

UFS Corporation

Getting Started Guide
UF Monitor System - Supplement



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Getting Started Guide

Welcome to UFS Corporation

This manual is intended to be an overview of a typical Standard Cell Circulation System (UF Monitor System) and how it works. It is presented to the owners, system designers, installers, and members of the paint-finishing department where the equipment is to be used. It is important that you keep this documentation in an easily accessible place for future reference.

Product Support and Customer Service

United States and Canada:

You may call or fax our office during normal business hours (7:30 a.m. - 4:30 p.m., CST). An automated answering service will provide emergency contact information during the message.

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Supplement

This Manual is meant to be a supplement to UFS TruFlux Getting Started Guide PN 994301 that was provided with your TruFlux UF Machine. Please read both manuals in their entirety before you proceed to install any equipment.

The normal control panel that is included with the TruFlux UF Machine CIP system has push buttons, lamps, and temperature controller that assist the end-user with the operation and control of using the CIP pump, cooling circuit, etc.

The UF System Monitor Panel is capable of doing the same as the normal panel too. However since it contains a micro PLC, its expansion capabilities are greatly expanded and offer a whole host of possibilities for monitoring as well as control of the UF machine.

Introduction

This manual provides the user with general information needed to install, operate, and maintain the UF Monitor System. For experienced end users you may refer to the Quick Start Guide. The Description and Function and Installation Sections describe the function of the UF Monitor System and the various system input requirements. Installation and operation of the UF Monitor System are discussed in the following sections. Finally, the remaining sections describe the servicing of the UF Monitor System. It is recommended that the user also carefully review the TruFlux UF Machine "Getting Started Manual" (if so provided) or the manual for your UF machine, as well as the major component manuals that are supplied with each product that relates to your UF system.

While every UF Monitor System contains the same basic components and embodies a similar design, the physical dimensions and component selection depend upon the user's paint system. The UF Monitor System will monitor the input and outputs of the UF system and create data

records from which trend charts and histograms can be created. The user will find at the end of this manual drawings and specifications that apply to their particular system.

Description and Function

The function of the UF Monitor System is to monitor the process variables of the paint. Specifically these include permeate flow rates and permeate turbidity.

Permeate flow rates are important as they predict the amount of rinse fluid that will be available. Permeate rates are highest for new UF Elements and decay will age and operating conditions. Tracking, logging, and forecasting permeate rates are important to forward planning.

Permeate turbidity is a measure of the opacity of the fluid. Usually the turbidity of the permeate is very low. If there is leak path for paint to enter the permeate (i.e. through the UF membrane, around an o-ring, etc) the turbidity will increase greatly.

It does this by using an analog flow meter for each UF module and another analog sensor for turbidity. Data is shown on a local remote monitor and can be sent to your PC to show real time information (via RS232 using Remote Access software from Unitronics).

Refer to the UF Monitor System Flow Diagram (refer to appendix for drawing 221063).

The UF Monitor System is meant to operate 24/7 in tandem with the UF machine.

Included in the Shipment

Included in the shipment are the following items:

- Control Panel
- Turbidity Sensor in PVC Tee sub-assembly
- Paddle wheel permeate flow sensor labeled DA (on permeate piping leg of Module A)
- Paddle wheel permeate flow sensor labeled DB (on permeate piping leg of Module B)
- Panel wiring diagram (inside panel)
- Match mark drawing on units
- Certification & Inspection Report for the system (inside Panel)
- RS232 Cable (RJ 11 to DB9 serial connector)
- CDrom with PLC programs
- CDrom from Unitronics
- UF Monitor System Panel Getting Started Guide included on a CDROM

Unpacking Instructions

Use a Phillips head screw driver to remove any wood screws or hold down clamps. Do not use a crow bar to pry wood pieces apart. The first step is to remove the cellophane from the unit. Step 2 is to unscrew the top wood cross members and set aside. Cut the banding that secures the tank. Next is to remove any loose items from inside the tank and set aside. Next remove the wood uprights at each corner. The unit can now be gently removed from its wooden skid. Remove any packaging that is protecting open pipes, or pressure gages (if ordered), etc. Use

the match marks drawing placed on the tank cover to re-assemble as required. Lastly review all the steps and make sure the unit is fully unpacked and ready for the connection of services.

System Requirements

The necessary requirements that enable the UF Monitor System to function properly are: electrical power, proper electrical ground, and suitable location. In some cases a customer supplied lock or customer-supplied disconnect switch may be required based upon the local electrical code or your company's safety policy.

Electrical

An electrical line of the proper voltage and number of phases should be brought to the UF Monitor System. The user must supply the appropriate disconnect switch (if required) at a location of their choosing and in compliance with national & local electrical codes.

Installation

This section details the sequence of installation steps to be taken to ensure a good working installation. The installation sequence consists of setting the Control Panel, re-assembly of any sensors, supplied loose, re-wiring of those loose sensors.

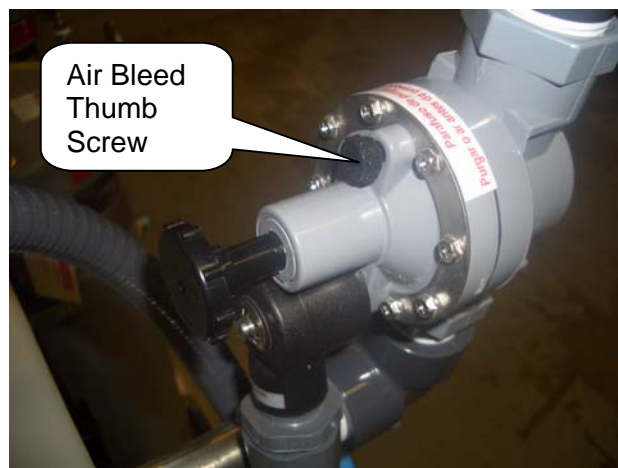
Refer to both the Match mark drawing of your product, panel wiring drawing, and other product drawing(s) located in the Appendix as you read on below.

Permeate Piping Installation

Do not complete connection of the permeate piping before the Turbidity Sensor Assembly is installed first. See next section for more details.

