Power Processor
Daily, Weekly, and Monthly Maintenance
Job Aids

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Power Processor Daily Operational Checks  
With Aliquot Upgrade

Introduction

Follow these procedures to perform daily maintenance and checks. This checklist combines all of the procedures from the Daily Checklist, Daily Maintenance, Daily Startup and Daily Shutdown contained in the IFU into one convenient list.

There are two versions presented in this document. This version is used with a Power Processor with an Aliquot Module.

Use the maintenance checklist based on your Power Processor configuration. Be sure a module is Paused prior to performing maintenance on it.

This document is based on the Power Processor Instructions for Use p/n 968232-AF, revised 12/2009.
Daily Operational Checks
(with Aliquoter Module)

1. Wait for all samples to be sorted to Outlets
2. Remove all samples from Outlets
3. Check that the centrifuge sample tube holders swing freely
4. Check the supply of aliquot tips, labels and tubes. Load if necessary
5. Shutdown the Line Control Software
6. Send extra sample tube carriers through the system to the return lane
7. Turn the power off at the Inlet Module
8. Perform the following with the power off:
   - Inspect each module for foreign objects on the track
   - Ensure the Decapper Module biohazard chute is free from obstructions
   - Empty the Decapper Module biohazard container
   - Empty the rejected aliquot tube drawer
   - Clean the label printer area
   - Check the serum trip trays. Clean if serum is present
   - Clean the aliquot tip nozzles
   - If a Recapper is present, remove caps from the Rejected Cap Container and place the caps into the Cap Container
   - If a refrigerated stockyard is present, verify the temperature is within the laboratory established range
9. Perform Daily Shutdown of PrepLink Software
10. Perform Daily Startup
Daily Operational Checks (with Aliquoter Module)

1. Wait for all samples to be processed and sorted to outlet/storage modules.

2. Remove any sample tubes sorted to Outlets (Hematology Outlet, Outlet 1A and Outlet 1B if present). If no samples are present proceed to step 3.
   - Select the RACK LOAD button on the Outlet Module keypad. The RACK LOAD button flashes and the alarm activates
   - Press the ALARM button to silence the alarm
     - The Transfer Arm completes the current operation and moves to the Home position
     - The RACK LOAD button stays lit
   - Remove all racks containing samples from the Outlet Module.
   - Remove samples from the racks
   - Place empty rack(s) back onto the Outlet Module. Racks are keyed to fit only one way in each loading position. Make sure to replace personality racks with the same configuration of personality rack. The PAUSE/RUN light flashes after racks are loaded
   - Select PAUSE/RUN

3. Check that the centrifuge sample tube holders swing freely
   - Select PAUSE at the centrifuge module keypad
   - Remove the centrifuge safety shield
   - Release the centrifuge lock by turning the switch on the front of the centrifuge to the right
   - Open the centrifuge lid
   - Verify the centrifuge sample tube holders swing freely by manually tilting each one
   - Close the centrifuge lid
   - Replace the centrifuge safety shield

4. Check the aliquot tube supply. If necessary load tubes:
   - Select RACK LOAD from the labeler module keypad
   - Press the ALARM button to silence the alarm
   - Open the Labeler unit right side door
   - Slide the aliquot tube rack out of the system and place in the support tray.
   - Load a full rack of tubes in the Labeler Unit. The PAUSE/RUN light flashes when the rack of tubes is properly loaded
   - Close the Labeler unit door
   - Select PAUSE/RUN
5. Check aliquot tube labels. If necessary load labels
   - If the Labeler is configured with a Type II TEC printer (pictured below), use the procedure contained in the Instruction for Use manual, Section D, How to Replace the Roll of Labels in the Labeler Unit for the Type II TEC printer

   **NOTE:** There are three different printers in use on Power Processor systems. These are identified as Type 1, Type 2, and Type 3 printers. The label replacement procedure differs slightly between the three types.

6. Check/Load aliquot tips. If necessary load tips:
   - Select **RACK LOAD** from the aliquot module keypad
   - Press the **ALARM** button to silence the alarm
   - Open the Aliquot Unit door
   - Slide the aliquot tip rack out the system and place in the support tray.
   - Load a full rack of tubes in the Labeler Unit. The **PAUSE/RUN** light flashes when the rack of tubes is properly loaded
   - Close the Aliquot Unit door
   - Select **PAUSE/RUN**

7. If your automation has LX/DxC connections:
   - Select the **PrtScrn** key on the keyboard
   - From the pop-up window, select **PrepLink**
   - Press the **ENTER** key on the keyboard
   - Verify the LX/DxC instrument is in **Standby** mode
   - Select the **Setup** tab
   - Select **Instrument Mode**
   - Select the drop-down ▼arrow under “Current Status” next to the LX/DxC connection
   - Select **Manual**
   - Repeat for each LX/DxC connection
8. Shutdown the Line Control Computer:
   - Select PrtScrn from the keyboard.
   - Select Line Computer, press ENTER
   - Select System Operation from the Line Control Computer menu bar.
   - Select Shutdown in the System Operation menu
   - Select OK in the Shutdown dialog box
   - If a pop-up window appears referring to samples on the line, verify there are not any samples on the line then select OK
   - If a black pop-up window appears, minimize the pop-up window
   - Verify the System Status box is OFF and the Host Communication box is OFFLINE.

