2025 Electrical-electronic (Pump Servoregulation) #3

Permission to print:	Yes
Category	Electrical / electronic
Category 2	Pump Servoregulation
Severity	Good Catch No Harm Incident
Duration of incident:	minutes
Description:	Essenz HLM was being primed for a cardiac case. A 3/8” bypass circuit and Fx15 oxygenator was selected for this patient. Surgeon had gone knife to skin and towards the end of the priming process an alarm alert - CPL-B CU Defective (use spare control unit; contact technical service) appeared. This was a RED alarm. A BioMed from LivaNova was onsite, working on the HLM that had a separate and different issue the day before, who was called into theatre to observe the issue. The cockpit screen is a slave of the main brains of the HLM that can be accessed from the front of the machine. We opened this compartment and still had no resolution or ability to override the error. The surgeon and anaesthetic team were notified we were experiencing problems with the HLM. Decision was made to reassign the pumps and continue to use the HLM. We started the case to reconfigure the pumps. The spare pump was plugged into the central control panel. The Vent (green) pump was reassigned to the spare small roller pump mounted on the back of the HLM without any issues. The green pump then becomes a “free” pump. When then trying to reassign the CPL-B (pink cardioplegia blood) pump to the green/free pump the alarm “Cockpit Info: Role change failed”. The process was attempted two more times with the same alarm appearing. You can see from the images attached that the HLM had labelled two pumps (green and pink) as CPL-B The decision was made to use the emergency dry set up which is a ½” pack with a Fx25 that was on the HLM used in the morning as the BioMed was still working on the other one. This was not the ideal choice of consumables for a patient of that weight, preoperative blood work and clinical state. The HLM was primed without an issue. Albumin was added to the prime and 1 unit RBC was transfused by anaesthesia prior to commencement of bypass and a second unit was added to the pump during initiation of bypass. The patient also required a third unit of blood transfused during the bypass run. Patient was weaned from bypass with nil issues and pump showed no error messages during the bypass run. There is about a 400-500mL difference between the circuit sizes so I can’t guarantee [no donor blood] would have been given but I would assume not three units would have been transfused. I only gave 200mL of crystalloid on pump and after RAP my prime was 900mL.
GOOD CATCH - what went well	Having a spare pump and dry set up available in pump room to help with swift pump changeout
What could we do better	Unsure
Preventive actions	CCU has since been replaced
Type of incident:	Equipment
Manufacturer advise	Yes
Timing of incident:	Prime
Discussed with team:	Yes
Hospital incident filed	Yes

Ext Authority Advised Yes

Patient outcome variance unknown