
ANNEX 6

Checklists for anaesthetic apparatus¹

Draw-over anaesthetic apparatus

Keep a copy of this list by your anaesthetic apparatus.

Oxygen cylinder and flowmeter

Turn on supply of gas from cylinder, and check pressure and flow. Also check spare cylinder.

Oxygen reservoir

Check for proper assembly of T-piece, and make sure that air inlet is unobstructed.

Vaporizer

Check that the vaporizer is filled (using only stocks of anaesthetic in their original containers). Check that connections fit, and set dials to zero.

Self-inflating bag/bellows

Check connections and, if applicable, position of magnet on bellows.

Breathing and connecting hoses

Check connections and correct assembly of breathing system.

Breathing valve

Test the valve yourself and check it visually; the bobbin or valve leaflets should move during breathing.

Check for leaks

Squeeze the bag or bellows while using your hand to block the connector that joins the breathing valve to the patient. No air should escape.

Continuous-flow (Boyle's) anaesthetic apparatus

Oxygen supplies

For machines fitted with cylinder-only supply

Turn on the oxygen supply from the cylinder in use and check the pressure. Turn on the supply from the reserve cylinder, check the pressure, and turn it off again. Check that you have a third cylinder available to replace the cylinder in use when it is exhausted.

For machines fitted with a piped gas supply

Check the source of the piped gas supply. Check that there is a full cylinder of oxygen fitted to the machine in case the piped supply fails.

¹ From: Dobson MB. *Anaesthesia at the district hospital*. Geneva, World Health Organization, 1988.

All machines

Turn off all gas supplies except one oxygen cylinder or piped supply. Open all rotameters. Oxygen should flow through only one rotameter tube (the oxygen one!). If this does not happen, do not use the machine.

If the machine has an oxygen-failure warning device, test it as follows:

Turn on the gas supply from one oxygen cylinder (pipeline disconnected if fitted) and one nitrous oxide cylinder (if fitted).

Open rotameter taps to give a flow of oxygen (and nitrous oxide also if fitted) of 5 litres/min.

Turn off the oxygen supply at the cylinder. If a functioning warning device is fitted, an alarm should sound as the oxygen rotameter bobbin starts to fall (this may take a few seconds). On some machines, oxygen failure automatically cuts off the nitrous oxide supply also.

After the test remember to open the oxygen cylinder valve again.

Nitrous oxide

Check the pressure in the nitrous oxide cylinder in use and in the reserve cylinder. If the pressure in a nitrous oxide cylinder at room temperature is less than 5200 kPa (51 atmospheres, 750 p.s.i.), the cylinder is less than 15% full.

Rotameters

Inspect visually for cracks. Make sure that the bobbins do not stick in the tubes.

Emergency oxygen

Locate and turn on the emergency oxygen (bypass) button or tap. A high flow of oxygen should be delivered from the gas outlet. Note that this supply does not pass through the oxygen rotameter.

Vaporizers

Check that all vaporizers are firmly connected and filled with the correct anaesthetic agent (from stocks of anaesthetic in their original containers). Check that all filling ports are firmly closed, and that concentration dials are set to zero. A Boyle's bottle should have both the lever and the plunger pulled up.

Leaks

Check the machine once a month for leaks (or immediately, if a leak is suspected) by "painting" suspect areas with soapy water and watching for bubbles.

Breathing system

Check for correct assembly.