9. If your Power processor configuration has connected instruments, send extra sample tube carriers through the system to the return lane.
   - Select System Setup from the Line Controller Main screen
   - Select System Setup
   - Select Thru Lane On/Off
   - Select OK
   - Once the sample tube carriers pass the track’s H lane, select Exit

10. Press the red power OFF button at the Inlet Module.

   Perform the following maintenance procedures with the line power OFF

11. Inspect each module for foreign objects on the track.
   - Remove any caps, tubes, tips or other foreign objects if found on the track

12. Ensure the Decapper Module biohazard chute is free from obstructions
   - Place a cap in the chute and verify it falls freely into the biohazard container


14. Empty the rejected aliquot tube drawer located on the lower section of the Aliquot Labeler
   - Discard aliquot tubes with labels
   - Discard any damaged aliquot tubes
   - Aliquot tubes without labels and undamaged may be put into inventory
15. Check/Clean the label printer area in the Aliquot Labeler Unit.

- Open the left Labeler Unit door
- Turn the printer power switch to the **OFF** position
- Pull out the printer drawer using the printer handle
- Open the printer door by pushing in the top and bottom printer door release tabs
- With a soft brush, gently wipe away any debris from the Black mark sensor, Strip sensor, Feed gap sensor and any other areas within the printer showing dust
- Press the “raised dots” on the top and bottom corners of the printer door. You should hear two clicks when the door is properly closed
- With a soft brush, clean the outside of the printer
- Push the printer drawer all the way in
- Turn the printer power switch to the **ON** position
- Close the left Labeler Unit door
16. Check the serum drip trays located in the Aliquot Module. If serum is present:
   - Using biohazard protection, place a finger under the tray and hold the sides of the tray with thumb and finger of your other hand. Lift trays up and out of the Aliquot Unit
   - Clean the trays with swabs moistened with 10% bleach solution or laboratory biohazard cleaning solution
   - Rinse trays with distilled water
   - Replace the serum drip tray by aligning the square peg on the bottom of the drip tray with the square opening on the drip tray mounting plate

17. Clean the three Aliquot Tip Nozzles located in the Aliquot Module. Two are located behind the left door (shown above), and one is located above the front left corner of the Aliquot tips storage rack (not shown)
   - Moisten a lintless tissue with alcohol-free window cleaner
   - Gently clean each aliquot tip nozzle with the tissue
18. If a Recapper is present, remove caps from the Rejected Cap Container and place the caps into the Cap Container. The rejected cap container is accessible from the back of the line.

19. Fill the Cap Container with additional caps if necessary. Only fill the cap container (accessible from the top of the Recapper module) to the red maximum fill line.

20. If a refrigerated Stockyard is present, verify the temperature is within the laboratory established range.

21. Perform Daily Shutdown of PrepLink software
   - Press PrtScrn on the keyboard to select PrepLink
   - From the pop-up window, select PrepLink, press ENTER
   - Select Shutdown in the lower left corner of the PrepLink screen. The Shutdown dialog box appears and asks, “Shutdown the PrepLink?”
   - Select Yes in the Shutdown dialog box. The desktop appears.
   - NOTE: The PrepLink saves sample programming information to its database at each exit
22. Perform Daily Startup

- Press the green **ON** button on the Inlet Module
- Double-click on the PrepLink Icon on the PrepLink desktop. The PrepLink screen appears
- If you have a LX/DxC connection:
  - Verify the LX/DxC is in Standby
  - Select the **Setup** tab
  - Select Instrument Mode
  - Select the drop-down ▼ selection next to the LX/DxC connection
  - Select Automation
- Press **PrtScrn** on the keyboard
- From the pop-up window, select **Line Computer**, press **ENTER**
- Select **System Operation** from the Line Control Computer menu bar
- Select **Startup**. The Startup dialog box appears
- Select the Delete Processed Samples Only button.
- Select **OK** in the Startup dialog box
- Verify the System Status box in **ON** and the Host Communication box is **ONLINE**
- Make sure the Line Control Computer Main screen track is blue color, which indicates routine operation. If parts of the track diagram are not blue, this indicates a communication error. If there is no communication error, proceed to the next step
- If a communication error did occur, select the **Screen Refresh** button. If the track is still not blue, then follow the instructions that relate to the software version in your laboratory contained in the Instructions for Use manual
- Press the **AUTO/MANUAL** button two times at the Inlet Module keypad to place the module in Auto mode. The RACK LOAD button will be solid lit and the system is ready to process samples
Power Processor Daily Operational Checks
Without Aliquot Upgrade

Introduction

Follow these procedures to perform daily maintenance and checks. This checklist combines all of the procedures from the Daily Checklist, Daily Maintenance, Daily Startup and Daily Shutdown contained in the IFU into one convenient list.

