

Providence Health Care	Department: Respiratory Services	Original Date: May 2007 Last Review/Revision:
PROCEDURE	Topic: Critical Care INOVent Monthly Calibration (Respiratory Therapy) Number: B-00-12-12062	Links Related to Topic: None

GENERAL:

- INOVents are not property of Providence Health Care – they are on loan as part of the contract for INOMax nitric oxide gas delivery
- Monthly calibrations will be performed by staff Respiratory Therapists
- Routine preventative maintenance is the responsibility of INOTherapeutics

EQUIPMENT:

- INOVent delivery system
- NO & NO₂ calibration gases
- Oxygen flowmeter with nut/nipple connector
- Oxygen tubing
- Small bore oxygen tubing connector
- Sample tee
- Sample line

PROCEDURE:

1. Turn the INOVent delivery system *on*.
2. From the normal INOVent display, push *Calibration* to access the calibration menu. From the calibration menu, use the control wheel to select *Low Range Cal (room air)* – calibration will automatically start for all 3 sensors (NO, NO₂, & O₂) at the same time. The sample line does not need to be connected at this time.

NOTE: If the INOVent is not fully warmed up, initial attempts at low range calibration will fail. Retry after a few minutes.

3. Successful calibration will be displayed on the INOVent display. Use the control wheel to select *Go to Calibration of Sensors* to return to the calibration menu.
4. Connect one end of the sample line to the INOVent and the other end to luer lock line from the NO calibration gas.

NOTE: Do NOT occlude the atmospheric vent that is tee'd off of the calibration gas line.

5. Use the control wheel to select *High Range Cal NO*. Turn the NO calibration gas *on*.
6. Wait for the measured NO value to stabilize – this may take a few minutes. Once the value

is stable, push the control wheel.

7. The following display will appear: *Set Calibration XX to Cal Gas Value*. Turn the control wheel to adjust to the value of NO displayed on the calibration gas cylinder, then push the wheel to enter.
8. *Calibration NO In Progress* will appear on the display. If the high range calibration fails, follow the instructions given on the display. If the calibration is successful, use the control wheel to select *Go to Calibration of Sensors*. Turn the NO calibration tank off.
9. When the calibration menu appears, use the control wheel to select the NO₂ sensor for calibration.
10. Repeat steps 4 to 8 for NO₂ sensor calibration.
11. After calibrating the NO₂ sensor, select O₂ sensor for calibration.
12. Connect the oxygen tubing to the flowmeter and turn the flow to 15lpm. Connect the other end of the oxygen flowmeter to the small bore oxygen tubing connector, which is then connected to the sample tee. Connect one end of the sample line to the sample tee and the other end to the INOVent.
13. From the calibration menu, use the control wheel to select the O₂ sensor for calibration.
14. Follow steps 4 to 8 for O₂ sensor calibration. The value for O₂ calibration is 100%.
15. After calibration the O₂ sensor, use the control wheel to select *Exit to Normal Display*.
16. Document completed calibration on the INOVent calibration log (on top of the INOVent delivery system).
17. Reconnect the sample line, sample tee, etc. to the sensor module so that the INOVent is ready for use.
18. Ensure calibration gases are turned off. Return all other equipment as necessary.