

Model **PBD**
26-E1

Owner's Guide

This Manual Applies To:	
Part #	Series #
100001	0003
100003	0003

- **Assembly**
- **Operation**
- **Maintenance**
- **Troubleshooting**
- **Accessories**
- **Parts List**



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Polar Bear Water Distillers
Mfg. Co. Ltd.

99009-

Polar Bear Distiller Warranty

POLAR BEAR WATER DISTILLERS MFG. CO. LTD. warrants to the original purchaser, their products against defects in materials for a period of one (1) full year on all electrical components, other parts and labor, and ten (10) years on all stainless steel parts.

If the Distiller is found to have defective stainless steel components within the first five years or electrically defective parts within the first year, the parts will be repaired or replaced at no cost to the customer. If the Distiller is found to have been consumer damaged or abused, the warranty does not obligate POLAR BEAR WATER DISTILLERS MFG. CO. LTD. to bear any transportation charges in connection with the repair or replacement of defective parts.

After five years from the date of purchase, stainless steel parts are warranted on a fully pro-rated replacement cost basis not to exceed 10 years from date of purchase.

This warranty is invalid if the damage or defect is caused by accident, act of God, customer abuse, unauthorized alteration or repair, vandalism or misuse.

This warranty is made in lieu of any other express warranty and except for the foregoing warranty which is exclusive, there is no other express warranty being made.

The purchaser is responsible for all shipping charges to and from the service center. The manufacturer, dealer or service center is not responsible for damages incurred during shipping.

POLAR BEAR WATER DISTILLERS MFG. CO. LTD. believes the information contained in this manual to be accurate. Parts, specifications, and instructions are subject to change without notice.

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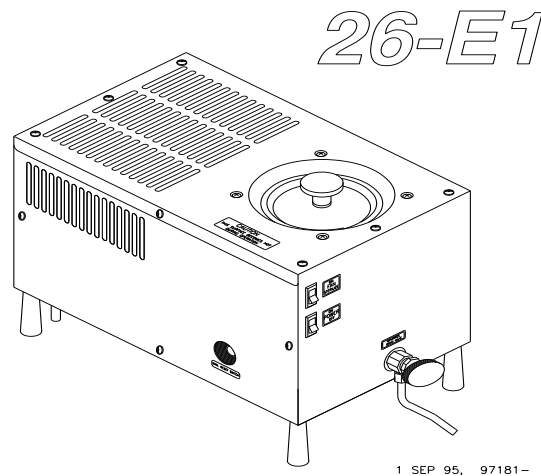
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Distiller Information

Model:	PBD 26-E1
Series:	
Serial Number:	
Purchase Date:	
Purchased From:	
Telephone:	
Installation Date:	
Installed By:	

Shipping Weight12 kg (26 lb)
 Machine Weight.....8.6 kg (19 lb)
 Machine Height 330 mm (13")
 With Optional Holding Tank
 470 mm (18.5")
 Machine Width..... 470 mm (18.5")
 Machine Depth..... 255 mm (10")
 Electrical Ratings:
 110 Volts, 9 Amps, 1100 Watts
 Distilling Capacity:..3.8 Litres/3hrs.
 or1 US Gal./3hrs.



(Based on 24 hours continuous operation under ideal conditions - actual production may vary)

Optional Holding Tank: 10.5 Litres
 or2.75 US Gal.

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Introduction

Congratulations! You are now the owner of one of the many fine products manufactured by **Polar Bear Water Distillers Mfg. Co. Ltd.**, a world leader in the water purification industry. We take pride in our solid reputation for product quality and industry-proven performance.

This product has been carefully inspected to comply with rigid factory quality control standards, as well as, where applicable, those of the Canadian Standards Association(CSA), Underwriters Laboratories (UL)*, and National Sanitation Foundation International (NSF)**. We are sure that, with reasonable care, it will provide you with years of reliable performance.

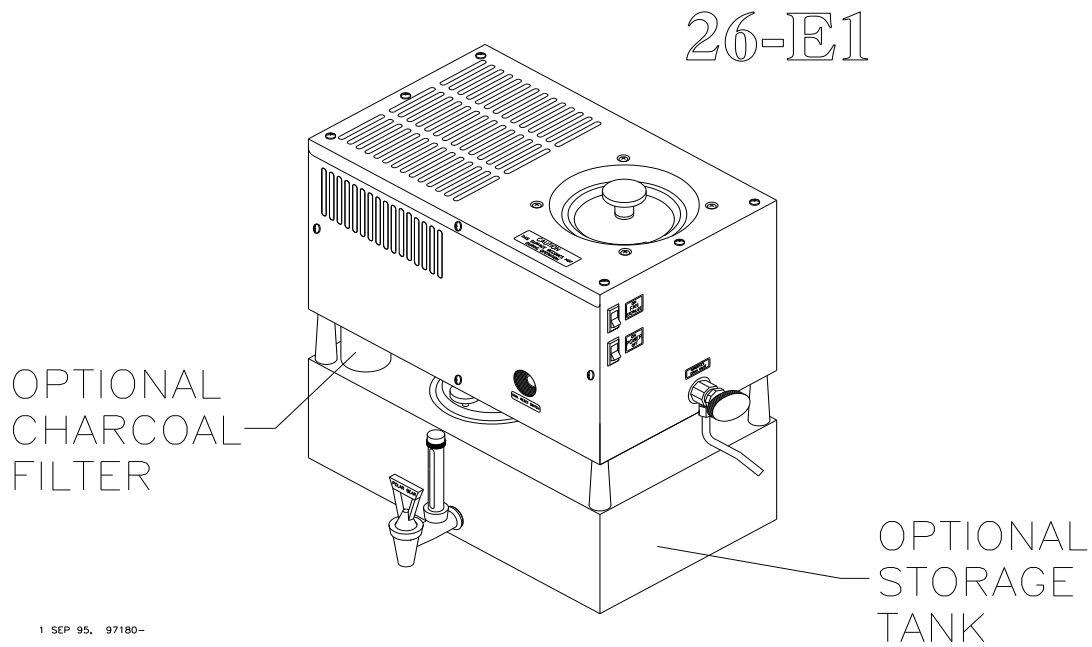
Polar Bear Water Distillers Mfg. Co. Ltd. compliments you on your choice - and know you will enjoy the purest and healthiest water available, because...

"We care about the water you drink!"

* Note: The physiological effects of the operation of this appliance, beneficial or otherwise have not been investigated by Underwriters Laboratories Inc.

** Note: The National Sanitation Foundation International has only tested for reduction of certain chemicals in accordance with Standard 62, Drinking Water Distillation Systems (TDS, Flouride & Mercury).

The Model 26-E1 & Accessories



For more information on available accessories, see the section on **Accessories** in this guide.

