

5 Routine Procedures

This section provides the following procedures:

- Replacing the measurement and wash/waste cartridges
- Replacing the AQC cartridge
- Cleaning the screen
- Cleaning external surfaces
- Emptying the ampule breaker
- Replacing printer paper
- Replacing the air filter

A form for tracking routine procedures on a monthly basis is provided in *Appendix I, RAPIDPoint 500 System Routine Procedures Log*.

Replacing the Wash/Waste Cartridge

The **Wash/Waste Cartridge** symbol appears on the banner when 30 or fewer samples can be analyzed or when less than 24 hours remain before the cartridge expires. This enables you to replace the cartridge at a time when the system is not busy. The system automatically displays a message if you must replace the cartridge before you can perform any other tasks.

Note If a message appears indicating that the cartridge needs replacing, go to step 4 in the following procedure.

If you need to replace both the measurement cartridge and the wash/waste cartridge, refer to *Replacing the Measurement and Wash/Waste Cartridges*, page 5-4.

Material: Wash/Waste cartridge

Follow this procedure to replace the wash/waste cartridge:

1. If prompted, enter your password, or scan your password with the barcode scanner.
2. At the **Analysis** screen, select the **System** button.



BIOHAZARD

Refer to *Protecting Yourself from Biohazards*, page A-1, for recommended precautions when working with biohazardous materials.

Note The Wash/Waste Cartridge symbol appears at the **Analysis** screen when the cartridge nears expiration.

3. At the **System** screen, select the **Wash/Waste Cartridge** button.

Note Ensure that nothing is blocking the door.

4. Select **Replace**.

The system plays a video that shows how to perform this procedure.

5. View the video before you begin if required.
6. Open the door.

Note Select the **Video** button to play the video again if you need help while replacing the cartridge.

7. Replace the cartridge. Refer to Figure 5-1.
 - a. Remove the wash/waste cartridge and dispose of this cartridge according to your institution's protocol for disposal of biohazardous materials.

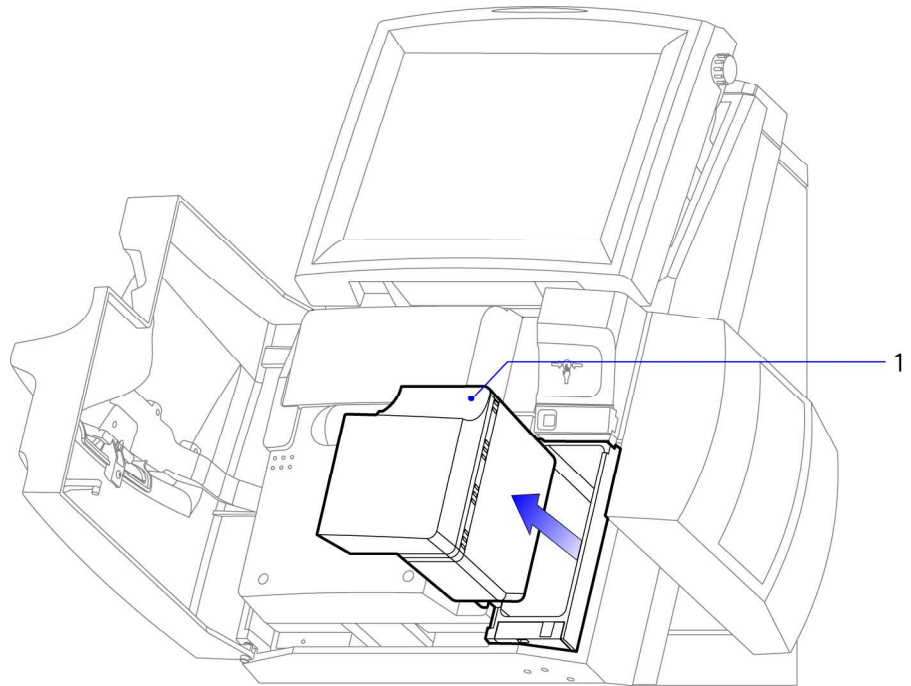
- b. Insert a new wash/waste cartridge into the system, and then push firmly on the dot until the cartridge locks in place.
- c. Close the system door.

The **Wait** screen appears while the system prepares the cartridge.

The **Analysis** screen appears when the cartridge is ready for use.

Note A wash/waste cartridge is designed for single use only. If a wash/waste cartridge is removed from the system it cannot be inserted into the system again.

Figure 5-1: Replacing the Wash/Waste Cartridge



1 Wash/waste cartridge

Replacing the Measurement and Wash/Waste Cartridges

The **Replace Cartridges** symbol appears on the banner when 30 or fewer samples can be analyzed or when less than 24 hours remain before the cartridge expires. This enables you to replace the measurement and wash/waste cartridges at a time when the system is not busy. The system automatically displays a message if you must replace the cartridges before you can perform any other tasks.



CAUTION

Do not install the measurement cartridge with the system powered off.

Note If a message appears indicating that the cartridge needs replacing, go to step 4 in the following procedure.

When you replace a measurement cartridge, you must replace the wash/waste cartridge at the same time. If you need to replace only the wash/waste cartridge, refer to *Replacing the Wash/Waste Cartridge*, page 5-2.

