HQ

Mortsel

How to Maintain

:Anapurna Mw

Document History

Review Date	Document Version	Changes
March 18, 2010	Version 1.2	

AGFA

1 Contents

2 Related Documents

- The :Anapurna Mw Operator Manual
- How to Shut down / Start-Up the :Anapurna Mw
- How to Calibrate the :Anapurna Mw
- How to Handle the Media on the :Anapurna Mw
- How to use the Wasatch Soft RIP on the :Anapurna Mw

3 Maintenance schedule

3.1 Daily Maintenance

- General cleaning of the printing table (Section 4.1)
- Perform a Prime test to check the nozzles (Section 4.2)
- In case of missing nozzles, clean the heads (Section 4.3)

3.2 Weekly Maintenance

- Perform Daily maintenance checks.
- Perform a 'Head Flush' on all the print heads.
- Check and clear the sub air tanks for color and white. (Section 4.4)
- Drain the compressor (remove water from the tank) (Section 4.5)
- Drain the Air Filter for any moisture (on the Anapurna Engine). (Section 4.6)
- Check and empty the Waste Tank (Anapurna Engine) . (Section 4.7)
- Clean the Encoder Strip (Section 4.8)
- Clean the Carriage Rails using a cloth with some lubrication oil (Section 4.9)
- Verify the condition of the UV Lamps (Section 4.10)
  - Clean the glass of the UV lamp house (Section 4.11)
  - UV lamp replacement (Section 4.12)

3.3 Monthly Maintenance

- Perform Daily maintenance checks
- Perform Weekly maintenance checks
- Verify the Air filters and replace if necessary (Section 4.13)

3.4 Preventive Maintenance

The six monthly preventive maintenance needs to be performed by an Agfa Certified engineer.

4 Maintenance Procedures

4.1 General cleaning of the printing table (Safety).

- ⇨ Dust off the Anapurna, making sure its clean (general cleaning).
- ⇨ Clean the Capping Station

- ⇨ Close the Capping station after cleaning
- ⇨ Clean the Home Side (using Carriage Release function).
- ⇨ Switch the system Offline with [ESC] button
- ⇨ Press [CALIB] to enter the Calibration menu.

```
== CALIBRATION ==
F1>FEED ADJUST                HOR/DIR ADJUST<F4
F2> CARRIAGE RELEASE          WHITE REF. <F5
F3> FACTORY SETTING           HEAD GAP <F6
```

- ⇨ Press [F2] to unlock the carriage.
  Now the Shuttle carriage is unlocked and can be moved freely.

```
== CARRIAGE RELEASE ==

F1> SERVO ON And HOME CHECK
```

- ⇨ After cleaning, Press [F1] to reposition the carriage to its home position.

Tip: use a moistened cloth to clean the Anapurna casing
use Isopropyl Alcohol for more aggressive cleaning

4.2 Prime / nozzle test

Check print heads by doing a Prime Test (F1 from Control Panel)

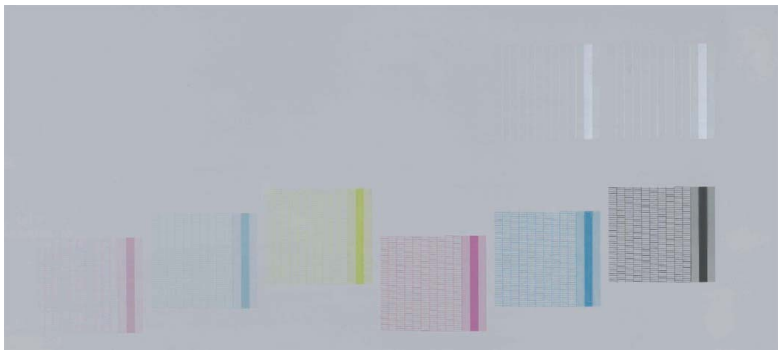
⇨ Press [ESC] to bring the :Anapurna Mw Offline

HOST	*** *** P	S7	1600 mm
F1 > PRIME			CLEANING<F4
F2 > PRIME ALL			SYSTEM SET <F5
F3> HOME COVER			PARAMETER <F6

⇨ [F1] PRIME will offer the possibility to choose for a

- Color Prime test
- White Prime test

⇨ [F2] PRIME ALL will print the following test pattern.



⇨ This pattern is printed with all nozzles from all heads.
In case of missing lines in the target, nozzles are missing and the heads must be cleaned.

4.3 Cleaning the heads

Heads can be cleaned in 3 different ways.
Dripping, Purging and flushing the heads

4.3.1 Dripping of the heads

⇨ Press [ESC] to bring the :Anapurna Mw Offline

```
HOST                *** *** P        S7        1600 mm
F1 > PRIME                                    CLEANING<F4
F2 > PRIME ALL                                SYSTEM SET <F5
F3> HOME COVER                                PARAMETER <F6
```

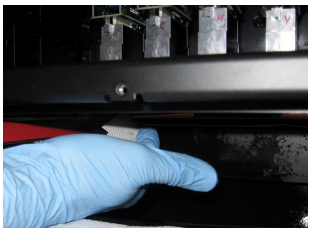
⇨ Press [F4] CLEANING

```
                        == CLEANING ==
F1> HEAD  UP / DOWN                           NOZZLE TEST <F4

F2> HOME COVER
```

⇨ Press [F1] to move the shuttle in the highest position
⇨ Press [F2] to open the Home Cover.
⇨ Leave all 3 Way Ink valves on "I"
⇨ Switch Off the under pressure
For White turn the left gauge to "000"
For the Color system turn the Right gauge to "000"

⇨ After ± 1 minute
⇨ Apply the under pressure again.
- For white set the under pressure to -0,41 mPa
- For Color set the under pressure to -0.38 mPa

⇨ Clean the printing heads with a lint free cloth
(wipe gently from back to front)



⇨ Bring down the Shuttle
⇨ Close the Home Cover
⇨ Press [ESC] to go back to the Main Menu
⇨ Perform a Prime again to verify.
If necessary repeat the above steps till the Prime test is OK.

Move Up / Down the shuttle with the "HEAD UP / DOWN" function has no influence on the HEAD GAP calibration.