There are two versions presented in this document. This version is used with a Power Processor without an Aliquot Module.

Use the maintenance checklist based on your Power Processor configuration. Be sure a module is Paused prior to performing maintenance on it.

This document is based on the Power Processor Instructions for Use p/n 968232-AF, revised 12/2009.
Daily Operational Checks (without Aliquoter Module)

1. Wait for all samples to be sorted to Outlets
2. Remove all samples from Outlets
3. Check that the centrifuge sample tube holders swing freely
4. Shutdown the Line Control Software
5. Send extra sample tube carriers through the system to the return lane
6. Turn the power off at the Inlet Module
7. Perform the following with the power off:
   - Inspect each module for foreign objects on the track
   - Ensure the Decapper Module biohazard chute is free from obstructions
   - Empty the Decapper Module biohazard container
   - If a Recapper is present, remove caps from the Rejected Cap Container and place the caps into the Cap Container
   - If a refrigerated stockyard is present, verify the temperature is within the laboratory established range
8. Perform Daily Shutdown of PrepLink Software
9. Perform Daily Startup
Daily Operational Checks (without Aliquoter Module)

1. Wait for all samples to be processed and sorted to outlet/storage modules.

2. Remove any sample tubes sorted to Outlets (Hematology Outlet, Outlet 1A and Outlet 1B if present). If no samples are present proceed to step 3.
   - Press the **RACK LOAD** button on the Outlet Module keypad. The RACK LOAD button flashes and the alarm activates
   - Press the **ALARM** button to silence the alarm
     - The Transfer Arm completes the current operation and moves to the Home position
     - The RACK LOAD button stays lit
   - Remove all racks containing samples from the Outlet Module.
   - Remove samples from the racks
   - Place empty rack(s) back onto the Outlet Module. Racks are keyed to fit only one way in each loading position. Make sure to replace personality racks with the same configuration of personality rack. The PAUSE/RUN light flashes after racks are loaded
   - Select **PAUSE/RUN**

3. Check that the centrifuge sample tube holders swing freely
   - Select **PAUSE** at the centrifuge module keypad
   - Remove the centrifuge safety shield
   - Release the centrifuge lock by turning the switch on the front of the centrifuge to the right
   - Open the centrifuge lid
   - Verify the centrifuge sample tube holders swing freely by manually tilting each one
   - Close the centrifuge lid
   - Replace the centrifuge safety shield

4. If your automation has LX/DxC connection:
   - Select the **PrtScrn** key on the keyboard
   - From the pop-up window, select **PrepLink**
   - Press the **ENTER** key on the keyboard
   - Verify the LX/DxC instrument is in **Standby** mode
   - Select the **Setup** tab
   - Select **Instrument Mode**
   - Select the drop-down ▼arrow under “Current Status” next to the LX/DxC connection
   - Select **Manual**
   - Repeat for each LX/DxC connection
5. Shutdown the Line Control software
   - Select PrtScrn from the keyboard
   - Select Line Computer, press ENTER
   - Select System Operation from the Line Control Computer menu bar
   - Select Shutdown in the System Operation menu
   - Select OK in the Shutdown dialog box
   - If a pop-up window appears referring to samples on the line, verify there are not any samples on the line then select OK
   - If a pop-up window appears, minimize the pop-up window
   - Ensure the System Status box is OFF and the Host Communication box is OFFLINE.

6. If your Power processor configuration has connected instruments, send extra sample tube carriers through the system to the return lane.
   - Select System Setup from the Line Controller Main screen
   - Select System Setup
   - Select Thru Lane On/Off
   - Select OK. Sample tube carriers may pass through the system to the H lane
   - Select Exit

7. Press the red power OFF button at the Inlet Module

Perform the following maintenance procedures with the line power OFF

8. Inspect each module for foreign objects on the track
   - Remove any caps, tubes, tips or other foreign objects if found on the track

9. Ensure the Decapper Module biohazard chute is free from obstructions
   - Place a cap in the chute and verify it falls freely into the biohazard container

10. Empty the Decapper Module biohazard container.
11. If a Recapper is present, remove caps from the Rejected Cap Container and place the caps into the Cap Container located on the top of the Recapper module. The rejected cap container is accessible from the rear side of the line.

12. Fill the Cap Container with additional caps if necessary. Only fill the cap container (accessible from the top of the Recapper module) to the red maximum fill line.

