

## ○ Connection of drain hose (Supplementary information)

### NOTE

- Cut the drain hose to an optimum length by considering the length when it is pulled out for maintenance. When pushing the equipment against the wall, make sure any excess section of the hose is laid horizontally on the floor.

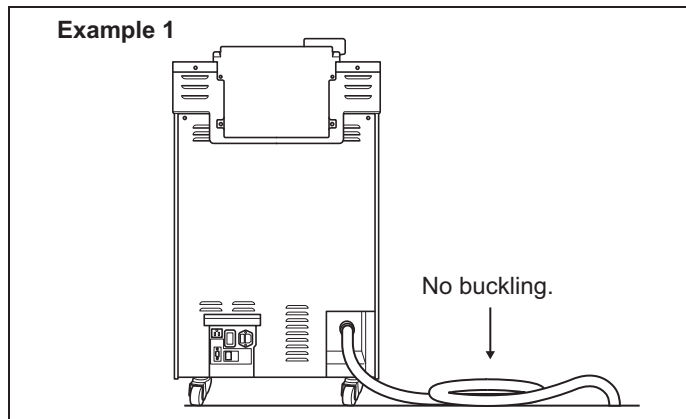


Figure 4.8

- The recommended drain pipe diameter is 100 mm (3.9 in). As this can vary for different facilities, check with your facilities' maintenance personnel or a plumber.

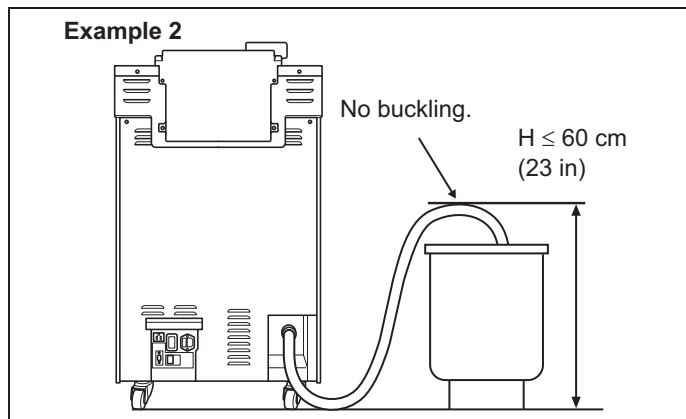


Figure 4.9

**NOTE**

- The drain hose connection examples below are intended to show different draining concepts. When connecting the drain hose, be sure to check with your facility's maintenance personnel or a plumber.

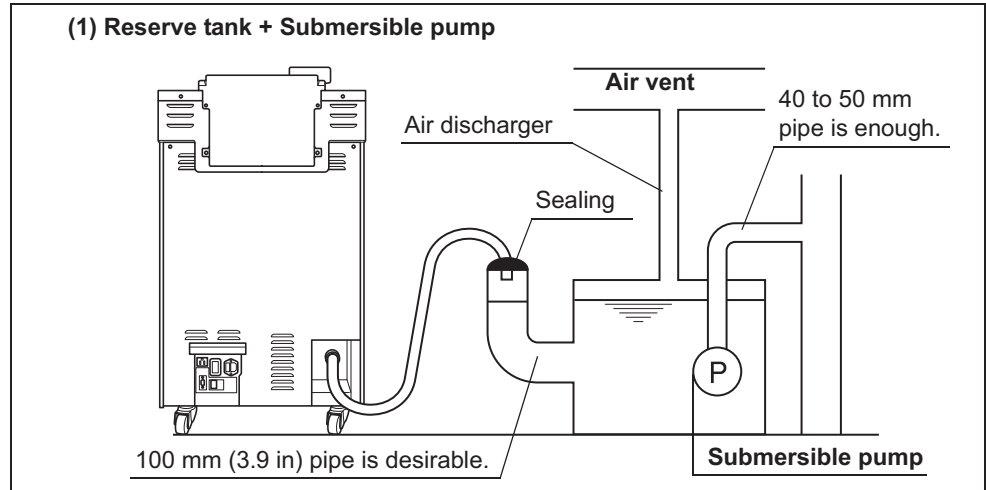


Figure 4.10

- If you plan to exhaust air near the ceiling, the ceiling height should be 2 m or more or the air discharge pipe should be connected to the building's air vent.

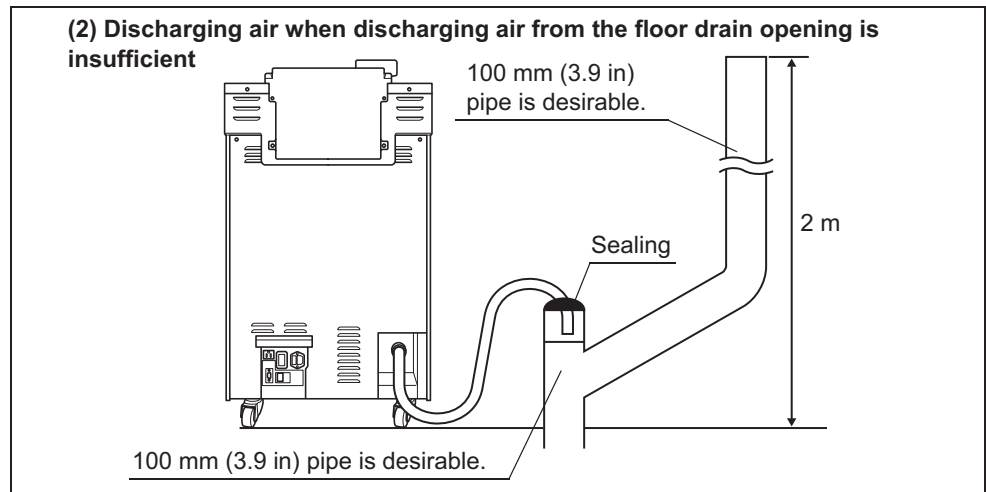


Figure 4.11

**NOTE**

- If you plan to use the drainage line of a sink, check the following:
  - The pipe diameter should be 100 mm (3.9 in) or more.
  - A backflow prevention structure should be provided.
  - An air discharge should be provided.

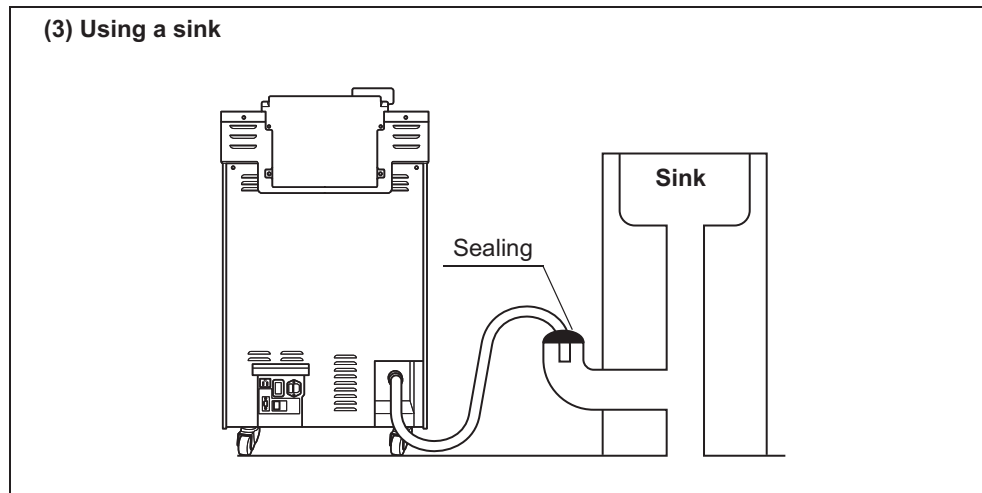


Figure 4.12

## 4.6 Connection of the power supply

### WARNING

- Always connect the power cord plug into a grounded, hospital-grade, wall mains power outlet. Never use a multi-outlet tap. Always connect directly to a wall mains power outlet. The equipment must be grounded via the power cord plug. Connecting the equipment to anything but a grounded wall mains power outlet may cause an electric shock or a fire.
- Do not allow the power cord plug to get wet. A wet plug can cause an electric shock.
- To prevent an electric shock, do not touch the power cord plug with wet hands or touch the power source directly.
- After connecting the power cord, do not push the rear of the equipment against a wall. The power cord could break and cause an electric shock or a fire.
- Make sure that the grounded wall mains power outlet meets the power specifications required by this unit. Insufficient capacity may result in a fire or activation of the facility's circuit breakers, which will turn off the power to all other equipment connected to the same power line.
- Always use the power cord provided with this equipment. Otherwise, equipment failure or power cord burnout could result. Also, remember that the provided power cord is for exclusive use with this equipment and should not be used with other equipment.

### Ch.4

- 1 Check that the power switch of the equipment is set to OFF (When you press the power switch, you will feel a click when set to ON and no click when set to OFF).
- 2 Insert the power cord all the way into the connector on the rear (bottom left).

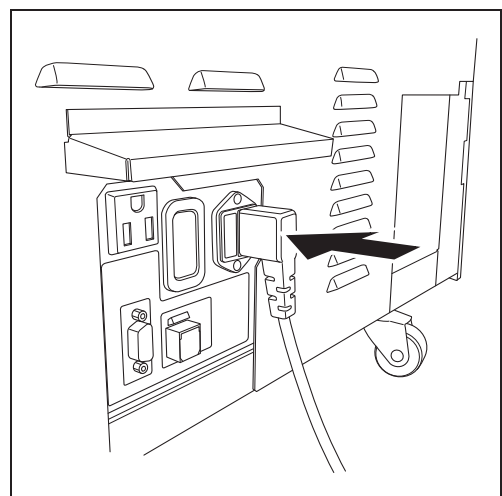


Figure 4.13

- 3 Clip the marking on the power cord with the clamp.

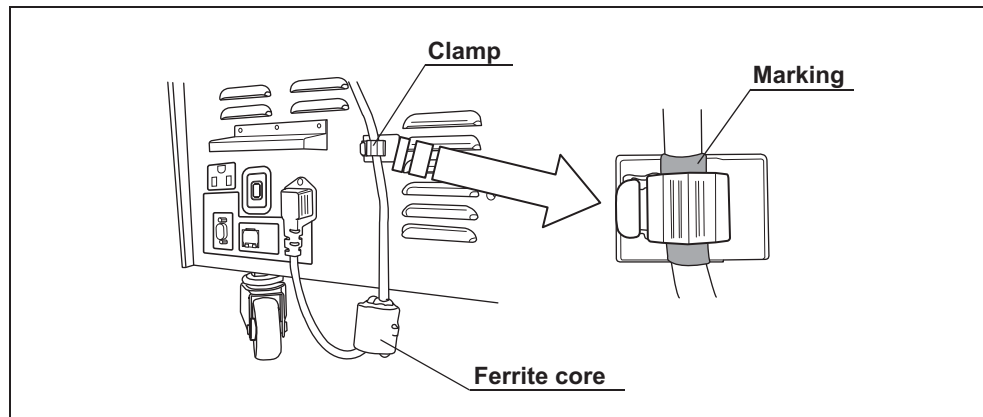


Figure 4.14

**CAUTION**

Properly attach the power cord to the clamp so that the ferrite core of the power cord does not touch the floor. Otherwise, the ferrite core may be caught between the equipment and floor and break when you move the equipment.

**Ch.4**

- 4 Connect the power cord plug into a hospital-grade, wall mains power outlet that meets the input power conditions indicated on the rating plate.

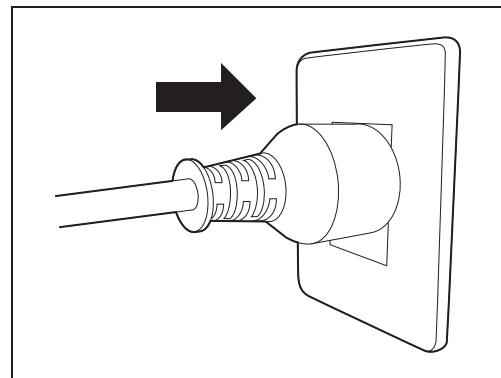


Figure 4.15

- 5 Press the ON side of each of the two casters on the bottom front to lock them.

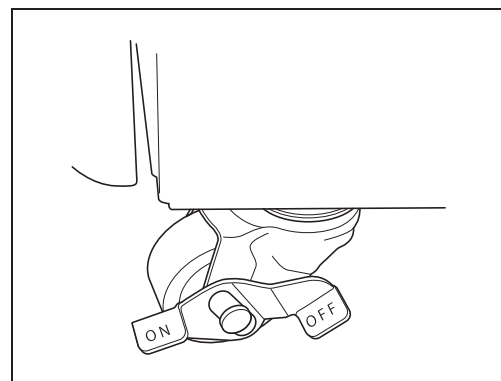


Figure 4.16

## 4.7 Confirmation of the power supply

- 1 Press the power switch ON.

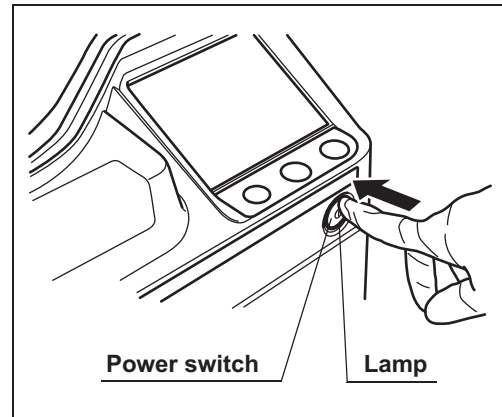


Figure 4.17

- 2 Make sure that the power indicator lights up and the touch screen displays the Start screen as shown in following figure.



Figure 4.18

- **If the touch screen displays nothing or the power indicator does not light up:**

If the touch screen displays nothing or the power indicator does not light up, turn the power OFF, wait at least 5 seconds and turn it ON again. If the problem persists, turn the power OFF and contact Olympus.

## ○ If the touch screen has no display and the power indicator does not light up:

If the touch screen has no display and the power indicator does not light up, inspect the equipment by following the procedure below. If the problem persists, turn the power OFF and contact Olympus.

### WARNING

- Before removing the fuse holder, be sure to turn the power switch OFF and unplug the power cord from the equipment and power outlet. Otherwise, a fire or an electric shock may result.
- To prevent an electric shock, do not replace the fuses with wet hands.

- 1 Ensure that the power cord is connected securely to the connector on the equipment and to a hospital-grade, wall mains power outlet.
- 2 Turn power OFF and unplug the power cord from the power outlet.
- 3 Unplug the power cord from the power cord receptacle on the equipment.
- 4 Push the tabs on the fuse holder in the directions shown and take out the fuses.

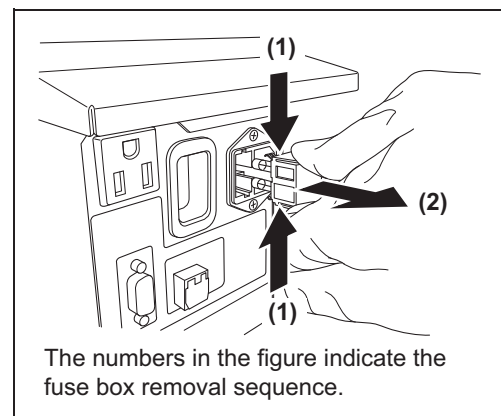


Figure 4.19

- 5 Visually confirm that neither of the two fuses is blown.

### WARNING

Always use the fuses specified below. Otherwise, malfunction or failure of the equipment may cause a fire or an electric shock.

Spare fuses: DB181500

**CAUTION**

If the power indicator does not light up even if neither fuse is blown or after both fuses are replaced, contact Olympus.

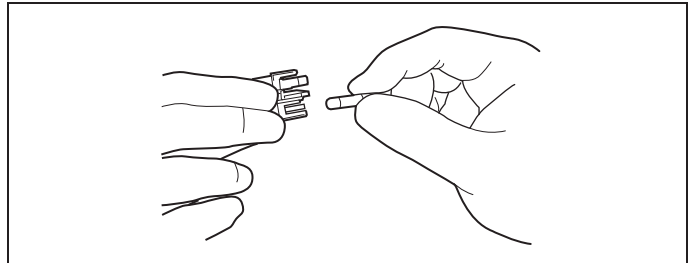


Figure 4.20

- 6 Insert the fuse holder into the equipment until it clicks. Confirm that the fuse holder is properly installed, referring to Figure 4.21.

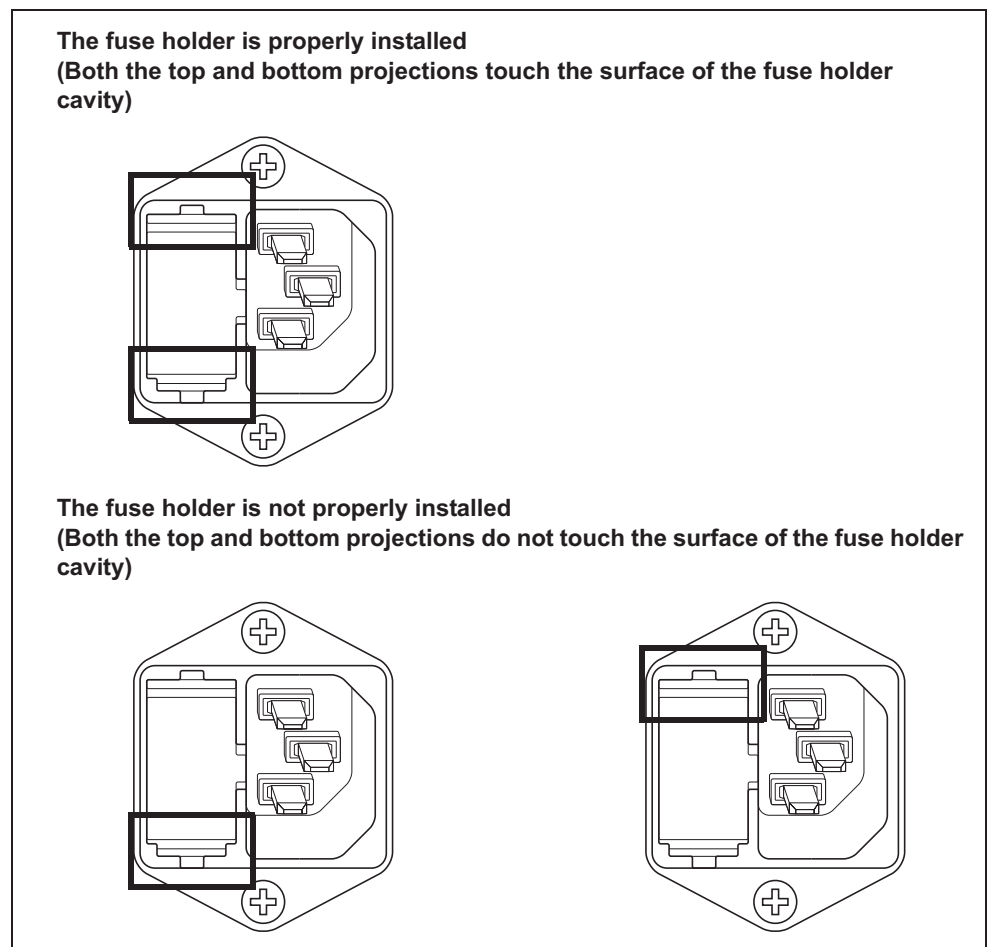


Figure 4.21

- 7 Connect the power cord, turn the power ON and make sure the power indicator lights up.



**WARNING**

If the power indicator does not illuminate even after the fuses have been replaced, be sure to unplug the power cord from the power outlet. Otherwise, an electric shock may result.

## 4.8 *Inspection of the RFID function*

This equipment can store the scope ID, user ID, and physician ID entered by RFID in the log of each process.

**WARNING**

Be aware that the radio waves emitted from the RFID reader of the equipment may cause medical devices such as pacemakers to malfunction. If any interference with the equipment is observed, immediately move away from the RFID reader or set the power switch to OFF. Call your doctor if you do not begin to feel better.

**Ch.4****CAUTION**

Electromagnetic interference from other devices may shorten the communication distance of the designated ID tag and cause signals to become unreadable. Try to take mitigation measures such as keeping the affecting device far enough away from this equipment to eliminate this type of interference.

**NOTE**

- In the step 4 below, if the endoscope is not any of 180 series, 190 series, or endoscopes with the external ID tag, use the Scope ID master card (GT970700).
- If entering a user ID is not done by RFID in the reprocessing process or each function, skip the steps 6 and 7 below.
- If entering a physician ID is not done by RFID in the reprocessing process or each function, skip the steps 8 and 9 below.

Perform the inspection procedure described below. Also, use the following procedure to check if the scope ID tag on each endoscope matches the actual scope information, if the user ID matches the actual user information, and if the physician ID matches the actual physician information.

## 4.8 Inspection of the RFID function

- 1 Press the “Information” button on the menu screen.

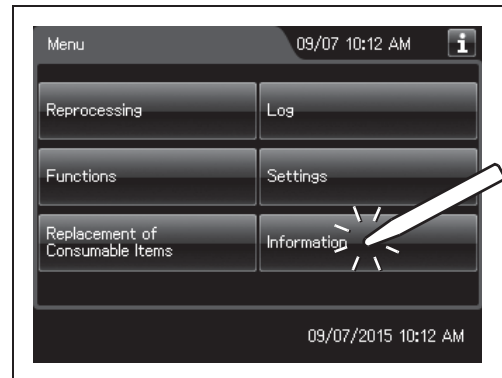


Figure 4.22

- 2 Press the “RFID Information” button.

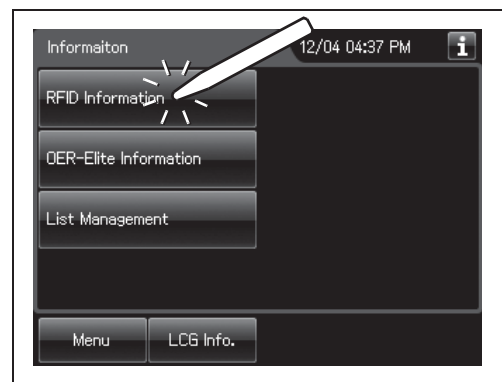
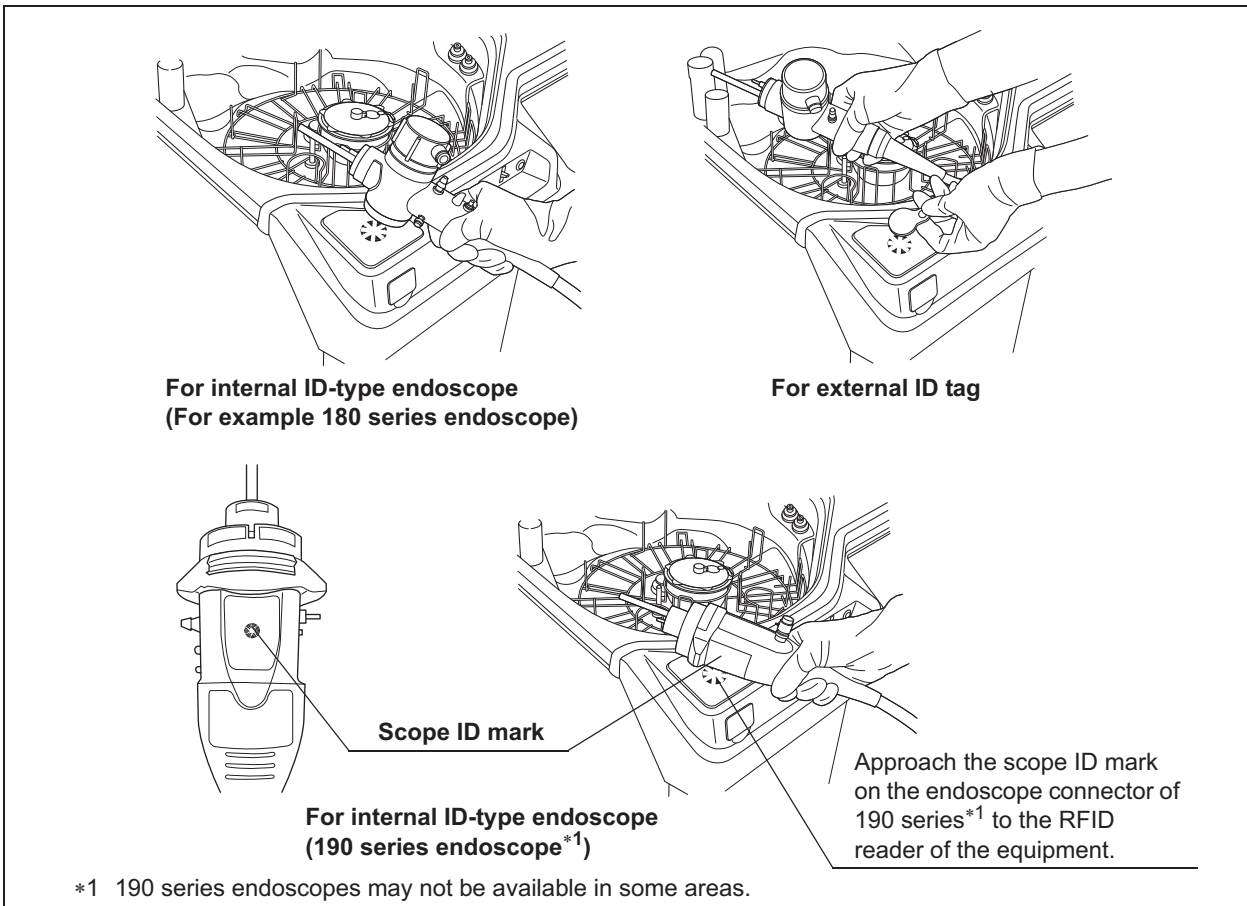


Figure 4.23

- 3 Check that the scope ID tag is attached to each scope as defined in the instruction manual for the scope ID tag.

- 4 Hold the internal ID-type endoscope connector or the external ID tag to the ID reader section of the equipment and scan the tag with the reader until a short beep sounds.



Ch.4

Figure 4.24

- 5 The information on the scope ID is displayed on the touch screen.

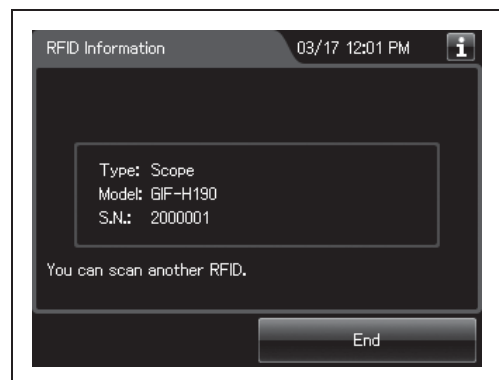


Figure 4.25

## 4.8 Inspection of the RFID function

- 6 Next, hold a User ID card parallel to the ID reader and scan the card with the reader until the equipment generates a short beep.

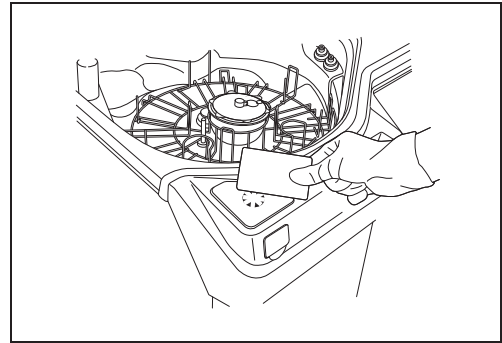


Figure 4.26

- 7 The information on the User ID is displayed on touch screen.

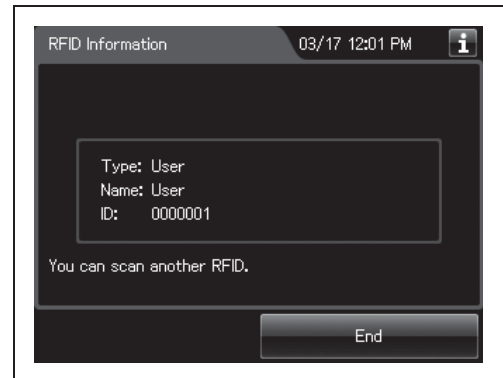


Figure 4.27

- 8 Next, hold a physician ID card parallel to the ID reader and scan the card with the reader until the equipment generates a short beep.

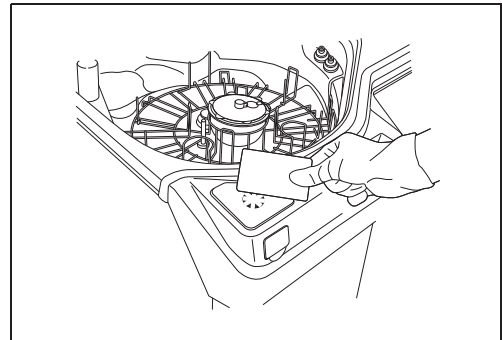


Figure 4.28

- 9 The information on the physician ID is displayed the touch screen.

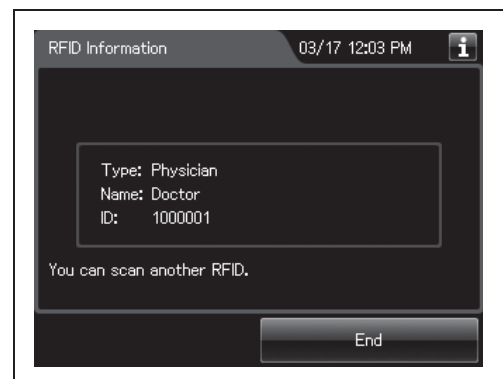


Figure 4.29

- 10 Press the “END” button to finish the RFID data check.

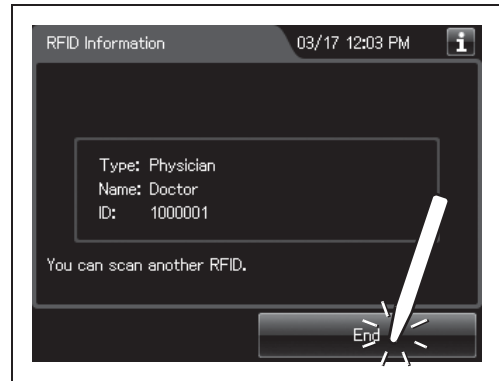


Figure 4.30

## 4.9 Setting the date and time

### NOTE

- The built-in clock may gain or lose some time during use. In this case, adjust the clock to the correct time using this function.
- Before changing the date setting, print records of the past stored in equipment by using the print function.
- Records are stored according to the date and time.
- If there is the difference of date and time between that of equipment and that of other connected equipment, adjust the clock to the correct time using this function.

Set the date and time on the built-in clock of the equipment.

Ch.4

- 1 Press the “Settings” button on the Menu screen.

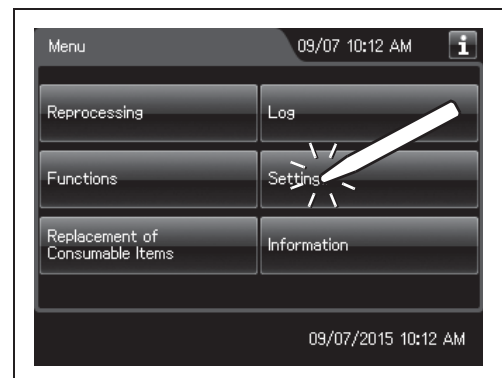


Figure 4.31

- 2 Press the “Date and Time” button on the 3rd page of the Settings menu.

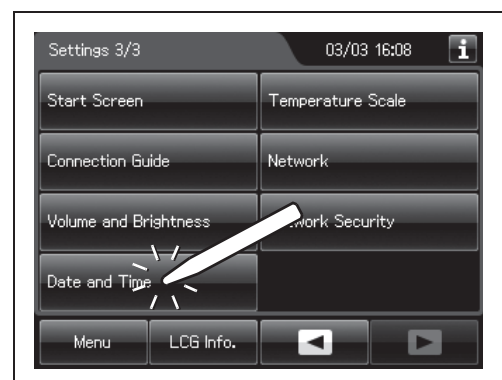
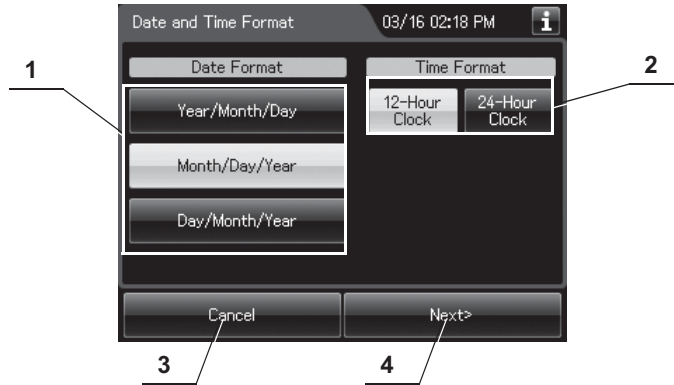


Figure 4.32

3 Select the date format and the time format, and then press the “Next” button.

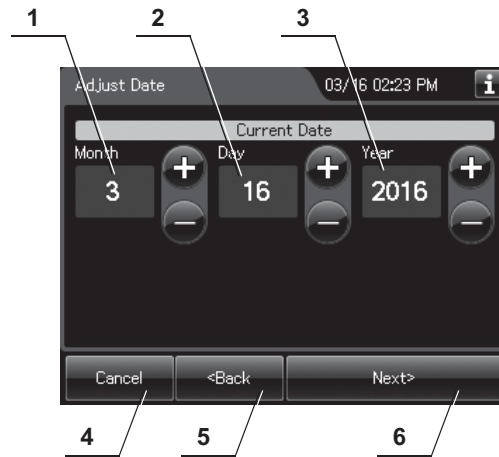


No.	Item/Button	Setting options	Description
1	Date Format	Year/Month/Day	Sets the format of the date display on the touch screen.
		Month/Day/Year (default)	
		Day/Month/Year	
2	Time Format	12-hour clock (default)	The hour is displayed in the 12-hour system, with “AM” for before noon or “PM” for the afternoon.
		24-hour clock	The hour is displayed in the 24-hour system.
3	Cancel	–	Returns to the Setting menu without saving the edited information.
4	Next	–	Goes to the next setting.

**NOTE**

The selected settings are displayed with white buttons.

4 Check and correct the date, and then press the “Next” button.



Ch.4

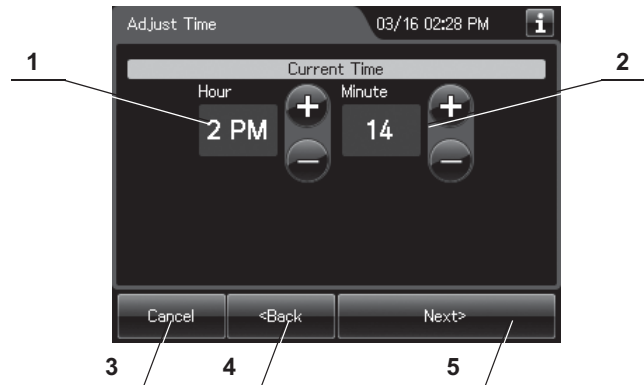
No.	Item/Button	Setting options	Description
1	Month	1 – 12	Edit the figure of the current month. Pressing the “+” button increments the setting and pressing the “-” button decrements it.
2	Day	1 – 31	Edit the figure of the current day. Pressing the “+” button increments the setting and pressing the “-” button decrements it.
3	Year	2012 – 2087	Edit the figure of the current year. Pressing the “+” button increments the setting and pressing the “-” button decrements it.
4	Cancel	–	Returns to the Setting menu without saving the edited information.
5	Back	–	Returns to the previous screen.
6	Next	–	Goes to the next setting.

**NOTE**

The order of year, month, and day displayed on the screen depends on the date format setting.



**5** Confirm or correct the time and press the “Next” button.

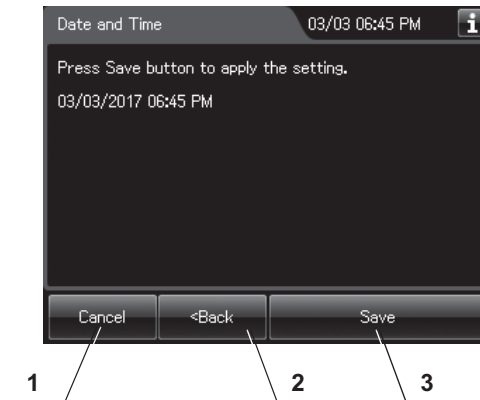


No.	Item/Button	Setting options	Description
1	Hour	0 – 11 (12-hour clock) 0 – 23 (24-hour clock)	Edit the figure of the current hour. Pressing the “+” button increments the setting and pressing the “-” button decrements it.
2	Minute	0 – 59	Edit the figure of the current minute. Pressing the “+” button increments the setting and pressing the “-” button decrements it.
3	Cancel	–	Returns to the Setting menu without saving the edited information.
4	Back	–	Returns to the previous screen.
5	Next	–	Goes to the confirmation screen.

