

# CLEANING, DISINFECTING, AND ROUTINE MAINTENANCE PROCEDURE

RECOMMENDATIONS		
HAVE ALL COMPONENTS ON HAND AND READY BEFORE BEGINNING PROCEDURE A CLEAN WORK AREA AND EQUIPMENT ARE ESSENTIAL TO PROPERLY CLEAN AND/OR DISINFECT THE SYSTEM (i.e., CLEAN HANDS, TOOLS, WORK SURFACE, AND CONTAINERS)		
EQUIPMENT NEEDED		
Safety Glasses Rubber Gloves, Sanitary Wash Cloth, Clean and Lint-Free	Liquid Dish Soap Household Bleach – Unscented Only (5 ¼% Sodium Hypochlorite)	Plastic Bucket “O” Ring Lubricant, Silicone Based
REPLACEMENT FILTERS		REPLACEMENT UV COMPONENTS
Refer to system Parts List for specific component part numbers		Refer to system Parts List for specific component part numbers

## CLEANING PROCEDURE

**NOTE:** Refer to individual System Assembly and Activation Procedures to identify specific components matching the descriptions shown in this procedure.

1. Disconnect system from electrical outlet.
2. Mix a mild cleaning solution of dish soap and clean potable water in the plastic bucket.
3. Close feed water supply valve and open downstream faucet to relieve system pressure.

**CAUTION:** Do not attempt to remove sumps until water flow stops. This reduces pressure inside the system so sumps may be safely removed.

**NOTE:** *For UVB and UV1 Models only:* Remove and save Teflon Sleeve as it will be used again with replacement EPCB™ Carbon Filter.

4. Remove each sump. Remove each filter as its sump is removed. Discard the filters. Use sump wrench to remove stubborn sumps.

**NOTE:** Use sanitary rubber gloves for this procedure to avoid contaminating cleaning solution or filters. Wear gloves whenever cleaning components or handling new filters.

5. Clean quartz sleeve carefully using vinegar to remove hardness. Do not use abrasive materials. Rinse sleeve thoroughly with clean potable water. Replace any sleeve that is damaged or will not come completely clean.
6. Remove sump “O” rings and wash with cleaning solution. Rinse them well with clean potable water. Inspect “O” rings for damage (i.e., nicks or scratches). Replace damaged “O” rings.

**CAUTION:** Use care when cleaning UV head. Do not get the UV control module or connectors wet.

7. Clean sumps and heads, inside and outside with washcloth and cleaning solution. Do not use abrasive materials.
8. Rinse sumps and heads with clean potable water.
9. *For UV20 Model only:* Clean and rinse the Stainless Steel Channeling Sleeve (Item 3) and Sleeve Gasket (Item 4) shown in Figure 2.

10. Inspect head and sump “O” ring groove area for damage (i.e., nicks or scratches). Replace damaged components.
11. Place a small amount of silicone based “O” ring lubricant on the filter sump “O” ring. Install the “O” ring into the filter sump groove.

## DISINFECTION PROCEDURE

**CAUTION:** WEAR SAFETY GLASSES AND SANITARY RUBBER GLOVES WHILE PERFORMING THIS PROCEDURE.

**CAUTION:** EXCESSIVE CONCENTRATIONS OF BLEACH WILL DAMAGE PLASTIC AND RUBBER COMPONENTS. Rinse all parts that contact bleach thoroughly with clean potable water.

**CAUTION:** Read the "WARNINGS" on the bleach container before using.

**CAUTION:** Handle sanitizing solution carefully. Avoid contact with unprotected areas.

1. Disconnect system from electrical outlet.
2. Mix sanitizing solution:
  - a. *For UVB, UV1, and Addon Models only :* Mix 59 ml (1/4 cup) of household bleach and 177 ml (3/4 cup) of clean, potable water in the bucket. Mix the solution well.
  - b. *For UV20 and UVBB Models only:* Mix 237 ml (1 cup) of household bleach and 237 ml (1 cup) of clean, potable water in the bucket. Mix the solution well.

