Model: Ko-P1	Date: 13-Mar-19	No.: RM0BY001

Subject: FSM correction on manual adjustment of print head position	Prepared by: H. Morishima
From: 1st System Biz Promotion Sec., IP Business Center	

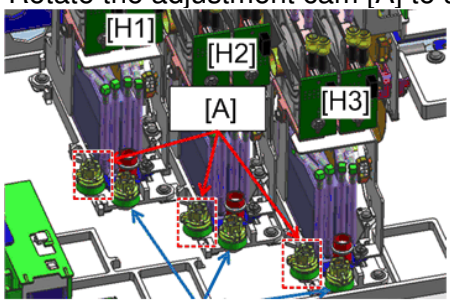
Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☒ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

Service Manual Correction:

Please delete following descriptions ~~crossed out~~ in red and add the following descriptions **in bold** to your field service manual.

3. Replacement and Adjustment
> Carriage Unit
> Print Head Unit
> Adjustment after Replacing the Print Head Unit

Adjusting Head Inclination (P.242~)
5. Rotate the adjustment cam [A] to adjust the head inclination.



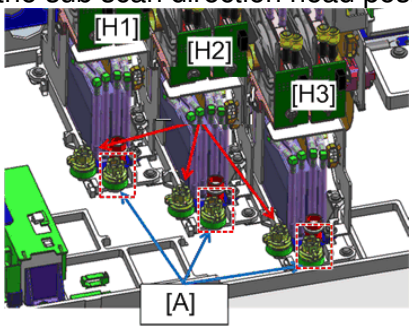
Refer to the following table for the rotation angle of the cam.

Rotation angle (degree)	Moving distance (μm)
10	4
20	8
30	12.1
40	16.2
50	20.4
60	24.8
70	29.3
80	34
90	38.9
100	44.3
110	50.2
120	57
130	65.3
140	78.1
144	90

Value of SP3-175 (µm) (Read value of colorimetric sensor)	Rotation angle (degree)	Cam Rotation direction
-144	90	Counter clockwise
-140	78.2	
-130	65.4	
-120	57.1	
-110	50.3	
-100	44.4	
-90	39	
-80	34.1	
-70	29.4	
-60	24.0	
-50	20.5	
-40	16.3	
-30	12.2	
-20	8.1	
-10	4.1	
0	-	-
10	4	Clockwise
20	8	
30	12.1	
40	16.2	
50	20.4	
60	24.8	
70	29.3	
80	34	
90	38.9	
100	44.3	
110	50.2	
120	57	
130	65.3	
140	78.1	
144	90	

Adjusting Head Position in the Direction of Sub Scan (P.244~)

5. Adjust the head position until the value displayed on the operation panel turns ± 10 m. Rotate the sub scan direction head position adjustment cam [A] to adjust the head position.



For the rotation angle of the cam, refer to the following table and the graph in the step 5, Adjusting Head Inclination.

Rotation angle (degree)	Moving distance (μm)
10	2.8
20	5.7
30	8.6
40	11.5
50	14.4
60	17.4
70	20.4
80	23.5
90	26.7
100	30
110	33.3
120	36.8
130	40.5
140	44.4
150	48.5
160	53.1
170	58.2
180	64.1
190	71.8
200	90

Value of SP3-175 (µm) (Read value of colorimetric sensor)	Rotation angle (degree)	Cam Rotation direction
-200	90	In case of adjusting position of print head 1: Clockwise In case of adjusting position print head 2 or 3: Counter Clockwise
-190	71.9	
-180	64.2	
-170	58.3	
-160	53.2	
-150	48.6	
-140	44.5	
-130	40.6	
-120	36.9	
-110	33.4	
-100	30	
-90	26.8	
-80	23.6	
-70	20.5	
-60	17.5	
-50	14.5	
-40	11.6	
-30	8.7	
-20	5.8	
-10	2.9	
0	-	-
10	2.8	In case of adjusting position of print head 1: Counter Clockwise In case of adjusting position print head 2 or 3: Clockwise
20	5.7	
30	8.6	
40	11.5	
50	14.4	
60	17.4	
70	20.4	
80	23.5	
90	26.7	
100	30	
110	33.3	
120	36.8	
130	40.5	
140	44.4	
150	48.5	
160	53.1	
170	58.2	
180	64.1	
190	71.8	
200	90	

Model: Ko-P1	Date: 14-Mar-19	No.: RM0BY002

Subject: Important notice on ONYX RIP driver			Prepared by: H. Morishima
From: 1st System Biz Promotion Sec., IP Business Center			
Classification:	☐ Troubleshooting ☐ Mechanical ☐ Paper path ☐ Product Safety	☐ Part information ☐ Electrical ☐ Transmit/receive ☐ Other ( )	☐ Action required ☒ Service manual revision ☐ Retrofit information ☐ Tier 2 ☐ Tier 0.5

Important Notice:

When installing the ONYX RIP, the ONYX RIP driver must be updated to the version "Ricoh_Pro_2019-02-15-09-58" or later by following procedures.

If ONYX RIP driver is not updated to this or later version, the device cannot print out any image via ONYX RIP.

Procedures:

Uninstall the old ONYX RIP driver

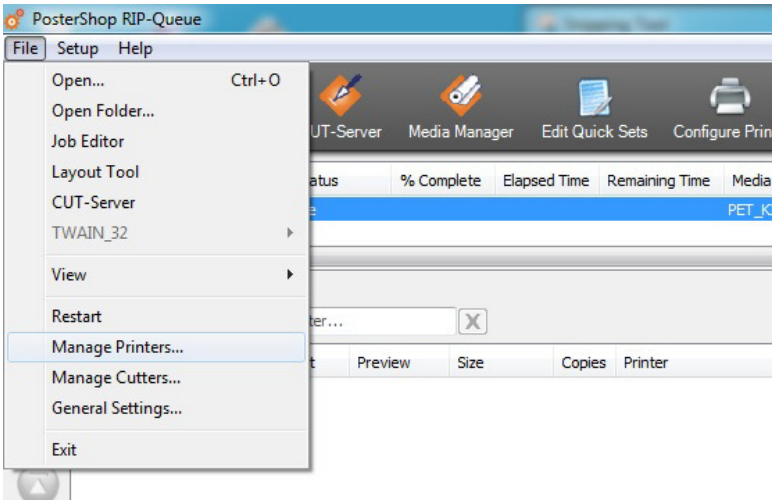
Please check followings:

1. Bundled ONYX RIP has been installed.
2. Installed ONXY RIP is initial state.
   - If new profiles or "QuickSet" have been created or imported, delete them.

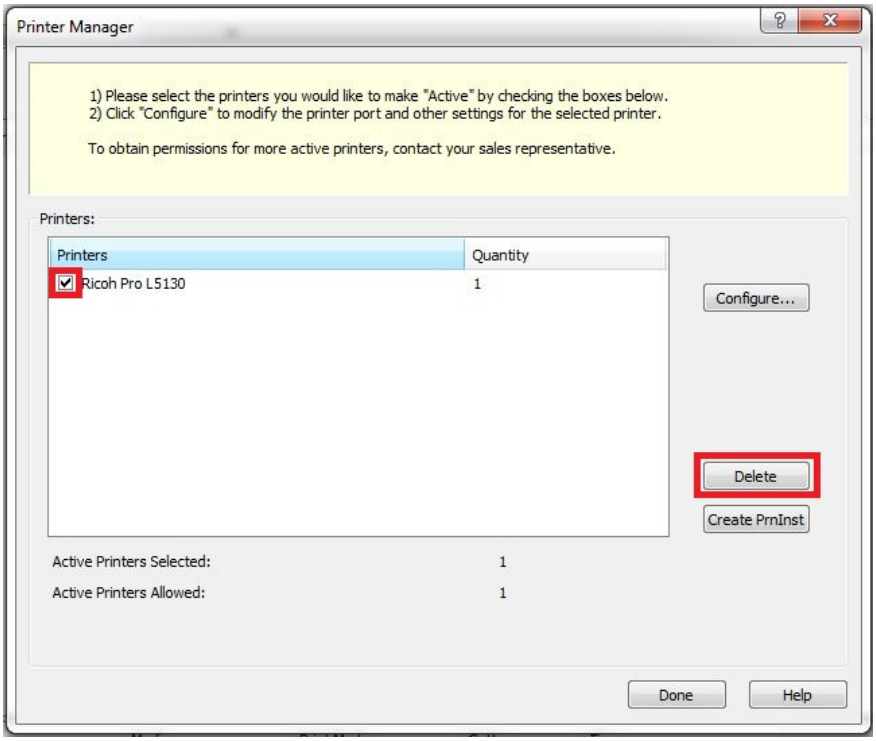
     Or
   - Delete printer "Ricoh Pro L51XX" from the ONYX RIP.

     How to delete the printer:

     1. Select RIP-Queue > FILE > "Manage Printers…"

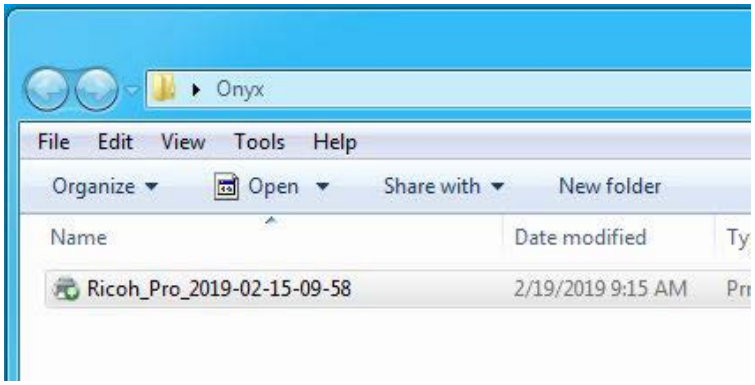


2. Select the printer and click “Delete”.

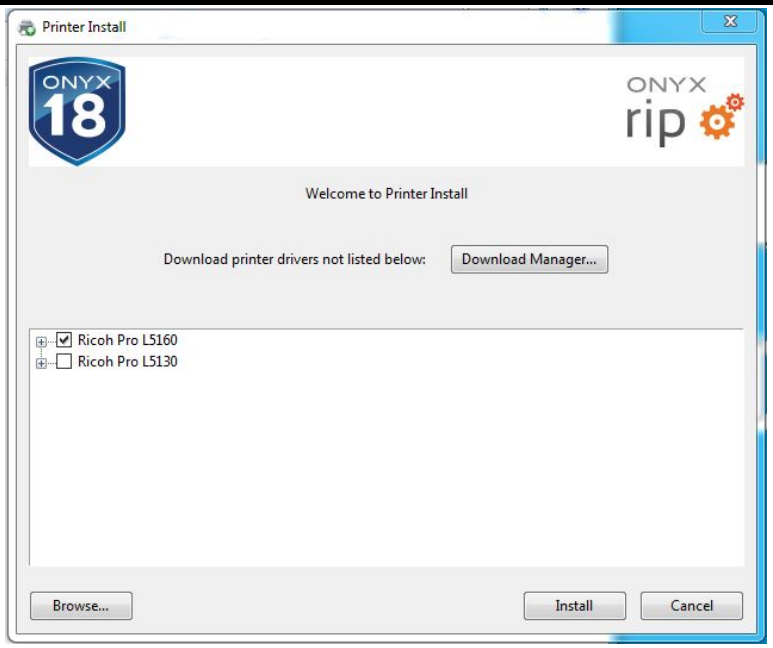


How to update

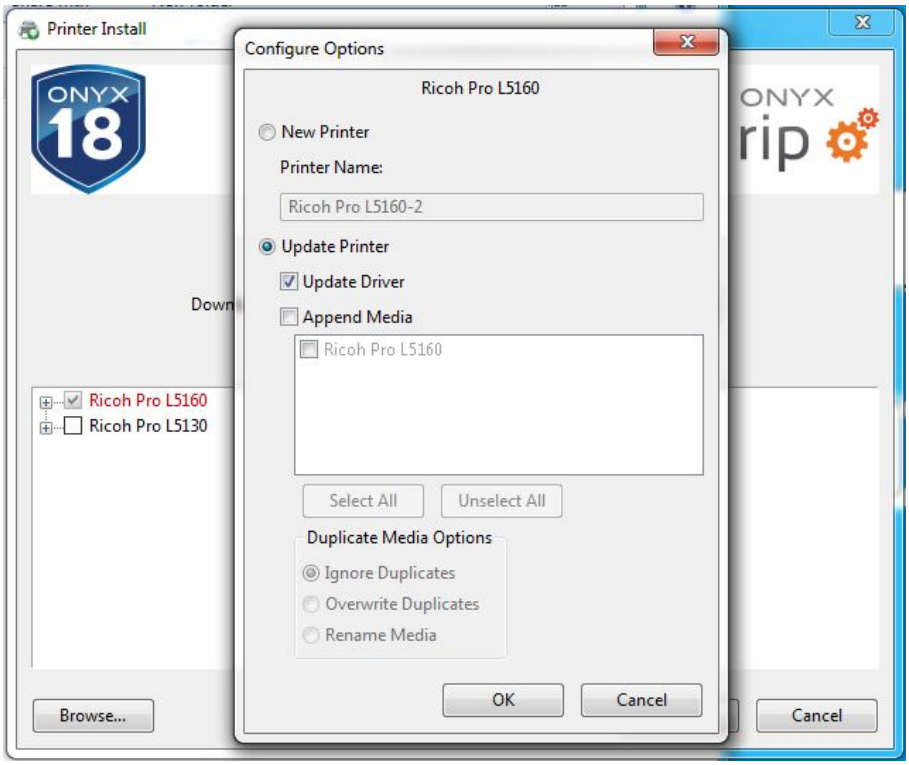
1. Download the latest version of ONYX RIP driver from the firmware download site.
2. Execute the driver file which downloaded in step1.



3. Select a printer which customer uses in following screen.
   Note: If update an existing printer, select same type of printer.



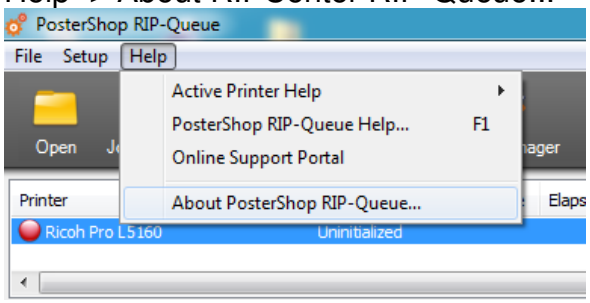
4. Select “Update Printer” and check “Update Driver” in “Configure Options” screen.



Note:

- If delete the printer from ONYX RIP in advance, step4 is skipped.
- If “New Printer” is selected, both new and old printer driver exist together. In this case, both drivers have to be deleted once and the new driver have to be re-installed.

5. Driver update is executed.
   Note: Command prompt screen appears while executing.
6. Click “Finish” after completing driver update, then RIP-Queue appears.
7. Check the updated driver version from RIP-Queue.
   Help -> About RIPCenter RIP-Queue...



Check the printer version displayed in middle of screen as “18.0.0.XXXXX MM/DD/YYYY”(Installed version) like figure below.

Model: Ko-P1	Date: 18-Mar-19	No.: RM0BY003

Subject: Network setting of the RIP PC	Prepared by: H. Morishima
From: 1st System Biz Promotion Sec., IP Business Center	

Classification:			
	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

SYMPTOM

The following network related errors:

- The carriage stops while printing and the operation panel remains displaying “Printing.”
- After switching to Online from Offline, pressing “Resume” on the operation panel does not resume printing.
- Resending the job from the RIP software does not start printing, followed by a network error.
- When attempted to connect RIP PC to the printer after rebooting the RIP software, error message “No valid IP address found” appears.

CAUSE

The network connection between the printer and RIP PC randomly switches to wireless connection due to a Windows OS issue.

SOLUTION

When the printer and RIP PC are connected with a LAN cable, turn Off the wireless LAN setting on the PC.

Model: Ko-P1	Date: 2-Apr-19	No.: RM0BY004

Subject: FSM correction on NV-RAM replacement	Prepared by: H. Morishima
From: 1st System Biz Promotion Sec., IP Business Center	

Classification:			
	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☒ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

Service Manual Correction:

Please delete following descriptions ~~crossed out~~ in red and add the following descriptions **in bold** to your field service manual.

5. Troubleshooting > When NV-RAM is Broken (Page.462)

When NV-RAM is Broken

When NV-RAM is broken, do the following procedure.

1. Replace the broken NV-RAM.
   - NV-RAM for controller: A label is attached.
   - NV-RAM for engine: No label is attached.
2. **Open the right front door, then turn ON the power.**
   Note: Leave the cover open until following procedures compete.
3. Execute SP, and then clear the memory.
   - When replacing NV-RAM for controller: ~~SP5-801-001~~ **SP5-801-006**.
   - When replacing NV-RAM for engine: SP5-801-002
4. If you have a backup of SP data that is stored in NV-RAM, download the data.
   - **Download from SD card: SP5-825-001**

   For Backup/Download procedure of NV-RAM data, refer to NV-RAM Data Upload/Download.
5. If you have not retrieved SP data, manually input the data of factory settings.
   For the data of factory settings, ask the key person in each area.

Model: Ko-P1	Date: 22-Apr-19	No.: RM0BY005

Subject: Troubleshooting :Poor drying may occur	Prepared by: Kobayashi
From: Regional Sales Department, Global IP Sales Center	

Classification:			
	☒ Troubleshooting	☐ Part information	☐ Action required
	☒ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2 ☐ Tier 0.5

There is an information of troubleshooting regarding poor drying.

Please change SP value as below at installation.

Symptom

Poor drying may occur when printing in following condition.

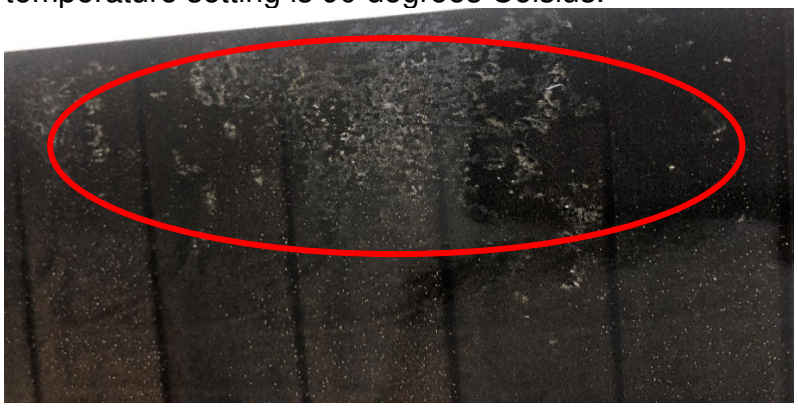
-Media : PVC

-Print Mode : Super draft

-Post Heater: 95 degrees Celsius

Note:

This symptom is not occurred when using bundled profile, because the post heater temperature setting is 90 degrees Celsius.



Cause

The heat for curing printed ink may be insufficient, because the cure heater is powered off when the post heater reaches upper limit temperature which is 95 degrees.

Solution

Change SP value as below.

SP1-108-002(Post heater temperature upper limit) : 95⇒105

This SP will be removed on newer version firmware.

About details, please refer to the release note which will be released at that time.

Reissued: 21-Apr-19

Model: Ko-P1	Date: 20-May-19	No.: RM0BY006a

RTB Reissue

The items in *red italics* were corrected or added.

Subject: Troubleshooting: unexpected ink end detection			Prepared by: D.Kobayashi
From: Regional Sales Department, Global IP Sales Center			
Classification:	☒ Troubleshooting ☒ Mechanical ☐ Paper path ☐ Product Safety	☐ Part information ☐ Electrical ☐ Transmit/receive ☐ Other ( )	☐ Action required ☐ Service manual revision ☐ Retrofit information ☒ Tier 2 ☐ Tier 0.5

There is an information of troubleshooting regarding unexpected ink end detection.

It may occur after changing the configuration to 4C+W.

Check the Field Service Manual and the bundled document with machine “Tubes Connection Procedure for the 4C+W Model” carefully about changing the configuration to 4C+W.

Symptom

Unexpected ink end detection may occur even if there is enough amount in ink cartridge.

The error message may be appeared when initial ink filling.

It may occur because configuration change wasn’t performed to 4C+W correctly.

Caution

If unexpected ink end detection occurred, it means that this ink cartridge cannot use because machine wrote wrong ink end information to ID chip on Ink cartridge.

Cause

Forget performing step 1 to step 7 into the Field Service Manual.

3.Installation > Main machine installation > installation for 4C+W model > Changing the Joints of Branch Section and Connecting Circulation Tubes (P128~)

(Refer to Solution below)

Or (Both cases mention same things)

Model: Ko-P1	Date: 20-May-19	No.: RM0BY006a

Forget performing steps into document “Tubes Connection Procedure for the 4C+W Model” which is bundled with the machine.

Ink cannot supply due to incorrect tube connection then unexpected ink end detection may occur by machine write the wrong ink end information to ID chip in ink cartridge.

Solution

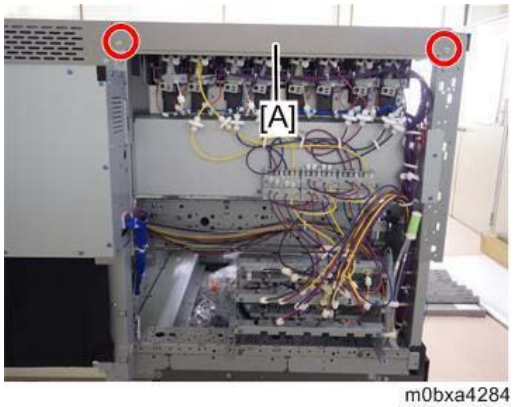
Refer to Field Service Manual or bundled document with machine “Tubes Connection Procedure for the 4C+W Model” carefully when changing configuration to 4C+W.

Especially check the step below carefully to prevent this trouble when changing configuration to 4C+W.

1. Remove the screws from the left upper cover [A].

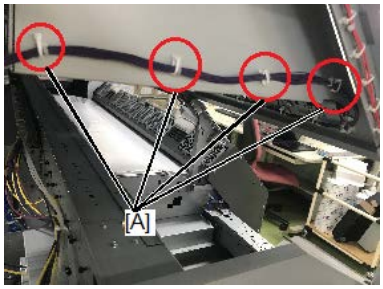
• Front side, Top

• Rear side

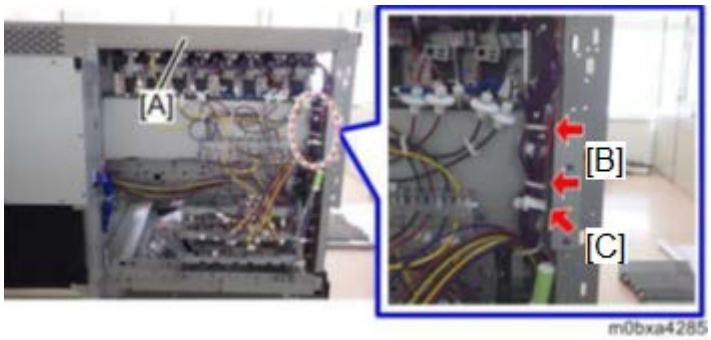


Model: Ko-P1	Date: 20-May-19	No.: RM0BY006a

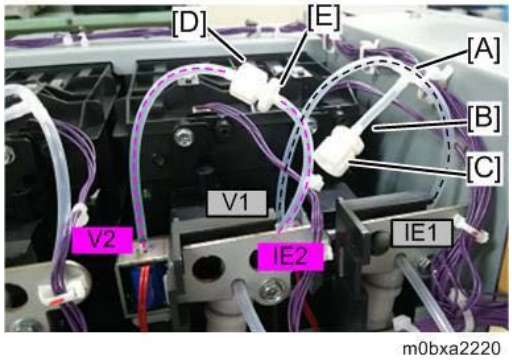
2. Unclasp the Harness clamp [A] at the left side



3. Unclasp the Harness clamp [B] and disconnect the Cable harness [C] then remove the left upper cover [A].



4. Prepare the instruction sheet for changing the joints provided with the machine.
5. Attach the sealing materials (MTLLP-2) [C] to the joint [B] branching from the T-shaped joint [A].
6. Connect the joint [D] of the tube extending from the solenoid valve [V2] and the joint [E] of the tube extending from the ink end detection [IE2].
The picture below shows the solenoid valve V1/V2.



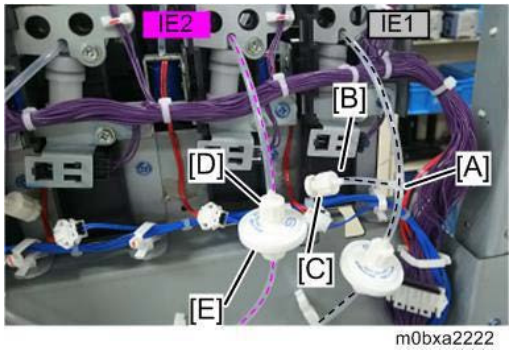
Note

Connect tubes of the other solenoid valves (V3/V4, V5/V6, V7/V8) in the same procedure.

These tubes and joints cannot be shown without remove the left upper cover.

7. Attach the sealing materials (FTLLP-1) [C] to the joint [B] branching from the T-shaped joint [A].
8. Connect the joint [D] of the tube extending from the ink end detection [IE2] and the joint of the filter

Model: Ko-P1	Date: 20-May-19	No.: RM0BY006a



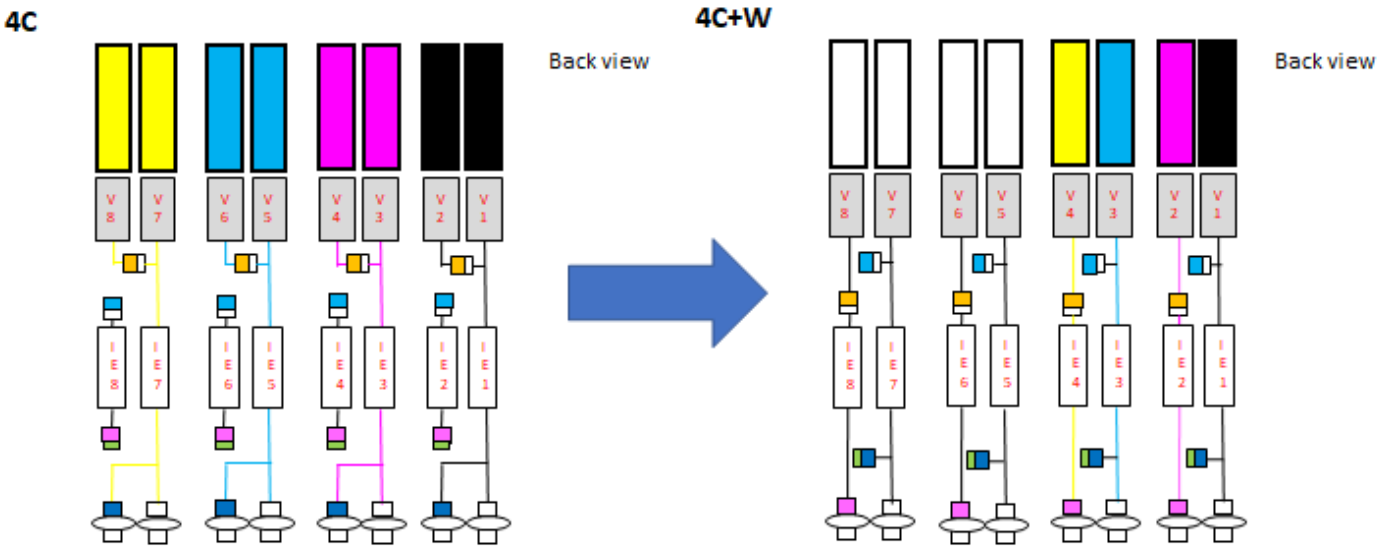
Step *6* and Step *8* is not same operation even similar, so check carefully

Note

Connect tubes of the other ink end detections (IE3/IE4, IE5/IE6, IE7/IE8) in the same procedure.