13. If a refrigerated Stockyard is present, verify the temperature is within the laboratory established range.

14. Perform Daily Shutdown of PrepLink software:
   - Select **Shutdown** in the lower left corner of the PrepLink screen. The Shutdown dialog box appears and asks, “Shutdown the PrepLink?”
   - Select **Yes** in the Shutdown dialog box. The desktop appears.
   - **NOTE:** The PrepLink saves sample programming information to its database at each exit.
15. Perform Daily Startup

- Press the green **ON** button on the Inlet Module
- Double-click on the PrepLink Icon on the PrepLink desktop. The PrepLink screen appears
- If you have a LX/DxC connection:
  - Verify the LX/DxC is in *Standby* mode
  - Select the **Setup** tab
  - Select Instrument Mode
  - Select the drop-down ▼ selection next to the LX/DxC connection
  - Select Automation
- Press the **PrtScrn** key on the keyboard
- From the pop-up window, select **Line Computer**
- Press the **ENTER** key on the keyboard
- Select **System Operation** from the Line Control Computer menu bar.

- Select **Startup**. The Startup dialog box appears and wait until it self terminates
- Select the Delete Processed Samples Only button.
- Select **OK** in the Startup dialog box
- Ensure the System Status box is **ON** and the Host Communication box is **ONLINE**
- Ensure the Line Control Computer Main screen track is blue (which indicates routine operation). If parts of the track diagram are not blue, this indicates a communication error. If there is no communication error, proceed to the next step.
- If a communication error did occur, select the **Screen Refresh** button. If the track is still not blue, then follow the instructions that relate to the software version in your laboratory contained in the Instructions for Use manual
- Press the **AUTO/MANUAL** button two times at the Inlet Module keypad to place the module in Auto mode. The RACK LOAD button will be solid lit and the system is ready to process samples
Power Processor Weekly Maintenance
With Aliquot Upgrade

Introduction

Follow these procedures to perform weekly maintenance and checks. This document combines all of the procedures for Weekly Maintenance contained in the IFU into one convenient list.

There are two versions presented in this document. The first version is used with a Power Processor with an Aliquot Module. The second version is used with a Power Processor without an Aliquot Module.

Use the maintenance checklist appropriate to your Power Processor configuration. Be sure a module is Paused prior to performing maintenance on it.

This document is based on the Power Processor Instructions for Use p/n 968232-AF, revised 12/2009.
Power Processor Weekly Maintenance Checks (with Aliquot Module)

- Wait for all samples to be sorted to Outlets. Do not process any samples on the Power Processor while performing maintenance.
- Remove all samples from Outlets.
- Inspect and clean each module’s gripper fingers and pads.
- Inspect the external Transfer Arm for loose screws and tighten as needed.
- Inspect and clean the centrifuge.
- Clean each group of five red fiber optic sensors.
- Clean all bar code readers.
- Inspect and clean all bar code spinners with orange O-rings.
- Inspect and clean the five tube nozzles located in the Labeler Unit.
- Inspect and clean the three tip nozzles located in the Aliquot Unit.
- Clean the Serum Drip Trays located in the Aliquot Unit.
- Clean the Aliquot Tip Ejector Chute.
- Empty the Rejected Caps Container at the Recapper Module.

Only perform the maintenance on modules specific to your configuration.
1. Wait for all samples to be processed and sorted to outlet/storage modules. Do not process any samples on the Power Processor while performing maintenance procedures.

2. Remove any sample tubes sorted to Outlets (Hematology Outlet, Outlet 1A and Outlet 1B if present). If no samples are present proceed to step 3
   - Select the RACK LOAD button on the Outlet Module keypad. The RACK LOAD button flashes and the alarm is activated.
   - Press the ALARM button to silence the alarm
     - The RACK LOAD button stays lit
   - Remove all racks containing samples from the Outlet Module.
   - Remove samples from the racks
   - Place empty rack(s) back onto the Outlet Module. Racks are keyed to fit only one way in each loading position. Make sure to replace personality racks with the same configuration of personality rack. The PAUSE/RUN light flashes after racks are loaded
   - Select PAUSE/RUN

3. Inspect and clean each module’s gripper fingers and pads:
   - At the module keypad you are working with, press the AUTO/MANUAL button twice to change to MANUAL mode. The AUTO/MANUAL button light flashes, then stays lit to indicate that the module is in MANUAL mode
     - Press the FUNCTION +/- buttons to set the display at “54”
     - Press the ENTER button on the keypad to open the gripper
     - Inspect and clean the gripper fingers and pads with a dampened laboratory tissue or cotton tipped applicator stick moistened with alcohol-free window cleaner. Window cleaner with ammonia is acceptable. If gripper pads are missing or worn, replace them using the procedure on D-12. If the gripper fingers are damaged, contact a Beckman Coulter Representative
   - After maintenance is completed, press the AUTO/MANUAL button twice to return to AUTO mode. This also homes the transfer arm

