Model: **Ma-P1**	Date: 16-Jan-14	No.: RM153002

Subject: Firmware Release Note: Service Tool			Prepared by: F. Noguchi
From: 2nd PP Tech Service Sect., PP Tech Service Dept.			
Classification:	☐ Troubleshooting	☐ Part information	☒ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☒ Other (Firmware)	☒ Tier 2

This RTB has been issued to announce the firmware release information for the **Service Tool (firmware update, parameter up/download)**.

Version	Program No.	Effective Date	Availability of RFU
2.3	M1537881	1st Mass production	Not available

Note: Definition of Availability of RFU via @Remote
"Available" The firmware can be updated via RFU or SD card.
"Not available": The firmware can only be updated via CD-ROM or SD card.

Version	Modified Points or Symptom Corrected
2.3	1st Mass production

Model: Ma-P1	Date: 31-Oct-17	No.: RM153020

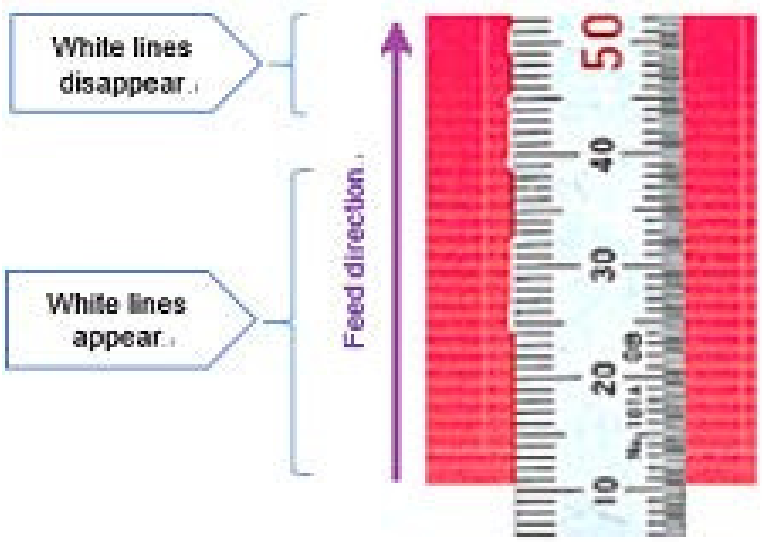
Subject: Troubleshooting of repeated nozzle missing			Prepared by: Kanji Nakano
From: PP CF/WF Sect., PP Field Quality Management Dept.,			
Classification:	☒ Troubleshooting	☐ Part information	☐ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☒ Tier 2 ☐ Tier 0.5

SYMPTOM

White lines appear during printing.

Note:

- The lines gradually disappear with use, but recur when periodic wiping is performed.
- The lines disappear when refresh or air purge is performed, but recur a few days later.



CAUSE

Ink is not discharged from the printhead nozzles (“nozzle missing” condition)

The ink inside the printhead is heated by a piezoelectric element during discharging. During printing, the discharge is continuous, so the heating time is short and the temperature remains normal.

However, during the wiping operation, one ink flow in one printhead is stopped. As a result, the temperature of the ink rises, and bubbles are formed in this ink.

SOLUTION

Do the following.

First:

Try the following.

Clean the nozzle
Clean the cap and wiper
Do air purge when aeration occurs in the ink supply tube

Note: As a side effect of the following actions, the density of the ink color for which the action is performed will decrease.

1. Lower the printhead drive voltage by 1V.
   Note: This will reduce the heat generated by the piezoelectric element.

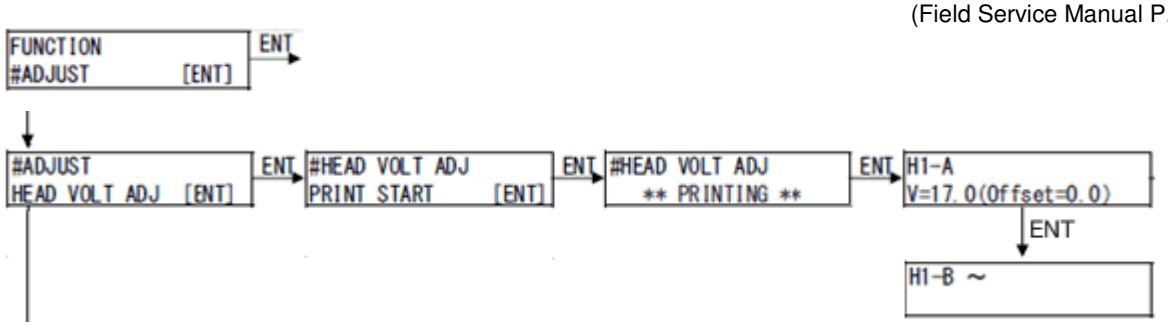
   - Nozzle — Magenta mainly
     4C/6C M [H1-A][H1-B]
     6C+W M [H1-A]

   - Wave — WF1 or WF2

   - Offset — -1V

   - Operation
     1) Enter Service Mode.
     2) [#ADJUST] > [HEAD VOLT ADJ] > [WF2] > [H1-A]...[H2-D]
        offset = 0V → -1V

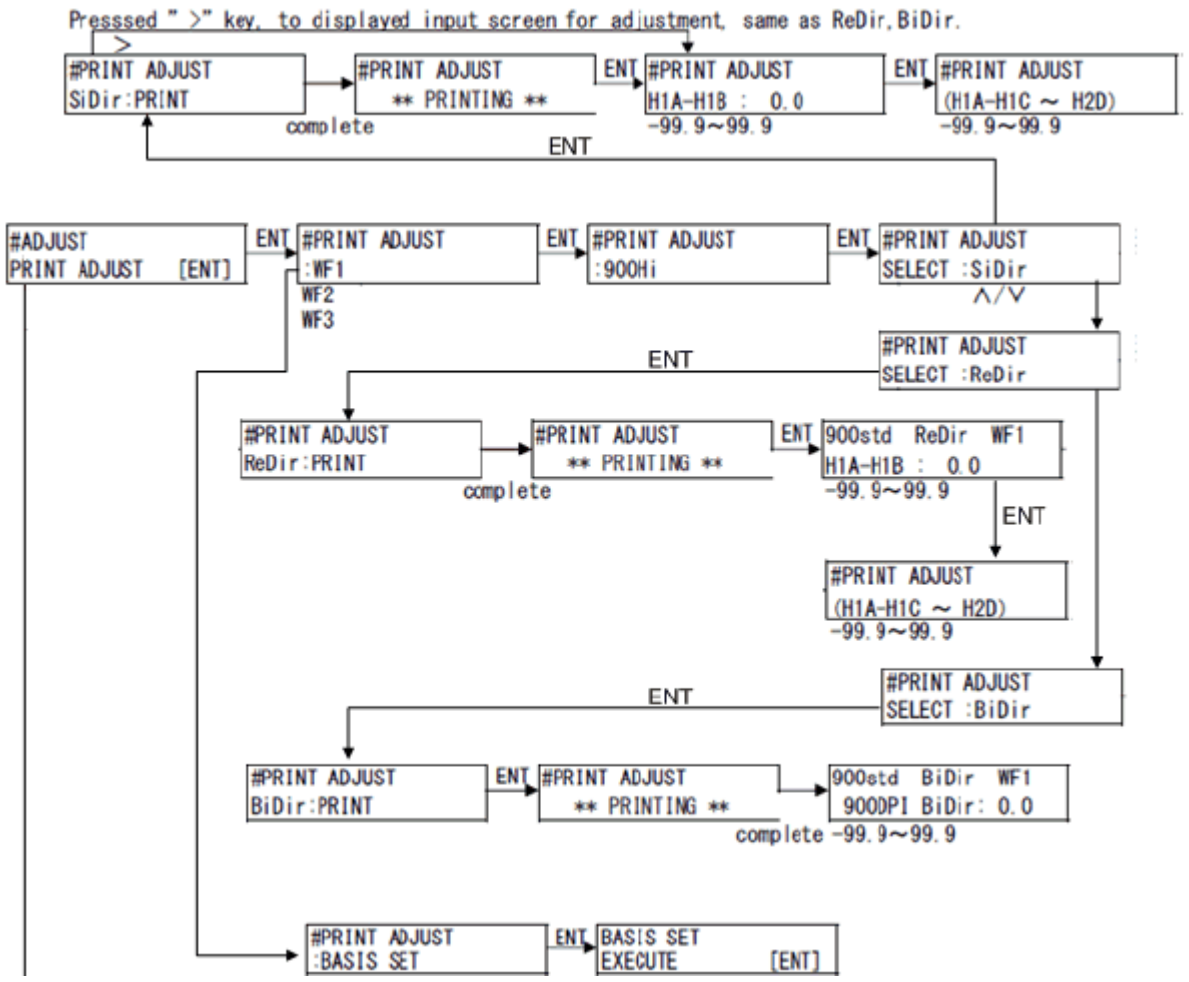
(Field Service Manual P.403)



2. Adjust the dot position
   Note: This is because the ink discharge speed may be changing, as shown on the next page.

   - Wave — All waveforms with the printhead drive voltage changed.
   - Resolution — All waveforms with the printhead drive voltage changed.

(Field Service Manual P.401)



3. If the symptom still occurs, set periodical wiping for the two printheads to “Simultaneous”.

Model: **Ma-P1**	Date: 16-Jan-14	No.: RM153003

Subject: Firmware Release Note: Printer Driver (RICOH Driver)			Prepared by: F. Noguchi
From: 2nd PP Tech Service Sect., PP Tech Service Dept.			
Classification:	☐ Troubleshooting	☐ Part information	☒ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☒ Other (Firmware)	☒ Tier 2

This RTB has been issued to announce the firmware release information for the **Printer Driver (RICOH Driver)**.

Version	Program No.	Effective Date	Availability of RFU
1.0	M1537880	1st Mass production	Not available

Note: Definition of Availability of RFU via @Remote
"Available" The firmware can be updated via RFU or SD card.
"Not available": The firmware can only be updated via CD-ROM or SD card.

Version	Modified Points or Symptom Corrected
1.0	1st Mass production

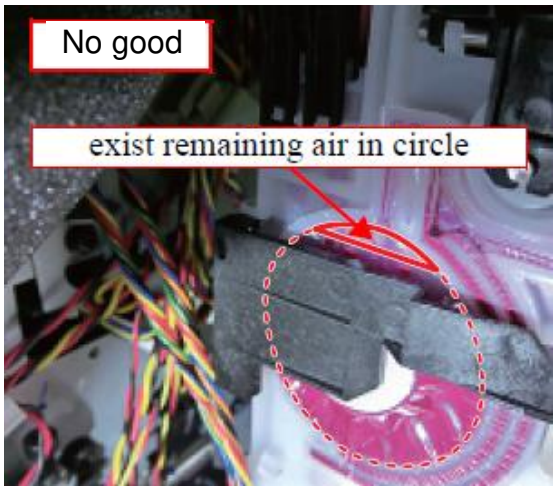
Model: Ma-P1	Date: 01-Apr-14	No.: RM153004

Subject: The air inside the damper cannot be fully purged	Prepared by: Y.Kurohashi
From: 2nd Tech Service sect,PP Tech Service Dept	

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

SYMPTOM

The air inside the damper cannot be fully purged with “Air PG (purge)”.



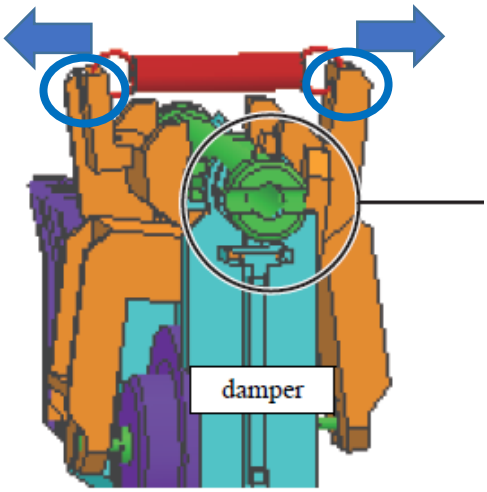
CAUSE

Not enough margin of error was built into the air purge valve in its assembled state, and as a result, the valve does not open as fully as expected.

SOLUTION

Move the parts circled in blue below (about 0.5mm each) **while the machine is performing “ink fill”.** This will widen the valve opening.

IMPORTANT 1: Be careful not to widen the opening too much.

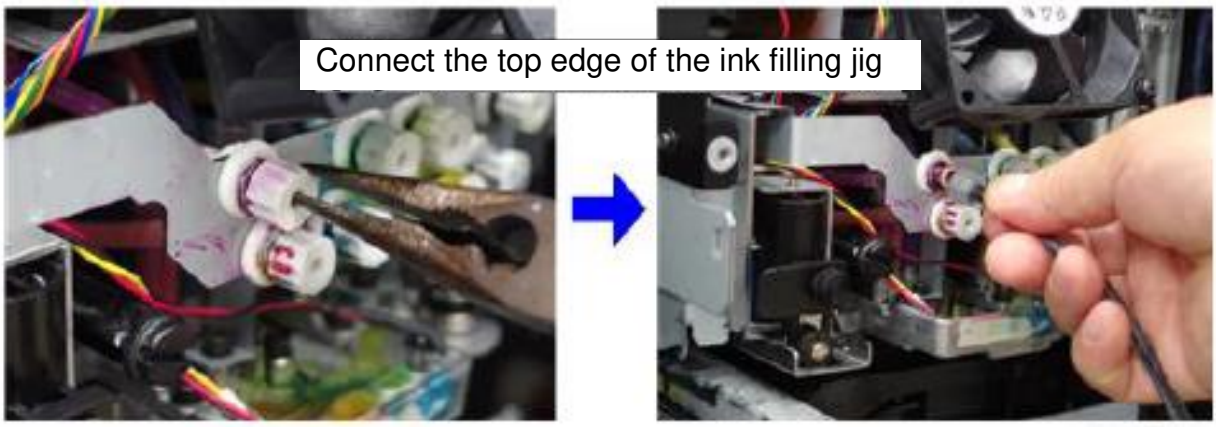


IMPORTANT 2:

Whenever you perform an air purge, make sure of the following **before you open the air purge port:**

1. The damper is filled sufficiently with ink, and
2. There is no air remaining in the damper

This is because if you open the port while there is still air inside the damper, this will lower the pressure inside the damper. As a result, the air purge will not be able to release all of the air inside the damper.



Model: Ma-P1	Date: 01-Apr-14	No.: RM153005

Subject: Colors are mixed on the Test Pattern printout	Prepared by: F.Noguchi
From: 2nd Tech Service sect,PP Tech Service Dept	

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

SYMPTOM

Colors are mixed on the Test Pattern printout if the ink is set for 6C or 6C+W.

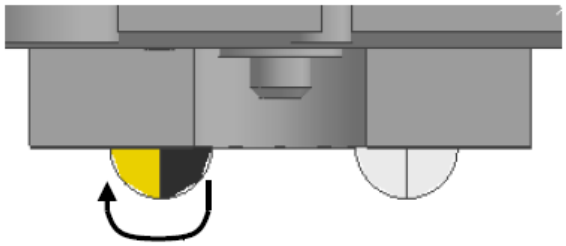
Note:

- This is especially noticeable with Y (yellow) and K (black), due to the contrast between these two colors.
- This does not occur with 4C, as the adjoining ink path is for the same color.

CAUSE

Air purging is performed separately for each individual ink path, which creates a pressure differential between a given path and its two adjoining paths. As a result, ink can then flow in the opposite direction and leak out of the nozzle.

6C+W (Head 2)



Ink (drops) flowing from high pressure (Y path) to low pressure (K path).
Neither path is purged of air.

SOLUTION

In the field

I. To prevent the symptom from occurring:

Purge the air from a given ink path **together with** (at the same time as) its adjoining path.
i.e. Paths 1+2 together, paths 3+4 together, paths 5+6 together, paths 7+8 together

IMPORTANT:

- Since there is only one ink tube per machine, **make sure to lay down a cloth, towel, or other similar object to absorb the ink** that will be released from the other (second) path.

- Do the following if the Y and K paths are next to each other (6C, 6C+W):
  1. Open the K port and connect the ink filling jig/tool.
  2. Open the Y port and discharge the ink in order to purge the air.
  3. Close the Y port as soon as all of the air has been completely purged.
  4. Close the K port.

II. If the symptom occurs:

Do the following if the symptom occurs, whether it was due to the CAUSE explained above or after the air purge procedure mentioned above.

1. Perform head cleaning 5-7 times.
2. If the symptom still occurs:
   1) Remove the ink from the damper and air purge tube.
   2) Clean the air purge tube
   3) Do ink fill again. (Damper: Charge)

Production line

A second air purge tube will be added to the accessories, to improve serviceability in the field.

Cut-in serial numbers

Applied from: May 2014 production

Model: Ma-P1	Date: 27-Jun-14	No.: RM153006

Subject: Parts Catalog Correction	Prepared by: Takuo Asada
From: 2nd Tech Service Sect., PP Tech Service Dept.	

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

Change: The following parts were newly registered as service parts.

Reason: To meet requests received from the field.

Part No.	Description	Page and Index No.		
11050211	CLAMP	26	-	4
M1531364	MIM:M514506:SCALE_BASE-R	14	-	16
M1531366	MIM:M514508:S_SIDE_PLT-R	20	-	16
M1531369	MIM:M514674:ROLL_GUID_BKT	22	-	9
M1531370	MIM:M514675:ROLL_GUID_BKT	22	-	4
M1531373	MIM:M514685:P_SENS_ANGLE	12	-	18
M1531376	MIM:M514688:MAINTE_SW_CVR	20	-	35
M1531386	MIM:M514703:CLAMP_LEVER_F	24	-	27
M1531387	MIM:M514704:CL_LINK_LX	24	-	23
M1531389	MIM:M514706:CLAMP_LEVER_R	24	-	17
M1531396	MIM:M514718:USB_JUNC_CVR	56	-	27
M1531398	MIM:M514720:ELECBOX_EXHST	56	-	1
M1531399	MIM:M514721:ELECBOX_COVER	56	-	3
M1531408	MIM:M514742:R-MNTE_CVR-D	6	-	23
M1531423	MIM:M514767:RIGHT-COVER	6	-	13
M1531424	MIM:M514768:LEFT-COVER	2	-	19
M1531426	MIM:M514770:Y_COVER_R_160	4	-	10
M1531427	MIM:M514774:L-MAINT_CVR-D	2	-	17
M1531431	MIM:M514778:CARTRIDGE_COV	2	-	3
M1531432	MIM:M514779:LED_COVER	42	-	9
M1531433	MIM:M514780:CART_GUIDE	4	-	1
M1531434	MIM:M514781:CARTRIDGE_BKT	4	-	5

M1531435	MIM:M514782:ELECBOX_COVER	6	-	12
M1531436	MIM:M514784:BACK_COVER-R	6	-	10
M1531438	MIM:M514787:Y_COVER_RR	6	-	1
M1531439	MIM:M514788:HEAD_COVER-R	32	-	5
M1531440	MIM:M514789:HEAD_COVER-L	32	-	15
M1531460	MIM:M514892:LEG-L	22	-	12
M1531461	MIM:M514893:RIGHT_LEG	22	-	5
M1531462	MIM:M514894:REINFORCE_PLT	22	-	11
M1531467	MIM:M514985:FFC_HOLDER	38	-	10
M1531477	MIM:M515002:HEATER_BASE_B	8	-	14
M1531478	MIM:M515004:HEATER_BKT_B	8	-	12
M1531479	MIM:M515006:T_SENSOR_HOLD	8	-	22
M1531480	MIM:M515031:F-SHT_HOLD-U_160	10	-	19
M1531481	MIM:M515032:F-SHT_HOLD-L_160	10	-	24
M1531482	MIM:M515033:F-SHT_HLD_BAS_160	10	-	23
M1531493	MIM:M515308:LURE_LOCK_COV	32	-	10
M1531499	MIM:M515894:ST_WIRE_COVER	20	-	37
M1531501	MIM:M516361:H-FAN_COVER	32	-	33
M1531512	MIM:M517334:HEAD_CVR	32	-	31
M1531522	MIM:M517705:H-FAN_CVR_BKT	8	-	29
M1531529	MIM:M517712:T-SENS_BKT_2	8	-	23
M1531537	MIM:M518218:W-FLT_MNT_CVR	2	-	24
M1531538	MIM:M518260:H-FAN_CVR_160	8	-	11
M1531539	MIM:M518263:HEAT_CVR_160	8	-	28
M1531540	MIM:M518264:RFLCT_BKT_160	8	-	19
M1531541	MIM:M518265:REFLECT_160-2	8	-	15
M1531542	MIM:M518266:HEAT_GRD2_160	8	-	10
M1531545	MIM:M518269:HEAT_SKIRT_160	8	-	8
M1531547	MIM:M518317:HEAT_CVR_U160	8	-	1
M1531550	MIM:M518320:SENS_CVR_L	18	-	40
M1531551	MIM:M518321:SENS_CVR_R	20	-	39
M1531552	MIM:M518664:BACK_COVER-LU	2	-	1

M1531553	MIM:M518665:H-HLDPLT_F160	12	-	7
M1531555	MIM:M518674:HEAT_CVR_BKT	8	-	27
M1531556	MIM:M518726:FIT_HLD_PLT	44	-	45
M1531575	MIM:M602116:ROLL_STOP_CVR	24	-	21
M1531589	MIM:M602229:TANK_TRAY	22	-	6
M1531590	MIM:M602250:CLAMP_LEVER	24	-	19
M1531599	MIM:M602829:H-LOCK_SCREW	38	-	25
M1531662	MIM:M801493:HDCFAN_FILTER	32	-	2
M1531663	MIM:M801495:PLTN_F_SHEET_160	10	-	21
M1531665	MIM:M801556:HEAT_INSLT_A_160	12	-	12
M1531666	MIM:M801557:HEAT_INSLT_B	12	-	14
M1531667	MIM:M801559:HEAT_INSLT_AD *130	12	-	13
M1531667	MIM:M801559:HEAT_INSLT_AD *160	12	-	13
M1531669	MIM:M801561:HEAT_INSLT_AD_160	12	-	15
M1531671	MIM:M801563:H-FAN_FILTER	32	-	14
M1531672	MIM:M801565:H-HARNS_SPNG_	38	-	14
M1531678	MIM:M801854:INSULATOR328 (130)	8	-	31
M1531678	MIM:M801854:INSULATOR328 (160)	8	-	31
M1531700	MIM:M906554:SPONGE260	12	-	32
M1531729	MIM:M908651:ADSORP_PAD	12	-	20
M1531738	MIM:M909931:ALMINIUM_SEAL	8	-	16
M1531739	MIM:M909996:VACUUM_SPONGE	12	-	27
M1531870	MIM:SSR15XW2GC:LM_GUIDE_160	14	-	15
M1531874	MIM:TM-96-1:PLUG_CUSHION_	6	-	3
M1531875	MIM:TM-96-10:PLUG_CUSHION_	4	-	8
M1531876	MIM:TSB-3509:EDGE_SADDLE	26	-	5
M1531886	MIM:VPRF308:MAL_LURE_LOCK	50	-	31
M1531887	MIM:VPRM308:FEM_LURE_LOCK	50	-	30
M1531892	MIM:M011743:BR_HOLDER_ASY	28	-	3

Model: Ma-P1	Date: 25-Jul-14	No.: RM153008

Subject: Additonal procedure in “Parameter Up/Download”	Prepared by: Y.Kurohashi
From: 2nd Tech Service sect,PP Tech Service Dept	

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

Service Manual Revision

[5.Service Tables] - [Parameter UP/Download]

The following were added:

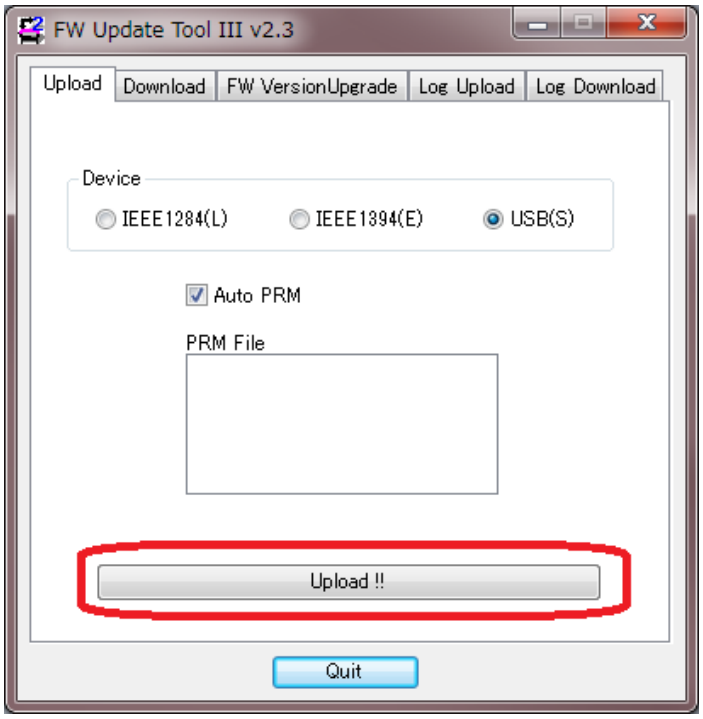
- Parameter upload and download procedures
- Necessary steps relating to the FW Update Tool III.
- Supplementary information for uploading log files

Procedures

Upload procedure (machine → host PC)

Step 1. Operation power ON + [▲] + [▼]
The machine starts in Parameter Up/Download mode. Ready for Up/Download.

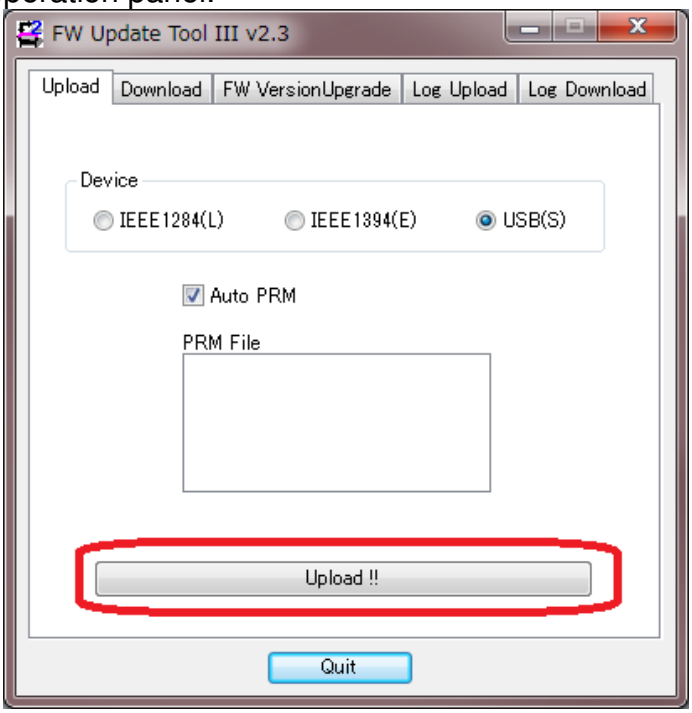
Step 2. Open FW Update Tool III in the host PC and select “Upload!!”.
The machine uploads the parameter data to the host PC.
When the upload is complete, “UP&DOWNLOAD END POWER OFF” is displayed on the LCD.



Step 3.Operation power OFF
Parameter upload completed

Note
* How to upload the LOG file:
Log files can be uploaded on the LCD using the same procedure described in Step 2.
Hold down the [ENTER] key on the operation panel.

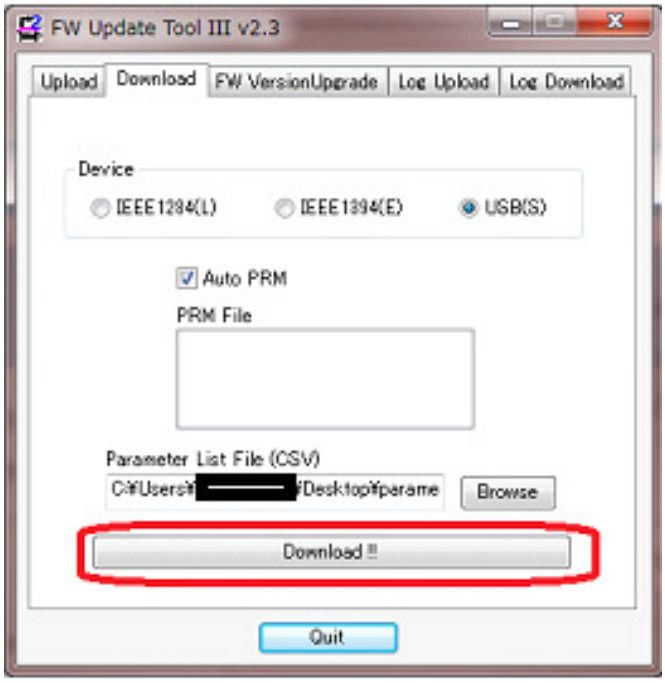
+



Download procedure (host PC → machine)

Step 1. Operation power ON + [▲] + [▼]
The machine starts in Parameter Up/Download mode. Ready for Up/Download.

Step 2. Open FW Update Tool III in the host PC and select “Download!!”.
The machine uploads the parameter data to the host PC.
When the Download is complete, “UP&DOWNLOAD END POWER OFF” is displayed on the LCD.



Step 3.Operation power OFF
Parameter Download completed.

Model: Ma-P1	Date: 5-Aug-14	No.: RM153007

Subject: Parts Catalog Correction	Prepared by: Takuo Asada
From: 2nd Tech Service Sect., PP Tech Service Dept.	

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

Change: The following parts were newly registered as service parts.

Reason: To meet requests received from the field.