4.3.2 Purge the heads

⇨ Press [ESC] to bring the :Anapurna MW Offline

```
HOST                  *** *** P        S7        1600 mm
F1 > PRIME                                     CLEANING<F4
F2 > PRIME ALL                                 SYSTEM SET <F5
F3> HOME COVER                                 PARAMETER <F6
```

⇨ Press [F4] CLEANING

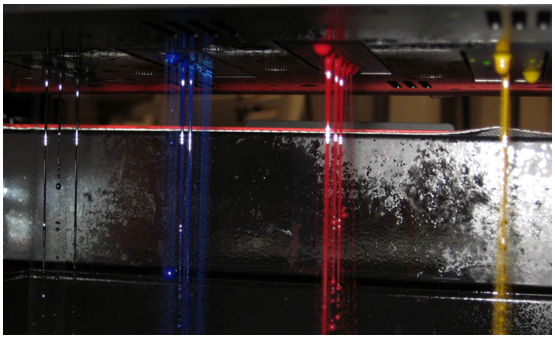
```
                        == CLEANING ==
F1> HEAD  UP / DOWN                            NOZZLE TEST <F4

F2> HOME COVER
```

⇨ Press [F1] to move the shuttle in the highest position

⇨ Press [F2] to open the Home Cover.

⇨ For each head that shows missing nozzles, perform the following steps.

- Turn all 3 way valves to "S" except the valve for the Solution and the valve for the head that needs to be purged.
  These valves must stay on "I"
- Press the Purge button with small intervals.



- When the Ink is refilling, this is indicated with a lower case character.
  Wait till it changes to 'Upper case' again.

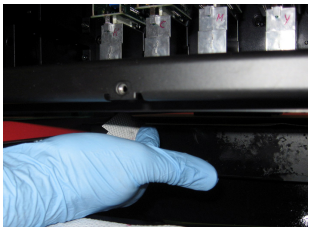
```
HOST      *** *** P    S7        1600 mm  tcp     K C M Y lC lM W S
F1 > PRIME                                        CLEANING<F4
F2 > PR
F3> HO
```

```
HOST      *** *** P    S7        1600 mm  tcp     k C M Y lC lM W S
F1 > PRIME                                        CLEANING<F4
F2 > PRIME ALL                                    SYSTEM SET <F5
F3> HOME COVER                                    PARAMETER <F6
```

- When a re-fill time out happens,
  press the [PAUSE] button as indicated in the screen

```
                    == CLEANING ==
F1> HEAD  UP / DOWN                    NOZZLE TEST <F4
F2> HOME COVER
              <<PAUSE Refill ... OVERTIME>>
```

- Turn all 3 way valves back to "I"



⇨ Clean the printing heads
(wipe gently from back to front)

⇨ Repeat this procedure for each head.

⇨ Bring down the Shuttle

⇨ Close the Home Cover

⇨ Press [ESC] to go back to the Main Menu

⇨ Perform a Prime again to verify.
If necessary repeat the above steps till the Prime test is OK.

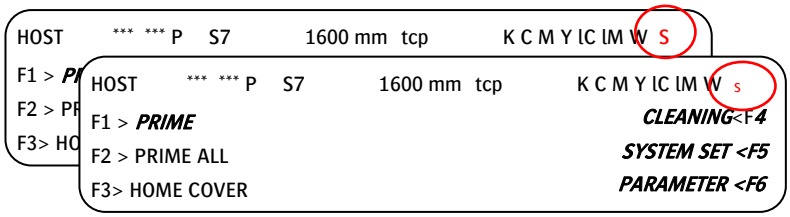
Remark : Since the :Anapurna MW has a separate ink system circuits for white and color, this procedure only needs to be performed for the circuit involved. (Color or White)

4.3.3 Flush the Printing Heads

4.3.3.1 Flush the Color Heads

- From the Main Menu Press [F3] to open the Home Cover
- First clean the Black head by moving the Black 3-way Ink Valve on "S"
- Push the Solution Valve Switch, to build pressure in the flushing solution tank.

- Open Solution Valve for 2 seconds (position "S") to flush the Black head with solution.
  Close the solution Valve again. (position "I")
  Check on the Display if the solution tank is refilled.
  A small "s" means that the Solution is being filled.
  A Capital "S" means that the Solution is filled
  Wait for the "S" before opening the solution valve again.

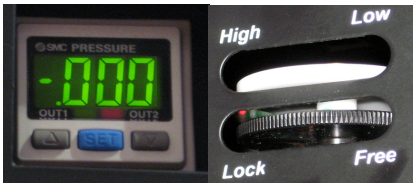


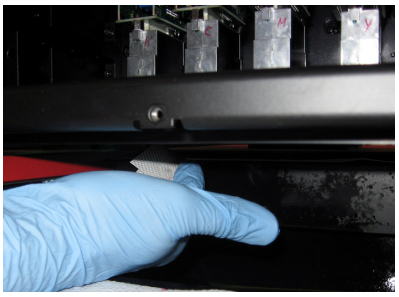
- Move the Black ink valve back to ink position "I"
- Then repeat this procedure head by head from left to right.
  When pushing the Solution Valve Switch again check on the control panel the status of Solution

NOTE: Flushing too long will the empty sub tank and will introduce air into the circuit.

- Once all the heads have been cleaned, switch all ink valves to position "S" and flush again flushing solution through all the heads together until you can see only flushing Solution coming out from the heads.
- Switch the 3-way ink valves for Solution back to 'I' position.

- ⇨ Turn Off the under pressure.
  Turn the Vacuum Gauge to zero.
  - Let all heads drip for 3 minutes
  - Turn on the under pressure again.
    Vacuum gauge to -0,038 mPa
  - Clean the residue of the ink on the print heads (wipe gently from back to front)
    Clean the base plate with a dust free dry cloth.
    Or wetted with flushing solution
- ⇨ Perform a PRIME TEST to check the nozzles.

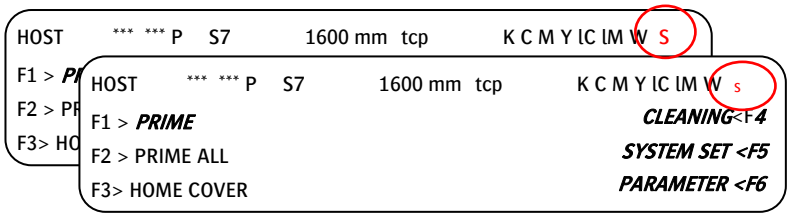




4.3.3.2 Flush the White Heads

- From the Main Menu Press [F3] to open the Home Cover
- Clean the heads one by one.
- First clean the first White head by moving the 3-way Ink Valve on "S"
- Push the Solution Valve Switch, to build pressure in the flushing Solution tank.