**Ch.4**

## 4.9 Setting the date and time

- 6 Confirm the date and time and press the “Save” button to save the corrected date and time.



### Ch.4

No.	Setting item/ Button	Note
1	Cancel	Returns to the Setting menu without saving the edited information.
2	Back	Return to the previous screen.
3	Save	Returns to the Setting menu after saving the edited information.

- 7 When the date and time setting is completed, the touch screen displays the completion message. The completion message closes after a few seconds and the Setting menu is displayed.

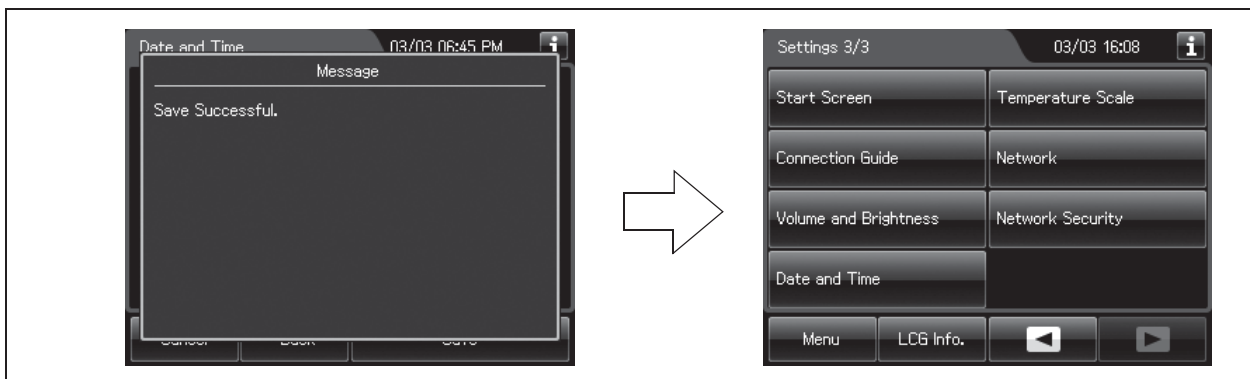


Figure 4.33

## 4.10 Installation of the gas filters (MAJ-822)

The gas filter cases are designed to be attached to the lid and gas filter case mount for the disinfectant tank. A gas filter (MAJ-822) should be placed in each of the two gas filter cases.

### WARNING

- As individual reactions to the disinfectant solution may vary, Olympus recommends the use of gas filters and enhanced protection by following the recommendations on ventilation given in “■ Ensuring the safety of reprocessing personnel” on page 11.
- Always be sure to attach the specified gas filter. Otherwise, the elimination of the odor and vapor of the disinfectant solution may become insufficient.

### CAUTION

Do not block the ventilation openings on the gas filter cases with the replacement date indication sticker or any other label. Blocking the ventilation does not hinder the deodorization effect but may cause the equipment to malfunction.

### NOTE

The lot number of the gas filter can be recorded in the gas filter replacement history. For changing the lot management of the gas filter, refer to Section 4.15, “Filter lot number management” in “Instructions-Operation Manual”.

Ch.4

### ■ Required items

Check	Required items
	Gas filter (MAJ-822) × 2

Table 4.1

## ■ Attachment of the gas filter case to the lid

- 1 Prepare the gas filter
- 2 Press the “Replacement of Consumable Items” button on the Menu Screen.

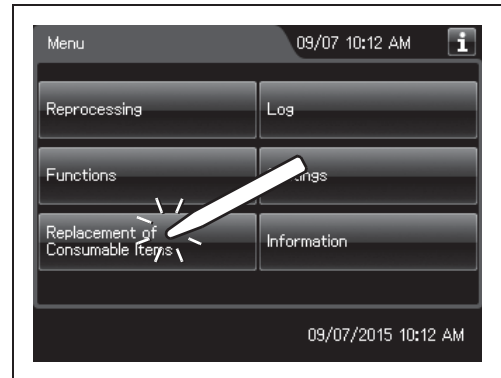


Figure 4.34

- 3 Press the “Replace Gas Filter on the Lid” button.

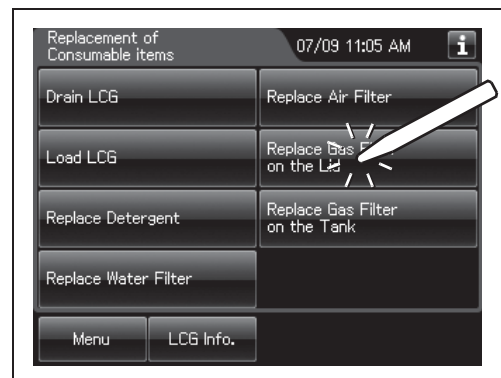


Figure 4.35

- 4 Enter the operator's user ID. For the detailed procedures, refer to Section 3.6, “Entering ID” in “Instructions-Operation Manual” (If applicable).

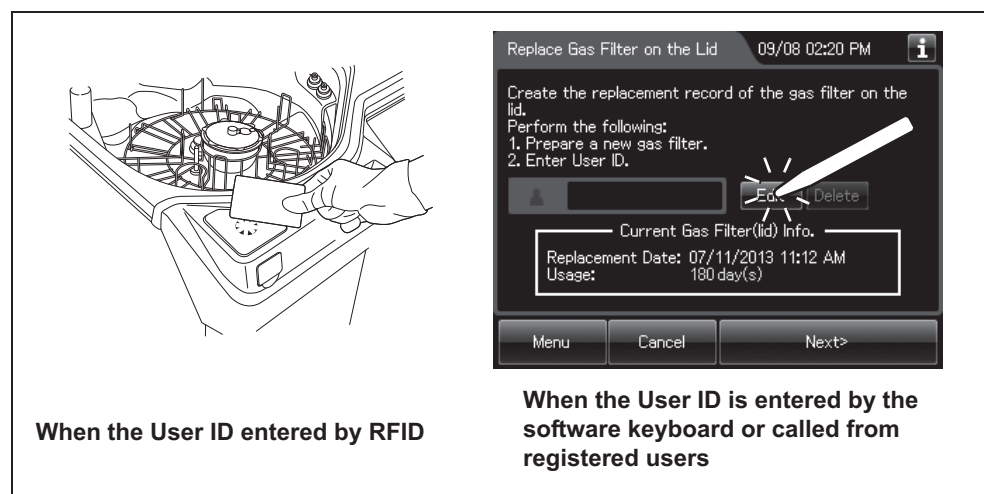


Figure 4.36

**NOTE**

- The input of the User ID can be omitted by modifying the User ID input setting. For details, refer to Section 4.5, “User ID Setting” in “Instructions-Operation Manual”.
- If the “Delete” button is pressed, the entered ID can be deleted.

**5** Press the “Next” button.

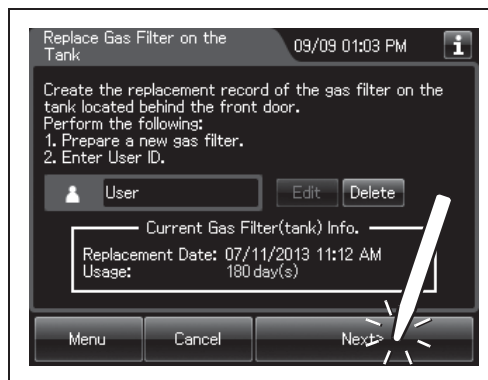


Figure 4.37

Ch.4

**NOTE**

When the lot number management of the gas filter is activated, the lot number of the gas filter is entered after Step 5. For details, refer to “○ When entering the lot number of the gas filter” on page 87.

**6** Unlock each gas filter case cover and open it.

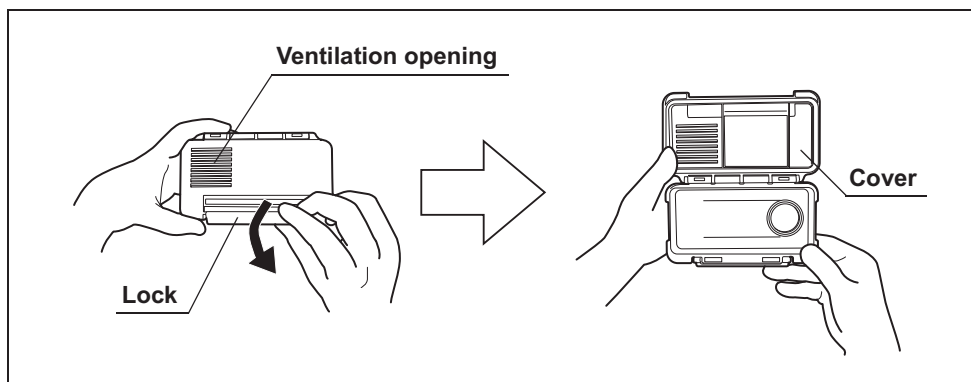


Figure 4.38

**NOTE**

The gas filters are not placed in the gas filter cases when the equipment is shipped from the factory.

## 4.10 Installation of the gas filters (MAJ-822)

- 7 Attach the gas filter adapter (splash guard) to the lid gas filter case as shown below so that the water droplets from the reprocessing basin do not penetrate.

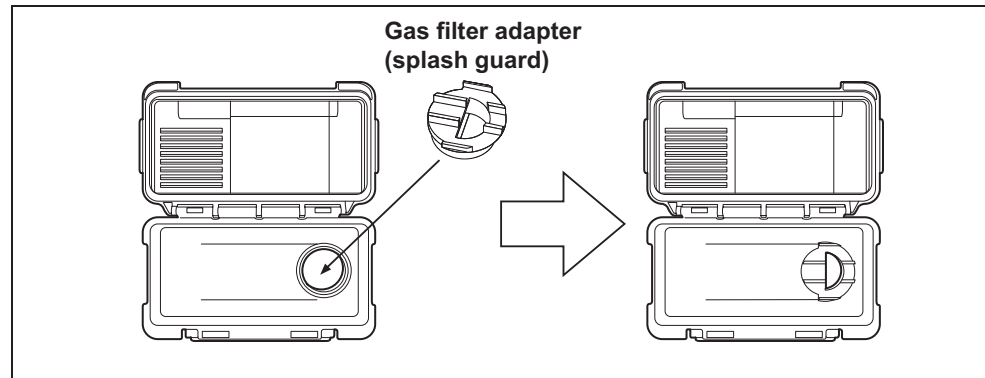


Figure 4.39

- 8 Place a new gas filter in each gas filter case.

Ch.4

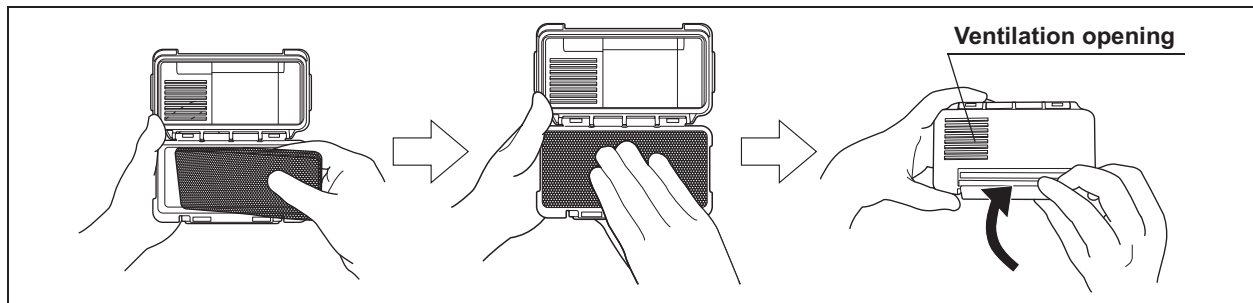


Figure 4.40

- 9 Close and lock the cover. Do not to catch the gas filter when closing the cover.
- 10 Insert the gas filter case designed for the reprocessing basin (the one with gas filter adapter (splash guard) attached to it) into the mount on the deep part of the lid, and then turn it all the way in the direction shown below until it is stopped.

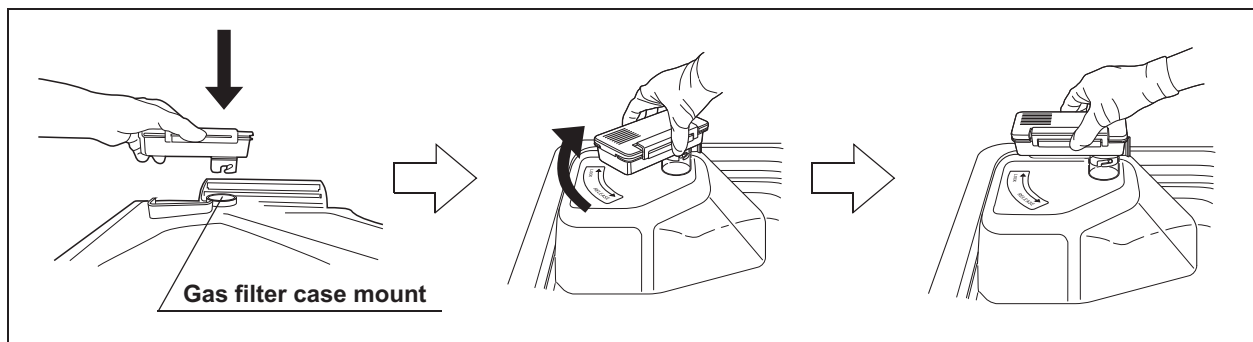


Figure 4.41

**11** Press the “OK” button.

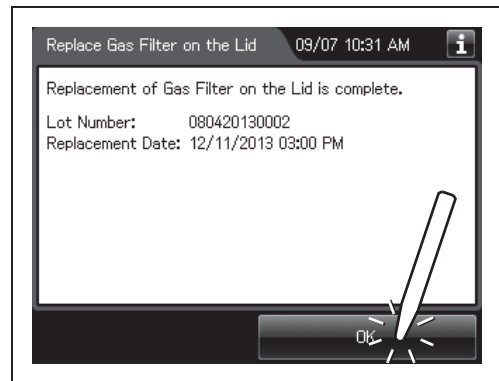


Figure 4.42

## ■ Attachment of the gas filter case to the disinfectant solution tank

Ch.4

- 1** Prepare the gas filter.
- 2** Press the “Replacement of Consumable Items” button on the Menu Screen.

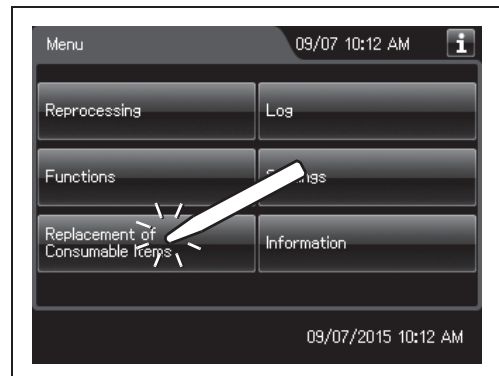


Figure 4.43

- 3** Press the “Replace Gas Filter on the Tank” button.

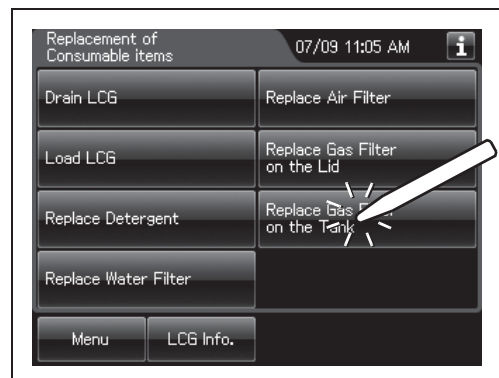


Figure 4.44

## 4.10 Installation of the gas filters (MAJ-822)

- 4 Enter the operator's user ID. For the detailed procedures, refer to Section 3.6, "Entering ID" in "Instructions-Operation Manual" (If applicable).

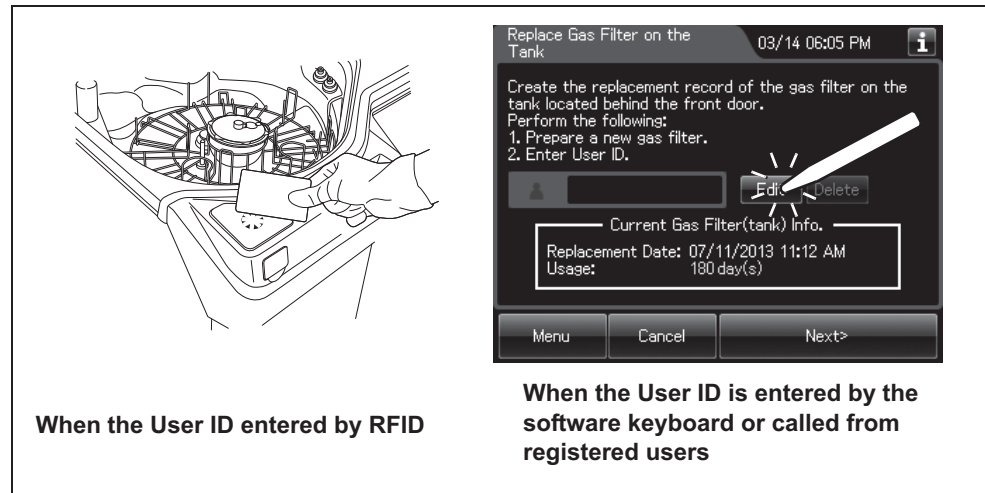


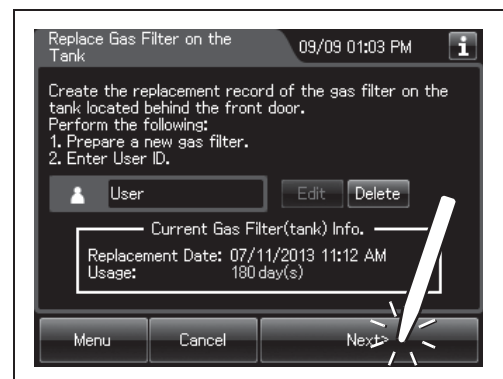
Figure 4.45

Ch.4

### NOTE

- The input of the User ID can be omitted by modifying the User ID input setting. For details, refer to Section 4.5, "User ID Setting" in "Instructions-Operation Manual".
- If the "Delete" button is pressed, the entered ID can be deleted.

- 5 Press the "Next" button.



### NOTE

When the Lot management of the water filter is activated, the lot number of the water filter is entered after Step 5. For details, refer to "○ When entering the lot number of the gas filter" on page 87.



**6** Unlock each gas filter case cover and open it.

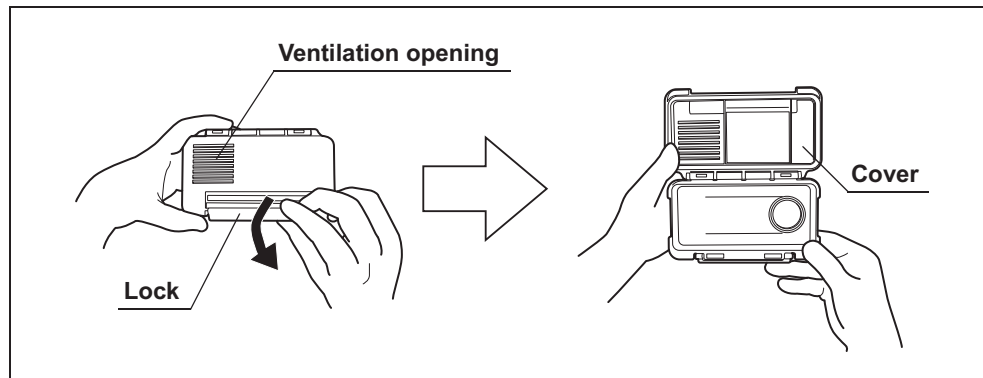


Figure 4.47

**NOTE**

- The gas filters are not placed in the gas filter cases when the equipment is shipped from the factory.
- Do not attach the gas filter adapter (splash guard) to the disinfectant solution tank gas filter case

**Ch.4**

**7** Place a new gas filter in each gas filter case.

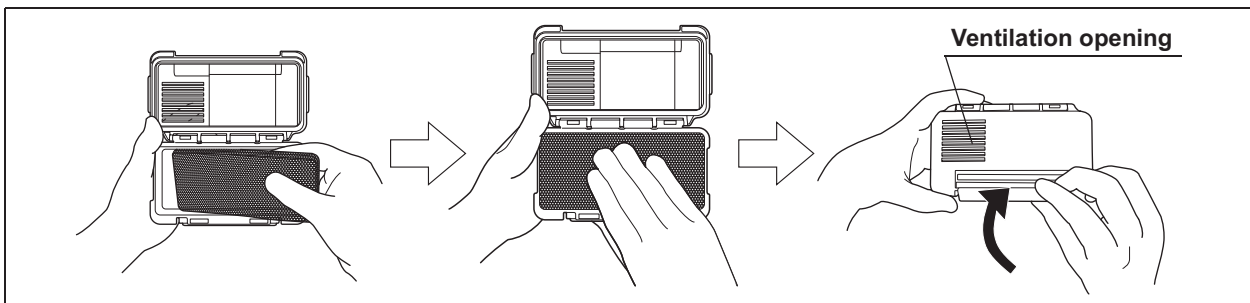


Figure 4.48

**8** Close and lock the cover. Do not to catch the gas filter when closing the cover.

## 4.10 Installation of the gas filters (MAJ-822)

- 9 Insert the gas filter case designed for the disinfectant solution tank into the gas filter case mount at the top right of the inside of the front door, and then turn it all the way in the direction shown below until it is stopped.

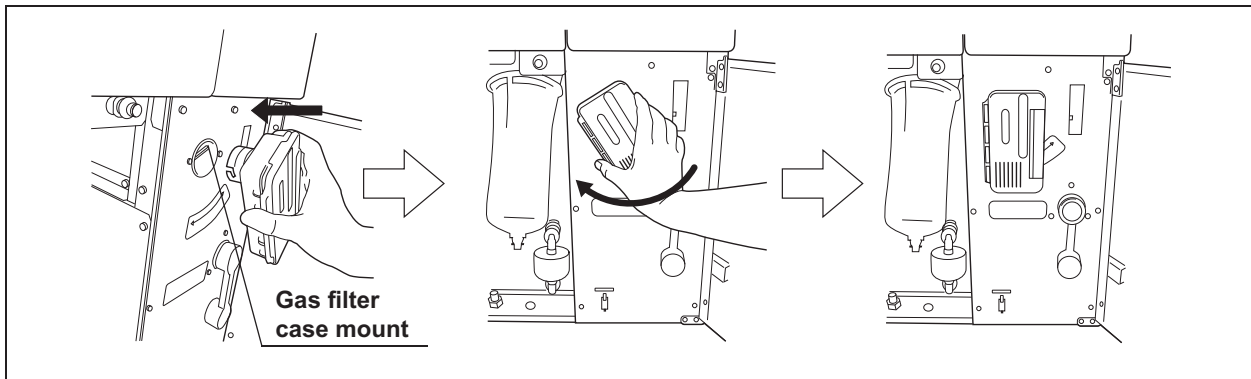


Figure 4.49

Ch.4

- 10 Press the "OK" button.

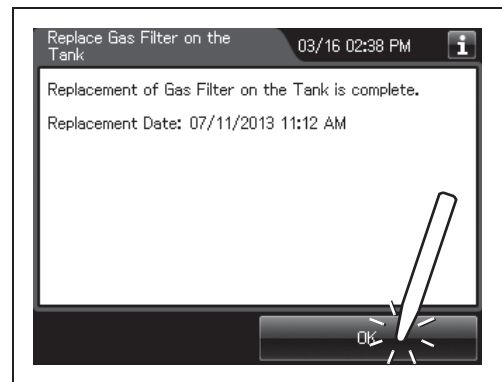


Figure 4.50

**○ When entering the lot number of the gas filter**

If the Lot management is activated, enter the Lot number according to the following procedure.

**NOTE**

The Lot number is printed on a label affixed to the package containing the gas filter.

- 1 If the filter lot number management of the gas filter (Lid and/or Tank) is active, the touch screen displays a screen as shown in following figure after Step 6 in “■ Attachment of the gas filter case to the lid” on page 81 or Step 5 in “■ Attachment of the gas filter case to the disinfectant solution tank” on page 84. Press the “Next” button.

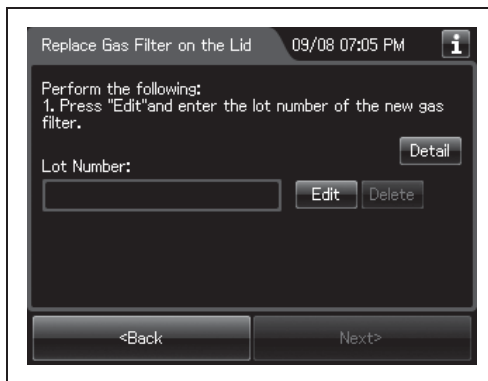


Figure 4.51

- 2 Press the “Edit” button to display the lot entry screen.

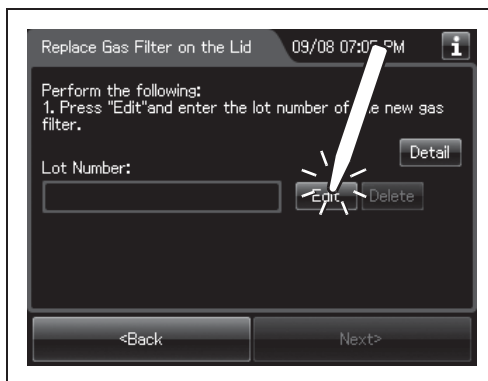


Figure 4.52

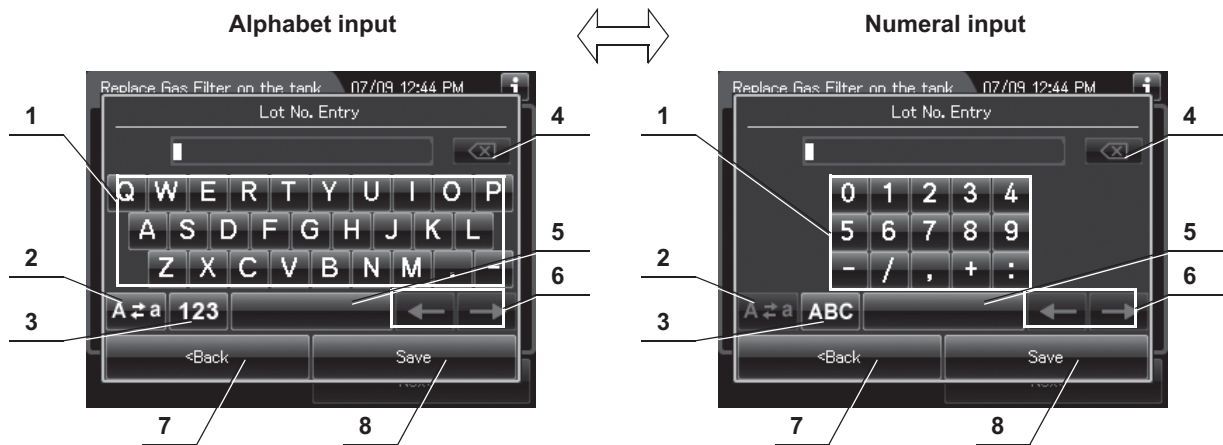
**NOTE**

If the “Delete” button is pressed, the entered Lot No can be deleted.



## 4.10 Installation of the gas filters (MAJ-822)

- Enter the lot number of the new gas filter by the software keyboard on the touch screen and press the “Save” button.



Ch.4

No.	Button	Note
1	Alphabet/Numeral key	Enter the alphabet or a numeral.
2	Uppercase/Lowercase button	Press “Uppercase/lowercase button” to switch alphabet characters between uppercase characters and lowercase characters.
3	Numeric/Alphabetic button	Press “Numeric or Alphabetic button” to switch the input mode between a numeral and the alphabet.
4	Back space button	Press the “Backspace button” to delete the left character of a cursor. When a cursor is on the leftmost, this button becomes gray and cannot be pressed.
5	Space button	Press to the “Space button” to insert a space character.
6	Cursor move button	Press to the cursor move button to move a cursor to left or right.
7	Back button	Return to the previous screen without saving the setting value.
8	Save button	Return to the previous screen and save the entered value.

- Press the “Next” button.

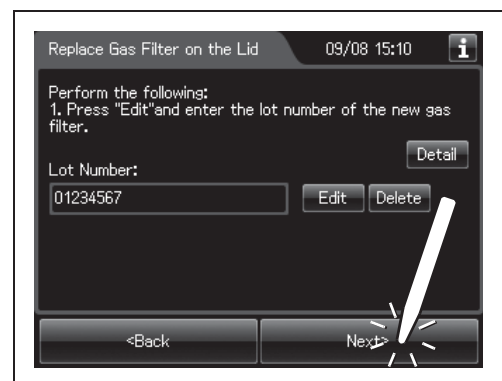


Figure 4.53

- 5 Check the displayed lot number and press the “Next” button.

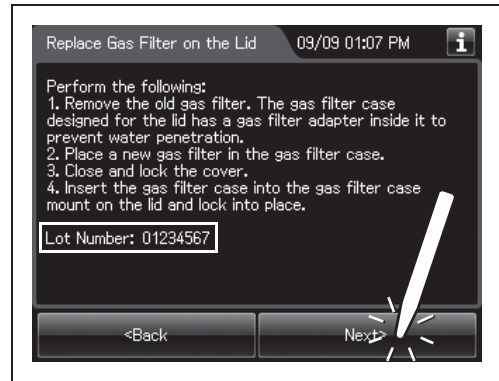


Figure 4.54

- 6 Press the “OK” button.

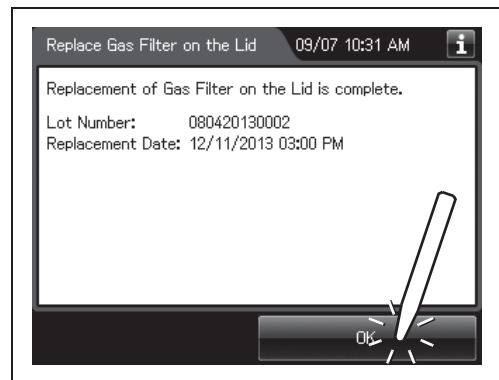


Figure 4.55



## 4.11 Installation of the air filter (MAJ-823)

The air filter is used to remove miscellaneous bacteria and fine particles from the air.

When the air filter is installed in the following procedure, the record of air filter replacements can be stored in memory.

### WARNING

- Always be sure to attach the specified air filter. Otherwise, the air may contaminate the equipment piping and/or the scope and prevent effective reprocessing.
- Replace the air filter at least every month. If the performance of the air filter drops, insufficient elimination of miscellaneous bacteria in air may cause contamination of the instrument and scopes and make the reprocessing insufficient.

### NOTE

- When the air filter counter setting is activated, the filter replacement indicator can be displayed on the top right of the touch screen and on the “Replace Air Filter” button on the Replacement of Consumable Items menu when the counter setting value is reached.
- The lot number of the air filter can be recorded in the air filter replacement history. For changing the lot management of the air filter, refer to Section 4.15, “Filter lot number management” in “Instructions-Operation Manual”.

Ch.4

## Required items

Check	Required items
	Air filter (MAJ-823)

Table 4.2

## ■ Installing the air filter

- 1 Prepare the air filter.
- 2 Press the “Replacement of Consumable items” button on the Menu screen.

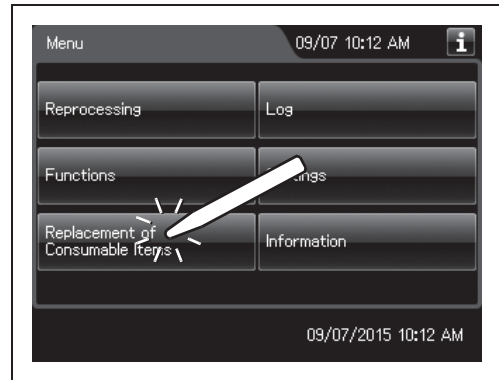


Figure 4.56

- 3 Press the “Replace Air Filter on the Lid” button.



Figure 4.57

- 4 Enter the operator's user ID. For the detailed procedures, refer to Section 3.6, “Entering ID” in “Instructions-Operation Manual” (If applicable).

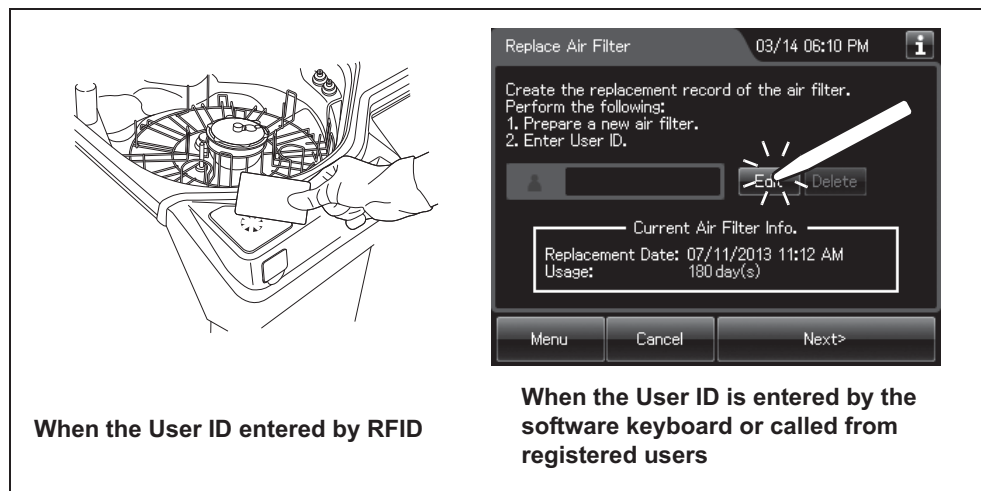


Figure 4.58

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## 4.11 Installation of the air filter (MAJ-823)

### NOTE

- The input of the User ID can be omitted by modifying the User ID input setting. For details, refer to Section 4.5, “User ID Setting” in “Instructions-Operation Manual”.
- If the “Delete” button is pressed, the entered ID can be deleted.

5 Open the front door of the device.

### NOTE

The air filter is not installed on the device when it is shipped from the factory.

6 With the FLOW indicator pointing upwards, attach a new air filter by fitting into the two connectors until they click.

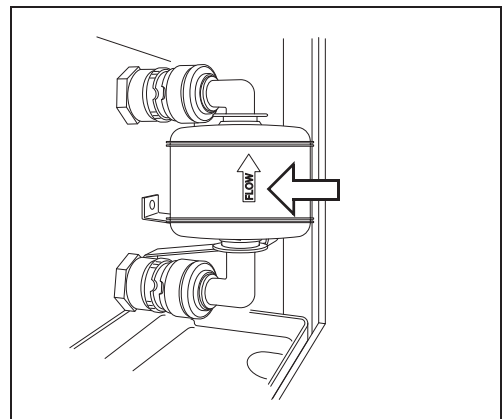


Figure 4.59

7 Press the “Next” button.



Figure 4.60

### NOTE

When the lot management of the air filter is activated, the lot number of the air filter is entered after step 4. For details, refer to “○ When entering the lot number of the air filter:” on page 93.



- 8 Press the “OK” button to finish.

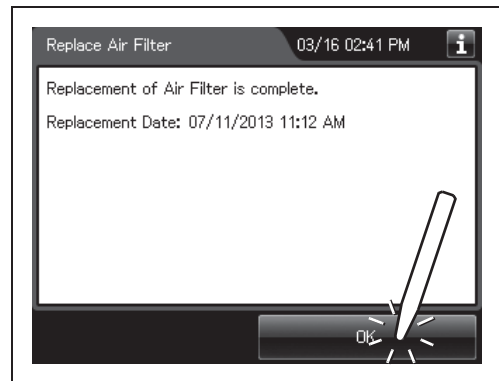


Figure 4.61

**○ When entering the lot number of the air filter:**

If the Lot management is activated, enter the Lot number according to the following procedure.

**NOTE**

The Lot number is printed on a label affixed to the package containing the air filter.

- 1 If the filter lot number management of the air filter is active, the touch screen displays a screen as shown in following figure after Step 7 in “■ Installing the air filter” on page 91.

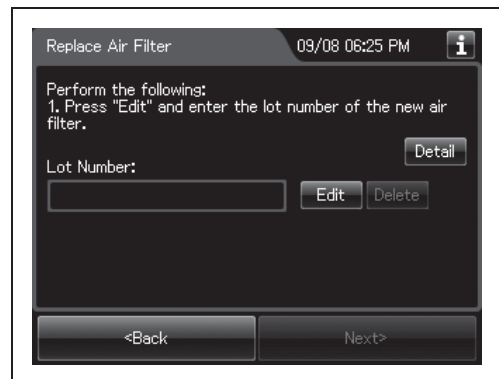


Figure 4.62

- 2 Press the “Edit” button to display the lot entry screen.