Distiller Features

- One of the most economical distillers available, designed with the smaller family in mind. Compact light design, countertop, and easily storable when not in use. Can be operated manually in any area of your home.
- Easily portable making it perfect for any holiday trips away from home and where suitable drinking water is unavailable.
- Easy to clean and maintain.
V-shaped boiling tank bottom for fast, efficient drainage of impurities. Just open the tap and drain.
- The boiling tank and condenser are manufactured from long-lasting high grade stainless steel.
- Double-baffle system for the purest distilled drinking water available.
- Volatile gas release vent – expels contaminants with a lower boiling point than water.
- Automatic start/stop float system.
- Built-in safety system that automatically shuts off the distiller should it overheat.
- Flush mount, boiler lid for easier clean-up and a more compact design.
- Coconut Charcoal Post Filter.
- Ten year limited warranty on all stainless steel parts and one year on all electrical parts and labor. See: **Polar Bear Distiller Warranty**.

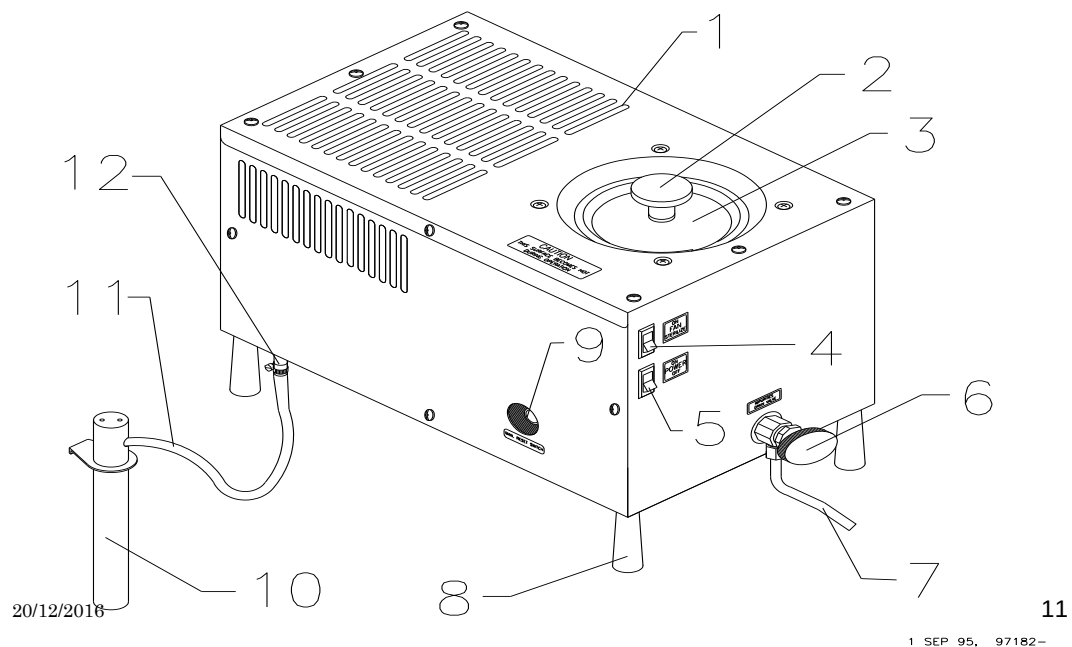
As You Begin...

1. It is important to fill out and return the warranty card in this manual. The information is necessary should parts or repairs be needed during the warranty period.
2. Each distiller is operated at the factory and tested for leaks and proper operation. Therefore, the distiller may have a water ring inside the boiling tank.
3. Proper cleaning is important! Keep the distiller and especially the inside of the boiling tank clean at all times. This is necessary to produce the purest water possible. See section on Maintenance for more information.
4. The boiling tank is TIG (Tungsten Inert Gas) welded. As water is distilled, minerals may cling to the weld, appearing as rust. This does NOT affect the quality of the water! Discoloration in corners of the boiling tank is caused by the heat during welding.
5. Distilled water may have a different taste. This is not a "taste", but a lack of taste. You will become accustomed to this the same way you did to the water in your area.

Know Your Distiller

Use this picture as a reference throughout this manual.

1. Volatile Gas Release Vent (inside)
2. Boiling Tank Lid Knob
3. Boiling Tank Lid
4. Fan Switch
5. Main Power Switch
6. Impurities Drain Valve
7. Impurities Drain Extension Tube
8. Tapered Leg
9. Reset Button
10. Coconut Charcoal Post Filter
11. Distilled Water Drip Tube
12. Cooling Coil Drain Exit



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Distilled Water – Benefits, Uses, & Questions

You have made an excellent choice in using distilled water. To help answer some questions of your own, or those of others, here are some of the benefits, uses, and answers to common questions about distilled water.

There is also a section on how distilled water is made.

Benefits

- Provides the *purest drinking water* - reduction of certain chemicals, impurities, pollutants, and bad taste.
- Distillation does not rely on physical barriers which can break down or fail. The prolonged boiling process in water distillers is critical for killing and eliminating bacteria and viruses. No other process is as effective or as reliable.
- Eliminates scale build-up on pots, tea kettles, coffee pots, humidifiers, vaporizers, steam irons, etc.
- Produces less waste water than reverse osmosis.
- Distillers are not affected by low or varying water pressures, temperatures, or pH. Consistent, high quality water will be produced for the life of the Distiller.
- **Polar Bear** water distillers are extremely durable, trouble-free appliances that require a minimum of service and maintenance for efficient and complete operation.

Uses

- Drinking – Distilled water is an excellent drink all on its own.
- Ice cubes - not only are they more shiny due to the absence of impurities in the water, but they are also harder.
- Tea and coffee. When you use distilled water to make coffee or tea, try approximately 1/3 less grounds or tea leaves. There will be a somewhat light color, but just as rich flavor, as well as a less-bitter taste.
- Juices and drinks. Try adding about 25% more water. Because the distilled water is free from chlorine, there will be no interaction between the chlorine and the Vitamin C.
- Cooking and baking - for standard results from favorite recipes. Flavors come through naturally, baked goods have a better texture. *Pasta products* will absorb more distilled water than tap water, producing better texture and flavor, as well as less tendency to cling together. Canning fruits and vegetables - not only do they retain a more natural color, but the flavor is better.
- Infant care and formulas. (Be sure to follow your Doctor's advice on sterilizing water for infants)
- Wine and beer making or mixing drinks.
- Drinking water for pets and for topping off aquariums.
- Automobile care - for batteries, as well as windshield washers - leaves no spotting.
- Photographic equipment and laboratories.
- Watering plants.
- Water based paints.
- All types of cleaning – less streaking on mirrors, windows, etc.

Answers to Some Frequent Questions

Question: Is tap water really safe for drinking?

