



MANITOBA RENAL PROGRAM

SUBJECT <ul style="list-style-type: none"> Use of Lauer Aquaboss EcoRO Dia Ilc Reverse Osmosis System (RO). Thompson Dialysis Unit, The Pas Dialysis Unit, Gimli Dialysis Unit, Russel Dialysis Unit, Hodgson Dialysis Unit, Berens River Dialysis Unit. 	SECTION 30.30 Water Treatment
	CODE 30.30.06
AUTHORIZATION <ul style="list-style-type: none"> Professional Advisory Committee, Manitoba Renal Program Nursing Practice Council, St Boniface Hospital 	EFFECTIVE DATE April 20, 2018
	REVISION DATE

PURPOSE:

- To provide instructions for system start-up and troubleshooting of the Lauer Aquaboss EcoRO Dia Ilc 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:

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

Regular Hours:

Monday- Friday 0800h to 1615h
Health Sciences Centre
Dialysis Technology: 204-787-7717

After hours On Call:

Except Sunday
204-223-0026 (On call cell phone)

EQUIPMENT:

- Lauer Aquaboss EcoRO Dia Ilc Reverse Osmosis System
- Nurses' station remote panel
- Dialysis Delivery System

A. PROCEDURE

KEY POINTS

1. Manual RO 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.

- In some dialysis units the RO system is programmed to turn on and off automatically at the beginning and end of each dialysis day.
- A picture of the Remote Panel can be found on below

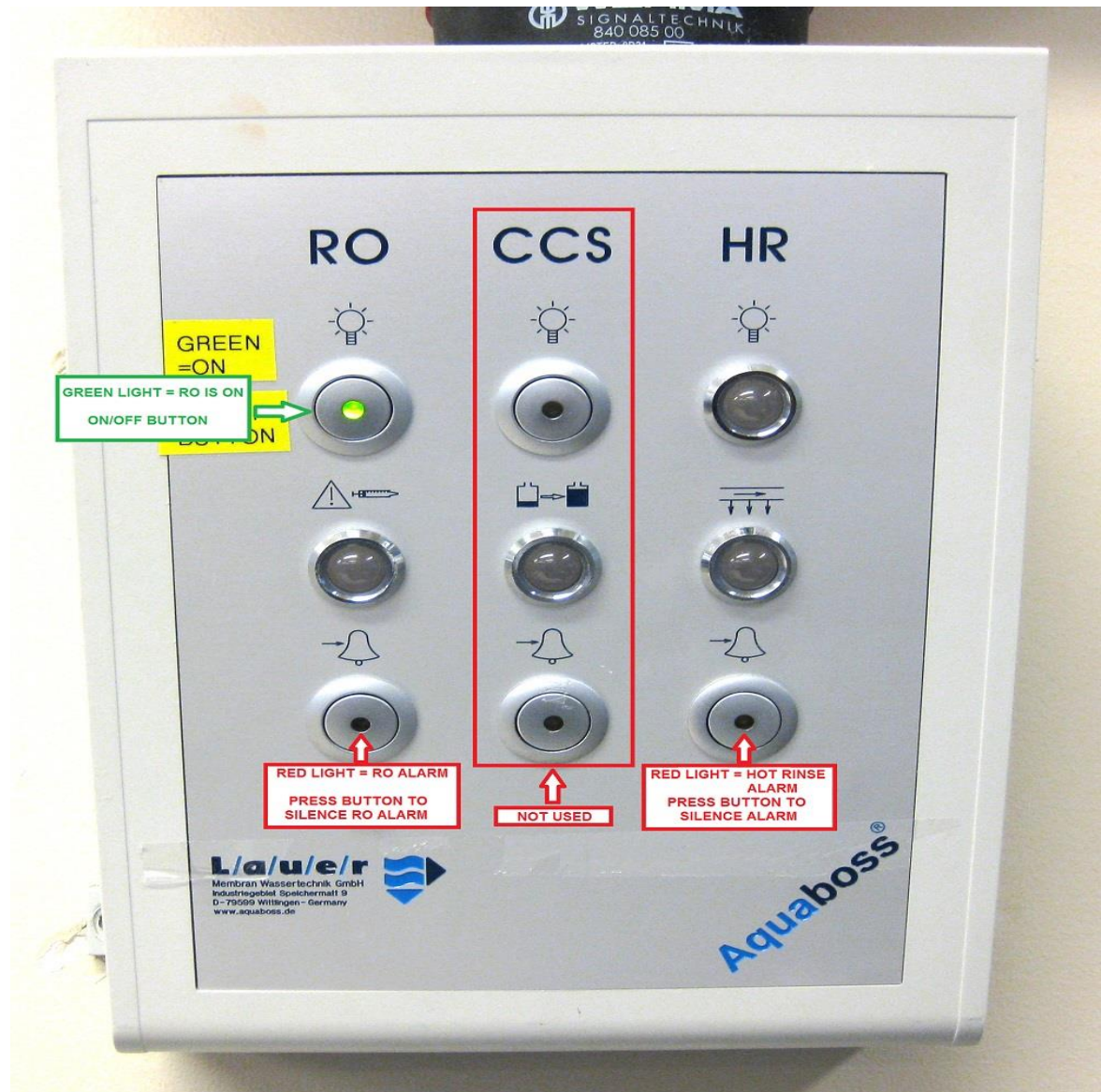
2. Manual RO System Shut-down

- 2.1 To manually turn the RO off, press top left button (☑) on the remote panel.

- The green light (☑) on the remote panel (top left) will turn off to indicate that the RO is off. If the RO **Auto OFF** option is enabled it will automatically turn off at the preprogrammed time.