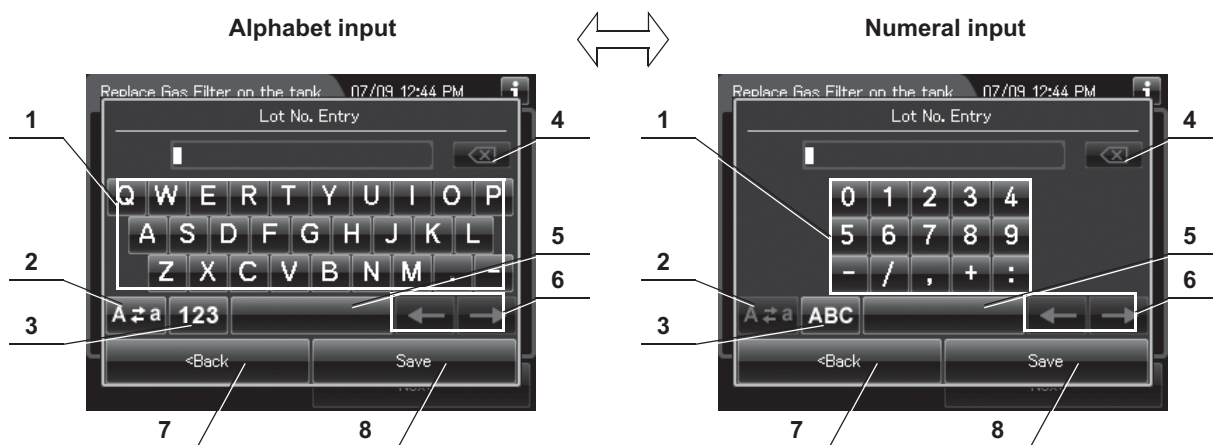
Figure 4.63

## 4.11 Installation of the air filter (MAJ-823)

### NOTE

If the “Delete” button is pressed, the entered Lot No can be deleted.

- 3 Enter the lot number of the new air filter by the software keyboard on the touch screen and press the “Save” button.



Ch.4

No.	Button	Note
1	Alphabet/Numeral key	Enter the alphabet or a numeral.
2	Uppercase/Lowercase button	Press “Uppercase/lowercase button” to switch alphabet character on the soft keyboard between uppercases characters and lowercase characters.
3	Numeric/Alphabetic button	Press “Numeric or Alphabetic button” to switch the input mode between a numeral and the alphabet.
4	Back space button	Press the “Backspace button” to delete the left character of a cursor. When a cursor is on the leftmost, this button becomes gray and cannot be pressed.
5	Space button	Press to the “Space button” to insert a space character.
6	Cursor move button	Press to the cursor move button to move a cursor to left or right.
7	Back button	Returns to the previous screen without saving the setting value.
8	Save button	Returns to the previous screen and save the entered value.

4 Press the “Next” button.



Figure 4.64

5 Check the displayed lot number and press the “Next” button.

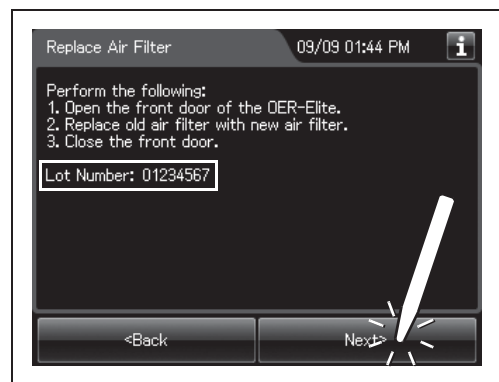


Figure 4.65

6 Press the “OK” button.

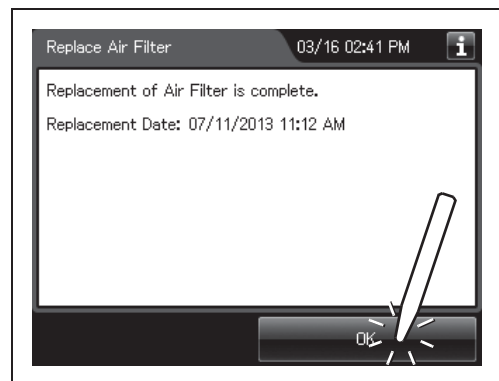


Figure 4.66

Ch.4



## 4.12 Inspection of air leakage from the air filter connectors

Check that air is not leaking from the air filter connectors.

- 1 Press the “Functions” button on the Menu screen.

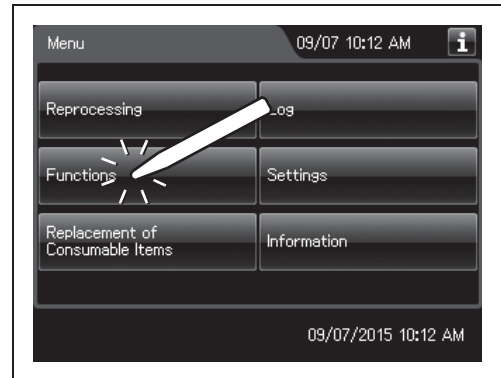


Figure 4.67

- 2 Press the “Air Purge” button.



Figure 4.68

- 3 Enter the operator's user ID. For the detailed procedures, refer to Section 3.6, "Entering ID" in "Instructions-Operation Manual" (If applicable).

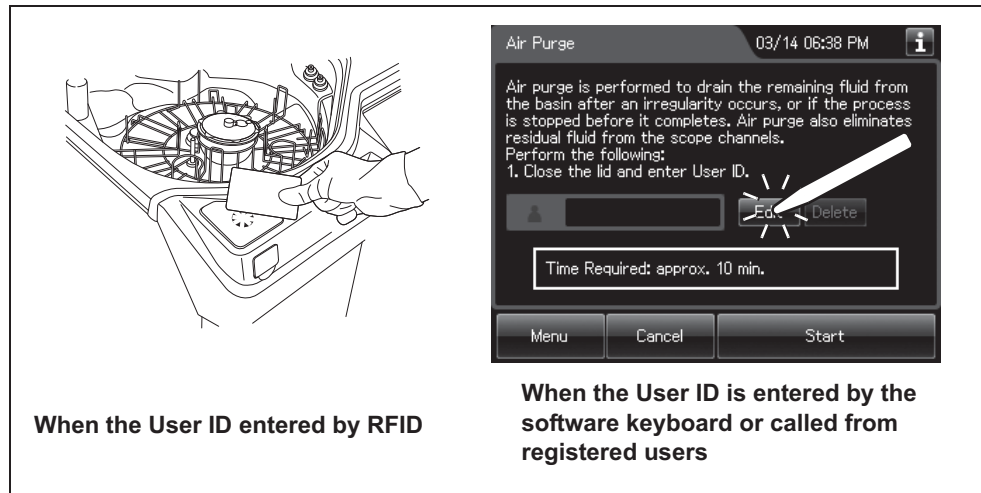


Figure 4.69

**NOTE**

- The input of the User ID can be omitted by modifying the User ID input setting. For details, refer to Section 4.5, "User ID Setting" in "Instructions-Operation Manual".
- If the "Delete" button is pressed, the entered ID can be deleted.

- 4 Press the "Start" button.

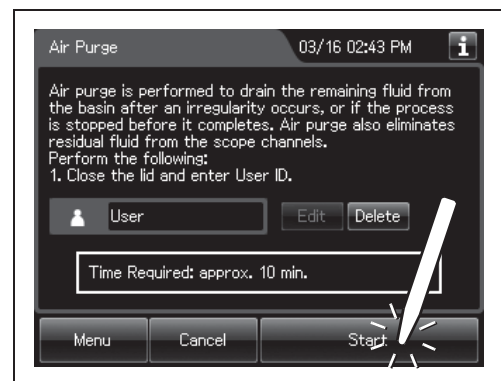


Figure 4.70

- 5 Open the front door of the equipment.



#### 4.12 Inspection of air leakage from the air filter connectors

- 6 When air purge has started, touch the air filter connectors to ensure that air is not leaking out. Also, ensure that the connectors do not produce a whistling sound, which would mean there is an air leak.

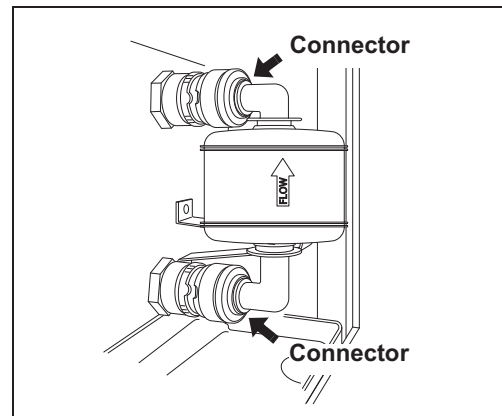


Figure 4.71

- 7 Press the "Stop" button on the touch screen to end Air Purge. If an air Leak is detected, reinstall the air filter as described in refer to "■ Replacing the air filter" in Section 8.5, "Replacing the air filter (MAJ-823)" in "Instructions-Operation Manual".
- 8 The touch screen displays the error code [E000]. Press the "OK" button repeatedly until the error screen is closed.

Ch.4

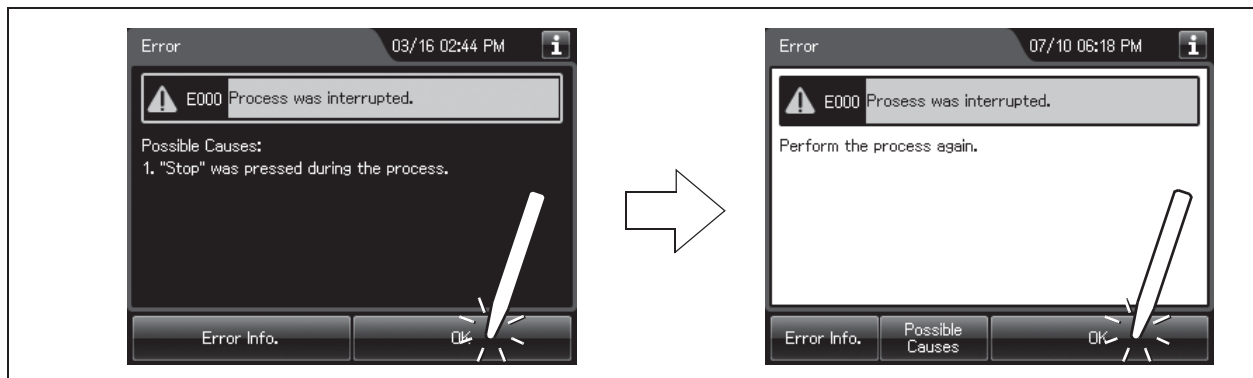


Figure 4.72

## 4.13 Installation of the water tray

The water tray is used to receive and hold water during maintenance such as water filter replacement. Push [PUSH] on the front door of the equipment to open the front door and place the water tray below the water filter.

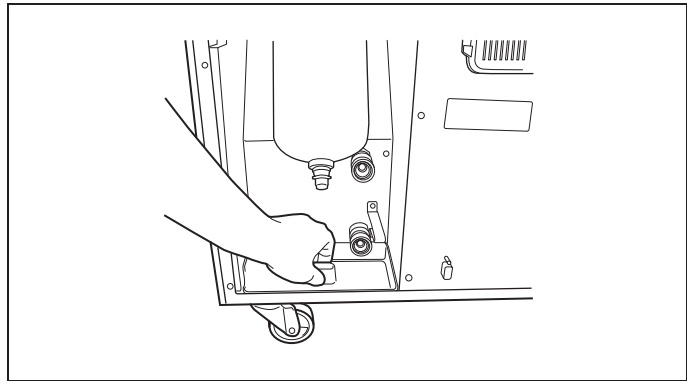


Figure 4.73

## 4.14 Installation of the water filter (MAJ-824 or MAJ-2318)

The water filter is bacteria-retentive.

When the water filter is installed in the following procedure, the record of water filter changes can be stored in memory.

### WARNING

- Attach the water filter under clean conditions. Do not touch the inner side of the water filter. Otherwise, dust could get on it.
- After replacing the water filter, be sure to perform the operation described in Section 4.22, "Water line disinfection" to prevent contaminating the water supply pipes. Failure to perform this operation could result in contamination of the equipment piping and/or the endoscope, preventing effective reprocessing.
- Always be sure to attach the water filter. Otherwise, the water may contaminate the equipment piping and/or the endoscope and prevent effective reprocessing.
- Always be sure to use the specified water filter. Otherwise, the water may contaminate the equipment piping and/or the endoscope and prevent effective reprocessing.

### CAUTION

- Hold the water filter wrench at a point below the projection on the grip. If you hold it at a point closer to the water filter housing connector than the projection, you might catch your finger in the equipment.
- After attaching the water filter, be sure to discharge air from the water filter housing completely. If air is left in the water filter housing, the process time may be extended. Check for air in the housing whenever the process time is extended or other irregularities are noticed.
- Do not drop the removed water filter housing. Otherwise, the water filter housing and/or the connector below the water filter housing case may be cracked or damaged and cause water leak.
- Make sure that the O-ring at the head of the water filter housing is free of irregularities such as cracks, breaks, rips, scratches, or stains. Water leakage may result if the O-ring is not attached or is abnormal.



**NOTE**

The lot number of the water filter can be recorded in the water filter replacement history. For changing the lot management of the water filter, refer to Section 4.15, “Filter lot number management” in “Instructions-Operation Manual”.

**Required items**

Check	Required items
	Water filter (MAJ-824 or MAJ-2318)
	Water filter wrench
	Filter tubes (× 2)
	Container with 2 L or larger capacity (wide-mouthed container such as a vat)

Table 4.3

**Ch.4**

**Attachment of the water filter**

- 1 Make sure that the water faucet is open.
- 2 Press the “Replacement of Consumable Items” button on the Menu Screen.

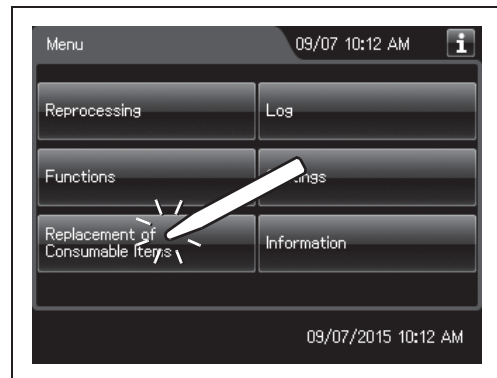


Figure 4.74

## 4.14 Installation of the water filter (MAJ-824 or MAJ-2318)

**3** Press the “Replace Water Filter” button.

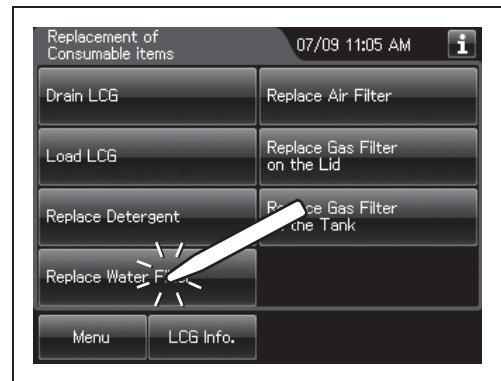


Figure 4.75

**4** Press the “No” button.

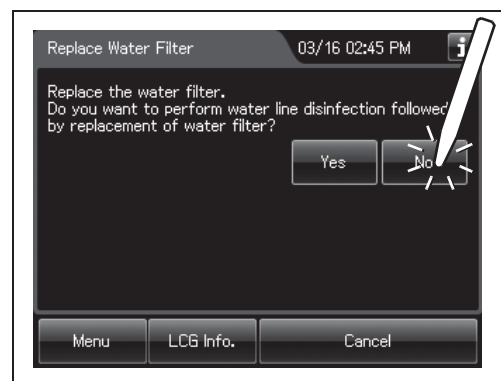


Figure 4.76

### NOTE

The disinfection of water supply piping is performed in Section 4.21, “Disinfection of the water supply piping”.

**5** Press the “Next” button repeatedly until the touch screen display changes as shown below.

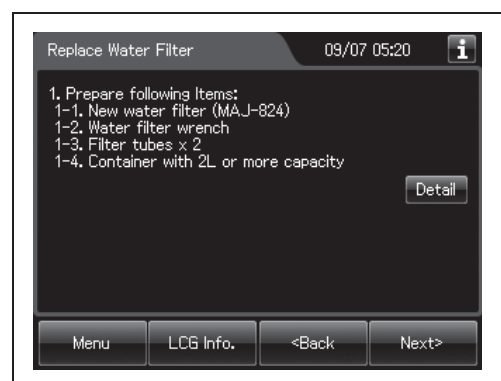


Figure 4.77

## 4.14 Installation of the water filter (MAJ-824 or MAJ-2318)

- 6 Enter the operator's user ID. For the detailed procedures, refer to Section 3.6, "Entering ID" in "Instructions-Operation Manual" (If applicable).

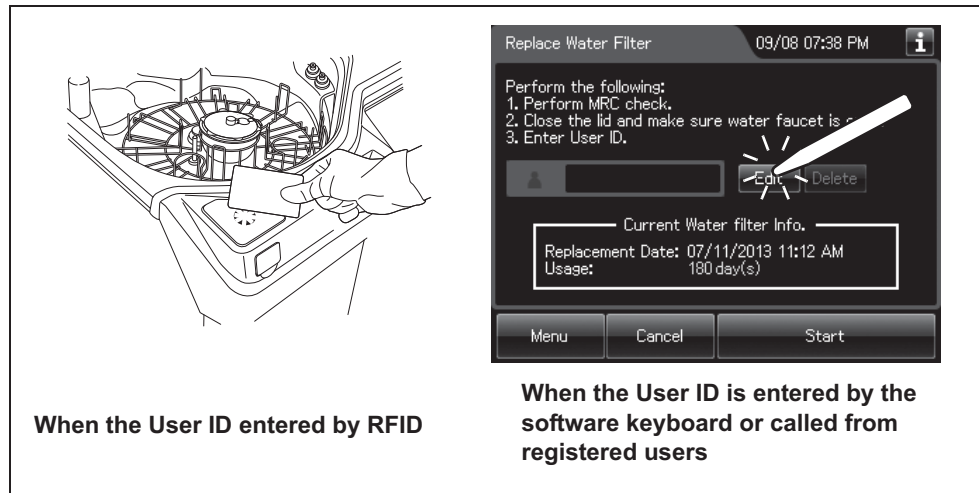


Figure 4.78

### NOTE

- The input of the User ID can be omitted by modifying the User ID input setting. For details, refer to Section 4.5, "User ID Setting" in "Instructions-Operation Manual".
- If the "Delete" button is pressed, the entered ID can be deleted.

- 7 Press the "Start" button.

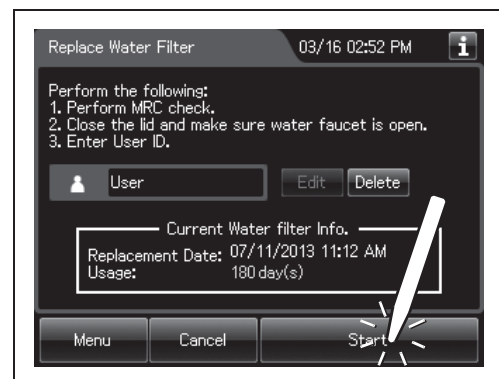


Figure 4.79

### NOTE

When the Lot management of the water filter is activated, the lot number of the water filter is entered after Step 7. For details, refer to "○ When entering the lot number of the water filter" on page 111

## 4.14 Installation of the water filter (MAJ-824 or MAJ-2318)

- 8 Press the “Next” button repeatedly until the touch screen display changes as shown below.

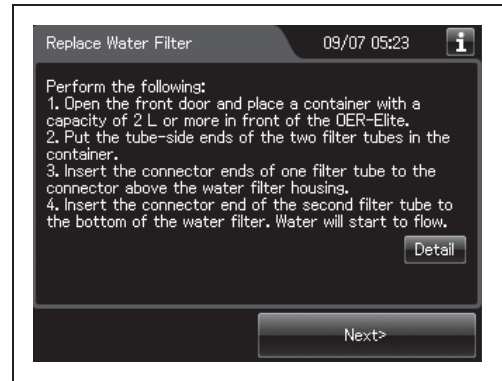


Figure 4.80

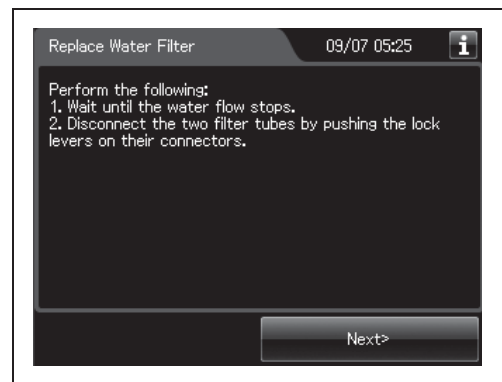


Figure 4.81

Ch.4

### NOTE

If the “Detail” button is pressed, the details of work can be displayed on the touch screen.

- 9 Push the area marked “PUSH” on the front door to open it.

### NOTE

Hold the water filter wrench at a point closer to you than to the projection on the grip. If you hold it at a point closer to the water filter housing connector than the projection, you might catch your finger in the mechanism.

- 10 Insert the water filter wrench from below the water case and rotate the tool as shown below to loosen the water filter housing.

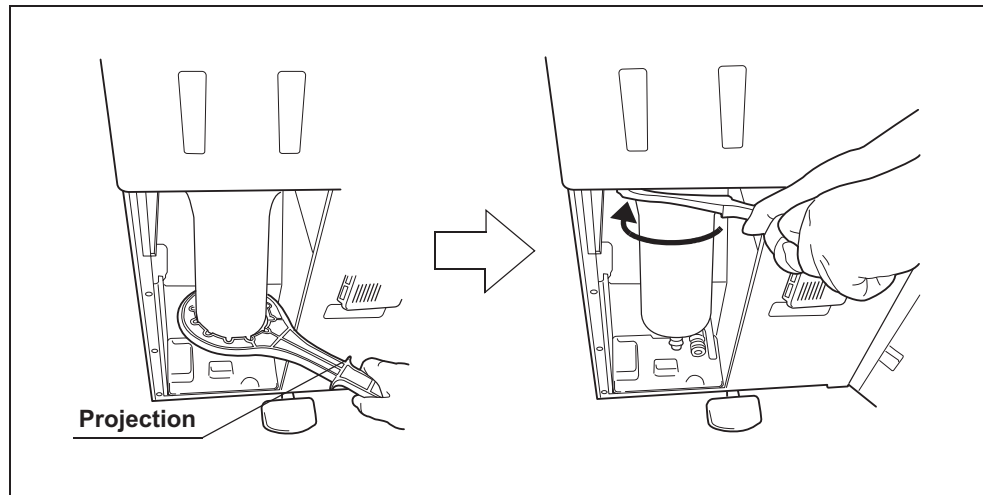


Figure 4.82

**CAUTION**

After fully loosening the water filter housing with the attaching/detaching tool, hold it with both hands and remove it. If the case is not fully loosened, your hands may slip and you could be injured.

- 11 Hold the water filter housing with both hands and rotate it in the direction shown to remove it.

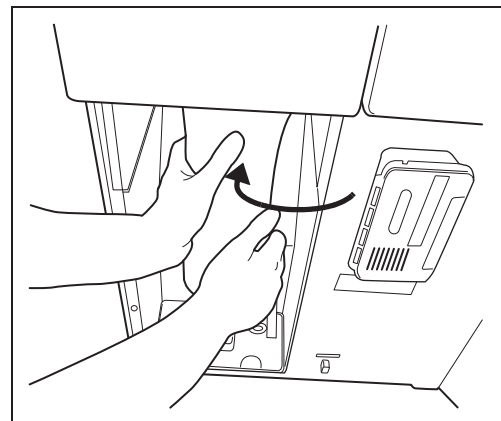


Figure 4.83

- 12 Open the bottom (the side without the O-ring) of the package containing the new water filter.

4.14 Installation of the water filter (MAJ-824 or MAJ-2318)

- 13** Hold the water filter housing and place the new water filter directly from the bag into the water filter housing so that its O-ring will be positioned upward.

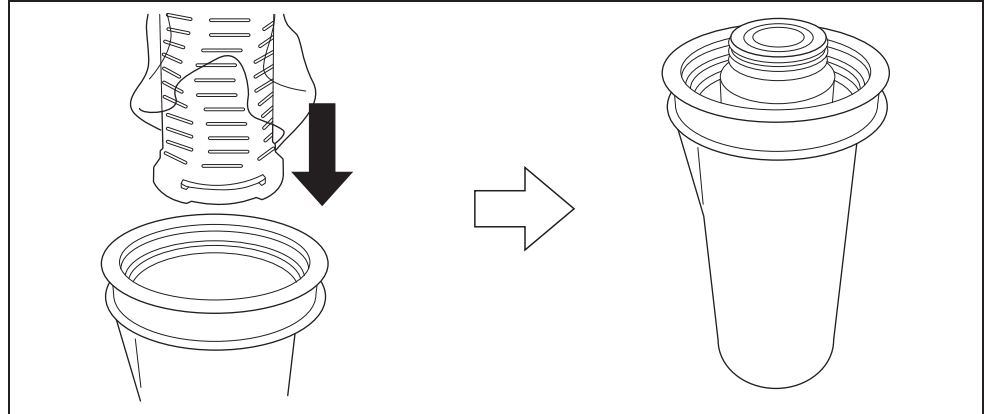


Figure 4.84

- 14** Attach and rotate the water filter housing in the direction shown to secure it temporarily.

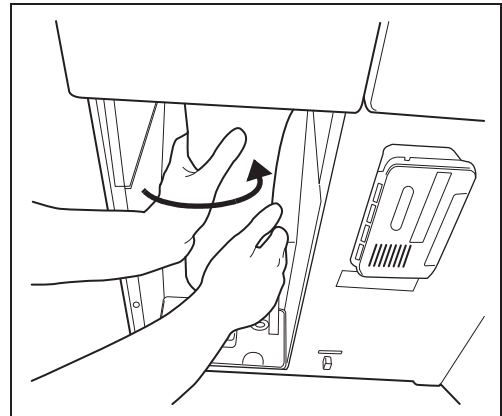


Figure 4.85

**NOTE**

- To ensure smooth installation, it is recommended to moisten the O-ring at the head of the water filter with clean water or ethanol before securing it temporarily.
- The rotation drag increases during temporary securing, but rotate the case all the way until it is stopped.

#### 4.14 Installation of the water filter (MAJ-824 or MAJ-2318)

- 15** Attach the water filter wrench and rotate it slowly in the direction shown to tighten.

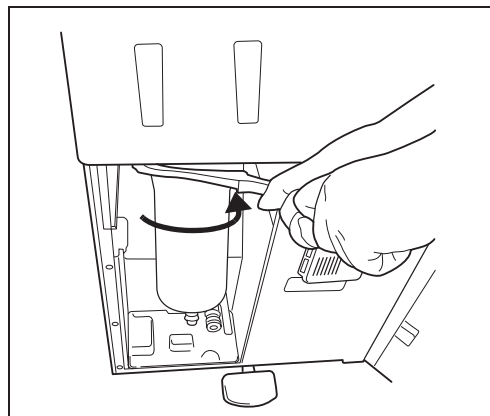


Figure 4.86

#### CAUTION

Tighten the water filter case securely. Insecure tightening may lead to a risk of water leak.

- 16** Remove the water filter wrench and place it in the space on the left of the water filter housing.

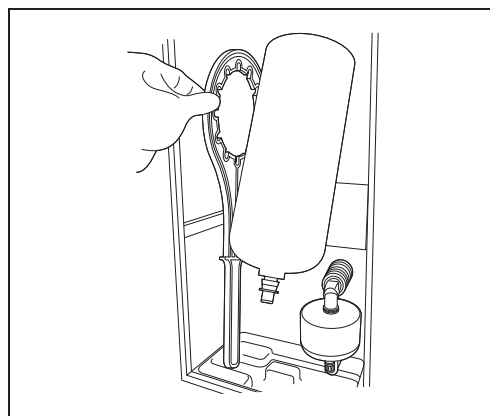


Figure 4.87

- 17** Press the “Continue” button.

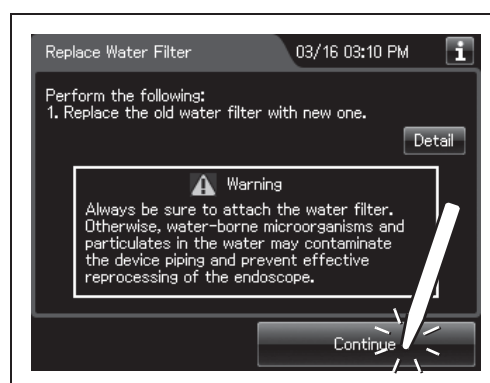


Figure 4.88

- 18** Prepare a container with a capacity of at least 2 L and place it in front of the equipment.

Ch.4

## 4.14 Installation of the water filter (MAJ-824 or MAJ-2318)

### NOTE

If the "Detail Info" button is pressed, the details of work can be displayed on the touch screen.

- 19** Put the tube-side end of the filter tube in the container, and insert the connector end of the filter tube into the connector above the water filter housing until it clicks. Do not connect anything to the connector below the water filter housing.

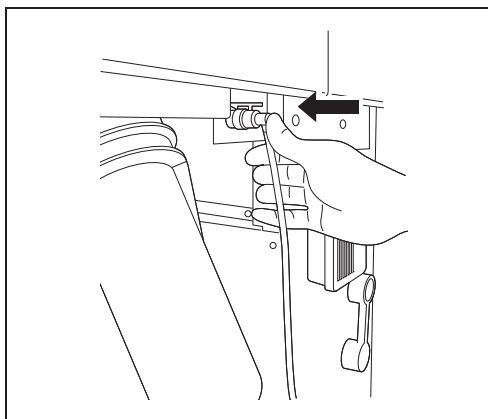


Figure 4.89

### CAUTION

Be sure to drain air from the newly attached water filter. If air gets in the water filter housing, the process time may be extended. Air should also be drained from the water filter housing whenever there is an irregularity such as extension of the process time.

- 20** Press the "Continue" button.

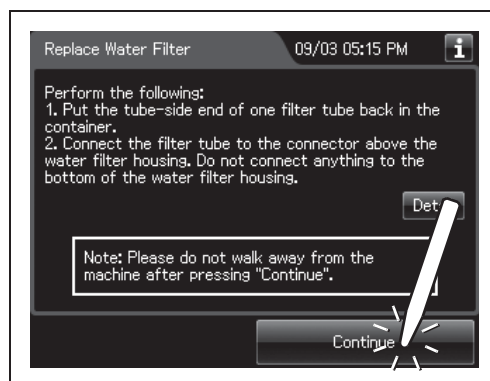


Figure 4.90



- 21** When water starts to flow continuously from the filter tube, disconnect the tube by pushing its lock lever. Water flow should stop when the filter tube is disconnected.

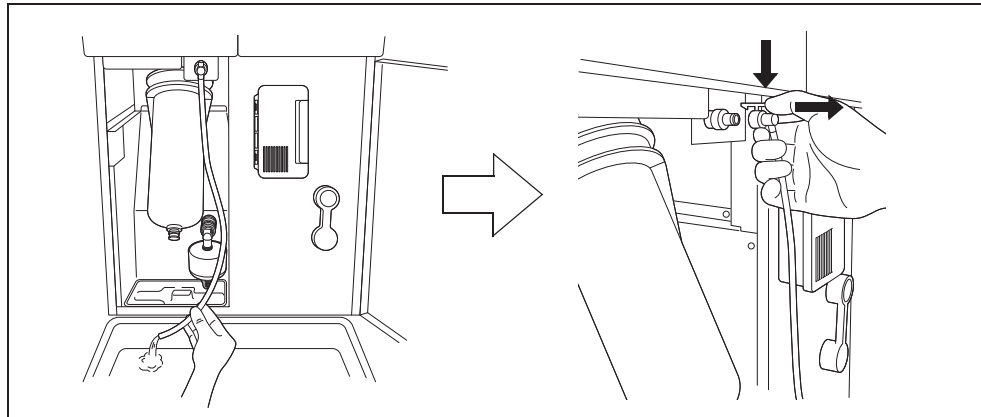


Figure 4.91

- 22** Check that no water Leaks from the water filter housing. If a Leak is detected, immediately press the “STOP” button to stop water supply and reinstall the water filter (perform as described in Section 8.4, “Replacing the water filter (MAJ-824 or MAJ-2318)” in the “Instructions-Operation Manual”).

Ch.4

**NOTE**

When the “Stop” button is pressed to stop the process, error code [E000] is displayed and the auto processing is executed.

- 23** Press the “Continue” button.

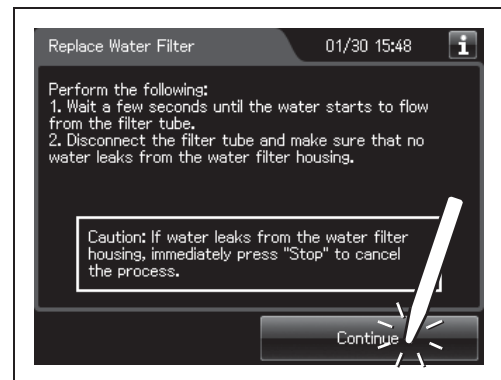


Figure 4.92

#### 4.14 Installation of the water filter (MAJ-824 or MAJ-2318)

**24** Press the “OK” button.

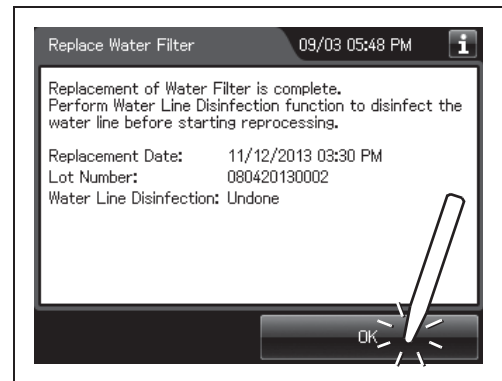


Figure 4.93

**25** Close the front door.

**26** Rinse the filter tube with running water, dry it completely and store in a clean place.

## ○ When entering the lot number of the water filter

If the Lot management is activated, enter the Lot number according to the following procedure.

**NOTE**

The Lot number is printed on a label affixed to the box containing the water filter.

- 1 If the filter lot number management of the water filter is active, the touch screen displays a screen as shown in following figure at Step 7 in “■ Attachment of the water filter” on page 101. Press the “Next” button.

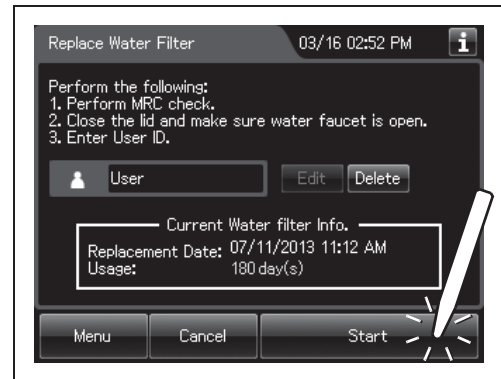


Figure 4.94

- 2 Press the “Edit” button to display the lot entry screen.

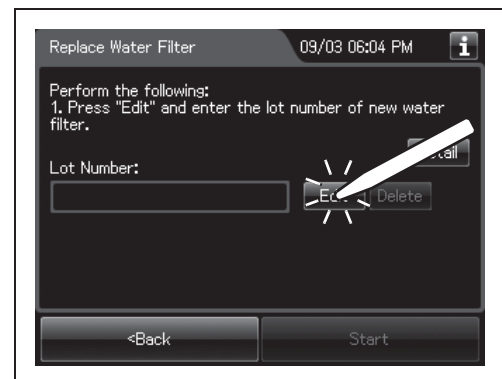


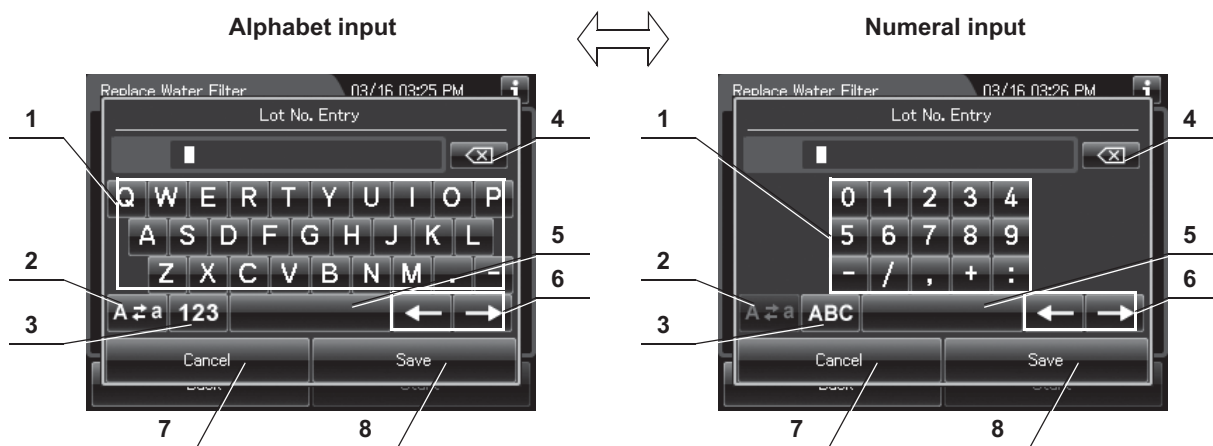
Figure 4.95

**NOTE**

If the “Delete” button is pressed, the entered lot number can be deleted.

