



**THE ASSOCIATION OF ANAESTHETISTS**  
*of Great Britain & Ireland*

## CHECKLIST FOR ANAESTHETIC EQUIPMENT 2004

**The following checks should be made prior to each operating session. In addition, checks 2, 6 and 9 (Monitoring, Breathing System and Ancillary Equipment) should be made prior to each new patient during a session.**

1. **Check that the anaesthetic machine is connected to the electricity supply (if appropriate) and switched on.**  
**Note:** Some anaesthetic workstations may enter an integral self-test programme when switched on; those functions tested by such a programme need not be retested.
  - Take note of any information or labelling on the anaesthetic machine referring to the current status of the machine. Particular attention should be paid to recent servicing. Servicing labels should be fixed in the service logbook.
2. **Check that all monitoring devices, in particular the oxygen analyser, pulse oximeter and capnograph, are functioning and have appropriate alarm limits.**
  - Check that gas sampling lines are properly attached and free of obstructions.
  - Check that an appropriate frequency of recording non-invasive blood pressure is selected.  
(Some monitors need to be in stand-by mode to avoid unnecessary alarms before being connected to the patient)
3. **Check with a "tug test" that each pipeline is correctly inserted into the appropriate gas supply terminal.**  
**Note:** Carbon dioxide cylinders should not be present on the anaesthetic machine unless requested by the anaesthetist. A blanking plug should be fitted to any empty cylinder yoke.
  - Check that the anaesthetic machine is connected to a supply of oxygen and that an adequate supply of oxygen is available from a reserve oxygen cylinder.
  - Check that adequate supplies of other gases (nitrous oxide, air) are available and connected as appropriate.
  - Check that all pipeline pressure gauges in use on the anaesthetic machine indicate 400 - 500kPa.
4. **Check the operation of flowmeters (where fitted).**
  - Check that each flow valve operates smoothly and that the bobbin moves freely throughout its range.
  - Check the anti-hypoxia device is working correctly.
  - Check the operation of the emergency oxygen bypass control.

5. **Check the vaporizer(s):**
  - Check that each vaporizer is adequately, but not over, filled.
  - Check that each vaporizer is correctly seated on the back bar and not tilted.
  - Check the vaporizer for leaks (with vaporizer on and off) by temporarily occluding the common gas outlet.
  - Turn the vaporizer(s) off when checks are completed.
  - Repeat the leak test immediately after changing any vaporizer.
  
6. **Check the breathing system to be employed.**

**Note:** A new single use bacterial/viral filter and angle-piece/catheter mount must be used for each patient. Packaging should not be removed until point of use.

  - Inspect the system for correct configuration. All connections should be secured by “push and twist”.
  - Perform a pressure leak test on the breathing system by occluding the patient-end and compressing the reservoir bag. Bain-type co-axial systems should have the inner tube compressed for the leak test.
  - Check the correct operation of all valves, including unidirectional valves within a circle, and all exhaust valves.
  - Check for patency and flow of gas through the whole breathing system including the filter and angle-piece/catheter mount.
  
7. **Check that the ventilator is configured appropriately for its intended use.**
  - Check that the ventilator tubing is correctly configured and securely attached.
  - Set the controls for use and ensure that an adequate pressure is generated during the inspiratory phase.
  - Check the pressure relief valve functions.
  - Check that the disconnect alarms function correctly.
  - Ensure that an alternative means to ventilate the patient’s lungs is available. (see 10. below)
  
8. **Check that the anaesthetic gas scavenging system is switched on and is functioning correctly.**
  - Check that the tubing is attached to the appropriate exhaust port of the breathing system, ventilator or workstation.
  
9. **Check that all ancillary equipment which may be needed is present and working.**
  - This includes laryngoscopes, intubation aids, intubation forceps, bougies etc. and appropriately sized facemasks, airways, tracheal tubes and connectors, which must be checked for patency.
  - Check that the suction apparatus is functioning and that all connectors are secure.
  - Check that the patient trolley, bed or operating table can be rapidly tilted head down.
  
10. **Check that an alternative means to ventilate the patient is immediately available. (eg self-inflating bag and oxygen cylinder)**
  - Check that the self-inflating bag and cylinder of oxygen are functioning correctly and the cylinder contains an adequate supply of oxygen.
  
11. **Recording**
  - Sign and date the logbook kept with the anaesthetic machine to confirm the machine has been checked.
  - Record on each patient's anaesthetic chart that the anaesthetic machine, breathing system and monitoring has been checked.

**This check list is an abbreviated version of the Association of Anaesthetists publication “Checking Anaesthetic Equipment 3 2004”**

(Endorsed by the Chief Medical Officer and the Royal College of Anaesthetists)