Answer: Many tap water supplies are, for the most part, safe in terms of being free of disease-causing bacteria. There are tests of water supplies throughout the world that now show varying degrees of contamination by modern chemical pollutants. In many cases, the chlorine used to rid water of bacteria is now interacting with these chemicals, creating additional pollutants. Water supplies may also be contaminated by asbestos, copper, cadmium and lead from water pipes. Drinking water from untested wells can be very unreliable, particularly when located on ½ - acre plots where it is almost impossible to keep seepage from the cesspool or septic tank out of the well.

Question: Why is distilled water the safest water to drink?

Answer: Distillation is more effective than any other purification system in removing bacteria, chemicals, and minerals from the water. Independent test results show a greater than 99% efficiency removal of contaminants, such as chlorine, nitrate and sodium, when water is distilled using a Polar Bear water distiller*. Distilled water is virtually pure H₂O and the safest of all drinking water.

Question: Does distillation remove minerals from water that our bodies need?

Answer: Distillation does remove minerals from water, however these minerals are inorganic and most cannot be used by the body. The body assimilates the organic minerals which are abundant in the foods we eat.

* Results from: An Evaluation of Polar Bear Water Distillers For Removing Toxic Industrial and Agricultural Contaminants. 'Enviro-Test Laboratories', September 28, 1987, Ref. No. 762.REP.

Question: Are water softeners considered water purifiers?

Answer: No. Water softeners do not kill bacteria or take out any contaminants. Rather, they add salts to the water. No one on a sodium (salt) restricted or sodium-free diet should drink softened water.

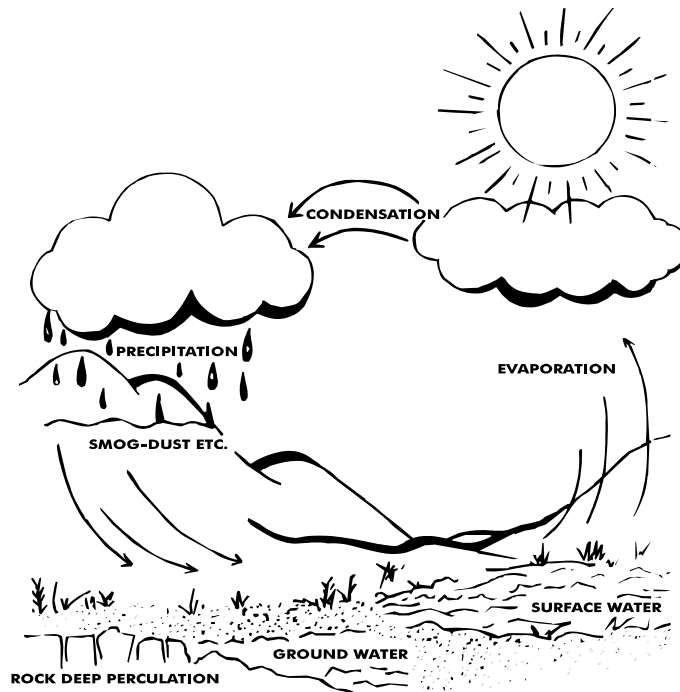
Question: Are there any other benefits of distilled water?

Answer: Food has more flavor. A glass of cold, distilled water tastes 'clean'. Everything remains pure, as there is nothing left in the water to interfere with or change the original natural flavor.

The Process of Distilling Water

The process of distillation duplicates Nature's hydrologic cycle:

1. In nature, the heat of the sun vaporizes the surface water and draws it into the atmosphere, leaving the impurities behind.
2. As the vapor cools, it condenses and falls back to Earth as rain or snow.
3. As it falls back towards Earth through smog and dust, the water can pick up many forms of contamination.
4. Even more contamination is absorbed through ground contamination.



Distillers are designed to duplicate Nature's hydrological cycle, but they take it a step further by producing high purity water in a chamber, essentially free from pollution. Distillers boil the feed water, creating steam. The steam rises, leaving almost all of the impurities behind in the Boiling Tank. The steam is collected and condensed as clean, distilled water and stored in an optional stainless steel Holding Tank or other storage container. The impurities that remain in the Boiling Tank are then expelled to a drain or sewer.

Distillation is the only water treatment process that does not rely on physical barriers to separate good, clean water from contaminants.

With proper maintenance, Polar Bear distillers will reject contaminants just as effectively ten years after installation as they do the day they are purchased.

Our distillers also include a charcoal filter, designed to handle the contaminants that boil at lower temperatures than the boiling point of water.

Assembly

The Distiller & parts have been shipped in one box . While unpacking, save all packing material until the Distiller is in full operation. Save the box should the Distiller require transportation.

Parts Included

- 1- Distillation Head
- 1- Parts Bag:
 - 1- Instruction Manual and Warranty Card
 - 1- Boiling tank impurities drain extension (stainless steel)
 - 1- Lid for boiling tank
 - 1- Sample jar of P.B.W.D. Cleaner & Descaler
 - 1- Sample jar of Activated Coconut Charcoal
 - 1- Length of Sterilization Drip Tube
 - 4- Tapered Legs

**** Note: Distiller installation must comply with all local and state regulations.***

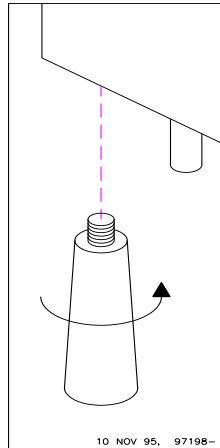
Location of Distiller Installation

Before installing your Distiller, decide where it will go, keeping in mind the following important factors:

1. The Distiller requires cool air to operate properly. Air flow must not be restricted by placing objects on top of Distiller, and it must be installed in an area that receives plenty of cool air.
2. Location of power. Distiller must be plugged directly into a wall outlet which should be on a dedicated circuit. (see Distiller Information for power requirements)
3. Access to drain impurities using a pail or other suitable container, OR close proximity to a water drain (sewer).