- Open Solution Valve next to the white heads for 2 seconds (position "S") to flush the head with solution.
  Close the solution Valve again. (position "I")
  Check on the Display if the solution tank is refilled.
  A small "s" means that the Solution is being filled.
  A Capital "S" means that the Solution is filled
  Wait for the "S" before opening the solution valve again.



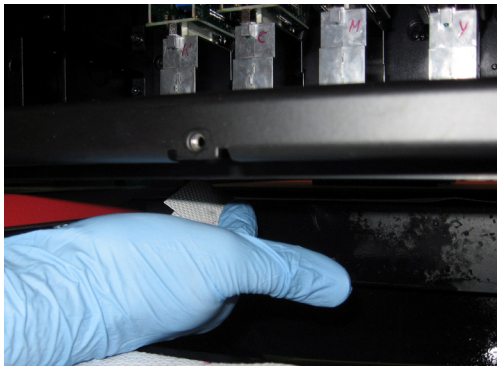
- Switch the 3-way valve of the first White head back to position "I"
- Then repeat this procedure for the second White Head.
  When pushing the Solution Valve Switch again check on the control panel the status of Solution

NOTE: Flushing too long will the empty sub tank and will introduce air into the circuit.

- Once both the heads have been flushed,,
  flush again flushing through all the heads together until you can see only flushing Solution coming out from the heads.

- Switch the 3-way ink valves for Solution back to 'I' position.
- Turn Off the under pressure.Turn the Vacuum Gauge to zero.
- Let all heads drip for 3 minutes

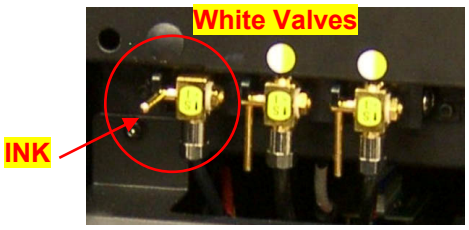
- Turn on the under pressure again.
  Vacuum gauge to -0,041 mPa
- Clean the residue of the ink on the print heads (wipe gently from back to front)

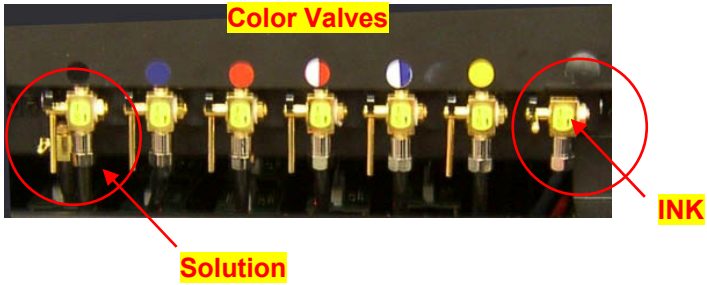


- Clean the base plate with a dust free dry cloth.
  Or wetted with flushing solution
- Perform a PRIME TEST to check the nozzles.

4.4 Check the sub air tanks (overflow tanks) for any ink.

- ⇨ Turn all the Ink Valves to 'S' position.
- ⇨ Keep the Cleaning Valve to 'I' position.

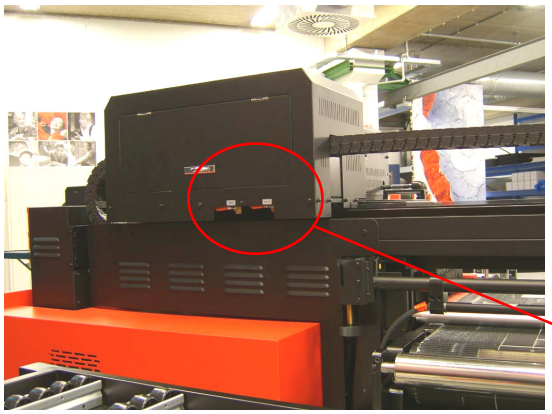


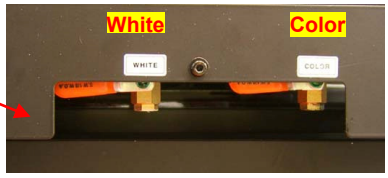


- ⇨ Turn OFF the Under pressure
  Turn the vacuum gauges to zero
  for white and color.

Tip: press the 2 grey buttons for 3 seconds to reset the display.

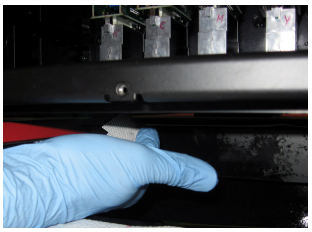
- ⇨ Clear the sub air tanks from any ink
  - ○ Open the valves on the back of the shuttle and capture the ink in a plastic bottle.





Tip: Verify that the valve is not jammed by dried ink particles
use a pin or paperclips to free the valve outlet

- ⇨ Apply the under pressure again.
  - For white set the under pressure to -0,41 mPa
  - For Color set the under pressure to -0.38 mPa
- ⇨ Clean the printing heads with a lint free cloth
  (wipe gently from back to front)



- ⇨ Bring down the Shuttle
- ⇨ Close the Home Cover
- ⇨ Press [ESC] to go back to the Main Menu
- ⇨ Perform a Prime again to verify.
  In case of missing nozzles, follow the “Purge Procedure”. (4.3.2)

4.5 Drain the main air compressor (make sure there is no water in the tank)

⇨ Follow the Main Compressor instructions to drain possible water out of the compressor.

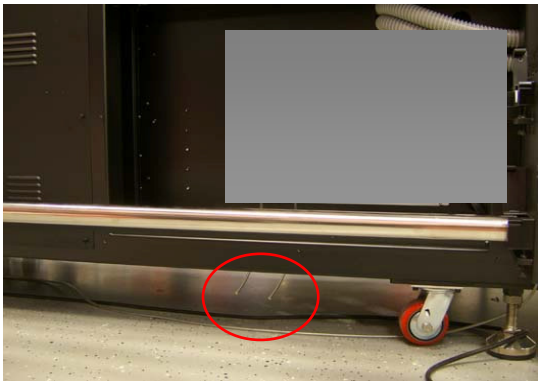
CAUTION: In case the air Compressor needs to be switched OFF.
Prepare the :Anapurna Mw for a 'Long Stand Still' .

4.6 Drain the Air Pressure system.

4.6.1 Drain the air pressure input filters

⇨ On the rear side of the engine 2 tubes will come out of the engine bottom.
These tubes are linked to the "overflow" of the under pressure inlet system.

