Alternate Temperature Regulation Configuration

Introduction

- DuraFlex systems utilize hardware within the printhead which is designed to regulate the PH IC temperature. More uniform ejection can be achieved by regulating it to a temperature above ambient temperature. A consequence of doing this is that the dehydration will be degraded resulting in the need for a small increase in KWS frequency. Under some cases the dehydration impact may be much more severe and not justify the PQ benefits of temperature regulation. In these cases, the system may perform better with temp regulation disabled. Following are instructions to implement this.
- The hardware that controls temperature regulation is **not turned OFF** but the temperature at which it regulates to is turned down below ambient. It this way the preheat pulses which raise the printhead's temperature are not generated.
- The following process should be compatible with R4.x.x and R5.x.x DuraFlex software releases.

  Note: This procedure is updated to use the file 99-memjet-test_dehydration_mitigation.xml instead of the older file 99-memjet-test.xml . The new file adjusts the default pulse width which is required for the newer "Silterra" wafer based printheads.

Procedure

1. Via the Windows CMD prompt, Log into (SSH) the target unit. For example:
   - *ssh duraflex@rs203 XXXXX .local*
2. Check that the system does not already have a file called *99-memjet-test.xml* or the newer version of the same file *99-memjet-test_dehydration_mitigation.xml*
   - DuraFlex Folder path: */opt/memjet/duraflex/data/gymea-data-current/common/*
3. At the SSH terminal, stop the DuraFlex Services by typing '*dtpStop* '
4. If the file *99-memjet-test_dehydration_mitigation.xml* exists no further action is required
5. If the file *99-memjet-test.xml* was found, rename it to *99-memjet-test.xml.unused*
6. Copy the attached file *99-memjet-test_dehydration_mitigation.xml* to the following location on the DuraFlex module: */opt/memjet/duraflex/data/gymea-data-current/common/*

   Note: The easiest method is to log in via WinSCP (Username: *root* / password: *root*). logging in as root will provide administrator read write access
7. Once copied over, Restart the DuraFlex services via the SSH terminal by typing: '*dtpUseExternalRip* '

   Note: If the internal rip is being used, please type: '*dtpUseInternalRip* '
8. At this stage, the new configuration should be in place and enabled. This must be verified.

Comments:

- The SSH terminal should be kept open as this will be needed for verifying (See page #2)

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Verification Procedure

- To verify that this configuration has taken effect, readback the record of the "last preheat value" after a job has been printed
- The parameters to disable temperature regulation that have been provided also set a "*preheat* " value of **60** which has no functional impact when temperature regulation is disabled but provides an indication that the new values are installed, as it is different to the usual value of **90**.

1. Print a short job file (approx 50 pages)
   - **Let the job file complete.**
2. Query the "*PH Values* " with the following command replacing the hostname as required:
   - *echo "tcl mm get_ph_values PRINTHEAD_0" | nc rs203 XXXXX .local 9000*
3. The following response line indicates the new parameters to disable temperature regulation have been implemented:
   - *last preheat value: 60*

Note:
- If the output does NOT contain this line, the parameters to disable temperature regulation are NOT implemented.
- If the result is unexpected, review the process and check that the correct file is installed and that the system was restarted

Replacement of the origional (Factory default) settings

- To restore or re-enable the original settings, remove the file which was copied before as followed:

1. Via the Windows CMD prompt, Log into (SSH) the target unit. For example:
   - *ssh duraflex@rs203 XXXXX .local*
2. At the SSH terminal, stop the DuraFlex Services by typing '*dtpStop* '
   Remove the file *99-memjet-test_dehydration_mitigation.xml* or *99-memjet-test.xml* from the following location on the DuraFlex module:
   - */opt/memjet/duraflex/data/gymea-data-current/common/*
3. Once removed, Restart the DuraFlex services via the SSH terminal by typing: '*dtpUseExternalRip* '
   Note: If the internal rip is being used, please type: '*dtpUseInternalRip* '
4. At this stage, the DuraFlex unit should be restored to factory default (TPS 'Enabled'). This must be verified.
5. Verify that the change has taken affect by implementing the instructions in "Verification Procedure" outlined above.

Change log & Links

Revision information:

Revision	Comments
1.1	Initial release
1.2	Minor formating updates

Useful Links and URLs: