

ASSEMBLY (Continued)

- d. Push the tube firmly into the tube opening and using a wrench tighten the compression nut.
- e. Fig 3-7 shows boiling tank drain extension tube installed.

Prior to using, it might be well to place water in the boiling tank and open drain valve to make sure that there are no leaks and that the connection is tight enough.

- NOTE: 1. If unit is to be used as a MANUAL FILL, stop here and go to page entitled "Operation of the Unit."
2. If the unit is to be used as a DIRECT WATERLINE HOOKUP, proceed with the following directions for assembling.

Open the waterline kit bag which contains the plastic tubing and Saddle Clamp Kit.

- NOTE: 1 Brass Compression Ring is included with the Saddle Clamp Kit; it will not be used.

1. Take the flexible tubing and run to your existing water supply pipe.
2. At the backside, bottom of the unit, remove white Compression Nut (Fig 5-31).
3. Remove Compression Sleeve and "Gray Plug" from Compression Nut by inserting plastic tube (Fig 6-32) through small end of Compression Nut (Fig 6 & Fig 7).
4. Discard "Grey Plug." (Fig 8-34)
5. Push Plastic Sleeve (Fig 8-33) back into Compression Nut, large end first.
6. Push Tube back through small end of Compression Nut. (Fig 9)
7. Push tube into bottom of fitting from which Nut was originally removed.
8. Push tube up into opening and tighten Compression Nut snugly.

IMPORTANT: If a "SADDLE TAPPING VALVE" is included with your kit, follow the directions on the package, then go to step Number 12. If the SADDLE TAPPING VALVE is not included, proceed with Steps 9 through 11.

9. Select existing water supply pipe which you wish to use and turn the water off in this line. Then, drill a 1/4" diameter hole into the waterline, preferably on top or on the side of a horizontal line.

CAUTION: Care should be taken not to get water into the power drill or electrical lines when drilling this hole.

10. The 90° valve (Fig 10-36) must be screwed into the saddle and the rubber washer (Fig 10-37) placed on the underside which will fit next to the water pipe. (See Fig 10)
11. Assemble saddle clamp onto the water line. (See Fig 10)
12. Remove the Compression Nut (Fig 10-33) from the 90° valve which is part of the saddle clamp. (When flexible tubing is used, the metal compression rings are not needed.)

ASSEMBLY (Continued)

13. Perform the following: (Fig 10)
 - a. Slide the Compression Nut over the flexible tubing.
 - b. Slide the nylon compression ring (Fig 10-34) over the flexible tubing, large end first.
 - c. Push the metal insert (Fig 10) into the end of the flexible tubing. Thread compression nut onto valve and while pushing tubing into fitting, tighten nut snugly.
14. Turn the existing water supply on and open the saddle clamp assembly valve completely.
15. Check for leaks at the following locations:
 - a. Where saddle clamp is attached to existing waterline
 - b. Where the waterline connection is made at the rear of the distiller
 - c. Should leaks occur, additional tightening may be necessary.
16. UNPLUG THE UNIT.
17. Fill the boiling tank manually until water is just above the heating element. Leave the boiling tank lid off.
18. Plug unit in. Turn the timer (Fig 3-17) left, counter-clockwise to the "1 Gallon" position. The boiling tank will stop filling when the water level is approximately 1 1/2" above heating element.
19. Holding a container under the drain valve, open the drain SLOWLY, and as the water level lowers to approximately 1" over the heating element -- the unit should again allow water to refill the boiling tank.

<p><u>CAUTION:</u> DO NOT OPERATE UNIT IF THE WATER GOES BELOW THE HEATING ELEMENT BEFORE THE UNIT ALLOWS WATER TO COME INTO THE BOILING TANK AGAIN.</p>
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OPERATION OF UNIT

This unit has been run several times at the factory in order to test its operation, parts, and assembly. However, the user is encouraged to run the unit through a steam sterilization cycle and two distillation cycles prior to distilling water for usage. In addition, we strongly recommend that the container used to catch the distilled water be made of either stainless steel or glass and that this container be cleaned with hot, soapy water and rinsed thoroughly before being used to catch distilled water.

