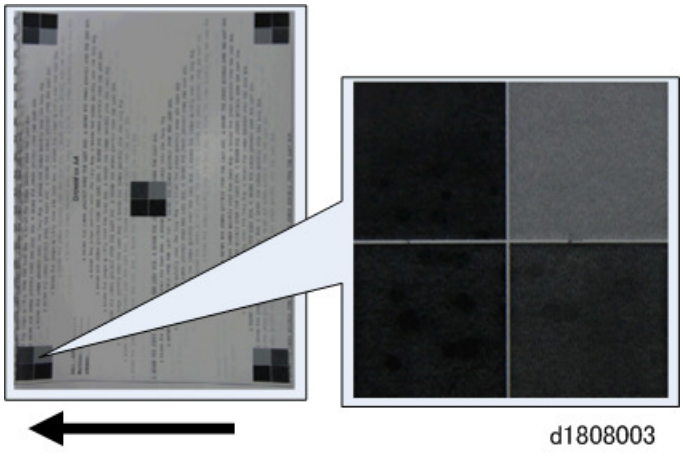
8. Do a fine adjustment of the PTR motor speed (-0.1%)
9. Do a fine adjustment of the image transfer roller speed (-0.1%).
10. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat Step 4.

11. If the problem persists, consult key operators.

Black Dots Appear on Coated Paper

The special properties of the paper (slick surface, electrical resistance, etc.) can cause black spots and specks to appear.



Cause:

Ambient conditions and special paper characteristics (slick surface, electrical resistance, etc.) can cause too much charge in the electrical field and cause dots to appear. This effect can occur when:

- High temperature, low humidity
- Coated paper is used
- Paper is thin (lower than 3 the scale)
- Halftones are used in fill areas

Note

- Please remember that before paper can be used, it requires setting by the operator, especially if adjustments for a different type of paper (custom paper) are used.

Solution

1. In Advanced Settings for the custom paper in use, check the present value in Image Transfer Voltage and PTR voltage settings.
   - SP2-817-001 to 100: ITB Voltage Custom Paper 001 to 100
   - SP2-811-001 to 100: PTR Current: Side1 Custom Paper 001 to 100
2. Is paper transfer current setting 140 or less?

Yes	Raise the paper transfer current 5 points.

No	Go to Step 4.

3. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat Steps 2, 3. If the problem persists, go to the next step.

4. Restore the image transfer current to its default setting.
5. Is the absolute value of the paper transfer current less than 50?

Yes	Use different paper.
No	Go to the next step.

6. Lower the absolute value of the paper transfer current by 5 points.
7. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat from Step 2.

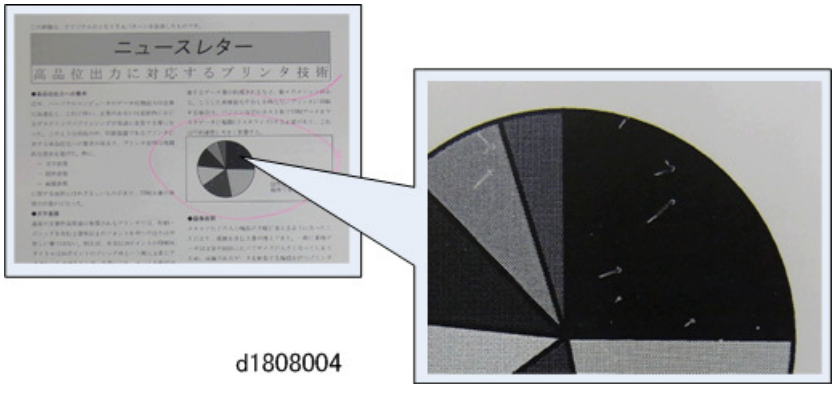
1. If the problem persists, consult key operators.

Note

- Adjustment of the image transfer current can cause white spots in images, so adjust carefully. If white spots appear, choose the best print from among the samples and apply the settings used for this test print.
- Adjustment of the paper transfer current can cause image density to fade, so adjust carefully. If images fade, choose the best print from among the samples and apply the settings used for this test print.

Static Traces Appear in Low Temperature, Low Humidity Environment

Dirt and paper scraps in or around the image area can cause static trace patterns to appear in the images.



Cause

During paper feed scraps of paper may collect around the transfer guide or other areas and cause a disturbance in the application of static charge which can lead to static trace patterns in images. Scattered toner and paper dust in the same areas can also cause discharges and cause the same problem. These problems may occur when:

- Ambient temperature and humidity are low
- Coated paper lower than Thickness 4 is used
- Paper transfer entrance guide is covered with scattered toner or paper dust

Solution

1. Can you raise ambient temperature and humidity?

Yes	Finished!
No	Used different paper.

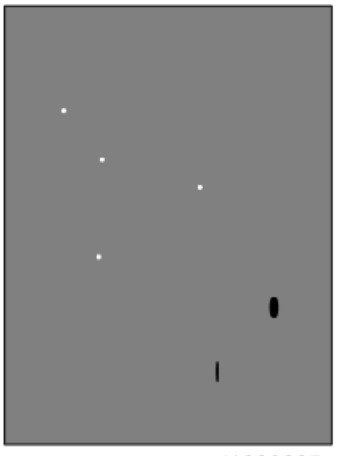
2. Raise ambient temperature and humidity.
3. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

1. If the problem persists, consult key operators.

Firefly, Comet Patterns

White spots in firefly patterns, or black comet streaking patterns appear.



d1808005

Cause:

Toner clumping can cause white firefly patterns with white spots in the center of kernels. These clumps can also cause degradation in image areas which leads to black, streaked comet patterns. These problems may occur when:

- The machine has remained idle for a long period, especially where ambient temperature was high.
- The machine was moved or shipped and was subjected to severe shock or vibration.
- Toner not used for a long period, especially where ambient temperature was high.

Solution:

1. Print a test sheet at 100% coverage. Do you see firefly or comet patterns?

Yes	Go to the next step.
No	Finished!

2. Print 350 A3 sheets at 100% coverage. Do you see firefly or comet patterns?

Yes	Go to the next step.
No	Finished!

3. Replace toner, and then print 350 A3 sheets at 100% coverage. Do you see firefly or comet patterns?

Yes	Go to the next step.
No	Finished!

4. Replace the toner sub hopper, and then print 350 A3 sheets at 100% coverage. Do you see firefly or comet patterns?

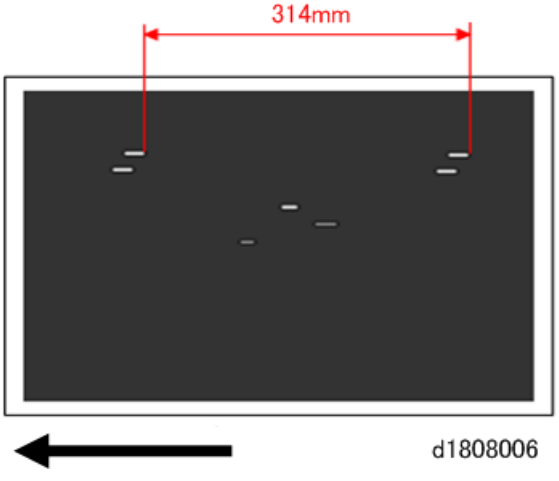
Yes	Go to the next step.
No	Finished!

5. Replace the development unit and the developer, and then print some test prints at 100% coverage. Do you see firefly or comet patterns?

Yes	The problem requires further analysis. Consult key operators.
No	Finished!

White Parallel Stripes

Toner or lubricant powder sticking to and accumulating on the surface of the drum are causing white strips in images.



Cause:

The lubricant powder designed to lubricate the surface of the drum can deteriorate over time, especially with continuous high quality printing. This can allow toner to stick to and collect on the drum surface, leading to parallel white streaks at intervals of about 314 mm (12.5″). Common causes include:

- Continuous high-quality printing
- Worn drum cleaning unit

Solution:

1. Wipe the surface of the drum clean with a dry, clean cloth.
2. Print the image. Is the problem resolved?

Yes	Finished!

No	Replace the drum

3. Does the problem re-occur after about 1,000 prints?

Yes	Clean the surface of the drum again, and then go to the next step.
No	Finished!

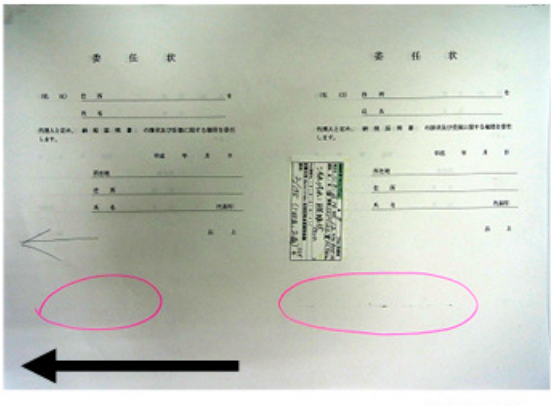
4. Increase the number of drum cleanings.
   - SP2-225-001: Cont High Q Img Print Mode Mode Selection. Change "0" (Default) to "1".
   - SP2-225-003: Cont High Q Img Print Mode Thresh:2. Change "80" (Default) to "0".
5. Did the problem re-occur after about 1,000 prints?

Yes	Reset the SP codes to their default settings, and then replace the drum and the drum cleaning unit.
No	If the client is consistently using print long print jobs set for high-quality printing, be sure to set the SP codes as shown in Step 4.

1. If the problem persists, consult key operators.

Edge Toner Scatter

Toner falls onto the edge of the image from the image transfer belt.



d1808007

Cause:

Toner falls from the ITB cleaning unit onto the paper near the edge of the image. Normally, this problem does not appear, but can occur if the cleaning blade or other component in the cleaning unit is defective and allows toner to fall at the image starting point on the paper. Even if the toner does not fall directly onto the paper but into the paper transport path, the toner can be transferred to the paper passing below the ITB.

Solution:

1. Clean the paper transport path.
2. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

3. Did a paper jam occur at the entrance of the ITB cleaning unit?

Yes	Replace the cleaning blade in the ITB cleaning unit.
No	Go to Step 6.

4. Print the image. Is the problem resolved?

Yes	Finished!
No	Replace the ITB cleaning unit.

5. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

6. Clean the ITB unit guide plate, PTR unit, development unit, drum cleaning unit, belt cleaning unit, ribs, and rollers.
7. If the problem persists, consult key operators.

Density Problems

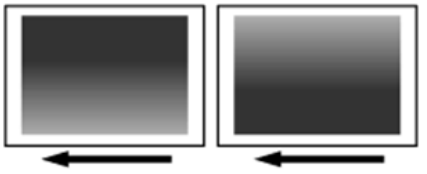
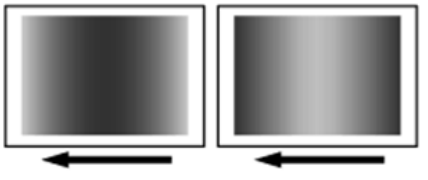
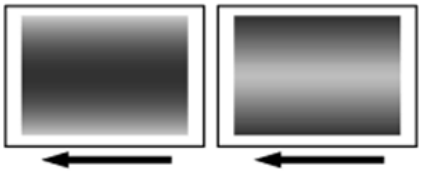
Uneven Image Density

The density is uneven.

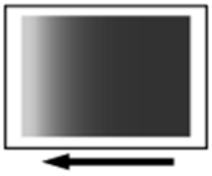
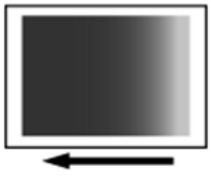
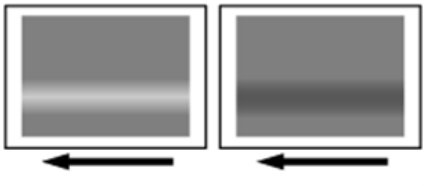
Solution:

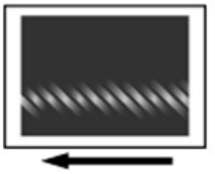
The solution depends on the type of unevenness. Carry out the appropriate procedure from those in the following table:

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

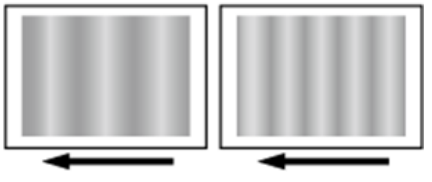
The density from top to bottom is uneven.	 d1798026
	• On the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Image Density > Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment) • If the problem persists, do the procedure for uneven density from top to bottom. (page 53)
The sides are fainter or denser.	 d1798027
	• On the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Image Density > Image Density Adjustment: Manual . Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment) • If the problem persists, consult key operators.
The top and bottom are fainter or denser.	 d1798028
	• On the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Image Density > Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment) • If the problem persists, consult key operators.

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

The leading edge is fainter.	 d1798029
	• On the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Image Density > Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment) • If the problem persists, see (page 53)
The trailing edge is fainter.	 d1798030
	• On the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Image Density > Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment) • If the problem persists, see (page 53).
The center is fainter or denser	 d1798031
	• On the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Image Density > Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment) • If the problem persists, consult key operators.

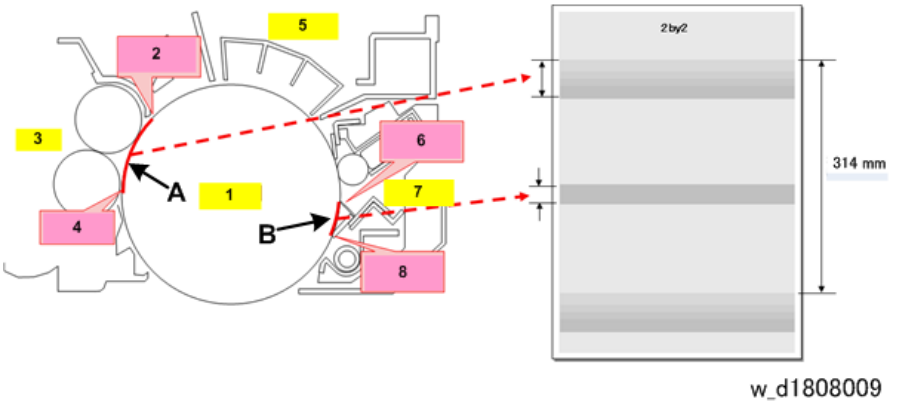
Wavy unevenness	 d1798032
	• On the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Image Density > Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment) • If the problem persists, consult key operators.

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

Periodic vertical density fluctuation	 d1798033
	• On the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Image Density > Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment) • If the problem persists, see (page 58).

Density Change at Low Temperatures

When printing images with halftone fill, uneven density appears at open space positions.



w_d1808009

1	Drum
2	Development Entrance Seal
3	Development Unit
4	Development Roller (Lower)
5	Charge Unit
6	Lubrication Mylar
7	Drum Cleaning Unit
8	Drum Cleaning Bladse

Cause:

With 2by2, 4by4 halftone images, the density becomes uneven at the open gaps [A] at the development unit and [B] at the drum cleaning unit.

- Uneven density can appear at the upper and lower position where the image could become partially lighter or darker.
- If differences in temperature and humidity develop between the open and closed gaps around the circumference of the drum (314 mm), this can cause fluctuation in the electrical potential of the drum charge after image exposure and easily create changes in density.
- This problem can easily occur where humidity is low.

Solution

1. Is the absolute humidity above 2.6? (The absolute humidity in the lookup table below is calculated from the temperature and relative humidity.)

Yes	Consult key operators.
No	Go to the next step.

2. Can the ambient temperature and humidity be adjusted?

Yes	Go to the next step.
No	Consult key operators.

3. Raise temperature so absolute humidity is above 2.6.
4. Adjust ambient conditions so the work site is above 15°C (59°F) 30% rH.
5. Print the image. Is the problem resolved?

Yes	Finished!

No	Consult key operators.

Lookup Table for Calculating Absolute Humidity

Absolute humidity is calculated from ambient temperature and relative humidity based on the lookup table below. The areas within the heavy red line in the table below indicate values where quality is assured. To prevent uneven image density, absolute humidity should be above 2.6 within these red shaded areas.

Units: g/m^3

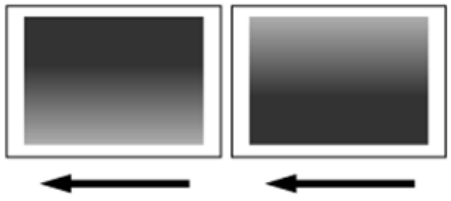
Temp. °C	Relative Humidity [%RH]									
	5	10	15	20	25	30	35	40	45	50
5	0.34	0.68	1.02	1.36	1.70	2.04	2.38	2.72	3.06	3.40
6	0.36	0.73	1.09	1.45	1.82	2.18	2.55	2.91	3.27	3.64
7	0.39	0.78	1.16	1.55	1.94	2.33	2.72	3.11	3.49	3.88
8	0.41	0.83	1.24	1.66	2.07	2.48	2.90	3.31	3.73	4.14
9	0.44	0.88	1.32	1.77	2.21	2.65	3.09	3.53	3.97	4.42
10	0.47	0.94	1.41	1.88	2.35	2.82	3.29	3.77	4.24	4.71
11	0.50	1.00	1.50	2.01	2.51	3.01	3.51	4.01	4.51	5.01
12	0.53	1.07	1.60	2.14	2.67	3.20	3.74	4.27	4.80	5.34
13	0.57	1.14	1.70	2.27	2.84	3.41	3.98	4.54	5.11	5.68
14	0.60	1.21	1.81	2.42	3.02	3.63	4.23	4.83	5.44	6.04
15	0.64	1.28	1.93	2.57	3.21	3.85	4.50	5.14	5.78	6.42
16	0.68	1.36	2.05	2.73	3.41	4.09	4.78	5.46	6.14	6.82
17	0.72	1.45	2.17	2.90	3.62	4.35	5.07	5.80	6.52	7.25
18	0.77	1.54	2.31	3.08	3.85	4.62	5.39	6.16	6.92	7.69
19	0.82	1.63	2.45	3.27	4.08	4.90	5.71	6.53	7.35	8.16
20	0.87	1.73	2.60	3.46	4.33	5.19	6.06	6.93	7.79	8.66
21	0.92	1.84	2.75	3.67	4.59	5.51	6.42	7.34	8.26	9.18
22	0.97	1.94	2.92	3.89	4.86	5.83	6.81	7.78	8.75	9.72
23	1.03	2.06	3.09	4.12	5.15	6.18	7.21	8.24	9.27	10.30
24	1.09	2.18	3.27	4.36	5.45	6.54	7.63	8.72	9.81	10.90
25	1.15	2.31	3.46	4.61	5.77	6.92	8.07	9.22	10.38	11.53
26	1.22	2.44	3.66	4.88	6.10	7.32	8.54	9.76	10.98	12.20
27	1.29	2.58	3.87	5.16	6.45	7.73	9.02	10.31	11.60	12.89
28	1.36	2.72	4.09	5.45	6.81	8.17	9.54	10.90	12.26	13.62
29	1.44	2.88	4.32	5.76	7.19	8.63	10.07	11.51	12.95	14.39
30	1.52	3.04	4.56	6.08	7.60	9.11	10.63	12.15	13.67	15.19
31	1.60	3.21	4.81	6.41	8.02	9.62	11.22	12.82	14.43	16.03
32	1.69	3.38	5.07	6.76	8.46	10.15	11.84	13.53	15.22	16.91
33	1.78	3.57	5.35	7.13	8.92	10.70	12.48	14.27	16.05	17.83
34	1.88	3.76	5.64	7.52	9.40	11.28	13.16	15.04	16.92	18.79
35	1.98	3.96	5.94	7.92	9.90	11.88	13.86	15.84	17.82	19.80

d1808161

Ab. humidity = 217x(6.11x10(7.5 x temp/ (temp+237.3)))/(temp+273.15) x Relative humidity x 0.01

Uneven Density from Top to Bottom

The density is uneven from top to bottom.



d1798034

Note

- You can adjust the density of halftone images, but not that of solid fills.

Cause:

This may occur at high temperature or humidity.

Solution:

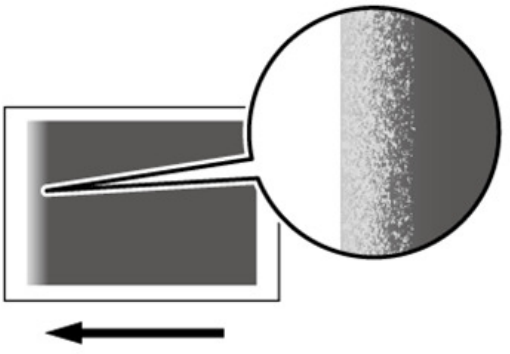
1. On the machine operation panel: Adjustment Settings for Skilled Operators menu > Image Quality > Adjust Density Difference Across Feed Direction. (SP2-113-001: Adjust LR density difference Density)
    - Decreasing the value (-) makes the area above the center denser and that below fainter.
    - Increasing the value (+) makes the area above the center fainter and that below denser.
2. Cycle the machine Off/On. The setting specified in step 1 will be in effect.
3. Print the image. Is the problem resolved?

Yes	Finished!
No	Replace the drum charge unit, PCDU.

1. If the problem persists, consult key operators.

Fainter Leading Edge

The leading edge is fainter.



d1798035

Cause:

At low temperature or when using thin coated paper, this may occur if the paper transfer current is insufficient. At high temperature, this may occur if the paper transfer current is excessive.

Important

- **This solution only works when the thickness of the paper is equivalent to Paper Weight 4 or higher. Do not try this as a solution when using paper with a thickness equivalent to Paper Weight 3 or lower, as it may cause paper misfeeding.**

Note

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details see "3. Custom Paper Settings for Administrator" in the TCRU "Adjustment Item Menu Guide".

Solution:

Do the following adjustments together: Procedure (a) and Procedure (b).

(a) Raising the Switch Point

1. In Advanced Settings for the custom paper in use, make a note of the preset values for Paper Transfer Current: Lead Edge.
   - SP2-814-001 to 100: Leading Edge Corr Switch: 2nd Custom Paper 001 to 100
   - SP2-813-001 to 100: Leading Edge Corr Coef: 2nd Custom Paper 001 to 100
2. Is the paper transfer leading edge switch setting set at its highest value?

Yes	Go to Step 7.
No	Raise the setting by 5 points.

3. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to Step 4.

4. Is the paper transfer leading edge correct less than 200?

Yes	Raise the setting 10 points.
No	Repeat from Step 2.

5. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat from Step 4.

6. If the problem persists after repeating from Step 4, and then raising the setting to 200, restore the original settings at Step 1, and then do Procedure (b) below to lower the settings.
7. Is the paper transfer leading edge correction setting below 200?

Yes	Raise the setting 10 points.
No	Use different paper.

8. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat from Step 7.

9. If the problem persists after repeating from Step 7, and then raising the paper transfer leading edge correction setting to 200, restore the original settings at Step 1, and then do Procedure (b) below to lower the settings.

(a) Lowering the Current

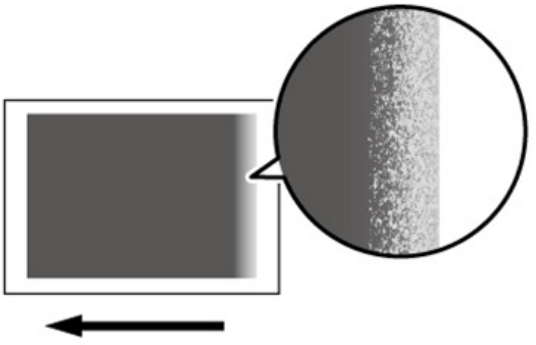
1. In Advanced Settings for the custom paper in use, raise the setting for the paper transfer leading edge correction setting by 10 points. (SP2-813-001 to 100: Leading Edge Corr Coef: 2nd Custom Paper 001 to 100)
2. Print the image. Is the problem resolved?

Yes	Finished!
No	Increase the scaling factor by 10 percentage points.

3. Repeat Step 2. If the problem persists even though you have increased the scaling factor by 50 percentage points, restore the value noted in Step 1 of Procedure (a), and then consult key operators.

Fainter Trailing Edge

The trailing edge is fainter.



d1798036

Cause:

This may occur because of insufficient or excessive paper transfer current when using paper weighing approximately 160 g/m^2 (60 lb. Cover) or heavier 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 see "3. Custom Paper Settings for Administrator" in the TCRU "Adjustment Item Menu Guide".

Solution:

Do these procedures in the order presented below: Procedure (a), Procedure (b), and then Procedure (c).

Procedure (a) Setting Range

1. Measure in millimeters how far the fainter area extends from the trailing edge.
2. In Paper Transfer Current > Trail Edge Dist, enter the value you measured in Step 1 plus an additional 10 mm. (SP2-816-001: Trail Edge Corr Switch:2nd Custom Paper 001)
3. Go to Procedure (b).

Procedure (b) Raising the Setting

1. In Advanced Settings for the custom paper in use, make a note of the present value in Paper Transfer Current > Trail Edge. (SP2-815-001 to 100: Trail Edge Corr Coef:2nd Custom Paper 001 to 100)
2. Increase the scaling factor in the above setting by 10 percentage points.
3. Print the image. Is the problem resolved?

Yes	Finished!
No	Increase the scaling factor by 5 percentage points.

4. Repeat Step 3. If the problem persists even though you have increased the scaling factor by 50 percentage points, restore the value noted in Step 1 and go to Procedure (c).

Procedure (c) Lowering the Setting

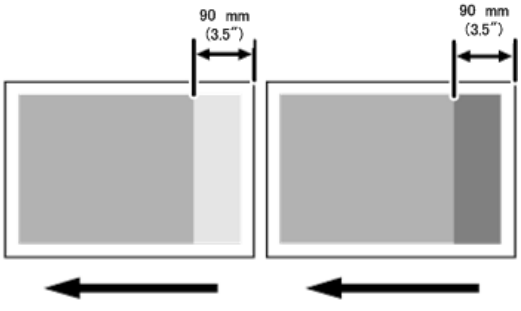
1. Decrease the scaling factor in the above setting by 10 percentage points.
2. Print the image. Is the problem resolved?

Yes	Finished!
No	Decrease the scaling factor by 5 percentage points.

3. Repeat Step 2. If the problem persists even though you have decreased the scaling factor by 50 percentage points, restore the value noted in Procedure (b) Step 1 and then consult key operators.

Uneven Density within 90 mm (3.5 in.) of the Trailing Edge

Printing in the area extending approximately 90 mm (3.5 inches) from the trailing edge is fainter or denser.



d1798037

Cause:

This may occur when:

- Printing is done at low temperature or humidity
- Printing a single-dot halftone image

Note

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details see "3. Custom Paper Settings for Administrator" in the TCRU "Adjustment Item Menu Guide".

Solution:

The solution depends on whether the area within 90 mm (3.5 inches) of the trailing edge is denser or fainter. However, if the paper is not registered with the Advanced User Settings, the timing roller speed must be adjusted for the paper type and paper thickness for the paper in use. (SP 1-006-001 Fine Adj Trans Tmg Roll Spd Plain:Weight (number) 001 to 100)

If the area within 90 mm (3.5 inches) of the trailing edge is fainter

1. In Advanced Settings for the custom paper in use, check the present value in Transfer Timing Roller Feed Speed Adj. (SP1-963-001 to 100: Trans Timing Roll Spd:Fine Adj Custom Paper 001 to 100) Is it higher than +1.0%?

Yes	Consult key operators.
No	Go to the next step.

2. Increase the value in Transfer Timing Roller Feed Speed Adj by 0.1 percentage point.
3. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat Steps 2 and 3. If the problem persists even though you have increased the value to +1.0%, consult key operators.

If the area within 90 mm (3.5 inches) of the trailing edge is denser

1. In Advanced Settings for the custom paper in use, check the present value in Transfer Timing Roller Feed Speed Adj. (SP 1-963-001 to 100: Trans Timing Roll Spd:Fine Adj Custom Paper 001 to 100) Is it lower than -1.0%?

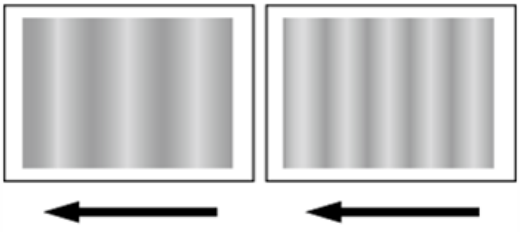
Yes	Consult key operators.
No	Go to the next step.

2. Decrease the value in Transfer Timing Roller Feed Speed Adj by 0.1 percentage point.
3. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat Steps 2 and 3. If the problem persists even though you have decreased the value to -1.0%, consult key operators.

Periodic Density Fluctuation

The vertical density fluctuates periodically.



d1798038

Solution:

Before you perform the solution procedure, make sure that the environmental conditions where you are using the machine meet those recommended for use.

The solution depends on the interval.

Note

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details see "3. Custom Paper Settings for Administrator" in the TCRU "Adjustment Item Menu Guide".

Interval	Solution
Approximately 12-18 mm (0.5-0.7 inches)	Consult key operators.
Approximately 60 mm (2.4 inches)	• In Advanced Settings for the custom paper in use, adjust the value in Transfer Timing Roller Feed Speed Adj according to the type and thickness of paper in use. (SP 1-963-001 to 100: Trans Timing Roll Spd:Fine Adj Custom Paper 001 to 100) • If the problem persists, consult key operators..
Approximately 95 mm (3.7 inches)	Consult key operators.
Approximately 314 mm (12.4 inches)	• Replace the photoconductor unit. • If the problem persists, consult key operators.

Entire Image Faint

The entire image is fainter than normal.

d1798039

Cause:

This may occur when:

- Continuously printing an image that consumes little toner
- The machine has not been used for a long time
- The machine is located somewhere very humid and has not been used for a while

Solution:

1. On the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Image Density > Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment)
2. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

3. Increase the value by 1 in Adjust Maximum Image Density. (SP3-620-001: ProCon Target M/A Maximum M/A:K)
4. Select Adjust Image Density and execute Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment)
5. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat Steps 3 to 5. If the problem persists even though you have increased the value to 5, consult key operators.

Color Is Too Dense

The entire image is denser than normal.

d1798040

Cause:

This may occur when:

- Continuously printing an image that consumes much toner
- The machine has not been used for a long time
- The machine is located somewhere very humid and has not been used for a while

Solution:

1. On the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Image Density > Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment)
2. Print the image. Is the problem resolved?

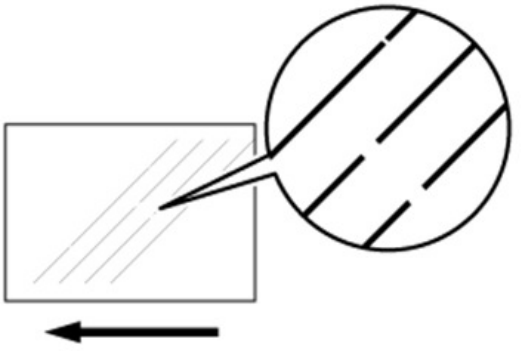
Yes	Finished!
No	Go to the next step.

3. Decrease the value by 1 in Adjust Maximum Image Density. (SP3-620-001: ProCon Target M/A Maximum M/A:K)
4. Select Adjust Image Density and execute Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment)
5. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat Steps 3 to 5. If the problem persists even though you have decreased the value to -5, consult key operators.

Broken Thin Lines

Thin lines (1 dot lines in 1200 dpi images) break.



d1798041

Cause:

Oblique (approximately 45°) thin lines or thin lines printed in faint colors are likely to contain breaks.

Solution:

1. On the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Image Density > Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment)
2. Print the image. Is the problem resolved?

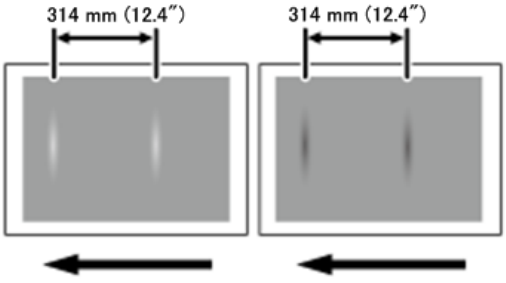
Yes	Finished!
No	Go to the next step.

3. Increase the value by 1 in Adjust Line Width. (SP3-623-061: LD Power :Set Line Width Adj.:K)
4. Select Adjust Image Density and execute Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment)
5. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat Steps 3 to 5. If the problem persists even though you have increased the value to 5, consult key operators.

Blurred Images (Lens Shaped)

Lens-shaped blurred images appear at 314 mm (12.4 inches) intervals.



d1798042

Cause:

If the machine is left unattended for a long period in an environment where temperature and humidity are high, the drum surface can absorb moisture and prevent a application or quenching of electrostatic charge on the drum.

Solution:

1. On the machine operation panel: Adjustment Settings for Skilled Operators > Maintenance > Photoconductor Refreshing. (SP2-810-004: Clear Blurred Img Execute)
2. Print the image. Is the problem resolved?

Yes	Finished!
No	Consult key operators.

Dropouts (Characters Broken)

Dropouts (character voids) occur when characters or lines are printed.

d1798043

Cause:

This may occur when:

- Continuously printing an image that consumes much toner
- The machine has not been used for a long time
- The machine is located somewhere very humid and has not been used for a while

Solution:

1. On the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Image Density > Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment)
2. Print the image. Is the problem resolved?

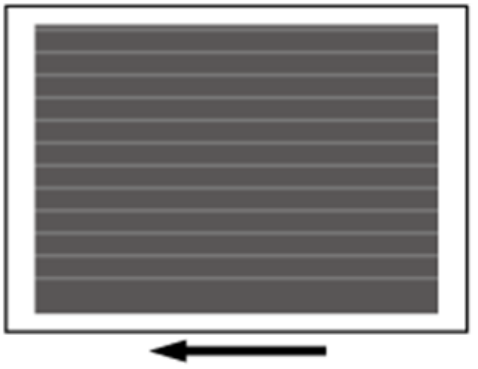
Yes	Finished!
No	Go to the next step.

3. Decrease the value by 1 in Adjust Maximum Image Density. (SP3-620-001: ProCon Target M/A Maximum M/A:K)
4. On the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Image Density > Image Density Adjustment: Manual Execute. (SP3-011-002: Manual ProCon :Ex Density Adjustment)
5. Is the problem resolved?

Yes	Finished!
No	Repeat Steps 3 to 5. If the problem persists even though you have decreased the value to -5, consult key operators.

After Images

An afterimage of the image printed just before the intended image appears.



d1798044

Cause:

This may occur when the image record on the intermediate transfer belt has largely changed. For example, this may occur when a solid-fill image is printed after vertical lines are printed continuously. A potential difference occurs between an image portion and non-image portion on the intermediate transfer belt as a result of continuous printing of vertical lines, causing the vertical lines to become obvious on the next solid-fill image.

This may occur when:

- Printing is done at high temperature or humidity
- Printing on thin coated paper (Paper Weight 3 or lower) or on OHP sheet
- Printing an extremely different type of image

Note

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details see "3. Custom Paper Settings for Administrator" in the TCRU "Adjustment Item Menu Guide".

Solution:

1. On the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Image Density > Image Density Adjustment: Manual Execute.
2. Can the image density be adjusted manually?

Yes	Adjust the image density manually. (SP3-011-001 Manual ProCon :Ex Normal ProCon)
No	Go to Step 4.

3. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

4. Are the paper transfer current settings at their lowest values?
   - SP2-811-001 to 100: PTR Current:Side1 Custom Paper 001 to 100
   - SP2-812-001 to 100: PTR Current:Side2 Custom Paper 001 to 100

Yes	Use different paper.
No	Go to the next step.

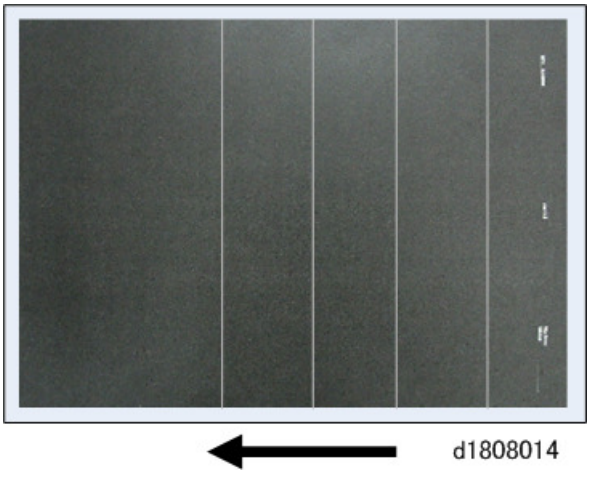
5. In Advanced Settings for the custom paper in use, do the following adjustments:
   - **Side 1**: Decrease the absolute value by 10 points in Paper Transfer Current Setting: Side 1.
   - **Side 2**: Decrease the absolute value by 10 points in Paper Transfer Current Setting: Side 2.
6. Print the image. Is the problem resolved?

Yes	Finished!

No	Repeat Steps 4 and 5. If the problem persists even though you have decreased the value to its lowest setting, consult key operators.

White Streaks

White streaks perpendicular to the paper feed direction appear.



Cause:

A separating discharge occurs between the intermediate transfer belt and paper edge during paper transfer, which causes a streak-like electric charge on the intermediate transfer belt. This residual electric charge may cause white streaks during image transfer. This may occur at low temperature and humidity.

Note

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details see "3. Custom Paper Settings for Administrator" in the TCRU "Adjustment Item Menu Guide".

Solution:

1. In Advanced Settings for the custom paper in use, select Paper Transfer Current; Trail Edge Dist.
   - SP2-816-001: Trail Edge Corr Switch: 2nd Custom Paper 001
   - SP2-815-001 to 100: Trail Edge Corr Coef: 2nd Custom Paper 001 to 100
2. Check the present switch value. Is it at the upper limit?

Yes	Go to Step 6.
No	Raise the switch setting 5 points.

3. Print the image. Is the problem resolved?

Yes	Finished!

No	Go to Step 4.

4. Check the present coefficient value. Is it at its lowest setting?

Yes	Restore the default value, and then repeat from Step 2.
No	Raise the setting 20 points.

5. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat from Step 4. If the problem persists, consult key operators.

6. Is the paper transfer trailing edge correction setting at its lowest value?

Yes	Use different paper.
No	Raise the setting 20 points.

7. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat from Step 6. If the problem persists, consult key operators.

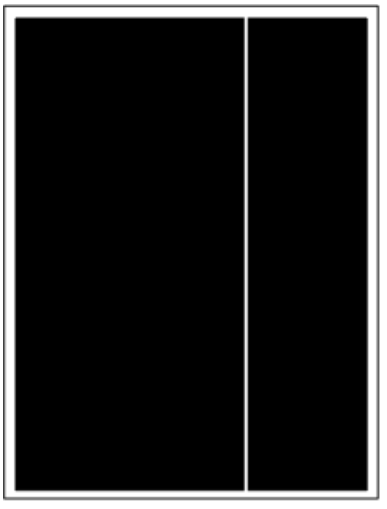
8. Even if the problem persists after setting the paper transfer trailing edge correction to its lowest value, consult key operators.

Note

- Changing these settings can cause fading at the trailing edges of the paper, so keep this in mind when doing the adjustments. If the images fade at the trailing edge, make some output samples and choose the best from among the test prints and use those settings.

Vertical White Lines

These are vertical white lines that appear on the paper in the direction of paper feed.



d1808010

Cause:

This can be caused dirt on the shield glass, or other foreign particles blocking the path of the laser beam from the laser unit. Developer particles draw up into the gap between the doctor blade and the development roller could also be causing the problem.

Solution

1. Remove and clean the toner shield glass.
2. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

3. Clean the development roller and doctor blade cap. (For details, please refer to the Field Service Manual.)
4. Print the image. Is the problem resolved?

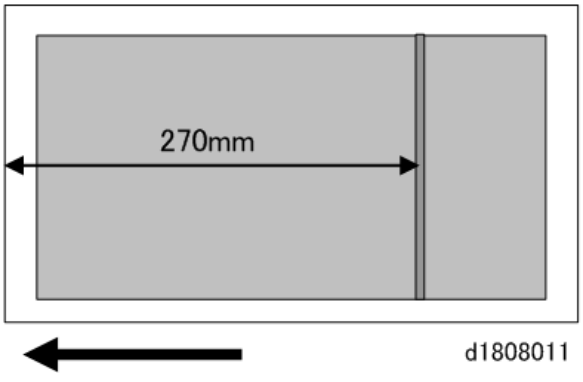
Yes	Finished!
No	Go to the next step.

5. Replace the development unit.
6. Print the image. Is the problem resolved?

Yes	Finished!
No	The cause of the problem requires more investigation. Consult key operators.

Shock Jitter at the Fusing Unit

If shock jitter occurs at the arrival of paper at the fusing unit, this can cause horizontal back lines to appear 270 mm (10.5") away from the leading edge of the paper.



Cause:

Shock jitter can occur when the paper reaches the fusing unit after passing through the PTR unit, causing black lines to appear about 270 mm (10.5") from the leading edge of the paper. This can occur when:

- Paper longer than 270 mm is used
- The paper is the first sheet of a print job
- Using thick paper
- Printing halftones

Note

- Please remember that before paper can be used, it requires registration by the operator, especially if adjustments for a different type of paper (custom paper) are used.

Solution:

1. Is the paper in use shorter than 270 mm (10.5")?

Yes	Go to the next step.
No	Go to Step 3.

2. Print the image on paper shorter than 270 mm. Is the problem resolved?

Yes	Finished!
No	Use different paper.

3. In Advanced Settings for the custom paper in use, check the setting for Process Speed Adjustment. (SP1-986-001 to 100: Process Speed Custom Paper 001 to 100)
4. Can the line speed adjustment be reduced?

Yes	Go to the next step.
No	Use different paper.

5. Reduce the line speed setting by 1 point.
6. Print the image. Is the problem resolved?

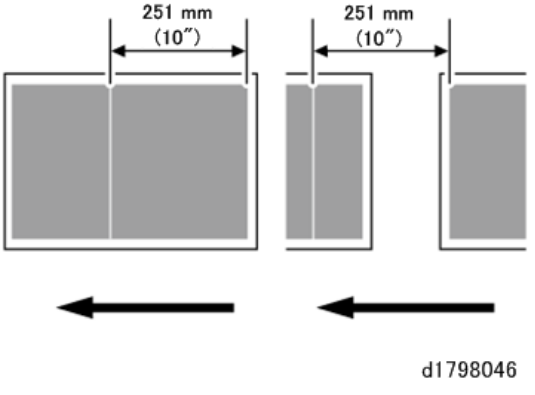
Yes	Finished!
No	Repeat Steps 4 to 6.

7. If the problem persists after adjusting the process line speed, consult key operators.

Glossy Problems

Vertical Glossy Lines

Glossy lines perpendicular to the paper feed direction appear.



Cause:

Glossy lines perpendicular to the paper feed direction may appear 251 mm (10 inches) from the boundary of the margin and the solid image (in the direction opposite to the paper feed direction).

Solution:

1. Print the image on twenty sheets. Do glossy lines appear on the tenth sheet and later sheets?

Yes	Go to the next step.
No	Consult key operators.

2. In Advanced Settings for the custom paper in use, select Fusing Heat Roller Temperature Adj and decrease the value by 5 °C. (SP1-984-001 to 100: Htg Roller Temp Setting Custom Paper 001 to 100)
3. Print the image on twenty sheets. Do glossy lines appear on the tenth sheet and later sheets?

Yes	Repeat Step 2 and 3. If the problem persists even though the setting has reached its minimum value, consult key operators. If the problem is resolved, go to the next step.
No	Go to the next step.

4. Check the toner fusion. Is it satisfactory?

Yes	Finished!
No	Restore the previous setting and consult key operators.

Insufficient Gloss

The image is not glossy enough.

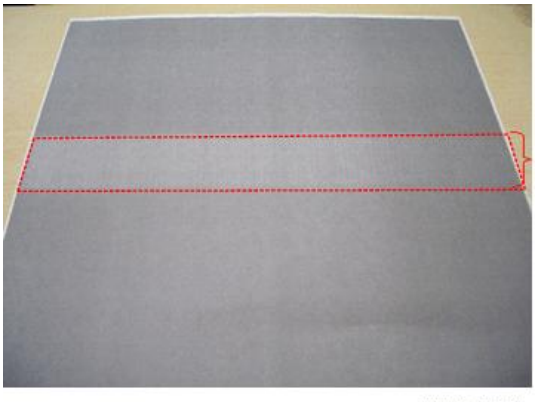
Solution:

If the gloss of the image is not glossy enough, do (a) Changing Fusing Temperature, and (b) Changing Processing Speed. See page 73 "Insufficient Toner Fusing".

Blurred Images (Band Areas)

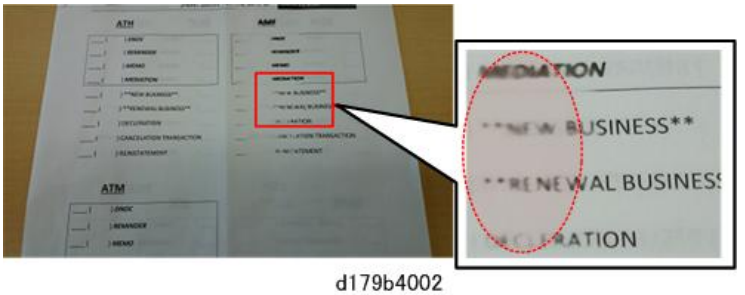
Halftone and text images appear light (low in density) or blurry at intervals within bands that are equal to the circumference of the drum.

Low Density in Shaded Area



d179b4001

Blurry Text



d179b4002

Note

- In addition to these problems, backgrounds may appear dirty, or the machine could issue SC401 if the problem occurs during toner supply control (process control).

Cause

Nitrous oxide generated during drum charging combines with the lubricant powder (zinc stearate) and absorbs moisture which can adhere to the drum surface. If the machine remains idle for a long period, this could prevent the drum from charging evenly in the affected areas.

Solution

1. Update the Engine firmware to Ver.1.45:08 or later.

   Note

   - Executing SP2810-001 (Clear Blurred Image) with older engine firmware could cause the machine to issue SC465.)

2. Specify the following settings for SP2810 values to clear blurred text and images:
   - SP2810-001: 1 (default). This setting will automatically execute and correct the problem every time.
   - SP2810-005: 360 (default) change to 120. This setting will automatically execute and correct the problem after the machine remains idle for 2 hours.
   - SP2810-006: 13 (default) change to 7. This setting will automatically execute and correct the problem even when the machine operates in an environment affected by medium temperature and relative humidity.
3. Is the problem solved?

Yes	Finished!
No	Go to next step.

4. Execute SP2819-004 (Clear Blurred Image) several times. Is the problem solved?

Yes	Finished!
No	Replace the drum.

Fusing Problems, Mixed Paper

Insufficient Toner Fusing

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 see "3. Custom Paper Settings for Administrator" in the TCRU "Adjustment Item Menu Guide".

Changing the fusing temperature or changing the process speed may produce one or more of the following side effects:

- Paper curling
- Paper misfeeding
- Blisters
- 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.

Solution:

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

Procedure (a): Changing the fusing temperature

1. In Advanced Settings for the custom paper in use, select Fusing Heat Roller Temperature Adj and increase the temperature by 5 °C. (SP1-984-001 to 100: Htg Roller Temp Setting Custom Paper 001 to 100)
2. Print the image and check toner fusion. Is the problem resolved?

Yes	Finished!
No	Increase the temperature an additional 5 °C.

3. Repeat Step 2 until the temperature reaches 185 °C. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

4. Check the type of your machine. Is it Pro 8110S?

Yes	Consult key operators.
No	Perform Procedure (b) below.

1

Procedure (b): Changing the process speed

This procedure is available only for Pro 8120/8120S and Pro 8110/8110S. This will slow down the printing to give the toner more time to fuse. However, because of this, throughput will be reduced.

For example, when printing on A4/LT paper:

Pro 8120/8120S

- If the process speed is changed from High to Middle: 135 cpm to 110 cpm
- If the process speed is changed from Middle to Low: 110 cpm to 95 cpm

Pro 8110/8110S

- If the process speed is changed from High to Low: 110 cpm to 95 cpm
- Pro 8110S does not have the Middle setting.

1. In Advanced Settings for the custom paper in use, select Process Speed Setting. (SP1-986-001 to 100: Process Speed Custom Paper 001 to 100)
2. Decrease the value by one level.
3. If the present value is High, select Middle. If it is Middle, select Low.
4. Print the image and check toner fusion. Is the problem resolved?

Yes	Finished!
No	If the problem persists, the machine may be faulty or the paper unsupported. Contact your service representative. The problem requires further investigation, so consult key operators.

Improving Print Quality with Mixed Paper

This section describes how to adjust operation to give priority to print quality over production when using different types and thicknesses of paper in the same print jobs.

Note

- In order to ensure optimum toner fusing for different paper types and thicknesses, the operation of the fusing unit can be adjusted for paper conditions. These settings ensure productivity when different paper is used continuously, but problems such as glossy lines can occur when different paper is used in the same job.
- There will be occasions when quality must take precedence over productivity, depending on how the operators are using the machine. In such a case, the Image Quality Priority Mode can be used.

Conditions Where Image Quality Can be Improved

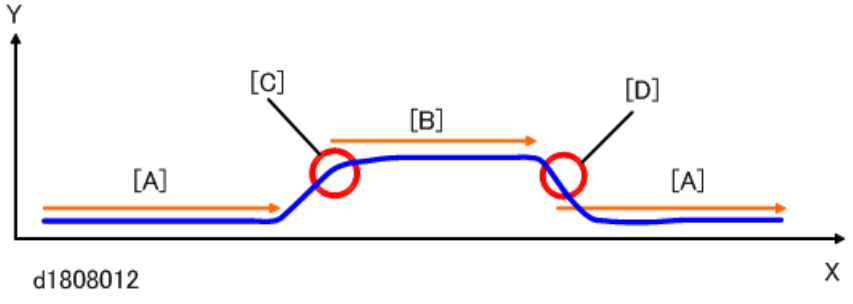
- For brand name paper where there is a large difference in the heating roller temperature setting between the front and rear of the paper area.
- For brand name paper where there is a large difference in the heating roller temperature setting for the width (front-to-back on paper path is the length) of the paper.
- Repeated low volume print jobs.

Solution

1. Advanced Settings > Quality Adjust > Production Priority Mode > Production Priority > change the setting from ON to OFF. (SP1-131-001: Continues Print Mode Switch Feed Permit Condition)

Control Image

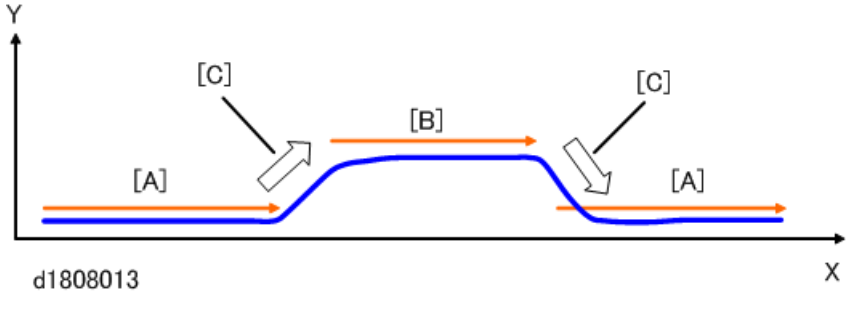
(a) Production Monitoring Mode: Production Priority ON



X	Time
Y	Heating Roller Temperature Setting

When changing from thin paper [A] to thick paper [B], insufficient temperature could cause poor fusing because the fusing temperature [C] was not high enough for thick paper. Also, when changing from thick paper [B] to thin paper [A], high temperature could cause glossy lines to occur because the fusing temperature [D] was too high for thin paper.

(a) Fusing Quality Monitoring Mode: Production Productivity OFF



X	Time
Y	Heating Roller Temperature Setting

When changing from thin paper [A] to thick paper [B], this generates wait time [C]. When changing from thick paper [B] to thin paper [A], this also generates wait time [C]

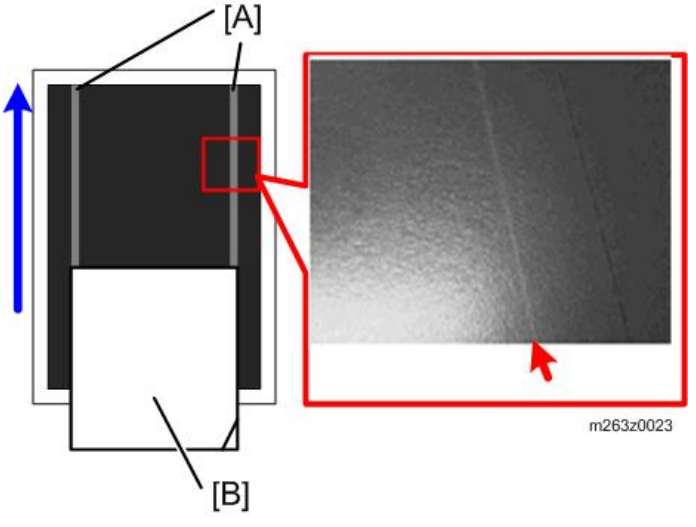
Note

- With production priority OFF, when the paper brand and area are changed, the wait time is generated in order to adjust the fusing temperature. Also, in some cases, the warm-up time to standby temperature for printing to begin may also be set the with the same wait time lag. Reducing the wait time during troubleshooting execution when using mixed paper sizes, may have no effect.