4. Inspect the external Transfer Arm and gripper finger for loose screws. Tighten as needed
   - Use a screwdriver to tighten any loose screws you find on the external Transfer Arm
5. Inspect and clean the centrifuge
   - Press **PAUSE/RUN** at the centrifuge module keypad
   - Remove the centrifuge safety shield
   - Release the centrifuge door lock by turning the door release switch on the front of the centrifuge to the right
   - Open the centrifuge door by pulling up from the handle on the top
   - Wipe the centrifuge sample tube holders, rotor and bowl with alcohol
   - Ensure each tube holder is tightly attached to its bucket. Pull on each tube holder. If it feels loose contact a Beckman Coulter Representative
   - Close the centrifuge door by firmly pressing down on the centrifuge door with the palms of your hands

6. Clean each group of five red fiber optic sensors located at the Inlet Module and each centrifuge with a laboratory lens cleaner:
   - Press the **AUTO/MANUAL** button twice at the Inlet Module to change to MANUAL mode. The AUTO/MANUAL button light flashes, then stays lit to indicate that the module is in MANUAL mode
     - Moisten laboratory lint free tissue with lens cleaner and gently wipe each group of five fiber optic sensors at the Inlet Module and at each centrifuge
     - Press the **PAUSE/RUN** at the centrifuge to un-pause it
     - Press the **AUTO/MANUAL** button twice at the Inlet Module to change to Auto mode. The AUTO/MANUAL button light flashes, then stays lit to indicate that the module is in Auto mode

7. Clean all of the bar code readers with a laboratory lens cleaner:
   - Moisten laboratory lint free tissue with lens cleaner and gently wipe the glass lens on each bar code reader

8. Inspect and clean the bar code spinners with orange O-rings using window cleaner containing no alcohol. Window cleaner containing ammonia is acceptable
   - For bar code spinners with covers, remove only one screw from the cover, and slide the cover to access the spinner’s orange O-ring in order to clean it. Some bar code spinners will not have covers, simply clean the O-ring
   - Clean the orange O-rings with swabs moistened with alcohol-free window cleaner
   - Gently move the O-ring and clean the outside circumference.
   - For bar code spinners with covers, move the cover into position and replace the screw
9. Clean the bar code spinner O-ring at the Generic Connection
   Aspiration Bar Code Reader
   - Press the **PAUSE/RUN** button on the Generic Connection
     Module keypad to put the module in the PAUSE mode. Verify
     that the PAUSE/RUN button is lit.
   - Remove the 4 screws from the LAS (Laboratory Automation
     System) sample pipette cover.
   - Carefully lift and remove the cover
   - Remove the screws from the Bar Code Spinner Cover in front of
     the Aspiration Bar Code (BCR02)
   - Lift and remove the cover
   - Clean the orange O-ring with swabs moistened with alcohol-free
     window cleaner. Window cleaner with ammonia is acceptable.
   - Gently clean the outside circumference of the O-ring
   - Replace the covers and screws
   - Press the **PAUSE/RUN** button on the Generic Connection
     Module keypad to resume routine operations.

10. Inspect and clean the five tube nozzles in the Labeler Unit.
    - Press the **AUTO/MANUAL** button two times using the Labeler
      Module keypad to place the module in Manual mode.
    - Wait for the tube to be ejected from the single nozzle located
      above the label printer and all internal components to stop
      moving
      - Open the Labeler unit right side safety shield door
      - Inspect the four tube nozzles located above the aliquot
        tube storage tray. If worn or torn, contact a Beckman
        Coulter Representative
      - Clean the four tube nozzles with a lint free tissue
        moistened with alcohol-free window cleaner. Window
        cleaner with ammonia is acceptable
      - Inspect the single tube nozzle located above the label
        printer. If worn or torn, contact a Beckman Coulter
        Representative
      - Clean the single tube nozzle with a lint free tissue
        moistened with alcohol-free window cleaner. Window
        cleaner with ammonia is acceptable.
    - Press the **AUTO/MANUAL** button on the keypad display
      two times to place the module back into Auto mode
11. Inspect and clean the three tip nozzles in the Aliquot Unit.
   - Press the AUTO/MANUAL button two times using the Aliquot Module keypad to place the module in Manual mode
   - Wait for the two Aliquot tips to be ejected from the nozzles located behind the left side door and all internal components to stop moving
   - Open the Aliquot unit left side safety shield door
   - Inspect the two tip nozzles. If worn or torn, contact a Beckman Coulter Representative
   - Clean the two tip nozzles with a lint free tissue moistened with alcohol-free window cleaner. Window cleaner with ammonia is acceptable
   - Inspect the single tip nozzle located behind the right door above the Aliquot tip storage tray in the front left side. If worn, contact a Beckman Coulter Representative
   - Clean the single tip nozzle with lint free tissue moistened with alcohol-free window cleaner. Window cleaner with ammonia is acceptable
12. Clean the two Serum Drip Trays located in the Aliquot Tip Unit
   - Verify the Aliquot Module is in Manual mode
   - Open the left side safety shield door to the Aliquot Tip Unit
   - Using biohazard protection, place a finger under the white serum drip tray and hold the sides of the tray with the thumb and finger of your other hand
   - Lift the tray up and out of the Aliquot Unit

