

# Chem-Trak Troubleshooting & Maintenance

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**CAUTION:** Wear protective clothing and eyewear when dispensing chemicals or other materials. Observe safety handling instructions (MSDS) of chemical mfrs.



**CAUTION:** To avoid severe or fatal shock, always disconnect main power when servicing the unit.



**CAUTION:** When installing any equipment, ensure that all national and local safety, electrical, and plumbing codes are met.

# POD ERROR

## HOST DISPLAY

**PUMP-01 POD ERROR!  
HIT RESET KEY TO RESUME**

(1) Press RESET on host.

**PRIME PUMPS?  
PRESS: YES OR NO**

(2) Replace empty chemical drum.  
(3) Press YES on host.

**PRIME PUMP 01  
PUSH PRIME TO START/STOP**

(4) Press PRIME on host.  
(5) Watch water level in vessel.  
(6) When nearly full, press PRIME again.

**PRIME PUMPS?  
PRESS: YES OR NO**

(7) Press NO on host.

**SEND PRODUCT TO WASHER  
PRESS ENTER           1**

(8) Select washer number to transfer to.  
(9) Press ENTER on host.

**TRANSFERRING-WASHER 1**

(10) System is ready and will continue automatically when transfer is complete.

## SLAVE DISPLAY

**VESSEL IS INOPERABLE !!  
PLEASE CHECK HOST**

**FORMULA 01  
ENTER LOAD WEIGHT 000LB**

# VESSEL OVERFLOW

## HOST DISPLAY

**VESSEL OVERFLOW !  
HIT RESET KEY TO RESUME**

(1) Press RESET on host.



**SEND PRODUCT TO WASHER  
PRESS ENTER 1**

(2) Select washer number to transfer to.  
(3) Press ENTER on host.



**EMPTYING VESSEL**

(4) The vessel will be emptied in preparation for transferring to the washer.

NOTE: If the vessel does not empty correctly, there may be a problem with the transfer pump, or blockage in the drain port or checkvalve on the bottom of the vessel.



**TRANSFERRING-WASHER 1**

(5) When the transfer is complete, the system is ready to resume normal operation and will continue automatically .

## SLAVE DISPLAY

**VESSEL IS INOPERABLE !!  
PLEASE CHECK HOST**

**FORMULA 01  
ENTER LOAD WEIGHT 000LB**

# VESSEL SENSOR ERROR

## HOST DISPLAY

**VESSEL SENSOR ERROR !  
HIT RESET KEY TO RESUME**

- (1) Press RESET on host.



**SEND PRODUCT TO WASHER  
PRESS ENTER 1**

- (2) Select washer number to transfer to.  
(3) Press ENTER on host.



**EMPTYING VESSEL**

- (4) The vessel will be emptied in preparation for transferring to the washer.

NOTE: If the vessel does not empty correctly, there may be a problem with the transfer pump, or blockage in the drain port or checkvalve on the bottom of the vessel.



