Train-the-Trainer Program - Home Therapies

Liberty® Cycler

Clinical Support Guide

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Liberty Cycler

Clinical Support Guide

This guide is intended to support clinicians and clinical support personnel in their efforts to help patients respond to various issues, warnings, or alarms that may arise during Liberty cycler therapy. Patient instructions offered within this guide are specific to various messages that may appear during Liberty cycler set-up or treatment. Technical support services remain available to patients and clinicians 24/7 at 1-800-227-2572 for any Liberty cycler issue that may arise.

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General Notes

1. If a true red alarm (red status bar) occurs at any time during treatment, Liberty cycler patients must be trained to make note of all alarm messages, turn off the Liberty cycler, and call technical support.

2. Technical support should be called;
   a. if instructions provided within this guide fail to resolve the problem
   b. if the PD RN or MD feel the cycler needs to be replaced
   c. any time the patient, PD RN, or MD wish to access Liberty cycler technical support.

3. The PD RN should provide Liberty cycler patients with general guidelines as to how to proceed should it become necessary to replace the original Liberty cycler set and/or solution bag(s) to continue an interrupted treatment.

4. If the patient is advised NOT to use a second set or additional solution bags to continue an interrupted treatment, the PD RN should advise the patient how to proceed (i.e., note issue and therapy results; call PD clinic in the morning).

5. If it becomes necessary to restart during set-up, the solution bag and Liberty cycler set (if attached) may be used to continue set-up provided the cones within solution bags have NOT been broken and the Liberty cycler set is not detached from solution bags.

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Support Screens

Support messages are displayed when a resolvable issue is detected before or during Liberty cycler set-up or during Liberty cycler treatment. If a Support Screen appears, the status bar will continue to display the phase in progress and will not change color.

If the Support Screen appears after powering on but before starting set-up (**Ready** and **USB Upload** Screens);

- The screen displays the issue and any applicable instructions
- **Press OK** (key) **to continue** appears across the bottom of the screen (no audible alarm).

If the Support Screen appears during set-up;

- The main screen continues to display step-specific icons and text
- The problem is identified in **red** text added to the usual set-up screen
- **Press next to continue** appears across the bottom of the screen (no audible alarm).

If the Support Screen appears during treatment;

- An audible alarm alerts the patient
- The screen displays the issue and brief instructions in blue text (no icons)
- **Press STOP to mute** appears across the bottom of the first screen
- **Press OK key to continue** appears across the bottom of the second screen.

Provide the following patient instructions for responding to Support Screen message:

1. Follow the specific on-screen instructions to resolve Support Screen messages (see Support Screen Table below). If the steps taken successfully resolved the issue, therapy will move on.
2. If the Support Screen message re-appears and therapy cannot move on;
    a. Turn the cycler off and wait 10 seconds
    b. Turn cycler back on and;
        a. Restart set-up from the **Ready** screen (before or during set-up)-or-
        b. Press **Resume Treatment** if **Power Fail Recovery** is successful.
3. Call technical support if the Support Screen does not clear after three attempts.

The following table displays Liberty Cycler Support Screens, causes, and additional instructions for the patient (not displayed on-screen).

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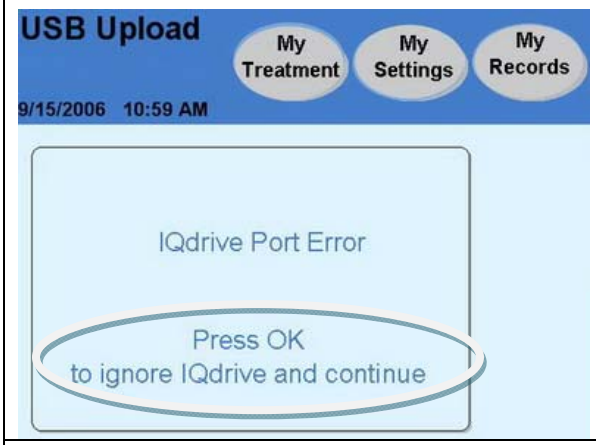
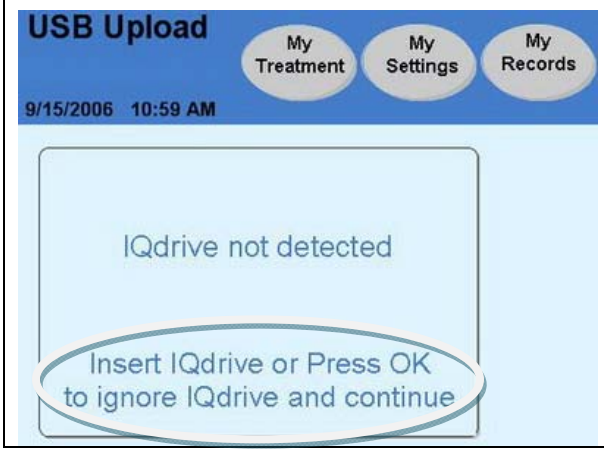
Liberty Cycler Support Screens

Pre Set-up Screens	Cause	Additional Instructions
	The door was opened before set-up began (**Ready** Screen).	☐ Make sure the door is securely closed ☐ Remove the cassette if present.
	The cycler was unable to access the IQdrive port.	☐ If an IQdrive is in place, remove and re-insert ☐ Verify that a light appears at the tip of the IQdrive ☐ If it is necessary to press the **OK** key in order to move on; o Contact your PD RN o Record treatment details as directed.
	The cycler was unable to read the IQdrive. IQdrive may be corrupted.	☐ If an IQdrive is in place, remove and re-insert ☐ Verify that a light appears at the tip of the IQdrive ☐ If it is necessary to press the **OK** key in order to move on; o Contact your PD RN o Record treatment details as directed.

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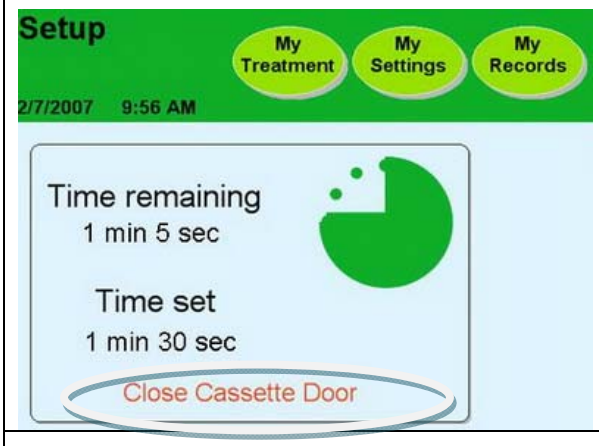
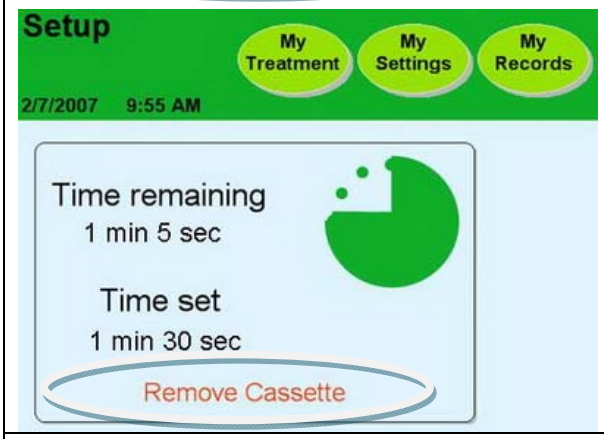
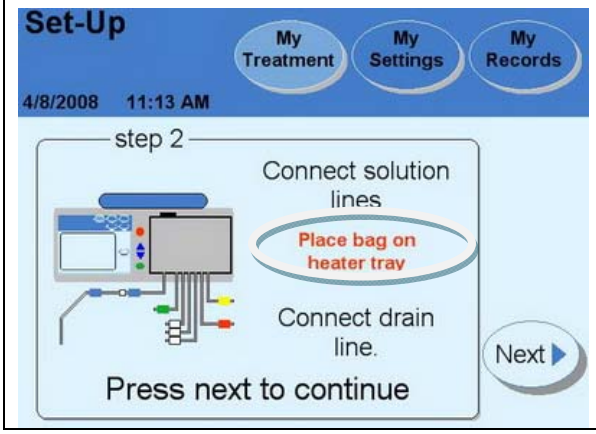
Liberty Cycler Support Screens

Set-up Support Screens	Cause	Additional Instructions
	The cassette door was not securely closed when the **OK** key was pressed before **step 1** (**Ready** screen step 0).	☐ Close the door ☐ Do not press the **OK** key a second time. Set-up will continue within a few seconds after the door is closed.
	A cassette was detected when the **OK** key was pressed before **step 1** (**Ready** screen step 0).	☐ Remove the cassette ☐ Do not press the **OK** key a second time. Set-up will continue within a few seconds after the cassette is removed.
	The heater scale does not detect a solution bag with <u>at least</u> 2000 mL after; ❑ The **Next** button on set-up **step 2** screen was pressed –or- ❑ Set-up has advanced to **step 3**.	☐ Make sure the heater solution bag contains <u>at least</u> 2000 mL. ☐ Make sure the solution bag is evenly placed on the heater tray (see page 94 in Liberty Cycler User Guide, P/N 480038).