Materials:

- Measurement cartridge
- Wash/Waste cartridge



BIOHAZARD

Refer to *Protecting Yourself from Biohazards*, page A-1, for recommended precautions when working with biohazardous materials.

1. If prompted, enter your password, or scan your password with the barcode scanner.
2. At the **Analysis** screen, select the **System** button.

Note The Replace Cartridges symbol appears at the **Analysis** screen when the cartridge nears expiration.

3. At the **System** screen, select the **Measurement Cartridge** button.

Note Ensure that nothing is in front of the system blocking the door.

4. Select **Replace**.

The system plays a video that shows how to perform this procedure.

5. View the video before you begin if required.

If an AutomaticQC cartridge is installed, push in and slide the connector on the AutomaticQC cartridge to the right.

If an AutomaticQC cartridge is not installed, continue to step 6.

6. Open the door.

Note Select the **Video** button to play the video again if you need help while replacing the cartridges.

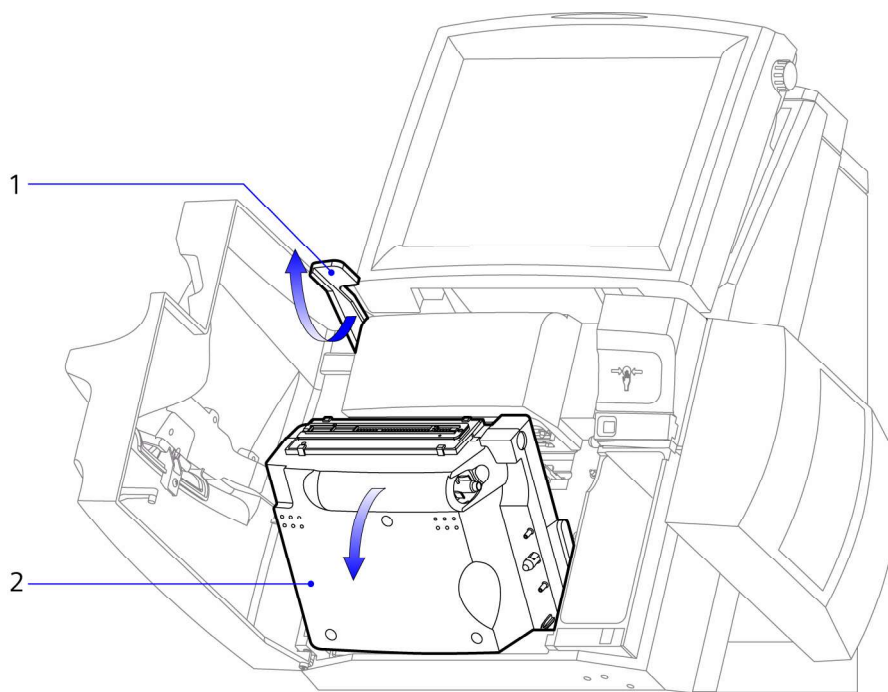
7. Remove the wash/waste cartridge and dispose of this cartridge according to your institution's protocol for disposal of biohazardous materials.
8. Remove the measurement cartridge. Refer to Figure 5-2.

Note When you lift the latch to remove the measurement cartridge, lift it up as far as possible until the cartridge ejects from the system.

- a. Lift up the latch that holds the measurement cartridge in place until the cartridge is ejected.
- b. Lift the measurement cartridge up and out of the system.

Handle the measurement cartridge according to your institution's protocol for working with biohazardous materials.

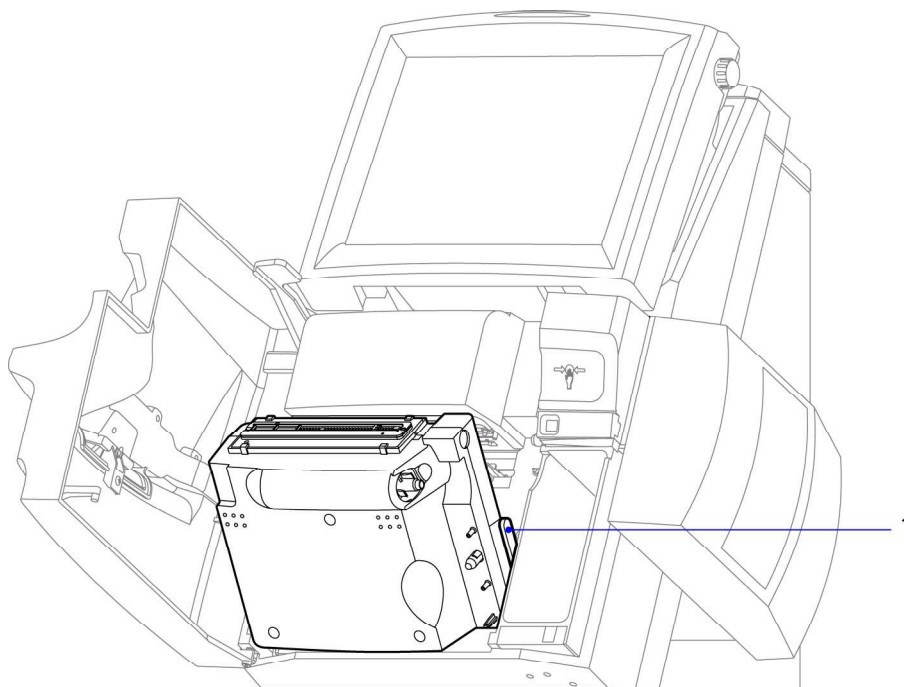
Figure 5-2: Removing the Measurement Cartridge



-
- | | |
|---|---|
| 1 | Latch that holds measurement cartridge in place |
| 2 | Measurement cartridge |
-

9. Insert a new measurement cartridge:
 - a. Align the grooves on the sides of the cartridge with the grooves on the system. Refer to Figure 5-3.