**TRANSFERRING-WASHER 1**

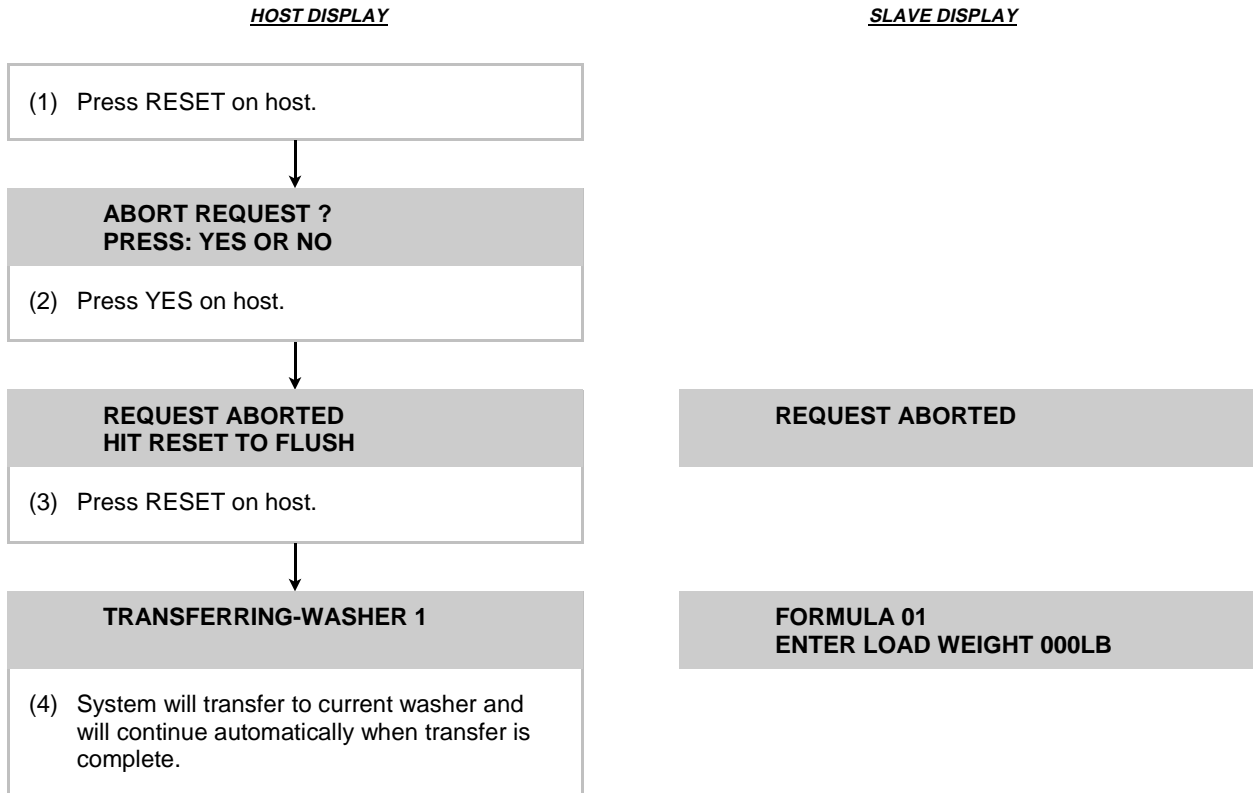
- (5) When the transfer is complete, the system is ready to resume normal operation and will continue automatically .

## SLAVE DISPLAY

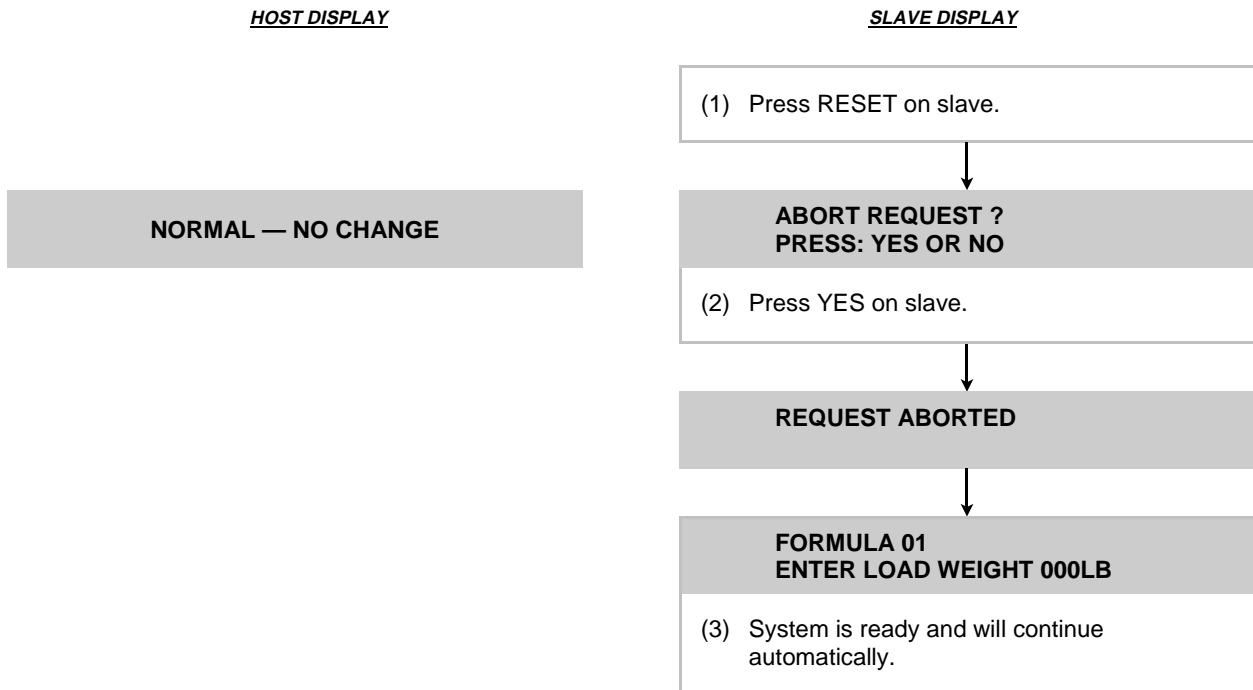
**VESSEL IS INOPERABLE !!  
PLEASE CHECK HOST**

**FORMULA 01  
ENTER LOAD WEIGHT 000LB**

## ABORT FROM HOST



## ABORT FROM SLAVE



## HOST COMMUNICATION ERROR

### HOST DISPLAY

**POB COMM ERROR ! X  
HIT RESET KEY TO RESUME**

- (1) Press RESET on host.
- (2) System will resume normal operation.
- (3) If the host continues to display this message, then it cannot communicate with one, or both, of the POB circuit boards in the pump unit. The "X" on the top line represents which POB (1 or 2) is not communicating.