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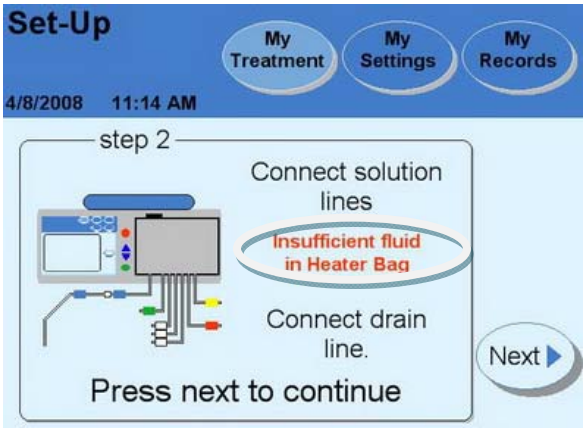
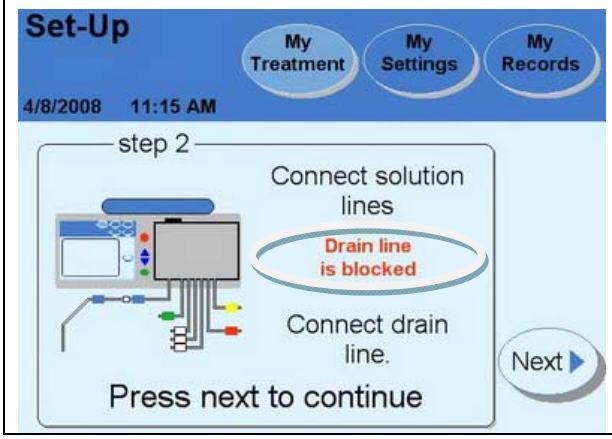
Liberty Cycler Support Screens

Set-up Support Screens	Cause	Additional Instructions
	The heater scale does not detect a solution bag with <u>at least</u> 1000 mL more than the programmed initial Fill volume after; ❑ The **Next** button on set-up **step 2** screen was pressed –or- ❑ Set-up has advanced to **step 3**.	☐ Make sure the heater solution bag contains <u>at least</u> 1000 mL more than the programmed Fill volume ☐ Make sure solution bag is evenly placed on the heater tray (see page 94 in Liberty Cycler User Guide, P/N 480038) ☐ Lift bag off of heater tray; return bag to tray ensuring even placement ☐ Verify the Fill volume on the **My Settings** screen.
	The cycler cannot pump solution to the drain after; ❑ The **Next** button on set-up **step 2** screen was pressed –or- ❑ Set-up has advanced to **step 3.**	☐ Make sure drain line is properly connected ☐ Check drain line for kinks or closed clamps.

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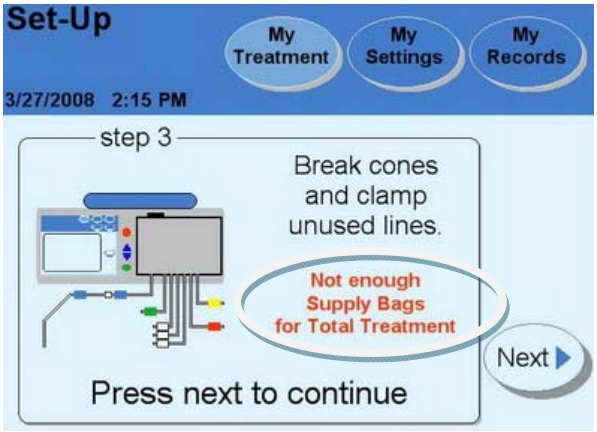
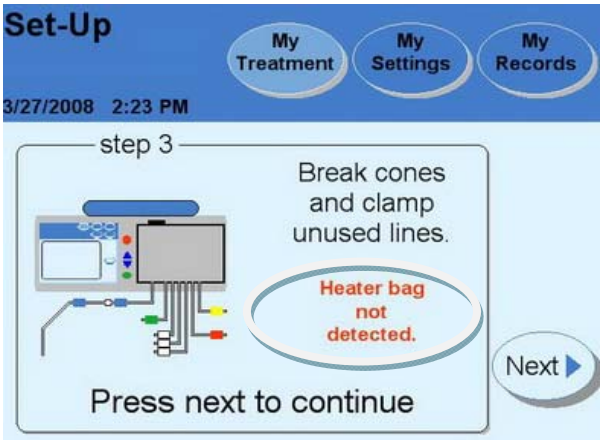
Liberty Cycler Support Screens

Set-up Support Screens	Cause	Additional Instructions
	The cycler cannot pull solution from the expected number of supply bags after; ❑ The **Next** button on set-up **step 2** screen was pressed –or- ❑ Set-up has advanced to **step 3.** To determine the expected number of bags, the Liberty cycler assumes that all bags hold 5000 mL. Therefore; ❑ Total number of bags connected must ≥ Total volume ÷ 5000 ❑ Number of supply bags (excludes heater bag) connected must > Total Volume - 5000 (heater bag) ÷ 5000. ❑ If the **Last bag option** is set to **YES**, the number of supply bags connected must ≥ Total volume - 5000 (heater bag) – Last Fill volume ÷ 5000.	☐ Make sure clamps are open on all solution lines ☐ Make sure cones are broken and not obstructing bag outlets ☐ Verify programmed or calculated Total volume ☐ Make sure enough supply bags are connected Ex: Last bag option = **NO** Total volume = 15000 # of supply bags expected (white and green clamped lines): 15000–5000 (heater) = 10000 ÷ 5000 ≥ 2 Last Bag Option = **YES** Ex: Total volume = 12000 Last Fill = 2000 # of supply bags expected (white clamped lines only): 12000–5000 (heater)- 2000 (last fill) = 5000 ÷ 5000 ≥ 1
	The cycler cannot pull solution from the heater bag after the **Next** button has been pressed on set-up **step 3** screen.	☐ Make sure red clamp is open on heater bag line ☐ Make sure heater bag cone is broken and not obstructing bag outlet.

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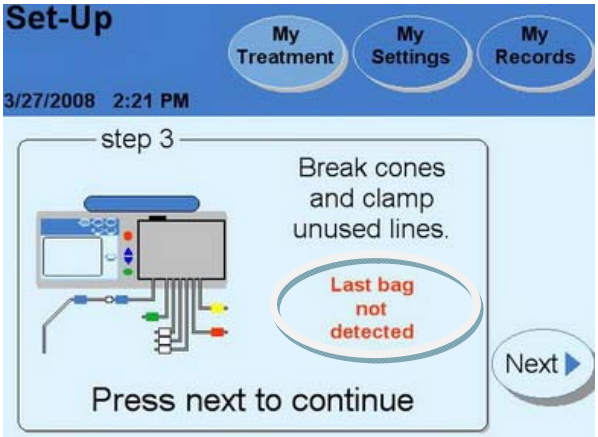
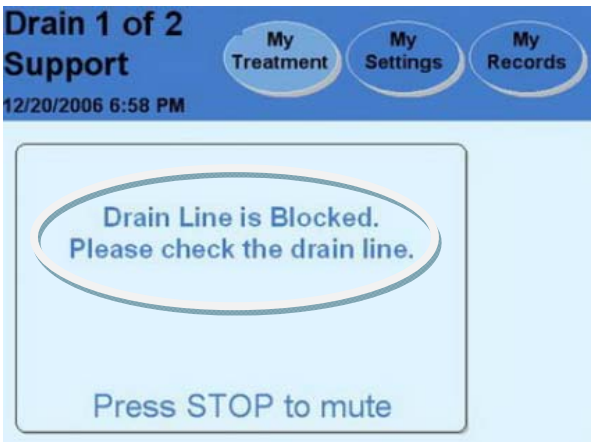
Liberty Cycler Support Screens

Set-up Support Screens	Cause	Additional Instructions
	The cycler cannot pull solution from the last bag (**Last bag option** = **YES**) after the **Next** button has been pressed on set-up **step 3** screen.	☐ Make sure green clamp is open on last bag line ☐ Make sure last bag cone is broken and not obstructing bag outlet. * Change the **Last bag option** to **NO** if a different solution is not needed for the Last Fill.
	The drain line clamped or blocked. The cycler was unable to pump solution during the drain phase.	☐ Make sure drain line is properly connected ☐ Make sure the wheel of the Liberty cycler cart is not on the drain line ☐ Check drain line for kinks or closed clamps.