Unpacking

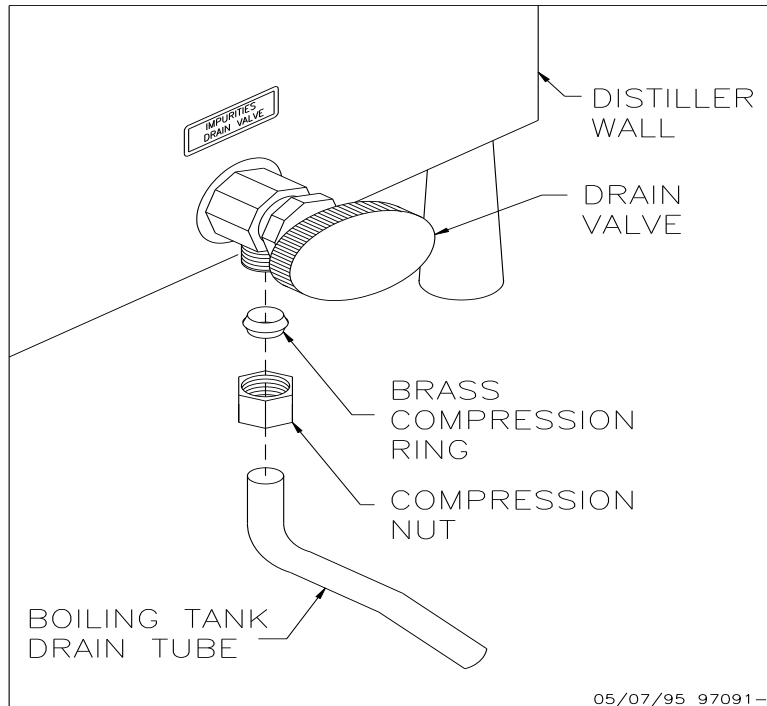
1. Remove all packing material from outside distiller.
2. Remove paper packing inside boiling tank to free up Boiler Tank Float – be careful not to bend float arm.
3. Strip off protective plastic from Boiling Tank Lid.
4. Screw the four black tapered legs into the bottom of the distiller.



Boiling Tank Drain Extension

The Drain Extension will allow you to manually drain the Boiler Tank into a waste container.

1. Remove the compression nut and brass compression ring from the boiling tank drain valve.

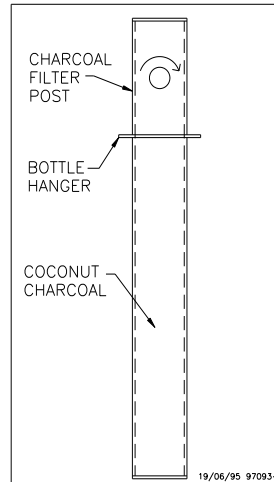


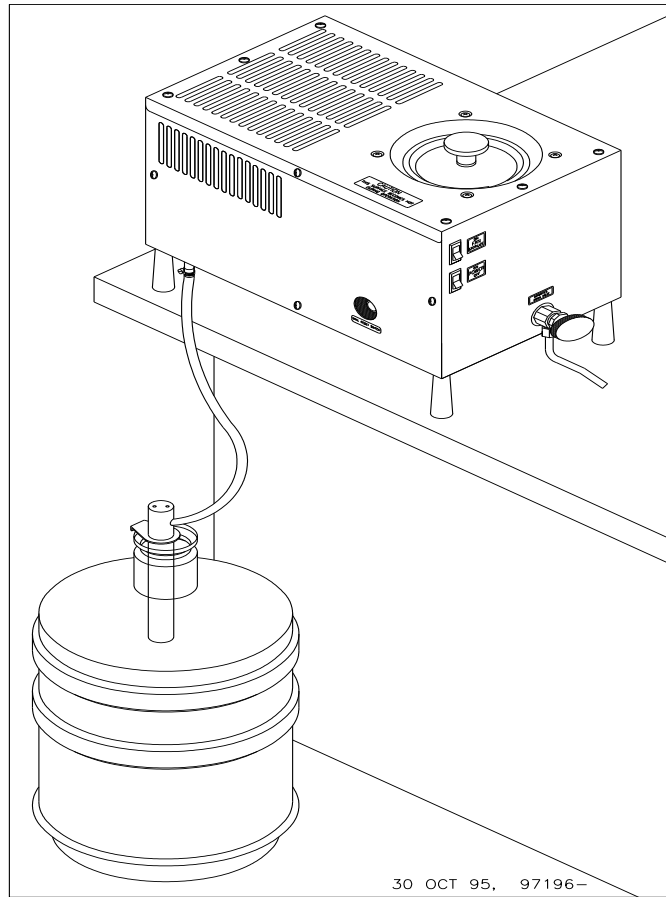
2. Slip the compression nut over the tube, small opening first, then slip on the brass compression ring (as shown).
3. Push the Drain Tube into the opening of the drain valve, turning Tube to point away from Distiller.
4. Thread compression nut onto the drain valve and tighten.

Charcoal Post Filter

The model 26-E1 is factory shipped with a Charcoal Post Filter with **no** charcoal inside.

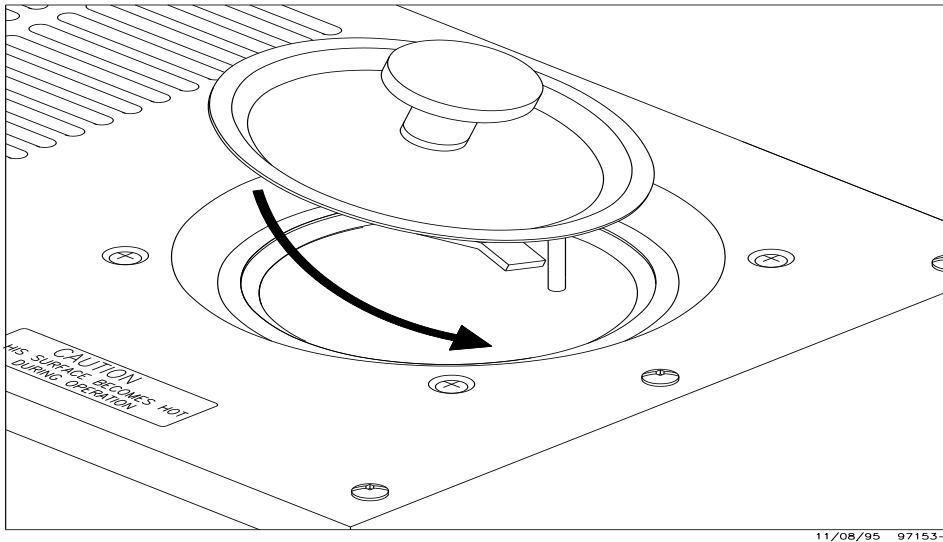
For the initial installation of the Distiller, leave the filter empty of charcoal. This will allow you to perform the Initial Sterilization procedure after assembly is complete.





Boiling Tank Lid

1. Remove any protective plastic coating(white or clear blue) from lid.
2. Loosen the Lid Knob (turn counter-clockwise). Tip the bar at the bottom.
3. Slip bar under the rim of Boiling Tank opening.
4. Center Lid Knob over the opening and tighten. This will need to be removed each time the distiller is cleaned or operated manually.

