TV-100 Proposed Competency

Name :		**Date :**	
Evaluator :			

1. Install correct circuit and pneumotach for the patient size indicated by evaluator.
   Neonatal _____, Pediatric _____, Adult _____.
   A. Make sure that the correct pneumotach has been installed.

2. Set vent up to the particular mode and settings indicated by evaluator.
   Mode _____, Vol or Pressure _____, Rate _____, PEEP _____, Insp Time _____.

3. Make sure that reasonable alarm levels are set for these particular settings.

4. Explain the relationship of pressure triggering and flow triggering. Why are they both settable?
   A. How can you tell what trigger is occurring?

5. Explain what happens when the Pre-Ox Key is pressed (assuming the vent is connected to an oxygen source).

6. Show how the wave forms can be manipulated (size and speed).

7. Show how to get an Auto Peep value.

8. Perform an Insp Hold.
   A. Explain what two things this can be used for.

9. If nCPAP/HFNC (neonatal) or HFNC (peds/adult) modes will be utilized, set up for a patient size as directed by evaluator. Neo _____, Peds _____, Adult _____, Flow Rate _____.
   A. How should circuit be connected for HFNC?
   B. If used for neonatal, how would you set up vent for 5 cm nCPAP?

10. Show how back light can be dimmed.

11. Power down vent and silence alarm.

12. Explain how long batteries will last with a full charge.
    A. How should batteries be changed?

TV-100 Proposed Competency – Answers

1. When the user chooses the patient size, the vent will preselect the Infant (20011), Pediatric (40011) or Adult (80018) circuit respectively. The user must install the correct pneumotach (flow sensor)

   4409C Infant

   4410 Pediatric/Adult

2. Give the user a particular mode and setting that is representative of what may be normal settings for your facility.
   Note: Sometimes the characteristics of the test lung can cause auto-cycling to occur. It may be necessary to increase the flow trigger to stop the auto-cycling with the test lung. The correct setting should always be evaluated once the patient is connected.

3. The user can make adjustments to most of the alarm parameters at the same time they adjust the patient settings. Or they can visit the alarm screen and adjust alarm parameters after setting all vent settings.

4. The vent will use either the Flow or Pressure *trigger* that occurs first. In this manner, as long as both are set appropriately, if there is a problem with the pneumotach (or moisture gets in the sensor tubing) the pressure trigger will act as a backup.

   a) On the main screen or graphics screen, a blue T on the bottom wave form indicates a flow trigger occurred. An orange T represents a pressure trigger.

5. In neonatal mode, when the Pre-Ox key is pressed, the oxygen level will increase 10 points above whatever the current Set value is, for 60 seconds, then it will revert to the actual set value (so if the oxygen percentage is Set to 31% the Pre-Ox key will increase the oxygen level to 41% for 60 seconds). If the Pre-Ox key is pressed again prior to 60 seconds, the increased oxygen will be *canceled*. Note: when the Pre-Ox key has been activated, the Pre-Ox text will appear green.
   In pediatric and adult modes the Pre-Ox key will result in the oxygen level being raised to 100% for 60 seconds no matter where the oxygen level was set.

6. The scale of the wave forms can be adjusted by pressing the +/- key on either the main screen or the graphics screen, then pressing the + or – key for the respective wave form. The speed of the wave form tracing can be adjusted by pressing the +/- key on either the main screen or the graphics screen and then either the button with a single wave form (faster tracing) or with multiple wave forms (slower tracing).

7. Pressing the Exp. Hold button (which is displayed on every screen) will perform an expiratory pause on the next mandatory breath. The resulting Auto PEEP value will be displayed on the Lung Mechanics screen for 10 seconds.

8. An Insp. Hold key pressed during a Volume mode breath will display the plateau pressure value for 10 seconds on the Lung Mechanics screen. If an extended inspiratory hold is desired, the Insp. Hold key can be pressed and held for up to 15 seconds. The breath will cycle into exhalation when the Insp. Hold button is released or 15 seconds has expired (whichever occurs first).

9. The HFNC circuit should be connected to the 22 mm vent output connection and nothing should be connected to the exhalation valve port or the pressure line port. Note: peds/adult modes only provide flow as the control variable. For neonatal HFNC make sure flow is set as the control variable.

   a) Above

   b) Switch the control variable to pressure and make sure a standard neonatal circuit is connected (including the pressure line and exhalation valve line). Make sure any desired alarms are set (oxygen, pressure).

10. Touching the light bulb key on the lower left portion of the touch screen will dim the screen in the following increments: 1st touch = 75%, 2nd touch = 50%, 3rd touch = 25%, 4th touch = back to full brightness.

11. To power off the vent, the power button must be held for at least 2 seconds. A pop-up confirmation box will be presented. Vent will be shut down upon confirmation. The vent will alarm upon shutting down. To silence the audible alarm after shut down, simply depress the alarm Silence button. The flashing alarm indicator should stop in about 3 minutes.

12. Batteries will last 7-8 hours on a full charge. If fully depleted batteries will take approximately 8 hours to fully charge. It will take longer to charge if the vent is running.

    a) Only one battery should be changed at a time (unless the unit is plugged into an external power source).