

Safety Advisory Notice – June 2016

Colleagues report an incident whereby a crack in the inspiratory flow sensor of the anaesthesia machine (Datex Omeda Aestiva 5) led to a ventilator failure requiring use of a Bain circuit and auxiliary gas outlet.

A similar event happened with a Datex Omeda Aisys in December 2016.

Cracking of these sensors can occur usually as the result of excessive force on the inspiratory circuit limb as the coaxial breathing circuits are stiffer and more rigid on the inspiratory side.

Cracked flow sensors can present as error readings on the ventilator or if significant, complete anaesthesia machine shut down.

Prevention:

1. Care must be taken to avoid excessive force when changing or inserting the coaxial breathing circuits.
2. Check your anaesthesia machine before each patient.
3. Be aware that knocks against the breathing circuits, especially the inspiratory limb may apply excessive force to the internal flow sensor (these include bumping anaesthesia machine against people or operating table or surgeon moving up against the breathing circuits).

Management of failure:

Know how to continue to give oxygen during anaesthesia machine failure. Options include:

- Bain circuit and auxiliary gas outlet
- C Circuit and separate oxygen flow regulator on anaesthesia machine
- C Circuit and separate oxygen cylinder
- Ambu bag to LMA or ETT
- New anaesthesia machine.

IT IS ESSENTIAL THAT TRAINEES ARE INSTRUCTED IN HOW TO DELIVER OXYGEN IN THE EVENT OF APPARANT ANAESTHESIA MACHINE FAILURE

5. Know how to replace the flow sensors for your machine and be aware of where spare flow sensors are kept in your hospital. This takes a number of minutes so have plan for oxygen delivery and maintenance of anaesthesia such as propofol bolus or TIVA.