Part No.	Description	Page and Index No.		
M1531005	MIM:03EN7691A7:THERMOSTAT	8	-	17
M1531006	MIM:109-049C:FINGER_GUARD *130	4	-	13
M1531006	MIM:109-049C:FINGER_GUARD *160	4	-	13
M1531007	MIM:109-049E:FINGER_GUARD	12	-	33
M1531008	MIM:109-049H:FINGER_GUARD *130	4	-	24
M1531008	MIM:109-049H:FINGER_GUARD *160	4	-	24
M1531009	MIM:109-139E:FINGER_GUARD	2	-	26
M1531009	MIM:109-139E:FINGER_GUARD	18	-	37
M1531010	MIM:150S2M380G:GEARED_BELT	30	-	11
M1531014	MIM:250-TN15-1:SYNCHRO_BELT	28	-	13
M1531023	MIM:80F-0603:BEARING	24	-	20
M1531024	MIM:80F-1006:BEARING	24	-	24
M1531030	MIM:BWP-50BN:CASTER	22	-	7
M1531032	MIM:CCLR-1:CORD_RING	34	-	36
M1531041	MIM:E106086:CASCADE_SHORT	56	-	36
M1531044	MIM:E106761:INK_LED_PCB	42	-	8
M1531046	MIM:E106806:CRG_FAN_ASY	18	-	18
M1531048	MIM:E106809:INLET_ASSY	56	-	25
M1531049	MIM:E106810:ACSW_CBL_160	18	-	29
M1531050	MIM:E106811:NF-POW_CABLE_	56	-	22
M1531051	MIM:E106812:DC-POW_CABLE_	56	-	28
M1531052	MIM:E106813:XY_MOT_CBL_160	28	-	18
M1531053	MIM:E106814:XY_MOT_CBL_130	28	-	18
M1531054	MIM:E106816:S_MOTOR_CABLE	48	-	29
M1531055	MIM:E106818:S_SENS_CABLE	20	-	28
M1531056	MIM:E106819:ADFAN_CBL_160	12	-	24
M1531057	MIM:E106820:THERMIST_CABL	56	-	35
M1531058	MIM:E106821:IO_CABLE_ASSY	56	-	34
M1531059	MIM:E106824:U-FAN_CBL_160	4	-	11
M1531060	MIM:E106826:PUMP_CBL_ASY	44	-	42
M1531061	MIM:E106827:INK_SOL_CABLE	42	-	38

Part No.	Description	Page and Index No.		
M1531062	MIM:E106828:INK_ID_CBL	42	-	29
M1531063	MIM:E106829:MN-HC_CBL160	56	-	29
M1531064	MIM:E106830:LINEARENC_CBL	40	-	11
M1531065	MIM:E106831:HEAD_CABLE	38	-	15
M1531066	MIM:E106833:PW_SENS_CABLE	38	-	39
M1531068	MIM:E106836:CRG_FAN_CBL	38	-	40
M1531069	MIM:E106837:HDC_PS_JUMPER	38	-	41
M1531070	MIM:E106839:REMOTE_SWITCH	6	-	20
M1531071	MIM:E106842:CVR_SENS_CBL_	18	-	7
M1531072	MIM:E106843:CVR_SENS_CBL_	20	-	15
M1531073	MIM:E106844:ADFAN_CBL130	12	-	24
M1531074	MIM:E106847:U-FAN_CBL130	2	-	11
M1531075	MIM:E106849:ACSW_CBL130	9	-	29
M1531076	MIM:E106859:MN-HC_CBL130	56	-	29
M1531077	MIM:E106861:CUTTERSOL_ASY	32	-	28
M1531078	MIM:E106950:CVR_SENS_CBL_	18	-	8
M1531078	MIM:E106950:CVR_SENS_CBL_	20	-	14
M1531079	MIM:E106951:VOL_SW_CABLE	18	-	28
M1531080	MIM:E106952:ACSW_JUNK_CBL	56	-	23
M1531081	MIM:E106953:CASCADE_SHORT	16	-	16
M1531082	MIM:E106963:ROOF_FUN_ASSY	38	-	34
M1531082	MIM:E106963:ROOF_FUN_ASSY *130	8	-	33
M1531082	MIM:E106963:ROOF_FUN_ASSY *160	8	-	33
M1531082	MIM:E106963:ROOF_FUN_ASSY *130	4	-	12
M1531082	MIM:E106963:ROOF_FUN_ASSY *160	4	-	12
M1531083	MIM:E106964:OUT_HEAT_CABL	18	-	27
M1531084	MIM:E106965:OUT_HEAT_CABL	8	-	38
M1531085	MIM:E106966:OUTHEATCBL160	8	-	37
M1531086	MIM:E106967:OUTHEATCBL130	8	-	37
M1531087	MIM:E106970:VOL_SWTCH_SW	10	-	11
M1531088	MIM:E107210:HEAT_PCB_CBL	18	-	20
M1531091	MIM:E107428:DAMP_SENS_CBL	34	-	15
M1531091	MIM:E107428:DAMP_SENS_CBL	36	-	22
M1531093	MIM:E107498:HEAT_CNC_CBL	12	-	28
M1531099	MIM:E107645:THERMIST_CBL	12	-	29
M1531100	MIM:E300482:ADSORPFAN_ASY	12	-	25
M1531103	MIM:E300555:PLTN_THERMIST	8	-	18
M1531103	MIM:E300555:PLTN_THERMIST	12	-	8
M1531104	MIM:E300604:P1.0-10-1100M	56	-	32
M1531105	MIM:E300771:FFC	42	-	7
M1531106	MIM:E300777:P1.25-20-250	56	-	31
M1531108	MIM:E300866:CODE_HEAT160	12	-	10

Part No.	Description	Page and Index No.		
M1531109	MIM:E300870:CODE_HEAT_130	12	-	10
M1531110	MIM:E300878:PLTN_THERMOST	10	-	7
M1531111	MIM:E300879:PLTN_THERMOST	10	-	16
M1531115	MIM:E300886:FFC_20P_160	16	-	17
M1531118	MIM:E300891:FFC_20P_130	16	-	17
M1531119	MIM:E300898:PLT_THERM_160	10	-	5
M1531120	MIM:E300899:THERMISTOR_AA_160	10	-	13
M1531121	MIM:E300901:PLT_THERM130	10	-	5
M1531122	MIM:E300902:THERM_AA130	10	-	13
M1531130	MIM:EAM-16-000:NOISE_FILTER	56	-	16
M1531131	MIM:F607ZZ:BEARING	30	-	14
M1531140	MIM:FTLLB220-1:FEM_PNL_MOUNT	34	-	35
M1531145	MIM:L420-1:L_FITTING	44	-	49
M1531148	MIM:LNS-1:PANEL_NUT	34	-	37
M1531150	MIM:M006891:Y_DRIV_PULLEY	30	-	10
M1531151	MIM:M006977:Y-T_PULLY_ASY	30	-	30
M1531165	MIM:M011742:BR_HOLDER_ASY *130	28	-	7
M1531165	MIM:M011742:BR_HOLDER_ASY *160	28	-	7
M1531207	MIM:M011892:T_JNT_M6_ASY	42	-	36
M1531225	MIM:M012139:CABLEBEAR_ASY_160	26	-	1
M1531226	MIM:M012140:CBL_BEAR_130	26	-	1
M1531232	MIM:M013524:VALVE_ASSY	42	-	22
M1531233	MIM:M602840:KB_COVER	6	-	15
M1531238	MIM:M013880:PLT_CVR-F_160	10	-	12
M1531239	MIM:M013881:PLT_CVR-F_130	10	-	12
M1531240	MIM:M013883:PLT_CVR-R_160	10	-	1
M1531241	MIM:M013884:PLT_CVR-R_130	10	-	1
M1531262	MIM:M014724:WIPER_ASSY	48	-	41
M1531271	MIM:M203155:PULLEY	28	-	12
M1531275	MIM:M205599:COVER_FLC_PIN	4	-	18
M1531275	MIM:M205599:COVER_FLC_PIN	6	-	7
M1531277	MIM:M205618:PR_SHAFT_(P) *130	24	-	8
M1531277	MIM:M205618:PR_SHAFT_(P) *160	24	-	8
M1531281	MIM:M205988:ROLL_GUIDE_160	22	-	10
M1531282	MIM:M205989:ROLL_GUIDE_130	22	-	10
M1531283	MIM:M206109:PF_COUPLING_C	28	-	6
M1531284	MIM:M206680:HEAD_AIR_EXTR	50	-	32
M1531285	MIM:M207034:H-INCLIN_CAM	40	-	36
M1531286	MIM:M207262:HEAD_ADJ_NUT	40	-	30
M1531288	MIM:M207264:YM_STUD	30	-	16
M1531290	MIM:M207298:PF_ROLLER_160	28	-	1
M1531291	MIM:M207299:PF_ROLLER_130	28	-	1

Model: Ma-P1	Date: 5-Aug-14	No.: RM153007

Part No.	Description	Page and Index No.		
M1531292	MIM:M207303:HEAD_U/D_LVR	40	-	3
M1531299	MIM:M301232:P_PLATEN_160	12	-	1
M1531300	MIM:M301234:P_PLATEN_130	12	-	1
M1531301	MIM:M400160:BELT_HOLDER_1	30	-	2
M1531302	MIM:M400161:BELT_HOLDER	30	-	6
M1531305	MIM:M400337:CLAMP_BASE_P *130	24	-	5
M1531305	MIM:M400337:CLAMP_BASE_P *160	24	-	5
M1531306	MIM:M400348:MEDIA_HOLDER_	12	-	5
M1531307	MIM:M400350:Y_BAR_BLOCK	18	-	17
M1531307	MIM:M400350:Y_BAR_BLOCK	20	-	24
M1531308	MIM:M400351:CL_LINK_BLOCK	24	-	25
M1531309	MIM:M400467:CARRIAGE_BASE	40	-	33
M1531313	MIM:M503398:SCALE_HOLD-R	14	-	19
M1531314	MIM:M503786:BELT_HOLDER_S	30	-	5
M1531315	MIM:M503978:COVER_FLC_BKT	4	-	19
M1531315	MIM:M503978:COVER_FLC_BKT	6	-	8
M1531326	MIM:M510437:LEG_STAY_160	22	-	1
M1531327	MIM:M510438:LEG_STAY_130	22	-	2
M1531334	MIM:M514471:CAP_RUB_HOLD	50	-	7
M1531334	MIM:M514471:CAP_RUB_HOLD	50	-	14
M1531339	MIM:M514478:HEAD_ADJ_SP	40	-	29
M1531340	MIM:M514479:H-U/D_SENS_DG	40	-	26
M1531357	MIM:M514498:MEDIA_PLATE-R	12	-	3
M1531358	MIM:M514499:MEDIA_PLATE-L	12	-	11
M1531371	MIM:M514676:ROLL_GUID_PLT	22	-	3
M1531388	MIM:M514705:ROLL_STOP_ARM	24	-	22
M1531405	MIM:M514727:SCALE_HOLD-L	14	-	11
M1531406	MIM:M514728:SCALE_HOOK	14	-	9
M1531452	MIM:M514849:DRIVE_MTR_BKT	48	-	27
M1531465	MIM:M514968:G5CP_MESH	50	-	8
M1531508	MIM:M517322:SUBTANK_BKT_R	34	-	26
M1531509	MIM:M517323:SUBTANK_BKT_L	34	-	24
M1531511	MIM:M517325:ADPT_SPACER	34	-	23
M1531557	MIM:M520160:SWITCH-DOG_L	4	-	25
M1531558	MIM:M520161:SWITCH-DOG_R	4	-	26
M1531559	MIM:M600520:LCD_WINDOW	6	-	16
M1531560	MIM:M600663:MAIN_CAM *130	24	-	3
M1531560	MIM:M600663:MAIN_CAM *160	24	-	3
M1531561	MIM:M600694:CLAMP_BUSHING *130	24	-	2
M1531561	MIM:M600694:CLAMP_BUSHING *160	24	-	2
M1531562	MIM:M601044:PUMP_MID_GEAR	48	-	26
M1531563	MIM:M601077:SCALE_HOLDER *130	14	-	20

Part No.	Description	Page and Index No.		
M1531563	MIM:M601077:SCALE_HOLDER *160	14	-	20
M1531567	MIM:M601182:CART_FRAME_V	54	-	20
M1531569	MIM:M601336:LINK	42	-	15
M1531569	MIM:M601336:LINK	54	-	12
M1531571	MIM:M601817:CART_GUIDE_U	54	-	3
M1531572	MIM:M601818:CART_GUIDE_D	54	-	4
M1531576	MIM:M602118:HEAD_GUARD_L	4	-	3
M1531577	MIM:M602123:AD_PUSHER	40	-	32
M1531578	MIM:M602126:INCLI_ADJ_LVR	40	-	35
M1531579	MIM:M602128:CARTRIDGE_FRM	42	-	23
M1531580	MIM:M602129:CART_GUIDE	42	-	25
M1531581	MIM:M602130:CART_BASE_U	42	-	11
M1531582	MIM:M602131:CART_BASE_D	42	-	14
M1531583	MIM:M602135:KEY_TOP	6	-	19
M1531585	MIM:M602224:SCALE_STOPPER	14	-	21
M1531588	MIM:M602228:SWITCH_COVER	18	-	5
M1531588	MIM:M602228:SWITCH_COVER	20	-	12
M1531597	MIM:M602804:PUMP_MID_GEAR	44	-	40
M1531597	MIM:M602804:PUMP_MID_GEAR	52	-	10
M1531597	MIM:MP-M011571:TUBE_PUMP_ASY	52	-	12
M1531620	MIM:M603427:FRT_CVR_130	4	-	17
M1531621	MIM:M603428:FRT_CVR_160	4	-	17
M1531622	MIM:M700322:PINCH_ROLLER_ *130	24	-	7
M1531622	MIM:M700322:PINCH_ROLLER_ *160	24	-	7
M1531630	MIM:M700678:CORNER_GUARD	8	-	6
M1531632	MIM:M700694:TUBE_SEAL_RUB	34	-	7
M1531632	MIM:M700694:TUBE_SEAL_RUB	36	-	14
M1531635	MIM:M700727:DAMP_RUB_STOP	34	-	12
M1531635	MIM:M700727:DAMP_RUB_STOP	36	-	19
M1531635	MIM:M700727:DAMP_RUB_STOP	38	-	44
M1531638	MIM:M800565:SCALE_SPRING	14	-	10
M1531639	MIM:M800569:Y_SPRING	30	-	27
M1531641	MIM:M800699:SHEET_SP *160	10	-	22
M1531641	MIM:M800699:SHEET_SP *130	10	-	2
M1531642	MIM:M800857:CART_PLT_SP	54	-	23
M1531643	MIM:M800966:PUSHER_SPRING	40	-	31
M1531644	MIM:M800977:X_BELT_SPRING	28	-	21
M1531645	MIM:M800979:CLAMP_SPRING *130	24	-	6
M1531645	MIM:M800979:CLAMP_SPRING *160	24	-	6
M1531646	MIM:M800980:CLAMP_LINK_SP	24	-	13
M1531647	MIM:M801089:SNAP_PIN_A	42	-	16
M1531649	MIM:M801115:CL_STOPPER_C_	40	-	19
M1531650	MIM:M801441:C_BASE_PAD	50	-	22

Part No.	Description	Page and Index No.		
M1531652	MIM:M801448:BELT_TENS_SP_	30	-	18
M1531653	MIM:M801449:JAM_SENSOR_SP	38	-	22
M1531654	MIM:M801468:CARRIAGE_INCL	40	-	41
M1531655	MIM:M801469:Y_DRIVE_BELT_160	30	-	1
M1531657	MIM:M801471:BEAR_BUFFER_160	26	-	3
M1531658	MIM:M801473:BEAR_BUFFER_130	26	-	3
M1531661	MIM:M801492:BEAR_ABSO_PAD	26	-	11
M1531713	MIM:M908510:KB_SHEET_200	6	-	21
M1531742	MIM:MF105ZZ:BEARING	28	-	20
M1531743	MIM:MF148ZZ:BEARING	28	-	10
M1531850	MIM:MTLL420-1:LURE_FITTING	44	-	15
M1531850	MIM:MTLL420-1:LURE_FITTING	44	-	46
M1531850	MIM:MTLL420-1:LURE_FITTING	46	-	11
M1531871	MIM:TK-24:RUBBER_FOOT	20	-	23
M1531872	MIM:TL-105:MAGNET_CATCH	18	-	26
M1531872	MIM:TL-105:MAGNET_CATCH	20	-	13
M1531873	MIM:TL-295-2:MAGNET_CATCH	6	-	9
M1531881	MIM:VFI236:LURE_FITTING	50	-	35
M1531891	MIM:AJ8202WWF:SWITCH	56	-	26

Model: Ma-P1	Date: 16-Oct-14	No.: RM153009

Subject: Modification kit for quality improvement			Prepared by: Y.Kurohashi
From: 2nd Tech Service sect,PP Tech Service Dept			
Classification:	☐ Troubleshooting	☐ Part information	☒ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☒ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2

SYMPTOMS

1. Interference between the wiper and the wiper bracket generates abnormal sound on a brand new machine.
2. The cutter blade interferes with its protection cover and cannot function.
3. Filling ink on a brand new machine causes ink overflow error, because the cap suction does not work properly.
4. Black ink mixes in the Y head on 6C model, because air purging is performed separately for each ink path, which creates a pressure differential between a given path and its two adjoining paths. (See RTB No: M153005 for details.)
5. Cannot purge air from the damper on a brand new machine, because the opening of the air purge valve was set too small.

SOLUTION

Production line:

Modifications to resolve the above symptoms were applied from July 2014 production.

<Cut-in serial numbers>

M152-17	Units applied with the modifications are not manufactured yet.
M153-17	T494X70001
M152-27	Units applied with the modifications are not manufactured yet.
M153-27	T494X70001

In the field:

- **For units that include the modification kit as an accessory**
  Either “Kit A” or “Kit B” is included as an accessory, which depends upon the modification level of the machines when they leave the factory. See instructions included in the kit to replace the parts.

- **For units that do not include the modification kit as an accessory**
  Procure “Kit A” and replace the parts by following the instructions included in the kit.

The modification kit is inserted to the location circled in red in the photo below.

<Part information>

- Part number : M1539900
- Part description : MIM:M016086:MODIFICATION **KIT TYPE A**
- "Kit A" can be procured as a service part. "Kit B" is not supplied as a service part.

Symptom #	Part description	Q'ty	Kit A P/N: M1539900	Kit B
1	Drive motor BKT	1	Included	-
2	Cutter ass'y 2	1	Included	-
	Cutter ass'y positioning jig	1	Included	-
3	Cap ass'y	1	Included	Included
4	Air purge tube ass'y	1	Included	Included
5	Damper valve opening shaft	4	Included	Included
	Valve opening spring	4	Included	Included

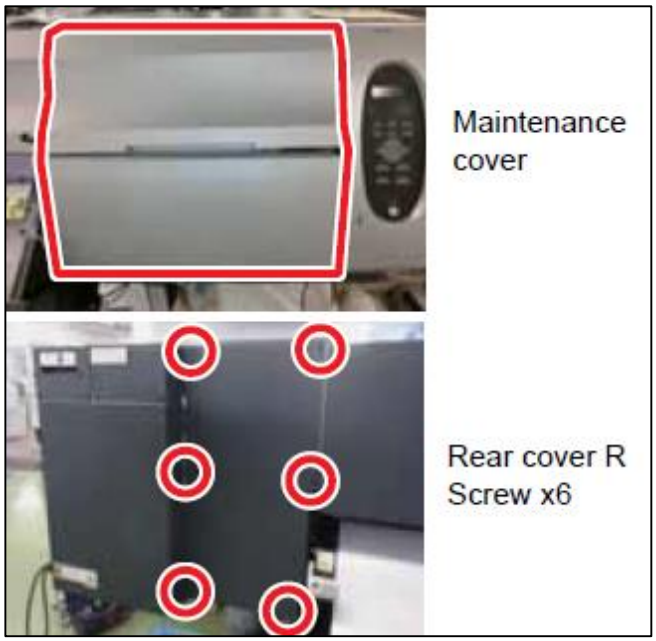
A label is attached to the side of the box to indicate modification kit "A" or "B."

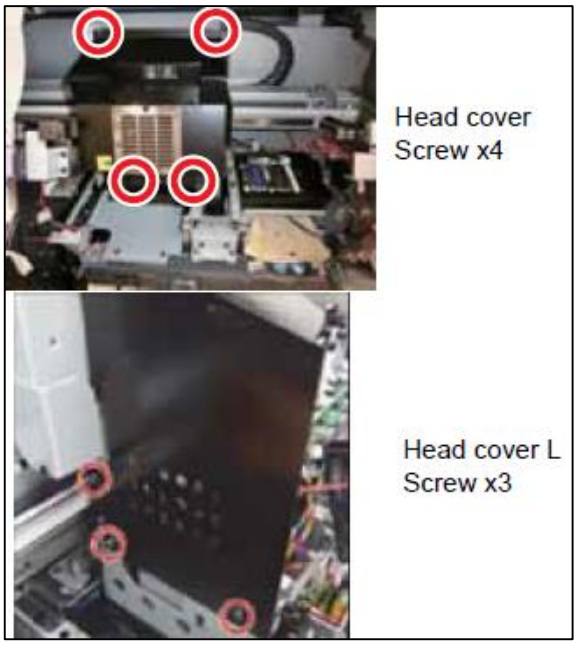
Procedure

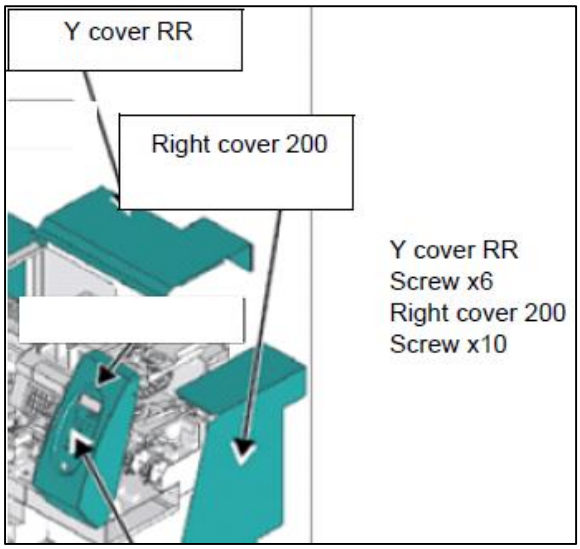
* Instruction for replacing the parts is included in the kit.

A) Removing the covers

1. Remove the following covers.
   - Maintenance cover
   - Rear cover R (Screw x6)
   - Head cover (Screw x4)
   - Head cover L (Screw x3)
   - Y cover RR (Screw x6)
   - Right cover 200 (Screw x10)

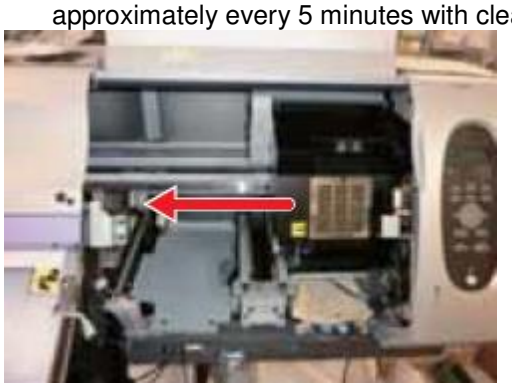




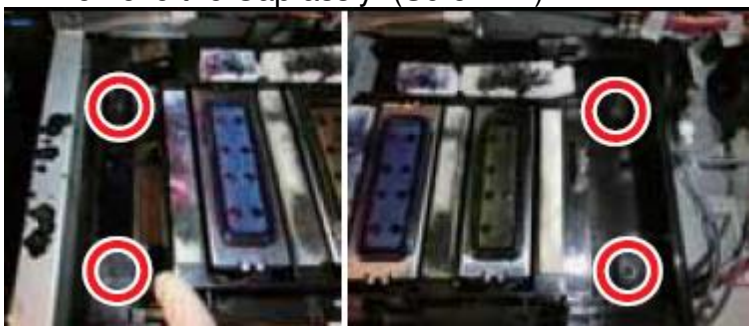


B) Replacing the Cap Ass'y

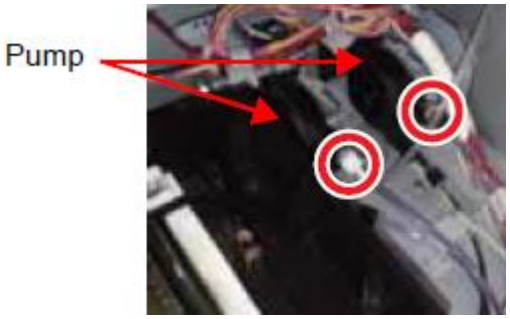
2. Lay down paper towels or similar objects beneath the tubes before working, to prevent ink from spilling.
3. Move the carriage to the left to release the cap from the head.
   If the cap was released from a head of an ink-charged printer, wipe the nozzles periodically at approximately every 5 minutes with cleaning fluid and cotton ciegal.



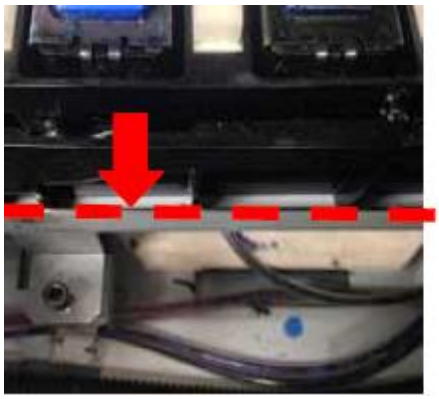
4. Remove the Cap ass'y. (Screw x4)



5. Remove the tube between the cap and the pump.
   One tube is connected to each cap.



6. Attach the new Cap ass'y by pressing down the metal plate at the front as you fasten the screws.



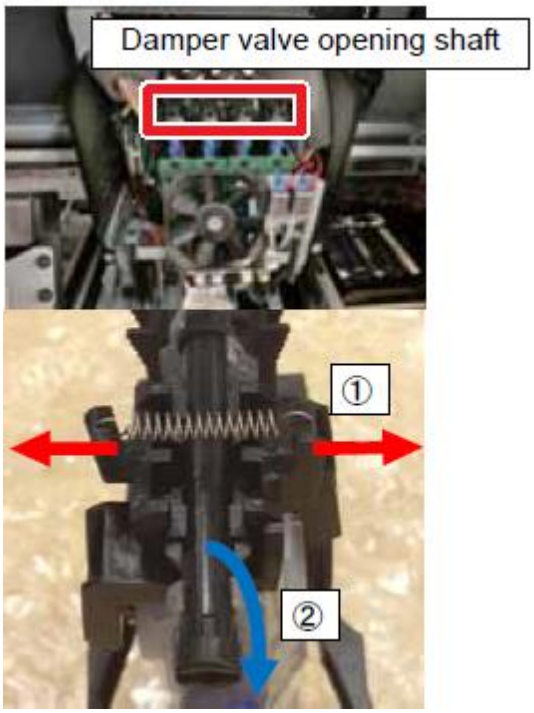
Press to the front,
and then screw.

7. Attach the tube between the cap and the pump.
   Make sure to connect the left cap to the left pump.

8. Move the head to its original position.

C) Replacing the Damper valve opening shaft

9. Remove the damper valve opening shaft. (black shaft x4)
   9-1. Stretch the arms to create a larger space.
   9-2. Pull to remove the shaft from the hook.

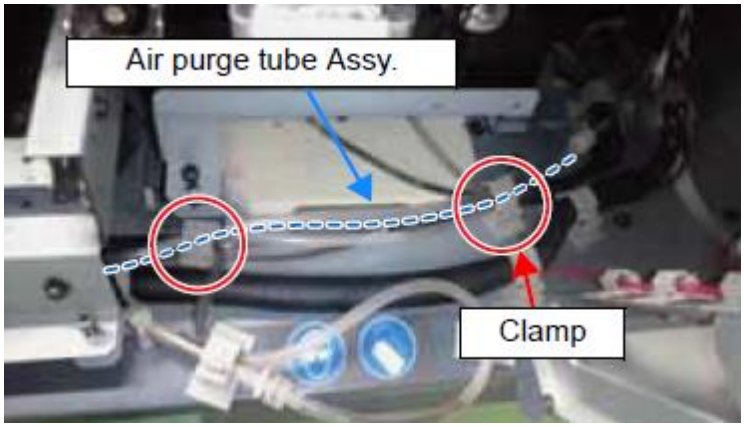


10. Install the new damper valve opening shaft. (white shaft x4)
    10-1. Stretch the arms to create a larger space.
    10-2. Insert the shaft so that it fits firmly into the hook.

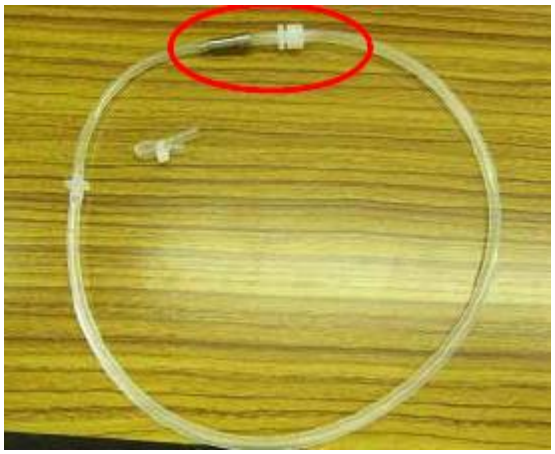
- If the springs attached to the arms are worn out, replace them with the valve open-close springs supplied.

D) Adding the Air purge tube

11. Fix the Air purge tube ass'y with the clamps under the cap at two locations.
    - To enable distinction with the original air purge tube, route and clamp the additional air purge tube to the upper path.



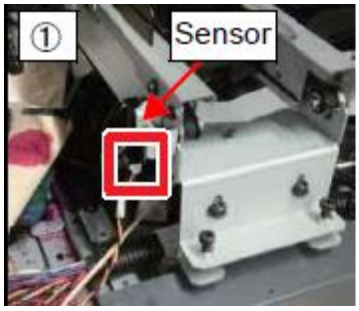
- When storing the tube, route it through the two clamps and make a loop by connecting the ends.
- See RTB RM153005 for how to use the additional air purge tube.

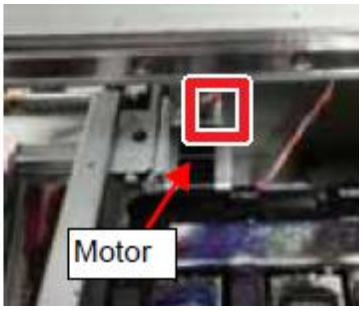


E) Replacing the Drive motor bracket (This procedure applies to Kit A only.)

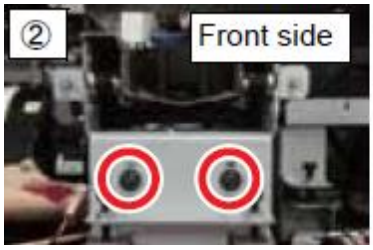
12. Remove the Wiper ass'y from the printer.
    - Use paper towels when removing the Wiper Ass'y, to prevent ink from spilling.

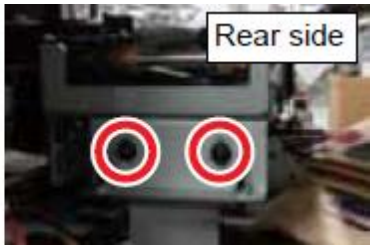
12-1. Remove the connectors from the sensor and motor.



