

Treating the stitching defect

Xerox[®] Rialto[®] 900 Inkjet Press

Internal follow-up table

Version	Date	Changes	Author
-	26/04/2017	Redaction beginning	GMO
RC-000	27/04/2017	First release	GMO
RC-001	04/05/2017	Remove section for checking registration, sect 1: add warning, check angle before check jetter position, sect 4 : add precisions to treat stitching defect.	GMO
RC-002	04/05/2017	Remove section for checking registration, sect 1: add warning, check angle before check jetter position, sect 4 : add precisions to treat stitching defect.	GMO
RC-003	11/05/2017	Remove section for checking angle, identify color first, check position, then treat the defect.	GMO
RC-004	12/05/2017	Add precisions for the specific tools and the feeler gauge, add related document.	GMO
RC-005	18/05/2017	Add procedures to install the stitching pattern and to restore the original one, precise stitching patterns references, precise how to fasten jetter in sect 4.2, minor corrections.	GMO
RC-006	19/05/2017	Add references of specific tools..	GMO

	Name	Function	Date	Visas
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A0	/04/2017	Creation	GMO

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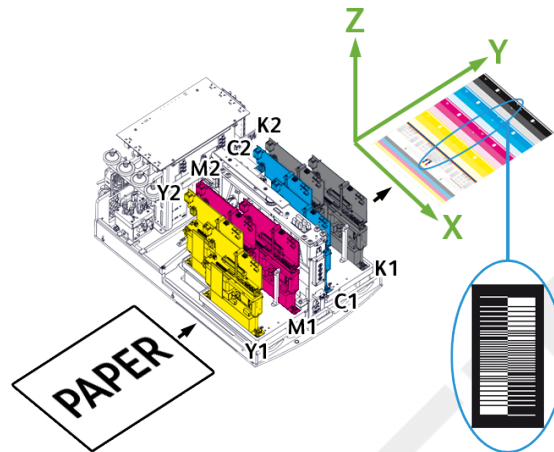
DRAFT

How to treat the stitching of the Xerox® Rialto® 900 Inkjet Press

1. Introduction

This technical note explains how to treat the stitching defect of the Xerox® Rialto® 900 Inkjet Press. This defect appears as an unexpected strip all along the middle of the printing.

The picture below shows the area characterising this defect for a front Printhead.



WARNING

Performing a diagnosis is very complex since several parameters are involved.

A double check with a L3 or L4 expert is mandatory before any adjustment.

Duration

Up to one day.

Intervenor

1 trained technician: this procedure requires a strong knowledge of the i1000L printhead.

Required material:

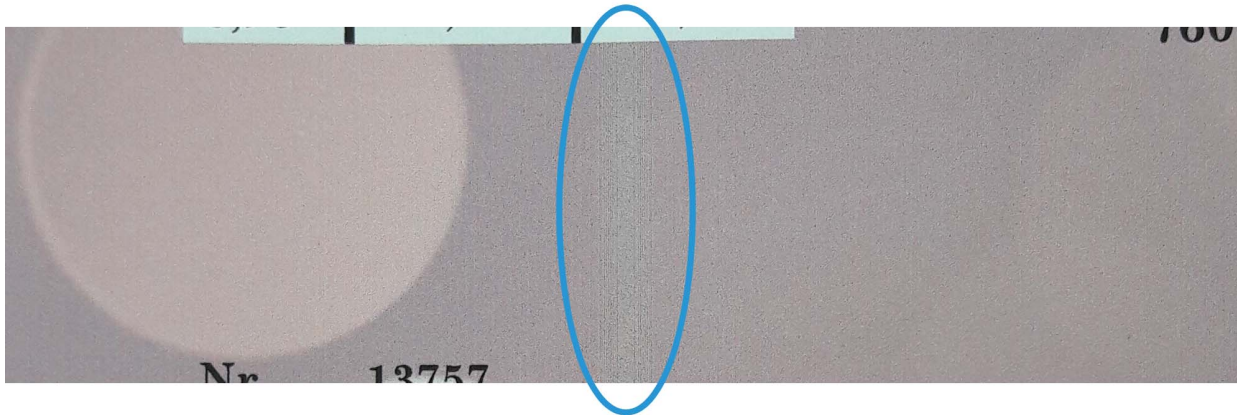
- 2x software files on a USB key:
 - > *Stitching.bat* to install the test patterns 173066.00.A0 and 173067.00.A0
 - > *Original.bat*
- Most selective paper used by the customer,
- Gloves,
- Polypropylene wipers,
- 1x digital microscope to read the test patterns,
- Specific tools:
 - > 1x long handle with a 3 mm Allen end (A0015953),
 - > 1x long handle with a 4 mm hexagonal end (A0015988),
- Feeler gauge set (used in the installation guide for the Printhead height).