STEAM STERILIZATION - MANUAL FILL AND DIRECT WATERLINE HOOKUP UNITS

1. Place container to catch water on bottle hook (Fig 3). Although mostly steam will come out of the extension tube, some condensation may possibly occur.
2. On Manual fill units, remove lid and fill with water until the water touches the water level gauge. (The water level gauge is located just to the rear, inside of tank opening Fig 1-9.) For Direct Waterline Hookup units, manually fill unit so that water covers heating element.
3. Replace lid and make sure it fits in proper groove so that steam does not escape. Tighten lid knob. (Fig 3-13)
4. Place the fan switch (Fig 3-16) in the "OFF" position. This will allow steam to pass through the condensing coil and sterilize the unit.
5. Plug the cord into an electrical outlet (120 Volt AC, Single Phase).
6. Turn the timer knob (Fig 3-17) left, counterclockwise to the ".1 Gallon position." Allow the unit to run for about 10 minutes after the water comes to a full boil.
7. Drain water from boiling tank.
8. Should unit fail to run, refer to the "TROUBLE SHOOTING" section at back of instructions.

<p>CAUTION: DO NOT plug unit into electrical outlet unless the water in the tank is at the proper depth; to do so would shorten the life of the heating element unnecessarily.</p>

DISTILLATION - MANUAL FILL ONLY

1. Place one gallon glass jug to catch water on the bottle hook (Fig 3).
2. Remove lid and fill with water until the water just touches the water level gauge.
3. Replace the lid and tighten the knob. (Fig 3-13).
4. Place the fan switch in the "ON" position. (Fig 3-16)
5. Plug cord into electrical outlet (120 Volt AC, Single Phase).
6. Turn timer knob left, counterclockwise, to the "ON" position (Fig 3-17).
7. The boiling tank must be refilled before each distillation cycle.
8. Should unit fail to run, refer to the "Trouble Shooting" section at the back of the instructions.

CAUTION: WHEN USING UNIT AS A MANUAL FILL, NEVER SET THE TIMER BEYOND THE "ONE GALLON" MARK.

NOTE: FILLING WATER ABOVE BOTTOM OF LEVEL GAUGE MAY ALLOW UNDISTILLED WATER TO FLOW INTO THE CONDENSING COIL AND OUT INTO USER'S CONTAINER. DO NOT OVERFILL!

THIS UNIT SHOULD BE OPERATED IN A SPOT AWAY FROM OTHER HEAT SOURCES. THE LOWER THE TEMPERATURE OF THE ROOM THE BETTER FOR DISTILLATION.

DISTILLATION - DIRECT WATERLINE HOOKUP ONLY

1. Make sure that water is turned on at saddle clamp connection. (Fig 6-10)
2. Before starting the unit the first time, and after each cleaning, UNPLUG THE UNIT and remove the boiling tank lid. Add water manually until the water covers the heating element. This is to protect the heating element as the unit fills.
3. Plug unit in. Turn the timer (Fig 3-17) left, counterclockwise to the "1 Gallon" position. The boiling tank will stop filling when the water level is approximately 1 1/2" above heating element.
4. Holding a container under the drain valve (Fig 3-8), open the drain SLOWLY, and as the water level lowers to approximately 1" over the heating element-- the unit should again allow water to refill the boiling tank.
CAUTION: DO NOT OPERATE UNIT IF THE WATER GOES BELOW THE HEATING ELEMENT BEFORE THE UNIT ALLOWS WATER TO COME INTO THE BOILING TANK AGAIN.
5. UNPLUG THE UNIT.
6. Replace boiling tank lid and tighten. (Fig 3-13)
7. Select the glass or stainless steel container which you wish to catch the distilled water in. (DO NOT USE PLASTIC CONTAINERS.) If "bottle hook" is used, a one gallon glass jug must be used.
8. Place the fan switch in the "ON" position. (Fig 3-16)
9. Plug the cord into electrical outlet (120 Volt AC).
10. Turn the timer knob left, counterclockwise, to the number of gallons you desire to produce. (Fig 3-17)
11. The boiling tank will automatically refill itself as water is used.
12. Should unit fail to run, refer to the "Trouble Shooting" section at the back of the instructions.

NOTE: FILLING WATER ABOVE BOTTOM OF LEVEL GAUGE MAY ALLOW UNDISTILLED WATER TO FLOW INTO THE CONDENSING COIL AND OUT INTO USER'S CONTAINER. DO NOT OVERFILL!