Figure 5-3: Aligning the Measurement Cartridge

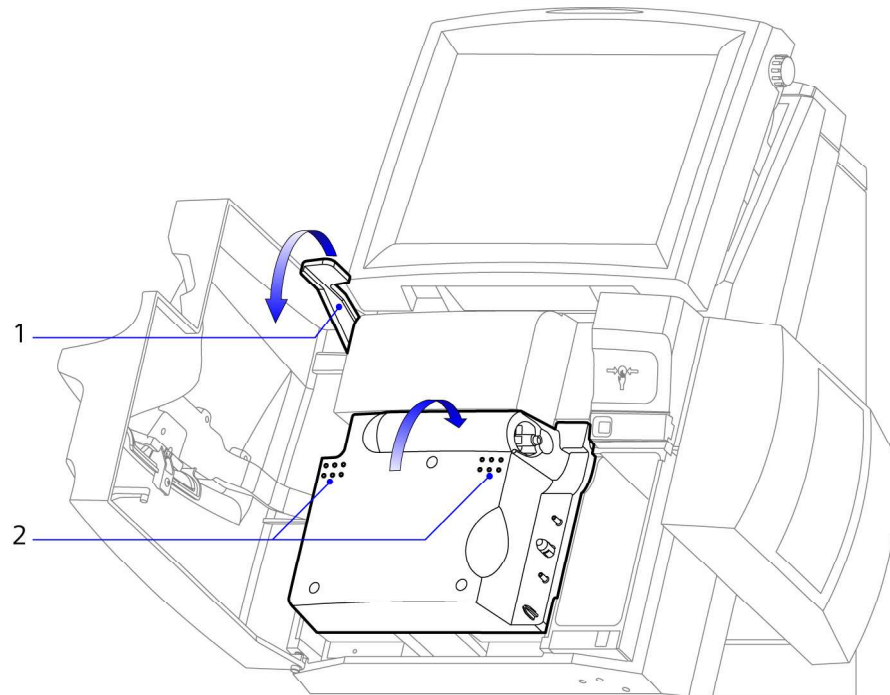


1 Grooves on the measurement cartridge

Note To install the cartridge, you must give a strong, firm push with your thumbs placed on the raised dots.

- b. Position the cartridge into the system, and then with your thumbs placed on the raised dots give a strong, firm push in and upwards to lock the cartridge in place.
- c. Lower the latch to secure the measurement cartridge. Refer to Figure 5-4.

Figure 5-4: Installing the Measurement Cartridge



-
- | | |
|---|---|
| 1 | Latch that holds the measurement cartridge in place |
| 2 | Raised dots on measurement cartridge |
-

10. Insert a new wash/waste cartridge into the system, and then push firmly on the dot until the cartridge locks in place.

11. Close the door.

If an AutomaticQC cartridge is installed, slide the connector on the AutomaticQC cartridge to the left to close it. The **Wait** screen displays while the system prepares the cartridges.

If an AutomaticQC cartridge is not installed, the **Wait** screen displays while the system prepares the cartridges

The **Analysis** screen appears when the cartridges are ready for use.

Note A wash/waste cartridge is designed for single use only. If a wash/waste cartridge is removed from the system it cannot be inserted into the system again.

12. If prompted, analyze Required QC samples before analyzing patient samples.

Reinitializing the Measurement Cartridge

Each time a measurement cartridge is replaced, a cartridge initialization is automatically performed. During initialization measurement parameters are calibrated. This calibration is not always successful for all parameters, and takes a long time.

You can manually invoke a measurement cartridge reinitialization if a parameter fails during cartridge initialization. This saves times that otherwise would be required to complete and restart the cartridge initialization.

Identifying a Parameter Failure after Cartridge Initialization

If a parameter failure shows in the events log of the **System** screen after initialization, or a parameter displays with a single diagonal line through it at the **Ready** screen, manually reinitialize the measurement cartridge.

Note Two lines through a parameter indicate a parameter failed calibration and a repeat calibration is unlikely to correct the problem. If there are 2 lines through a parameter, do not reinitialize the measurement cartridge. If there are 2 lines through a parameter, see *Problems Indicated by Sample Type and Parameter Buttons that are Unavailable*, page 6-32.

Manually Reinitializing a Measurement Cartridge

The **Calibrate** button at the **System** screen changes into the **Restart Cartridge** button when cartridge initialization completes.