Chilled Water Solenoid Valve

There is a serpentine cooling coil in the Clean Tank. Chilled water (or maybe city water in some cases) can be used to cool the cleaning fluid and prolong the cleaning cycle. Note the valve has an air bleed valve. After the chilled water or city water has been turned, you must crack this small thumb wheel to open this air bleed valve (the solenoid needs to be turned OFF) and release any trapped air before the valve is used the first time. Repeat this when every there has an interruption in the flow of water to this valve. You may use a screwdriver to fully tighten. See picture below.



Electrical Installation

Think and act in a safe manner. Always disconnect power and use a lockout before you work on the E-coat system or any of the related sub systems. Observe any confined space conditions. Use the appropriate safety equipment and clothing for the task.

Install per local and national electrical/safety codes.

Before you proceed below you should have completed the 'Support E-coat Paint & Permeate Pipe' section of the TruFlux UF Machine Getting Started Manual (Bulletin 994301) on the top portion of page 25.

Open up the TruFlux UF Machine Getting Started Guide (Bulletin 994301) and turn to page 25. See the sections on CIP Panel Completion & CIP Motor Connection. Then proceed below.

1. Install an appropriate lockout panel (supplied by the customer) ahead of the Panel. This will be used to turn power (and use a padlock as required by the plant's safety code) off to the Panel when serving is done.
2. Bring the appropriate 3 phase voltage into the Panel at the upper right hand side through conduit. Attach the three line wires to L1, L2, and L3. Attach the ground to the enclosure ground point. **Do Not Attempt To Bump The Motor Until Water Has Been Added to the Pump Volute.** Failure to do so will void the warranty.
3. There is an analog flow sensor for each UF Module labeled FMA and FMB. Bring these cables into the Panel through the leftmost watertight conduit fitting on the bottom side of the Panel. Do not tighten the watertight fitting yet. The wires should be terminated as shown below

	Permeate Flowmeter	
	FMA	FMB
Black	AI0/Com	AI1/Com
Red	+ 24 V DC	+ 24 V DC
White	AI0/V	AI1/V

4. Loosen the Turbidity Sensor and cable from its shipping position restraint. The PVC sub-assembly is to be installed on the discharge permeate line at the top of the unit on the side opposite the CIP system. Look for the Match marks to assist. Assemble using the union nut making sure the o-ring is in place. Make sure there is at least 50 cm of cable. Use some plastic tie wraps to loop the excess cable and secure as required. The Turbidity Sensor should be installed so that it's completely covered in permeate at all times. It will be necessary to remove the sensor and clean its optics if there is ever significant paint solids in the permeate.

You are finished with the special features of the UF Monitor System Panel and can now return to the TruFlux UF Machine Getting Started Guide (Bulletin 994301) page 25 'Make Paint Drain Connections'.

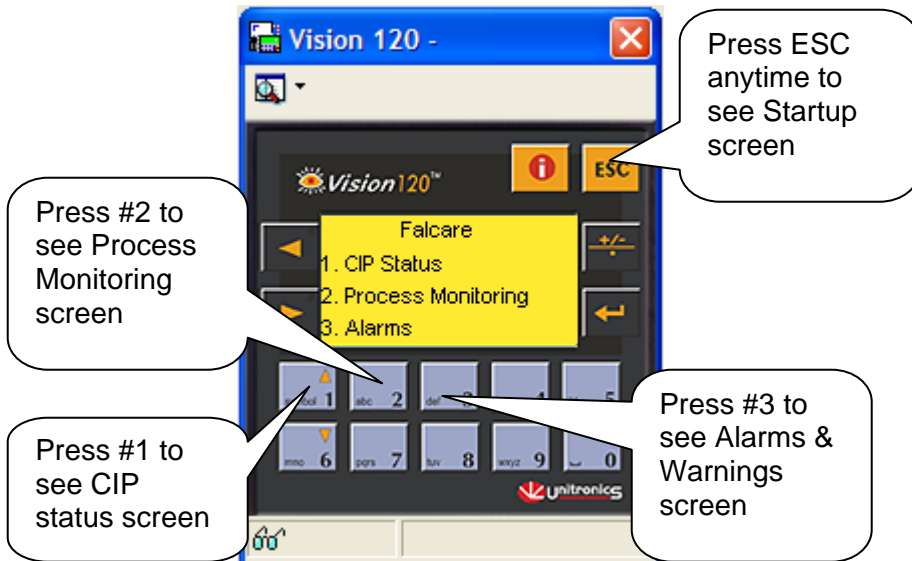
Installation Checklist

Start-up and commissioning is comprised of reviewing the installation, checkout, and initialization of all equipment and components. Use the check boxes by each action item as a guideline and only proceed in the sequence shown below.

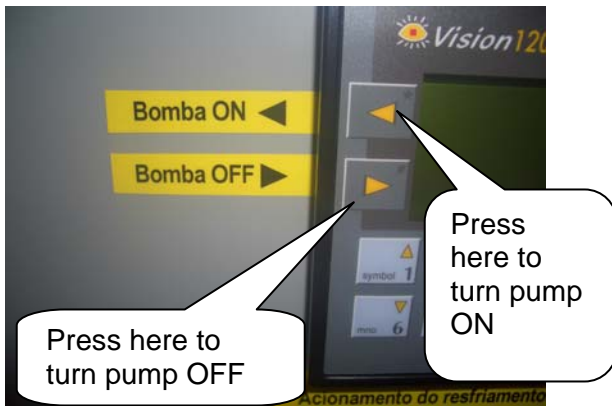
UF Monitor System Check-Out Checklist

Once Step 2 from page 26 of Bulletin 994301 has been completed, skip Step 3 and proceed below

- Press the white 'Trip Bar' on the motor Overload controller and it should go away from view. Then press the Overload reset button and the white trip bar should come back into view. UFS does not recommend the use the automatic reset feature.
- Press Green 'Power' button. Lamp should illuminate and the plc display should power up and go to the start up screen shown below:



- Navigation amongst the PLC screens: pressing the ESC keypad will always returns back to this screen shown above. Press the keypad number 1 and the CIP Status Screen appears. Press keypad number 2 and Process Monitoring screen appears. Finally press keypad number 3 and it shows the alarms and warnings screen.
- Compare all electrical, process piping, and ground connections to and from the UF Monitor System with the general arrangement shown on the Product drawing, match mark drawing, flow schematic, and electrical wiring diagrams for accuracy and completeness.
- Jump to Bulletin 994301 page 26 Step 4. Note to Start the CIP pump you must press the 'Less Than' symbol on the display, as below -