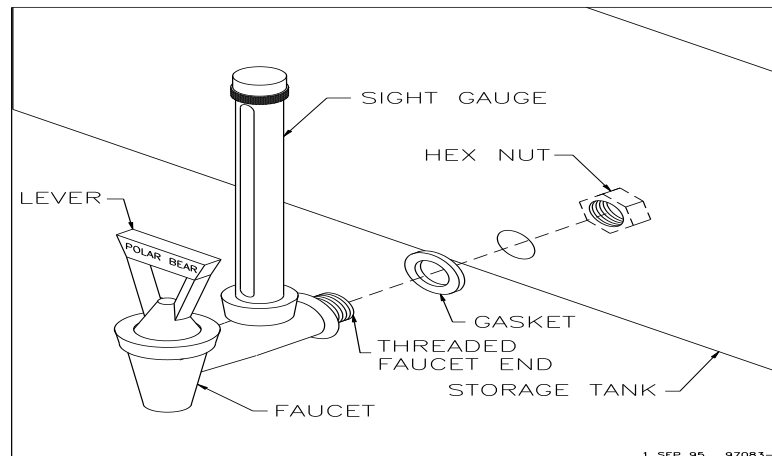


Optional Holding Tank

For convenience, an optional storage tank is available for use with the distiller model 26-E1. This 2 $\frac{3}{4}$ gallon storage tank is made from attractive high grade stainless steel. It is the perfect storage container for your distilled water. The drain faucet lets you easily fill other containers for use and the sight gauge lets you tell at a glance how much distilled water you have. The distiller also custom fits on top of the tank while still providing complete access to the storage tank lid. The optional 2 $\frac{3}{4}$ gallon storage tank comes pre-packaged and requires some assembly. Some easy steps to follow are:

1. Remove tank from box and remove all tape and plastic from around tank.
2. Remove white plastic coating from the lid.
3. Place gasket on threaded faucet end (as shown).

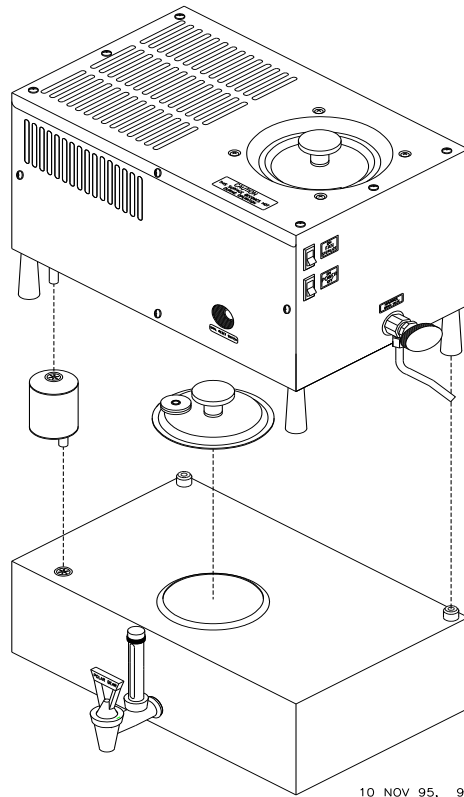
4. Insert threaded section through hole in bottom front of tank.
5. Reaching through top of the tank



(While holding faucet in position with other hand), install the nut on Threaded Faucet End.

6. To tighten the nut, turn faucet counter-clockwise 1/8 of a turn, **finger-tighten** the nut on the inside of the tank.

7. Holding the nut, turn the faucet clockwise until upright. *Do not push on sight gauge as it is fragile!*
8. Wash the storage tank using hot, soapy water and rinse thoroughly before use. This will remove any dust or particles that may be present from shipping and/or packaging materials.
9. Replace Holding Tank Lid.
10. Place distiller onto storage tank with the two back legs fitting over the two aluminum posts at each corner at the back of the tank.
11. Place empty Filter Canister onto Distiller by lifting up corner of distiller to separate it from the Holding Tank. Place filter exit tube into holding tank bushing and the condenser coil exit into the top of the filter as shown below.
12. Your distiller and storage tank should now be sterilized as explained in the next section.



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Final Assembly

1. Make sure the Fan and Power switches are turned OFF.
2. Your Distiller is now ready to produce distilled water. Please read section on Operation thoroughly before operating Distiller.

Operation

This Distiller is designed to operate manually. It can be run when moved for portable use when a safe water supply is not available.

Before operating Distiller for the first time, please read the safety precautions and Distiller Controls, and perform the following Before-Operation checks and Initial Sterilization procedure.

Safety Precautions

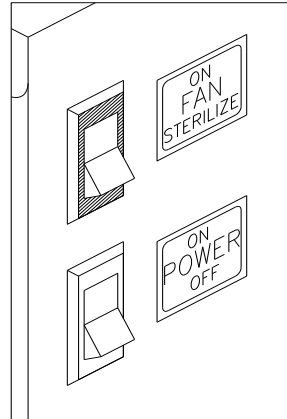
1. Always unplug Distiller from power source before servicing.
2. If the electrical cord becomes damaged or cut, have it changed immediately!
3. Operate indoors. Do not expose the Distiller to any natural elements (rain, sun, snow).
4. This Distiller is air-cooled. *Do not restrict air-flow or place inside a closet or cupboard to operate.*
5. Distiller must be plugged directly into a firm fitting and grounded wall receptacle. Extension cords must only be used during assembly and for temporary installations. (see section Distiller Information for power requirements)

Controls

There are two (2) switches located on the side of the distiller that allow you to control all functions of the distiller:

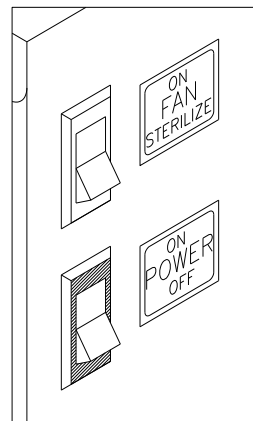
Fan – "ON / Sterilize"

- Normally turned ON.
- Supplies power to cooling fan.
- Turn to STERILIZE (OFF) only when performing a sterilization process.
- Fan will start running when distillation begins and shut off when the water level in the boiler tank is low.



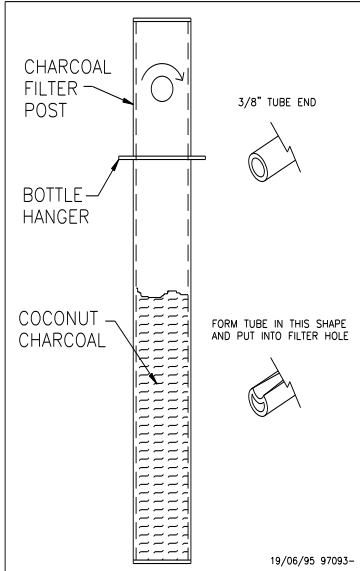
Power – "ON / OFF"

- Normally turned ON. Controls power to entire Distiller.
- Turn OFF to stop operation of Distiller.