Paper Edge Friction on Fusing Belt: Fusing Unit Swapping

Cause:

Glossy vertical stripes [A] occur on sheets of a print job using paper smaller than the previous long print job on large size paper [B] with its edges contaminated by strips from cutting.



This problem can occur with the when:

- Using thick paper with edges contaminated by small burrs and strips created when the paper was cut.
- Printing images with large coverage areas (half-tones, etc.).
- Using very high-gloss paper

Solution:

Procure a fusing unit to be dedicated for long print jobs with a selected paper size to avoid the occurrence of glossy, vertical striping on prints. Up to four units can be registered for swapping the fusing unit for high volume print jobs on the same paper size.

Important

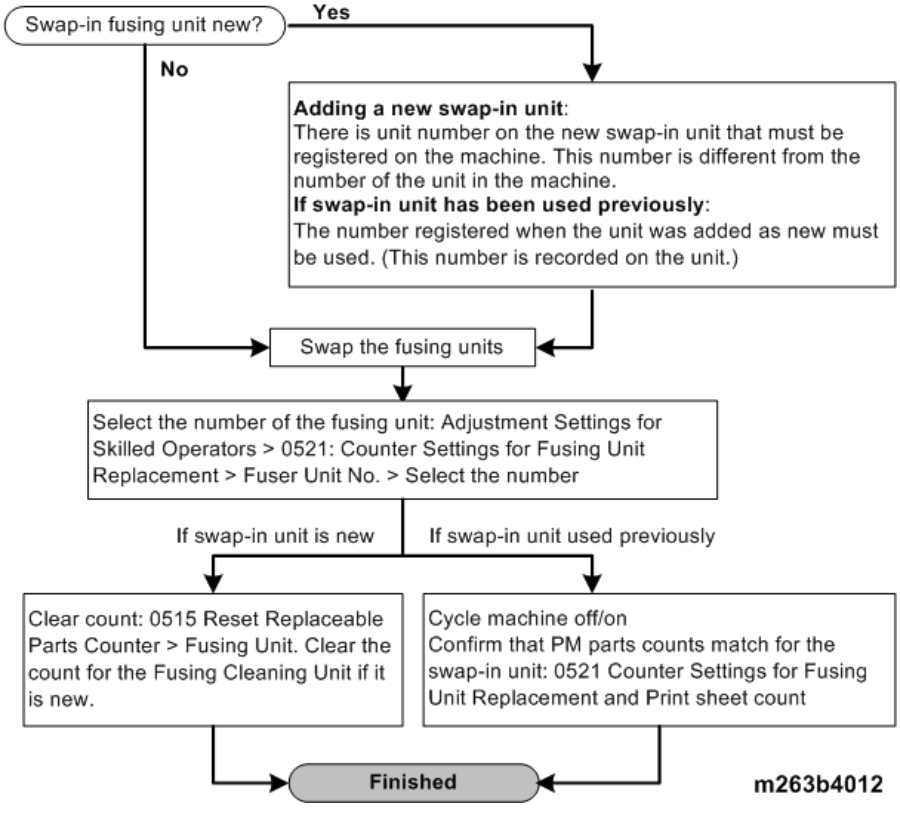
- **After a fusing unit dedicated to printing on one paper size for long print jobs is swapped into the machine, the registration number attached to the unit must be selected and the distance and page counters must be reset before that fusing unit.**

These important settings are done with the "Adjustment Settings for Skilled Operators" on the operation panel of the main machine. Here is a list of the settings that must be done:

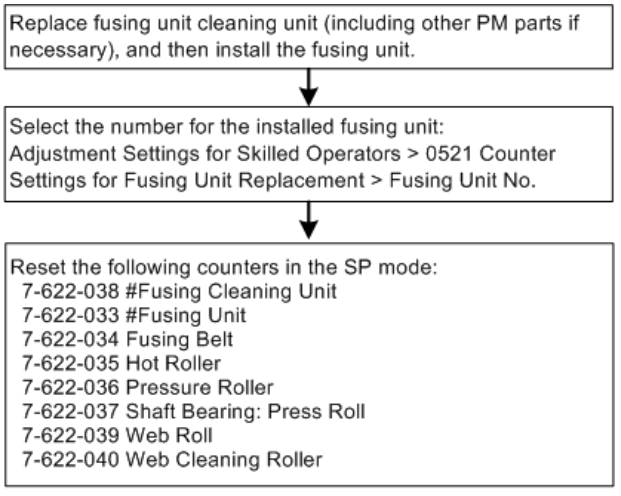
- [Fuser Unit No.]
- [Current Value: Distance Counter: Fuser Unit]
- [Current Value: Distance Counter: Fuser Cleaning Unit]
- [Current Value: Page Counter: Fuser Unit]
- [Current Value: Page Counter: Fuser Cleaning Unit]

Procedure

Fusing Unit Swapping



Resetting Counts for Fusing Unit Cleaning Unit (Other New PM Parts)



m263b4013

Paper Delivery Problems

Frequent Paper Misfeeds

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

Coated or another type of unsupported paper is loaded on the machine operation panel's tray.

- Load paper not supported by the machine's paper tray (Trays 1-3) in the wide LCT or another paper tray supporting the paper.
- For details about the size and type of paper that can be loaded in the paper trays, see "Specifications" in the "Appendices".

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 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.

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

- If the side fences are too far apart, paper misfeeds may occur due to wrong paper size detection.
- Adjust the side fences to match the paper width.

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

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

Too many sheets of paper are loaded in the paper tray.

- When loading paper, do not exceed the limit.

The edges of the sheets are rough.

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

Sheets are curled or wavy.

- Flatten curls and waviness before loading paper.
- Turn the sheets the other way up or smooth the edges before loading.
- Stacking too many sheets may cause the sheets on top to curl greatly. If this happens, reduce the number of stacked sheets.

Sheets absorbed moisture and became limp.

- Sheets that will not be used for a long time should be protected from moisture by, for example, storing them in a sealed bag.
- If the machine is plugged in, the heaters (options) inside the paper bank start operating when the main power is off to prevent sheets from absorbing moisture.

The paper feed sensor is stained with paper dust.

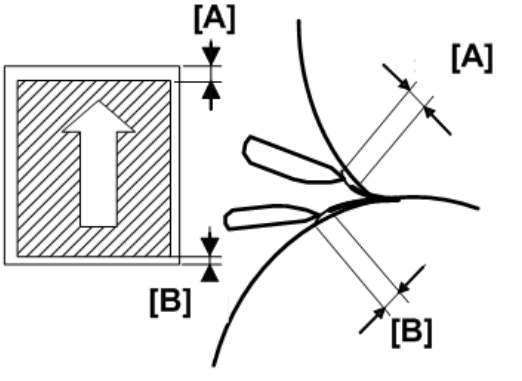
- Clean the part of the paper feed sensor where the paper misfeed is detected.
- For details about cleaning the paper feed sensor, see page 128.

The paper feed performance is less sufficient because the paper transport roller is soiled with toner.

- Clean the part of the paper transport roller where the paper misfeed is detected.
- For details about cleaning the paper transport roller, see page 128.

Fusing Unit Separation Plate Accordion Jams

Accordion jams can occur at the fusing unit separation plate with paper where there is insufficient white space at the leading edge of paper.



[A]	Leading Edge Margin (White Space)
[B]	Trailing Edge Margin (White Space)

Causes:

This problem can occur under with:

- Thin paper (less than 100 gsm)
- Coated paper (low rigidity)
- Image coverage (or toner) near the leading edge of the paper
- Leading edge white space extremely narrow

Solution

The best solution is to have the client staff or key operators increase the size of the margin white space at the leading edge of the paper. If this is not possible, consult with the client staff and key operators to determine if another type of paper can be used.

1. Can the size of the image be adjusted to create more white space in the leading edge?

Yes	Go to Step 2.
No	Go to Step 4.

2. In Advanced Settings for the custom paper in use, change the Leading Edge Mask Width Adjustment to +0.5 mm. (SP2-122-001 to 100: Erase Margin Adj Leading Edge Custom Paper 001 to 100). Did this solve the problem?

Yes	Finished!
No	Go to Step 3.

3. Is the margin at the leading edge less than 10 mm?

Yes	Repeat Steps 2 and 3.
No	Replace the fusing unit. If the problem persists, consult key operators.

4. Ask the client if adjustment of the image on the paper is possible.

Yes	Go to Step 5.
No	Consult key operators.

5. In Advanced Settings for the custom paper in use, set the values for image position adjustment for Side 1 and Side 2 to +0.5 mm.
   - SP1-950-001 to 100: Image Pos:Sub:Side1 Custom Paper 001 to 100
   - SP1-951-001 to 100: Image Pos:Sub:Side2 Custom Paper 001 to 100

   Did this solve the problem?

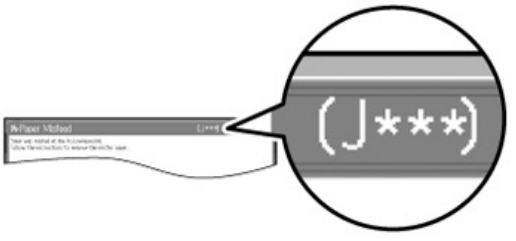
Yes	Finished!
No	Go to Step 6.

6. Is the margin at the leading edge less than 10 mm?

Yes	Repeat Steps 5 and 6.
No	Replace the fusing unit. If the problem persists, consult key operators.

Messages Reporting Paper Misfeeds

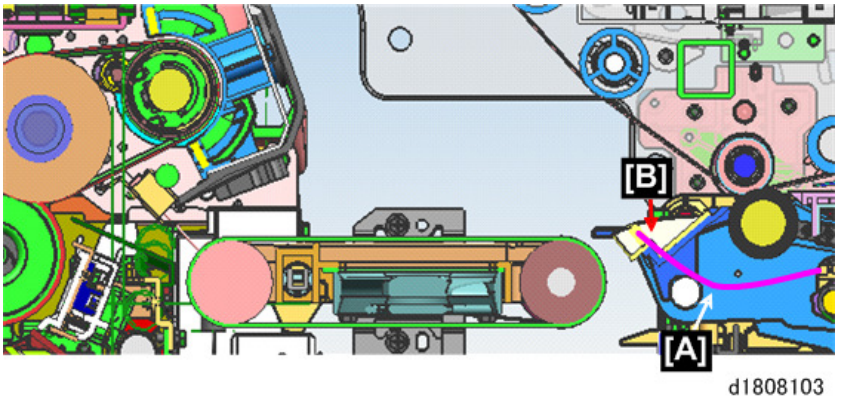
Paper misfeeds are reported by messages prefixed with problem codes. Resolve the problem according to the code.



d1798047

J032 Appears

This problem can occur when using paper thinner than Thickness 1.



d1808103

When very thin paper (less than Thickness 1) feeds, the paper can sag at the at the transfer exit guide plate [A], fail to separate and wrap in the paper transfer unit [B], causing Jam32.

Cause:

This problem can occur when:

- Paper is extremely thin (less than Thickness 1)
- Ambient temperature is high or low
- Ambient humidity is high or low
- Duplex printing on Side 2

Solution:

This problem can be solved by adjusting the leading edge switching and coefficient settings for the leading edge.

1. Is the paper registered in the User Settings for Custom Paper?

Yes	Go to Step 2.
No	Register the paper in the User Settings.

2. Adjust the User Settings for the paper transfer coefficient and switch.
   - (SP 2-813-001 to 100: Leading Edge Corr Coef: 2nd Custom Paper 001 to 100
   - (SP 2-814-001 to 100: Leading Edge Corr Switch: 2nd Custom Paper 001 to 100

   Is the paper transfer leading edge coefficient setting less than 60?

Yes	Restore the coefficient setting to its default setting.
No	Go to Step 5.

3. Is the paper transfer leading edge correction switch at its upper limit?

Yes	Use different paper. If this is not possible, consult key operators.
No	Add 5 points to the setting.

4. Is the problem resolved?

Yes	Finished!
No	Go to Step 5.

5. Does reducing the paper transfer coefficient setting by 5 points solve the problem?

Yes	Finished!
No	Repeat from Step 2.

If J049 Appears

Cause:

Paper is skewed.

Solution:

Depending on the cause of the problem, do one 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.

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

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

Colored paper or transparencies are loaded in the paper tray.

Paper edges may not have been detected correctly. Adjust the color paper edge detection.

1. In Advanced Settings for the custom paper in use, select Color Paper Edge Detection Adjustment and make a note of the present value. (SP1-962-001 to 100: Color Paper Adjustment Custom Paper 001 to 100)
2. Increase the value in Color Paper Edge Detection Adjustment.
3. Print the image. Is the problem resolved?

Yes	Finished!
No	Keep increasing the value until the problem is resolved. If the problem persists even though the setting has reached its maximum value, restore the value noted in step 1 and go to the next step.

4. Decrease the value in Color Paper Edge Detection Adjustment.
5. Print the image. Is the problem resolved?

Yes	Finished!
No	Keep decreasing the value until the problem is resolved. If the problem persists even though the setting has reached its minimum value, restore the value noted in step 1 and go to the next step.

6. In Advanced Settings for the custom paper in use, set Skew Detection to Off. (SP1-955-001 to 100: Skew Detect Custom Paper 001 to 100)
7. Print the image. Is the problem resolved?

Yes	Finished!
No	Consult key operators.

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 the skew detection function.

If custom paper is used

In Advanced Settings for the custom paper in use, set Skew Detection to Off. (SP1-955-001 to 100: Skew Detect Custom Paper 001 to 100)

If custom paper is not used

On the machine operation panel: Paper Feed/ Output group on the Adjustment Settings for Skilled Operators menu, set Skew Detection to Off. (SP1-021-001 to 008: Skew Detect Tray <number>)

The skew detection level is too high.

The skew detection level may be too high. Decrease the skew detection level. (SP1-022-001 to 008: Skew Correction Level Setting Tray <number>

1. On the machine operation panel: Paper Feed/ Output group on the Adjustment Settings for Skilled Operators menu, increase the value in Skew Detection Level. (SP1-022-001 to 008: Skew Correction Level Setting Tray <number>. If you change these settings in plus direction (+), the detection level decreases.
2. Print the image. Is the problem resolved?

Yes	Finished!
No	Keep increasing the value until the problem is resolved. If the problem persists even though the setting has reached its maximum value, go to the next step.

3. On the machine operation panel: Paper Feed/ Output group on the Adjustment Settings for Skilled Operators menu, set Skew Detection to Off. (SP1-021-001 to 008: Skew Detect Tray <number>)

Note

- If the skew detection level is reduced or the skew detection function is disabled, no misfeed report will be displayed. However, this may result in paper skew feeding. If you do not want this result, contact your service representative.
- If the machine wrongly detects skew, see page 91.

If J050 Appears

Cause:

Sheets cannot be positioned properly by paper position adjustment in the paper registration unit.

Solution:

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 shift.

- 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.

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

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

Colored paper or transparencies are loaded in the paper tray.

- Paper edges may not have been detected correctly. Adjust the color paper edge detection.

1. In Advanced Settings for the custom paper in use, select Color Paper Edge Detection Adjustment and make a note of the present value. (SP1-962-001: Color Paper Adjustment Custom Paper 001)
2. Increase the value in Color Paper Edge Detection Adjustment.
3. Print the image. Is the problem resolved?

Yes	Finished!
No	Keep increasing the value until the problem is resolved. If the problem persists even though the setting has reached its maximum value, restore the value noted in step 1 and go to the next step.

4. Decrease the value in Color Paper Edge Detection Adjustment.
5. Print the image. Is the problem resolved?

Yes	Finished!
No	Keep decreasing the value until the problem is resolved. If the problem persists even though the setting has reached its minimum value, restore the value noted in step 1 and go to the next step.

6. In Advanced Settings for the custom paper in use, set Skew Detection to Off. (SP 1-955-001 to 100: Skew Detect Custom Paper 001 to 100)
7. Print the image. Is the problem resolved?

Yes	Finished!
No	Consult key operators.

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

- Load identical sheets in the paper tray.

Shift Tray Full Disable (OFF)

With Custom Paper

In user paper settings for the custom paper in use, disable side-to-side registration. (SP 1-957-001 to 100: Side-to-Side Reg Disable Custom Paper 001 to 100)

With Standard Paper

In Advanced Settings for the custom paper in use, disable side-to-side registration. (SP 1-917-001 to 008: Side-to-Side Reg Disable Tray <number>)

If J080 Appears

Cause:

The paper feed is delayed. This may occur if the paper is slippery.

Solution:

1. In Advanced Settings for the custom paper in use, set Regist Jam Detection with Feed Dir to Off. (SP 1-958-001 to 100: Subscan Reg Jam Detect Custom Paper 001 to 100)
2. Print the image. Is the problem resolved?

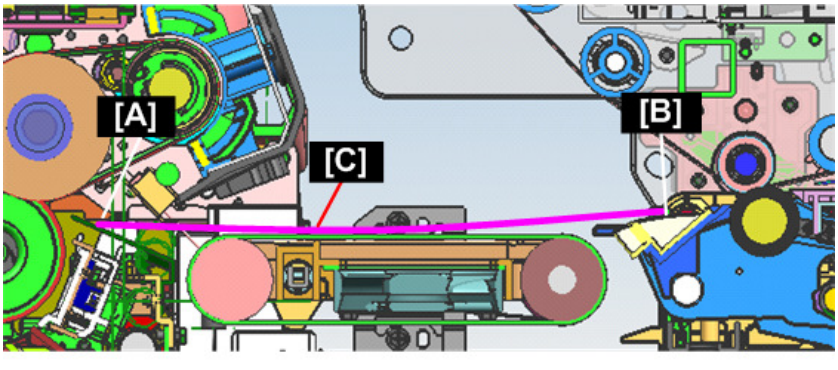
Yes	Finished!
No	Consult key operators.

Note

- When you set Regist Jam Detection with Feed Dir to Off, the printed image may become misaligned at the leading edge.

If J082 Appears

This code signals a jam with paper above Thickness 6.



d1808102

With paper thicker than Thickness 6, when the leading edge of the paper on the fusing guide plate [A] and the trailing edge is on the transfer exit guide [B] both ends of the paper rest on the guide plates, and due to the rigidity of the paper the surface of the paper loses contact with the paper transport belt below

at [C] and the paper cannot feed. Also, coated paper is very slick and can easily slip over the surface of the belt and loses contact with the belt causing a failure to feed (Jam 82).

Cause:

This problem can occur when:

- Using paper sizes B5 LEF, A4 LEF, LT LEF
- Thick paper (above Thickness 6), especially rigid paper or paper with a slick surface like coated paper.

Solution:

This problem can be resolved by switching the paper to short-edge feed (SEF).

1. Is the paper registered with Custom Paper Setting?

Yes	Go to Step 2.
No	Register the paper with User Tools.

2. Can the job be switched from LEF to SEF feed?

Yes	Switch paper orientation to SEF.
No	Go to Step 3.

3. Print the image. Is the problem resolved?

Yes	Finished!
No	Use different paper. If this is not possible, consult key operators.

If J099 Appears

Cause:

Double feeding has occurred.

Solution:

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

Coated or another type of unsupported paper is loaded On the machine operation panel's tray.

- Load paper not supported by the machine's paper tray (Trays 1-3) in the wide LCT or another paper tray that supports the paper.

Sheets are stuck to each other.

- Fan the paper before loading it to loosen the sheets.

The edges of the sheets are rough.

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

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.

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

Remove the fragment. (page 128)

The correct amount of paper buckle has not been specified.

Adjust the degree of paper arching at the registration gate.

If using paper of Paper Weight 1 to 4

1. On the machine operation panel: Image Position group on the Adjustment Settings for Skilled Operators menu, change the value in Adjust Registration Paper Buckle. (SP1-004-1 to 3: Reg. Buckle Adjust: Tray 1 to 3).

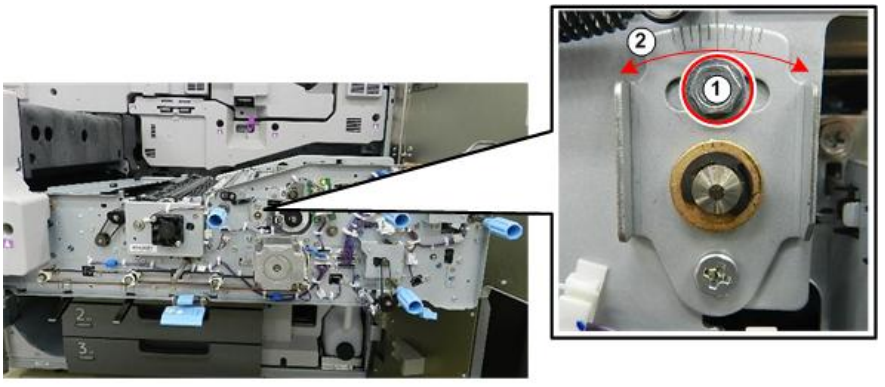
If using paper of Paper Weight 5 to 7

1. On the machine operation panel: group on the Adjustment Settings for Skilled Operators > Image Position > Adjust Registration Paper Buckle (Thick Paper) > Change the value. (SP1-005-001 to 3: Reg. Buckle Adj.: Thick 5 to Thick 7).
2. Increase (+) or decrease (-) 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, do the procedure below.

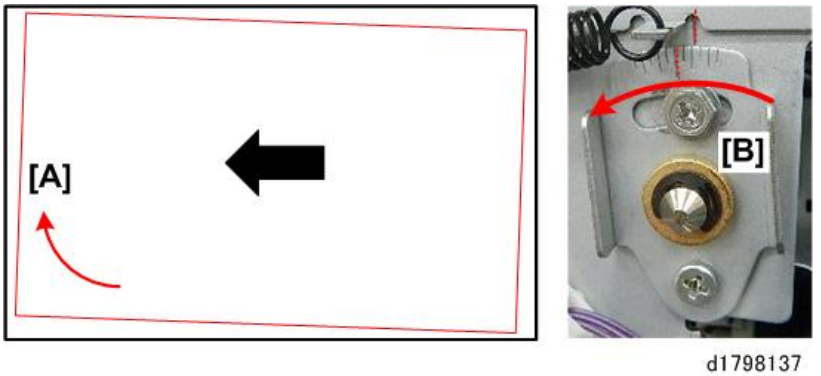
Leading Edge Shift Unit Manual Adjustment

1. Do SP2109-003 Pattern #14, and then print a Trimming Area pattern on both sides of an A3 sheet of paper.
2. Pull out the drawer.
3. Remove the right front cover of the drawer.



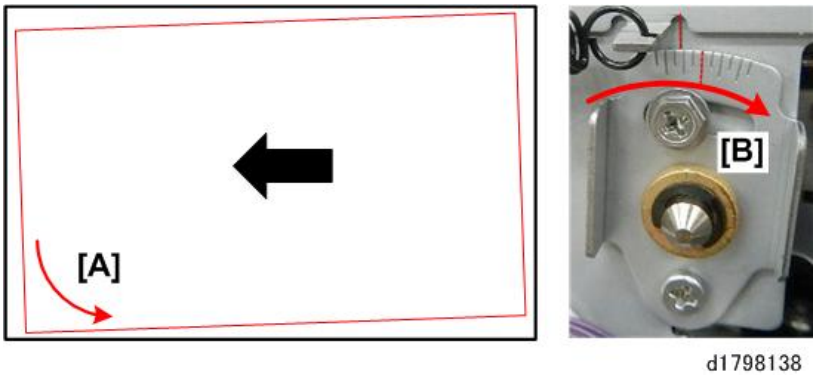
d1798136

4. Note and record the current setting at ①.
5. Loosen screw ① and then move bracket ② to either the left or the right.



d1798137

6. If the trimming area pattern [A] is skewed to the rear, move bracket [B] to the left.



d1798138

7. If the trimming are pattern [A] is skewed to the front, move bracket [B] to the right.
8. Do more trimming area pattern prints and adjustments until the sides of trimming area pattern are perfectly parallel with the edges of the paper.
9. If the problem persists, consult local staff and key operators.

The skew detection level is too low.

Increase the skew detection level.

1. On the machine operation panel: group on the Adjustment Settings for Skilled Operators > Paper Feed/ Output > Skew Detection Level > Reduce the value. (SP1-022-001 to 008: Skew Correction Level Setting Tray<number>)
2. Reduce the value to increase the detection level.
3. This will allow the machine to report a paper misfeed and stop printing even for a slight skew.

Wrong Detection of Skew

Depending on the cause of the problem, do one of the following if 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 in use, set Skew Detection to Off. (SP 1-955-001 to 100: Skew Detect Custom Paper 001 to 100)

<If custom paper is not used>

On the machine operation panel: Paper Feed/ Output group on the Adjustment Settings for Skilled Operators menu, set Skew Detection to Off. (SP 1-021-001 to 008: Skew Detect Tray <number>)

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:

Is the paper feed roller covered with paper dust?

- Check the paper feed rollers of the LCT A3/A4, Multi Bypass Unit, and Cover Interposer Tray if they are installed.
- 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 128.

1

Have you fanned the paper sufficiently to remove static cling?

- Check the paper of the LCT A3/A4, Multi Bypass Unit, and Cover Interposer Tray if they are installed.
- Double feeding may result if the paper is not ruffled properly.
- Remove the paper, ruffle it, and reload it.

Is the Pickup Assist setting enabled?

This is for the LCT A3 only. If the Pickup Assist function operates too much, it may cause double feeding with coated paper. By disabling the Pickup Assist setting, you can prevent double feeding.

If custom paper is used

In Advanced Settings for the custom paper in use, set Pickup Assist Setting to Off. (SP 1-977-001 to 100: LCT Pickup Assist ON/OFF Custom Paper 001 to 100)

If custom paper is not used

On the machine operation panel: Paper Feed/ Output group on the Adjustment Settings for Skilled Operators menu, set Pickup Assist Setting to Off. (SP 1-923-001 to 007: LCT Pickup Assist ON/OFF A3LCT Tray <number>)

Special or coated paper is used (LCT A3 only)

- Is the airflow strong enough?

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

  If custom paper is used

  In Advanced Settings for the custom paper in use, increase the value in Adjust Wide LCT Fan Level. (SP 1-975-001 to 100: LCT Tray Fan Duty Adjustment Custom Paper 001 to 100)

  If custom paper is not used

  On the machine operation panel: Adjustment Settings for Skilled Operators > Paper Feed/ Output > Adjust Wide LCT Fan Level > Increase the setting. (SP 1-920-001: LCT Tray Fan Duty Adjustment A3LCT Tray <number>)

- Is the tab sheet holder attached?

  Attach the tab sheet holder to prevent air from leaking at the trailing edge of the paper. This improves paper separation.

Wrong Detection of Double Feeding

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

Paper with high paper-to-paper adhesion is used.

Paper with high paper-to-paper adhesion may be wrongly detected as double feeding.

Disable the double feeding detection function.

If custom paper is used

1. In Advanced Settings for the custom paper in use, set Double Feed Detection to Off. (SP 1-956-001 to 100: Dbl-Feed Detect Custom Paper 001 to 100)

If custom paper is not used

1. On the machine operation panel: Adjustment Settings for Skilled Operators > Paper Feed/ Output > Double Feed Detection > Set to Off. (SP 1-302-001 to 007: Dbl-Feed Detect Tray <number>)

An envelope is being used.

The seams of envelopes may cause double feeds to be erroneously detected.

Disable the double feed detection.

If custom paper is used

1. In Advanced Settings for the custom paper in use, set Double Feed Detection to Off. (SP 1-956-001 to 100: Dbl-Feed Detect Custom Paper 001 to 100)

If custom paper is not used

1. On the machine operation panel: Adjustment Settings for Skilled Operators > Paper Feed/ Output > Double Feed Detection > Set to Off. (SP 1-302-001 to 007: Dbl-Feed Detect Tray <number>)

The double feed detection sensor is soiled.

- If the double feed detection sensor is soiled with paper dust or other fragments, it may wrongly detect double feeding.
- Clean the double feed detection sensor.

Note

- Disabling double feed detection may reduce print image quality or cause blank sheets to be delivered.

Failure to Feed

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

Have you fanned the paper to remove static cling?

- Not fanning the paper properly may cause paper misfeeding.
- Remove the paper, fan it, and reload it.

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.

Special or coated paper is used.

- Is the airflow powerful sufficient?

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

  If custom paper is used

  1. In Advanced Settings for the custom paper in use, increase the value in Adjust Wide LCT Fan Level. (SP 1-976-001 to 100: LCT Tray Fan ON/OFF Custom Paper 001 to 100)

  If custom paper is not used

  1. On the machine operation panel: Paper Feed/ Output group on the Adjustment Settings for Skilled Operators menu, increase the value in Adjust Wide LCT Fan Level. (SP 1-920-001 to 003: LCT Tray Fan Duty Adjustment A3LCT Tray <number>)

- Is the tab sheet holder attached?

1. Attach the tab sheet holder to prevent air from escaping at the trailing edge of the paper. This improves paper separation.

- Is the paper feed roller covered with paper dust?

  Paper dust on the surface of coated 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. For details about cleaning the paper feed roller of the wide LCT, see page 128.

An envelope is used.

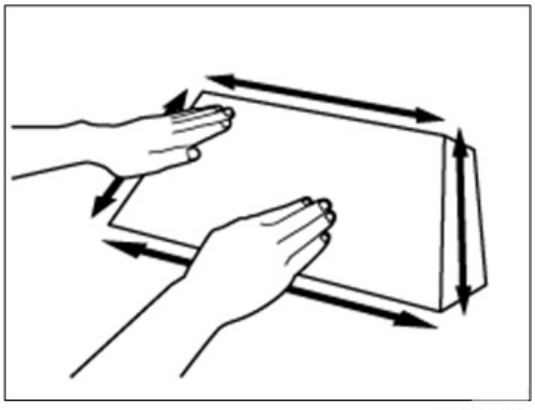
Depending on the type of envelope, air trapped inside may be squeezed out when the paper feed roller picks up the envelope and cause slippage leading to a misfeed.

- Is the wide LCT fan disabled?

1. In Advanced Settings for the custom paper in use, set Wide LCT Fan Setting to Off. (SP 1-976-001 to 100: LCT Tray Fan ON/OFF Custom Paper 001 to 100)

- Have you flattened the envelope?

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

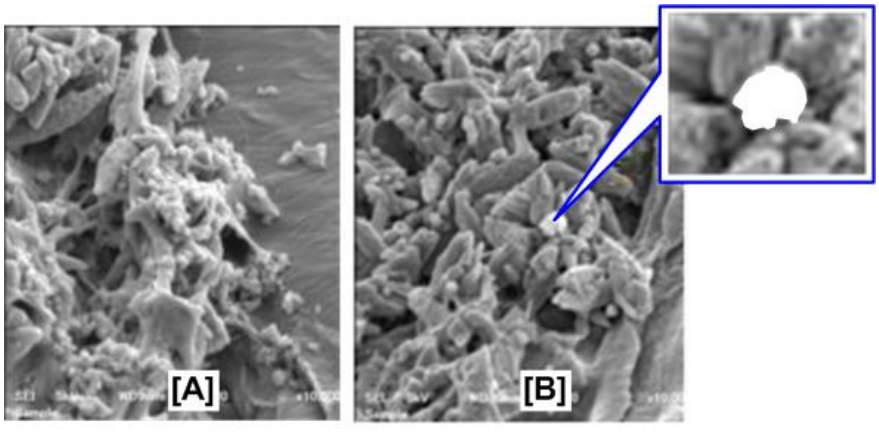


d1790848

Failure to Feed: Worn Rollers

Loss of Friction on Roller Surfaces

Paper with a high ash content (calcium carbonate) can cause paper feed jams in the paper feed units of the main machine and LCIT RT5070, RT5080. In the photo below, [A] shows normal paper fibers and [B] shows paper fibers contaminated by extremely fine calcium carbonate particles.



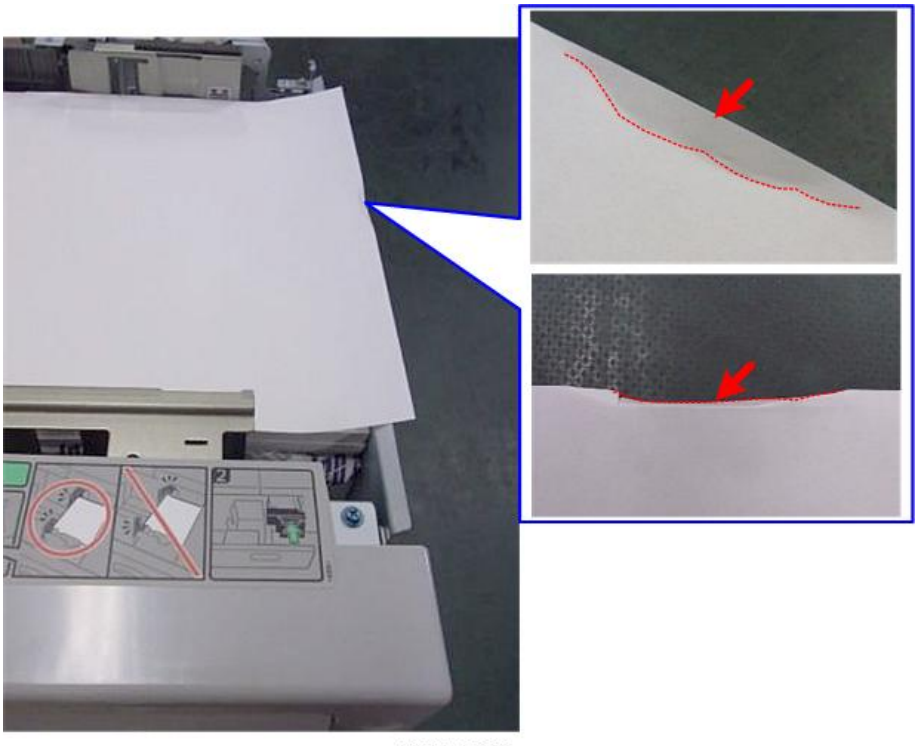
m263b4006

These particles are extremely small and easily transferred from the paper to roller surfaces. This causes the roller surfaces to become slick so they no longer have enough friction to grip the paper for efficient paper feeding.

Signs of this problem are:

- Paper fails to feed and starts causing frequent jams at 50K service life of the rollers
- Rollers appear smooth and have not reached the end of service life

- Paper dust appears powdery, not grainy
- Leading edges of paper appears damaged as shown below



m263b4002

Main Machine

Cause

Paper dust adheres to the surfaces of the rollers in the paper feed units of the main machine, the rollers become smooth, and then slip on the surface of the paper. The paper fails to feed out of the paper tray.

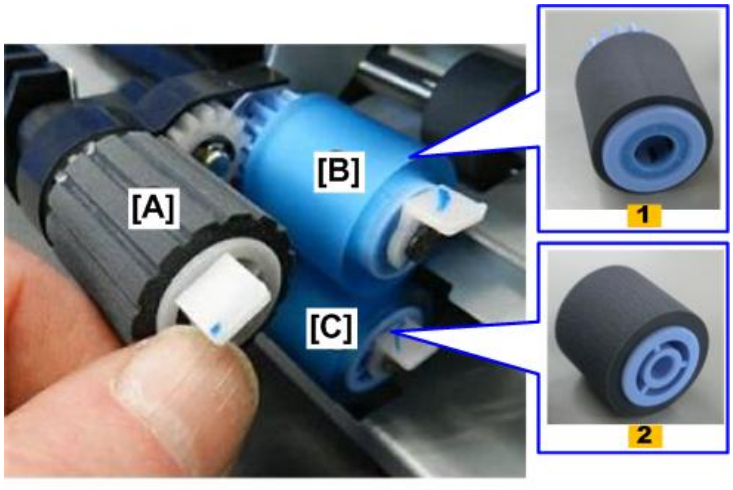
Solution

Two rollers can be replaced with EPDM rollers to improve feed performance. If the customer is using paper with a high ash content, replace the feed and reverse rollers in the paper feed units.

Description	Q'ty
Paper Feed Roller	1
Paper Separation Roller	1

The photo shows the configuration of the rollers in each paper feed unit. Only two of the three rollers need to be replaced.

No.	Roller	Comment
[A]	Pick-up roller	Do not replace
[B]	Feed roller	Replace with EPDM Roller [1]
[C]	Reverse (separation) roller	Replace with EPDM Roller [2]



m263b4003

LCIT RT5070/RT5080

Cause

Paper dust adheres to the surfaces of the rollers in the LCIT paper feed units, the rollers become smooth, and then slip on the surface of the paper. The paper fails to feed out of the paper tray.

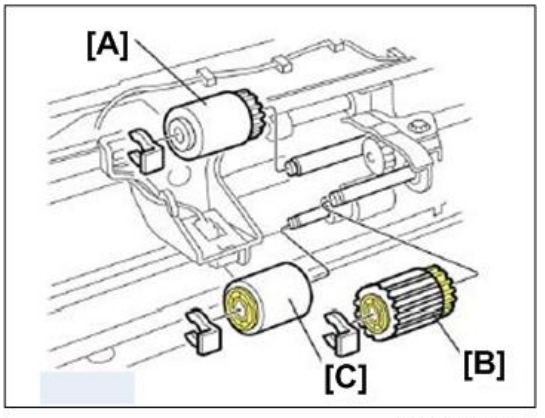
Solution

Three rollers can be replaced with EPDM rollers to improve feed performance. If the customer is using paper with a high ash content, replace the pick-up roller, feed roller, and separation roller in the paper feed units.

Description	Q'ty
Pick-up roller	1
Feed roller	1
Separation roller	1

The photo shows the configuration of the rollers in each paper feed unit. Three rollers need to be replaced:

No.	Roller	Comment
[A]	Pick-up roller	Replace with EPDM pick-up roller
[B]	Feed roller	Replace with EPDM feed roller
[C]	Reverse (separation) roller	Replace with EPDM separation roller



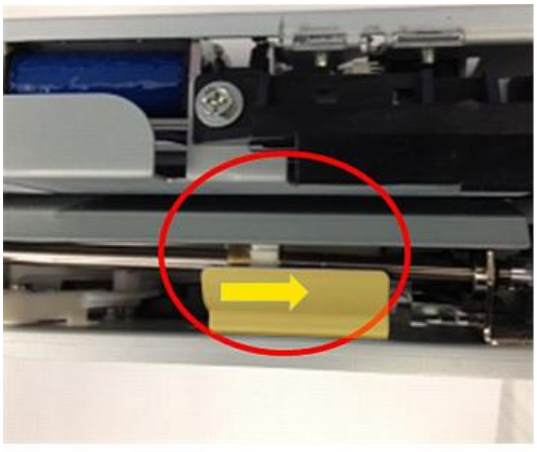
m263b4007

Note

- Two rollers are replaced in each paper feed unit of the main machine.
- Three rollers are replaced in each paper feed unit of the LCITs.

After Roller Replacement

After installing the EPDM rollers, sliding the reverse roller gear 10 mm toward the front can improve paper feed.



m263b4004

Important

- **The service life of each EPDM roller is 300K. This is shorter than the service life of the urethane rollers (1000K). Replace the standard urethane rollers with the EPDM rollers only if the customer is experiencing serious paper feed problems.**

If no-feed jams start to occur before the EPDM rollers have reached the end of their service life, clean the rollers.

1. Remove the three rollers (pick-up, feed, and separation roller).
2. Moisten a clean cloth with some water.
3. Slowly wipe the surface of each roller in the direction of the arrows as shown to remove the paper dust.

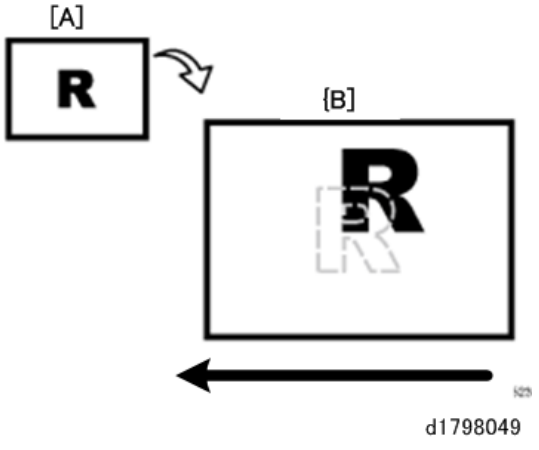
m263b4005

4. Allow the rollers to dry completely before you re-install them in the machine.

Paper Feed Problems Affecting Image Quality

1

The Image Is Positioned Incorrectly



[A]	Original
[B]	Output

Cause:

Depending on the paper thickness, floppiness, edge roughness, and curl, the image may fall out of alignment.

Solution:

Adjust the image position.

If custom paper is used

1. In Advanced Settings for the custom paper in use, adjust the image position.

Side 1

- To adjust the position vertically, change the value in Adj Image Position of Side1 With Feed. (SP 1-952-001 to 100: Image Pos:Main:Side1 Custom Paper 001 to 100)
- To adjust the position horizontally, change the value in Adj Image Position of Side1 Across Feed. (SP 1-950-001 to 100: Image Pos:Sub:Side1 Custom Paper 001 to 100)

Side 2

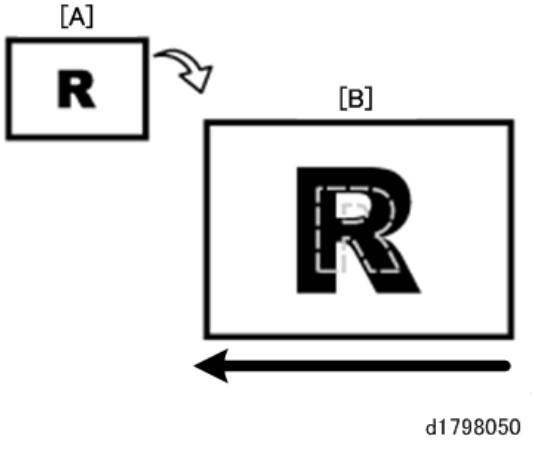
- To adjust the position vertically, change the value in Adj Image Position of Side2 With Feed. (SP 1-953-001 to 100: Image Pos:Main:Side2 Custom Paper 001 to 100)
- To adjust the position horizontally, change the value in Adj Image Position of Side2 Across Feed. (SP 1-951-001 to 100: Image Pos:Sub:Side2 Custom Paper 001 to 100)

If custom paper is not used

1. On the machine operation panel: group on the Adjustment Settings for Skilled Operators > Image Position > Adjust the image position.

- To adjust the position horizontally, change the value in Adjust Image Position With Feed Direction. (SP1-001-001 to 008: Lead Edge Reg Thick <number>)
- To adjust the position vertically, change the value in Adjust Image Position Across Feed Direction. (SP1-003-001 to 008: Side-to-Side Reg Tray <number>
- If the problem persists even though you have adjusted the setting to its maximum and minimum values, consult key operators.

Image Scaling Error on the Side 1 of Paper



[A]	Original
[B]	Output

Cause:

An image scaling error may occur because of expansion or contraction of the paper.

Solution:

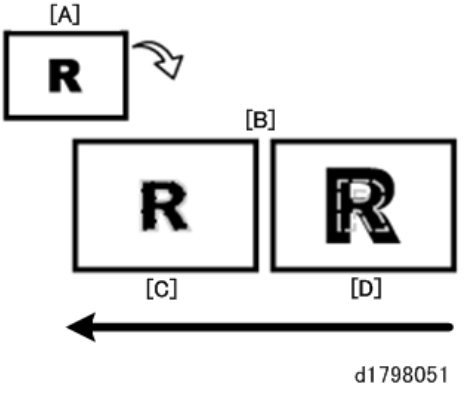
Adjust the image scaling.

1. In Advanced Settings for the custom paper in use, adjust the image scaling.
   - To adjust the horizontal scaling, change the value in Adj Magnification of Side1 Across Feed. (SP 2-950-001 to 100: Face Main Mag set & Adj Custom Paper 001 to 100)
   - To adjust the vertical scaling, change the value in Adj Magnification of Side1 With Feed. (SP 2-951-001 to 100: Face Sub Mag set & Adj Custom Paper 001 to 100)
2. Press [+] to increase the scaling and [-] to decrease it.

3. Print the image. Is the problem resolved?

Yes	Finished!
No	If the problem persists even though you have adjusted the setting to its maximum and minimum values, consult key operators.

Image Scaling Error on the Side 2 of Paper



[A]	Original
[B]	Output
[C]	Side 1
[D]	Side 2

Cause:

An image scaling error on the side 2 of the paper may occur because the paper expands or contracts after the image on the side 1 of the paper has been fused.

Solution:

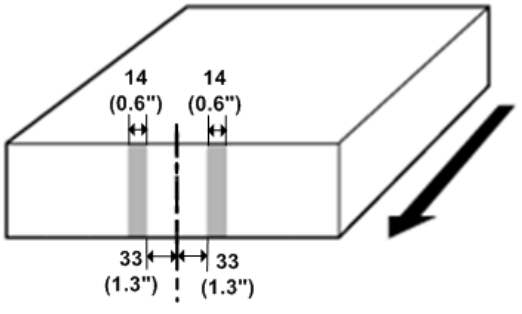
Adjust the scaling for the side 2 of the paper and minimize the difference in print size between the side 1 and the side 2.

1. In Advanced Settings for the custom paper in use, adjust the image scaling.
    - To adjust the horizontal scaling, change the value in Adj Magnification of Side2 Across Feed. (SP 2-952-001 to 100: Verso Main Mag set & Adj Custom Paper 001 to 100)
    - To adjust the vertical scaling, change the value in Adj Magnification of Side2 With Feed. (SP 2-953-001 to 100: Verso Sub Mag set & Adj Custom Paper 001 to 100)
2. Press [+] to increase and [-] to decrease the scaling.

3. Print the image. Is the problem resolved?

Yes	Finished!
No	Consult key operators.

Paper Edges Are Dirty (1)



d1798052

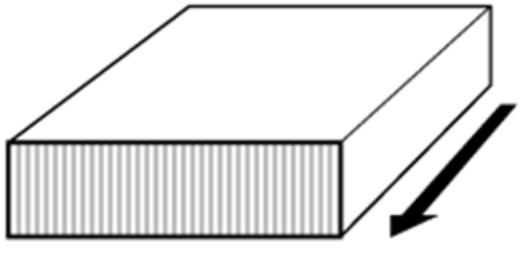
Cause:

The exit rollers in the drawer are soiled.

Solution:

Clean the exit rollers in the drawer.

Paper Edges Are Dirty (2)



d1798053

Cause:

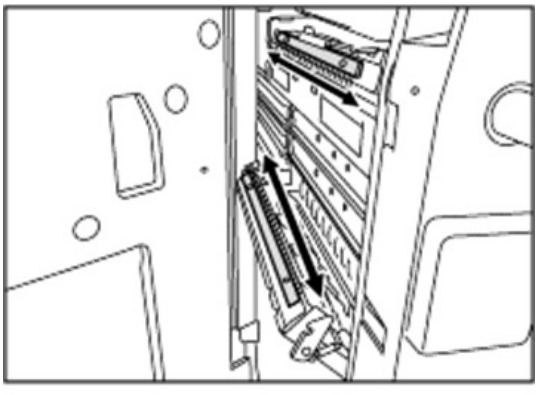
The antistatic brushes in the exit transport and invert transport of the drawer are soiled or the anti-static brushes in Finisher SR5050/SR5060 are soiled.

Solution:

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

Procedure 1

1. Clean the antistatic brushes in the exit transport and inverter transport of the drawer with a blower brush.



d1798054

Procedure 2

Note

- Apply this procedure only when: 1) A back-curl is required to flatten curls with the decurl unit, and 2)
- Sheets are delivered with their printed side facing up in the post-processing machine.

1. On the machine operation panel: Adjustment Settings for Skilled Operators > Paper Feed/ Output > Adjust Paper Curl > Check the current decurl setting (Off, Weak, or Strong). (SP 1-906-001 to 007: De-curler Setting Tray <number> :Paper Path Selection)
2. Is it "Adjust Convex Curl: Weak" or "Adjust Concace Curl: Strong"?

Yes	Go to the next step.
No	Consult key operators.

3. Is this setting essential?

Yes	Go to the next step.
No	Set Adjust Paper Curl to "Adjust Convex Curl: Off" (set it back to the default value).

4. Are the sheets delivered with their printed side facing up.

Yes	Go to the next step.
No	Contact your service representative.

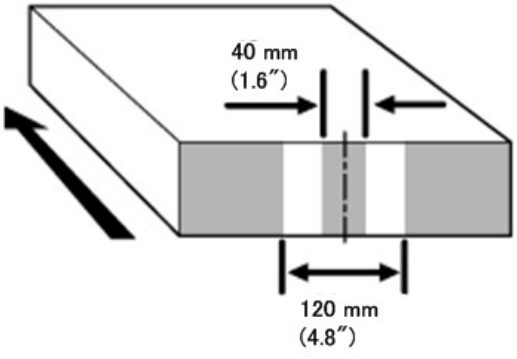
5. Is this setting essential?

Yes	Consult key operators.
No	Change the setting so that the sheets are delivered with their printed side facing down.

6. Print the image. Is the problem resolved?

Yes	Finished!
No	Consult key operators.

Paper Edges Are Dirty (3)



d1798055

Cause:

The paper feed speed of the decurl unit is too high.

Note

- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details see "3. Custom Paper Settings for Administrator" in the TCRU "Adjustment Item Menu Guide"
- Decreasing the paper feed speed of the decurl unit may result in creases, scratches, or paper jams if thin paper is used.

Solution:

You can lessen the problem by decreasing the paper feed speed of the decurl unit.

1

1. On the machine operation panel: Adjustment Settings for Skilled Operators > Paper Feed/ Output > Adjust Paper Curl > Check the decurl setting (Off, Weak, or Strong) in. (SP 1-906-001 to 007: De-curler Setting Tray <number> :Paper Path Selection)
2. In Advanced Settings for the custom paper in use, adjust the paper feed speed of the decurl unit.
   - If the degree of decurling is set to "Off", reduce the value in Decurler Feed Speed Adj: Curl Adj Off by 0.5%. (SP 1-959-001 to 100: Line Speed Adjust:Default Pos Custom Paper 001 to 100)
   - If the degree of decurling is set to "Weak", reduce the value in Decurler Feed Speed Adj: Curl Adj Weak by 0.5%. (SP 1-960-001 to 100: Line Speed Adjust:Pos.1 Custom Paper 001 to 100)
   - If the degree of decurling is set to "Strong", reduce the value in Decurler Feed Speed Adj: Curl Adj Strg by 0.5%. (SP 1-961-001 to 100: Line Speed Adjust:Pos.2 Custom Paper 001 to 100)
3. Print the image. Is the problem resolved?

Yes	Finished!
No	Keep decreasing the value by 0.5% until the problem is resolved. If the problem persists even though the setting has reached its minimum value, consult key operators.

Scratches, Streaks, or Vertical Creases Appear on the Image

Cause:

The paper feed speed of the exit motor, switchback entrance, or switchback exit is too high or too low.

Solution:

If scratches or streaks appear on the side 2 of the paper

You can lessen the problem by decreasing the paper feed speed.

1. In Advanced Settings for the custom paper in use, adjust the paper feed speed for delivery.

   Depending on the type of printing, specify one of the following:
   - For one-sided printing, reduce the value in Exit Motor Feed Speed Adjustment by 0.1%. (SP 1-964-001 to 100: Exit Motor Spd: Fine Adj Custom Paper 001 to 100)
   - For duplex printing, reduce the value in Switchback Entrance Feed Speed Adj by 0.1%. (SP 1-965-001 to 100: Invert Entrance Spd: Fine Adj Custom Paper 001 to 100)
   - For one-sided printing (delivery of inverted paper), reduce the value in Switchback Exit Feed Speed Adj by 0.1%. (SP 1-966-001 to 100: Invert Exit Spd: Fine Adj Custom Paper 001 to 100)
2. Print the image. Is the problem resolved?

Yes	Finished!
No	Keep decreasing the value by 0.1% until the problem is resolved. If the problem persists even though you have decreased the value by 1.0%, consult key operators.

If scratches or streaks appear on the side 1 of the paper

You can lessen the problem by increasing the paper feed speed.

1. In Advanced Settings for the custom paper in use, adjust the paper feed speed for delivery.

   Depending on the type of printing, specify one of the following:

   - For one-sided printing, increase the value in Exit Motor Feed Speed Adjustment by 0.1%. (SP 1-964-001 to 100: Exit Motor Spd: Fine Adj Custom Paper 001 to 100)
   - For duplex printing, increase the value in Switchback Entrance Feed Speed Adj by 0.1%. (SP 1-965-001 to 100: Invert Entrance Spd: Fine Adj Custom Paper 001 to 100)
   - For one-sided printing (delivery of inverted paper), increase the value in Switchback Exit Feed Speed Adj by 0.1%. (SP 1-966-001 to 100: Invert Exit Spd: Fine Adj Custom Paper 001 to 100)

2. Print the image. Is the problem resolved?

Yes	Finished!
No	Keep increasing the value by 0.1% until the problem is resolved. If the problem persists even though you have increased the value by 1.0%, consult key operators.

