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INSTALLATION INSTRUCTIONS

IK4-0200

MEMBRANE CLEANING KIT

(PowerSurvivor and Survivor-35)

PURPOSE OF THE KIT

The Membrane Cleaning Kit contains parts required to periodically clean the membrane on a PowerSurvivor or Survivor-35. It also includes an initial supply of cleaning chemical, adequate for approximately 12 cleaning operations.

CONTENTS OF THE KIT

- Membrane Cleaning Housing, with hose
- Alkaline Membrane Cleaning Agent (2 bottles)
- Acid Membrane Cleaning Agent (1 bottle)

TOOLS AND SUPPLIES REQUIRED

- Clean pail or other suitable container.

WHEN TO CLEAN?

The membrane does not have to be cleaned regularly. However, even in normal operation it can eventually become dirty or fouled with biological growth and particles which are small enough to pass through the prefilter. Also, under certain conditions mineral scaling can occur on the membrane surface.

This build-up on the surface of the membrane can cause the freshwater flow rate to be low or the operating pressure to be high. The most likely symptom will be discharge of seawater from the relief valve on the pump body, because of higher-than-normal operating pressure.

Under the above circumstances, the membrane should be cleaned as described below.

TYPES OF CLEANER SUPPLIED

Two types of cleaner are provided with the kit – alkaline and acid. The alkaline cleaner is used to remove biological fouling, oil, or dirt; the acid cleaner is used to remove mineral scaling.

Cleaning with just the alkaline cleaner will usually restore the membrane's performance. However, if low output or higher-than-normal pressure continues, the acid cleaner should also be used.

The procedure is the same for both cleaners. Use the alkaline cleaner first, following the appropriate procedure

below. If the acid cleaner is also required, flush the system and repeat the procedure with it.

CLEANING PROCEDURE (PowerSurvivor)

1. Mix three level capfuls of the cleaning agent with one gallon of clean fresh water, in a clean pail. The water should be warm but not hot – maximum of 122° F (50° C). Mix until the cleaner is completely dissolved.

2. Grasp the membrane housing with both hands and turn counterclockwise until it can be removed.

In its place, install the special membrane-cleaning housing provided with the kit. Screw the housing all the way on by hand, but don't overtighten.

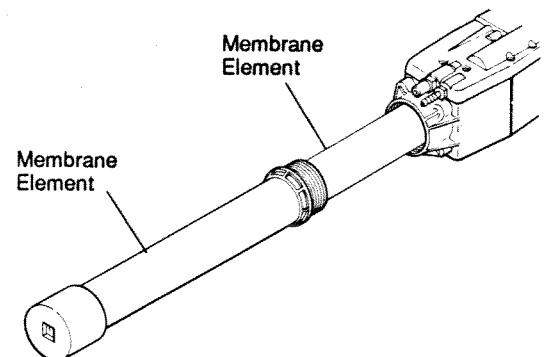
3. Place the auxiliary intake tubing (from the intake 3-way valve) into the pail of warm water, and turn the valve to the auxiliary intake position.

4. Turn on the PowerSurvivor. Discard the water coming from the discharge hose (on the end of the cleaning housing) for about 30 seconds, then place the discharge hose into the cleaning solution container.

Continue running the unit while recirculating, for about 15 minutes.

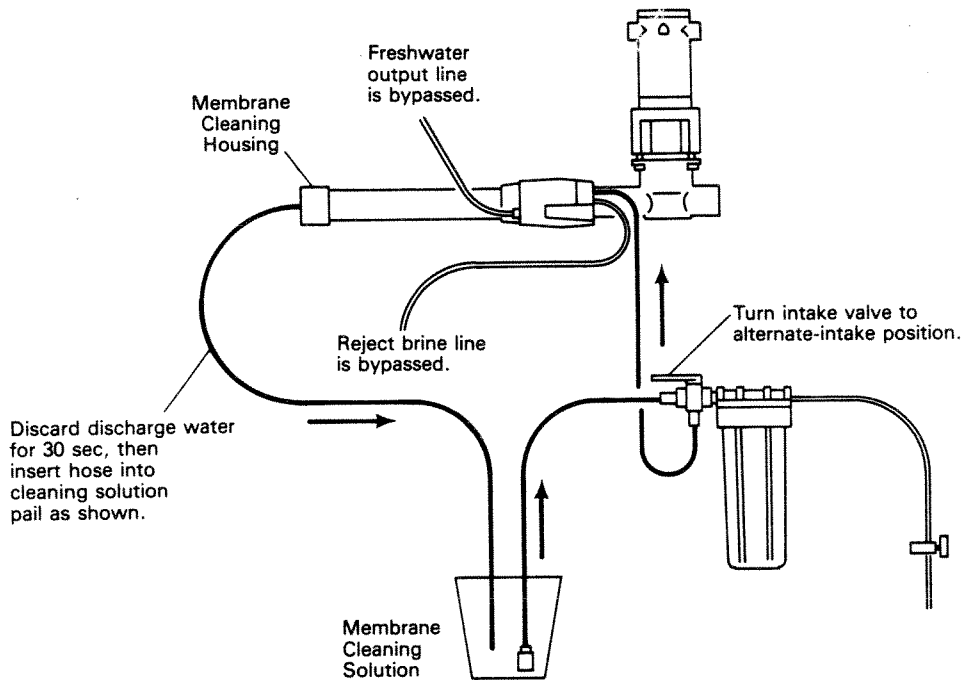
5. Turn the pump off and allow the membrane to soak for at least an hour. For severe fouling, an extended soak period of 10 to 15 hours may be desirable.