- Skip Step 5 and read on here below in its place. Place a separate thermometer so it touches the fluid in the clean tank. We want to insure the temperature controller will turn on the cooling at ~38 Deg C and then turn off the pump when the temperature reaches ~49 Deg C. Press keypad number 1 so you see the plc screen as shown below -

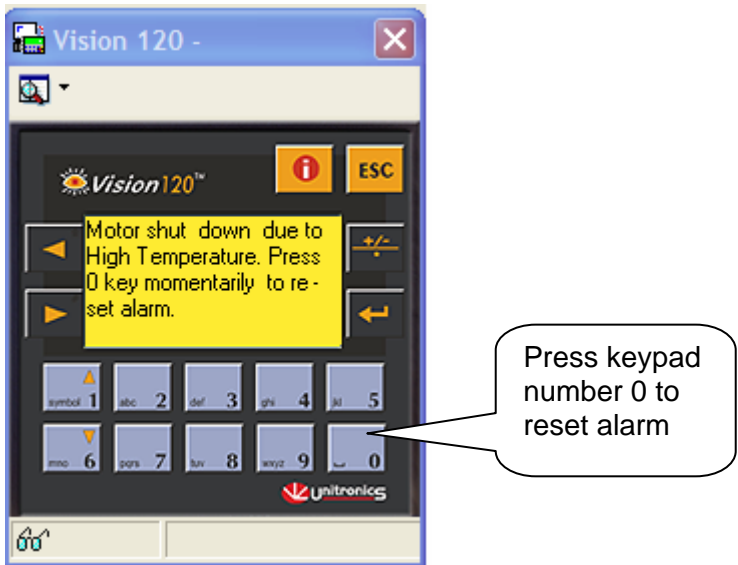


The pump will inject heat into the DI water that is circulating through the piping. The time required can be reduced by only filling the CIP tank to above the low tank level float switch. Add enough to cover the low level float by 6 cm. Close valves V6-B & V4-B for Module B so that only Module A is allowed to fill up with water. It may take an hour or so to heat the fluid up. Another trick is to turn the cooling water OFF once you have satisfied yourself that it was turned on properly and the cooling water solenoid valve is OK. Make sure to turn the cooling water back ON after this test is completed.

- Record data when cooling is initiated (~38 Deg C)
 Separate thermometer reading when the snowflake appeared _____ Deg C
 PLC display temperature (lower right corner) when snowflake appeared _____ Deg C
 Cooling water solenoid valve turned on: Yes or No (circle one)



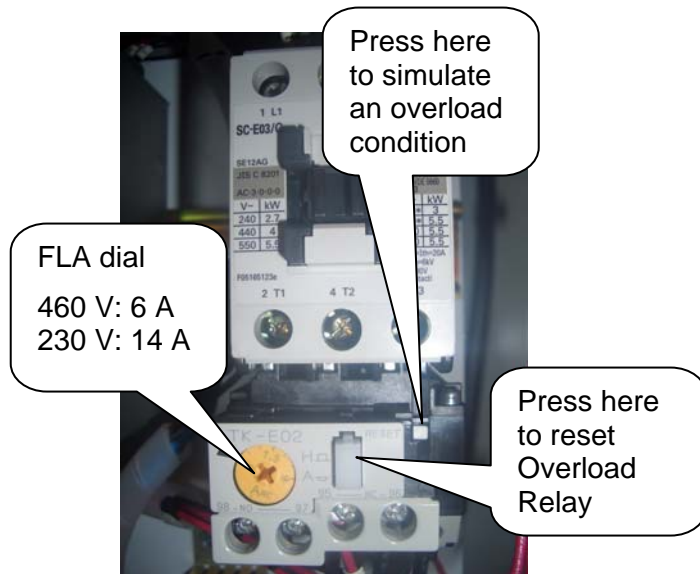
- Record data when the pump was shut down for high temperature (~49 Deg C)
 Separate thermometer reading when the pump turned OFF _____ Deg C
 PLC display temperature (lower right corner) when pump turned OFF _____ Deg C
 Pump turned OFF : Yes or No (circle one)



The purpose here is to confirm the RTD (temperature sensor) is reading about the same as a calibrated separate thermometer.

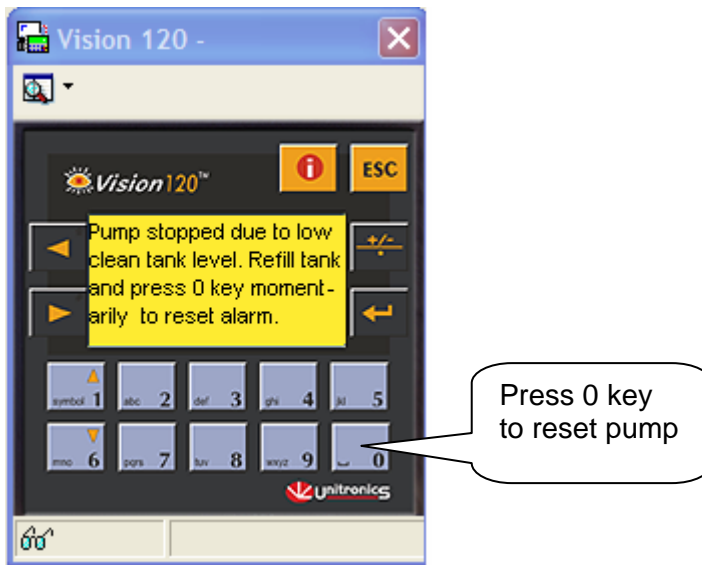
If temperature set point when cooling is turned has t be changed then the PLC ladder program will have to be altered. Please call UFS for assistance.

- For Step 6, see picture below of where to trip the Overload. Once it has been tripped, press the reset button on the Overload to restore the pump.



Note about overload condition. If the motor stops and there is no warning on the PLC screen, then check the motor overload controller to see if the motor stopped due to an overload condition. If yes, then reset the overload controller, but before you restart the pump investigate the reason for the overload and correct as required.

- As you do Step #7 (ref Bulletin #994301), see below for the screen that appears when the CIP clean tank level goes 'Low'. Press 0 on the keypad, will the pump restart?