Decurling Results in Scratches, Streaks, or Creases

Cause:

The paper feed speed of the decurl unit is too high or too low.

Solution:

If scratches or streaks appear on the side 2 of the paper or continuous noise results

You can lessen the problem by decreasing the paper feed speed of the decurl unit.

1. On the machine operation panel: Adjustment Settings for Skilled Operators > Paper Feed/ Output > Adjust Paper Curl > Check the current decurl setting (Off, Weak, or Strong) in. (SP 1-906-001 to 007: De-curler Setting Tray <number> :Paper Path Selection)
2. In Advanced Settings for the custom paper in use, adjust the paper feed speed of the decurl unit.

- If the degree of decurling is set to "Off", reduce the value in Decurler Feed Speed Adj: Curl Adj Off by 0.5%. (SP 1-959-001 to 100: Line Speed Adjust: Default Pos Custom Paper 001 to 100)
- If the degree of decurling is set to "Weak", reduce the value in Decurler Feed Speed Adj: Curl Adj Weak by 0.5%. (SP 1-960-001 to 100: Line Speed Adjust:Pos.1 Custom Paper 001 to 100)
- If the degree of decurling is set to "Strong", reduce the value in Decurler Feed Speed Adj: Curl Adj Strg by 0.5%. (SP 1-961-001 to 100: Line Speed Adjust:Pos.2 Custom Paper 001 to 100)

3. Print the image. Is the problem resolved?

Yes	Finished!
No	Keep decreasing the value by 0.5% until the problem is resolved. If the problem persists even though the setting has reached its minimum value, consult key operators.

If scratches, streaks, or creases appear on the side 1 of the paper

You can lessen the problem by increasing the paper feed speed of the decurl unit.

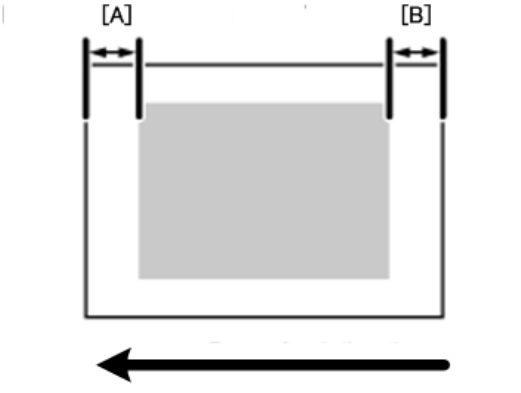
1. On the machine operation panel: Adjustment Settings for Skilled Operators > Paper Feed/ Output > Adjust Paper Curl > Check the current decurl setting (Off, Weak, or Strong) in. (SP 1-906-001 to 007: De-curler Setting Tray <number> :Paper Path Selection)
2. In Advanced Settings for the custom paper in use, adjust the paper feed speed of the decurl unit.
   - If the degree of decurling is set to "Off", increase the value in Decurler Feed Speed Adj: Curl Adj Off by 0.5%. (SP 1-959-001 to 100: Line Speed Adjust:Default Pos Custom Paper 001 to 100)
   - If the degree of decurling is set to "Weak", increase the value in Decurler Feed Speed Adj: Curl Adj Weak by 0.5%. (SP 1-960-001 to 100: Line Speed Adjust:Pos.1 Custom Paper 001 to 100)
   - If the degree of decurling is set to "Strong", increase the value in Decurler Feed Speed Adj: Curl Adj Strg by 0.5%. (SP 1-961-001 to 100: Line Speed Adjust:Pos.2 Custom Paper 001 to 100)
3. Print the image. Is the problem resolved?

Yes	Finished!
No	Keep increasing the value by 0.5% until the problem is resolved. If the problem persists even though the value has reached its maximum value, consult key operators.

The Leading/Trailing Edge Margin Is Long

Cause:

In some custom paper presets, the leading/trailing edge margins are wide enough to prevent paper jams.



[A]	Leading Edge Margin
[B]	Trailing Edge Margin

Solution:

Adjust the leading/trailing edge margins.

1. In Advanced Settings for the custom paper in use, reduce the value by 0.5 mm in Adjust Erase Margin of Leading Edge. (SP 2-122-001 to 100: Erase Margin Adj Leading Edge Custom Paper 001 to 100)
2. Reduce the value by 0.5 mm in Adjust Erase Margin of Trailing Edge.
3. Print the image. Is the problem resolved?

Yes	Finished!
No	Consult key operators. If this results in a paper jam during duplex printing, restore the previous setting.

Note

- 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.

Curling

To eliminate curling without using the decurl unit, lower the heat roller temperature.

Lowering the temperature may result in:

- Unsatisfactory fusing
- Reduced glossiness
- Smeared for halftone images on uncoated paper

1. In Advanced Settings for the custom paper in use, select Fusing Heat Roller Temperature Adj and reduce the value by 5 °C. (SP 1-984-001 to 100: Htg Roller Temp Setting Custom Paper 001 to 100)
2. Print a full-page solid-fill image. Is the problem resolved?

Yes	Finished!
No	Further reduce the value by 5 °C until the problem is resolved. If the problem persists, consult key operators.

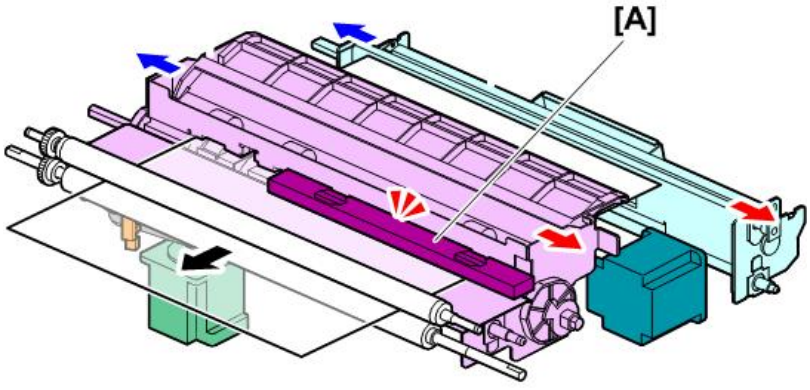
Note

- To use the decurl unit, specify Adjust Paper Curl On the machine operation panel: Paper Feed/ Output group on the Adjustment Settings for Skilled Operators menu. (SP 1-906-001 to 007: De-curler Setting Tray <number> :Paper Path Selection)

JAM 49, JAM 50

Incorrect settings for color paper can cause problems with skew and shift in the registration unit. When this happens the machine will issue JAM 49 (Over Skew or JAM 50 (Over Shift).

The Leading Edge (LE) Shift Unit is equipped with a CIS (Contact Image Sensor) [A] that detects the reflection of the leading edge of every sheet of paper as it passes.



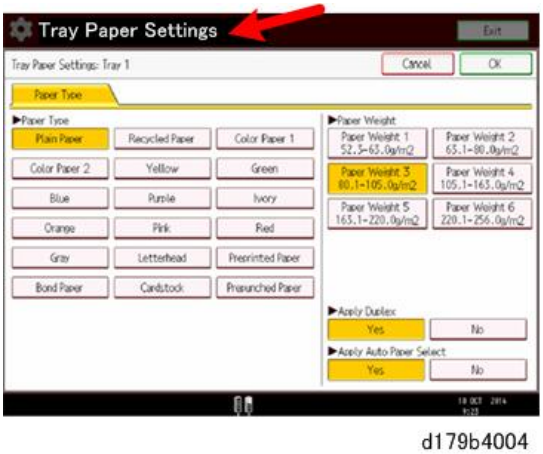
d179b4003

The luminance of the reflection is determined by the color of the paper, so it is very important that the color setting for the paper in use is correct. If the color setting is wrong, this could cause incorrect CIS readings which can cause paper jams.

Available paper types

A variety of paper types that can be selected on Tray Paper Settings dialog box:

Plain Paper • Recycled Paper • Color Paper 1 • Color Paper 2 • Green • Blue • Purple • Ivory • Orange • Pink • Red • Gray • Letterhead • Preprinted Paper • Bond Paper • Cardstock • Label Paper • Translucent Paper • OHP (Transparency) • Pre-punched Paper • Tab Stock



d179b4004

Important

- A paper type can be selected for each tray.
- If OHP Transparency is selected, this automatically cancels side-to-side registration.

CIS LED light intensity

The system determines the CIS LED light intensity based on the type of paper selected, as shown in the table below. "Magnification" in the table denotes the LED light intensity.

Mode	Magnification	Paper Type
Mode 1	1.52	Plain Paper, Recycled Paper Yellow, Letterhead, Preprinted Paper, Bond Paper, Cardstock, Label Paper, Translucent Paper, Prepunched Paper, Tab Stock
Mode 2	2.01	Color Paper 1, Orange, Pink, Ivory, Gray
Mode 3	3.53	Color Paper 2, Blue, Red, Green, Purple, Tracing Paper

Note

- If type of paper in use is not included list of options in the Tray Paper Settings dialog box, refer to the table above and choose the closest paper type. This will apply the most suitable CIS LED light intensity for best results.

Other Solutions

Here are some suggestions:

- Specify a darker paper color, for example, change to Color Paper 1 or to Color Paper 2.
- If the job is printed on of different colors, specify the darkest color.
- If the problem occurs even with the Mode 3 setting (Color Paper 2), increase the CIS LED light intensity by following the procedure below.

Adjustments

1. Go into the SP mode and adjust the settings of SP1916-003.

   1.00 to 5.00/3.53 (default)/0.001 Step

2. Try Advanced Settings

   Login > Paper Setting> Edit Custom Paper > Select the paper in use > Change > Under “Advanced Settings” > Select 06 (Color Paper Edge Detection Adjustment).

3. Do not select a value that is too high.

   Important

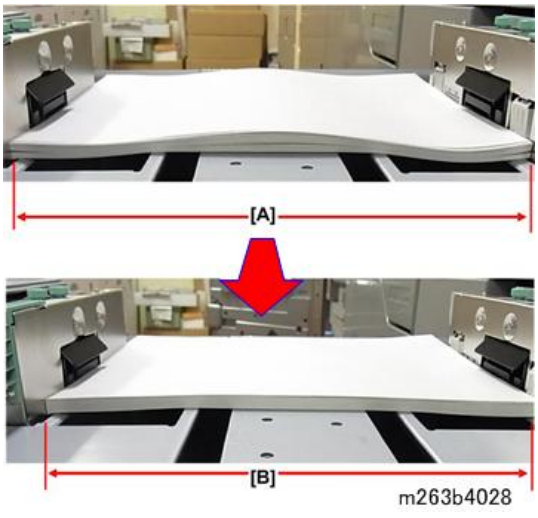
   - **Doing so may cause jams because the CIS detects diffused reflection from the surrounding components, such as the guide plates, for example.**
   - **The high value could also shorten the CIS service life.**

Vacuum Feed LCIT

Frequent Double Feeds, Failure to Feed

Cause: Side Fence, Rear Fence Set Incorrectly

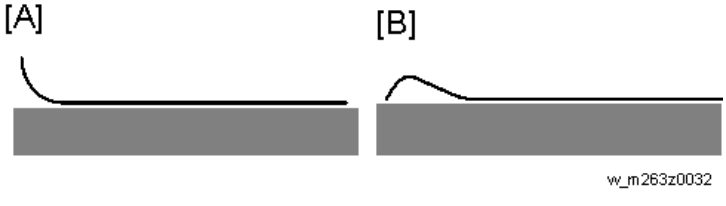
Paper with excessive buckle [A] can cause double-feeding, so adjust the fences to the correct positions so the paper lies flat [B].



Cause: Paper Curling

[A]	Concave curl. Paper exits with curve down.
[B]	Convex curl. Paper exits with curve up.

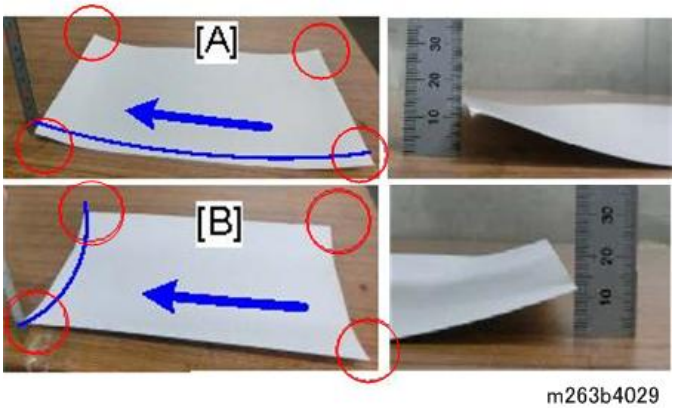
In either case if the curl is excessive (not within specification), this can cause double-feeding.



Solution: Measure and correct curl.

Measuring amount of curl

1. Take a sheet of paper causing the problem and lay it on a flat surface.
2. Set a scale at each corner of the paper and measure the amount of curl at each of the four corners. SEF curl is shown at [A], and LEF curl is shown at [B].



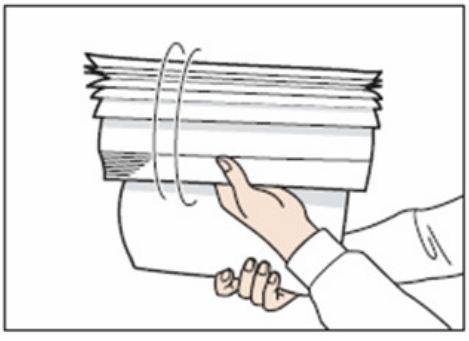
Allowed Amount of Curl

SEF Curl	
52 g/m2 to 300 g/m2	Concave curl: +5mm Convex curl: -5mm
LEF Curl	
52 g/m2 to 300 g/m2	Concave curl: +8mm Convex curl: -8mm

Correcting Curl

1. Lay the stack on a flat surface, opposite to the direction of curl.
2. Bend the edge up as shown to straighten it the edge.

3. Repeat the procedure for the other end of the stack.
4. Fan the paper before loading it to loosen the sheets. Paper sticks together if it has excessive static electricity, burrs (due to edge cutting) or is damp.



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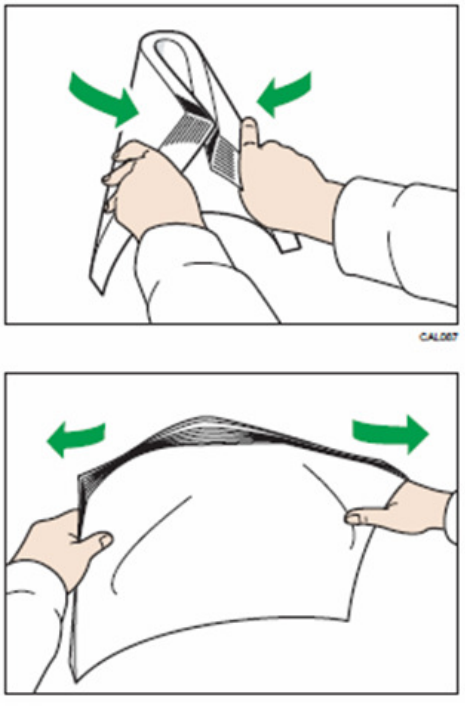
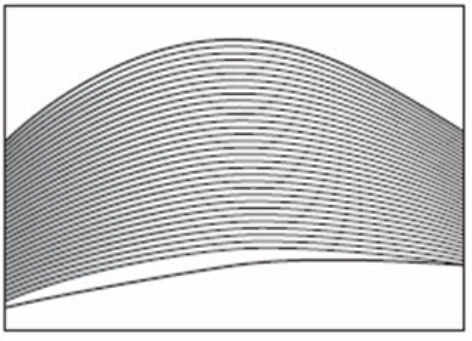
5. Hold the paper by the ends and slowly bend it several times.



d194d6103

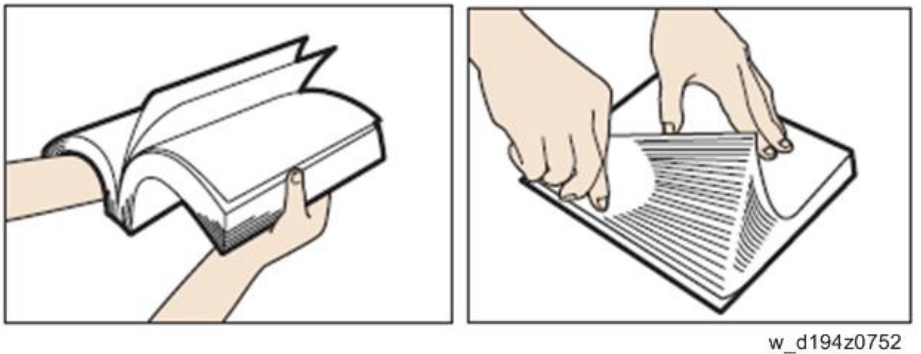
6. Make sure plenty of air gets in between the sheets.



d194d6104

If the above method is difficult, fan the paper in the following way.

- Hold the paper by the edge and fan it by flipping through the sheets. Repeat this fanning for all four sides.
- Place the paper on a flat surface and press down the edges.
- Fan it by flipping through the sheets. Repeat this fanning for all four sides.



w_d194z0752

J099 Appears (Vacuum Feed LCIT)

This problem is caused by a variety of factors. Implement the following measures.

1. Create a new custom paper setting.
2. In Custom Paper Settings, set 35: [Blower Fan] to "initial value +10%." Problem solved?

Yes	Finished!
No	Go to next step.

3. In Custom Paper Settings, set 35: [Blower Fan] to "initial value +20%." Problem solved?

Yes	Finished!

No	Go to next step.

4. In Custom Paper Settings, change 40: [Switch Paper Load Upper Limit] from [High] (12mm) to [Low] (18mm). Problem solved?

Yes	Finished!
No	Go to next step.

5. Manually adjust the paper load upper limit (+1mm). Problem solved?

Yes	Finished!
No	Go to next step.

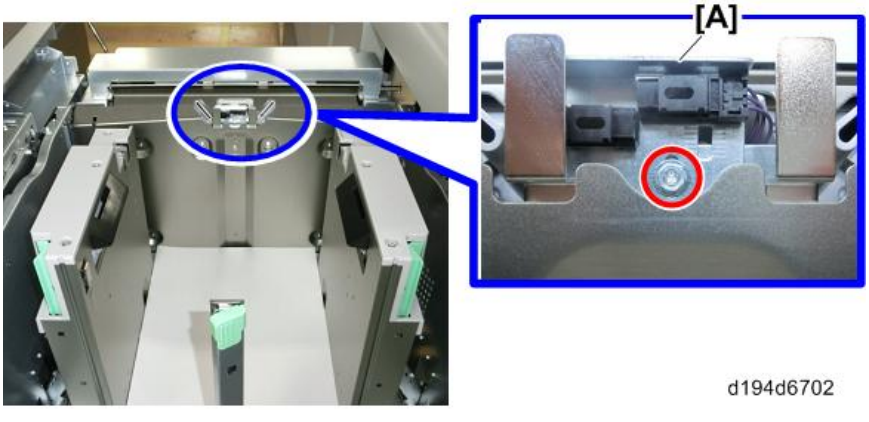
6. Manually adjust the paper load upper limit (+2mm). Problem solved?

Yes	Finished!
No	Go to next step.

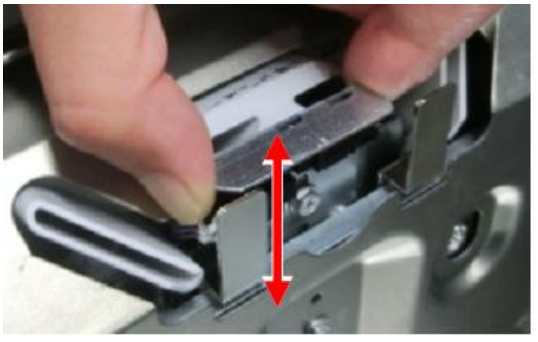
7. Manually adjust the paper load upper limit (+3mm). (See procedure below).

Manually Adjusting the Paper Load Upper Limit

1. Loosen the screw on the sensor bracket [A].

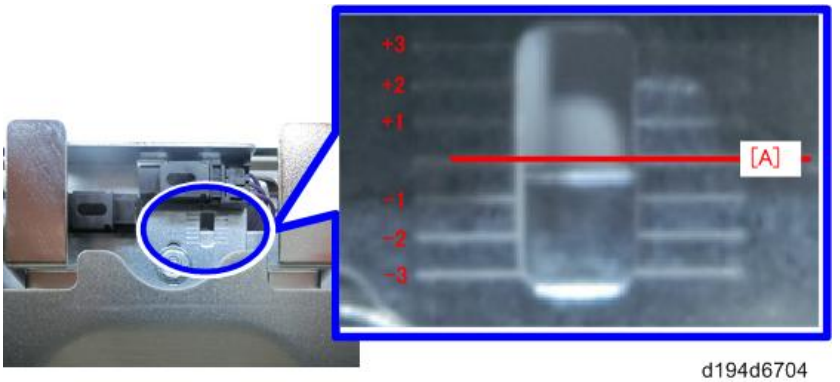


2. Use the scale shown in the diagram below as a guideline to adjust the sensor bracket by sliding up and down.



d194d6703

3. Adjust by sliding in increments of 1mm from the reference position [A].



d194d6704

4. Tighten the screw on the sensor bracket.

Note

- When tightening the screw, use your hand to firmly hold the sensor bracket in the proper position and prevent it from sliding.

Double Feeding

This problem is caused by a variety of factors. Implement the following measures.

1. Remove the paper from the paper tray and fan the paper. Problem solved?

Yes	Finished!
No	Go to next step.

2. Clean the feed unit. Problem solved?

Yes	Finished!
No	Go to next step.

3. Create a new custom paper setting.
4. In Custom Paper Settings, set 41: [Paper Feed Mode (Adjust Fan Level)] to "Max Dble Fd Reduc. (Lowest)". Problem solved?

Yes	Finished!
No	Go to next step.

5. In Custom Paper Settings, set 41: [Paper Feed Mode (Adjust Fan Level)] to "Moderate Dble Fd Red. (Lower)". Problem solved?

Yes	Finished!
No	Go to next step.

6. In Custom Paper Settings, change 40: [Switch Paper Load Upper Limit] from [High] (12mm) to [Low] (18mm). Problem solved?

Yes	Finished!
No	Go to next step.

7. Manually adjust the paper load upper limit. (page 116)

J430, 431,445, 446, 460, or 461 Appears

This problem is caused by a variety of factors. Implement the following measures.

Note

- If no feeding occurs when feeding remaining uncoated paper in tray, try feeding again through paper tray of main machine, instead of the vacuum feed LCIT

1. Create a new custom paper setting.
2. In Custom Paper Settings, change 40: [Switch Paper Load Upper Limit] from [Low] (18mm) to [High] (12mm). Problem solved?

Yes	Finished!
No	Go to next step.

3. Manually adjust the paper load upper limit (-1mm). Problem solved?

Yes	Finished!
No	Go to next step.

4. Manually adjust the paper load upper limit (-2mm). Problem solved?

Yes	Finished!
No	Go to next step.

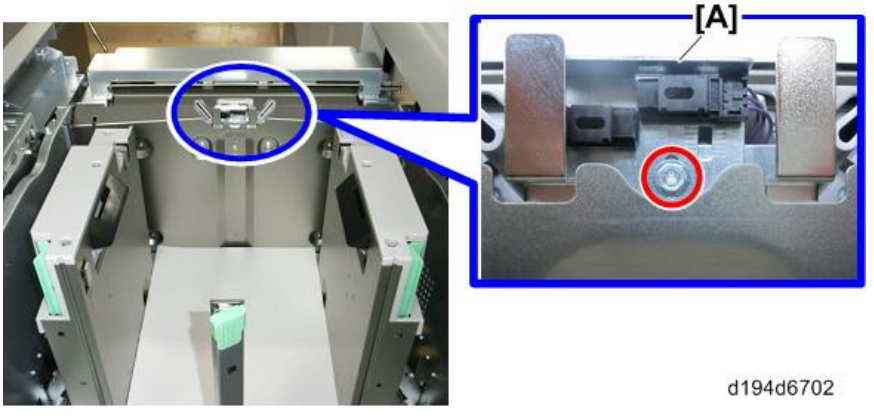
5. Manually adjust the paper load upper limit (-3mm). Problem solved?

Yes	Finished!
No	Go to next step.

6. Clean the paper feed belt.

Manually Adjusting the Paper Load Upper Limit

1. Loosen the screw on the sensor bracket [A].



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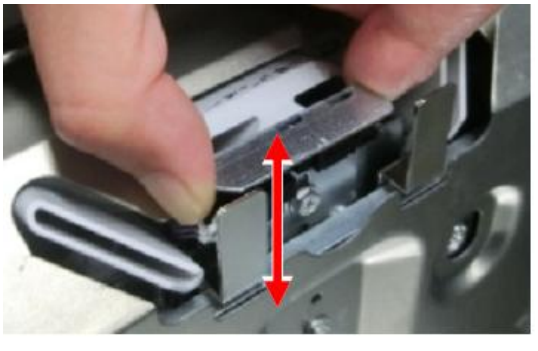
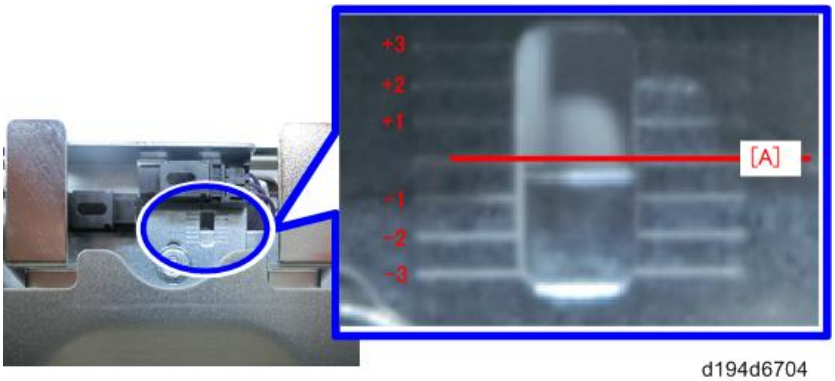
2. Use the scale shown in the diagram below as a guideline to adjust the sensor bracket by sliding up and down.



d194d6703

3. Adjust by sliding in decrements of 1mm.



d194d6704

4. Tighten the screw on the sensor bracket.

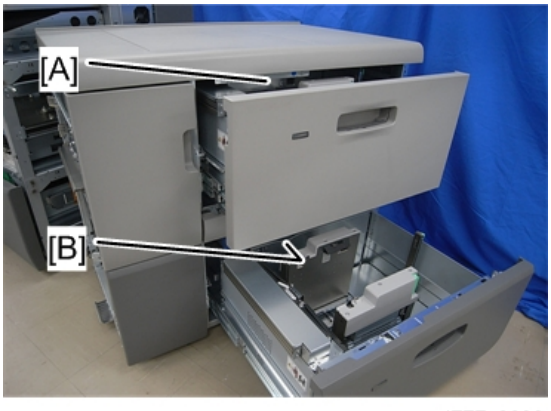
Note

- When tightening the screw, use your hand to firmly hold the sensor bracket in the proper position and prevent it from sliding.

Cleaning the paper feed belt

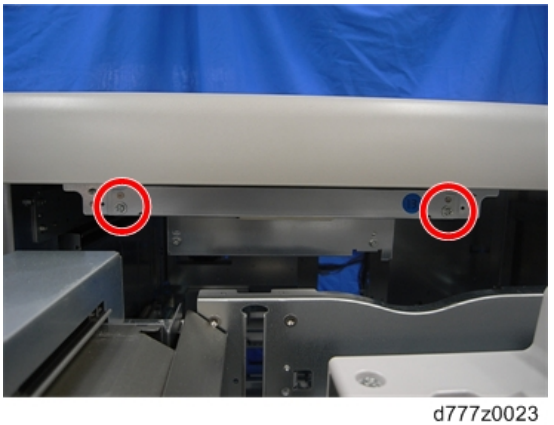
[A]: Tray 1 Paper Feed Belt Unit

[B]: Tray 2 Paper Feed Belt Unit



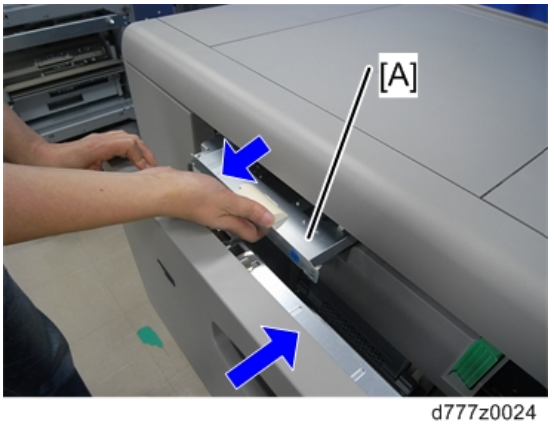
d777z0039

1. Open the paper tray.
2. Unlock the paper feed belt unit (x2).



d777z0023

3. Grab the handle of the paper feed belt unit [A] and close the paper tray halfway.



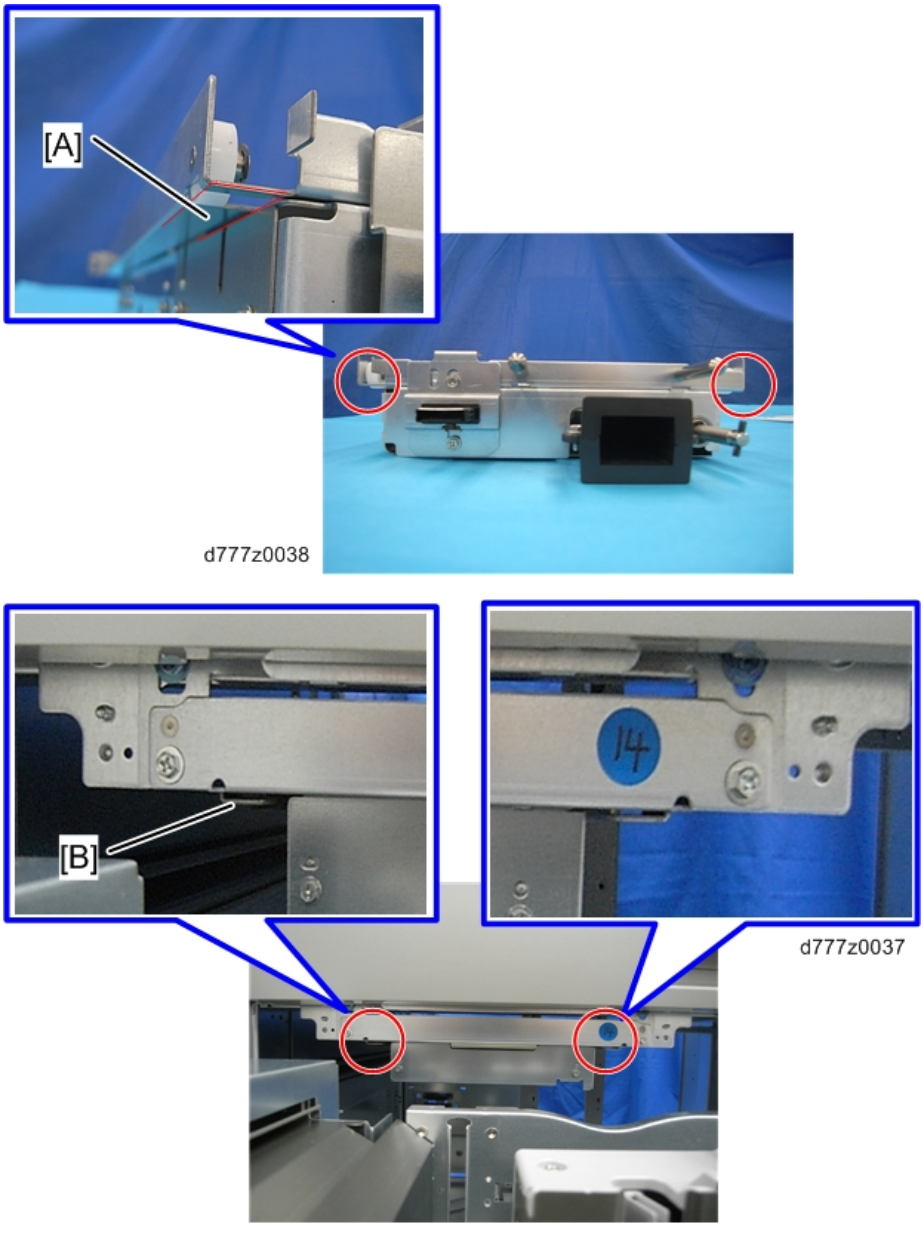
d777z0024

4. Pull out the paper feed belt unit [A] together with the paper tray.

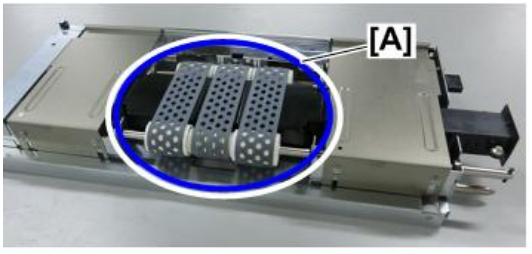
d777z0025

- The paper feed belt may be damaged if it becomes caught on the side fence or other parts. Therefore, be sure to pull the paper feed belt unit out horizontally relative to the paper tray.

- In order to avoid damaging the paper feed belt when returning the paper feed belt unit to its original position, align the right/left guides [A] with the rails [B] of the paper tray and lift up it slightly when setting.



5. Turn the paper feed belt unit over and wipe the paper feed belt [A] with a damp cloth.



d194d6705

No Feeding

This problem is caused by a variety of factors. Implement the following measures.

Note

- If no feeding occurs when feeding remaining uncoated paper in tray, try feeding again through paper tray of main machine, instead of the vacuum feed LCIT

1. Remove the paper from the paper tray and fan the paper. Problem solved?

Yes	Finished!
No	Go to next step.

2. Attach the Tab Sheet Holder. (page 125) Problem solved?

Yes	Finished!
No	Go to next step.

3. Clean the feed unit. Problem solved?

Yes	Finished!
No	Go to next step.

4. Create a new custom paper setting.
5. In Custom Paper Settings, set 41: [Paper Feed Mode (Adjust Fan Level)] to "Moderate Nonfdg Red. (Higher)". Problem solved?

Yes	Finished!
No	Go to next step.

6. In Custom Paper Settings, set 41: [Paper Feed Mode (Adjust Fan Level)] to "Max Nonfdng Reduc. (Highest)". Problem solved?

Yes	Finished!
No	Go to next step.

7. In Custom Paper Settings, change 40: [Switch Paper Load Upper Limit] from [Low] (18mm) to [High] (12mm). Problem solved?

Yes	Finished!
No	Go to next step.

8. Manually adjust the paper load upper limit. (page 119) Problem solved?

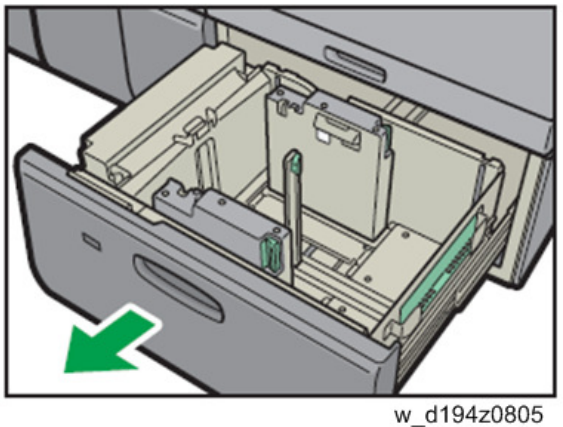
Yes	Finished!
No	Go to next step.

9. Clean the paper feed belt. (page 119)

Attaching the Tab Sheet Holder (Vacuum Feed A3 LCIT)

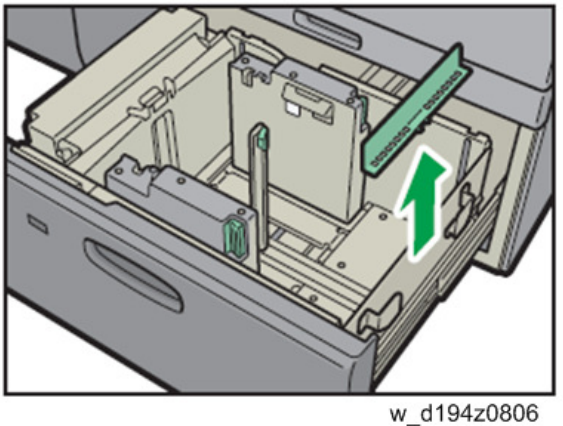
By attaching the tab sheet holder, you can prevent air from escaping at the trailing edge of the paper and so improve separation.

1. Check that paper in the paper tray is not being used, and then pull the tray carefully out until it stops.



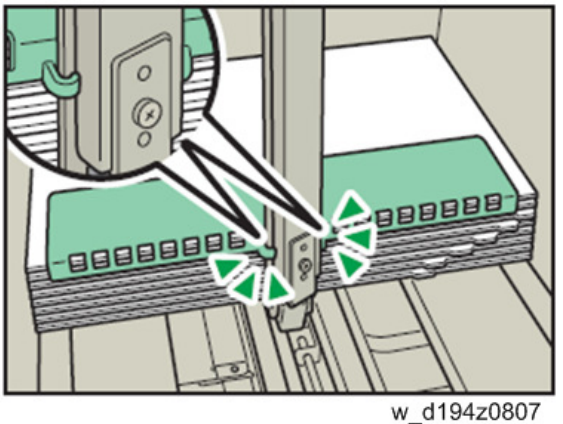
w_d194z0805

2. Take out the tab fence from the pocket on the right-hand side of the paper tray.



w_d194z0806

3. Set the side fences to the size of the tab stock to be loaded, and then load it.
4. Attach the tab fence, and then align the end fence gently against the paper you loaded while pressing the release button of the end fence.



w_d194z0807

Carefully slide the paper tray fully in.

Excessive Shift or Skew, Image Skew on Paper

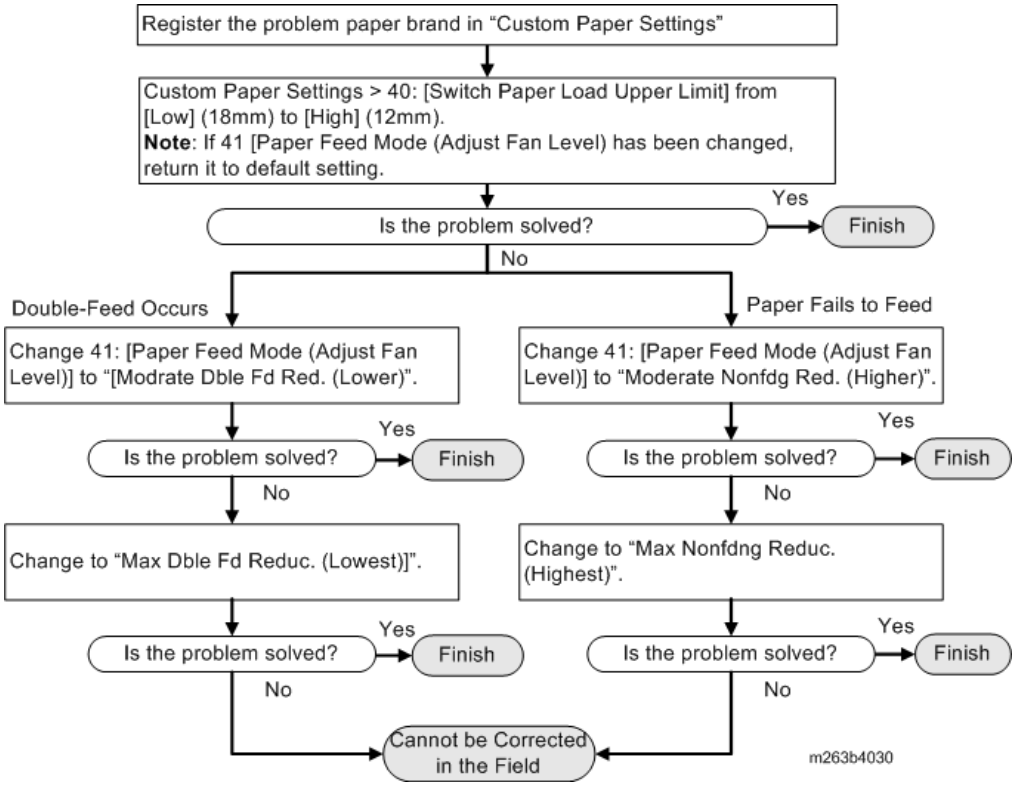
1. Paper type less than Thick 3?

Yes	Go to next step.
No	Problem cannot be corrected in the field.

2. Create a new custom paper setting.
3. In Custom Paper Settings, change 40: [Switch Paper Load Upper Limit] from [Low] (18mm) to [High] (12mm). Problem solved?

Yes	Finished!
No	Problem cannot be corrected in the field.

Folded Corners with Thin Paper



Paper Remains Up after Tray Opened

Cause:

With paper in in the tray and the bottom plate up with the stack at the paper feed position, when the tray is opened, the pressure of the spring [A] on the skew correction plate is stuck between the side fence so the stack [B] remains up even after the plate is lowered.

m263b4031

This problem occurs only when the operator opens the tray. This does not occur during paper feed because the bottom plate does not operate.

Solution:

Caution the operator that when opening the tray, check the top of the stack. If paper remains up, remove the stack and load it in the tray again

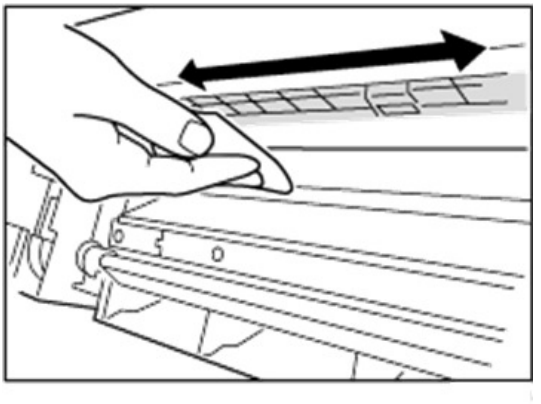
Cleaning the Paper Feed Path

Paper dust sticking to the paper transfer guide board, 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.

⚠CAUTION

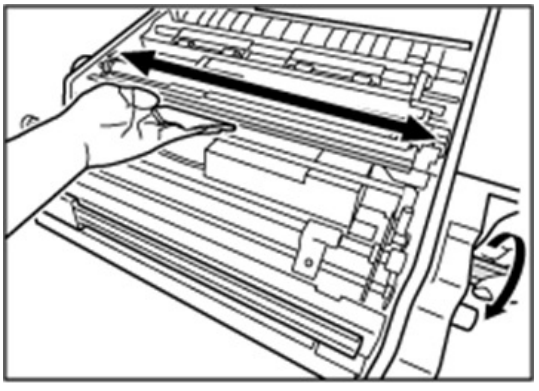
- Before cleaning always turn off the system and disconnect the main machine from its power source.
- Allow the machine to cool for 10 minutes before you start cleaning.

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



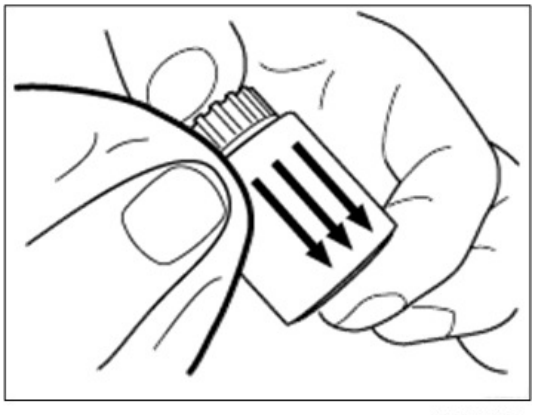
d1798057

2. **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.



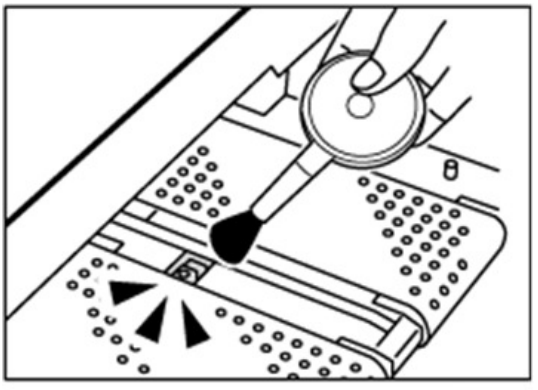
d1798058

3. **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.



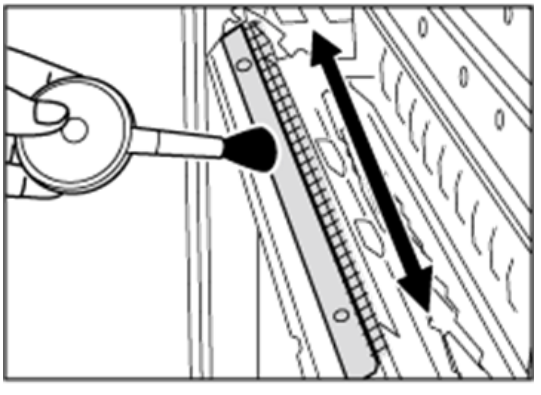
d1798059

4. **Sensor**. Remove dust with a blower brush.



d1798060

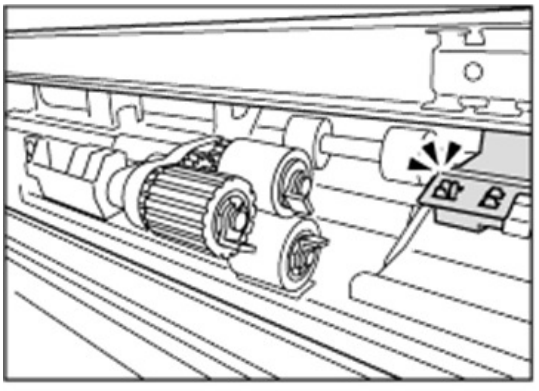
5. **Antistatic Brush**. Remove dust with a blower brush.



d1798061

Cleaning Paper Trays 1-3

1. Remove the paper tray.
2. Clean the sensor.



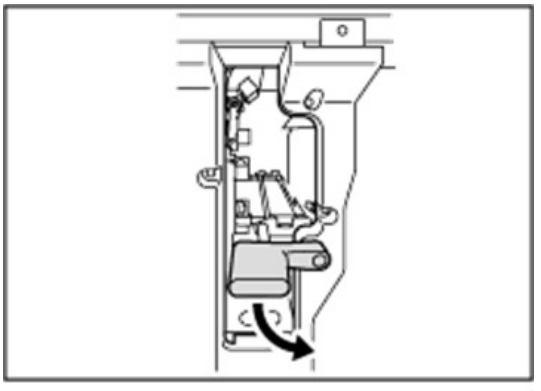
d1798062

Cleaning the Paper Feed Path for Paper Trays 1-3

1. Open the front doors.

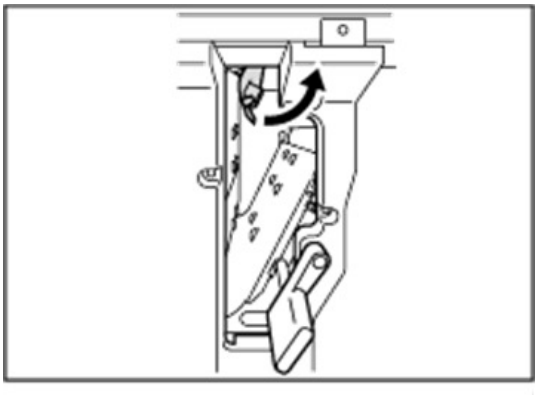
d1798063

2. Pull down the lever **A1**.



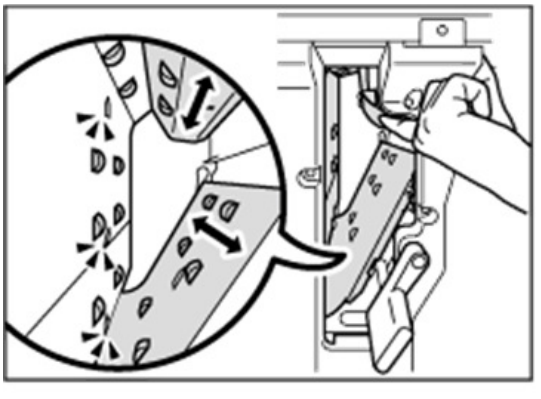
d1798064

3. Pull up the plate.



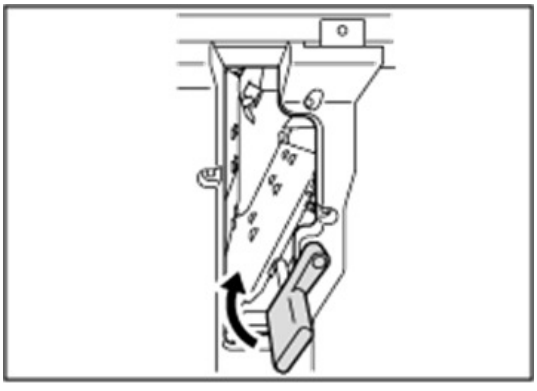
d1798065

4. Clean the rollers, sensors, and guide boards.



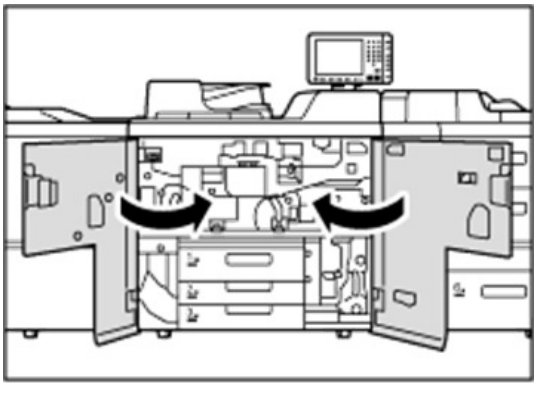
d1798066

5. Pull down the plate.
6. Pull up the lever A1.



d1798067

7. Close the front doors.



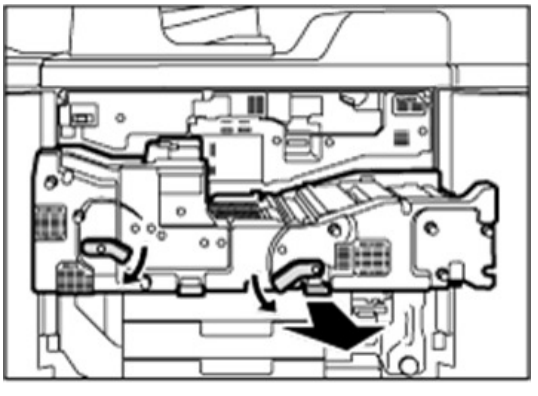
d1798068

Cleaning the Paper Feed Path in the Drawer

1. Open the front doors.

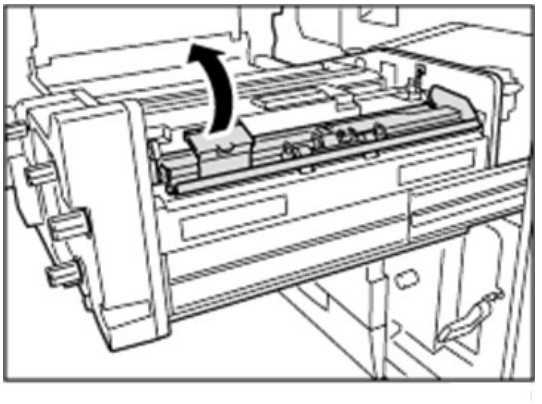
d1798069

2. Pull down the levers C1 and C2, and then pull the drawer out completely until it stops.



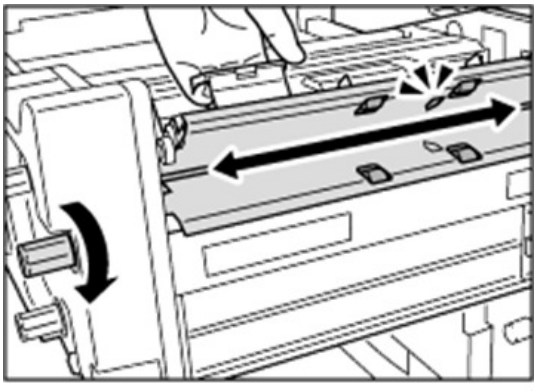
d1798070

3. Pull up and open the cover B6.



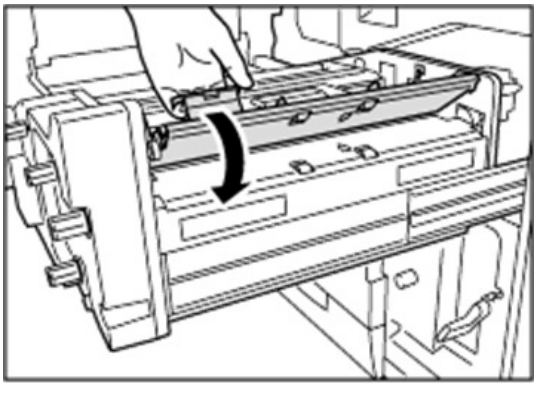
d1798071

4. Clean the rollers while turning the knob B2. Clean the sensors and guide boards also.



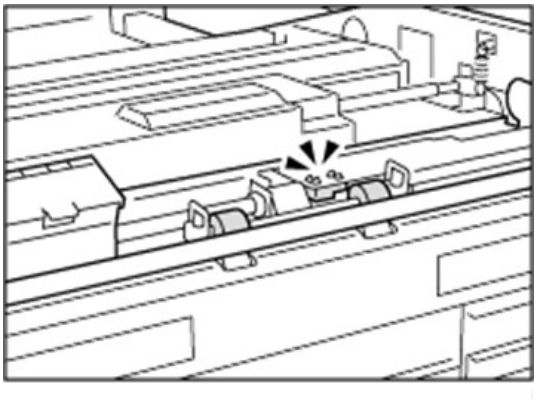
d1798072

5. Close the cover **B6**.



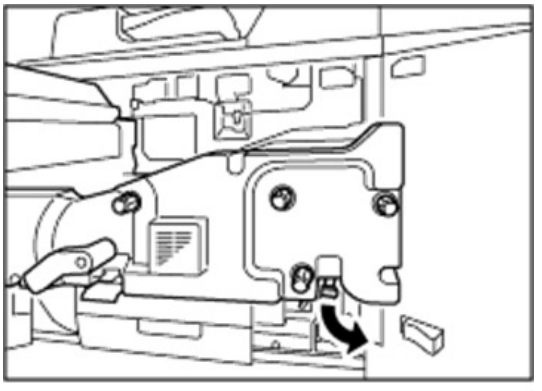
d1798073

6. Clean the rollers and sensors.



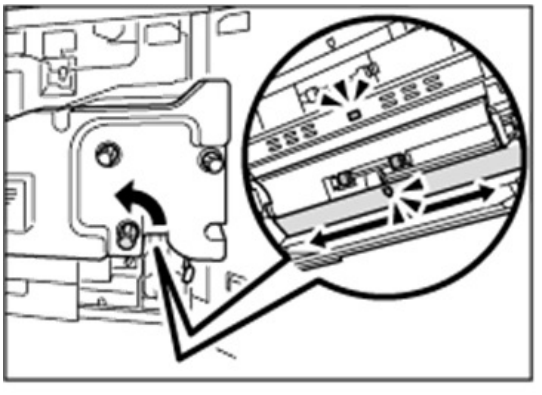
d1798074

7. Pull down and open the cover **B3**.



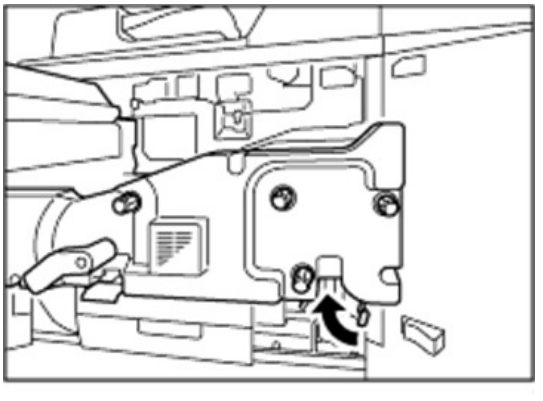
d1798075

8. Clean the rollers while turning the knob **B1**. Clean the sensors and guide boards also.



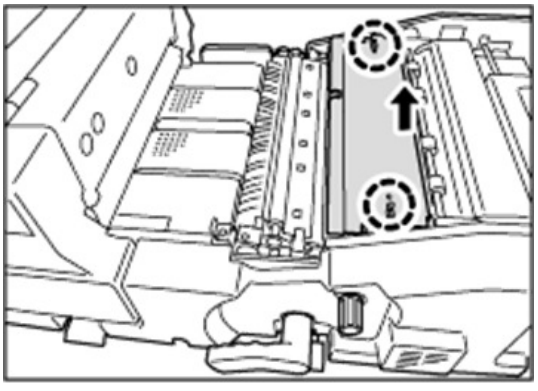
d1798076

9. Close the cover **B3**.



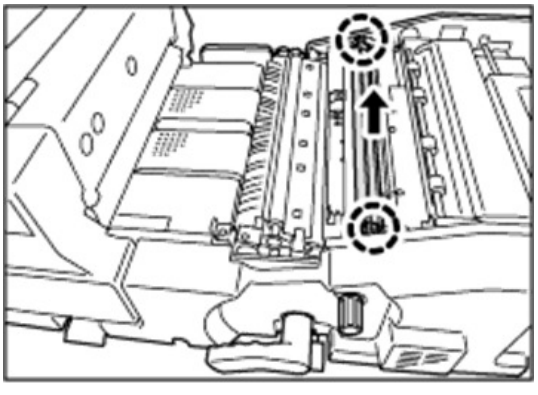
d1798077

10. Remove the 2 screws, and then remove the cover.



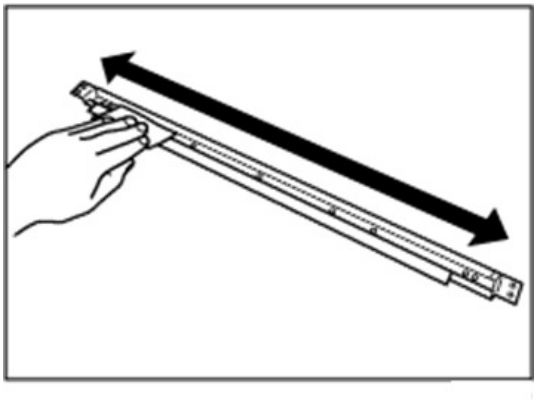
d1798078

11. Remove the 2 screws, and then remove the dust catcher.



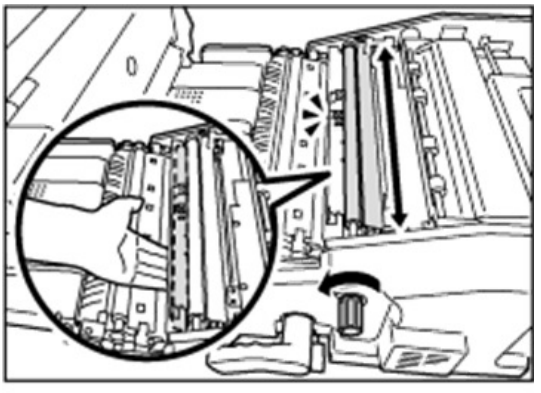
d1798079

12. Clean the dust catcher.



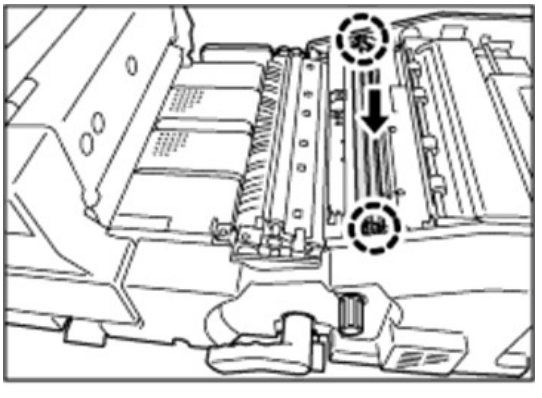
d1798080

13. Clean the roller while turning the knob **B5**. Clean the sensor, guide board, and roller in the paper transfer unit also.