Related document

152482.01.GI.A0_Xerox Rialto 900 - Installation Guide

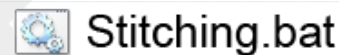
2. Identifying a stitching defect

A stitching defect results in an unexpected strip all along the middle of the printing, in the area of interlacing between the front and back jetters.



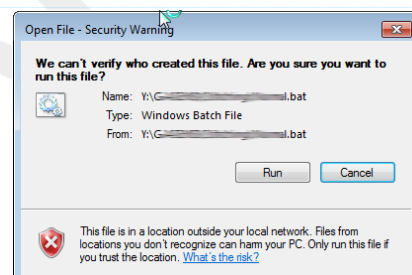
This defect must be confirmed by printing the stitching test patterns: 173066.00.A0 and 173067.00.A0. They must be installed in the **Pattern_600** snapshot as follows:

- 1 Quit the GUI.
- 2 Plug the USB key containing the two **.bat** files in a USB port of the MMI.
- 3 Run the **Stitching.bat** file by double-clicking it.

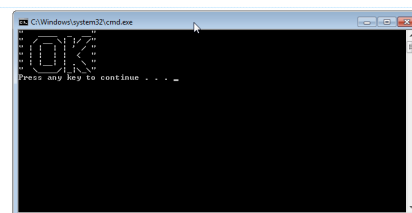


Stitching.bat

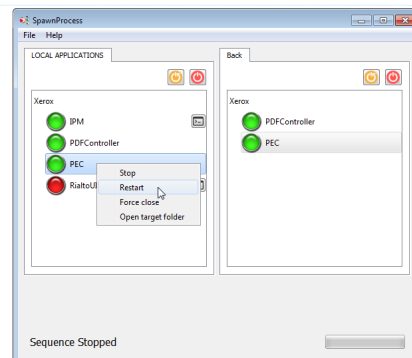
- 4 Click the **Run** button.



- 5 A window with the message **OK** is displayed, confirming the installation is successful. Press any key to close this window.



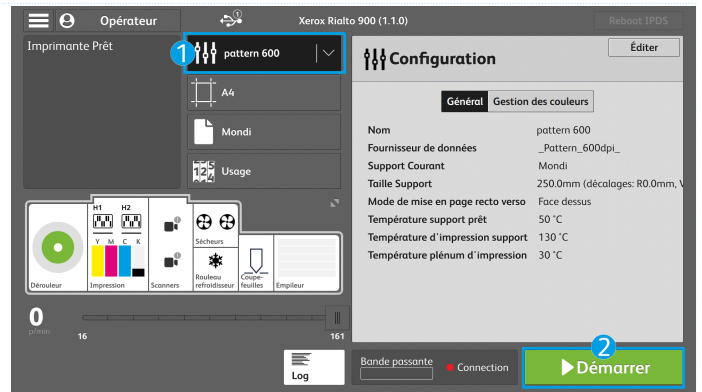
- 6 In the **SpawnProcess**, restart the two PEC by right-clicking them.