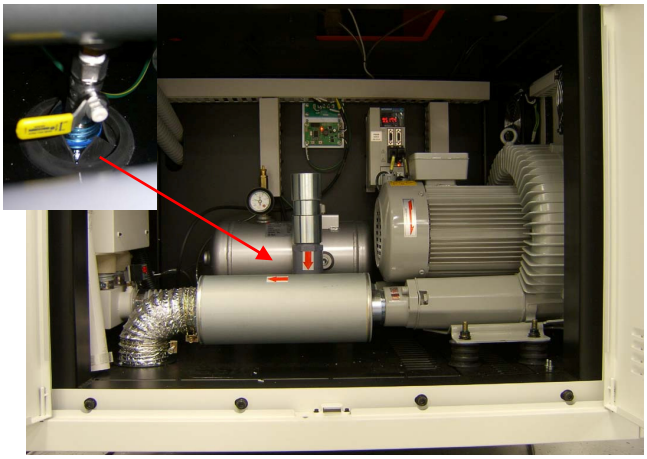
⇨ When the compressor is switched OFF, these valves will open and some drips of water may come out.



TIP: When switching OFF the compressor, place a small tray underneath the tubes to collect possible water drips

4.6.2 Drain the Air tank.

- ⇨ Open the Left door compartment
- ⇨ Place a small bottle underneath the air tank valve. Via the rubber seal in the bottom.
- ⇨ Open the valve with short intervals to drain the tank.



4.7 Check and empty the Waste Tank (Anapurna Engine).

Ink Waste.

Cleaning, purging and flushing your print heads always creates some waste that is collected in the "Waste INK Tank".

This tank is located inside the left compartment of the printer. When the waste tank is almost full, the control panel will display a warning.

This tank needs to be cleaned periodically.

- ⇨ Open the right door (Ink compartment)
- ⇨ Place an empty ink bottle underneath the Waste Ink Container
  Open the valve and empty the Waste Ink Container.

INK WASTE:

Used cloths and gloves, purged ink and solution,...
Make sure that uncured UV ink waste is always treated as hazardous, chemical waste.

Make sure that the drained waste is processed as chemical waste. Don't mix the UV waste with solvent inks

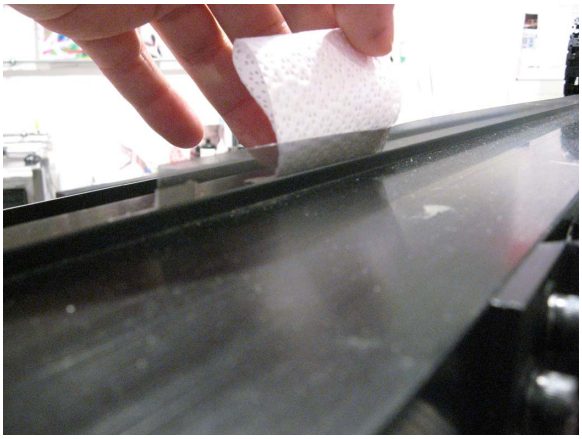
4.8 Clean the Encoder Strip

The encoder strip is the part that defines the x-position of the carriage (position of the firing pulse). If the strip is dirty, wrong signals will be sent to the shuttle resulting in printing artefacts.

The Encoder Strip is a transparent plastic strip located on top of the carriage beam.

To clean, take a lint free cloth, put some isopropyl alcohol (IPA) on the cloth and wipe the strip gently from the right to the left.

To clean the strip on the Home Side, perform the Carriage Release function to move the carriage away (to access the Encoder Strip).



4.9 Clean the Carriage Rails using a cloth with some lubrication oil

The carriage moves on two rails.
For effective movement of the carriage, the operator should clean & lubricate the rails regularly.

- ⇨ Take a clean cloth, put some lubricating oil and clean both the rails.
  (Normal bearing grease similar to 'Shin Etsu Silicone (G-4 OM) made by Shin Etsu Chemical Co. Ltd.Japan)

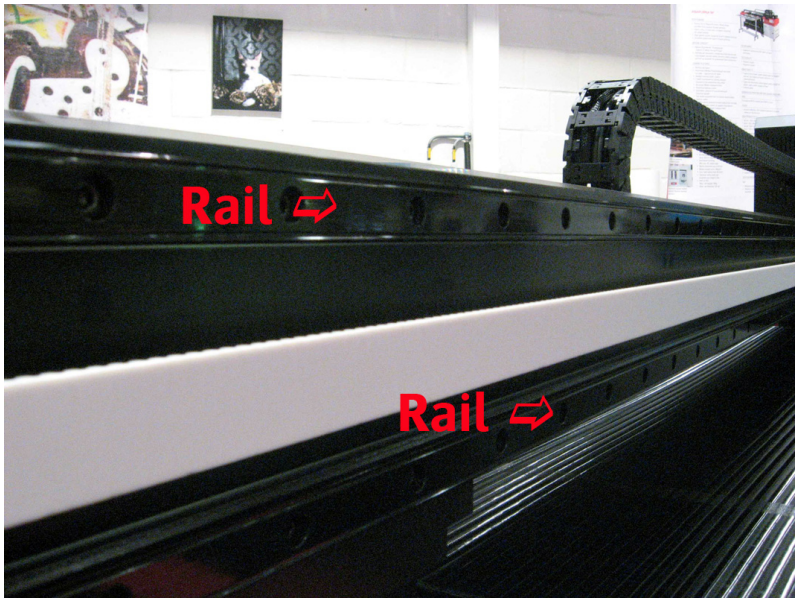
- ⇨ To clean the rails on the Home Side, use the Carriage Release function.

Once the rails are free of any dust and grease build-up, apply very little amount of lubrication oil onto the rails with the help of a cloth.

Make sure that the oil does not drip down (the applied quantity should be minimum).

The operator needs to make sure that when he feels the rail with his finger, it should not be dry.

To lubricate the rail on the Home Side, use the Carriage Release function

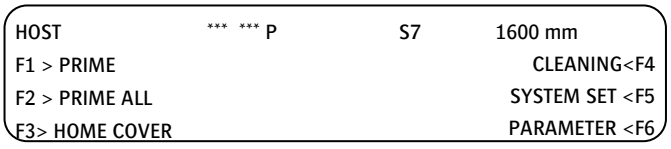


4.10 Checking the UV lamps

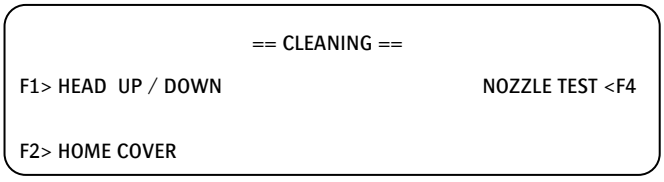
- UV lamps are consumable and have a certain life.
- Once the UV lamps reach their life, the operator will observe that the curing power of the lamps have gone down (resulting in poor adhesion to those media which were performing well before).
- How to analyze that lamps are end of life time?
  - Through printing:
    For example, if the adhesion on Metamark 5 is not good (with lamps at Full Power, Carriage Speed 7, 8 Pass Bi Direction mode); then its fair to say that lamps need replacement.
  - Visual Check:
    For this purpose, you need to take the lamp assembly out (Refer to Changing the Lamps) and visually check the condition of the lamp (without touching the lamp surface); the glass of the lamp should be clear. If it has turned white of dark yellow / brown; the lamps need replacement.