**CAUTION:** Use care when sanitizing UV head. Do not get the UV control module or connectors wet.

**CAUTION:** TIGHTEN SUMPS BY HAND ONLY. Do not use tools as they will over-tighten and may damage sump. Take care not to cut or pinch “O” rings or gaskets. Use sump wrench for removal only.

3. Add sanitizing solution into system:
  - a. *For UVB, UV1, and Addon Models only:* Add 237 ml (1 cup) of sanitizing solution to the sump that contains the UV lamp.
  - b. *For UV20 and UVBB Models only:* Add 473 ml (2 cups) of sanitizing solution to the sump that contains the UV lamp.

- Slowly open the feed water supply valve.
- Open all downstream faucets. Keep faucets open until a chlorine smell is detected at each faucet, then close faucets.

**NOTE:** Water lines downstream from UV housing must be disinfected to destroy any bacteria that might remain in the pipes.

- Verify disinfection solution has reached every water outlet downstream of UV system. **Solution must remain in the system for at least four hours.**
- Open outlet valve and let water flow for 5 minutes to flush disinfection solution from the water lines.

## ROUTINE MAINTENANCE FILTER REPLACEMENT PROCEDURE

- Perform Cleaning Procedure (Page 15, step1-11).

**NOTE:** Do not remove protective plastic bag from filters. Open bottom of bag only enough to expose bottom of filter.

**NOTE:** Refer to Exploded Schematic for your system to ensure each filter is installed in the correct position.

**NOTE: For UVB and UV1 Models only:** Refer to the Exploded Schematic to ensure proper position of Teflon Sleeve removed in Cleaning Procedure.

- Install the filters into the appropriate sump. Hold filter by its protective plastic bag and insert the filter into the sump.

**CAUTION: For UVBB Model only:** Be sure sump with metal liner is installed onto UV head.

**CAUTION:** TIGHTEN SUMPS BY HAND ONLY. Do not use tools as they will over-tighten and may damage sump. Take care not to cut or pinch "O" rings or gaskets. Use sump wrench for removal only.

- Slide bag from filter and discard. Replace each sump as each filter is installed.
- Plug system into electrical outlet. Turn on water supply and check for leaks. Flush system for several minutes to remove carbon fines.

## ROUTINE MAINTENANCE UV LAMP REPLACEMENT PROCEDURE

**NOTE:** Refer to individual System Assembly and Activation Procedures to identify specific components matching the descriptions shown in this procedure.

- Disconnect system from electrical outlet.
- Shut feed water supply valve and open downstream faucet to relieve system pressure.

**CAUTION:** Do not attempt to remove sumps until water flow stops. This reduces pressure inside the system so sumps may be safely removed.

**CAUTION:** Use care when sanitizing UV head. Do not get the UV control module or connectors wet.

- Remove sump from UV head and set aside.

**CAUTION:** Do not touch quartz sleeve or UV lamp with bare hands. Fingerprints will reduce the effectiveness of the light.

**WARNING: Do Not Attempt to Remove Quartz Sleeve.** Damage to system and personal injury may occur if the sleeve is removed incorrectly. Contact your dealer if quartz sleeve is broken or needs replacement.

- Clean quartz sleeve carefully using vinegar to remove hardness. Do not use abrasive materials. Rinse sleeve thoroughly with clean potable water. Replace any sleeve that is damaged or that will not come completely clean.

- Gain access to UV lamp:
  - For UVB, UV20, and UVBB Models only.** Remove UV Control Module (Item 10) from Mounting Bracket (Item 6, 6A, 6b) by removing four Screws (Item 11).
  - For UV1 Model only:** Loosen Screw (Item 9) securing slotted side of UV Lamp Retainer (Item 7). Remove other screw securing UV lamp retainer to UV head. Rotate bracket away from UV lamp. Remove and slide Finish Cap (Item 12) on cable towards UV control.