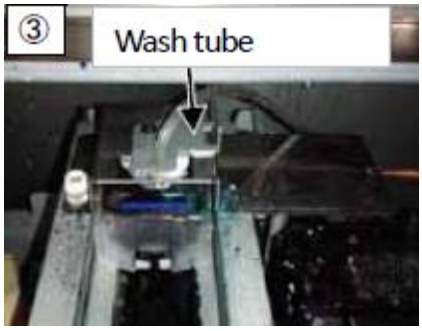


12-2. Remove the screws from the brackets on front and rear sides. (x4)



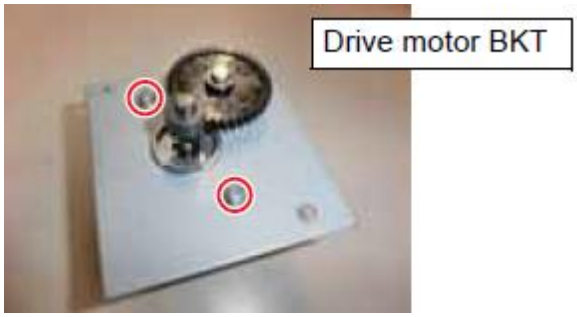


12-3. Remove the wash tube.

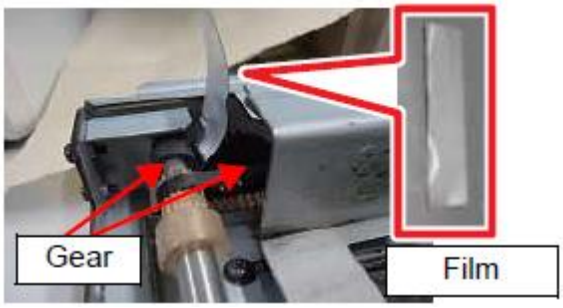


13. Remove the Drive motor ass'y from the Wiper ass'y. (Screw x2)

14. Replace the Drive motor bracket with the new one. (Use the same motor.) (Screw x2)

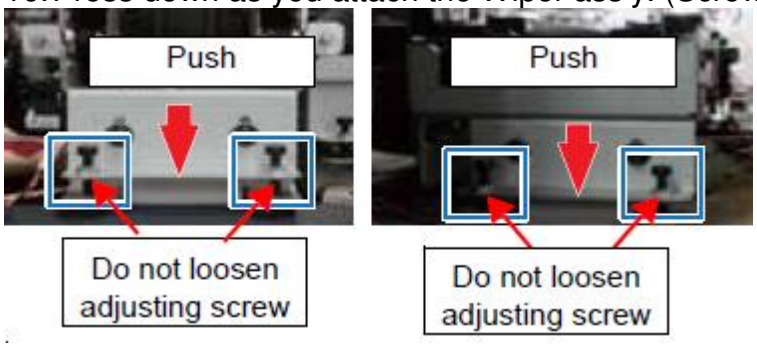


15. Attach the Drive motor ass'y.
    15-1. Slide in the film between the middle gear and the drive shaft gear.



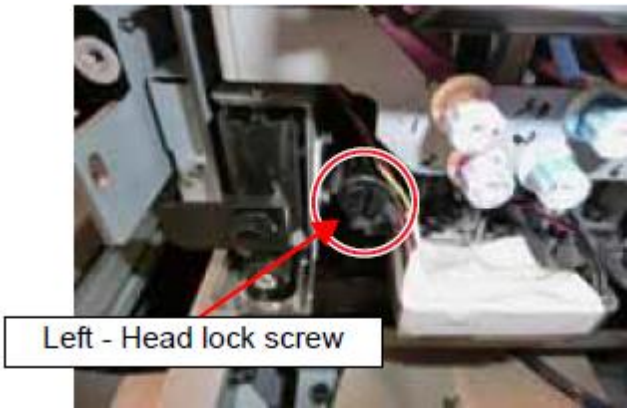
    15-2. Attach the drive motor bracket, by pushing and turning in the direction of the arrow.

16. Press down as you attach the Wiper ass'y. (Screw x4)



F) Replacing the Cutter unit (This procedure applies only to Kit A.)

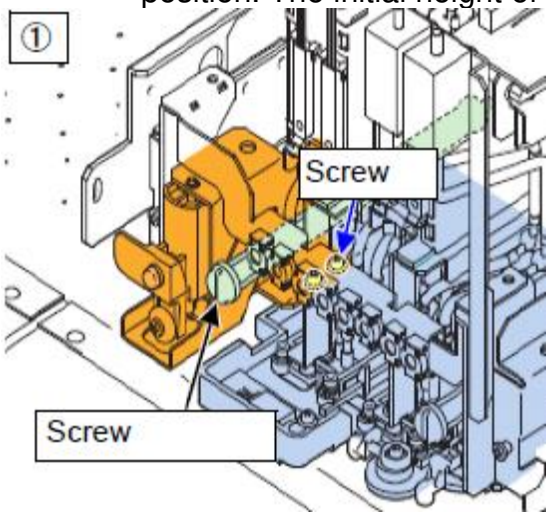
17. Remove the Head lock screw at the left side of the carriage. (Screw x1)



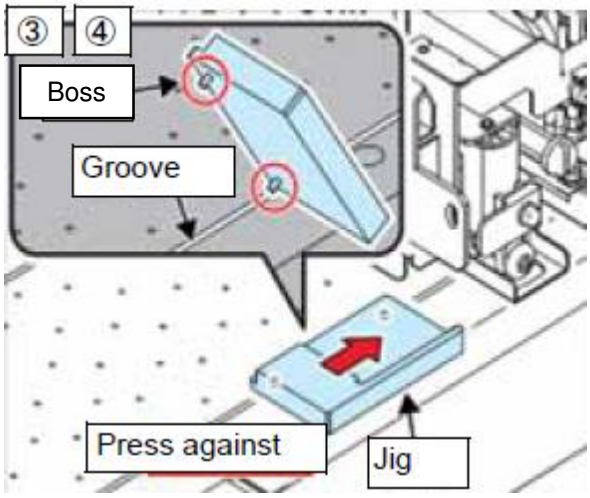
18. Remove the screw fixing the Lure Lock bracket at the left side. (Screw x1)

19. Remove the Cutter blade and Cutter unit. (Screw x2, Connector x1)
IMPORTANT: Work with extra care to avoid injuries.

20. Install the new Cutter ass'y, and use the positioning jig to fix the cutter blade position.
    20-1. Use the cutter unit screws (x2) to temporarily fix the unit. Tighten the screws just enough to support the unit.
    20-2. Press down the clamp lever.
    IMPORTANT: Adjust the cutter position while the clamp lever is in the lowered position. The initial height of the head should be set in the L range.



    20-3. Set the jig on the platen so that the bosses (x2) on the bottom fit with the fittings on the platen media plate.
    20-4. Attach the jig to the head by sliding the jig toward the head until it stops.

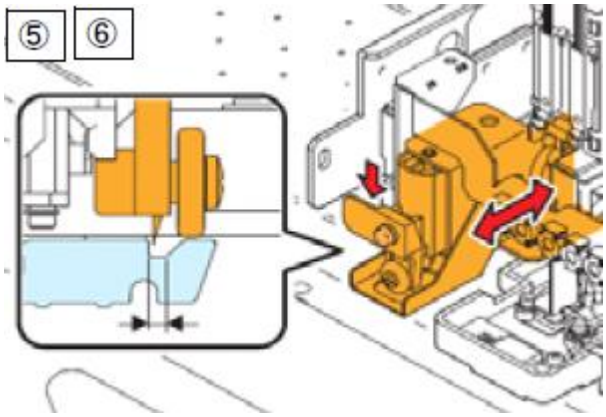


20-5. Lower the cutter blade until it fits into the groove. Verify that the front and back of the unit are aligned, and then fix the position by tightening the screws.

- The groove is slightly wider than the blade width. Make sure to adjust the blade position within the groove. If the jig is not in hand, lower the cutter blade until it reaches the platen, and fix the position when the blade fits into the groove.

20-6. Move the head unit manually and press down the Cutter blade ass'y at the right, center and left positions of the platen, to check front-to-back alignment.

- See "Adjustment of the Mounting Location for the Cutter" in the field service manual for details.



G) Attaching the covers / Wiping test

21. Attach the covers removed in step 1.

22. Check the wiping operation.
    22-1. Set the head gap to “low.”
    22-2. Turn the power ON.
    22-3. Do the cleaning and verify proper operation.

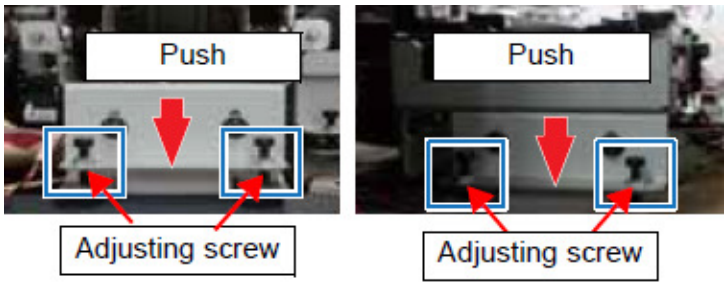
[Points to check]
- Check if the ink on the nozzles is cleanly wiped off.
- Run a test print and verify proper discharge of the ink.

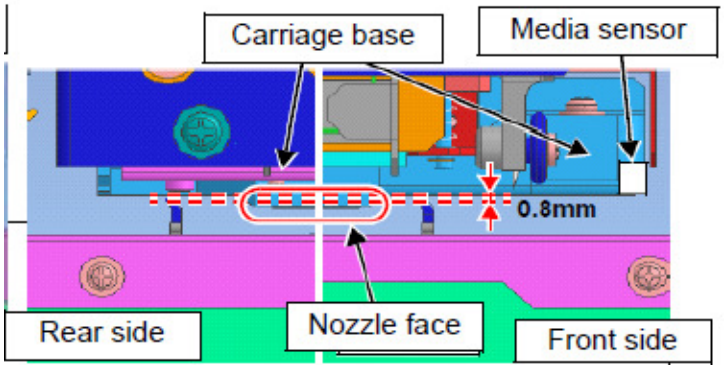
    22-4. Do the same wiping operation, this time with the head gap set to “high.”
    22-5. If the wiping was not performed normally, adjust the height of the wiper and reattach the “Drive motor bracket.”

<Wiper height adjustment>
Adjust the wiper height, if necessary.

1. Set the head gap to “Low.”
2. Adjust the wiper position using the adjusting screws so that the tip of the wiper barely contacts the front and rear sides of the carriage base. (The gap should be approx. 0.8mm.)

See “Adjustment of the Wiper Height” in the field service manual for details.





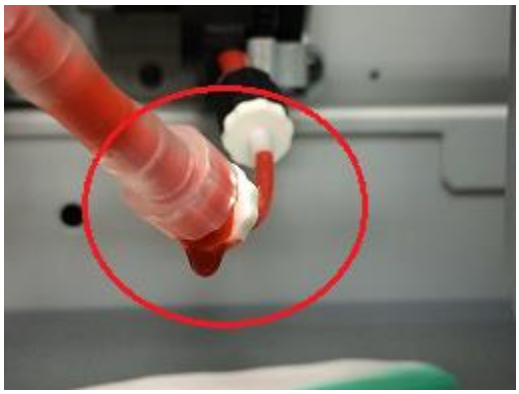
Model: Ma-P1	Date: 22-Oct-14	No.: RM153010

Subject: Request to tighten the fittings to prevent ink spillage	Prepared by: Y. Kurohashi
From: 3rd Tech Service sect, PP Tech Service Dept	

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

SYMPTOM

Ink spills from the fittings.



CAUSE

Fittings were not completely tightened in the production line.

SOLUTION

Production line:

Torque applied for fastening the fittings is checked from August 2014 production.

<Cut-in serial numbers>

M152-17	Units applied with the modifications are not manufactured yet.
M153-17	Units applied with the modifications are not manufactured yet.
M152-27	Units applied with the modifications are not manufactured yet.
M153-27	T494X90001

In the field:

<Affected serial numbers>

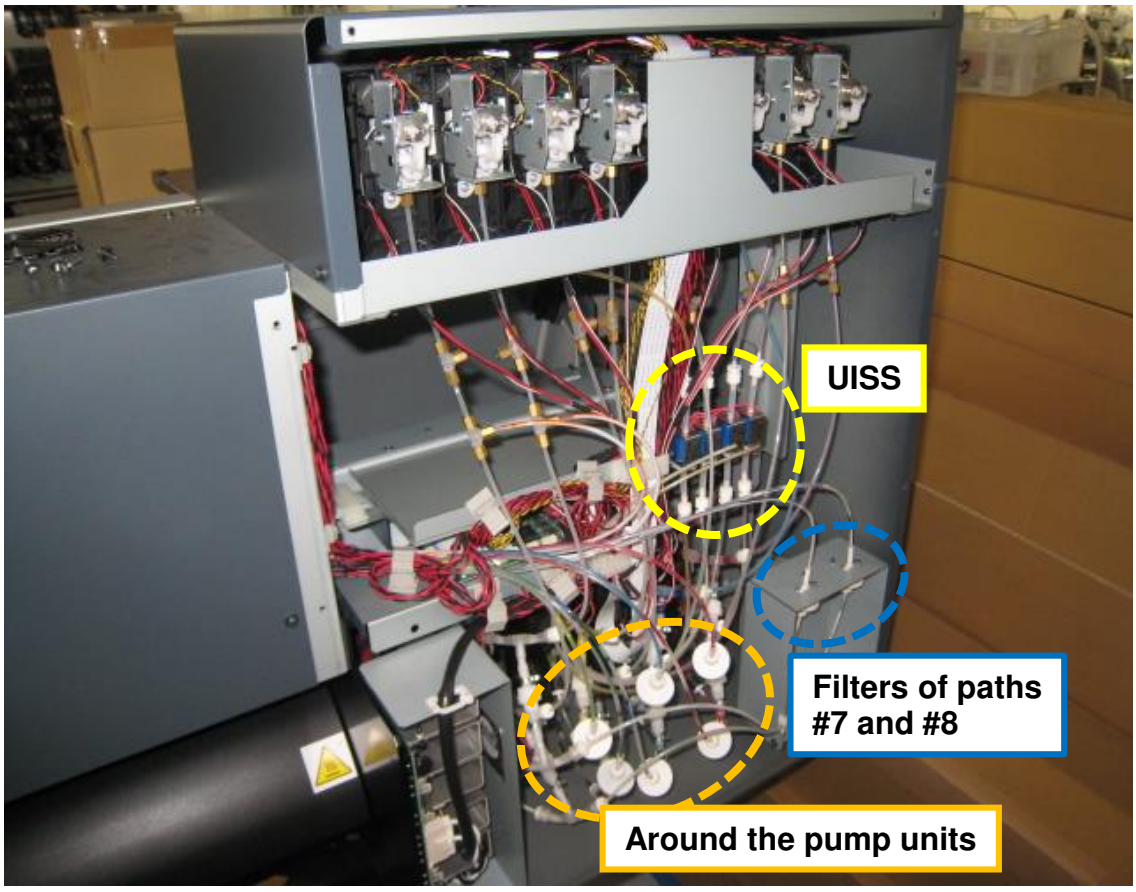
M152-17	T483XA00006 - T484X500002
M153-17	T493XA00026 - T494X600016
M152-27	T483XA00001 - T484X600002
M153-27	T493XA00001 - T494X700003

For new site installs:

Fully tighten the fittings before filling ink.

For machines already installed in customer sites:

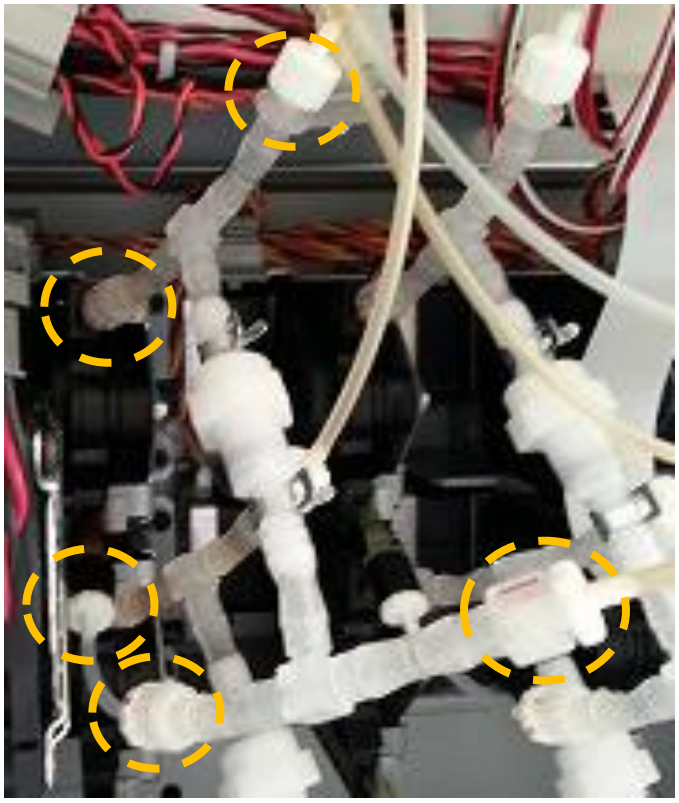
Visit customer sites as soon as possible and tighten the fittings.

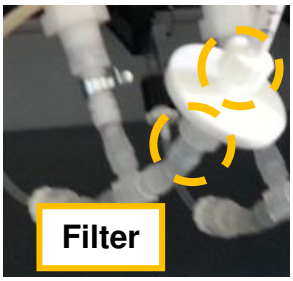


Model: Ma-P1	Date: 22-Oct-14	No.: RM153010

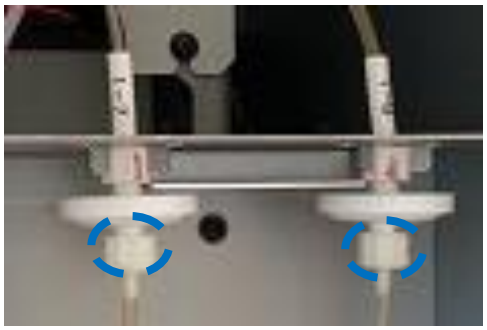
<Around the pump units>

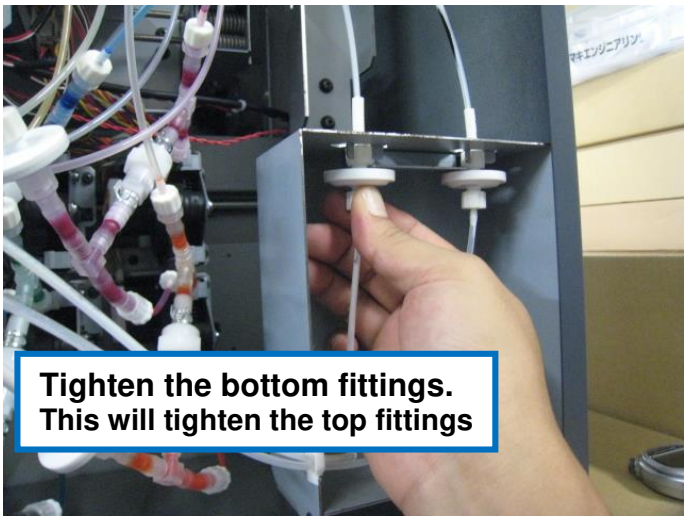
- Fittings need to be tightened for all 8 ink paths.
- Photo below shows the ink paths of #7 and #8. For ink paths #1 - 6, tighten also the filter.





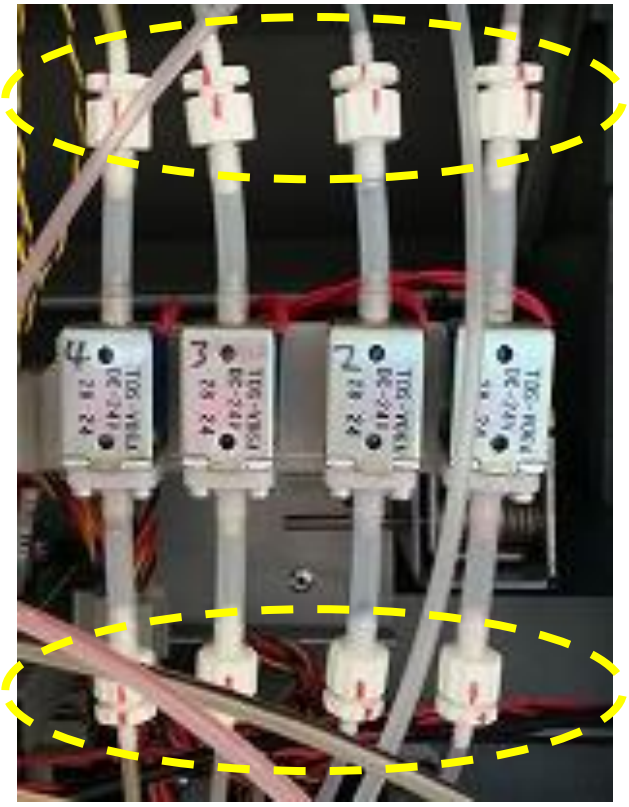
<Filters of paths #7 and #8>





Model: Ma-P1	Date: 22-Oct-14	No.: RM153010

<UISS>



NOTE

To ensure that all fittings are tightened, mark the fittings as you tighten them.

Model: Ma-P1	Date: 18-Nov-14	No.: RM153012

Subject: Parts Catalog Correction	Prepared by: T.Asada
From: 3rd Tech Service Sect., PP Tech Service Dept.	

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

Change: The following parts were deleted from the parts catalog. These parts will be supplied as an assembly part.

Reason: Design modification

Part Number	Description	Q'ty	Int	Page	Index	Note
M1531334	MIM:M514471:CAP_RUB_HOLD	1	-	50	7	Delete
M1531465	MIM:M514968:G5CP_MESH	1	-	52	8	Delete
M1533002	MIM:MP-M602833:CAP_BASE_GEN5	1	-	52	10	Delete
M1533003	MIM:MP-M700666:CAP_RUBBER_5	1	-	52	9	Delete

Model: Ma-P1	Date:2015/1/7	No.: RM153013

Subject: Service Manual revision - System Halt Errors	Prepared by: T. Asada
From: 3rd Tech Service Sect., PP Tech Service Dept.	

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

1. Please add the following descriptions regarding system halt errors in your FSM.
2. The areas highlight in red were corrected.

Error description	Cause	Solution
SYSTEM HALT (*) 115: PCB MAIN-F1	MAIN PCB fuse (F1) is disconnected.	1. Confirm secure connection of the FFC between the Central-IO PCB and the Main PCB. 2. Check for possible short circuits between 1 pin and 4 pin of CN1, and 1 pin and 9 pin of CN11 of the Central-IO PCB. Replace the Central-IO PCB, if necessary. 3. If the above does not resolve the problem, replace the Main PCB.
SYSTEM HALT (*) 116: PCB MAIN-F2	MAIN PCB fuse (F2) is disconnected.	
SYSTEM HALT (*) 17b: PCB CIO	Central-IO PCB is not detected.	1. Confirm secure connection of the FFC between the Central-IO PCB and the Main PCB. 2. If the above does not resolve the problem, replace the FFC. 3. If the above does not resolve the problem, replace the Central-IO PCB. 4. If the above does not resolve the problem, replace the Main PCB.
SYSTEM HALT (*) 189: COM VOLT	Abnormal COM voltage	1. Confirm secure connections between the HDC PCB and print head. 2. If the above does not resolve the problem, replace the HDC PCB.
SYSTEM HALT (*) 449: SCAN COORD(MIN)	Scan coordinates error-Minimum	1. Update the F/W. 2. If the above does not resolve the problem, reset the parameters. 3. If the above does not resolve the problem, replace the Main PCB.
SYSTEM HALT (*) 44a: SCAN COORD(MAX)	Scan coordinates error-Maximum	
SYSTEM HALT (*) 44b: SCAN ERR	Scan error	

Error description	Cause	Solution
SYSTEM HALT (*) 802: (C)SWI	System error (CPU exception: Software exception)	1. Replace the MAIN PCB with a new one. 2. If the above does not resolve the problem, replace the DC Power Supply(5V) with a new one.
SYSTEM HALT (*) 803: (C)PFTCH ABRT	System error (CPU exception: Prefetch Abort)	
SYSTEM HALT (*) 804: (C)DATA ABRT	System error (CPU exception: Data Abort)	
SYSTEM HALT (*) 805 : (C)ZERO DIV	This error does not occur on L4160/L4130.	
SYSTEM HALT (*) 819 : FW/HROM SIZ		
SYSTEM HALT (*) 828: PRG ERR L	Program Error	1. Update the F/W. 2. If the above does not resolve the problem, reset the parameters. 3. If the above does not resolve the problem, replace the Main PCB.
SYSTEM HALT (*) 829: FW/ERASE TIMEOV	FW Error (Flash memory deletion time over)	
SYSTEM HALT (*) 86b: FW/MENU	Abnormal screen transition	
SYSTEM HALT (*) 910: DEVICE CONST.	Incorrect device configuration	Check if the correct FW is applied.

Model: Ma-P1	Date: 2-Mar-15	No.: RM153014

Subject: New cap assembly to prevent leakage	Prepared by: Y.Kurohashi
From:3nd Tech Service sect,PP Tech Service Dept	

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

CHANGE

- The cap was modified for better air-tight sealing.
- The cap will be supplied only as an assembly unit, and its components will no longer be supplied as individual service parts.
  The new cap assembly unit will be supplied as a service part from April 2015.

REASON

The old cap was not sealed good enough, causing problems such as failure in solution filling and leakages.

Modification in detail

- Cap rubber and mesh are thermally crimped
- New rubber material

Parts information

Part Description	Part Number	Change/New Part Number	Page Number in P/C
CAP_ASSY	M1533044	M1531915	25-42
CAP_RUB_HOLD	M1531334	Delete	25-7
G5CP_MESH	M1531465	Delete	25-8
CAP_RUBBER_5 2	M1533003	Delete	25-9
CAP_BASE_GEN5	M1533002	Delete	25-10

Parts which are deleted were already announced by RTB RM153012.

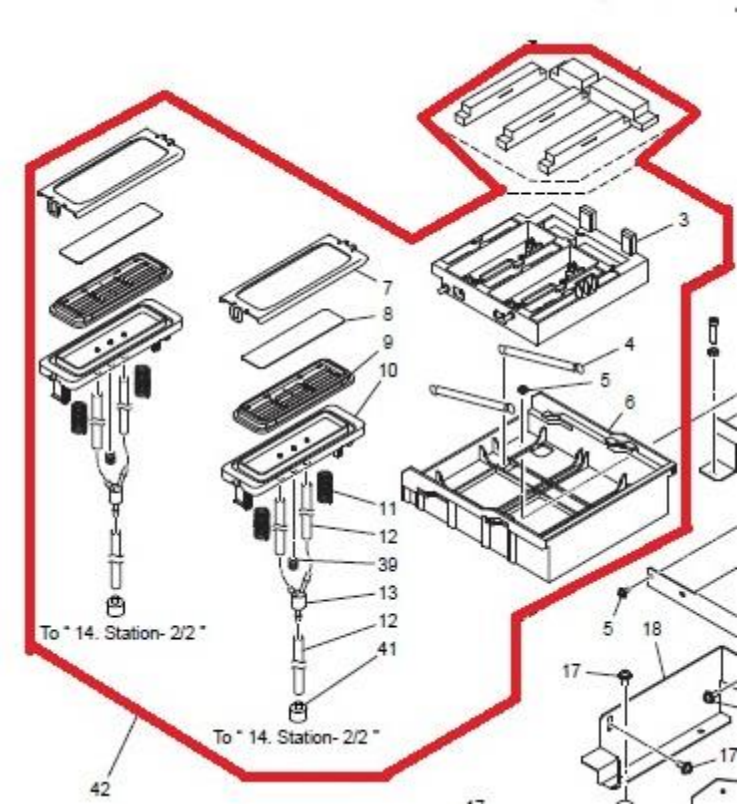
Cut-in serial numbers

M152-17	T484X600001
M153-17	T494X600009
M152-27	T484X600001
M153-27	T494X600009

NOTE: In line with the announcement “Modification kit for quality improvement” provided in RTB RM153009, the new cap will be applied to all units.

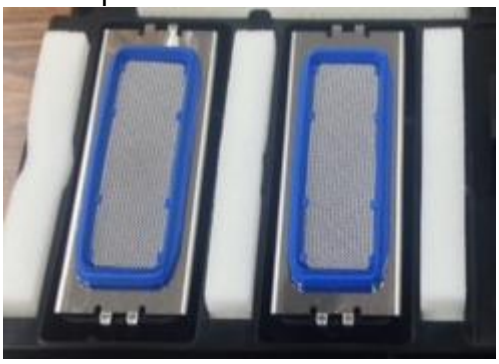
Model: Ma-P1	Date: 2-Mar-15	No.: RM153014

Parts Catalog: 25 Station 1
The cap assembly (callout 42) consists of the parts outlined in red.



New Cap
The cap rubber is BROWN.

Old Cap
The cap rubber is BLUE.



RICOH

Technical Bulletin

Model: Ma-P1	Date: 17-Apr-15	No.: RM153015

Subject: Parts catalog revision	Prepared by: T. Asada
From: QAC Field Quality Management Dept., Group 2	

Classification:

☐ Troubleshooting	☒ Part information	☐ Action required
☐ Mechanical	☐ Electrical	☐ Service manual revision
☐ Paper path	☐ Transmit/receive	☐ Retrofit information
☐ Product Safety	☐ Other ( )	☐ Tier2

Please apply the following changes to your parts catalog.

Old p/n	New p/n	Description	Q'ty	Int	Page	Index	Note
M1531876		MIM:TSB-3509:EDGE_SADDLE	1	X/O	26	5	Delete
M1531869		MIM:SSR15XW2GC:LM_GUIDE_130	1	X/O	14	15	Delete
M1531870		MIM:SSR15XW2GC:LM_GUIDE_160	1	X/O	14	15	Delete
M1531452		MIM:M514849:DRIVE_MTR_BKT	1	X/O	47	27	Delete
VSSG0008		OIL:SEALUB L101 *	1	X/O	1	37	Delete
	07200025G	RETAINING RING - 2.5	1		23	4	Add
	M1533096	MIM:M016117:WIPER_ASSY	1		47	41	Add
	11050097	CORD CLAMP - 13.5MM	55		29	4	Add
	M1533106	MIM:M016135:DRY_HT_AS_160	1		7	40	Add
	M1533107	MIM:M016136:DRY_HT_AS_130	1		7	40	Add
M1533038	M1531897	MIM:M014883:DC_PW_SPL_ASY	1	O/O	56	21	Change
M1533044	M1531915	MIM:M015209:CAP_ASSY	1	X/O	56	42	Change

*NOTE: SEALUB L101 oil (p/n: VSSG0008) can be substituted with FLOIL(MG-A1-GU).

