MVE Tech Tips

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XLC TECHNICAL SERVICE TRAINING OVERVIEW

XLC/MVE freezer technical training is scheduled for June 16th and 17th at our Canton, Georgia facility.

The following is the training overview agenda of what subjects will be covered. We plan on conducting a more detailed hands-on session for the set-up and running of the freezer programs on the Kryo 750 and 560 control rate freezers.

- **FILLING SYSTEM**
  - Liquid Cylinder - LN2 Supply
  - Transfer Hose
  - Tee Assembly
  - Fill Port
  - Full Auto
  - Plumbing S/A
- **SENSING CIRCUIT**
  - Annular Tubes
  - Purge Port
  - Purge Line S/A
- **OPTIONS**
  - Gas By-Pass Cabinet
  - Battery Backup Cabinet
  - Gas By-Pass Stand Alone
  - Battery Backup Stand Alone
- **CONTROL PANEL**
  - Front Panel
  - Rear Panel
- **WARRANTY ISSUES**
  - Vacuum
  - Electronics/Parts
- **ADJUSTING LEVELS AND MEASUREMENTS**
  - Calibrating Temperature and Liquid Level
  - Maintenance Menu
- **TROUBLE SHOOTING**
  - Locate & Identify Problem Areas
- **PREVENTIVE MAINTENANCE CHECKS**
  - Procedure List

- **SANITIZING & DECONTAMINATING**
  - Aluminum
  - Stainless

- **FIRST TIME SET-UP**
  - IQ-OQ

- **ACCESSORIES**
  - OFAF
  - Converter kit
  - Daisy chain kit
  - Downloading TEC-2000 Using HyperTerminal Connection

- **VARIOUS TYPES OF AUTOMATIC SYSTEMS**
  - Models Still in Service Back to A-4500
  - Various Solenoid Valves Still in the Field
  - Thermocouple Sensor Assembly
    a) Gordinier Electronics
    b) Bio Series
  - Differential Pressure Transducers
    c) Lakeshore
    d) MDC

- **HEAT LEAKS AND HEAT TRANSFER WITHIN THE FREEZER**
  - Racks
  - Filling parameters
  - Supply

- **CAUSES OF LIQUID USAGE INCREASE**

- **DETERMINING DAILY LOSS RATES IN THE FIELD**

- **CHANGING OUT LID LINERS IN THE FIELD**

- **CONTROL RATE FREEZERS**
  - Kryo 750+
  - Kryo 560

- **TANK SWITCHER**

Chart is also planning a Sales Training Seminar in July. This will be held in Bloomington, Minnesota on July 16 and 17. Please send your registration for either of the training sessions to Anita Conrade at our Burnsville facility ASAP.
Ph/952-882-5004 . Fx/952-882-5172 . email: anita.conrade@chart-ind.com

SANITIZING AND DECONTAMINATION OF RETURNING UNITS

The following notice is to be viewed as a very important reminder of the protocol for returning units for rehab.

DECONTAMINATION OF RETURNING UNITS
XLC STAINLESS STEEL UNITS

Date:
To:
Attn:
Fax Number:
E-Mail
From:
Fax Number: *800-232-9683*
NO. OF PAGES:

RMA will issued upon receipt of this signed document RMA #XXXXXX
MODEL sn #

Preparing the Shipment:
When returning units to Chart/MVE for repair, rehab or testing the following decontamination procedure must be performed prior to shipping your unit to Chart/MVE:

1. Clean the inside and outside surfaces of the unit with a solution equivalent to at least 10% chlorine and 90% water (*this can be sprayed or flushed)* Rinse inner with water and dry. **(Questions-please contact Jim Bachman, Technical Service @ 952 882 6115)**
2. Notify Chart/MVE by faxing this signed form confirming the above procedure has been performed. **Fax correspondence attn: Customer Service @ 800-232-9683**. Attach a copy of the signed form to each unit being returned.

The internal and exterior of this unit was cleaned with a solution that contained an approved germicide or equivalent in accordance with D.O.T. and C.D.C. regulations.

Model: ___ _____ Serial#_____

Signed by:_____ Date:_____

Please return unit to:
CHART INDUSTRIES, INC.

RMA # 623995
1300 Airport Drive
Ball Ground GA 30107
770-479-6531

CHART/MVE **will** refuse delivery if proof of decontamination is not attached to each unit or is not already on file at CHART. Failure to comply with this procedure will result in refusal and immediate return of your unit.
It is imperative that customers make absolutely sure that there are no vials, straws or blood bags left in the freezers after they decontaminate the units before Canton gets them back. There are freezers that come back and still have vials in them; we will not work on a unit that still has a sample in it. Canton will call you back to have the customer make arrangements for the pickup of that unit to be cleaned out properly at their cost. Also, if a unit comes back and does not have the decontamination paperwork on it, (see above form), the unit will not be received into the Canton facility. We are finding vials under the turn trays on the HE units and also under the vapor platforms on regular units. Please tell customers to make certain all foreign material is removed from the freezers before returning.