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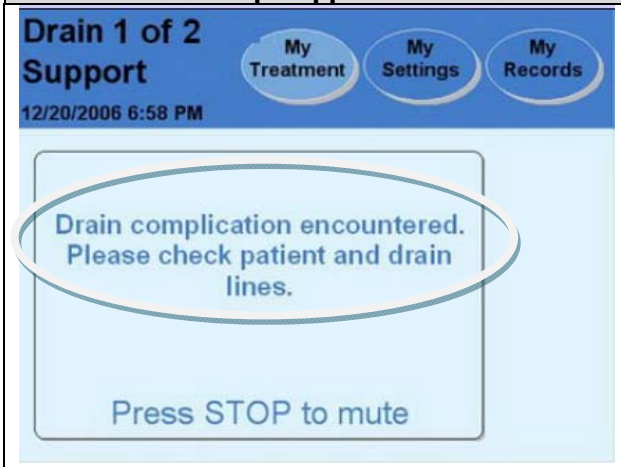
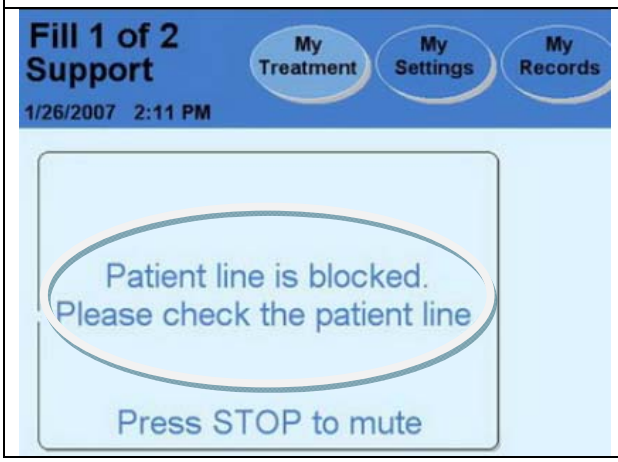
Liberty Cycler Support Screens

Set-up Support Screens	Cause	Additional Instructions
	Insufficient volume has drained within allotted drain time* Mid-drain volume by software version (v.); ❑ v.< 2.8.2: 42.5 % of previous Fill volume regardless of drain flow rate ❑ v. ≥ 2.8.2: 35% of previous Fill volume and drain flow rate < 30 mL/min End of drain volume; ❑ v.< 2.8.2: 85 % of previous Fill volume regardless of drain flow rate ❑ v. ≥ 2.8.2: 70% of previous Fill volume and drain flow rate < 30 mL/min * Treatment Based drain time calculations; ❑ v.<2.8.2: previous Fill volume ÷ 75 ❑ v.≥2.8.2: previous Fill volume ÷ 30 Cycle Based drain time is a programmed setting.	❑ Check patient line for fibrin, kinks, or closed clamps ❑ Change body position to facilitate drain flow rate ❑ Make sure center of cycler is within 12 inches of bed height ❑ Treat constipation ❑ Increase Cycle Based drain time.
	The patient line is clamped or blocked. The cycler was unable to pump solution during the Fill phase.	☐ Check patient line for fibrin, kinks, or closed clamps ☐ Change body position ☐ Make sure center of cycler is within 12 inches of bed height ☐ Treat constipation.

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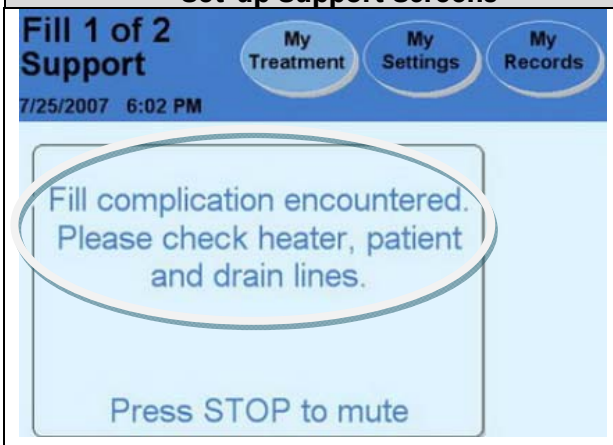
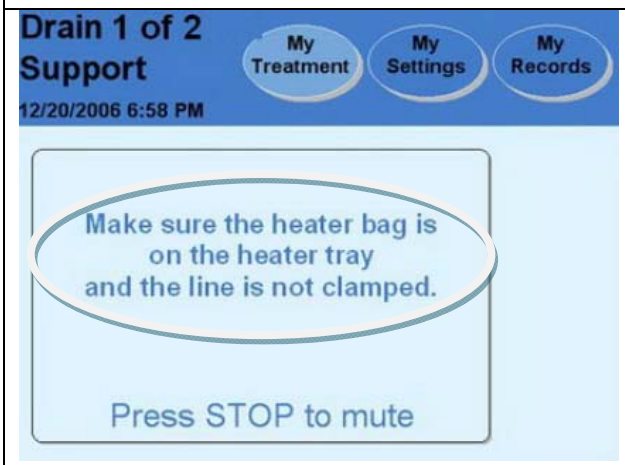
Liberty Cycler Support Screens

Set-up Support Screens	Cause	Additional Instructions
	The programmed Fill volume was not delivered within the allotted Fill time. Cycle Based Fill time programmed; calculated in Treatment Based (v ≥2.7.3 programmed Fill volume/ 75 = Fill time in minutes).	☐ Make sure blue patient line and stay.safe extension set clamps are open ☐ Make sure red clamp on heater bag is open ☐ Change body position ☐ Make sure center of cycler is within 12 inches of bed height ☐ Increase Cycle Based Fill time.
	The cycler does not detect a bag on the heater tray or cannot pull solution from the heater bag.	☐ Make sure a heater bag is in place on the heater tray ☐ Make sure the heater bag is centered on tray ☐ Make sure heater bag is properly connected ☐ Check heater line for kinks or closed clamp ☐ Make sure heater bag cone is broken and not obstructing bag outlet.
	The cycler cannot pull solution from supply bag(s).	☐ Make sure supply bags are properly connected ☐ Check supply lines (white clamps) for kinks or closed clamps ☐ Make sure supply bag cones are broken and not obstructing bag outlet

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Warnings

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Warnings

Warnings: Various warning messages may occur during Liberty cycler therapy. If a recoverable error is detected, the warning screen will display a specific warning message as well as a numeric error code. An audible alarm will also sound. The status bar will turn **orange** and identify the warning as one of the following types of error codes:

1. **Heater:** Heater tray error
2. **Patient Sensor Warning:** Patient pressure warning
3. **Pneumatic (Air Pump):** Pneumatic pump pressure error
4. **Scale Warning:** Scale reading incorrectly
5. **Self Test**: Cycler self-test error message
6. **Sensor Warning:** Cycler **s**ensor reading incorrectly
7. **Switch Warning:** Door or cassette switch reading incorrectly
8. **System**: Critical error
9. **Treatment:** Treatment-related error message.

Troubleshooting Warning Messages

If a warning message is displayed the patient should be instructed to follow the steps below.

1. Press the **STOP** key to mute the audible alarm.
2. Make note of the error code. If it becomes necessary to call technical support, they will need this code to help trouble shoot the issue.
3. Follow any instructions provided to resolve the warning (not all warnings require user action to resolve):
   a. Some warning screens may present a **Help** button, which, when pressed will display additional trouble shooting instructions
   b. Additional instructions are also provided in the following table for several of the warning messages.
4. Press the **OK** key to continue. If the issue has been resolved therapy will move on. If not, the warning screen will re-appear. Make sure that the interventions outlined in the table below have been implemented before proceeding with the following steps.
5. If the warning recurs during set-up;
   a. clamp all lines
   b. turn off cycler and wait for 10 seconds
   c. turn cycler back on
   d. When the **Ready** screen appears, press the **My Treatment** status bar button and follow on-screen instructions to restart set-up (if consistent with PD program policy).
6. If the warning recurs during treatment;
   a. turn the cycler off and wait 10 seconds
   b. turn cycler back on
   c. if **Power Fail Recovery** is successful, press **Resume Treatment** button
   d. if **Power Fail Recovery** fails, press **Cancel Treatment** button and follow on-screen instructions to end treatment and disconnect
7. Call technical support if the warning is not cleared after three attempts.

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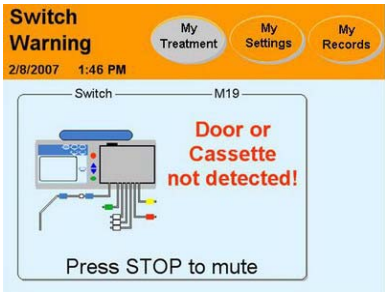
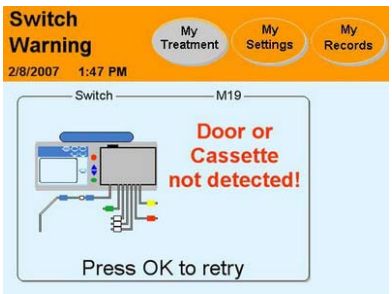
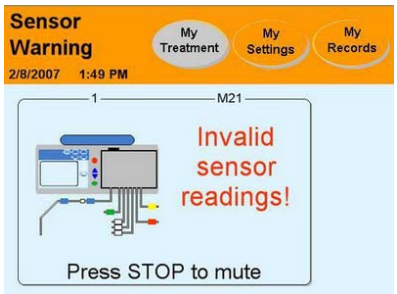
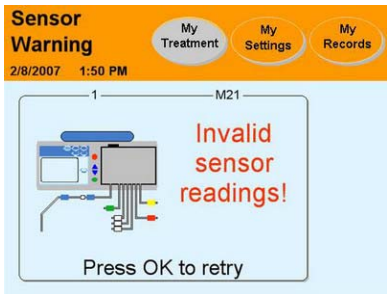
Liberty Cycler Warnings

Error Code	Warning Message (recoverable error)	Reason for Warning	May Occur During
M19	 	The door is open at an inappropriate time	☐ Set-up **step 5** & **step 6** ☐ Any treatment phase (Drain, Dwell, Fill, or Pause) ☐ Disconnect **step 8** ☐ **Power Fail Recovery**
	Additional Instructions: Make sure that cassette is in place and pump plate door is securely closed.		
M21	 	An out of range reading has been detected by one of the cycler's 17 sensors.	☐ Any time from Power Up to Power Down
	Additional Instructions: If M21 sub-error code 7 is displayed remove anything other than the heater bag from the heater tray (no additional instructions for other sub-error codes).		