NOTE: If the system shows a POB 2 error and there is only 1 POB, check the "number of POBs" setting and ensure its set to 1.

NOTE: If using an old board from an existing Knight dispenser, the chip version on the POB must be 2.0 to operate with Chem-Trak.

### SLAVE DISPLAY

**CIO/POB COMM ERROR!  
PLEASE CHECK HOST**

All slaves will display this message until the host communication problem is corrected.

## SLAVE COMMUNICATION ERROR

### HOST DISPLAY

**NORMAL — NO CHANGE**

### SLAVE DISPLAY

**LFP HAS BEEN SHUTDOWN  
CHECK HOST**

This message will appear on the slave for one of the following reasons.

- This particular slave LFP has been set to "disabled" at the host.
- This particular slave LFP is not communicating with the host. Check wiring connections and ID number of the LFP.

# LOW AIR

## HOST DISPLAY

### LOW AIR PRESSURE !! HIT RESET KEY TO RESUME

- (1) Re-connect air supply.
- (2) Press RESET on host.
- (3) If low air pressure occurs while the system is idle (not pumping chemical and not receiving a feed request) this message will appear in the display window but will not sound the external alarm. The system will continue automatically.

If low air pressure occurs while the system is busy pumping chemical or receiving a feed request, the external alarm will sound (in addition to the message on the display) and the slaves will be shut down. Continue with the steps below.

### TRANSFER TO WASHER? PRESS: YES OR NO

- (4) Press YES on host.

### SEND PRODUCT TO WASHER PRESS ENTER            1

- (5) Select washer number to transfer to.
- (6) Press ENTER on host.

### TRANSFERRING-WASHER 1

- (7) System is ready and will continue automatically when transfer is complete.

## SLAVE DISPLAY

### VESSEL IS INOPERABLE !! PLEASE CHECK HOST

This message will appear on all slave units, but only if low air pressure occurred while pumping chemical or while receiving a feed request.

### FORMULA 01 ENTER LOAD WEIGHT 000LB

All slave displays will return to normal once the air pressure situation is resolved.



## CALIBRATION ERROR

### HOST DISPLAY

**CAL. ERROR W# (CHEM. NAME)  
HIT RESET KEY TO RESUME**

- (1) Press RESET on host.
- (2) Calibrate the pump that caused the error.

This error occurs when there is a feed request for a chemical pump that is not calibrated (does not have a flow rate).

The display will show which washer was requesting chemical, which chemical name the request was for, and the external alarm will sound.

### SLAVE DISPLAY

**NORMAL — NO CHANGE**

## TROUBLESHOOTING

The table below provides additional information regarding the cause and solution to the system problems that generate error messages on the host and/or slave display windows.

ERROR	TYPICAL CAUSE	SOLUTION
POD Error	<ul style="list-style-type: none"> <li>• Empty chemical container</li> <li>• Incorrect sensor setting</li> <li>• Clogged checkvalve</li> <li>• POD error delay setting</li> <li>• No water flow in tube</li> </ul>	<ul style="list-style-type: none"> <li>• Replace container</li> <li>• Adjust sensor setting</li> <li>• Change checkvalve</li> <li>• Change error delay setting</li> </ul>
Low Air	<ul style="list-style-type: none"> <li>• Air supply turned off</li> <li>• High demand on air supply</li> <li>• Air sensor faulty or loose wires</li> </ul>	<ul style="list-style-type: none"> <li>• Turn on air supply</li> <li>• Use more reliable air supply</li> <li>• Fix wiring or replace sensor</li> </ul>
Vessel Overflow	<ul style="list-style-type: none"> <li>• Water in vessel activating top sensor setting during normal operation</li> <li>• Incorrect sensor setting</li> <li>• Problem with drain checkvalve</li> </ul>	<ul style="list-style-type: none"> <li>• Drain water from vessel</li> <li>• Adjust sensor setting</li> <li>• Replace checkvalve</li> </ul>
Vessel Sensor Error	<ul style="list-style-type: none"> <li>• Water remaining in vessel</li> <li>• Vessel sensor not shutting off when trying to empty vessel</li> <li>• Incorrect sensor setting</li> <li>• Transfer pump not working</li> </ul>	<ul style="list-style-type: none"> <li>• Drain water from vessel</li> <li>• Adjust sensor setting</li> <li>• Repair or replace transfer pump</li> </ul>
POB Comm. Error	<ul style="list-style-type: none"> <li>• Power supply off at pump unit</li> <li>• Faulty cable connection to POB</li> <li>• Incorrect number of POB's in setup</li> <li>• Re-using an old Knight dispenser with earlier POB chip.</li> </ul>	<ul style="list-style-type: none"> <li>• Turn power on at pump unit</li> <li>• Fix cable connections</li> <li>• Change number of POB's setting</li> <li>• POB must have ver 2.0 chip to work with Chem-Trak</li> </ul>
LFP Shutdown	<ul style="list-style-type: none"> <li>• LFP setting is disabled at host</li> <li>• Incorrect slave ID numbers</li> <li>• Faulty cable connection to CIO</li> </ul>	<ul style="list-style-type: none"> <li>• Enable the LFP setting</li> <li>• Set the correct ID numbers</li> <li>• Fix cable connections</li> </ul>

