

QUICK REFERENCE EXAMPLES OF INCIDENTS AND PREVENTIVE PLAN BY CATEGORY

the examples below have been reported with varying frequency

CATEGORY	PREVENTIVE PLAN
Air in circuit	
2nd period of CPB - Level alarm off	No interruption to level alarm until HLM powered down
To proximal side of arterial filter (hemofilter inlet from ALF purge tap)	Insert non return valve to hemofilter outlet where it is attached directly to the reservoir
Outgasing from membrane during occlusion test	Where occlusion testing by pressure decay, clamp circuit distal to arterial filter (v venous line) and decay gradually.
During MUF	Provide a second pressure to servo regulate the MUF pump to an arterial line pressure to negative 1mmHg (to avoid negative blood phase pressures during MUF)
ECMO circuit disruption	1L heparinised (5000iu) crystalloid replacement + pressure bag changed each 72hr for high volume flushing with 1 L transfer pack for effluent.

Exsanguination

Open shunt post CPB - arterial canula in situ	Shunt lines remain clamped to HLM stripdown. Ammend checklist
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Circuit

Reversed vent and sump sucker tubing in pumphead	Add to essentials and pre-use check "Sucker Boot in/out correct" in set up section of checklist and Sucker Boot Direction OK in OR check section
Reversed tubing connections at reservoir and oxygenatorhead to Biopump	Match tubing color coding to respctive device port cap colour
Tubing disconnection (Cobe SMART tubing)	<ul style="list-style-type: none"> •Checklist item to ensure tubing over 3 barbs of port and tied - Tie band even the low pressure connections. •Request calibrated tie gun from tubing pack supplier and recalibrate 6 monthy. •Confirm with supplier appropriate size of cable ties

CATEGORY

PREVENTIVE PLAN

Drug / Medication

Date expired additive to cardioplegia solution	add expiry dates to 2 person checklist
Antibiotic added to prime pre OR before antibiotic allergy noted	Delay drug adds to prime until OR time-out completed
Open cardioplegia delivery purge line	Amend checklist
Prime error - hyperglycemia	Amend checklist

Gas Supply

Electronic gas blender failure	Backup gas blender or O2 bottle with regulated flow meter immediately available
Unseated vaporiser	Amend checklist

HLM

Stockert S3 pump failure due to unseated fuse	<ul style="list-style-type: none"> •Include fuse seat check on checklist for HLM with fuses •Replace Fuses with circuit breakers on EP Pack for older model Stockert S3 HLMs
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Hypoperfusion

secondary to clamp left on arterial line from HLM with an open shunt	Make connection of arterial line to cannula by rolling pump rather than stirriontic connection and syringe aspiration
Incorrect Flow factor on Stockert S5	Amend checklist

Hypercapnia

During CPB with CO2 Field flooding	Use capnography on Oxygenator outlet
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CATEGORY**PREVENTIVE PLAN****Power**

Failure of battery on Arrow IABP - ambulance transport	<ul style="list-style-type: none">•Dual battery upgrade available battery for extended life.•Do not use generic batteries for replacements
Failure of battery on Biomedicus 550	<ul style="list-style-type: none">•The team alerted that the model 550 can reach a critically low battery charge state that will not be reversed by its recharging circuits.• A post use check (laminated and attached to the pump) added to perform an additional battery test following use

Temperature

Reversed arterial and venous probes	Colour code temperature probes
Heater Cooler unit water flow failure	Install water flow indicators into HCU water lines Manufacturer: Proteus Industries Inc. Model: 901SCP2 (might be 9015CP2)