



## MANITOBA RENAL PROGRAM

<b>SUBJECT</b> <ul style="list-style-type: none"> <li>▪ Use of Lauer Aquaboss EcoRO Dia II HT Reverse Osmosis System (RO).  Health Sciences Centre (Central Dialysis Unit, Sherbrook Dialysis Unit), St. Boniface Dialysis Unit, Seven Oaks Dialysis Unit, Boundary Trails Health Centre, Pine Falls Dialysis Unit, Dauphin Dialysis Unit, Portage Dialysis Unit and Selkirk Dialysis Unit.</li> </ul>	<b>SECTION</b> 30.30 Water Treatment
	<b>CODE</b> 30.30.01
<b>AUTHORIZATION</b> <ul style="list-style-type: none"> <li>▪ Professional Advisory Committee, Manitoba Renal Program</li> <li>▪ Nursing Practice Council, St Boniface Hospital</li> </ul>	<b>EFFECTIVE DATE</b> June 19, 2015
	<b>REVISION DATE</b> August 2017 April 2018 October 2018

**PURPOSE:**

1. To provide instructions for system start-up and troubleshooting of the Lauer Aquaboss EcoRO Dia II HT Reverse Osmosis (RO) System. The Reverse Osmosis System is a water treatment process whereby organic matter and electrolytes are removed from the water. The processed water is required by Hemodialysis delivery systems in the preparation of dialysate.

**POLICY:**

1. Nurses, Technologists and HCAs working in Dialysis who have received instruction may use the Lauer Aquaboss EcoRO Dia II HT Reverse Osmosis System. It may be necessary to contact hospital security to access the main RO room.
2. **The Technologist on call for the unit must be contacted as soon as possible each time an RO system alarm/error occurs.**

3. To contact a Technologist:

**Monday- Friday 0800h to 1615h**

Health Sciences Centre	
Sherbrook Dialysis Unit	204 787 1723
Central Dialysis Unit	204 787 7804
Local Renal Health Centres	204 787 7717
St. Boniface Hospital	204 237 2028
Seven Oaks Hospital	204 632 3458

**After hours all units:**

Monday through Friday 1615h to 0800h **and**  
Friday 1615h to Saturday 2400h  
204-223-0026 (On call cell phone)

## EQUIPMENT:

1. Lauer Aquaboss EcoRO Dia II HT Reverse Osmosis System
2. Nurses' station remote panel
3. Dialysis Delivery System

## A. PROCEDURE

1. **System Start-Up (Nurses' station remote panel)**
  - 1.1 Press top left button (⏻) on the remote panel to turn RO on.
  - 1.2 The light on the button will turn green. The dialysis machines can now be turned on and used.
2. **System Shut-down**
  - 2.1 RO system will shut off automatically at night.
  - 2.2 To manually turn the RO off, press top left button (⏻) on the remote panel.

## B.TROUBLESHOOTING

### 1. ALARM/ERROR CONDITIONS

- 1.1 Any malfunctions of the RO system are indicated on the remote panel by a lit red LED on the alarm button (⚠) and an audible sound.
- 1.2 The alarm can be muted by pressing the alarm button (⚠).
- 1.3 Go to the Main RO and record the alarm/error number and description that is displayed on the main RO display panel.
- 1.4 **Immediately contact the Dialysis Technologist on call to report the alarm/error that has occurred.**
- 1.5 Refer to the **"Response to Alarms or Errors"** below in this document sheet (also located on Main RO panel )

## KEY POINTS

- A picture of the Remote Panel can be found on page 2 of this document.
- In some units the system is programmed to turn on and off automatically.
- The RO will turn automatically off at the preprogrammed time. The green light (⏻) on the remote panel (top left) will also turn off to indicate that the RO is off.

## KEY POINTS

- The red LED remains on until the problem is resolved.

The display on the main RO panel located in the water treatment room will display the alarm/error number and description.



**Nurses' Station Remote RO**

## B.TROUBLESHOOTING

### 2. RESPONSE TO ALARMS OR ERRORS

**(EXCEPT FOR ALARMS 5, 6, 7)**

- 2.1 **Contact the Dialysis Technologist ( if not done prior) and go to the Main RO room**

## KEY POINTS

**For alarms # 5 and 6 refer to section 3 of this document.**

**For alarm #7 refer to section 4**



The Lauer Aquaboss ECORO Dia II Reverse Osmosis System

- 2.2 Document the Error or Alarm code shown on the display panel



The alarm/error code will be displayed here.