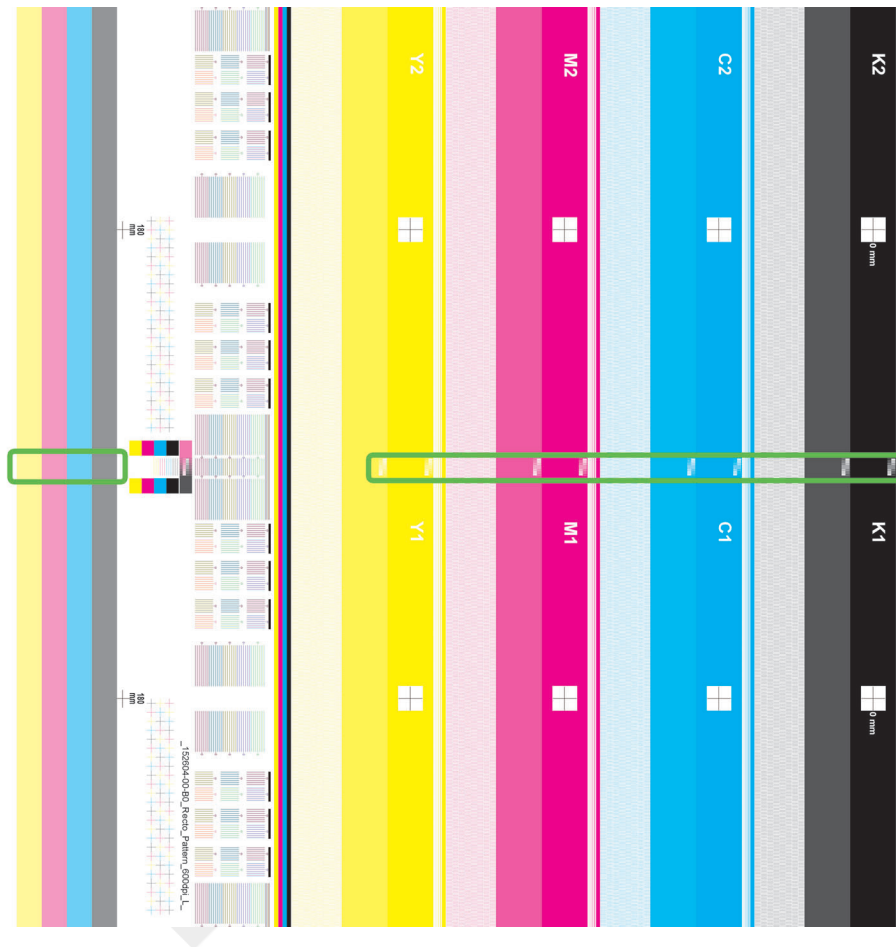
- 7 Start the GUI.

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Print the stitching test patterns using the **Pattern_600** snapshot.



These test patterns allow controlling the interlacing zone color by color in the area shown below.



3. Troubleshooting

3.1. Principle

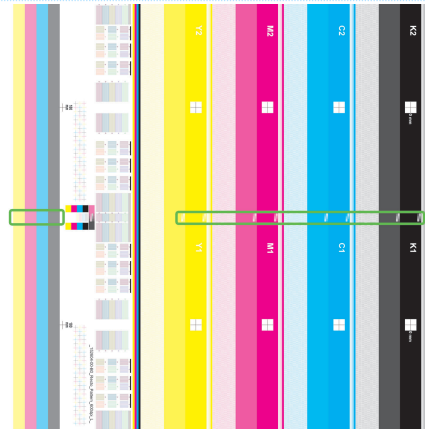
A stitching defect appears on a test pattern in the dedicated zones. But such defects can have other root causes than a problem of stitching between the front and back jetters.

First, the Printhead calibration must be checked and rectified if necessary:

1. Printhead height (see 152482.01.GIA0, p.59 - 61),
2. Printhead angle (see 152482.01.GIA0, p.67),
3. Step coder adjustment (see 152482.01.GIA0, p.68).