Appendix

This is block diagram of the above procedure.



Refer to the Field Service manual for the subsequent steps.

Reissued: 4-Sep-19

Model: Ko-P1	Date: 22-May-19	No.: RM0BY007a

RTB Reissue
The updating procedure has been modified.

Subject: How to update the system firmware by using a zip file			Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center			
Classification:	☐ Troubleshooting ☐ Mechanical ☐ Paper path ☐ Product Safety	☐ Part information ☐ Electrical ☐ Transmit/receive ☒ Other (Firmware)	☐ Action required ☐ Service manual revision ☐ Retrofit information ☐ Tier 2 ☐ Tier 0.5

Notice:
When a new adjustment pattern is added for function improvement, forcibly update of the system firmware is needed to add the pattern to the machine. The system firmware is updated forcibly by using “System_force” firmware. This RTB instructs how to use the “System_force” firmware.

	Firmware	Note	Destination	Parts No	Version	Release Date	Size	HTTP
☐	Engine		GEN (all)	M0BY5420H	Ver.1.07:01	2019/08/30	1,840 KB	Download
☐	System		GEN (all)	M0BY5415H	Ver.1.07	2019/08/30	75,222 KB	Download
☐	System_force		GEN (all)	M0BY5415H_force	Ver.1.07	2019/08/30	317,067 KB	Download
☐	Waveform		GEN (all)	M0BY5495A	Ver.04.00.00	2019/03/20	82 KB	Download

Note:
“System” firmware (“.fwu” file) also will be released always and it is possible to update the system firmware by “.fwu” file. However, if the system firmware is updated by the “.fwu” file, the new function does not work.

Preparation:
- SD card (1GB or more) which can be formatted

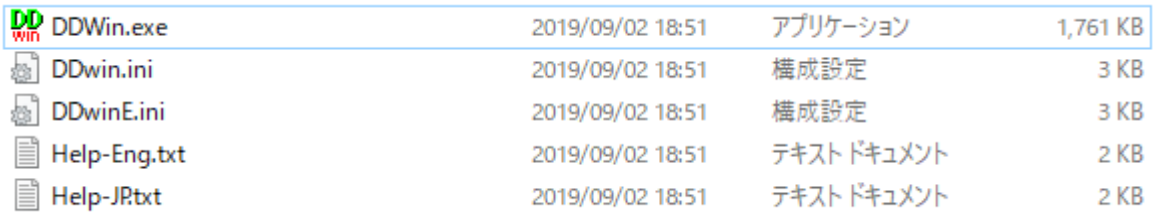
Procedure: Making a system update SD card for forcibly updating.
1. Download a “DD for windows” tool from the link below.
   http://113.35.21.242/dd_for_windows/

Name	Last modified	Size	Description
Parent Directory		-	
DDWinR2_Ver1000beta/	08-May-2019 12:56	-	
DDWinR2_beta_Ver1.0.7067.22284.zip	08-May-2019 12:27	3.7M	
DDWinR2_beta_Ver1.0.7086.28480.zip	27-May-2019 15:53	3.7M	
DDWin_Ver098.zip	13-Jun-2008 08:24	125K	
DDWin_Ver099.zip	13-Jun-2008 08:22	162K	
DDWin_Ver0992.zip	16-Sep-2008 20:27	167K	
DDWin_Ver0993.zip	21-Apr-2009 19:21	168K	
DDWin_Ver0994.zip	25-Jun-2009 17:29	168K	
DDWin_Ver0995.zip	24-May-2010 13:29	169K	
DDWin_Ver0996.zip	26-May-2010 17:33	169K	
DDWin_Ver0997.zip	25-Mar-2013 04:39	170K	
DDWin_Ver0998.zip	27-May-2014 20:55	811K	

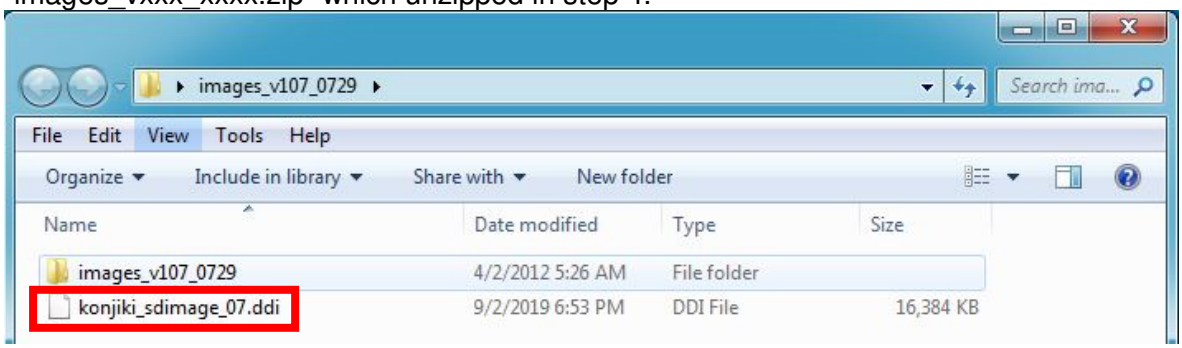
Apache/2.2.22 (Debian) Server at 113.35.21.242 Port 80

Model: Ko-P1	Date: 22-May-19	No.: RM0BY007a

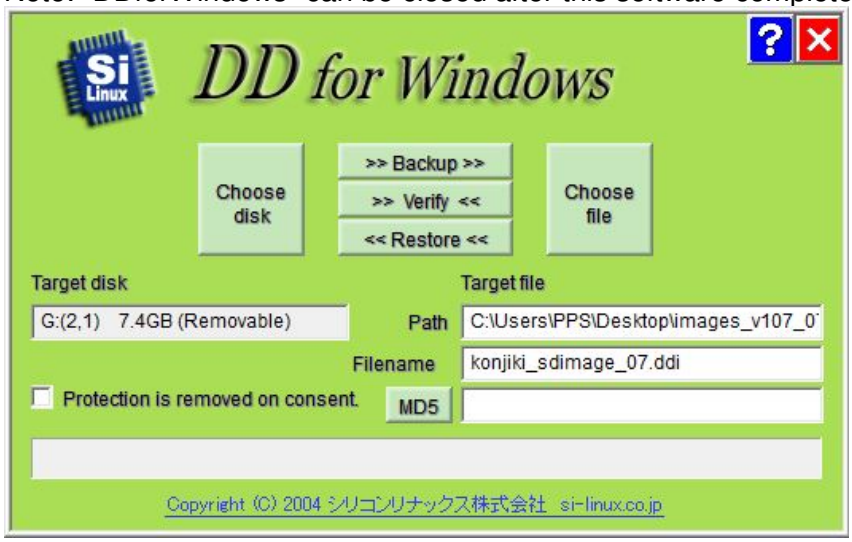
2. Unzip the “DDWin_Ver0998.zip”.
3. Download the “System_force” firmware from the firmware download site, then a zip file “images_vxxx_xxxx.zip” is downloaded.
4. Unzip the “images_vxxx_xxxx.zip”.
5. Insert a SD card to the PC, then run the “DDWin.exe”.



6. Press “Choose disk” button and select the SD card.
   Note:
   If you cannot select the SD card in the “DD for windows” software, please run this software as administrator.
7. Press “Choose file” button and select “konjiki_sdimage_07.ddi” which is included in “images_vxxx_xxxx.zip” which unzipped in step 4.



8. Press “Restore” button, then the “konjiki_sdimage_07.ddi” is written to the SD card.
   Note: “DDforWindows” can be closed after this software completes writing.



Model: Ko-P1	Date: 22-May-19	No.: RM0BY007a

9. Perform FAT format against the volume of the SD card from Windows.
10. Copy all files in the unzipped “images_vxxx_xxxx” folder to the SD card.

Procedure: How to update the CTL firmware

1. Insert the SD card made above procedure.
2. Firmware updating starts automatically.
   RICOH” is displayed during updating.
3. Wait until “Completed” is displayed in the operation panel.
4. Turn OFF the machine.
   Note: If machine doesn’t turn OFF, press the main power switch until turning power off.
5. Remove the SD card, and turn ON the machine.

Appendix:

System:

System		Update version				
		February	March	April	June	August
		1.03	1.04	1.05	1.06	1.07
Current Version	1.02	FWU	FWU	FWU	ZIP File	ZIP File
	1.03		FWU	FWU	ZIP File	ZIP File
	1.04			FWU	ZIP File	ZIP File
	1.05				ZIP File	ZIP File
	1.06					FWU*1

A new adjustment pattern for “Registration roller eccentricity correction function” has been added since system version 1.06.
Therefore;

- When current machine system version is 1.02, the system can be update to version 1.05 with “.fwu” file as usual.
- When updating the system firmware from 1.02 to 1.06, the system must be update with the zip file.

Note;
The zip file has been released as the “System_force” firmware and the “.fwu” file has been released as the “System” firmware since version 1.07.

*1: In case of updating the system firmware from version 1.05 or older to 1.06 with the "FWU" file, please use "System_force" firmware when updating the system firmware to version 1.07.

Reissued: 4-Sep-19

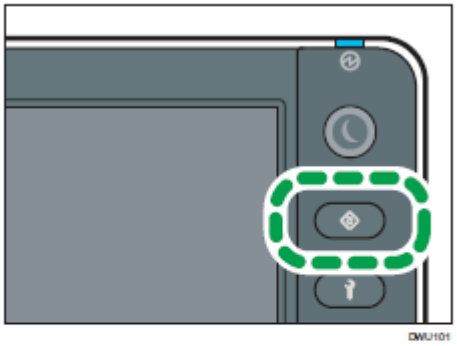
Model: Ko-P1	Date: 22-May-19	No.: RM0BY007a

Engine:

Engine		Update version				
		1.03.01	1.04.01	1.051.01	1.061.01	1.07.01
Current Version	1.021:01	FWU Reset required	FWU Reset required	FWU Reset required	FWU Reset required	FWU Reset required
	1.03:01		FWU Reset required	FWU Reset required	FWU Reset required	FWU Reset required
	1.04:01			FWU -	FWU -	FWU -
	1.051:01				FWU -	FWU -
	1.061:01					FWU -

Only when updating the Engine version from 1.02 or 1.03 to 1.04 or newer, machine reset is required.

1. Press the [User Tools] key.



2. Press [▼].
3. Press [Reset].
4. Press [Execute].
5. Press [Confirm].

   The set values are returned to the factory-set values.
6. Press [End].

Model: Ko-P1	Date: 22-May-19	No.: RM0BY008

subject: Field Service Manual Correction Installation			Prepared by: D.Kobayashi
From: Regional Sales Department, Global IP Sales Center			
Classification:	☐ Troubleshooting ☐ Mechanical ☐ Paper path ☐ Product Safety	☐ Part information ☐ Electrical ☐ Transmit/receive ☐ Other ( )	☐ Action required ☒ Service manual revision ☐ Retrofit information ☒ Tier 2 ☐ Tier 0.5

Service manual correction

Please apply the following corrections to your Pro L5160 and Pro L5130 field service manual, in section:

4. System Maintenance Reference > Firmware Update for Colorimetric Sensor > Firmware Update for Colorimetric Sensor >

Replace step in Red for “Before You Begin”

Before You Begin

When updating the colorimetric sensor, it is necessary to install the USB driver manually.

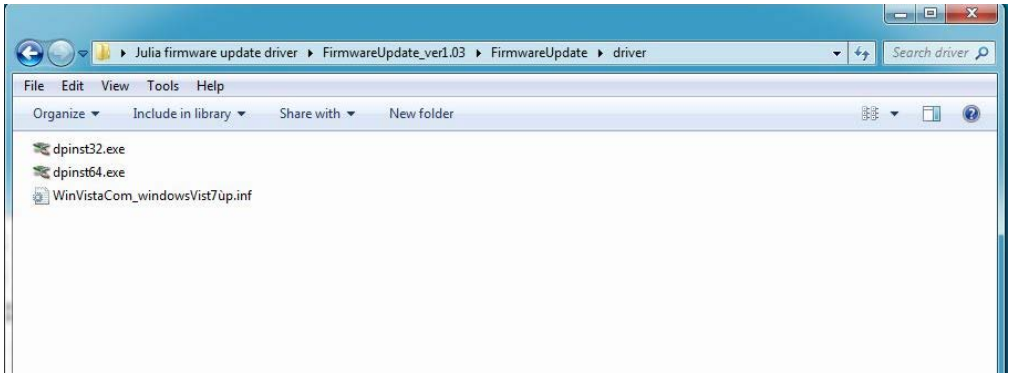
(If the operation system is windows 10, installation is done automatically.)

If installation is not done automatically, you are required to install the driver manually follow the procedure below.

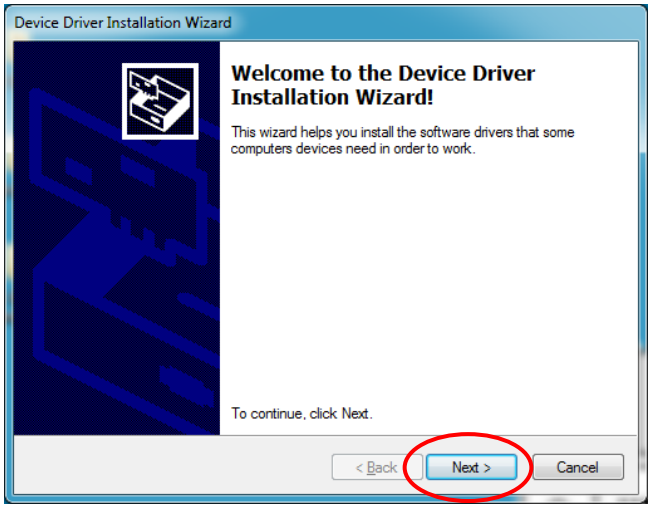
1. Unzip “FirmwareUpdate_ver x.xx.zip
2. Check your OS which is 32bit or 64bit.

   32bit > double click dpinst32.exe \FirmwareUpdate\driver\

   64bit> double click dpinst64.exe \FirmwareUpdate\driver\



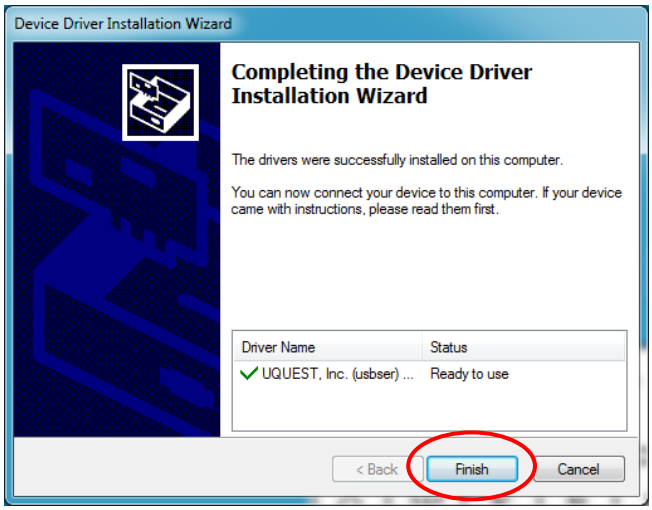
3. Click “Next”



Note

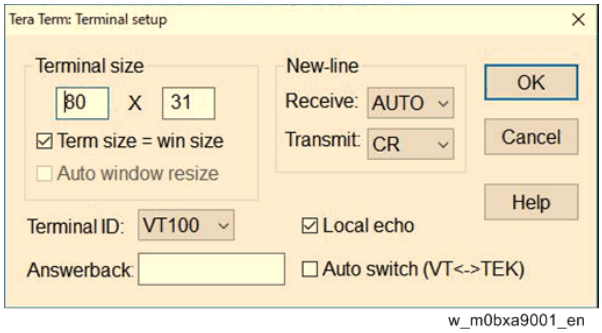
If any windows security notice appeared, select “install this driver software anyway”

4. Driver installation is completed after appeared below, click “Finish”.



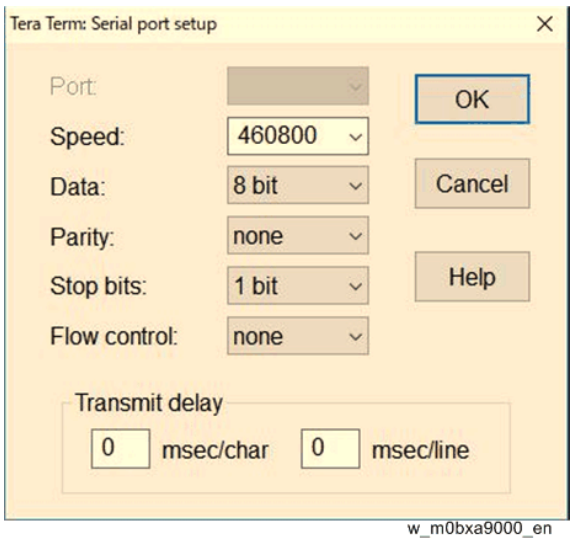
5. Set the communication settings of TeraTerm as shown below.

・Terminal Setup



w_m0bxa9001_en

・ Serial port setup



w_m0bxa9000_en

Note

Updating the firmware of the colorimetric sensor takes time from several tens of seconds to several minutes. If updating is failed or too much time is needed, check the communication settings again.

Reissued: 2-Sep-19

Model: Ko-P1	Date: 28-May-19	No.: RM0BY009b

RTB Reissue

The image of "Print settings registered sheet" has been added as a reference.

Subject: Media record function (Ver1.06)			Prepared by: H. Morishima
From: Service Promotion Sec., GIP Sales Center.			
Classification:	☐ Troubleshooting ☐ Mechanical ☐ Paper path ☐ Product Safety	☐ Part information ☐ Electrical ☐ Transmit/receive ☒ Other (New function)	☐ Action required ☐ Service manual revision ☐ Retrofit information ☐ Tier 2 ☐ Tier 0.5

New Function Release:

Media record function has been added since version 1.05 of system firmware.

To use this function, it needs to update both System and Engine firmware.

Type	Version
System	1.05
Engine	1.051:01

Usability of media record function has been improved since firmware version 1.06.

Note:

- It needs to use a zip file for updating from version 1.05 or older to version 1.06.
- For more information about system update procedure by using a zip file, please refer to the RTB (No.RM0BY007).
- System and Engine firmware should be updated together as a set.

Type	Version
System	1.06
Engine	1.061:01

The overview of Adjustment value register and retrieve function of media feed adjustment and drop position adjustment.

By using the media record function, a user can register media feed adjusted values and drop position adjusted values after adjusting a certain media. This function makes it possible to retrieve the registered values when using the same media again.

- Media Feed Adjustment Value is saved for each set of media settings:

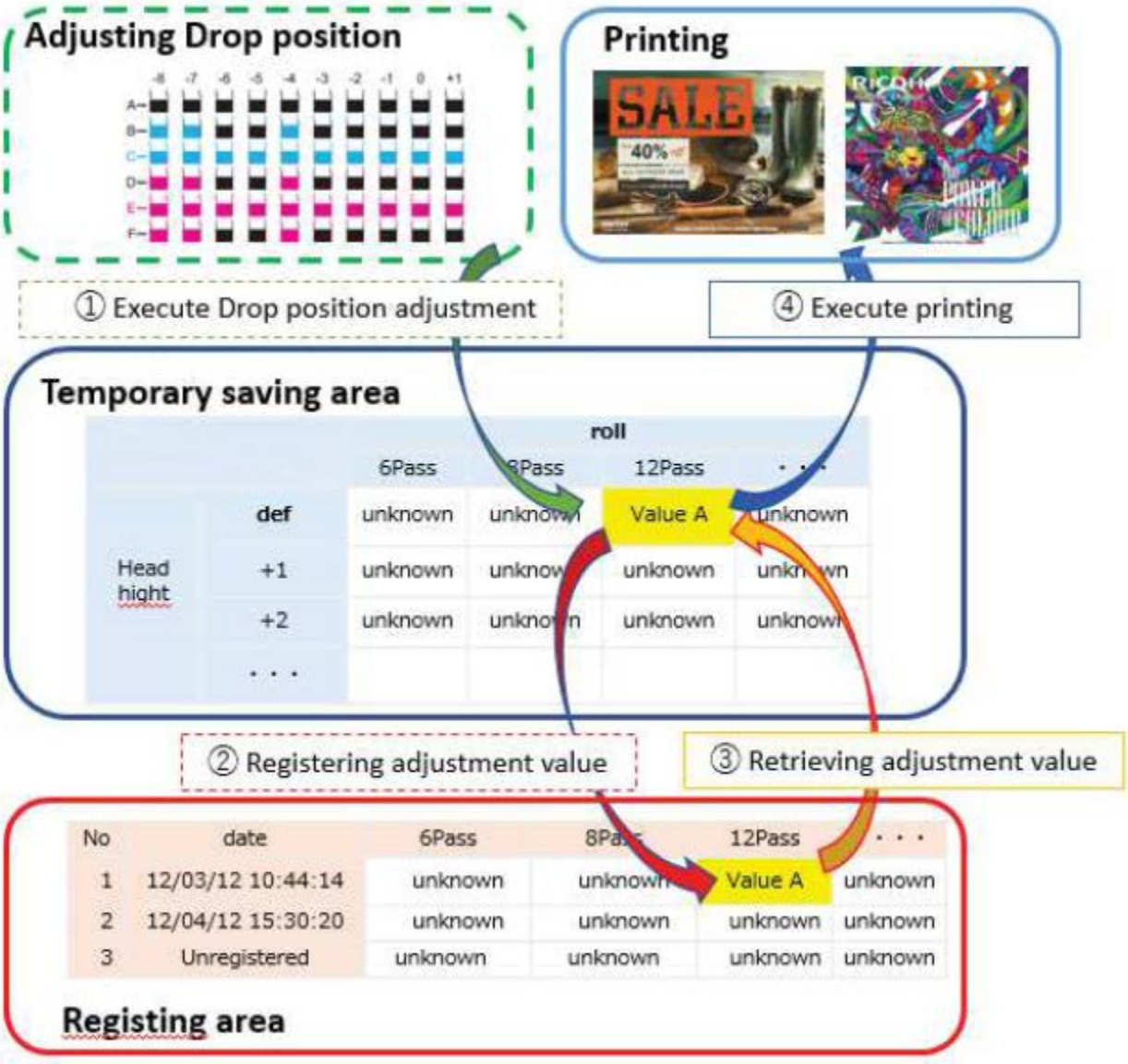
  Combination of media type, media thickness, media width, and roll/leaf

- Drop Position Adjustment Value is saved for each set of machine settings:

  Combination of media type, head height, and print mode

When printing, the drop position values and media feed amount values are referred by machine settings and media settings. As an example, a diagram of the register function and retrieve function for drop position adjustment is shown below.

Model: Ko-P1	Date: 28-May-19	No.: RM0BY009b



Caution:

If the machine settings are different at the time of data retrieving and registration, the print quality may deteriorate.

How to register and retrieve the adjustment values of media feed adjustment and drop position adjustment

Important notice:

- Adjustment values to be registered are related to “Media Selection (Roll or Leaf)”, “Media Setting (Media Type, Media Thickness, Head Height, Vacuum level, Media Width)”.

Model: Ko-P1	Date: 28-May-19	No.: RM0BY009b

When retrieving the registered adjustment values, make sure that it is in the same state as when these settings were registered in advance. If you retrieve in a state different from the setting at the time of registration, there is a risk that the printed lines or images may be displaced.

- When calling adjustment values, printed lines or images may shift depending on the lot of media and the difference in environment when registering. In this case, adjust the media feed adjustment and the head gap adjustment value again.

Registration

1. Fill in registration time, media type, model number, roll / leaf, head height, vacuum level, media width, and media thickness in the print settings registered sheet.

   The confirmation method is as follows:

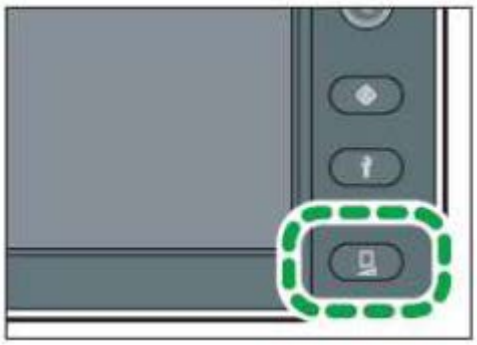
   - Roll / leaf settings: Fill in the setting selected at media set
   - Head height : Press “Print adjustment” key on the HOME screen > Head height
   - Vacuum Level: Press “Print Adjustment” key on the HOME screen

     Press “Media setting” > Vacuum Level
   - Media width, media thickness

     Press "Check Status" key on the HOME screen > Media tab
2. Perform media feed quantity adjustment and drop position adjustment.

   Select the print mode to register the adjustment value from [6 Pass], [8 Pass], [12 Pass], [16 Pass], and [32 Pass].

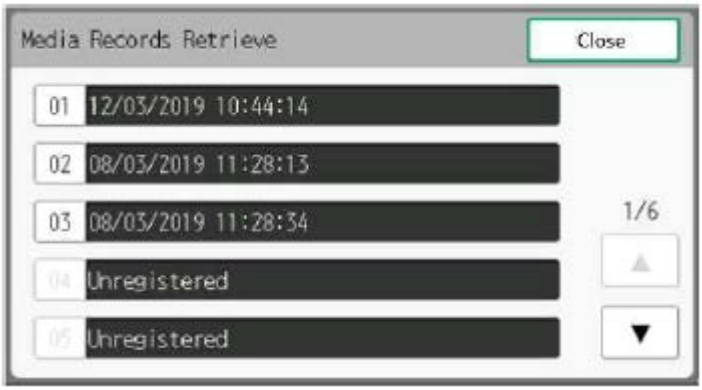
   For white ink equipped machines, select from □6 Pass], [8 Pass], [12 Pass], [12Pass(White)].
3. Press the [Standard procedure] key.



4. Press [▼].
5. Press [Media Records Register / Retrieve].
6. Press [Media Records Register].
7. Press [▲] or [▼] to select the number you want to register.

   • Selectable numbers are from 01 to 30.

Model: Ko-P1	Date: 28-May-19	No.: RM0BY009b



8. Press Enter.

   If the number you want to register is displayed as [Unregistered], this step is skipped.

9. Fill in the registered number in the No column of the print settings registered sheet.
10. Select the print mode to register the adjustment value from [6 Pass], [8 Pass], [12 Pass], [16 Pass], and [32 Pass].
    - For white ink equipped machines, select from [6 Pass], [8 Pass], [12 Pass], [16 Pass], [32 Pass], and [12 Pass (White)].
    - Multiple print modes can be selected at the same time.
    - To register adjustment values for all print modes, press [Register All Modes].
11. Press [Register].

    This step is omitted when [Register All Modes] is selected.

12. Press Enter.
    - Adjustment values for the selected print mode are registered.
    - The display format of the date and time is in the order of day/month/year time: minute: second.
    - The latest date and time of registration will be registered as the date and time of registration.
13. In the "Registered mode" field of the print settings registered sheet, check the print mode in which the adjustment has been made.
14. Press [OK].
15. Press [Exit].