THIS UNIT SHOULD BE OPERATED IN A SPOT AWAY FROM OTHER HEAT SOURCES. THE LOWER THE TEMPERATURE OF THE ROOM THE BETTER FOR DISTILLATION.

CLEANING INSTRUCTIONS

PROPER CLEANING IS IMPORTANT. Improper cleaning may shorten the life of the unit and particularly that of the heating element. We recommend draining the boiling tank of your unit after approximately every 3rd distillation cycle. This will prevent a concentration of chemicals, pollutants and other materials from building up in the bottom of the boiling tank.

Your unit should be cleaned whenever there is a noticable amount of mineral build up around the outside of the heating element. The frequency in which the unit is cleaned will vary from one area to another, depending upon the mineral content present in that area.

For cleaning we suggest that you use either a solution of white vinegar and water, our industrial grade cleaner called Lumen No. 2 (which may be purchased through your distributor), or a cleaner of your choice. DO NOT USE AN ABRASIVE CLEANER OR STEEL WOOL CLEANING PADS.

Use the following procedure for cleaning Boiling Tank:

1. Make sure the unit is turned "OFF" and disconnected from electrical source.
2. Drain the boiling tank.
3. Fill boiling tank half full of water.
4. Add cleaning solution - white vinegar, Lumen No. 2, or cleaner of your choice to the water in boiling tank.
 - a. If white vinegar is used, add $\frac{1}{2}$ to 1 quart of vinegar to water.
 - b. If Lumen No. 2 is used, add 3 to 5 tablespoonsful to water.
 - c. If cleaner of your choice is used, use manufacturer's recommended dosage.

(The amount of cleaner you use may need to be increased depending upon the kind and type of mineral deposits in your boiling tank.)

5. Mix well.
6. Fill with water to the water level gauge.
7. Let solution stand overnight or until the mineral content softens.
UNDER NO CIRCUMSTANCES SHOULD THE CLEANING SOLUTIONS BE HEATED AND RUN THROUGH A STEAM STERILIZATION OR DISTILLATION CYCLE.
8. The next morning drain and rinse the boiling tank thoroughly.
9. Be sure to refill the unit with water before beginning to distill water again.

TROUBLE SHOOTING

A. Should your unit not run, do the following:

1. Reset may have "kicked" off. (Fig 3-15)

- a. If unit is hot, allow to cool down. Cooling may be hastened by draining the boiling tank and refilling with cold water.
- b. Fill with water to water level gauge--manual fill only. On direct waterline hookup, fill so that water covers heating element.
- c. When the unit is cool, take a pencil, use the eraser end and push firmly against the reset button. Listen for a "click." If you do not hear a "click," it may be necessary to let the unit cool down a little longer.

2. Plug the unit in.

3. Turn fan switch to "ON" position. (Fig 3-16)

4. Turn timer left, counterclockwise to the number of gallons you wish to produce. (Fig 3-17)

5. Should the above fail, check to make sure you have power to the electrical wall outlet. A good check for this is to take an appliance or lamp you know works and plug it into the wall outlet.