3.2. Identifying the defect

- 1 Print a *Stitching_Investigation* Test Pattern and check the stitching zones to determine which color is involved in the defect.



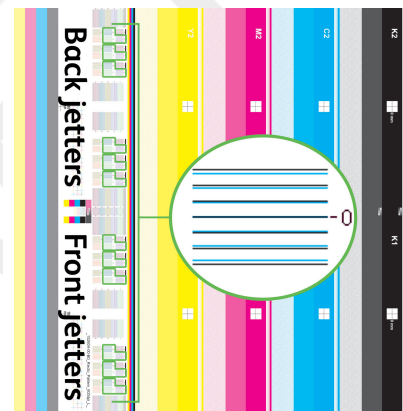
Identify which jetter of the involved color is in the worst position by comparing the alignment of each one with the other jetters on the same side.



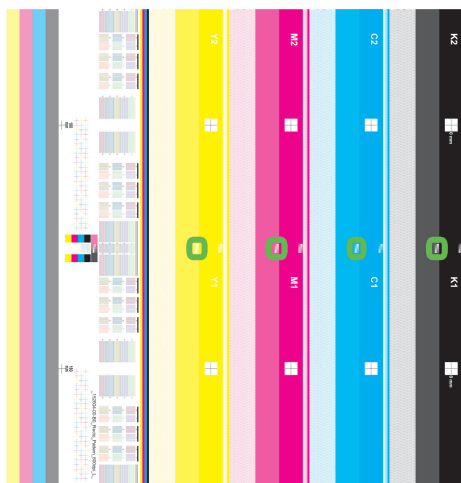
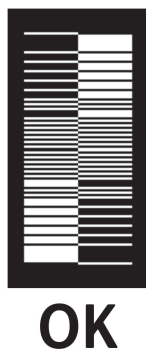
NOTE

For example, if the cyan color is involved, check the alignment of the front cyan jetter with the three other front jetters. Then check the alignment of the back cyan jetter with the three other back jetters. The correction must be achieved on the jetter with the worse position.

The picture below shows the zones to check the alignment of the cyan jetters. Be careful to check the zones of the relevant color.



Evaluate the direction and the size of the defect by checking the dedicated zones of the test pattern.



Need 1/2 pixel to the back
of the Printhead

Need 1/2 pixel to the front
of the Printhead

4. Treating the stitching defect



WARNING

Performing a diagnosis is very complex since several parameters are involved.

A double check with a L3 or L4 expert is mandatory before any adjustment.

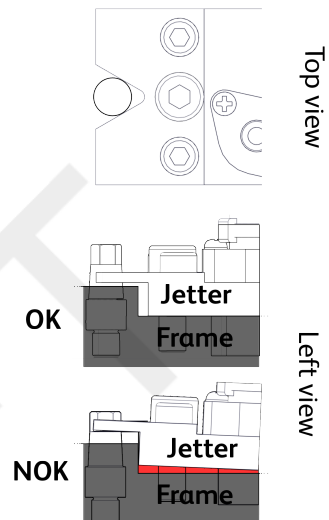
4.1. Positioning the identified jetter(s) in the frame

The V-shaped extremity of a jetter may get stuck against the head of the conic screw, loosing the contact between the jetter and the frame. The consequence is a strong image quality defect and possibly an irreversible damage of the jetter.



WARNING

The position of a jetter in the frame must be correct at all time. In particular, it must be checked after replacing a jetter or moving the Press.



Position the identified jetter as follows:

- 1 Loosen the two screws (1 and 2) fastening the jetter with the specific Allen tool.
- 2 Pull slightly the jetter away from its two reference pins and let it go back to its natural position.
- 3 Tighten slightly the two screws (1 and 2) fastening the jetter, enough to position the jetter, but without blocking it in translation.
- 4 If the jetter is equipped with springs, check with an opposite stress it is well positioned back on its references by the springs.