Retrieve

You can call up the registered adjustment value.
Compare the machine's media settings and print settings registered sheet, make sure that it is the same as when you registered the adjustment value.
If the media settings are different from those at the time of adjustment value registration, change the settings according to the time of adjustment value registration.
Here's how to check the machine's media settings:

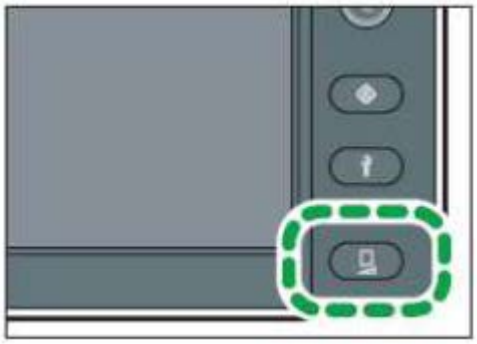
- Role / leaf setting: setting selected at media set

Model: Ko-P1	Date: 28-May-19	No.: RM0BY009b

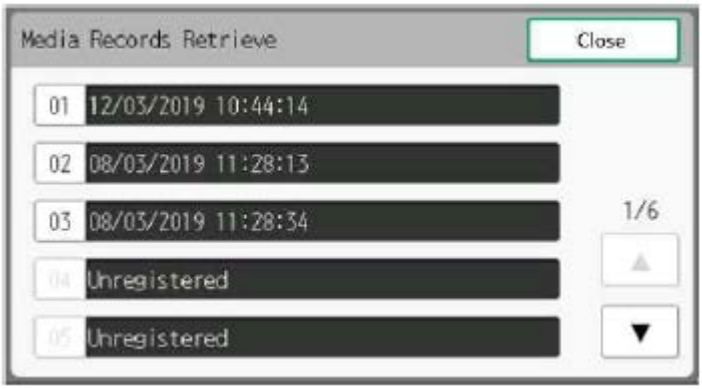
- Head height : Press “Print adjustment” key on the HOME screen > Head height
- Vacuum Level : Press “Print Adjustment” on the HOME screen >
  Press “Media setting” > Vacuum Level
- Media width, media thickness
  Press "Check Status" on the HOME screen > Media tab

If the media width is different, the adjustment value can’t be diverted.
Please use the same media which used when adjustment value registration.
If the media thickness is different, open and closes the media holding lever and set again.

1. Press the [Standard procedure] key.



2. Press [▼].
3. Press [Media Records Register / Retrieve].
4. Press [Media Records Retrieve].
5. Press [▲] or [▼] to select the number for which the adjustment value to be retrieved is registered.
   The number displayed as [Unregistered] can’t be selected.



6. Press [Next].
   The adjustment value registered to the selected number is retrieved.
7. Press [OK].
8. Press [Exit].

Note

• When overwriting a previously registered number, only the adjustment value of the selected print mode is overwritten and saved. Adjustment values for not selected print modes will retain adjustment

values that have already been registered.

• When "Media can't be detected" is displayed, registration and recall can't be performed. Please set the media before performing.

Improvements of firmware version 1.06 about Media record function

No.	Version 1.05	Version 1.06
1	After media set sequence complete, customer can retrieve a media record.	When media is changed, confirming screen appear and users can retrieve the media record. Therefore, users can save the step of retrieving media record setting.
2	Media record function can save and retrieve only following items. - Media feed adjustment values - Drop position adjustment values. - Vacuum level Therefore, users need to set media type, media width, media thickness and head height manually even though users use the media record function.	Media record function can save and retrieve following items. - Media feed adjustment values - Drop position adjustment values. - Vacuum level **- Media type (Added)** **- Media width (Added)** **- Media thickness (Added)** **- Head height (Added)** Above items are retrieved automatically when users use media retrieve function. Therefore, customer can complete media setting by just using retrieving function.

Reference:

Print settings registered sheet

Print settings registered sheet Attention : Strongly recommend adjusting the "Media Feed Quantity" by each job or roll.

No.	Registration time	Media information		Media and machine settings						Adjusted print mode						Remarks
		Media type	Manufacturer Model number	Roll Outer / Roll Inner / Leaf	Take-up reel Use / Not use	Media thickness	Head height	Vacuum level	Media width	6pass	8pass	12pass	16pass	32pass	12pass (White)	
Ex	DD/MM/20YY 00:00	PVC	3M IJ35C-10	Roll Outer	Use	1	Default	2	1300mm	✓		✓				
1																
2																
3																
4																
5																
6																
7																
8																
9																
10																

Model: Ko-P1	Date: 29-May019	No.: RM0BY010

Subject: Shortening of waiting time for heater waming up	Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center	

Classification:			
	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

Symptom:

Following symptom may occur due to the software problems.

1. It may take a long time until printing starts after all heaters reach the setting temperature.
2. It may take a long time to warm up the cure heater if a job is sent when all other heaters have reached the setting temperature.

Cause:

1. This model has two post heaters. When post heater 1 reaches setting temperature, the state lamp of the post heater displayed on the operation panel turns green even though post heater does not reach setting temperature. Because of this, users need to wait for the post heater 2 to reach the setting temperature even though the screen displays all heater has reach the setting temperature.
2. If a job is sent to the printer when all other heaters have reached setting temperature, cure heater starts to warm up and happen long waiting time.

Solution:

Update both System and Engine firmware to the version 1.05 in accordance with the field service manual. Temperature display of post heater is modified, and pre-heat temperature of cure heater is rose up by firmware version 1.05.

Module	Version	Parts Number
System	1.05	M0BY5415F
Engine	1.051:01	M0BY5420F

Important:

- System firmware and Engine firmware should be updated to the version 1.05 together as a set.

- ONYX RIP should be upgraded to the version 1.2.0 or newer as a set.

Model: Ko-P1	Date: 31-May-19	No.: RM0BY011

Subject: Media Handling Guideline	Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center	

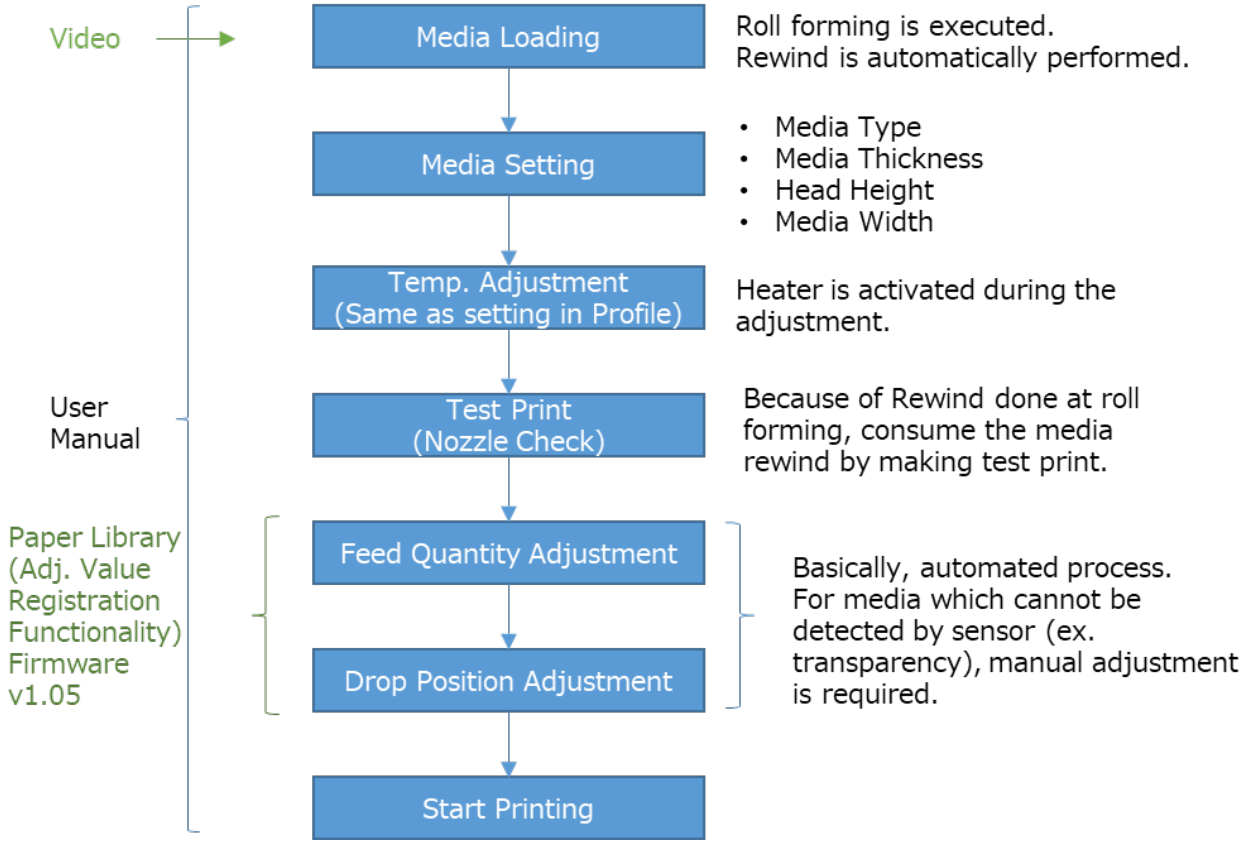
Classification:			
	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☒ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

Notice:

This guideline is consisted with following two items.
- Media Handling TIPS (This RTB)
- Instruction video of how to load media

Please check this RTB with while referring to the guide video.

1. Total flow from media loading to printing.



2. Media Loading

No.	Procedure	Tips and check items	How to check	Risks when not paying attention	Technical reason to be required
1	Press the [Energy Saver] key.	-	-	-	-
2	Open the cover on the front of the machine.	-	-	-	-
3	Move the right-side media guide until it makes contact with the right edge of the platen.	-	-	-	-
4	Move the left-side media guide until it makes contact with the left edge of the platen.	-	-	-	-
5	Temporarily place set media on the media support.	-	-	-	-
6	Move the roll holder to the reference position marked on the machine to match the inner diameter of the roll core.	-	-	-	-
7	Lock the roll holder's holding lever. (Left)	Confirm that media holder is locked.	Set the lever of media holder to lock side.	It causes banding and abnormal image.	Media become skewing if media holder is unlocked.
8	Open the pre heater cover.	-	-	-	-

9	Insert the core of the roll media to the roll holder. (Both right and left sides)	Align both media edge vertically with the roll core	・Align both media edge vertically with roll core with holding by hand ・Align both media edge after loosening the media winding if the media winding becomes tightened ・Align the media edge in one direction with making media roll standing on the ground (Note: Pay attention not to make media dirty with dust and break the media edge)	It causes banding and abnormal image.	Media become skewing.
10	Lock the roll holder's holding lever. (Right)	Confirm that media holder is locked.	Set the lever of media holder to lock side.	It causes banding and abnormal image.	Media become skewing if media holder is unlocked.
11	Raise the media holding lever. (Back)	-	-	-	-
12	Insert the tip of the media between the feed roller and the pinch roller.	Push the media roll core into the edge of the flange	・Insert the one side of the media roll core into the flange positioned at carriage home side, and push the media roll into flange from the other side. Check if the media roll core inserted into the edge of the flange.	It causes banding and abnormal image.	Media feeding won't become stable due to the variation of the media tension caused by the idle of the flange and roll core.
		Align both media edge vertically with the roll core	・Align both media edge vertically with roll core with holding by hand ・Align both media edge after loosening the media winding if the media winding becomes tightened	It causes banding and abnormal image	Media become skewing.

			・Align the media edge in one direction with making media roll standing on the ground (Note: Pay attention not to make media dirty with dust and break the media edge)		
13	Align the edge of the media, and then load the media while adjusting media position by hand so that it is stretched evenly.	Confirm the evenness of media tension at both media edge when setting the media	・Rotate the flange in the rewinding direction to stress the media with holding the center position of media on the pre heater, and check left and right tension by hand.	It causes banding and abnormal image.	Media become skewing.
14	Lower the media holding lever.	-	-	-	-
15	Rotate the flange in the rewinding direction to stress the media, and then touch and check left and right tension by hand. (Even or not)	Confirm the evenness of media tension at both media edge when setting the media.	・Rotate the flange in the rewinding direction to stress the media, and then touch and check left and right tension by hand. (Even or not)	It causes banding and abnormal image	Media become skewing.
16	Check the scale's value on the pre-heater.	NOT to position forcedly the media onto the center (0) of the scale.	NOT to position forcedly the media onto the center (0) of the scale.	It causes banding and abnormal image.	If you position forcedly the media onto the center (0) of the scale, the media may be skewing.
17	Return the pre heater cover to the original position.	-	-	-	-
18	While holding the center of the media, raise the media holding lever. (Front)	-	-	-	-
19	While holding the center of the media, pull the media straight	-	-	-	-

	out to the media output location. (Front)				
20	While pulling the media straight out, align the right edge of the media to the post-heater's scale so that it matches the value on the pre-heater's scale.	Confirm the difference of the scales between front and back within 1mm.	While pulling the media straight out, align the right edge of the media with the value which is checked in Proc. No. 16.	It causes banding and abnormal image.	Media become skewing.
21	While holding the center of the media, lower the media holding lever. (Front)	-	-	-	-
21-1	Close the center cover and raise the media holding lever (Back), and then rewind the media about 300mm with rotating the flange.	(If the media right edge gap of the media is not within 1 mm on the scale at the front and rear side of the device,) adjust the right edge position of the media.	・Close the center cover and rise media holding lever(back). Rewind the media about 300 mm with rotating the Flange, then lower media holding lever (back).	It causes banding and abnormal image.	Media become skewing.
21-2	Lower the media holding lever.	-	-	-	-
22	Rotate the flange in the rewinding direction to stress the media, and then touch and check left and right tension by hand. (Even or not)	Confirm the evenness of media tension at both media edge when setting the media.	・Rotate the flange in the rewinding direction to stress the media, and then touch and check left and right tension by hand. (Even or not)	It causes banding and abnormal image.	Media become skewing.
23	Make the media no slacken.	Make the media no slacken.	Rewind the media manually.	Slackened media causes miss-detection of 'No Media'.	The rotation direction of flange might be miss-detected if there are slackened media.

24	Move the left and right media guides to match the media width.	Make sure that both right and left edge of the media is aligned to the white lines of the decal on the media guide.	Make sure that both right and left edge of the media is aligned to the white lines of the decal on the media guide.	・It might cause media jam and head attacking	Near the edges of the media are likely to occur the cockling without media guides.
25	Close the center cover.	-	-	-	-

3. Media Setting

No.	Procedure	Tips and check items	How to check	Risks when not paying attention	Technical reason to be required
26	Set the take-up switch to the [off] position. (Middle)	-	-	-	-
27	Press [YES] on the confirmation screen for media replacement.	-	-	-	-
28	Select [Roll (Outer winding of print side)], and then press [Next]. When using the media whose printing surface is rolled up on the inside, select [Roll (Inner winding of print side)], and then press [Next].	-	-	-	-
29	Press [Media Type] and select the media type of the set media.	-	-	-	-
30	Press [Media Thickness] and select the media thickness of the set media.	-	-	-	-
31	Press [Head Height] and select the height of the print head from [Default], [+1], [+2], [+3]. The height is depending on the thickness of the media used.	Using [Default] is recommended for good image quality if there are no issues like jam or head attack.	-	-	-
32	Press [Media Width] and select the width of the set media.	-	-	-	-
33	Press [Next].	-	-	-	-

34	Press [Vac. Lv. Change] and select the appropriate vacuum level.	Mostly, there are no needs to change the vacuum level from default value.	Use the default vacuum level.	It causes banding and abnormal image. ・It might cause media jam and head attacking	Too strong vacuum level may make media feeding behavior unstable. Too weak vacuum level might cause cockling or winkling.
	If you don't use take-up roll, press the [Completed] and jump to the Proc. No. 40	If you don't want to use take-up, make sure that the media front edge not to hit vertically to the ground.	・Guide the front edge of media manually. ・Make sure that the front edge of the media doesn't hit to the ground vertically.	It might cause banding and abnormal image.	Media become skewing.

4. Media Setting (Take-up reel)

No.	Procedure	Tips and check items	How to check	Risks when not paying attention	Technical reason to be required
35	Hold down [Feed] until the media is fed to the take-up core.	Minimize the variation of the media feeding and skewing and stabilize the feeding quality by making the media feeded about 1m on operation panel after lower the front media holding lever.	Feed the media with the [Feed] function on operation panel.	There might cause some abnormal image.	The tension to the media between roll feed unit and feeding roller takes balance.
36	Fix the central tip of the media to the empty take-up core with adhesive tape.	If you use take-up, make sure that not to skewed fix the front edge of media to the take-up core.	At first, fixing the center with adhesive tape, and take-up roll core to remove the slack. After that, fixing the left and right edge so that sagging or winkles cannot occur.	It might cause banding and abnormal image.	We can prevent from skewed fixing media to take up core with fixing the center and then right and left edges.
37	Press [Feed] to slacken the media, and then rotate the take-up core manually to roll the media around the take-up core a few times.	Roll the media around the take-up core with slackening the media.	Press [Feed] to slacken the media, and the rotate the roll core manually to roll the media around the take-up core.	It might cause banding and abnormal image.	We can prevent from media skewing by rolling manually. Rolling around the take-up core with tensioned feeding is likely to occur media skewing.
38	Set the take-up switch to the ON position according to the decal's instruction.	-	-	-	-
39	Press the [Completed].	-	-	-	-

5. Heater Temp. Adjustment and Print Test

No.	Procedure	Tips and check items	How to check	Risks when not paying attention	Technical reason to be required
40	Set the heater temperature as same as RIP setting (actual printing temperature).	Not leave the media on the device with the heater "ON" for long time.	・Remove the media from the device when not using it. ・Not use the heater area of the media by feeding if leaving the media with its heater "ON" for long time.	・It might cause banding and abnormal image. ・It might cause media jam and head attacking.	Media makes deformed by heat. The deformed media causes cockling and makes the feeding level unstable.
41	Do the [Print Test] and check the condition of the nozzles.	Perform to print nozzle check pattern or feed the media at more than 200mm after roll forming.	・Perform to print nozzle check pattern or feed the media at more than 200mm after roll forming.	It might cause banding and abnormal image.	Media moves back around 200mm after completing roll forming.

6. Feed Quantity Adjustment and Drop Position Adjustment

No.	Procedure	Tips and check items	How to check	Risks when not paying attention	Technical reason to be required
42	Do the [Feed Quantity Adjustment] for the print mode you want to use. (Auto or Manual)	Set the same heater temperature as printing the actual images when performing feeding/ drop position adjustment.	・Raise the heater temperature to the same level as printing the actual images on the operation panel when performing feeding/ drop position adjustment. ・Check if the heater setting on RIP data which you want to use and device setting on operation panel.	It might cause banding and abnormal image.	Feeding level destabilizes by media deformation with heater.

		Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	・Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	It might cause banding and abnormal image.	Feeding level destabilizes by roller marks after moving forward and back the media.
		Turn off the Cure-heater when you do manual feed adjustment.	Turn off the Cure-heater on operation panel.	More media is wasted due to the unnecessary secondary drying.	If the Cure-heater is ON, the secondary drying is performed, and the media is wasted. Adjustment chart is no need to be secondary drying.
		If you changed the heater setting and/or vacuum level, you have to feed adjustment again.	Do the feed adjustment again.	It might cause banding and abnormal image.	Feeding level destabilizes by media deformation with heater. Feed quantity changes if you change the vacuum level (resistance of media feeding).
43	Do the [Drop Position Adjustment] for the print mode you want to use. (Auto or Manual)	Set the same heater temperature as printing the actual images when performing feeding/ drop position adjustment.	・Raise the heater temperature to the same level as printing the actual images on the operation panel when performing feeding/ drop position adjustment. ・Check if the heater setting on RIP data which you want to use and device setting on operation panel.	It might cause banding and abnormal image.	Feeding level destabilizes by media deformation with heater.

		Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	・Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	It might cause banding and abnormal image.	Feeding level destabilizes by roller marks after moving forward and back the media.
		Turn off the Cure-heater when you do manual drop position adjustment.	Turn off the Cure-heater on operation panel.	More media is wasted due to the unnecessary secondary drying.	If the Cure-heater is ON, the secondary drying is performed, and the media is wasted. Adjustment chart is no need to be secondary drying.
44	You can start to print using RIP.	Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	・Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	It might cause banding and abnormal image.	Feeding level destabilizes by roller marks after moving forward and back the media.

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Model: Ko-P1	Date: 31-May-19	No.: RM0BY011b

RTB Reissue

The items in ***bold italics*** were corrected or added.

Subject: Media Handling Guideline			Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center			
Classification:	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☒ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

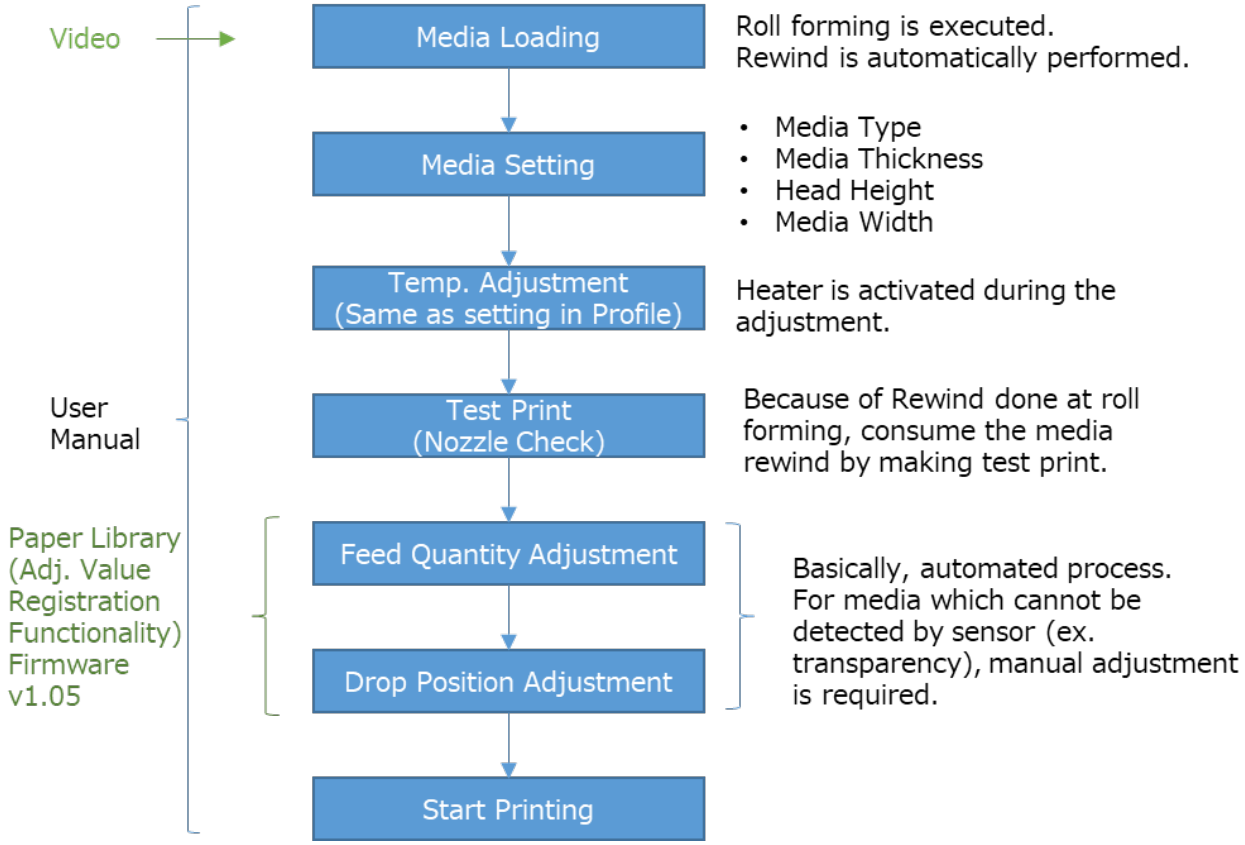
Notice:

This guideline is consisted with following two items.

- Media Handling TIPS (This RTB)
- Instruction video of how to load media (Uploaded to below link)
  https://www.youtube.com/embed/ArxqwcmGU60?autoplay=1&showinfo=0&rel=0&modestbranding=1

Please check this RTB with while referring to the guide video.

1. Total flow from media loading to printing.



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2. Media Loading

No.	Procedure	Tips and check items	How to check	Risks when not paying attention	Technical reason to be required
1	Press the [Energy Saver] key.	-	-	-	-
2	Open the cover on the front of the machine.	-	-	-	-
3	Move the right-side media guide until it makes contact with the right edge of the platen.	-	-	-	-
4	Move the left-side media guide until it makes contact with the left edge of the platen.	-	-	-	-
5	Temporarily place set media on the media support.	-	-	-	-
6	Move the roll holder to the reference position marked on the machine to match the inner diameter of the roll core.	-	-	-	-
7	Lock the roll holder's holding lever. (Left)	Confirm that media holder is locked.	Set the lever of media holder to lock side.	It causes banding and abnormal image.	Media become skewing if media holder is unlocked.
8	Open the pre heater cover.	-	-	-	-

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9	Insert the core of the roll media to the roll holder. (Both right and left sides)	Align both media edge vertically with the roll core	・Align both media edge vertically with roll core with holding by hand ・Align both media edge after loosening the media winding if the media winding becomes tightened ・Align the media edge in one direction with making media roll standing on the ground (Note: Pay attention not to make media dirty with dust and break the media edge)	It causes banding and abnormal image.	Media become skewing.
10	Lock the roll holder's holding lever. (Right)	Confirm that media holder is locked.	Set the lever of media holder to lock side.	It causes banding and abnormal image.	Media become skewing if media holder is unlocked.
11	Raise the media holding lever. (Back)	-	-	-	-
12	Insert the tip of the media between the feed roller and the pinch roller.	Push the media roll core into the edge of the flange	・Insert the one side of the media roll core into the flange positioned at carriage home side, and push the media roll into flange from the other side. Check if the media roll core inserted into the edge of the flange.	It causes banding and abnormal image.	Media feeding won't become stable due to the variation of the media tension caused by the idle of the flange and roll core.
		Align both media edge vertically with the roll core	・Align both media edge vertically with roll core with holding by hand ・Align both media edge after loosening the media winding if the media winding	It causes banding and abnormal image	Media become skewing.

			becomes tightened ・Align the media edge in one direction with making media roll standing on the ground (Note: Pay attention not to make media dirty with dust and break the media edge)		
13	Align the edge of the media, and then load the media while adjusting media position by hand so that it is stretched evenly.	Confirm the evenness of media tension at both media edge when setting the media	・Rotate the flange in the rewinding direction to stress the media with holding the center position of media on the pre heater, and check left and right tension by hand.	It causes banding and abnormal image.	Media become skewing.
14	Lower the media holding lever.	-	-	-	-
15	Rotate the flange in the rewinding direction to stress the media, and then touch and check left and right tension by hand. (Even or not)	Confirm the evenness of media tension at both media edge when setting the media.	・Rotate the flange in the rewinding direction to stress the media, and then touch and check left and right tension by hand. (Even or not)	It causes banding and abnormal image	Media become skewing.
16	Check the scale's value on the pre-heater.	NOT to position forcedly the media onto the center (0) of the scale.	NOT to position forcedly the media onto the center (0) of the scale.	It causes banding and abnormal image.	If you position forcedly the media onto the center (0) of the scale, the media may be skewing.
17	Return the pre heater cover to the original position.	-	-	-	-
18	While holding the center of the media, raise the media holding lever. (Front)	-	-	-	-

19	While holding the center of the media, pull the media straight out to the media output location. (Front)	-	-	-	-
20	While pulling the media straight out, align the right edge of the media to the post-heater's scale so that it matches the value on the pre-heater's scale.	Confirm the difference of the scales between front and back within 1mm.	While pulling the media straight out, align the right edge of the media with the value which is checked in Proc. No. 16.	It causes banding and abnormal image.	Media become skewing.
21	While holding the center of the media, lower the media holding lever. (Front)	-	-	-	-
21-1	Close the center cover and raise the media holding lever (Back), and then rewind the media about 300mm with rotating the flange.	(If the media right edge gap of the media is not within 1 mm on the scale at the front and rear side of the device,) adjust the right edge position of the media.	・Close the center cover and rise media holding lever(back). Rewind the media about 300 mm with rotating the Flange, then lower media holding lever (back).	It causes banding and abnormal image.	Media become skewing.
21-2	Lower the media holding lever.	-	-	-	-
22	Rotate the flange in the rewinding direction to stress the media, and then touch and check left and right tension by hand. (Even or not)	Confirm the evenness of media tension at both media edge when setting the media.	・Rotate the flange in the rewinding direction to stress the media, and then touch and check left and right tension by hand. (Even or not)	It causes banding and abnormal image.	Media become skewing.
23	Make the media no slacken.	Make the media no slacken.	Rewind the media manually.	Slackened media causes miss-detection of 'No Media'.	The rotation direction of flange might be miss-detected if there are

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					slackened media.
24	Move the left and right media guides to match the media width.	Make sure that both right and left edge of the media is aligned to the white lines of the decal on the media guide.	Make sure that both right and left edge of the media is aligned to the white lines of the decal on the media guide.	・It might cause media jam and head attacking	Near the edges of the media are likely to occur the cockling without media guides.
25	Close the center cover.	-	-	-	-

3. Media Setting

No.	Procedure	Tips and check items	How to check	Risks when not paying attention	Technical reason to be required
26	Set the take-up switch to the [off] position. (Middle)	-	-	-	-
27	Press [YES] on the confirmation screen for media replacement.	-	-	-	-
28	Select [Roll (Outer winding of print side)], and then press [Next]. When using the media whose printing surface is rolled up on the inside, select [Roll (Inner winding of print side)], and then press [Next].	-	-	-	-
29	Press [Media Type] and select the media type of the set media.	-	-	-	-
30	Press [Media Thickness] and select the media thickness of the set media.	-	-	-	-
31	Press [Head Height] and select the height of the print head from [Default], [+1], [+2], [+3]. The height is depending on the thickness of the media used.	Using [Default] is recommended for good image quality if there are no issues like jam or head attack.	-	-	-
32	Press [Media Width] and select the width of the set media.	-	-	-	-
33	Press [Next].	-	-	-	-

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34	Press [Vac. Lv. Change] and select the appropriate vacuum level.	Mostly, there are no needs to change the vacuum level from default value.	Use the default vacuum level.	It causes banding and abnormal image. ・It might cause media jam and head attacking	Too strong vacuum level may make media feeding behavior unstable. Too weak vacuum level might cause cockling or winkling.
	If you don't use take-up roll, press the [Completed] and jump to the Proc. No. 40	If you don't want to use take-up, make sure that the media front edge not to hit vertically to the ground.	・Guide the front edge of media manually. ・Make sure that the front edge of the media doesn't hit to the ground vertically.	It might cause banding and abnormal image.	Media become skewing.