B. Should it ever be necessary for you to install parts, always disconnect the unit from the electrical wall outlet.

C. Do not use an extension cord.

D. This machine, like all electrical appliances, should be properly grounded.

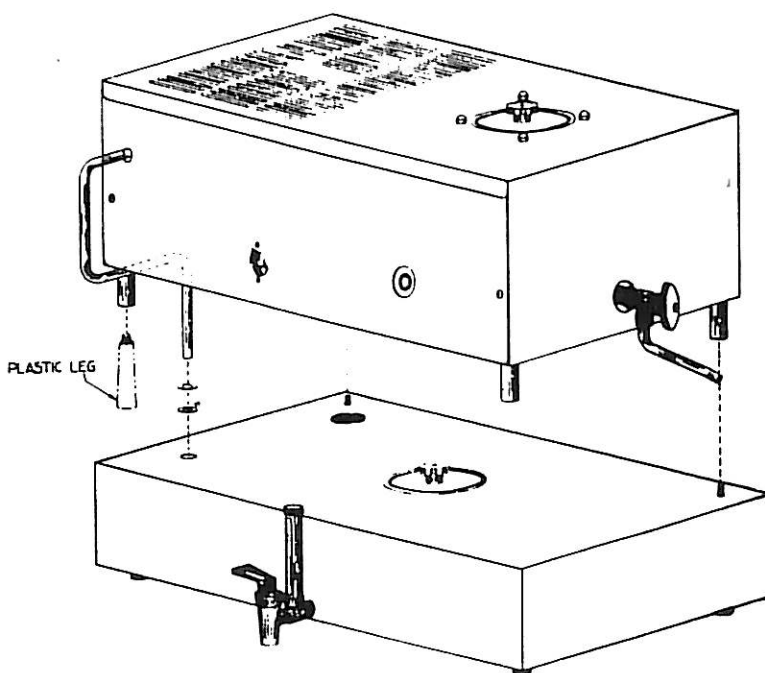
E. Should a leak appear where the condensing coil and condensing coil extension tube are joined together, this is not a defect in the machine; but rather an indication of a low spot somewhere in the coil, or at the condensing coil extension tube. To correct this problem, place the extension tube on the condensing coil as for normal use and push down on the end of the extension tube which will in turn raise the back of the coil. There must be gravity or downward flow from where the condensing coil hooks to the boiling tank to where the distilled water is collected.

TO ASSEMBLE UNIT TO TANK

1. Disconnect unit from power.
2. Remove plastic legs from your machine by unscrewing them from the metal risers. Do not remove risers.

Note: Refer to parts drawing on other side of sheet.

3. Install extension tube over condensing coil. Stainless steel washer and gasket should be over extension tube with gasket next to tank and washer on top covering opening where extension tube goes into tank cover.
4. Place extension tube into the hole of the tank and the back risers over retaining studs.



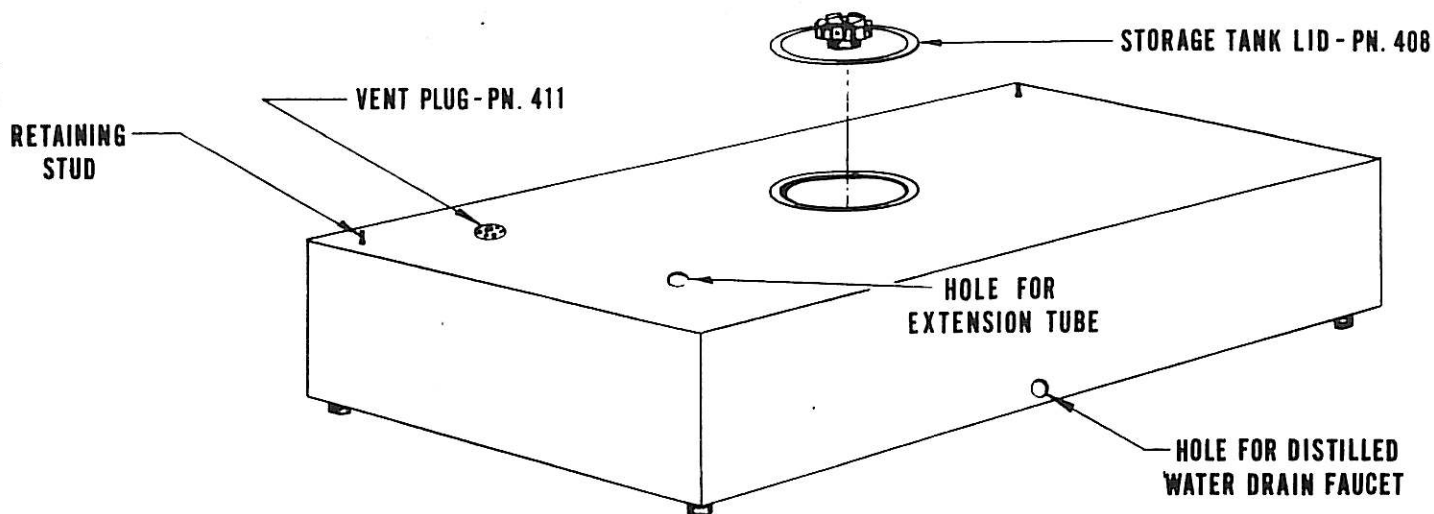
OPERATION OF UNIT

The user is encouraged to run the unit through a steam sterilization cycle and a distillation cycle prior to distilling water for usage.