4.11 Clean the glass of the UV Lamp house.

- Make sure that the carriage is in home position.
- Switch OFF the UV Lamps
- Wait till the lamps are cooled down completely.
  Fans will stop.
- Press [ESC] to bring the engine OFF-LINE
- From the Main menu
- Press [F4] CLEANING



- Press [F1] HEAD UP / DOWN

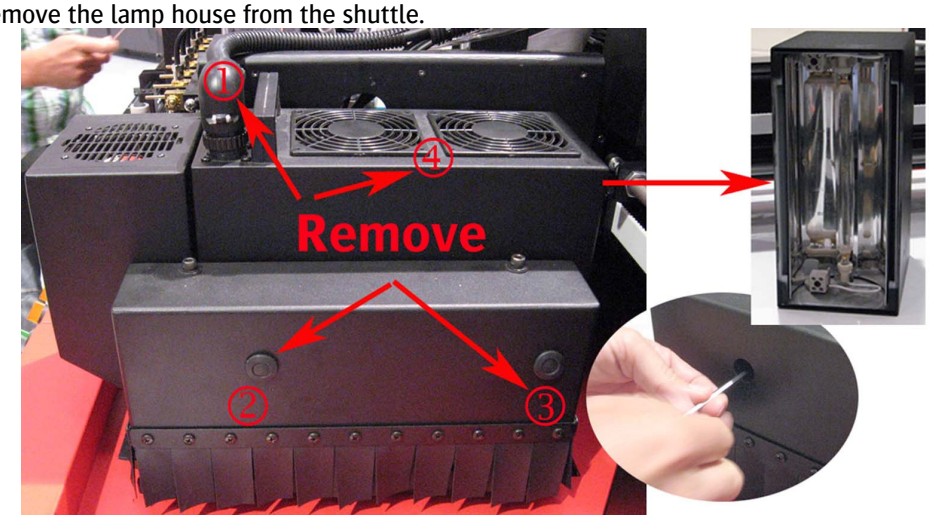


- Use a lint free cloth wetted with Isopropyl alcohol
- Clean the glasses.
- When finished press [ESC] to go back to the main menu.

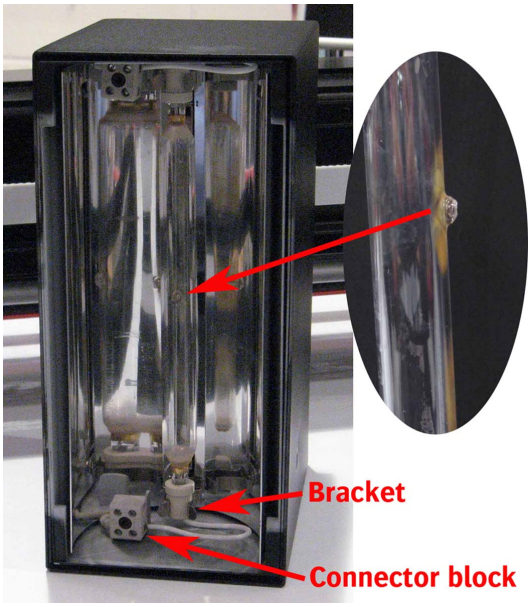
4.12 UV Lamp replacement Procedure

The UV Lamp is a consumable and can be ordered
With ABC code: E901B

- ⇨ Switch OFF the lamps.
  Wait till the Fans stop cooling.
- ⇨ Switch OFF the engine.
- ⇨ Remove the lamp house from the shuttle.



- ⇨ Remove the rubber caps
- ⇨ Loosen the 2 screws with a 3 mm Allen key.
- ⇨ Disconnect the power connector from the lamp house.
- ⇨ Gently lift the out UV lamp house.



- ⇨ Turn the UV lamp box upside down.
- ⇨ Unscrew the two wires out of the connector blocs.
- ⇨ Lift the UV lamp out of the brackets without touching.
- ⇨ Take the new UV lamp out of the foil.
- ⇨ When placing the lamp, keep the bulb pointed to the reflector.

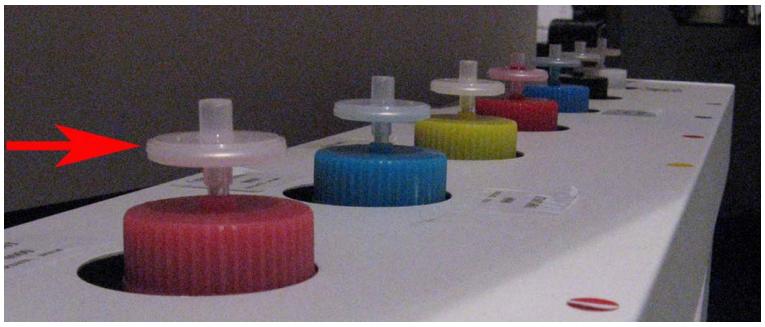
! CAUTION: Do not touch the glass part of the UV lamp with your bare hands.
Wear gloves to avoid grease stains on the bulb.

If residue of your hands gets on the glass, the lifetime of the UV lamp will be reduced significantly.

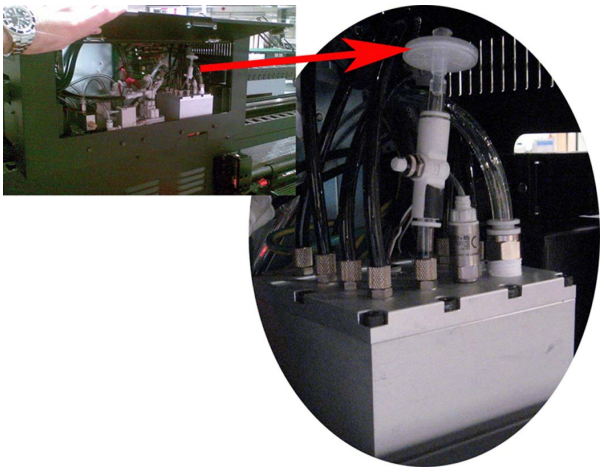
4.13 Verify and replace the air filters.

