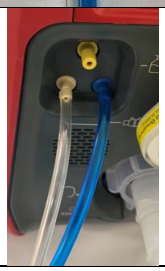
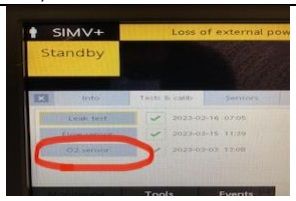
# Hamilton T1 Ventilator Standard Operating Procedure
# Adult (>15Kgs) Invasive Ventilation Set-up and Operation

Adapted from SJH ED SOP: Author Ross Archibald (NHSL employee)

| *Instruction* | | *Example / Note* |
|---|---|---|
| 1. | Items required:<br><br>**Circuit pack** (code: 260207) containing;<br>- Disposable coaxial circuit<br>- Disposable proximal flow sensor<br>- Disposable expiratory valve |  |
| 2. | a) **Connect AC power cable to wall and turn on**<br><br>b) **Connect oxygen hose to cylinder or wall outlet** (if supplementary oxygen is required).<br><br>c) **Turn power ON** (hold power button briefly and allow auto start up procedure to complete).<br><br>d) **The ventilator will run a short self-check then displays the standby screen. Ensure no major faults indicated** (RED flashing light and accompanying error message). |  |
| 3. | a) **Open circuit pack.**<br><br>b) **Detach expiratory valve from disposable circuit.** Ensure rubber membrane cap remains attached to expiratory valve.<br><br>c) **Insert expiratory valve into expiratory port** (membrane cap first) and rotate clockwise until click felt. |  |
| 4. | **Connect coaxial circuit ends to inspiratory port and expiratory port as shown.** |  |
| 5. | **Separate ends of proximal flow sensor tubing as shown**. |  |
| 6. | **Connect proximal flow sensor tubing to ventilator** (blue to blue, clear to white). |  |

| | | |
|---|---|---|
| 7. | **Select 'Preop check' on standby screen** (bottom left). **Perform the leak and flow sensor checks.** |  |
| 8. | <u>Leak test</u><br><br>a) **Don gloves.**<br><br>b) **Remove red cap from end of circuit.**<br><br>c) **Select "Leak test" and follow instructions on screen.**<br><br>d) **Block end of flow sensor** (dark blue part) **and release when instructed.**<br><br>GREEN tick indicates successful test.<br>RED cross requires repetition of above steps. |  |
| 9. | <u>Flow sensor check</u><br><br>a) **Select "Flow Sensor" and follow instructions on screen.**<br><br>b) **When prompted, attach calibration adapter** (opaque part) **to the end of the flow sensor.**<br><br>c) **When prompted, flip both parts 180° so the calibration adapter is directly connected to the coaxial circuit.**<br><br>d) **Remove calibration adapter** (don't throw away) **and return flow sensor adaptor to original position as shown.**<br><br>GREEN tick indicates successful test.<br>RED cross requires repetition of above steps. | b)  c)  <br>d)  |
| 10. | <u>02 sensor check</u><br><br>Not routinely required unless indicated by ventilator. **Perform check if not done within the last 4 weeks.**<br><br><u>Loss of power check</u><br><br>Perform a loss of power check by disconnecting the ventilator from the mains power supply. Verify that that the alarm is activated and that the ventilator is powered by its backup battery.<br>**Reconnect the ventilator to the AC power supply** |  |
| 12. | Once three GREEN ticks appear on Pre-op check menu*:<br><br>**Connect ventilator tubing as per departmental protocol** (ETT > catheter mount > HME Filter > capnography > ventilator circuit).<br><br>**Select desired ventilator settings and input patient specific information** (sex, height). |  |
| For further information, support or queries please contact:<br>Jake Maxwell, UK Manager, Eden Medical UK<br>07551 171280 Jake.maxwell@edenmedical.co.uk | | eden medical |

*If the pre-operational checks fail

1. Check breathing circuit – no disconnection, properly connected and no leakage
2. Check flow sensor – properly connected (as per steps 5-6)
3. Check expiratory valve is properly installed and seated (step 3)
4. Replace breathing circuit, flow sensor and expiratory valve set – ensure properly connected and seated
5. Return ventilator to medical physics for servicing