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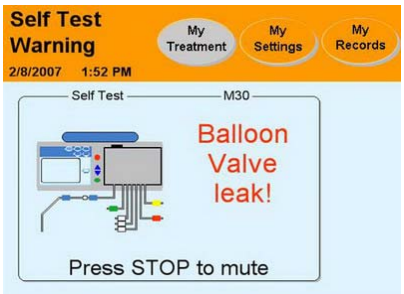
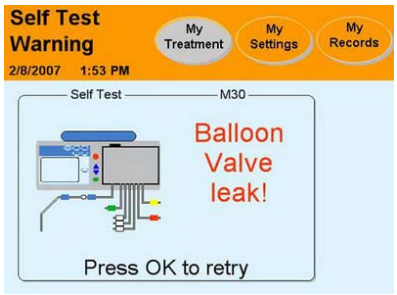
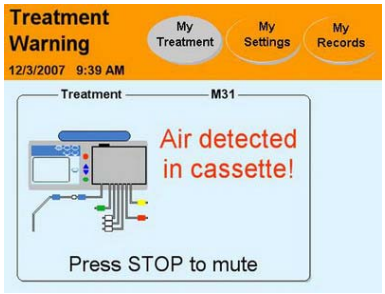
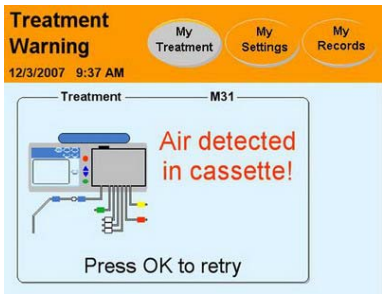
Liberty Cycler Warnings

Error Code	Warning Message (recoverable error)	Reason for Warning	May Occur During
M30	 	Self test failure due to balloon valve leak during set-up	☐ Set-up **step 2** & **step 5**
M31	 	Air detected in patient line, solution bag, or cassette	☐ Any treatment phase (Drain, Dwell, Fill, or Pause)

Additional Instructions:

Remove paper tabs and uncoil lines before pressing **Next** on set-up screen **step 4**

Make sure that the heater bag, supply bags, and blue patient line are properly connected

If air is seen in patient line or if an integrated set is used (20-foot patient line), press **Back** button on set-up screen **step 6** to ensure the patient line is fully primed.

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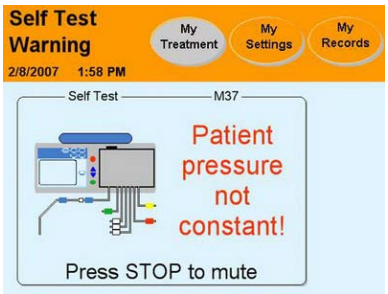
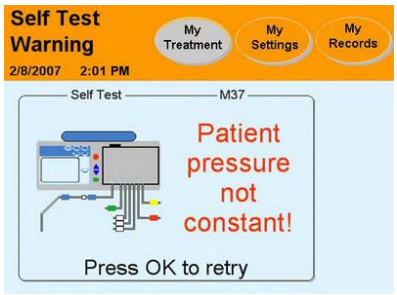
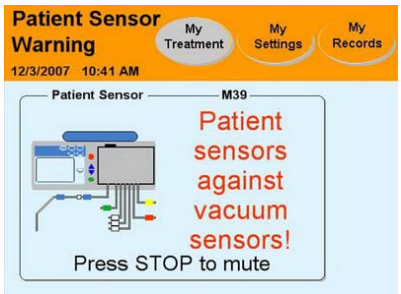
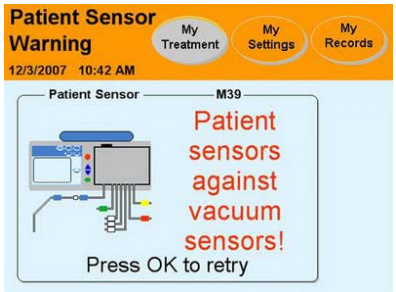
Liberty Cycler Warnings

Error Code	Warning Message (recoverable error)	Reason for Warning	May Occur During
M37	 	Changing patient pressure due to ☐ Pressure sensors out of calibration ☐ Open door ☐ Cassette detected prior to set-up ☐ High pneumatic pressure	☐ Before set-up **step 1**
M39	 	Cassette not close enough to patient pressure sensor to provide an accurate reading	☐ Connect **step 7** ☐ Any treatment phase (Drain, Dwell, Fill, or Pause) ☐ Disconnect **step 8** ☐ **Power Fail Recovery**

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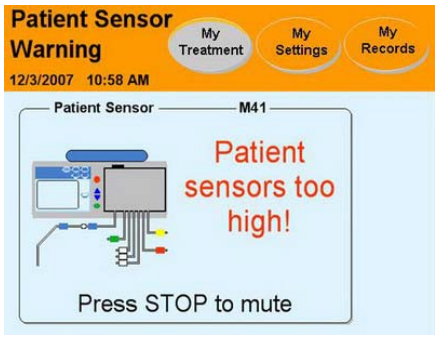
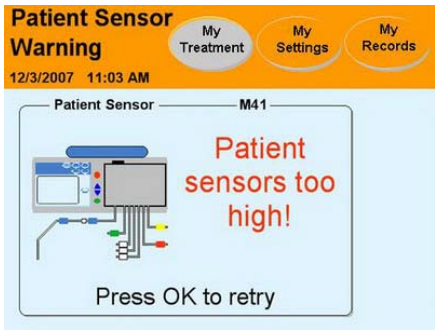
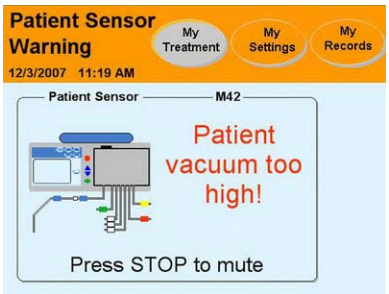
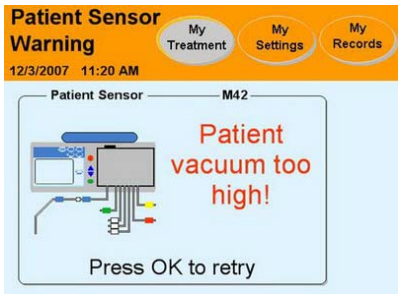
Liberty Cycler Warnings

Error Code	Warning Message (recoverable error)	Reason for Warning	May Occur During
M41	 	Fill pressure too high due to; ☐ Clamped patient line ☐ Patient is lower than cycler	☐ Fill phase
	Additional Instructions: Make sure that blue patient line clamp is open and cycler ≤ 12 inches above patient.		
M42	 	Negative pressure too high due to; ☐ Clamped patient line ☐ Patient is higher than cycler	☐ Drain phase
	Additional Instructions: Make sure that blue patient line clamp is open and cycler ≤ 12 inches below patient.		

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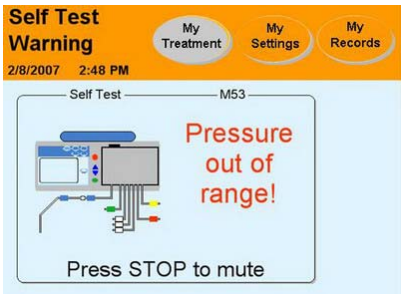
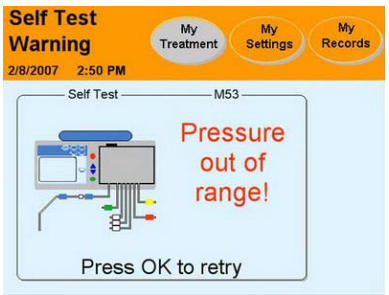
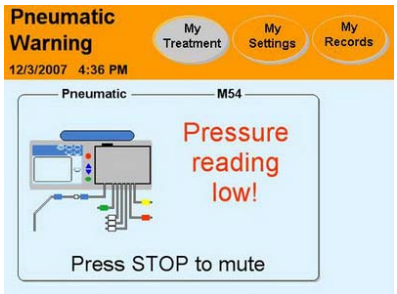
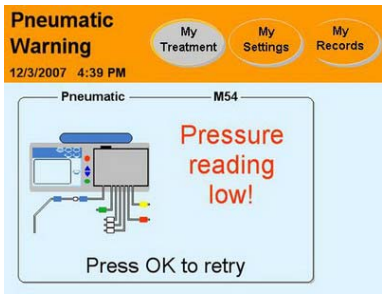
Liberty Cycler Warnings

Error Code	Warning Message (recoverable error)	Reason for Warning	May Occur During
M53	 	Self test failure due to; ☐ Pneumatic pressure sensor out of calibration ☐ Pressure vent valve malfunction	☐ Set-up **step 1**
M54	  **NOTE:** High altitude can cause this warning.	Pneumatic pressure too low	☐ Set-up **step 3** ☐ Connect **step 7** ☐ Any treatment phase (Drain, Dwell, Fill, or Pause) ☐ Disconnect **step 8** ☐ **Power Fail Recovery**

