	RESPIRATORY SERVICES	DATE CREATED: April 2008
		DATE REVIEWED/REVISED: **August 2016**
PROCEDURE	TITLE: <u>Pulmonary Diagnostics:</u> Calibration of Jaeger Masterscreen Body Box (SPH Room A, MSJ) (Respiratory Therapy) NUMBER: B-00-12-12103	RELATED DOCUMENTS:

SITE APPLICABILITY:

ST. PAUL'S HOSPITAL
MOUNT SAINT JOSEPH HOSPITAL

GENERAL INFORMATION:

Equipment calibrations are to be done on a daily basis. Repeat calibrations may be necessary when large fluctuations in barometric pressure or temperature occur (i.e. greater than 2 degrees Celsius), if equipment parts are replaced or changed, and when troubleshooting equipment.

There are three types of calibrations done each morning for the Jaeger Masterscreen Body Box:

- Volume
- Gas Analyzer
- Pressure

REQUIRED SUPPLIES & EQUIPMENT:

- Jaeger Masterscreen Body Box
- 3 L calibration syringe

PROCEDURE:

Ambient Conditions:
1. From the main group desktop click on **Ambient Conditions** icon.
2. Update by clicking on **F1,** then enter **barometric pressure**, **relative humidity** and **temperature**.
3. Save by pressing **F12.**

Volume Calibration:
1. Double click on **Volume Calibration** icon.
2. The volume calibration screen will appear. Click on **F1** to **zero the flow**, and then attach the 3 L calibration syringe to the pneumotach.
3. The volume calibration is a three flow calibration which requires the calibrator to pump the calibration syringe at low, medium and high flows – the calibration screen indicates these flows with white dotted lines.

4. When finished there will be a message at the bottom of the screen that says **Calibration ended successfully**. If it does not pass, an error message will appear asking for a **repeat calibration**.

Gas Analyzer Calibration:

1. Double click the **Gas Analyzer Calibration** icon.
2. Press **F1** to calibrate all gases.
3. Once calibration is complete make sure the results are in the appropriate ranges.
4. When calibration is finished press **F12** to save and exit.

Box Calibration:

1. The body box calibration must be carried out with the door closed.
2. Next, double click on **the Box Calibration** icon and the calibration will start automatically.
3. There will be a 2-minute countdown to stabilize the body box.
4. During calibration the box should not be exposed to direct sunlight.
5. Pressure fluctuations from outside sources (i.e. slamming doors, vibrations etc.) can cause disturbances to the calibration and may lead to incorrect measurements.
6. Once finished check that the leak time and PB are within the appropriate ranges. Repeat calibration if necessary.

REFERENCES:

1. *Masterscreen Instruction Manual,* Viasys Healthcare Version 4.6 Art. No. 781040.
2. *American Thoracic Society Series "ATS/ERS Task Force: Standardization of Lung Function Testing",* European Respiratory Journal, 2005. Volume 26

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