



DESCALE PROCEDURE FOR  
TWO & THREE PROBE GENERATOR BASE STEAMERS

STEP BY STEP PROCEDURE

**IMPORTANT WARNING: BEFORE REMOVING THE HAND HOLE PLATE TO DESCALE ANY STEAM GENERATOR, MAKE SURE THERE IS NO WATER OR PRESSURE BUILT UP IN THE GENERATOR. CHECK THE OUTER SURFACE OF THE GENERATOR TO MAKE SURE IT IS COLD. TURN THE YELLOW HANDLE ON THE MANUAL FILL VALVE 90 DEGREES TO THE BODY TO PREVENT ANY WATER FROM ENTERING THE UNIT. THIS LIQUID DESCALER IS DESIGNED TO BE USED WITH NO HEAT APPLIED TO THE GENERATOR.**

STEP #1

Before opening the hand hole plate in the generator make sure the red power switch is in the off position. Open the electric circuit box in front of the generator and look for two black square solid state timers mounted on the side. If there are two solid state timers in the box, this unit has a TDS blowdown. The timer mounted on top is a one-second timer. Remove the white wire from the terminal marked number 3 on the TDS timer to prevent the purge from coming on.

To open the hand hole plate, loosen and remove the nut and bar across the generator opening. Place the end of a two x four on the hand hole plate. Rap the end of the wood with a hammer in various places until the plate and gasket fall inside the generator.

Remove any scale build-up that can be taken out by hand or with a small vacuum cleaner. **IF THE GENERATOR HAS PREVIOUSLY BEEN REPLACED WITH A NICKEL PLATED ONE, DO NOT SCRAPE OR SCRATCH THE SURFACE.** Assess the scale build-up above the water level on the tubes and the top to determine the number of descalings that will be needed.

Use 2 gallons of liquid cleaner regardless of the size of the boiler. If there is a heavy build-up of scale (1/4" or more) on the upper tubes (above the water level) and across the top of the generator, it will have to be descaled twice.

After removing the scale and determining the number of descalings needed, replace the hand hole plate with the old gasket still on the plate.

STEP #2

Remove the safety relief valve from the front of the generator. This will be the port of entry for the liquid

descaling agent. **REMEMBER TO MOVE THE YELLOW HANDLE ON THE WATER FILL VALVE TO ALIGN WITH THE VALVE BODY.** Before applying the descaler, turn on the power switch to close the drain valve. This will also energize the fill valve.

### STEP #3

Using a funnel and tubing, pour the liquid descaler into the generator through the port the safety relief valve was removed from.

### STEP #4

After the descaling agent has been introduced into the generator, replace the safety relief valve.

1. Place the upper compartment timer switch in the manual position. As the generator is filling with water, this will allow any air in the top to escape.
2. To completely fill the generator with water, bypass the water level probe:
  - a. Remove the black wire at the terminal marked HI on the water level control board that connects to the water level probe.
  - b. When the water begins to enter the upper cooking compartment, **CAREFULLY** replace the black wire on the water level control. This will turn the water off.

### STEP #5

**DO NOT PRESS THE AMBER STEAM SWITCH. THIS CHEMICAL WORKS BEST WHEN COLD.**

### STEP #6

Wait 1-2 hours to allow for descaling of the generator. Drain the generator by turning off the red POWER switch. The drain and fresh water solenoid valves will open for three minutes allowing the generator to flush out. After draining, fill the generator with fresh water and repeat the flush process by turning off the power switch.

### STEP #7

After the generator has been rinsed out, remove the hand hole plate and gasket as explained in STEP #1. Observe the edges and surfaces of the hand hole and the plate for excessive wear-and corrosion. Replace the used hand hole plate gasket with a new one and install new anodes.

For the anodes to work properly, the hanger must be firmly connected to the support rod. Make sure no scale or debris is between the support and the hanger. It must be a metal to metal connection.

Do not use a gasket sealing material on the hand hole plate gasket. When tightening the nut on the bar, make sure that at least 1/16" of gasket material is showing all of the way around the inside of the hand hole plate.

Reinstall the wire removed from the purge timer in the electric box.

### STEP #8

Bring the steamer up to pressure by pressing the red power switch to fill the generator and then the amber switch when the light comes on. After twenty (20) minutes the generator should have steam in it. Check for steam leaks around the hand hole. If any leaks are found repeat the process for replacing the gasket.