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4. Media Setting (Take-up reel)

No.	Procedure	Tips and check items	How to check	Risks when not paying attention	Technical reason to be required
35	Hold down [Feed] until the media is fed to the take-up core.	Minimize the variation of the media feeding and skewing and stabilize the feeding quality by making the media feeded about 1m on operation panel after lower the front media holding lever.	Feed the media with the [Feed] function on operation panel.	There might cause some abnormal image.	The tension to the media between roll feed unit and feeding roller takes balance.
36	Fix the central tip of the media to the empty take-up core with adhesive tape.	If you use take-up, make sure that not to skewed fix the front edge of media to the take-up core.	At first, fixing the center with adhesive tape, and take-up roll core to remove the slack. After that, fixing the left and right edge so that sagging or winkles cannot occur.	It might cause banding and abnormal image.	We can prevent from skewed fixing media to take up core with fixing the center and then right and left edges.
37	Press [Feed] to slacken the media, and then rotate the take-up core manually to roll the media around the take-up core a few times.	Roll the media around the take-up core with slackening the media.	Press [Feed] to slacken the media, and the rotate the roll core manually to roll the media around the take-up core.	It might cause banding and abnormal image.	We can prevent from media skewing by rolling manually. Rolling around the take-up core with tensioned feeding is likely to occur media skewing.
38	Set the take-up switch to the ON position according to the decal's instruction.	-	-	-	-

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39	Press the [Completed].	-	-	-	-

5. Heater Temp. Adjustment and Print Test

No.	Procedure	Tips and check items	How to check	Risks when not paying attention	Technical reason to be required
40	Set the heater temperature as same as RIP setting (actual printing temperature).	Not leave the media on the device with the heater "ON" for long time.	・Remove the media from the device when not using it. ・Not use the heater area of the media by feeding if leaving the media with its heater "ON" for long time.	・It might cause banding and abnormal image. ・It might cause media jam and head attacking.	Media makes deformed by heat. The deformed media causes cockling and makes the feeding level unstable.
41	Do the [Print Test] and check the condition of the nozzles.	Perform to print nozzle check pattern or feed the media at more than 200mm after roll forming.	・Perform to print nozzle check pattern or feed the media at more than 200mm after roll forming.	It might cause banding and abnormal image.	Media moves back around 200mm after completing roll forming.

6. Feed Quantity Adjustment and Drop Position Adjustment

No.	Procedure	Tips and check items	How to check	Risks when not paying attention	Technical reason to be required
42	Do the [Feed Quantity Adjustment] for the print mode you want to use. (Auto or Manual)	Set the same heater temperature as printing the actual images when performing feeding/ drop position adjustment.	・Raise the heater temperature to the same level as printing the actual images on the operation panel when performing feeding/ drop position adjustment. ・Check if the heater setting on RIP data which you want to use and device setting on operation panel.	It might cause banding and abnormal image.	Feeding level destabilizes by media deformation with heater.

		Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	・Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	It might cause banding and abnormal image.	Feeding level destabilizes by roller marks after moving forward and back the media.
		Turn off the Cure-heater when you do manual feed adjustment.	Turn off the Cure-heater on operation panel.	More media is wasted due to the unnecessary secondary drying.	If the Cure-heater is ON, the secondary drying is performed, and the media is wasted. Adjustment chart is no need to be secondary drying.
		If you changed the heater setting and/or vacuum level, you have to feed adjustment again.	Do the feed adjustment again.	It might cause banding and abnormal image.	Feeding level destabilizes by media deformation with heater. Feed quantity changes if you change the vacuum level (resistance of media feeding).
43	Do the [Drop Position Adjustment] for the print mode you want to use. (Auto or Manual)	Set the same heater temperature as printing the actual images when performing feeding/ drop position adjustment.	・Raise the heater temperature to the same level as printing the actual images on the operation panel when performing feeding/ drop position adjustment. ・Check if the heater setting on RIP data which you want to use	It might cause banding and abnormal image.	Feeding level destabilizes by media deformation with heater.

			and device setting on operation panel.		
		Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	・Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	It might cause banding and abnormal image.	Feeding level destabilizes by roller marks after moving forward and back the media.
		Turn off the Cure-heater when you do manual drop position adjustment.	Turn off the Cure-heater on operation panel.	More media is wasted due to the unnecessary secondary drying.	If the Cure-heater is ON, the secondary drying is performed, and the media is wasted. Adjustment chart is no need to be secondary drying.
44	You can start to print using RIP.	Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	・Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	It might cause banding and abnormal image.	Feeding level destabilizes by roller marks after moving forward and back the media.

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2. Media Loading

No.	Procedure	Tips and check items	How to check	Risks when not paying attention	Technical reason to be required
1	Press the [Energy Saver] key.	-	-	-	-
2	Open the cover on the front of the machine.	-	-	-	-
3	Move the right-side media guide until it makes contact with the right edge of the platen.	-	-	-	-
4	Move the left-side media guide until it makes contact with the left edge of the platen.	-	-	-	-
5	Temporarily place set media on the media support.	-	-	-	-
6	Move the roll holder to the reference position marked on the machine to match the inner diameter of the roll core.	-	-	-	-
7	Lock the roll holder's holding lever. (Left)	Confirm that media holder is locked.	Set the lever of media holder to lock side.	It causes banding and abnormal image.	Media become skewing if media holder is unlocked.
8	Open the pre heater cover.	-	-	-	-

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9	Insert the core of the roll media to the roll holder. (Both right and left sides)	Align both media edge vertically with the roll core	・Align both media edge vertically with roll core with holding by hand ・Align both media edge after loosening the media winding if the media winding becomes tightened ・Align the media edge in one direction with making media roll standing on the ground (Note: Pay attention not to make media dirty with dust and break the media edge)	It causes banding and abnormal image.	Media become skewing.
10	Lock the roll holder's holding lever. (Right)	Confirm that media holder is locked.	Set the lever of media holder to lock side.	It causes banding and abnormal image.	Media become skewing if media holder is unlocked.
11	Raise the media holding lever. (Back)	-	-	-	-
12	Insert the tip of the media between the feed roller and the pinch roller.	Push the media roll core into the edge of the flange	・Insert the one side of the media roll core into the flange positioned at carriage home side, and push the media roll into flange from the other side. Check if the media roll core inserted into the edge of the flange.	It causes banding and abnormal image.	Media feeding won't become stable due to the variation of the media tension caused by the idle of the flange and roll core.
		Align both media edge vertically with the roll core	・Align both media edge vertically with roll core with holding by hand ・Align both media edge after loosening the media winding if	It causes banding and abnormal image	Media become skewing.

			the media winding becomes tightened ・Align the media edge in one direction with making media roll standing on the ground (Note: Pay attention not to make media dirty with dust and break the media edge)		
13	Align the edge of the media, and then load the media while adjusting media position by hand so that it is stretched evenly.	Confirm the evenness of media tension at both media edge when setting the media	・Rotate the flange in the rewinding direction to stress the media with holding the center position of media on the pre heater, and check left and right tension by hand.	It causes banding and abnormal image.	Media become skewing.
14	Lower the media holding lever.	-	-	-	-
15	Rotate the flange in the rewinding direction to stress the media, and then touch and check left and right tension by hand. (Even or not)	Confirm the evenness of media tension at both media edge when setting the media.	・Rotate the flange in the rewinding direction to stress the media, and then touch and check left and right tension by hand. (Even or not)	It causes banding and abnormal image	Media become skewing.
16	Check the scale's value on the pre-heater.	NOT to position forcedly the media onto the center (0) of the scale.	NOT to position forcedly the media onto the center (0) of the scale.	It causes banding and abnormal image.	If you position forcedly the media onto the center (0) of the scale, the media may be skewing.
17	Return the pre heater cover to the original position.	-	-	-	-
18	While holding the center of the media, raise the media holding lever. (Front)	-	-	-	-

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19	While holding the center of the media, pull the media straight out to the media output location. (Front)	-	-	-	-
20	While pulling the media straight out, align the right edge of the media to the post-heater's scale so that it matches the value on the pre-heater's scale.	Confirm the difference of the scales between front and back within 1mm.	While pulling the media straight out, align the right edge of the media with the value which is checked in Proc. No. 16.	It causes banding and abnormal image.	Media become skewing.
21	While holding the center of the media, lower the media holding lever. (Front)	-	-	-	-
21-1	Close the center cover and raise the media holding lever (Back), and then rewind the media about 300mm with rotating the flange.	(If the media right edge gap of the media is not within 1 mm on the scale at the front and rear side of the device,) adjust the right edge position of the media.	・Close the center cover and rise media holding lever(back). Rewind the media about 300 mm with rotating the Flange, then lower media holding lever (back).	It causes banding and abnormal image.	Media become skewing.
21-2	Lower the media holding lever.	-	-	-	-
22	Rotate the flange in the rewinding direction to stress the media, and then touch and check left and right tension by hand. (Even or not)	Confirm the evenness of media tension at both media edge when setting the media.	・Rotate the flange in the rewinding direction to stress the media, and then touch and check left and right tension by hand. (Even or not)	It causes banding and abnormal image.	Media become skewing.
23	Make the media no slacken.	Make the media no slacken.	Rewind the media manually.	Slackened media causes miss-detection of 'No Media'.	The rotation direction of flange might be miss-detected if

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					there are slackened media.
24	Move the left and right media guides to match the media width.	Make sure that both right and left edge of the media is aligned to the white lines of the decal on the media guide.	Make sure that both right and left edge of the media is aligned to the white lines of the decal on the media guide.	・It might cause media jam and head attacking	Near the edges of the media are likely to occur the cockling without media guides.
25	Close the center cover.	-	-	-	-

3. Media Setting

No.	Procedure	Tips and check items	How to check	Risks when not paying attention	Technical reason to be required
26	Set the take-up switch to the [off] position. (Middle)	-	-	-	-
27	Press [YES] on the confirmation screen for media replacement.	-	-	-	-
28	Select [Roll (Outer winding of print side)], and then press [Next]. When using the media whose printing surface is rolled up on the inside, select [Roll (Inner winding of print side)], and then press [Next].	-	-	-	-
29	Press [Media Type] and select the media type of the set media.	-	-	-	-
30	Press [Media Thickness] and select the media thickness of the set media.	-	-	-	-
31	Press [Head Height] and select the height of the print head from [Default], [+1], [+2], [+3]. The height is depending on the thickness of the media used.	Using [Default] is recommended for good image quality if there are no issues like jam or head attack.	-	-	-
32	Press [Media Width] and select the width of the set media.	-	-	-	-
33	Press [Next].	-	-	-	-

4. Media Setting (Take-up reel)

No.	Procedure	Tips and check items	How to check	Risks when not paying attention	Technical reason to be required
35	Hold down [Feed] until the media is fed to the take-up core.	Minimize the variation of the media feeding and skewing and stabilize the feeding quality by making the media feeded about 1m on operation panel after lower the front media holding lever.	Feed the media with the [Feed] function on operation panel.	There might cause some abnormal image.	The tension to the media between roll feed unit and feeding roller takes balance.
36	Fix the central tip of the media to the empty take-up core with adhesive tape.	If you use take-up, make sure that not to skewed fix the front edge of media to the take-up core.	At first, fixing the center with adhesive tape, and take-up roll core to remove the slack. After that, fixing the left and right edge so that sagging or winkles cannot occur.	It might cause banding and abnormal image.	We can prevent from skewed fixing media to take up core with fixing the center and then right and left edges.
37	Press [Feed] to slacken the media, and then rotate the take-up core manually to roll the media around the take-up core a few times.	Roll the media around the take-up core with slackening the media.	Press [Feed] to slacken the media, and the rotate the roll core manually to roll the media around the take-up core.	It might cause banding and abnormal image.	We can prevent from media skewing by rolling manually. Rolling around the take-up core with tensioned feeding is likely to occur media skewing.
38	Set the take-up switch to the ON position according to the decal's instruction.	-	-	-	-

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39	Press the [Completed].	-	-	-	-

5. Heater Temp. Adjustment and Print Test

No.	Procedure	Tips and check items	How to check	Risks when not paying attention	Technical reason to be required
40	Set the heater temperature as same as RIP setting (actual printing temperature).	Not leave the media on the device with the heater "ON" for long time.	・Remove the media from the device when not using it. ・Not use the heater area of the media by feeding if leaving the media with its heater "ON" for long time.	・It might cause banding and abnormal image. ・It might cause media jam and head attacking.	Media makes deformed by heat. The deformed media causes cockling and makes the feeding level unstable.
41	Do the [Print Test] and check the condition of the nozzles.	Perform to print nozzle check pattern or feed the media at more than 200mm after roll forming.	・Perform to print nozzle check pattern or feed the media at more than 200mm after roll forming.	It might cause banding and abnormal image.	Media moves back around 200mm after completing roll forming.

6. Feed Quantity Adjustment and Drop Position Adjustment

No.	Procedure	Tips and check items	How to check	Risks when not paying attention	Technical reason to be required
42	Do the [Feed Quantity Adjustment] for the print mode you want to use. (Auto or Manual)	Set the same heater temperature as printing the actual images when performing feeding/ drop position adjustment.	・Raise the heater temperature to the same level as printing the actual images on the operation panel when performing feeding/ drop position adjustment. ・Check if the heater setting on RIP data which you want to use and device setting on operation panel.	It might cause banding and abnormal image.	Feeding level destabilizes by media deformation with heater.

		Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	・Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	It might cause banding and abnormal image.	Feeding level destabilizes by roller marks after moving forward and back the media.
		Turn off the Cure-heater when you do manual feed adjustment.	Turn off the Cure-heater on operation panel.	More media is wasted due to the unnecessary secondary drying.	If the Cure-heater is ON, the secondary drying is performed, and the media is wasted. Adjustment chart is no need to be secondary drying.
		If you changed the heater setting and/or vacuum level, you have to feed adjustment again.	Do the feed adjustment again.	It might cause banding and abnormal image.	Feeding level destabilizes by media deformation with heater. Feed quantity changes if you change the vacuum level (resistance of media feeding).
43	Do the [Drop Position Adjustment] for the print mode you want to use. (Auto or Manual)	Set the same heater temperature as printing the actual images when performing feeding/ drop position adjustment.	・Raise the heater temperature to the same level as printing the actual images on the operation panel when performing feeding/ drop position adjustment. ・Check if the heater setting on RIP data which you want to use	It might cause banding and abnormal image.	Feeding level destabilizes by media deformation with heater.

			and device setting on operation panel.		
		Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	・Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	It might cause banding and abnormal image.	Feeding level destabilizes by roller marks after moving forward and back the media.
		Turn off the Cure-heater when you do manual drop position adjustment.	Turn off the Cure-heater on operation panel.	More media is wasted due to the unnecessary secondary drying.	If the Cure-heater is ON, the secondary drying is performed, and the media is wasted. Adjustment chart is no need to be secondary drying.
44	You can start to print using RIP.	Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	・Not perform feeding/ drop position adjustment nor actual images on the area which went back up after sending the media once with/ without heater.	It might cause banding and abnormal image.	Feeding level destabilizes by roller marks after moving forward and back the media.

Model: Ko-P1	Date: 31-May-19	No.: RM0BY012

Subject: Important notice on media rewinding	Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center	

Classification:			
	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☒ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

Notice:
Provides an operation method and notes to reduce waste media between a job and a next job.

Important:
Because rewinding media affects image quality, use this method with the full understanding of the user about affects and trade-off.

1. Operation method

There are two ways to rewind the media after printing.

1) After printing a job, user rewinds the media by operation panel ([Origin Setting]) each time.

2) SP setting change to set the length to rewind the media automatically after printing.
SP1-941-023 (min -690 / max 200 / def 0): For rewinding, set negative value.

2. Notes: Impact on image quality by rewinding media and way to manage

✓ Impact (1): The unwound area of the media tends to reduce the feed amount compared to the new area, and a black horizontal streaks may occur between scans.

✓ Way to manage (1): There is a possibility that black streaks can be eliminated by turning on [Media Feed Correction] (Please refer to the operation instructions).

✓ Impact (2): The media once dried by the cure heater float and deform due to heat, and there is a possibility that image unevenness due to changes in the media surface and rubbing due to the float may occur.

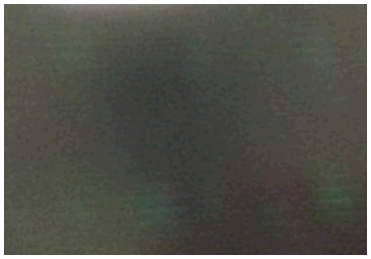
✓ Way to manage (2): By lowering the temperature of the curing / post heater, thermal deformation may be avoided.

✓ Impact (3) : Rewinding the media tends to cause skew. As a result, it leads to the occurrence of banding, double lines, and lowercase blur.

✓ Way to manage (3) : None.

3. Example

Media Type	Vendor	Media Name	(1) Black Streak	(2) Media Curls
PVC	Lintec	GIY-11Z5	 Media Feed Correction OFF ⇩  Media Feed Correction ON	Not occur
PVC	Avery	MPI3000 Gloss White	same as above	 image unevenness due to changes in the media surface

PET	Kimoto	TP-188	same as above	 image unevenness due to changes in the media surface  rubbing due to the float
PP	Yupo	VJFP120	same as above	 rubbing due to the float

Model: Ko-P1	Date: 15-Jun-19	No.: RM0BY013

subject: Field Service Manual Correction :Tubes Connection Procedure for the 4C Model	Prepared by: D.Kobayashi
From: Regional Sales Department, Global IP Sales Center	

Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☒ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2 ☐ Tier 0.5

Service manual correction

Please apply the following corrections to your Pro L5160 and Pro L5130 field service manual, in section:

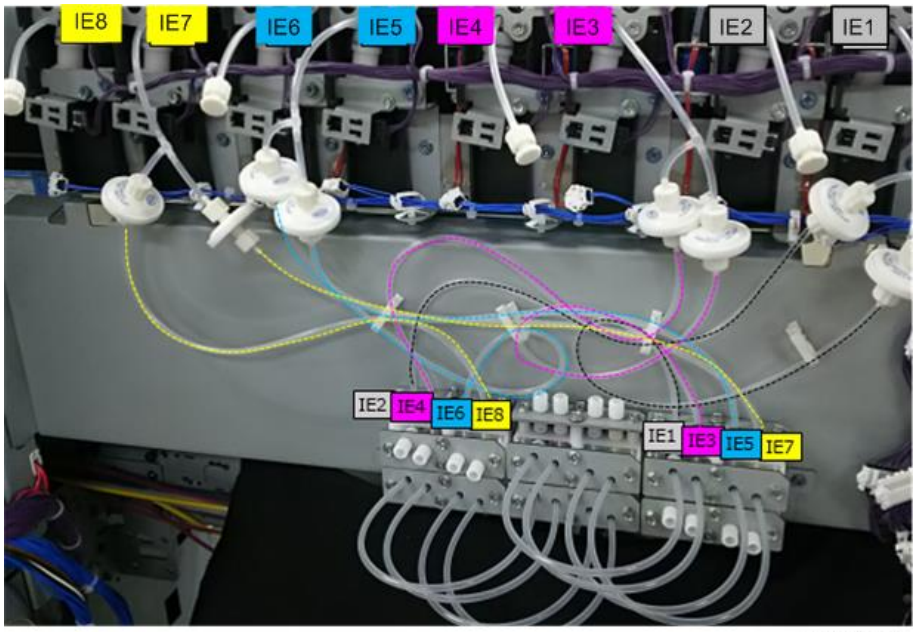
3. Replacement and Adjustment >Ink Supply Unit >Procedure of Color Change >Tubes Connection Procedure for the 4C Model

Additional step is in red.

Tubes Connection Procedure for the 4C Model

The procedures for changing the ink combination from 4C+W model to 4C model are as follows:

4C Model



m0bxa4316

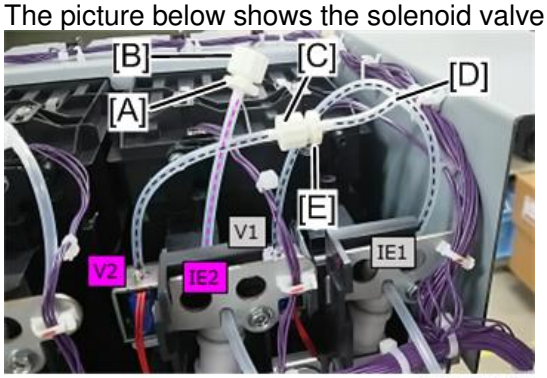
IE: Ink End Detection

Note

When installing, make sure to insert tubes and stoppers correctly.

When routing tubes, be careful not to bend the tubes or make scratches on the tubes.

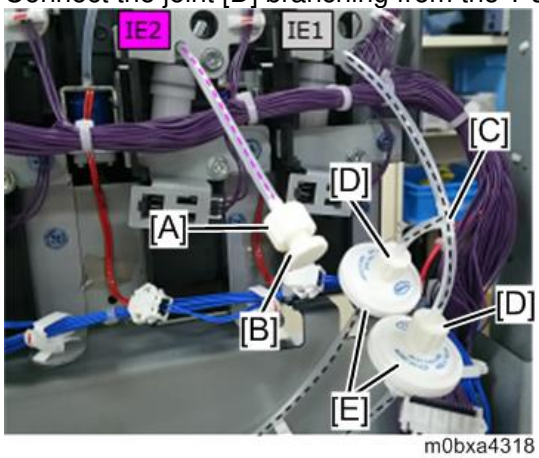
1. Remove the rear left cover.
2. Remove the left upper cover [A].
3. Attach the sealing materials (MTLLP-2) [B] to the joint [A] of the tube extending from the ink end detection [IE2].
4. Connect the joint [E] branching from the T-shaped joint [D] and the joint [C] of the tube extending from the solenoid valve [V2].
   The picture below shows the solenoid valve V1/V2.



m0bxa4317

Note
Connect tubes of the other solenoid valves (V3/V4, V5/V6, and V7/V8) in the same procedure.

5. Attach the sealing materials (FTLLP-1) [B] to the joint [A] of the tube extending from the ink end detection [IE2].
6. Connect the joint [D] branching from the T-shaped joint [C] and the joint of the filter upper side [E].

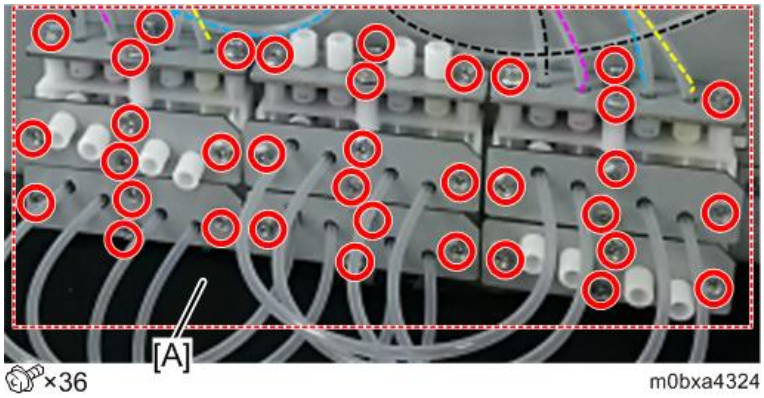


m0bxa4318

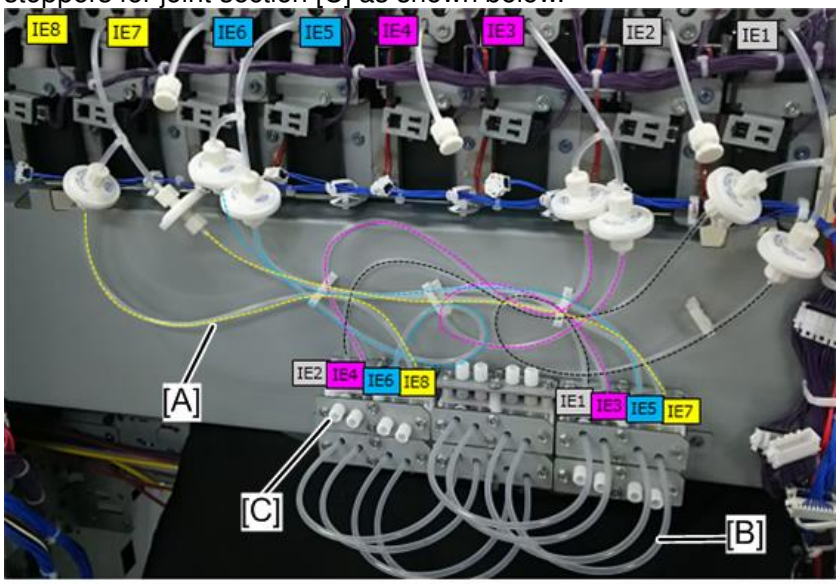
Note
Connect tubes of the other ink end detections (IE3/IE4, IE5/IE6, and IE7/IE8) in the same procedure.