- 2.3 In order to reset the error/alarm:

- 2.3.1 Turn the switch to **OFF** position and wait 5 seconds
- 2.3.2 Then turn switch to **MANUAL ON** position.



- 2.4 Verify the green Dialysis Mode light is lit. If green light is lit, dialysis can commence.

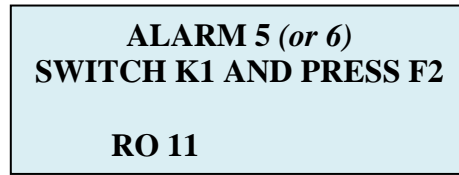


### **3. RESPONSE TO ALARMS 5 AND 6**

### **KEY POINTS**

- 3.1 **Contact the Dialysis Technologist if not done prior.**
- 3.2 Read proceeding instructions prior to taking any further action

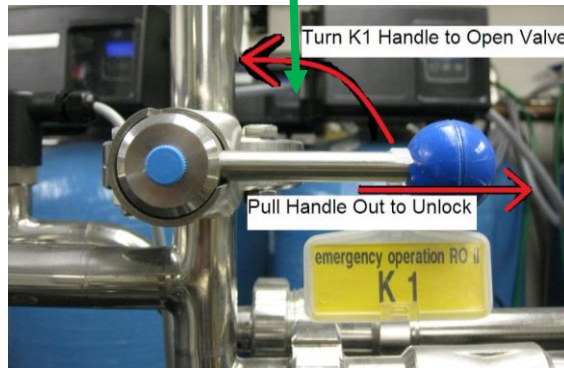
The RO display panel (see 2.2) will display:



- 3.3 Locate the K1 valve. (It is to the left of the front display panel of the RO and is labeled with a yellow tag)



- 3.4 To switch valve:
  - a. Pull the handle out to unlock.
  - b. Then turn handle counter clockwise until it stops.



- 3.5 Press the F2 button located below the display panel.
- 3.6 The display panel should now read:

**EMERGENCY MODE  
RO 11**

- 3.6 Verify the green Dialysis Mode light on the RO panel is lit. (See 2.4) If the green light is lit, dialysis can commence. The yellow "Emergency Operation" and red "Alarm" lights will also be lit.
- 3.7 Confirm that the Dialysis Technologist is aware the RO is in an Emergency mode.
- 3.8 Receive instructions from the Dialysis Technologist on how to properly shut down the RO at the end of the dialysis day.

## **4.0 RESPONSE TO ALARM 7**

4.1 **Contact the Dialysis Technologist if not done prior**

4.2 Read proceeding instructions prior to taking any further action

4.3 Locate the K3 valve. (It is to the left of the front display panel of the RO and is labeled with a yellow tag.

4.4 To switch valve:

- a. Pull the handle out to unlock.
- b. Then turn the handle counter-clockwise (right) until it stops

4.5 Press the F1 button located below the display panel.

4.6 The display panel should now read:

**EMERGENCY MODE**  
**RO 1**

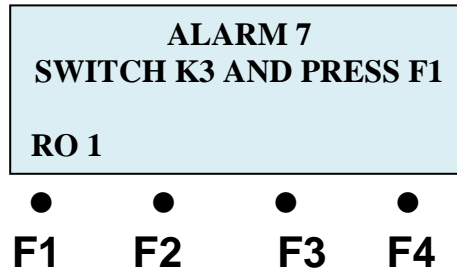
4.7 Verify the green Dialysis Mode light on the RO panel is lit. (See 2.4) If the green light is lit, dialysis can commence. The yellow "Emergency Operation" and red "Alarm" lights will also be lit.

4.8 Confirm that the Dialysis Technologist is aware the RO is in an Emergency mode.

4.9 Receive instructions from the Dialysis Technologist on how to properly shut down the RO at the end of the dialysis day.

## **KEY POINTS**

The RO display panel (see 2.2) will display:



## **REFERENCES:**

Lauer Aquaboss Operating Instructions, EcoRO Dia II HT Reverse Osmosis System  
Rev. HT 3.5 dated 01.07.2011