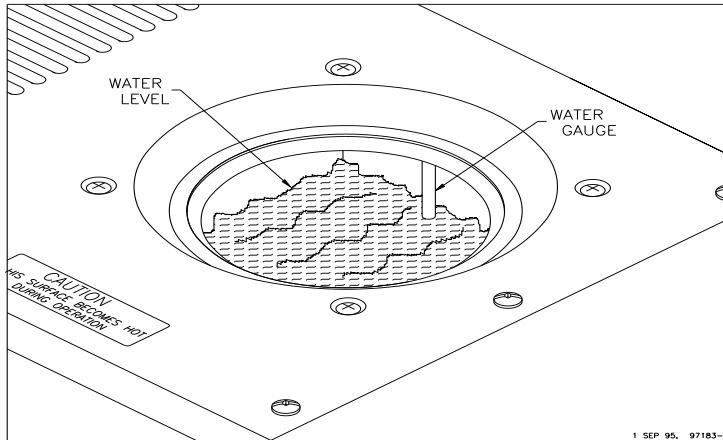
Initial Sterilization

If you purchased an optional holding tank, follow the instructions for sterilizing with an optional holding tank.

1. Fill the Boiling Tank 2/3 full with water.
 2. Ensure the Boiling Tank Lid is back on and snug.
 3. Place post filter with drip tube into a waste container
 4. Turn ON the Power switch, and set the Fan switch to the STERILIZE position.
 5. Allow the distiller to run until the Distiller shuts itself off .
WARNING: The Distiller and empty Charcoal Post Filter will get VERY hot (this is normal).
 6. Turn Power Switch OFF and allow machine to cool 1 hour.
 7. Remove drip tube from Charcoal Post Filter. Separate Filter Cap from Post Filter Body.
 8. Fill Filter 2/3 full of new coconut charcoal.
 9. Rinse charcoal with water (distilled, if available) until the water runs clear (one or two cupfuls).
 10. Press Filter Cap onto Post Filter Body.
- 
11. Place drip tube into filter post by folding the tube together and turning it into the filter. Filter can now be placed to drip into a storage container.
 12. The Distiller is now sterilized and ready to produce distilled water.

Manual Operation

1. Remove Boiling Tank lid. Fill boiler with water until it touches the bottom of the Water Gauge. **Caution: Filling water above the bottom of the water gauge as shown may allow un-distilled water to flow into the Condensing Coil and into the Storage Container.**



2. Place boiling tank lid onto Distiller and tighten lid knob. Do not over tighten - it only needs to be snug enough to prevent steam from leaking.
3. Turn fan switch to ON position.
4. The Distiller will now distill the water into the storage container or Holding Tank. Distillation will stop when the Boiler is about 1/3 full (water level is just above Heating Element
5. When the distiller has stopped, refill the Boiling Tank with water (Caution: Distiller remains HOT for several hours).
6. To help prevent a concentration of chemicals, pollutants and other material from building up in the Boiling Tank, drain the Boiler Tank using the Impurities Drain Valve and a pail after at least every 10 gallons of water distilled

Maintenance

With proper care, your Polar Bear Water Distiller should give you years of trouble free distilled water. Regular maintenance will help ensure that your Distiller will provide top quality distilled water.

Cleaning the Boiling Tank

The most important aspect of Distiller maintenance is keeping the Boiling Tank free from the build-up of contaminants and scale. These impurities removed from the water during distillation collect inside the Boiling Tank.

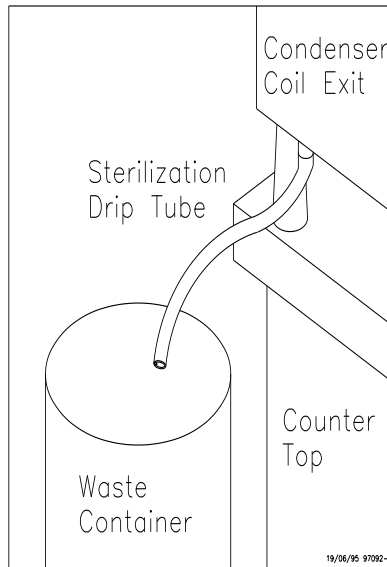
To remove these impurities:

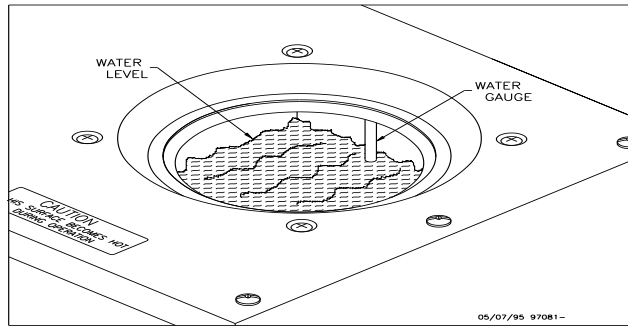
1. After every 10 gallons of water distilled, drain the boiling tank with the Impurities Drain Valve into the drain or a pail.
2. Every 50 gallons of water distilled, and when Distiller is cool, observe the inside of boiler (remove Boiling Tank Lid). Walls of boiler and especially the heating element should be relatively clear of scale (less than 1/8" build up). If build up is excessive, use the following procedure: **'Cleaning - Using P.B.W.D. Cleaner and Descaler'**.
 - When cleaning we recommend that you use our industrial cleaner, **P.B.W.D. Cleaner & Descaler**. A sample is included with every new Distiller.
 - *Do not use an abrasive cleaner or steel wool cleaning pads.* Plastic pads may be used.
 - The sample of the Descaler enclosed with the distiller should last for approximately six cleanings.

Cleaning the Boiling Tank - Using P.B.W.D. Cleaner and Descaler

This procedure requires the use of our Cleaner and Descaler – a corrosive and poisonous substance. Read safety precautions on package before proceeding.

1. Turn the Power Switch to the OFF position. Allow Distiller to cool.
2. Remove the Boiling Tank Lid.
3. Drain the Boiling Tank by opening Impurities Drain Valve. Rinse and drain.
4. Remove all loose scale build-up, if any, inside the Boiling Tank.
5. Close the Drain.
6. Remove Charcoal Post Filter and install Sterilization Drip Tube as shown.
7. Fill the Boiling Tank half-full of tap water (preferably hot from a kettle).
8. **SLOWLY** add 3 level tablespoons of P.B.W.D. Cleaner and Descaler.
9. Mix well to dissolve the cleaner.
10. Fill Boiling Tank with hot water to bottom of Water level gauge only. *Do not over-fill boiling tank!*