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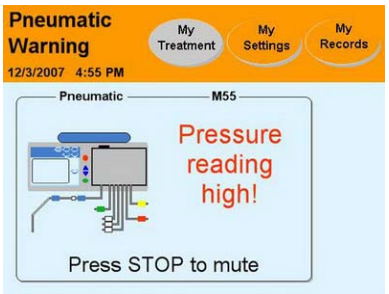
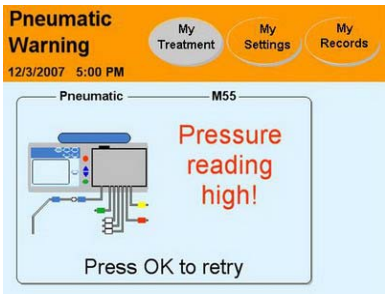
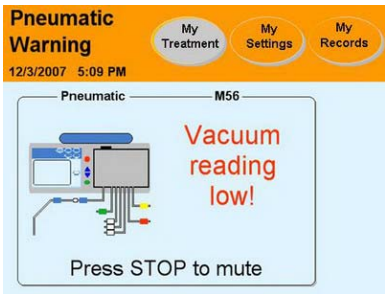
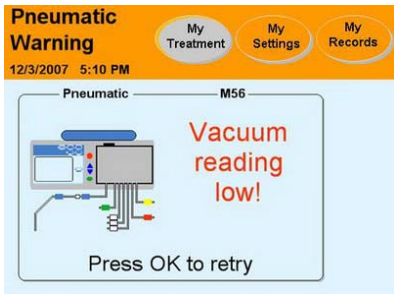
Liberty Cycler Warnings

Error Code	Warning Message (recoverable error)	Reason for Warning	May Occur During
M55	 	Pneumatic pressure too high	☐ Any time from Power Up to Power Down
M56	  **NOTE:** High altitude can cause this warning.	Pneumatic vacuum reading too low	☐ Set-up **step 3** ☐ Connect **step 7** ☐ Any treatment phase (Drain, Dwell, Fill, or Pause) ☐ Disconnect **step 8** ☐ **Power Fail Recovery**

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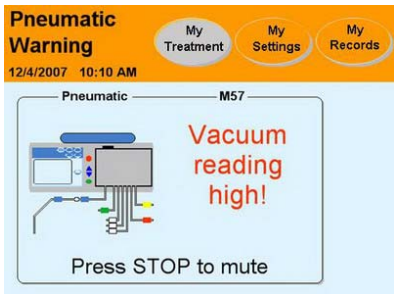
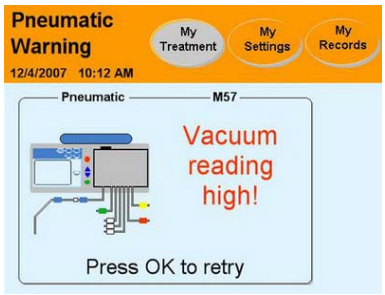
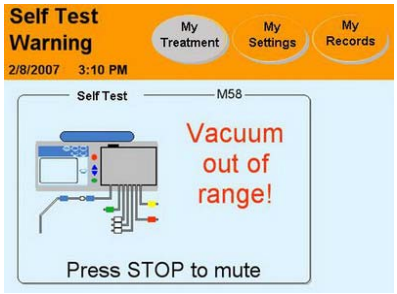
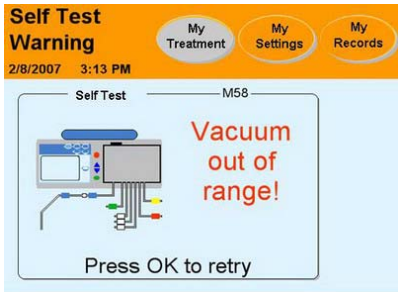
Liberty Cycler Warnings

Error Code	Warning Message (recoverable error)	Reason for Warning	May Occur During
M57	 	Pneumatic vacuum reading too high	☐ Any time from Power Up to Power Down
M58	 	Self test failure due to; ☐ Pneumatic sensor or chamber sensor out of calibration ☐ Vacuum vent valve malfunction ☐ Vacuum isolation valve out of calibration	☐ Set-up **step 1**

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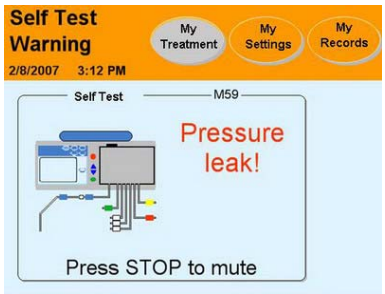
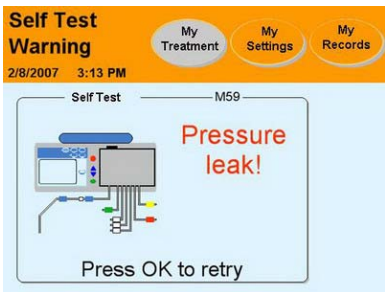
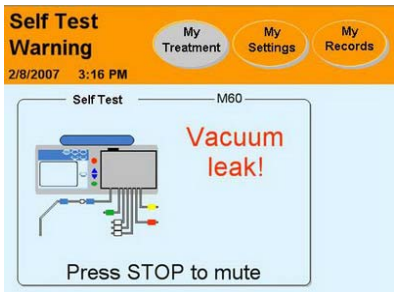
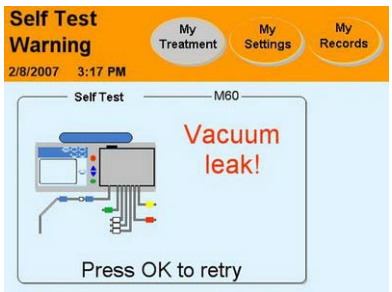
Liberty Cycler Warnings

Error Code	Warning Message (recoverable error)	Reason for Warning	May Occur During
M59	 	Self test failure due to; ☐ Pneumatic pressure valve malfunction ☐ Pneumatic pressure too low	☐ Set-up **step 2**
M60	 	Self test failure due to; ☐ Pneumatic vacuum valve malfunction ☐ Pneumatic vacuum too low	☐ Set-up **step 2**

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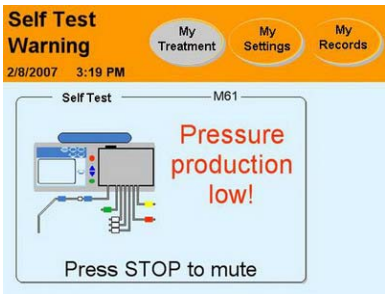
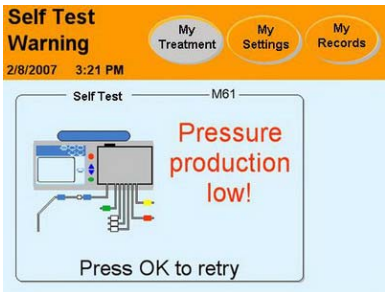
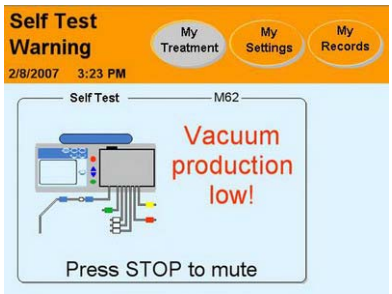
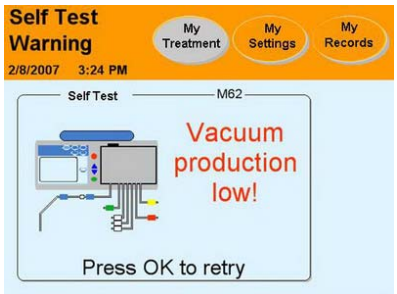
Liberty Cycler Warnings

Error Code	Warning Message (recoverable error)	Reason for Warning	May Occur During
M61	 	Self test failure due to; ☐ Pneumatic pressure valve malfunction ☐ Pressure vent valve malfunction ☐ Pressure at start of self test too high ☐ Pressure at end of self test too low	☐ Set-up **step 1**
	NOTE: High altitude can cause this warning		
M62	 	Self test failure due to; ☐ Pneumatic pressure valve malfunction ☐ Pneumatic vacuum valve malfunction ☐ Vacuum at start of self test too high ☐ Vacuum at end of self test too low	☐ Set-up **step 2**
	NOTE: High altitude can cause this warning		

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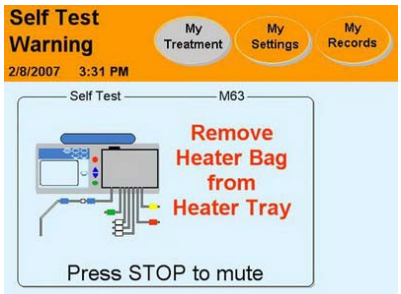
Liberty Cycler Warnings

Error Code	Warning Message (recoverable error)	Reason for Warning	May Occur During
M63	 	Self test failure due to; ☐ Anything on scale ☐ Scale out of range	☐ Set-up **step 2**

Additional Instructions:

Remove anything that may be on heater tray, including sets, solution bags, or other supplies
Do not lean on heater tray while completing other tasks.