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## MAINTENANCE

Good maintenance habits are key to getting the best performance out of your equipment. The following service items are recommended for normal operation. The intervals may vary depending on chemical affect and actual usage.

<p><b>Service:</b> Lube squeeze tubes.</p> <p><b>Interval:</b> Once a month.</p>	<ol style="list-style-type: none"><li>(1) Remove the faceplate of the pump.</li><li>(2) Apply a thin bead of Tube Lube to the inner surface (the side that the rollers contact) of the squeeze tube between the 9 o'clock and 3 o'clock positions. Avoid getting lube near the pinch points where the bottom of the faceplate grips the tube.</li><li>(3) Put the faceplate back on the pump.</li><li>(4) The next time the pump activates, the lubricant will be evenly distributed.</li></ol>
<p><b>Service:</b> Replace squeeze tubes.</p> <p><b>Interval:</b> Every 6 months, or as needed.</p>	<ol style="list-style-type: none"><li>(1) Bleed any pressure from discharge line.</li><li>(2) Disconnect suction and discharge lines from tube.</li><li>(3) Remove the faceplate of the pump.</li><li>(4) Pull old tube out, being careful not to splash chemical. Insert new tube by squeezing into place.</li><li>(5) Apply lube per step 2 above.</li><li>(6) Put the faceplate back on the pump.</li><li>(7) Re-connect suction and discharge lines from tube.</li></ol>
<p><b>Service:</b> Replace manifold checkvalves.</p> <p><b>Interval:</b> 3 times a year, or as needed.</p>	<ol style="list-style-type: none"><li>(1) Bleed any pressure from discharge line.</li><li>(2) Disconnect chemical line from barb fitting.</li><li>(3) Remove checkvalve from manifold by turning it counter-clockwise.</li><li>(4) Install new checkvalve being careful not to over-tighten.</li><li>(5) Install barb fitting onto new checkvalve.</li><li>(6) Re-connect chemical line to barb fitting.</li></ol>
<p><b>Service:</b> Drain air filter.</p> <p><b>Interval:</b> As needed.</p>	<ol style="list-style-type: none"><li>(1) Open drain port on bottom of filter.</li><li>(2) When all water is out, close the drain port.</li></ol> <p>NOTE: Drain port can be left <u>slightly</u> open to continually bleed off water during operation. Be sure to not open the port too much.</p>

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## **DISCLAIMER**

Knight LLC does not accept responsibility for the mishandling, misuse, or non-performance of the described items when used for purposes other than those specified in the instructions. For hazardous materials information consult label, MSDS, or Knight LLC. Knight products are not for use in potentially explosive environments. Any use of our equipment in such an environment is at the risk of the user, Knight does not accept any liability in such circumstances.

## **WARRANTY**

All Knight controls and pump systems are warranted against defects in material and workmanship for a period of ONE year. All electronic control boards have a TWO year warranty. Warranty applies only to the replacement or repair of such parts when returned to factory with a Knight Return Authorization (KRA) number, freight prepaid, and found to be defective upon factory authorized inspection. Bearings and pump seals or rubber and synthetic rubber parts such as "O" rings, diaphragms, squeeze tubing, and gaskets are considered expendable and are not covered under warranty. Warranty does not cover liability resulting from performance of this equipment nor the labor to replace this equipment. Product abuse or misuse voids warranty.

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