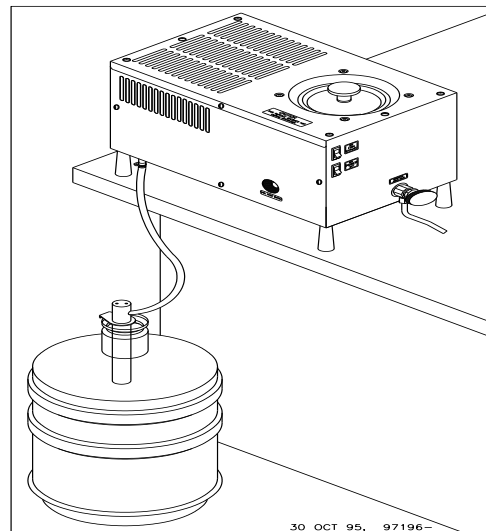
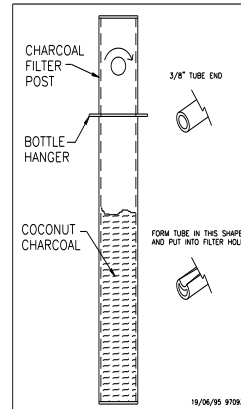
11. Let solution stand overnight, or until mineral content softens. Leave *boiling tank lid open during cleaning so that Descaler fumes do not enter the cooling (Condensing) coil.*

12. The next morning, or when mineral content is soft, drain the Boiling Tank. Repeat cleaning if necessary.
13. Rinse Boiler **THOROUGHLY** using warm tap water: Fill the Boiler with water to bottom of Water Level Gauge, stir gently, drain. Repeat several times.
14. Once tank is rinsed, fill with water to the water level pin.
15. Replace Boiling tank lid.
16. Ensure Sterilization Drip Tube is on Distiller as shown.
17. Turn on Power Switch, set the Fan switch to STERILIZE.
18. Allow the Distiller to run 30-40 minutes. Steam will escape into the waste container.
19. Replace Charcoal Post Filter, first replacing charcoal if necessary (see section: Charcoal Replacement).
20. The Distiller is now cleaned, and ready to produce distilled water.

Charcoal Replacement - Post Filter

Replace charcoal in filter every two months or every 100 gallons of distilled water.

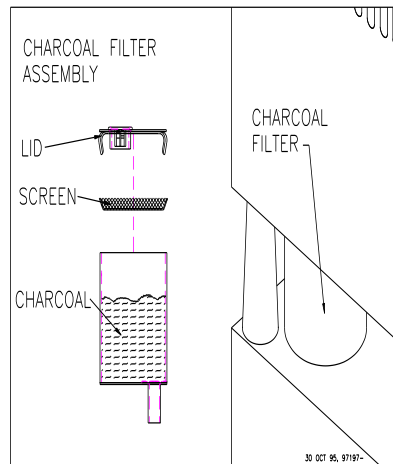
1. Remove drip tube from Charcoal Post Filter.
2. Over a sink, remove top cap and empty old charcoal from filter. Rinse filter thoroughly.
3. Fill filter 2/3 full of new coconut charcoal.
4. Rinse charcoal with water (distilled, if available) until the water runs clear (one or two cupfuls).
5. Press filter cap onto the post filter body.
6. Replace charcoal in filter every two months or every 100 gallons of distilled water.
7. Place drip tube into filter post by folding the tube together and turning it into the filter. Filter can now be placed to drip into a storage container.



Charcoal Replacement - Canister Filter

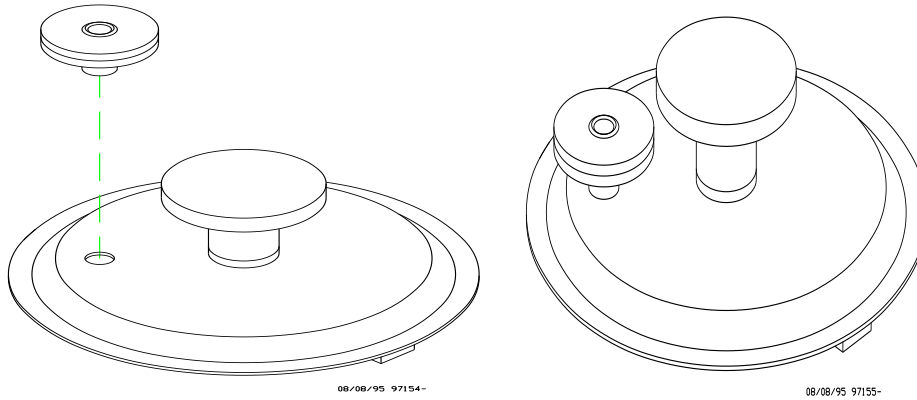
Replace charcoal in filter every two months or every 100 gallons of distilled water.

1. Remove Charcoal Filter from between machine and optional holding tank.
2. Over a sink, remove top lid and empty old charcoal from filter. Rinse filter thoroughly.
3. Fill filter 2/3 full of new coconut charcoal.
4. Rinse charcoal with water (distilled, if available) until the water runs clear (one or two cupfuls).
5. Press filter lid onto the canister filter body.
6. Replace charcoal in filter every two months or every 100 gallons of distilled water.
7. Place Filter onto Distiller by lifting up corner of distiller to separate it from the Holding Tank. Place filter exit tube into holding tank bushing and the condenser coil exit into the top of the filter.



Air Filter Replacement on Optional Holding Tank

Replace the Air Filter on the Optional Holding Tank Lid every six months.



1. Remove Holding Tank Lid.
2. Pull out Air Filter while turning gently.
3. Press new Air Filter gently into hole in Holding Tank Lid.
4. Replace Holding Tank Lid onto Holding Tank.

Steam Sterilization with Optional Holding Tank

This procedure should be performed whenever you wish to clean the Holding Tank of your Distiller, after any maintenance, or if there are any problems with the quality of your distilled water.

Before Sterilization:

IF DISTILLER BOILING TANK HAS JUST BEEN CLEANED WITH P.B.W.D. CLEANER AND DESCALER, ENSURE BOILER TANK HAS BEEN RINSED AND THAT DISTILLER HAS BEEN CLEANED WITH THE STERILIZATION DRIP TUBE AS DESCRIBED IN THE PROCEDURE: 'CLEANING - USING P.B.W.D. CLEANER AND DESCALER'

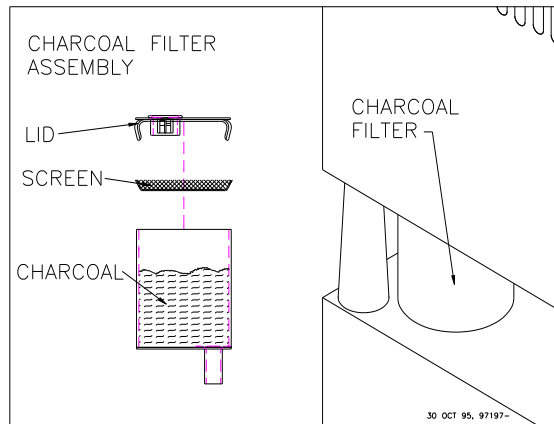
To prepare your Distiller for Steam Sterilization:

1. Ensure Boiler tank is clean – see section: Cleaning.
2. Place **EMPTY** charcoal filter between distiller and holding tank.
3. Drain holding tank.