#### 4.14 Installation of the water filter (MAJ-824 or MAJ-2318)

- Enter the lot number of the new water filter by the software keyboard on the touch screen and press the “Save” button.



Ch.4

No.	Button	Note
1	Alphabet/Numeral key	Enter the alphabet or a numeral.
2	Uppercase/Lowercase button	Press “Uppercase/lowercase button” to switch alphabet character on the soft keyboard between uppercases characters and lowercase characters.
3	Numeric/Alphabetic button	Press “Numeric or Alphabetic button” to switch the input mode between a numeral and the alphabet.
4	Back space button	Press the “Backspace button” to delete the left character of a cursor. When a cursor is on the leftmost, this button becomes gray and cannot be pressed.
5	Space button	Press to the “Space button” to insert a space character.
6	Cursor move button	Press to the cursor move button to move a cursor to left or right.
7	Back button	Returns to the previous screen without saving the setting value.
8	Save button	Returns to the previous screen and save the entered value.

- Press the “Start” button. Go to Step 8 in “■ Attachment of the water filter” on page 101.

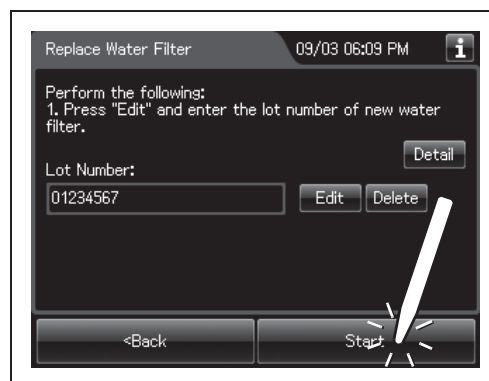


Figure 4.96

## 4.15 Correction of equipment tilt

Make sure that the equipment is not tilted. If it is, correct the tilt as follows.

### CAUTION

To prevent fluid leakage, do not use the equipment if it is not level.

### NOTE

The Manual Leak Test function is performed to supply water to the reprocessing basin. The work instruction of this section may differ from the instruction displayed on the touch screen.

- 1 Make sure that the water faucet is open.
- 2 Make sure power is ON.
- 3 Close the lid.
- 4 Press the “Functions” button on the Menu screen.

Ch.4

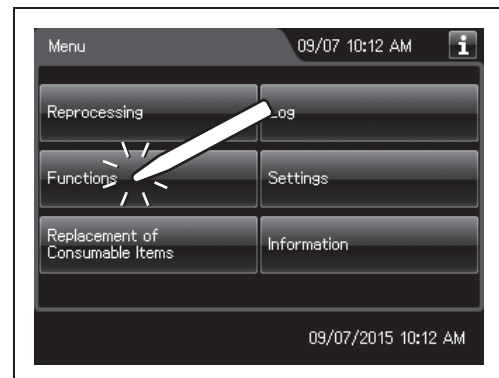


Figure 4.97

- 5 Press the “Manual Leak Test” button on the 2nd page of the functions menu screen.

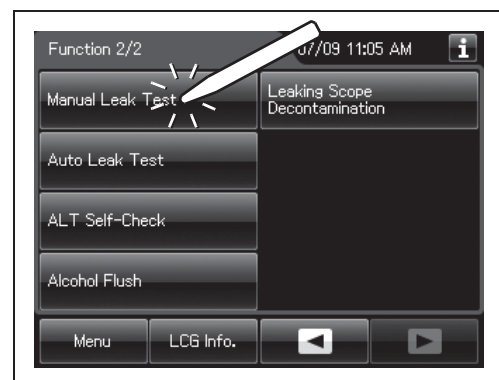


Figure 4.98

## 4.15 Correction of equipment tilt

- 6 Hold the scope ID master card parallel to the RFID reader and scan the card with the reader until the equipment generates a short beep.

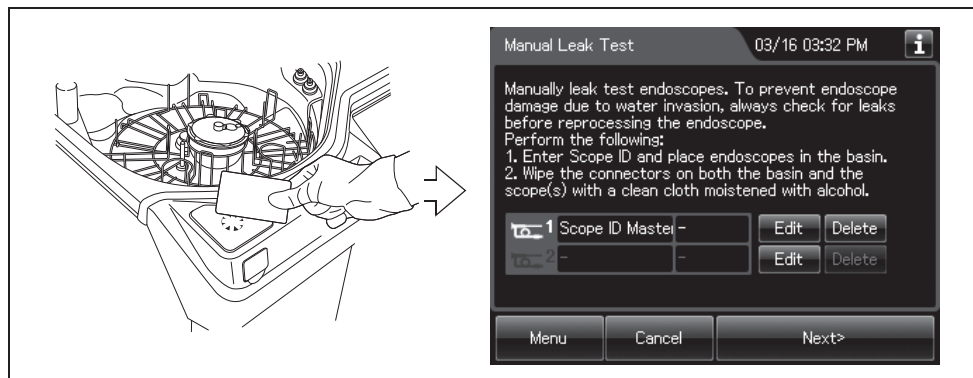


Figure 4.99

- 7 Press the “Next” button.
- 8 Hold the User ID master card parallel to the RFID reader and scan the card with the reader until the equipment generates a short beep.

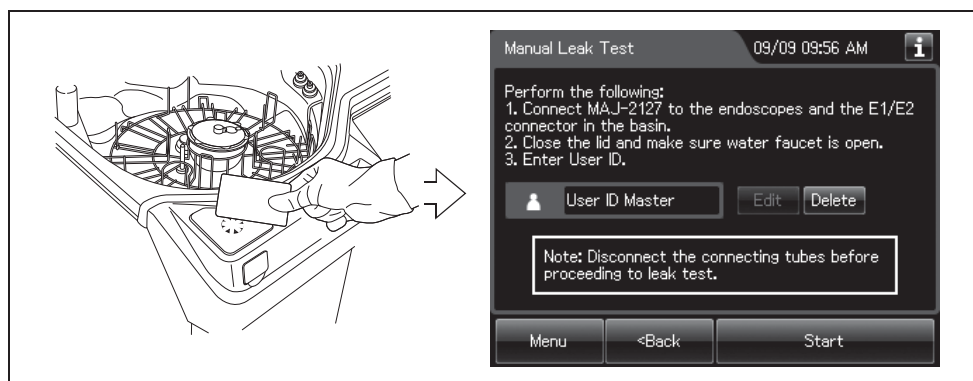


Figure 4.100

### NOTE

- The input of the User ID can be omitted by modifying the User ID input setting. For details, refer to Section 4.5, “User ID Setting” in “Instructions-Operation Manual”.
- If the “Delete” button is pressed, the entered ID can be deleted.

- 9** Press the “Start” button. Water supply to the reprocessing basin starts and the touch screen changes a screen.

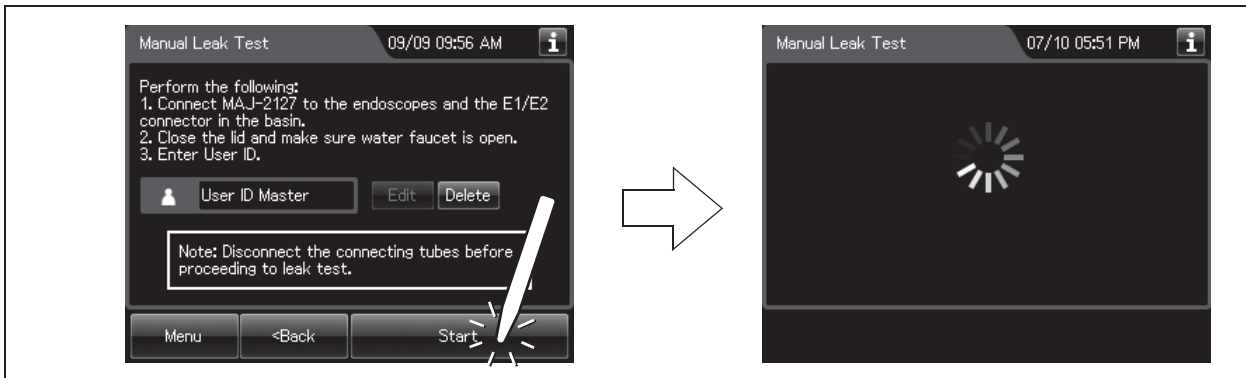


Figure 4.101

- 10** When the water supply completes, the equipment generates three buzzer beeps and unlock the lid. Open the lid within 10 minutes.

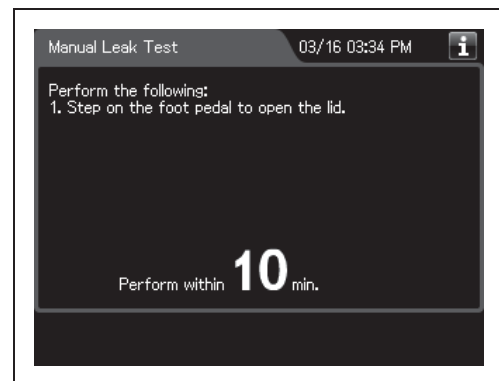


Figure 4.102

- 11** Ensure that the water supply is stopped and then step on the foot pedal to open the lid. When the lid is opened, the touch screen displays the following screen.

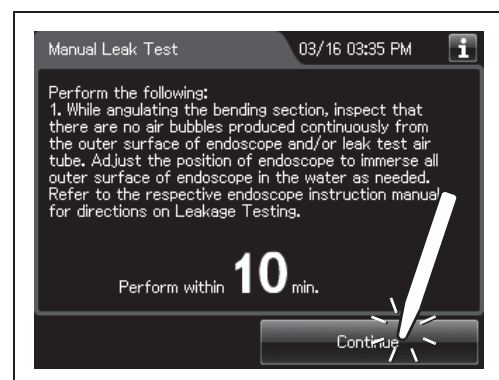


Figure 4.103

Ch.4

**NOTE**

- When the lid is opened, the remaining time displayed on the touch screen is reset to 10 minutes and the countdown restarts.
- If the lid is not opened within 10 minutes, the fluid in the reprocessing basin is drained automatically and the manual leak test stops. The touch screen will then display the error code “E092”.

**12** Check that the water level is located within the range of each of the three scale indicators inside the reprocessing basin.

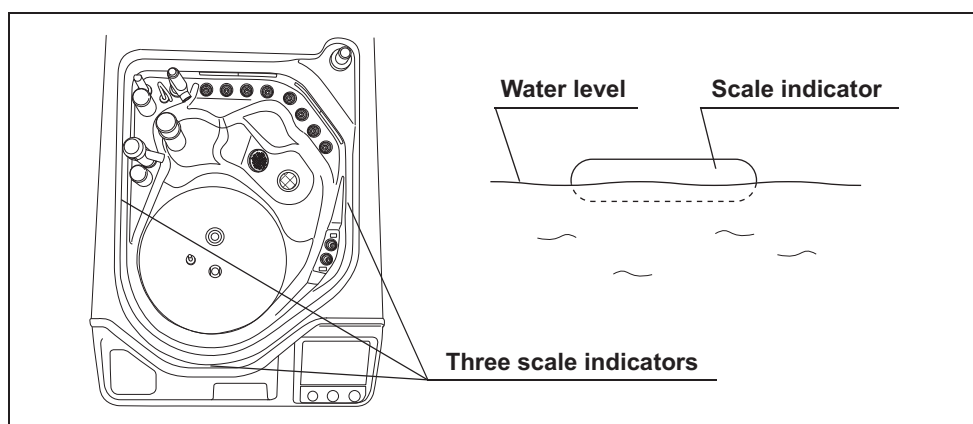


Figure 4.104

**13** If the water level is located within all of the ranges of the three scale indicators, it is not required to correct the equipment tilt. If the water level is not located within even one of the ranges of the three scale indicators, adjust according to “■ Adjustment if water level is not located within even one of the three ranges” on page 117 and “■ Correcting the tilt” on page 118.

**14** Press the “Pass” button.

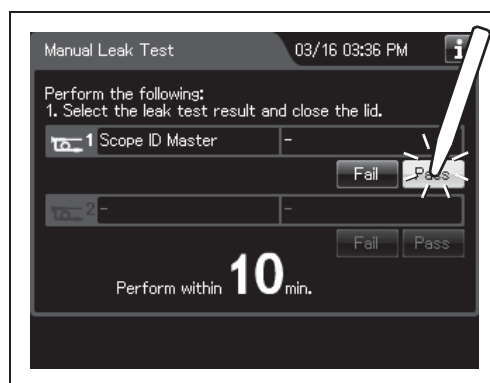


Figure 4.105

**15** Close the lid. Then the water inside the reprocessing basin is drained.



**NOTE**

Even if the process is not completed by closing the lid, the water is drained automatically 10 minutes after the water supply stopped. The touch screen will then display error code [E092].

- 16** When draining has completed, the equipment generates three buzzer beeps and the touchscreen shows the following screen. Press the “OK” button to finish.

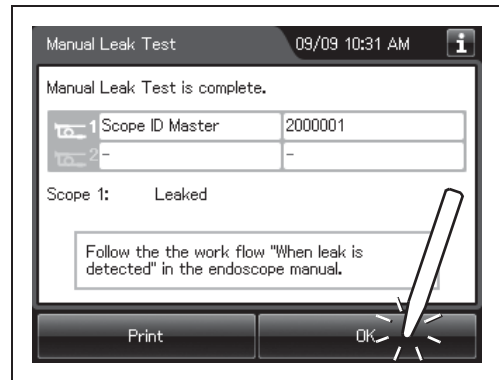


Figure 4.106

Ch.4

**■ Adjustment if water level is not located within even one of the three ranges**

○ Required items

Check	Required items
	Container such as a cup

Table 4.4

- 1** Check the water level. Using a cup, add or remove water until the water level reaches the scale indicator that had the largest deviation from the water level.

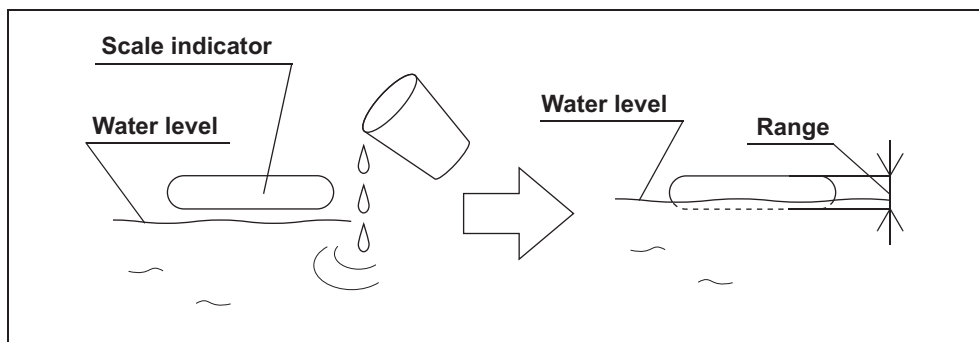


Figure 4.107

## 4.15 Correction of equipment tilt

- 2 Also, check the other scale indicators to ensure that the water level is within their respective ranges.

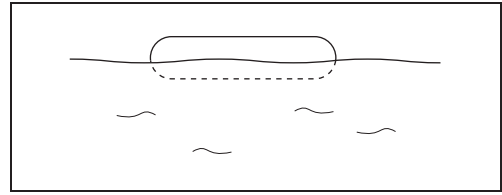


Figure 4.108

- 3 If the water level is still out of the range of the other scale indicators, the equipment may be tilted. Correct the tilt as described in “■ Correcting the tilt” on page 118 below.

### ■ Correcting the tilt

The tilt of the equipment can be adjusted by turning the nuts on the four casters. After correcting the tilt, push the caster lock levers down to stabilize the equipment.

Ch.4

#### ○ Required items

Check	Required items
	Provided wrench

Table 4.5

## ○ Raising the height

### WARNING

The height is set to the lowest position at the factory. Therefore, the height cannot be reduced below the factory shipped height. The height can be raised by up to 10 mm (0.4 in). If it is raised higher, the casters may separate, causing equipment damage or injury.

- 1 Using the provided wrench, turn the lower nut on each caster in the direction shown in Figure 4.109 to set the desired height.

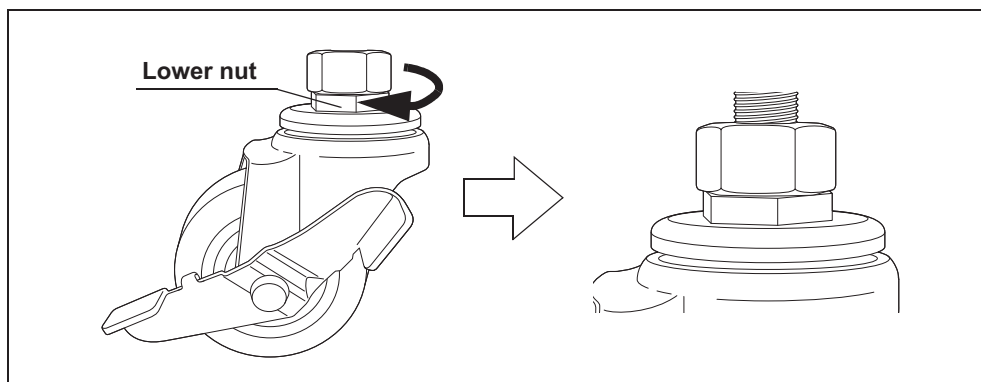


Figure 4.109

- 2 Turn the upper nut on each caster in the direction shown in Figure 4.110 to tighten.

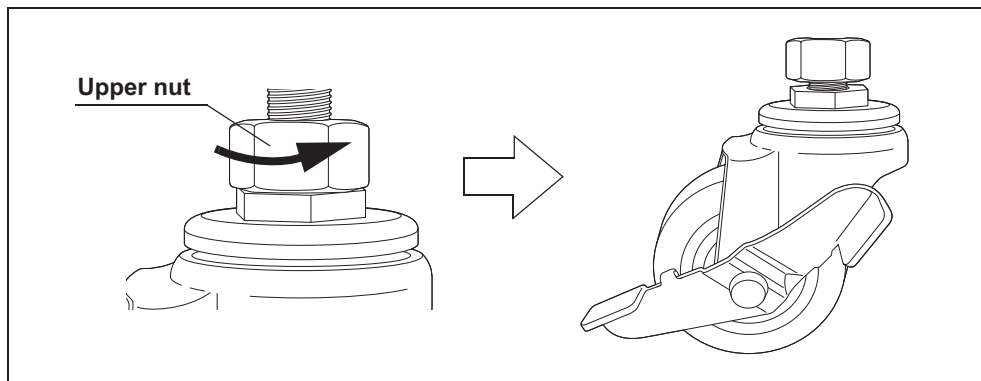


Figure 4.110

Ch.4

## ○ Lowering the height

- 1 Using the provided wrench, turn the upper nut of each caster in the direction shown in Figure 4.111 to loosen the current height setting.

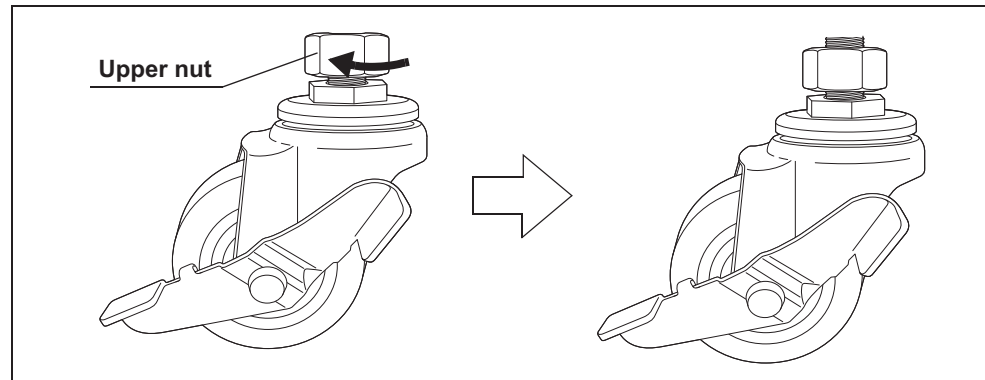


Figure 4.111

- 2 Turn the lower nut on each caster in the direction shown in Figure 4.112 to set the desired height.

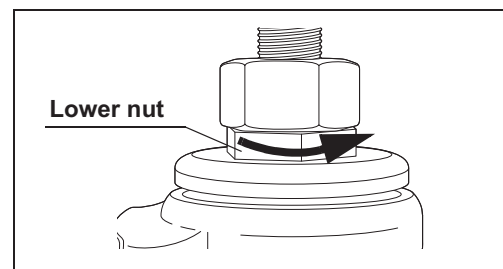


Figure 4.112

- 3 Turn the upper nut on each caster in the direction shown Figure 4.113 to tighten.

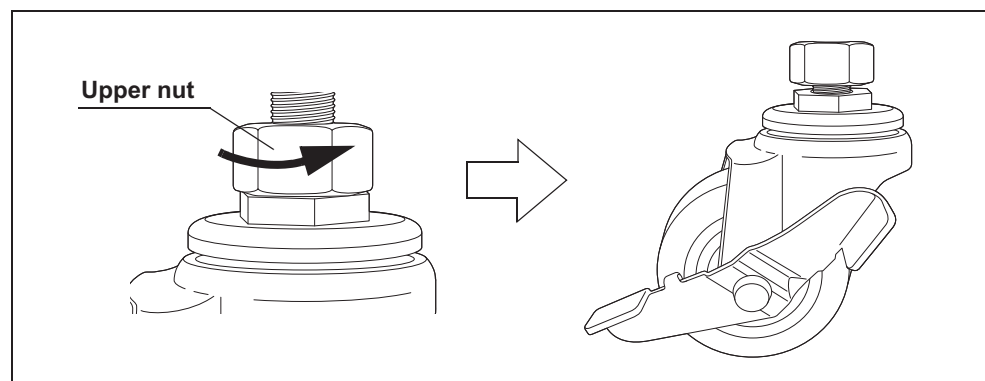


Figure 4.113

## 4.16 Inspecting the detergent/alcohol inner tray

The detergent/alcohol inner tray is used to hold the detergent tank and alcohol tank in position so that they will not fall over.

- 1 Hold the section marked "PULL" on the detergent/alcohol drawer and pull it out.

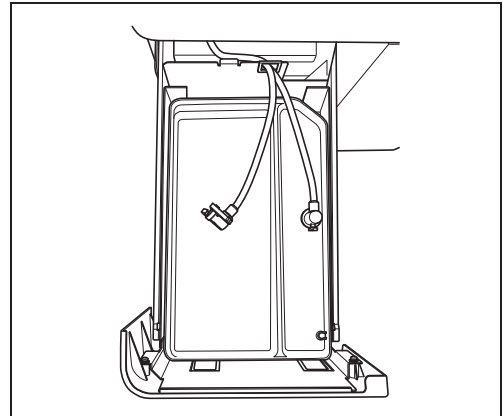


Figure 4.114

- 2 Check if the detergent/alcohol inner tray is properly installed as shown in Figure 4.115.

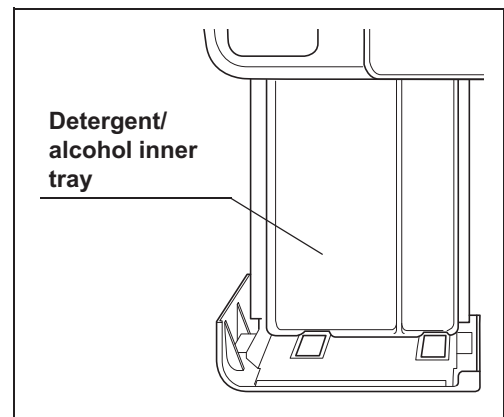


Figure 4.115

Ch.4

## 4.17 Inspecting the alcohol tank

The alcohol tank is used to store alcohol for use during alcohol flush.

### CAUTION

Do not install the alcohol tank unless the ventilation tube is properly secured to the side of the alcohol tank.

- 1 Place the alcohol tank on the detergent/alcohol drawer so that the ventilation tube sits on the front of the tray.
- 2 Insert the blue connector into the connector on the alcohol tank until it clicks.

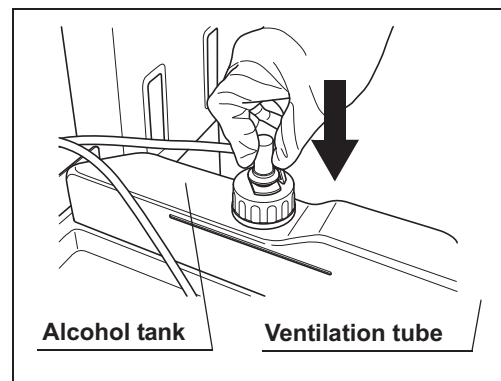


Figure 4.116

- 3 Rotate the connector and orientate the tube as shown in Figure 4.117.

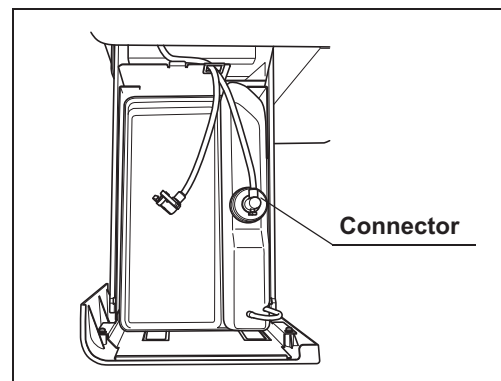


Figure 4.117

- 4 Close the detergent/alcohol drawer.

## 4.18 Addition of alcohol

### WARNING

- The alcohol used with the equipment must be 70% ethyl alcohol or 70% isopropyl alcohol. Using any other kind of alcohol may result in malfunction of the equipment or insufficient reprocessing of the endoscope, difficulty drying the endoscope, fire hazard, or a hazard due to toxic vapor emitted from the alcohol.
- Alcohol is flammable and should be handled with extra care.
- Drain the alcohol in the alcohol tank and replace it with new alcohol at least once a week. Otherwise, the alcohol in the tank may degrade.
- Before handling alcohol, read the cautions carefully and use as instructed.

### NOTE

- If alcohol flush is initiated without alcohol in the tank, the message screen “Alcohol cannot be supplied” will be displayed and the process will be stopped temporarily.
- When the reprocessing process is performed with newly-installed equipment or with equipment after Section 9.9, “Preparing the reprocessor for long-term storage” in “Instructions-Operation Manual” is performed, the reprocessing process may stop temporarily with the message screen “Alcohol cannot be supplied” displayed even though there is enough alcohol in the tank.

- 1 Hold the section on the detergent/alcohol drawer marked “PULL” and pull it out.

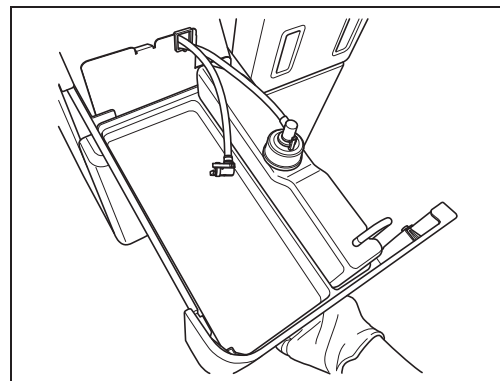


Figure 4.118

## 4.18 Addition of alcohol

- 2 Push the lock lever on the connector of the tube connected to the cap on the alcohol tank to detach the tube.

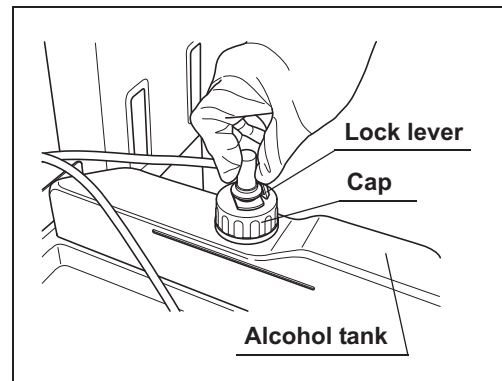


Figure 4.119

- 3 Remove the alcohol tank and place it in a sink or other tub.
- 4 Turn the cap on the alcohol inlet in the direction shown in Figure 4.120 to remove it.

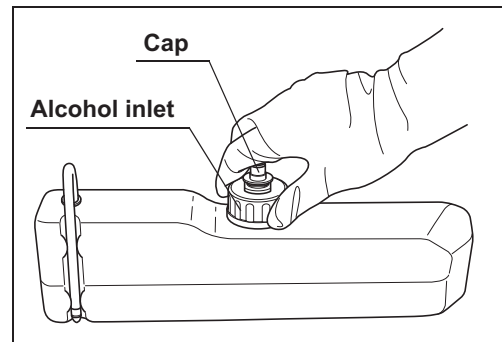


Figure 4.120

### CAUTION

- Do not add alcohol while the tank is in the detergent/alcohol drawer. If alcohol is spilled on the plate, it could damage the equipment.
- Do not knock over the alcohol tank while there is still alcohol inside. Otherwise, the alcohol may spill.

- 5 Carefully pour the 70% ethyl alcohol or 70% isopropyl alcohol into the alcohol tank until it is level with the line inside the tank. If any alcohol is spilled from the tank, wipe it with a clean cloth. Replace the cap on the alcohol tank, making sure that it is tight.

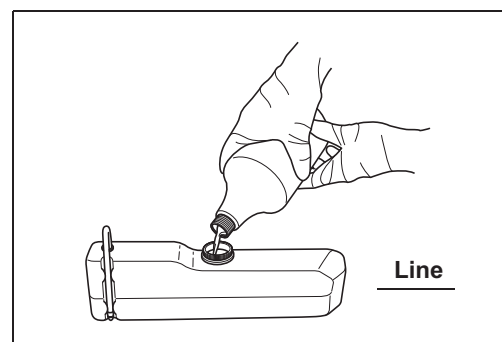


Figure 4.121



**NOTE**

When the alcohol tank is filled to the line, it will hold about 1 L (33 ounces) of alcohol (enough for about 20 alcohol flushes).

- 6** Place the alcohol tank in the detergent/alcohol drawer so that the ventilation tube of the alcohol tank sits on the front of the tray. Ensure that the vent tube is properly attached to the side of the alcohol tank and then place the tank in the detergent alcohol drawer.

**CAUTION**

Placing the alcohol tank so that the ventilation tube sits on the deeper side of the tray could damage the alcohol tank.

- 7** Connect the tube that was originally connected to the cap.

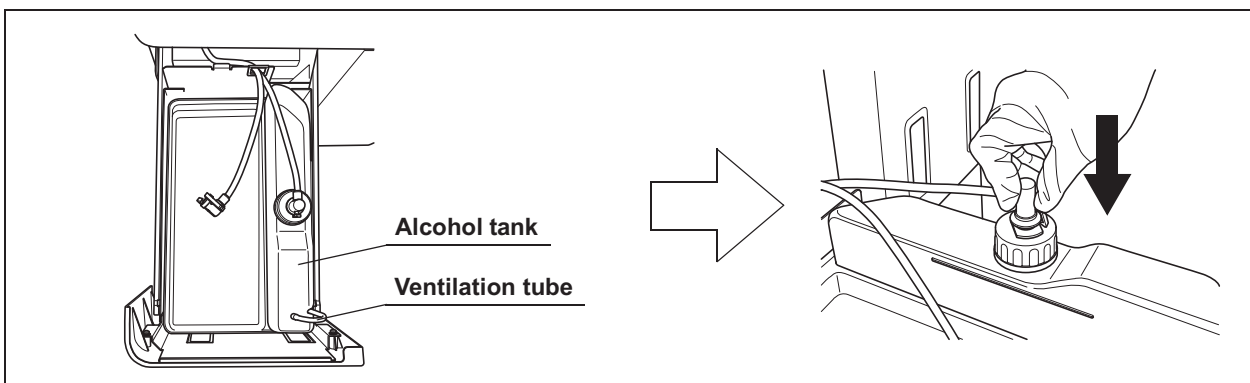
**Ch.4**

Figure 4.122

- 8** Turn the connector to orientate the tube as shown in Figure 4.123. Confirm that the tube is not bent.

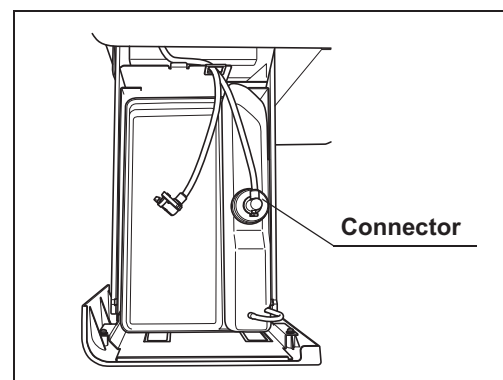


Figure 4.123

- 9** Close the detergent/alcohol drawer.

## 4.19 Installation of the detergent tank

Installation of the detergent tank as described below.

When the detergent tank is installed in the following procedure, the record of the detergent tank replacements can be stored in memory.

### WARNING

- Before handling the detergent, read the cautions and instructions for use carefully, get fully accustomed to the content, and use the detergent as instructed. Make sure that you fully understand what measures need to be taken if you get any detergent on your skin.
- Always use an Olympus-validated detergent. Otherwise, the endoscopes may not be properly cleaned and as a result, the endoscopes may not achieve high-level disinfection.
- When handling the detergent, always wear appropriate personal protective equipment, such as eyewear, face mask, moisture-resistant clothing, and chemical-resistant gloves that fit properly and are long enough so that your skin is not exposed. All personal protective equipment should be inspected before use and replaced periodically before it is damaged.
- To prevent the detergent from leaking, do not tilt the detergent tank when there is detergent inside.

### NOTE

- If detergent has run out and the message screen “Detergent cannot be supplied” is displayed, the equipment will stop the process. Refer to “■ When the “Message 093” is displayed” on page 159.
- For Olympus-validated detergents, Refer to Section 2.8 “Consumable accessories (Optional)”.
- The detergent tank can hold about 2.8 L (95 ounces) of detergent (which can be used for approximately 30 reprocessing operations).
- When the reprocessing process is performed with newly-installed equipment or with equipment after Section 9.9, “Preparing the reprocessor for long-term storage” in “Instructions-Operation Manual” is performed, the reprocessing process may stop temporarily with the message screen “Detergent cannot be supplied” displayed even though there is enough detergent in the tank.
- The shelf-life and/or lot number of the detergent can be recorded in the detergent replacement history. For changing the shelf-life and lot management of the detergent, refer to Section 4.11, “Detergent lot number and shelf-life management” in “Instructions-Operation Manual”.

## Required items

Check	Required items
	Olympus-validated detergent

Table 4.6

## Installing the detergent tank

- 1 Close the lid.
- 2 Press the “Replacement of Consumable Items” button on the Menu screen.

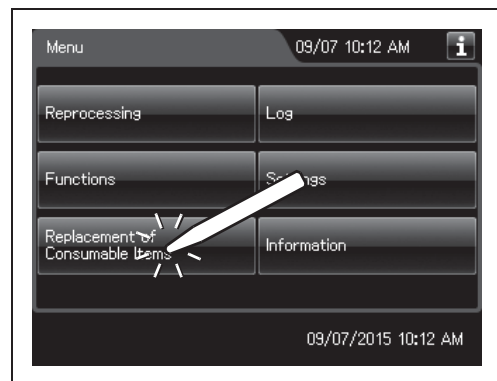


Figure 4.124

- 3 Press the “Replace Detergent” on the Replacement of Consumable Items menu.