7. Loosen all the screws retaining the joint branch unit [A] by rotating about from one to one and half

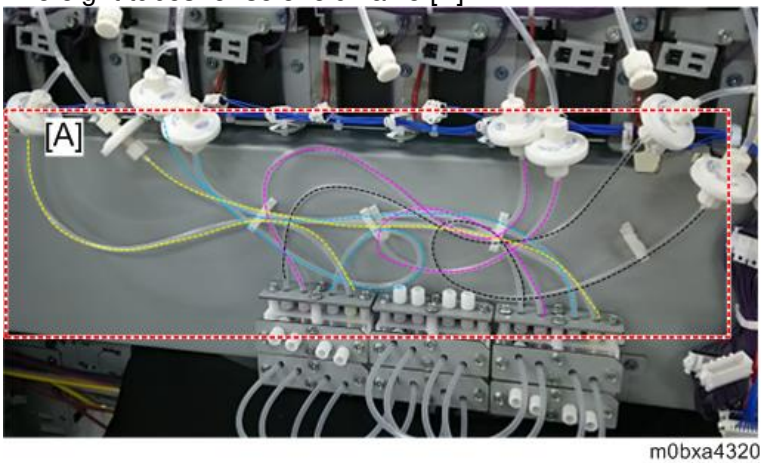
times with a driver.



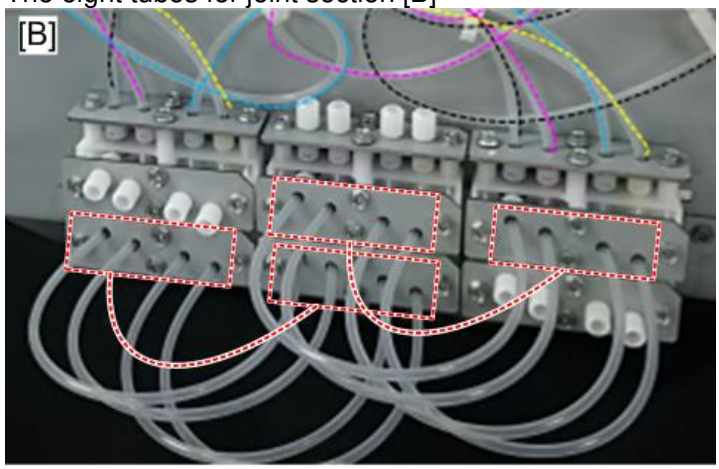
8. Connect the eight tubes for solenoid valve [A], the eight tubes for joint section [B], and the 12 stoppers for joint section [C] as shown below.



- The eight tubes for solenoid valve [A]

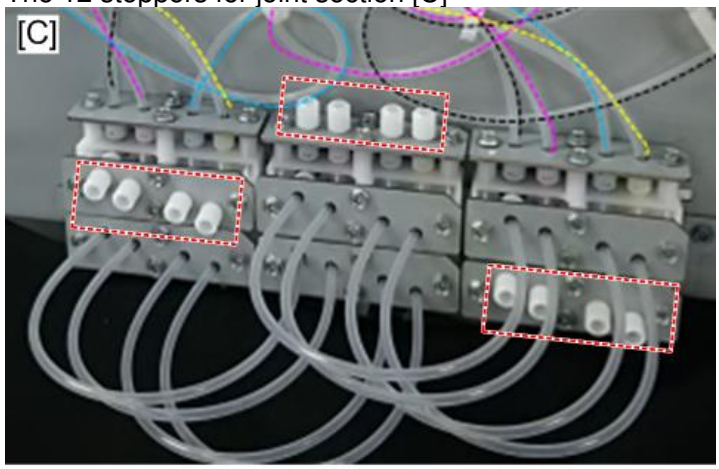


- The eight tubes for joint section [B]



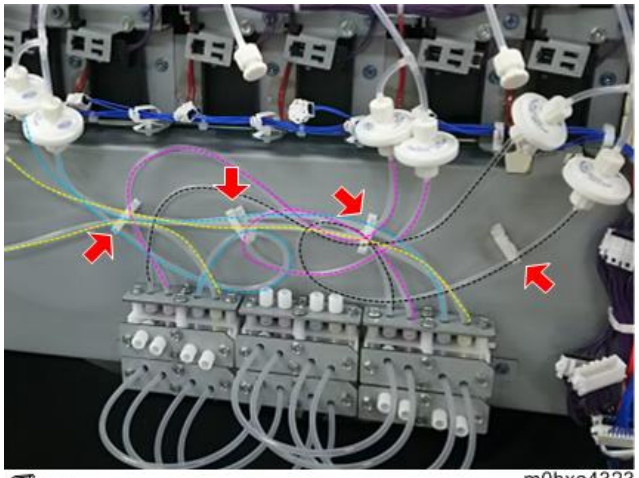
m0bxa4321

- The 12 stoppers for joint section [C]



m0bxa4322

9. Tighten all the loosen screws in step 7.
10. Fix the tubes.



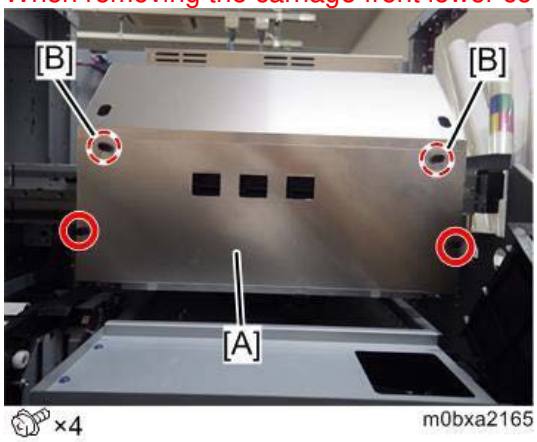
×4 m0bxa4323

Note

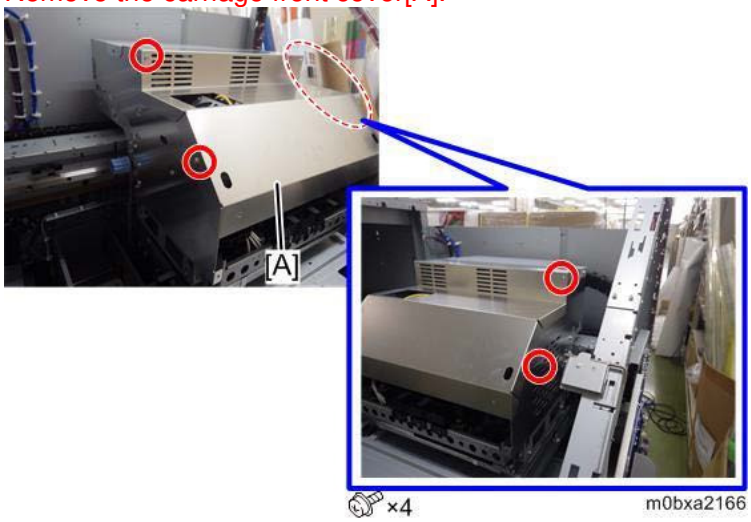
Be careful not to bend the tubes.

11. Remove the Right Upper Cover.
12. Remove the carriage front lower cover[A].

When removing the carriage front lower cover, loosen the screws[B].

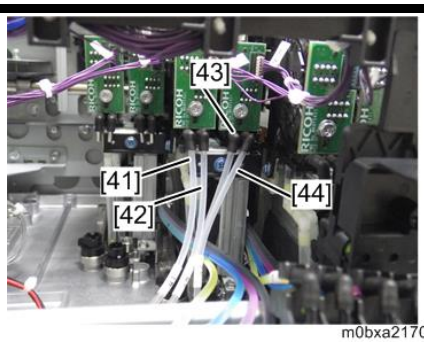


13. Remove the carriage front cover[A].



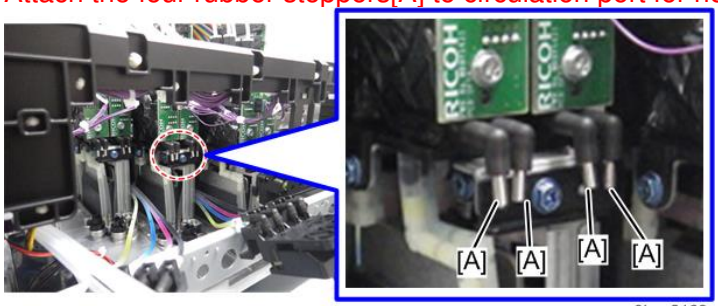
14. Remove the port brackets [A] for air purge of head 1 and 2.

15. Remove the circulation tube for white ink from the circulation port of head 2.



m0bxa2170

16. Attach the four rubber stoppers[A] to circulation port for head 2.

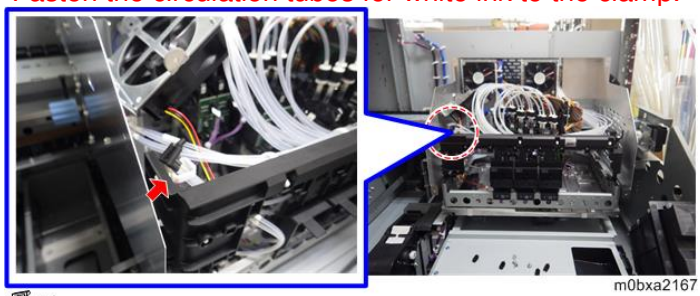


m0bxa2169

Note

- Customers might be keeping this stopper when change the color configuration.

17. Fasten the circulation tubes for white ink to the clamp.


m0bxa2167

×1

18. Reattach the removed covers.

Reissued: 1-Oct-19

Model: Ko-P1	Date: 14-Jun-18	No.: RM0BY014a

RTB Reissue

The description **bold in red** was added.

subject: FSM Correction on the procedure of color change			Prepared by: D.Kobayashi
From: Regional Sales Department, Global IP Sales Center			
Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☒ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2 ☐ Tier 0.5

Service manual correction

Please apply the following corrections to your field service manual, in section:

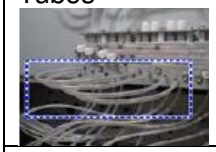
3. Replacement and Adjustment >Ink Supply Unit >Procedure of Color Change
>Full Auto Cleaning at Changing Color and Tubes Connection Procedure for the 4C Model

Operation procedure is added regarding color changing both to 4C from 4C+W and to 4C+W from 4C.

Procedure of Color Change

Full Auto Cleaning at Changing Color

What You Need

Parts	Q'ty	Note
Displacement liquid cartridge	8	
Ink replacement jigs 	8	
Tubes 	4	Only used in case of 4C+W -> 4C
Rubber stopper 	**4**	**Only used in case of 4C+W -> 4C**
Sealing materials for channel 	4	Only used in case of 4C -> 4C+W

Model: Ko-P1	Date: 14-Jun-18	No.: RM0BY014a

Cleaning When Changing the Color

The Flow of Full Auto Cleaning

No.	
1	Set 4C ink cartridges, a flushing cartridge, a cleaning cartridge, and then turn the power on.
2	Empty the waste ink bottle.
3	Set the waste ink count to 0. (SP7-962-012)
4	Press full auto cleaning. (SP2-100-003) To execute the SP, select "7" for all heads.
5	Remove the cartridge.
6	Set the jig used for discharging liquid, set the cartridge again, and then close the cartridge lock.
7	Discharge the filling liquid. (SP2-012-002) To execute the SP, select "7" for all heads.
8	Remove the jig used for discharging liquid.
9	Set the displacement liquid cartridge, and then close the cartridge lock.
10	Fill the liquid. (SP2-012-003) To execute the SP, select "7" for all heads.
11	Remove the displacement liquid cartridge.
12	Set the jig used for discharging liquid, set the cartridge again, and then close the cartridge lock.
13	Discharge liquid again. (SP2-012-002) To execute the SP, select "7" for all heads.
14	Remove the jig used for discharging liquid.
15	Set the displacement liquid cartridge, and then close the cartridge lock.
16	Fill the liquid again. (SP2-012-003) To execute the SP, select "7" for all heads.
17	Rewrite the air purge flag. (SP2-012-004) To execute the SP, select "7" for all heads.
18	Open the front cover, open the air purge port of H1, set the tray, and then close the front cover.
19	Perform air purge for H1. (SP2-012-005) To execute the SP, select "1" for head 1.
20	Open the front cover, close the air purge port of H1, remove the tray, and then close the front cover.
21	Perform head cleaning for H1. (SP2-010-001) To execute the SP, select "1" for head 1.
22	Open the front cover, open the air purge port of H2, set the tray, and then close the front cover.
23	Perform air purge for H2. (SP2-012-005) To execute the SP, select "2" for head 2.
24	Open the front cover, close the air purge port of H2, remove the tray, and then close the front cover.
25	Perform head cleaning for H2. (SP2-010-001) To execute the SP, select "2" for head 2.
26	Open the front cover, open the air purge port of H3, set the tray, and then close the front cover.
27	Perform air purge for H3. (SP2-012-005) To execute the SP, select "4" for head 3.
28	Open the front cover, close the air purge port of H3, remove the tray, and then close the front cover.
29	Perform head cleaning for H3. (SP2-010-001) To execute the SP, select "4" for head 3.

Note

When you cannot perform this procedure normally, refer to "Troubleshooting Information When Performing Initial Filling and Full Auto Cleaning".

Model: Ko-P1	Date: 14-Jun-18	No.: RM0BY014a

Color Configuration Change Procedure

The procedures for changing the ink configuration are as follows:

4C + W -> 4C

1	Empty the waste ink bottle.
2	Set the waste ink count to 0. (SP7-962-012)
3	Fill the cleaning liquid. (SP2-012-006) To execute the SP, select "1".
4	Set initial operation setting value to 1. (SP2-012-001)
5	Remove the displacement liquid cartridge.
4	Set the jig used for discharging liquid, set the cartridge again, and then close the cartridge lock.
5	Discharge the filling liquid. (SP2-012-002) To execute the SP, select "7" for all heads.
6	Remove the jig used for discharging liquid.
7	Set SP5-882-002 (Machine Information: Ink Set) to 0, and then set the color configuration.
8	Turn the main switch off.
9	Remove the rear left cover
10	Remove the left upper cover
11	Change Tube joint and route referring to following section. 3.Replacement and Adjustment> Ink Supply Unit> Procedure of Color Change> Tubes Connection Procedure for the 4C Model.
12	Remove the Circulation Tubes for white ink from the circulation ports for head 2 and attach rubber stoppers. Refer to RTB (RM0BY013) for detail.
13	Attach the removed covers.
14	Set 4C cartridges and then turn the power on.
15	Fill the liquid. (SP2-012-003) To execute the SP, select "7" for all heads.
16	Rewrite the air purge flag. (SP2-012-004) To execute the SP, select "7" for all heads.
17	Open the front cover, open the air purge port of H1, set the tray, and then close the front cover.
18	Perform air purge for H1. (SP2-012-005) To execute the SP, select "1" for head 1.
19	Open the front cover, close the air purge port of H1, remove the tray, and then close the front cover.

20	Perform head cleaning for H1. (SP2-010-001) To execute the SP, select "1" for head 1.
21	Open the front cover, open the air purge port of H2, set the tray, and then close the front cover.
22	Perform air purge for H2. (SP2-012-005) To execute the SP, select "2" for head 2.
23	Open the front cover, close the air purge port of H2, remove the tray, and then close the front cover.
24	Perform head cleaning for H2. (SP2-010-001) To execute the SP, select "2" for head 2.
23	Open the front cover, open the air purge port of H3, set the tray, and then close the front cover.
24	Perform air purge for H3. (SP2-012-005) To execute the SP, select "4" for head 3.
25	Open the front cover, close the air purge port of H3, remove the tray, and then close the front cover.
26	Perform head cleaning for H3. (SP2-010-001) To execute the SP, select "4" for head 3.

Note

Refer to below for more detail.

3.Replacement and Adjustment> Ink Supply Unit> Procedure of Color Change> Tubes Connection Procedure for the 4C Model.

4C -> 4C + W

1	Empty the waste ink bottle.
2	Set the waste ink count to 0. (SP7-962-012)
3	Remove the cartridge.
4	Set the jig used for discharging liquid, set the cartridge again, and then close the cartridge lock.
5	Discharge the filling liquid. (SP2-012-002) To execute the SP, select "7" for all heads.
6	Remove the jig used for discharging liquid.
7	Set SP5-882-002 (Machine Information: Ink Set) to 3, and then set the color configuration.
8	Turn the main switch off.
9	Remove the screws from the left upper cover
10	Remove the left upper cover
11	Prepare the instruction sheet for changing the joints provided with the machine.
12	Change Tube joint and route referring to following section. 2.Installation> Main Machine Installation> Installation for 4C + W Model.

Model: Ko-P1	Date: 14-Jun-18	No.: RM0BY014a

13	Attaching the Circulation Tubes to the circulation ports for head 2. Refer to 2.Installation> Main Machine Installation> Installation for 4C + W Model> Attaching the Circulation Tubes to Head Tank
14	Attach the removed covers.
15	Set 4C+W cartridges and then turn the power on.
16	Fill the liquid. (SP2-012-003) To execute the SP, select "7" for all heads.
17	Rewrite the air purge flag. (SP2-012-004) To execute the SP, select "7" for all heads.
18	Open the front cover, open the air purge port of H1, set the tray, and then close the front cover.
19	Perform air purge for H1. (SP2-012-005) To execute the SP, select "1" for head 1.
20	Open the front cover, close the air purge port of H1, remove the tray, and then close the front cover.
21	Perform head cleaning for H1. (SP2-010-001) To execute the SP, select "1" for head 1.
22	Open the front cover, open the air purge port of H2, set the tray, and then close the front cover.
23	Perform air purge for H2. (SP2-012-005) To execute the SP, select "2" for head 2.
24	Open the front cover, close the air purge port of H2, remove the tray, and then close the front cover.
25	Perform head cleaning for H2. (SP2-010-001) To execute the SP, select "2" for head 2.
26	Open the front cover, open the air purge port of H3, set the tray, and then close the front cover.
27	Perform air purge for H3. (SP2-012-005) To execute the SP, select "4" for head 3.
28	Open the front cover, close the air purge port of H3, remove the tray, and then close the front cover.
29	Perform head cleaning for H3. (SP2-010-001) To execute the SP, select "4" for head 3.

Note

Refer to below for more detail.

2.Installation> Main Machine Installation> Installation for 4C + W Model.

Model: Ko-P1	Date: 17-Jun-19	No.: RM0BY015

Subject: FSM correction on printer stand protection sheet	Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center	

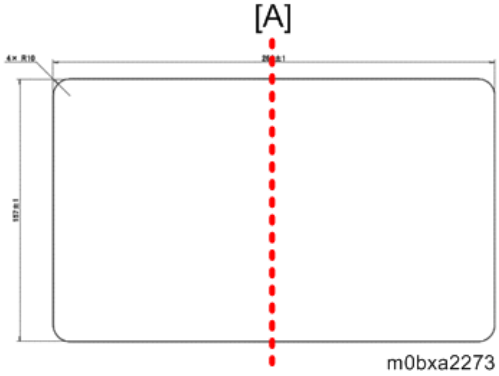
Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☒ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

Service Manual Correction:

Please add the following descriptions **in bold** to your field service manual.

2. Installation
> Main Machine Installation
> Installing the Roll Holder/Roll Core Holder
> Installing the Roll Holder (P.83~)

12. Cut the protection sheet along the center broken line [A].

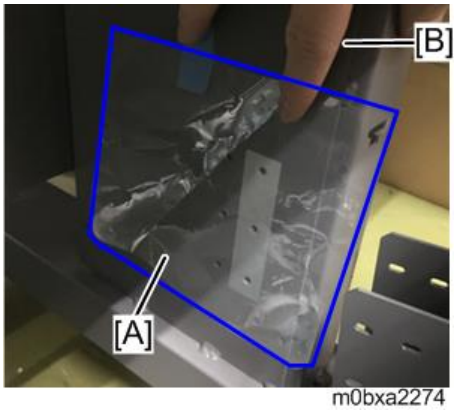


Note

This protection sheet protects the printer stand from damage when attaching the paper feed support stays.

13. Fix the protection sheet [A] to the printer stand [B] temporary.

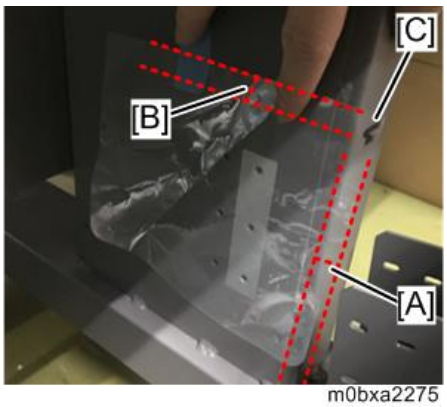
The picture below shows inside. Also attach it to the outside in the same way.



Note

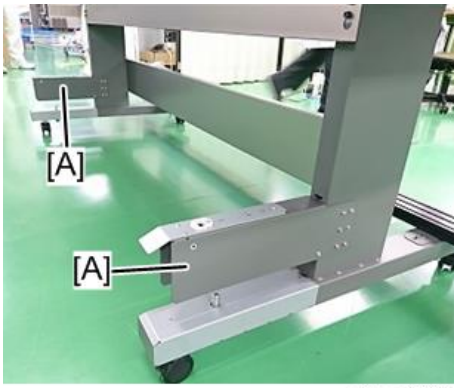
[A]: The right end of the sheet is out of the front side of the stand and the extra length is 10 to 15 mm. (approx. 0.394 to 0.591 inch)

[B]: The upper end of the sheet exceeds the height of the T-shaped hole [C] by 5 to 10 mm. (approx. 0.197 to 0.394 inch)



m0bxa2275

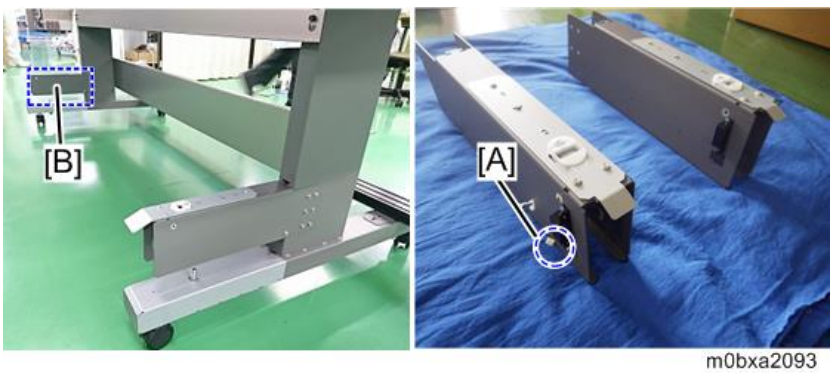
14. Attach the paper feed support stays [A] to the printer stand.



m0bxa2092

Note

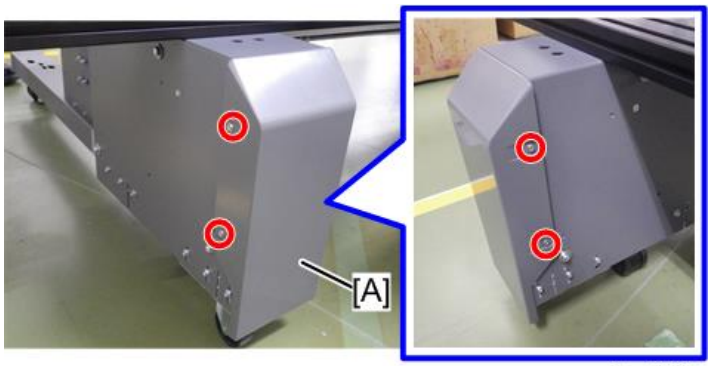
Attach the paper feed support stay with the harness [A] to the rear left side [B] of the main unit.



m0bxa2093

15. Pull out the protection sheet from between the printer stand and paper feed support stay.

16. Remove the paper feed stand front cover [A].

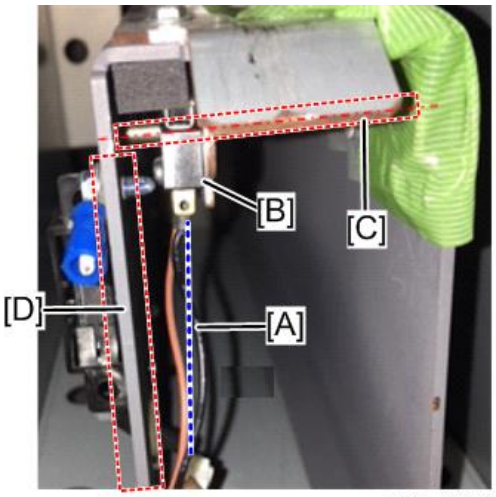


m0bxa2304

Note

Bend the harness [A] so that the harness is under the roll feed unit set switch [B].

Prevent the harness touching the shaft [C] and the bracket [D].



m0bxa2247

Model: Ko-P1	Date: 20-Jun-19	No.: RM0BY016

Subject: Troubleshooting for banding	Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center	

Classification:			
	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☒ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2 ☐ Tier 0.5

Notice:
Following files have been uploaded as troubleshooting for banding images onto the GKM as Tier 2.
- Banding symptom and solution.pdf
- Troubleshooting for Banding.pdf
- Troubleshooting for Banding.xlsx

Flow chart in above file is helpful for identify the cause of banding image.

The link is below:
https://global-ricoh.custhelp.com/app/answers/gr_detail/a_id/264456

QR cord for above page

RICOH **Technical Bulletin**

Model: Ko-P1	Date: 20-Jun-19	No.: RM0BY017

Subject: Troubleshooting for nozzle missing	Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center	

Classification:			
	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☒ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2 ☐ Tier 0.5

Notice:
Following files have been uploaded as troubleshooting for nozzle missing onto the GKM as Tier 2.
- Troubleshooting for Nozzle missing.pdf
- Troubleshooting for Nozzle missing.xlsx

Flow chart in above file is helpful for identify the cause and solution of nozzle missing.

The link is below:
https://global-ricoh.custhelp.com/app/answers/gr_detail/a_id/264457

QR cord for above page

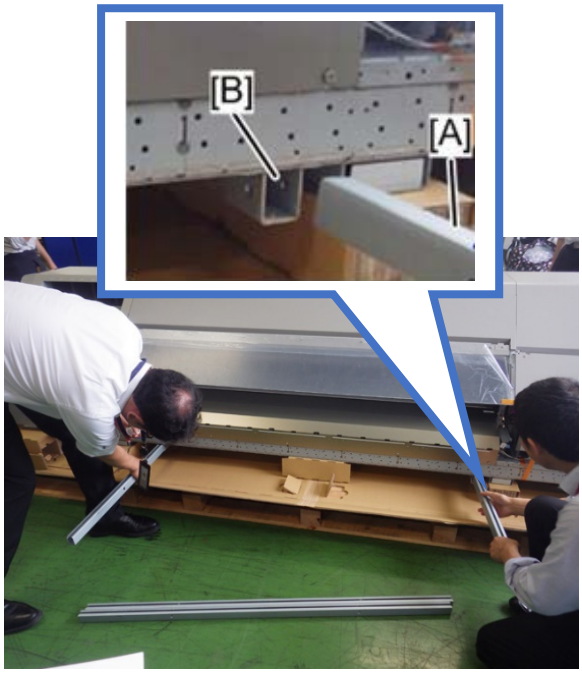
Model: Ko-P1	Date: 24-Jun-19	No.: RM0BY018

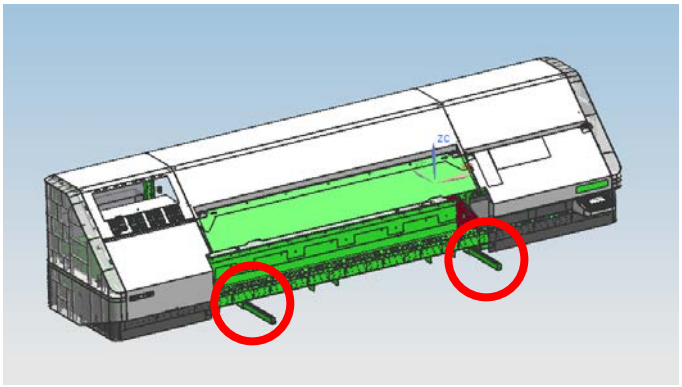
Subject: How to hoist up a machine	Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center	

Classification:			
	☐ Troubleshooting	☐ Part information	☐ Action required
	☒ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☒ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2 ☐ Tier 0.5

How to hoist up a machine

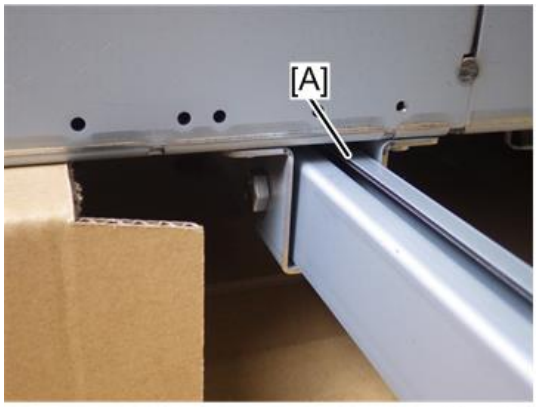
1. Insert the two lifting stays [A] into the bracket [B] of the lower side of the main unit.