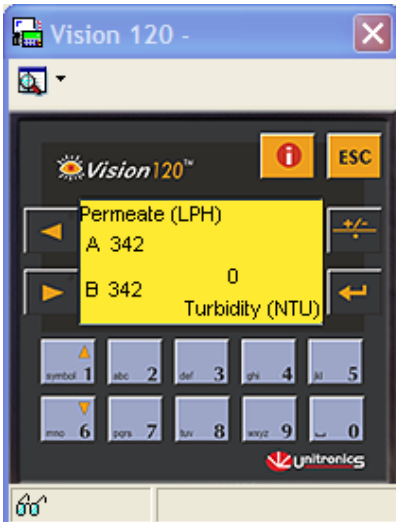


- This completes the UF Monitor System Check out.
- Note, Keypad keys: 4, 5, 6, 7, 8, and 9 do not have any functionality.

System Start-up Checklist

- When the UF Machine is brought on line and begins to produce permeate, you can press the green Power button, allows the PLC to start up and then Press Keypad

number 2 to monitor: permeate flow rates & turbidity. As shown below



You may see permeate flow readings as high as 1135 l/h (5 gpm), or more, from each UF Module when they are new. The standard permeate flow rate for a 7640 type UF Element is 567 l/h (2.5 gpm).

- Next you can press keypad number 3 to see if there are any warnings. A screen shot can be seen below.



In the screen shot above there are 3 warnings: permeate flow from Module A is low; permeate flow from Module B is low; and there is high turbidity. The factory set points are: permeate flow = 340 l/h (1.5 gpm) and turbidity = 100 NTU. Note the permeate flow sensors have very good linearity between 454 l/h (2 gpm) and 1817 l/h (8 gpm). Below 454 l/h (2 gpm) the slope of the linearity curve is less steep and so readings will not be as accurate as above 454 l/h. In most cases once the UF Element has fallen below 454 l/h (2 gpm) it has suffered from significant wear and tear and should be replaced shortly anyways.

Process Parameters Operation

PLC Display

This is the Startup Screen when the PLC is powered up. It is the Main Menu. The numbers shown to the left are keypad strokes that will take you to either: CIP Status; Process Monitoring; or Alarms. Note - Alarms screen displays both System Critical Alarms (that are cause to stop the CIP pump) and also lower level warnings or notifications to the operator.

You can quickly return to the CIP Startup Screen by pressing the keypad with the '1' in the red circle (i.e like a home page).



Monitoring

The normal process monitoring will be the permeate flow rates for Module A & B and the turbidity of total permeate stream (i.e. Module A + Module B). You may access this by pressing Keypad number 2.

Warnings

Warnings are given for low permeate flow or high turbidity. These are not System Critical are not related to the operation of the CIP pump.

CIP Operation

The UF Monitor System Panel will also control the operation of the Clean In Place (CIP) components: pump, cooling system, and pump shutdown.

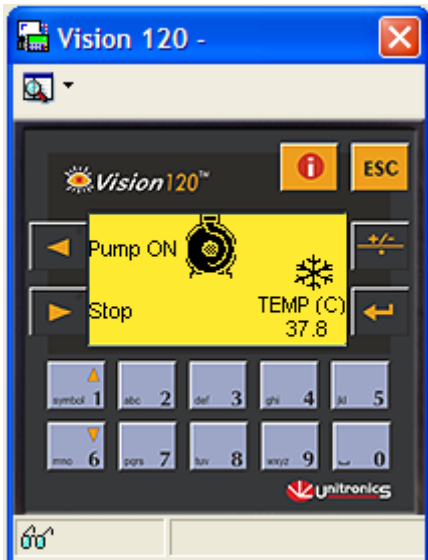
Normal

When you want to clean a UF Module (please refer to the Operator Checklist first and study which valves have to be turned, etc) you can start the pump by pressing the keypad 'less than' on the upper left hand side of the display, as shown below-



Cooling Mode

When the clean fluid reaches 38 Deg C, the solenoid valve for the cooling circuit should be turned on and the snowflake appears when keypad number 1 is pressed.



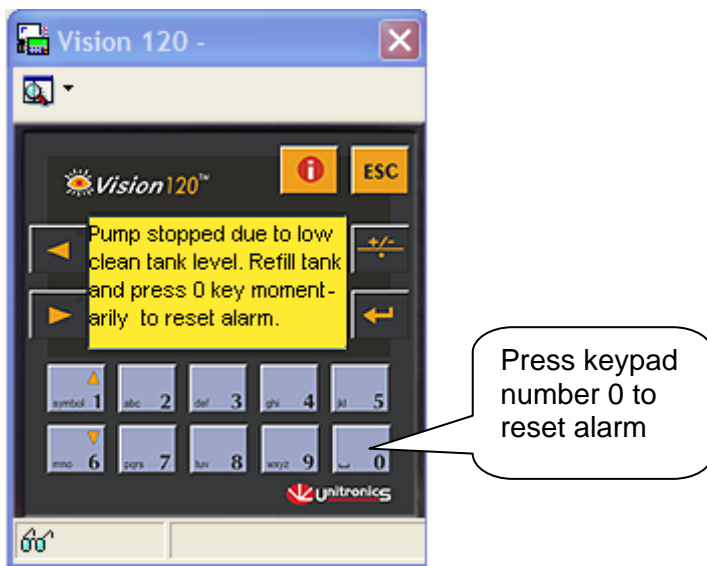
If you press keypad number 3, you will see a script 'Cooling On', this is not a warning, but more of a notification.