1. Select **Restart Cartridge** at the **System** screen to perform a measurement cartridge reinitialization.

A dialog box displays and you are asked if you want to restart cartridge initialization.

2. Select **Yes**.

The **Wait** screen displays. Cartridge initialization proceeds until completion.

Replacing the AutomaticQC Cartridge

The **AutomaticQC Cartridge** symbol appears on the banner when 10 or fewer samples remain for any level of QC material, or when less than 24 hours remain before the cartridge expires. This enables you to replace the AutomaticQC cartridge at a time when the system is not busy. The system automatically displays a message if you must replace the cartridge before you can perform any other tasks.



CAUTION Do not install the cartridge with the system powered off.

Note You can reinstall an AutomaticQC cartridge if the following criteria apply: (1) the cartridge is reinstalled within 6 hours on the system from which it was removed, (2) the cartridge contains at least 1 sample left for all levels of AQC testing, and (3), the cartridge has at least 1 day of use-life before expiration.

Note If a message appears indicating that the cartridge needs replacing, go to step 4 in the following procedure.

Material: AutomaticQC cartridge

Follow this procedure to replace the AutomaticQC cartridge:

1. If prompted, enter your password, or scan your password with the barcode scanner.
2. At the **Analysis** screen, select the **System** button.

Note The AutomaticQC Cartridge symbol appears in the **Analysis** screen when the cartridge nears expiration.

3. At the **System** screen, select the **AutomaticQC Cartridge** button.
4. Select **Replace**.

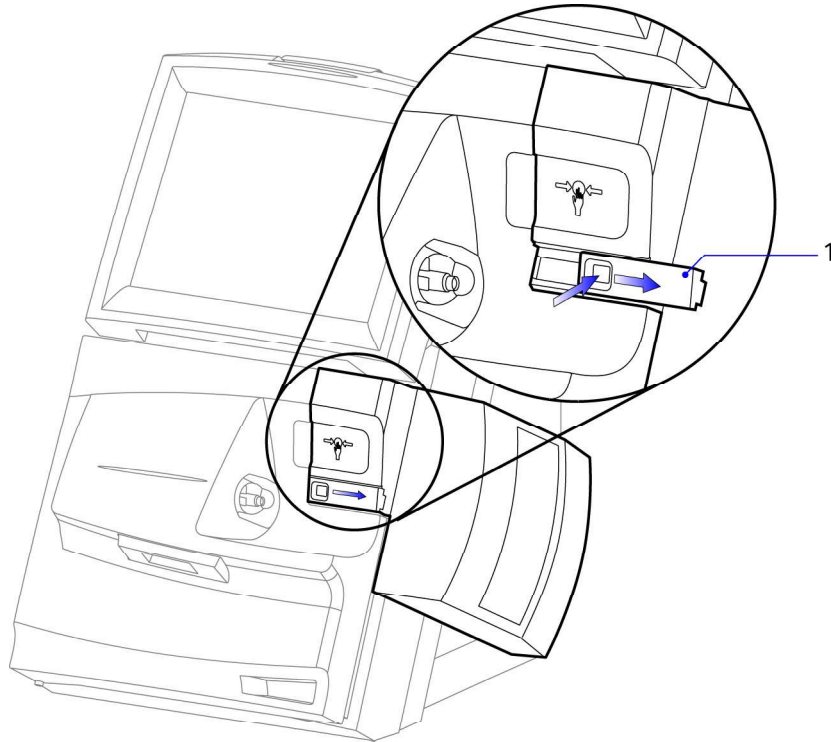
The system plays a video that shows how to perform this procedure.

5. View the video before you begin if required.

Note Select the **Video** button to play the video again if you need help while replacing the cartridge.

6. Push in and then slide the connector on the AutomaticQC cartridge to the right. Refer to Figure 5-5.

Figure 5-5: Opening the Cartridge Connector



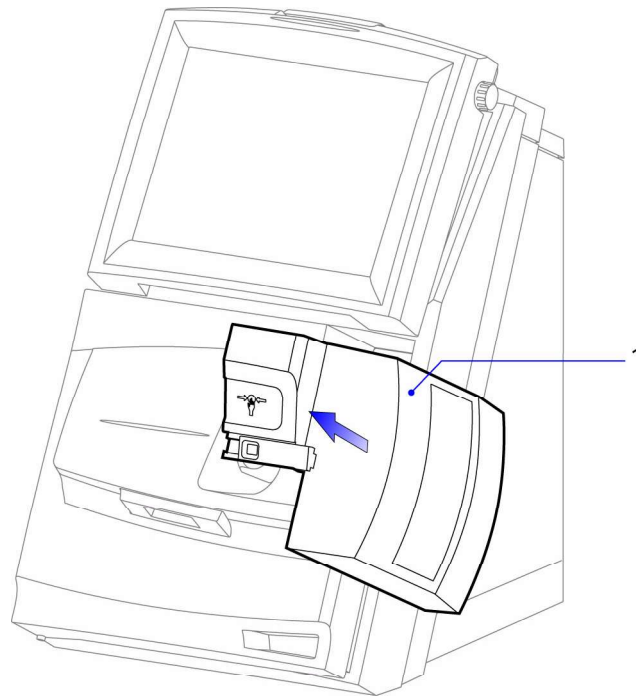
1 Cartridge connector

7. Wait for the AutomaticQC cartridge to eject from the system.

Note In normal operation the AutomaticQC cartridge does not come in contact with biohazardous materials from the system. However, if you suspect that the cartridge is contaminated, dispose of it according to your hospital policy for biohazardous materials.