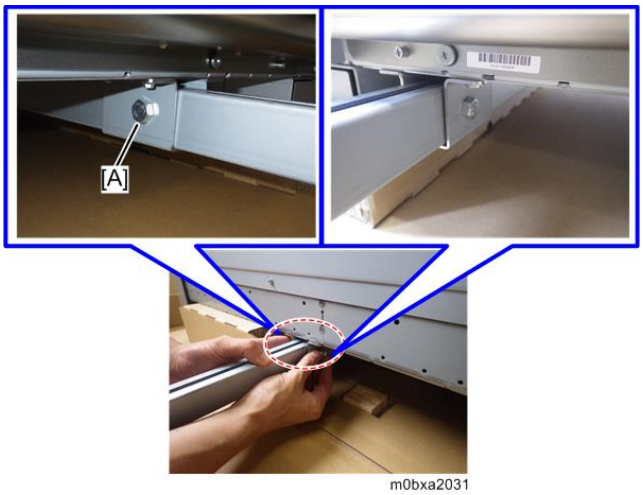
Note

Make sure that the groove [A] of the stay is upward.



m0bxa2029

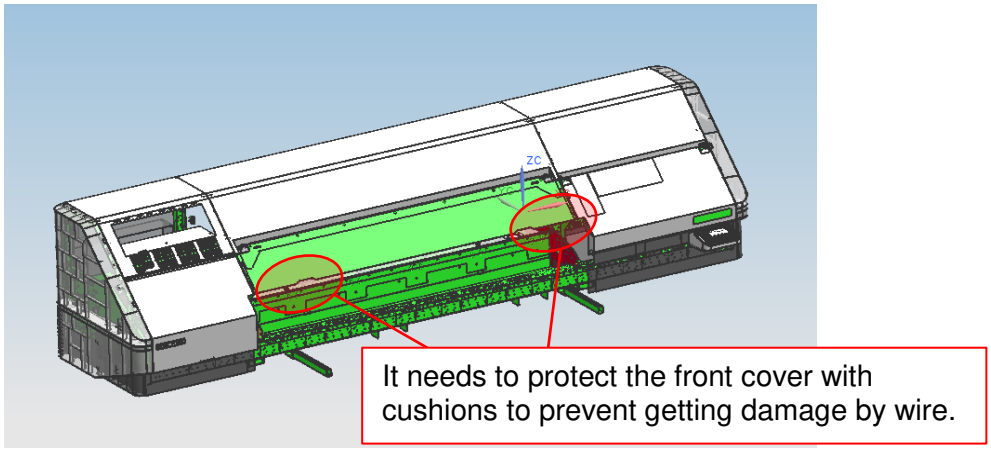
2. Fix the inserted lifting stay with bolt and nut [A]. (HEXAGONAL BOLT:M8X40) (HEXAGONAL NUT:M8)



3. Loop wires to the lifting stay.

Note

- Fix wires at the root of the lifting stay.
- It needs to protect the front cover with cushions to prevent getting damage by wires when using shorter than 6m (19.7 feet) wires.

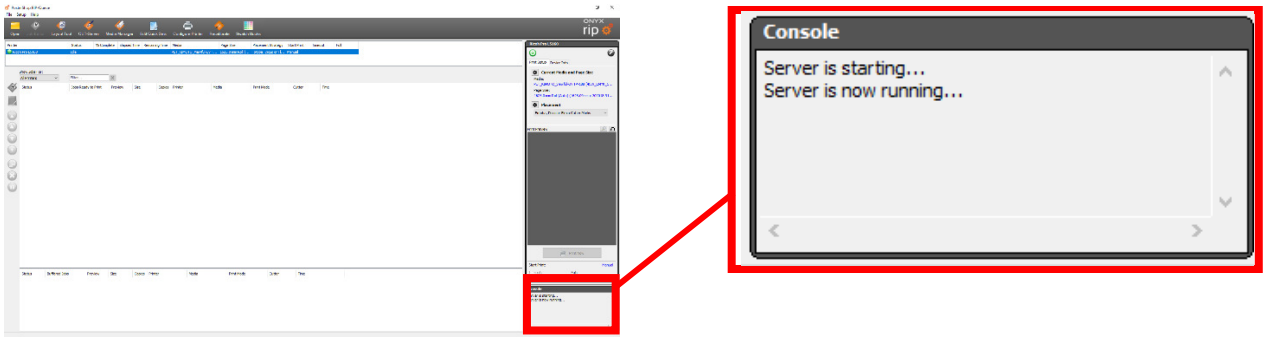


Model: Ko-P1	Date: 1-Jul-19	No.: RM0BY019

subject: Technical information : SDK Error Codes	Prepared by: D.Kobayashi
From: Regional Sales Department, Global IP Sales Center	

Classification:			
	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

There is technical information of Error codes which may appear on RIP Queue console display.



This information will help to find root cause of error on RIP Queue console display.

Error code	Error name	Detail
-1	Invalid API argument	RIP software calls SDK API with invalid parameter. This should not occur in general but if this occur, rebooting RIP software may recover.
-2	Sequence violation	RIP software calls SDK API with incorrect timing. This should not occur in general but if this occur, rebooting RIP software may recover.
-3	Library internal error	SDK library detects some internal error. This should not occur in general but if this occur, rebooting RIP software re-installing printer driver may recover.
-4	File access error	SDK library detects some errors while disk access / memory access. Disk / Memory shortage or hardware broken may cause this error.
-5	Command size shortage	This is internal error code, should not occur in general. If this occur, that will be a bug and rebooting RIP software possible recover.
-6	Nozzle supplement failed	The clogged nozzles on printer operational panel are not able to supplement combination. Clear clogged nozzles will recover.
-7	RIP buffer full	This is internal error code, must not occur in general. If this occur, that will be a bug and rebooting RIP software possible recover.

-8	Unsupported print setting	SDK library detects specified print setting is unsupported. If this occur, check the print settings again and once change some settings or profile and turn back, that will recover.
-101	Network timeout	SDK library detects timeout while network access to printer. If this occur, check network environment and connection between computer and printer. Rebooting printer, RIP software, computer, network devices may recover.
-102	Communication error	SDK library detects invalid parameter while network access to printer. If this occur, check network environment and connection between computer and printer. Rebooting printer, RIP software, computer, network devices may recover.

*SDK: Software Development Kit

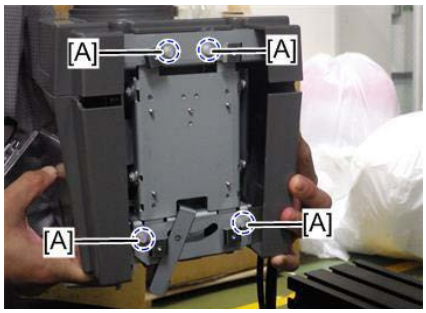
Model: Ko-P1	Date: 11-Jul-19	No.: RM0BY020

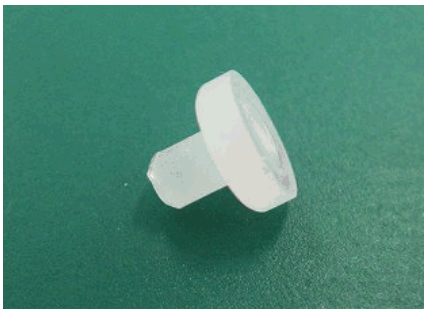
Subject: Installability improvement of roll/roll core holders	Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center	

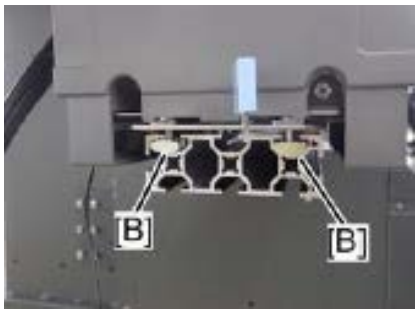
Classification:			
	☐ Troubleshooting	☐ Part information	☐ Action required
	☒ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

Symptom:

The small white rubbers[A] may drop off when inserting the nuts of the roll holders / roll core holders into the grooves [B] of the stay. The absence of the rubber might lower the power of fixing the holder to the stay.





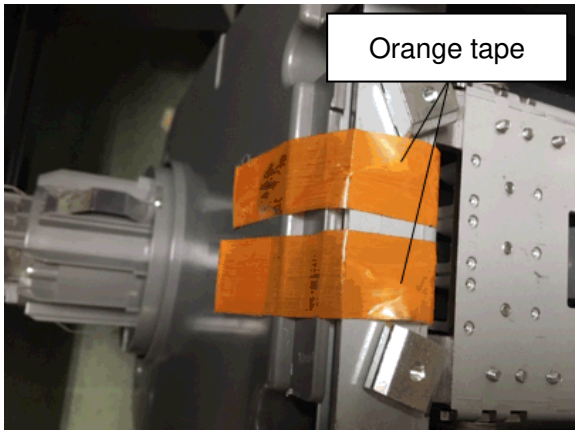


Cause:

The white rubber drop off when they are hit the edge face of the stay repeatedly.

Solution

The design change has been applied and the orange tapes has been stuck on the rubbers like picture below.



Insert the holders in the condition that the orange tapes are stuck on the white rubber.

After inserting the holder into the stay, pull out the orange tapes.

Model: Ko-P1	Date: 30-Jul-19	No.: RM0BY021

Subject: Layout change on screws for the printer stand assembling	Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center	

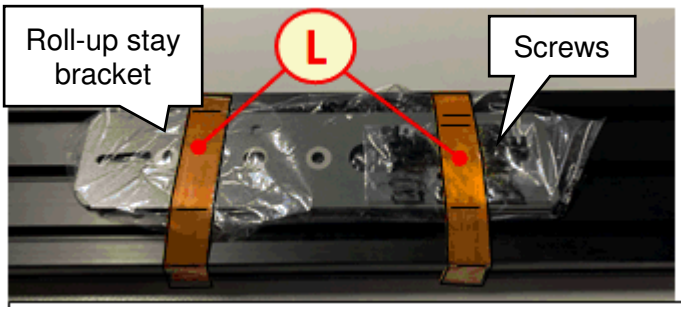
Classification:			
	☐ Troubleshooting	☒ Part information	☐ Action required
	☒ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

Change:

Packing layout of the screws which used for the printer stand assembling has been changed.

- Layout after changed

The screws listed in below tables are attached on the roll-up stay with a tape.

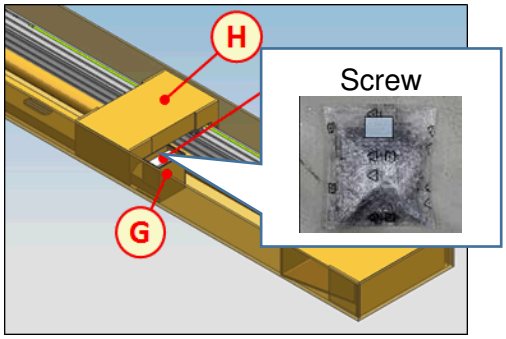


The list of screws whose position has been changed

P/N	Description	Q'ty	Use
M1384949	HEXAGON SOCKET HEAD CAP BOLT:SW-W:M4X8:BLACK	4	Attaching roll-up stay bracket
05930080	BOLT - M3X8	8	Fixing roll-up stay to the stand
07010030	WASHER DIA3	8	Fixing roll-up stay to the stand

- Previous layout

The screws had been put at position G together with other screws.



Reason:

- To prevent a misuse of assembling screws
- To improve assembly workability

Cut-in S/N:

Product Name	Product Code	EDP	Cut-in S/N
Ricoh Pro L5130	M0BX17 (NA/LA)	342291	5359F800001 -
	M0BX27 (EU/AP)	342292	
Ricoh Pro L5160	M0BY17 (NA/LA)	342293	5369F800001 -
	M0BY27 (EU/AP)	342294	

Model: Ko-P1	Date: 6-Aug-19	No.: RM0BY022

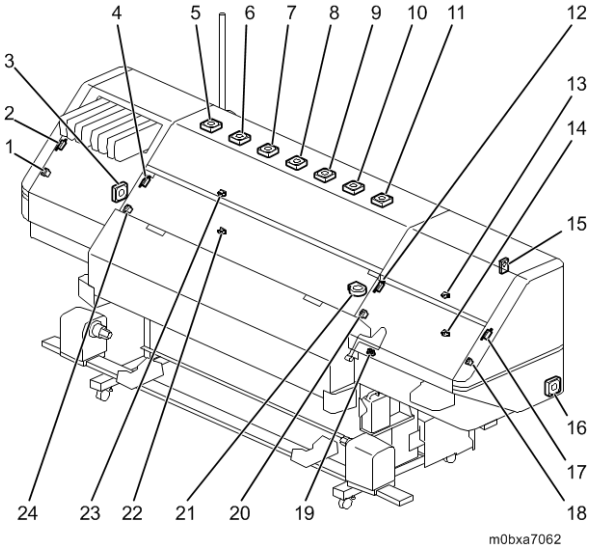
Subject: FSM correction on internal ventilation fan	Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center	

Classification:			
	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☒ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

Service Manual Correction:

Please revise the following descriptions ***bold italic in red*** from your field service manual.

6. Detail Description > Overview > Electrical Components > Fans/Switches (P.475)



No.	Name	No.	Name
1	Front Cover Open SW/Left	13	Pre-heater Cover Open SW (Right)
2	Cover Interlock SW/Left	14	Pre-heater Cover Open SW
3	Internal Ventilation Fan ***2***	15	Main Power Switch
4	Cover Interlock SW/Center 2	16	Internal Ventilation Fan ***1***
5	Internal Air Intake Fan 1	17	Cover Interlock SW/Right
6	Internal Air Intake Fan 2	18	Front Cover Open SW/ Right
7	Internal Air Intake Fan 3	19	Registration Pressure Release Sensor
8	Internal Air Intake Fan 4	20	Front Cover Open SW/Center 1
9	Internal Air Intake Fan 5	21	Suction Fan
10	Internal Air Intake Fan 6	22	Cover Interlock SW
11	Internal Air Intake Fan 7	23	Pre-heater Cover Open SW (Left)
12	Cover Interlock SW/Center 1	24	Front Cover Open SW/Center 2

Model: Ko-P1	Date: 9-Aug-19	No.: RM0BY023

Subject: Important notice on machine transportation	Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center	

Classification:			
	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☒ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

■ Notice when transportation by a truck after assembling the main unit and printer stand

In case of transporting the machine after the main unit is mounted on the printer stand, do not attach following items.

- Post heater, Cutter unit
- Cure heater
- Media feed unit
- Roll-up unit

Note:

- If machine is transported after attaching above items, there is a deformation risk of the platen.
- While moving the machine, do not remove support materials.
  Ex: Carriage fixing sponges, carriage fixing screws, cutter fixing screws.
- After transporting the machine, measure the distance between the print head and platen. If the distance is not within the extent of the reference value (1.8±0.2 mm (approx. 0.071 ± 0.008 inch)), perform print head height adjustment.

■ Notice when moving the machine outdoor after assembling the main unit and printer stand

If moving the machine outside after assembling the main unit and printer stand, lay curing sheets on the ground and move the machine on the sheets. While moving the machine, do not attach following items.

- Post heater, Cutter unit
- Cure heater
- Media feed unit
- Roll-up unit

Note:

- Attach above items after machine is delivered at installation site.
- While moving the machine, do not remove support materials.
  Ex: Carriage fixing sponges, carriage fixing screws, cutter fixing screws.
- After moving the machine, measure the distance between the print head and platen. If the distance is not within the extent of the reference value (1.8±0.2 mm (approx. 0.071 ± 0.008 inch)), perform print head height adjustment.

Model: Ko-P1	Date: 19-Aug-19	No.: RM0BY024

Subject: Notice on ink cartridge set			Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center			
Classification:	☒ Troubleshooting ☐ Mechanical ☐ Paper path ☐ Product Safety	☐ Part information ☐ Electrical ☐ Transmit/receive ☐ Other ( )	☐ Action required ☐ Service manual revision ☐ Retrofit information ☐ Tier 2 ☐ Tier 0.5

Symptom:

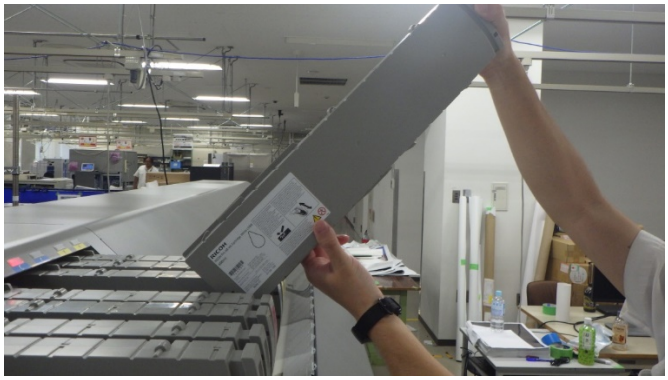
Ink remaining amount may be large even though ink end is detected.

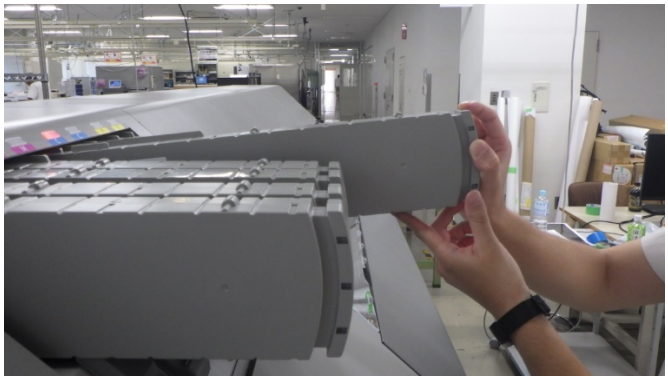
Cause:

If ink pools at the opposite side of ink supply port, ink becomes harder to be flowed to the machine. This phenomenon occurs easily after shaking an ink cartridge with standing state especially.

Solution:

- Set an ink cartridge while turning ink supply port downward.
- Instruct users to follow this inserting method when setting an ink cartridge.





Model: Ko-P1	Date: 21-Aug-19	No.: RM0BY025

Subject: FSM correction on print head height adjustment	Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center	

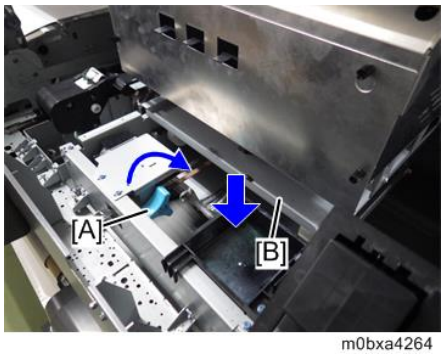
Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☒ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

Service Manual Correction:

Please add the following descriptions **in red** to your field service manual.

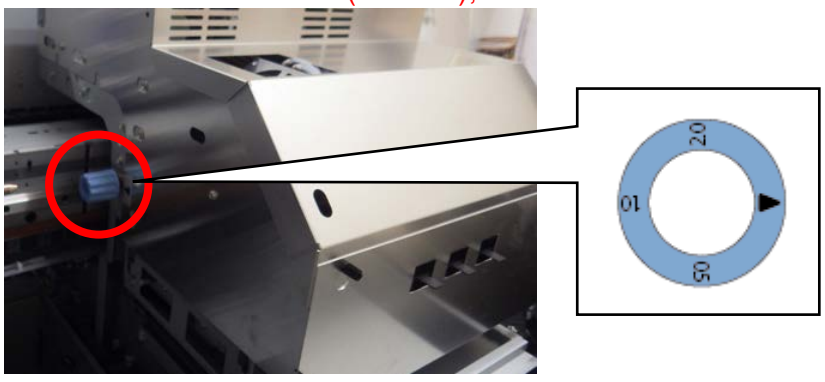
2. Installation > Main Machine Installation > Measuring the Head Height and the Jam Detection Feeler Height (P.116)

6. Turn the handle [A] to lower the cap unit [B].
(Change the state of decap)



m0bxa4264

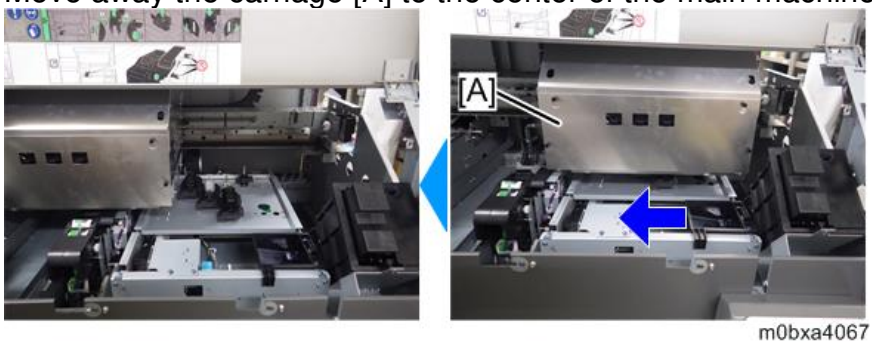
7. Check the head height adjustment knob is set "▸" (Default).
If the knob is not set "▸" (Default), turn the knob and set the carriage to "▸" (Default).



Note

If the head height is adjusted when head height setting is not default, print head may be broken due to print head crash with the media guide plate, platen, or media when the machine changes the print head height to default (the lowest position).

8. Move away the carriage [A] to the center of the main machine.



Model: Ko-P1	Date: 13-Sep-19	No.: RM0BY026

Subject: FSM correcntion on screw type reduction	Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center	

Classification:			
	☐ Troubleshooting	☒ Part information	☐ Action required
	☒ Mechanical	☐ Electrical	☒ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

Change:

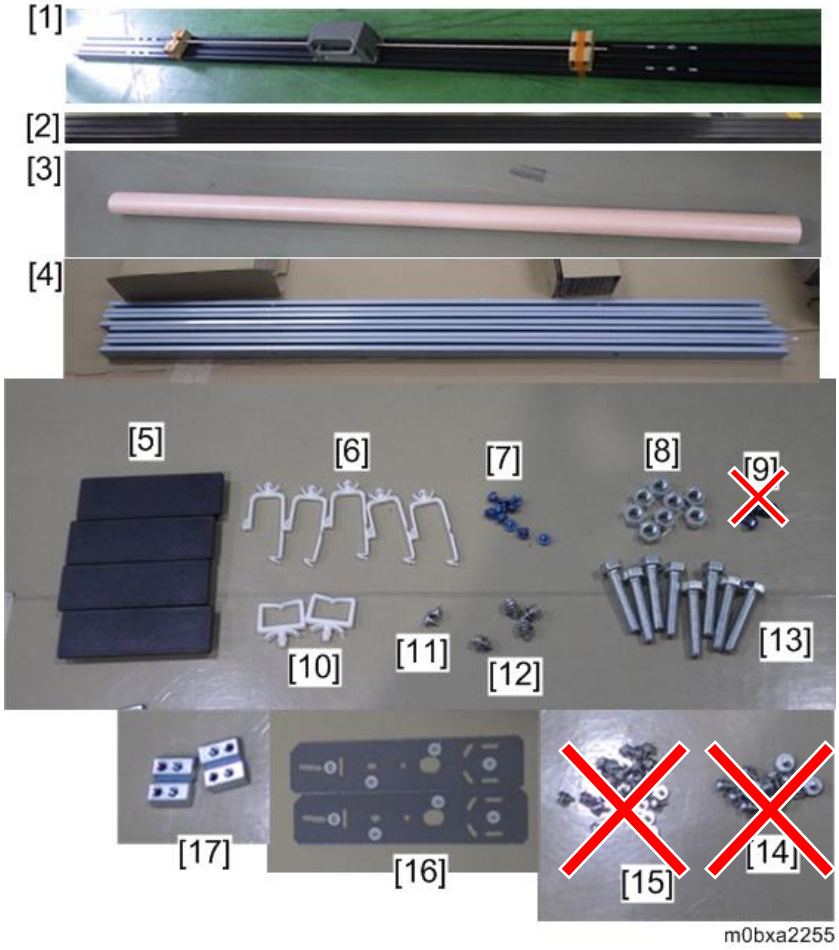
Some screws has been changed for screw type reduction. Please delete ~~crossed-out~~ description from your service manual and add **descriptions bold in red**.

Reason:

To prevent misuse of screws.