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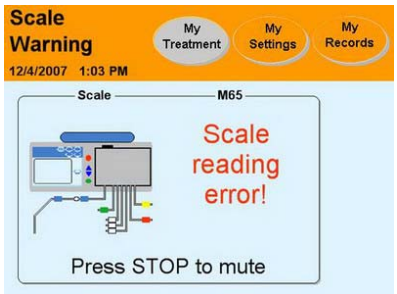
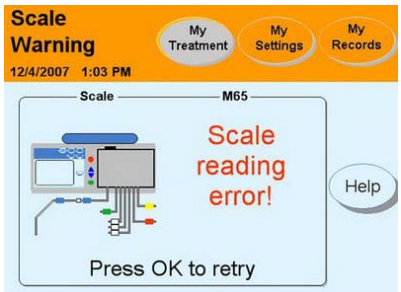
Liberty Cycler Warnings

Error Code	Warning Message (recoverable error)	Reason for Warning	May Occur During
M65	 	Unexpected scale change during treatment	☐ Any treatment phase (Drain, Dwell, Fill, or Pause)

Additional Instructions:

Make sure that heater bag is evenly placed on heater tray/ scale and covering bag sensor (see page 94 in Liberty Cycler User Guide, P/N 480038)

Press **Help** button

Remove any other material on heater tray

Press **Back** button

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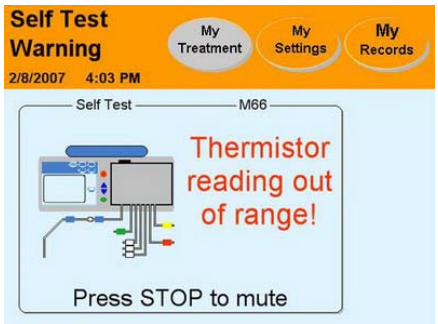
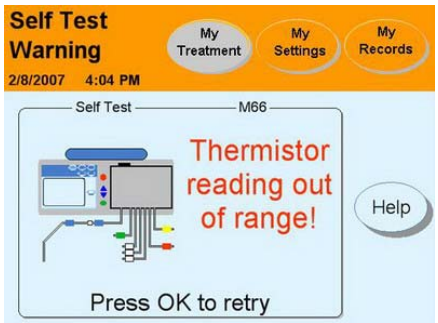
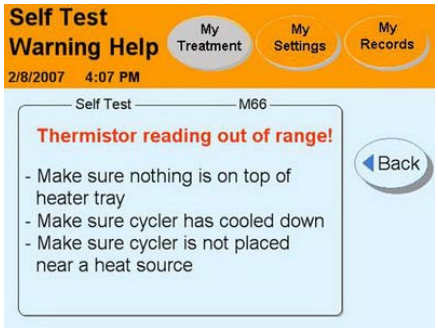
Liberty Cycler Warnings

Error Code	Warning Message (recoverable error)	Reason for Warning	May Occur During
M66	  	Self test failure due to; ☐ Heater bag or tray <1º C ☐ Thermistor readings differ by >5º C	☐ Set-up **step 1**

Additional Instructions:

Press **Help** button

Make sure nothing is on top of heater tray

Make sure cycler has cooled down

Make sure cycler is not placed near a heat source

Press **Back** button

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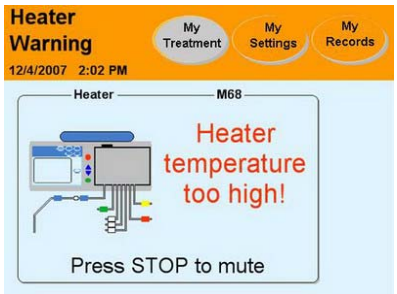
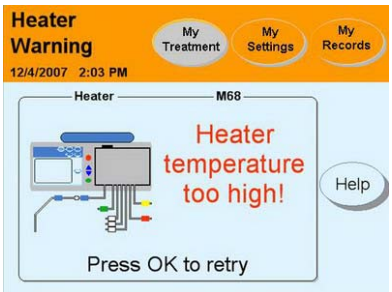
Liberty Cycler Warnings

Error Code	Warning Message (recoverable error)	Reason for Warning	May Occur During
M68	  	Heater tray >54º C	☐ Anytime from Power Up to Power Down

Additional Instructions:

Make sure that;

- Cycler is away from heating source
- Bag placed on heater is room temperature
- Nothing but heater bag is on heater tray

Press **Help** button

- **Make sure nothing is on top of heater tray**
- **Make sure cycler has cooled down**
- **Make sure cycler is not placed near a heat source**

Press **Back** button

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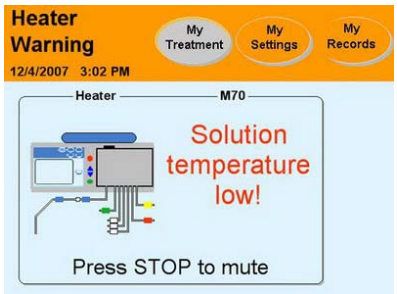
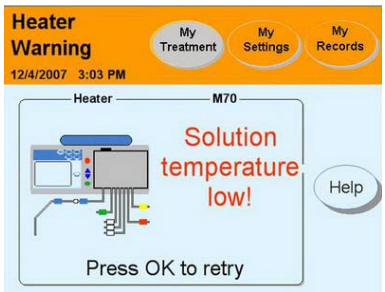
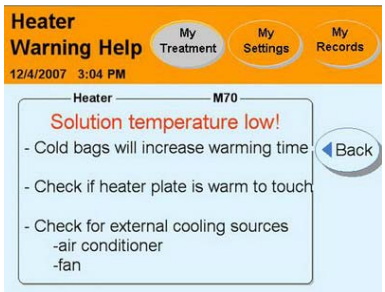
Liberty Cycler Warnings

Error Code	Warning Message (recoverable error)	Reason for Warning	May Occur During
M70	  	Heater bag <20º C	☐ Fill phase

Additional Instructions:

Make sure that;

Cycler is away from cooling source

Bag placed on heater is room temperature

Nothing but heater bag is on heater tray

Press **Help** button

Cold bags will increase warming times

Check if heater tray is warm to touch

Check for external cooling sources
- air conditioning
- fan

Press **Back** button

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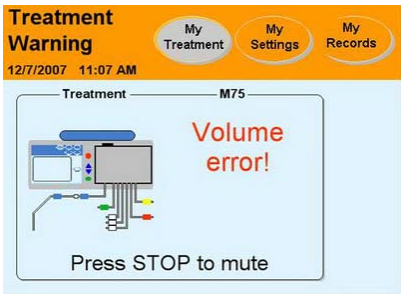
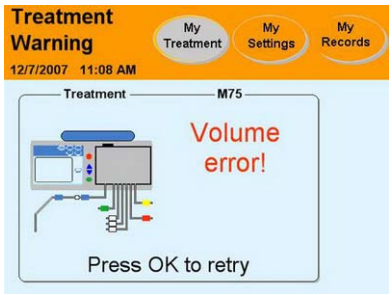
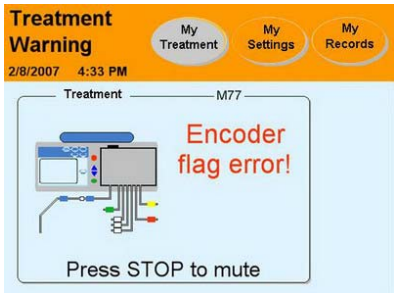
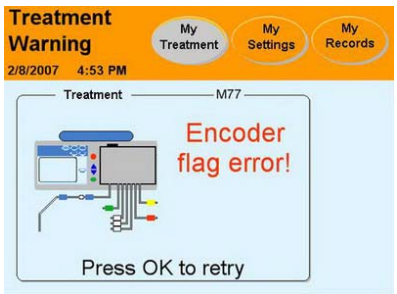
Liberty Cycler Warnings

Error Code	Warning Message (recoverable error)	Reason for Warning	May Occur During
M75	 	Solution is not being moved although pumps are moving.	☐ Fill ☐ Dwell ☐ Pause
M77	 	The motor pump head is not moving as expected.	☐ Set-up from **step 3** onward ☐ Connect **step 7** ☐ Any treatment phase (Drain, Dwell, Fill, or Pause) ☐ Disconnect **step 8** ☐ **Power Fail Recovery**

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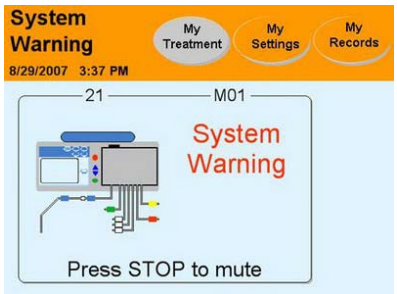
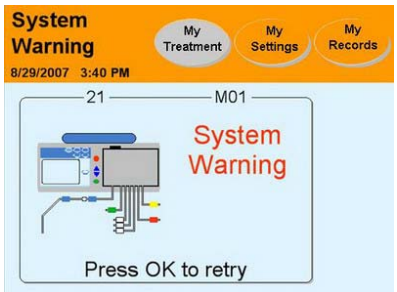
Liberty Cycler Warnings			
Error Code	**Warning Message** (recoverable error)	**Reason for Warning**	**May Occur During**
S_006 **(21-M01)**	 	Unusual system reading or action	☐ Anytime from Power Up to Power Down

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Alarms

Alarms: If a non-recoverable error is detected during Liberty cycler treatment, an alarm message will be displayed. An audible alarm will also sound. The screen will display the specific alarm as well as the alarm-specific error code. The status bar will turn **red** and display the type of alarm:

1. **Computer-related alarms**
    a. Battery RAM
    b. CRC
    c. EEPROM
    d. Watchdog
2. **Heater:** Heater tray error
3. **Pneumatic** (Air Pump): Pneumatic pump pressure error
4. **Self Test**: Cycler self-test error
5. **System**: Critical error
6. **Treatment:** Treatment-related error.

Troubleshooting Alarm Messages

Alarms typically require that treatment be terminated. However, the patient should be instructed to follow the steps below before disconnecting just in case technical support can resolve the issue.

