



### 3. Check the dampers

- Determine when last the dampers have been replaced. Replace the dampers if it has not been changed within the last 6 months.

### 4. Check the printheads

- Check that the edges of the print head and faceplate are free from foreign particles and dried ink.
- Perform corrective maintenance if necessary.

### 5. Ink delivery system

- Ensure that the ink pumps are fully functional.
- Ensure that the ink feed lines are in a reasonable state.

You may now proceed with the ink conversion process if satisfied with the condition of the digital printer

The Ink Conversion procedure is comprised of the following major steps;

- Remove original ink from Printer.
- Flush the IDS of the printer with the Flushing Solution supplied by the original ink manufacturer.
- Flush the IDS of the printer with NUTec AQF Flushing Solution.
- Install NUTec Aquamarine AQ10-DS Ink.

Each step will be elaborated on to highlight the necessary actions to ensure the successful installation of NUTec Aquamarine AQ10-DS Inks:

#### **STEP 1:**

Before starting the conversion procedure it is important to check the status of the print heads, this is done by:

- Print a 5 sqm area of solid CMYK at high speed, print nozzle status.
- Have the status signed, with the date, by the end-user.
- No printer/print head damage dispute, regarding the ink conversion can be supported or defended without a signed nozzle status.

#### **STEP 2:**

- Print a few customer selected reference images to compare before and after conversion.

**General note before proceeding:**

- It is not recommended that the IDS is filled/purged with air. All steps below to be liquid-on-liquid.

**STEP 3:**

- Remove the original ink from the main tank.
- Check the main ink tanks for residual inks or other contaminants. Use a lint free cloth to wipe out the tank.
- Inspect the filter in the main ink tank and clean/replace if necessary

**STEP 4:**

- Once the ink tank is empty fill each tank with the Flushing Solution supplied by the original ink Manufacturer.
- Select the “Purge” function (a function that activates the mechanical parts of the IDS to allow ink/flush to rapidly pass through the print heads) of the printer and allow an adequate amount of Flush Solution through the IDS system to ensure that the old ink is removed from the system.
- **Note:** Printer functionality will differ from machine to machine.
- Ensure that you are familiar with the functionality of the printer so that “purging” of the flushing solution via the IDS is carried out correctly.
- Purge until the flushing solution is clear.
- Remove the flushing solution from the main tanks.
- Empty the waste bottle.

**STEP 5:**

- Once the ink tank is empty fill each tank with NUTec AQF Flush.
- Select the “purge” function of the printer and allow the NUTec AQF Flush to replace the original flushing solution through the IDS system. You can get an idea of how many flush cycles would be needed by paying careful attention to step-4.
- Remove NUTec AQF Flush from the main tanks.
- Empty the waste bottle.

**STEP 6:**

- Once the ink tank is empty fill each tank with NUtec Aquamarine ink.
- Some printers may have an in-line filter or a damper/filter combination situated just before the print head. At this stage of the process, inspect this filter and clean/replace if necessary.
- Select the “purge” function of the printer and allow an adequate amount of NUtec Aquamarine ink through the IDS system to ensure that the NUtec AQF Flush solution is completely removed from the system. Failure to do this could result in printing defects.

**STEP 7:**

- Print 5 meters of images at slow speed. This is to settle the nozzles and the ink delivery system to the NUtec Dye-Sub ink set.

**STEP 8:**

- Complete the software alignment of the printheads. The software settings will allow you to adjust the Print head to Print head and Bi-directional values.
- Next step is to set the Step-size or Feed-adjust value.

**STEP 9:**

- Print the nozzle status and ensure it is the same as before conversion. The end-user is to sign and date stamp this nozzle pattern.
- Profile the machine.
- Repeat the customer selected reference plots.

The machine is ready to begin printing with the NUtec Dye-Sub Ink.

**\*\*NOTE\*\*:** Note AQ10-DS Inks will not perform optimally if used with another profile. To get the maximum benefit from AQ10-DS you must optimise the profiling, transfer time & temperature.

## INK CONVERSION TIPS: AFTER INK CONVERSION

Following the NUtec ink conversion principles will keep issues to a minimum. However, if you do encounter a problem during the conversion process, please check the following;

1. *Problem:* Images exhibit excessive banding.
  - This might be due to an air bubble in the IDS.
  - Check the condition of the dampers. Replace if necessary
  - Perform strong/powerful cleans.
  - An ink fill machine function might be necessary.
  
2. *Problem:* The ink has not passed through the ink delivery system.
  - The filling function is not working correctly.
  - Check the conditions of the dampers. Replace if necessary.
  - Check the capping unit for any damage. A damaged capping unit might allow air into the IDS and prevent ink from moving through the system.
  - Check the tubing of the IDS. Damaged tubing will exhibit the flow of ink through the IDS.
  - Check the ink pumps if they are functioning correctly.

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