On top of the Main ink tanks and on the sub ink tanks are air filters.
These filters provide a balance for the under pressure system.
In order to have an optimum air management, these filters need to be replaced when they are contaminated.

⇨ On the main ink tanks check if the filters are clean.



⇨ Verify if the filter on top of the Sub Air Tank (in the rear of the shuttle) is clean.
Do not turn the valve. (Optimal position is half open)

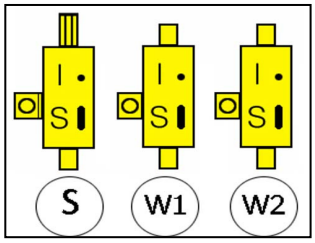


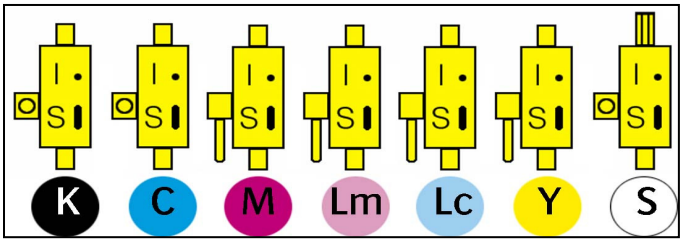
5 Ad Hoc Maintenance Tips.

5.1 Purging, Flushing and Bleeding of the Printing Heads

5.1.1 Purge (using color ink/white ink)

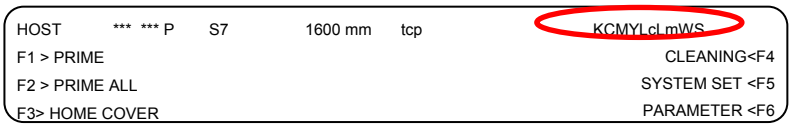
- A Purge of the print heads, will apply air pressure in the sub ink tanks.
  By doing this, ink is driven by air pressure through the nozzles.
  Multiple heads can be purged at the same time. (Air pressure will be divided over the different heads).
- Open the Home Cover.
- Make sure that the valves of the print heads that need to be purged are set to "I".
  The other valves must be switched to "S" while the solution valve remains in position : "I").
- Push the purge button to apply pressure.
  Use short intervals to purge the heads.





Caution: Do not push the "purge" button for more than 1 second.

When purging too long, the ink refill system will not be able to keep up and the sub ink tanks may become empty. This may introduce air into the system. In order to check the condition of the sub ink tanks, verify the ink level indication in the main window of the control panel.



The ink level is indicated in the top right top side of the panel.
If the color is indicated in uppercase, the sub ink tank is full. In case it is a lower case letter, ink is being pumped to the sub ink tank. Do not purge till the ink is refilled.

- ⇨ After purging the heads with ink, wipe the heads with a lint free cloth to remove the excess ink. Turn all the ink valves back into the "I" position
- ⇨ Close the Home Cover
- ⇨ Perform a prime test.

! Caution: The refill system is protected with a timer. In case of a refill time out, the following message will appear.

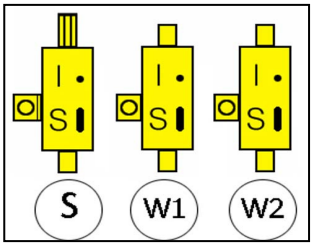
<<PAUSE Refill ... OVERTIME>>

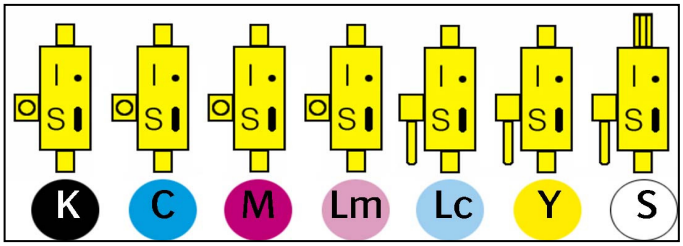
Press the [PAUSE] button to continue the refill process.

5.1.2 Flushing the Print heads (with use of cleaning solution)

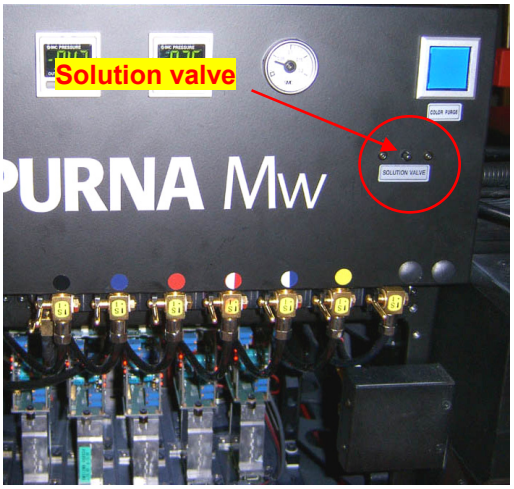
If purging the heads is not sufficient to open the blocked nozzles, the print heads can be flushed with cleaning solution to open op the nozzles.

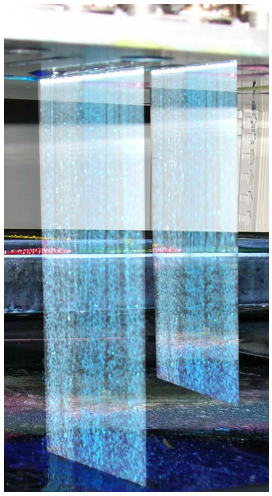
- ⇨ Switch the right valve to "S". This is the solution valve and solution liquid can now start running into the grey bar towards the ink valves. Switch the valves of the heads which have to be flushed to "S". The solution liquid can now run via the gray bar and the valve into the print heads.





- ⇨ The light Cyan, yellow and solution valves are switched to "S".
- ⇨ Press the solution pressure button (located on the front side of the shuttle), to build pressure in the the solution sub ink tank.
- ⇨ Switch the 3-way valve for the solution form "I" to "S" in order to flush solution through the printing heads. In this case light cyan and yellow.