Shut Down Modes

Low Clean Tank Level

When the pump is on and the low level float switch is allowed to fall down then the pump will be stopped to avoid damage to the pump. If this happens then the screen below will be displayed:



The red audible alarm will also be on. In order to defeat the alarms you must press the keypad zero. The CIP Status screen will be displayed as below:



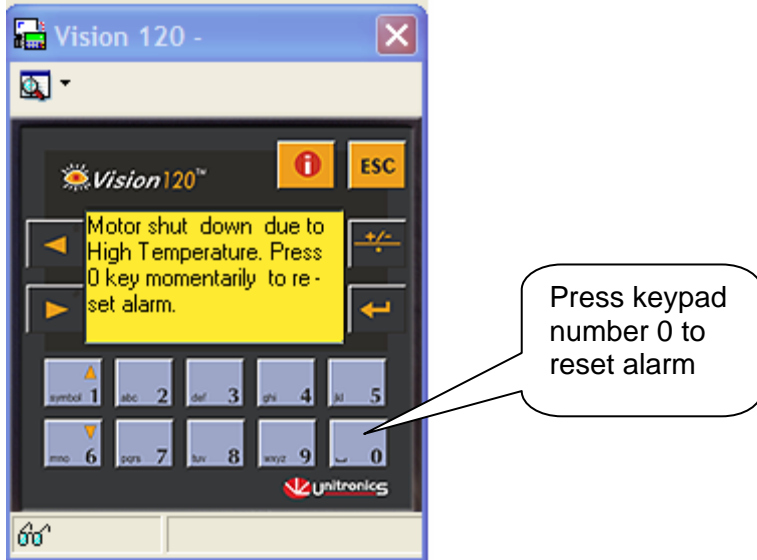
If the tank level is still low, then the following screen is shown:



The pump can not be started if the exclamation icon is shown. Press keypad number 3 to verify the problem. In this case it was low tank level, so this problem must be investigated and corrected. If the tank level was not low, then did some turbulence push the float down?

High Temperature

High temperature will damage the UF membrane (remember it is a thin plastic layer over a polymer substrate) and the PVC piping too. The cooling system is not designed to clean a UF module indefinitely, only for a little bit more. If the pump has been stopped for high temperature then the screen display will show:



The red audible alarm will also be on. In order to defeat the alarms you must press the keypad zero. The CIP Status screen will be displayed as below:

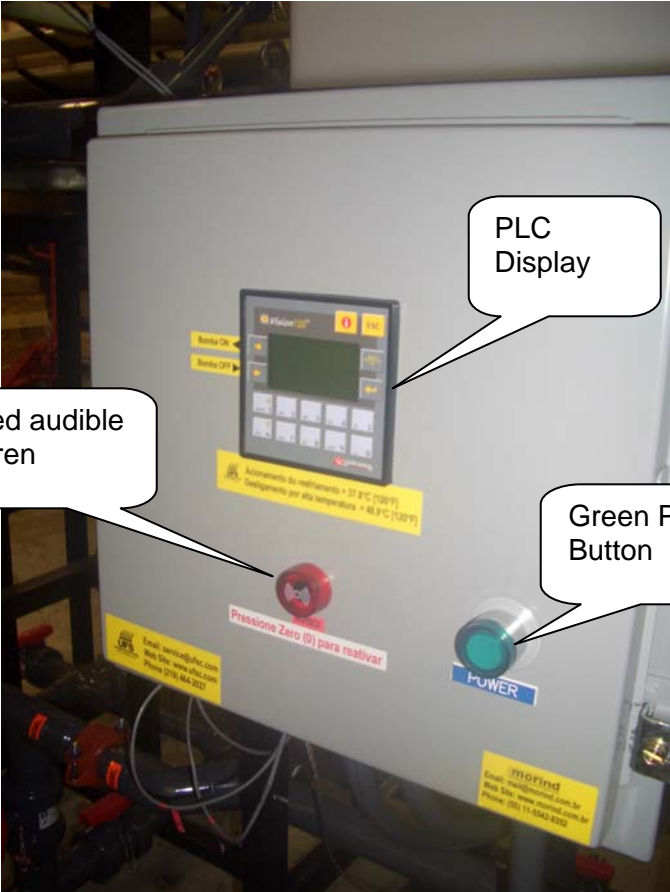


If the temperature is still above 48 Deg C, the pump can not be restarted. Drain some or all of the cleaning fluid and refill. Make sure the cooling water supply is normal.

Maintenance

Periodically inspections of the UF Monitor System should include checking the pump suction strainer to make sure it is clean, ensuring that there are no obstructions blocking either the supply or the return pipes to the electrolyte tank, and confirming that the conductivity set point is adjusted properly. For further information on normal operation and maintenance procedures, the user should read the component operation manuals supplied in the Appendix.