8. Remove the AutomaticQC cartridge and dispose of this cartridge. Refer to Figure 5-6.

Figure 5-6: Removing the AutomaticQC Cartridge



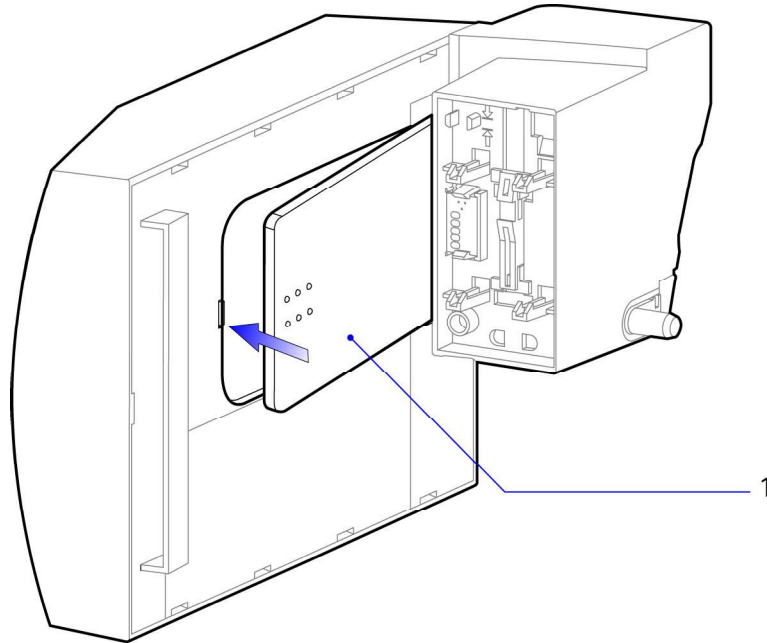
1 AutomaticQC cartridge

9. Insert a new AutomaticQC cartridge:
 - a. Get the new cartridge and remove the yellow card from under the lever.

Note Be sure the lever locks in place.

- b. Press down on the lever firmly, near the raised dots, to close and lock the lever in the cartridge. Refer to Figure 5-7.

Figure 5-7: Closing the Lever on the AutomaticQC Cartridge

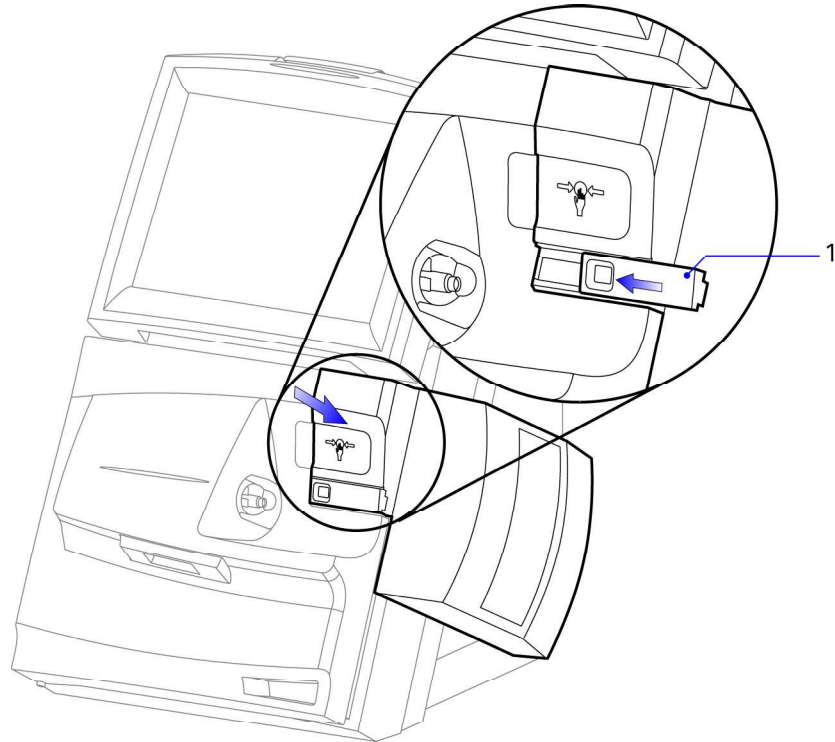


1 Lever that locks the cartridge

Note After you push the cartridge, release your hand and check to see if the cartridge moves forward. If it does, push again to ensure it locks in place.

- c. Insert the cartridge in the system, and then push firmly on the circle indicated by the arrows until you hear the cartridge lock in place. Refer to Figure 5-8.

Figure 5-8: Installing the AutomaticQC Cartridge



1 Cartridge connector

10. Slide the cartridge connector to the left to close it.

The **Wait** screen appears while the system prepares the cartridge. The **Analysis** screen appears when the cartridge is ready for use.