- 2. Installation > Main Machine Installation > Unpacking Procedure > Main Unit Accessory List > Roll Feed/Roll-up Unit Stays, Paper Feed Caster Unit [C] (P.32~)

Roll Feed/Roll-up Unit Stays, Paper Feed Caster Unit [C]



Model: Ko-P1	Date: 13-Sep-19	No.: RM0BY026

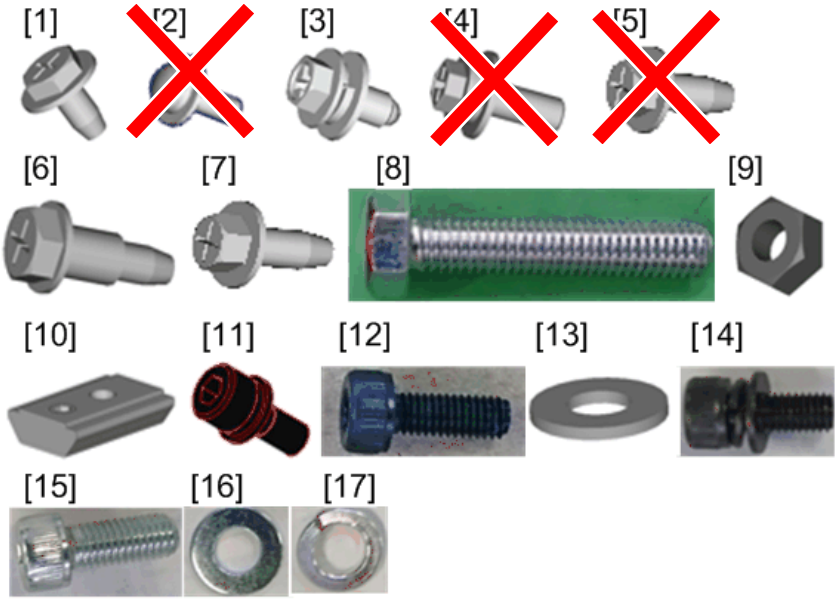
No.	Description	Q'ty	
		L5130	L5160
1	Roll Feed Unit Stay:160	0	1
	Roll Feed Unit Stay:130	1	0
2	Roll-up Unit Stay:160	0	1
	Roll-up Unit Stay:130	1	0
3	Roll Core:160	0	1
	Roll Core:130	1	0
4	Stay 2	4	4
5	CAP:STAY:GUIDE:FLANGE	4	4
6	CLAMP:LWS-2218A	5	5
7	TAPPING SCREW - M3X6	32	32
8	HEXAGONAL NUT:M8	8	8
~~9~~	~~TAPPING SCREW - M4X8~~	~~14~~	~~14~~
10	CLAMP - WS-4W	2	2
11	SCREW:M3:DIA4X5.6	2	2
12	SCREW:SPRING WASHER:ROUND POINT:M4X10	~~4~~ **42**	~~4~~ **42**
13	HEXAGONAL BOLT:M8X40	8	8
~~14~~	~~SCREW:POLISHED ROUND:M4X8 *1~~	~~8~~	~~8~~
~~15~~	~~HEXAGONAL BOLT:DOUBLE SCREW:M4X12~~	~~30~~	~~30~~
16	Platen Adjustment Plate (Front/Rear)	2	2
17	NUT:LOCK:M4	4	4
-	HEXAGON SOCKET HEAD CAP BOLT:SW-W:M4X8:BLACK	4	4
-	BOLT - M3X8	8	8
-	WASHER DIA3	8	8
-	~~TAPPING SCREW:ROUND POINT:4X10~~	~~1~~ **15**	~~1~~ **15**

~~*1: Four of this screws are provided in another bag. They are used for fixing the adjustment plate to the roll-up unit stay.~~

- 2. Installation > Main Machine Installation > Unpacking Procedure > Main Unit Accessory List > Screw set (P.37)

Screws Set

Model: Ko-P1	Date: 13-Sep-19	No.: RM0BY026



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No.	Name	Part Number	Q'ty	Use
1	TAPPING SCREW:ROUND POINT:3X6	04543006	32	Main machine operation panel [2] Post-heater bracket [8] Cure heater cover [12] Media holding lever [2] Roll/Roll core holder harness [8]
~~2~~	~~SCREW:POLISHED ROUND:M4X8~~	~~09514008~~	~~8~~	~~Paper feed caster unit [8]~~
3	SCREW:SPRING WASHER:ROUND POINT:M4X10	G8327900	~~4~~ **42**	Stay of the drawer lever of roll feed unit [4] **Paper feed caster unit [8]** **Paper feed support plate [24]** **Waste ink bottle bracket [6]**
4	~~HEXAGONAL BOLT:DOUBLE SCREW:M4X12~~	~~08010237~~	~~30~~	~~Paper feed support plate [24]~~ ~~Waste ink bottle bracket [6]~~
~~5~~	~~TAPPING SCREW - M4X8~~	~~04544008~~	~~14~~	~~Post heater [2]~~ ~~Cure heater [4]~~ ~~Right bottom cover [4]~~ ~~Left bottom cover [4]~~
6	SCREW:M3:DIA4X5.6	AA143542	2	Fixing the left side lower cover [1] Fixing the right side lower cover [1]
7	TAPPING SCREW:ROUND POINT:4X10	04544010	~~1~~ **15**	Fixing the left side lower cover [1] **Post heater [2]** **Cure heater [4]**

No.	Name	Part Number	Q'ty	Use
				Right bottom cover [4] **Left bottom cover [4]**
8	HEXAGONAL BOLT:M8X40	05880400	8	Attaching the Grip [8]
9	HEXAGONAL NUT:M8	07100080N	8	Attaching the Grip [8]
10	Nut Lock M4	MBY2614	4	Roll feed stay [2] Roll-up stay [2]
11	HEXAGON SOCKET HEAD CAP BOLT:SW-W:M4X8:BLACK	M1384949	4	Attaching roll-up stay bracket [4]
12	BOLT - M3X8	05930080	8	Fixing roll-up stay to the stand [8]
13	WASHER DIA3	07010030	8	Fixing roll-up stay to the stand [8]
14	Hex Bolt SW-W:M5X12	M4482966	16	Attaching the stand stay [16]
15	Hex Bolt M8X20	M0BY1173	4	Fixing the main machine and the printer stand [4]
16	Washer dia8	07010080N	4	Fixing the main machine and the printer stand [4]
17	Spring washer dia8	07030080N	4	Fixing the main machine and the printer stand [4]

- 2. Installation > Main Machine Installation > Installation for the Left Side of the Main unit > Installing the Left Bottom Cover (P.56)

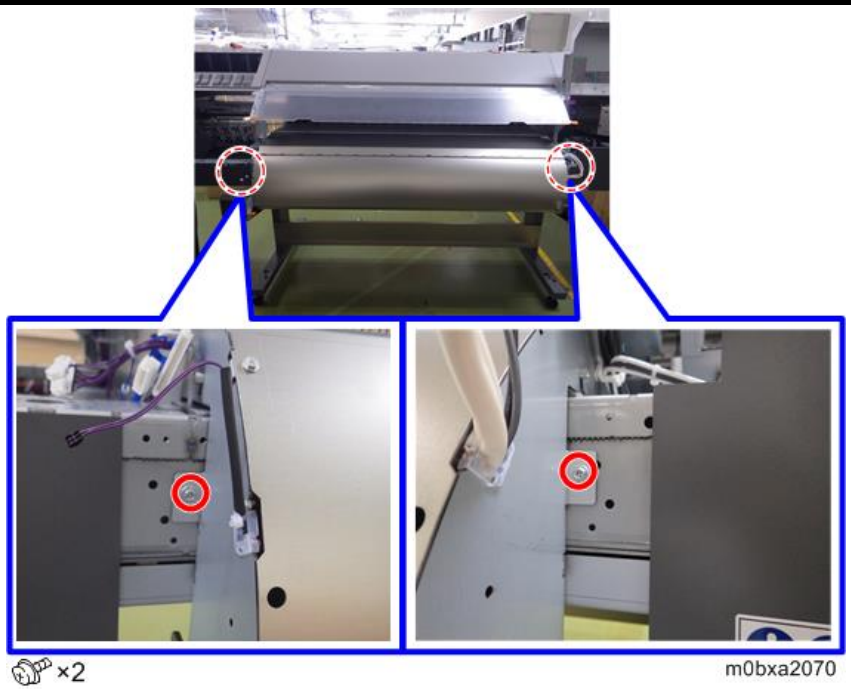
  2. Fix the left bottom cover [A]. (~~TAPPING SCREW - M4X8~~ **TAPPING SCREW:ROUND POINT:4X10**)

- 2. Installation > Main Machine Installation > Installation for the Left Side of the Main unit > Installing the Right Bottom Cover (P.62)

  2. Fix the right bottom cover [A]. (~~TAPPING SCREW - M4X8~~ **TAPPING SCREW:ROUND POINT:4X10**)

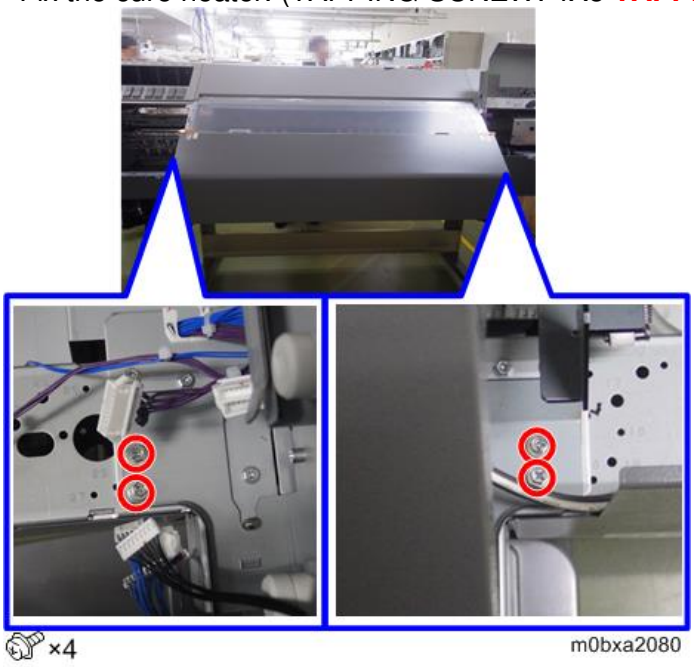
- 2. Installation > Main Machine Installation > Installing Post Guide Plate and Cutter Unit(P.70)

  2. Fix the post guide plate and cutter unit. (~~TAPPING SCREW - M4X8~~ **TAPPING SCREW:ROUND POINT:4X10**)



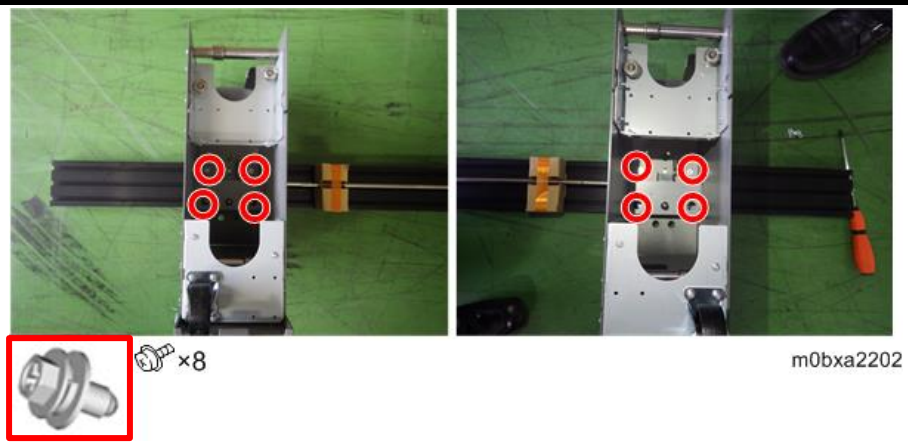
- 2. Installation > Main Machine Installation > Installing the Cure Heater (P.74)

5. Fix the cure heater. (~~TAPPING SCREW: 4X8~~ **TAPPING SCREW:ROUND POINT:4X10**)

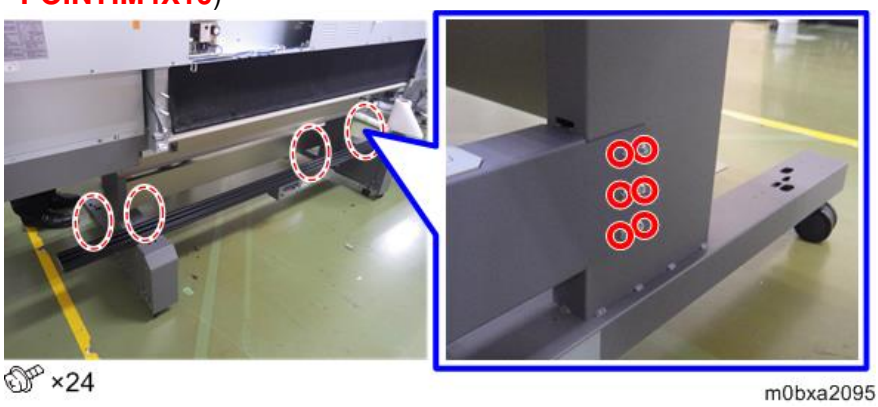


- 2. Installation > Main Machine Installation > Installing the Rol Holder/Roll core Holder > Installing the Roll Holder (P.80~)

4. Fix the paper feed caster units on the stay. (~~SCREW:POLISHED ROUND:M4X8~~ **SCREW:SPRING WASHER:ROUND POINT:M4X10**)



17. Fix the inside and outside of the paper feed support stays (left/right) with the screws. (~~HEXAGONAL BOLT:DOUBLE SCREW:M4X12~~ **SCREW:SPRING WASHER:ROUND POINT:M4X10**)



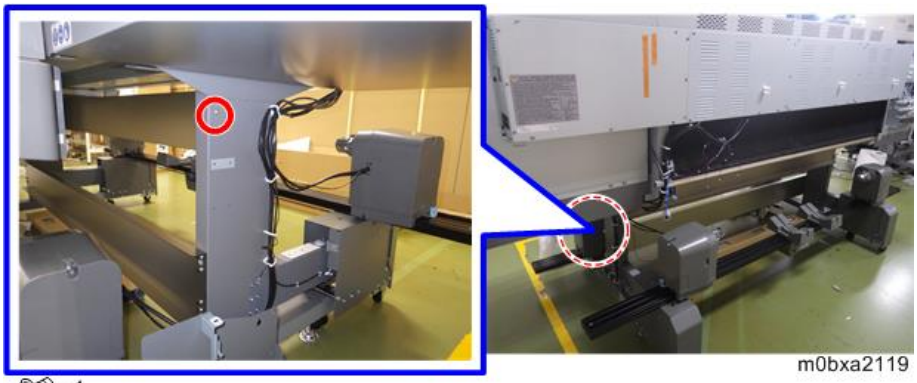
Note

The screw [A] of the left side of the main unit is fastened with the ground cable of the roll holder.

Temporarily fix the screw to the position [B] for fixing the ground cable of the roll core holder with it later.

- 2. Installation > Main Machine Installation > Installing the Waste Ink Bottle (P.96~)

1. Insert the screw into the printer stand. (~~HEXAGONAL BOLT:DOUBLE SCREW:M4X12~~ **SCREW:SPRING WASHER:ROUND POINT:M4X10**)



3. Fix the waste ink bottle holder [A]. (~~HEXAGONAL BOLT:DOUBLE SCREW:M4X12~~ **SCREW:SPRING WASHER:ROUND POINT:M4X10**)

Cut-in S/N:

Product Name	Product Code	EDP	Cut-in S/N
Ricoh Pro L5130	M0BX17 (NA/LA)	342291	5359FA00001 -
	M0BX27 (EU/AP)	342292	
Ricoh Pro L5160	M0BY17 (NA/LA)	342293	5369FA00001 -
	M0BY21 (CHN)	342318	
	M0BY27 (EU/AP)	342294	

Model: Ko-P1	Date: 24-Oct-19	No.: RM0BY027

Trroubleshooting for image shift when setting auto rewinding after cutting	Prepared by: Y.Fukasaku
From: CP/IP Product Quality Management Department	

Classification:	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

SYMPTOM

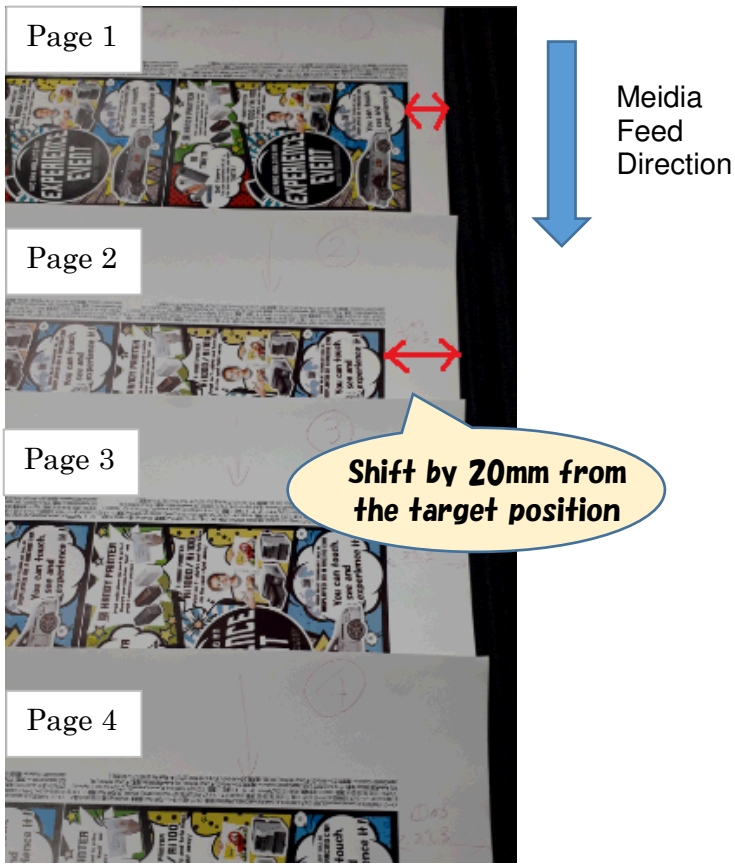
Image shift after set cutting settings

Image shift occurs in the following procedure :

1. Contain multiple print jobs in one to print file.
2. After each file the printer has to cut.
3. set the value with SP1-941-024 to 650 mm to avoid waste media.
4. send the job.

We notice that the images are shifted to the left for about 20 mm after the 1st file is printed and cut.

When SP mode 1-941-024 is set to default the image doesn't shift.



Cause

Engine firmware issues.

Temporary Solution

Set the value with SP1-941-024 to 500 mm or less.

Permanent Solution

RCL will release update firmware in end of November.

Reissued : 1-Nov-19

Model: Ko-P1	Date:24-Oct-19	No.: RM0BY028a

RTB Reissue : Addition of occurrence condition and addition of solution

Important Notice on White Skip and Unidirectional Printing			Prepared by: Y.Fukasaku
From: CP/IP Product Quality Management Department			
Classification:	☒ Troubleshooting ☐ Mechanical ☐ Paper path ☐ Product Safety	☐ Part information ☐ Electrical ☒ Transmit/receive ☐ Other ( )	☐ Action required ☐ Service manual revision ☐ Retrofit information ☐ Tier 2 ☐ Tier 0.5

Symptom

SC211-02 and/or SC211-04 occurs when printing continues with White Skip Enable or Unidirectional printing. And, in most cases, the Main Scan Motor (P/N : M0BY2074) has broken down.

M0BY2074 : DC MOTOR MAIN SCANNING:SUB-ASS'Y

Cases occurred in the field

When printing 850mm wide image data continuously for 150 minutes with White Skip Enable, the following SC occurred, and the Main Scan Motor has broken down.

SC211-02 : Carriage Hardware Error

SC211-04 : Main Scan Motor Driver Error (Overcurrent)

Cause

Motor overload due to repeated STOP-START of the Main Scan Motor.

Temporary Solution

- Pro L5160 M0BY17 / M0BY27 / M0BY21 (64inch / 160cm device)
  Disable "White Skip" on the RIP job setting.

- Pro L5130 M0BX27 (54inch / 130cm device)
  Disable "White Skip" and Set "Bidirectional" printing mode on the RIP job setting.

[How to set]

1. If using ONIX RIP, see page 2
2. If using Color Gate RIP, see page 3

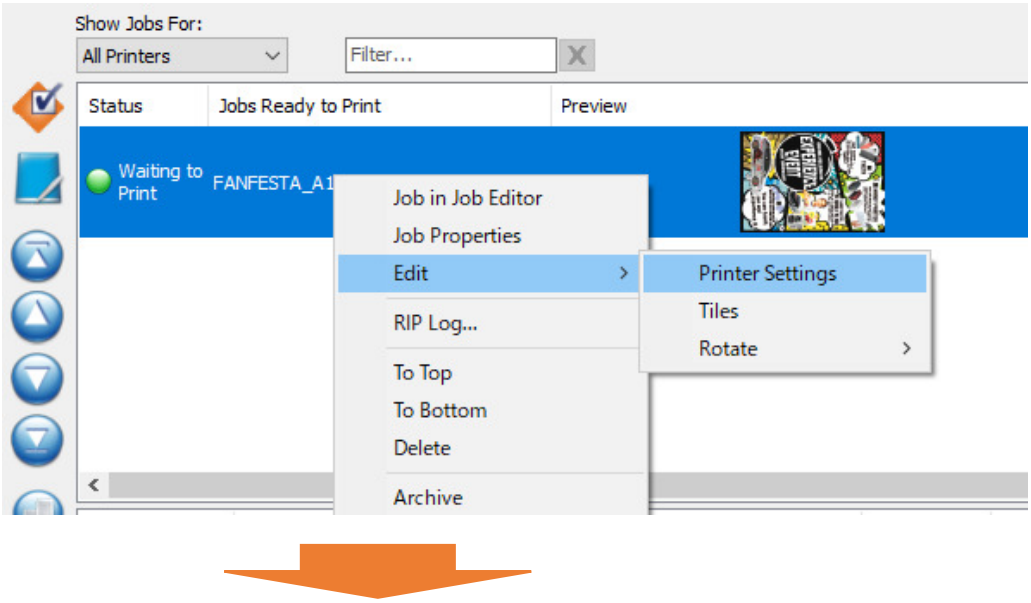
Permanent Solution

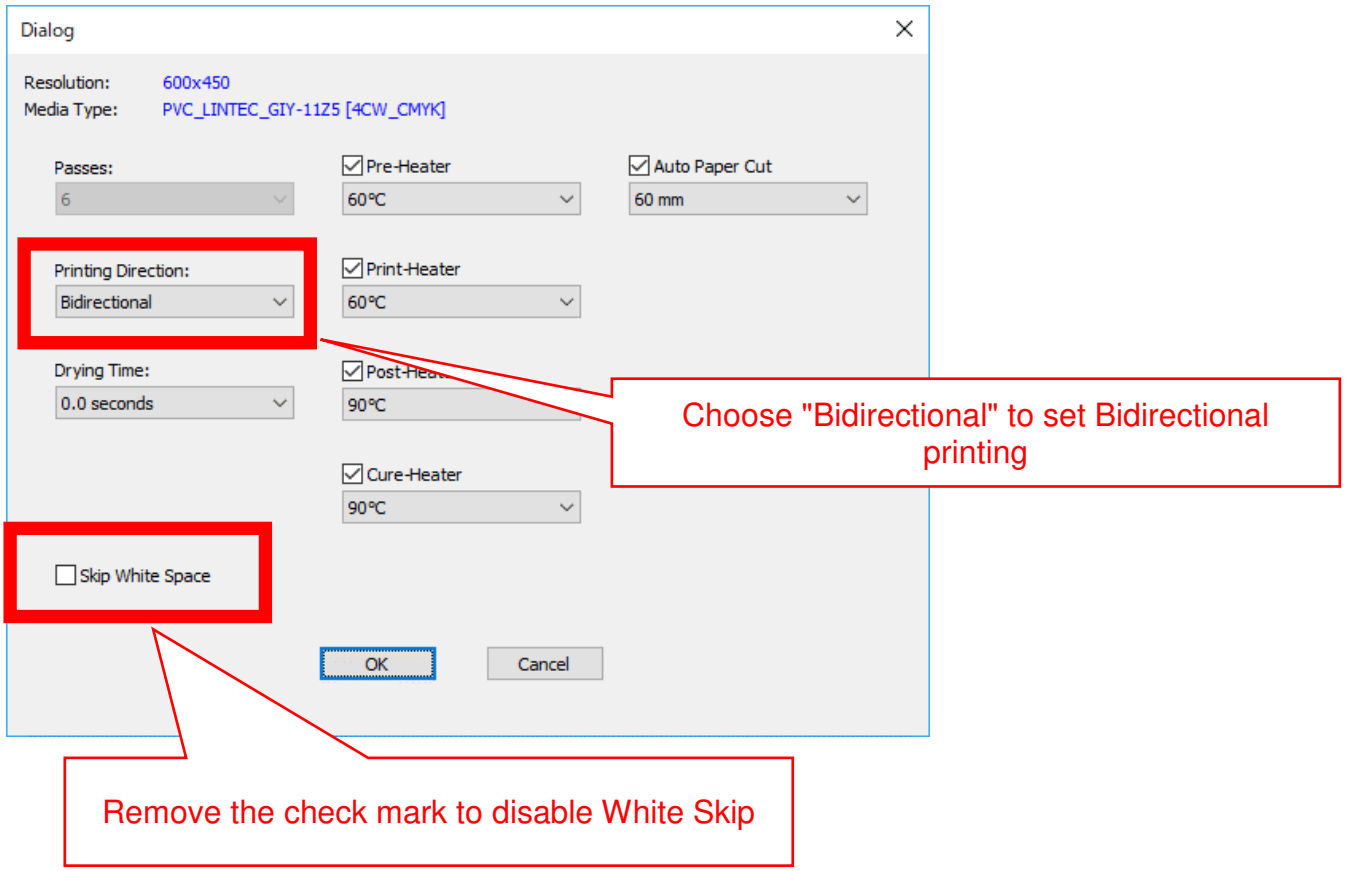
RCL is under considering countermeasures.
RCL will inform you as soon as the countermeasures are determined.
(by the End of Nov. at the latest)

Reissued : 1-Nov-19

Model: Ko-P1	Date:24-Oct-19	No.: RM0BY028a

1. How to set RIP job setting on ONYX RIP

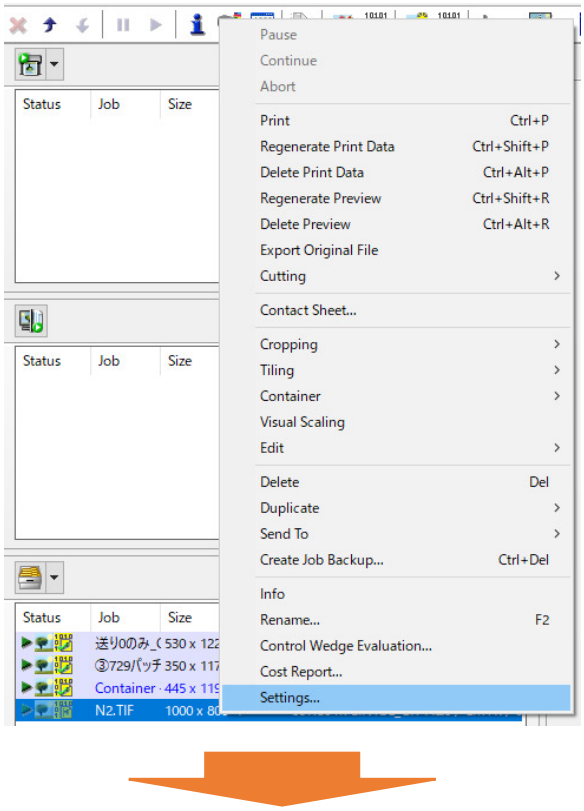


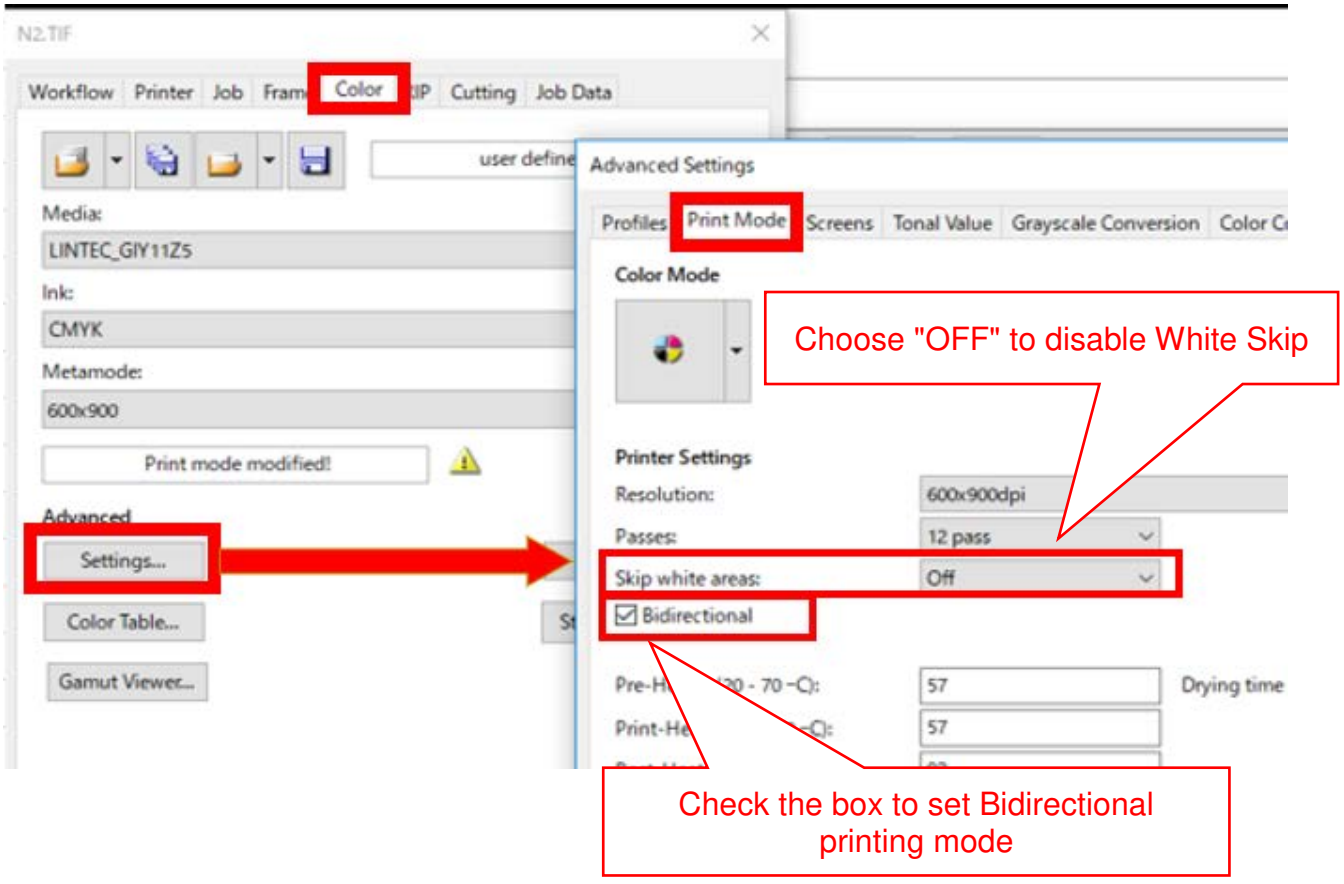


Reissued : 1-Nov-19

Model: Ko-P1	Date:24-Oct-19	No.: RM0BY028a

2. How to set RIP job setting on Color Gate RIP





Model: Ko-P1	Date:15-Nov-19	No.: RM0BY029

Part change information: Print head fixing screw	Prepared by: H.Morishima
From: Regional Sales Department, Global IP Sales Center	

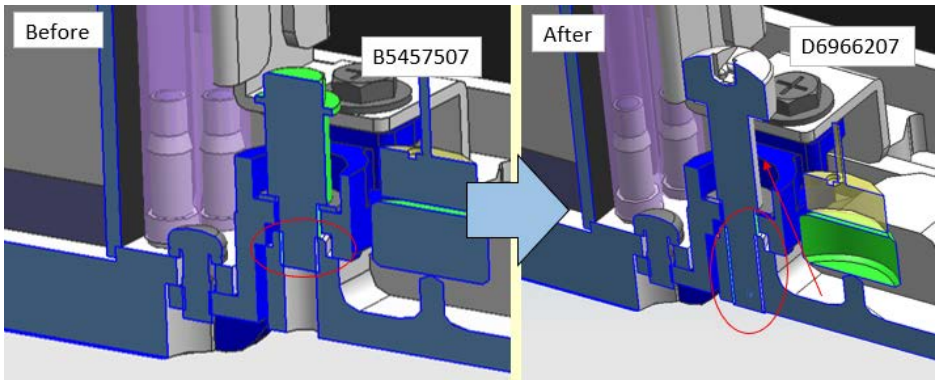
Classification:	☐ Troubleshooting	☒ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

Change:
The screws which fixing print head on the carriage have been change.

