

# 2025 Electrical-electronic (Pump Servo-regulation)

Permission to print: Yes

Category Electrical / electronic

Category 2 Pump Servoregulation

Severity Good Catch Near Miss

Duration of incident: minutes

**Description:** I was priming the LivaNova Essenz heart lung machine and encountered a known nuisance error called "CPL-C pump issue" (possibly related to slow crystalloid pump movement during 4:1 cardioplegia pressure limit check). A colleague suggested I restart the machine to clear the error, in line with the vendor's recommendation. This caused a show-stopping "CPL-B config issue" error in which the cardioplegia blood pump became unusable (seemingly free and unconfigured). I warned the surgeon and sought assistance to troubleshoot/work around the error. Eventually, another restart resolved the "CPL-B config issue" error and replaced it with a "Vent 1 config issue" error (the vent pump was now free and unconfigured), which was abnormal but not a showstopper. The only effect on the patient was a minimal delay in initiating cardiopulmonary bypass, but this could create a dangerous situation if the "CPL-B config issue" happened overnight under greater clinical urgency/with less assistance available. The cockpit of the machine involved (HLM2) today shows Software HLM.1.5.

Our logbook does not reflect previous instances of CPL-C pump issue on HLM2. The full message is as shown in the attached photo.

The CPL-B config issue has happened at least once before and was resolved by a restart. (My instance of that problem was also resolved by a restart but led to the Vent 1 pump losing its configuration!)

Another HLM possibly on an earlier software version, had previously reported what I suspect was the same underlying problem as CPL-C pump issue but under the label CPL-C pump defective: Replace CPL Cryst. Pump.

**GOOD CATCH - what went well** Happened during hours with skilled assistance available, in an elective case, before initiation of bypass. Able to convert to non-showstopping problem.

**What could we do better** I had been reluctant to restart the machine solely to dismiss a nuisance error. The nuisance error had previously been reported to vendor and not fully resolved.

**Preventive actions** Vendor is actively investigating. Readiness to have a second perfusionist always available.

Type of incident: Equipment

Manufacturer advise Yes

Timing of incident: Post Prime PreCannulation

Discussed with team: Yes

Hospital incident filed Yes

Ext Authority Advised No

Patient outcome variance Nil