2.2

Nurses' Station Remote Panel



B. ALARM TROUBLESHOOTING

KEY POINTS

1. ALARM/ERROR CONDITIONS

- 1.1 All malfunctions of the RO or HR (HotRinse) system are indicated on the Nurse Station Remote Panel by a lit red LED on the alarm button (🔴) in the appropriate column of buttons, along with an audible alarm.
- 1.2 The alarm can be muted by pressing the alarm button (🔴).
- 1.3 Go to the Water Treatment room and record the alarm/error number and alarm description that is displayed on the main RO or Hot Rinse display screen.



RO System

Hot Rinse (HR) System

- 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**” section below as directed by a technologist.

B.TROUBLESHOOTING

2. RESPONSE TO ALARMS OR ERRORS

(EXCEPT FOR ALARMS 5, 26)

2.1 Contact the Dialysis Technologist (if not done prior) and go to the Water Treatment room.

2.2 Record the Error or Alarm code shown on the display screen.

2.3 To RESET the RO or HR error/alarm:

2.3.1 If the screen indications a RESET option, then press the button below the RESET.

2.3.2 If no RESET option available then turn the **Main Power Switch** located on the left hand side of the cabinet to OFF, wait 10 seconds and then turn back ON.

2.4 Verify **Dialysis Mode** is indicated on the RO display screen with in a few minutes. If not, press the button below the **DIAL** option on the RO display. Once Dialysis Mode is displayed on the RO screen, dialysis machine use can commence.

2.5 Verify **System Off** is indicated on the Hot Rinse (HR) display screen with in a few minutes.

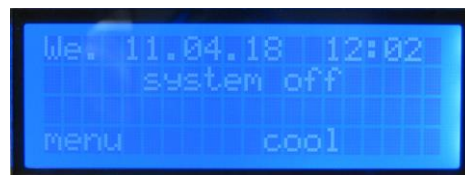
KEY POINTS

For **RO alarm # 5**, refer to section **3** of this document.

For **RO alarm # 26**, refer to section **4** of this document.



The alarm/error code will be displayed here.



3. RESPONSE TO ALARMS 5

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

- 3.3 Locate the **K1** valve. (It is to the left of the Main RO cabinet and is labeled with a yellow tag)

- 3.4 To switch **K1** 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 screen.

- 3.6 The display screen should now read:

**EMERGENCY MODE
RO 11**

- 3.7 Verify the green **Dialysis Mode light** on the front of Main RO panel is lit. If the green light is lit, dialysis can commence. The yellow "Emergency Operation" and red "Alarm" lights will also be lit.

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

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

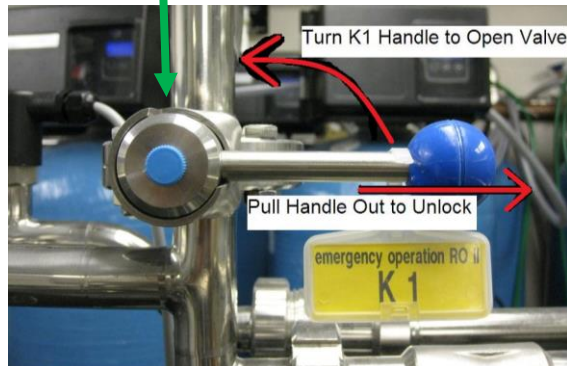
KEY POINTS

The RO display screen (see sec. 2.2) will display:

**ALARM 5 PUMP M1
SWITCH K1 AND PRESS F2**

RO 11

● ● ● ●
F1 F2 F3 F4



4.0 RESPONSE TO ALARM 26

- 4.1 Contact the Dialysis Technologist if not done prior.
- 4.2 Read proceeding instructions prior to taking any further action
- 4.3 Press the **F2** button located below the RO display screen.

Then press the **F1** button located below the display screen.

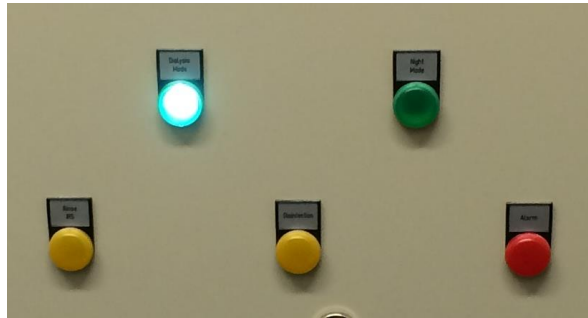
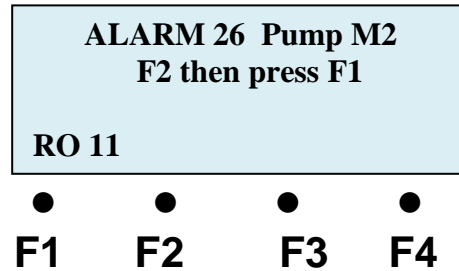
- 4.4 The display screen should now read:

EMERGENCY MODE
RO 1

- 4.5 Verify the green Dialysis Mode light on the RO panel is lit. If the green light is lit, dialysis can commence. The yellow "Emergency Operation" and red "Alarm" lights may also be lit.
- 4.6 Confirm that the Dialysis Technologist is aware the RO is in an Emergency mode.
- 4.7 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 screen (see sec. 2.2) will display:



REFERENCES:

Lauer Aquaboss Operating Instructions, EcoRO Dia IIC Reverse Osmosis System
Rev. 1.6 NA sw 1.07 dated 15.09.2007