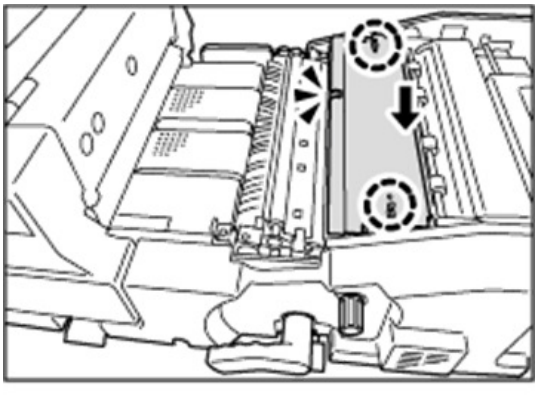
d1798081

14. Attach the dust catcher, and then secure it with the 2 screws.



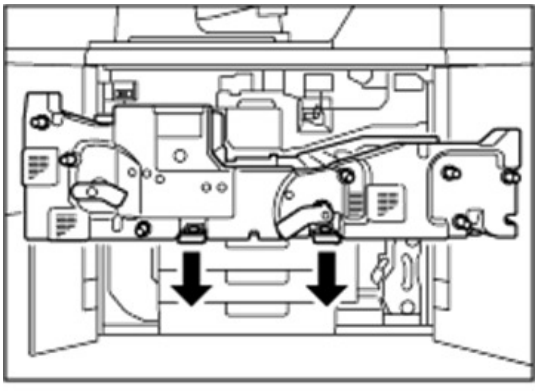
d1798082

15. Attach the cover, aligning the notch on the cover with the claw, and then secure it with the 2 screws.



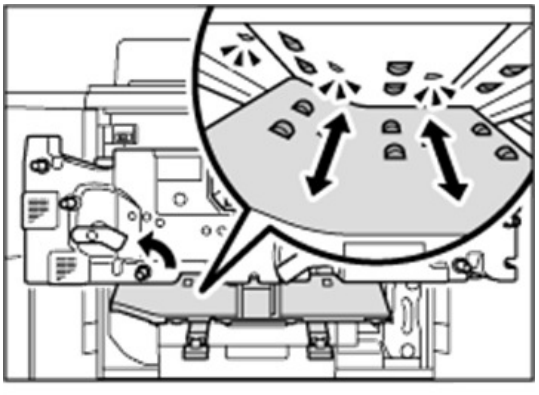
d1798083

16. Pull down the levers **Z2** and **Z3**.



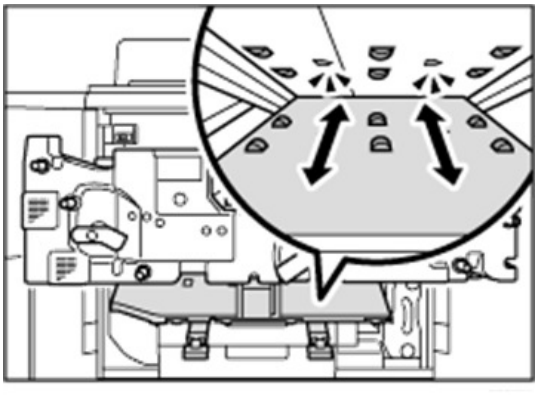
d1798084

17. Clean the left-hand side rollers while turning the knob Z1. Clean the left-hand side sensors and guide boards also.



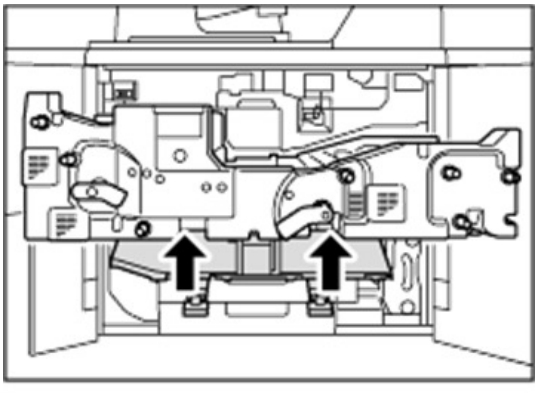
d1798085

18. Clean the right-hand side rollers, sensors, and guide boards.



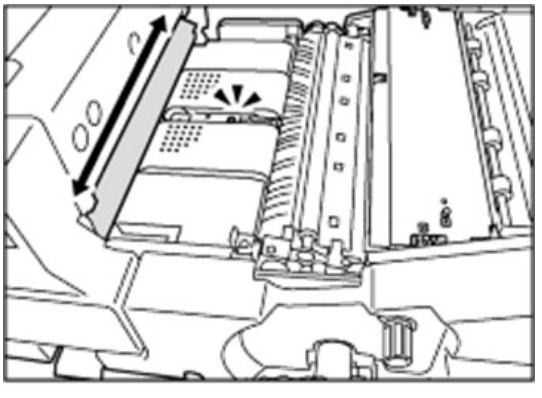
d1798086

19. Pull up the levers Z2 and Z3.



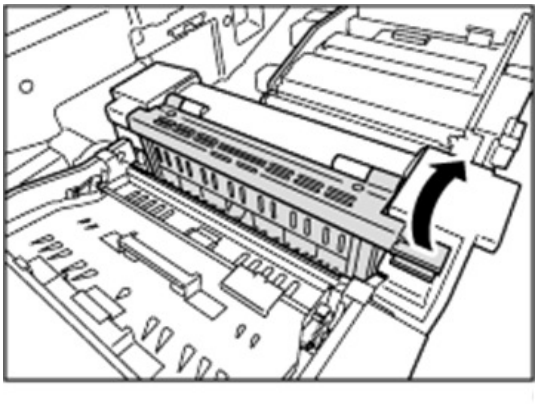
d1798087

20. Clean the sensor and guide board on the entrance of the fusing unit.



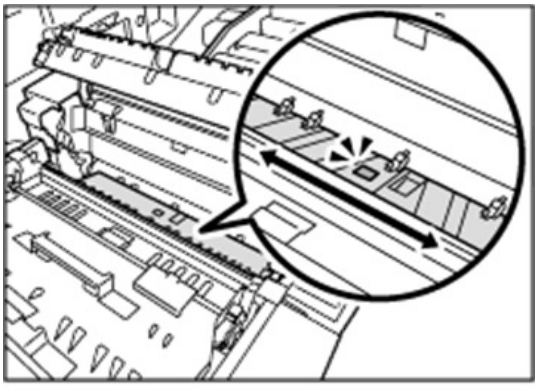
d1798088

21. Pull up and open the cover **D2**.



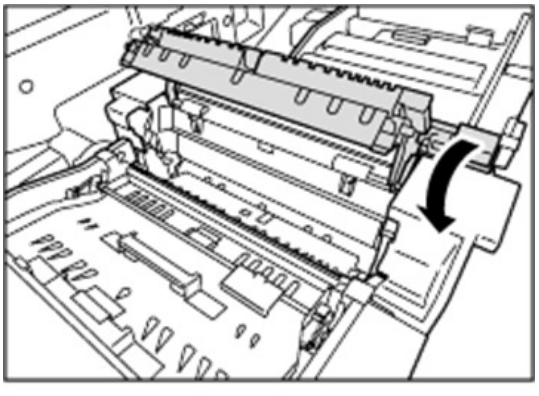
d1798089

22. Clean the sensor and guide board.



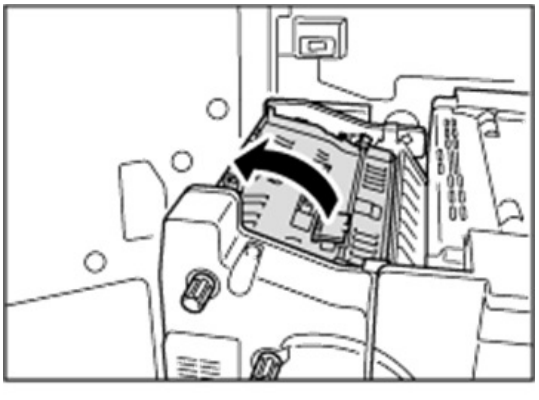
d1798090

23. Close the cover **D2**.



d1798091

24. Pull up and open the cover **D3**.



d1798092

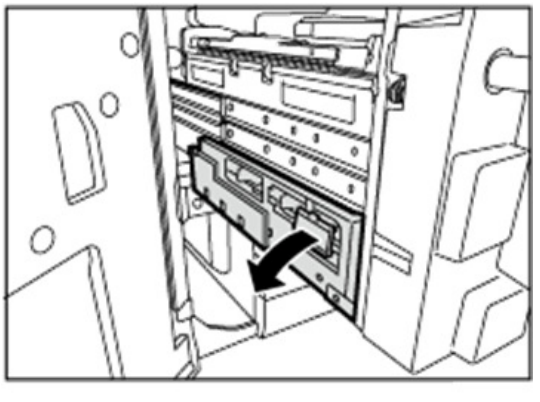
25. Clean the rollers while turning the knob **D1**. Clean the sensors and guide boards also.

d1798093

26. Close the cover **D3**.

d1798094

27. Pull down and open the cover **D4**.

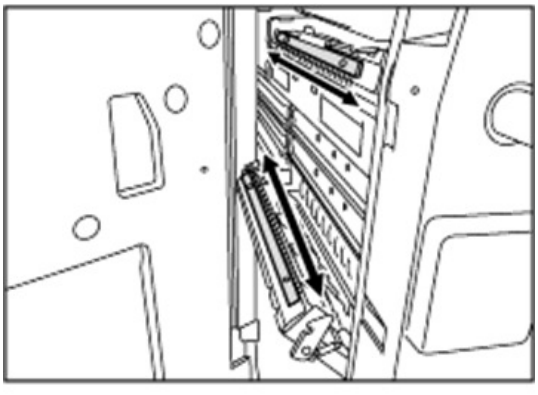


d1798095

28. Clean the rollers, sensor, and guide boards.

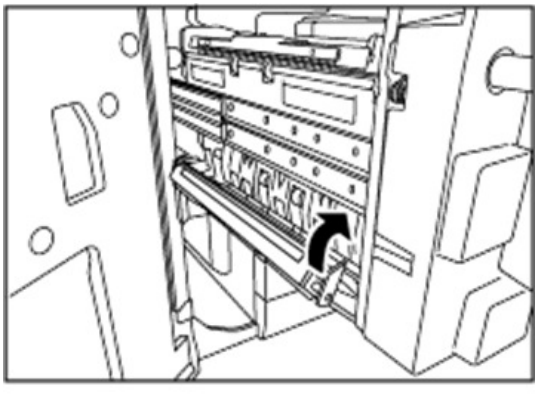
d1798096

29. Clean the antistatic brushes.



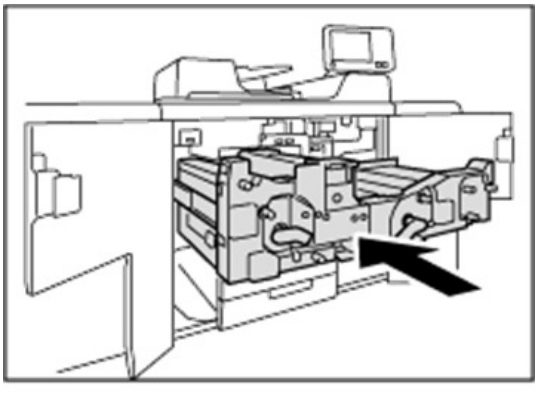
d1798097

30. Close the cover **D4**.



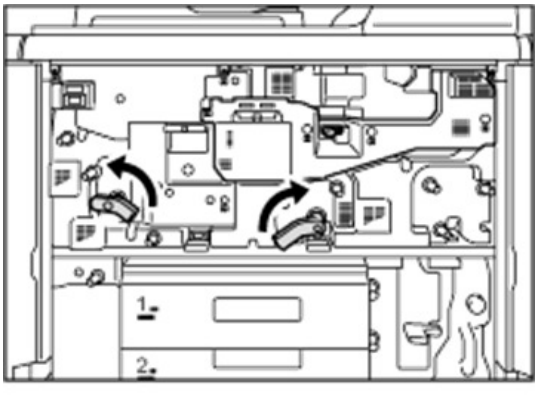
d1798098

31. Push the drawer back into the machine.



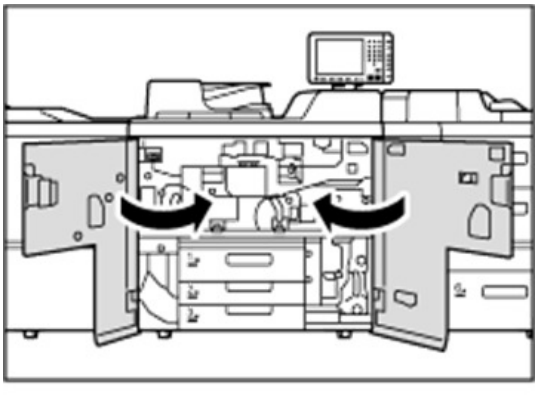
d1798099

32. Pull up the levers C1 and C2.



d1798100

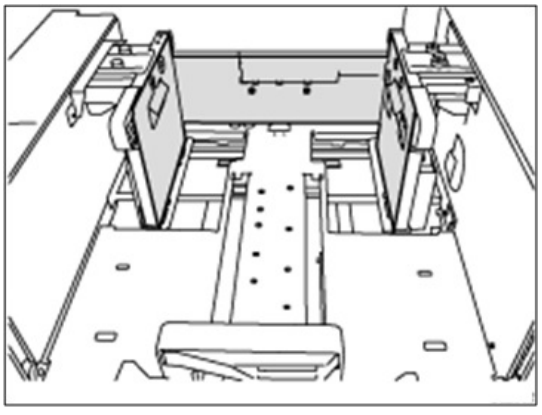
33. Close the front covers.



d1798101

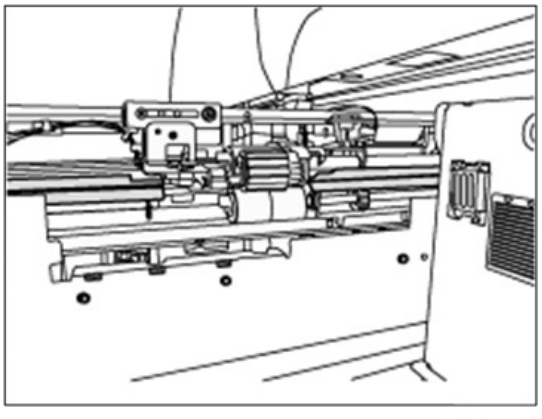
Cleaning the LCT A3 Paper Feed Path

1. Clean the side fences and front guide.



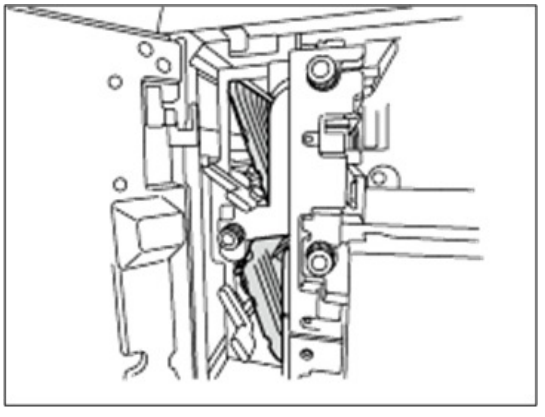
d1798102

2. Clean the paper feed rollers.
3. Clean the guide board of the paper feed unit.



d1798103

4. Clean the guide board interior.

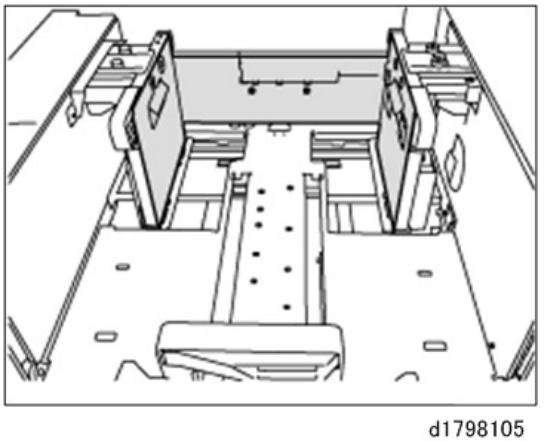


d1798104

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

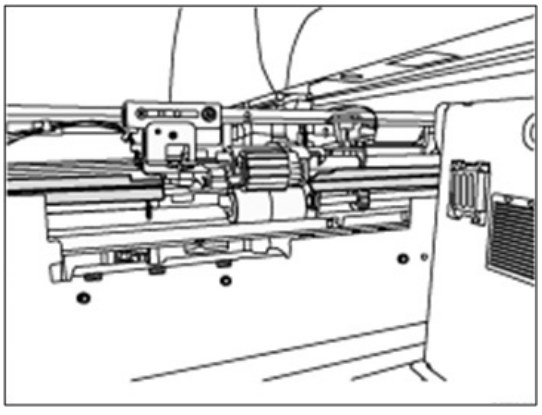
Cleaning the LCT A4 Paper Feed Path

1. Clean the side fences and front guide.



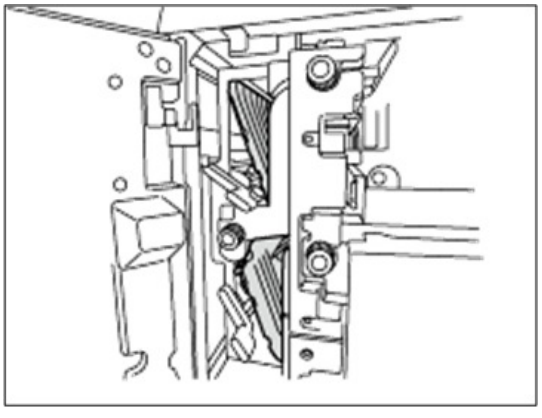
d1798105

2. Clean the paper feed rollers.
3. Clean the guide board of the paper feed unit.



d1798106

4. Clean the guide board interior.

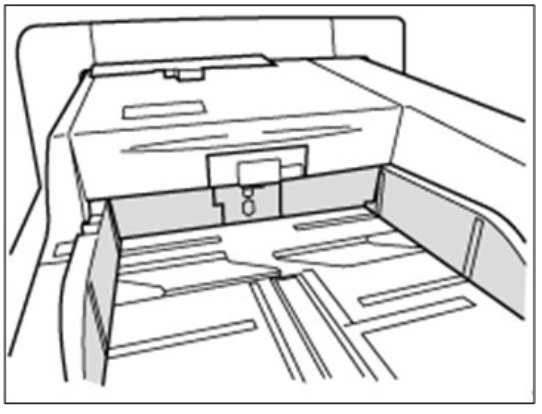


d1798107

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

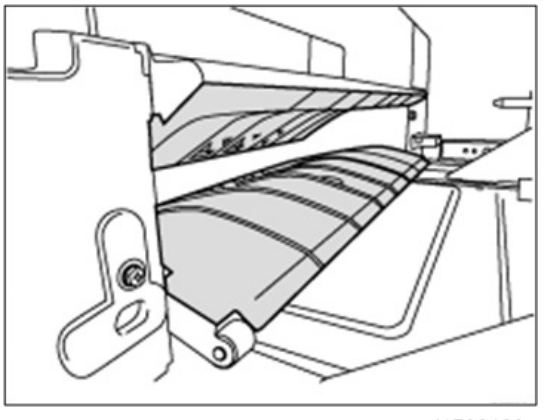
Cleaning the Multi Bypass Tray Paper Feed Path

1. Clean the side fences and front guide.



d1798108

2. Clean the paper feed rollers.
3. Clean the guide board.



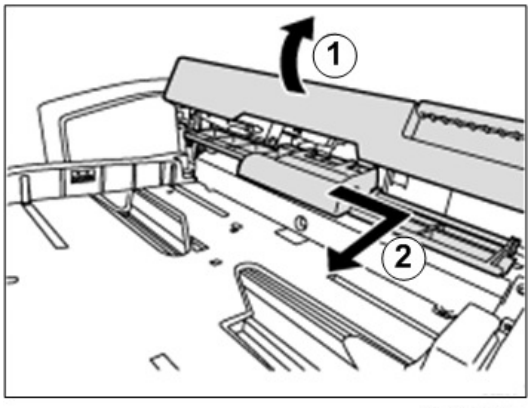
d1798109

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

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

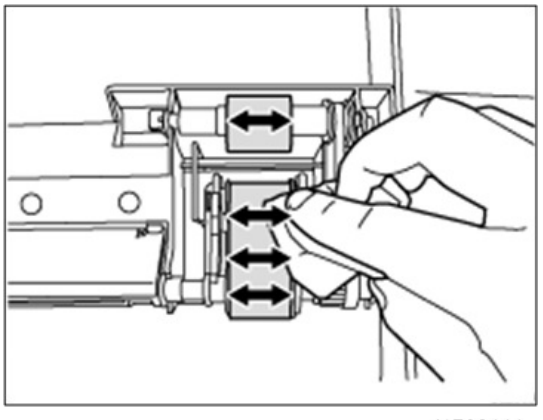
Clean the paper feed belt and paper feed rollers in the interposer. The procedure is explained using the interposer upper tray. The procedure is the same for the lower tray.

1. Remove the loaded paper.
2. Open the upper cover, and then detach the paper feed unit.
3. Pull it out slightly, release the metal shaft, and then detach it.



d1798110

4. Clean the paper feed belt and paper feed rollers in the detached paper feed unit.

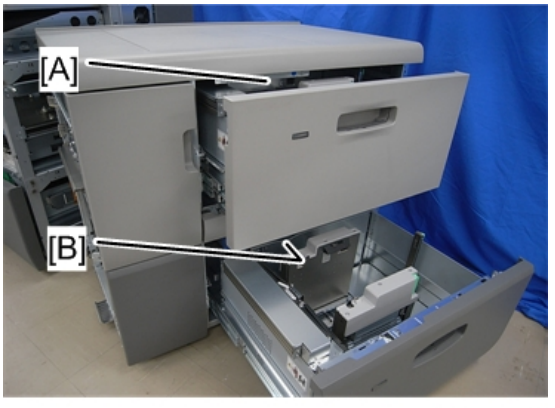


d1798111

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

Cleaning the Paper Feed Unit of Vacuum Feed LCIT (RT5100)

Paper Feed Belt Unit

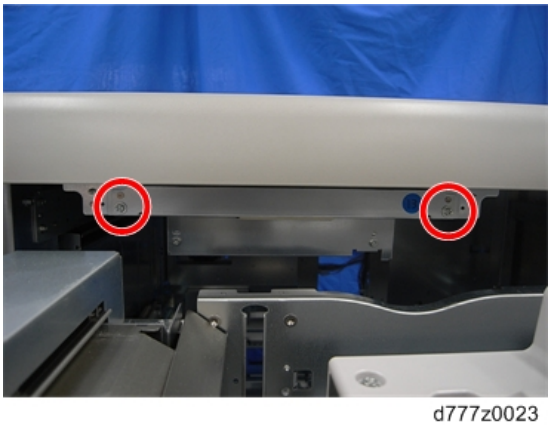


d777z0039

[A]: Tray 1 Paper Feed Belt Uni

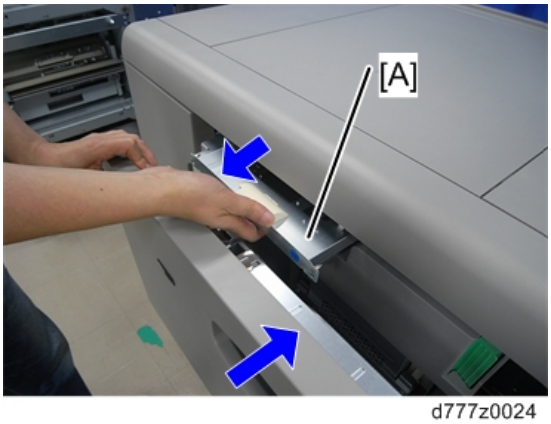
[B]: Tray 2 Paper Feed Belt Unit

1. Open the paper tray.
2. Unlock the paper feed belt unit (x2).



d777z0023

3. Hold the knob of the paper feed belt unit [A] and close the paper tray halfway.

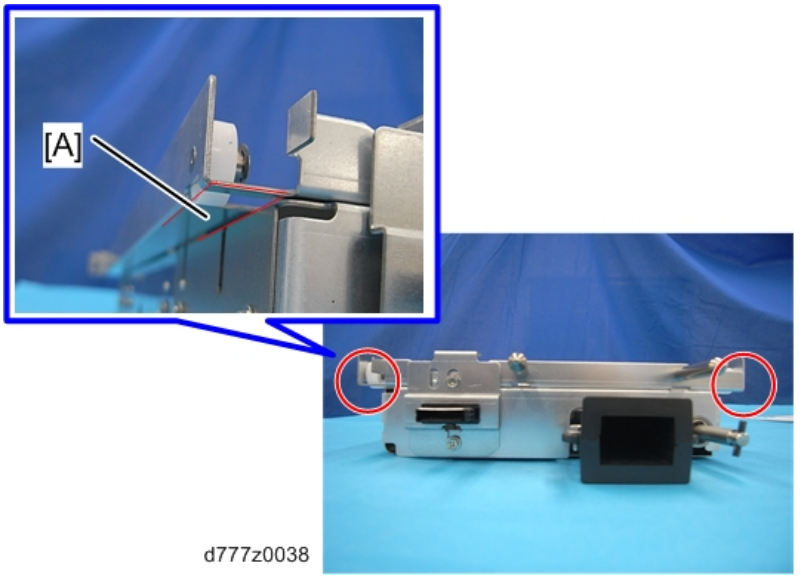


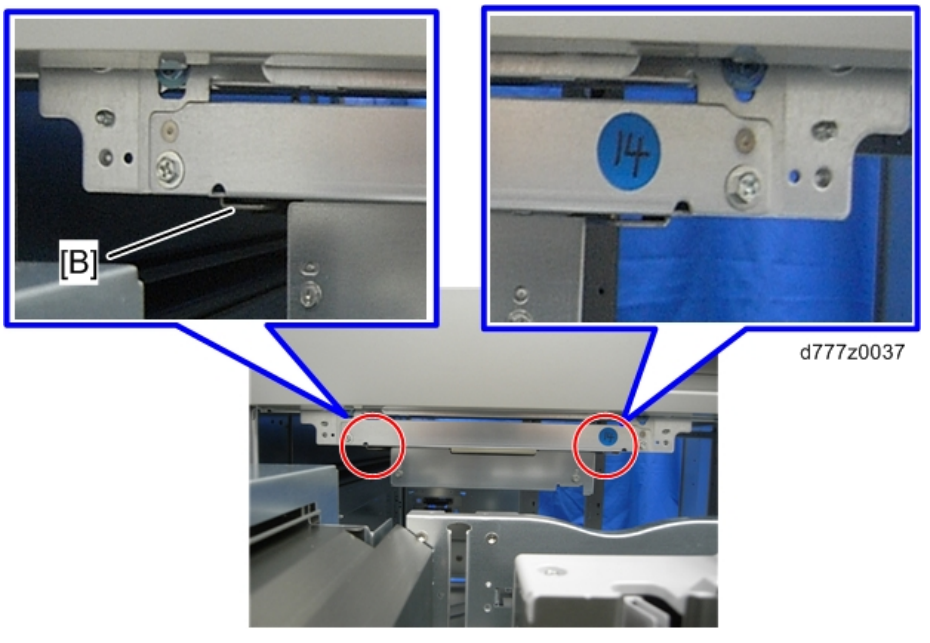
d777z0024

4. Pull out the paper feed belt unit [A] and the paper tray together.

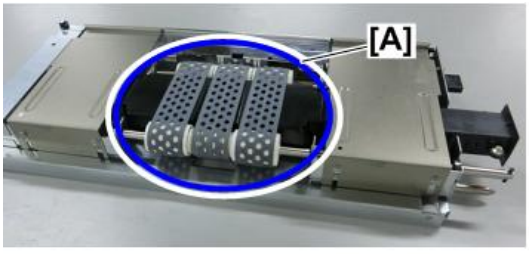
d777z0025

- Pull the paper feed belt unit out horizontally relative to the paper tray to ensure that the paper feed belt is not damaged by getting it caught in the side fences or other parts.
- To prevent damaging the paper feed belt when you return the paper feed belt unit to its original position, align the right and left guides [A] with the rail [B] on the paper tray side and raise them slightly before replacing the unit.



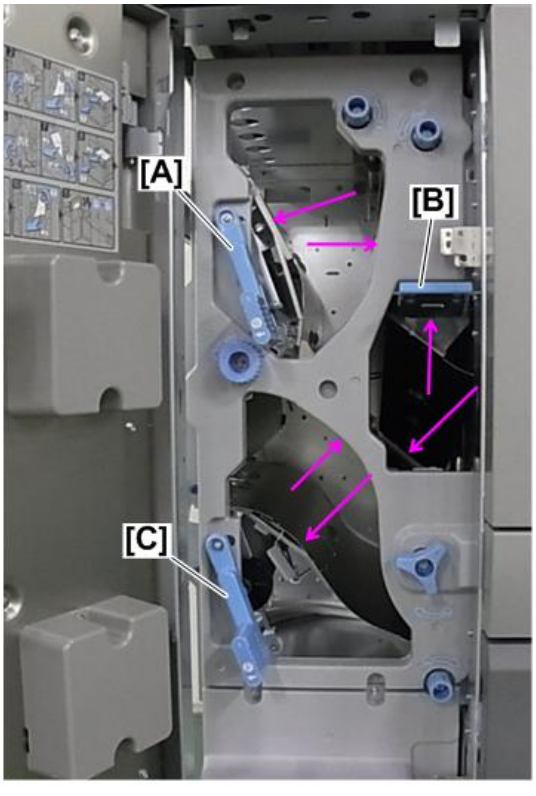


5. Turn upside down the paper tray pulled out, and wipe the paper feed belt [A] with a damp cloth.



d194d6705

6. Open and clean the front door, Open/close guide plates [A], [B].

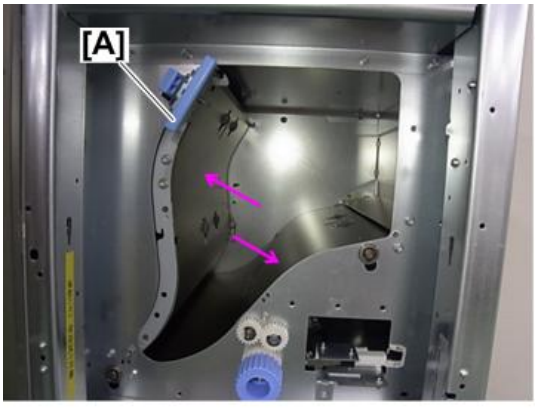


d194d6277

7. Close the guide plates and front door.

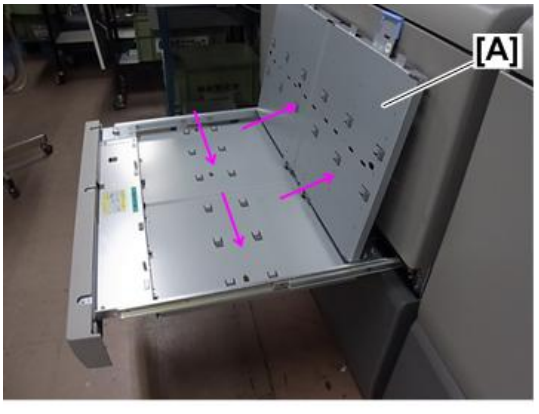
Cleaning the Bridge Unit

1. Open the front door of the relay unit, and then open and clean the open/close guide plate [A].



d194d6278

2. Close the guide plate and front door of the relay unit.
3. Pull out the horizontal feed unit, and open the guide plate [A] to clean it.



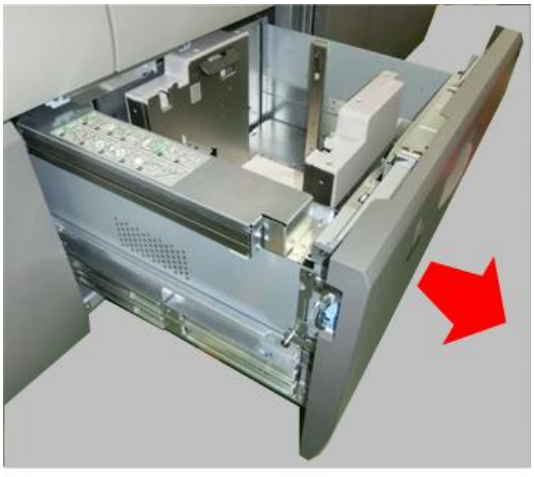
d194d6279

4. Close the guide plate and put the horizontal feed unit back in place.

LCIT: Manual Registration Adjustment

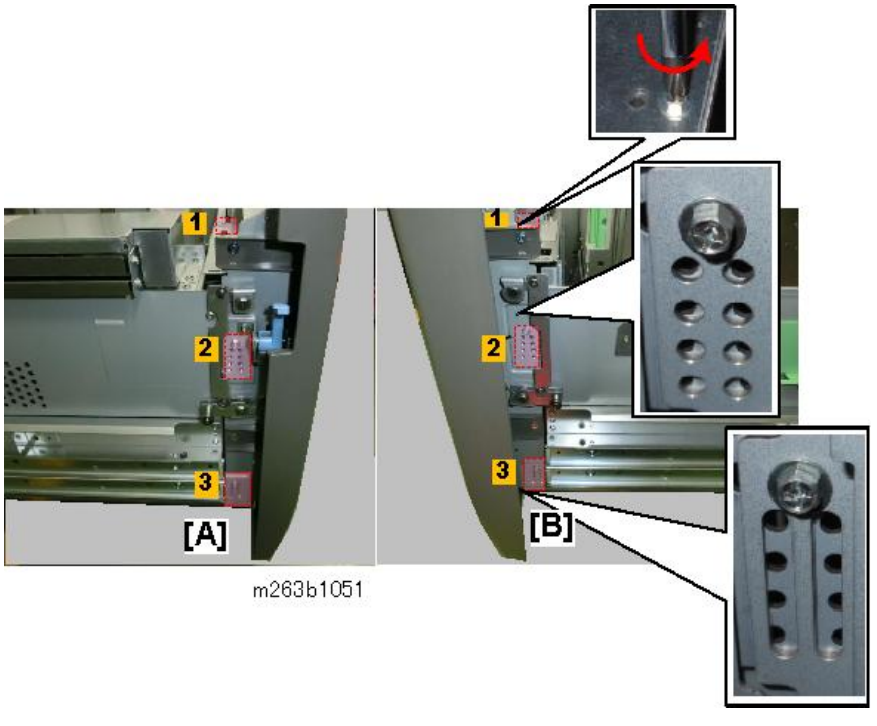
Normally, you can use SP1002 to adjust the position of the images for paper feed from the LCITs. You can also change the paper feed position first, manually, by adjusting the support plate of the front cover of the tray, and then, second, adjusting the position of the image with SP1002.

1. First, determine whether the paper stack needs to be moved to the front or the rear.
2. Pull out the tray.



m263b1050

1. There are three adjustment points on the left side [A] and right side [B] of the tray cover.
    - [1] These screws need to be loosened to release the cover. They do not need to be removed.
    - [2] This is the top adjustment grid (left and right).
    - [3] This is the bottom adjustment grid (left and right)



m263b1051

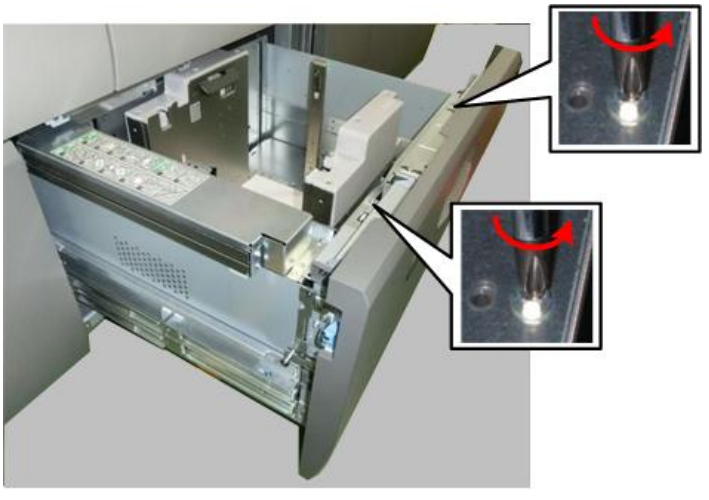
Important

- **In order to change the position of the front cover plate evenly, the adjustments must be done at all six points, two on the left side (top and bottom), two on the right side (top and bottom), and two screws loosened on the top.**

2. First, loosen the screws on the top front edge of the tray.

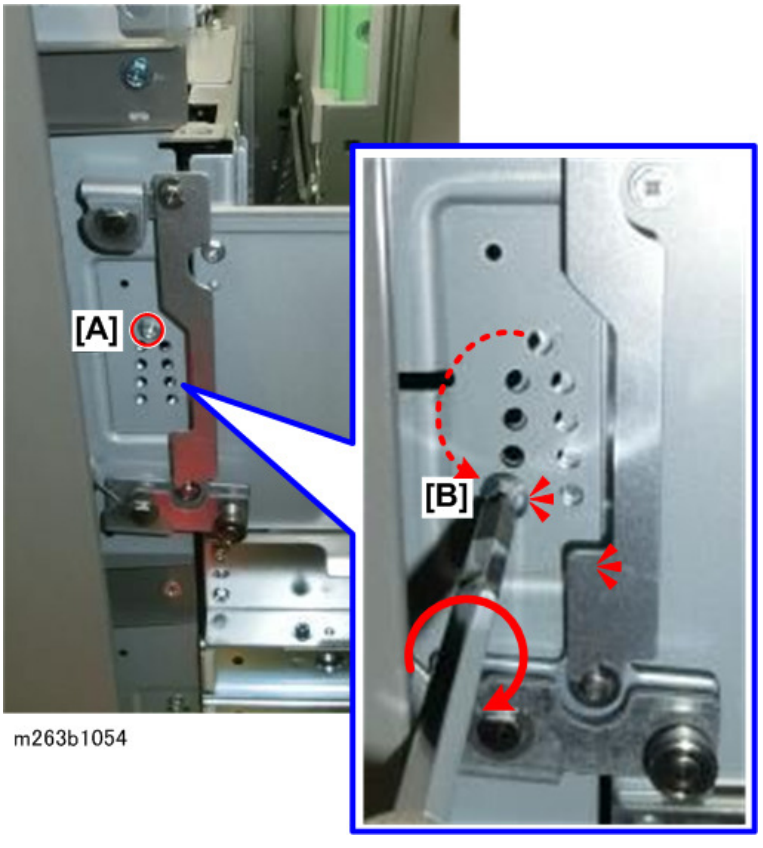
Note

- If you cannot see the screws, remove the front cover (x4).



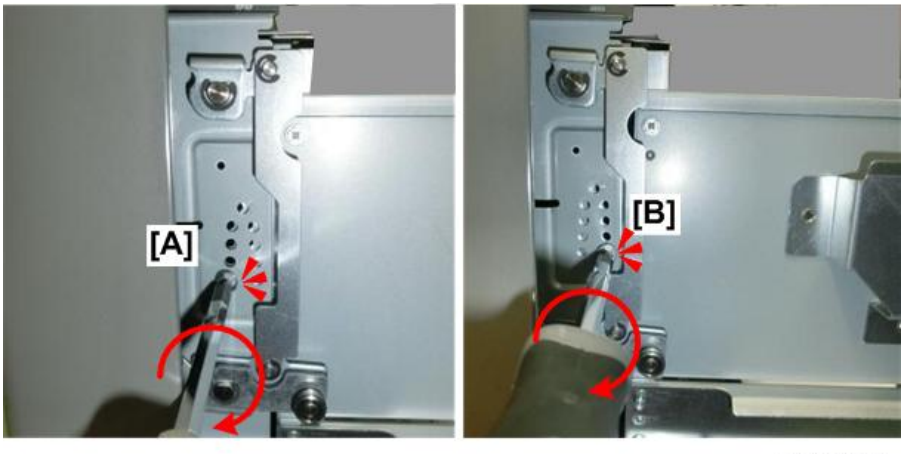
m263b1053

3. At each grid adjustment point, first remove each screw [A]. This allows you to easily adjust the position of the cover so you can align the holes.
4. Fasten the screw into the hole [B] for the selected adjustment. Be sure to fasten the screw at the same hole at each adjustment point.



m263b1054

- The adjustment range is ±2 mm in 0.5 mm steps for each hole.
- In the example below, [A] is a full 2 mm adjustment to move the paper stack to the front.
- In the example below, [B] is a full 2 mm adjustment to move the paper stack to the rear.



m263b1052

5. Tighten the screws on the top.

6. Close the tray.
7. Do some test prints, and then go into the SP mode and do the image adjustment for the tray with SP1002.

Peripheral Unit Troubleshooting

Finisher SR5050/SR5060

Delivered Sheets Are Not Stacked Properly

Solution:

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

- Coated paper is being used.

  If coated paper is being used, attach the Z-fold support tray for multi-folding unit.

  For details about attaching the Z-fold support tray for multi-folding unit, see "Copy/ Document Server" supplied with the machine.

- There is airflow in the room.

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

- Printed sheets are curled.

If the decurl unit is used

1. On the machine operation panel: Adjustment Settings for Skilled Operators > Paper Feed/ Output > Adjust Paper Curl > Select the amount of curl correction. (SP 1-906-001 to 007: De-curler Setting Tray <number> :Paper Path Selection)
   - To correct curls facing up, specify "Adjust Concave Curl".
   - To correct curls facing down, specify "Adjust Convex Curl".
2. Select "Strong" or "Weak" depending on the amount of curl correction required.

If the decurl unit is not used

1. Remove the paper stack and turn it upside down.

There are too many stacked sheets.

1. 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 key on the finisher.
   - To resume printing, press the Resume key on the finisher.

Large Paper Not Stacked Properly

Cause:

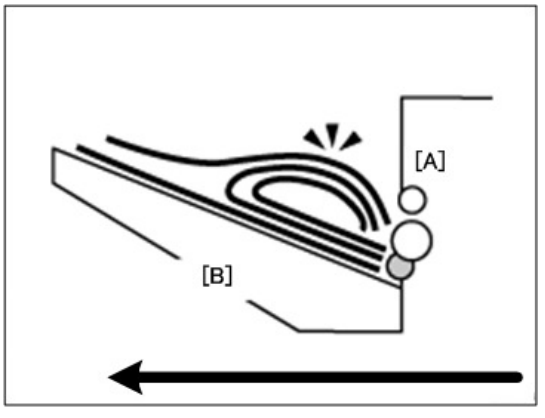
When using large-size or coated and paper-to-paper friction is very high, a sheet may push against another or paper deflection may occur.

This is likely to occur if:

- B4 LEF, 8"x14" LEF, 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.

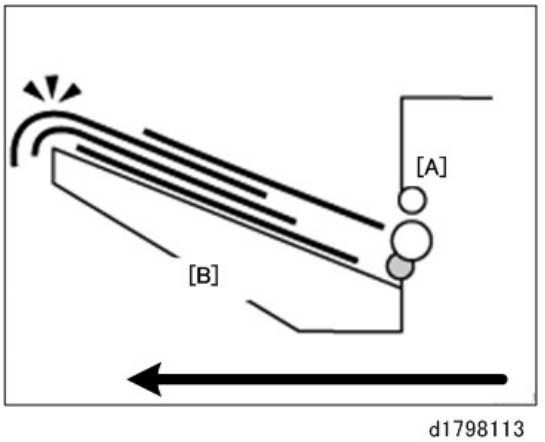


d1798112

[A]	Paper Exit
[B]	Output Tray

One sheet pushing out another

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

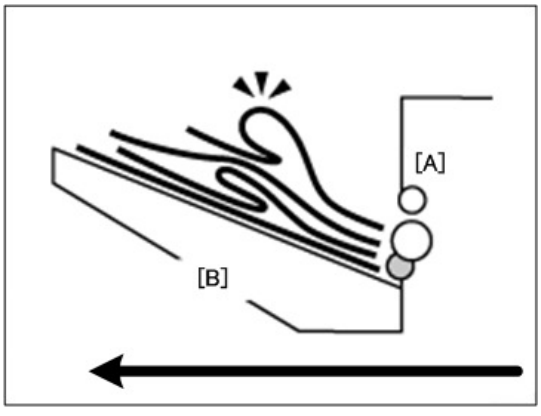


d1798113

[A]	Paper Exit
[B]	Output Tray

Paper deflection

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



d1798114

[A]	Paper Exit
[B]	Output Tray

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.

- If the decurl unit is used
  1. On the machine operation panel: Adjustment Settings for Skilled Operators > Paper Feed/ Output > Adjust Paper Curl > Set to "Adjust Concave Curl". (SP 1-906-001 to 007: De-curler Setting Tray <number> :Paper Path Selection)
  2. To control the amount of curl correction, select "Weak" if the present setting is "Off" or "Strong".
- If the decurl unit is not used
  1. Remove the paper stack and turn it upside down.
- Paper of Paper Weight 0 is being used.

If paper of Paper Weight 0 is being used, attach the Z-fold support tray for multi-folding unit. For details about attaching the Z-fold support tray for multi-folding unit, see "Copy/ Document Server" supplied with the machine.

1

One sheet pushing out another or sheets becoming crimped

Sheets are curled downward.

- If the decurl unit is used
  1. On the machine operation panel: Adjustment Settings for Skilled Operators > Paper Feed/ Output > Adjust Paper Curl > Set to "Adjust Convex Curl". (SP 1-906-001 to 007: De-curler Setting Tray <number> :Paper Path Selection)
  2. To control the amount of curl correction, select "Weak" if the present setting is "Off" or "Strong".
- If the decurl unit is not used
  1. Remove the paper stack and turn it upside down.