Steam Sterilization

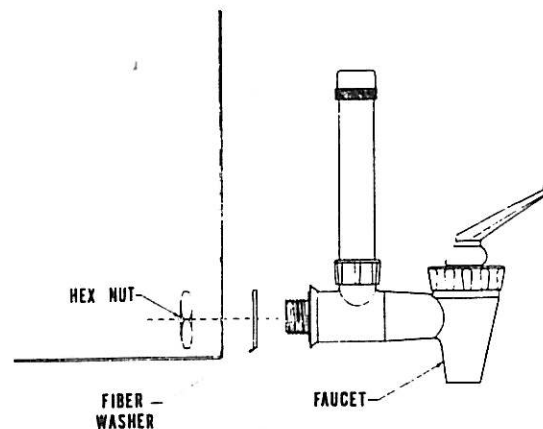
1. Remove boiling tank lid, fill with water until the water touches the water level gauge.
2. Replace lid.
3. Place the fan switch in the off position.
4. Plug the cord into a electrical outlet.
5. Open tank faucet and place container under opening. Although mostly steam is produced, some condensation may occur.
6. Turn the timer knob to the on position. Run unit for about 10 minutes after water comes to a full boil.
7. After the initial steam sterilization, turn on the fan switch and close the faucet.

TANK UNASSEMBLED



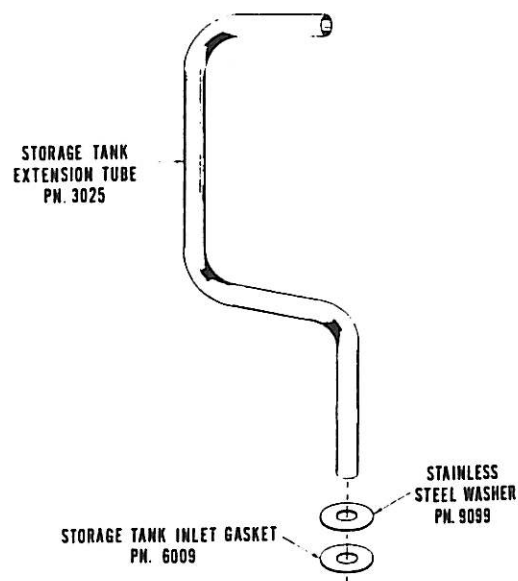
INSTRUCTIONS TO ASSEMBLE WATER DRAIN FAUCET

1. The MS4 faucet part number 9571 is packed inside of a plastic bag attached to the inside of the tank top for shipping purposes.
2. Remove tank lid and remove parts from inside of tank.
3. Install the drain faucet using the following procedure;
 - a. Remove the nut from the threaded section of the faucet.
 - b. Insert the threaded section through the hole in the bottom front of the tank.
 - c. Reaching through the access hole, while holding the faucet in position with your other hand, install the nut.
 - d. To tighten the nut, offset the faucet a few degrees counterclockwise; finger tighten the nut on the inside of the tank; then, while holding the nut, turn the faucet clockwise to tighten.



CAUTION: Grasp the body of the faucet to tighten; not the slight gage.

4. Check for leaks around faucet by filling tank with water. Should leaks occur, additional tightening may be necessary.
5. Wash tank and rinse thoroughly.



SS-5D MIDI STILL

PARTS LIST

PART #	DESCRIPTION	PRICE
628	Bib washer	
509	Bottle Hook	
636	Cap nuts(4pak)	
607	Condensing coil w/fittings	
517	Condensing coil extension tube	
3025A	Condensing coil ext.tube/storage tank	
6010	Cover gasket, boiling tank	
9508	Drain valve, side	
95	Drain valve, bottom	
518	Drain valve extension tube	
639	Fan blade w/fastener	
653	Fan motor w/blade & connectors	
642	Fan switch, plastic	
71	Fan switch,toggle style	
644	Float kit	
633	Heating elementw/gasket & clamp	
642	Heating element switch	
8010	Legs, black plastic	
9081A	Leg riser, metal	
409	Lid complete	
610	Lid knob w/gasket,washer & o ring	
402	Lid crossbar w/stud	
646	Microswitch	
601	Reset	
638	Screws, sheetmetal(12pak)	
637	Speed clips (12pak)	
635	Solenoid complete w/ nuts	
19005	Strainer,micron w/comp. nuts	
640	Timer w/connectors	
651	Water inlet tube	