RICOH

Technical Bulletin

Model: Ma-P1	Date: 14-Jul-15	No.: RM153016

Subject: Parts catalog revision	Prepared by: Y.Kurohashi
From: 1'st Tech Service sect,PP Tech Service Dept	

Classification:

☐ Troubleshooting	☒ Part information	☐ Action required
☐ Mechanical	☐ Electrical	☐ Service manual revision
☐ Paper path	☐ Transmit/receive	☐ Retrofit information
☐ Product Safety	☐ Other ( )	☐ Tier2

Please apply the following changes to your parts catalog.

Old p/n	New p/n	Description	Q'ty	Int	Page	Index	Note
-	M1533106	MIM:M016135:DRY_HT_AS_160	1		8	40	Add
-	M1533107	MIM:M016136:DRY_HT_AS_130	1		8	40	Add
M1531238	M1533102	MIM:M016192:PLT_CVR-F_160	1	O/O	10	12	Change
M1531239	M1533103	MIM:M016191:PLT_CVR-F_130	1	O/O	10	12	Change
M1531240	M1533104	MIM:M016193:PLT_CVR-R_160	1	O/O	10	1	Change
M1531241	M1533105	MIM:M016194:PLT_CVR-R_130	1	O/O	10	1	Change
M1531016	M1533076	TUBE:2X4:1000MM	1	O/O	48 52 54 50 52	37 27 37 36 19	Change

NOTE:

- The above changes have been applied to the latest parts catalog.
- Tube (P/N: M1533076) was a part added in June, 2014, but was missing from the parts catalog, and therefore was added in the latest revision.

Model: Ma-P1/P1.5	Date: 1-Feb-16	No.: RM153017

Subject: Changes in line with the new AR Ink	Prepared by: Y.Kurohashi
From:1st Tech Service sect,PP Tech Service Dept	

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

This bulletin announces the changes in line with the new AR ink.

Production line:

Announcement on cut-in S/N information will follow.

In the field:

Take note of the following when making new site installs.

- Procure the following service parts (kit) according to the type of ink set.

  4 color type and 6 color type:
  p/n: M1539906

  6 color +W:
  Procure both of the following.
  p/n: M1539906
  p/n: M1539907

P/N and Description	Content	Application / Remark	Q'ty
M1539906 INSTALLA-TION KIT for AR	SILICONE TUBE:2X4:3cm	To shorten the circulation circuit	1
	CD-ROM (RIP)	RIP for AR Ink Ver.3.0.0	1
	CD-ROM (Profile)	Profile for AR Ink Ver.2.0.0	1
	CD-ROM (RIP Manual)	Ver.2.0.0	1
	Eco case label	For AR Ink cartridge	1
	AR Ink label	Pasting to machine	1
M1539907 SOLENOID ASSY for WHITE INK	2mm diameter tube type circulation valve assembly	New circulation valve assembly	1

- For 4-color type and 6-color type, shorten the circulation circuit of White with the **silicone tube**. (See following pages for detailed steps.)
- For 6-color + W, replace the circulation valve assembly with the **2mm diameter tube type circulation valve assembly** before ink filling. (See following pages for detailed steps.)

- Select the **Pro AR ink** for ink filling.
- The procedure to purge air in the ink supply path has been changed.
- First adjust "**WF2 900Hi**" first for Basis setting.

IMPORTANT NOTES when installing units manufactured before Mar, 2016

- Make sure to update the **printer firmware to Ver1.50 or newer** before setting the ink. It is recommended to download the parameters to a PC after updating the firmware. See RTB RM153008 for detail.
- Pasting new labels for AR ink to distinguish ink type.
- Install the software RIP with the CD contained in the installation kit.
- For the AR ink, the software RIP is Ver.3.0.0. The version is described on the label attached to the top left of the package.
- Installing the software RIP will automatically install the profile for AR ink to the Profile Manager. The Profile CD is a spare for the customer.

<CDs>

RIP

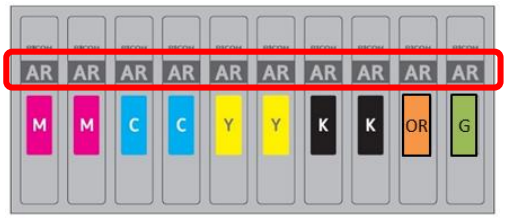
Profile

RIP Manuals

<New labels>

AR Ink label

Eco case label



Installation Procedure in Detail

Changes in the procedures are described in red.

Installation > Ink Set > Changing the Joints

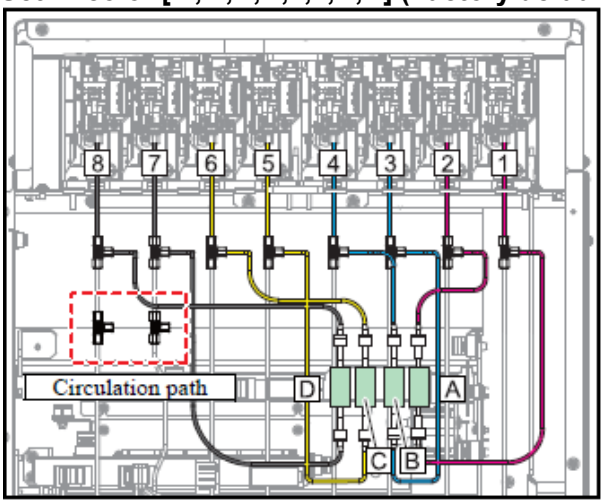
Changing the Joints

Outline

Depending on chosen ink set, it must change a relationship between joints and liquid contact valve.
Connect ink tubes of the same colors to each other through liquid contact valve.

- Change as follows.

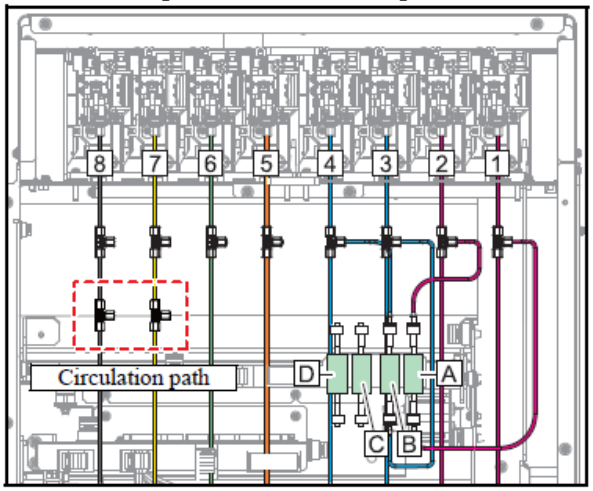
Ink Set: 4-color [M,M,C,C,Y,Y,K,K] (Factory default)



	Joint No.	Liquid contact valve	Joint No.	Ink color
Connection 1	1	A	2	Magenta
Connection 2	3	B	4	Cyan
Connection 3	5	C	6	Yellow
Connection 4	7	D	8	Black

NOTE: See Step 5 of the “Work procedures.”

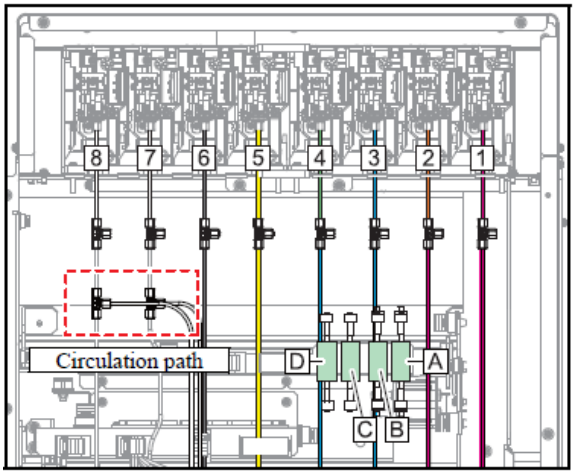
Ink Set: 6-color [M,M,C,C,Or,G,Y,K]

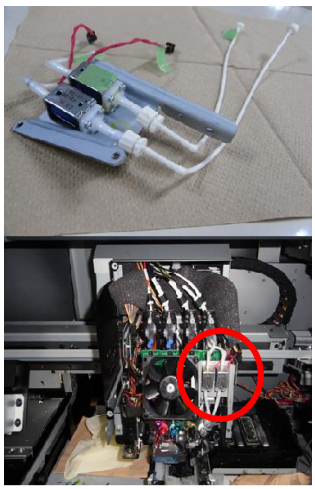


	Joint No.	Liquid contact valve	Joint No.	Ink color
Connection 1	1	A	2	Magenta
Connection 2	3	B	4	Cyan

For joints numbered from 5 to 8, attach rubber plugs to them.
Liquid contact valves C, D are unused.
For removed tubes, be careful that they will not be bent, and they should bundle together.
NOTE: See Step 5 of the “Work procedures.”

Ink Set: 6-color + White [M,Or,C,G,Y,K,W,W]



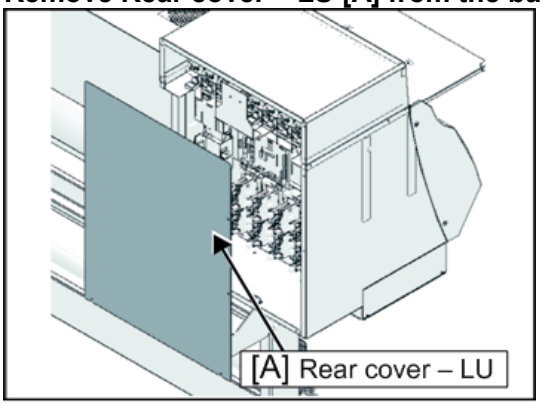


For joints numbered from 1 to 8, attach rubber plugs to them.
Liquid contact valve A, B, C, D are unused.
For removed tubes, be careful that they will not be bent, and they should bundle together.
Replace the Circulation valve assembly with the 2mm diameter tube type circulation valve assembly included as an accessory.

⚠CAUTION

- Use protective glasses and gloves during work.
- Depending on the working condition, ink may reach your eyes or your skin may become rough due to ink.

1. **Remove Rear cover – LU [A] from the back panel of the main unit.**

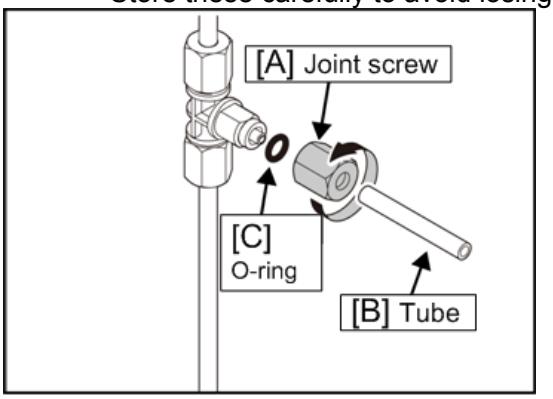


w_m1522224

2. **Loosen the joint screws [A] and remove the tube [B] and O-rings [C].**

Important

- The O-rings are required when returning from the 6-color + White ink set to the 4-color ink set.
- Store these carefully to avoid losing them.

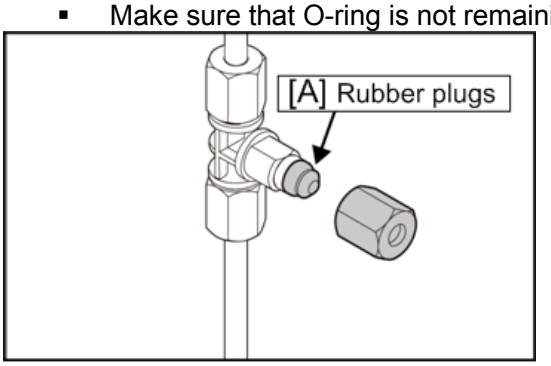


w_m1522225

3. **Put the rubber plugs [A] on the joint.**

Important

- Make sure that O-ring is not remaining in the joint screws.

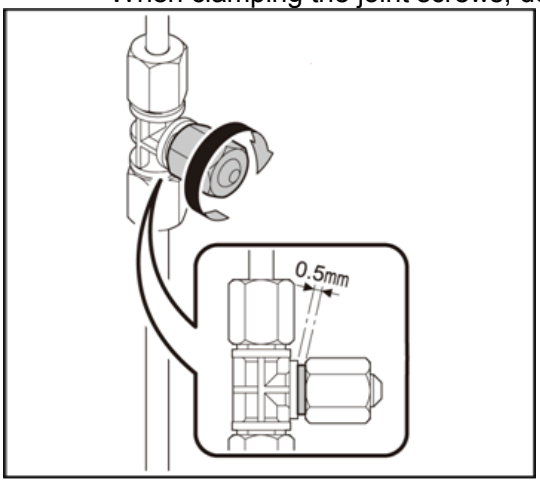


w_m1522226

4. **Tighten the joint screws.**
   Leave a space of around 0.5 mm between the coupler and screw.

   Important

   - When clamping the joint screws, do not clamp them too much.



w_m1522227

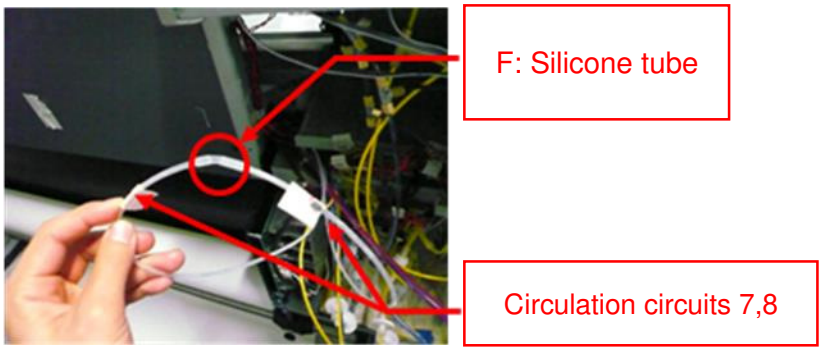
5. **Return the Rear cover - LU to the original location, and affix using the screws.**

Outline
Depending on the chosen ink set, it must change a relationship between joints and liquid contact valve.
Connect ink tubes of the same colors to each other through liquid contact valve.

For 4-color [M,M,C,C,Y,Y,K,K] and 6-color [M,M,C,C,Or,G,Y,K]

Remove the tubes from the cartridges for circulation circuits 7 and 8. Connect the ends of the removed tubes with silicone tube (F) and plug the apertures where the tubes were removed with rubber plug (G).

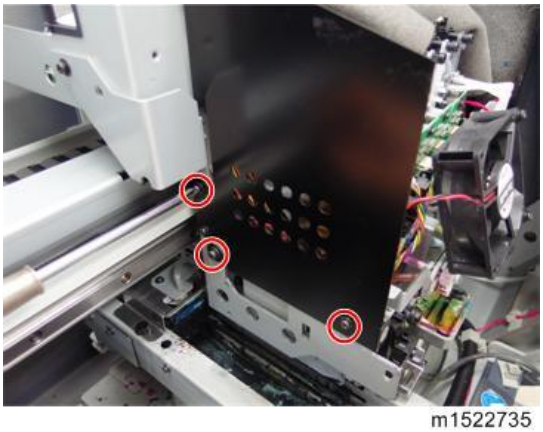
Mark the tubes so that circulation circuits 7 and 8 can be distinguished.



For 6-color + White [M,Or,C,G,Y,K,W,W]

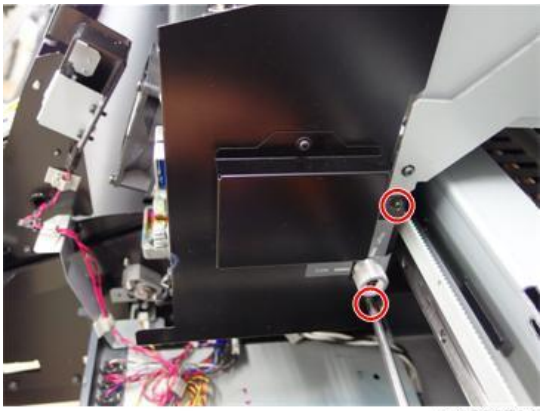
1. Remove the following covers.

- Right maintenance cover C
- Right maintenance cover U
- Y cover RR
- HDC cover
- Lure-lock cover
- Head cover
- Head cover L



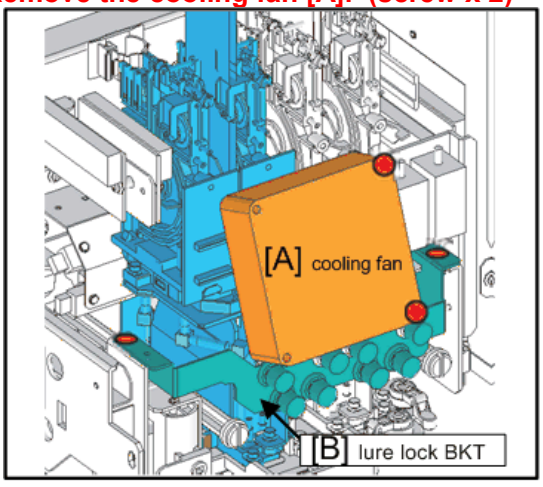
m1522735

- Head cover R

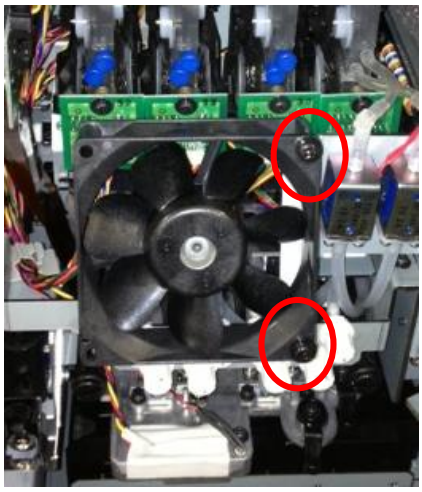


m1522736

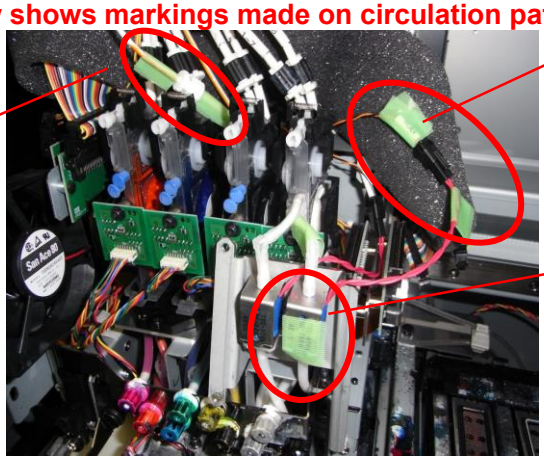
2. Remove the cooling fan [A]. (screw x 2)



w_m1522671



3. Mark the tube and solenoid with tape.
The photo below shows markings made on circulation path #8.



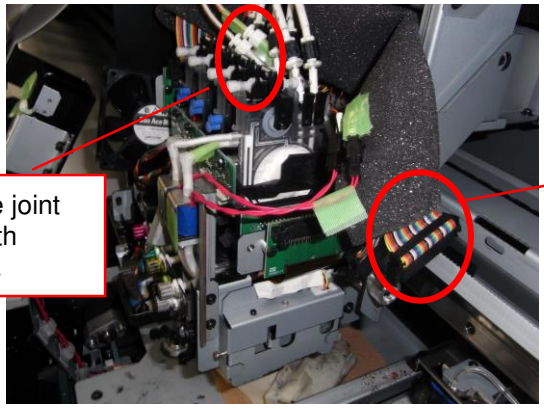
Mark both ends of the tube joint of the right solenoid with tape.

* To distinguish right and left solenoid, slightly pull the tube.

Mark both ends of the harness connector of the right solenoid with tape.

Mark the right solenoid with tape.

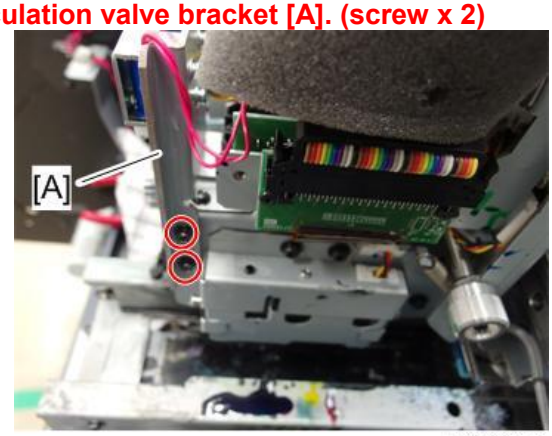
4. Disconnect the Tube and Connector.



Remove the joint and plug with rubber plug.

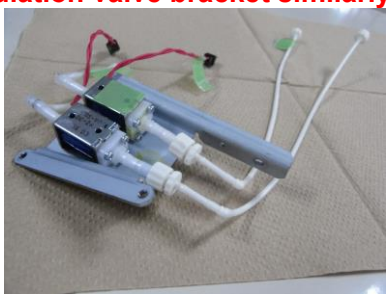
Disconnect this connector.

5. Remove the circulation valve bracket [A]. (screw x 2)

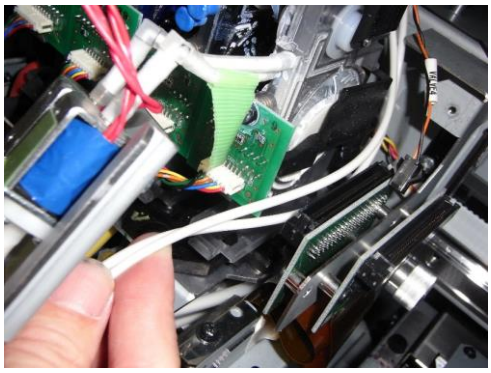


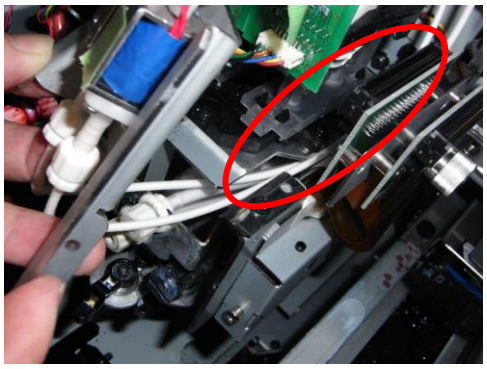
m1522738

6. Mark the new circulation valve bracket similarly to Step 3.



7. Insert the two tubes between the printhead and bracket.

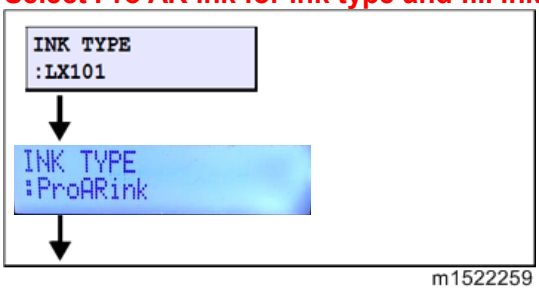




8. Set the tube and connector, and fasten the screws.

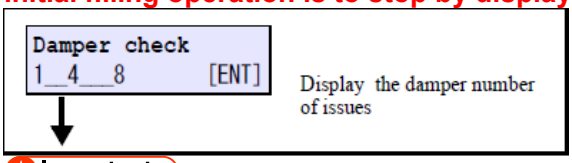
Performing the Initial Ink Fill

1. **Remove the head cover.**
2. **Select Pro AR ink for ink type and fill ink.**



m1522259

3. **If the damper has not been sucked in enough, such as leaks or cap failure of the route, the initial filling operation is to stop by displaying the warning.**



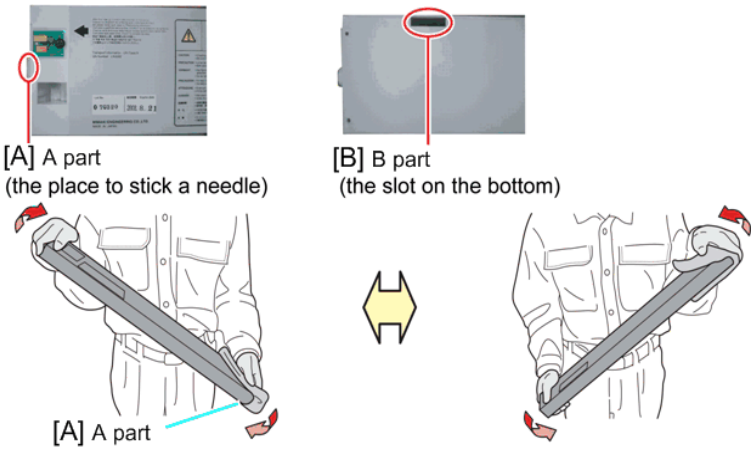
Important

- Confirm the damper number of issues, which is displayed.
- Press [ENTER] key, to return to the initial filling start screen.
- Turn off the main power supply to check the state as well as the route of the problem damper and cap, or the like.

4. **Slowly shake the white ink cartridge more than twenty times right and left.**
To prevent ink from leaking when you shake the cartridge, wear gloves and firmly cover the A part [A] of the upper surface of the cartridge and the B part [B] of the bottom surface of the cartridge with paper towels.
Then, shake it more than twenty times right and left so that ink flows inside the cartridge.

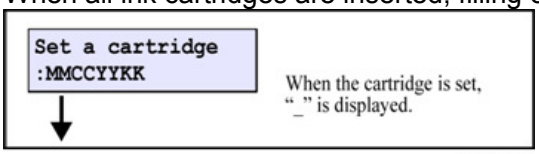
Note

- If you shake it too strong, the pack inside may be damaged and it may cause ink leakage. Therefore, perform this carefully.
- If the remaining amount of ink is less, ink in the cartridge cannot be beaten enough. Tilt the cartridge until it becomes vertical.



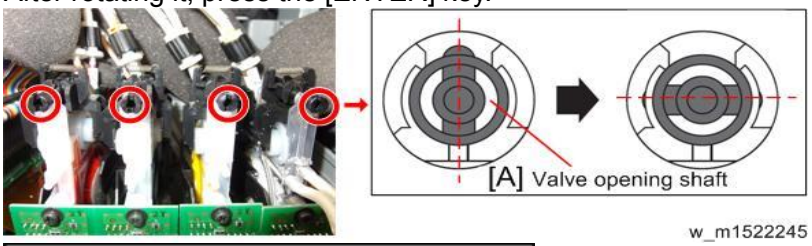
w_m1522658

5. **Insert all ink cartridges.**
When all ink cartridges are inserted, filling operation starts.

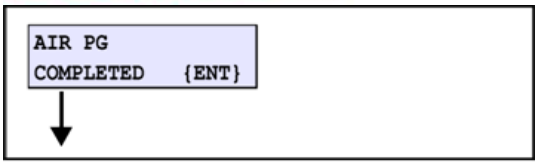


w_m1522260

6. **Rotate the valve opening shaft [A] 90 degrees with a flathead screwdriver.**
After rotating it, press the [ENTER] key.

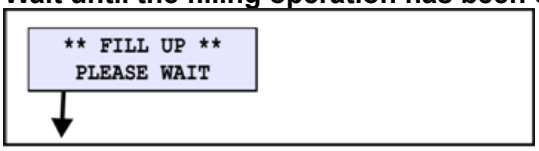


w_m1522245



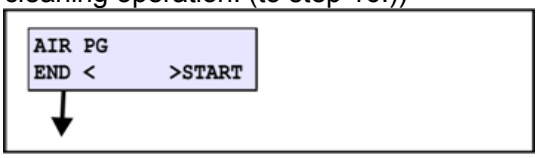
m1522267

7. **Wait until the filling operation has been completed.**



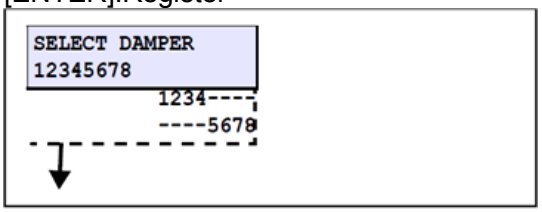
m1522261

8. **Remove air. (Filling head air port)**
With the [▶] key, move to the air purge sequence.
(When you press the [◀] key, air purge work is not performed and the machine moves to the cleaning operation. (to step 16.))



m1522262

9. **Select a damper on which you perform air purge.**
[▲] [▼]: Select
[ENTER]:Register



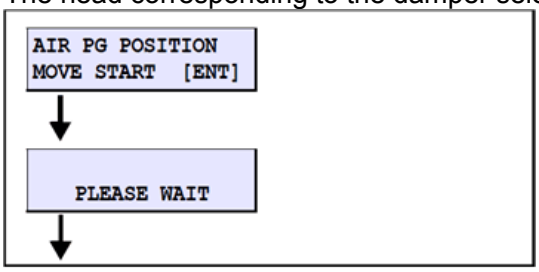
m1522263

Important

- This does not mean that you can perform air purge on all air purge ports you selected at the same time.

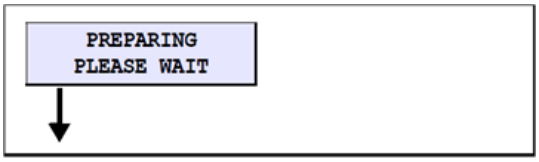
10. Press the ENTER key to move the carriage on the wiper.

The head corresponding to the damper selected in 9.moves on the wiper.



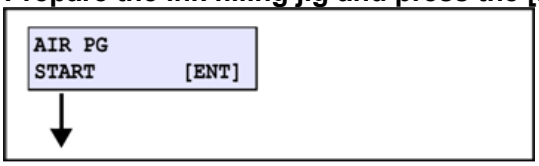
w_m1522669

11. Wait for a while until the machine is ready for opening the port.



w_m1522670

12. Prepare the ink filling jig and press the [ENTER] key.



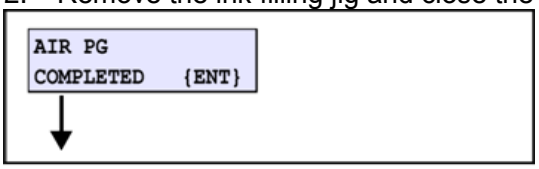
m1522266

Important

- Do not remove the cap of the damper's port that is not selected.

13. Insert ink filling jig (x2) into two ports of the adjacent path (1-2,3-4,5-6,7-8) simultaneously) and flow a constant amount of ink.

