

Instructions for UV Lamp Replacement and Lamp Maintenance Instructions For OutbackWater™ and other Luminor™ Manufactured UV Systems

What follows is *critical* information regarding UV lamp replacement. Please note: The fact that a UV lamp is illuminated does not necessarily mean it is working properly. A UV lamp's ability to create Ultra Violet light decreases over time. This decrease is not visibly detectable. To ensure a UV lamp's effectiveness, it is strongly advised that it be replaced based on the manufacturers' recommendation (rated hours) or every 12 months. Most of our systems are designed to remind you when lamp replacement is required.

Awareness of Potential Hazards and of Safety Measures to avoid these hazards is necessary. Please review the list and incorporate the appropriate safety measures into your lamp replacement and/or maintenance activities.

UV Exposure

- Never illuminate the UV lamp outside of the UV chamber.
- Never look directly at an illuminated UV lamp, even when using protective gear.
- Always use protective gear, including gloves and UV safety glasses.
- If accidental exposure occurs, immediately cool affected area, consult physician.

Electrical Shock

- Always disconnect power to the UV system before performing any maintenance or repairs.
- Check and confirm there is not more than one source of power to UV.

Impalement

- Never perform any physical inspection, repair or maintenance on the UV chamber before isolating and depressurizing the chamber.
- Never service UV lamps, sleeves or associated parts until depressurization of the UV chamber has been confirmed.

Burn - Hot Chamber

- Always allow UV lamps, and UV chambers to cool for a minimum of 10-15 minutes before handling.
- When there is no flow and there is water in the chamber. This water will be **hot**. To prevent being burned or scalded, always allow the system to cool before draining or handling components

Fire

- Do not store any combustible or flammable material close to the system.

Cuts or Abrasions

- Always check to ensure the UV and /or quartz sleeve is not broken, cracked or damaged in any way prior to handling.

Mercury (Hg) Exposure

- The UV lamp contains mercury (Hg). In the event the lamp breaks, avoid inhalation or ingestion of the debris, avoid exposure to eyes and skin. Never use a vacuum cleaner to clean up a broken lamp as this could scatter the spilled mercury. Observe local guidelines for the removal and disposal of mercury waste.

Water leak

- Use appropriate plumbing materials to avoid potential material degradation from UV exposure.

Tools and Supplies Needed for UV Lamp Change or Maintenance

- A pair of clean, cotton, latex or plastic gloves or 2 lint/chemical free soft cloths to ensure you avoid touching the lamp with your bare hands
- Phillips head screwdriver
- UV Replacement Lamp
- UV lamp replacement/maintenance procedure for Outback, Luminor or Genesis UV systems

Terms Used in the Lamp Change Instruction Process

- Power supply
- Ground wire
- Lug nut
- UV lamp
- Controller
- Lamp Connector
- Gland Nut

UV Lamp Change Procedure *(IMPORTANT: Read complete lamp change procedure before beginning!)*

1. Close the valve on the main water supply line to the UV system.
2. Open a faucet down-stream of the UV system to release the water pressure in the UV system.
3. Close the valve on the main water line from the UV.
4. Unplug all electrical power sources to the UV system.
5. Unscrew the ground screw from ground lug on the UV reactor chamber. **DOUBLE CHECK** to ensure there is no other power source connected to the UV system such as a solenoid module.
6. Allow the system to cool for at least 10-15 minutes.

After confirming all power supplies to the UV system are unplugged or disconnected and the water in the UV chamber has had adequate time to cool down, proceed to step 7.

7. Remove the UV lamp connector from the UV gland nut. To remove the lamp connector, simply push it in (approximately 1") towards the UV chamber, and turn it counter clockwise one-quarter turn. The lamp is spring loaded so once the lamp connector is released from the gland nut, the lamp will partially exit the UV chamber.

At this stage the lamp connector is still connected to the end of the (fragile) UV lamp.

8. Holding the end of the lamp connector with one hand, slightly raise the lamp from the chamber enough to hold the ceramic end of the lamp with the other hand. Carefully remove the lamp connector from the lamp. (The lamp and lamp connector are attached by four pins requiring a *very slight* back and forth and pulling motion to separate them.) It is critical that you Do Not allow the lamp to move sideways inside the UV chamber as this could cause damage to both the UV lamp and UV sleeve.

9. Once the lamp connector and lamp are no longer attached, and after ensuring that you have adequate room to accommodate the length of the lamp, carefully slide the lamp out of the UV chamber. Again, be careful not to bend or put any lateral pressure on the lamp during the removal process.

NOTE: If the UV Lamp is mounted horizontally and the lamp is being removed from the side, the spring may follow the lamp out of the chamber when the lamp is removed. Watch for this and recover the spring if this happens. This is not an issue with a vertically mounted lamp.

Set the old lamp off to the side.

10. Remove the new UV lamp from its packaging. Being careful to touch only the ceramic ends. If you must touch the glass portion of the lamp it is best to do so with a clean soft oil-free cloth or cotton gloves.

Inspect the new lamp for any damage that may have occurred during shipping. Double check to insure the old lamp and the new lamp have the same colored ceramic ends and the part numbers are the same (part number etched on lamp).

11. Slide the new UV lamp into the UV chamber, again being careful not to bend or put lateral pressure on the lamp during the process. Remember never to touch the lamp with your bare hands.
12. Carefully attach the lamp connector to the pronged end of UV lamp.
13. Connect the lamp connector to the gland nut by simply pushing the lamp connector in (about 1"), towards the UV chamber, and turning it clockwise one-quarter turn. The lamp is spring loaded so you will feel a bit of resistance when you push in the lamp.
14. Reattach the ground wire to the ground lug on the UV chamber.
15. Close the faucet you opened in step 2.
16. Open the two water valves on the main water supply line to and from the UV system.
17. DO NOT complete this step or connect power to the UV system before reviewing information below.

BEFORE reattaching any of the UV power supplies please see Lamp Countdown Reset Sequence below. If your system is equipped with a lamp countdown feature, you must initiate the lamp Countdown Reset Sequence when you install the new lamp. This process resets the controller in order for the system to begin its countdown function with the newly installed lamp.

To perform this reset you must simultaneously;

- a. firmly depress the button on the front of the controller while
- b. plugging the power cord into the wall outlet and initiating power to the unit.

Continue holding down the button for at least five seconds. The controller screen will display the message "continue holding button to reset lamp timer". Doing this allows the controller time to reset the internal timer. Release the button after you hear an audible chirp or three beeps, signifying that the lamp countdown feature has been reset. The controller display will show the message "lamp life reset".

Your new lamp is now installed the lamp countdown has been reset and your UV system is good to go!