Reinstalling the AutomaticQC Cartridge

Reinstalling the AutomaticQC (AQC) cartridge provides the following advantages:

- If you have a problem installing the cartridge the first time, the same cartridge can be removed and reinstalled.
- If you remove an AQC cartridge when in Diagnostics mode, you can reinstall it.
- You can remove an AQC cartridge to clean the waste housing, and then reinstall the same cartridge. Cleaning the waste housing is easier when the AQC cartridge is removed.

You can reinstall the AQC cartridge after removal if the cartridge meets the criteria listed in the *AQC Cartridge Reinstallation Criteria* section below.

AutomaticQC Cartridge Reinstallation Criteria

Note You can reinstall a cartridge more than once if it satisfies the reinstallation criteria.

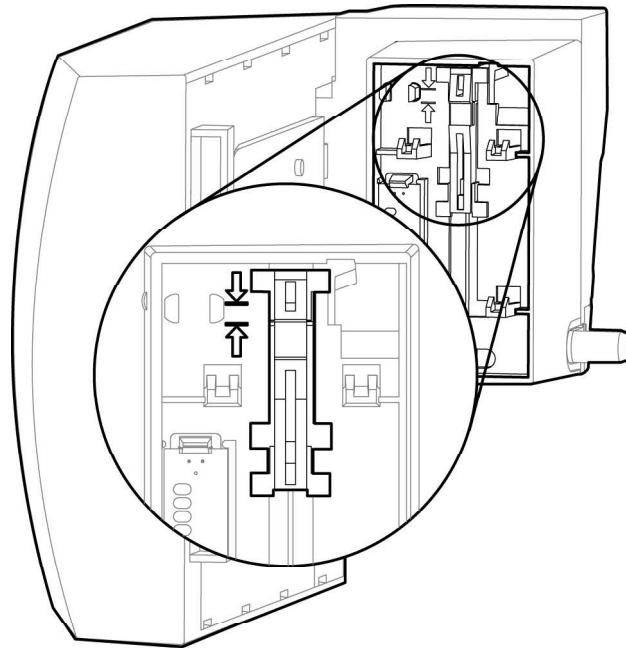
- The cartridge must be reinstalled on the system from which it was removed.
- The cartridge must be reinstalled within 6 hours of removal.
- The cartridge must have at least 1 sample left for all levels of AQC.
- The cartridge must have at least 1 day of use-life before expiration.

The system automatically evaluates the cartridge upon installation. If a cartridge fails to meet the AQC cartridge reinstallation criteria, a message indicates that the AQC cartridge is invalid. If this message displays, you must install a new cartridge.

Reinstalling the AutomaticQC Cartridge

Follow this procedure to reinstall the AutomaticQC cartridge:

Figure 5-9: Back of AQC Cartridge Interface Assembly Showing 2 Arrows Used to Align Valve



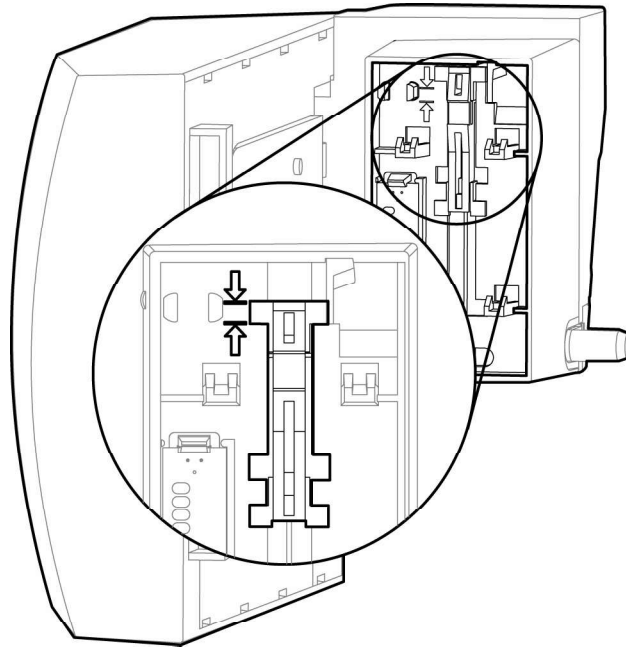
1. Determine if the valve is correctly aligned.

The valve shown in Figure 5-9 is not correctly aligned. The top of the valve is not between the arrows. The correct alignment is shown in Figure 5-10.

If the valve is not correctly aligned, go to step 2.

If the valve is correctly aligned go to step 3.

Figure 5-10: Valve Aligned so the Top of the Valve is Between 2 Arrows



2. Manually move the valve on the back of the AQC cartridge so the top of the valve is aligned between the arrows, as shown in Figure 5-10.
3. Select the **System** screen.
If prompted, enter your password, or use the barcode scanner to scan your password.
4. Select the **AutomaticQC** button.
5. Select **Replace > Yes**.
6. Follow the current instructions in the video to reinstall the cartridge.

Cleaning and Disinfecting the Screen

Clean the touch screen as needed to remove dust, dirt, or splatters from the screen and disinfect the screen surface.

Materials:

- Lint-free cloth
- 0.5% sodium hypochlorite solution



BIOHAZARD

Refer to *Protecting Yourself from Biohazards*, page A-1 for recommended precautions when working with biohazardous materials.