CAUTION

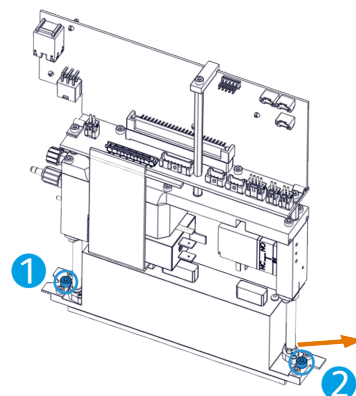
If the jetter is not equipped with springs (reference jetter), push slightly the jetter against its reference pins.

- 5 Tighten progressively the jetter with the specific Allen tool as follows:

- a. tighten slightly the rear screw 1,
- b. tighten slightly the front screw 2,
- c. tighten completely the rear screw 1,
- d. tighten completely the front screw 2.

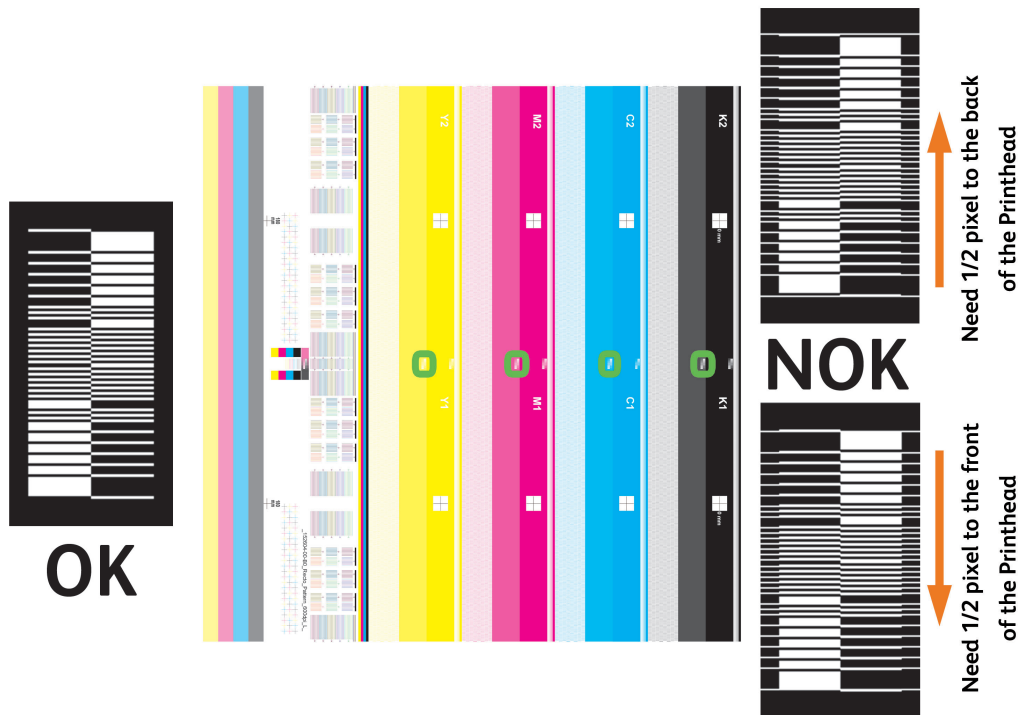
- 6 Print a test pattern and check the area of the relevant jetter. Position it again if necessary.

- 7 If there is no improvement, go the next section to rectify the position of the jetter with respect to the other jetters.



4.2. Treating the stitching defect

The dedicated zones of the test pattern shows the stitching defect: one thin line corresponds to one pixel. Make sure the defect is identified for one jetter only. Translate it as follows to correct the stitching:



- 1 Loosen the two fastening screws ① of the jetter with the specific Allen tool.