Old P/N	New P/N	Description	Q'ty	Int	Int as a set
B5457507	D6966207	STEPPED SCREW:STAND:LONG	2	X/X	O/O
-	M0BY2165	COMPRESSION SPRING:HEAD:FIX	1	X/X	

NOTE:

- When replacing any parts of the above, replace them as a set.
- Parts quantity described above is required for per a print head.
- The spring(M0BY2165) is necessary only at front side.



Reason:
To prevent breaking the carriage bottom plate.

Note:
When using the old screws(B5457507), hold the driver with three fingers and tighten the screw. Do not tighten them excessively.

Cut-in S/N:

Product Name	Product Code	EDP	Cut-in S/N
Ricoh Pro L5130	M0BX17 (NA/LA)	342291	5359F700001 -
	M0BX27 (EU/AP)	342292	
Ricoh Pro L5160	M0BY17 (NA/LA)	342293	5369F700001 -
	M0BY27 (EU/AP)	342294	

Model: Ko-P1	Date:15-Nov-19	No.: RM0BY030

Release notice of solution manual and print setting storage sheet	Prepared by: H.Morishima
From: Regional Sales Department, Global IP Sales Center	

Classification:	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

Notice:
Solution manual and print setting storage sheet have been released.
http://support.ricoh.com/bb_v1oi/html/oi/r/model/L5130/L5130en.htm

1. **Solution manual**
   This solution manual instructs troubleshooting method for common troubles including abnormal images and abnormal operations. Some problem factors and technical mechanisms are written in this manual. These information helps customers to solve some common problem by themselves.

2. **Print setting storage sheet**
   Customers can take a memo about print setting information by using this sheet. This make media record function more easy to use.

Important:
Please give notice of releasing this solution manual and print settings registered sheet to customers.
Please distribute these documentations when visiting customers.

Reference:
- Printer settings registered sheet

Print settings registered sheet Attention : Strongly recommend adjusting the "Media Feed Quantity" by each job or roll.

No.	Registration date	Media information		Media and machine settings						Adjusted print mode						Remarks
		Media type	Manufacturer Model number	Roll Outer / Roll Inner / Leaf	Take-up reel Use / Not use	Media thickness	Head height	Vacuum level	Media width	6pass	8pass	12pass	16pass	32pass	12pass (White)	
(Ex)	DD/MM/YYYY HH:MM	PVC	AAA XXX-YYZZ	Roll Outer	Use	1	Default	2	1300mm	✓		✓				
1																
2																
3																
4																
5																
6																

Model: Ko-P1	Date: 28-Nov-19	No.: RM0BY031

subject: Important notice on long term storage without power supply	Prepared by: H.Morishima
From: Service Promotion Sec., Global IP Sales Center	

Classification:			
	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2 ☐ Tier 0.5

Notice

When the machine is stored for long term without power supply, replace all ink to displacement liquid according to following procedure.

The Flow of Full Auto Cleaning (Filling displacement liquid instead of color ink)

No.	
1	Set ink cartridges, a flushing cartridge, a cleaning cartridge, and then turn the power on.
2	Empty the waste ink bottle.
3	Set the waste ink count to 0. (SP7-962-012)
4	Press full auto cleaning. (SP2-100-003) To execute the SP, select "7" for all heads.
5	Remove the cartridge.
6	Set the jig used for discharging liquid, set the cartridge again, and then close the cartridge lock.
7	Discharge the filling liquid. (SP2-012-002) To execute the SP, select "7" for all heads.
8	Remove the jig used for discharging liquid.
9	Set the displacement liquid cartridge, and then close the cartridge lock.
10	Fill the liquid. (SP2-012-003) To execute the SP, select "7" for all heads.
11	Remove the displacement liquid cartridge.
12	Set the jig used for discharging liquid, set the cartridge again, and then close the cartridge lock.
13	Discharge liquid again. (SP2-012-002) To execute the SP, select "7" for all heads.
14	Remove the jig used for discharging liquid.
15	Set the displacement liquid cartridge, and then close the cartridge lock.
16	Fill the liquid again. (SP2-012-003) To execute the SP, select "7" for all heads.
17	Rewrite the air purge flag. (SP2-012-004) To execute the SP, select "7" for all heads.
18	Open the front cover, open the air purge port of H1, set the tray, and then close the front cover.
19	Perform air purge for H1. (SP2-012-005) To execute the SP, select "1" for head 1.
20	Open the front cover, close the air purge port of H1, remove the tray, and then close the front cover.
21	Perform head cleaning for H1. (SP2-010-001) To execute the SP, select "1" for head 1.
22	Open the front cover, open the air purge port of H2, set the tray, and then close the front cover.
23	Perform air purge for H2. (SP2-012-005) To execute the SP, select "2" for head 2.
24	Open the front cover, close the air purge port of H2, remove the tray, and then close the front cover.
25	Perform head cleaning for H2. (SP2-010-001) To execute the SP, select "2" for head 2.

No.	
26	Open the front cover, open the air purge port of H3, set the tray, and then close the front cover.
27	Perform air purge for H3. (SP2-012-005) To execute the SP, select "4" for head 3.
28	Open the front cover, close the air purge port of H3, remove the tray, and then close the front cover.
29	Perform head cleaning for H3. (SP2-010-001) To execute the SP, select "4" for head 3.

Note

- When you cannot perform this procedure normally, refer to "Troubleshooting Information When Performing Initial Filling and Full Auto Cleaning".
- When replacing from displacement liquid to color ink, please follow the ink filling procedure described in the field service manual.
- Make sure ink supply tube connection and setting of SP5-882-002 (Machine information: Ink Set, 0 is 4C, 3 is 4CW) if color configuration is changed after long term storage.

Reason

If leaving machine as it is without power supply for long term, machine cannot perform auto maintenance. Then, ink tube or print head nozzle clogging may occur.

Model: Ko-P1	Date: 29-Nov-19	No.: RM0BY032

Subject: FSM correcntion on ink filling	Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center	

Classification:	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☒ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2 ☐ Tier 0.5

Change:

Please add **descriptions bold in red** to your field service manual.

- 2. Installation > Main Machine Installation > Damper Air Purge (P.139)

21. Press [Confirm].
Repeat this procedure from Step 1 if you perform air purging for another print head.

In the initial filling, perform air purge on all the print heads.

22. Check the value of SP2-012-001(Initial Operation Setting).

If the value is "0", ink filling completes correctly.

If the value is not "0", refer to "5. Troubleshooting -> Troubleshooting Information When Performing Initial Filling and Full Auto Cleaning" described in the service manual. (P.452~)

Note

- When the air purge tool is removed, ink may leak. Place a paper towel near the port before the work.
- Air purging is performed for one print head. You cannot perform air purging for multiple print heads.
- Use a paper towel to remove ink from the used air purge tool, and then ask the customer to store the tool.

The air purge can be performed by SP mode

1. Set SP2-012-004 to 7, and then execute it to rewrite all air purging flags of the print heads.
2. Perform Steps 7-11 of "エラー! 参照元が見つかりません。".
3. Execute SP2-012-005 to perform the air purge.
   - H1: Set the SP value to 1, and then execute it.
   - H2: Set the SP value to 2, and then execute it.
   - H3: Set the SP value to 4, and then execute it.
4. Perform Steps 13-19 of "エラー! 参照元が見つかりません。".
5. Execute SP2-010-001 to perform the head cleaning.
   - H1: Set the SP value to 1, and then execute it.
   - H2: Set the SP value to 2, and then execute it.
   - H3: Set the SP value to 4, and then execute it.
6. **Check the value of SP2-012-001 (Initial Operation Setting) after completing head**

cleaning for all print heads.
If the value is “0”, ink filling completes correctly.

If the value is not “0”, refer to “5. Troubleshooting -> Troubleshooting Information When Performing Initial Filling and Full Auto Cleaning” described in the service manual. (P.452~)

Model: Ko-P1	Date: 18-Dec-19	No.: RM0BY033

Subject: FSM correcntion on the left ventilation fan	Prepared by: H. Morishima
From: Service Promotion Sec., Global IP Sales Center	

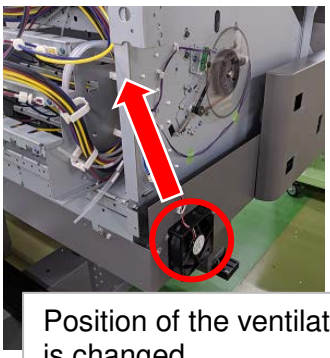
Classification:	☐ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☒ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2 ☐ Tier 0.5

Change:

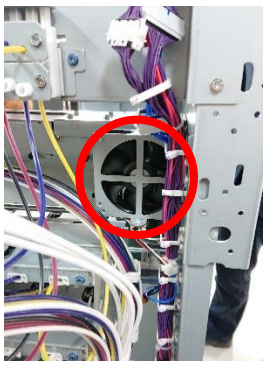
Please delete the description ~~**crossed out**~~ from your field service manual and add the description **bold in red** to your field service manual.

Reason:

To cool down the carriage drive motor, position of the left internal ventilation fan is changed from machine left side to backside of carriage drive motor.



Position of the ventilation fan is changed



Cut-in S/N:

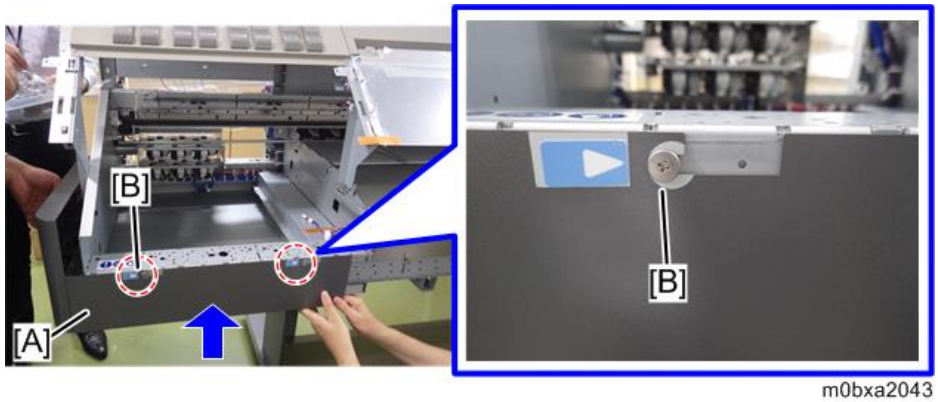
Product Name	Product Code	EDP	Cut-in S/N
Ricoh Pro L5130	M0BX17 (NA/LA)	342291	5350F100001 -
	M0BX27 (EU/AP)	342292	
Ricoh Pro L5160	M0BY17 (NA/LA)	342293	5360F100001 -
	M0BY21 (CHN)	342318	
	M0BY27 (EU/AP)	342294	

- **2. Installation > Main Machine Installation**
  > Installation for the Left Side of the Main Unit
  > Installing the Left Bottom Cover (P.57)

Installing the Left Bottom Cover

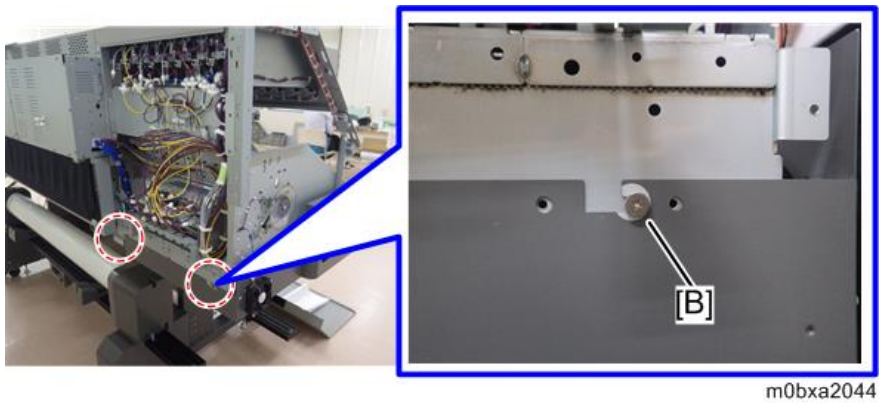
1. Attach the left bottom cover [A] from the lower side, and then hook the cutouts onto the stepped screws [B] of the main unit.

- Front side



m0bxa2043

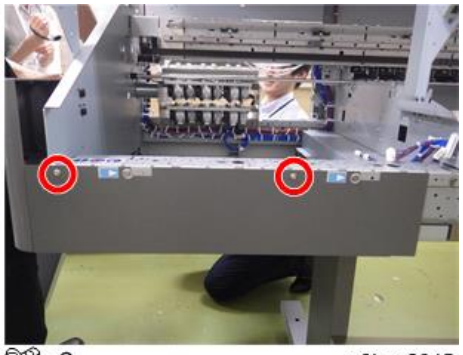
- Rear side



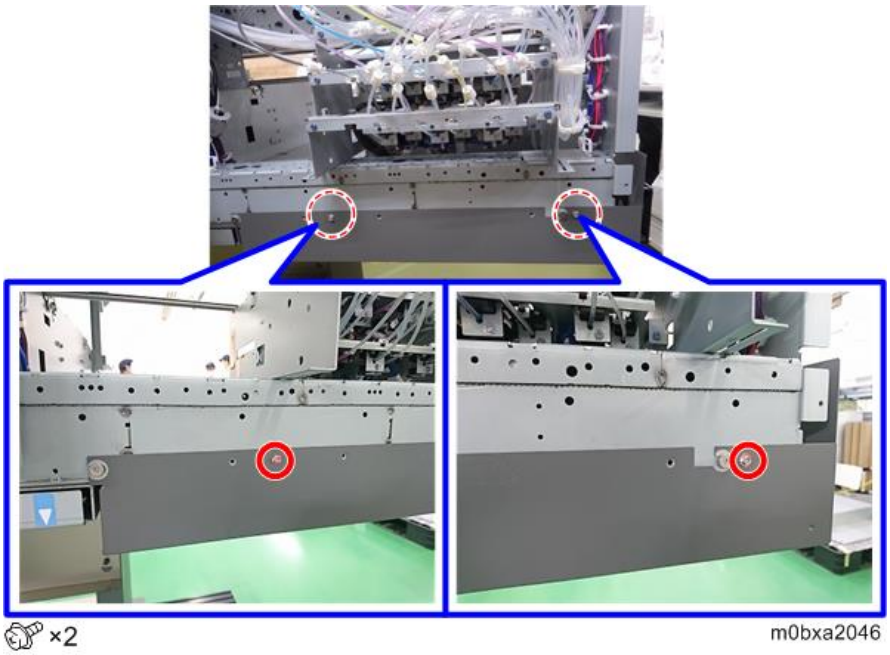
m0bxa2044

2. Fix the left bottom cover. (TAPPING SCREW:ROUND POINT:4X10)

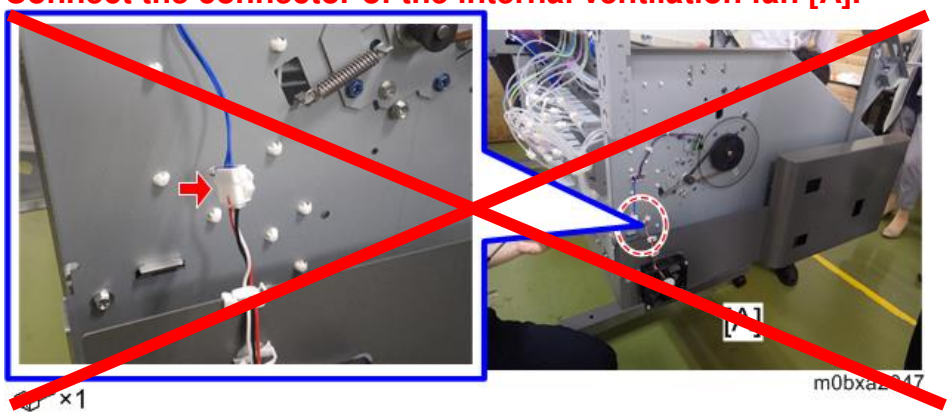
- Front side


×2 m0bxa2045

- Rear side



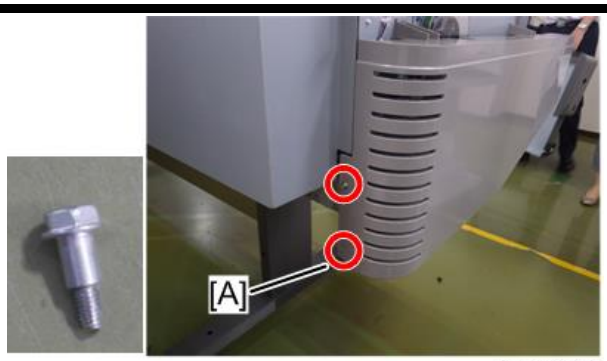
~~3. Connect the connector of the internal ventilation fan [A].~~



4. Reattach the removed covers.
If your customer uses the machine in the state of 4CW (C, M, Y, K, W), which is ink components type, reattach only the left side lower cover. (Do not reattach the left front cover, the left side upper cover, the rear left cover)

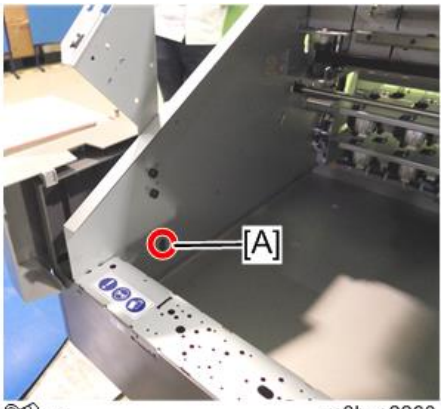
Note

When installing the left side lower cover, use the stepped screw provided with the main machine to retain the position [A]. (SCREW:M3:DIA4X5.6)



m0bxa2041

When attaching the left side lower cover, fix the position [A] with the screw. (TAPPING SCREW:ROUND POINT:4X10)

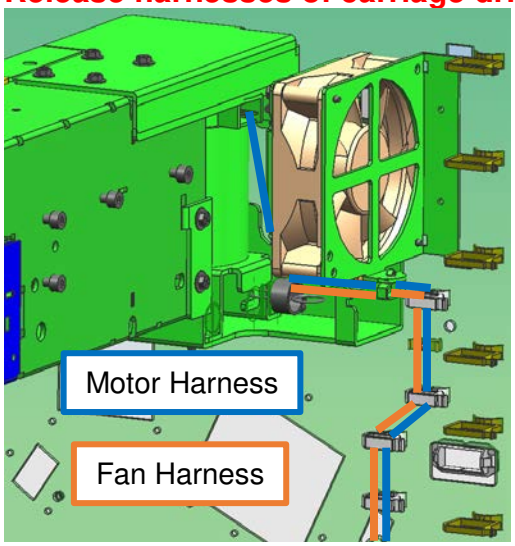


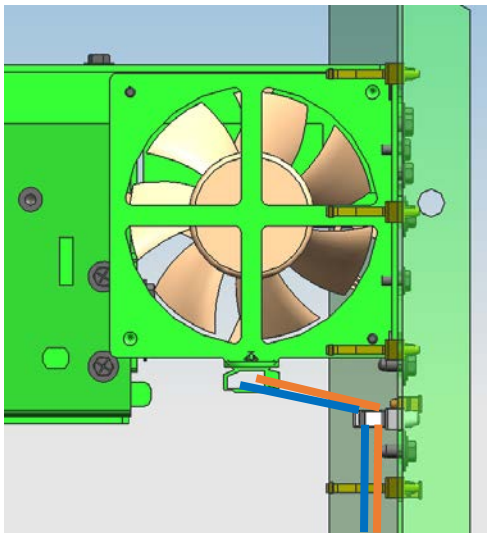
×1 m0bxa2260

- **3. Replacement and Adjustment > Carriage Unit > Carriage Drive Motor (P.255)**

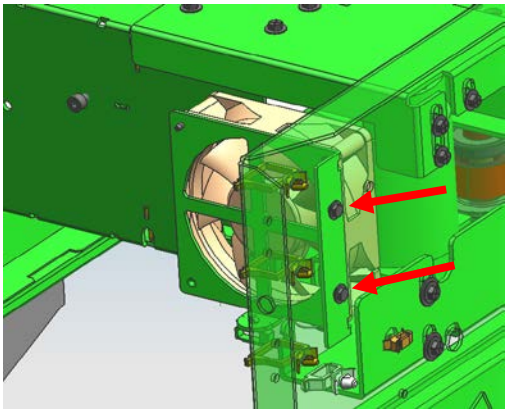
Carriage Drive Motor

1. Remove the rear left cover.
2. Remove the left side upper cover.
3. **Release harnesses of carriage drive motor and fan from the harness clamp.**

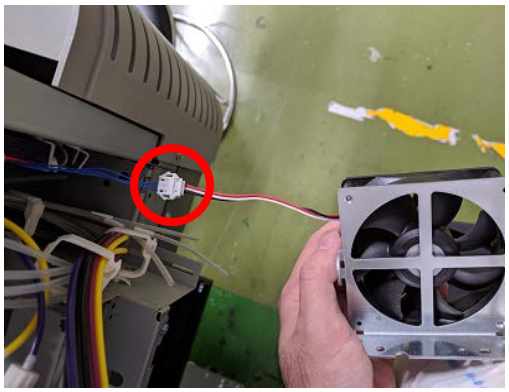




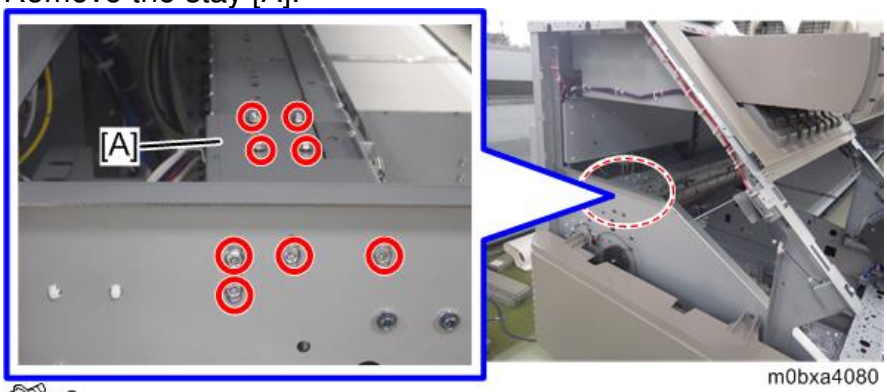
4. Remove the fan and bracket.



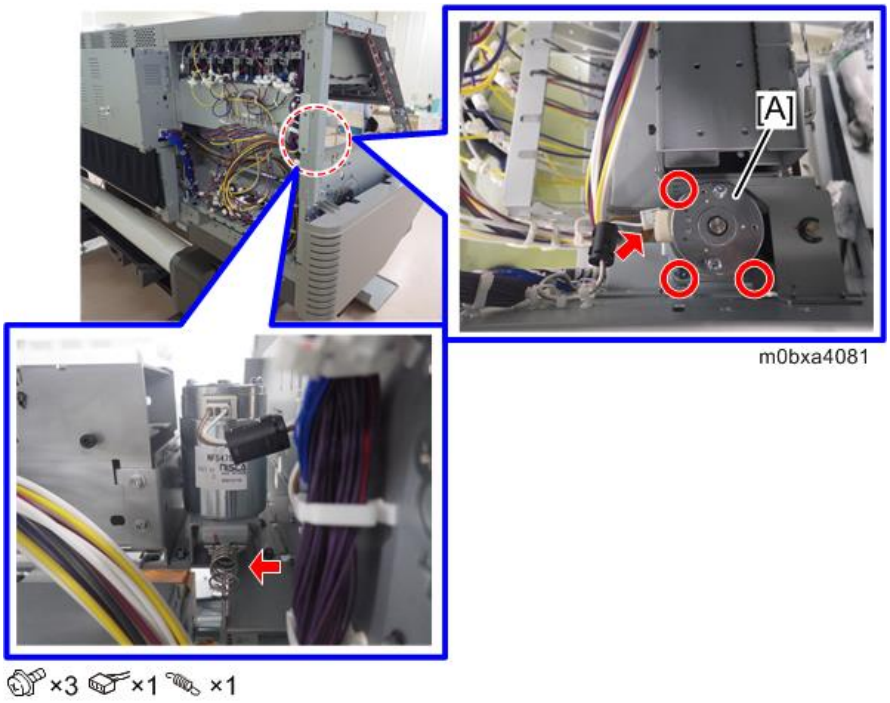
5. Disconnect the fan harness.



6. Remove the stay [A].



7. Remove the carriage drive motor [A] with the bracket.



8. Remove the carriage drive motor [A] from the bracket.