Digital MDM
Pre & Post Use Checklist

Checklist aims
This checklist has been designed for use with a Digital MDM flowmeter that has been mounted on a four cylinder mobile stand. If followed correctly you will ensure that you have;

- Checked the power supply is connected.
- Checked the contents of all four gas cylinders.
- Checked the correct function and controls of the flowmeter.
- Checked the automatic cut-out of Nitrous Oxide flow in the absence of Oxygen.
- Checked the reservoir bag for leaks.
- Checked the high pressure gas system and regulators for leaks.

PRE USE

Step 1: Power supply check
Aim; To ensure that power supply is connected

1. Make sure your power lead is present and is connected firmly into the back of your Accutron Digital Ultra.
2. Make sure that the power lead is connected to the wall socket and that the socket has been turned on.

Step 2: Cylinder contents & leak check
Aim: Check the contents of all cylinders.,
Check for any leaks.

1. Open the "In Use" Oxygen cylinder by turning the valve anticlockwise then wait for five seconds. The needle on the cylinder contents gauge should rise and then settle when it reaches the cylinders current contents.
2. Close the "In Use" Oxygen cylinder by turning the valve clockwise then wait for 20 seconds. The needle on the cylinder contents gauge should not drop from its original position.
3. Repeat this process with the remaining cylinders in the following order; "In Use" Nitrous Oxide, "Full" Oxygen, "Full" Nitrous Oxide.
4. Before continuing with these tests open both the Oxygen and Nitrous Oxide "In Use" cylinders by turning the valve anticlockwise.

Please note; Due to Nitrous Oxide being stored in liquid form within the cylinder its pressure is not a clear indication of cylinder contents, the pressure gauge will read at 650psi until it is nearly depleted at which point it will drop rapidly. ALWAYS MAKE SURE YOU HAVE A "FULL" BACK UP CYLINDER BEFORE STARTING A PROCEDURE.

Step 3: Oxygen flush test
Aim: Check the function of the Oxygen Flush

1. Check that both the Oxygen and Nitrous Oxide "In Use" cylinders are open and that your Accutron Digital Ultra has been turned on then press and hold the Oxygen flush button. A strong flow of Oxygen should be present.

Please note; Watch out for changes in your flush as your machine ages. This may be a sign your unit requires attention.

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Step 3: Oxygen Failsafe (Hypoxic guard) Check

Aim: Check the automatic cut-out of Nitrous Oxide flow in the absence of Oxygen.

1. Ensure that the Oxygen and Nitrous Oxide "In Use" cylinders are open then set the machine to a flow of 6 litres per minute.
2. Increase the Nitrous Oxide percentage to 50% and then close the Oxygen "In Use" cylinder. The needle on the Oxygen pressure gauge should slowly fall to zero and both Oxygen and Nitrous Oxide flows should gradually decrease before ceasing. The "Oxygen Failure" alarm will now sound. Reinstating the Oxygen supply will stop this alarm and return the Accutron Digital Ultra to it's previous flow rate and percentage.

Please note; If the flow of Nitrous Oxide does not cease with the flow of Oxygen then your machine MUST NOT BE USED until it has been inspected by an RA Medical Services engineer.

Step 4: Nitrous Oxide Failsafe Check

Aim: Check the function of the "Nitrous Oxide Failure" alarm.

1. Ensure that the Oxygen and Nitrous Oxide "In Use" cylinders are open then set the machine to a flow of 6 litres per minute.
2. Increase the Nitrous Oxide percentage to 50% and then close the Nitrous Oxide "In Use" cylinder. The needle on the Nitrous Oxide pressure gauge should slowly fall to zero and the Nitrous Oxide flow should gradually decrease before ceasing. The "Nitrous Oxide Failure" alarm will now sound.

Step 5: Inspiratory Valve & Bag Check

Aim: Check the functionality of both the inspiratory valve and the reservoir bag.

1. Cover the common gas outlet (where your breathing system attaches to your Accutron Digital Ultra) using the palm of a gloved hand.
2. Press the Oxygen flush for two seconds to inflate the reservoir bag.
3. While you are blocking the common gas outlet the bag should remain inflated.

Please note; If your machine fails this test examine you current reservoir bag for tears and if possible repeat with a different reservoir bag. Repeated failures may be an indication of a damaged inspiratory valve.

Machine is now ready for use

POST USE

Readying the machine for storage

Aim: To ensure that the machine is ready to be safely stored until next use.

1. Set the machine to a flow of 6 litres per minuet and set the Nitrous Oxide percentage to 50%.
2. Close the "In Use" Nitrous Oxide cylinder by turning it clockwise. Wait for the Nitrous Oxide contents gauge to fall to zero.
3. Close the "In Use" Oxygen cylinder by turning it clockwise. Wait for the Oxygen contents gauge to fall to zero.
4. Ensure that the flow control has been turned off and that the percentage wheel has been set to 100%.

Machine is now ready for storage

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