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OMK040 HUMIDITY SENSOR CALIBRATION KIT CALIBRATION INSTRUCTIONS

NOTE: The Humidity Sensor (RPI Part #OMS038) fits the Giraffe® Incubator, the Giraffe® OmniBed®, and the Ohmeda Care Plus® Servo Humidifier. The Humidity Sensor Calibration Kit (RPI Part #OMK040) can be used to calibrate the Humidity Sensor in all of these systems.

IMPORTANT: Be sure to perform this calibration procedure whenever the Humidity Sensor or the Control PCB is replaced.

Setting up the standard:

- 1) Once mixed with distilled water, the saline solution in the calibration vial may only be used for a period of one year. Use a permanent marker to write the activation date on the calibration vial.
- 2) Remove the cap from the calibration vial and add one half cap of distilled water to the vial. Shake the vial to thoroughly mix the salt and water. Most of the salt should be undissolved and there should be as little standing water above the salt line as possible.
- 3) **CAUTION:** The solution should be approximately the same temperature as the humidity sensor. If the calibration vial was stored in a cold environment (or if cold distilled water was used) place the vial inside of the incubator and allow it to warm before continuing with the calibration.

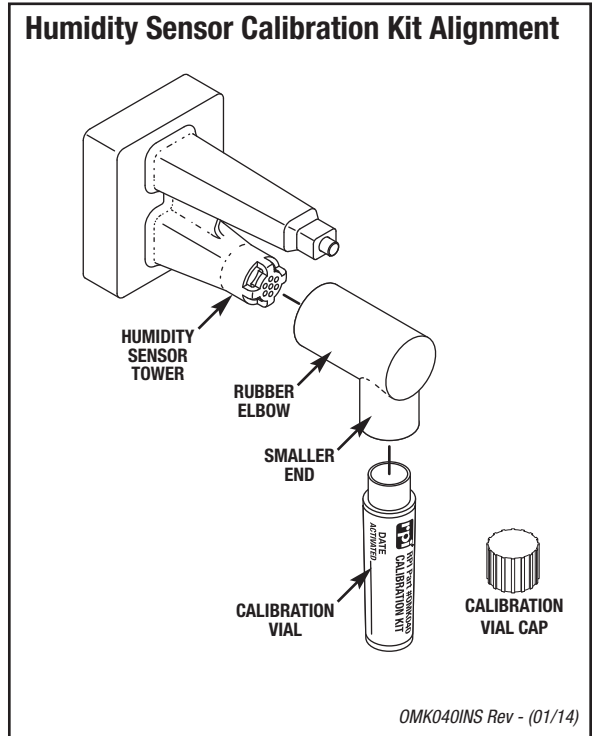
Calibration Instructions for the Giraffe Incubator and OmniBed:

- 1) Turn off the Giraffe Incubator or OmniBed.
- 2) Remove the cap from the calibration vial and set aside for use later. Place the smaller end of the rubber elbow over the vial until it stops. Slide the larger end of the rubber elbow over the humidity sensor until it stops (see "Humidity Sensor Calibration Kit Alignment" to the right). This will produce a 75% relative humidity environment to calibrate the humidity sensor.
- 3) Hold the Override Key (>37°) while powering up the Incubator or OmniBed until the entire boot process has completed. The unit should now be in the service mode and should be displaying the first service screen.
- 4) Using the control knob, advance the service mode to the second screen. On the second service screen select Cal RH. The screen will prompt "Push knob when RH reading is stable." Wait 20 minutes or until the RH display stabilizes (changing by no more than 1% in 5 minutes).
- 5) Depress the control knob to complete the calibration. On Software Revision 1.3 and higher you will be prompted with an option to select **STABLE**, **SET TO DEFAULT**, or **EXIT**. Selecting **STABLE** initiates the calibration routine. **SET TO DEFAULT** resets the calibration values back to the factory default values. If you entered the calibration routine by mistake select **EXIT** to leave without initiating the calibration routine.

- 6) If "RH Sensor Calibration Completed" is displayed the calibration is complete. Depress the control knob to exit the Cal RH process.
- 7) If "RH Sensor Calibration Failed. Try again" is displayed verify the initial setup and press the control knob to try the calibration routine again. If the failure persists it means that the readings are out of range and may indicate an out of date calibration standard (saline solution) or a bad humidity sensor.
- 8) Remove the rubber elbow from the humidity sensor and the calibration vial from the rubber elbow. Recap the calibration vial and store in a cool location for future use.

Calibration Instructions for the Ohmeda Care Plus Servo Humidifier:

- 1) Turn on the Incubator and set the Temperature to 30° C in the manual mode.
- 2) With water in the fill tray, turn on the humidifier and set the humidity to 75%. Allow the temperature and humidity to stabilize.
- 3) Remove the cap from the calibration vial and set aside for use later. Place the smaller end of the rubber elbow over the vial until it stops. Slide the larger end of the rubber elbow over the humidity sensor until it stops (see "Humidity Sensor Calibration Kit Alignment" below). This will produce a 75% relative humidity environment to calibrate the humidity sensor.
- 4) Wait 30 minutes.
- 5) Verify that the RH display reads 75 ±2%. If the display does not read 75 ±2%, perform steps 6, 7, 8 and 9. If it does read 75 ±2%, skip to step 9 below.
- 6) Loosen the two bolts at the bottom of the humidifier controller housing that secure it to the base platform. Lower the controller housing while tilting the bottom of the housing toward you. This will allow access to adjust the potentiometer on the controller/display board.
- 7) Adjust the potentiometer (R30, CALIBRATE) on the control/display board until the RH display reads 75%.
- 8) Re-assemble the humidity controller to the incubator base with the two mounting bolts.
- 9) Remove the rubber elbow from the humidity sensor and the calibration vial from the rubber elbow. Recap the calibration vial and store in a cool location for future use.



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