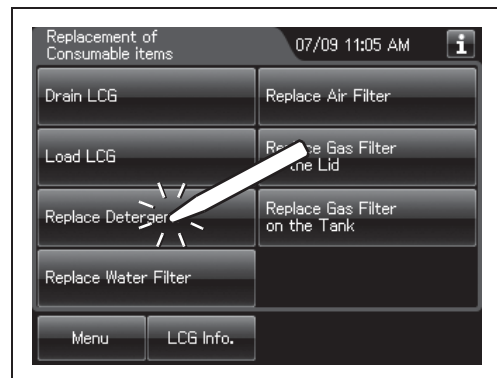


Figure 4.125

Ch.4

## 4.19 Installation of the detergent tank

- 4 Enter the operator's user ID. For the detailed procedures, refer to Section 3.6, "Entering ID" in "Instructions-Operation Manual" (If applicable).

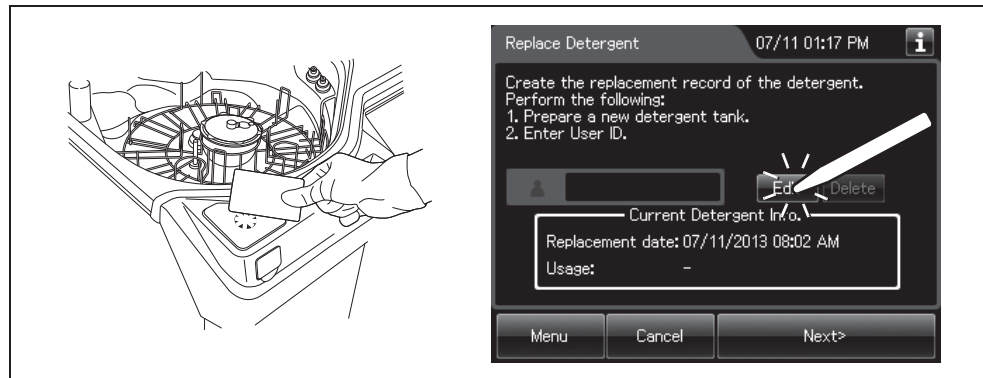


Figure 4.126

### NOTE

- The input of the user ID can be omitted by modifying the user ID input setting. For details, refer to Section 4.5, "User ID Setting" in "Instructions-Operation Manual".
- If the "Delete" button is pressed, the entered ID can be deleted.

- 5 Hold the section marked "PULL" on the detergent/alcohol drawer and pull it out.

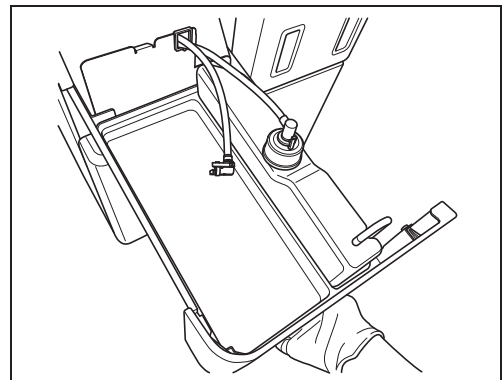


Figure 4.127

- 6 Place the new detergent tank on the left side of the detergent/alcohol drawer.

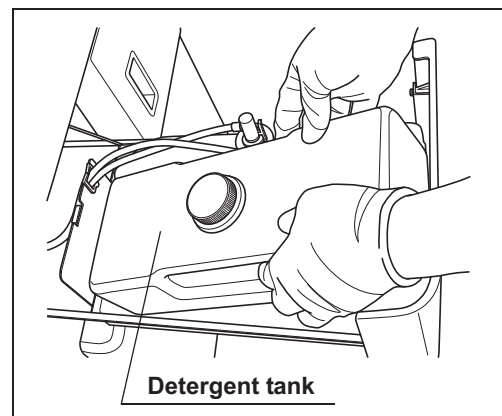


Figure 4.128

**7** Remove the detergent tank cap.

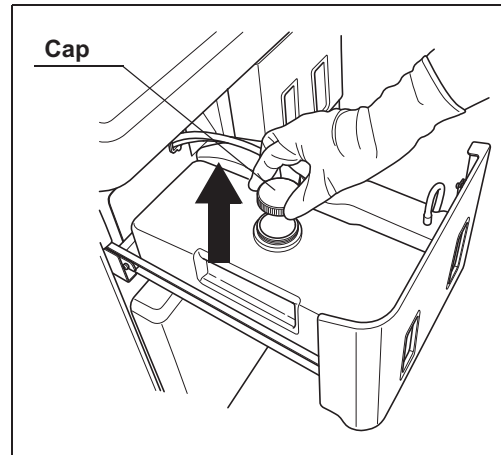


Figure 4.129

**8** Remove the seal on the detergent tank.

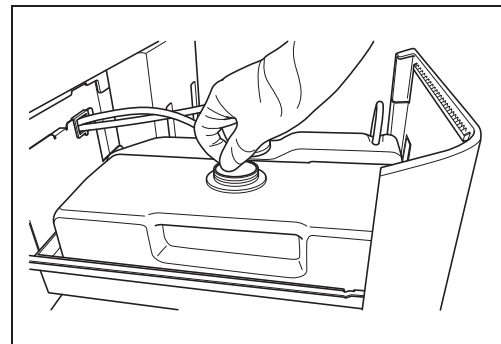


Figure 4.130

**9** Attach the cap with connector to the detergent tank.

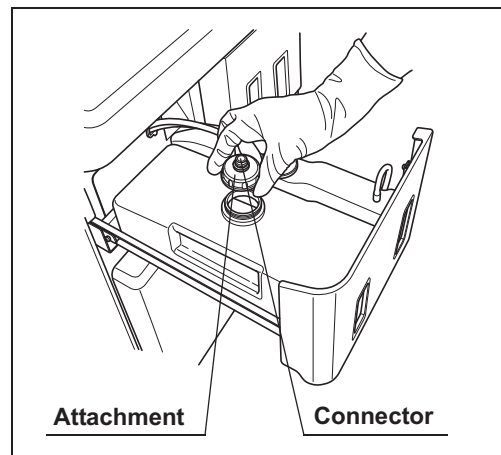


Figure 4.131



## 4.19 Installation of the detergent tank

- 10 Insert the gray connector into the connector on the detergent tank until it clicks.

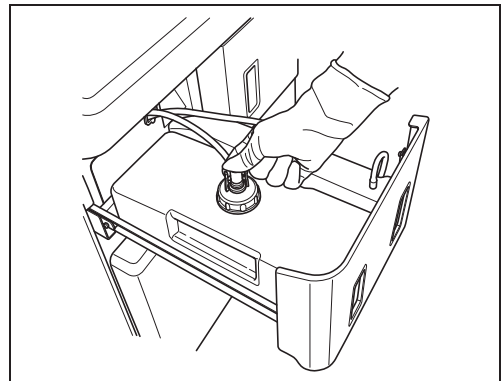


Figure 4.132

- 11 Turn the connector to correct the tube orientation as show in Figure 4.133. Confirm that the tube is not bent.

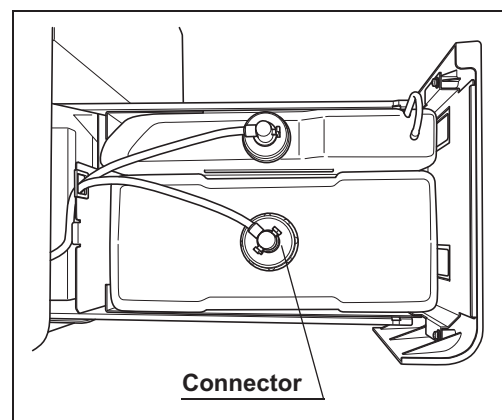


Figure 4.133

- 12 Close the detergent/alcohol drawer.
- 13 Press the "Next" button.

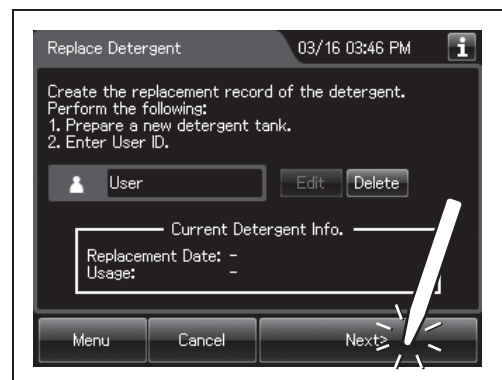


Figure 4.134

### NOTE

If the shelf-life and lot management of the detergent are activated, the shelf-life or lot number of detergent can be entered after Step 13. For entering the shelf-life and/or lot number of the detergent, refer to "○ When entering the shelf-life and/or lot number of the disinfectant solution:" on page 142.

**14** Press the “OK” button.

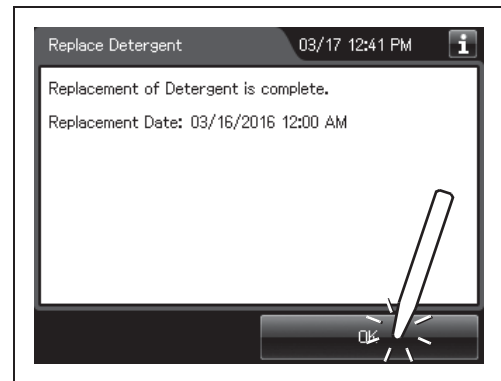


Figure 4.135

### ○ When entering the lot number of detergent and shelf life:

If the lot number of detergent and Shelf life management is activated, enter the lot number and/or shelf life according to the following procedure.

- 1** If the lot number management of the detergent is activated, the touch screen displays the screen as shown in following figure after Step 13 in “■ Installing the detergent tank” on page 127. If the lot number management of the detergent is inactivated, go to Step 5.

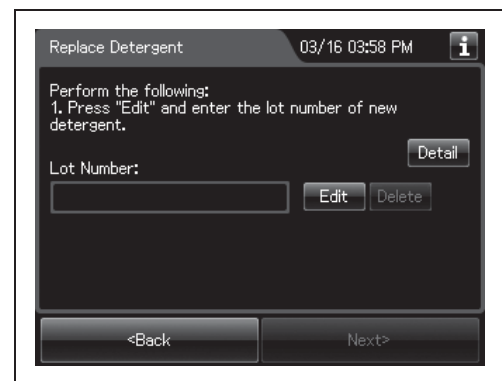


Figure 4.136

- 2** Press the “Edit” button to display the lot number entry screen.

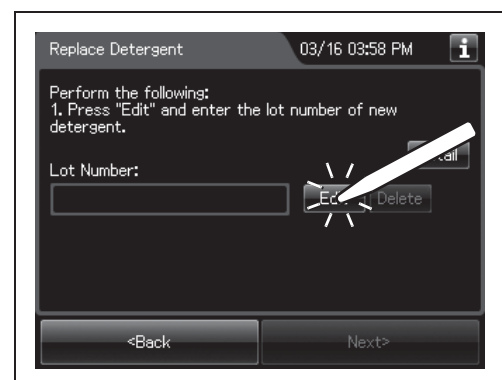
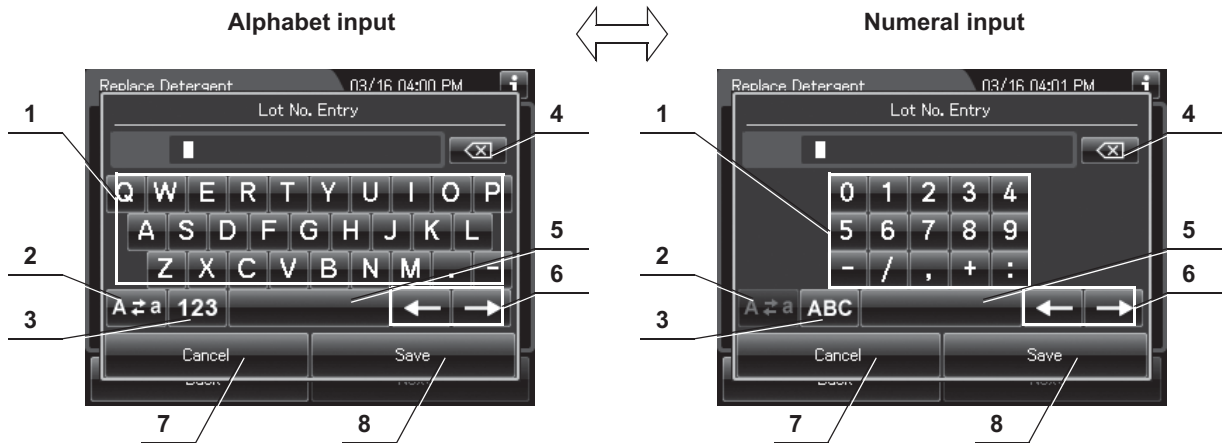


Figure 4.137

## 4.19 Installation of the detergent tank

- Enter the lot number of the new detergent by the software keyboard on the touch screen and press the “Save” button.



### Ch.4

No.	Button	Note
1	Alphabet/ Numeral key	Enter the alphabet or a numeral.
2	Uppercase/ Lowercase button	Press the “Uppercase/Lowercase” button to switch alphabet character on the soft keyboard between uppercase characters and lowercase characters.
3	Numeric/ Alphabetic button	Press the “Numeric/Alphabetic” button to switch the input mode between a numeral and the alphabet.
4	Backspace button	Press the “Backspace” button to delete the left character of a cursor. When a cursor is on the left edge, this button becomes gray and unavailable.
5	Space button	Press the “Space” button to insert a space character.
6	Cursor move button	Press the “Cursor move” button to move a cursor to left or right.
7	Cancel button	Return to the previous screen without saving the setting value.
8	Save button	Return to the previous screen and save the entered value.

- Press the “Next” button. If the shelf-life management of the detergent is activated, go to Step 5. If the shelf-life management of the detergent is inactivated, go to Step 6.

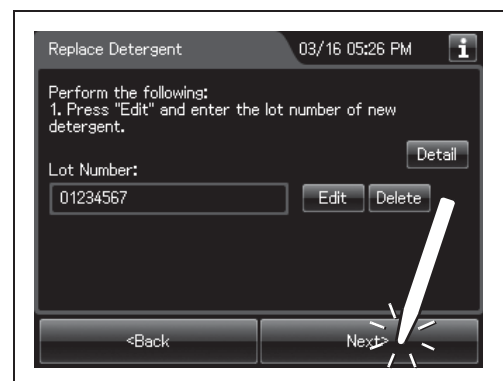


Figure 4.138



- 5 Enter the Expiration Date of the detergent. Press the “Plus” button to increase or the “Minus” button to decrease. Then press the “Next” button.

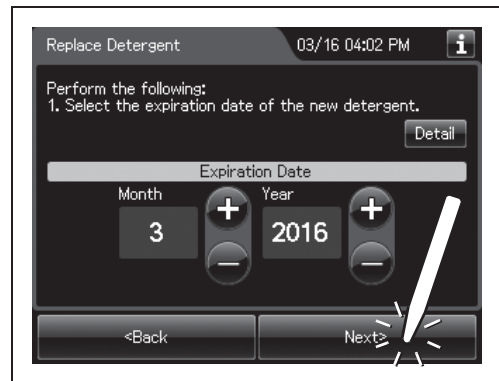


Figure 4.139

- 6 Check the displayed lot number and the expiration date, and press the “Next” button.

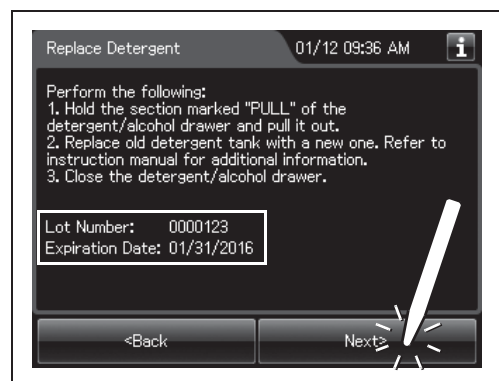


Figure 4.140

- 7 Press the “OK” button.

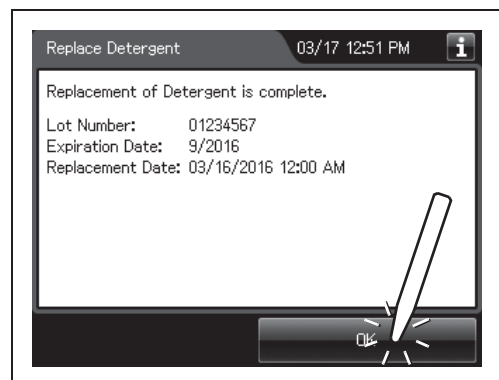


Figure 4.141

## 4.20 Setup of the disinfectant solution

### WARNING

- Before handling the disinfectant solution, read the cautions carefully and use it as instructed. It is especially important to know what to do if the disinfectant solution comes in contact with your skin.
- Always use disinfectant that has been validated by Olympus. High-level disinfectants that are not validated by Olympus for use in the OER-Elite may be unsafe and ineffective due to improper dilution, incorrect contact time and temperature, excessive foaming, inadequate rinse, and therefore may compromise patient safety. Use of a high-level disinfectant that has not been validated by Olympus may also damage internal OER-Elite components (e.g., seals, valves, etc.) and the endoscopes being reprocessed.
- When handling the disinfectant solution, wear personal protective equipment to prevent any disinfectant from getting on your skin or being inhaled. Avoid direct physical contact and inhalation of vapors. If any disinfectant solution gets in your eyes, immediately rinse with a large amount of fresh water and then consult a medical specialist. Wear personal protective equipment, such as eyewear, face mask, moisture-resistant clothing, and chemical-resistant gloves that fit properly and are long enough so that your skin is not exposed. All personal protective equipment should be inspected before use and replaced periodically before it is damaged.

**WARNING**

- When using the disinfectant solution and alcohol, Olympus recommends the use of gas filters and running this equipment in well-ventilated areas.
  - Wear a face mask, gloves, and protective clothes to minimize aspiration and skin contact.
  - Wear goggles for eye protection.

Refer to the following association's guidelines related to ventilation:

SGNA	(Society of Gastroenterology Nurses and Associates)
ASGE	(American Society of Gastroenterological Endoscopy)
APIC	(Association for Professionals of Infection Control and Epidemiology)
AORN	(Association of Preoperative Registered Nurses)
ASTM	(American Society for Testing and Materials)
OSHA	(Occupational Safety and Health Administration)
ACGIH	(American Conference of Governmental Industrial Hygienists)
NIOSH	(National Institute for Occupational Safety and Health)
AIA	(American Institute of Architects)

If the person performing the inspection or maintenance exhibits an allergic reaction or symptoms no matter how slight they should discontinue the task and vacate the room.

- Effective reprocessing cannot be guaranteed when a non-validated disinfectant solution is used. Equipment malfunction may also result.
- Follow the disinfectant manufacturer's instructions for any preparation or activation required prior to loading into the OER-Elite.
- If the disinfectant solution in the cassette bottles has not completely drained after preparation of disinfectant solution, do not use the equipment and contact Olympus. Inappropriate preparation of disinfectant solution will prevent proper endoscope reprocessing.
- Do not touch inside the caps of cassette bottles. Do not push or apply strong pressure to the bottle. Otherwise, disinfectant solution may leak from the bottle.

**CAUTION**

- To avoid malfunction, do not attempt to pull out the disinfectant bottle drawer while it is locked.
- Do not put your hand into the disinfectant bottle drawer or near the cassette bottle cutters. Irritation of skin due to contact with concentrated disinfectant solution, injury by touching a projection, or malfunction of this equipment may result.

## Required items

Check	Required items
	Acecide-C high level disinfectant solution

Table 4.7

### NOTE

For Acecide-C high level disinfectant solution, refer to Section 2.8, “Consumable accessories (Optional)”.

## Setup of the disinfectant solution

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### CAUTION

- To avoid malfunction, do not attempt to pull out the disinfectant bottle drawer while it is locked.
- Do not put your hand into the disinfectant bottle drawer or near the cassette bottle cutters. Irritation of skin due to contact with concentrated disinfectant solution, injury by touching a projection, or malfunction of this equipment may result.

### NOTE

For Acecide-C high level disinfectant solution, refer to Section 2.8, “Consumable accessories (Optional)”.

- 1 Make sure that the water faucet is open.
- 2 Close the lid.
- 3 Press the “Replacement of Consumable Items” button on the Menu screen.

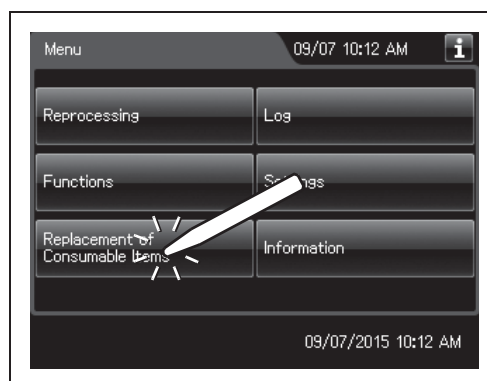


Figure 4.142

4 Press the “Load LCG” button.

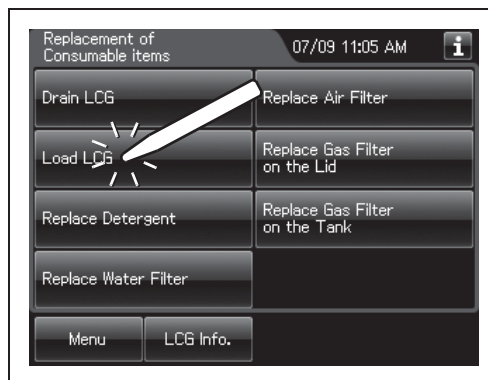


Figure 4.143

5 Enter the operator's user ID. For the detailed procedures, refer to Section 3.6, “Entering ID” in “Instructions-Operation Manual” (If applicable).

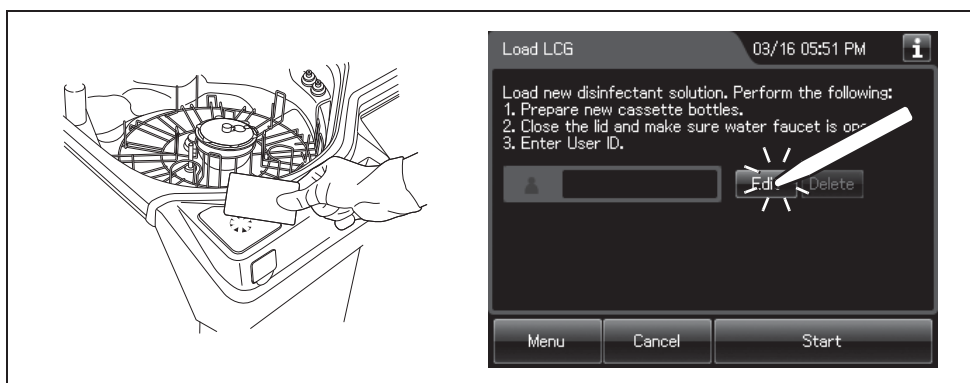


Figure 4.144

**NOTE**

- The input of the user ID can be omitted by modifying the user ID input setting. For details, refer to Section 4.5, “User ID Setting” in “Instructions-Operation Manual”.
- If the “Delete” button is pressed, the entered ID can be deleted.

6 Press the “Start” button to unlock the disinfectant bottle drawer.

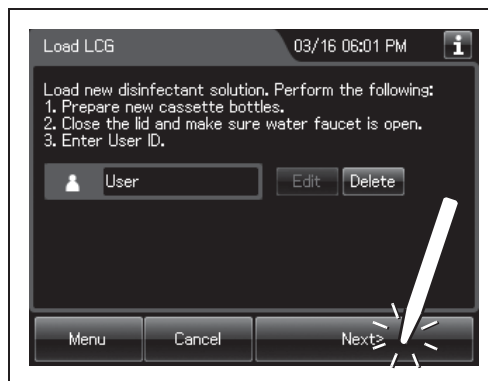


Figure 4.145

**NOTE**

- The Load LCG cannot be started unless the disinfectant solution tank is empty.
- If the shelf-life and/or lot management of the disinfectant solution are activated, the touch screen displays a screen as shown in following figure. For entering the shelf-life and/or lot number of the disinfectant solution, refer to “○ When entering the shelf-life and/or lot number of the disinfectant solution:” on page 142.

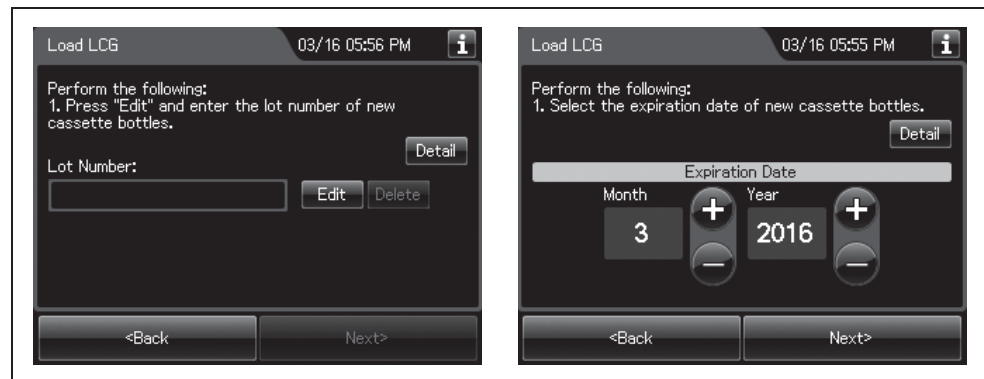


Figure 4.146

- 7 Pull out the disinfectant bottle drawer.

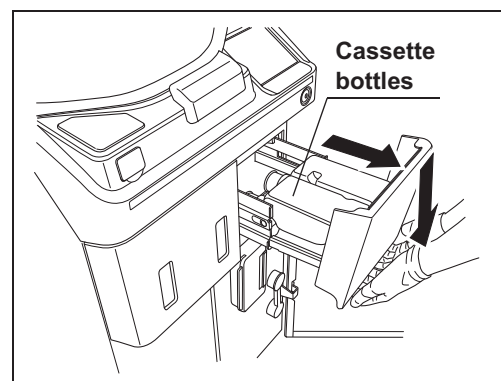


Figure 4.147

- 8 To remove the empty cassette bottles from the disinfectant bottle drawer, position the bottle mouths upward so that residual disinfectant solution that might remain in the bottles does not come out.
- 9 If any disinfectant solution spills, wipe it away with a clean cloth. If the disinfectant bottle drawer is dirty, clean using a clean cloth moistened with neutral detergent solution and then wipe with a clean cloth.

**WARNING**

- Do not put your hand behind the disinfectant bottle drawer. Irritation of skin due to contact with concentrated disinfectant solution, injury by touching a projection, or malfunction of this equipment may result.
- If the cassette cutters are abnormal, do not use the equipment and contact Olympus. If the cassette cutters are abnormal, the disinfectant solution cannot be properly prepared. This will prevent effective endoscope reprocessing and may cause the equipment to malfunction.

- 10** Check the two cassette cutters (blades for ripping caps on disinfectant cassette bottles) placed at the back of the disinfectant bottle drawer. Compare the two blades and make sure that neither cutter is bent, cracked, or deformed. Changes in color are not a malfunction.

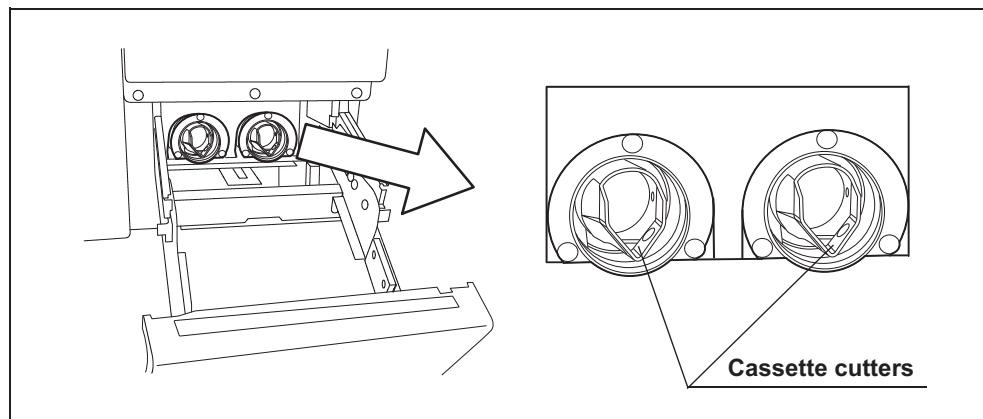


Figure 4.148

- 11** Hold the new disinfectant cassette bottles together and place them on the disinfectant bottle drawer so that the bottle with the purple cap is on the right.

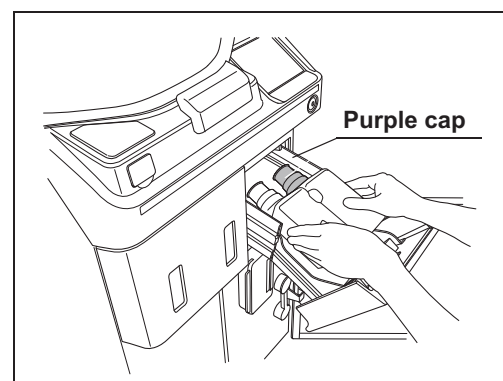


Figure 4.149

**CAUTION**

When pushing in the disinfectant bottle drawer, hold the disinfectant drawer horizontally and push it all the way in. Otherwise, the disinfectant cassette bottle would be unable to be opened and the disinfectant solution would be unable to be prepared normally.

- 12** Lift the disinfectant bottle drawer slightly up, and insert it all the way. The buzzer should beep, the drawer should lock, and the disinfectant cassette bottles should open automatically.

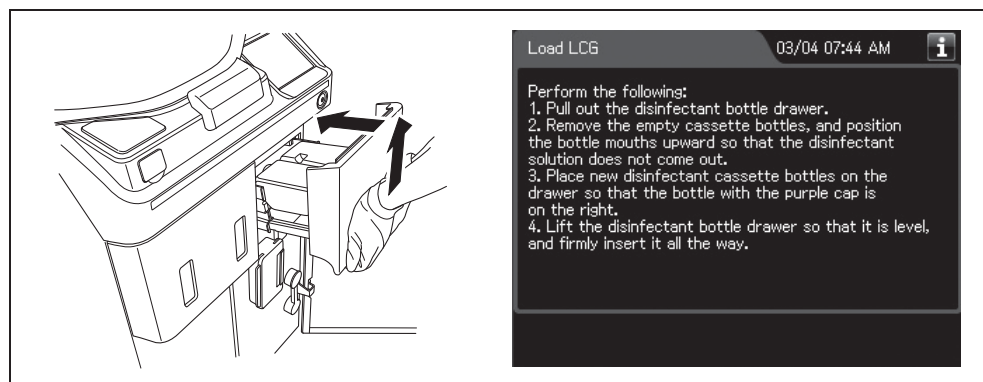


Figure 4.150

- 13** Look at the disinfectant bottle drawer and check the windows to verify that the disinfectant solution in both bottles has decreased.

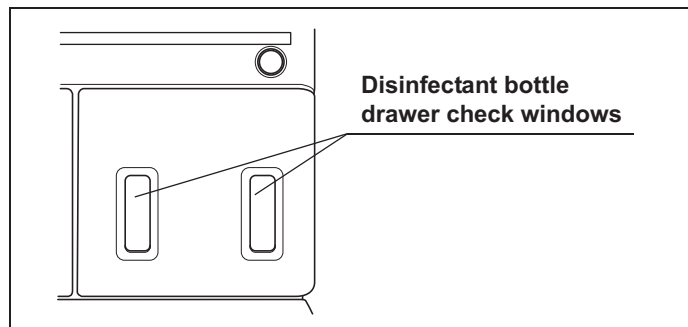


Figure 4.151



- 14** The buzzer generates short beeps and the touch screen displays a screen indicating that the disinfectant solution is being prepared.

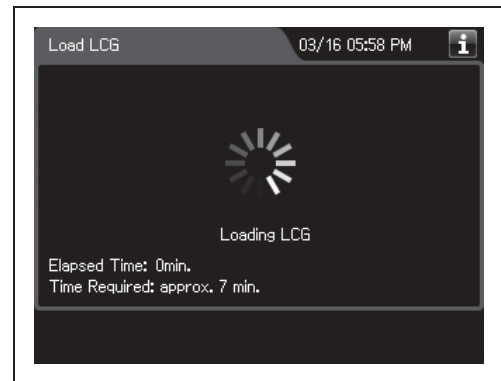


Figure 4.152

**NOTE**

- Preparation of disinfectant solution includes single rinse process to rinse the reprocessing basin. While executing the preparation of disinfectant solution, buzzer beeps intermittently and the main control panel displays as shown in Figure 4.152. STOP button is deactivated during the process.
- The required time for setup of disinfectant solution may vary depending on the water supply condition.

- 15** The touch screen displays the following screen. This screen indicates the process is completed. Press the “OK” button.

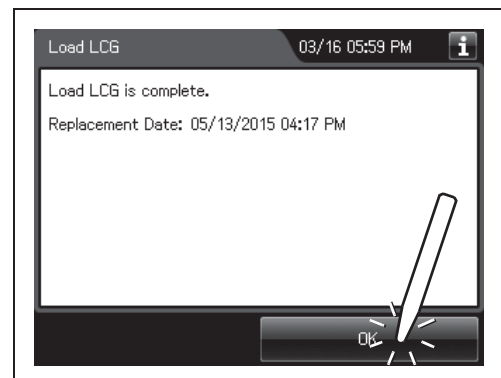


Figure 4.153

**○ When entering the shelf-life and/or lot number of the disinfectant solution:**

If the shelf-life and lot number management is activated, enter the shelf-life and/or lot number according to the following procedure.

**NOTE**

The lot number and shelf-life are printed on the bottle.

- 1 If the shelf-life and/or lot number management of the disinfectant solution are activated, the touch screen displays a screen as shown in following figure at Step 7 in “■ Setup of the disinfectant solution” on page 136. Press the “Next” button. If the lot number management of the disinfectant solution is activated, go to Step 2. If the lot number management of the disinfectant solution is inactivated, go to Step 5.

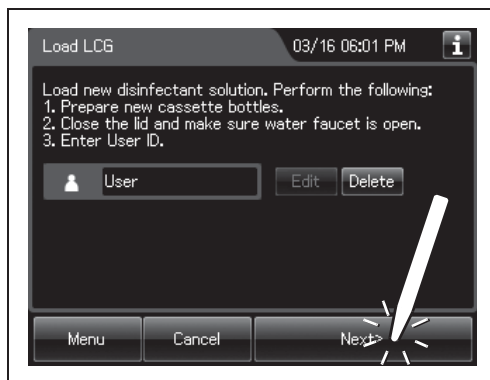


Figure 4.154

- 2 Press the “Edit” button to display the lot entry screen.

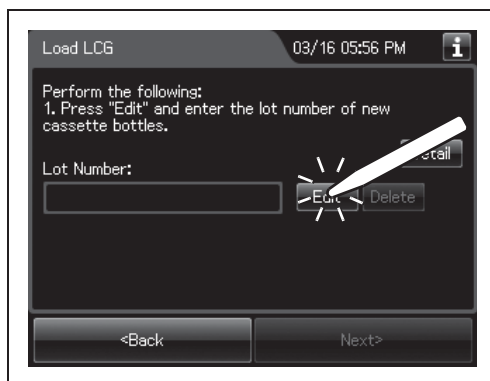
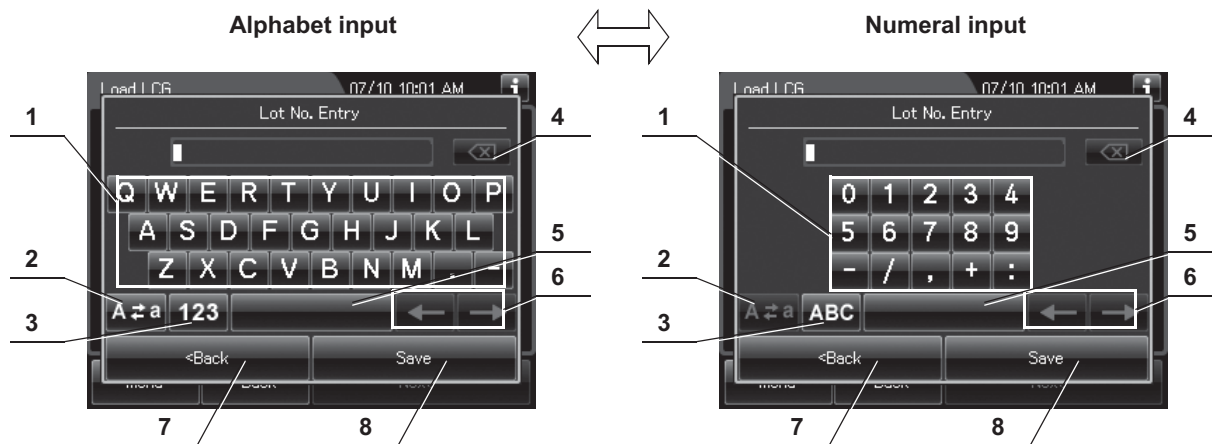


Figure 4.155

- 3 Enter the lot number of the disinfectant solution by the software keyboard on the touch screen and press the “Save” button.