1. Press the **STOP** key to mute the audible alarm.
2. Clamp all lines.
3. Make note of the following to provide to technical support;
    a. Alarm error code (displayed on screen)
    b. Cycler software version (displayed on sticker on top of cycler above door)
    c. Cycler serial number (displayed on sticker on top of cycler above door)
4. Turn off the cycler (back of cycler).
5. Call Technical Support (1800-227-2572).

Warning: All warning and alarms require immediate attention. Failure to do so may result in complications that may be severe.

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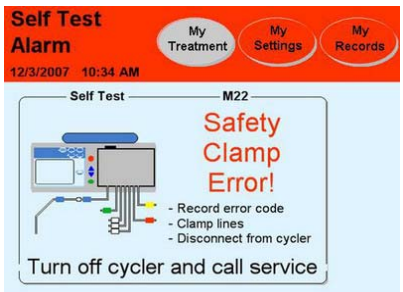
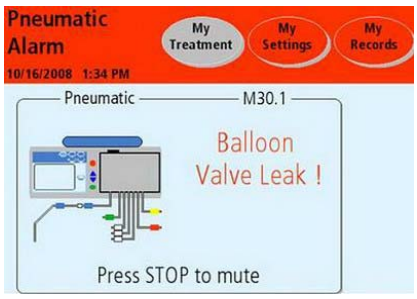
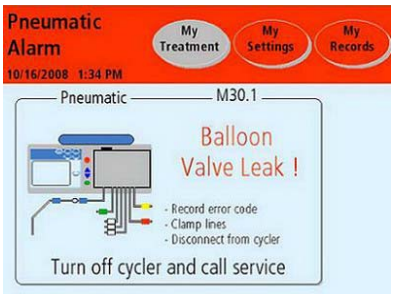
Liberty Cycler Alarms			
Error Code	**Alarm Message** (unrecoverable error)	**Reason for Alarm**	**May Occur During**
M22	 	Safety clamp test failed three times.	☐ Set-up **step 4**
M30.1	 	Self-test failed due to possible balloon valve leak during treatment.	☐ Any treatment phase (Drain, Dwell, Fill, or Pause)

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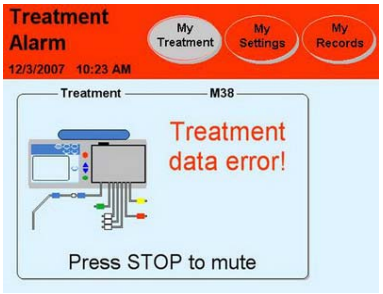
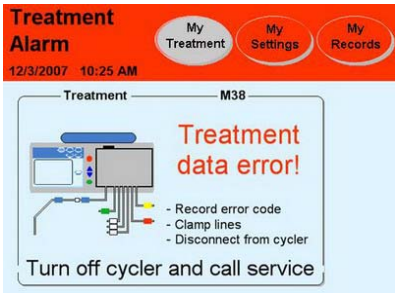
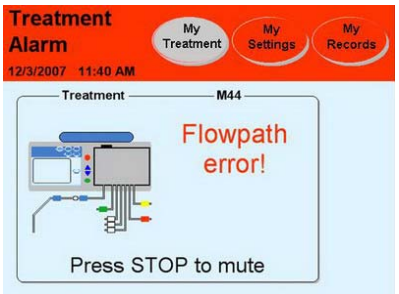
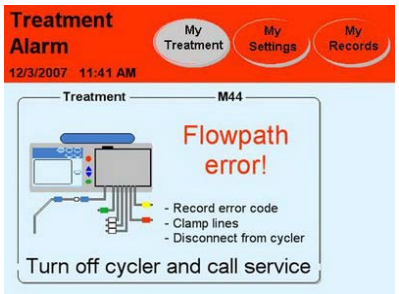
Liberty Cycler Alarms

Error Code	Alarm Message (unrecoverable error)	Reason for Alarm	May Occur During
M38	 	Due to; ☐ pending warnings or alarms when moving between phases ☐ corrupted therapy settings	☐ Connect **step 7** ☐ Any treatment phase (Drain, Dwell, Fill, or Pause) ☐ Disconnect **step 8** ☐ **Power Fail Recovery**
M44	 	Free flow of fluid detected in the cassette	☐ Connect **step 7** ☐ Any treatment phase (Drain, Dwell, Fill, or Pause) ☐ Disconnect **step 8** ☐ **Power Fail Recovery**

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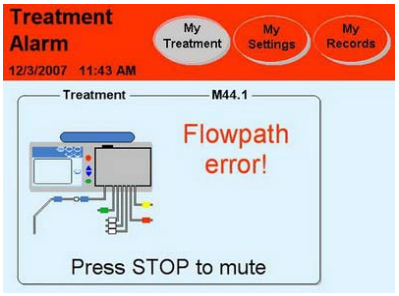
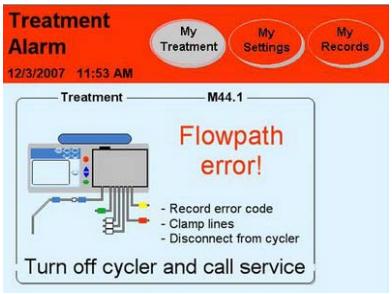
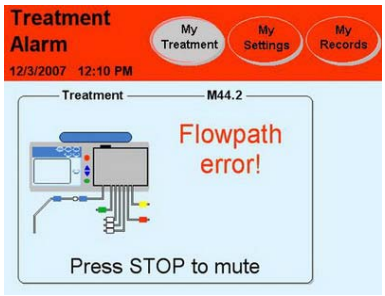
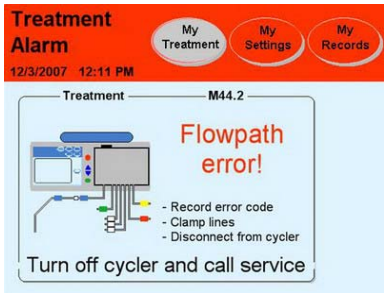
Liberty Cycler Alarms

Error Code	Alarm Message (unrecoverable error)	Reason for Alarm	May Occur During
M44.1	 	Fluid flowing in wrong direction	☐ Connect **step 7** ☐ Any treatment phase (Drain, Dwell, Fill, or Pause) ☐ Disconnect **step 8** ☐ **Power Fail Recovery**
M44.2	 	Increased or decreased (vacuum) pressure in fluid path	☐ Connect **step 7** ☐ Any treatment phase (Drain, Dwell, Fill, or Pause) ☐ Disconnect **step 8** ☐ **Power Fail Recovery**

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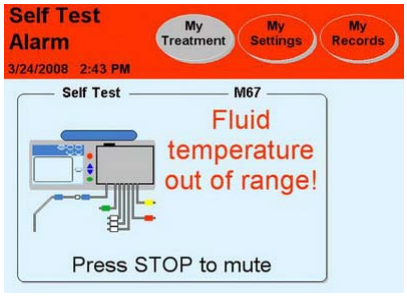
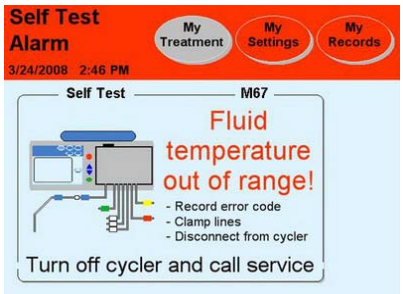
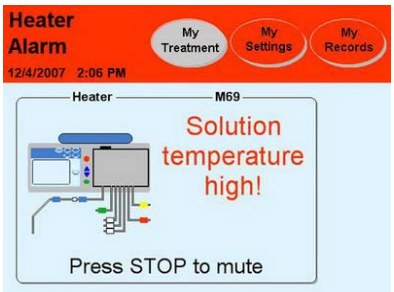
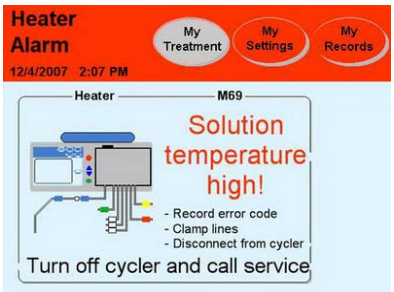
Liberty Cycler Alarms

Error Code	Alarm Message (unrecoverable error)	Reason for Alarm	May Occur During
M67	 	Solution temperature test failed because; ☐ heater bag too cold (<33° C) ☐ heater tray too cold (<30° C) ☐ heater bag or heater tray temperature not warming up.	☐ Set-up **step 5**
M69	 	Solution temperature test failed three times because heater bag >40° C	☐ Any time from Power Up to Power Down

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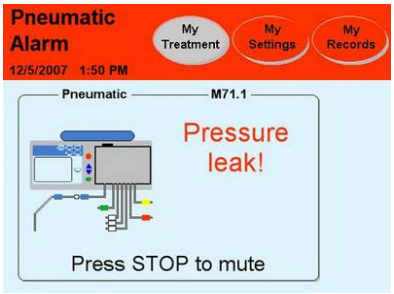
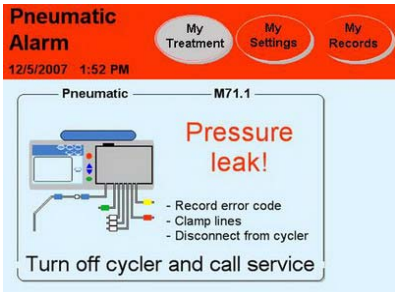
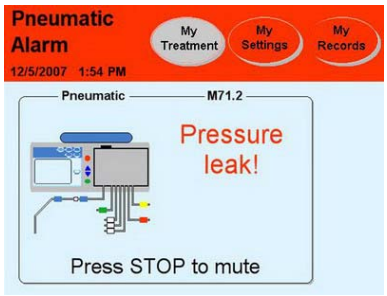
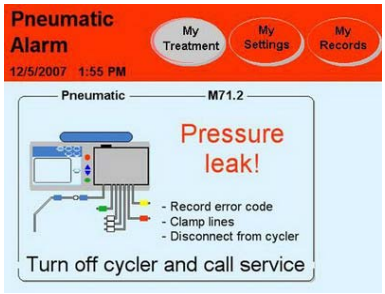
Liberty Cycler Alarms