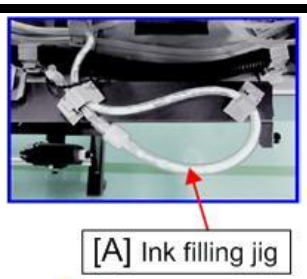
1. After flowing ink from all ports of the damper selected in 9, press the [ENTER] key to stop sending ink.
2. Remove the ink filling jig and close the cap.

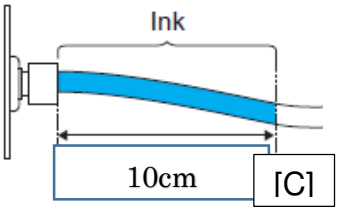


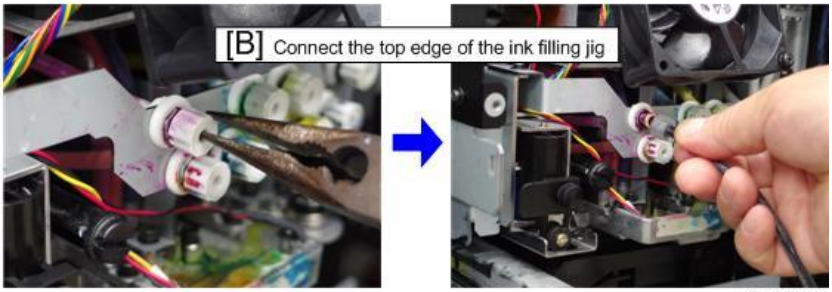
m1522267

Important

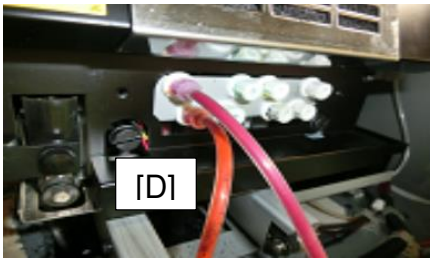
- **Use the ink filling jig** [A].
- Connect the top edge of the ink filling jig [B] with the "Fitting" on the carriage front surface.
- For reference: Amount shall be about constant 10cm-flowing on the jig. [C]
- A second air purge tube [D] is added to the accessories, to improve serviceability in the field. Insert the end of the tube to the exhaust hole [E] before using it.
- If there is only one jig available, make sure to lay down a cloth, towel, or other similar object to absorb the ink that will be released from the other path.[F]
- For "6-color" or "6-color + White" ink, do not open the yellow port while the black port is open to prevent colors from mixing. [G][H]
  (This is especially noticeable with Y (yellow) and K (black), due to the contrast between these two colors.)
- If colors are mixed, perform "CLEANING""HARD" repeatedly to recover from mixing. (For reference: 10 times).

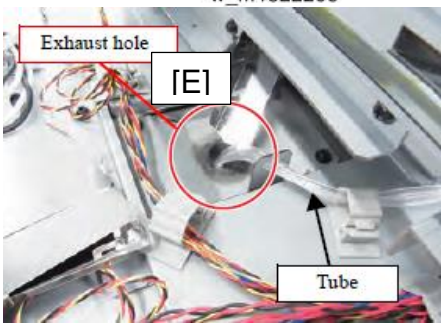


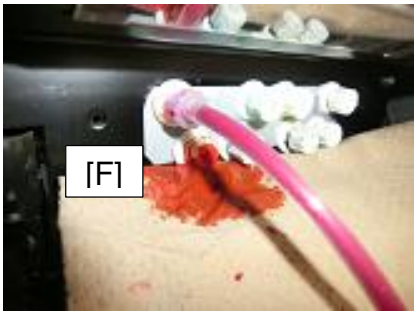




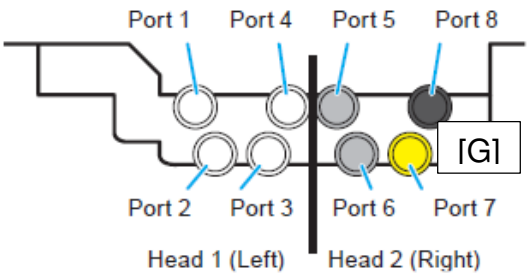
w_m1522265



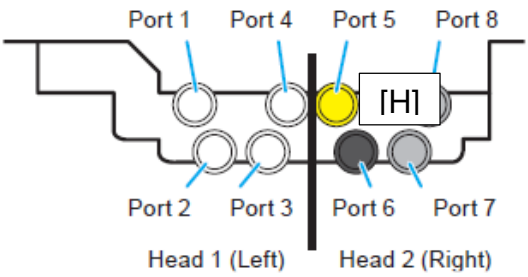




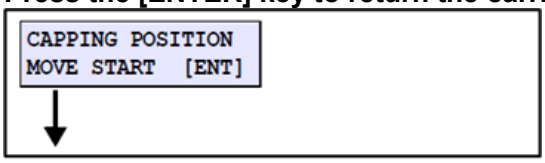
6-color Ink Set



6-color + White Ink Set



14. Press the [ENTER] key to return the carriage to the position that close the cap.



w_m1522676

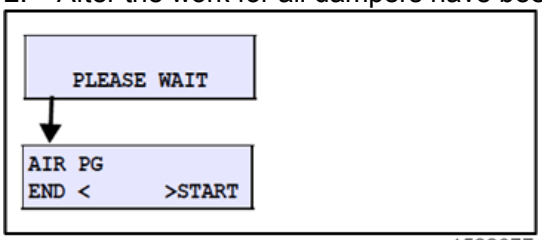
15. Wait for a while until the amount of ink in the damper returns to the normal status.

1. When the operation has been completed, the screen returns to the one in 6. Perform the same work to the remaining damper.

Important

- When you connect the jig with other color, clean the top edge of the ink filling jig so that colors may not be mixed.

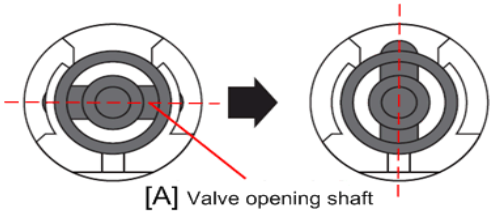
2. After the work for all dampers have been completed, press the [◂] key.



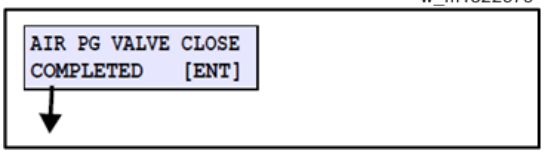
w_m1522677

16. Check that no air remains in the damper, and return the valve opening shaft [A] with a flathead screwdriver to the original status.

Press the [◂] key to terminate the operation.



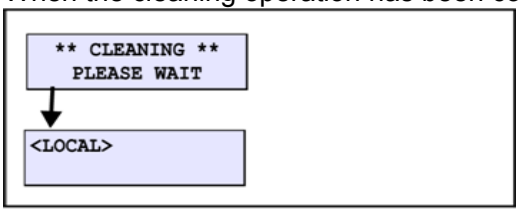
w_m1522679



w_m1522678

17. When you press [ENTER], the cleaning operation starts.

When the cleaning operation has been completed, the screen returns to LOCAL.



m1522269

Installation > Outputting Plots > PRINT ADJUST

PRINT ADJUST

Draw the built-in patterns, and compensate the parameter so that the drop positions of other heads are on the same line as the drop position of reference head (Head 1) in the Y-direction. To each of the discharged waveforms, execute [SiDir], [ReDir] and [BiDir] in each resolution.

Set the parameters in the order below.

1. WF2:900Hi [SiDir], [ReDir] and [BiDir]
2. [BASIS SET]
3. WF1:900std,1200std [SiDir], [ReDir] and [BiDir]
4. WF2:900std,1200std,1200Hi [SiDir], [ReDir] and [BiDir]

Important

- The value set using [BASIS SET] are values calculated as a guideline for correction values. Thus, the actual ink landing position may be misaligned. Be sure to adjust the landing position for each mode that will be sure.
- Adjustment value adjusted by WF2 900Hi is distributed to the correction value of the other modes.

Note

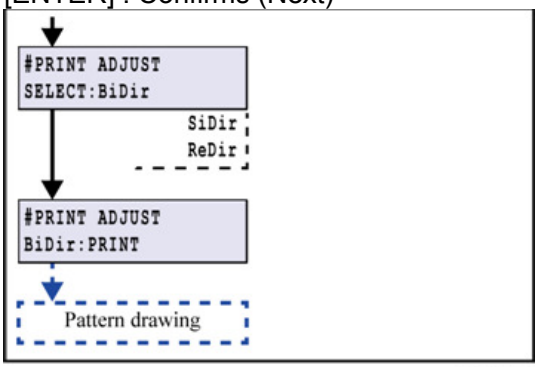
- WF1 (Wave Form 1) : Normal dot
- WF2 (Wave Form 2) : Valuable dot
- Std : Scan speed “Standard”
- Hi : Scan speed “High”

- WF1 900std is for new fastest printing mode, named “Super Draft” .

Installation > PRINT ADJUST > Going and returning adjustment

Going and returning adjustment

1. **Select “BiDir” on the [SELECT] display.**
   [▲] / [▼] : Switches
   [ENTER] : Confirms (Next)



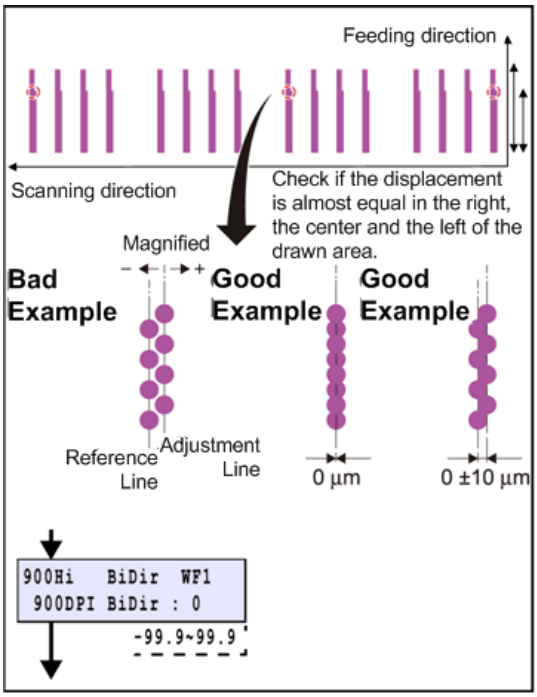
m1522579

2. **Press the [ENTER] key to draw the pattern.**
   [ENTER]: To start Pattern drawing
   [►]: To the compensation display
   (Without drawing)

3. **Check and compensate the patterns.**
The reference lines are drawn in going, and then the adjustment lines are drawn at the same Y-coordinate positions in returning. The position where the lines above are overlapped on one vertical line is specified as the correct dot position (H1A: M color fixed)
Confirm that the dots are on the same line.
* The adjusting procedure is the same although the drawing pattern is different depending on mode.
[▲] / [▼]: Compensating value input (Measured value)
[ENTER]: Confirms

Note

- If the displacement is significantly different in the right and left, other reasons are considered.



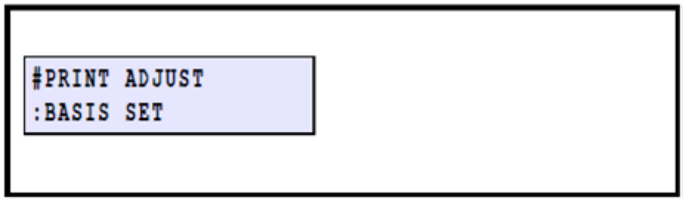
w_m1522458

4. **When compensated, draw and check the patterns again.**

Important

- Repeat “Drawing -> Checking (Compensating)” until any compensation is not required.

5. **Select [BASIS SET] and press [ENTER] key. Adjustment value adjusted by WF2 900Hi is distributed to the correction value of the other modes.**



w_m1522703

Important

- The value set using [BASIS SET] are values calculated as a guideline for correction values. Thus, the actual ink landing position may be misaligned. Be sure to adjust the landing position for each mode that will be sure.

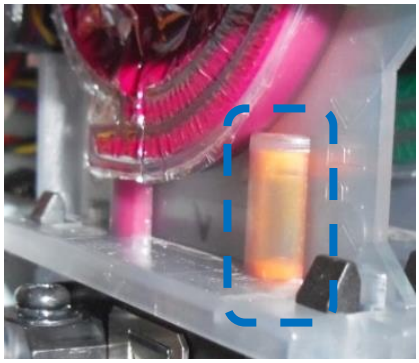
Model: Ma-P1	Date: 16-Feb-16	No.: RM153018

Subject: Troubleshooting – Purging air in lower part of damper	Prepared by: Y.Kurohashi
From:1st Tech Service sect,PP Tech Service Dept	

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

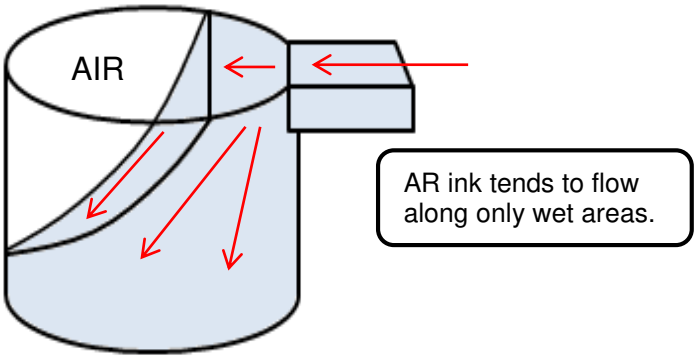
SYMPTOM

Air remaining in the lower part of the damper may not be purged even after performing Air Purge on machines using AR ink.



CAUSE

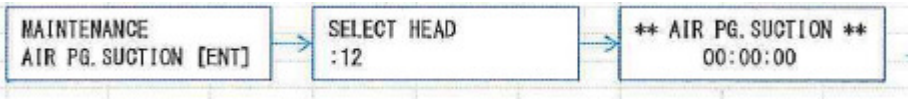
Compared to the conventional ink, AR ink is lower in surface tension and has a stronger tendency to flow only through wet areas. In areas such as the lower part of the damper where ink-flow bends at a right angle along the inner face of the wall, pressure applied by the standard Air Purge function may not be enough to purge air.



SOLUTION

1. Do [FUNCTION] [MAINTENANCR] [AIR PG. SUCTION].

This is more powerful than the standard cleaning. Approximate time: 2 min

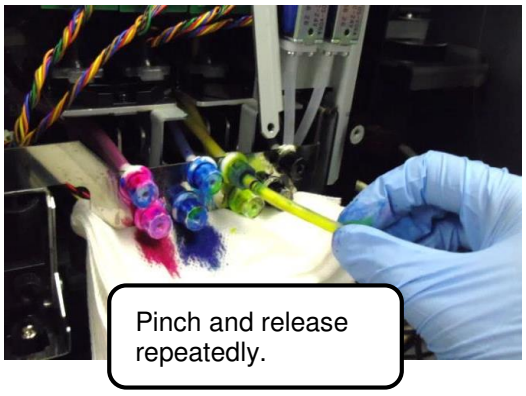


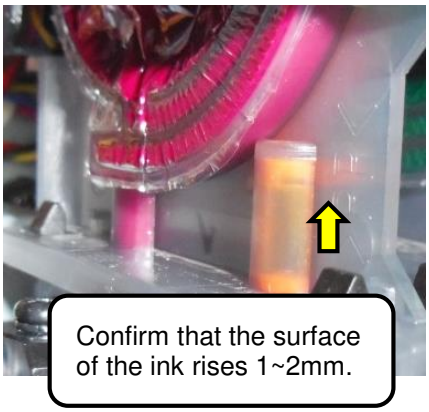
2. Repeatedly "pinch and release" the Air Purge tube.

2-1. Do [AIR.PG], open the port that needs to be purged of air, and connect the Air Purge tube.

2-2. Confirm that ink is flowing through the tube. Pinch the tube as shown below to stop the ink flow and confirm that the surface of the ink in the damper rises 1~2mm. Release after about 1 second.

2-3. Repeat the above "pinch and release" action for a several times.





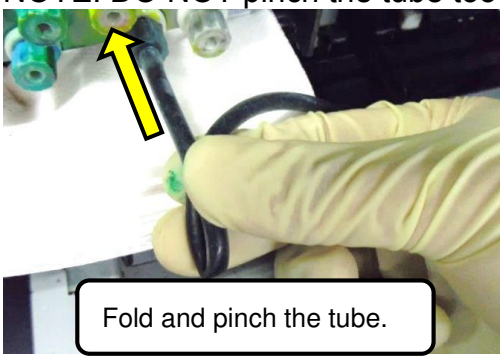
3. Fold and pinch the Air Purge tube.

3-1. Do [AIR.PG], open the port that needs to be purged of air, and connect the Air Purge tube.

3-2. Bend the tube and stop the ink flow.

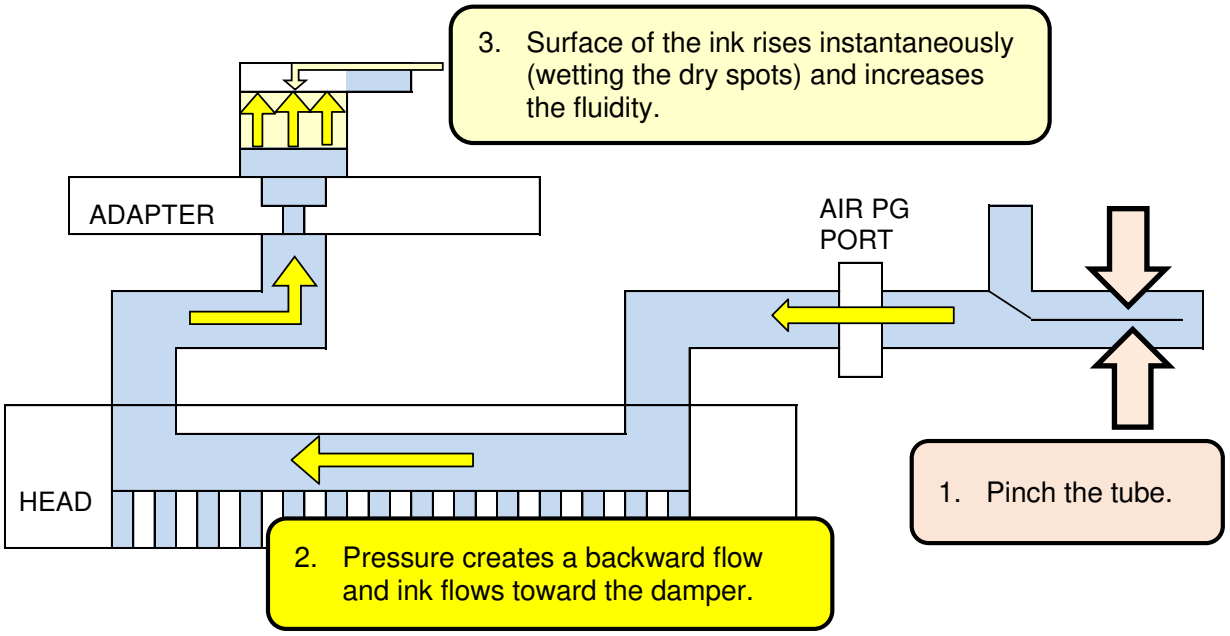
3-3. Pinch the tube so that ink contained in the bent area flows toward the port and confirm that the surface of the ink in the damper rises 1~2mm.

NOTE: DO NOT pinch the tube too strongly, or it will break.



If the color blends after Air Purge, repeat [CLEANING] [HARD] until the color becomes clean.

Reference


3. Surface of the ink rises instantaneously (wetting the dry spots) and increases the fluidity.
ADAPTER
AIR PG PORT
HEAD
1. Pinch the tube.
2. Pressure creates a backward flow and ink flows toward the damper.

Reissued: 13-May-16

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

RTB Reissue

The items in blue were revised.

Subject: Pro AR ink conversion procedure for machines in the field			Prepared by: Y.Kurohashi
From: 1st Tech Service sect,PP Tech Service Dept			
Classification:	☐ Troubleshooting ☐ Mechanical ☐ Paper path ☐ Product Safety	☐ Part information ☐ Electrical ☐ Transmit/receive ☐ Other ( )	☒ Action required ☐ Service manual revision ☐ Retrofit information ☐ Tier 2

Revision List:

No.	Content Revised	Revised Contents
RM153019a	2. Parts information	"Cautions" has been updated.
	3. INK Switching Procedure	"Workflow" has been updated.
		"Preparation 2" has been updated.
		"Additional part" has been updated.
		"Part 8: Installing RIP and overwriting the profile" has been updated.

Revised contents are described in blue.

Reissued: 13-May-16

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

As announced in bulletin #RM153017, Ma-P1 has employed the new Pro AR ink. While #RM153017 announces the procedure for setting the Pro AR ink for new site installs, this bulletin announces the procedure for replacing the conventional ink with Pro AR for machines already installed in the field.

1. Preparation

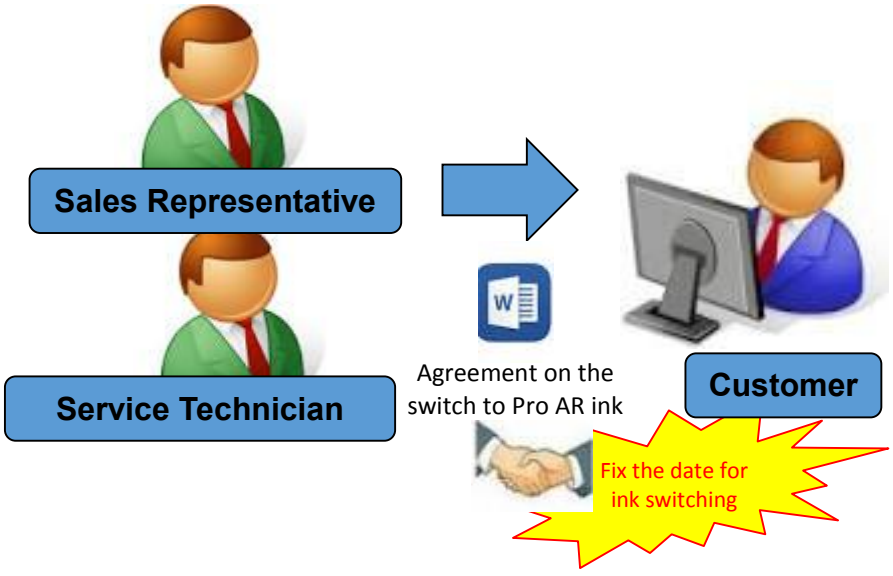
1. Obtain agreement from your customer before switching to the Pro AR ink.
   Please cooperate and share information with your sales representative to prevent any misunderstandings.

   < Sales representative >

   - Explain to the customer that the conventional ink will no longer be supplied and will be replaced with the Pro AR ink as of Sep 2016. Explain also the advantages of the Pro AR ink.
   - Explain to the customer that the procedure may take up to 8 hours.
   - Obtain agreement from the customer.

   < Service technician >

   - Check with the sales representative and customer on the date of visit to perform the ink conversion.
   - Confirm the ink set the customer wishes to apply.

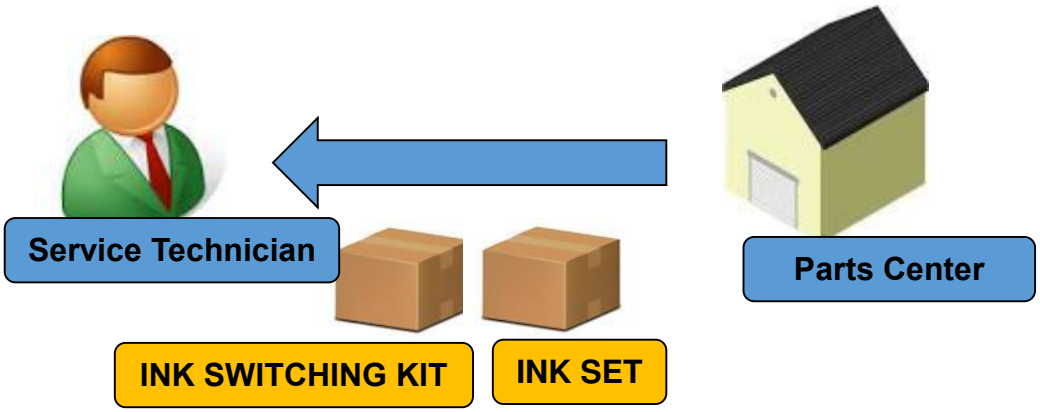


Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

2. Procure Service Parts

< Service technician >

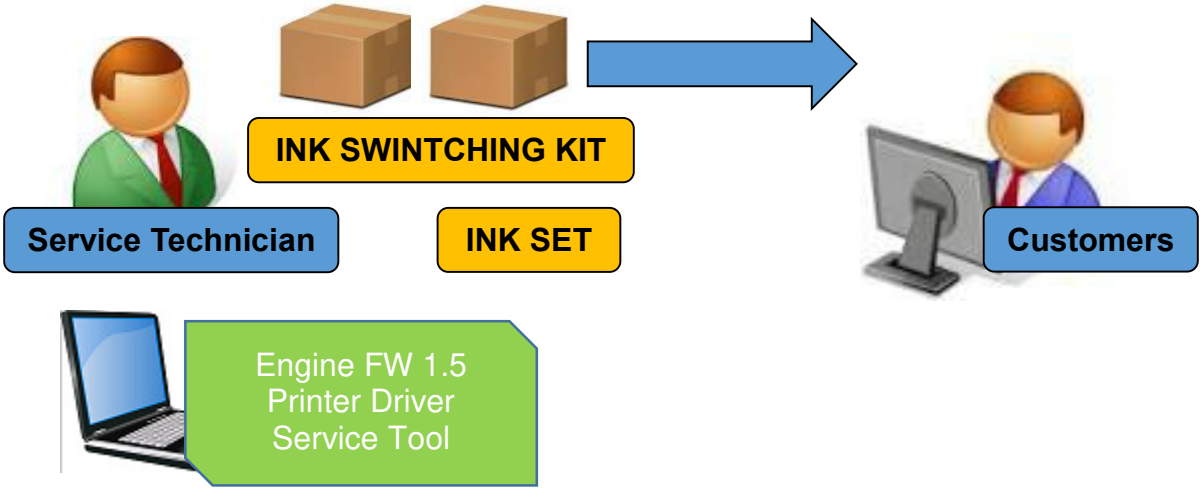
Procure one each of the INK SWITCHING KIT and INK SET according to the ink set required by the customer at least 2 weeks before the day of visit. See section "2. Parts information" on the following page for detailed information on parts required for the modification.



3. Fix the date of visit with your customer.

< Service technician >

- Confirm no problems with the parts procured.
- Download the latest Engine FW (ver.1.50 or newer).
- Install the Printer Driver and Service Tool on your PC, if not installed yet.



Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

2. Parts information

Procure the following service parts according to the type of ink set.

4 color: Procure both of the following.

p/n: M1539904 or M1539905 (INK SWITCHING KIT) x1

p/n: M1539913 (INKSET 4 COLOR MODEL) x1

6 color: Procure both of the following.

p/n: M1539904 or M1539905 (INK SWITCHING KIT) x1

p/n: M1539914 (INKSET 6 COLOR MODEL) x1

6 color +W: Procure both of the following.

p/n: M1539904 or M1539905 (INK SWITCHING KIT) x1

p/n: M1539915 (INKSET 6C+WHITE MODEL) x1

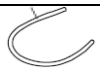
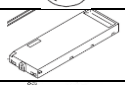
Components

	P/N (Description)	Components/Q'ty	Remark
INK SW KIT	M1539904 or M1539905 (INK SWITCHING KIT)	See table "Components of INK SWITCHING KIT" on next page.	M1539904 is for RAC. M1539905 is for RE/RA.
INK SET	M1539913 (INKSET 4 COLOR MODEL)	Pro AR ink(M) x6 Pro AR ink(Cy) x6 Pro AR ink(Y) x6 Pro AR ink(Bk) x6	
	M1539914 (INKSET 6 COLOR MODEL)	Pro AR ink (M) x6 Pro AR ink (Cy) x6 Pro AR ink (Y) x3 Pro AR ink (Bk) x3 Pro AR ink (Or) x3 Pro AR ink (Gr) x3	
	M1539915 (INKSET 6C+WHITE MODEL)	Pro AR ink (M) x3 Pro AR ink (Cy) x3 Pro AR ink (Y) x3 Pro AR ink (Bk) x3 Pro AR ink (Or) x3 Pro AR ink (Gr) x3 Pro AR ink (W) x6	

- INK SET contains 3 packs of ink for each path.
- 1 set of ink pack is used for INK filling and the remaining 2 sets are spares for the customer.

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

Contents of the INK SWITCHING KIT

	Item	Description	Q'ty	Application / Remark	
A		SOLENOID ASSY WHITE INK	1	Install this assy before ink filling. (For only 6C +W ink type)	Part 3
B		Syringe with filter	1	To fill air and solution	Part 1, Step 4
C		Syringe	1	To purge air from ports	Part 1, Step 7
D		F2N Tube (50cm)	1	To clean circulation path	Part 1, Step 4
E		Silicone Tube (3cm)	1	To connect circulation path. (This tube is packed with Syringe with filter [B].)	Part 1 Step 4
F		ϕ2 Rubber plug	2	Temporal plugging	Part 1 Step 4
G		Rubber plug for damper	2	To replace solenoid assy	Part 3 Step 4
H		Wiping cloth	1	To clean areas around the print heads	
I		Cleaning stick	5	To clean the caps	Preparation 2
J		Maintenance solution 03 Bottle	1	To wash circulation path (Part1, Step5-7)	Part 1 Step 5
K		Maintenance solution 01 Bottle	1	To clean caps and areas around the print head	Preparation 2
L		Maintenance solution 03 Cartridge	8	To wash the main ink supply paths	Part 2
M		Check valve assy	8	Replace this assy after washing.	Part 4
N		Filter	8	Replace this filter after washing.	Part 4
O		Wiper	1	Replace this wiper after washing.	Part 5
P		C-PAD (absorber)	1	Replace this pad after washing	Part 9
Q		CD-ROM (RIP)	1	Ricoh Software RIP Ver.3.00 Profiles for AR ink	Part 8
R		Eco case label	1		Part 9
S		AR ink label	1		Part 9

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

NOTE:

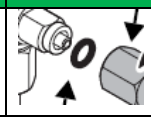
The O-rings are required when switching back the ink set

from [6 color + White] to [4 color] or [6 color]

or

from [6 color] to [4 color].

If the O-rings have been lost, procure the following:

		Part number (Description)	Q'ty	Application / Remark
Y		M1533065 (O-ring)	10	To connect the UISS. 10 rings are contained.