No.	Button	Note
1	Alphabet/Numeral key	Enter the alphabet or a numeral.
2	Uppercase/Lowercase button	Press "Uppercase/lowercase button" to switch alphabet character on the soft keyboard between uppercases characters and lowercase characters.
3	Numeric/Alphabetic button	Press "Numeric or Alphabetic button" to switch the input mode between a numeral and the alphabet.
4	Back space button	Press the "Backspace button" to delete the left character of a cursor. When a cursor is on the leftmost, this button becomes gray and cannot be pressed.
5	Space button	Press to the "Space button" to insert a space character.
6	Cursor move button	Press to the cursor move button to move a cursor to left or right.
7	Back button	Return to the previous screen without saving the setting value.
8	Save button	Return to the previous screen and save the entered value.

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- 4 Press the "Next" button. If the shelf-life management of the disinfectant solution is activated, go to Step 5. If the shelf-life management of the disinfectant solution is inactivated, go to Step 6.

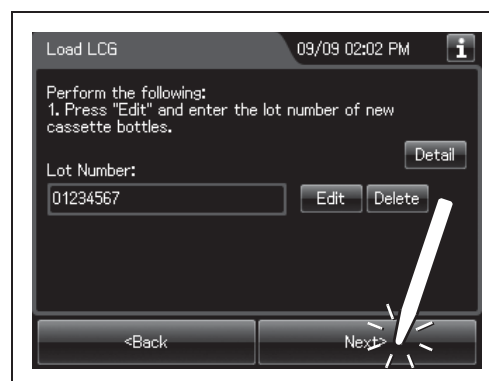


Figure 4.156

## 4.20 Setup of the disinfectant solution

- 5 Enter the Expiration Date of the disinfectant solution. Press the “+” button to increase or the “-” button to decrease. And then press the “Next” button.

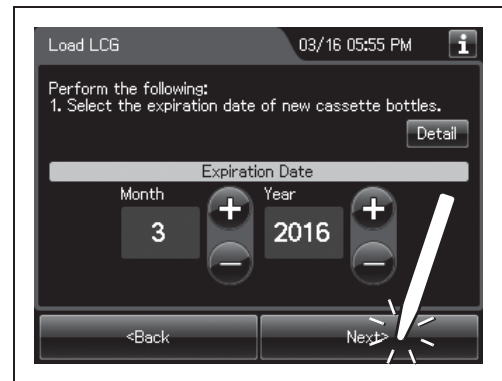


Figure 4.157

- 6 Check the displayed lot number and press the “Start” button. Go to Step 8 in “■ Setup of the disinfectant solution” on page 136.

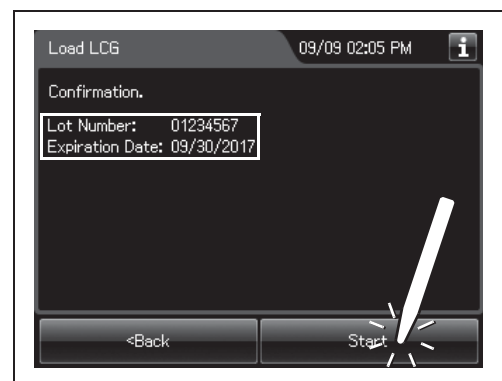


Figure 4.158

## 4.21 Self disinfection and check the operation

This process is to disinfect the internal lines of the equipment and check the operation of the equipment.

Before reprocessing, be sure to check that the disinfectant solution has an effective concentration by using a test strip. (Refer to Section 3.7, “Checking the MRC level and entering the check result” in “Instructions-Operation Manual”.) Be sure to replace the disinfectant solution when it fails to meet the Minimum Recommended Concentration as specified by the manufacturer.

### WARNING

- Before handling the disinfectant solution, read the cautions carefully and use as instructed. It is especially important to know what to do if the disinfectant solution comes into contact with your skin.
- When handling the disinfectant solution, wear personal protective equipment to prevent any disinfectant from getting on your skin or being inhaled. To avoid adverse physical effects, do not touch the disinfectant solution directly or to inhale too much vapor. If any disinfectant solution gets in your eyes, immediately Rinse with a large amount of fresh water and then consult a medical specialist. Personal protective equipment, such as eyewear, face mask, moisture-resistant clothing, and chemical-resistant gloves that fit properly and are long enough so that your skin is not exposed. All personal protective equipment should be inspected before use and replaced periodically before it is damaged.
- If an OER-Elite pipe is clogged or another malfunction occurs, it can prevent fluid from entering the endoscope channel and render the endoscope reprocessing process ineffective. Be sure to confirm the fluid jet from the connecting tube connector hits the dome of the lid.

### CAUTION

Before starting the self disinfection and check the operation, always confirm that there is no foreign material on the ventilation openings on the gas filter cases. Blocking the ventilation not only hinders deodorization but may also cause the device to malfunction.

## ■ Self-disinfection and check the operation workflow

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<b>1</b>	<b>Check the MRC level.</b>  • If the concentration is below the minimum effective level, replace the disinfectant solution.  <p style="text-align: right;">→on page 164</p>
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<b>2</b>	<b>Check the function of this equipment.</b>  • Check if the equipment operates properly to complete the Self-Disinfection.  <p style="text-align: right;">→on page 154</p>
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Ch.4

## ■ Required items

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Check	Required items
	FDA-cleared chemical indicator (test strip)
	Connector jig
	User ID card

Table 4.8

**NOTE**

For the test strip, refer to Section 2.8, “Consumable accessories (Optional)”

## ■ Checking the MRC level and entering the check result

### CAUTION

Do not collect the drained disinfectant solution from the disinfectant removal port to check the MRC. Otherwise, the disinfectant solution in the disinfectant solution tank would decrease, making it impossible to start the reprocessing.

- 1 Press the “Functions” button on the Menu screen.

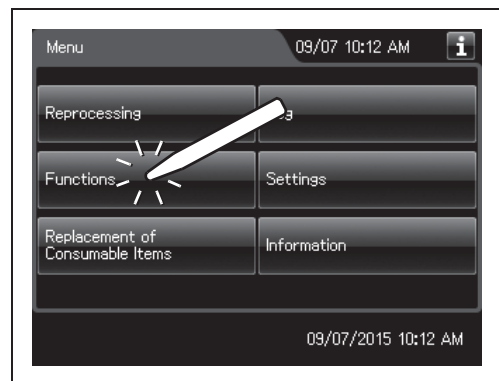


Figure 4.159

- 2 Press the “Self-Disinfection & Water Sampling” button.

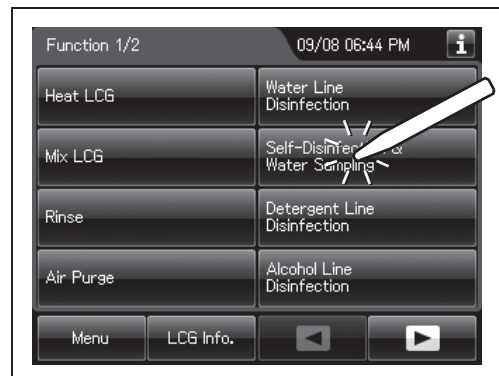


Figure 4.160

Ch.4

## 4.21 Self disinfection and check the operation

### NOTE

When a touch screen displays a screen as shown in the following figure, perform the LCG Mixing. For details, refer to “O Mix LCG” on page 152.

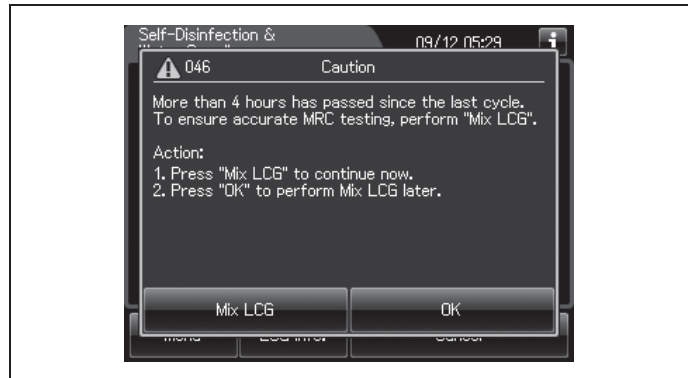


Figure 4.161

## Ch.4

**3** Press the “LCG Info.” Button.

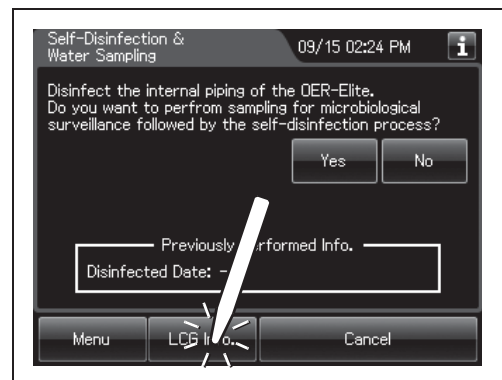


Figure 4.162

**4** Press the “MRC Check” button.

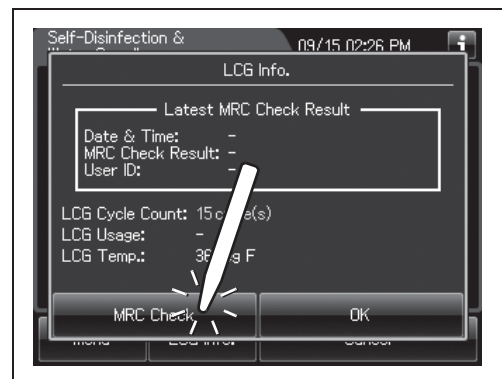


Figure 4.163

**5** Step on the foot pedal to open the lid.



- 6** Uncap the disinfectant solution nozzle of the reprocessing basin by turning the disinfectant solution nozzle cap in the direction shown right.

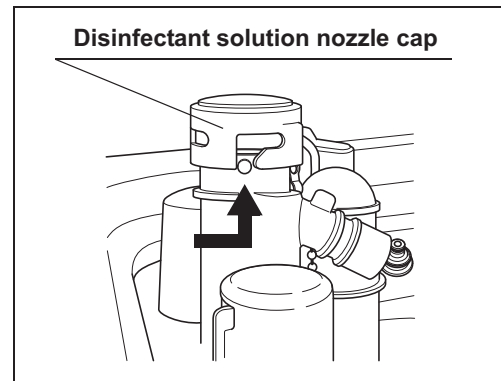


Figure 4.164

- 7** Insert a test strip all the way into the disinfectant nozzle and check the concentration as described in the instruction manual for the test strip. If the concentration is below the minimum effective level, replace the disinfectant solution as described in Section 8.2, “Replacing the disinfectant solution” in “Instructions-Operation Manual”.

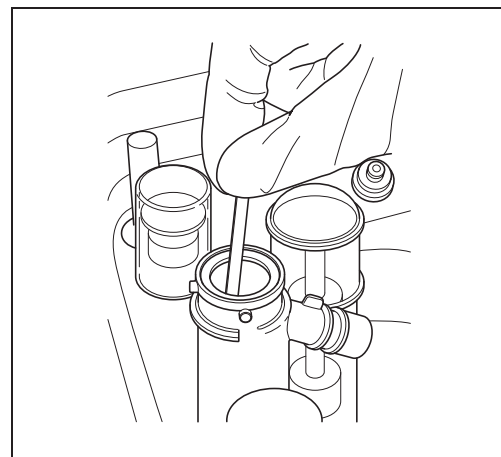


Figure 4.165

**NOTE**

- Under high temperature and extreme temperature fluctuations, test strip may result in fail. In such cases, Olympus recommends performing mix LCG and check the MRC level again.
- Depending on conditions of internal valve, there is a possibility that no disinfectant solution exist in the disinfectant solution nozzle. In the following cases, perform the mix LCG, then check the MRC level again.
  - No reaction is observed on the chemical indicator after checking the MRC level.
  - Reaction is observed only from the edge parts of the chemical indicator after checking the MRC level.

If the disinfectant solution in the disinfectant solution nozzle is found insufficient for checking the MRC level on a regular basis, contact Olympus.

## 4.21 Self disinfection and check the operation

- 8 Attach the disinfectant solution nozzle cap to the original position above the disinfectant solution nozzle. Make sure that the pin backs in original position, and the projection of the disinfectant solution nozzle cap is aligned to the projection of the disinfectant solution nozzle.

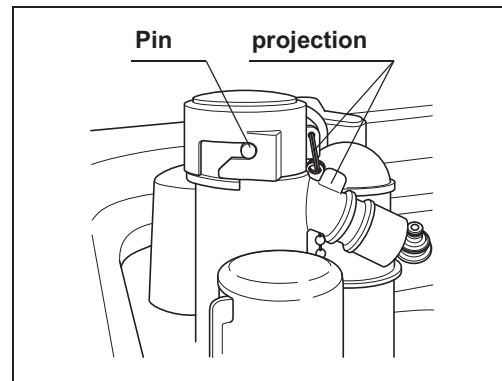


Figure 4.166

### NOTE

Be sure to return the disinfectant solution nozzle cap in the original position. Otherwise, the disinfectant solution inside the nozzle may be diluted in the next process and next MRC check will be failed even if the concentration of LCG in the tank is above its MRC. In this case, perform mix LCG, then check MRC again.

## Ch.4

- 9 Select the result of the MRC level.

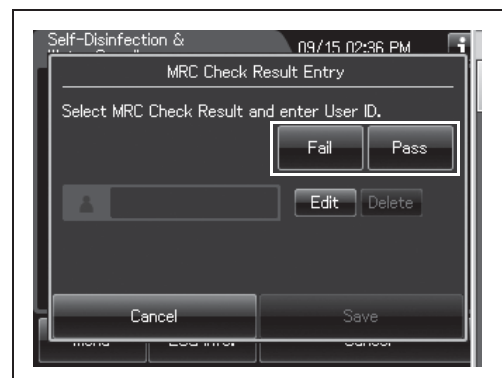


Figure 4.167

### NOTE

- The currently selected button is highlighted.
- If you select "Fail", the process cannot be started.

- 10 Enter the operator's user ID. For the detailed procedures, refer to Section 3.6, "Entering ID" in "Instructions-Operation Manual" (If applicable).

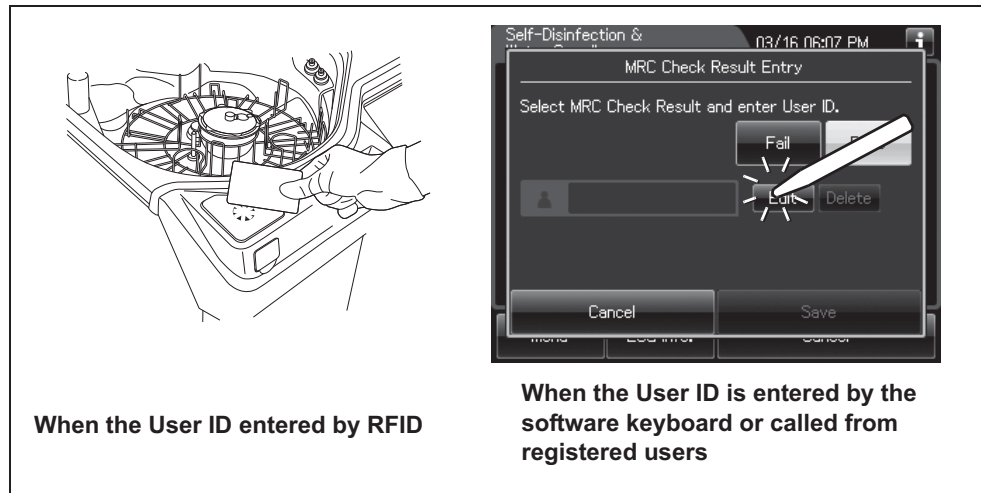


Figure 4.168

**NOTE**

- The input of the User ID can be omitted by modifying the User ID input setting. For details, refer to Section 4.5, "User ID Setting" in "Instructions-Operation Manual".
- If the "Delete" button is pressed, the entered ID can be deleted.

- 11 Press the "Save" button. The touch screen displays as shown in the following figure.



Figure 4.169

**12** Press the “OK” button.

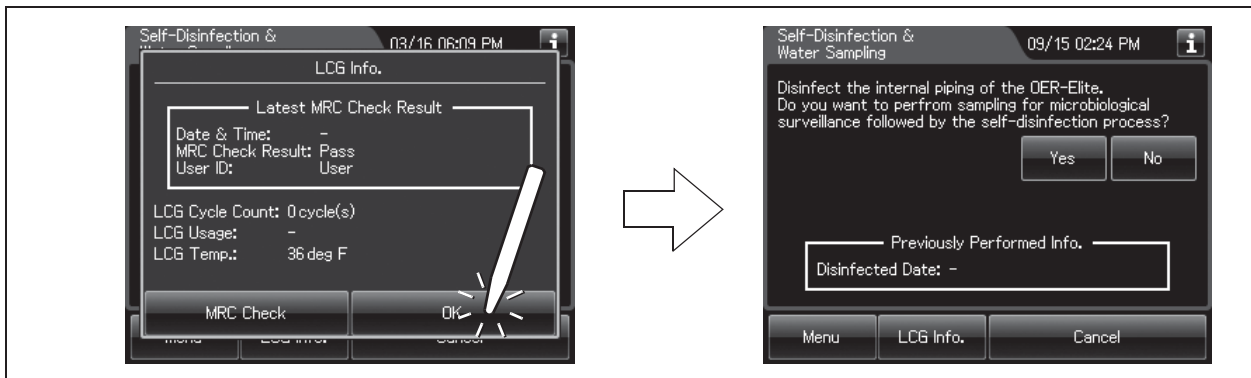


Figure 4.170

**○ Mix LCG**

**Ch.4**

If the touch screen displays a screen as shown in following figure, perform the LCG Mixing by using the following procedure.

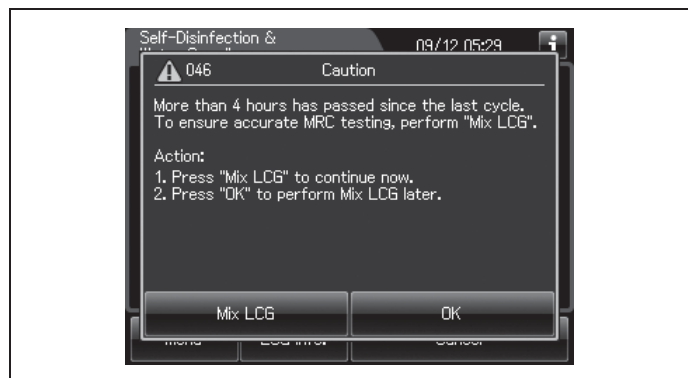


Figure 4.171

- 1** Make sure that the water faucet is open.
- 2** Close the lid.
- 3** Press the “Mix LCG” button to close the message.

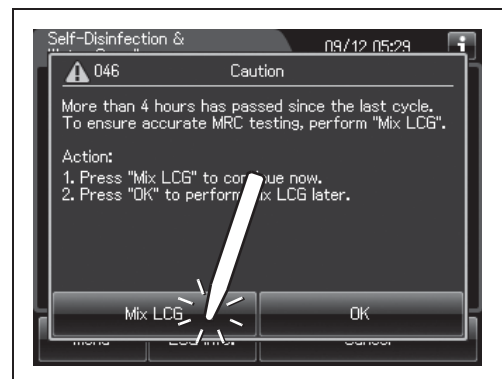


Figure 4.172

- 4 Enter the operator's user ID. For the detailed procedures, refer to Section 3.6, "Entering ID" in "Instructions-Operation Manual" (If applicable).

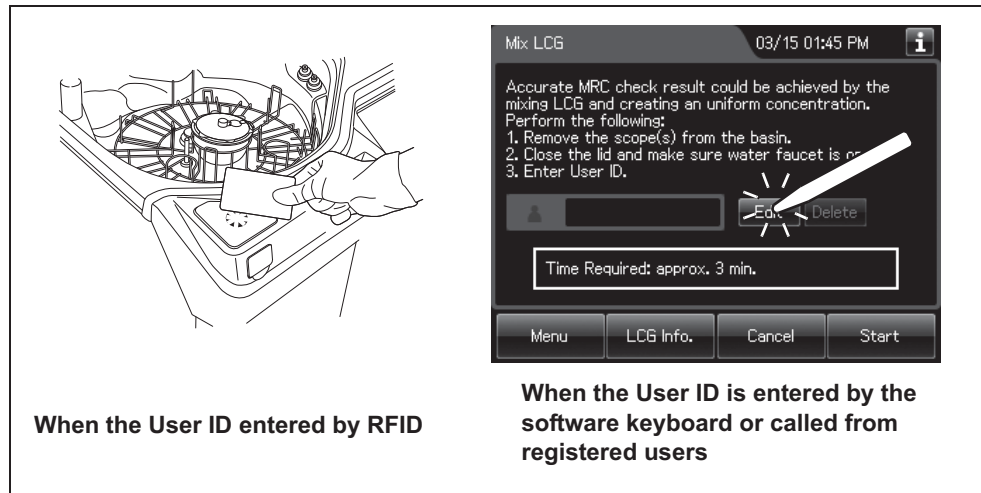


Figure 4.173

**NOTE**

- The input of the User ID can be omitted by modifying the User ID input setting. For details, refer to Section 4.5, "User ID Setting" in "Instructions-Operation Manual".
- If the "Delete" button is pressed, the entered ID can be deleted.

- 5 Press the "Start" button. The touch screen displays as shown in the following figure.

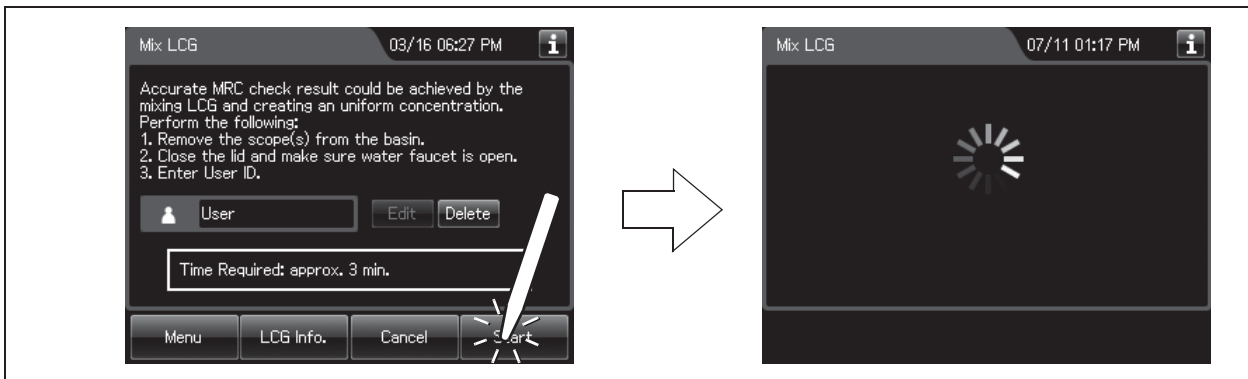


Figure 4.174

## 4.21 Self disinfection and check the operation

- 6 When the disinfectant solution mixing process completes, the equipment generates a buzzer beep and displays the following screen on the touch screen. Press the “OK” button to finish.

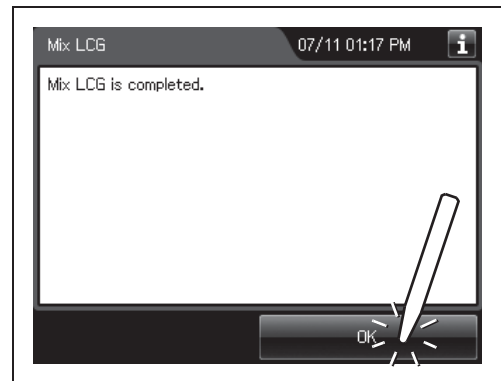


Figure 4.175

### ■ Performing the self disinfection

#### Ch.4

- 1 Make sure that the water faucet is open.
- 2 Press the “Functions” button on the Menu screen.

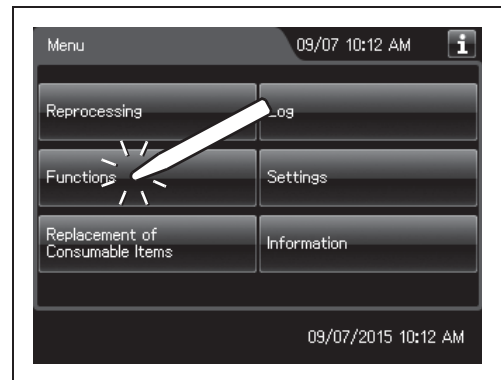


Figure 4.176

- 3 Press the “Self-Disinfection & Water Sampling” button.



Figure 4.177

- 4 Press the “No” button.

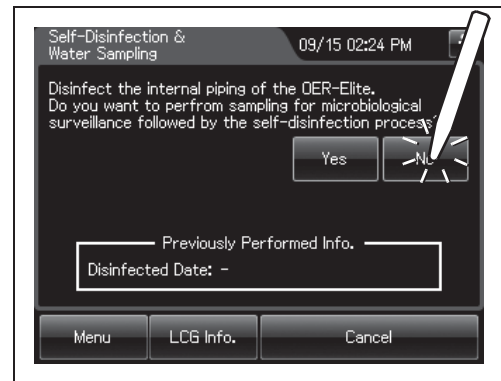


Figure 4.178

- 5 Step on the foot pedal to open the lid.
- 6 Connect the connector jig to the same-colored connector at the reprocessing basin by pushing down on the connector jig until it clicks.

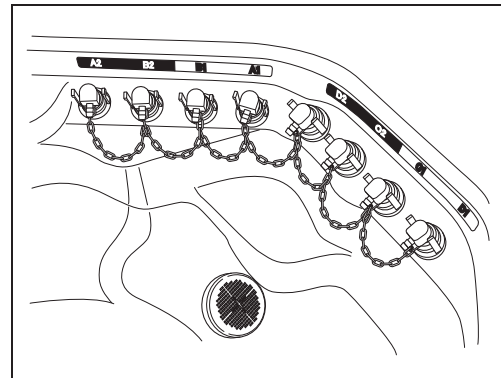


Figure 4.179

- 7 Press the “Next” button repeatedly until the touch screen display changes as shown below.

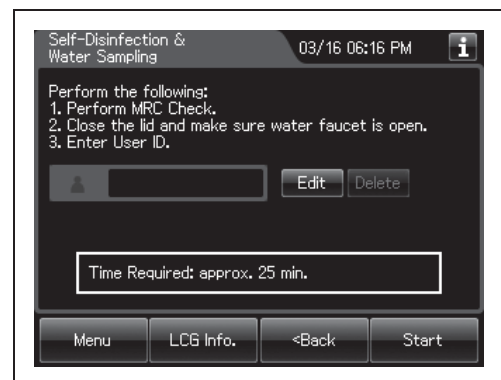


Figure 4.180

- 8 Close the lid by pushing until it clicks.
- 9 Make sure that the water faucet is open.

## 4.21 Self disinfection and check the operation

- 10 Enter the operator's user ID. For the detailed procedures, refer to Section 3.6, "Entering ID" in "Instructions-Operation Manual" (If applicable).

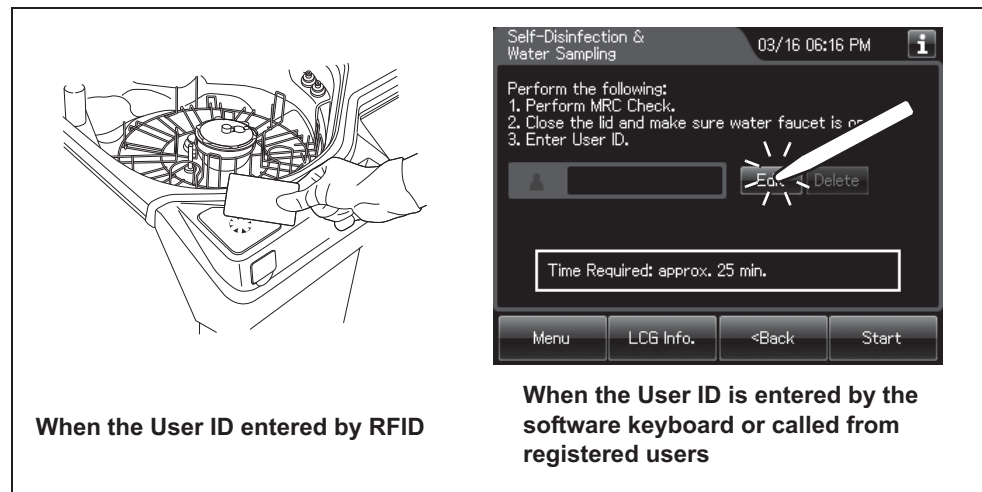


Figure 4.181

Ch.4

### NOTE

- The input of the User ID can be omitted by modifying the User ID input setting. For details, refer to Section 4.5, "User ID Setting" in "Instructions-Operation Manual".
- If the "Delete" button is pressed, the entered ID can be deleted.

- 11 Press the "Start" button.



Figure 4.182



**NOTE**

- The cleaning, disinfection and rinse are executed in the process.
- If the temperature of the disinfectant solution in the reprocessing basin is below 20°C (68°F), it will be heated to 20°C (68°F) before the disinfection process starts. During heating, the remaining time countdown and the progress bar display stop and turn gray. After the completion of heating, the remaining time countdown and progress bar display resume.

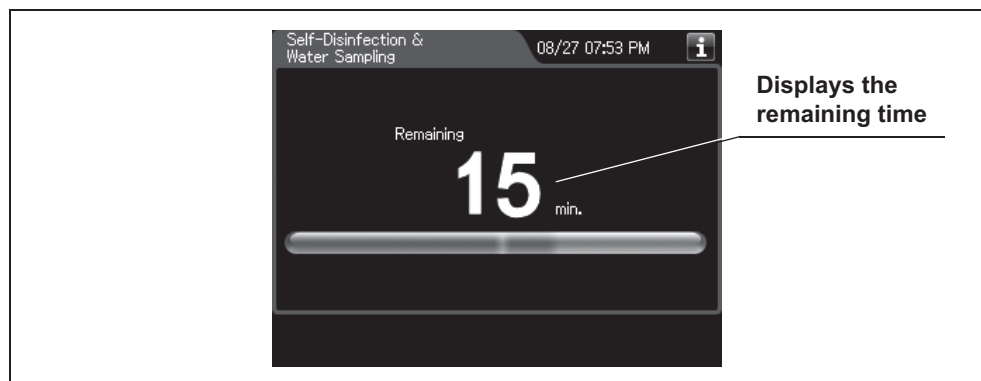


Figure 4.183

- 12** Check that a jet of fluid is squirted from the water supply/circulation nozzle to the dome of lid (to check that the cleaning pump is not clogged or abnormal).

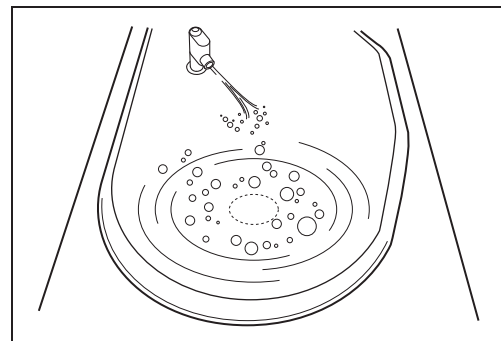


Figure 4.184

- 13** Confirm the following points during reprocessing:
- That no water Leaks from the water supply hose connector.
  - That no water Leaks from the drain hose connector.
  - That no water Leaks from the water filter housing and the surroundings.
  - That no water Leaks from the lid and surroundings.
  - That no water Leaks from the lower part of the equipment.
  - That there are no abnormal noises.

## 4.21 Self disinfection and check the operation

- 14 When the self-disinfection is finished, the buzzer beeps and the touch screen displays a screen as shown in the following figure.

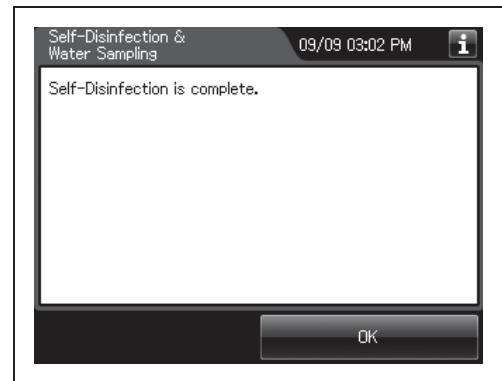


Figure 4.185

- 15 Step the foot pedal to open the lid.
- 16 Disconnect the connector jig and close the lid.
- 17 Press the "OK" button.

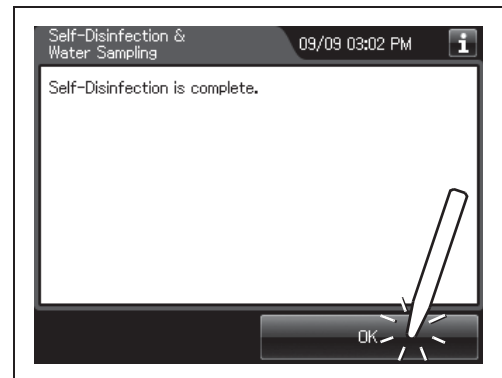


Figure 4.186

- 18 Rinse the connector jig thoroughly under running water, dry them well and store them in a clean place.

## ■ When the “Message 093” is displayed

If detergent has run out and the message screen “Detergent cannot be supplied” is displayed, the equipment will stop the process. In this case, you can restart the process from the cleaning process by implementing the following procedure.

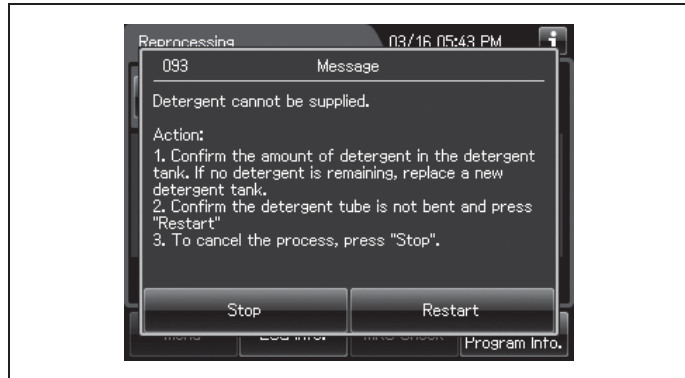


Figure 4.187

Ch.4

### WARNING

When handling the detergent, read the cautions carefully and use as instructed. It is especially important to know what measures to take if the disinfectant solution comes into contact with your skin.

### CAUTION

When handling the detergent, always wear appropriate personal protective equipment, such as eyewear, face mask, moisture-resistant clothing, and chemical-resistant gloves that fit properly and are long enough so that your skin is not exposed. All personal protective equipment should be inspected before use and replaced periodically before it is damaged.

## ○ Required items

Check	Required items
	Syringe
	Tube

Table 4.9

## ○ Solution

Refer to “■ When the “Message 093” is displayed” in Section 13.2, “Troubleshooting guide” in “Instructions-Operation Manual”.

## ■ When the “Message 087” is displayed

If the message screen “Alcohol cannot be supplied” is displayed and the equipment is stopped while the detergent is still present in the detergent tank, check that there is no irregularity regarding the following points.

- The tube connected to the alcohol tank is not kinked.
- The connector of alcohol tank is attached firmly.

If any irregularity is found by inspection, correct these points and press “Restart” button to restart the alcohol flush process.

If any irregularity is not observed during an inspection or the message screen “Alcohol cannot be supplied” is displayed again, internal problem with the equipment may be suspected. In this case, follow the procedure below.

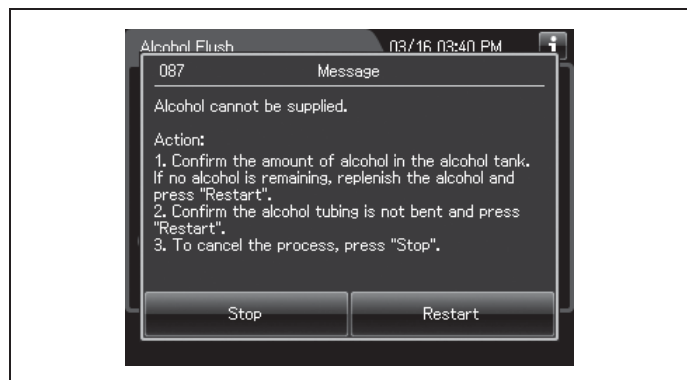


Figure 4.188

### WARNING

- The alcohol used with the equipment must be 70% ethyl alcohol or 70% isopropyl alcohol. Using any other kind of alcohol may result in malfunction of the equipment or the endoscope, difficulty drying the endoscope, fire hazard, or a hazard due to toxic vapor emitted from the alcohol.
- Alcohol is flammable and should be handled with extra care.
- Remove the alcohol in the alcohol tank and replace it with new alcohol at least once a week. Otherwise, the alcohol in the alcohol tank may degrade.
- Before handling the alcohol, read the cautions carefully and use it as instructed.