Paper of Paper Weight 0 is being used.

If paper of Paper Weight 0 is being used, attach the Z-fold support tray for multi-folding unit. For details about attaching the Z-fold support tray for multi-folding unit, see "Copy/ Document Server" supplied with the machine.

Note

- If the Z-fold support tray for multi-folding unit is attached, the number of sheets that can be stacked is reduced.
- If the Z-fold support tray for multi-folding unit is attached, the range of misalignment of the last print may exceed 2 mm (0.08 inches) if the Shift Collate function is used.

Trailing Edge of Stapled Sheets Close to the Paper Exit

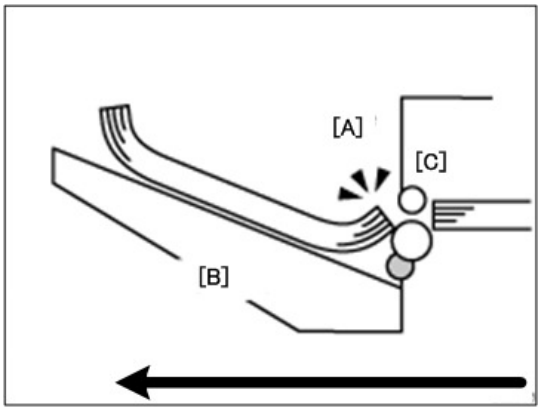
Cause:

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 is likely to occur if:

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



d1798115

[A]	Trailing Edges
[B]	Output Tray
[C]	Paper Exit

In the illustration the trailing edges of the stack [A] on the output tray [B] are too close to the paper exit [C]

Solution:

1. Attach the Z-fold support tray for multi-folding unit.
2. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

3. On the machine operation panel: Adjustment Settings for Skilled Operators > Paper Feed/ Output > Adjust Paper Curl > Set to "Adjust Concave Curl". (SP 1-906-001 to 007: De-curler Setting Tray <number> :Paper Path Selection)
4. Select "Strong" or "Weak" to control the amount of curl correction as required.
5. Print the image. Is the problem resolved?

Yes	Finished!
No	Consult key operators.

Note

- For details about attaching the Z-fold support tray for multi-folding unit, see "Copy/ Document Server" supplied with the machine.

- If the Z-fold support tray for multi-folding unit is attached, the trailing edge of the ejected sheets will not be too close to the paper exit, so no problem will occur. However, the stapled sheets may not be stacked properly.

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 is likely to 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.

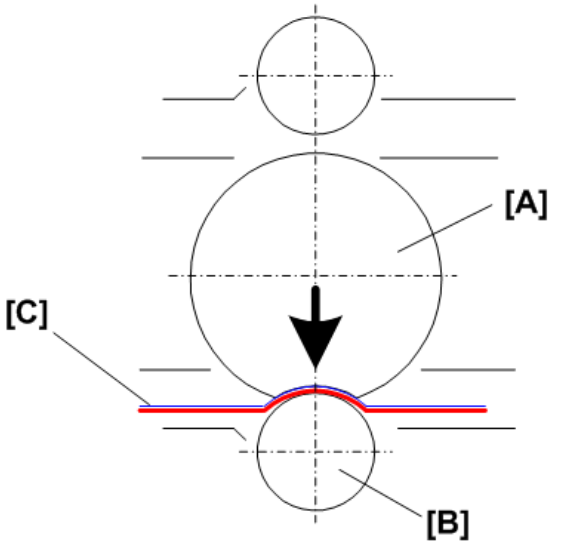
1. In the Finishing: Adjustment Settings for Skilled Operators > Finisher > Number of Sheets Align for Stapling > Reduce the number of sheets to be stapled. (SP 6-225-001 to 014: Adj Pre Stack Number (size) SEF)
2. Print the image. Is the problem resolved?

Yes	Finished!
No	If the problem persists even though the setting has reached its minimum value, consult key operators.

Note

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

Streaks Appear 4 mm Apart on the Leading Edge of the Stacked Paper



Cause:

During back-curl correction the paper is compressed in the nip of the sponge roller [A] above and the decurl roller [B], so the sponger roller can press down to correct paper curl. When the image on the paper [C] is facing up when the sponge roller presses down, this can cause toner from the image to detach and foul the anti-static brush which then transfers this loose toner to the leading edge of each sheet.

This can occur when:

- Decurl unit is connected
- Poor stacking, and back-curl correction in effect
- Image on the paper is facing up

Solution:

1. Is it possible to disable back-curl correction?

Yes	Disable back-curl correction. Adjustment Settings for Skilled Operators > Main: Paper Feed/Exit Adjustment > Paper Curl Correction > Off. (SP 1-906-001 to 007: De-curler Setting Tray <number> :Paper Path Selection)
No	Go to Step 2.

2. Determine if the paper can be output with the image side facing down.

Yes	Invert the paper for output. On the operation panel, set the paper to exit the main machine face down
No	Go to Step 3.

3. Remove the anti-static brush. Is the problem resolved?

Yes	Finished!
No	Consult key operators.

Note

- Removal of the anti-static brush before the stapling unit can affect the accuracy of stapling, so the number of sheets shunted to the pre-stacker of the finisher must be reduced. Reducing the number of sheets sent to the pre-stacker before stapling will slow down the line, so be sure to consult key operators before you do this with SP 6-225-001 to 014: Adj Pre Stack Number (size) (<SEF or LEF>.

Multi-Folding Unit

Poor Folding

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.

1. For multi-sheet folding, change the folding position using the following settings:
    - Half Fold Position (Multi-sheet Fold) (SP 6-752-101 to 119: FM2 Equal 1/2:FineAdjFld(D615) (size) SEF (Multi Sheet))
    - Letter Fold-out Position 1 (Multi-sheet Fold) (SP 6-753-101 to 108: FM3 Equal 3rds:Fine Adj 1st (size) SEF (Multi Sheet))
    - Letter Fold-out Position 2 (Multi-sheet Fold) (SP 6-754-101 to 108: FM3 Equal 3rds:Fine Adj 2nd (size) SEF (Multi Sheet))
    - Letter Fold-in Position 1 (Multi-sheet Fold) (SP 6-755-101 to 110: FM4 3rds 1 Flap:Fine Adj 1st (size) SEF (Multi Sheet))
    - Letter Fold-in Position 2 (Multi-sheet Fold) (SP 6-756-101 to 110: FM4 3rds 1 Flap:Fine Adj 2nd (size) SEF (Multi Sheet))
2. For single-sheet folding, change the folding position using the following settings:

- Adjust Z-fold Position 1 (SP 6-750-001 to 100: FM1 Z-Fld: Fine Adj 1st Fld Custom Paper 001 to 100)
- Adjust Z-fold Position 2 (SP 6-751-001 to 100: FM1 Z-Fld: Fine Adj 2nd Fld Custom Paper 001 to 100)
- Half Fold Position: Single-sheet Fold (SP 6-752-001 to 100: FM2 Equal 1/2:FineAdjFld(D615) Custom Paper 001 to 100)
- Letter Fold-out Posn 1: Single-sheet Fld (SP 6-753-001 to 100: FM3 Equal 3rds:Fine Adj 1st Custom Paper 001 to 100)
- Letter Fold-out Posn 2: Single-sheet Fld (SP 6-754-001 to 100: FM3 Equal 3rds:Fine Adj 2nd Custom Paper 001 to 100)
- Letter Fold-in Posn 1: Single-sheet Fold (SP 6-755-001 to 100: FM4 3rds 1 Flap:Fine Adj 1st Custom Paper 001 to 100)
- Letter Fold-in Posn 2: Single-sheet Fold (SP 6-756-001 to 100: FM4 3rds 1 Flap:Fine Adj 2nd Custom Paper 001 to 100)
- Double Parallel Fold Position 1 (SP 6-757-001 to 100: FM5 4ths "V": Fine Adjust 1st Custom Paper 001 to 100)
- Double Parallel Fold Position 2 (SP 6-758-001 to 100: FM5 4ths "V": Fine Adjust 2nd Custom Paper 001 to 100)
- Adjust Gate Fold Position 1 (SP 6-759-001 to 100: FM6 4ths 2 Flap:Fine Adj 1st Custom Paper 001 to 100)
- Adjust Gate Fold Position 2 (SP 6-760-001 to 100: FM6 4ths 2 Flap:Fine Adj 2nd Custom Paper 001 to 100)
- Adjust Gate Fold Position 3 (SP 6-761-001 to 100: FM6 4ths 2 Flap:Fine Adj 3rd Custom Paper 001 to 100)

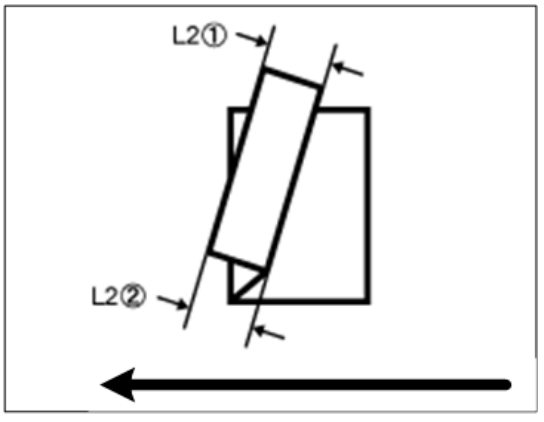
Folding Deviation

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>

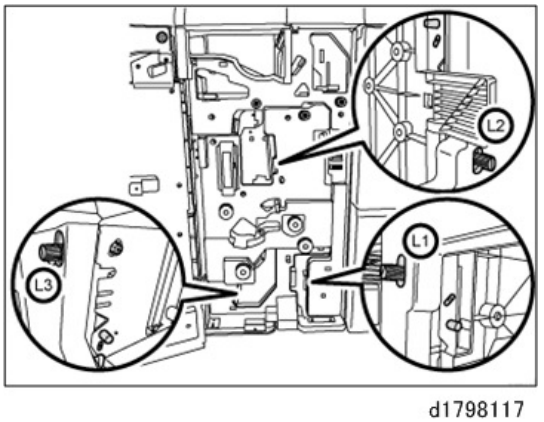


d1798116

Solution:

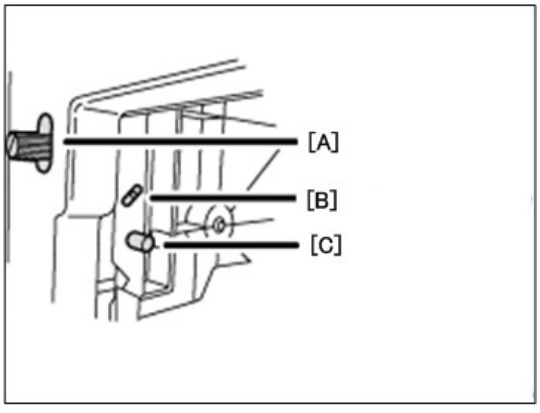
Adjust the deviation.

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



d1798117

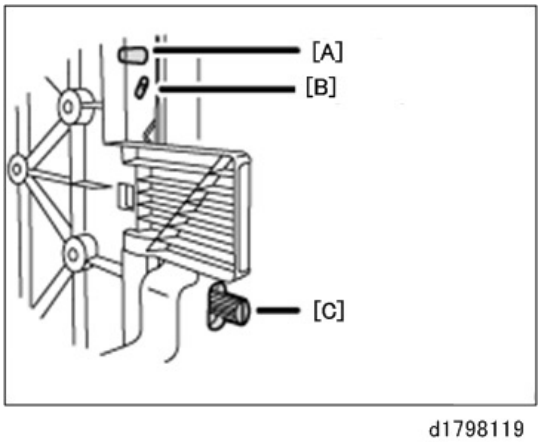
L1



d1798118

[A]	Adjusting Screw
[B]	Adjusting Screw Hole
[C]	Mounting Screw/

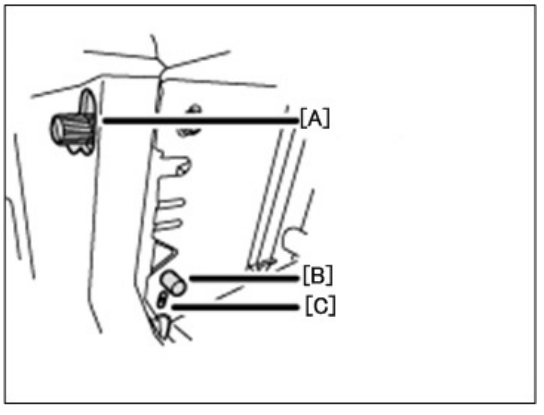
L2



d1798119

[A]	Mounting Screw
[B]	Adjusting Screw Hole
[C]	Adjusting Screw

L3

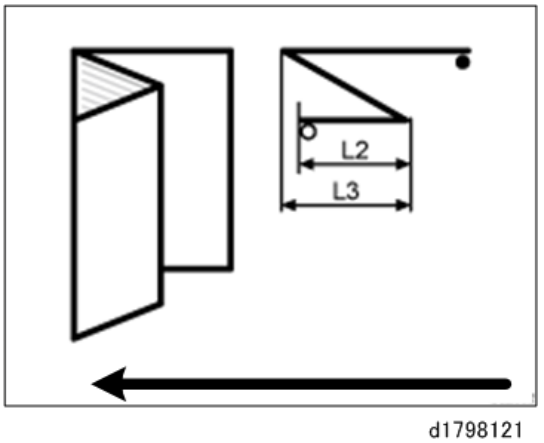


d1798120

[A]	Adjusting Screw
[B]	Mounting Screw
[C]	Adjusting Screw Hole

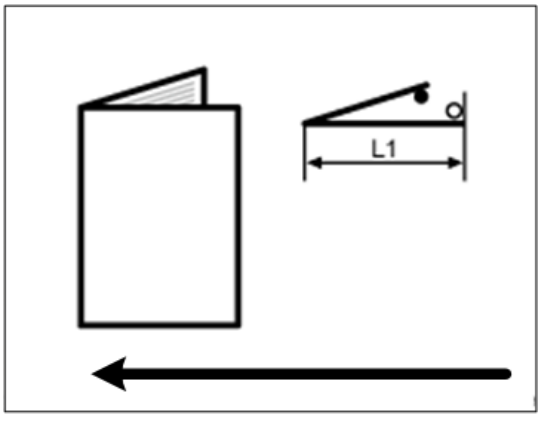
The screws can be used to do adjustments for the following fold methods:

- Z-fold



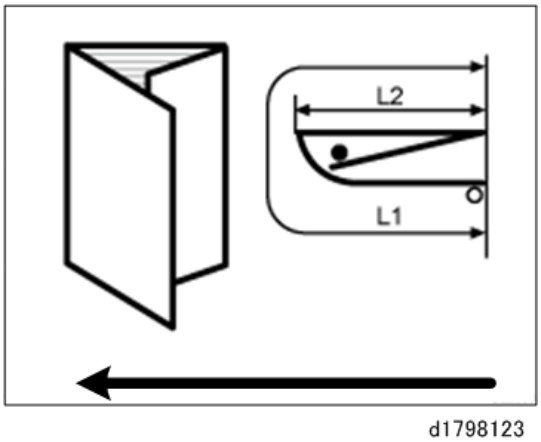
d1798121

- Half Fold



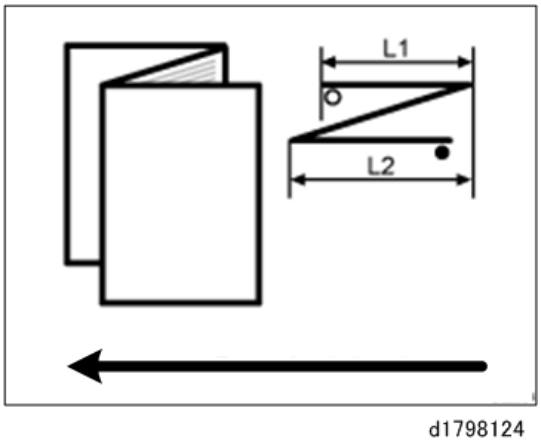
d1798122

- Letter Fold-in



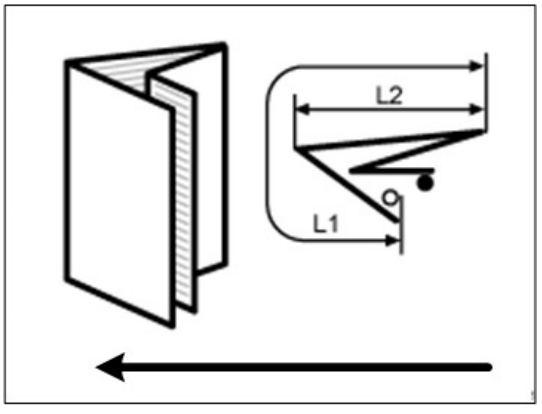
d1798123

- Letter Fold-out



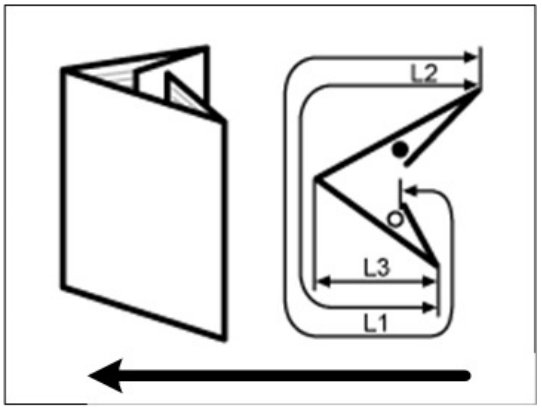
d1798124

- Double Parallel



d1798125

- Gate Fold



d1798126

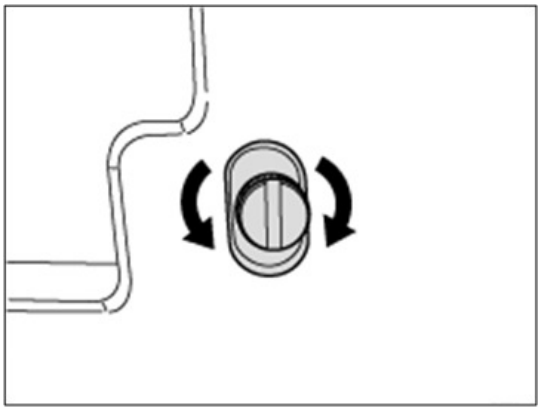
The ○ mark indicates the leading edge (relative to the paper feed direction), and the ● mark indicates the trailing edge.

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.



d1798127

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.

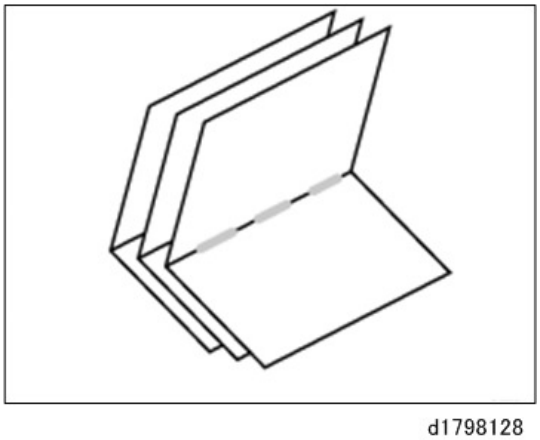
Note

- 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, see page 89.

Folds Soiled 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 soiled, resulting in soiled paper.



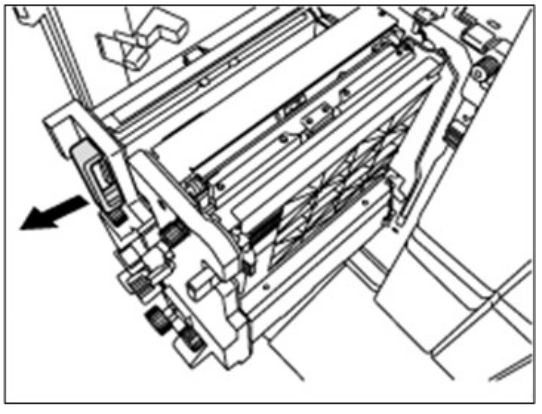
d1798128

This will produce paper soil 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.

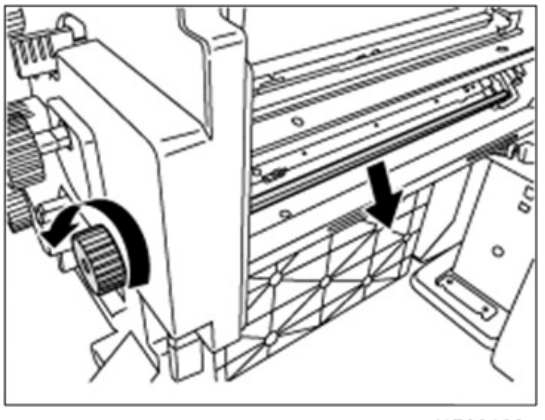
1. Open the front cover of the multi-folding unit.
2. Pull the multi-folding unit out.



d1798129

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

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

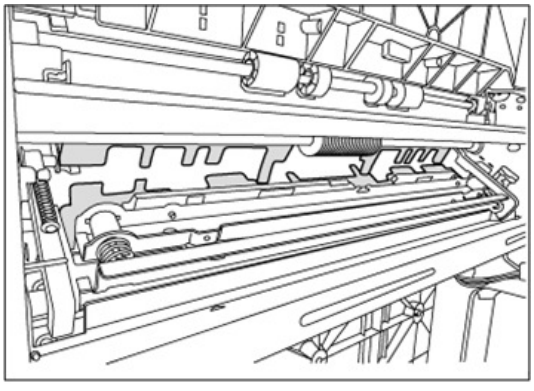


d1798130

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

Important

- **Be careful not to damage the blade.**

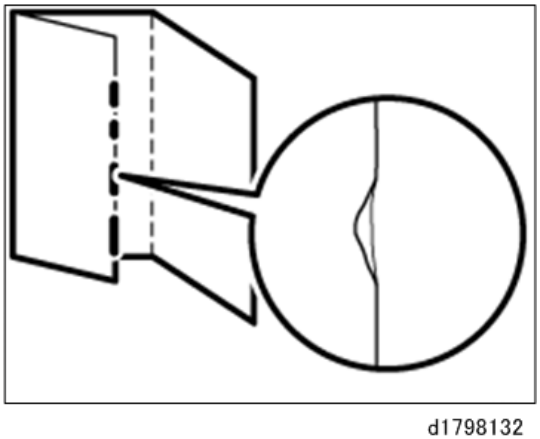


d1798131

5. After cleaning, restore the machine so that it resumes operation.
6. Apply multi-sheet folding and print 3-5 copies. The paper soil will disappear.

Edges of Letter Fold Bent

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



d1798132

Solution:

The solution depends on whether letter folding is applied to multiple sheets or a single sheet.

When letter folding is applied to multiple sheets

1. Load the paper the other side up.
2. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

3. On the machine operation panel: [User Tools] > System Settings > General Features > Set Letter Fold-in Position for multiple sheets to "4.0 mm". (SP 6-755-101 to 110: FM4 3rds 1 Flap:Fine Adj 1st (size) SEF (Multi Sheet))
4. Print the image. Is the problem resolved?

Yes	Finished!
No	Consult key operators.

When letter folding is applied to a single sheet

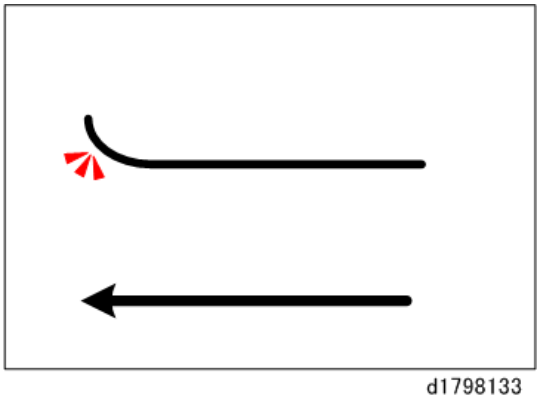
Note

- This procedure is applied especially to coated paper.
- To adjust the following settings, pre-register the type of paper in use as a custom paper. For details see "3. Custom Paper Settings for Administrator" in the TCRU "Adjustment Item Menu Guide".

1. In General Features in System Settings, set Letter Fold-in Position for a single sheet to "7 mm".
2. In Advanced Settings for the custom paper in use, select Letter Fold-in Posn 1: Single-sheet Fold. (SP 6-755-001 to 100: FM4 3rds 1 Flap:Fine Adj 1st Custom Paper 001 to 100)
3. Increase the value by 0.2 mm.
4. Print the image. Is the problem resolved?

Yes	Finished!
No	Repeat Step 2 to 4. If the problem persists even though the setting value is 4 mm larger than the maximum value, consult key operators.

Z-Folding Is Not Performed Correctly



d1798133

The delivered paper has an upward curl with a arc of 4 cm (1.6") or less at leading edge.

Solution:

1. Is the decurl unit installed?

Yes	Go to the next step.
No	Go to Step 4.

2. On the machine operation panel: Adjustment Settings for Skilled Operators > Paper Feed/ Output > Set Adjust Paper Curl to Adjust Concave Curl: Weak. (SP 1-906-001 to 007: De-curler Setting Tray <number>:Paper Path Selection)
3. Print the image. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

4. Load the paper the other way up.
5. Print the image. Is the problem resolved?

Yes	Finished!
No	Consult key operators.

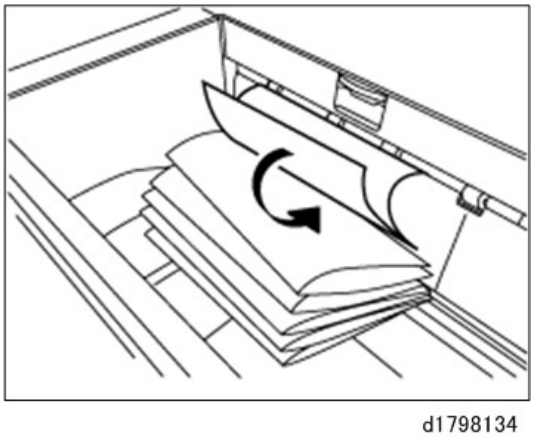
Note

- 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 is likely to occur if thick, relatively stiff paper is used.



d1798134

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

Solution:

1

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.

d1798135

For details about attaching the Z-fold support tray for multi-folding unit, see "Copy/ Document Server" supplied with the machine.

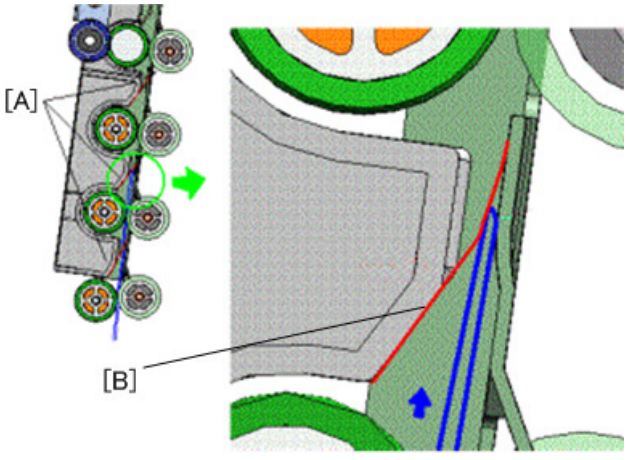
Note

- 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.

Matte Paper Scratched During Folding

The surface of matte finish paper shows scratches after folding.

Cause:



When the folded paper is transported to the fold crease unit, the leading edge (creased edge) enters the fold nip prepared level for the press guide, and then is pressed by the on the paper transport guide. The press guide is provided with three press rollers [A]. The friction between the press guide and press guide plate as the paper is fed can scratch or mark the matte finish of the paper.

Note

- The surface of the guide plate is rough and can cause marks on the surface of the paper. The surface of the plate becomes smoother after about 2,000 sheets have feed through the folding unit and these marks disappear.
- The surface of gloss coated paper is much smoother, so these marks do not appear on glossy paper.
- The surface of Normal paper is untreated, so these marks do not appear with Normal paper.

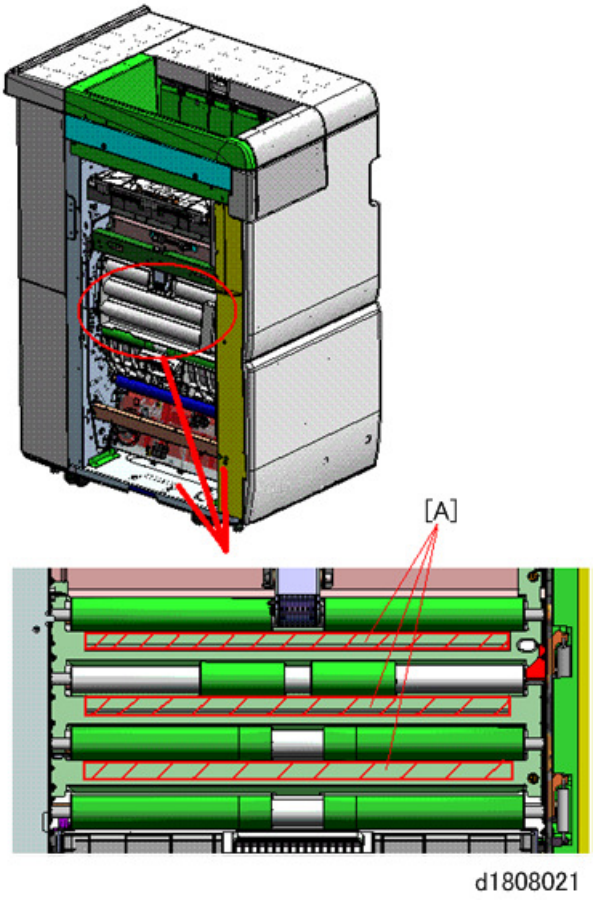
Solution:

1. Open the guide plate and clean the metal plate at [A] with an alcohol dampened cloth.
2. Print and fold a sample. Is the problem resolved?

Yes	Finished!
No	Go to the next step.

3. Take a piece of paper and gently rub the surface of the metal plate to smooth it, and then do another test. Is the problem solved?

Yes	Finished!
No	Repeat Steps 1 and 2. If the problem persists, consult key operators.



Note

- Cleaning the surface of the metal guide plate and buffing it with a piece of paper reduces the occurrence of marks on the paper.
- The present condition of the guide plate at the affected area depends on the amount of usage of the folding unit, but buffing the surface of the plate with paper 20 to 50 times should reduce friction during paper feed.

Important

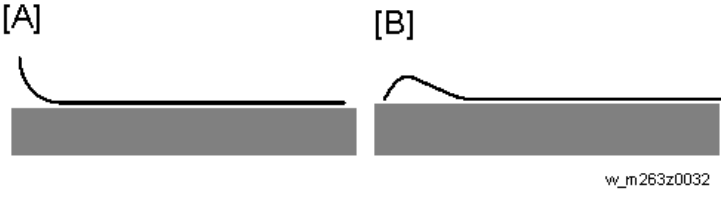
- **After buffing the with paper, always clean the surface of the plate with a clean cloth dampened with alcohol to remove tiny bits of paper that could adhere to the plate after buffing.**

High Capacity Stacker

Delivered Sheets Are Severely Curled

Cause:

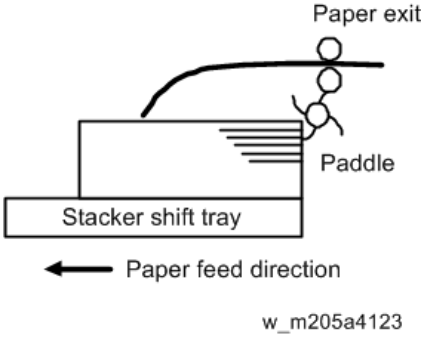
Curled sheets can cause strong friction at their leading edges. This may result in paper misfeeds. Sheets will not be ejected completely and the trailing edges will be left inside the paper exit. If this happens, other sheets may slip under the delivered sheets, so that the delivered sheets may be curled when loaded.



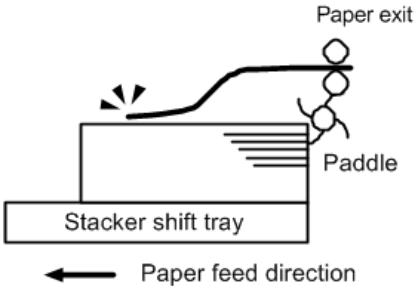
[A]	Concave curl. Paper exits with curve down.
[B]	Convex curl. Paper exits with curve up.

Here is a detailed description of how this problem can occur.

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

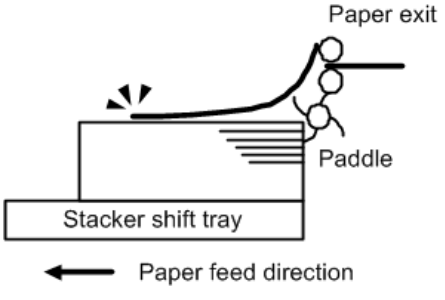


2. Strong friction occurs at the trailing edge so that the paddle cannot pull the sheet back and align the edges of the sheet with those of the stack.



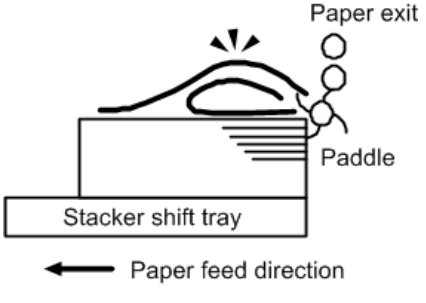
w_m205a4124

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



w_m205a4125

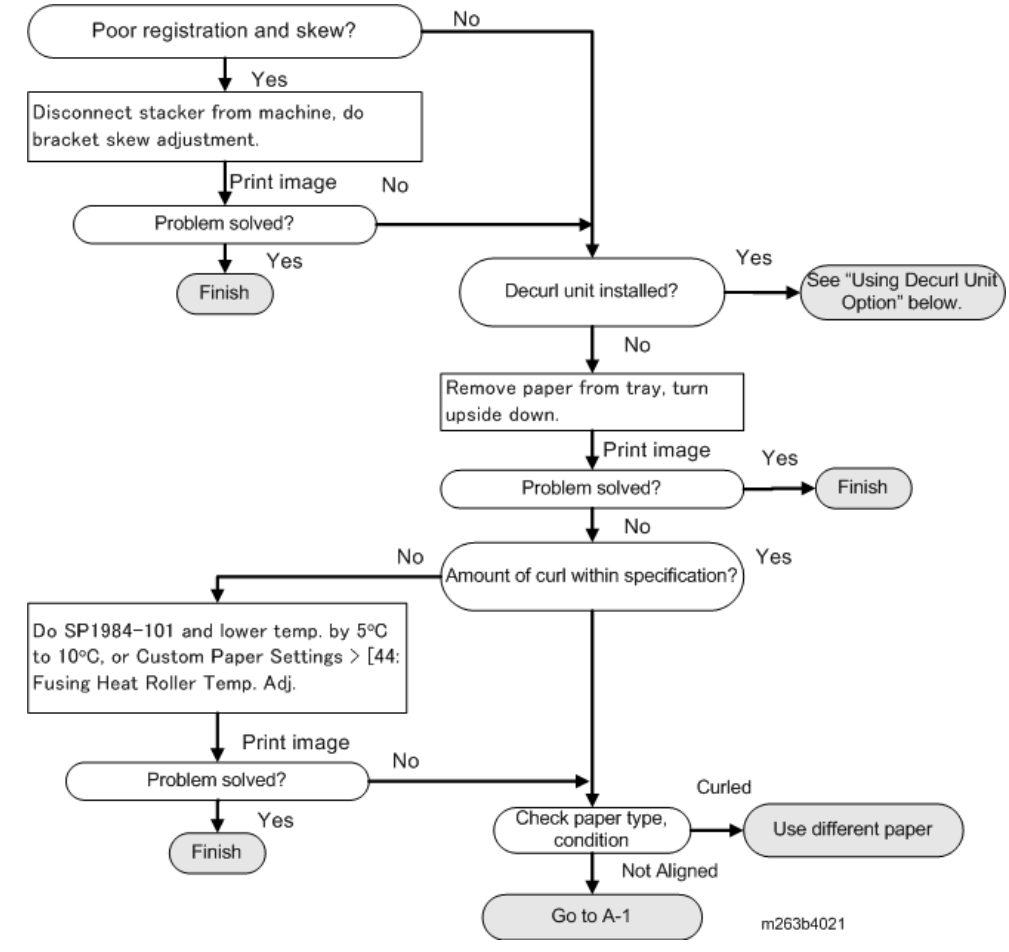
4. Stacked sheets are not aligned properly.

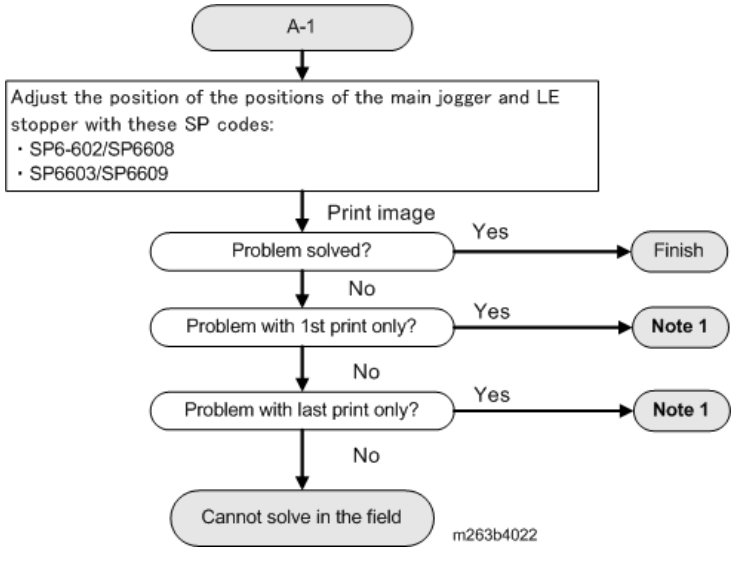


w_m205a4126

Not Using Decurl Unit Option

Remove the stack, turn it upside down, load it in the tray again, and then adjust the fusing temperature.


Poor registration and skew?
No
Yes
Disconnect stacker from machine, do bracket skew adjustment.
Print image
Problem solved?
No
Yes
Finish
Decurl unit installed?
Yes
See "Using Decurl Unit Option" below.
No
Remove paper from tray, turn upside down.
Print image
Problem solved?
Yes
Finish
No
Amount of curl within specification?
No
Yes
Do SP1984-101 and lower temp. by 5°C to 10°C, or Custom Paper Settings > [44: Fusing Heat Roller Temp. Adj.
Print image
Problem solved?
No
Yes
Finish
Curled
Check paper type, condition
Use different paper
Not Aligned
Go to A-1
m263b4021


A-1
Adjust the position of the positions of the main jogger and LE stopper with these SP codes:
・SP6-602/SP6608
・SP6603/SP6609
Print image
Problem solved?
Yes
Finish
No
Problem with 1st print only?
Yes
Note 1
No
Problem with last print only?
Yes
Note 1
No
Cannot solve in the field
m263b4022

Note 1

- Problem cannot be resolved. If the problem occurs on only the first sheet, print a blank sheet as the first sheet, and if the problem occurs on the last sheet, print a blank sheet as the last sheet.

1

Using the Decurl Option

Follow this procedure to correct paper curl with the Decurl Unit.

1. Using coated paper?

Yes	In the [Adjustment Settings for Skilled Operators] menu, set 0310: [Adjust Paper Curl] to [Adjust ⌒ Curl: Weak]. Go to next step.
No	Go to next step 7.

2. Print the image. Problem solved?

Yes	Finished!
No	Go to next step.

3. Set 0310: [Adjust Paper Curl] to [Adjust ⌒ Curl: Strong].
4. Print the image. Problem solved?

Yes	Finished!
No	Go to next step.

5. Convex curl within specification?

Yes	The problem cannot be corrected in the field.
No	Go to next step.

6. Turn the stack upside down, and go to step 3 again. If the amount of curl exceeds specification, do SP1984-101 to 131 to lower fusing temperature by 5°C to 10°C to reduce the amount of curl. You can also use the Custom Paper Settings > 44: [Fusing Heat Roller Temperature Adj.] to adjust the fusing temperature.
7. Convex curl with Plain Paper?

Yes	In the [Adjustment Settings for Skilled Operators] menu, set 0310: [Adjust Paper Curl] to [Adjust ⌣ Curl: Weak]. Go to next step.
No	The problem cannot be corrected in the field.

8. Print the image. Problem solved??

Yes	Finished!
No	Go to next step.

9. Set 0310: [Adjust Paper Curl] to [Adjust ⌣ Curl: Strong].
10. Print the image. Problem solved??

Yes	Finished!
No	Go to next step.

11. Convex curl within specification?

Yes	The problem cannot be corrected in the field.
No	Go to next step.

12. Turn the stack upside down, and go to step **9** again. If the amount of curl exceeds specification, do SP1984-101 to 131 to lower fusing temperature by 5°C to 10°C to reduce the amount of curl. You can also use the Custom Paper Settings > 44: [Fusing Heat Roller Temperature Adj.] to adjust the fusing temperature.

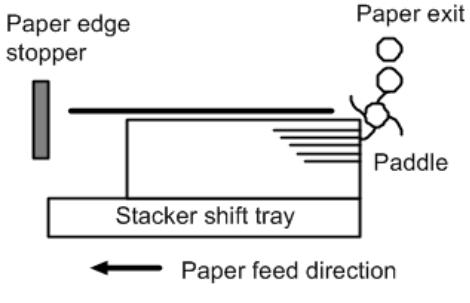
Delivered Sheets Are Not Aligned

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 is likely to occur if Thick (280 g/m2 [105 lb. Cover] or heavier), uncurled A3 or larger paper is used.

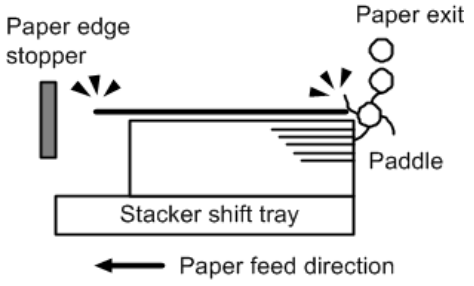
Here is a detailed description of how this problem can occur.

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



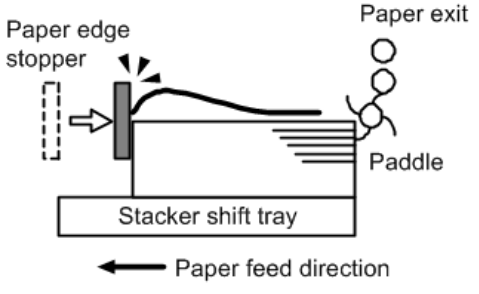
w_m205a4127

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



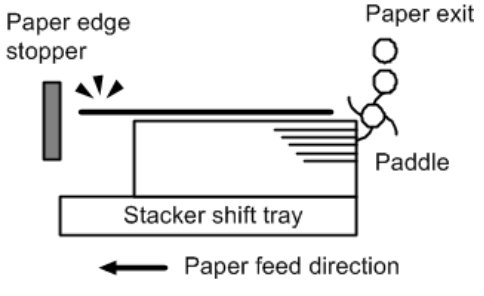
w_m205a4128

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



w_m205a4129

4. Stacked sheets are not aligned properly.



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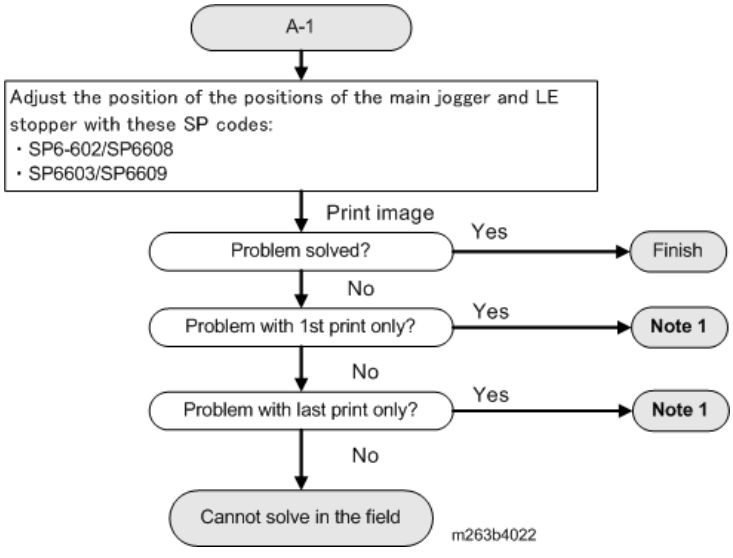
If the Decurl Unit option is not being used



Note 1

- Problem cannot be resolved. If the problem occurs on only the first sheet, print a blank sheet as the first sheet, and if the problem occurs on the last sheet, print a blank sheet as the last sheet.

If the Decurl Unit is being used

Follow this procedure to correct paper curl with the Decurl Unit.

1. Using Thick Paper?

Yes	In the [Adjustment Settings for Skilled Operators] menu, set 0310: [Adjust Paper Curl] to [Adjust ⌒ Curl: Weak]. Go to next step.
No	Go to next step 7.

2. Print the image. Problem solved??

Yes	Finished!
No	Go to next step.

3. Set 0310: [Adjust Paper Curl] to [Adjust ⌒ Curl: Strong].
4. Print the image. Problem solved??

Yes	Finished!
No	Go to next step.

5. Convex curl is within specification?

Yes	The problem cannot be solved in the field.
No	Go to next step.

1

6. Turn the stack upside down, and go to step **3** again. If the amount of curl exceeds specification, do SP1984-101 to 131 to lower fusing temperature by 5°C to 10°C to reduce the amount of curl. You can also use the Custom Paper Settings > 44: [Fusing Heat Roller Temperature Adj.] to adjust the fusing temperature.
7. Convex curl with Plain Paper?

Yes	In the [Adjustment Settings for Skilled Operators] menu, set 0310: [Adjust Paper Curl] to [Adjust ⌣ Curl: Weak]. Go to next step.
No	The problem cannot be corrected in the field.

8. Print the image. Problem solved??

Yes	Finished!
No	Go to next step.

9. Set 0310: [Adjust Paper Curl] to [Adjust ⌣ Curl: Strong].
10. Print the image. Problem solved??

Yes	Finished!
No	Go to next step.

11. Convex curl is within specification?

Yes	The problem cannot be corrected in the field.
No	Go to next step.

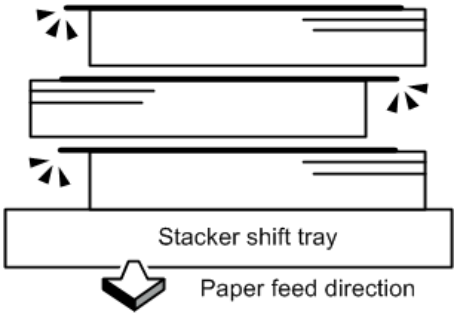
12. Turn the stack upside down, and go to step **9** again. If the amount of curl exceeds specification, do SP1984-101 to 131 to lower fusing temperature by 5°C to 10°C to reduce the amount of curl. You can also use the Custom Paper Settings > 44: [Fusing Heat Roller Temperature Adj.] to adjust the fusing temperature.

    If this does not solve the problem, adjust the positions of the main jogger and LE stopper with these SP codes:

    - SP6-602/SP6-608
    - SP6-603/SP6-609

Note

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



w_m205a4122

Registration, Skew Adjustment

Registration Adjustment

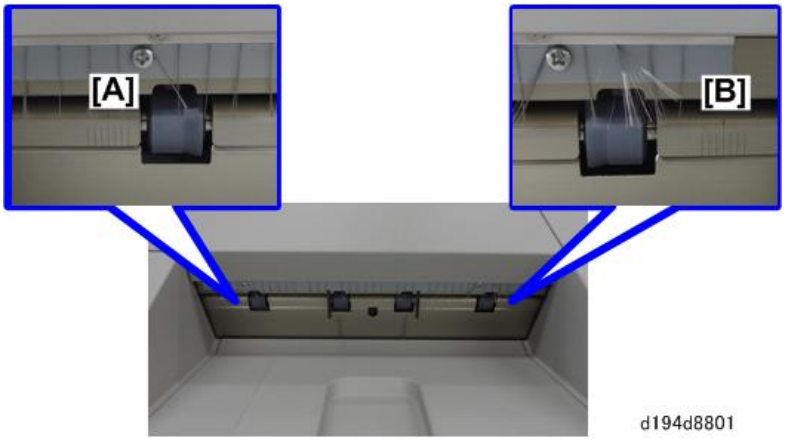
Important

- **Disconnect the stacker from the upstream unit and do this adjustment on the left side of the upstream unit connected to the main unit. To avoid damaging the cart set switch, be sure to remove the Roll-away cart from inside the stacker when you disconnect the upstream unit.**
- **If a Booklet (or Stapler) finisher is connected downstream, paper cannot be output to the proof tray of the stacker. With a downstream finisher connected, do the adjustment after disconnecting the I/F cable of the finisher and then turning the main machine on.**

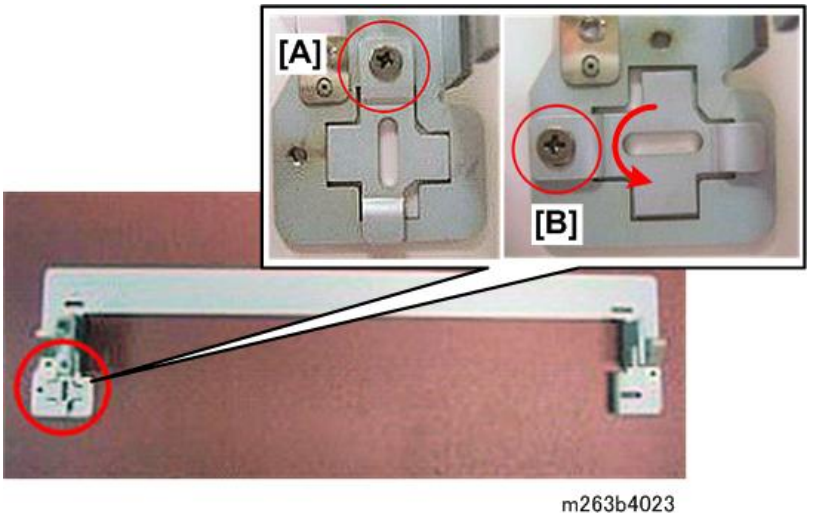
1. Load some A3 or 11"x17" paper in the 2nd tray of the main unit, and then output several sheets of single-side printing to the proof tray stacker.
2. Watch the edge each sheet as it exits the unit. If the edge is within the first notch (2 mm) on the scale, there is no problem. If edge goes beyond the first notch, adjustment is required.

   [A]: This is the rear scale for 11"×17" (DLT)

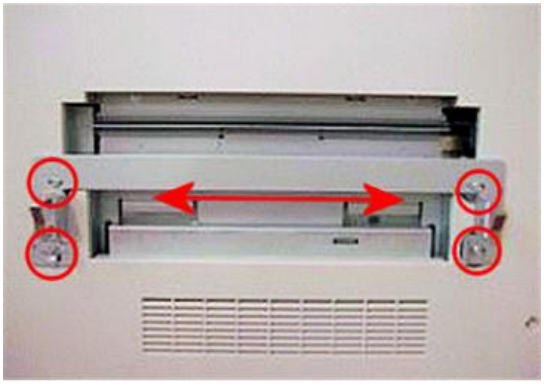
   [B] : This is the front scale for A3



3. Disconnect the stacker from the upstream unit.
4. Remove bracket [A] of the upstream unit and rotate it to [B] (x1). Changing the position of this bracket aligns the oval cut-out horizontally and frees the joint bracket so it can slide from side to side.



5. Loosen the screws of the bracket and slide it to the left or right to adjust the position.



m263b4024

6. Dock the stacker to the upstream unit again, print some more sheets, and then check registration and skew again to make sure that the edges of the sheet do not go beyond the first notch of the scale.
7. If there is no problem, connect the units and set the shoes.

Manual Skew Correction

1. Disconnect the stacker from the upstream unit.
2. Remove the front right cover [A] (x3).

m263b4025

3. Remove the skew adjustment spacers (x1).

m263b4026

4. The adjustment bracket is [A] on the left side of the upstream unit [B]. Loosen the screws of the connection bracket, slide the bracket to the left or right to adjust the position, insert the spacer behind the bracket, and then tighten the screws.

m263b4027

Note

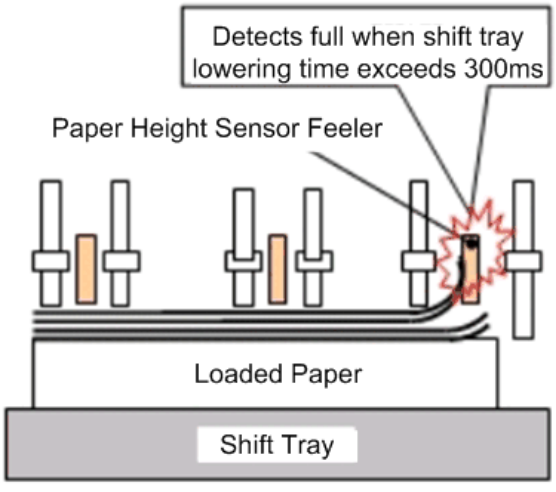
- A spacer is 2 mm thick. If the adjustment requires more than 2 mm, use another spacer.