Required tools

- Philips screwdriver
- Flathead screwdriver
- Nipper
- Long-nose pliers
- Paper towel (Prepare sufficient amount of paper towel.)
- Gloves
- Goggle

Cautions

- Make sure to wear gloves and goggles when discharging ink and cleaning the ink paths with maintenance solution.
- Do not suspend the work for more than 2 hours after discharging the ink.
- Pay attention to the waste ink bottle. Do not let it overflow.
- Do not suspend the work with the carriage unit retracted from its home position.

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

3. INK Switching Procedure

Workflow

Take note that it will take approximately 8 hours to complete the entire procedure below, which includes time required for providing explanation to the customer, securing work space, cleaning up, and resting.

- 《Preparation 1》 Parameter download→ FW update → Parameter download (15min)
- 《Preparation 2》 Test Printing and confirmation nozzle condition → Cleaning around the head and cap (10min)
- 《Preparation 3》 Cleaning the waste ink bottle → Setting the waste ink bottle level to 0% (5min)
- 《Part 1》 Discharging ink /Washing the circulation path (60min)
- 《Part 2》 Washing the ink path (60min)
- 《Part 3》 Replacing the white solenoid assy (for 6C+W model only) (20min)
- 《Part 4》 Replacing the check valve and filters (15min)
- 《Part 5》 Cleaning around the head and cap / Replacing the wiper (5min)
- 《Additional part》 Attaching / Removing the UISS circuit, if necessary (20min)

  For detail, see section: 2.Installation > Ink Set > Changing the joint, of the FSM.
- 《Part 6》 Ink filling → Air Purging (60min)
- 《Part 7》 Print adjustment /Image quality adjustment/Parameter download (90min)
- 《Part 8》 Installing RIP and overwriting the profile (20min)
- 《Part 9》 Replacing the C-pad (absorber) / Pasting labels (5min)

REQUEST:

Please report to your service representative together with the parameter (downloaded in Part7) when you complete the task, as this information is needed to verify the number of machines in the field completed of the modification to the Pro AR ink.

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

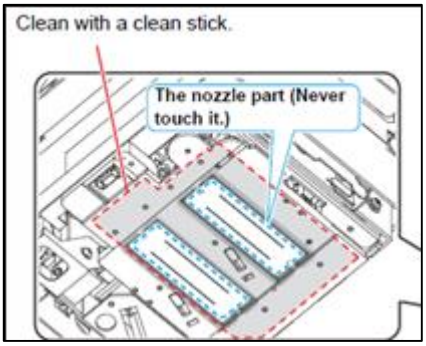
Preparation 1 (15min)

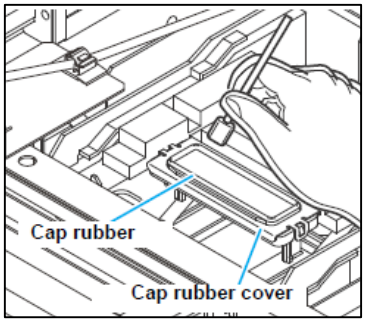
1. Download the parameters to PC. (These parameters will not be used. However, download is recommended just for in case.)
2. Update the printer firmware to Ver1.50 or later.
3. Download the parameters to PC again.

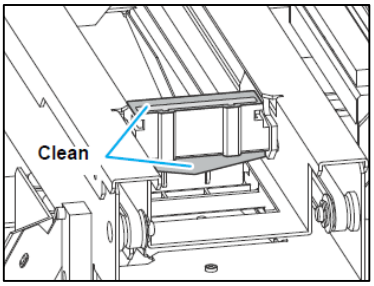
NOTE:
- Use machine serial number as filename of the downloaded parameter file.
- See the bulletin #RM153008 as reference regarding parameter downloading.
- If the ink set modification is forcefully or accidentally terminated in the process, apply the print parameters downloaded in Step 3 above and resume the procedure from Part 1 or Part 2.

Preparation 2 (10min)

1. Print a test pattern to check that there are no discharging defects such as nozzle clogging (Slight touching of ink or nozzle missing). When the result abnormal, perform head cleaning.
2. Clean the area around the head and cap, wiper with clean stick (I) and wiping cloth (H).





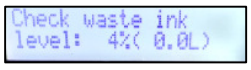


Important
- If changing from 6C+W to 6 color or 4 color, pay attention especially to the ink ejection from the White nozzles (7 path, 8 path), as White ink is often not used and may be clogged.

Preparation 3 (5min)

1. Empty the waste ink bottle and set the waste ink bottle level to 0% by following.

Then, press the [MAINT] key, and change the setting of the waste ink bottle level to 0%.

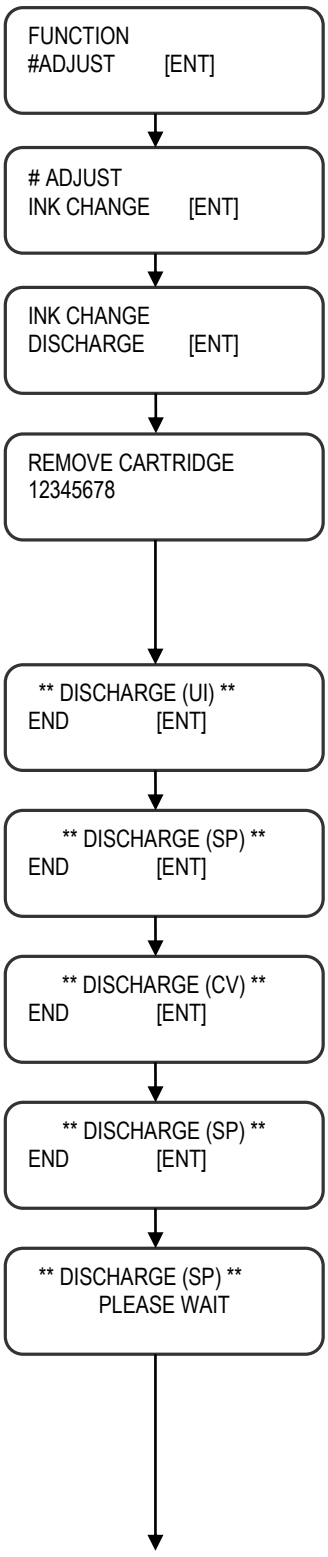


2. Use paper towel and wrap the components around the capping station to prevent ink from dripping.

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

Part 1: Discharging the ink / Washing the circulation path (60min)

In the first part of the procedure, you will discharge the ink and clean the ink paths from the menu screen and manual operations using the syringe.



1. Select [#ADJUST] → [INK CHANGE] → [DISCHARGE] and press the ENTER key.

2. Remove all ink cartridges from the slot.

3. Ink discharge will start in the following sequence.

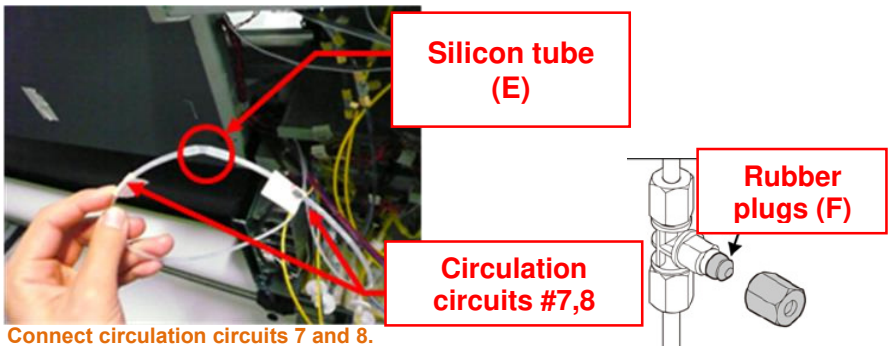
(UI) UISS circuit: 6 min
* Process only for ink sets that use the UISS.
↓
↓
(SP) Main circuit: 5 min
↓
↓
↓
(CV) Check Valve: 1 min
↓
↓
↓
(SP) Main circuit: 5 min
↓
↓
↓
(SP) Release of negative pressure in the pump assembly, wiping, carriage retraction: 1 min

Be careful. The carriage unit will automatically retract from home position.

CIRCULATION DISCHARGE START [ENT]

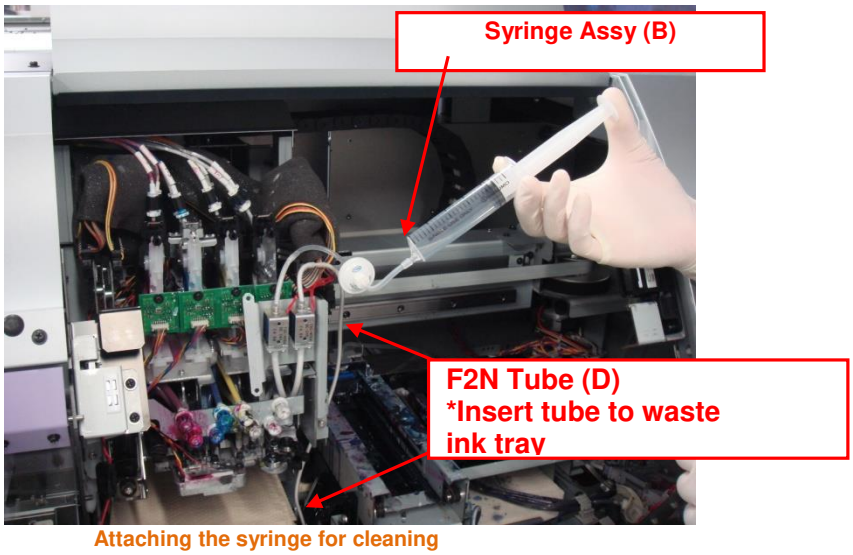
4. The screen displays "ready" status for discharging ink from the circulation circuit. If cleaning of the circulation circuit cleaning is unnecessary depending on the ink set, press the ENTER key twice, skip steps 4 and 5 and go to step 6.
This step is mandatory for the 6C+W model. This step can be skipped for the 4 color and 6 color models, but is recommended if the circulation paths are unclean.

4-1. Remove the rear cover LU.
4-2. Remove the tubes from the cartridges for circulation circuits 7 and 8. Connect the ends of the removed tubes with silicone tube (E) and plug the apertures removed of the tubes with rubber plug (F).
Mark tubes so that circulation circuits 7 and 8 can be distinguished.



Connect circulation circuits 7 and 8.

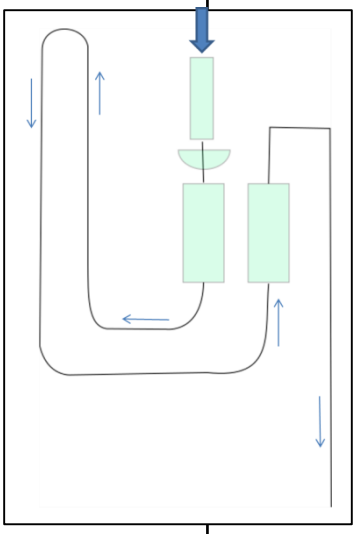
4-3. Open the right maintenance cover.
4-4. Remove the head cover assembly.
4-5. Locate the tube connecting the right circulation valve and the bottom of the damper. Remove the tube from the damper and connect the tube with F2N tube (D). Attach rubber plug (G) to the damper.
4-6. Direct the other end of F2N tube (D) to the waste ink tray.
4-7. Locate the tube connecting the left circulation valve and the top of the damper. Remove the tube from the damper and attach the syringe included in the maintenance solution filling kit (B) to the tube. Attach rubber plug (G) to the damper.



Attaching the syringe for cleaning

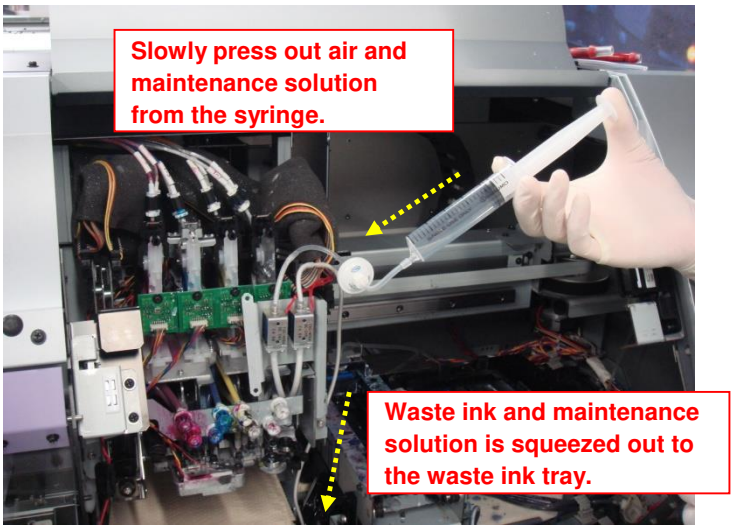
4-8. **Press the ENTER key. The circulation valve will open.**

CIRCULATION DISCHARGE
END [ENT]



5. The screen displays the “end” status for discharging ink from the circulation circuit (which means preparations required for ink discharge have been completed). Manually discharge the ink in the following procedure.

5-1. Remove the syringe from the fitting on the front of the filter.
5-2. Suck air into the syringe removed from the fitting.
5-3. Attach the syringe to the fitting on the front of the filter.
5-4. Slowly press out air from the syringe (approx 0.5ml/sec) to discharge the ink from the circulation circuit.
5-5. Repeat steps 5-1~5-4 until you confirm no ink remaining in the circuit.



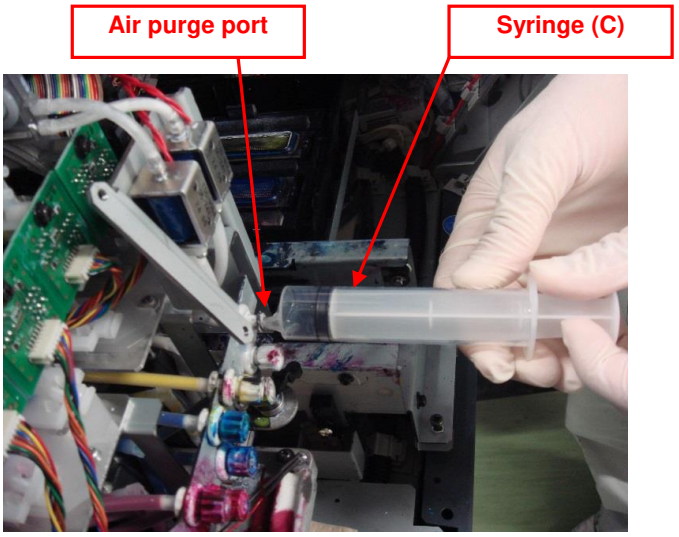
Cleaning the circulation circuit

Steps hereafter are for cleaning the circulation path.
5-6. Remove the syringe from the fitting on the front of the filter.
5-7. Suck maintenance solution 03 from the bottle (J) into the syringe.
5-8. Attach the syringe to the fitting on the front of the filter.
5-9. Slowly press out the maintenance solution from the syringe (approx 0.5ml/sec) to fill up the circulation circuit with maintenance solution.
5-10. Remove the syringe from the fitting on the front of the filter.
5-11. Suck air into the syringe remove.
5-12. Attach the syringe to the fitting on the front of the filter.
5-13. Slowly press out the air from the syringe (approx 0.5ml/sec) to discharge maintenance solution 03 from the circulation circuit.
5-14. Repeat steps 5-6~5-13 until you confirm the discharged maintenance solution is clear of ink colors.
5-15. Reconnect the tube removed in step 4-7 to the top of the damper.
5-16. Reconnect the tube removed in step 4-5 to the bottom of the damper.
5-17. At the rear side of the machine, put back the circulation circuits 7 and 8 back to their original positions.
5-18. Press the ENTER key. The circulation valve will shut.

AIR PG PORT DISCHARGE
START [ENT]

6. The screen displays the “ready” status for discharging ink from the air purge ports. Prepare for the ink discharge in the following procedure.

6-1. Remove the cap from one of the ports, and attach syringe (C).



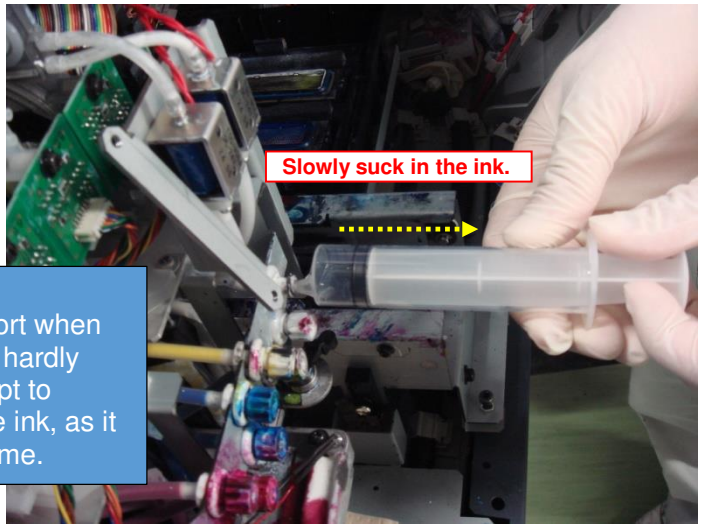
Attaching the syringe to the air purge port

6-2. **Press the ENTER key. The cartridge valve will open.**

AIR PG PORT DISCHARGE
END [ENT]

7. The screen displays the “end” status for discharging ink from the air purge ports (which means preparations required for ink discharge have been completed). Manually discharge the ink in the following procedure.

7-1. Slowly suck the ink contained in the port into the syringe (approx. 0.5ml/sec) until no further ink can be sucked in.



Discharging ink from the air purge port

NOTE:
Move on to the next port when you confirm that ink is hardly sucked. Do not attempt to completely remove the ink, as it consumes too much time.

7-2. Remove the syringe and cap the port.
7-3. Repeat the above procedure for the remaining 7 ports.
7-4. Press the ENTER key. The cartridge valve will shut.

INK CHANGE
DISCHARGE [ENT]

8. Carriage unit returns to home position and printheads are capped.

DO NOT exit the [INK CHANGE] mode, or the parameters will return to factory default.

Part2. Washing the ink path (60min)

INK CHANGE
WASH [ENT]

9. Back to [INK CHANGE], and select [WASH] and press the ENTER key.

SUPPLY PATH
12345678

10. Select all 8 ink circuits and press the ENTER key.

Make sure to select all 8 circuits.

SET WASHING LIQUID
12345678

11. Insert maintenance solution 03 cartridges (L) into the slots for all circuits.

12. The system will start filling up the maintenance solution in the following sequence.

** WASH (SP) **
END [ENT]

(SP) Main circuit fill-up: 1 min 30 sec

↓

** WASH (UI) **
END [ENT]

(UI) UISS circuit fill-up: 2 min 30 sec
* Process only for ink sets that use the UISS.

↓

** WASH (CV) **
END [ENT]

(CV) Check Valve fill-up: 1 min

↓

** WASH (SP) **
END [ENT]

(SP) Main circuit fill-up: 5 min

↓

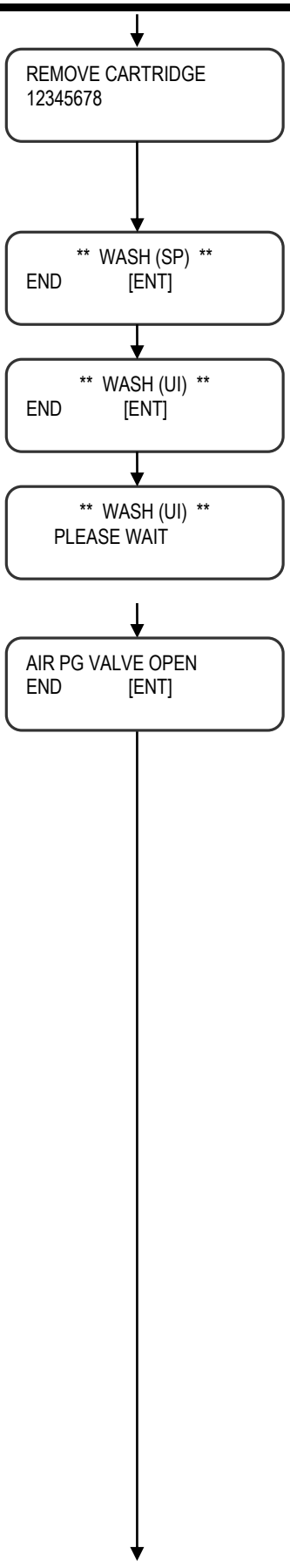
** WASH (CV) **
END [ENT]

(CV) Check Valve fill-up: 1 min

↓

** WASH (CV) **
PLEASE WAIT

(CV) Release of negative pressure in the pump assembly: 30 sec



13. Remove all maintenance solution 03 cartridges (L) from the slots.

14. The system will discharge the maintenance solution in the following sequence.

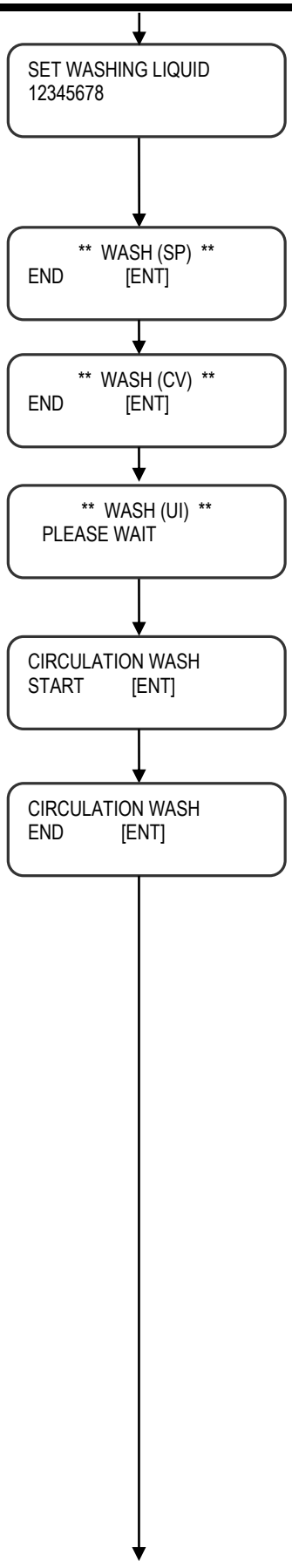
(SP) Discharge from main circuit: 1 min 30 sec
↓
↓
↓
(UI) Discharge from UISS circuit: 3 min
* Process only for ink sets that use the UISS.
↓
↓
(UI) Release of negative pressure in the pump assembly: 30 sec

15. The screen displays the “ready” status for purging air from the air purge valve.

15-1. Rotate the valve opening shaft so that it is horizontal.

Rotate 90 degrees with a flathead screwdriver.

15-2. Press the ENTER key.



16. Insert maintenance solution 03 cartridges (A) into the slots for all circuits.

17. Maintenance solution fills up in the following sequence.

(SP) Main circuit fill-up: 5 min
↓
(CV) Check Valve fill-up: 1 min
* Process only for ink sets that use the UISS.
↓
(CV) Release of negative pressure in the pump assembly, wiping, carriage retraction: 1 min 30 sec

Be careful. The carriage unit will automatically retract from home position.

18. The screen displays the “ready” status for cleaning the circulation circuit. Press the ENTER key. The circulation valve will open.

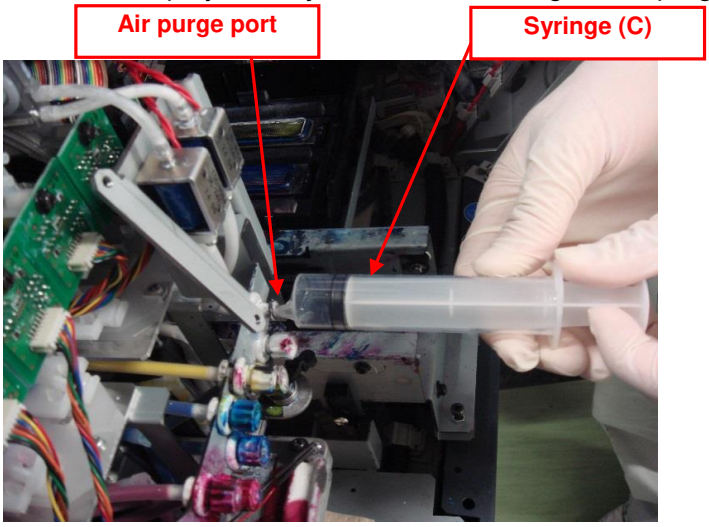
19. The screen displays the “end” status for cleaning the circulation circuit. Press the ENTER key. The circulation valve will shut.

Press the ENTER key and go to the next step since the circulation circuit was already cleaned in step 5.

AIR PG PORT WASH
START [ENT]

20. The screen displays the “ready” status for cleaning the air purge ports. Prepare for the air purge port cleaning in the following procedure.

20-1. Remove the cap from one of the ports, and attach syringe (C). The screen displays “ready” status for cleaning the air purge port.



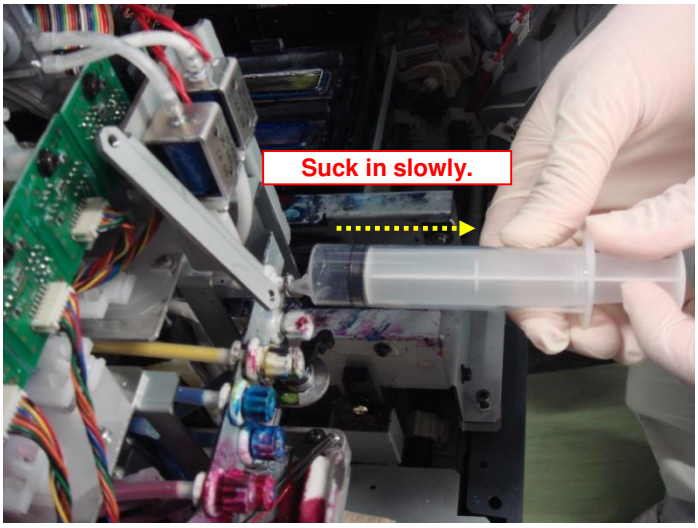
Attaching the syringe to clean the air purge ports

20-2. **Press the ENTER key. The cartridge valve will open.**

AIR PG PORT WASH
END [ENT]

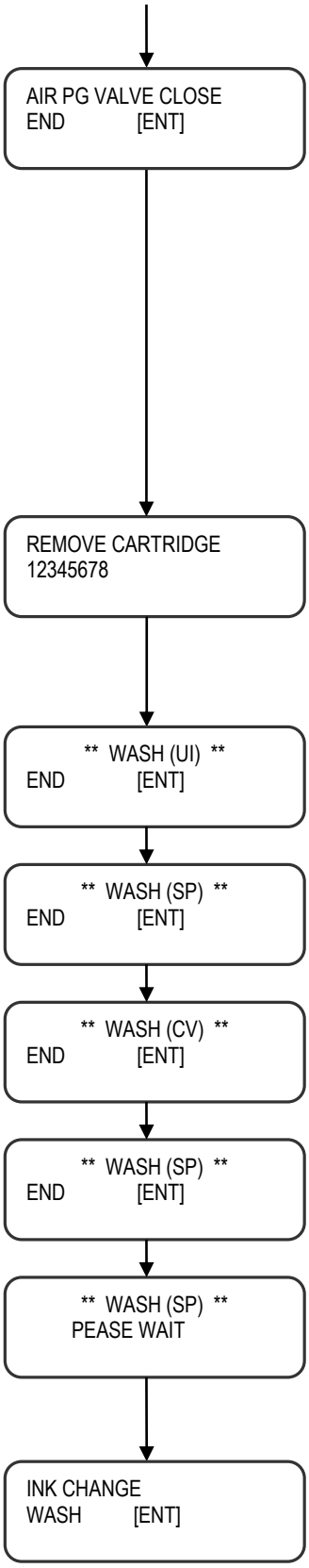
21. The screen displays the “end” status for cleaning the air purge port. Clean the air purge ports in the following procedure.

21-1. Slowly suck the maintenance solution with the syringe (approx. 0.5ml/sec) until no further solution can be sucked in.



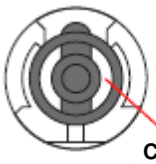
Cleaning the air purge port

21-2. Remove the syringe and cap the port.
21-3. Repeat the above procedure for the remaining 7 ports.
21-4. Press the ENTER key. The cartridge valve will shut.



22. The screen displays the “end” status for closing the air purge valve.

22-1. Rotate the valve opening shaft so that it is vertical for all circuits.



CLOSED

Rotate 90 degrees with a flathead screwdriver.

22-2. Press the ENTER key. Printheads are capped.

23. Remove all maintenance solution 03 cartridges (L) from the slots.

24. Maintenance solution is discharged from the circuit in the following sequence.

(UI) Discharge from UISS: 4 min
* Process only for ink sets that use the UISS.

↓
↓

(SP) Discharge from main circuit: 5 min

↓
↓
↓

(CV) Discharge from check valve: 1 min

↓
↓
↓

(SP) Discharge from main circuit: 10 min

↓
↓
↓

(SP) Release negative pressure from pump assembly: 2 min

25. Press the ENTER key to exit the ink replacement/cleaning menu screen.

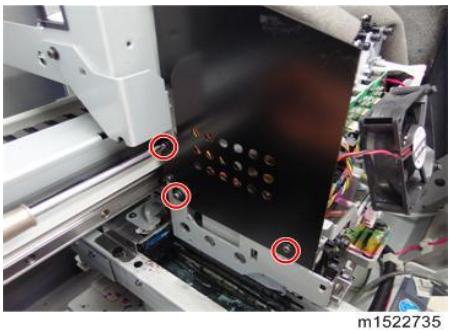
Confirm clean dampers and ink paths. If they are not clean after performing the above procedure, leak is a possible cause. In such case, identify and resolve the leak and redo the above procedure from Part 2, Step 1.

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

Part 3: Replacing the white solenoid assy (for 6C +W model only) (20min)

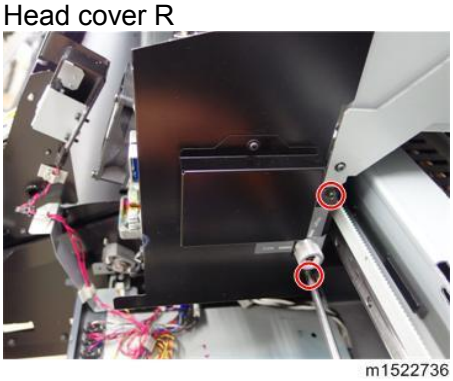
1. Remove the following covers.