UPGRADED TOOL BOX

As new freezer designs are developed, the need to periodically add new tools to our repair toolbox arises. The toolbox still carries all of the previously offered tools, but we have also added a special wrench for removing and installing the lid lock assembly on MVE 600 and 1400s. The part number for this new toolbox is 11509460 and price is $90.00.

LEAKING RELIEF VALVES

On several occasions I have heard of leaking relief valves on freezers that have the revised dual valve plumbing assembly. Testing at the factory indicates that these are not defective relief valves. The likely cause is that the brass elbow that the RV connects to in the new plumbing assembly does not sufficiently insulate the valve from the cold plumbing components. When the valve gets sufficiently cold, the seal material becomes less compliant and the spring shrinks. This can result in premature opening of the valve during filling. Once it begins to leak LN2, it may not warm sufficiently when filling stops, to allow the RV to reseal.

To address this issue in production, we are replacing the brass elbow with a stainless steel bent tube that has threaded fittings soldered to the ends. Space limitations prevented using the old existing "pigtail" tube assembly. However, testing has shown that this new tube will prevent the RV from getting cold enough to open prematurely. The part number for the new tube assembly is 11898021.

When premature leaking occurs in the field on HE/Eterne/Stock Series/230 freezers with the new dual valve plumbing assembly, the brass elbow that connects the RV to the main plumbing assembly should be replaced with this new tube assembly. If the RV has not had LN2 flowing through it for an extended period of time, such that the seat material has cracked, it would not be necessary to replace the RV.

To determine whether there is permanent damage to the RV, shut off the liquid supply at the liquid cylinder or pipeline. Allow the RV to warm to room temperature. Open the valve at the supply. If the valve does not begin leaking again, the valve has no permanent damage and will not need to be replaced. This is assuming that the supply pressure does not exceed 50psi +/-10%.

Again, assuming that the supply pressure is not too high, if the valve is warm and still prematurely relieving when the repair person arrives on site, the indication is that the valve seat is damaged and the RV will need to be replaced.

CRYOSYSTEM 750

The specifications for the CryoSystem 750 are as follows:

LN2 Capacity:	47.4 Liters
Static Evaporation Rate:	.39 Liters/Day
Normal Working Days:	76 Days
Neck Opening:	5 Inches / 127 mm
O.A.H.:	26.5 Inches / 673 mm
O.D.:	20 Inches / 508 mm
Number of 5-2 Mini-Racks:	6
Number of 2" Mini-Boxes:	30
Number of 1.2 & 2.0 ml Vials:	750
Weight Empty:	421 Lbs / 19 Kg.
Weight Full:	120.41 Lbs / 54.6 Kg

QUESTIONS AND ANSWERS

Q. *We have just received a call from a customer who was doing the installation of an 1830 Eterne and encountered a problem with the controller not alarming. They said that everything was working fine with the first fill, the appropriate alarms were sounding. However, later the same day they attempted to do a 'High Temp Alarm Test' and the alarm would not sound after it reached temperature (-160 C). They also said that the LED did not light up. They attempted to reboot the system by switching it off and then back on with the same result. They also disconnected Probe B and the system would sound an alarm. They have made sure that the Audible Alarm hasn't been placed in the off position. Any ideas as to what to do?*

A. Check to see if the high temperature alarm has been disabled. It is possible that they accidentally disabled it during the course of setting it up. With the desired sensor displayed, press and hold the high temperature alarm key. After 5-10 seconds, it will show 'On/Off' on the bottom line of the display. There will be an arrow pointing to one of them. If the arrow is pointing to 'Off', toggle it to 'On' with the down arrow key, then press enter. I suspect that they will find that it is turned off, or disabled.

Q. *I was operating a unit at the University today and sometimes the unit displayed temperature in MM instead of C. Then it would not allow me to enter any numbers. After pressing the manual fill stop, the automatic fill start would not function. Is it something I am doing incorrectly?*

A. It sounds like the front display panel should be replaced, p/n 10713434. If the control is working correctly after pressing fill stop, there is a 30-minute delay before it will automatically fill again, regardless of what the level is. This may be the case of the apparent failure of the automatic fill start to work. Also, pressing and holding the fill stop key for 30 seconds brings up a display that allows automatic filling to be disabled. Since the display appears to be malfunctioning, it is possible that the display malfunction has caused the autofill to be accidentally disabled.

BIO-MEDICAL CUSTOMER AND TECHNICAL SERVICE

Customer Service 888 683-2796 toll free / 952 882-5000 Burnsville receptionist
800 232-9683 fax
Technical Service 952 641-6115 direct line
866 819-5897 toll free
612 382-6678 cell
800 232-9683 fax

For copies of past Tech Tips or for more information on maintaining your nitrogen storage dewars, please contact Jim Bachman at (952) 641-6115, Fax (800) 232-9683.