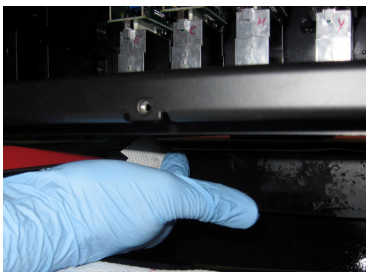


- ⇨ Afterwards, switch the 3-way ink valves back to "I" and purge or bleed the heads to replace the flushing solution with ink.
- ⇨ Close the Home Cover
- ⇨ Perform a Prime test to check if all nozzles are available.

5.1.3 Bleeding the heads

Bleeding / dripping the print heads will fill the heads with ink and remove any air from it.

- ⇨ Open the Home Cover
- ⇨ Turn the negative pressure system to ".000"
  The print heads will start dripping.
  Let them drip for several minutes
- ⇨ Turn the negative pressure back, to -.036 for the colors and -.041 for white.
- ⇨ Clean the heads with a lint free cloth (wipe gently from back to front)
- ⇨ Close the Home Cover
- ⇨ Perform a Prime test to check if all nozzles are available.



Tip: The head bleed can also be performed after a weekend or long stand still of the engine.

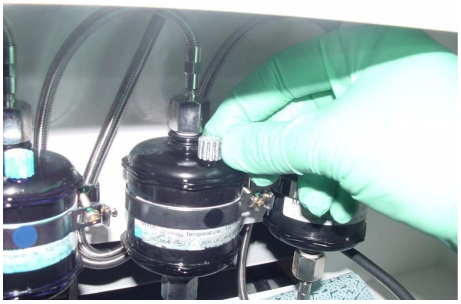
5.2 Bleeding the Ink Filters

The print head technology used on the :Anapurna printers, uses a closed ink circuit that must be free of air. Even a small amount of air can cause printing artifacts, such as missing nozzles or leaking print heads. Missing nozzles is mostly caused by air built up in the print heads, this can be solved by purging, flushing or bleeding the print heads.

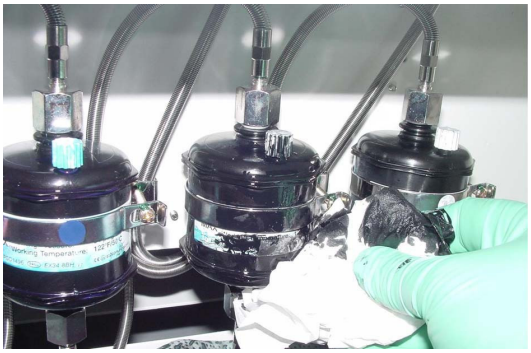
To remove the Air Ink refill circuit, it is necessary to bleed also the ink filters.
These filters are located in the ink door of the engine.

5.2.1 Procedure

- Remove the 6 screws of the refill system panel (on ink door) and remove the panel.
- Put it gently on the floor, making sure that the data cable is not disconnected and you can still reach the manual feeding buttons.
- Place some cleaning towels underneath the air filters.
- Wear rubber gloves.
- Loosen the white air cap on top of the filter



- Wait until ink is coming out.
  Press the manual feeding button to speed up the process.
- Tighten the white air cap.
- Make sure that you clean up all the ink that came out.



- Perform this for all filters.
- Replace the panel.

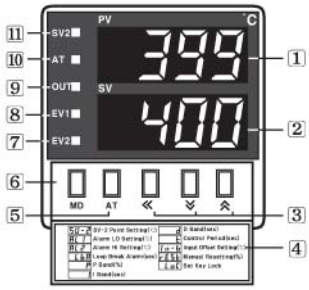
5.3 Changing PID settings

Temperature and Vacuum settings are controlled by PID (Programmable Integrator Differentiator regulator)

Temperature settings are defined by Agfa Headquarters and should not be changed unless otherwise instructed.

Vacuum settings can be modified according the media that is used.
See the "How to handle Media" manual for more information.

5.3.1 Description of the PID



1 PV : Processing value indicator(Red)
2 SV : Setting value indicator(Green)
3 « » » : Key shifting the display
4 Information for operation mode
5 AT Key : The mode key to excite Auto tuning function
6 MD Key : Mode key
7 EV2 : Event 2 output signal lamp
8 EV1 : Event 1 output signal lamp
9 OUT : Output signal lamp
10 AT : The signal lamp flickers while Auto tuning is being executed
11 SV2 : SV2 lamp for SV2 operation

5.3.2 Modifying the PID target setting

To change the target setting:
Open the small lid on the display and use the setting controls:

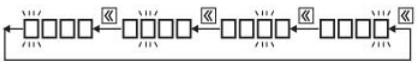
▣ How to change the set value

1 In case of changing the set value at status of RUN, press « key.

10⁰ digit will flash at SV.

3 Press » or » at the flicker digit, and then change the set value.

2 Press « key, and then the flicker will be shifted step by step.



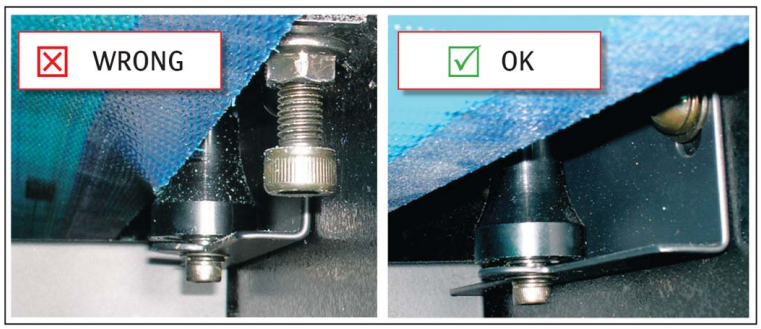
4 Press MD key when the setting is completed. It will stop flickering, then return to RUN mode.

Tip: The Green value is the target value.
The Red value is the actual measured value.