Front Panel

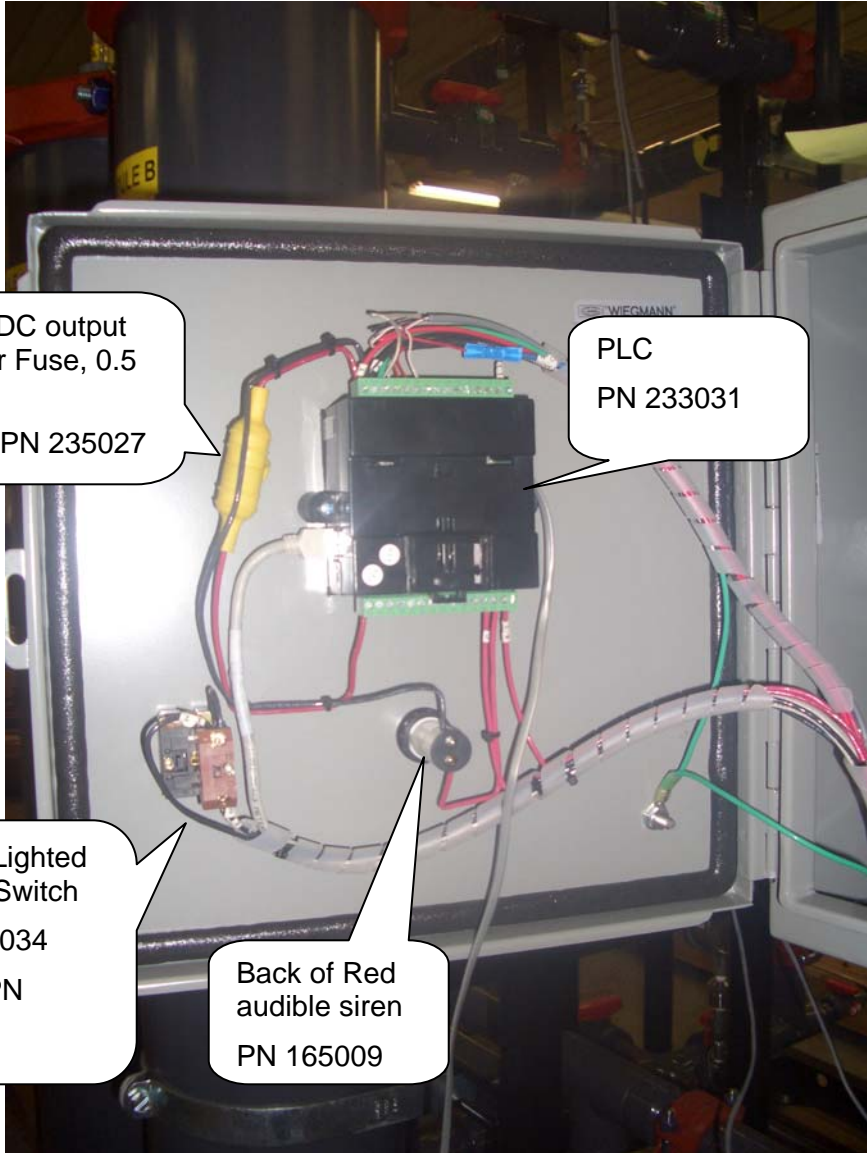


PLC Display

Red audible Siren

Green Power Button

Inside Front Panel



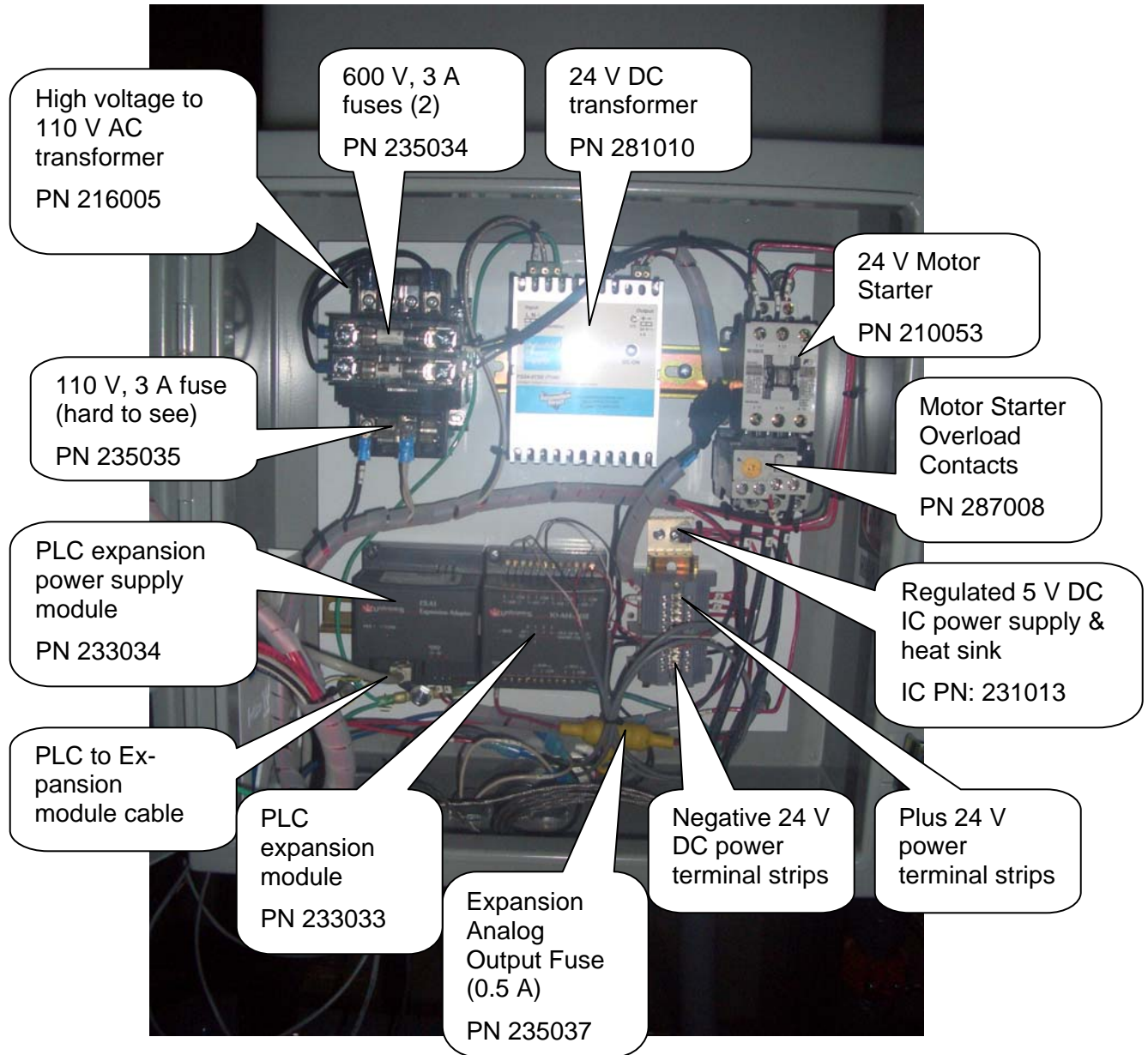
24 V DC output
power Fuse, 0.5
amps
Fuse PN 235027

PLC
PN 233031

Green Lighted
Power Switch
PN 280034
Lamp PN
165006

Back of Red
audible siren
PN 165009

Inside Back Panel



Sensors

RTD

This is a temperature sensor on the discharge of the CIP pump piping.



RTD
PN 295033

Permeate Flow Meter

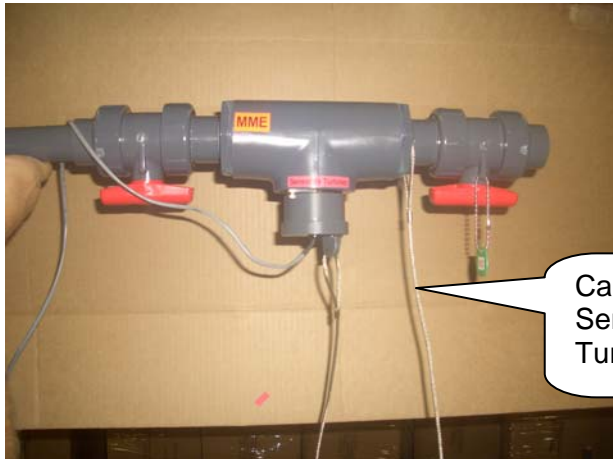
These are an analog output proportional to the speed of the paddle wheel rpm.