## ○ Required items

Check	Required items
	Connector jig
	Syringe
	Tube

Table 4.10

## ○ Solution

Refer to “■ When the message screen “Message 087” is displayed” in Section 13.2, “Troubleshooting guide” in “Instructions-Operation Manual”.

## 4.22 Water line disinfection

Disinfection of water supply piping is required in the following cases.

- Before using this equipment for the first time (after installation of the water filter).
- Immediately after replacing the water filter.
- Whenever contamination of the water supply piping has been determined.
- Before using the equipment when it has not been used for more than 14 days.

### NOTE

- Olympus recommends performing microbiological sampling of the OER-Elite rinse water quality immediately after performing the water supply piping disinfection if the device has not been used for more than 14 days. For details on sampling rinse water, refer to Section 7.9, “Self-disinfection” and water sampling in “Instructions-Operation Manual”.
- When disinfection of water supply piping is required, Olympus recommends performing it prior to replacement of the disinfectant solution. The disinfectant solution must still meet the MRC using the test strip. After disinfection of water supply piping, drain the disinfectant solution according to the instructions in the instruction manual and the facility policy. Fill the OER-Elite with fresh disinfectant solution prior to proceeding with endoscope reprocessing.
- There may be instances when the water supply lines are disinfected using fresh disinfectant for the first time. Following disinfection of the water supply piping with fresh disinfectant, the quantity of disinfectant solution might be reduced preventing use of the fresh disinfectant for endoscope reprocessing. In this case, additional fresh disinfectant can be added to the OER-Elite only when using the ready-to-use disinfectant prepared by top loading. Adding fresh disinfectant to increase the volume of the existing fresh disinfectant will achieve typical usage conditions.

The disinfectant solution stored in the equipment is used for disinfection of the water supply piping.

### WARNING

- Before disinfecting the water supply piping, check the concentration of the disinfectant solution with the Test Strip, and replace the disinfectant solution if the disinfectant efficacy has been determined to be below the required level. If this check is not applied, disinfection may be insufficient.
- Disinfection of the water supply piping is required each time the water filter is replaced (at least once every month). Otherwise, the rinse water may be contaminated.

**WARNING**

- Disconnect the connecting tubes from the connectors on the equipment before disinfecting the water supply piping. Otherwise, a jet of disinfectant solution may squirt out from the connecting tubes and leak from a connector such as the gas filter case connector.
- Before handling the disinfectant solution, read the cautions carefully and use as instructed. It is especially important to know what to do if the disinfectant solution comes into contact with your skin.
- When handling the disinfectant solution, wear personal protective equipment to prevent any disinfectant from getting on your skin or being inhaled. To avoid adverse physical effects, do not touch the disinfectant solution directly or to inhale too much vapor. If any disinfectant solution gets in your eyes, immediately rinse with a large amount of fresh water and then consult a medical specialist. Such protective equipment should include appropriate eyewear, face mask, cap, moisture-resistant clothing, shoe covers, and chemical-resistant gloves that fit properly and are long enough to prevent skin exposure. All personal protective equipment should be inspected before use and replaced periodically before it is damaged.

**NOTE**

- For details on replacing the disinfectant solution, refer to Section 4.20, "Setup of the disinfectant solution".
- Disinfecting the water supply piping also disinfects the water filter and other components in the piping.

## ■ Disinfection of water supply piping workflow

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<b>1</b>	<p><b>Check the MRC level.</b> <span style="float: right;">→on page 164</span></p> <ul style="list-style-type: none"> <li>If the concentration is below the minimum effective level, replace the disinfectant solution</li> </ul>
----------	---

<b>2</b>	<p><b>Disinfect the water supply piping.</b> <span style="float: right;">→on page 172</span></p>
----------	--

## ■ Required items

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Ch.4

Check	Required items
	Chemical indicator (test strip)
	Container with 2 L (67 ounces) or larger capacity (wide-mouthed container such as a vat)
	Filter tube (× 2)
	Water supply piping disinfection hose

Table 4.11

**NOTE**

For details on the test strip, refer to Section 2.8, “Consumable accessories (Optional)”.

## ■ Checking the MRC level and entering the check result

---

**CAUTION**

Do not collect the drained disinfectant solution from the disinfectant removal port to check the MRC. Otherwise, the disinfectant solution in the disinfectant solution tank would decrease, making it impossible to start the reprocessing.



- 1 Press the “Functions” button on the Menu screen.

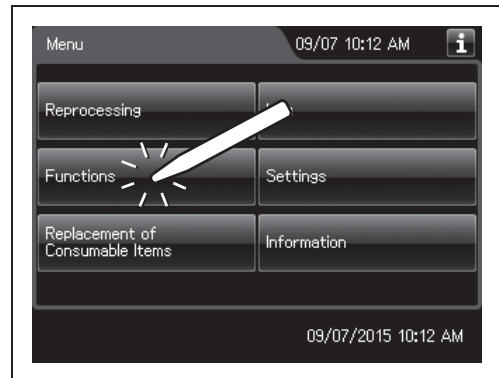


Figure 4.189

- 2 Press the “Water Line Disinfection”.



Figure 4.190

- 3 Press the “LCG Info.” Button.

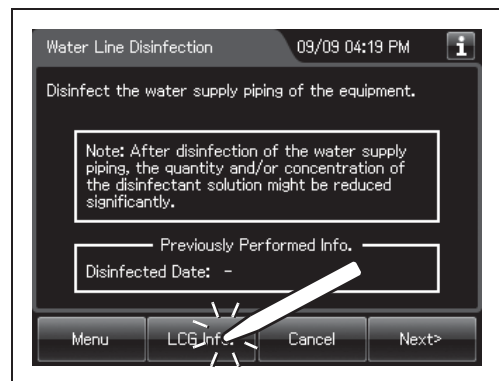


Figure 4.191

- 4 Press the “MRC Check Result” button to display the MRC Check Result entry screen.

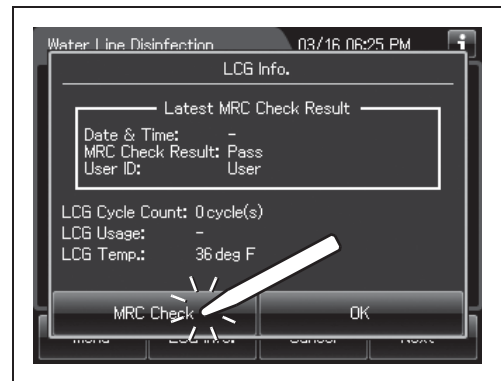


Figure 4.192

**NOTE**

When a touch screen displays a screen as shown in the following figure, perform the LCG Mixing. For details, refer to “○ LCG Mixing” on page 169.

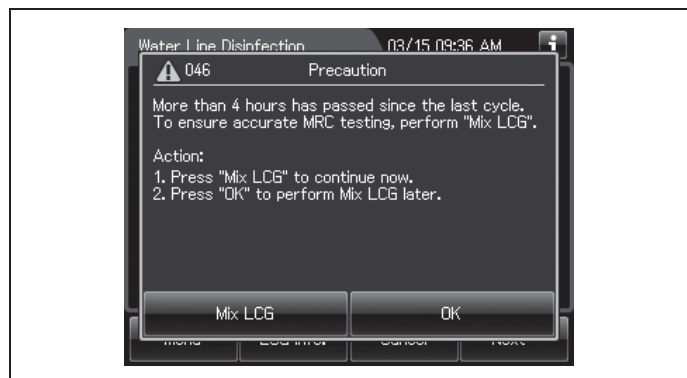


Figure 4.193

- 5 Step on the foot pedal to open the lid.
- 6 Turn the disinfectant solution nozzle cap in the direction shown to remove, refer to the Figure 4.194.

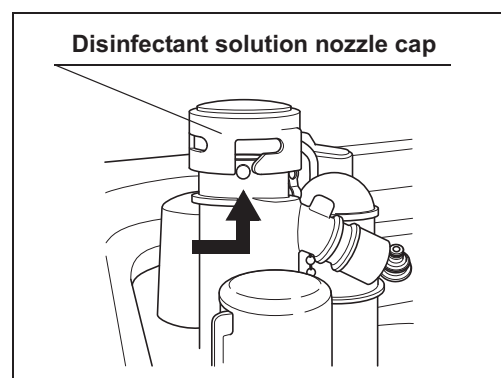


Figure 4.194

- 7 Insert a test strip all the way into the disinfectant nozzle and check the MRC level according to the instructions manual of the test strip. If the concentration is below the minimum effective level, replace the disinfectant solution as described in Section 8.2, “Replacing the disinfectant solution” in “Instructions-Operation Manual”.

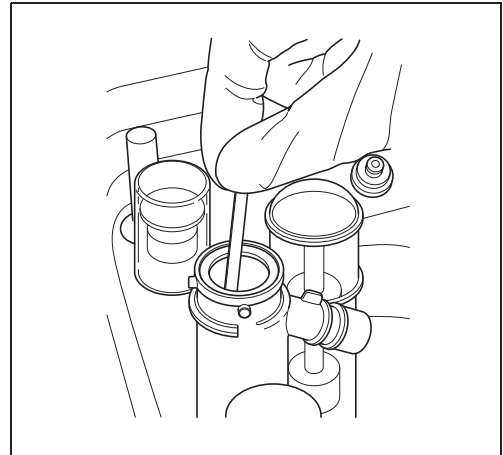


Figure 4.195

**WARNING**

Be sure to attach the disinfectant solution nozzle cap to the original position above the disinfectant solution nozzle. There is a risk that water penetrates in the disinfectant nozzle during the process, in which case the disinfectant concentration cannot be checked correctly.

- 8 Attach the disinfectant solution nozzle cap to the original position above the disinfectant solution nozzle. Make sure that the pin backs in original position, and the projection of the disinfectant solution nozzle cap is aligned to the projection of the disinfectant solution nozzle.

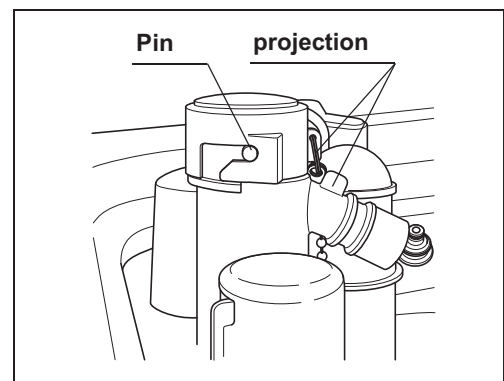


Figure 4.196

- 9 Select the result of the MRC level. If you select “Fail”, the process cannot be started.

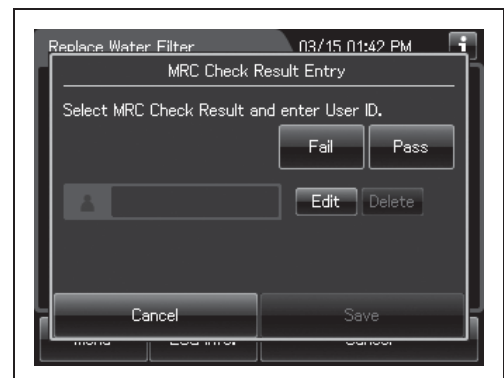


Figure 4.197

**NOTE**

The currently selected button is highlighted.

- 10 Enter the operator's user ID. For the detailed procedures, refer to Section 3.6, "Entering ID" in "Instructions-Operation Manual" (If applicable).

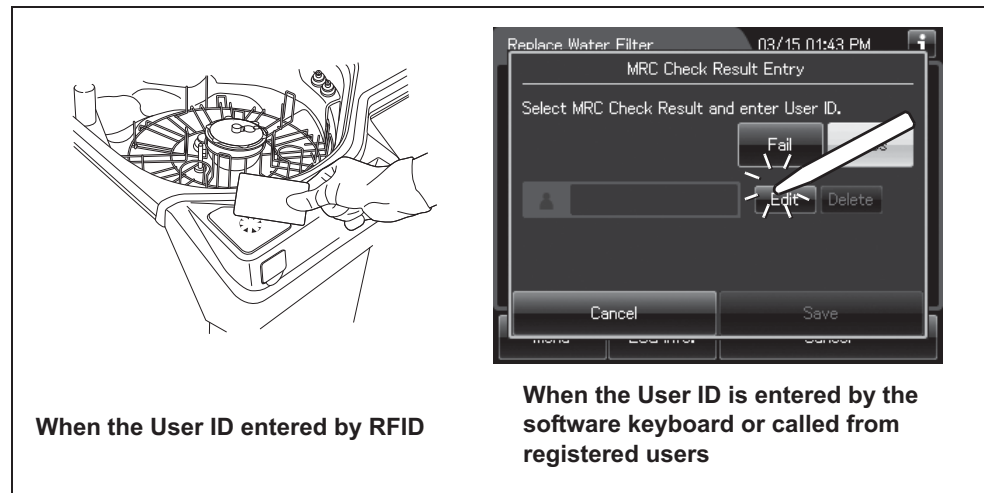


Figure 4.198

**NOTE**

- The input of the User ID can be omitted by modifying the User ID input setting. For details, refer to Section 4.5, "User ID Setting" in "Instructions-Operation Manual".
- If the "Delete" button is pressed, the entered ID can be deleted.

- 11 Press the "Save" button. The touch screen displays as shown in the following figure.



Figure 4.199

**12** Press the “OK” button.

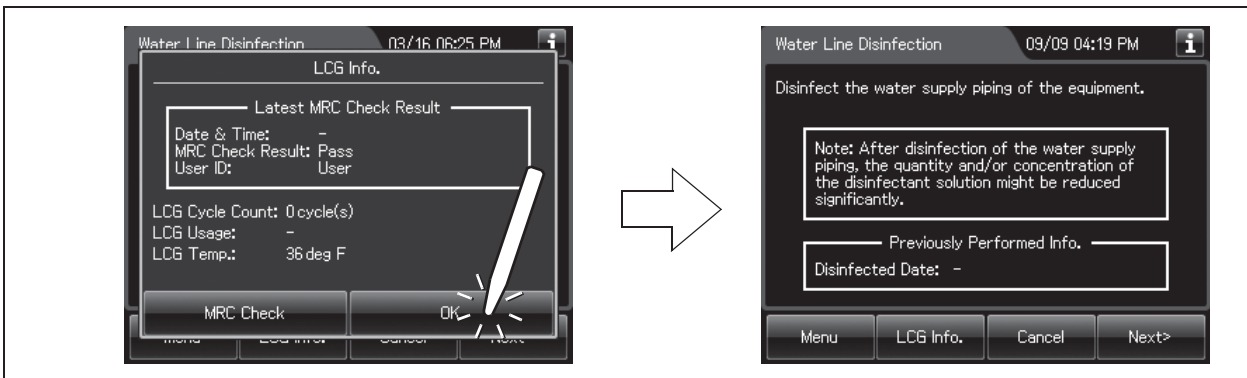


Figure 4.200

## ○ LCG Mixing

If the touch screen displays a screen as shown in following figure, perform the LCG Mixing by using the following procedure.

**Ch.4**

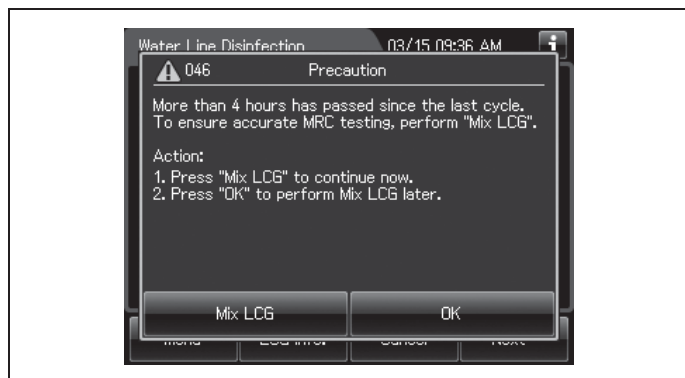


Figure 4.201

- 1** Make sure the water faucet is open.
- 2** Close the lid.
- 3** Press the “Mix LCG” button to close the message.

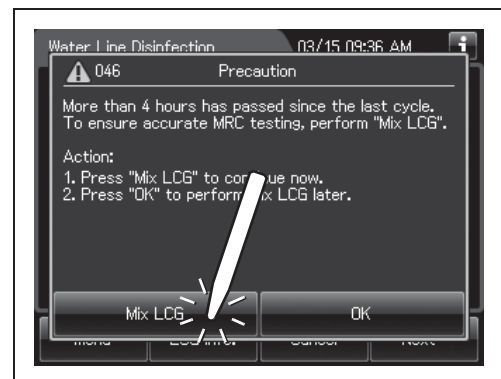


Figure 4.202

- 4 Enter the operator's user ID. For the detailed procedures, refer to Section 3.6, "Entering ID" in "Instructions-Operation Manual" (If applicable).

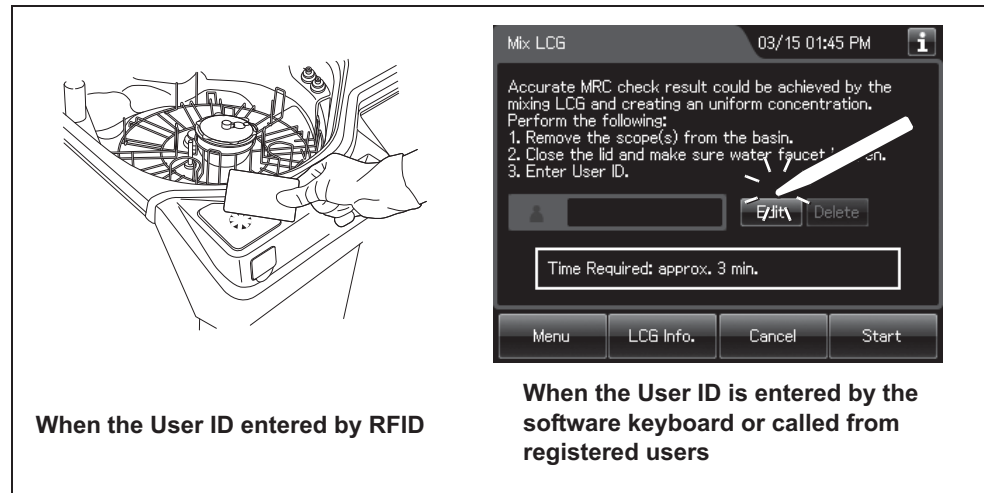


Figure 4.203

Ch.4

**NOTE**

- The input of the User ID can be omitted by modifying the User ID input setting. For details, refer to Section 4.5, "User ID Setting" in "Instructions-Operation Manual".
- If the "Delete" button is pressed, the entered ID can be deleted.

- 5 Press the "Start" button. Disinfectant solution mixing starts.

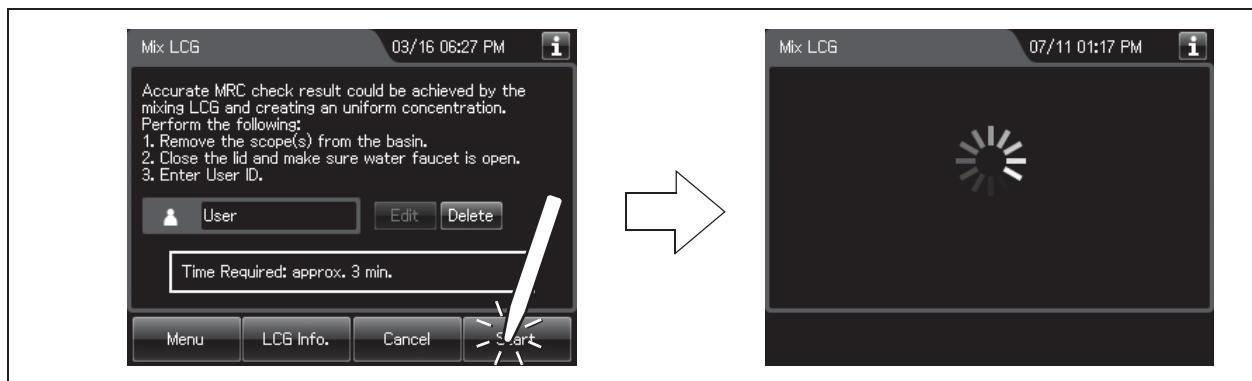


Figure 4.204

- When the disinfectant solution mixing process completes, the equipment generates a buzzer beep and displays the following screen on the touch screen. Press the “OK” button to finish.

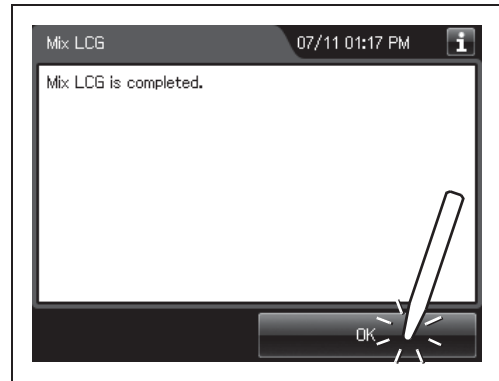


Figure 4.205

## ■ Disinfecting the water line

- 1 Make sure that the water faucet is open.
- 2 Close the lid.
- 3 Press the “Next” button repeatedly until the touch screen display changes as shown below.

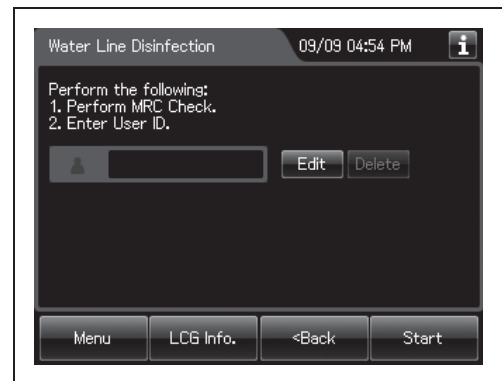


Figure 4.206

- 4 Enter the operator's user ID. For the detailed procedures, refer to Section 3.6, “Entering ID” in “Instructions-Operation Manual” (If applicable).

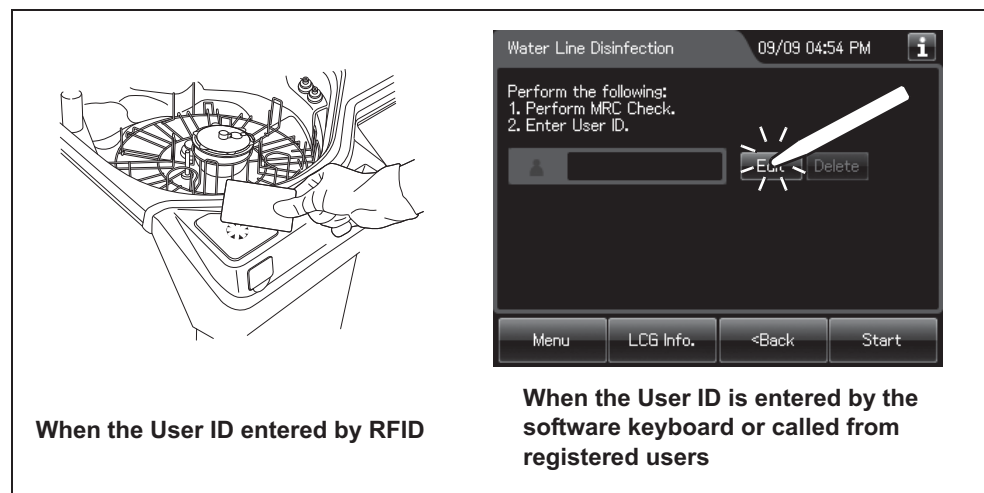


Figure 4.207

**NOTE**

- The input of the User ID can be omitted by modifying the User ID input setting. For details, refer to Section 4.5 “User ID Setting” in “Instructions-Operation Manual”.
- If the “Delete” button is pressed, the entered ID can be deleted.

- 5 Press the “Start” button.
- 6 Push the area marked “PUSH” on the front door to open it.



- 7 Prepare the container with a capacity of 2 L (67 ounces) or more in front of the equipment.
- 8 Put the tube-side ends of the two filter tubes in the container placed and insert the connector ends of the two filter tubes into the connector above the water filter housing and the connector below the water filter housing until they click. Water will start to flow from the tube connected to the connector below the water filter housing.

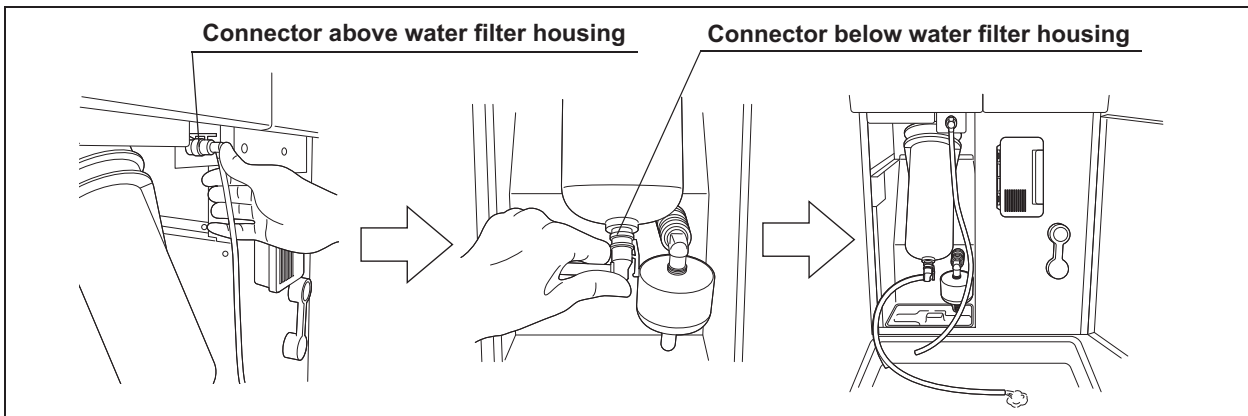


Figure 4.208

- 9 Press the “Continue” button.

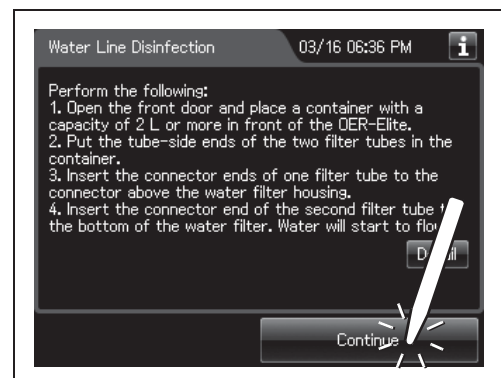


Figure 4.209

## 4.22 Water line disinfection

- 10** When water flow stops, disconnect the two filter tubes by pushing the lock levers on their connectors.

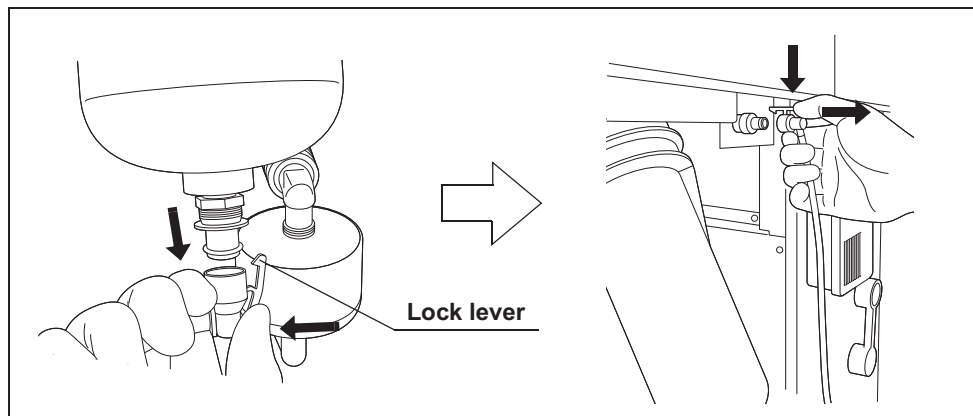


Figure 4.210

- 11** Press the “Continue” button.



Figure 4.211

- 12** Step on the foot pedal to open the lid.
- 13** Connect the water supply piping disinfection hose between the connector C1 in the reprocessing basin and the water supply piping disinfection connector.

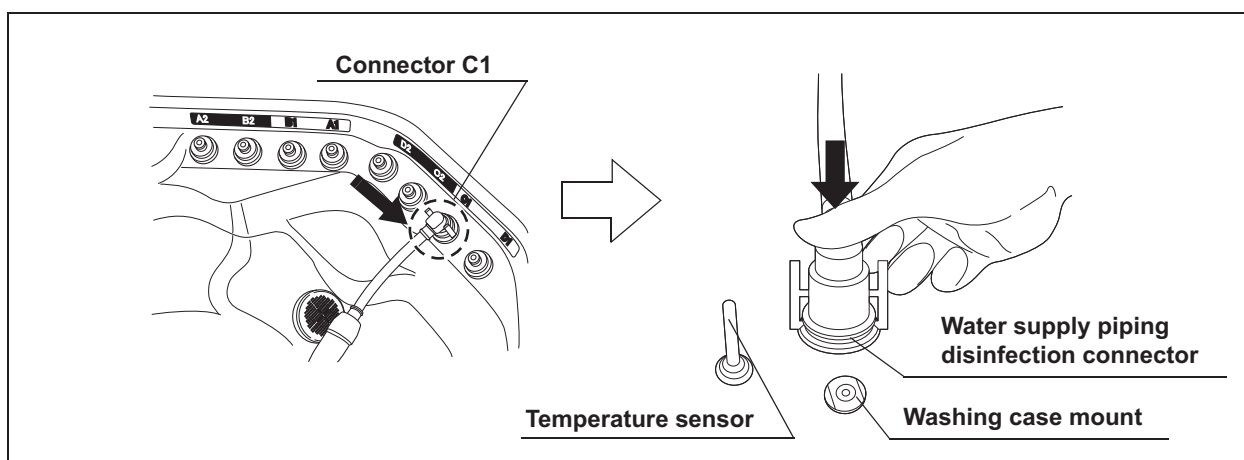


Figure 4.212

- 14** Close the lid.

- 15** Press the “Continue” button to supply the disinfectant solution in the reprocessing basin.

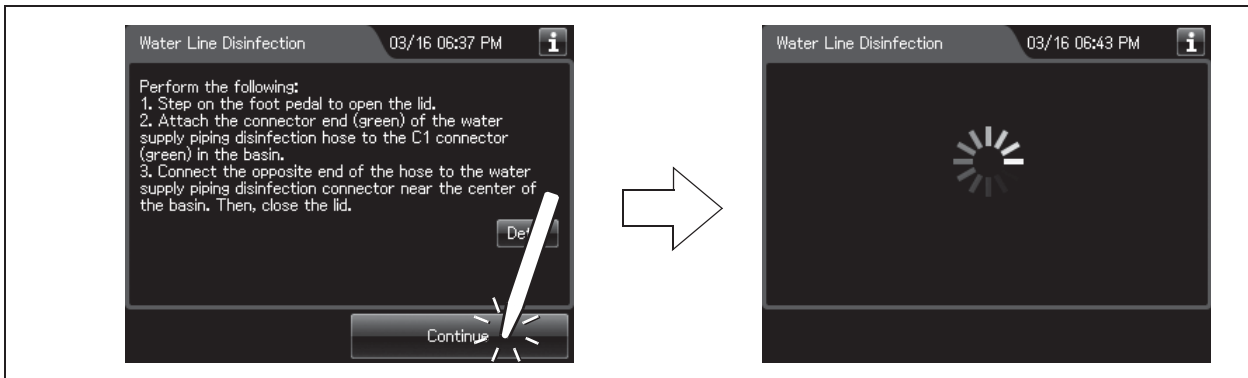


Figure 4.213

- 16** When the reprocessing basin is filled with disinfectant solution, a buzzer sounds three times and the touch screen displays the following screen.

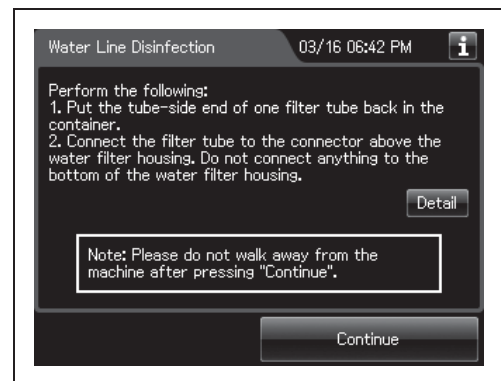


Figure 4.214

- 17** Put the tube-side end of the filter tube and put it in the container.
- 18** Insert the connector end of the filter tube into the connector above the water filter housing until it clicks. Do not connect anything to the connector below the water filter housing.

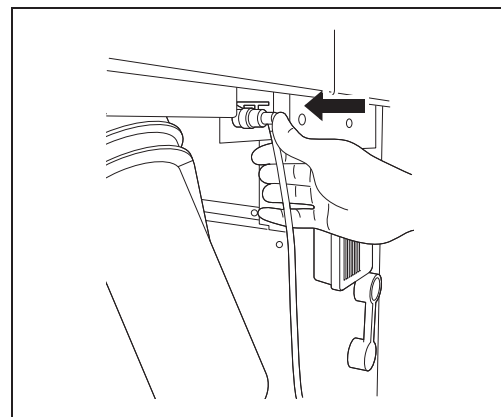


Figure 4.215

**19** Press the “Continue” button twice.

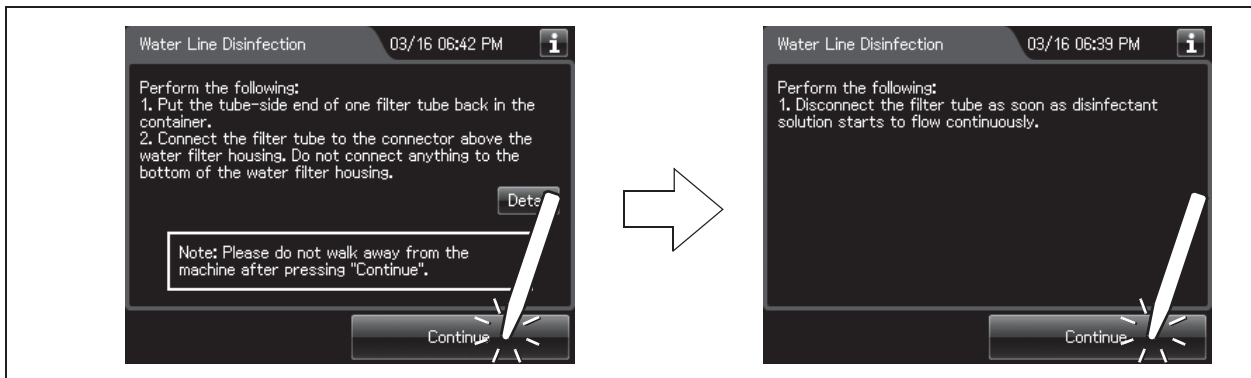


Figure 4.216

**20** When the disinfection process starts, the touch screen displays the remaining time and the progress bar.



Figure 4.217

**21** When water starts to flow continuously from the filter tube, disconnect the tube by pushing its lock lever. Water flow should stop when the filter tube is disconnected.

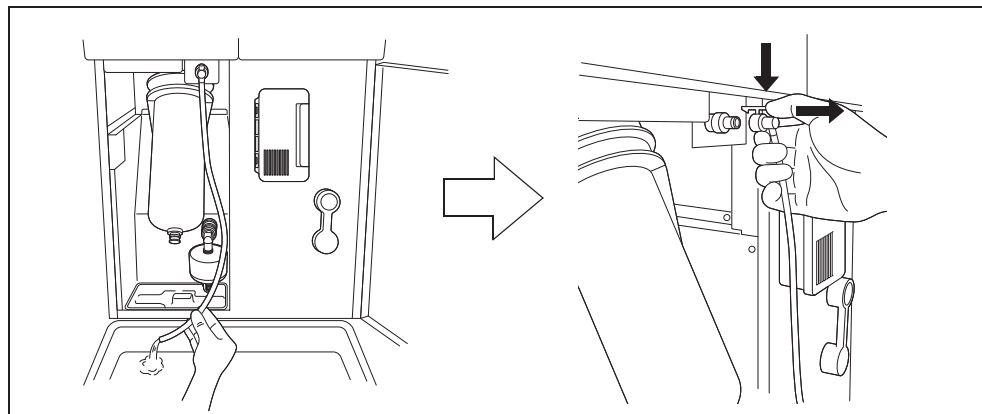


Figure 4.218

**NOTE**

If the temperature of the disinfectant solution is less than 20°C (68°F), it will be heated to 20°C (68°F). During heating, the remaining time countdown and the progress bar display stop and turn gray. After the completion of heating, the remaining time countdown and progress bar display resume.