5.4 Align the conveyor belt.

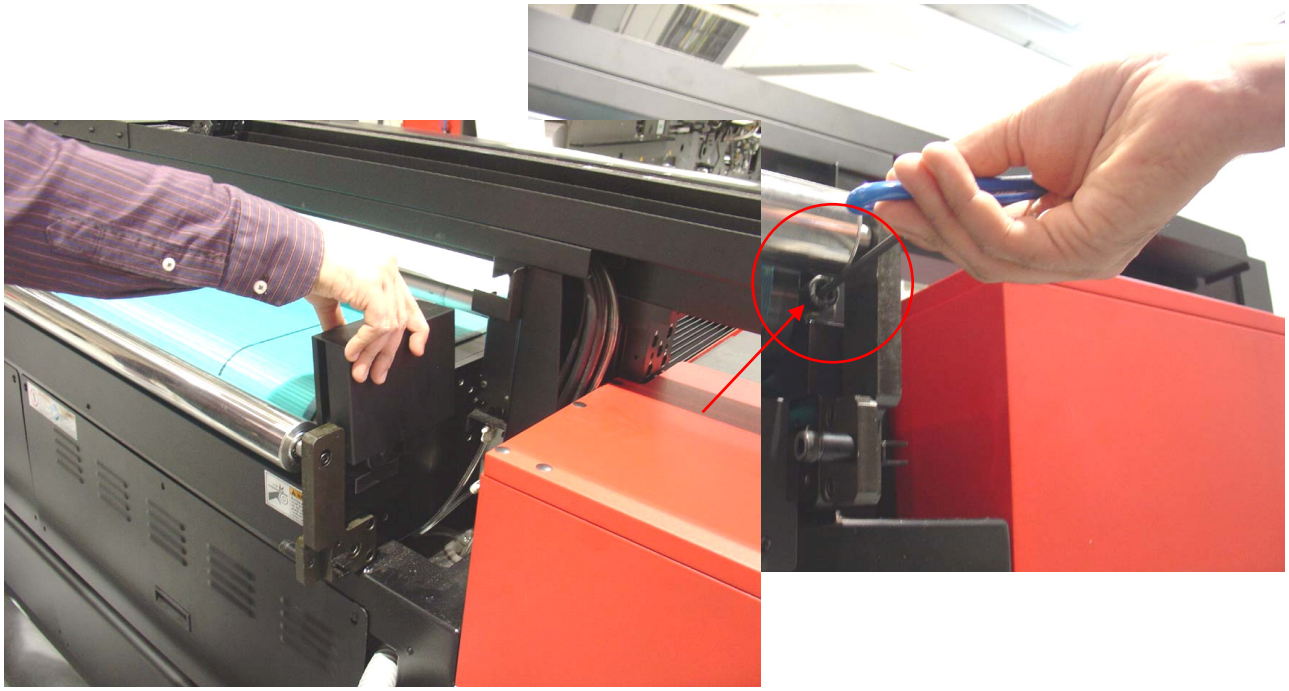
The woven conveyor belt is transported by a step-motor. It lies on top of a vacuum table with a honey grid structure. It is very important to have a perfect aligned conveyor belt. It should have a linear movement without any side deviations.

On the bottom of the vacuum table, you see a guide wheel in the shape of an hour glass.
If the conveyor belt touches this wheel, it should be realigned.



5.4.1 Procedure:

- Loosen the conveyor belt.
  Remove the metal covers on the backside (both left and right), completely unscrew left and right bolt.

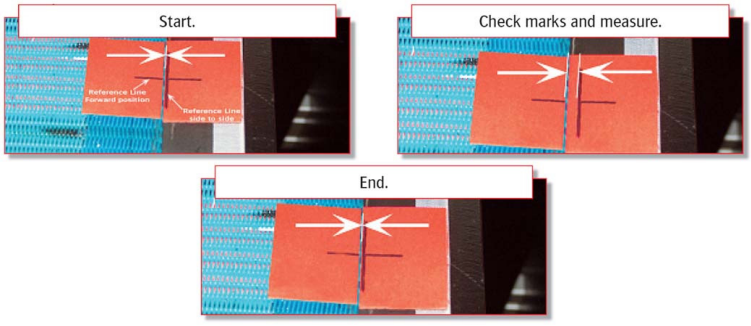


- Position the conveyor belt:

- The belt's joint need to be positioned in the middle underneath the printing table.
- Measure the distance on the left/right side of the printing table; start vs. end of the conveyor belt. This measured distance should be equal, on front- as well as on rear-side of the engine.
- Tighten the conveyor belt: Screw left and right bolt, alternate between left and right bolt, with maximum 1 complete turn each at a time.

5.4.2 Belt Transport test:

- Place a mark on the belt that matches a reference on the printing table.
- Move conveyor belt for at least 10 minutes.
- Check marks on belt and printing table and measure the difference.



5.4.3 Adjust the belt tension:

- Loosen the conveyor belt completely.
- Re-Position the conveyor belt and use the same marks on the belt vs. the printing table.
- Tighten the conveyor belt, taking in account the measured difference. Adjust belt tension by the same amount as the measured difference.
- When the measured difference is smaller then 0,5cm: Enhance tension with the same amount on the side where belt was moving to.
- When the measured difference is higher then 0,5cm: Enhance tension with half of the measured difference on the side where belt was moving to and reduce the tension with half of the measured difference on the side where belt was moving from.

5.4.4 Belt Transport verification test:

- Move conveyor belt for at least 10 minutes
- Check marks on belt and printing table
- If needed, adjust position of belt.
- The position of the belt should not move more then 2mm. Rotate the bolts at the REAR stand to CW or CCW to control the tension. Those small adjustments can be done while belt is moving.

Remark: The position of the conveyor belt can still move a little bit during daily production.

Always make sure, when printing “borderless” that the belt is masked, so printing on the belt is reduced to a minimum. When you have printed onto the conveyor belt, try to remove the ink with some cleaning solution.

The amount of vacuum can become insufficient when the belt is completely printed. The ink will block the air channels in the woven structure of the belt. This also affects the condition of the vacuum table. The build-up of ink underneath the belt can cause loss of vacuum and head strikes.

5.5 Actions to take after unexpected failure

In case of an unexpected situation of power shut down or compressor break-down, please follow the following procedure:

5.5.1 Power Break Down (during printing or otherwise)

- ⇨ Turn all the (ink, varnish) valves to 'S' position.
- ⇨ Keep the Solution valve to 'I' position.
- ⇨ Move the carriage very slowly towards the home position (manually).
- ⇨ When the power is reinstated, power the engine ON and perform a solution 'flush' on all the print heads.
- ⇨ Purge the ink, making sure all print heads have got rid of the solution.
- ⇨ Follow the procedures to do a Prime Test before printing a job.

5.5.2 Compressor Break Down

- ⇨ Make sure carriage is at home position.
- ⇨ Turn all the (ink, varnish) valves to 'S' position.
- ⇨ Keep the Solution valve to 'I' position.
- ⇨ Push the Emergency Button to power the engine down.
- ⇨ When compressor is up and running, turn the engine ON and perform a large ink purge.
- ⇨ Follow the procedures to do a Prime Test before printing a job.

Caution: During printing when the compressed air pressure drops down (insufficient) the carriage will move towards the home position and the control panel will display the following error message:

<<ERROR / AIR PRESSURE LOW>>

This problem needs to be solved before printing can be continued.