   - Clean the tray with swabs moistened with 10% bleach solution or laboratory biohazard cleaning solution
   - Rinse tray with distilled water
   - Align the bottom of the tray with the square opening on the mounting plate, and replace the tray
   - Repeat these steps for the second tray
13. Clean the Aliquot Tip Ejector Chute
   - Verify the Aliquot Module is in Manual mode
   - Remove the safety cover that is mounted on the lower front exterior panel of the Aliquot Module
   - Open the left side safety shield door
   - Clean any residue from the inside of the chute with cotton tipped applicator sticks and a laboratory biohazard cleanser.
   - Locate the area where the tip ejection chute opens on the outside of the Aliquot Unit
   - Release any tips that may be sticking in the chute
   - Wipe clean any residue from the inside the chute. You may use paper towels, gauze, forceps and biohazard cleaning solution
   - Close the left side safety shield door
   - Replace the safety cover on the lower front exterior panel of the Aliquot Module
   - Press the AUTO/MANUAL button two times using the Aliquot Module keypad to place the module in Auto mode

14. Empty the Rejected Caps Container at the Recapper Module
   - Open the rear door to the Recapper
   - Remove the Rejected Caps Container
   - Empty the the caps into the Cap Container located at the top of the Recapper
   - Re-install the Rejected Caps Container with the slanted side to the right
   - Close the rear door of the Recapper Module
Power Processor Weekly Maintenance
Without Aliquot Upgrade

Introduction

Follow these procedures to perform weekly maintenance and checks. This document combines all of the procedures for Weekly Maintenance contained in the IFU into one convenient list.

There are two versions presented in this document. This version is used with a Power Processor without an Aliquot Module.

Use the maintenance checklist appropriate to your Power Processor configuration. Be sure a module is Paused prior to performing maintenance on it.

This document is based on the Power Processor Instructions for Use p/n 968232-AF, revised 12/2009.
Power Processor
Weekly Maintenance Checks
(without Aliquot Module)

1. Wait for all samples to be sorted to Outlets. Do not process any samples on the Power Processor while performing maintenance.
2. Remove all samples from Outlets.
3. Inspect and clean each module’s gripper fingers and pads.
4. Inspect the external Transfer Arm for loose screws and tighten as needed.
5. Inspect and clean the centrifuge.
6. Clean each group of five red fiber optic sensors.
7. Clean all bar code readers.
8. Inspect and clean all bar code spinners with orange O-rings.

Only perform the maintenance on modules specific to your configuration.
Power Processor Weekly Maintenance Checks

(without Aliquot Module)

1. Wait for all samples to be processed and sorted to outlet/storage modules. Do not process any samples while performing maintenance procedures.

2. Remove any sample tubes sorted to Outlets (Hematology Outlet, Outlet 1A and Outlet 1B if present). If no samples are present proceed to step 3.
   - Select the RACK LOAD button on the Outlet Module keypad. The RACK LOAD button flashes and the alarm is activated.
   - Press the ALARM button to silence the alarm - The RACK LOAD button stays lit
   - Remove all racks containing samples from the Outlet Module.
   - Remove samples from the racks
   - Place empty rack(s) back onto the Outlet Module. Racks are keyed to fit only one way in each loading position. Make sure to replace personality racks with the same configuration of personality rack. The PAUSE/RUN light flashes after racks are loaded
   - Select PAUSE/RUN

3. Inspect and clean each module’s gripper fingers and pads:
   - At the module keypad you are working with, press the AUTO/MANUAL button twice to change to MANUAL mode. The AUTO/MANUAL button light flashes, then stays lit to indicate that the module is in MANUAL mode
     - Press the FUNCTION +/- buttons to set the display at “54”
     - Press the ENTER button on the keypad to open the gripper.
     - Inspect and clean the gripper fingers and pads with a dampened laboratory tissue or cotton tipped applicator stick moistened with alcohol-free window cleaner. Window cleaner with ammonia is acceptable. If gripper pads are missing or worn, replace them using the procedure on D-12. If the gripper fingers are damaged, contact a Beckman Coulter Representative
     - After maintenance is completed, press the AUTO/MANUAL button twice to return to the module to AUTO mode. This also homes the transfer arm
     - Repeat these steps for each module that has gripper pads
4. Inspect the external Transfer Arm and gripper finger screws. Tighten if necessary
   - Use a screwdriver to tighten any loose screws you find on the external Transfer Arm