FMA & FMB
PN 295036

Turbidity Sensor

The sensor fits into a modified 2" PVC Tee.



Captive chain with
Service Plug &
Turbidity Sensor

Cleaning Turbidity Sensor

If there is a high turbidity warning and the matter that caused the high turbidity has been eliminated, but yet the turbidity level is higher than expected then its likely the optics of the

turbidity sensor have been obscured and they have to be cleaned. Follow the methodology below.

Service Plug

The first step is to remove the turbidity sensor and insert the temporary Service Plug. Remember to never restrict the flow of permeate as that could damage the UF Element membrane and void the warranty. Open V14 to allow permeate to enter the CIP tank (just while the Service Plug is being inserted). Close V11 and V32 to isolate the Turbidity sensor. Use a 9/64" hex key to tool to loosen the two machine screws taking care no to loose any washers or O-rings.



Use 9/64" hex key to remove the two machine screws. Gently remove the grey PVC cap on the sensor so that the machine screws can be backed out entirely. Once the screws are out replace the grey cap on the sensor. Grab the Service Plug and gently allow the sensor to dangle from the capture wire.

Make sure there is an O-ring on the Service Plug and insert into the opening and twist it to line up the two holes with the threaded insert locations. Re attached the machine screws and washers and make snug.



Machine Screw hardware:

Screw PN 320022

Washer PN 35022

Lock washer PN 350059

Now open Valves V32 and V11 and close V14 to reroute permeate while the sensor is cleaned.

Clean Turbidity Sensor

If the grey PVC top cap comes loose from the turbidity sensor, use a couple drops of super glue to tack the two pieces together.

The amber colored sensor cover (portion that comes into contact with the permeate is made from polyetherimide. Attempt to clean off any paint solids with DI water first and a soft cloth. Any scratches on the amber material near the optics will alter the sensors capabilities.



Turbidity sensor PN 295039
Note: does not include grey
PVC cap nor cable

Re-insertion of Turbidity Sensor

This is the reverse of the early process to remove the sensor. Open Valve V14 to allow permeate to enter the CIP tank. Close Valves V11 and V32. Remove the Service plug and retain all the hardware. Remove the grey PVC cap and insert the sensor (make sure the O-ring is in place) and twist so the holes line up. (the sensor will only fit in one orientation). Use the hardware and tighten with a 9/64" hex key until snug. Replace the grey PVC cap. Now open Valves V32 and V11 and close V14. Take a look at the turbidity reading on the display and confirm it is a reasonable figure.

Programming the PLC

UFS Default Settings

UFS made some decisions about how use the input and outputs and these are shown below.

I/O Jumper Settings

Jumper #	Jumper Position
JP11	A
JP2	A
JP7	B
JP13	A
JP1	B

All other jumpers are factory default.

Visilogic Software

Unitronics Vision 120 is the PLC and check their website for the latest version of VisiLogic software, which can be downloaded free of charge. Follow the link below to the download page.

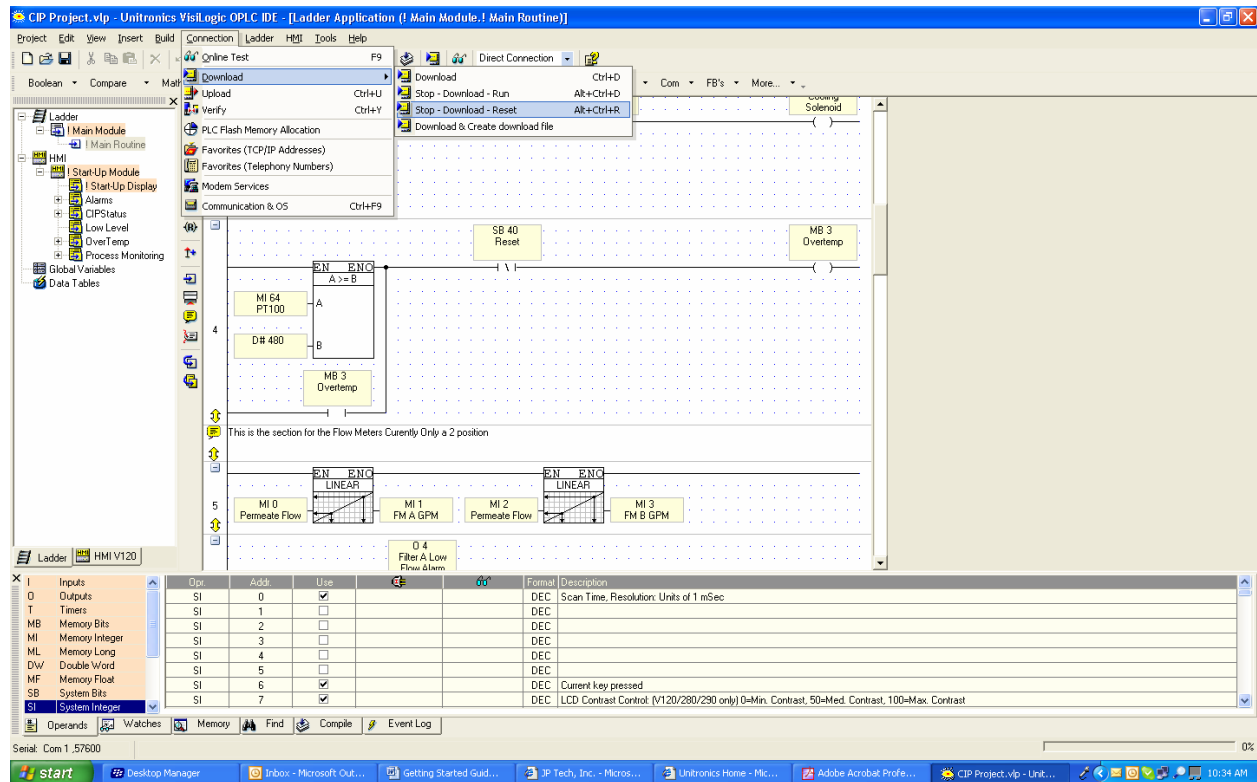
<http://www.unitronics.com/download.htm>

Download Default Ladder/HMI Programs

The default program can be downloaded again in the event for some reason that the Vision 120 lost its memory. Use a Windows XP laptop with a serial port. Included was a DB9 to RJ11 cable. Plug the DB9 into the back of the laptop and the RJ11 into the port #1 of the PLC. Open the

front door of the Panel (take care since the high voltage inside the panel will be exposed) to gain access to the back of the PLC. Keep the length of the RS232 communications cable no more than 3 meters long.