5. Dock the stacker to the upstream unit, and then do some more test prints, and if the amount of skew is still beyond the first notch, do the procedure again and insert another spacer if required.
6. If no further adjustment is required, re-attach the right front cover of the stacker, and then connect the stacker to the upstream unit.

Premature Detection of Full When Paper Discharged to Shift Tray

Cause:

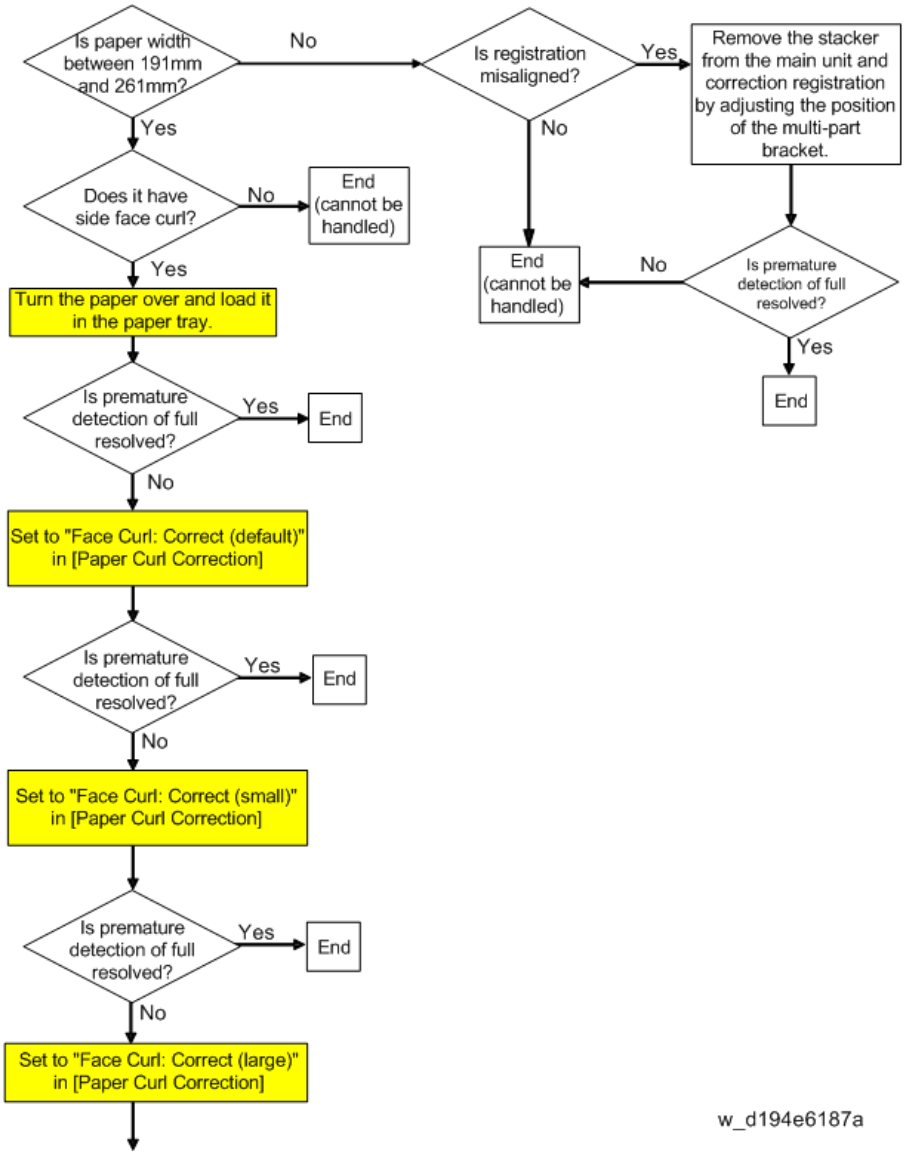
When paper that is about as wide as the paper height sensor feeler is discharged to the shift tray, if it has side face curl, the edge of the paper may fail to go under the paper height sensor feeler and ride up on the feeler; alternatively, by coming in contact with the paper height sensor feeler, it may ride up and press against the feeler and the load from this may hinder the movement of the feeler. In this case, even if the shift tray lowers down, the paper height sensor feeler fails to turn OFF, and the lowering time of the shift tray ends up exceeding 300ms, and the unit ends up sensing it is full.



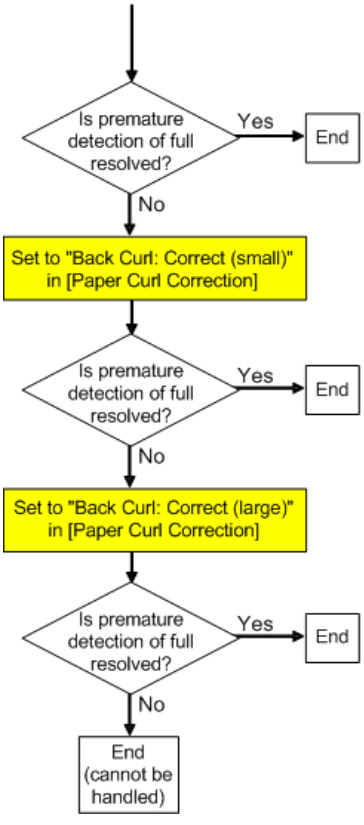
w_d194e6186a

This is likely to occur if paper of a certain width is output to the shift tray, the unit may detect being full prematurely. (Paper between roughly 191 mm to 261 mm wide)

Solution:



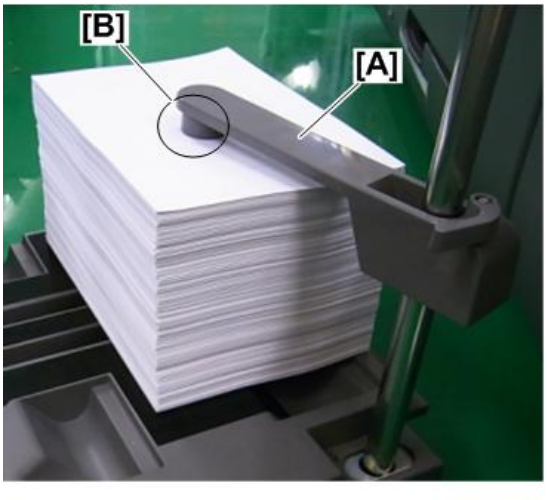
w_d194e6187a



w_d194e6187b

Marks Left by the Paper Holder

Pressure from the paper holder [A] on the cart may leave marks where the holder pressed down [B].



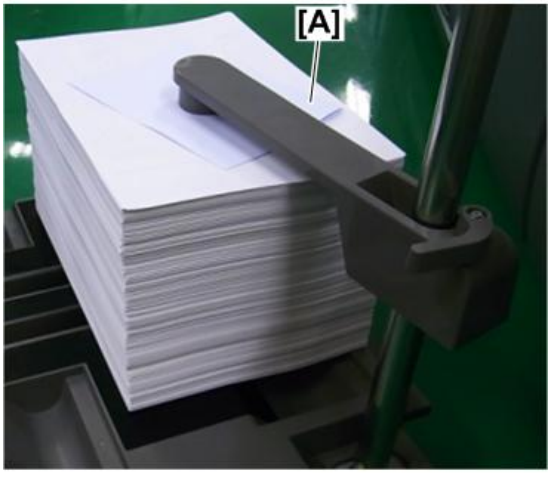
d194d6188

Cause:

The paper holder exerts more pressure than the previous model of cart, which creates the potential for leaving marks on the stack of paper when it is holding it. The top pages of the stack are prone to having marks left.

Solution:

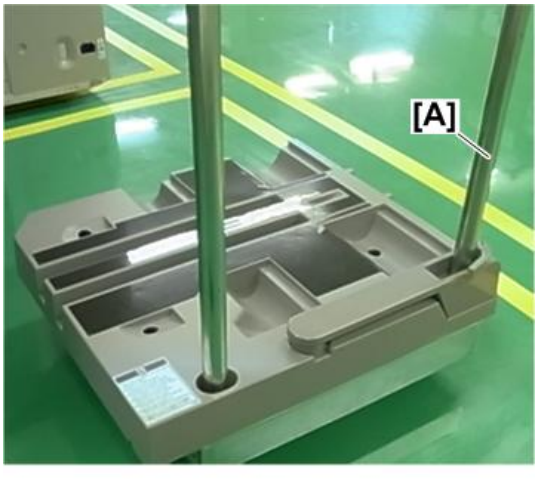
Marks can be prevented by putting scrap paper in between [A].



d194d6189

Prevent Loosening of Screws to the Cart's Handle

There have been cases of screws [A] to the handle of the cart loosening.



d194d6190

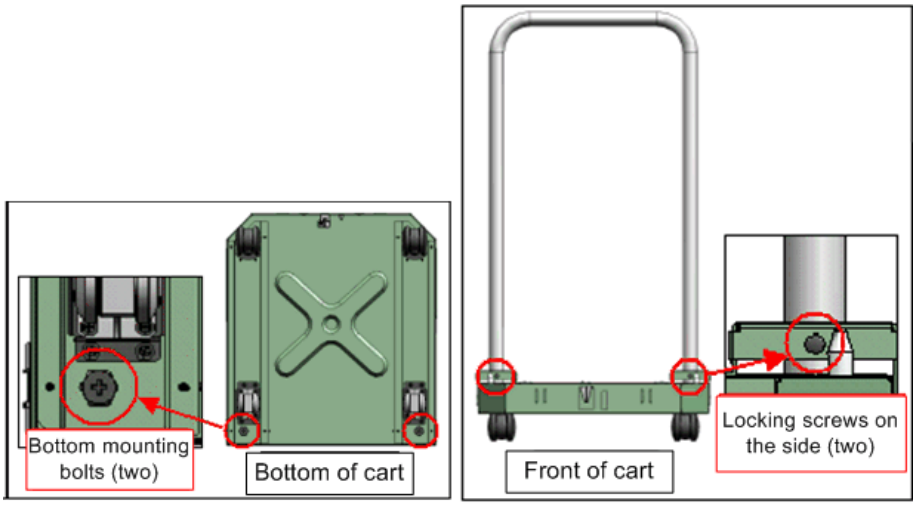
Cause:

The torque on the mounting bolt of the handle on the bottom of the cart is too low, so when the cart is loaded with paper and it is pushed/pulled repeatedly, the mounting bolt may get loose. This is likely to occur if the torque on the mounting bolt of the handle is less than 18Nm.

Solution:

If the cart's handle starts to rattle, or if the paper holder fails to be effective because of loosening, re-tighten the mounting bolt on the bottom of the handle.

Also, if the locking screws on the side of the handle get loose, re-tighten them.



w_d194e6191a

Ring Binder Recognition: SC756-48

Cause:

- In a system where the Ring Binder is installed, there may be cases when the main machine issues SC756-48 (Ring Binder: Ring Binder Not Detected) when the Ring Binder door is opened, the ring binder unit is pulled out of the machine, upon recovery from low energy mode, or when the main machine is turned on.
- Occasionally, closing the door will not release SC756-48.

Note

- If the system is powered on with the ring binder unit pulled out, the ring binding system may not start up normally.

Solution:

1. The system recovers from low energy mode, or is powered on, with the ring binder unit pulled out of the machine.
2. The machine issues SC756-48 on the operation panel.

3. The ring binder reset and the door was closed.
4. When the ring binder function is selected for use, SC756-48 pops up on the operation panel.
5. Wait for the current copy or print job to end, and then cycle the main machine off/on.
6. Does SC756-48 display again, even after cycling the machine off/on?

Yes	The Ring Binder is malfunctioning. The problem requires further investigation, so consult key operators.
No	Finished!

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.

1. On the machine operation panel: Adjustment Settings for Skilled Operators > Image Quality > Adjust Fusing Temperature on Standby > Decrease the temperature by 10°C.
2. Decrease by 10°C the values for Temperature on Standby Mode, Temperature on Low Power Mode, and Temperature Before Performing a Process.
    - SP 1-107-001: Standby Target Temp. Setting Standby: Center
    - SP 1-107-005: Standby Target Temp. Setting Low Power: Center
    - SP 1-107-007: Standby Target Temp. Setting Print Ready: Center

Note

- When printing on paper other than thin paper, we recommend leaving the above settings unchanged

Improving Throughput with Coated Paper

This procedure describes measures for printing on coated paper that equivalent to Paper Weight 7 or higher. When printing on coated paper with a thickness equivalent to Paper Weight 7 or higher, the machine's copy/print speed must be reduced to 80% of full speed (for A4 paper) so that the degree of toner fixation can be enhanced. However, depending on the type of paper in use and printed image, you can have the machine print at full copy/print speed.

The following are requirements for improving throughput when using coated paper with a thickness equivalent to Paper Weight 7 or higher are described below.

1. In Advanced Settings for the custom paper in use, increase the value in Process Speed Setting by one step. (SP 1-986-001 to 100: Process Speed Custom Paper 001 to 100)
    - If it is presently set to Low, change it to Middle.
    - If it is presently set to Middle, change it to High.
2. Set "Fusing Heat Roller Temperature Adj" to 185°C. (SP 1-984-001 to 100: Htg Roller Temp Setting Custom Paper 001 to 100)
3. Print the image. Does it exhibit any fusing problem?

Yes	You cannot improve throughput under the present condition. Restore the previous setting.
No	You can operate the machine using this setting.

The following table shows the copy/print speed available for each item in “Process Speed Setting”.

Mode	Speed/Machine
High (Full Speed)	135 cpm (Pro 8120S/Pro 8120) 110 cpm (Pro 8110S/Pro 8110) 95 cpm (Pro 8100S)
Middle	110 cpm (Pro 8120S/Pro 8110)
Low	95 cpm (Pro 8120S) 95 cpm (Pro 8110S)

Reducing Wait Time with Mixed Paper

When using mixed paper the fusing unit settings can switch to accommodate the different types and sizes of paper, and this affects the wait time which can lower productivity. However, depending on how the client is using the machine, there are occasions when it is best for the client to operate the machine even when fusing conditions are not exactly ideal. This procedure describes how to confirm whether the wait time during jobs with mixed paper can be reduced.

There are three cases when wait time can occur:

- **Case 1**. For brand name paper where there is a large difference in the heating roller temperature between the previous and adjusted paper thickness setting.
- **Case 2**. For brand name paper where there is a large difference in the heating roller temperature in the paper thickness setting for the width (front-to-rear on paper path is the length).
- **Case 3**. Repeated low volume print jobs.

This procedure describes how to reduce the wait time for Case 1 above.

Solution:

1. Are the heating roller temperature settings different for the intervals between different types of paper?

Yes	Go to Step 2.
No	No solution for this machine.

2. Raise the setting for low heating roller temperature paper by +5C. (SP 1-984-001 to 100: Htg Roller Temp Setting Custom Paper 001 to 100) (Upper limit: This is the same as the as the temperature for paper of high temperature.)
3. Do a sample print. Did this reduce the wait time?

Yes	Go to Step 4.
No	Repeat Step 2.

4. Can you get permission from the client to reduce efficiency of paper feed?

Note

- This step could possibly cause paper curl, jams, or wrinkling with low fusing temperature paper.

Yes	Go to Step 5.
No	No solution for this machine.

5. Can you get permission from the client to reduce image quality?

Note

- This step could possibly cause paper curl, jams, or wrinkling with low fusing temperature paper.

Yes	Finished!
No	No solution for this machine.

Important

- **Never reduce the heating roller temperature for high fusing temperature paper. Doing so could cause poor fusing and foul the parts inside the machine with toner.**

Other Problems

ITB Centering: SC471-03, -04, -05, -06 (ITB Position Errors)

Cause:

The machine issues the following SC codes when the machine ITB steering control mechanism cannot correct the position of the ITB to compensate for the belt shifting out of position during operation of the system:

- SC471-03 ITB position error 1
- SC471-04: ITB position error 2
- SC471-05: ITB position error 3
- SC471-06: Belt centering sensor error

Solution:

The value of SP 2-920-002 (Steering Control Roller Stable Position of Steering Roller) displays the target setting (-20≦SP Value ≦+20) for the optimum position of the ITB used to reset the ITB to its optimum position with steering control after the lubricant application mode has been executed so the ITB is positioned correctly for stable operation.

Important

- **The current setting of SP2-920-002 and the setting of the steering plate during operation and before and after adjustment for any operation where lubricant was applied are recorded.**
- **If the optimum position of the belt cannot be recovered, then that value of the setting should be passed to the key operator in order to solve future problems.**

Note

- SP2-920-002 (Steering Control Roller Stable Position of Steering Roller) displays the number of steps used in operation of the steering control motor that diagonally adjusts the position of the steering control roller to keep the belt at the initial position. The target setting for this SP code is "0". If the displayed setting is within range [-20≦SP≦+20], the position can be controlled within ±2 mm.
- This troubleshooting procedure is not required if the ITB has been replaced after the service life of the ITB has expired and no ITB-related SC code has been issued.

Preparation for Lubricant Application Mode

This procedure is the same as that done for setting the machine in the lubrication application mode after the ITB has been replaced.

1. Remove the drum cleaning unit.

2. Remove the PTR unit.
3. On the front of the ITB unit, turn both blade levers clockwise.
4. Remove the ITB unit.

RTB 112: This section was modified

Make Sure the Machine is Level

If the machine is level within 5 mm, this could cause the belt to cant to the front or rear and negate these adjustment procedures..

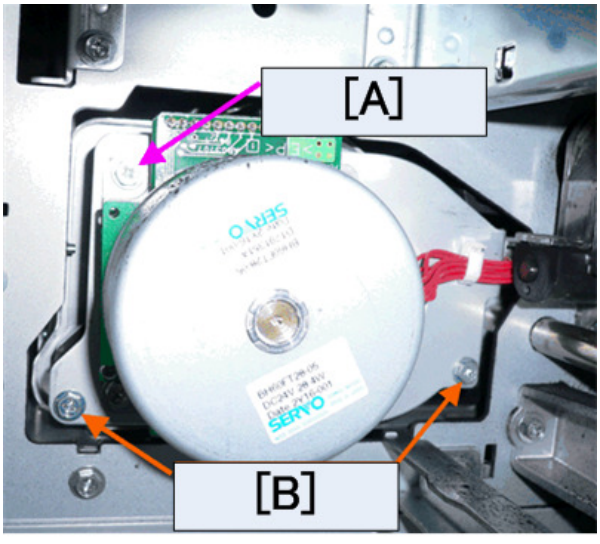
1. Re-install the ITB. (Field Service Manual > ITB Unit > Belt Replacement > Belt Re-installation)
2. Open SP2-310-002 (Force Apply Lubricant Operation Time Setting), and then change the setting from 300 to 100 sec.
3. Open SP2-920-013 (Steering Control Roller Timeout of Belt Ready), and then change the setting from 400 to 105 sec.

Note

- The timing settings for these SP codes must be shortened from their normal operation settings in order to allow diligent operation checks.
- Reducing **SP2-310-002** to 100 sec. allows the machine to apply lubricant at 100 sec. intervals, confirm the stable position of the belt, and then adjust the belt to the positions of the left and right scale plates.
- Depending on the conditions of the machine, after application of the lubricant ends the belt may not be adjusted to its correct position within the target range within 100 sec. This can occur if the belt has been re-installed out of position. In this case after the SP executes lubricant application for 10 sec. and stops, if the machine is not able to do the correction quickly enough, so beforehand the belt ready **SP2-920-013** timeout setting is set to 105 sec. If the machine cannot correct the belt position within 105 sec. the machine issues SC471-01 (Belt Position Ready Timeout), and SP2-310-002 (applying the lubricant) stops, and then starts the process again after the belt has been steered to the correct position.

1. Set the following steering control SP codes to “0”.
    - SP 2-920-002 (Steering Control Roller Stable Position of Steering Roller)
    - SP 2-920-004 (Steering Control Roller Last Time Ai Value)
2. SP 2-310-001 (Force Apply Lubricant Belt Cleaning) – 1st Execution
    - SP2-310-001 executes (100 sec.) After the SP executes, check the value of SP2-920-002 (Steering Control Roller Stable Position of Steering Roller).
    - If the value is -20≦SP Value≦+20, do the next 2nd SP execution. At this time the SP value in Step 4 is not set to “0”.
    - If the value is <-20 or +20< the SP value, then the “Steering plate Adjustment” described below is required. After this adjustment, set the value for the Step 4 SP to “0”, and then do the 2nd SP execution.

3. Do SP2-310-001 – 2nd Execution
    - Do SP2-310-001 (100 sec.). After this SP executes, check the value of SP2-920-002 (Steering Control Roller Stable Position of Steering Roller)
    - If the value is -20≦SP Value≦+20, do the next 3rd SP execution. At this time the SP value in Step 4 is not set to "0".
    - If the value is <-20 or +20< the SP value, then the "Steering plate Adjustment" described below is required. After this adjustment, set the value for the Step 4 SP to "0", and then do the 3rd SP execution.
4. Do SP2-310-001 – 3rd Execution
    - Do SP2-310-001 (100 sec.). After this SP executes, check the value of SP2-920-002 (Steering Control Roller Stable Position of Steering Roller)
    - If the value is -20≦SP Value≦+20, do the next 4th SP execution. At this time the SP value in Step 4 is not set to "0".
    - If the value is <-20 or +20< the SP value, then the "Steering plate Adjustment" described below is required. After this adjustment, set the value for the Step 4 SP to "0", and then do the 4th SP execution.
5. Do SP2-310-001 – 4th Execution
    - Do SP2-310-001 (100 sec.). After this SP executes, record the value of SP2-920-002 (Steering Control Roller Stable Position of Steering Roller)
6. After doing the 4th execution of SP2-310-001, do one of the following, using the value of the setting for SP2-920-002 (Steering Control Roller Stable Position of Steering Roller).
    - If SP value <-20 or +20<SP value: Check the ITB unit, and then reset the ITB belt unit, and then repeat lubricant application in Step 4.
    - If -20≦SP Value≦+20: Reset the following SP codes to their default settings:
      For SP2-310-002 change the "100" setting to "300" to restore the default.
      For SP2-920-013 change the "105" setting to "400" to restore the default.
    - Next, do Steps 11 and 12. If you did not do the adjustment for the right control plate, skip Steps 11 and 12, and then go to Step 13.
7. Open the controller box. (Field Service Manual > Replacement and Adjustment > Common Procedures > Controller Box, Controller Box Cover > Opening the Controller Box)
8. Loosen the three screws of the ITB/PTR motor bracket, and then tighten them.



d1808023

Note

- This step is required the correct the positions of these screws [A] and [B] because adjustment of the right steering plate can cause these screws slip out of position between the ITB unit and the ITB/PTR motor.

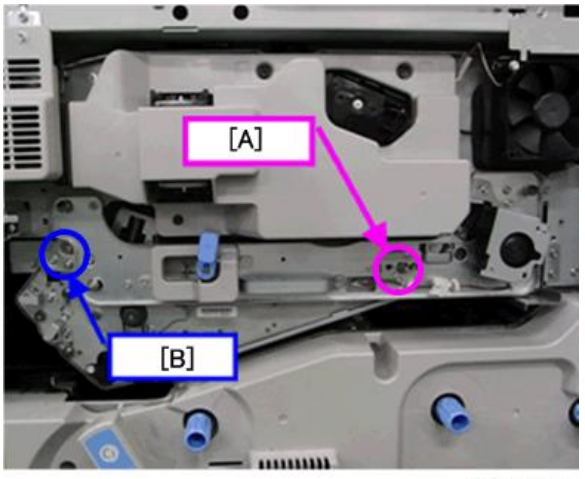
Important

- **Recommended torque for screw [A]: 0.9±0.1N m**
- **Recommended torque for screws[B: 0.7±0.1N m**
- **Screws [B] are made of resin-based material, so do not apply to much force when loosening and tightening them.**

1. Do these procedures, and check the re-installation. This completes the procedure.
    - Close the controller box.
    - Re-install the drum cleaning unit.
    - Raise the ITB lever so the ITB is in contact with the drum.
    - Re-install the PTR unit.
    - Raise the levers on the front of the ITB cleaning unit so the blades are up in the operating position.

Steering plate Adjustments

Do this procedures if the results of the 1st, 2nd, and 3rd executions of SP2-920-002 were SP Value<-20 or +20<SP Value. There are two plates, a left steering plate and a right steering plate. The right steering plate should be adjusted first, and then the left steering plate.



d1808024

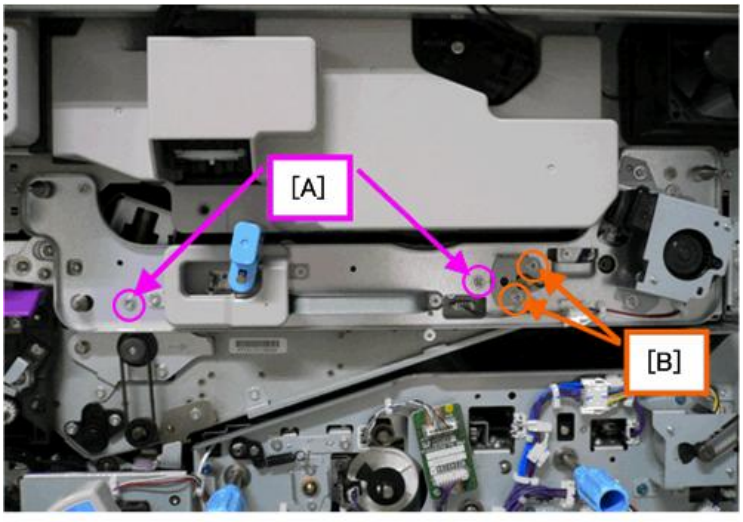
Note

- The range of adjustment for the right steering plate [A] is ±1 on its notched scale.
- The range of adjustment for the left steering plate [B] is ±6 on its notched scale.
- Adjustment of the SP code may have no effect if the right plate has been previously adjusted. For example, if the right steering plate has already been adjusted to +1 on its scale, this corresponds to a +30 setting of the SP code and further adjustment will have no effect.
- However, if the right steering plate has been adjusted to "-1" or "+1" before leaving the factory, the right steering plate should not be adjusted. Leave the right steering plate at its factory setting, and adjust the left steering plate.

Right Steering Plate Adjustment

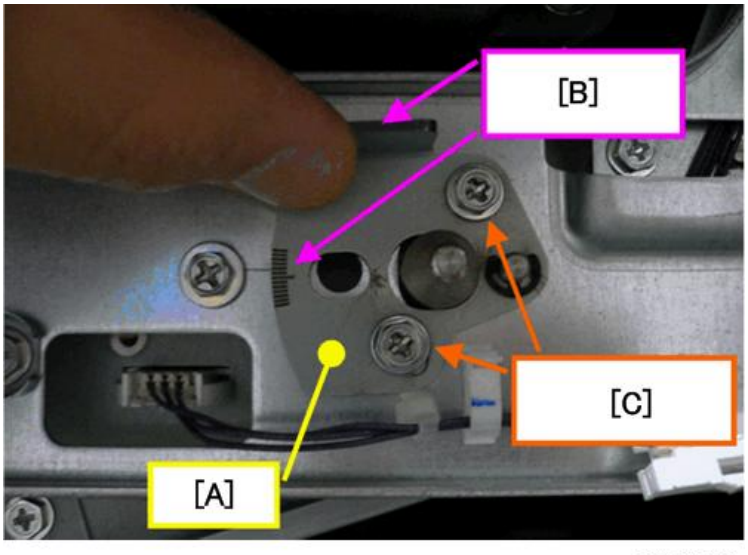
1. Execute application of lubricant with SP2-310-001, and then do SP2-920-002 (Steering Control Roller Stable Position of Steering Roller), and check its setting. Based on this setting, adjust the position of the right steering plate by referring to the table below.

SP2-920-002	From the Current Right Steering Plate Scale Setting	Comments
+21 to +150	+1	Move to upper part of scale
-20 to +20	No adjustment required	Within correct range
-20 to -150	-1	Move to lower part of scale



d1808025

2. Loosen (do not remove) the four screws at [A] and [B].



d1808026

3. Move the adjustment plate [A] to the scale [B], and then tighten both screws [C].

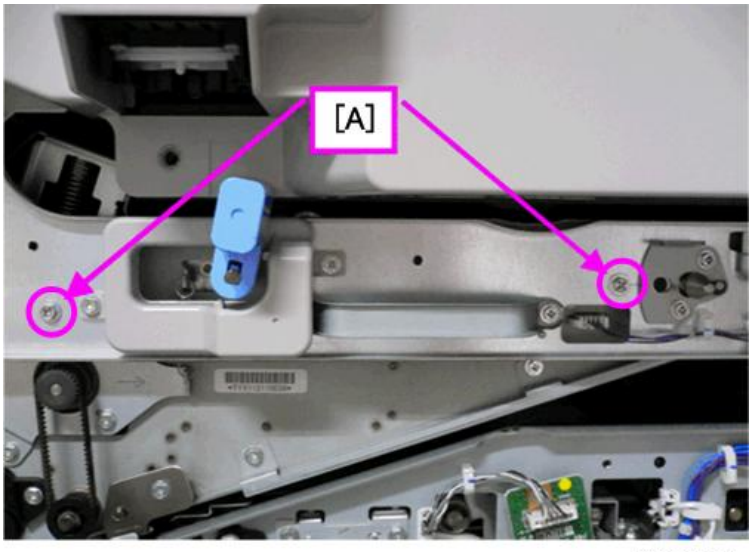
Example 1

If the right steering plate was set to "-1" and the SP setting was "+30", move the plate to the up one notch (+1) to "0" on the scale.

Example 2

If the right steering plate was set to "+1" and the SP setting was "+30", the position of the plate cannot be adjusted. You will have to adjust the left steering plate up one notch (+1). If the left

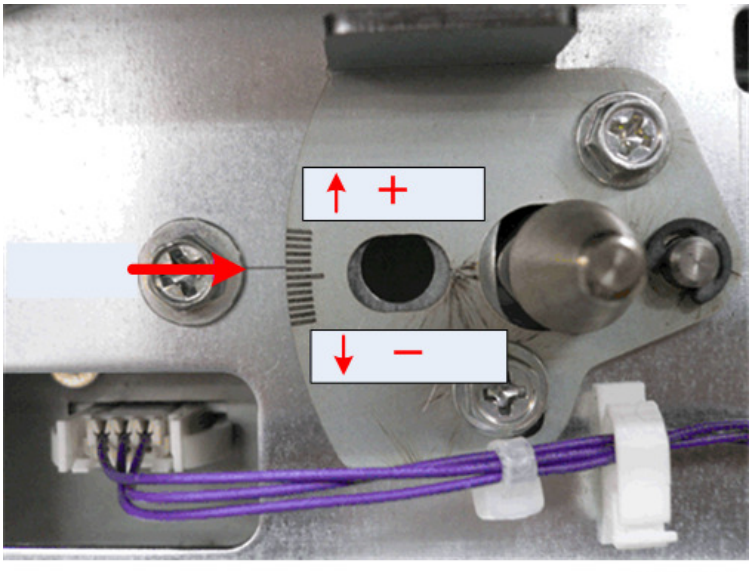
steering plate is at the "0" notch, move the plate up one notch (+1), or of the plate is at +1, move the plate up two notches (+2).



d1808027

4. Tighten both screws [A]. Make sure that the plate is at the correction position on the scale. This completes manual adjustment of the plate.
5. Return to Step 5 in the previous section and restore these SP codes to their default settings.
    - SP 2-920-002 (Steering Control Roller Stable Position of Steering Roller)
    - SP 2-920-004 (Steering Control Roller Last Time Ai Value)

Right Steering Plate Scale Adjustment Example



d1808028

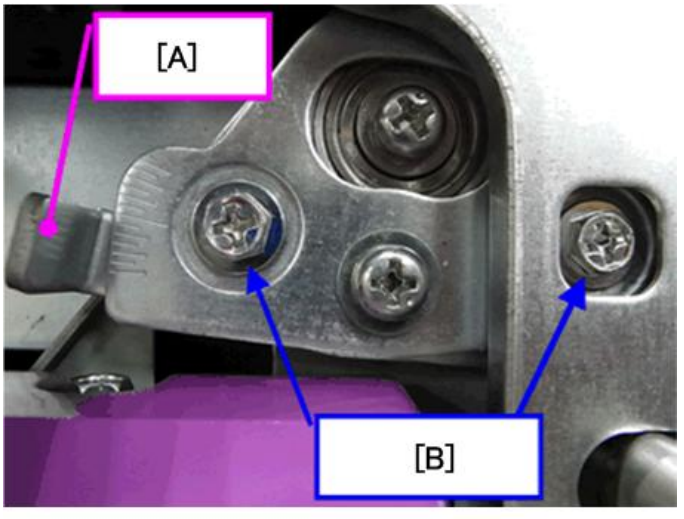
The setting for SP2-920-002 (Steering Control Roller Stable Position of Steering Roller) was "+30", so the right steering plate was adjusted to "+1".

Left Steering Plate Adjustment

1. After executing SP2-310-001 (Force Apply Lubricant Belt Cleaning), do SP2-920-002 (Steering Control Roller Stable Position of Steering Roller) and check its setting. Based on this setting, adjust the position of the left steering plate by referring to the table below.

SP2-920-002	From the Current Left Steering Plate Scale Setting	Comments
+150 to +121	+5	Move to upper part of scale. If you cannot adjust to +5, move to +6.
+120 to +96	+4	
+95 to +71	+3	
+70 to +46	+2	
+45 to +21	+1	
-20 to 0 to +20		

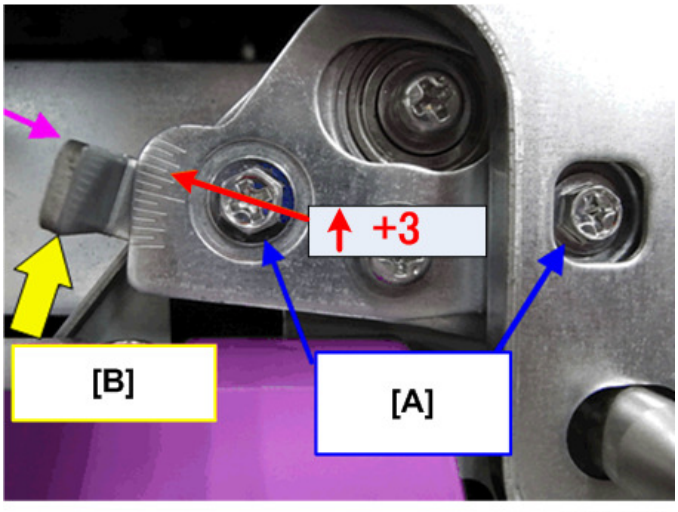
SP2-920-002	From the Current Left Steering Plate Scale Setting	Comments
-21 to -45	-1	Move to lower part of scale. If you cannot adjust to -5, move to -6.
-46 to -70	-2	
-71 to -95	-3	
-96 to -120	-4	
-121 to -150	-5	



d1808029

2. Loosen (do not remove) both screws [B].
3. Move lever [A] to the desired notch, and then tighten both screws [B].
4. Return to Step 5 (under the main **Solution** procedure above), and then execute the force lubricant belt cleaning (SP2-310-001) and the steering control position setting (SP2-920-002).

Left Steering Plate Scale Adjustment Example



d1808030

The setting for SP2-920-002 (Steering Control Roller Stable Position of Steering Roller) was "+80", so the right steering plate was adjusted to "+3".

Countermeasures for Other SC Codes

These are countermeasures for solving other mechanical problems with the recurrence of SC741 series codes that may occur during these troubleshooting procedures.

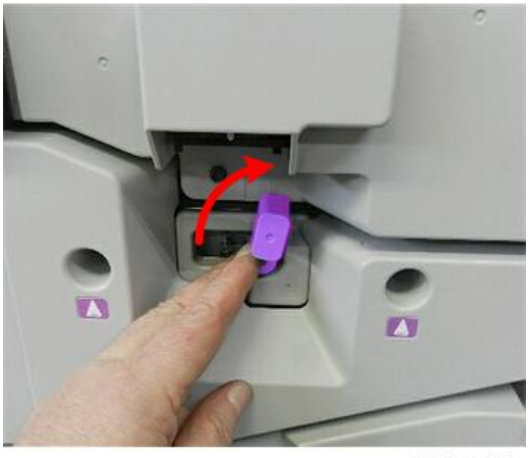
SC471-01	Belt Position Ready Timeout
	The machine issues this error during normal operation when ITB steering control fails to move the belt within the 400 sec. prescribed by SP2-920-013 (SP 2-920-013: Steering Control Roller Timeout of Belt Ready). If the machine issues this SC during the troubleshooting procedures described above, this means the steering control failed to position the belt within 105 sec. after the SP code was changed from "400" to "105".
	The ITB was not re-installed correctly.
	Remove the ITB, re-install it correctly, and then do the lubricant application SP 2-310-00 (Force Apply Lubricant Belt Cleaning)

SC471-02	Belt Centering Roller HP Error
	There is a problem in the steering control mechanism.

	• The wire that controls steering is kinked, has slipped off the pulley, or is not set correctly. • The belt centering HP sensor harness is loose, broken, defective, or the sensor is defective. • The belt centering motor harness is loose, broken, defective, or the motor is defective.
	• Cycle the machine off/on. • If the problem persists, remove the ITB unit, remove the belt, and then check the steering control mechanism wire, pulley, sensor and motor harness connections.

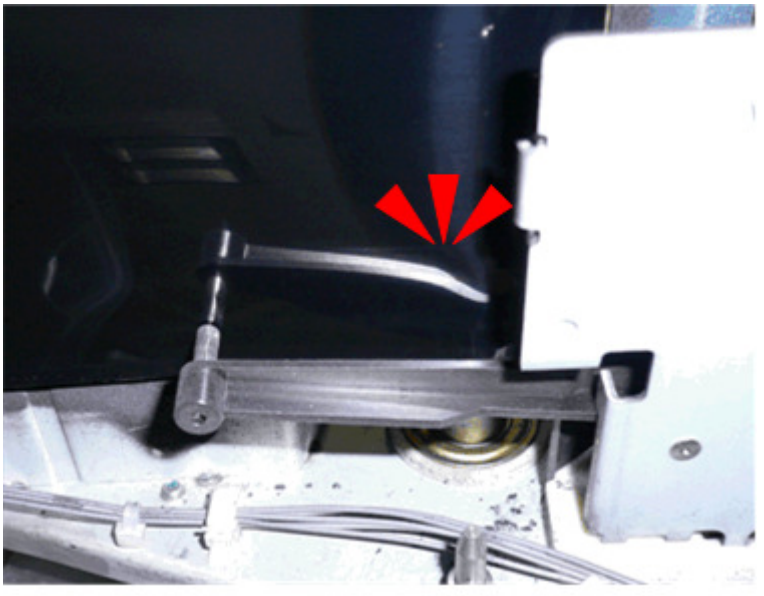
SC471-03	ITB Position Error 1
	The belt centering sensor detected that the belt has slipped out of position ±2mm. **Note**: This SC is logged, not displayed.
	The belt has slipped out of position after shipping from the factory, or the main machine has not been leveled correctly.
	No procedure is required. The purpose of this SC code is used for analysis of SC471-04 and SC471-05 described below. It indicates whether the belt is frequently slipping out of position during daily use or if there has been a sudden development of the belt slipping out of position easily.

SC471-04	ITB Position Error 2
	The front edge of the belt is slipping out of position.
SC471-05	ITB Position Error 3
	The rear edge of the belt is slipping out of position.

	• SC471-04 can occur if the belt positioning lever is not completely up and locked in place.  d1793214 • These errors may indicate that the belt has slipped out of position after shipping from the factory, or the main machine has not been leveled correctly. • The belt centering sensor harness may be loose, broken, defective, or the sensor may be defective.
	• Remove the ITB unit, remove the belt, and then check the belt centering sensor. • Carefully, re-install the ITB • Be sure to do SP2-310-001 (Force Apply Lubricant Belt Cleaning) after re-installing the ITB.

SC471-06	Belt Centering Sensor Error
	There is a problem with the belt centering sensor readings.
	• The belt centering sensor harness is loose, broken, defective, the sensor could be defective, or something (a scrap of paper) could be interfering with operation of the sensor. • The ITB is slipping too far to the front or too far to the rear. • The lever of the belt centering sensor is riding up out of position.

	• Replace belt centering sensor • Check the belt centering unit sensor and make sure that it is installed correctly. Make sure that the leading edge of the lever is not riding up onto the surface of the ITB as shown in the illustration below. • After re-installing the ITB, be sure to do SP2-310-001 (Force Apply Lubricant Belt Cleaning) after re-installing the ITB.



d1808112

SC325, SC395 Grounding Faults

This section describes how to deal with two service codes:

- SC325: Development motor error
- SC395: Drum motor error

Cause

One or more deformed or dirty ground plates in the drum cleaning unit are causing grounding faults and generating electrical noise that is interfering with the motor control signals that control operation of the drive motor.

Note

- SC325 occurs most frequently when electrical noise interferes with the drive motor control signals.

Solution

1. Inspect the four ground plates on the drum cleaning unit.

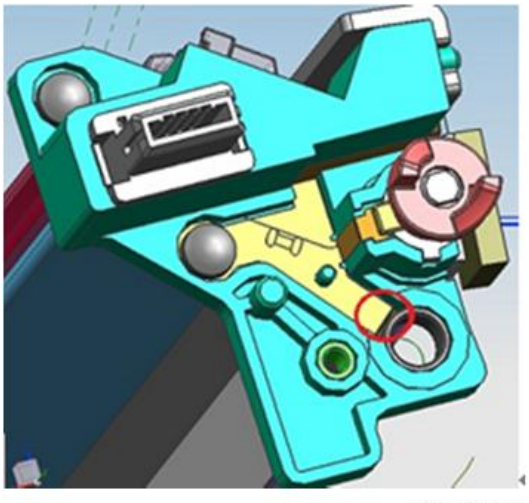
2. Clean the plates if they are covered with toner or grease, and then replace any plate if it deformed.

Ground Plates that Require Checks

No.	Description
1	Ground Plate
2	Ground Plate Covers
3	PCU Slide Rail Stopper
4	Ground Plate Stays

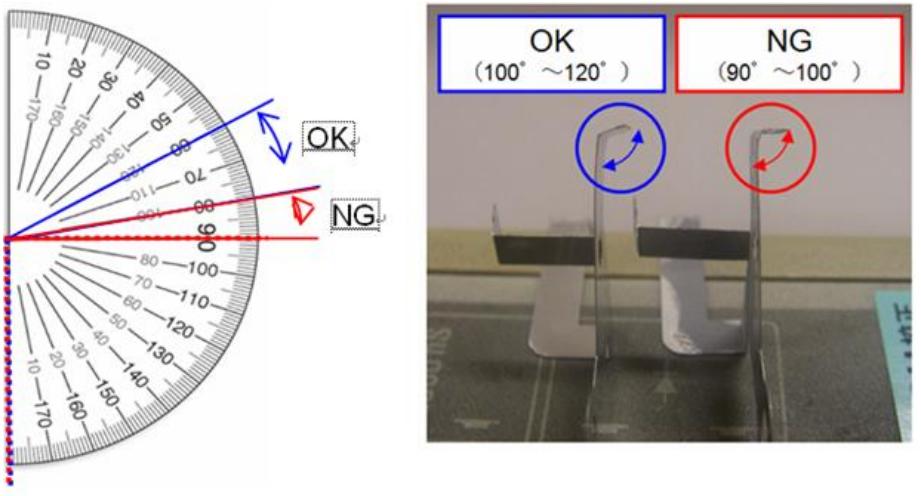
*1: These are new service parts.

No. 1 Ground Plate



d179b4006

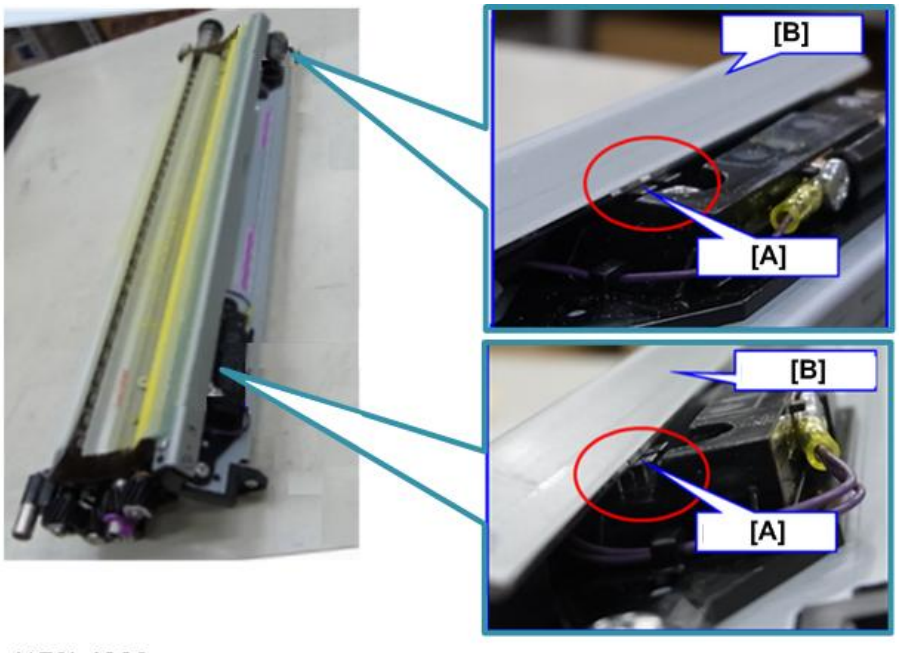
1. Remove the grounding plates from the unit and check the angles.



d179b4007

No. 2 Ground Plate Covers

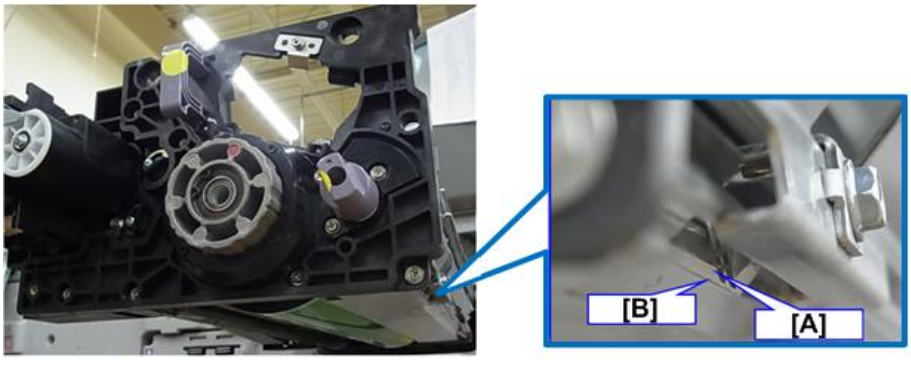
1. Confirm correct connection of the grounding plates [A] with the frame [B] of the cleaning blade assembly at two points, front and rear.



d179b4008

No. 3 PCU Slide Rail Stopper

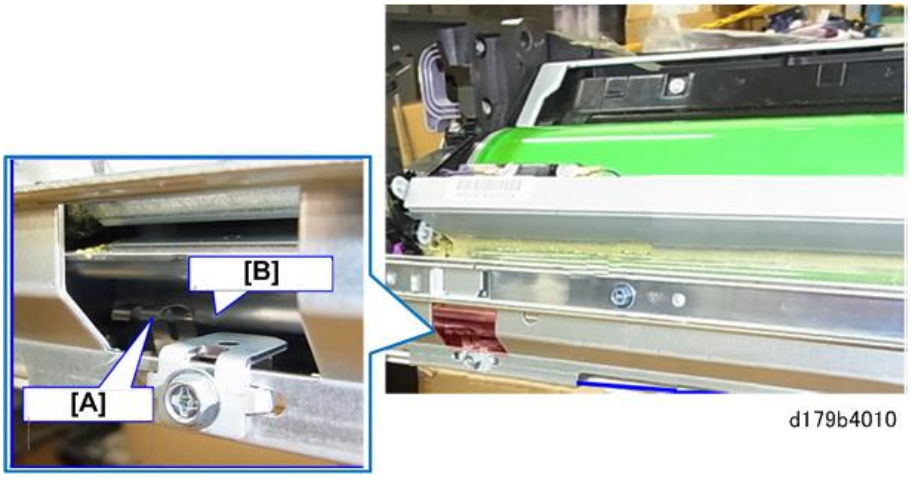
1. Confirm correct connection of the ground plate [A] with the stay [B].



d179b4009

No. 4 Ground Plate Stays

1. Confirm correct connection of the ground plate [A] with the frame [B].



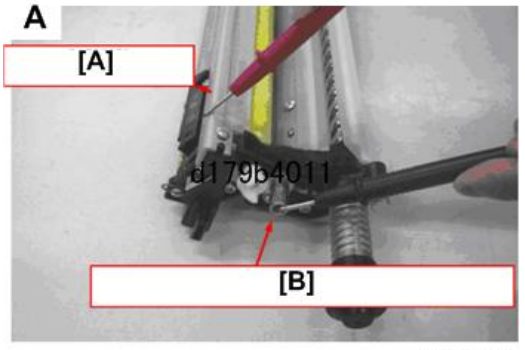
d179b4010

How To Check Ground Resistance with the Multi-meter

1. Measure the ground resistance between two points with a multi-meter.
2. Confirm that the reading is less than 100 ohms.

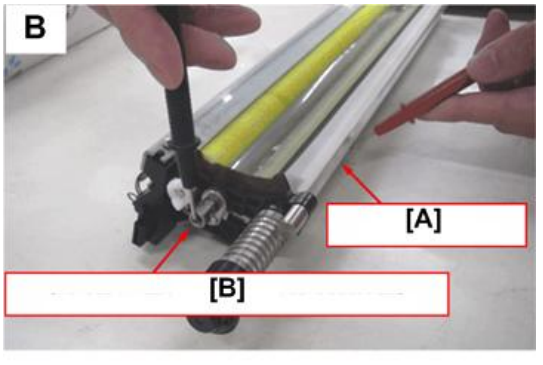
   The illustrations below labeled A to F show you how to position the test leads for the readings.

A to E	Measure with the drum cleaning unit removed from PCDU.
F	Measure with the drum cleaning unit mounted on slide rails.