5. Inspect and clean the centrifuge
   - Press the PAUSE/RUN at the centrifuge module keypad
   - Remove the centrifuge safety shield
   - Release the centrifuge door lock by turning the door release switch on the front of the centrifuge to the right
   - Open the centrifuge door by pulling up from the handle on the top
   - Wipe the centrifuge sample tube holders, rotor and bowl with alcohol
   - Ensure each tube holder is tightly attached to their buckets. Pull on each tube holder. If it feels loose contact a Beckman Coulter Representative
   - Close the centrifuge door by firmly pressing down on the centrifuge door with the palms of your hands

6. Clean each group of five red fiber optic sensors located at the Inlet Module and each centrifuge with a laboratory lens cleaner:
   - Press the AUTO/MANUAL button twice at the Inlet to change it to MANUAL mode. The AUTO/MANUAL button light flashes, then stays lit to indicate that the module is in MANUAL mode
   - Moisten laboratory lint free tissue with lens cleaner and gently wipe each group of five fiber optic sensors at the Inlet Module and at each centrifuge
   - Press the PAUSE/RUN at the centrifuge to un-pause it
   - Press the AUTO/MANUAL button twice at the Inlet Module to change to Auto mode. The AUTO/MANUAL button light flashes, then stays lit to indicate that the module is in Auto mode

7. Clean all of the bar code readers on the Power Processor with a laboratory lens cleaner:
   - Moisten laboratory lint free tissue with lens cleaner and gently wipe the glass lens on each bar code reader
8. Inspect and clean the bar code spinners with orange O-rings located across from each bar code reader
   - For bar code spinners with covers, remove only one screw from the cover, and slide the cover to access the spinner’s orange O-ring in order to clean it. Some bar code spinners will not have covers, simply clean the O-ring
   - Clean the orange O-rings with swabs moistened with alcohol-free window cleaner. Window cleaner containing ammonia is acceptable
   - Gently move the O-ring and clean the outside circumference
   - For bar code spinners with covers, move the cover into position and replace the screw

9. Clean the bar code spinner O-ring at the Generic Connection Aspiration Bar Code Reader
   - Press the PAUSE/RUN button on the Generic Connection Module keypad to put the module in the PAUSE mode. Verify that the PAUSE/RUN button is lit
   - Remove the 4 screws from the LAS (Laboratory Automation System) sample pipette cover
   - Carefully lift and remove the cover
   - Remove the screws from the Bar Code Spinner Cover in front of the Aspiration Bar Code (BCR02)
   - Lift and remove the cover
   - Clean the orange O-ring with swabs moistened with alcohol-free window cleaner. Window cleaner with ammonia is acceptable
   - Gently clean the outside circumference of the O-ring
   - Replace the covers and screws
   - Press the PAUSE/RUN button on the Generic Connection Module keypad to resume routine operations.
10. Empty the Rejected Caps Container at the Recapper Module
   - Open the rear door to the Recapper
   - Remove the Rejected Caps Container
   - Empty the the caps into the Caps Container located at the top of the Recapper
   - Re-install the Rejected Caps Container with the slanted side to the right
   - Close the rear door of the Recapper Module
Power Processor Monthly Maintenance

Introduction

Follow these procedures to perform Monthly Maintenance and Checks. This document combines all of the procedures for Monthly Maintenance contained in the IFU into one convenient list.

Only perform maintenance on the modules configured in your facility. Be sure a module is Paused prior to performing maintenance on it.

This document is based on the Power Processor Instructions for Use p/n 968232-AF, revised 12/2009.
Power Processor
Monthly Maintenance Checks

Wait for all samples to be sorted to Outlets
Do not process any samples on the Power Processor while performing maintenance

Remove all samples from Outlets

Check all visible air hoses for kinks and loose connections

Check the centrifuge’s orange washers

Check the green transfer belts

Clean the Stockyard’s gripper pads

Set the LX/DxC connection to Manual mode

Shutdown the Line Control Software

Turn the power off at the Inlet Module

Perform the following maintenance with the power to the Line off:
- Check all surface screws on the system
- Clean the cooling fans
- Clean the track belts

Perform a Daily Startup

Only perform the maintenance on modules specific to your configuration
1. Check all visible air hoses
   - Check all visible air hoses for loose connections or kinks
   - Reconnect loose connections and un-kink hose as needed
   - For damaged or worn air hose, contact a Beckman Coulter Representative

2. Check cooling fans for proper operations
   - Locate the cooling fans on the lower panels of the Power Processor
   - Verify each fan is rotating and blowing air
   - Contact a Beckman Coulter Representative if a fan is not operating properly