Follow this procedure to clean and disinfect the screen:

1. If prompted, enter your password, or scan your password with the barcode scanner.
2. Moisten the cloth with the sodium hypochlorite solution so that the cloth is wet but not dripping.
3. Select the **System** button and then select **Clean Screen**.

The **Clean** screen appears for 20 seconds. This allows you to wipe the screen without activating any buttons.

Note To disinfect the screen surface, wait 10 minutes after applying the sodium hypochlorite solution then access the **Clean** screen again and dry.

4. While the **Clean** screen displays, wipe the screen with the wet cloth and then thoroughly dry the screen.

After 20 seconds, the system returns to the **System** screen.

5. Select the **Continue** button to return to the **Analysis** screen.

Cleaning and Disinfecting the Exterior Surfaces

Clean the exterior surfaces as needed to remove dust, dirt, and splatters from the surfaces, and disinfect the surfaces.

Materials:

- Lint-free cloth
- 0.5% sodium hypochlorite solution



BIOHAZARD

Refer to *Protecting Yourself from Biohazards*, page A-1, for recommended precautions when working with biohazardous materials.



CAUTION

Do not use any solutions containing the benzalkonium chloride ion. Do not wet the sample port or the sensor contacts for the measurement and AutomaticQC cartridges. When cleaning surfaces do not spray cleaning solution or other fluids into or on the sample port or the area behind the measurement and AutomaticQC cartridge. Do not spray cleaning solutions or other fluids on the optics head assembly. The sensor contacts and the CO-ox optics head assembly, which are located behind the measurement cartridge, may be damaged if they get wet. Sensors, in the cartridge, may be damaged if cleaning solution enters the sample port.

Follow this procedure to clean and disinfect exterior surfaces:

1. Moisten the cloth with the sodium hypochlorite solution so that the cloth is wet but not dripping.

Note To disinfect the exterior surfaces, wait 10 minutes after applying the sodium hypochlorite solution before drying.

2. Wipe the exterior surfaces of the system with the wet cloth and then thoroughly dry the surfaces.

Emptying the Ampule Breaker

The ampule breaker holds approximately 100 ampule tops.

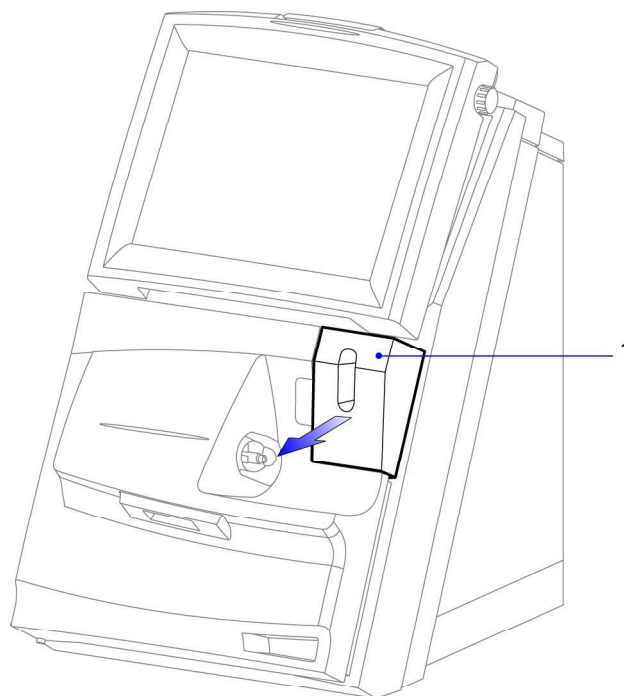
Note The ampule breaker is not available on systems when an AutomaticQC cartridge is in use.

Material: Approved sharps container

Follow this procedure to empty the ampule breaker.

1. Remove the ampule breaker from the system. Refer to Figure 5-11.

Figure 5-11: Removing the Ampule Breaker



1 Ampule breaker

2. Empty the ampule breaker and dispose of the ampule tops in an approved sharps container.

If necessary, you can rinse the inside of the ampule breaker with a 0.5% solution of sodium hypochlorite.

3. Reinstall the ampule breaker in the system.

Replacing the Printer Paper

Replace the printer paper when a red stripe appears on the edge of the paper.

Material: Printer paper

Follow this procedure to replace the printer paper:

1. Grasp the latch on top of the touch screen and move the screen forward to expose the printer compartment. Refer to Figure 5-12.
2. Remove the old roll of paper:
 - a. Open the printer compartment.
 - b. If paper remains in the printer, tear off the paper below the printer.



CAUTION Do not pull the torn paper back through the printer. This can damage the printing mechanism.