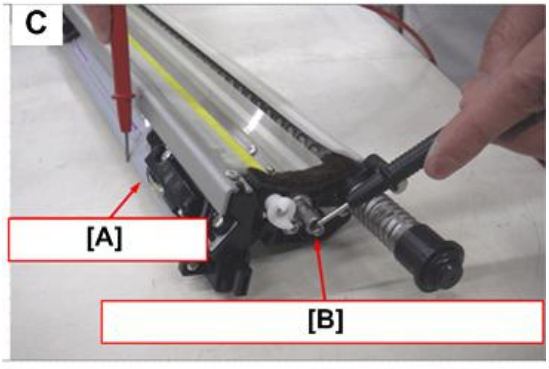
d179b4011

No.	Name
[A]	Blade Assembly
[B]	Rear Cleaning Blade Shaft Holder



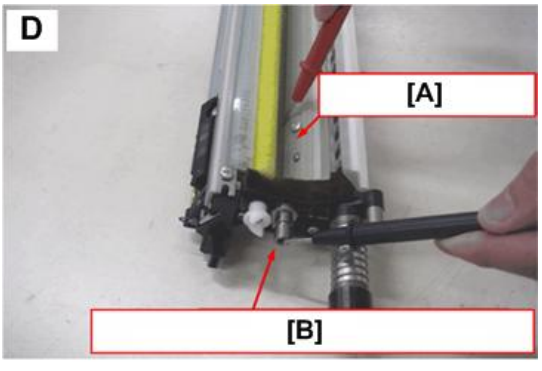
d179b4012

No.	Name
[A]	Cleaning Frame
[B]	Rear Cleaning Blade Shaft Holder



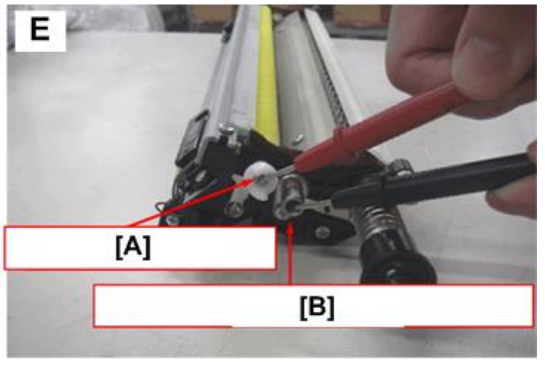
d179b4013

No.	Name
[A]	Lubrication Bar Cover
[B]	Rear Cleaning Blade Shaft Holder



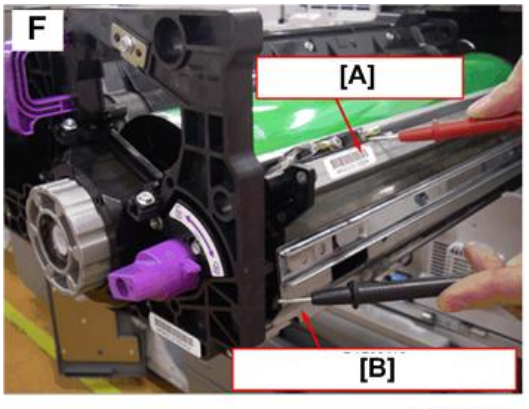
d179b4014

No	Name
[A]	Cleaning Blade Assembly
[B]	Rear Cleaning Blade Shaft Holder



d179b4015

No.	Name
[A]	Lubrication Brush Roller
[B]	Rear Cleaning Blade Shaft Holder



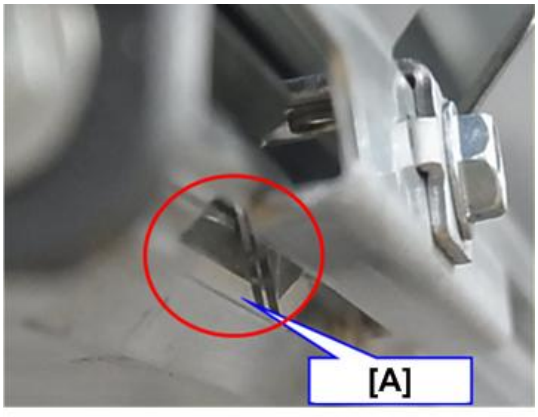
d179b4016

No.	Name
[A]	Lubrication Bar Cover
[B]	PCU Right Slide Rail Holder

PCDU Preventive Maintenance: Important Notes

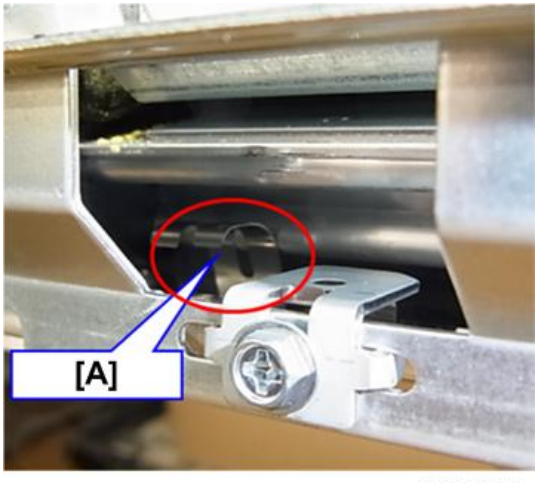
Work carefully to avoid bending the ground plates when performing the following three tasks:

1. Removing PCDU from the mainframe at the PCU slide rail stopper [A].



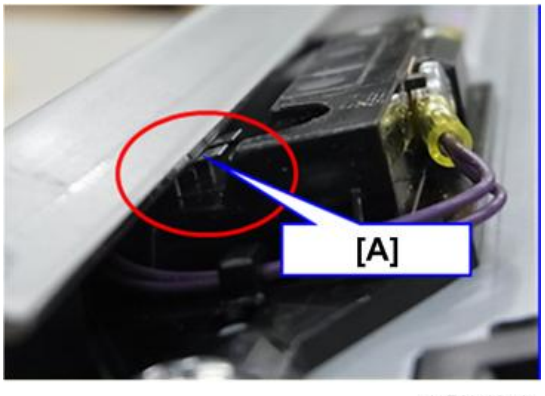
d179b4017

2. Removing the drum cleaning unit from the PCDU at ground stay [A]



d179b4018

3. Replacing PM parts of the drum cleaning unit at ground plate cover [A]



d179b4019

SC401 Development Gamma Low Error

This section describes how to manage SC401, toner scatter, and dirty background. Conditions that increase the risk of these problems include:

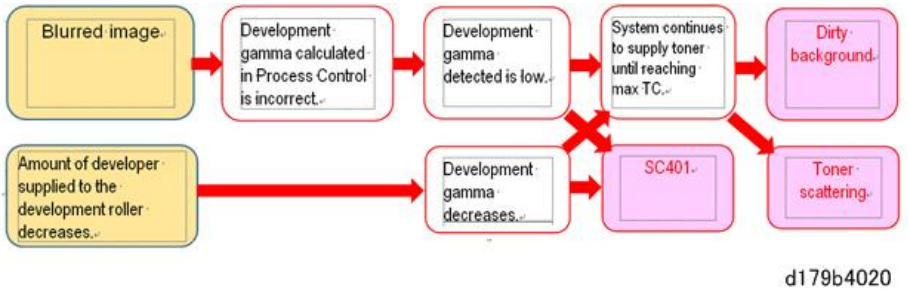
- Allowing the machine to remain idle for long periods where the humidity is high.
- Where average coverage is consistently 4% or lower.
- 20 P/J or lower average P/J

Causes

1. Process control fails. The development gamma detected in process control was lower than 3.0 because the ID sensor pattern created on the drum was blurred. (page 62)
2. Due to the degradation of toner over time, and the adhesion of toner on the doctor blade, the amount of developer supplied to the development roller decreased and development gamma becomes fell lower than 3.0.

Note

- In addition to SC401, toner scatter and dirty backgrounds could also occur because the system supplies too much toner to compensate for reduced development gamma.



Solution

Do these procedures if the machine is issuing SC401, or if you observe toner scatter or dirty backgrounds in prints.

1. Open SP2109-003, select Patter #12 (2-dot Independent Pattern), and then print three copies of the pattern on A3/DLT.
2. Does the pattern appear blurry?

Yes	Do the following SP settings: • SP2810-001: 1 (default). This setting will automatically execute "Clear Blurred Image" at all times. • SP2810-005: 360 (default). Set to "120". This setting will automatically execute "Clear Blurred Image" if the machine remains idle for 2hrs. • SP2810-006: 13 (default). Set to "7". This setting will automatically execute "Clear blurred image" even when the machine is operated in medium temperature, medium RH environment. Do SP2810-004 (Clear blurred image). Go to Step 3.
No	Go to Step 4

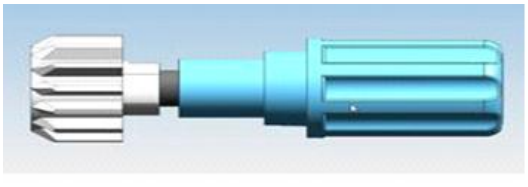
3. Has the blurred image problem been resolved?

Yes	Go to Step 4
No	Repeat SP2810-004 (Clear Blurred Image) If the blurred images cannot be corrected after executing this SP code three times, replace the drum, and then go to Step 4.

4. Clean the doctor blade, development roller, potential sensor and ID sensor. Refer to the Field Service Manual for the cleaning procedures.

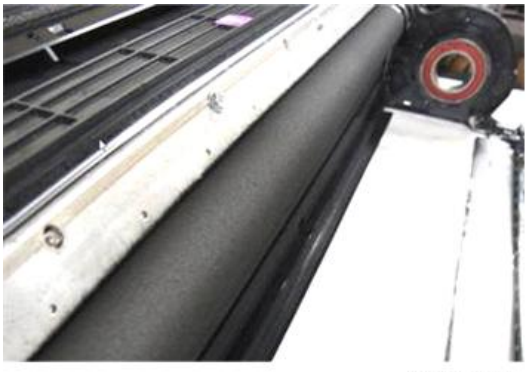
   When cleaning the doctor blade:

   - Doctor blade cleaning is different for this machine. Refer to the doctor blade cleaning instructions in the Field Service Manual.
   - Be sure to use the special tool (shown below) to rotate the development roller during servicing.



d179b4021

   - Before cleaning the doctor gap, confirm that there is no old developer on the development roller as shown below.



d179b4022

- After cleaning the doctor gap with the cleaning tool use a vacuum cleaner to completely remove any toner particles.

5. Calculate the average coverage and average P/J.
   - Average coverage = SP8921-001 / SP8581-001
   - Average P/J = SP8581-001 / Sum of SP8071-001to014

   Either or both of the following conditions met?

   Average coverage≦4 (%)

   Average P/J≦20

Yes	• Change the setting of SP3-820-001 (Tnr Refresh Mode: Img Area Thresh: K) setting from "2" (default) to "3".
No	Do SP3-011-002 (Density Adjustment) for process control.

6. Make 20 copies of the same test pattern. Has the problem been resolved?

Yes	Finish.
No	Replace the developer. If replacing the developer does not resolve the problem, replace the development unit.

Tray 1 Does Not Close Completely.

Cause

The tray lock lever needs adjustment because it does not reach the registration adjustment plate.

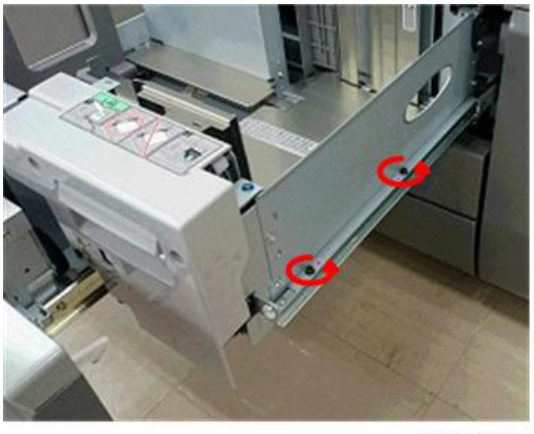
Solution

Follow this procedure to shift the registration adjustment plate to the front so the tray lock lever can reach the registration adjustment plate.

1. Pull out Tray 1 completely so that the right and left tandem trays separate.

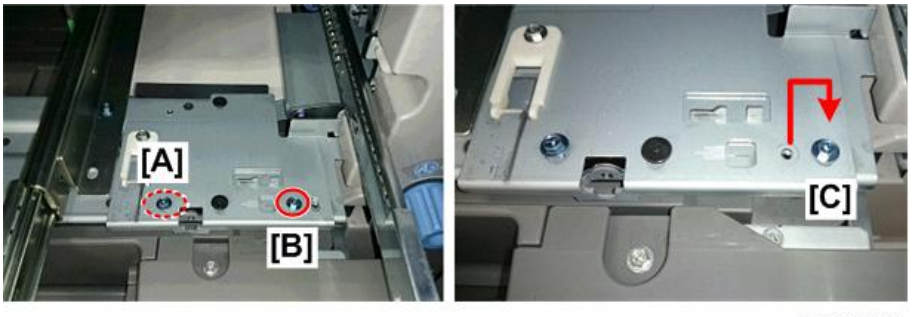
d179b4023

2. Remove the right tandem tray. (x2)



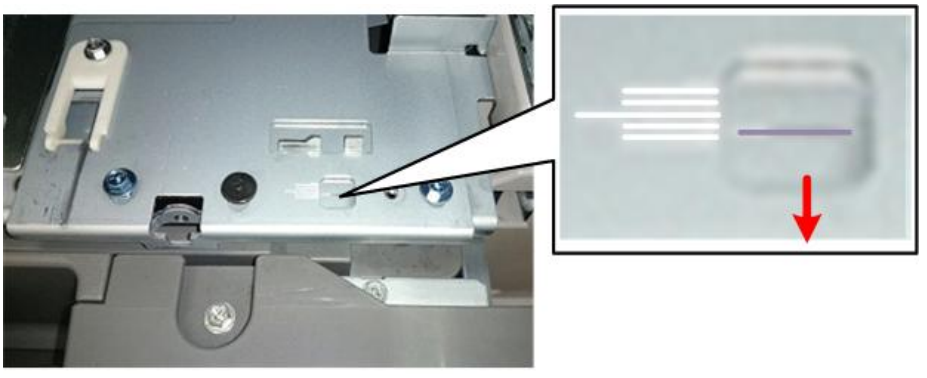
d179b4024

3. On the registration adjustment plate, **loosen** screw [A], **remove** screw [B], and then and fasten it at [C]. Do not tighten the screw at [C] (x1).



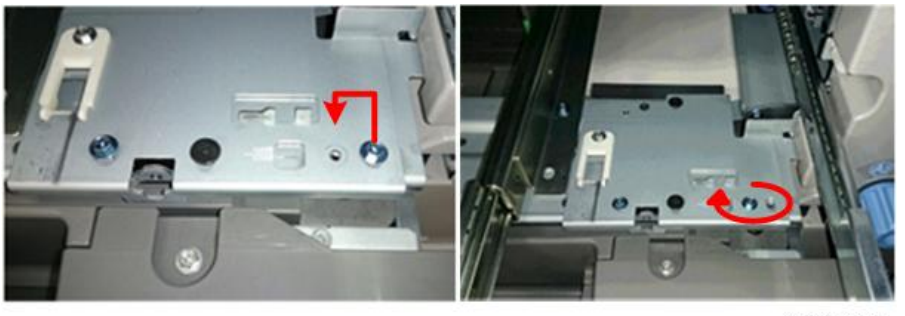
d179b4025

4. While looking at the scale, pull the registration adjustment plate approximately 3 mm to the front.



d179b4026

5. Remove the screw that you moved in Step 3, and then fasten at its original position (x1).



d179b4035

6. Re-attach the right tandem tray (x2).
7. To compensate for the 3 mm shift to the front:
    - Disable the registration adjustment in main scan direction in either Adjustment Settings for Operators 1-105-01 to 08, or do SP1-917-001 to 008 [Side-to-Side Reg Disable] and change "0" to "1".
    - Adjust the registration in SP1-002-001 (Main Scan Regist (Shift: Off): Tray 1).

False Drum Lubricant Near-end Alert

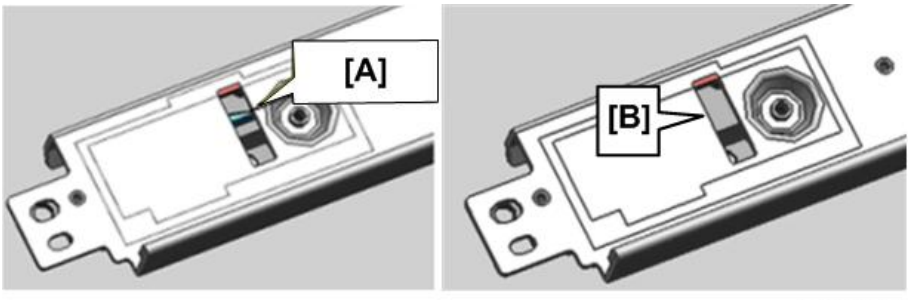
A jammed feeler can cause the machine to issue a faluse drum lubricant near-end alert.

Cause

The feeler that detects lubricant near-end is stuck and caused the system to constantly issue a false drum lubricant near-end alert. This can be caused by removing the drum lubricant components in the incorrect order. Removing the brush roller before the lubricant bar can cause the lubricant bar to pop up and lock the feeler.

Solution

1. Confirm that the setting of SP3-810-021 is not "0: Normal" (because the system is notifying a near-end status).
2. Remove the lubricant blade with the bracket attached and the two lubricant near-end sensors.
3. Place the bracket bottom-side-up on a table and check if the feeler is visible [A]. The feeler is not visible [B] if it is stuck out of position.



d179b4027

If the feeler is stuck, correct its position.

- The feeler is up at [A]. This is the wrong position because the contact causes the near-end alert.
- The feeler is down at [B]. This is the correct position because there is no contact.

d179b4028

4. Reassemble the unit and confirm the setting of SP3-810-021 is "0". If the value is "1" or "2", repeat step 2.

Clear PM Counters

1. Turn the machine off.
2. Open the front doors.
3. Turn the machine on with the front doors open.
4. Enter the SP mode, open SP4622-008, and then reset the counter for the lubricant bar.
5. Close the front doors. This resets the counter.
6. Open SP3810-021 and confirm that the value is "0".
7. Exit the SP mode.

Important

- Always remove the drum lubricant components in the correct order, as described in the Field Service Manual: 1) Lubricant blade, 2) Lubricant bar, 3) Brush roller.

Paper Transport Roller/Rib Maps

How to Use These Maps

After long use the transport rollers and ribs of the guide plates that guide paper in the paper transport path become contaminated with paper dust and loose toner which can cause streaks or roller "footprints" to appear on paper, or on edges of stacked paper. Some simple cleaning procedures can eliminate these problems. This section provides paper transport maps that will help you easily identify the transport rollers and transport guide plate ribs that may require cleaning to eliminate these problems.

- Paper transport maps are provided for the main machine, LCT A3, and the finisher.
- The transport rollers and ribs described in this section are the ones in the paper transport path that can be accessed easily for paper jam removal.

When streaks or roller footprints appear:

1. Take one sheet that is marked by streaks, and then fold it carefully exactly in half with the crease in the center and parallel to the direction of paper feed.
2. Lay the sheet on a flat surface, and then used a mm scale to measure from the fold line to the marks on the surface or edges of the paper.
3. Compare the measurements with the maps to identify the transport rollers/ribs that are causing the problem, and then clean them. For more details about how to clean the rollers and transport path, see the Field Service Manual > PM Parts List.

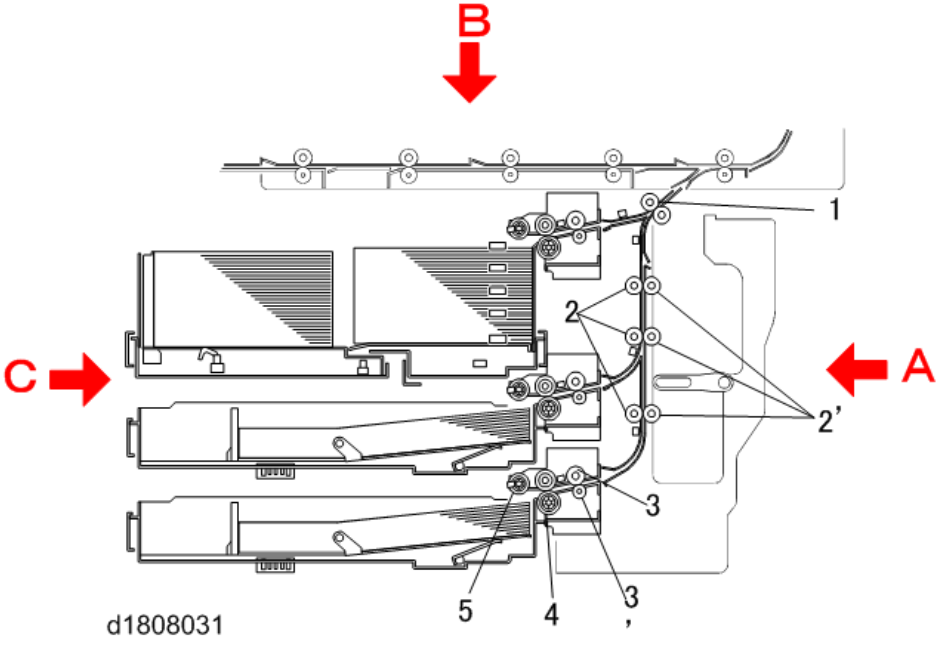
Note

- All of the measurements given in the line drawings are given in millimeters.
- The measurements are the "target" measurements of the design drawings. There may be very slight differences between these design measurements and actual measurements due to minute variations in machine manufacture, component manufacture, and component wear. Therefore, the actual measurements taken from the folding paper may not exactly match the location of transport roller or rib.

Paper Transport Units

1

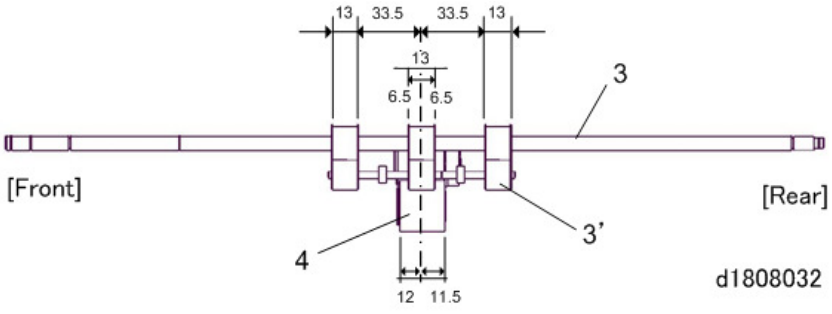
Overall Layout



Note the positions of the red arrows and letters in the diagram above. They are used in the map titles to indicate the direction of view so you can orient the map to the machine and identify the transport rollers and ribs:

- A: Right View
- B: Top View
- C: Left View

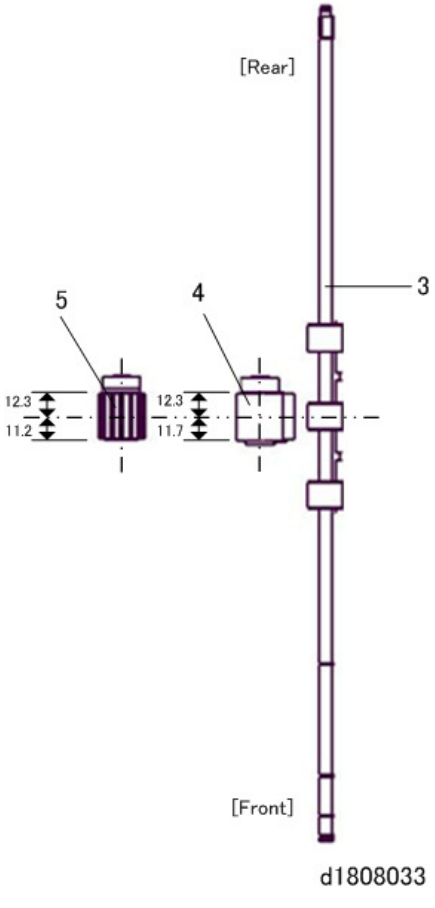
Paper Feed 1-1: View A (Right Side)



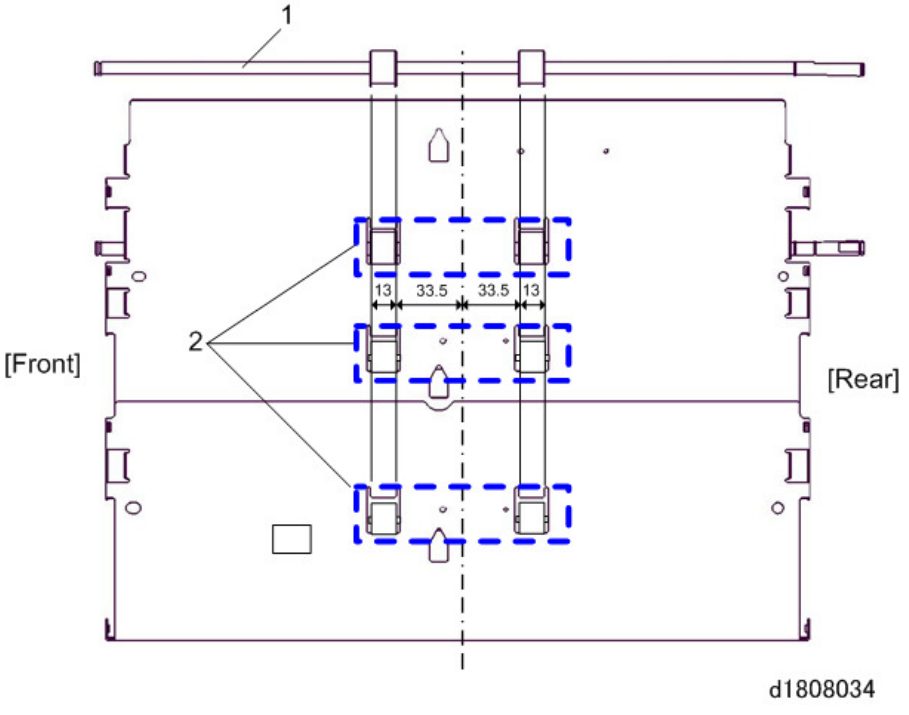
Paper Feed 1-2: View B (Top)

Note

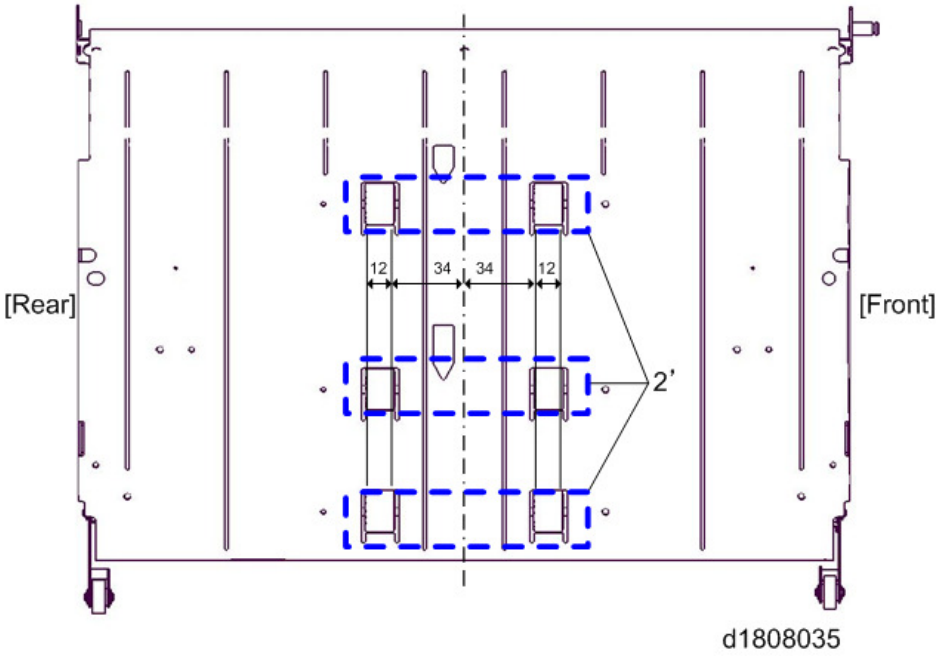
- The layout diagram below applies to Tray 1, Tray 2, and Tray 3 because their mechanisms are the same.



Paper Feed 2: View A (Right Side)



Paper Feed 3: View C (Left Side)

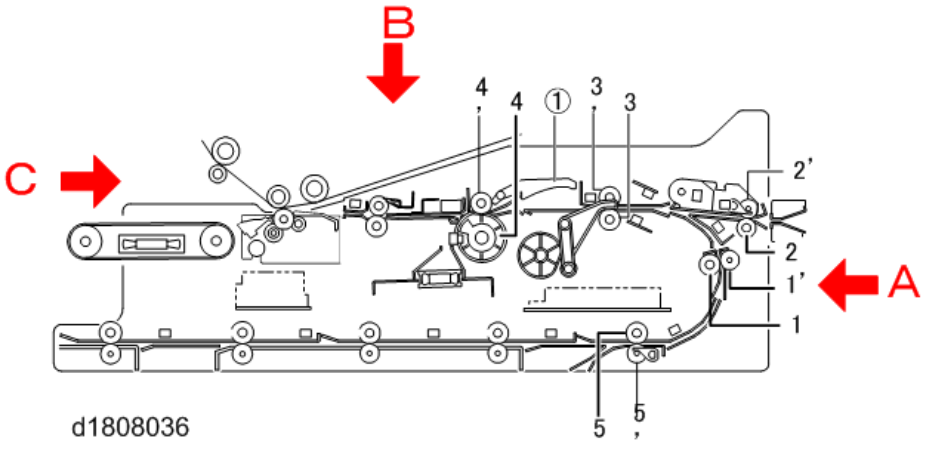


Registration Unit

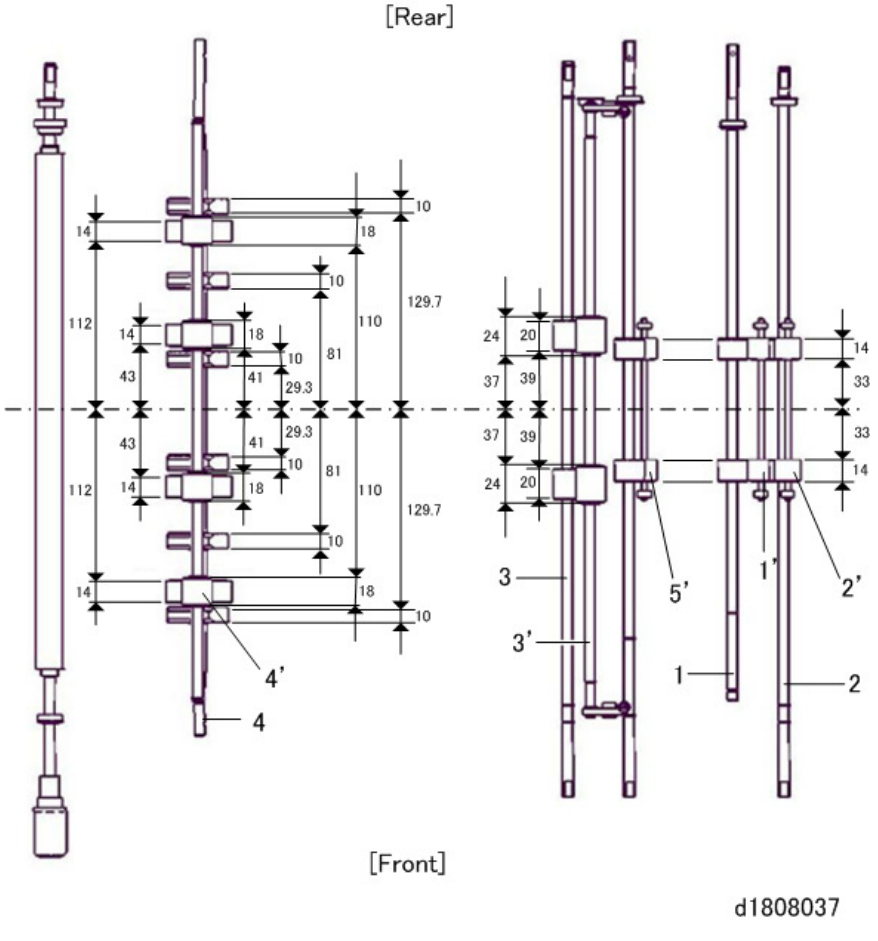
General Layout

Note

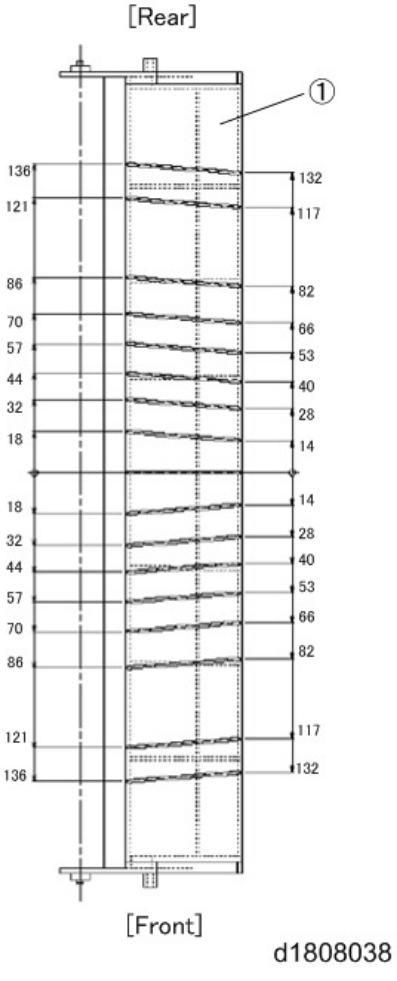
- The red letters and arrows in the diagram below indicate the angle of view so you can orient the map to the machine and identify the transport rollers and ribs



Registration Unit Rollers: View B (Top)



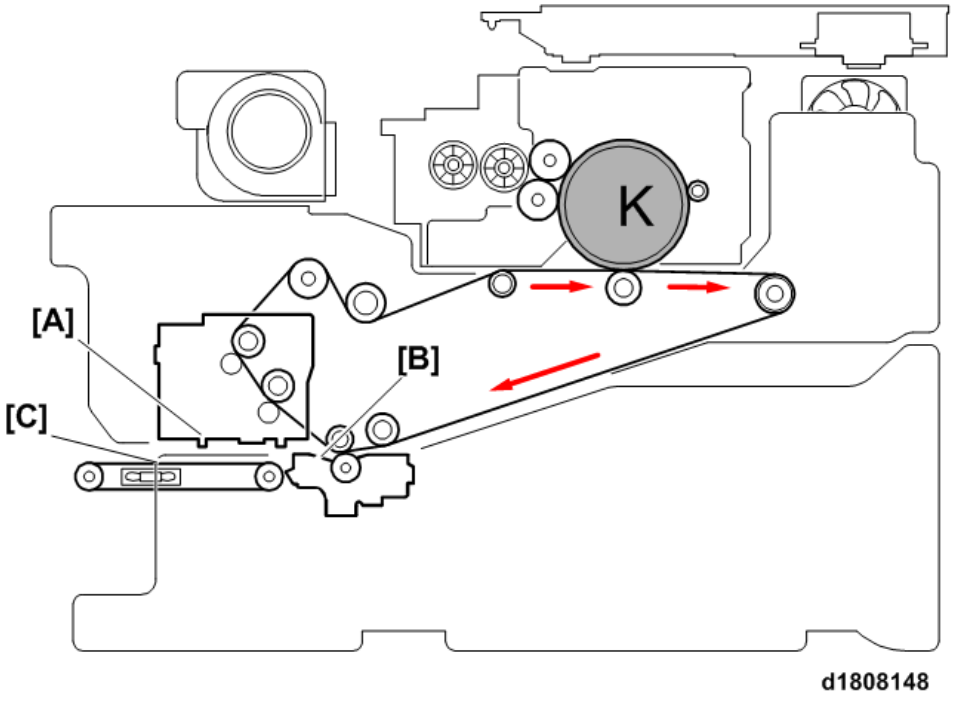
Registration Unit Guide Plate: View B (Top)



PTR Unit

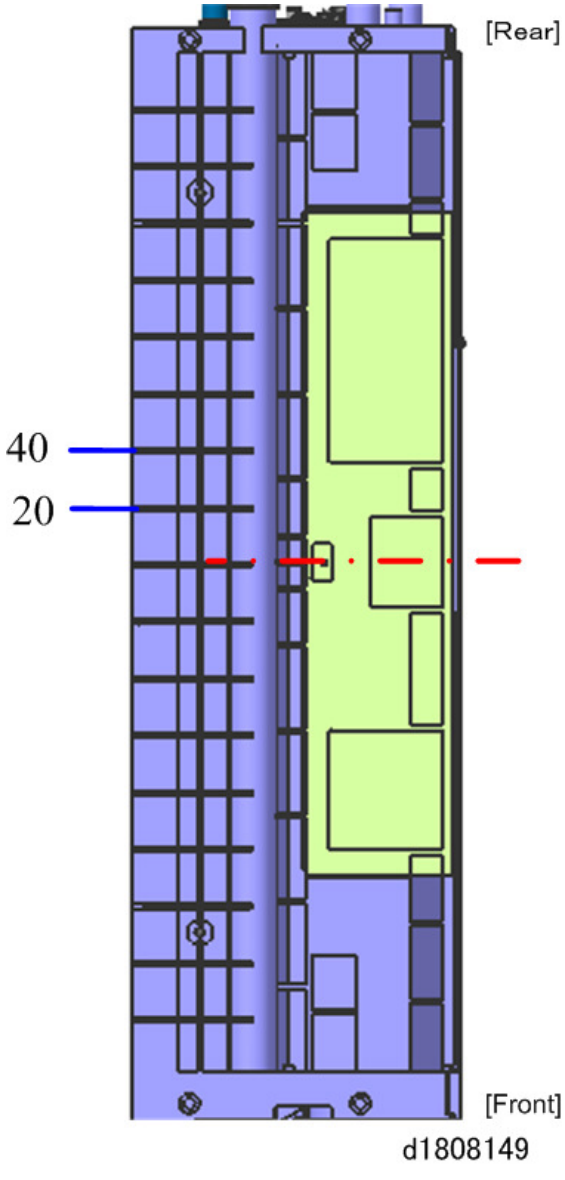
1

General Layout

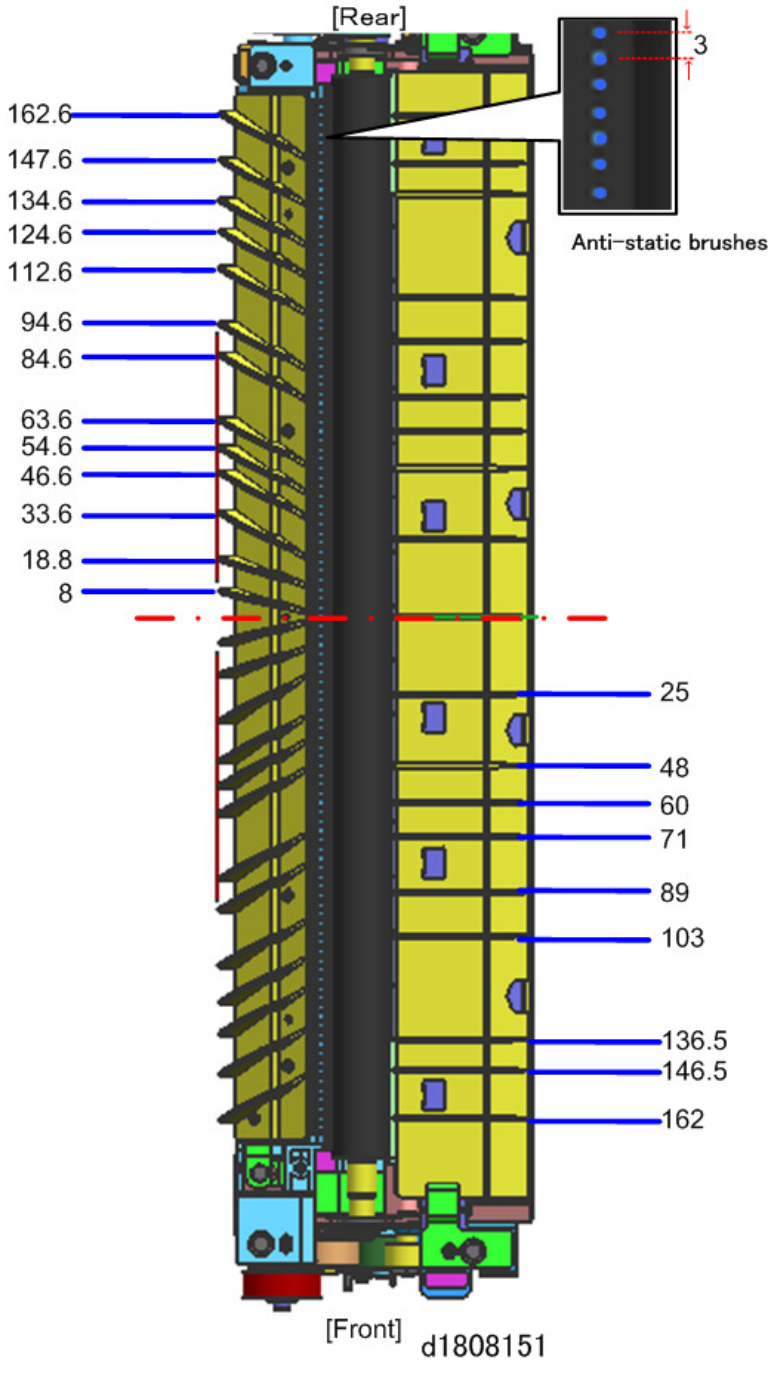


No.	Name
A	Belt Cleaning Unit (Bottom)
B	PTR Unit
C	PTB Unit

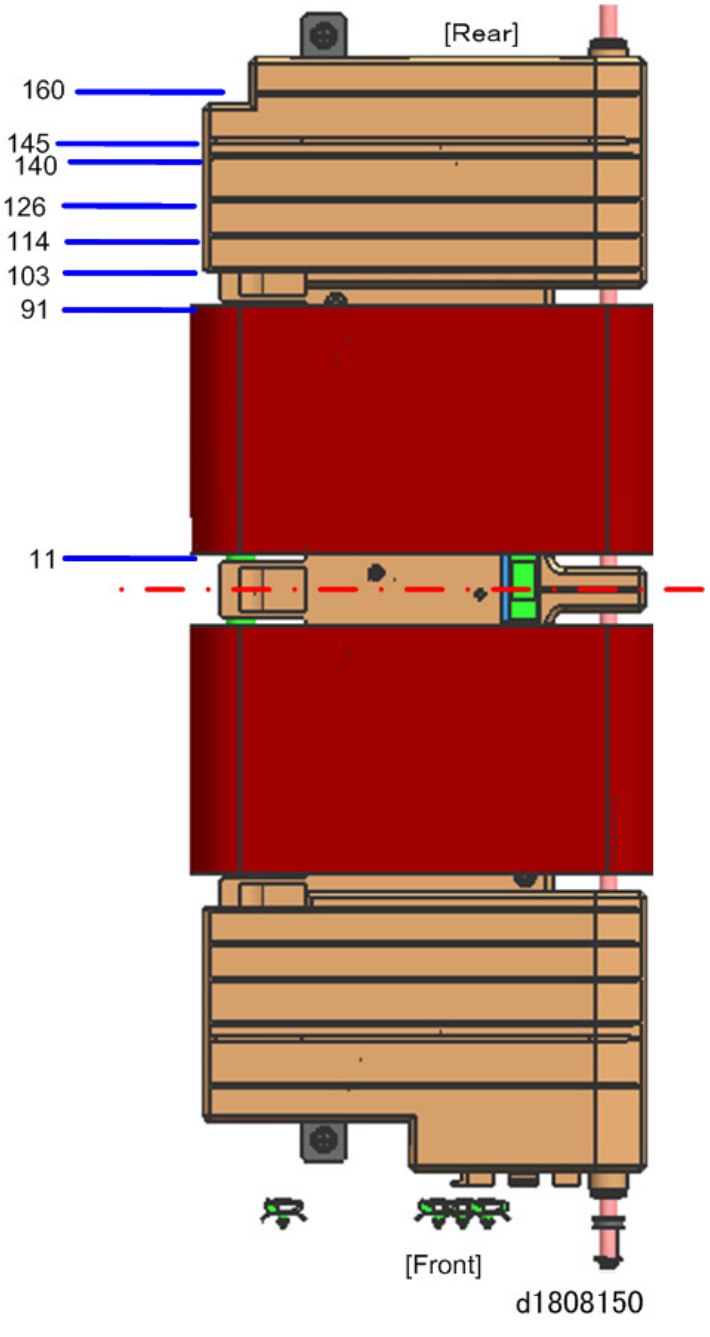
ITB Cleaning Unit (Bottom)



PTR Unit

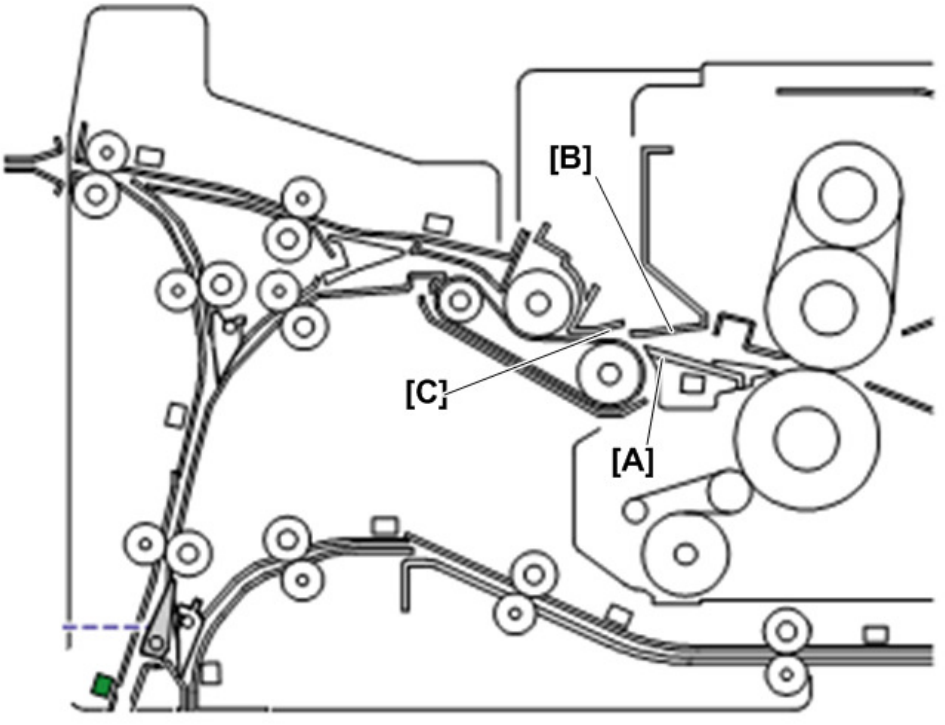

[Rear]
3
Anti-static brushes
162.6
147.6
134.6
124.6
112.6
94.6
84.6
63.6
54.6
46.6
33.6
18.8
8
25
48
60
71
89
103
136.5
146.5
162
[Front]
d1808151

PTB Unit



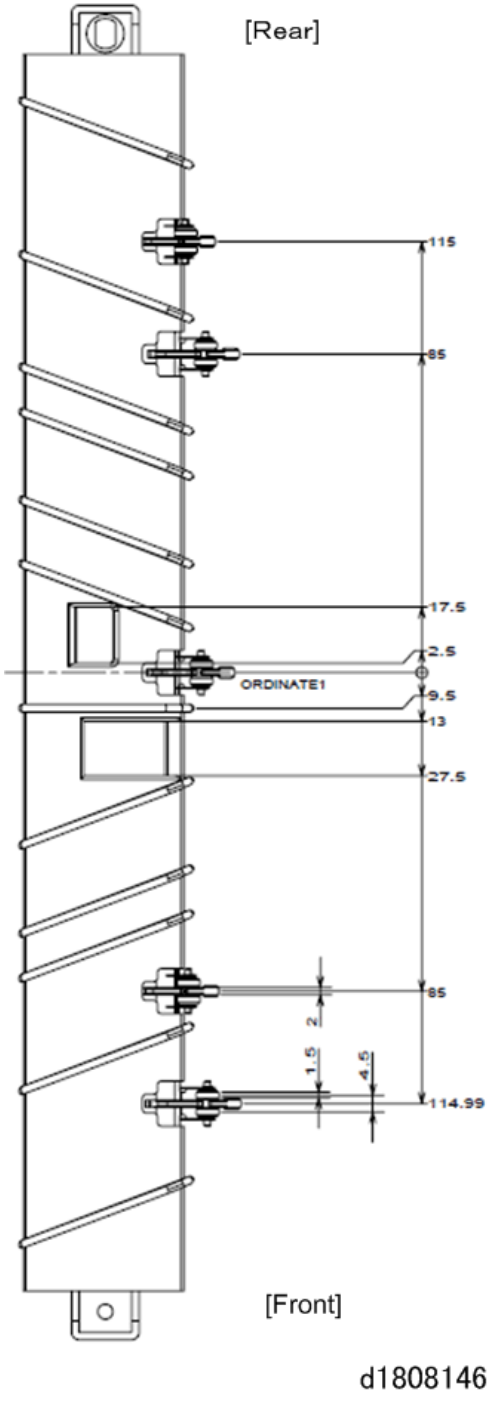
Fusing Unit

General Layout



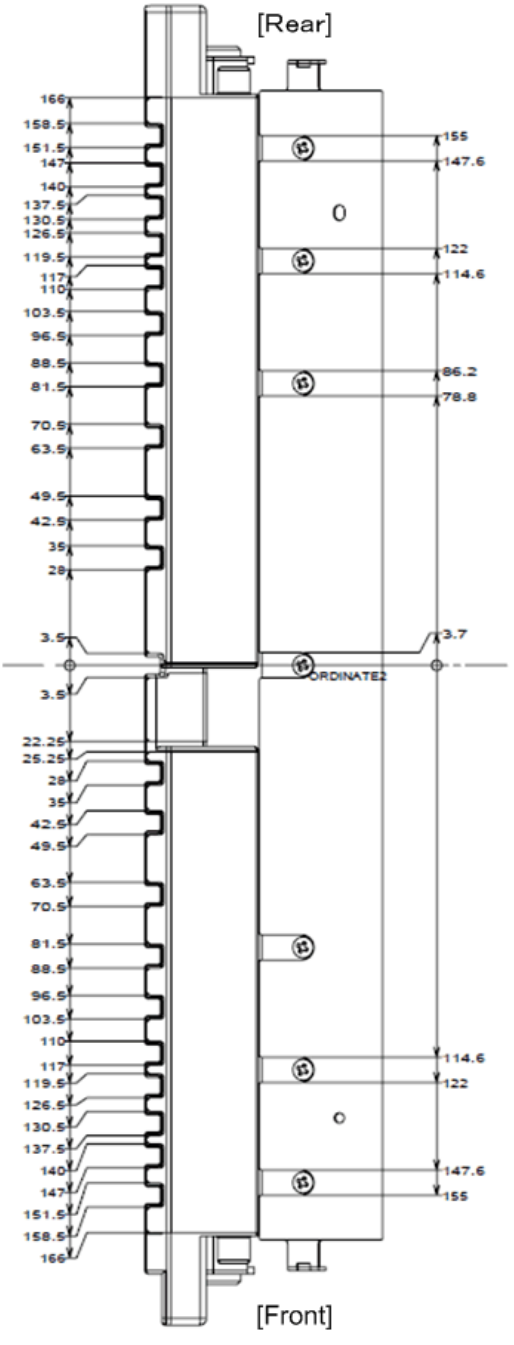
No.	Name
A	Fusing Exit Guide Plate (Upper)
B	Fusing Exit Guide Plate (Lower)
C	Exit Entrance Guide Plate (Upper)

Fusing Exit Guide Plate (Lower)