REMOVING MEMBRANE ASSEMBLY FROM PUMP

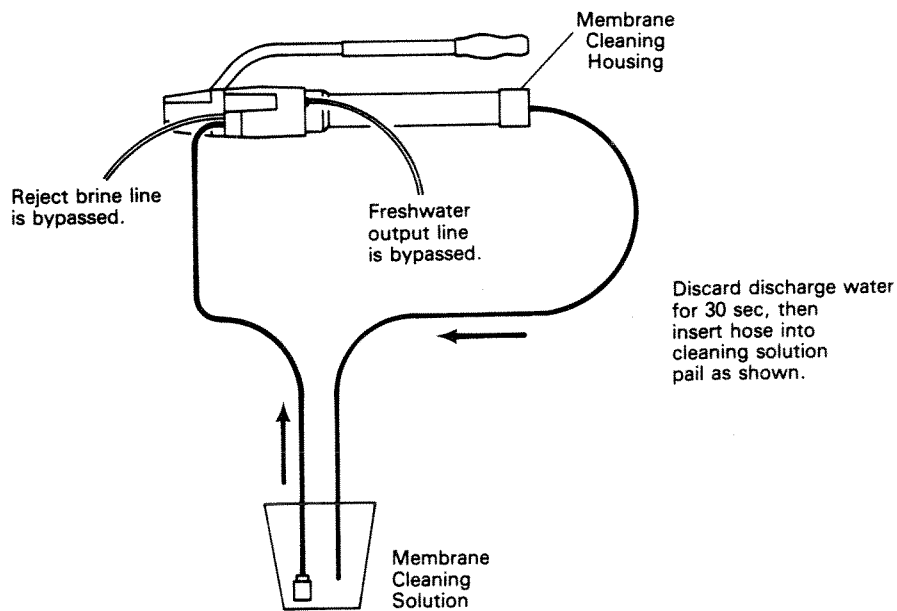


** Flush w/ Fresh Water - Good for 3 weeks*

**PLUMBING SCHEMATIC,
MEMBRANE CLEANING (POWERSURVIVOR)**



**PLUMBING SCHEMATIC,
MEMBRANE CLEANING (SURVIVOR-35)**



6. After soaking, restart the pump. Dump the first few pulses of solution that come immediately from the discharge hose.

When the stream becomes cleaner, place the hose back into the pail of cleaning solution and recirculate for another 30 to 60 minutes.

7. After cleaning, flush by pumping warm fresh water through the system (insert the alternate intake hose into a pail of fresh water, and run the discharge water from the cleaning housing to a drain). If fresh water is not available, you may use seawater if it is above 68° F (20° C).
8. Remove the cleaning housing and reinstall the normal membrane housing.
9. If the unit won't be used for at least 7 days after cleaning, follow the inhibiting instructions under "Storage" in the Owner's Manual.

CLEANING PROCEDURE (Survivor-35)

1. Mix three level capfuls of the cleaning agent with one gallon of clean fresh water, in a clean pail. The water should be warm but not hot – maximum of 122° F (50° C). Mix until the cleaner is completely dissolved.
2. Grasp the membrane housing with both hands and turn counterclockwise until it can be removed.

In its place, install the special membrane-cleaning housing provided with the kit. Screw the housing all the way on by hand, but don't overtighten.

3. Place the intake suction strainer into the pail of warm water.

4. Pump the handle. Discard the water coming from the discharge hose (on the end of the cleaning housing) for about 30 seconds, then place the discharge hose into the cleaning solution container.

Continue running the unit while recirculating, for about 15 minutes.

5. Stop pumping and allow the membrane to soak for at least an hour. For severe fouling, an extended soak period of 10 to 15 hours may be desirable.
6. After soaking, pump the handle again. Dump the first few pulses of solution that come immediately from the discharge hose.

When the stream becomes cleaner, place the hose back into the pail of cleaning solution and recirculate for another 30 to 60 minutes.

7. After cleaning, flush by pumping warm fresh water through the system (insert the intake hose into a pail of fresh water, and run the discharge water from the cleaning housing to a drain). If fresh water is not available, you may use seawater if it is above 68° F (20° C).

8. Remove the cleaning housing and reinstall the normal membrane housing.

9. If the unit won't be used for at least 7 days after cleaning, follow the inhibiting instructions under "Storage" in the Owner's Manual.