3. Check the centrifuge’s orange washers
   - Press the PAUSE/RUN at the centrifuge module keypad
   - Remove the centrifuge safety shield from the top of the centrifuge
   - Release the centrifuge door lock by turning the door release switch on the front of the centrifuge to the right
   - Open the centrifuge door by pulling up from the handle on the top
   - Locate the orange washers on both sides of each sample tube holders buckets inside the centrifuge
   - Ensure the orange washers are not damaged or worn
   - Contact a Beckman Coulter Representative if the orange washers are damaged or worn
   - Close the centrifuge door by firmly pressing down on the centrifuge door with the palms of your hands.
   - Replace the centrifuge safety shield
   - Press the PAUSE/RUN at the centrifuge module keypad

4. Check the green transfer belts
   - Ensure the green belts are not cracked, frayed, or rubbing the sides of the track on the entire length of the Power Processor
   - Contact a Beckman Coulter Representative if the belts are cracked, frayed, or rubbing the sides of the track
5. Clean the Stockyard’s gripper pads
   - Press the AUTO/MANUAL button twice on the Stockyard’s keypad to change the Stockyard to MANUAL mode.
   - The AUTO/MANUAL button light flashes, then stays lit to indicate that the module is in MANUAL mode
     - Press the FUNCTION +/- buttons to set the display at “54”
     - Press the ENTER button on the keypad to open the gripper
     - Inspect and clean the gripper pads with a dampened lint free tissue or cotton tipped applicator stick moistened with alcohol-free window cleaner. Window cleaner with ammonia is acceptable. If gripper pads are missing or worn, or if the gripper fingers are damaged contact a Beckman Coulter Representative
     - Inspect and clean the gripper pads for each level of the Stockyard as needed
   - After maintenance is completed, press the AUTO/MANUAL button twice to return to AUTO mode. This homes the internal transfer arms

6. Set the LX/DxC connection(s) to Manual if these instruments are connected to the line
   - Press the PrtScrn on the keyboard
   - From the pop-up window, select PrepLink, press ENTER
   - Select the Setup tab
   - Select Instrument Mode
   - Select the drop-down ▼ arrow under “Current Status” next to the LX/DxC Connection
   - Select Manual
   - Repeat for each LX/DxC connection

7. Shutdown the Line Control software.
   - Select the PrtScrn key on the keyboard
   - Select Line Control, press ENTER
   - Select System Operation from the menu bar.
   - Select Shutdown in the System Operation menu
   - Select OK in the Shutdown dialog box
   - If a pop-up window appears referring to samples on the line, verify there are not any samples on the line then select OK
   - If a pop-up window appears, minimize the pop-up window
   - Make sure the System Status box is OFF and the Host Communication box is OFFLINE
8. Press the red power OFF button at the Inlet Module
   - The power to the line is off

**Perform the following maintenance procedures with the line power OFF**

9. Check all surface screws on the system
   - Check for loose surface screws on paneling and system components on the Power Processor. Tighten any loose screws as needed using a screwdriver

10. Clean the cooling fans
    - Locate the cooling fans on the lower panels of the Power Processor
    - Clean each fan using a vacuum or a brush
    - Contact a Beckman Coulter Representative if a fan is not operating properly

11. Clean the track belts
    - Vacuum the exposed areas of green track
    - Vacuum the edges and seams where the belts intersect
    - Contact a Beckman Coulter Representative if a track belt is worn or damaged
12. Perform a Startup

- Press the green ON button on the Inlet Module.
- Press the PrtScrn key on the keyboard
- From the pop-up window, select Line Computer, press ENTER
- Select System Operation from the Line Control Computer menu bar.
- Select Startup. The Startup dialog box appears.
- Select: Delete Processed Samples Only.
- Select OK in the Startup dialog box.
- Make sure the System Status box is ON and the Host Communication box is ONLINE.
- Make sure the Line Control Computer Main screen shows the track in a blue color, which indicates routine operation. If parts of the track diagram are not blue, this indicates a communication error.
- If a communication error did occur, select the Screen Refresh button. If the track is still not blue, then follow the instructions that relate to the software version in your laboratory contained in the Instructions for Use manual.
- Change the LX/DxC instrument mode in PrepLink to automation if you have an LX/DxC connection. (The LX/DxC must be in Standby.)
- Press the PrtScrn key on the keyboard
- From the pop-up window, select PrepLink, press ENTER
- Select the Setup Tab
- Select Instrument Mode
- Select the drop-down ▼ selection next to the LX/DxC connection
- Select Automation
- Repeat for each connected LX/DxC
- Press the AUTO/MANUAL button twice at the Inlet Module keypad to prepare the system for sample processing. The RACK LOAD button will be lit solid and the system is ready to process samples.