- Right maintenance cover C
- Right maintenance cover U
- Y cover RR
- HDC cover
- Lure-lock cover
- Head cover
- Head cover L



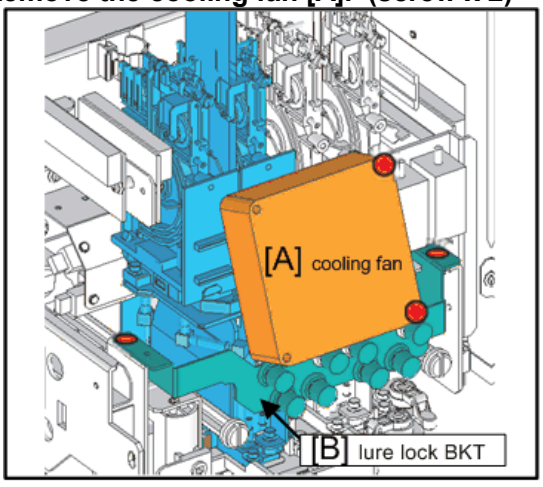
m1522735

- Head cover R

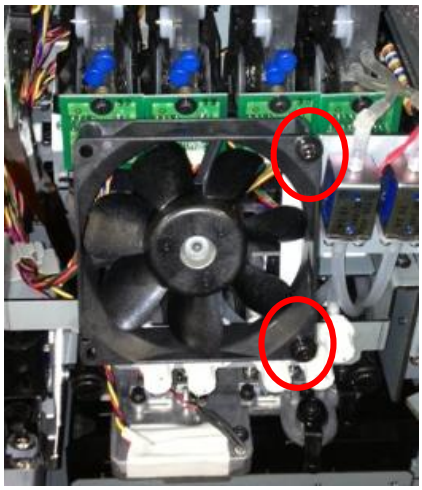


m1522736

2. Remove the cooling fan [A]. (screw x 2)

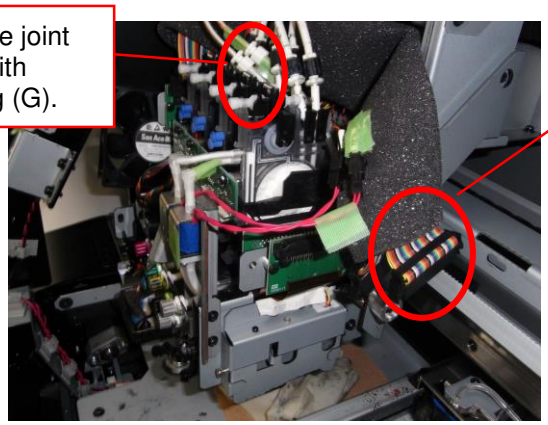


w_m1522671

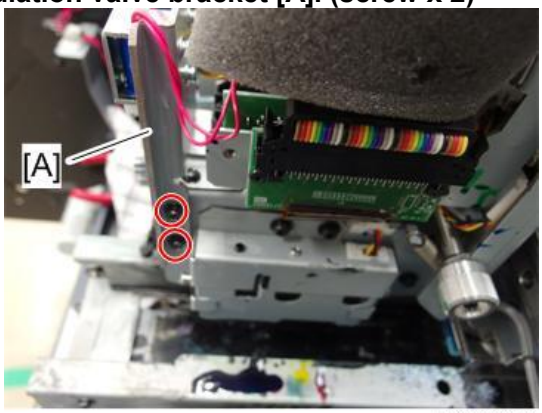


3. Mark the tube and solenoid with tape.
The photo below shows markings made on circulation path #8.

4. Disconnect the Tube and Connector. Plug the joint of the tube to prevent solution from dripping.



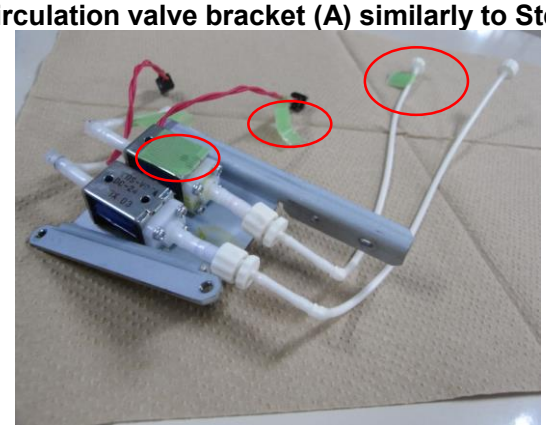
5. Remove the circulation valve bracket [A]. (screw x 2)



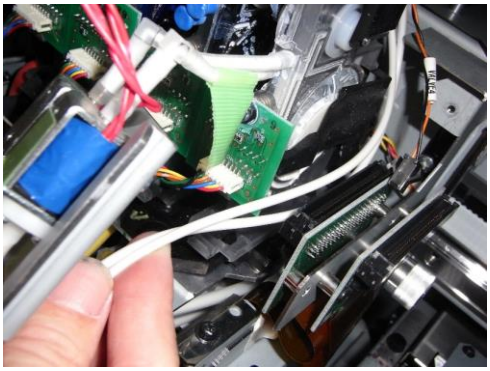
m1522738

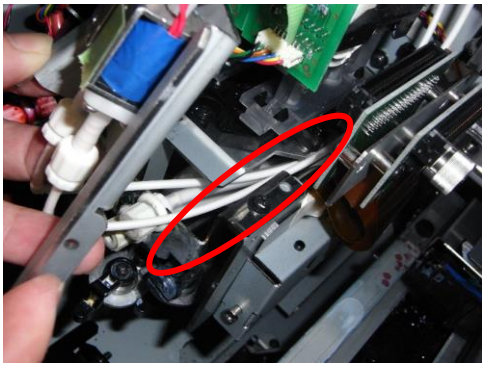
Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

6. **Mark the new circulation valve bracket (A) similarly to Step 3.**



7. **Insert the two tubes between the printhead and bracket.**



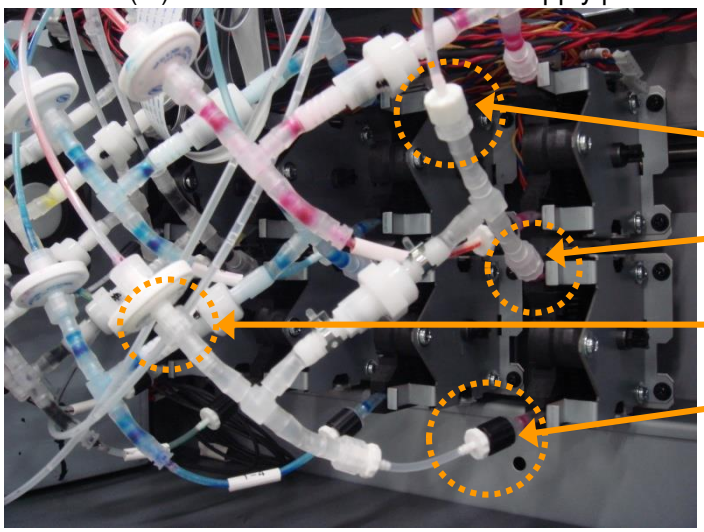


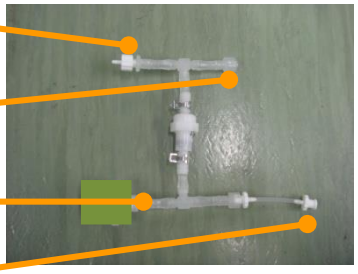
8. **Put the circulation valve bracket back in place then fasten it down with screws. And set the connectors.**

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

Part 4: Replacing the check valve and filter (15min)

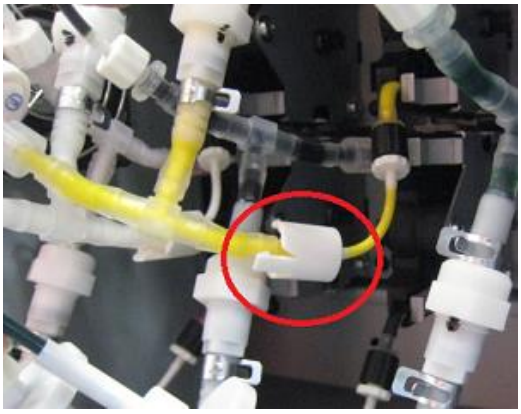
1. Remove the 4 fittings circled in the photo below and replace the Check Valve with the Check Valve (M) included in the kit at all ink supply paths. Then attach the lock pieces.



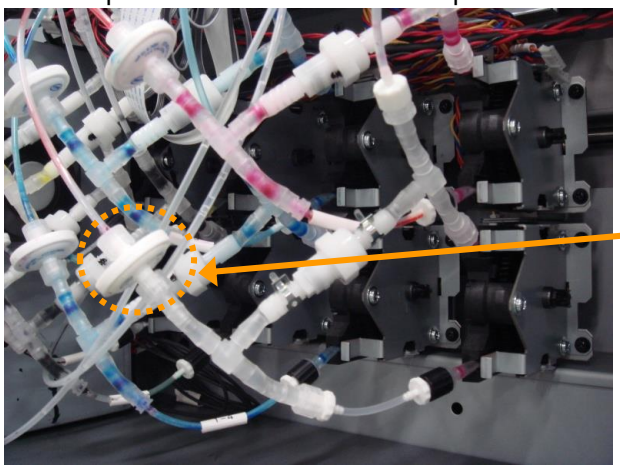


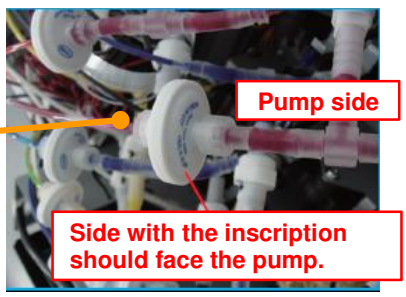
Check Valve assembly kit (M)

Check Valve attached to the circuit



2. Replace the filter circled in the photo below with Filter (N) at all ink supply paths.





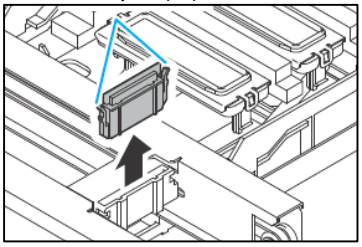
Filter (N)

Filter replacement

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

Part5: Replacing the wiper (5min)

1. Replace the wiper(O) with new one.

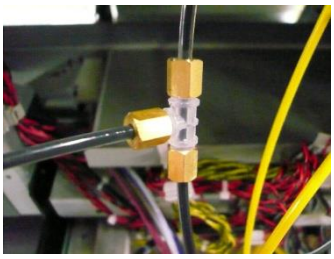


Additional part: Attaching / Removing the UISS circuit, if necessary (20min)

If the new ink set uses the UISS circuit, attach the UISS circuit.
If the new ink set does not use the UISS circuit, remove the UISS circuit.

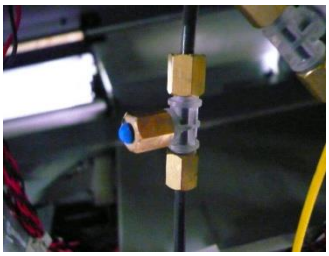
See table “Supply/equipment reference” to check the number of UISS circuits that need to be attached or removed according to the new ink set.

1. See field service manual for procedures on how to change the joints for the UISS circuit.



<Removing the UISS>
Remove the UISS circuit and attach the Rubber Plug (F)

<Attaching the UISS>
Remove the rubber plug and attach the UISS with Oring(Y).



Attaching the rubber plug when UISS is not in use

For detail, see section: 2.Installation > Ink Set > Changing the joint, of the FSM.

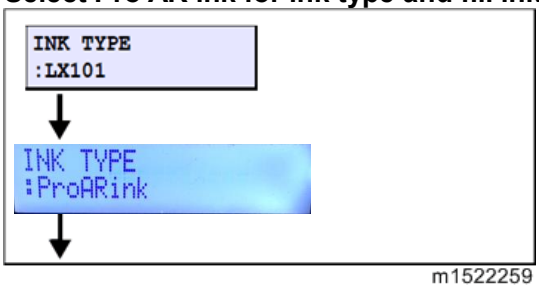
Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

Part 6: Ink filling → Air purging (60min)

Select the ink set and fill the ink paths with ink. This procedure is same as the standard procedure.

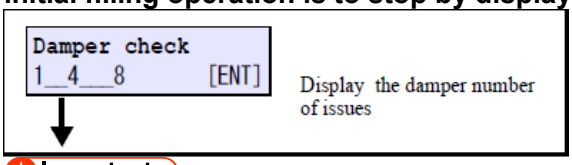
Performing the Initial Ink Fill

1. **Remove the head cover.**
2. **Select Pro AR ink for ink type and fill ink.**



m1522259

3. **If the damper has not been sacked in enough, such as leaks or cap failure of the route, the initial filling operation is to stop by displaying the warning.**



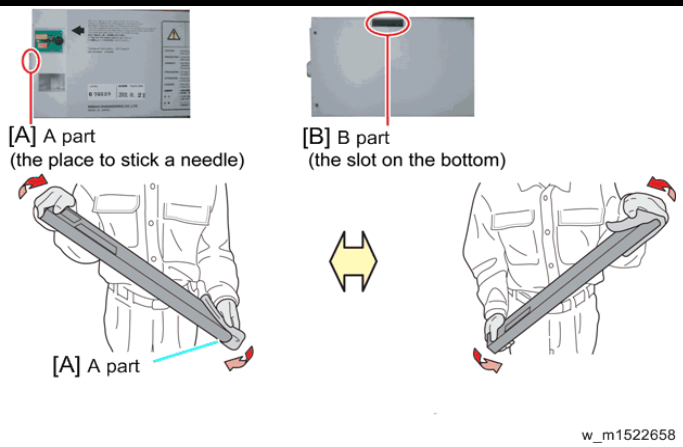
Important

・Confirm the damper number of issues, which is displayed.
・Press [ENTER] key, to return to the initial filling start screen.
・Turn off the main power supply to check the state as well as the route of the problem damper and cap, or the like.

4. **Slowly shake the white ink cartridge more than twenty times right and left.**
To prevent ink from leaking when you shake the cartridge, wear gloves and firmly cover the A part [A] of the upper surface of the cartridge and the B part [B] of the bottom surface of the cartridge with paper towels.
Then, shake it more than twenty times right and left so that ink flows inside the cartridge.

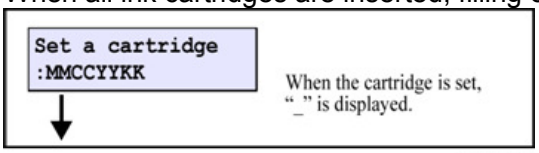
Note

- If you shake it too strong, the pack inside may be damaged and it may cause ink leakage. Therefore, perform this carefully.
- If the remaining amount of ink is less, ink in the cartridge cannot be beaten enough. Tilt the cartridge until it becomes vertical.



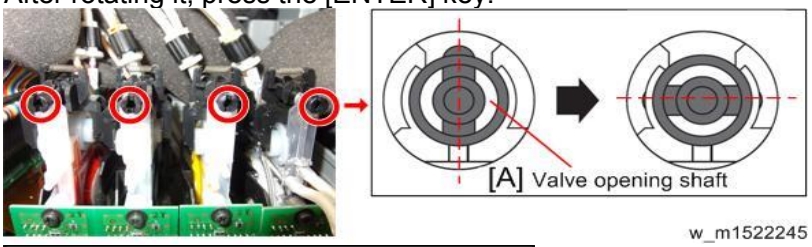
w_m1522658

5. **Insert all ink cartridges.**
When all ink cartridges are inserted, filling operation starts.

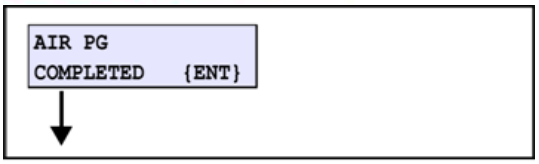


w_m1522260

6. **Rotate the valve opening shaft [A] 90 degrees with a flathead screwdriver.**
After rotating it, press the [ENTER] key.

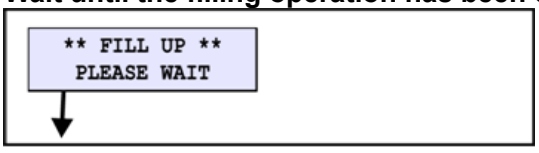


w_m1522245



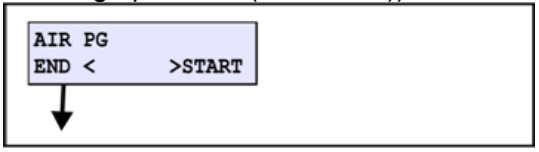
m1522267

7. **Wait until the filling operation has been completed.**



m1522261

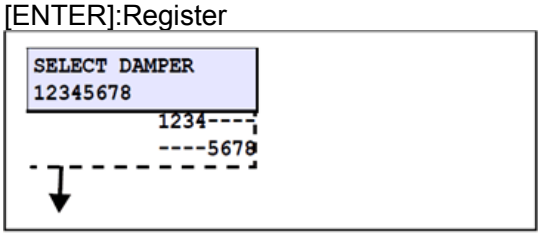
8. **Remove air.(Filling head air port)**
With the [▸] key, move to the air purge sequence.
(When you press the [◂] key, air purge work is not performed and the machine moves to the cleaning operation. (to Part 16.))



m1522262

9. **Select a damper on which you perform air purge.**

[▲] [▼]: Select
[ENTER]:Register



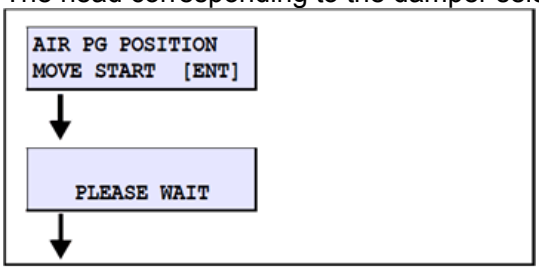
m1522263

Important

- This does not mean that you can perform air purge on all air purge ports you selected at the same time.

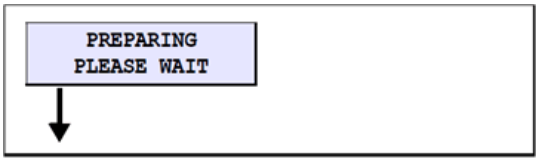
10. Press the ENTER key to move the carriage on the wiper.

The head corresponding to the damper selected in 9.moves on the wiper.



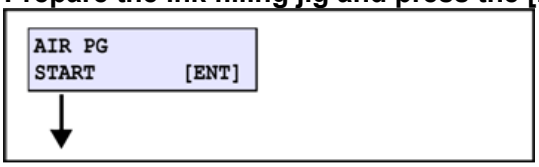
w_m1522669

11. Wait for a while until the machine is ready for opening the port.



w_m1522670

12. Prepare the ink filling jig and press the [ENTER] key.



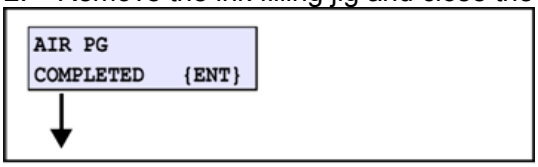
m1522266

Important

- Do not remove the cap of the damper's port that is not selected.

13. Insert ink filling jig (x2) into two ports of the adjacent path (1-2,3-4,5-6,7-8) simultaneously) and flow a constant amount of ink.

1. After flowing ink from all ports of the damper selected in 9., press the [ENTER] key to stop sending ink.
2. Remove the ink filling jig and close the cap.



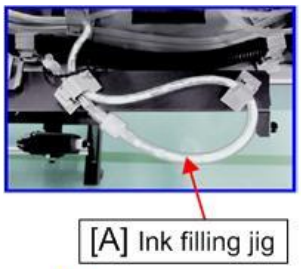
m1522267

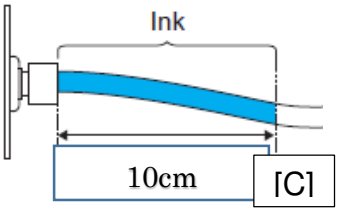
Important

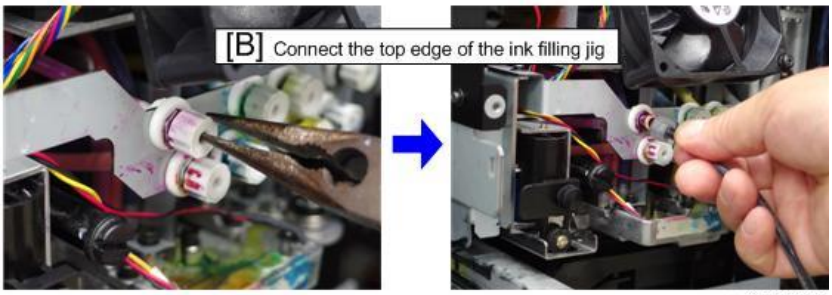
- **If air remaining in the lower part of the damper cannot be purged, do the additional**

procedure by referring to bulletin #RM153018.

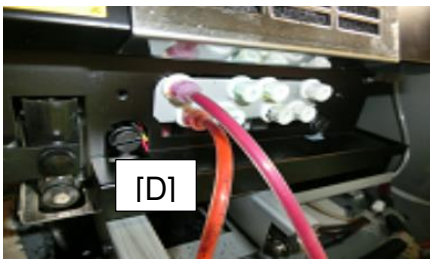
- Use the ink filling jig [A].
- Connect the top edge of the ink filling jig [B] with the “Fitting” on the carriage front surface.
- For reference: Amount shall be about constant 10cm-flowing on the jig. [C]
- A second air purge tube [D] is added to the accessories, to improve serviceability in the field. Insert the end of the tube to the exhaust hole [E] before using it.
- If there is only one jig available, make sure to lay down a cloth, towel, or other similar object to absorb the ink that will be released from the other path.[F]
- For “6-color” or “6-color + White” ink, do not open the yellow port while the black port is open to prevent colors from mixing. [G][H]
  (This is especially noticeable with Y (yellow) and K (black), due to the contrast between these two colors.)
- If colors are mixed, perform “CLEANING””HARD” repeatedly to recover from mixing. (For reference: 10 times).

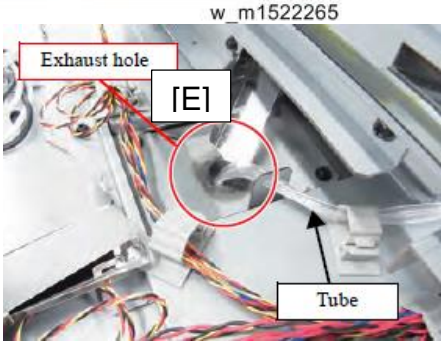




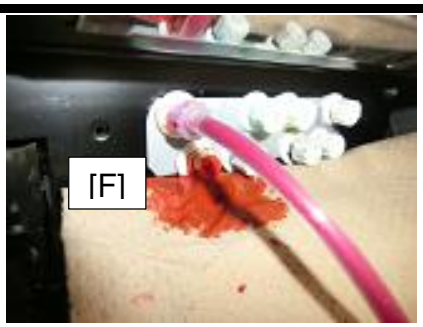


w_m1522265

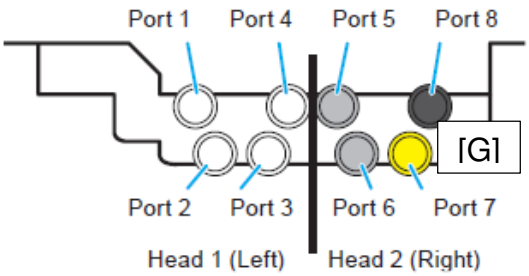




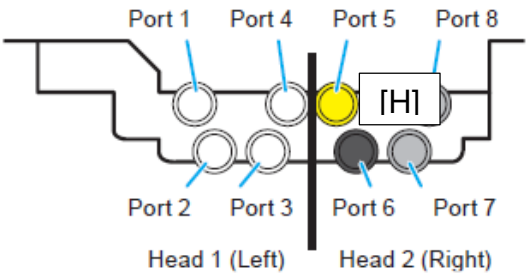
Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a



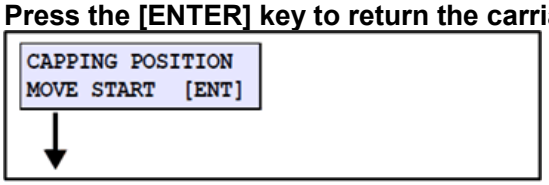
6-color Ink Set



6-color + White Ink Set



14. Press the [ENTER] key to return the carriage to the position that close the cap.



w_m1522676

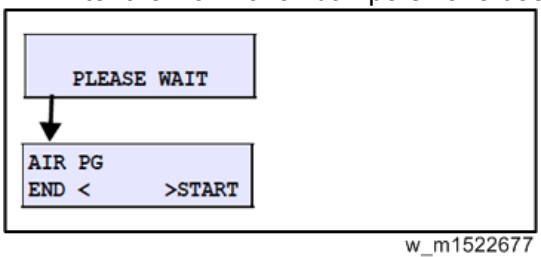
15. Wait for a while until the amount of ink in the damper returns to the normal status.

1. When the operation has been completed, the screen returns to the one in 6. Perform the same work to the remaining damper.

Important

- When you connect the jig with other color, clean the top edge of the ink filling jig so that colors may not be mixed.

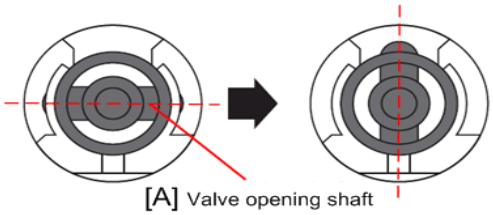
2. After the work for all dampers have been completed, press the [◂] key.



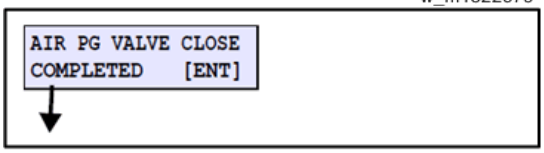
w_m1522677

16. Check that no air remains in the damper, and return the valve opening shaft [A] with a flathead screwdriver to the original status.

Press the [◂] key to terminate the operation.



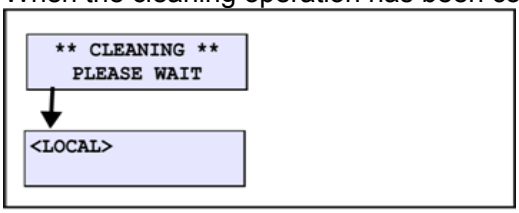
w_m1522679



w_m1522678

17. When you press [ENTER], the cleaning operation starts.

When the cleaning operation has been completed, the screen returns to LOCAL.



m1522269

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

Part 7: Print adjustment / Image quality adjustment / Parameter download (90min)

PRINT ADJUST

Draw the built-in patterns, and compensate the parameter so that the drop positions of other heads are on the same line as the drop position of reference head (Head 1) in the Y-direction. To each of the discharged waveforms, execute [SiDir], [ReDir] and [BiDir] in each resolution.

Set the parameters in the order bellow.

1. WF2:900Hi [SiDir], [ReDir] and [BiDir]
2. [BASIS SET]
3. WF1:900std,1200std [SiDir], [ReDir] and [BiDir]
4. WF2:900std,1200std,1200Hi [SiDir], [ReDir] and [BiDir]

Important

- The value set using [BASIS SET] are values calculated as a guideline for correction values. Thus, the actual ink landing position may be misaligned. Be sure to adjust the landing position for each mode that will be sure.
- Adjustment value adjusted by WF2 900Hi is distributed to the correction value of the other modes.

Note

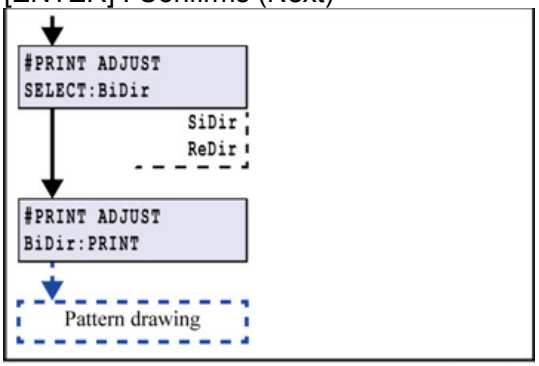
- WF1 (Wave Form 1) : Normal dot
- WF2 (Wave Form 2) : Variable dot
- Std : Scan speed “Standard”
- Hi : Scan speed “High”

- WF1 900std is for new fastest printing mode, named “Super Draft” .

Installation > PRINT ADJUST > Going and returning adjustment

Going and returning adjustment

1. **Select “BiDir” on the [SELECT] display.**
   [▲] / [▼] : Switches
   [ENTER] : Confirms (Next)



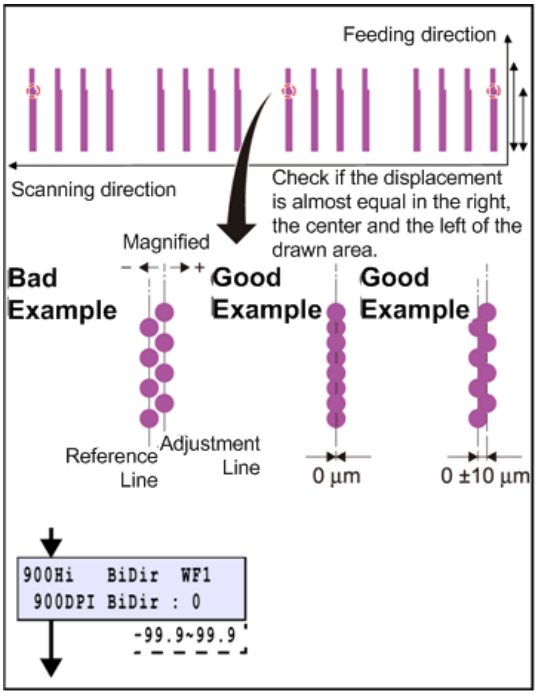
m1522579

2. **Press the [ENTER] key to draw the pattern.**
   [ENTER] : To start Pattern drawing
   [►] : To the compensation display
   (Without drawing)

3. **Check and compensate the patterns.**
The reference lines are drawn in going, and then the adjustment lines are drawn at the same Y-coordinate positions in returning. The position where the lines above are overlapped on one vertical line is specified as the correct dot position (H1A: M color fixed)
Confirm that the dots are on the same line.
* The adjusting procedure is the same although the drawing pattern is different depending on mode.
[▲] / [▼]: Compensating value input (Measured value)
[ENTER] : Confirms

Note

- If the displacement is significantly different in the right and left, other reasons are considered.