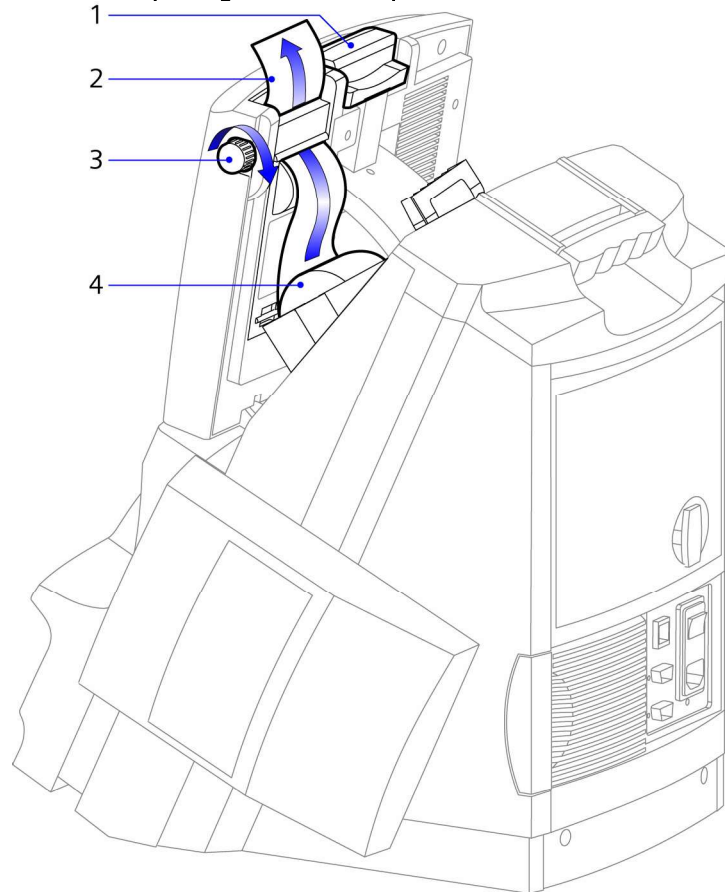
- c. Turn the paper-advance knob clockwise to move the torn paper through the printer.
 - d. Remove the old roll of paper.
 - e. Save the spindle for use with the new roll of paper.
3. Install a new roll of paper:

Note When you advance the paper, watch the paper move through the printer to ensure that it exits the printer correctly.

 - a. Get a new roll of paper and remove the outer wrapper.
 - b. Insert the spindle through the roll of paper and place the paper in the printer compartment. Ensure that the paper is tightly wound and the ends of the spindle fit into the grooves on the sides of the compartment.
 - c. Insert the paper from the bottom of the roll through the back of the printer.
 - d. The system advances the paper automatically if the previous roll of paper was empty.

- e. Turn the paper-advance knob clockwise to move 2 to 3 inches of paper through the top of the printer.

Figure 5-12: Replacing the Printer Paper



-
- | | |
|---|---------------------------|
| 1 | Screen latch |
| 2 | Printer slot |
| 3 | Paper-advance knob |
| 4 | Printer paper compartment |
-

Note When you close the printer compartment, ensure that the edge of the printer paper extends beyond the top of the printer.

4. Close the printer compartment.

Note The first report printed after installing a new roll of paper does not have the logo printed at the top.

5. Adjust the position of the screen for viewing.

Replacing the Air Filter

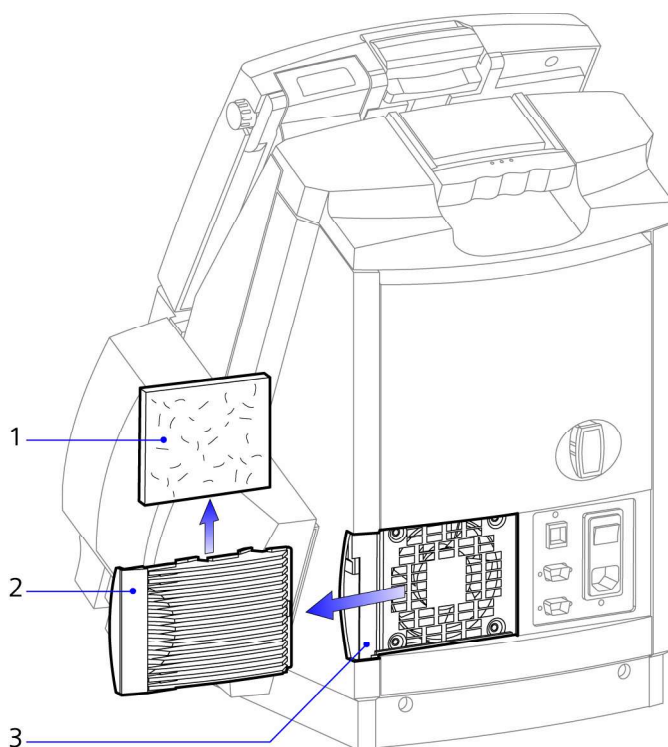
Routinely inspect the air filter and replace it if it is dusty or dirty. Depending on the level of dust and lint in the air where the system is being used, you may need to inspect the filter more frequently. The air filter is located on the lower right side of the back panel of the system.

Material: Air filter

Follow this procedure to replace the air filter:

1. Pull the air filter carrier out of the system. Refer to Figure 5-13.
2. Remove the filter from its carrier.

Figure 5-13: Removing the Air Filter



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- 1 Air filter
 - 2 Air filter carrier
 - 3 Air filter location in system back panel
-

3. Install a new air filter in the carrier.
4. Reinstall the air filter carrier in the system.