


Operator competency checklist – Hamilton-C1/ T1/ MR1 ventilators

Performance criteria		Competent		Comments
		Yes	No	
Physical components				
1	Identify and explain: a. High pressure oxygen inlet b. Air intake c. 240V (mains) power connection d. Battery compartment (T1 only)			
2	Identify and explain: a. Inspiratory port b. Expiratory valve housing c. Connections for flow sensor d. Connection for pneumatic nebuliser			
3	Identify and explain: a. Power/ Standby key b. Battery charge indicator c. Day/ Night key d. Screen Lock/ Unlock key e. Manual Breath/ Inspiratory Hold key f. O2 Enrichment key g. Print Screen key h. Nebulizer On/Off key i. Press & Turn knob			
4	Demonstrate: a. Battery life and replacement b. Mounting/ dismounting of ventilator on trolley (or customer preferred alternative)			
Attach and prepare breathing circuit				
5	Identify (using customer's preferred circuit): a. Inspiratory hose b. Expiratory hose c. Flow sensor d. Flow sensor tubing e. Flow sensor calibration adapter			
6	Demonstrate: a. Install expiratory valve b. Connect inspiratory and expiratory hoses c. Connect flow sensor and tubing d. Secure calibration adapter			
7	Explain: a. How frequently Tightness Check and Flow sensor calibration should be performed b. How frequently O2 calibration should be performed			
8	Demonstrate: a. Tightness Check b. Flow sensor calibration c. O2 calibration			
9	Demonstrate: a. Troubleshoot failed Tightness Check			
10	Explain: a. The correct position in which a combined HME/ Viral/ Bacterial filter should be fitted for use with "dry" circuits b. The correct position in which Viral/ bacterial filters should be fitted for use with "wet" circuits			

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Navigating the ventilator LCD display in Standby				
11	Demonstrate: a. How to adjust screen brightness b. How to adjust the volume of ventilator audio tones			
12	Explain: a. The location and function of input power status indicators			
13	Explain: a. How to enable/ disable sensors			
Prepare the ventilator for use on a patient				
14	Explain: a. The function of Set-Ups			
15	Demonstrate: a. Input of patient details			
16	Explain a. The similarities and differences between (S)CMV+ (APV-CMV) and SIMV+ (APV-SIMV) b. The similarities and differences between PCV+ and PSIMV+ c. SPONT d. The similarities and differences between NIV and NIV-ST e. The basics of ASV f. Enabling/ disabling “Backup” (apnea ventilation)			
17	Demonstrate: a. Use of “Main” (shortcut) ventilator controls b. Selecting ventilation mode c. Changing and applying settings for new mode			
18	Demonstrate: a. Commencing ventilation			
Navigating the ventilator display in operation				
19	Explain: a. Main Monitoring Parameters (MMPs)			
20	Demonstrate: a. Location of measured parameters via Monitoring key			
21	Demonstrate: a. Locating and navigating other measured values			
22	Demonstrate: a. Enabling and disabling Screen Freeze b. Use of cursor			
23	Demonstrate: a. Displaying alternate waveforms b. Displaying Trends c. Displaying Loops and capture of reference loops d. Displaying graphics e. Display ASV Graph			
24	Explain: a. Use of Events list and Buffer ()			
25	Demonstrate: a. How to export ventilator logs b. How to export screenshots via the “Print” key			

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Alarms				
26	Demonstrate: a. Locate and adjust alarm limits b. Locate alarm bar and messages c. Where Technical Events are displayed			
27	Explain: a. Differentiating Alarm Priority b. Breakthrough alarm behaviour			
28	Explain: a. Significance of Patient settings in optimizing alarm limits			
29	Explain: a. Adjusting the maximum pressure (Pmax) threshold (red line) b. Adjusting the pressure limit threshold (blue line) c. The behaviour of the ventilator when the Pmax is reached d. Pressure limiting behaviour in adaptive ventilation modes			
30	Explain: a. The correct position of the flow sensor in the circuit to minimize the likelihood of liquid draining into the flow sensor tubing b. The fail-safe behaviour of the ventilator in the event of a flow sensor failure			
31	Explain: a. The difference between “Apnea Ventilation” and Apnea alarms			
High Flow Oxygen Therapy				
32	Explain: a. What must be done to change from invasive or non-invasive ventilation modes to High Flow O2 Therapy			
33	Demonstrate: a. Changes to breathing circuit configuration required when changing to High Flow O2 Therapy			
Use of Hamilton-MR1 in the MRI suite (Hamilton-MR1 only)				
34	Explain: a. What is the maximum magnetic field strength in which Hamilton-MR1 can safely be operated? b. The use of the TeslaSpy function			
35	Demonstrate: a. Operation of MR1 trolley brake b. Operation of transport adapter on MR1 trolley (if applicable)			

Hospital/ customer name	Date
Clinical user name	Clinical user signature
Assessor name	Assessor signature