Checking temperature limits on a Trendsetter VLF or Trendsetter 3244 (TS3 or TS3/8)

Background

To determine if a customer's Trendsetter VLF or Trendsetter 3230/3244 (TS3 & TS3/8 models only) can be upgraded to use a heat exchanger, you need to know what the maximum and minimum temperatures are for that device's environment as measured by the device engine temperature sensor. This procedure explains how to determine the maximum and minimum temperatures using the device's built-in temperature log.

A heat exchanger consists of a pump, fans, and a heat exchanger block. Because it relies on ambient air to cool the water, the maximum room temperature for a heat exchanger-equipped Trendsetter is 30 °C (86 °F). In cases where the temperatures exceed 30 °C, a chiller must be used for cooling.

Procedure

1. Type `>>list stats` and locate the line that shows the maximum and minimum temperatures. An example is shown below:

   Recorder Statistics

   On time: 6870:58:50 (hrs:min:sec)
   (286 days) Time busy: 1035:57:42 (hrs:min:sec)
   Secure total on time (should equal on time): 47777:42:58 (hrs:min:sec)
   Time suspended: 38:19:25 (hrs:min:sec)
   Door opened 118 times for a total time of 3:41:15 (hrs:min:sec)
   Power up or operator reset: 290 Fault reset: 11
   Min temperature: 18C Max temperature: 20C
   System low pressure time: 1283:11:20 (hrs:min:sec)
   Total images: 6841 Total failed: 269 Total cancelled: 207
   Total imaging retraces: 1775 Failed edge detects: 31 False edges: 84
   Total number of double edges accepted: 0
   Min laser diode temperature: 19C Max laser diode temperature: 24C
   Maximum laser diode current: 41.780A
   Head Controller, focus out of range errors: 55
   Head Controller, unexpected resets: 1

2. Check the maximum temperature. If this parameter has never been initialized before, the maximum temperature may be an invalid number.
   a. If the maximum temperature is 30 °C or below, then it will most likely be valid data and it represents the highest temperature measured since the machine was installed.
   b. If the maximum temperature is higher than 30 °C, or if it has an unreasonably high number, then the data may be invalid.
3. To reset the maximum temperature only, type `>>set state general tmax 0`. The device will now log new temperature highs as they occur.
4. To reset the minimum temperature only, type `>>set state tmin 0` . The device will now log new temperature lows as they occur.

5. To reset all the *list stats* values, type >>`nvs init stats` . Press **Y** to continue. This will set everything back to 0 except for the *secure on time* value. The firmware will gradually populate the statistic values while the device runs.
   The example below shows all *list stats* values after the statistic initialization is complete:

   Recorder Statistics

   On time: 0:00:17 (hrs:min:sec)
   (0 days) Time busy: 0:00:00 (hrs:min:sec)
   Secure total on time (should equal on time): 47797:09:01 (hrs:min:sec)
   Time suspended: 0:00:00 (hrs:min:sec)
   Door opened 0 times for a total time of 0:00:00 (hrs:min:sec)
   Power up or operator reset: 0 Fault reset: 0
   Min temperature: 0C Max temperature: 0C
   System low pressure time: 0:00:00 (hrs:min:sec)
   Total images: 0 Total failed: 0 Total cancelled: 0
   Total imaging retraces: 0 Failed edge detects: 0 False edges: 0
   Total number of double edges accepted: 0
   Min laser diode temperature: 0C Max laser diode temperature: 0C
   Maximum laser diode current: 0.000A
   Head Controller, focus out of range errors: 0
   Head Controller, unexpected resets: 0

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