Start the VisiLogic program on the laptop and open the appropriate file that will be downloaded to the PLC. Once the file opens and it is the correct file, then it can be downloaded as shown below. Note find the CD rom labeled 'CIP Firmware' has the original VisiLogic program files.



RS232 Communications Cable

Reorder PN for the communication cable is UFS PN 233036.

VisiLogic Software Manuals and Examples

See the Appendix (under Manufacturer Manuals) for these reference and support materials.

Trouble Shooting

Please see the trouble shooting section in the Appendix

Spare Parts and Accessories

The Major Component List is shown in the Appendix. This list includes the user serviceable items in your UF Monitor System.

Safety

A safe work environment is of utmost importance to UFS Corporation; therefore, we recommend that our customers:

Design and implement a comprehensive health and safety program that includes training on working with electrical and chemical equipment.

Design and implement a lockout, tagout program for maintaining ED equipment.

Conduct on going training for ED employees that encompasses system installation, operation, and maintenance for UFS components and other ED equipment.

Post adequate warnings at the job site including labels and tags on energized circuits.

Use proper techniques to lift heavy objects and wear the appropriate clothes and safety equipment for the task at hand.

Upon request, MSDS sheets for appropriate chemicals are available from UFS Corporation.

Warranty

We warrant all equipment manufactured by UFSc to be free from defects in material and manufacture at the time of shipment for a period of one (1) year from the date of shipment. We will furnish without charge, but not install, replacements for such parts as we find to have been defective.

This warranty shall not apply to any equipment which has been subjected to misuse, neglect or accident, or has been altered or tampered with, or if corrective work has been done thereon without our specific written consent. No allowances will be made for such corrective work done without such consent. Improper maintenance, deterioration by chemical action, and wear, do not constitute defects.

Equipment manufactured by others, and included in our offering, is not warranted in any way by us but carries only the manufacturer's warranty, if any. All ME Electrodes (and or cathodes), of any material, are not warranted by us in any way since they by nature are sacrificial and will erode or corrode away with time.

All warranty claims must be submitted within ten (10) days of discovery of defects or shall be deemed waived. All parts returned for inspection must be sent prepaid. No representative of our company has any authority to waive, alter, vary or add to the terms hereof without prior approval in writing. The foregoing is in lieu of all other warranties (including that of merchantability), whether express or implied.

Liability

It is expressly understood that our liability, including that for breach of contract, negligence, strict liability in term, or otherwise for our products is limited to the furnishing of such replacement parts, and that UFSc will not be liable for any expense, injury, loss or damage, whether direct or consequential, including but not limited to loss of profits, production, increased cost of operation, or spoilage of material, arising in connection with the sale or use of, or inability to use, our equipment or products for any purpose, except as herein provided.

Appendix

UF Monitor System Trouble Shooting, Bulletin 990405

UF Monitor System Wiring Drawing, 221063

Field Re-Assembly Installation (using match mark) Guide

Manufacturer's Manuals

UFS Corporation

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Valparaiso, IN 46383-9704 USA
PH: 219-464-2027 FAX: 219-464-8646
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Service Reference

Topic: UF Monitor System Panel

This guide can help identify and solve problems with UF Machines equipped with the UF Monitor System from UFS. It is meant to be a supplement to the Getting Started Guide Bulletin 994310.

Problem	Possible Cause	Remedies
1. Motor will not start	<ul style="list-style-type: none">- 24 volt I/O fuse is blown (back of front panel door)- motor overload relay has tripped- clean fluid is temperature is > 49 deg C- clean tank level is low	<ul style="list-style-type: none">- replace fuse- locate and correct reason for overload trip, reset overload relay- wait till cooler or exchange cleaning fluid- reduce turbulence of clean return that is pushing float down- fix piping leak, cracked open valve, valve handle mis-installed, etc
2. Display shows no flow from UF Module	<ul style="list-style-type: none">- flow sensor wire has a loose wiring connection- flow sensor paddle wheel is blocked- UF Element permeate production is very low- PLC ladder program has malfunctioned- air bubbles are entrained in the permeate- flow sensor has failed	<ul style="list-style-type: none">- investigate & fix- remove blockage- replace UF Element- Hook up laptop and investigate- wait for the bubbles to pass- check for 0 – 10 V dc signal (between black & white wires), if no signal replace flow sensor
3. Display shows a very high turbidity level and the permeate is clear	<ul style="list-style-type: none">- turbidity sensor has a loose wiring connection- turbidity optics have been obscured by paint solids- air bubbles are entrained in the permeate- PLC ladder program has malfunctioned	<ul style="list-style-type: none">- investigate & fix- Remove sensor, clean, replace- wait for the air bubbles to pass- Hook up laptop and investigate
4. Display shows a Low tank level pump shut down notice	<ul style="list-style-type: none">- Low tank level- excessive tank turbulence	<ul style="list-style-type: none">- investigate and correct- redirect return line, slightly lower float switch, make baffle to protect
5. Display shows a high temperature pump shut down notice	<ul style="list-style-type: none">- no cooling water- cooling water solenoid not working- serpentine coil is blocked	<ul style="list-style-type: none">- fix chilled water supply- replace coil or entire valve- clean inside of serpentine coil with de scaling agent
6. Cooling circuit does not appear to be working	<ul style="list-style-type: none">- 24 V DC output fuse(s) are blown	

Problem	Possible Cause	Remedies
7. PLC buttons do not appear to be working	- PLC has been corrupted - PLC has locked up	- re-install PLC program - Shut off and turn back on after 30 seconds
8. Green Power button does not light up	- AC Transformer has failed - lamp has failed	- replace fuse(s), or replace entire unit - replace lamp
9. PLC display does not start up	- 24 V DC transformer has failed - 110 V input is not present	- replace unit - replace fuses, or entire high voltage transformer unit

For more information see the original manual that came with the equipment or call UFSc at the phone number shown above.