Act on the conic screw ② (hexagonal head) at the rear of the jetter to translate it with the specific hexagonal tool:

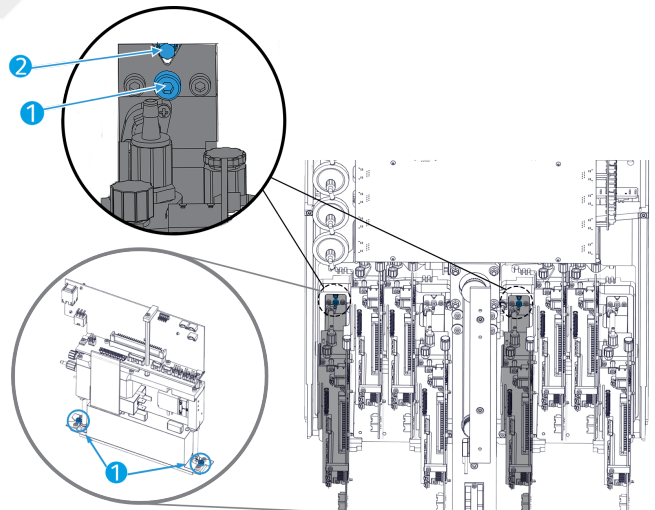
- tighten the screw to translate the jetter to the rear,
- loosen the screw to translate the jetter to the front.

2



WARNING

- Do not turn the hexagonal screw of more than 1.5 turn in a direction or another,
- One turn of conic screw = 35 μm ,
- Size of one pixel = 42.33 μm .



Tighten progressively the two fastening screws ① of the jetter with the specific Allen tool as follows:

3

- a. tighten slightly the rear screw,
- b. tighten slightly the front screw,
- c. tighten completely the rear screw,
- d. tighten completely the front screw.

4

Print a new test pattern to check the stitching of the involved jetter is correct.

5

Rectify the position of the jetters until the test pattern shows a satisfying global result.

5. Restore the original test pattern

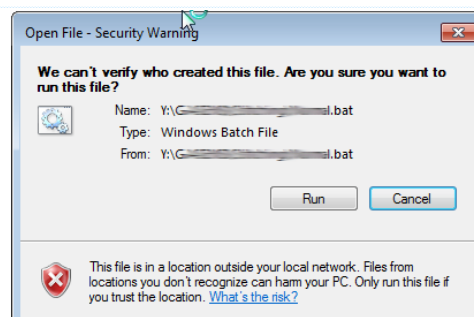
1 Quit the GUI.

2 Run the **Original.bat** file by double-clicking it.

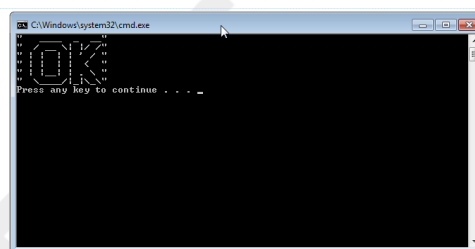


Original.bat

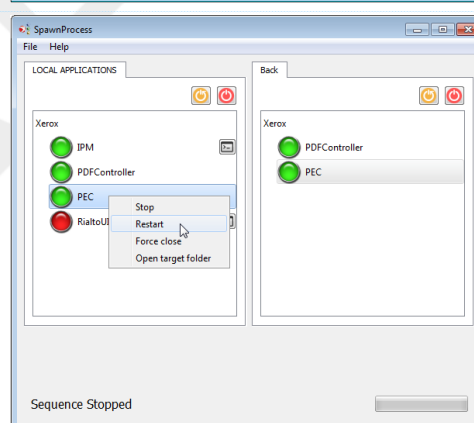
3 Click the **Run** button.



4 A window with the message **OK** is displayed, confirming the installation is successful. Press any key to close this window.



5 In the **SpawnProcess**, restart the two PEC by right-clicking them.



6 Start the GUI.

7 Print a test pattern using the **Pattern_600** snapshot to make sure the original test pattern is restored.