Error Code	Alarm Message (unrecoverable error)	Reason for Alarm	May Occur During
M71.1	 	Air pump on for extended period due to possible pressure leak	☐ Set-up **step 3** ☐ Connect **step 7** ☐ Any treatment phase (Drain, Dwell, Fill, or Pause) ☐ Disconnect **step 8**
M71.2	 	Air pump on for extended period due to possible balloon valve sub-system leaking	☐ Set-up **step 3** ☐ Connect **step 7** ☐ Any treatment phase (Drain, Dwell, Fill, or Pause) ☐ Disconnect **step 8**

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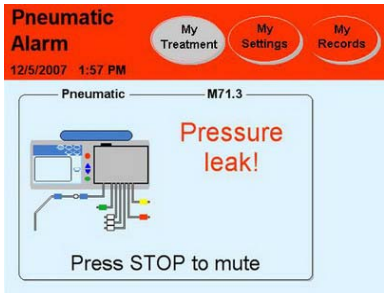
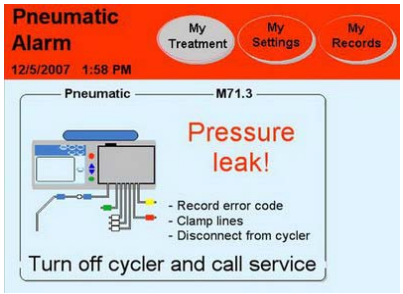
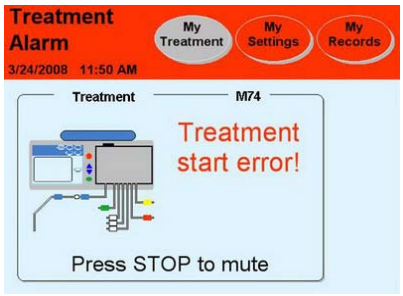
Liberty Cycler Alarms

Error Code	Alarm Message (unrecoverable error)	Reason for Alarm	May Occur During
M71.3	 	Air pump on for extended period due to possible vacuum leak	☐ Set-up **step 3** ☐ Connect **step 7** ☐ Any treatment phase (Drain, Dwell, Fill, or Pause) ☐ Disconnect **step 8**
M74	 	Treatment starts or ends without pressing the **Next** button	☐ Connect **step 7** ☐ Disconnect **step 8**

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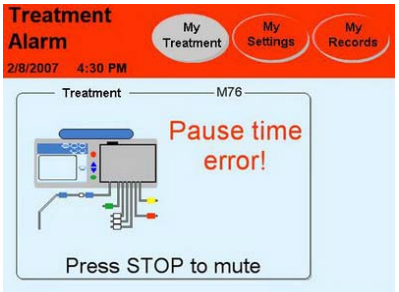
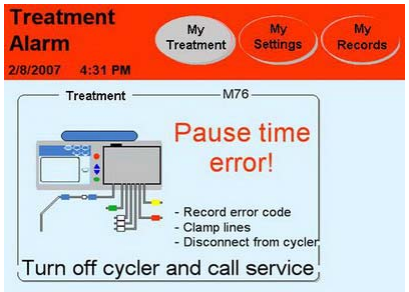
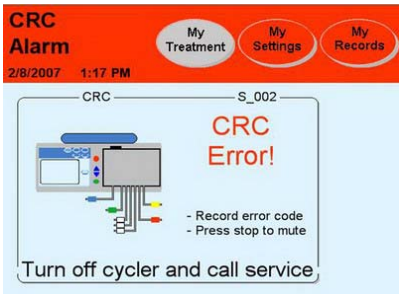
Liberty Cycler Alarms

Error Code	Alarm Message (unrecoverable error)	Reason for Alarm	May Occur During
M76	 	PAUSE time exceeds 24 hours	◻ PAUSE exchange
MWD		Critical error in software	◻ Any time from Power Up to Power Down
S_002		Critical error in firmware	◻ Any time from Power Up to Power Down

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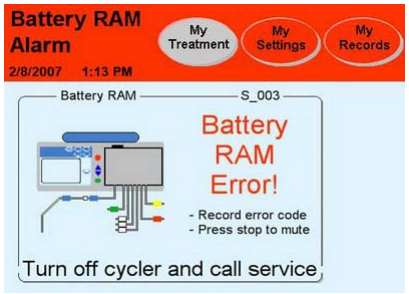
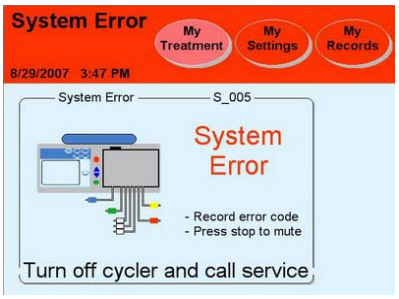
Liberty Cycler Alarms			
Error Code	**Alarm Message** (unrecoverable error)	**Reason for Alarm**	**May Occur During**
S_003		Critical error in battery RAM	☐ Any time from Power Up to Power Down
S_004		Critical error in circuit board	☐ Any time from Power Up to Power Down
S_005		Critical system error	☐ Any time from Power Up to Power Down

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FAQs

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Frequently Asked Questions

1. Why does the display read **Press OK to fill**?
   Drain has finished but the heater bag solution is still too cool (between 25° C and 33° C). The patient may either wait for the heater bag to warm up or press the **OK** key to begin filling with the cooler solution. If the **OK** key is NOT pressed, solution will continue to warm until it reaches 33° C. Fill will automatically begin when this temperature is reached.

2. Why does the display read **Please wait for solution to warm up or cool down?**
   Drain has finished and the temperature of the heater bag solution temperature is <25° or >38° C. The cycler will not allow Fill to begin until the heater bag solution temperature is >33° C and <38° C.

3. Why am I unable to insert the cassette?
   The cassette can only be inserted during set-up **step 1**. Attempting to insert the cassette at any other time will prompt a support message.

4. Why am I unable to remove the cassette?
   The cassette can only be removed at the end of treatment (**step 9)**. Attempting to remove the cassette at any other time will prompt a support message. If treatment is completed and the cassette cannot be removed, turn the cycler off and wait 10 seconds before turning it back on. When the **Power Fail Recovery** screen is displayed, press the **Cancel Treatment** button. Follow on-screen instructions to end treatment and remove the cassette.

5. Why do the letters '**P**', '**B**', '**F**', or '**S**' appear on the **Treatment Details** screen?
   The letter **P** identifies a PAUSE exchange. The letters **B**, **S**, and **F** identify treatment phases that were interrupted: **B** = bypass, **S** = STAT drain, and **F** = power failure.

6. How can I bypass a phase of treatment?
   Press and hold the **OK** key for four seconds. If it safe to do so, the screen will display the **bypass current phase** button. Press this button to bypass. If <50% of the previous Fill volume has drained or if the heater bag has not finished emptying or refilling, the **bypass current phase** button will be inactive (gray) and **bypass not allowed at this time** will be displayed. Please refer to the Liberty Cycler User Guide page 159 for more in-depth information related to bypassing during Liberty Cycler therapy.

7. How can I initiate a STAT (immediate) drain?
   Press the **STOP** key on a Fill, Dwell, or PAUSE screen. A **Stopped** screen will appear and a **STAT drain** button will appear on the right side of the screen. Pressing this button will open the **STAT drain option screen** which will display **Are you sure you want to do STAT drain?** above two screen buttons: **STAT drain** and **Cancel.** Press the **STAT drain** button to initiate an immediate drain. Please refer to the Liberty Cycler User Guide page 157 for more in-depth information related to doing a **STAT drain**.

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8. How can I enter Daytime Manual Exchange information?

   The Daytime Manual Exchange screen is displayed during Set-up just after **step 6**. Press the **daytime manual exch** button on this screen to activate the option. Change the default setting from **NO** to **YES**. This action will allow the entry of the Manual **Fill Volume** using the **UP/DOWN arrow** keys. After the **Next** button is pressed, you can review and confirm or correct the settings entered.

9. How can I enter blood pressure readings?

   The blood pressure is entered at the end of therapy when the Patient Data Screen is displayed. This screen will only be displayed if the Personal Data option = **YES**. Touch the **blood pressure** button to select it, and then use the **Up/Down Arrow** keys to change the first number (systolic). Press the **OK** key to confirm the selection. Use the **Up/Down Arrow** keys to set the Next number (diastolic) and press the **OK** key again to confirm the selection.

10. Why am I unable to program a drain time?

    Liberty Cycler software v. $\geq$ 2.8.2 prevents the programming of Cycle Based drains time shorter than 20 minutes or less than the previous Fill volume / 100, whichever is greater. This is intended to prevent unnecessary drain alarms due to insufficient drain time.

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