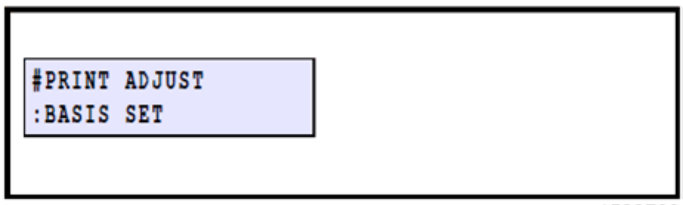
w_m1522458

4. **When compensated, draw and check the patterns again.**

Important

- Repeat “Drawing -> Checking (Compensating)” until any compensation is not required.

5. **Select [BASIS SET] and press [ENTER] key. Adjustment value adjusted by WF2 900Hi is distributed to the correction value of the other modes.**



w_m1522703

Important

- The value set using [BASIS SET] are values calculated as a guideline for correction values. Thus, the actual ink landing position may be misaligned. Be sure to adjust the landing position for each mode that will be sure.

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

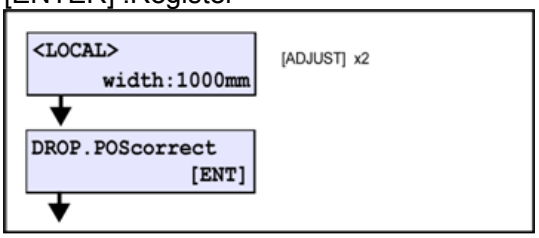
Image Quality Adjustment (Common procedure with the conventional ink)

Perform the adjusting function such as FEED COMP. and DROP.POScorrect.

DROP. POScorrect

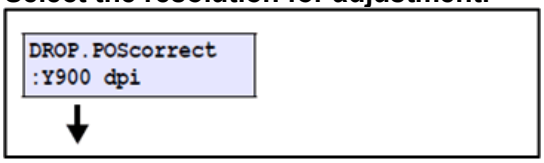
Correct the drop position difference for back and forth printing.

6. **Press [ADJUST] twice, and select DROP.POScorrect.**
   [ENTER] :Register



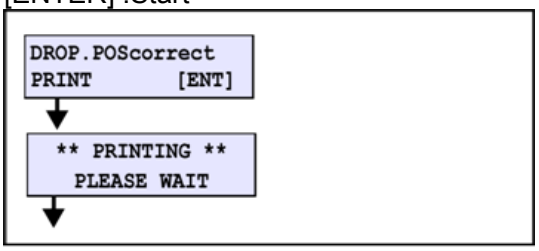
w_m1522277

7. **Select the resolution for adjustment.**



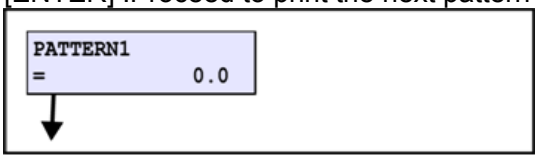
w_m1522690

8. **Start print with [ENTER].**
   [ENTER] :Start



m1522278

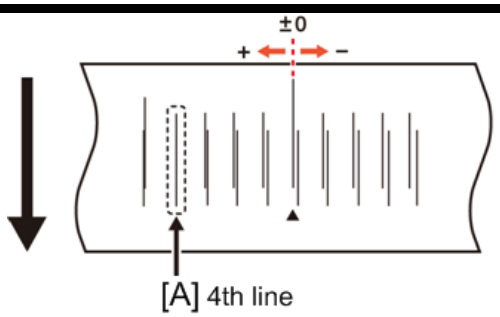
9. **Input the correction value of the pattern 1st.**
   [▲] [▼] :Input the correction value
   [ENTER] :Proceed to print the next pattern



m1522279

Note

- DROP. POScorrect pattern (example)
- The straight line is shown at the 4th line [A] in the plus direction from the 0 position. In this case, the dot position adjustment value is 4.0.



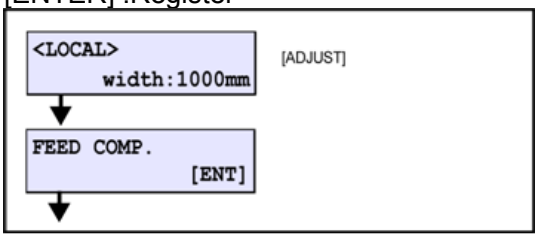
w_m1522280

10. **When all patterns have been printed and all correction values have been input, it returns to step 3.**
11. **Repeat adjust for resolution that can be selected in step 2.**

FEED COMP.

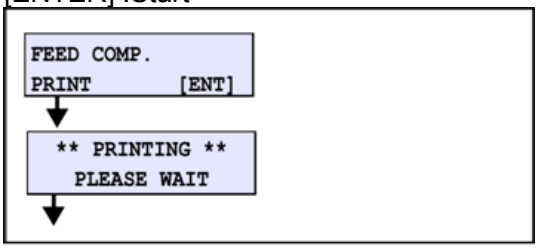
Perform correction of media feed amount.

12. **Press [ADJUST] , and select "FEED COMP.".**
    [ENTER] :Register



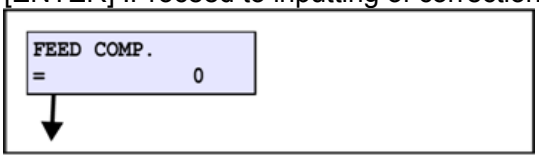
w_m1522283

13. **Start print with [ENTER].**
    [ENTER] :Start



m1522284

14. **Input the correction value.**
    [▲] [▼] :Input the correction value
    [ENTER] :Proceed to inputting of correction value of the next pattern

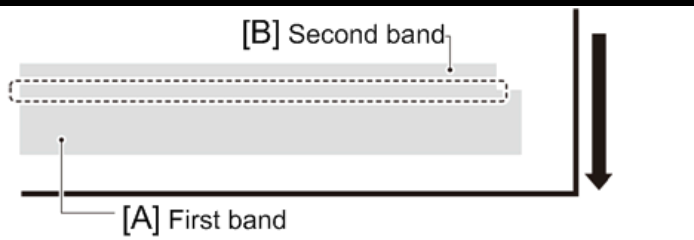


m1522285

Note

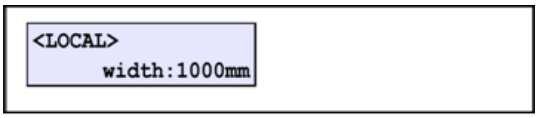
- Print two bands (First band [A], Second band [B]) as the compensation pattern.
  Adjust so that an even color density is obtained around the boundary between the two bands.
  When "+" value is input: The distance of two bands separates.
  When "-" value is input: The distance of two bands comes closer.
  FEED COMP. pattern

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a



w_m1522286

15. It returns to LOCAL.



m1522287

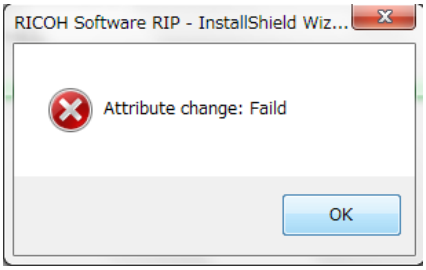
Note

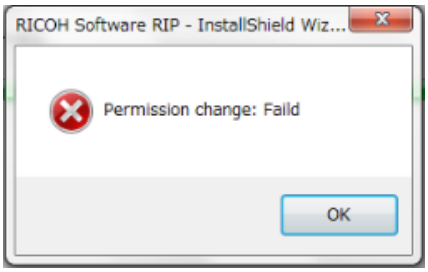
Download the parameter to PC after finishing all adjustment.

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

Part 8: Installing RIP and overwriting the profile

- For the AR ink, the software RIP is Ver.3.0.0. The version is described on the label attached to the top left of the package.
- Install the software RIP with the CD contained in the INK SWITCHING KIT.
- It is recommended to uninstall the software RIP originally installed before installing software RIP Ver.3.0.0. Note that uninstalling the software RIP will delete all print parameters. If you wish to maintain the print parameters, do not uninstall. See next page for the procedure on this.
- The following error messages may appear depending on the Windows OS version. Proceed with the installation procedure by clicking OK..

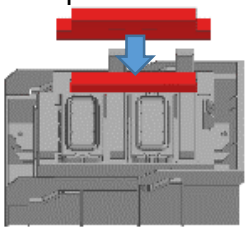




- Installing the software RIP will automatically install the profile for AR ink to the Profile Manager. Old inks profiles still remain, so delete old ones as necessary.

Part 9: Replacing the C-pad (absorber)/ Pasting labels

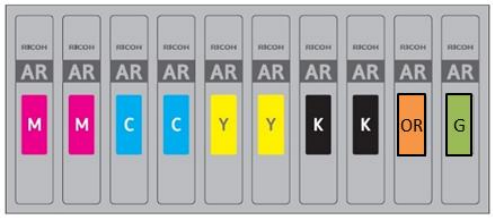
- Replace the absorber (one located at the rear among the four) with the new one.



- Attach the following labels.

<AR Ink label>

<Eco case label>



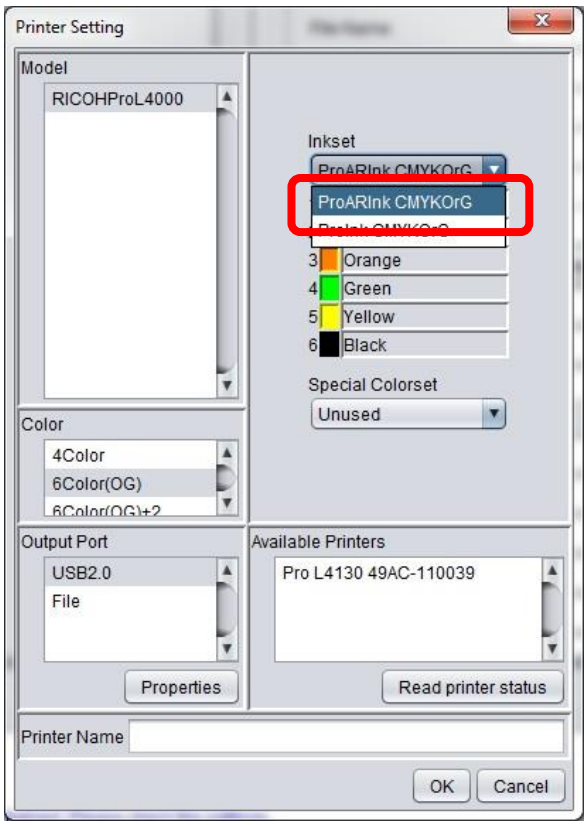
Finish.

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

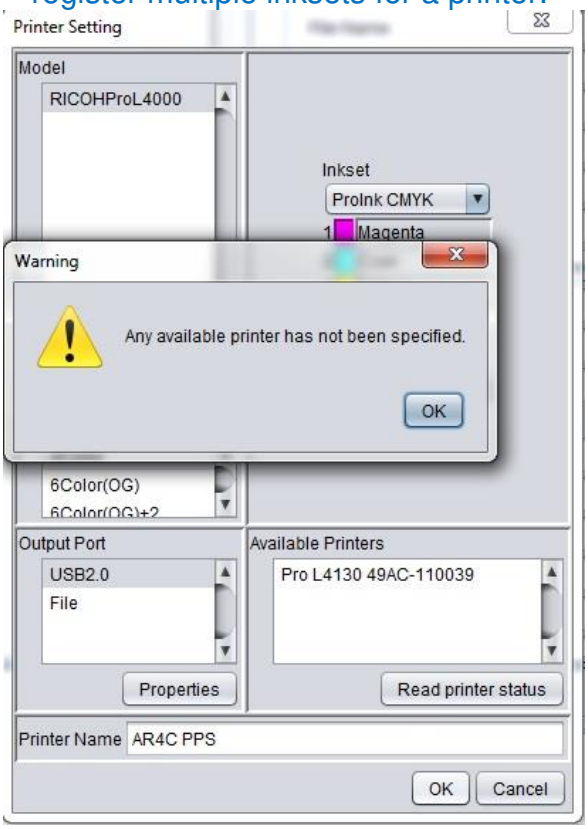
How to install software RIP Ver.3.0.0 without uninstalling the previous software RIP, to maintain previously applied print parameters

- After installing software RIP Ver.3.0.0, select the AR ink under Inkset.
- Make sure to replace the old insket with the new AR inkset, because only 1 inkset can be registered per printer S/N.

Select the AR inkset.



Warning message appears if attempted to register multiple inksets for a printer.



- The former print parameters are not automatically inherited after converting to the Pro AR ink. If the same parameters need to be applied, reset the parameters.
- Formerly used profiles will remain even after converting to the Pro AR ink. Delete the old profiles as necessary.
- If jobs associated with the previously applied inkset remain in the list, make sure to leave at least one profile in the ProfileManager, or software RIP will not activate. If all profiles have been deleted by mistake, install the previous profile.

Model: Ma-P1/P1.5	Date: 07-Apr-16	No.: RM153019a

The following Warning appears when attempted to activate the software RIP after having deleted all profiles.

To prevent the above, select any profile from the old inkset.

Device Profile | Input Profile

Model	Ink set	Media	Output setting	Separation	Ver.	Media type
All	ProInk CMYKOrG+W	All	All	All	All	All
RICOHProL4000 (6...	ProInk CMYKOrG+W	3M Controltac IJ160-10	900x900 VD	Full color	V3.1	PVC Matte
RICOHProL4000 (6...	ProInk CMYKOrG+W	3M Controltac IJ160-10	1200x1200 VD	Full color	V3.1	PVC Matte
RICOHProL4000 (6...	ProInk CMYKOrG+W	3M IJ180CV3-10	900x900 VD	Full color	V3.1	PVC Gloss
RICOHProL4000 (6...	ProInk CMYKOrG+W	3M IJ180CV3-10	1200x1200 VD	Full color	V3.1	PVC Gloss
RICOHProL4000 (6...	ProInk CMYKOrG+W	Avery MPI3000	900x900 VD	Full color	V3.1	PVC Gloss
RICOHProL4000 (6...	ProInk CMYKOrG+W	Avery MPI3000	1200x1200 VD	Full color	V3.1	PVC Gloss
RICOHProL4000 (6...	ProInk CMYKOrG+W	Mimaki BckTransparentLX	900x900 VD	Full color	V3.1	Transparent Film
RICOHProL4000 (6...	ProInk CMYKOrG+W	Mimaki BckTransparentLX	900x900 VD	Full color	V3.1	Transparent Film
RICOHProL4000 (6...	ProInk CMYKOrG+W	Mimaki BckTransparentLX	1200x1200 VD	Full color	V3.1	Transparent Film
RICOHProL4000 (6...	ProInk CMYKOrG+W	Mimaki GPVC	900x900 VD	Full color	V3.1	PVC Gloss
RICOHProL4000 (6...	ProInk CMYKOrG+W	Mimaki GPVC	1200x1200 VD	Full color	V3.1	PVC Gloss
RICOHProL4000 (6...	ProInk CMYKOrG+W	Mimaki PosterpaperLX	900x900 VD	Full color	V3.1	Coat Paper
RICOHProL4000 (6...	ProInk CMYKOrG+W	Mimaki PosterpaperLX	1200x1200 VD	Full color	V3.1	Coat Paper
RICOHProL4000 (6...	ProInk CMYKOrG+W	Mimaki WP PaperLX	900x900 VD	Full color	V3.1	Polyester Synthetic
RICOHProL4000 (6...	ProInk CMYKOrG+W	Mimaki WP PaperLX	1200x1200 VD	Full color	V3.1	Polyester Synthetic

Model: Ma-P1	Date: 7-Dec-18	No.: RM153021

Subject: Request to tighten the fittings to prevent ink spillage	Prepared by: Kanji Nakano
From: PP CF/WF Sect., PP Field Quality Management Dept.	

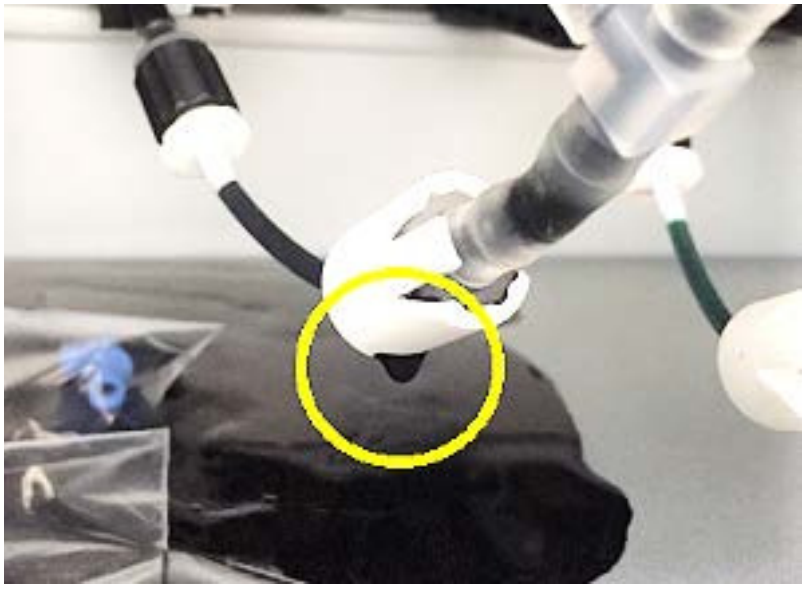
Classification:	☒ Troubleshooting	☐ Part information	☒ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2

IMPORTANT NOTICE:

For machines already installed in the field, do the SOLUTION in this RTB no later than **January 31, 2019.**

SYMPTOM

Ink spills from the fittings.



CAUSE

Fittings were not completely tightened in the production line.

SOLUTION

Production line:

Torque applied for fastening the fittings is checked from June 2017 production.

<Cut-in serial numbers>

RUS		RE	
M152-17	T487X80001	M152-27	T487X60001
M153-17	T497X80001	M153-27	T497X60001

In the field:

RUS		RE	
M152-17	T487X100002 - T487X500004	M152-27	T487X100001 - T487X400001
M153-17	T496XC00012 - T497X400010	M153-27	T496XB00020 - T497X400018

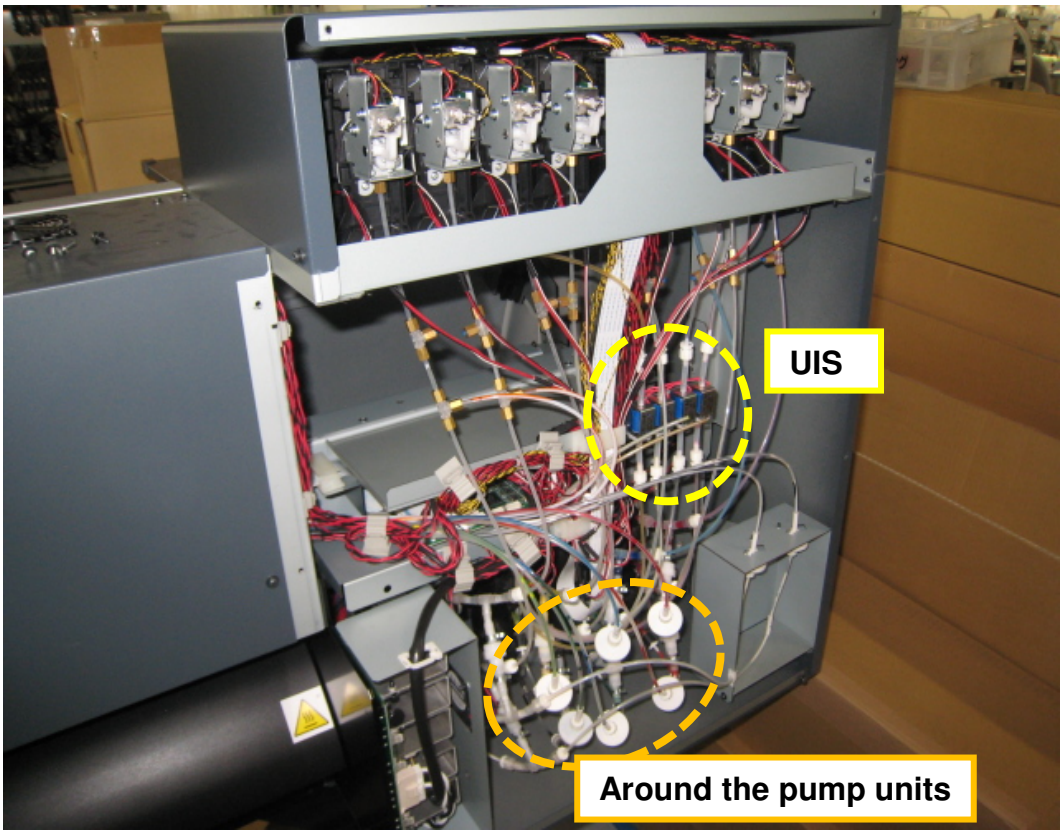
For new site installs:

Fully tighten the fittings before filling ink.

For machines already installed in customer sites:

Visit customer sites and tighten the fittings (Procedure below).

IMPORTANT: Do this action no later than **January 31, 2019.**
This is because the risk of ink spillage increases with time.

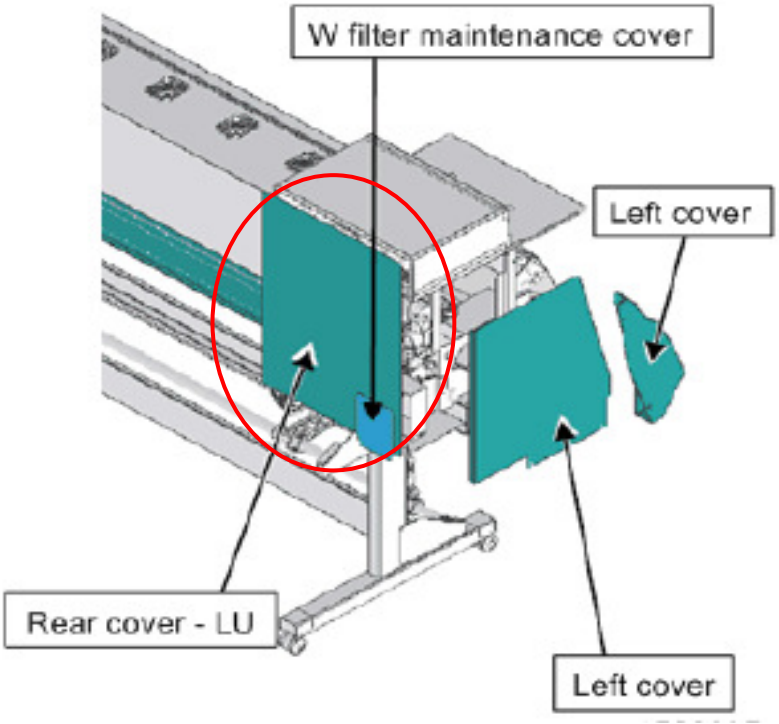


PROCEDURE

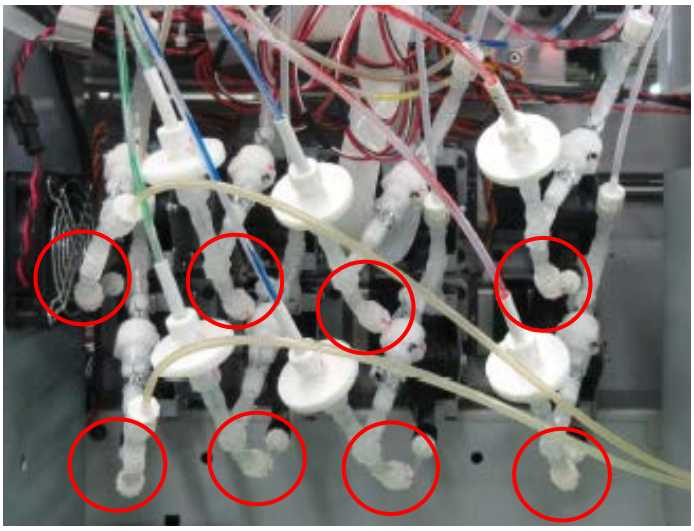
IMPORTANT:

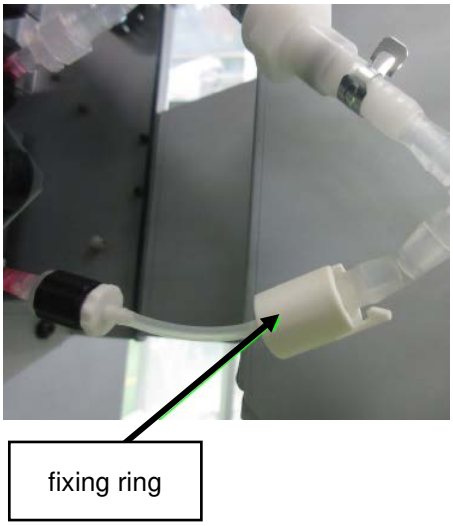
	Make sure to **<u>wear goggles and gloves</u>** during this procedure.

1. Remove the rear cover – LU.

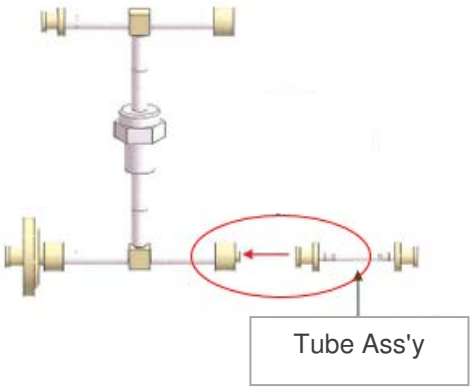


2. Remove the fixing rings (8 pcs) attached to the fitting parts.

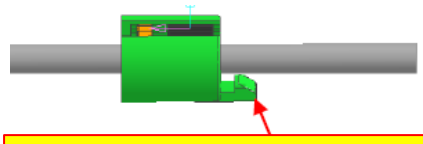




3. Turn the fitting part by hand until it stops (approximately 45-150 degrees).

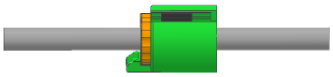


4. Immediately after step 3, mount the fixing ring.



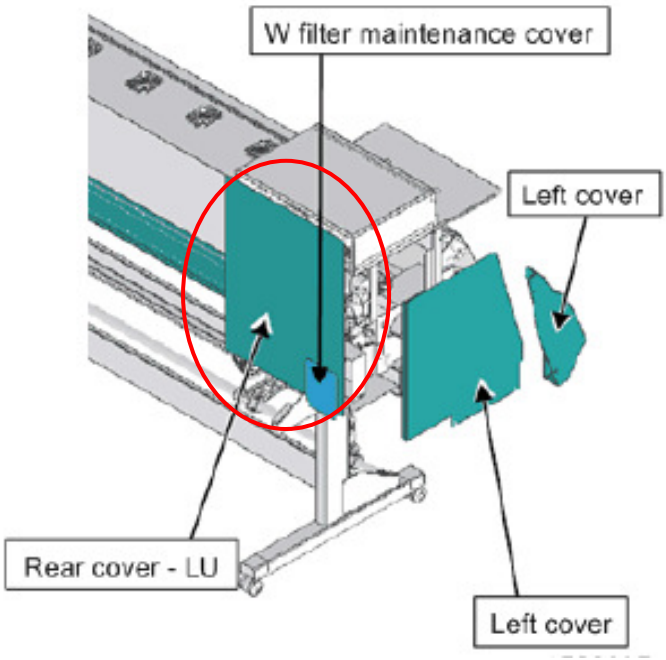
Pay attention to the direction of the ring to be mounted.
Make sure that claw securely fixes the tube.

Bad example
Not fixed when the ring is mounted in the reverse direction



☛ Repeat Steps 3 and 4 for all 8 parts.

5. Return the Rear cover - LU to its original location and fix the cover in place by tightening the screws.



Model: Ma-P1	Date: 9-Apr-19	No.: RM153022

Subject: Blank output after AUTO Power-off			Prepared by: Kanji Nakano
From: PP CF/WF Sect., PP Field Quality Management Dept.			
Classification:	☒ Troubleshooting	☐ Part information	☒ Action required
	☐ Mechanical	☐ Electrical	☐ Service manual revision
	☐ Paper path	☐ Transmit/receive	☐ Retrofit information
	☐ Product Safety	☐ Other ( )	☐ Tier 2

SYMPTOM

Blank page(s) are output after the machine recovers from AUTO Power-off.

Conditions:

- The **G5HDC PCB assembly** (E109890-00) is installed (S/N below), and
- **Firmware Ver1.90** is installed

Serial numbers of machines with the G5HDC PCB assembly installed:

Product	Serial Number	Shipping Date (approx.)
Pro L4130	T487XC00001 – T488X600002	7 Dec. 2017 – 7 July 2018
Pro L4160	T498X100001 – T498X700003	9 Jan. 2018 – 7 Aug. 2018

CAUSE

Firmware bug

The ink head does not turn on after the machine recovers from AUTO Power-off. As a result, print and maintenance operations do not work correctly.

SOLUTION

In the field:

- Temporary

  Do either of the following:

  (A) Disable the AUTO Power-off function.

  Set the AUTO Power-off function in MACHINE SETUP menu to "**None**".

  (See pg. 3-10 of the Operation Manual for the Pro L4130/L4160).

  Or,

  (B) Change the AUTO Power-off operation

  Set operation parameter No.80 (Auto PKind) to a value of "**1**".

  Note: The same power-on sequence is performed as when the power is turned on manually, and the above symptom can be avoided.

Operation Parameter No.80 "Auto PKind"	0: CPU stand-by (Default) **1: Power-off**

- Permanent

  The firmware will be modified (V2.00 set for release in June, 2019).

Production line:

None, as production for this model has already been discontinued.

Model: Ma-P1	Date:17-Apr- 19	No.: RM153023

Subject: "INK END" displayed while ink remains			Prepared by: Kanji Nakano
From: PP CF/WF Sec., CIP Product Quality Management Dep.			
Classification:	☒ Troubleshooting ☐ Mechanical ☐ Paper path ☐ Product Safety	☐ Part information ☐ Electrical ☐ Transmit/receive ☐ Other ( )	☒ Action required ☐ Service manual revision ☐ Retrofit information ☐ Tier 2

SYMPTOM

"INK END" is displayed even though there is still ink remaining in the cartridge.

Note: This occurs more frequently with high print volume users.

CAUSE

Ink has remained a long time in the ink cartridge and crystallizes. As a result, the filter clogs and ink cannot be supplied.

SOLUTION

Production line:

The following step was added to the ink production process:

Once manufacturing of the ink is completed, the ink is aged for 200 days to allow any crystalline substances to precipitate. Filtering is then performed to remove any foreign substances, and the ink is packaged and shipped.

Applied from: May 2019

In the field:

If the symptom occurs, replace the filter.

Note: This filter is normally replaced once a year, however machines used at high print volumes may require filter replacement more than once/year.