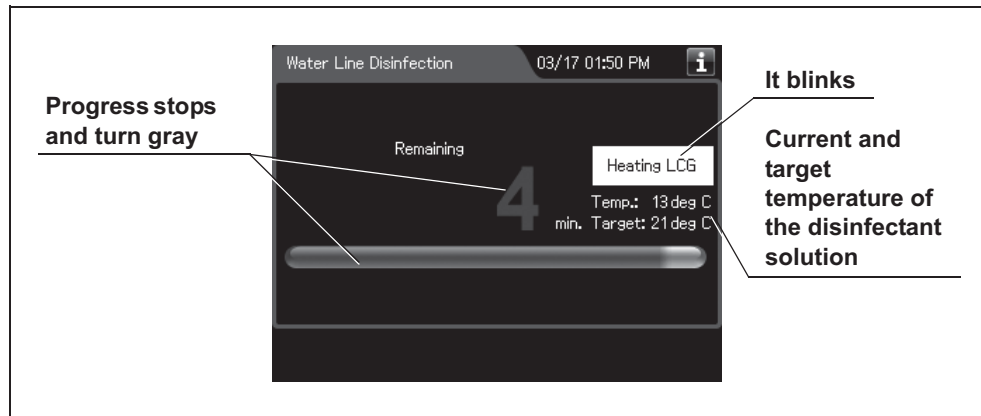


Figure 4.219

Ch.4

- 22** Make sure that a jet of fluid is output from the water supply/circulation nozzle to the dome of lid during the process.

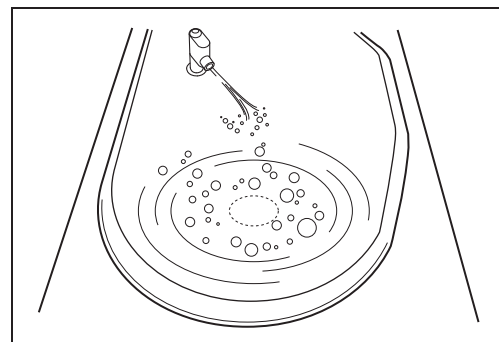


Figure 4.220

- 23** When the remaining time displayed on the touch screen reaches 0 minutes, the buzzer sounds and the touch screen displays the following screen.

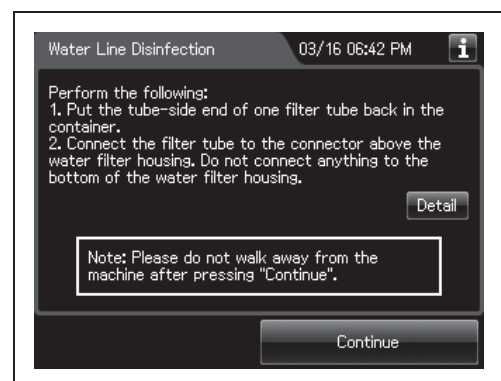


Figure 4.221

- 24** Put the tube-side end of the filter tube back in the container.

## 4.22 Water line disinfection

- 25** Insert the connector end of the filter tube into the connector above the water filter housing. Do not connect a filter tube to the connector below the water filter housing.

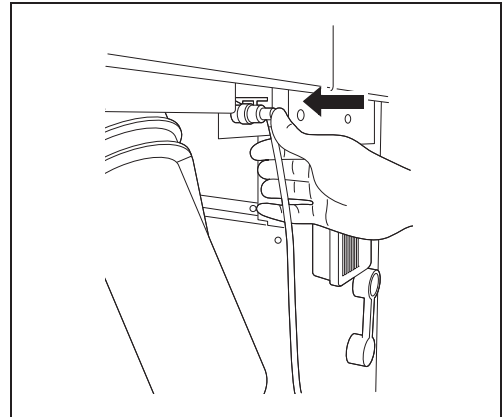


Figure 4.222

- 26** Press the “Continue” button. The touch screen displays a screen as shown in the following figure and water will flow from the filter tube.

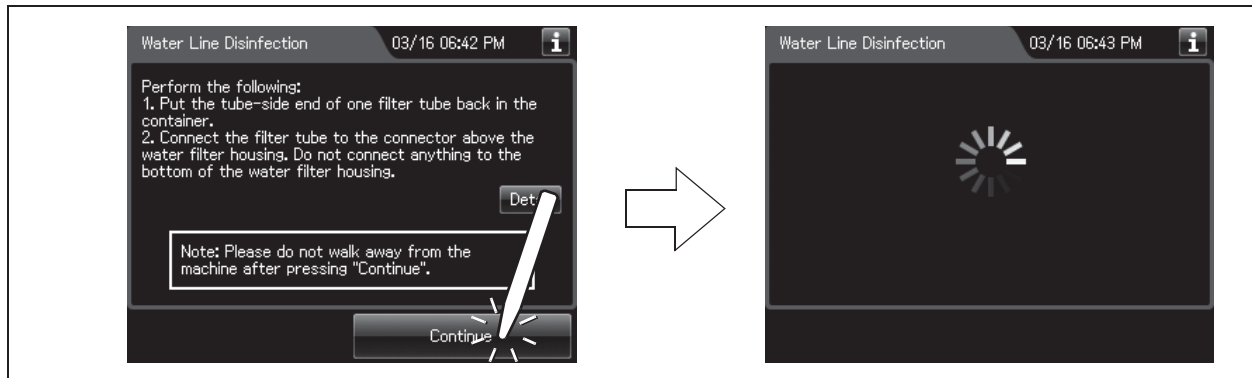


Figure 4.223

- 27** After several seconds, the buzzer sounds indicating the end of the process and the touch screen displays the following screen.

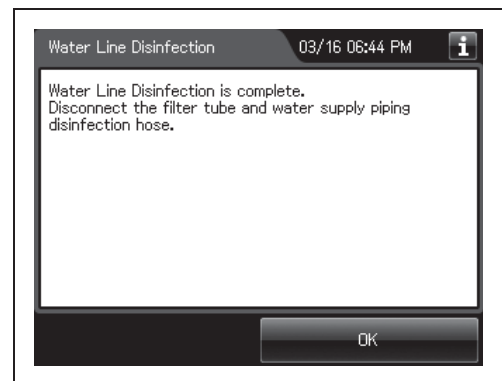


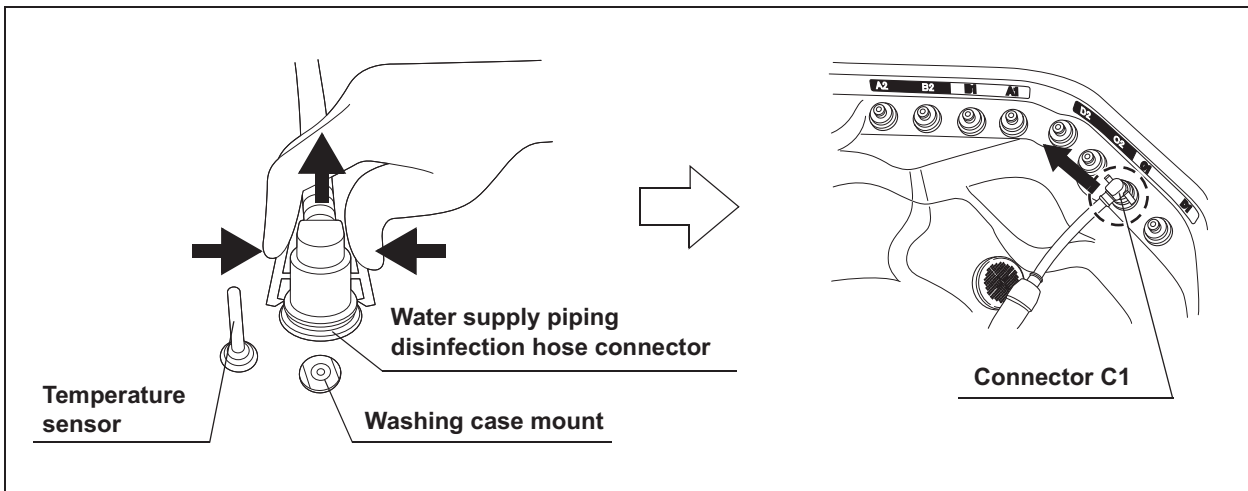
Figure 4.224

- 28** Disconnect the filter tube by pushing its lock lever.  
**29** Close the front door.  
**30** Step on the foot pedal to open the lid.

**WARNING**

Disconnect the water supply piping disinfection hose from the connector, covering the connector of the hose with hands in waterproof gloves. Otherwise, water pooled inside of the hose may spill out.

**31** Disconnect the water supply piping disinfection hose and close the lid.



Ch.4

Figure 4.225

- 32** Rinse the filter tube and water supply piping disinfection hose thoroughly in running water, dry them thoroughly, and store in a clean place.
- 33** Press the “OK” button to complete the water filter replacement process.

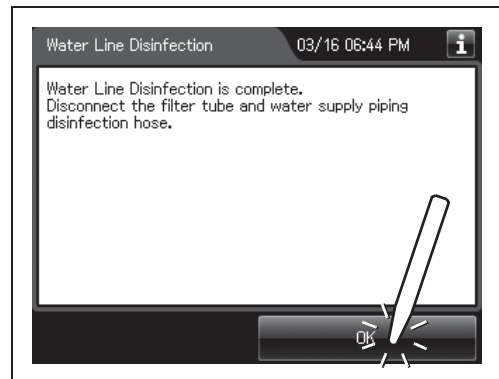


Figure 4.226

## 4.23 Checking the operation of optional accessories

### ■ Checking the operation of the bar code reader (MAJ-2130)

---

To input the patient ID from a bar code, it is required to connect the optional MAJ-2130 bar code reader.

For the installation of the bar code reader, refer to the Instructions - Installation Manual for this equipment and the Instructions for the MAJ-2130 bar code reader.

#### CAUTION

Do not connect anything other than the designated bar code reader to the bar code reader port. Otherwise, the IDs may not be read out correctly or the instrument may malfunction.

#### NOTE

- A patient ID can be input by either bar code reader or software keyboard (on-screen), but a patient name can be input by only software keyboard. It is possible to input the patient name by software keyboard (on-screen) after entering the patient ID by the bar code reader.
- The OER-Elite can read the top 23 characters of each bar code. When the bar code contains data other than patient data, the equipment reads all of 23 characters including data other than the patient data that a bar code has.
- Do not alter the settings of the bar code reader. It has been set to the optimum settings for combined use with this equipment. If the Settings are altered, it may be impossible to read the bar codes, contact Olympus.



## ○ Required items

Check	Required items
	Bar code

Table 4.12

### NOTE

The bar code that equipment can read is a bar code of the following standards.

- UPC/EAN
- Code 128
- GS1-128
- Code 39
- Trioptic Code 39
- Code 93
- Code 11
- Interleaved 2 of 5
- Discrete 2 of 5
- Codabar
- MSI
- Chinese 2 of 5
- Matrix 2 of 5
- Korean 3 of 5
- Inverse 1D
- GS1 DataBar
- Composite Codes

## ○ Checking the operation of the bar code reader

- 1 Press the “Reprocessing” button to display the reprocessing standby screen.

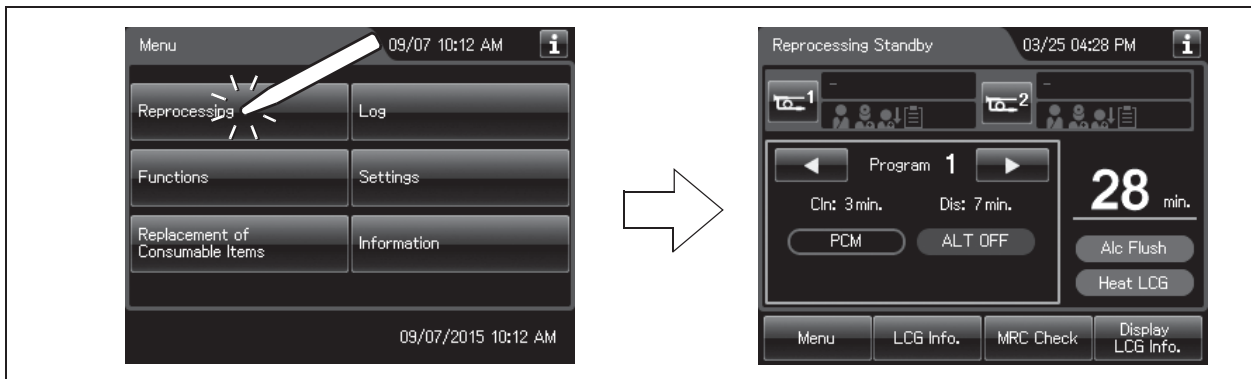


Figure 4.227

### Ch.4

- 2 Place the bar code under the bar code reader to read the bar code and adjust the distance between them so that the entire bar code is within the scanning area of the bar code reader. When the bar code reader succeeds in scanning of the bar code, the bar code reader sounds a short beep. If the bar code reader dose not sound a short beep, correct problems in reference to the instruction manual for the bar code reader MAJ-2130 or Section 13.2, “Troubleshooting guide” in “Instructions-Operation Manual”.

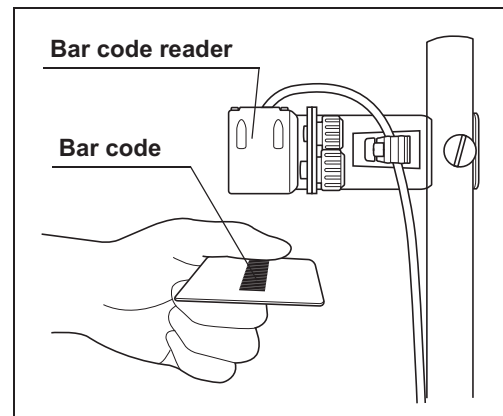


Figure 4.228

**NOTE**

When the bar code reader scans bar code, the bar code reader projects a green aiming pattern. The scanning pattern of the bar code reader is formed by the aiming pattern. When the entire bar code does not cross the scanning pattern, the bar code reader cannot scan the entire bar code.

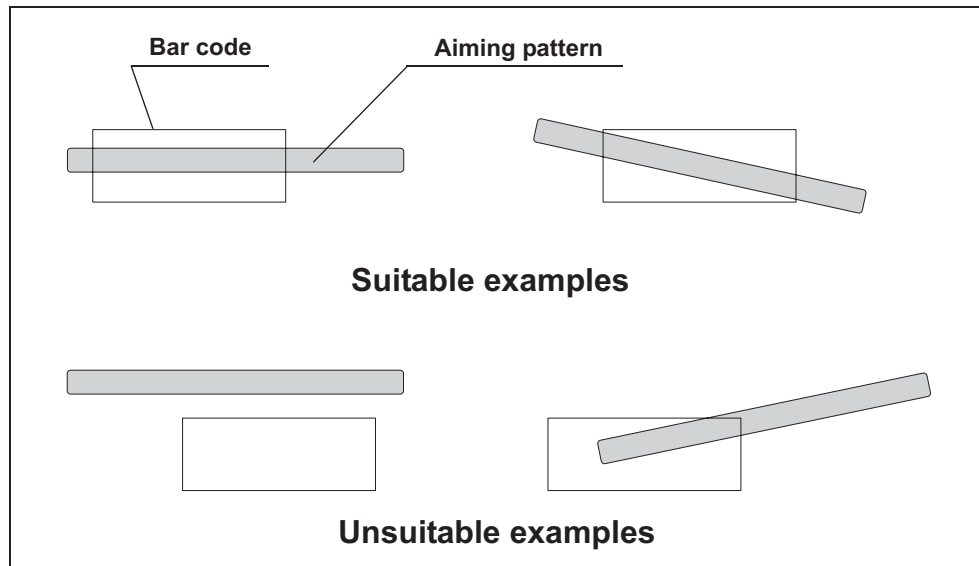


Figure 4.229

- 3 Then the touch screen displays data scanning from bar code as shown in the following figure. Check the data of bar code on the touch screen. If the touch screen does not display a screen as shown in the following figure, or if the displayed data has errors, correct problems in reference to the instruction manual for the bar code reader MAJ-2130 or Section 13.2, “Troubleshooting guide” in “Instructions-Operation Manual”.

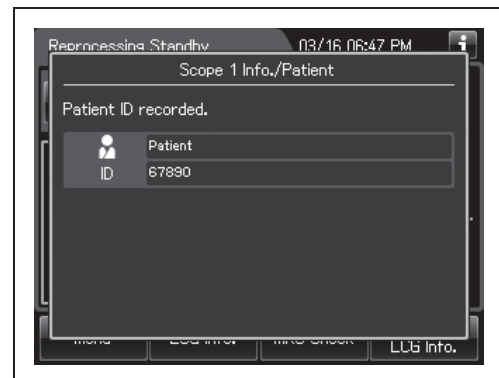


Figure 4.230

## 4.23 Checking the operation of optional accessories

### NOTE

- A patient ID can be input by either bar code reader or software keyboard (on-screen), but a patient name can be input by only software keyboard. It is possible to input the patient name by software keyboard (on-screen) after entering the patient ID by the bar code reader.
- When the patient ID setting is inactivated, the touch screen does not display information on bar code. For changing the patient ID setting, refer to Section 4.7, "Patient ID setting" in "Instructions-Operation Manual".
- The entered patient ID can be checked on the scope1 associated ID information screen. Press the "Scope 1" button to display the scope1 associated ID information screen.

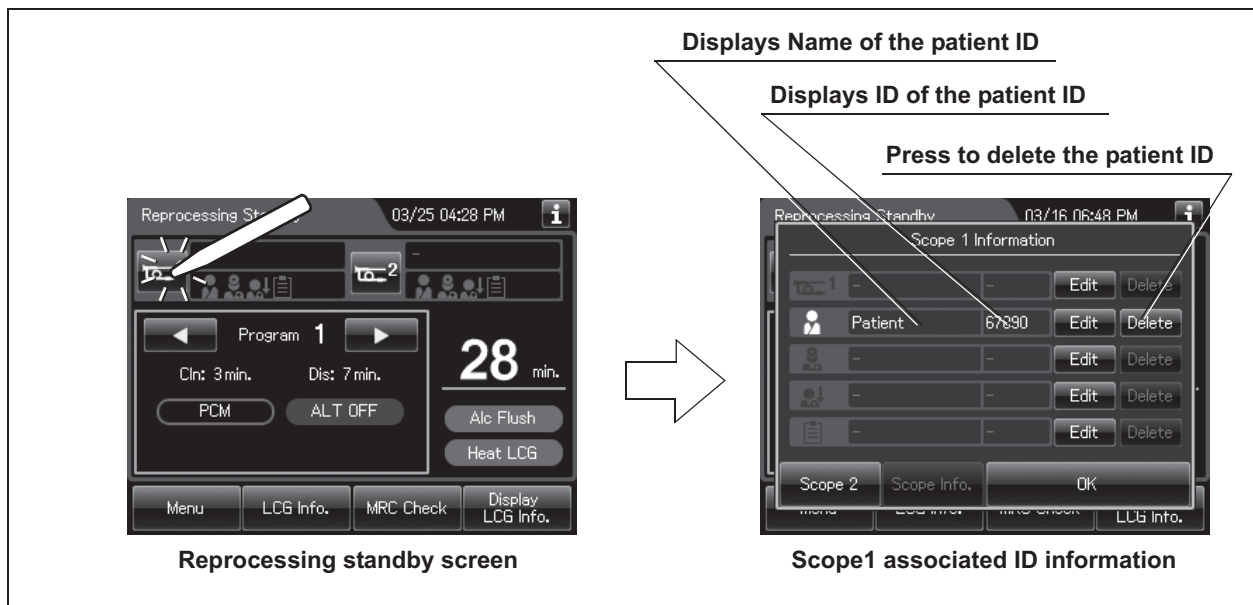


Figure 4.231

- 4 Press the "Scope 1" button on the reprocessing standby screen to display the Scope1 associated ID information screen.

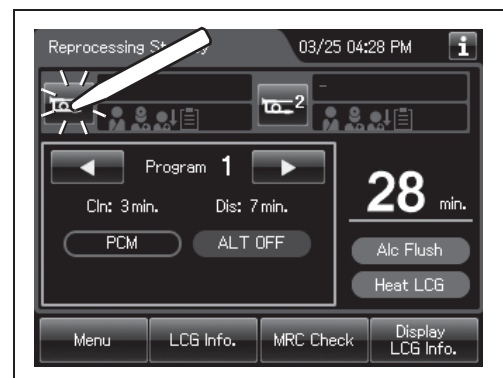


Figure 4.232

- 5 Press the “Delete” button of the patient ID to delete the patient ID.

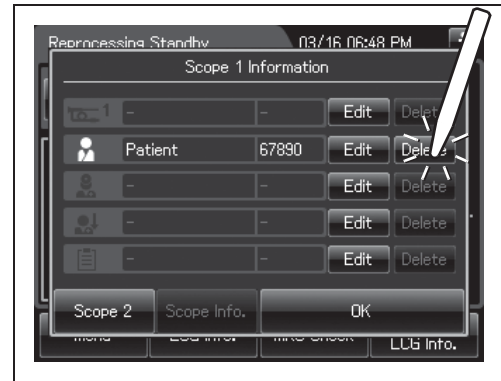


Figure 4.233

- 6 Press the “OK” button to return to the reprocessing standby screen.

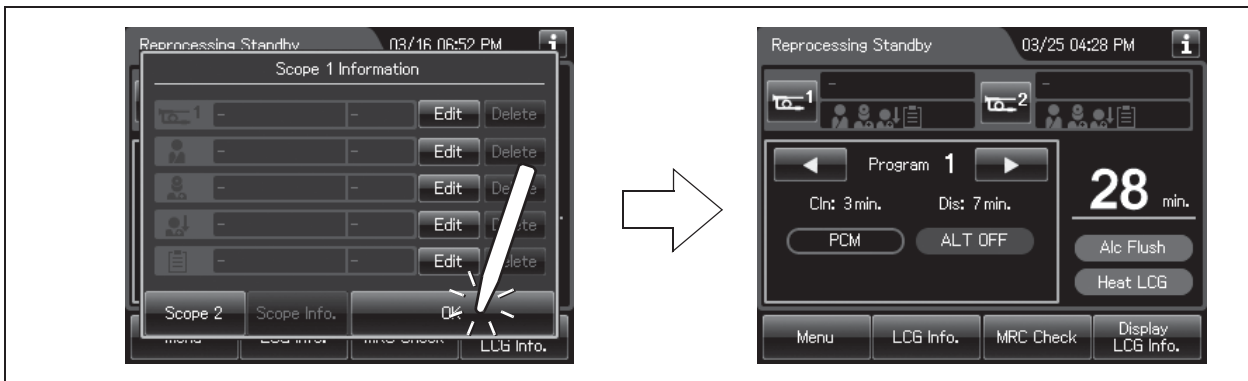


Figure 4.234

## ■ **Checking the operation of the printer (MAJ-1937)**

When the optional printer set MAJ-2144 is installed in the equipment, check the operation of the printer MAJ-1937 by following procedure.

For the operation of the printer and the set of roll paper, refer to the instruction manual for the printer set. Make sure that this checking exist record data of reprocessing record, leak test records, or leaking scope decontamination records.

### **CAUTION**

- Do not connect any other power cord to the printer (MAJ-1937) other than the power cord which provided with the printer. Connecting any power cord except the one specified may result in failure or burnout of the equipment.
- Do not connect any cables other than the interface cable of the printer MAJ-1937 to the printer communication port. Connecting except the specified cable may result in failure or burnout of the equipment.

### **NOTE**

Make sure that this checking exist record data of reprocessing record, leak test records, or leaking scope decontamination records. Otherwise, checking cannot executed. Be sure to execute the reprocessing, leak test, or leaking scope decontamination.

- 1** Turn on the equipment and the printer MAJ-1937.
- 2** Press the “Log” button on the Menu screen.

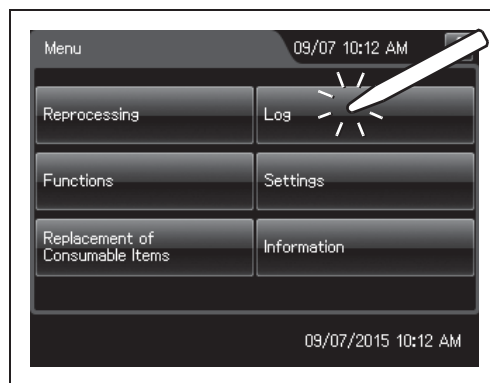


Figure 4.235

3 Press the “Printout” button.

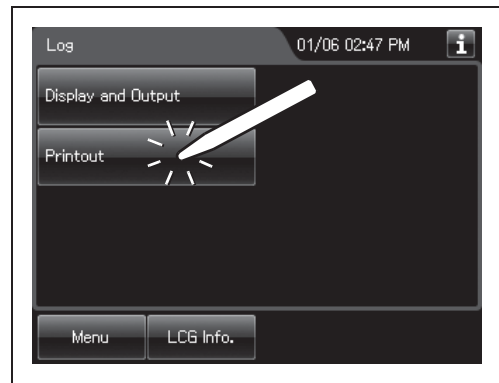


Figure 4.236

4 Press the “Reprocessing Record” button.



Figure 4.237

5 Press the “Include Error Result” button.

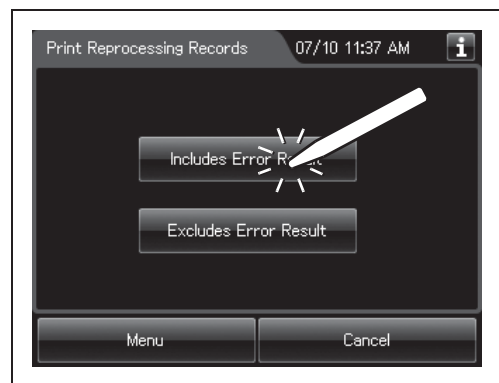


Figure 4.238

## 4.23 Checking the operation of optional accessories

- 6 Enter the date of select to be displayed. Press the “+” button to increase or the “-” button to decrease.

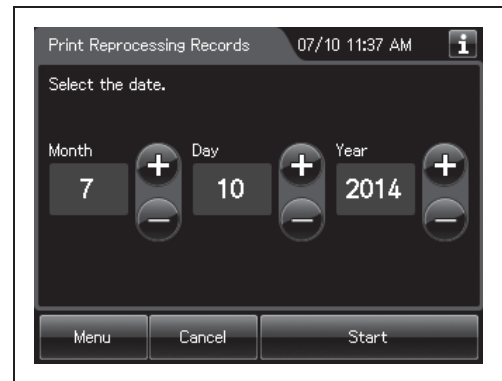


Figure 4.239

- 7 Press the “Start” button to start printing the reprocessing records. During printing, the touch screen displays a progress status of printing.

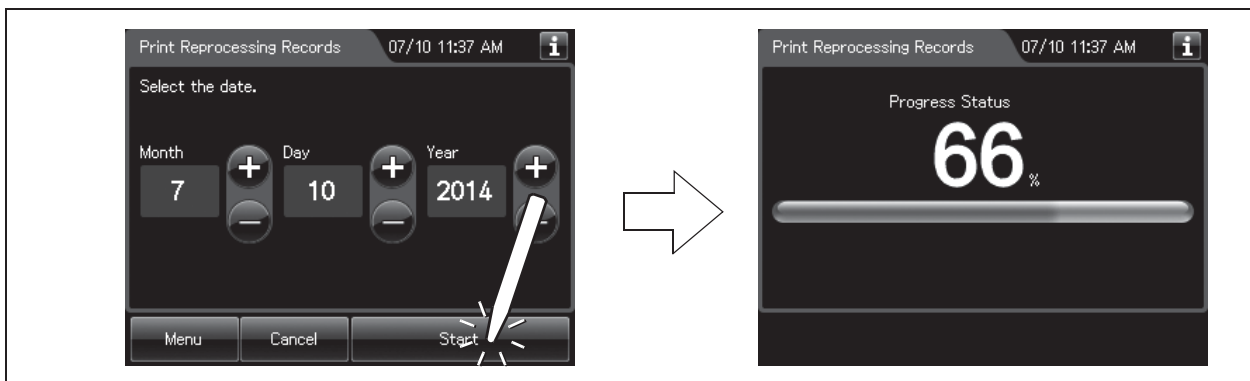


Figure 4.240

- 8 When the screen as shown in Figure 4.241 appears, the printing process is complete. Press the “OK” button.

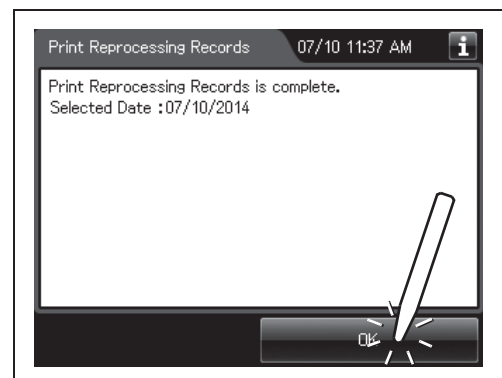
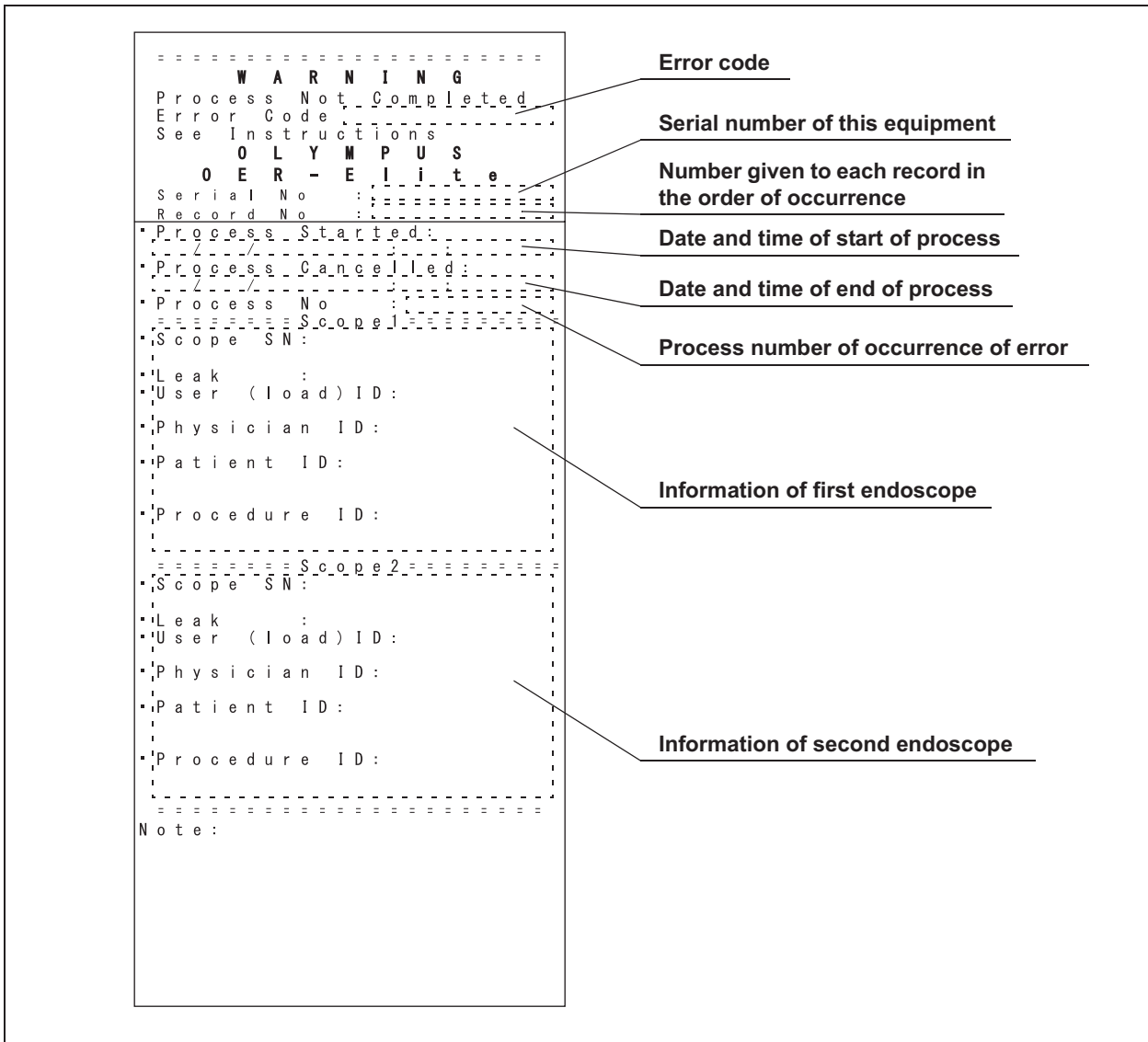


Figure 4.241



- 9 Check that the printed information is correct. If no information is printed, or if the printed information has errors, reference the instruction manual for the printer set.



Ch.4

Figure 4.242

| 4.23 Checking the operation of optional accessories

**Ch.4**



# Installation Work Check Points

## Installation work check points

To prevent problems due to improper installation, check the following during installation of the equipment.

<b>Installation of buckling guard</b>	
	The provided buckling guard should be attached to the rear of the equipment.
<b>Installation of retaining rack, washing case and drain/circulation port mesh filters</b>	
	The drain port mesh filter should be installed properly.
	The retaining rack should be installed properly.
	The washing case should be installed properly.
	The two circulation port mesh filters should be installed properly.
<b>Installation of water tray</b>	
	The water tray should be installed properly.
<b>Installation of stylus pen</b>	
	The stylus pen holder should be attached to the right side of the equipment.
<b>Connection of water supply hose</b>	
	Packing should be present inside the water supply plug and the connection ring.
	Pull the water supply hose lightly to ensure that there is no loose connection or buckle of the hose.
	Tighten the water supply plug and the connection rings on the equipment end of the water supply hose. To secure the water supply plug, use the provided wrench.
	Pull the water faucet end of the water supply hose to ensure that it is not disconnected.
	When the water faucet is open, no water should leak from the water supply hose connection area.
<b>Connection of drain hose</b>	
	The drain hose should not be buckled.
	The drain height should be appropriate.
	The hose should be cut to an appropriate length.
<b>Connection of power supply</b>	
	The hospital-grade wall mains power outlet should meet the rating (120 V AC/5.5 A) used for the equipment.
	The power cord should be plugged firmly into the equipment and the power outlet.
	The power switch should be able to be set to ON.
<b>Installation of equipment</b>	
	The equipment should be fixed in place by locking the two front casters.
<b>Check for RFID function</b>	
	The scope IDs should be recognized properly.

App.

## Installation work check points

	The user IDs should be recognized properly.
	The physician IDs should be recognized properly.
<b>Setting of date and time</b>	
	The built-in clock should be set to the present date and the time.
<b>Installation of gas filters</b>	
	The gas filters should be installed in the gas filter cases.
	The gas filter cases should be present in the two specified positions.
<b>Installation of air filter</b>	
	The filter should be installed properly.
<b>Installation of water filter</b>	
	The water filter should be installed with correct (up/down) orientation.
	The water filter should be installed properly.
	The water filter housing is secured without loosening by the water filter wrench.
	No water should leak from the water filter housing.
	Air should be drained properly from the water filter housing.
<b>Correction of equipment tilt</b>	
	The equipment should be level.
<b>Addition of alcohol</b>	
	70% ethyl alcohol or 70% isopropyl alcohol should be present in the alcohol tank.
<b>Installation of the detergent tank</b>	
	The detergent tank should be installed on the detergent/alcohol drawer.
	The detergent/alcohol inner tray should be installed in position.
<b>Setup of disinfectant solution</b>	
	Confirm that a buzzer beeps at the end of the supplying process to indicate optimum supplying of disinfectant solution.
	The amount of disinfectant solution should be within the specified range.
<b>Setting of self-disinfection and water sampling</b>	
	Set the date and time of completion of Self disinfection and water sampling.
<b>Checking Functions</b>	
	No error code should be displayed.
	A jet of fluid should be squirted from the water supply/circulation nozzle to the dome of lid.
	Water should not leak from the following positions.
	– Water supply hose connector
	– Drain hose connector
	– Water filter housing and surrounding area
	– Lid and surrounding area
	– Lower part of the equipment
<b>Disinfection of the water supply piping</b>	
	No error code should be displayed.

App.



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