- For UVB and UV20 Models only:** Remove UV control module with UV lamp by gently lifting control module straight up from mounting bracket. Grasp UV lamp firmly and remove lamp from the four-pin socket.
- For UVBB Model only:** Remove UV control module with UV lamp by lifting the control module straight up from mounting bracket. The four-pin socket is attached to the UV control module by a short cable that allows for correct insertion depth. Grasp UV lamp and four-pin socket firmly and separate lamp from connector.
- For UV1 and Addon Models Only:** Remove UV lamp by gently lifting the cable connecting the four-pin socket to the UV lamp. Grasp UV lamp and four-pin socket firmly and separate lamp from connector. During replacement, be sure UV lamp is inserted as far as possible into the quartz sleeve.

- Remove UV lamp from system being careful not to break UV lamp or dislodge quartz sleeve:
  - For UVB and UV20 Models only:** Remove UV control module with UV lamp by gently lifting control module straight up from mounting bracket. Grasp UV lamp firmly and remove lamp from the four-pin socket.
  - For UVBB Model only:** Remove UV control module with UV lamp by lifting the control module straight up from mounting bracket. The four-pin socket is attached to the UV control module by a short cable that allows for correct insertion depth. Grasp UV lamp and four-pin socket firmly and separate lamp from connector.
  - For UV1 and Addon Models Only:** Remove UV lamp by gently lifting the cable connecting the four-pin socket to the UV lamp. Grasp UV lamp and four-pin socket firmly and separate lamp from connector. During replacement, be sure UV lamp is inserted as far as possible into the quartz sleeve.

- For UVB and UV20 Models only:** Remove UV control module with UV lamp by gently lifting control module straight up from mounting bracket. Grasp UV lamp firmly and remove lamp from the four-pin socket.
- For UVBB Model only:** Remove UV control module with UV lamp by lifting the control module straight up from mounting bracket. The four-pin socket is attached to the UV control module by a short cable that allows for correct insertion depth. Grasp UV lamp and four-pin socket firmly and separate lamp from connector.
- For UV1 and Addon Models Only:** Remove UV lamp by gently lifting the cable connecting the four-pin socket to the UV lamp. Grasp UV lamp and four-pin socket firmly and separate lamp from connector. During replacement, be sure UV lamp is inserted as far as possible into the quartz sleeve.

- For UVB and UV20 Models only:** Remove UV control module with UV lamp by gently lifting control module straight up from mounting bracket. Grasp UV lamp firmly and remove lamp from the four-pin socket.
- For UVBB Model only:** Remove UV control module with UV lamp by lifting the control module straight up from mounting bracket. The four-pin socket is attached to the UV control module by a short cable that allows for correct insertion depth. Grasp UV lamp and four-pin socket firmly and separate lamp from connector.
- For UV1 and Addon Models Only:** Remove UV lamp by gently lifting the cable connecting the four-pin socket to the UV lamp. Grasp UV lamp and four-pin socket firmly and separate lamp from connector. During replacement, be sure UV lamp is inserted as far as possible into the quartz sleeve.

**NOTE:** The inside of quartz sleeve must be completely dry before installing the replacement UV lamp.

**NOTE:** Hold replacement UV lamp by the ceramic ends only. Do not touch the glass. Clean glass with isopropyl alcohol if necessary.

- Install the replacement UV lamp by reversing steps 5 and 6 of this procedure.

## INSTALL QUARTZ SLEEVE

### CAUTION: QUARTZ SLEEVE IS VERY FRAGILE!

For safety, wear a protective glove when handling quartz sleeve. Do not touch quartz sleeve or UV lamp with bare hands. Fingerprints will reduce the effectiveness of the light.

1. Remove Sump from UV Head.



**NOTE:** Do not remove protective plastic bag from quartz sleeve until so instructed.

2. Remove Quartz Sleeve from packing tube. While holding middle of quartz sleeve with one hand, slide protective bag with other hand to expose open end.



3. Place a small amount of silicone based "O" ring lubricant supplied in the small packet on the outside of the open end of the quartz sleeve only on the area that will engage with the "O" ring.



**CAUTION:** Apply even pressure to push the quartz sleeve into the UV head. To avoid breakage, make sure quartz sleeve goes in straight by pushing it with a slight twisting motion.

5. Insert quartz sleeve into the UV head. As quartz sleeve passes "O" Rings, resistance will be felt. Remove protective bag from quartz sleeve.