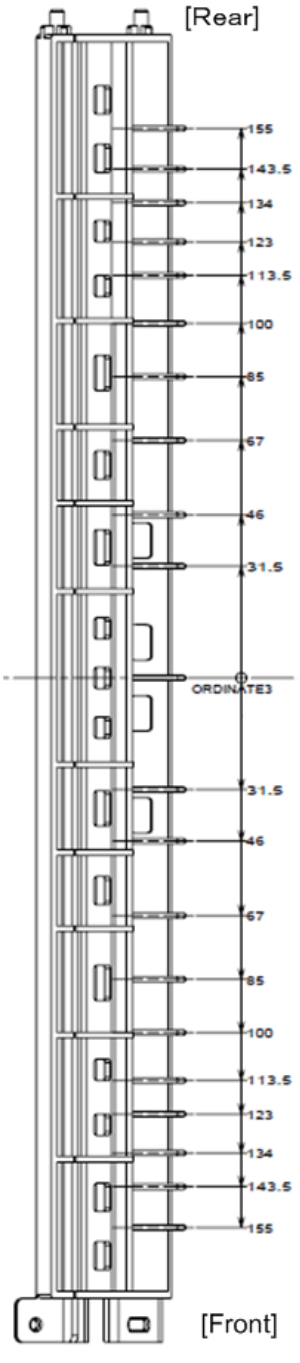
1

Fusing Exit Guide Plate (Upper)



d1808145

Exit Entrance Guide Plate (Upper)



d1808147

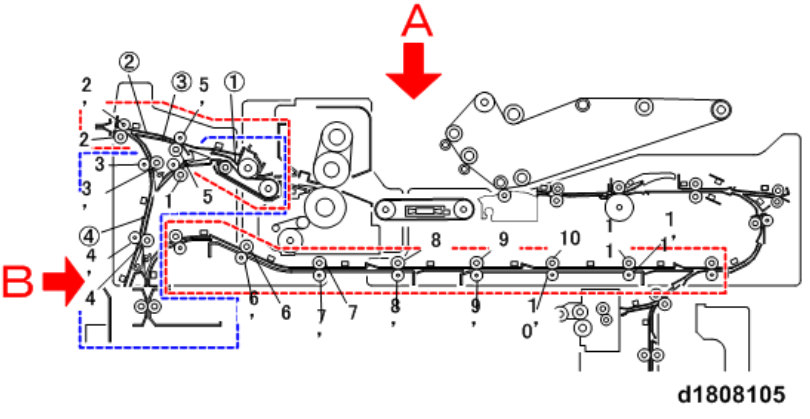
Invert/Exit Unit

1

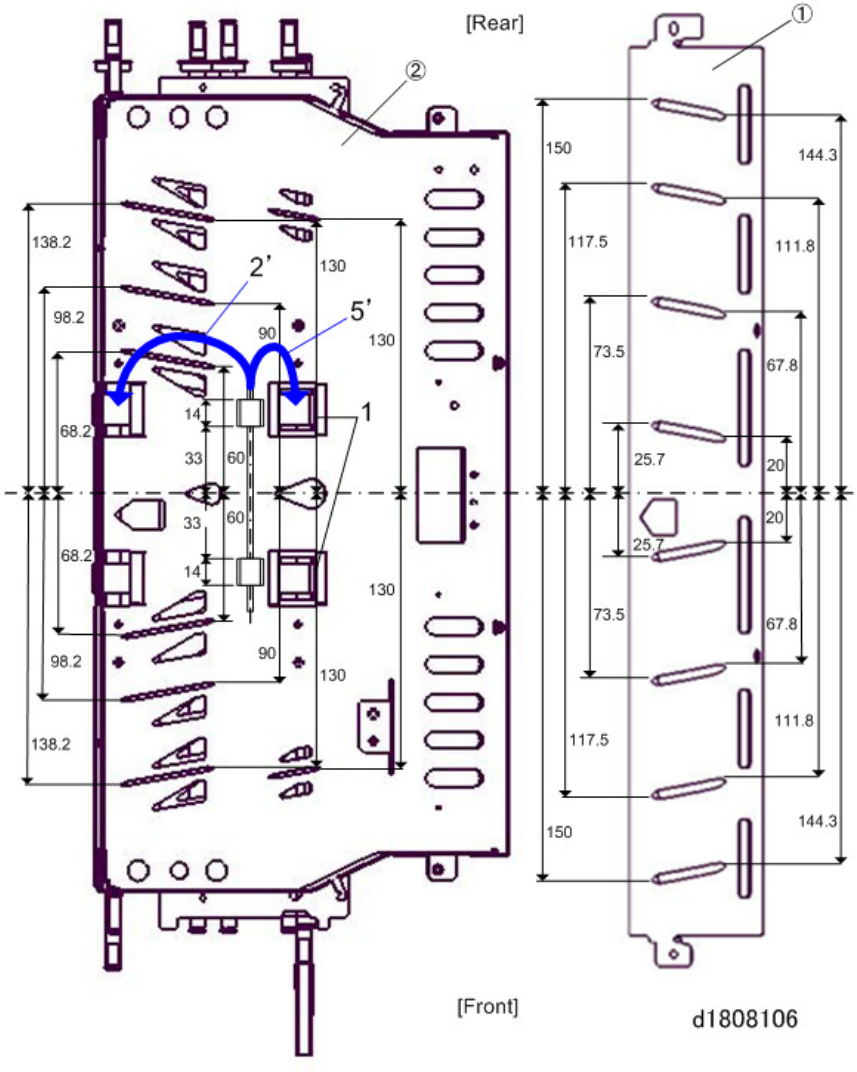
General Layout

Note

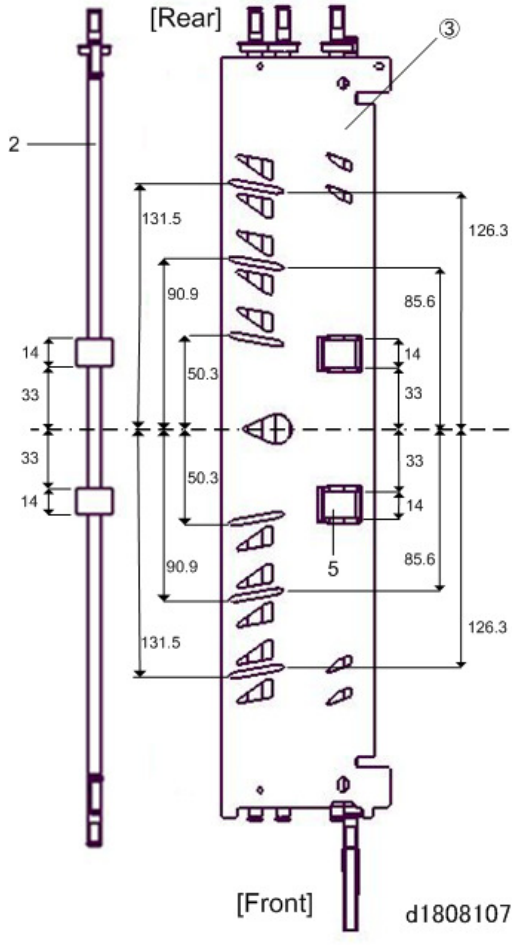
- The red letters and arrows in the diagram below indicate the angle of view so you can orient the map to the machine and identify the transport rollers and ribs



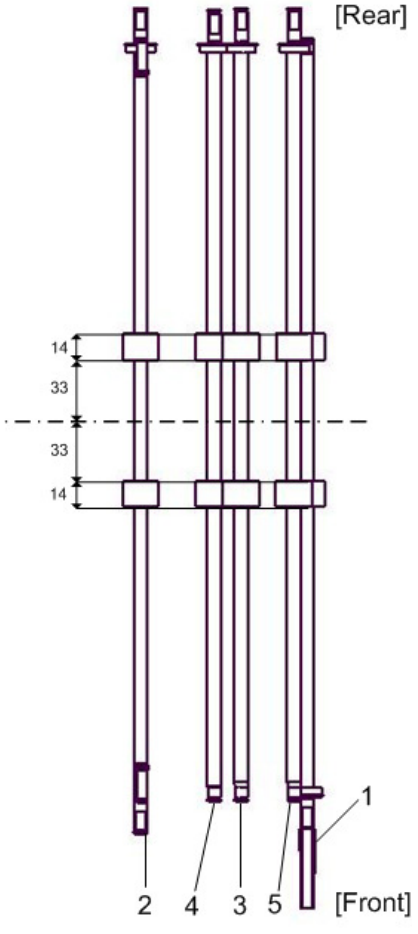
Straight-Through Exit 1: View A (Top)



Straight-Through Exit 2: View A (Top)

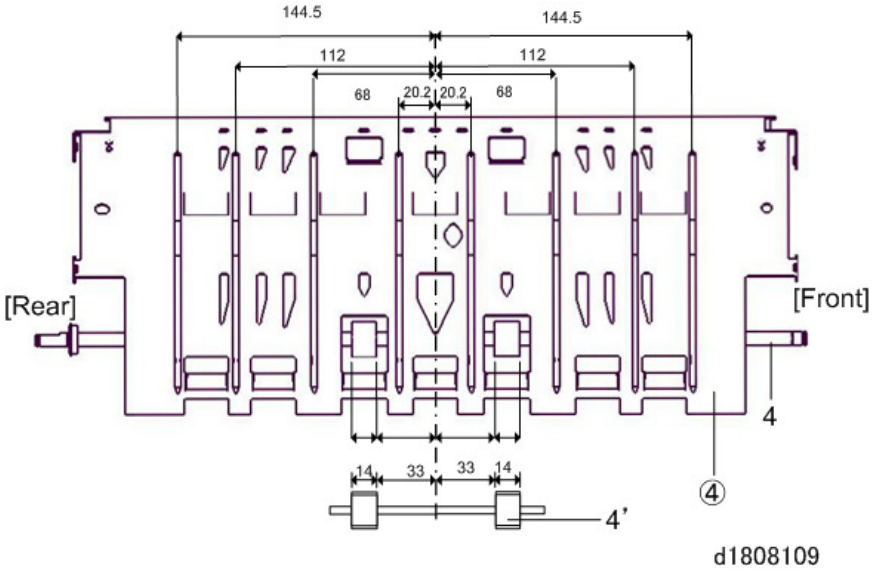


Rollers: View A (Top)

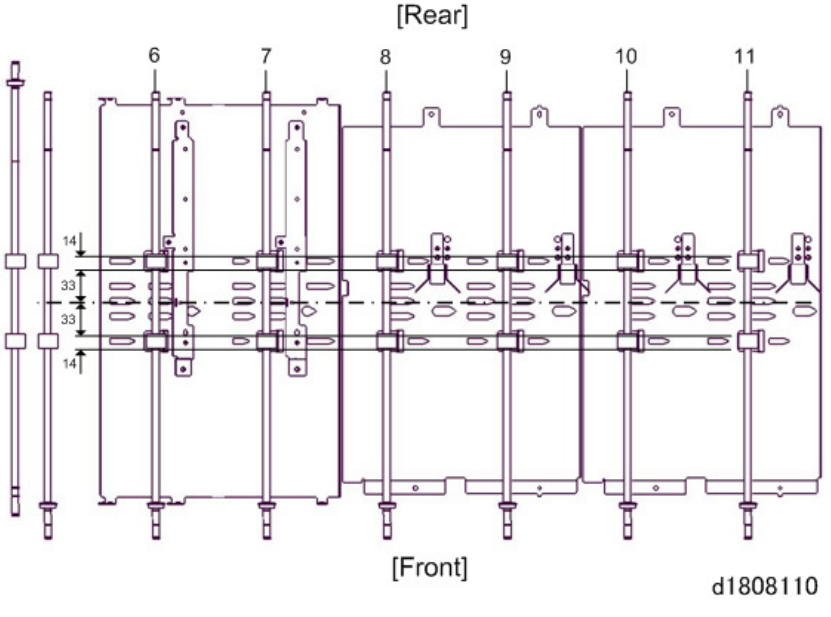


1

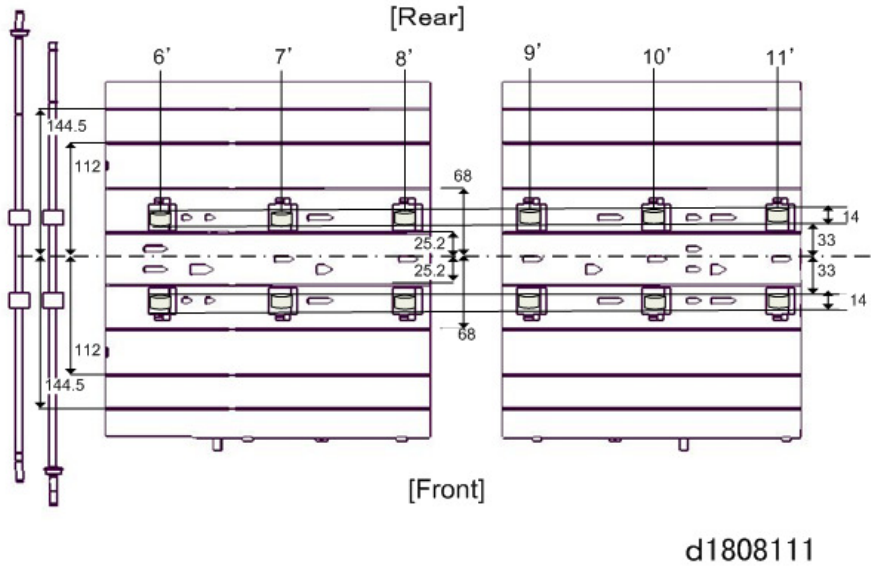
Invert/Exit: View B (Left)



Duplex 1: View A (Top)



Duplex 2: View A (Top)

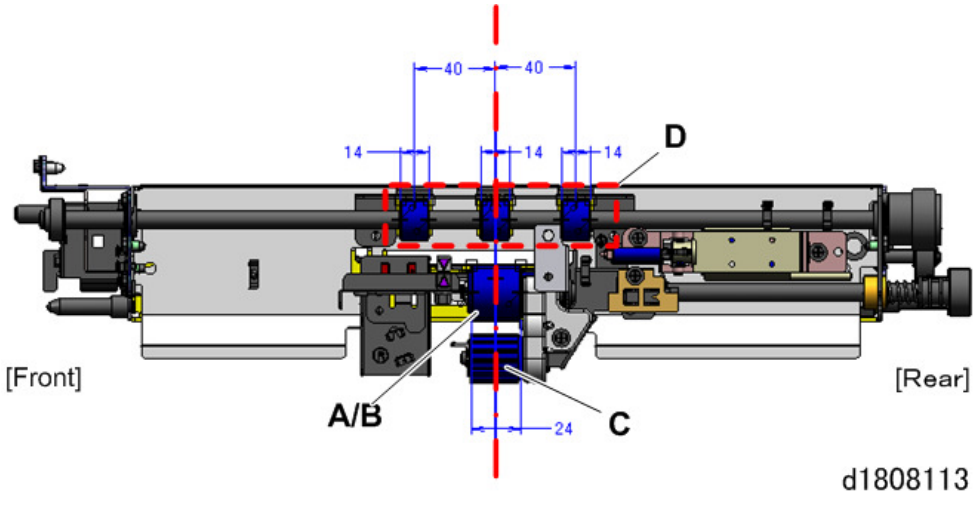


LCT A3

General Layout

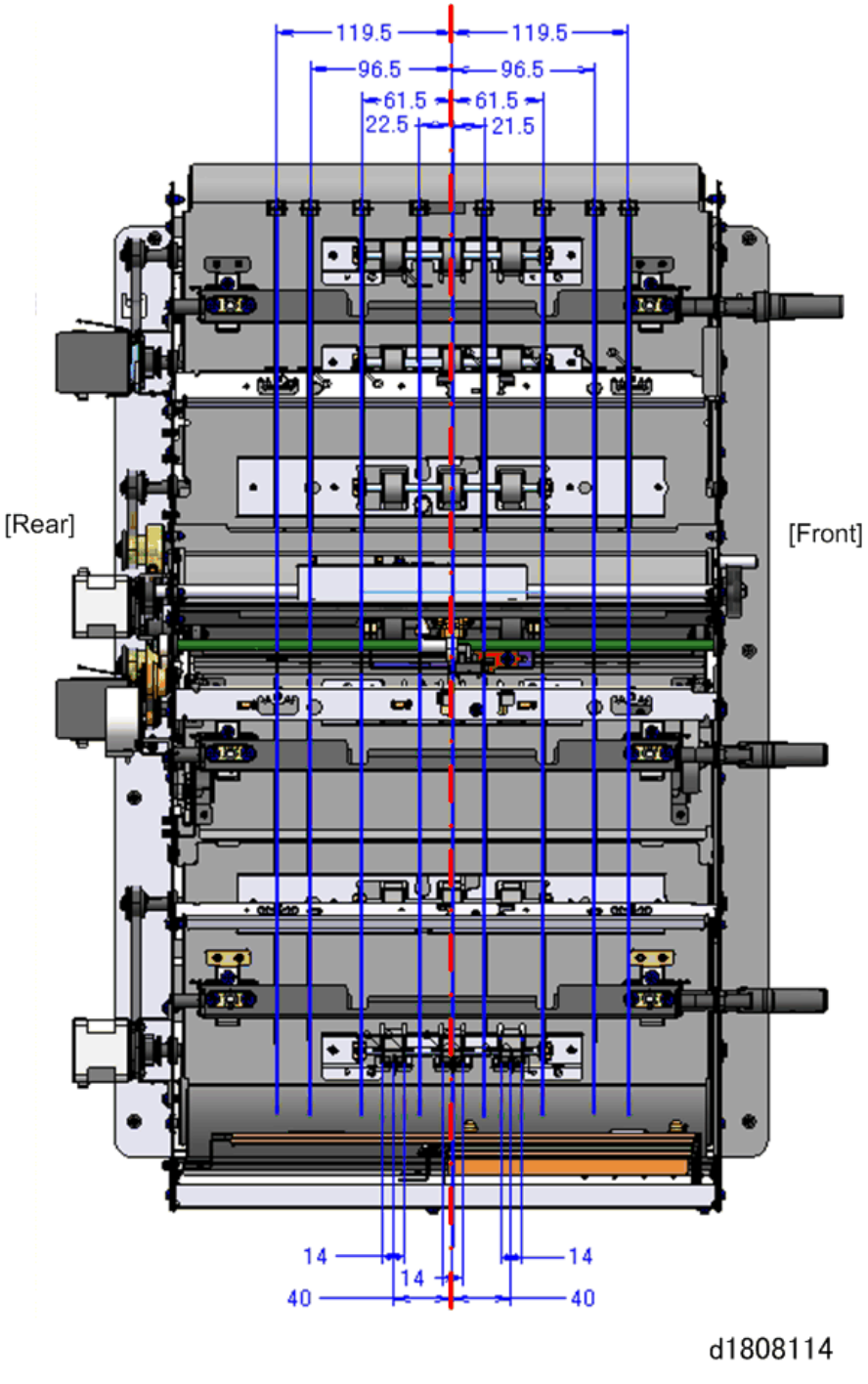
Note

- The layout diagram shown below applies to LCT Tray 4, Tray 5, Tray 6 because their mechanisms are the same.

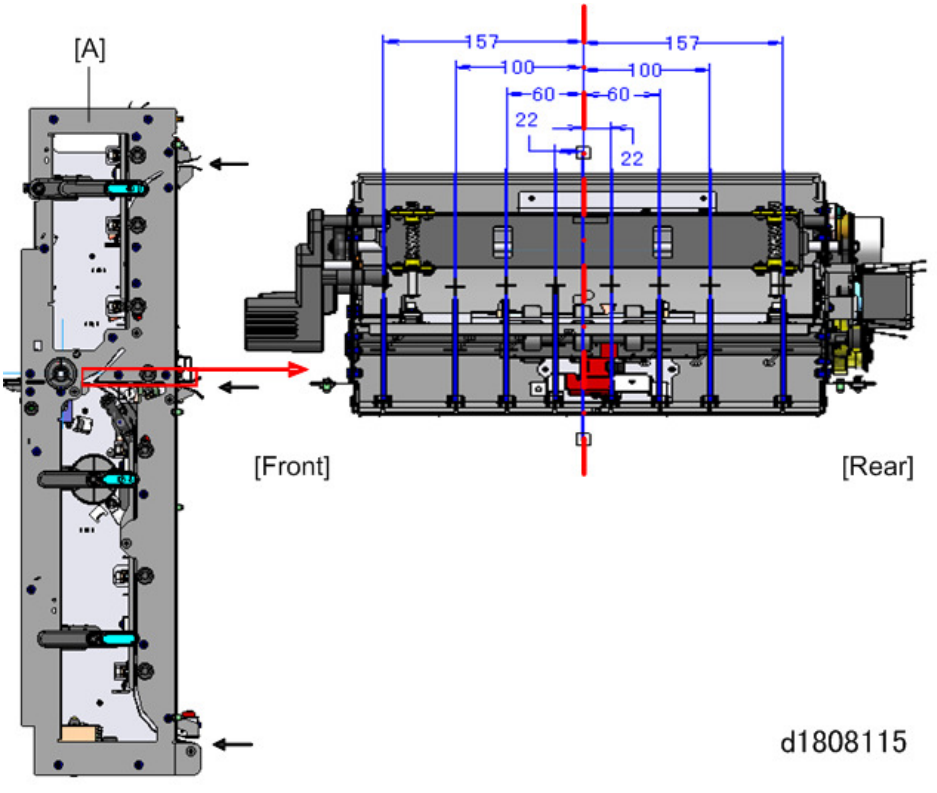


No.	Name
A	Pick-up Roller
B	Paper Feed Roller
C	Separation Roller
D	Grip Roller

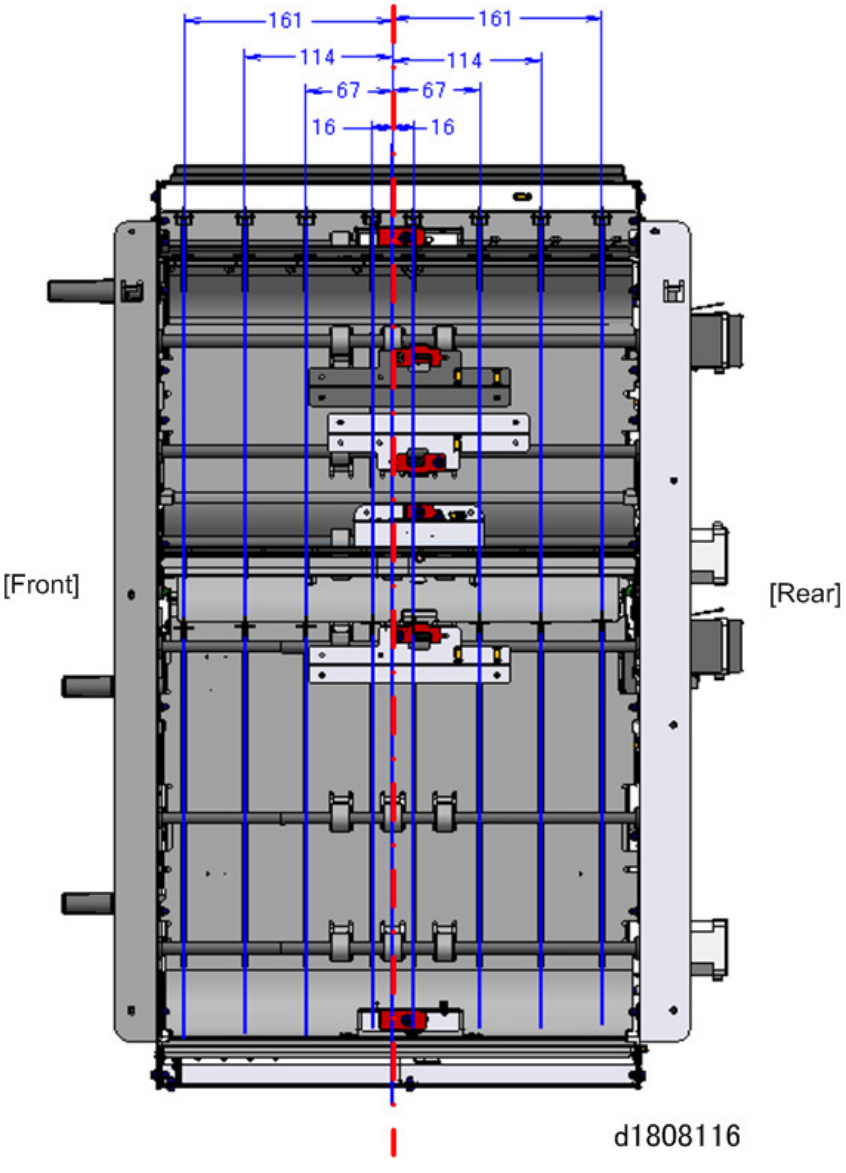
Paper Transport: Movable Guide Ribs and Rollers: Left View



Paper Transport: Tray 5 Transport Fixed Guide Ribs: Left View

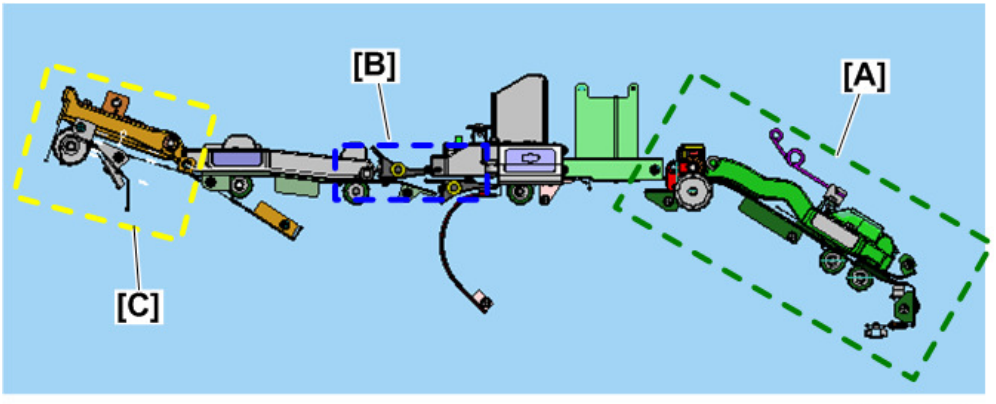


Paper Transport: Fixed Guide Plate Ribs: Right View



Finisher

General Layout: Straight-Through to Shift Tray



d1808117

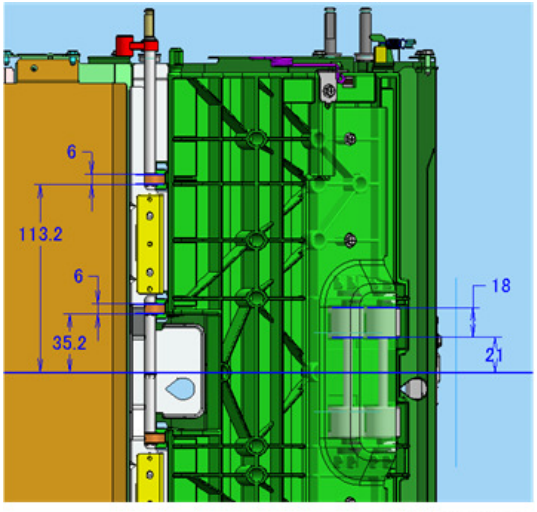
No.	Name
A	Straight Transport 1: Entrance, Paper Registration
B	Straight Transport 2: Post-Punch
C	Straight Transport 3: Exit to Shift Tray

Note

- The diagrams below show the transport rollers and ribs for the finisher. The diagrams are half images because either side is identical to the other.

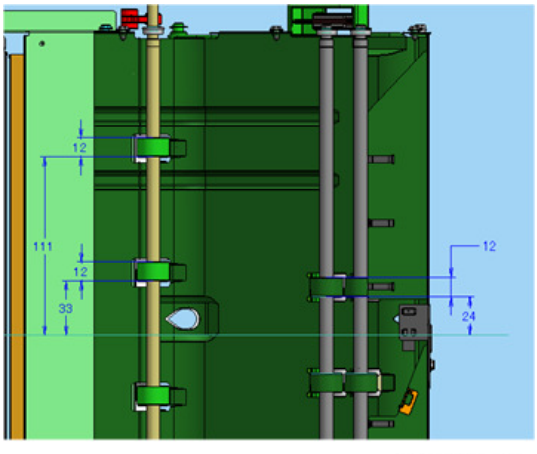
Straight Transport 1: Entrance, Paper Registration

Vertical Drive Rollers



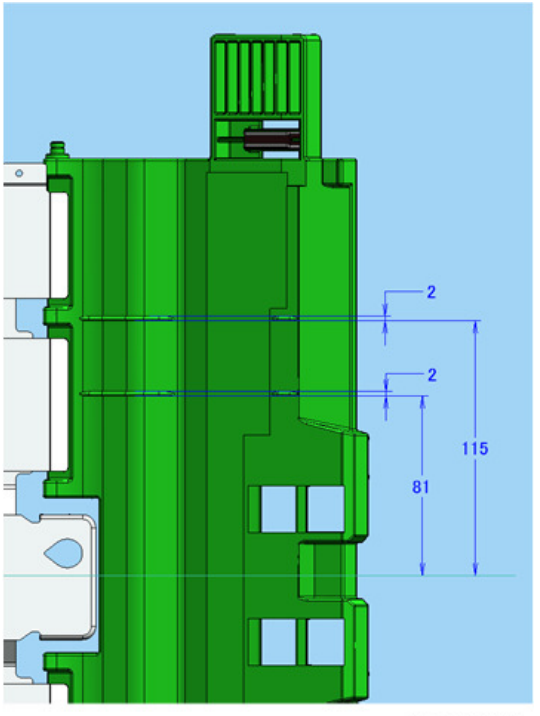
d1808118

Drive Rollers



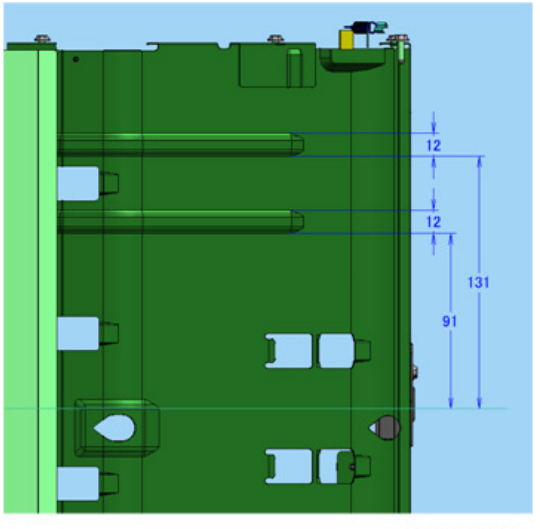
d1808119

Vertical Path Ribs



d1808120

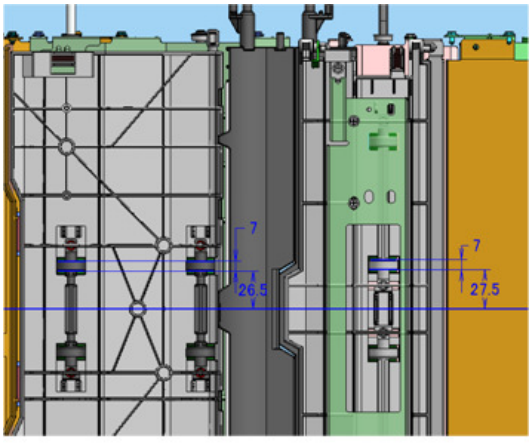
Drive Ribs



d1808121

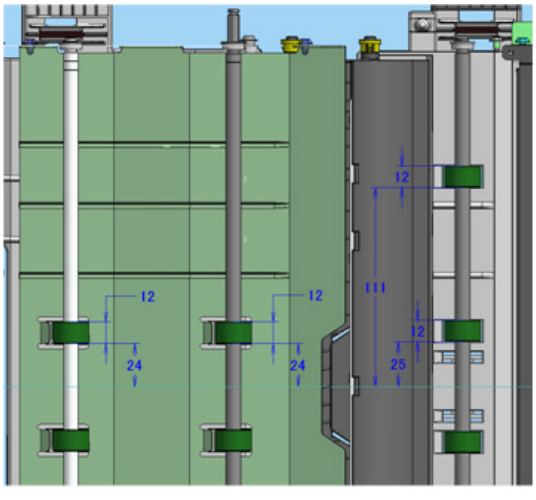
Straight Transport 2: Post-Punch

Vertical Drive Rollers



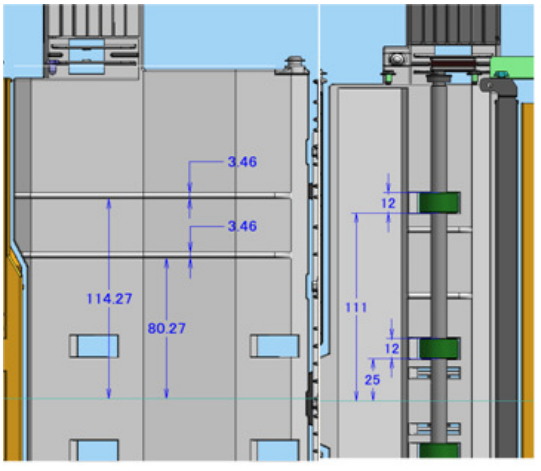
d1808122

Drive Rollers



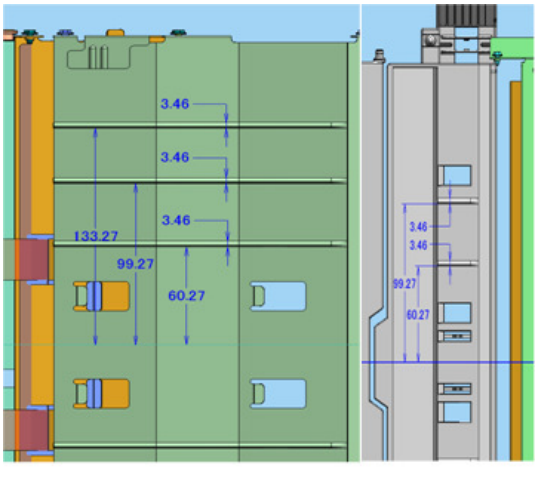
d1808123

Vertical Ribs



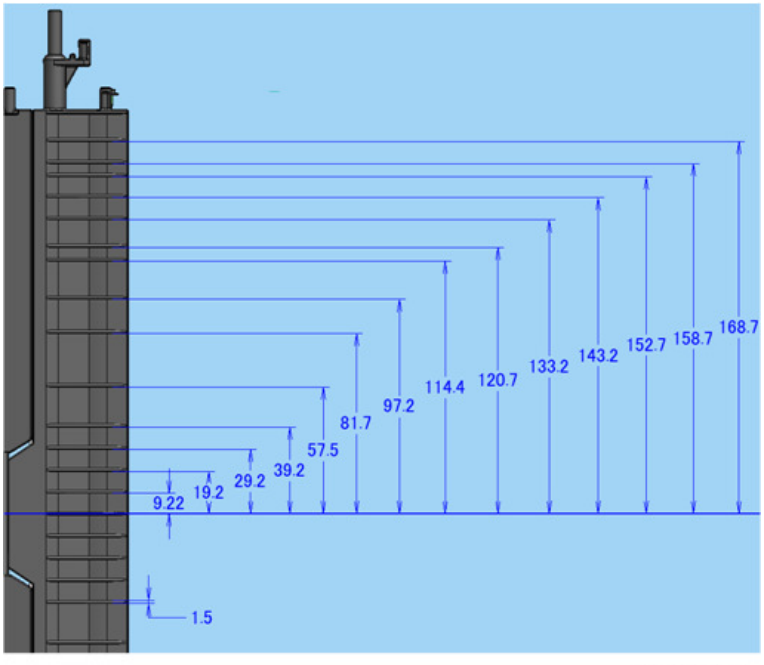
d1808124

Drive Ribs



d1808125

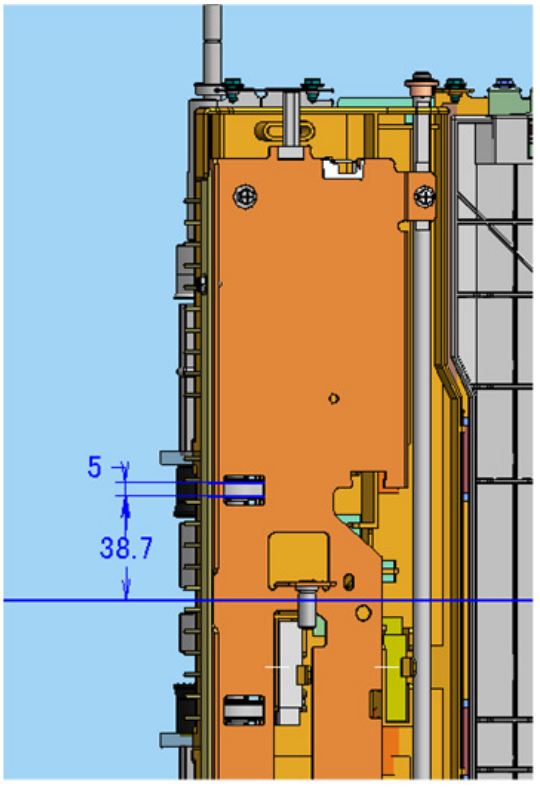
Vertical Drive, Junction Gate



d1808126

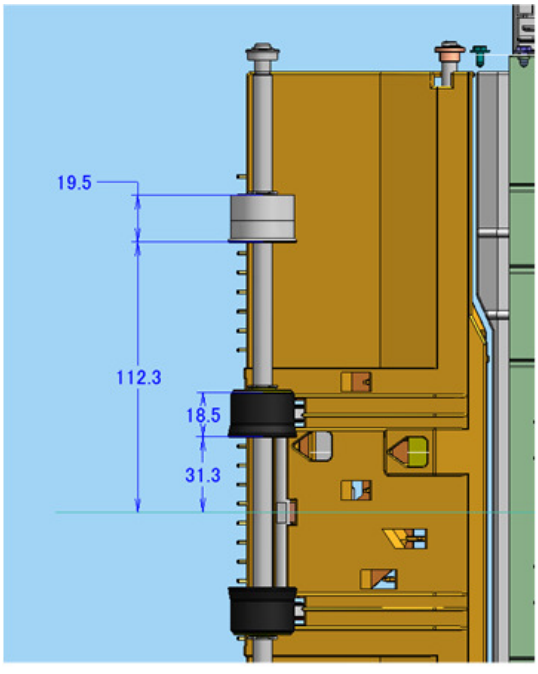
Straight Transport 3: Exit to Shift Tray

Vertical Drive Rollers



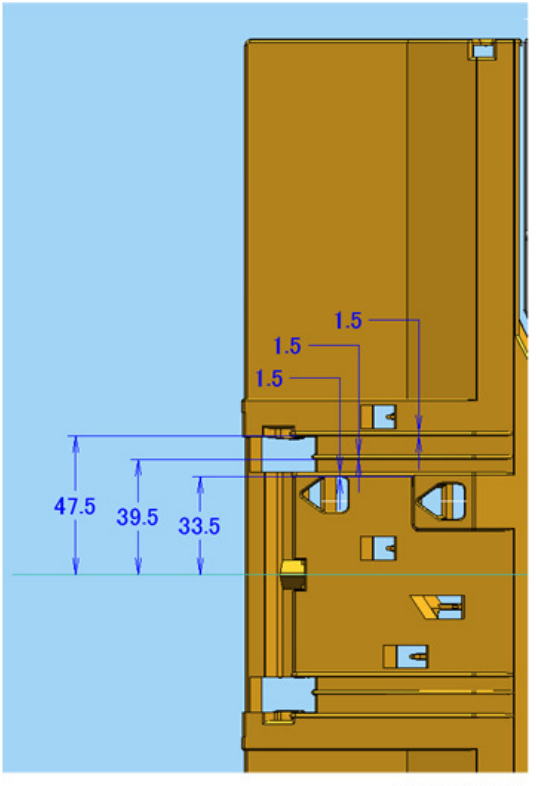
d1808127

Drive Rollers

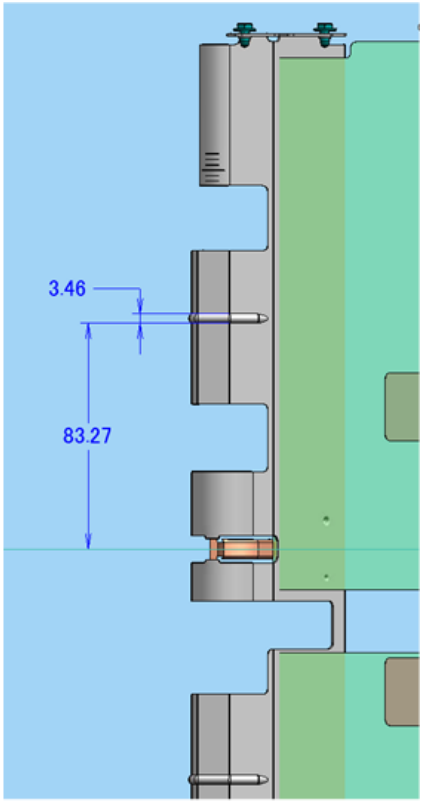


d1808128

Vertical Ribs

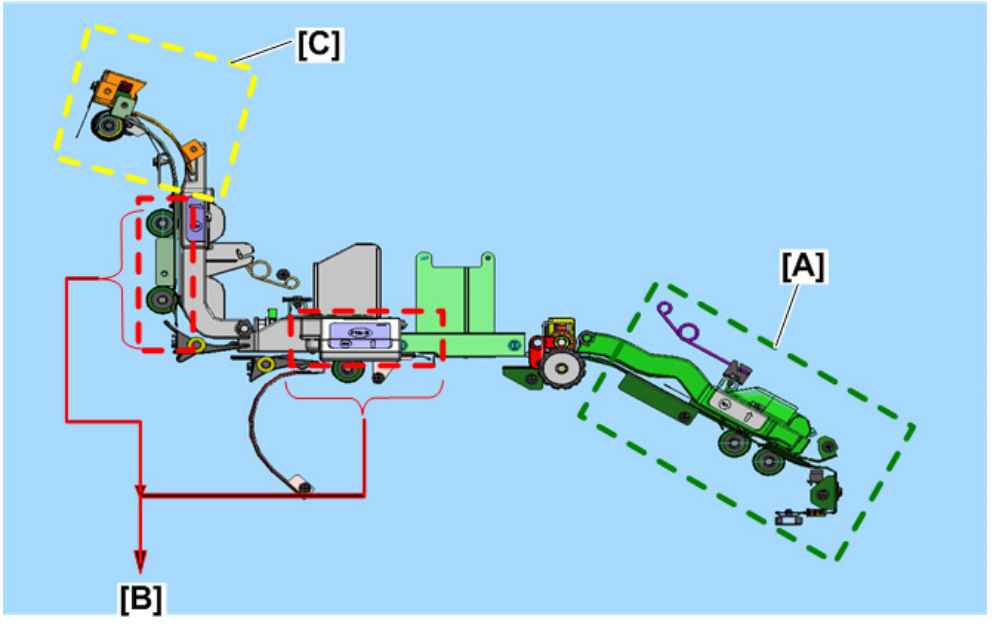


Drive Ribs



d1808130

Proof Transport Path Layout

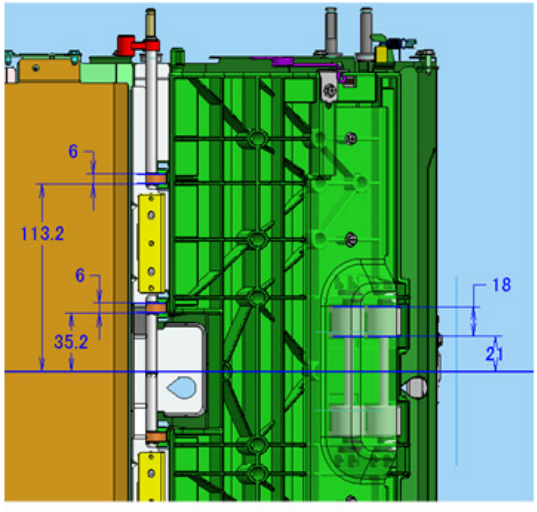


d1808131

No.	Name
A	Proof Path 1: Entrance, Paper Registration
B	Proof Path 2: Post Punch, Proof Path
C	Proof Path 3: Proof Tray Exit

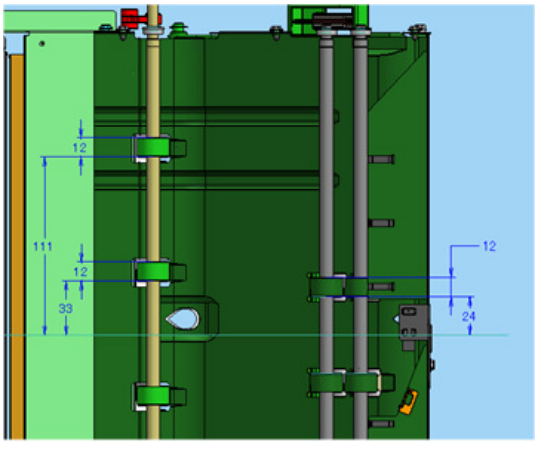
Proof Path 1: Entrance, Paper Registration

Vertical Rollers



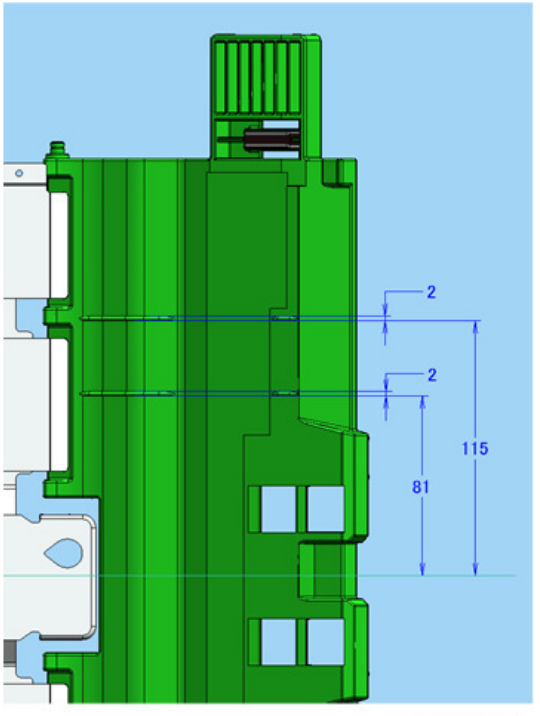
d1808132

Drive Rollers



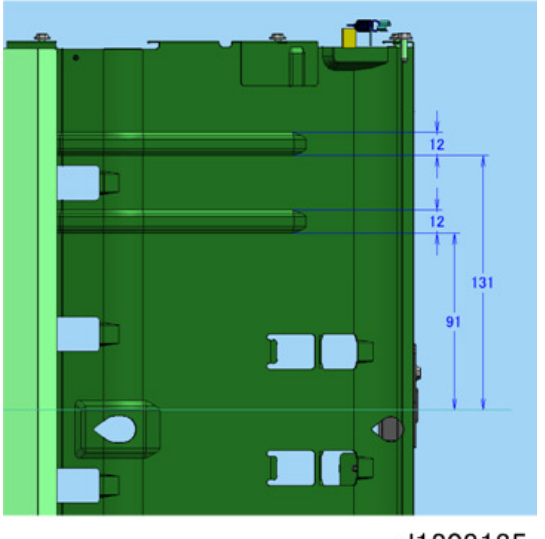
d1808133

Vertical Ribs



d1808134

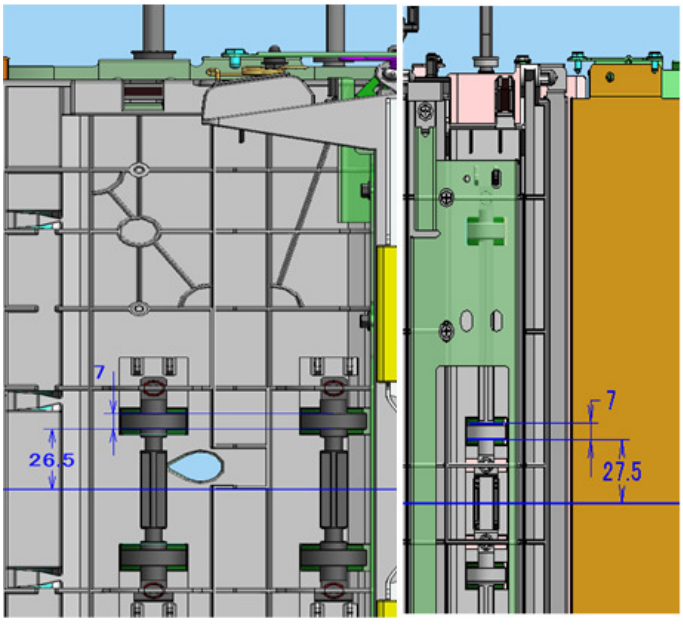
Drive Ribs



d1808135

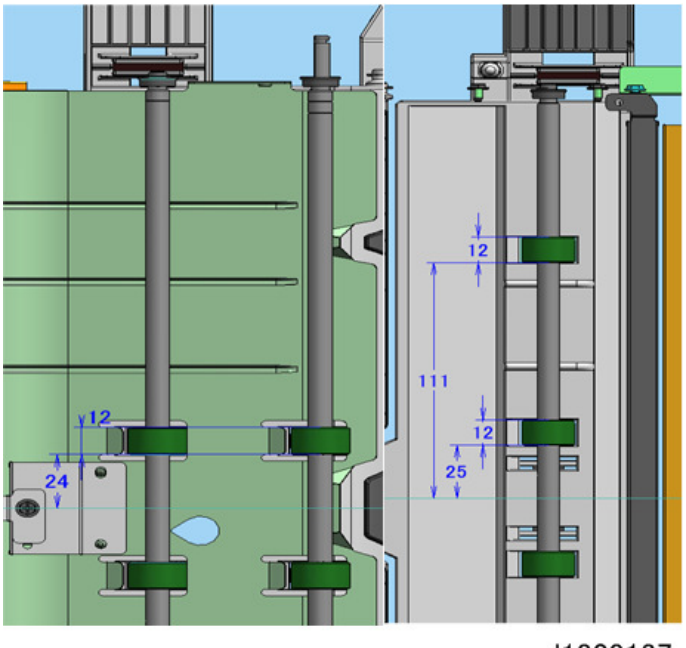
Proof Path 2: Post Punch, Proof Path

Vertical Rollers



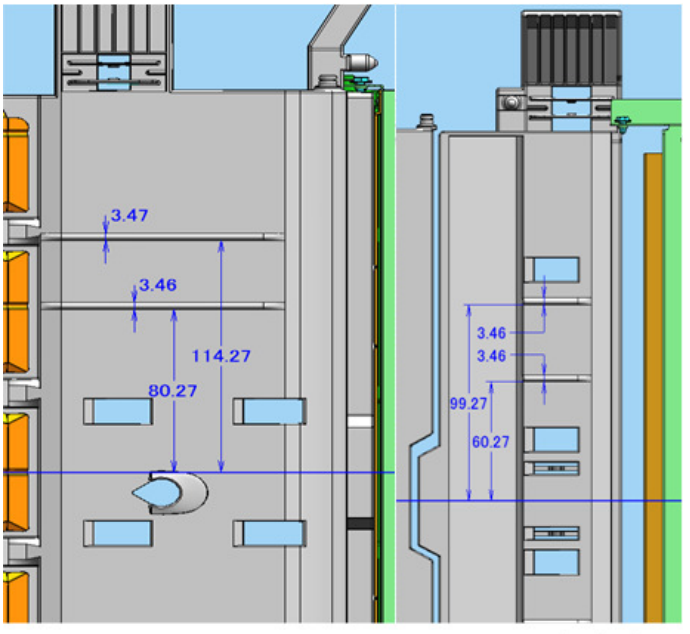
d1808136

Driver Rollers



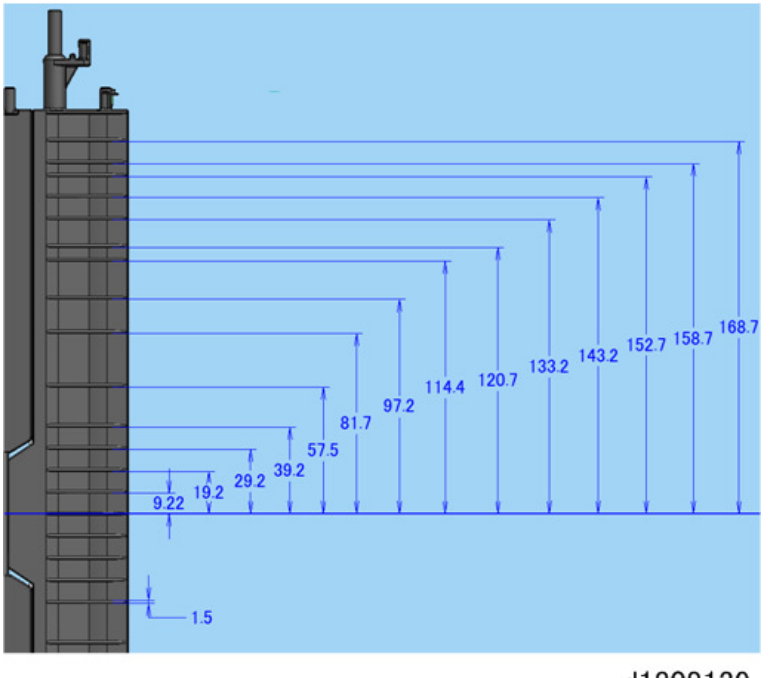
d1808137

Vertical Ribs



d1808138

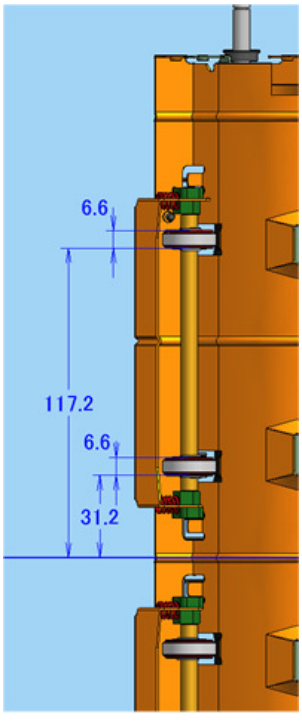
Transport Junction Gate Ribs



d1808139

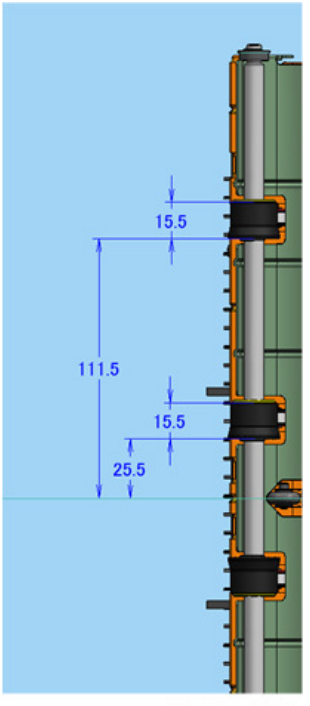
Proof Path 3: Proof Tray Exit

Vertical Rollers



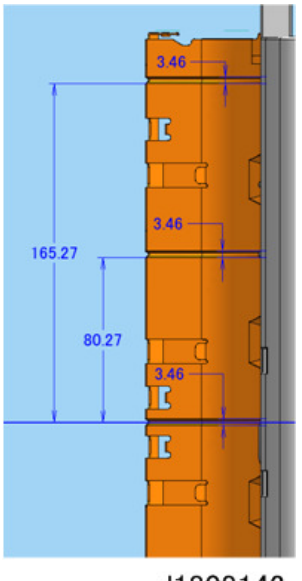
d1808140

Drive Rollers



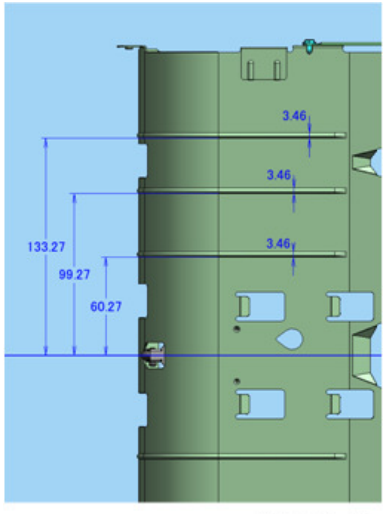
d1808141

Vertical Ribs



d1808142

Drive Ribs



d1808143

MEMO