Performing Steam Sterilization:

1. Fill the Boiling Tank 2/3 full with water.
2. Ensure the Boiling Tank Lid is back on and snug.
3. Loosen, but do not remove Holding Tank Lid to allow steam to escape.
4. Turn ON the Power switch, and set the Fan switch to the STERILIZE position.
5. Allow the distiller to run 30-40 minutes or until the Distiller shuts itself off. **WARNING: The Distiller, empty Charcoal Filter, and Holding Tank will get VERY hot (this is normal).**
6. Turn Power Switch OFF and allow machine to cool for 1 hour.
7. Drain any water from Holding Tank.

8. Remove Charcoal Filter. Separate Filter Lid from Filter Body.



9. Remove screen.

10. Fill Filter 2/3 full of new coconut charcoal.

11. Place Screen on top of charcoal by using your fingers to evenly slide the screen until it is placed firmly against the charcoal.

12. Rinse with water (distilled, if available) until the water runs clear (one or two cupfuls).

13. Press Filter Lid onto Filter Body.

14. Place Filter onto Distiller by lifting up corner of distiller to separate it from the Holding Tank. Place filter exit tube into holding tank bushing and the condenser coil exit into the top of the filter.

15. Tighten Holding Tank Lid until snug.

16. The Distiller is now sterilized and ready to produce distilled water.

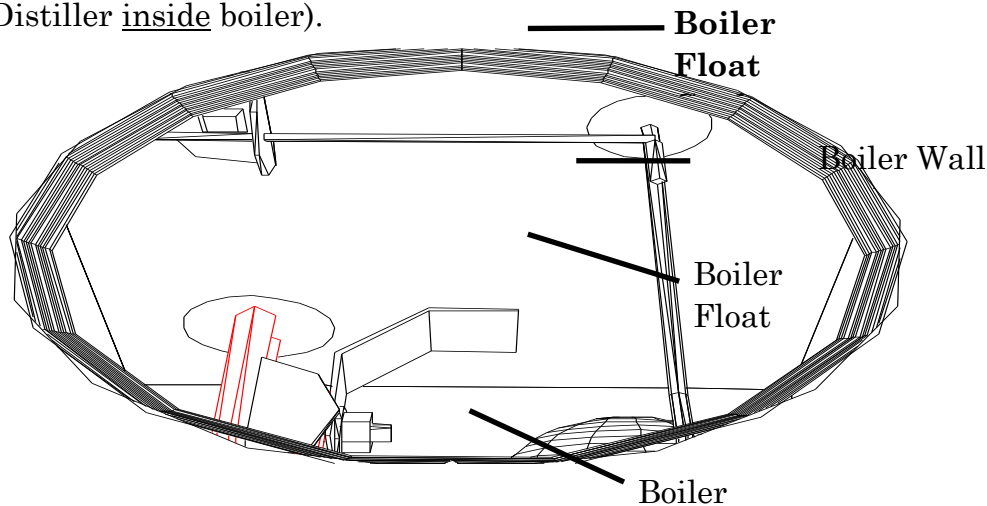
Boiler Float Gasket

The Boiler Float inside the Distiller has a gasket on the wall of the Boiler to seal in water. Since the Boiler is subject to high temperatures for long periods of time, this gasket will require replacing every three to five years.

Inspection of this gasket should be done every month or two – inspecting during cleaning is an excellent time!

Inspect the Boiler Float Gasket:

1. Turn OFF Distiller and unplug.
2. When Distiller is cool, remove Boiler Tank Lid. Looking inside the Boiler Lid hole from the rear of the Distiller towards the front, you will see the following:
3. Look for float and rod connecting it to boiler wall (towards front of Distiller inside boiler).



4. You will see where Boiler Float rod passes through Boiler wall. On boiler wall you will be able to see or feel the Boiler Float Gasket.
5. Gasket should feel pliable and should not appear to be cracked or have any visible holes.

Should Gasket require replacing, contact your dealer. Polar Bear recommends that gasket replacement be done by qualified personnel only.

Troubleshooting

Problem: Water tastes 'funny'.

- Causes:**
1. Storage container needs to be cleaned or changed – especially if distilled water is drawn from Distiller and cooled in a fridge.
 2. Boiling Tank is badly scaled with impurities – see section on Maintenance, Cleaning.
 3. Boiling Tank has overfilled: Open Boiler Tank and observe that Boiler water level is below water level pin.
 4. Boiling tank may have been overfilled during cleaning, or cleaning procedure was not completed. This can allow dissolved solids to pass through the Condenser and into the holding tank or storage container. Drain the holding tank or storage container, rinse, and follow the Sterilization procedure in the section on Maintenance.

Problem: Fan Operates, little or no water is distilled.

- Causes:**
1. Boiler Tank Lid is loose or Boiler Tank Lid Gasket requires replacement.
 2. Heating element may be defective.
 3. Reset button may be defective.

Problem: Distiller does not operate.

- Causes:**
1. Main Power switch on Distiller is OFF position.
 2. Distiller is not plugged in securely or circuit breaker is OFF.
 3. Reset button needs to be reset. Distiller must be cool before the button can be reset. This reset button is for your safety. It is designed to stop all operation should the distiller overheat. This will happen if the water level gets too low in the boiling tank. If at any time the reset button needs resetting, it indicates that the float switch mechanism may need adjusting.
 4. Reset button may need replacing.

Problem: Fan does not operate automatically.

- Causes:**
1. Fan switch is in the STERILIZE position.
 2. Fan motor may be defective.
 3. Boiling tank water level is low – Distiller has shut itself off.

Problem: **Steam escapes through charcoal post filter or post filter is extremely hot.**

- Causes:**
1. Fan switch is in the STERILIZE position.
 2. Fan may have dropped on the motor shaft preventing proper cooling.
Steam will be produced through condenser coil instead of water.
 3. Condensing Coil may have moved down onto Fan Blade.
 4. Fan motor may be defective.

Problem: **Steam or water escapes from volatile gas release vent on top of distiller.**

- Causes:**
1. The condensing coil has one small hole drilled in the top, located inside the Distiller at the center rear (facing the Distiller). This hole is not a defect, but rather it is provided to release certain volatile gases. Should some steam escape from this hole, there is no cause for concern.

Problem: **Water is overflowing from the Charcoal Post Filter.**

- Causes:**
1. Charcoal filter is more than 2/3 full of charcoal. Ensure there is a small air gap between charcoal and drip tube entrance to the post filter.
 2. Charcoal is old and 'caked up'. replace with new charcoal.
 3. Charcoal Filter grains are too fine. Use Polar Bear charcoal to ensure correct grain size.

**Should problems arise that are not covered in this guide,
please contact your local qualified Polar Bear service person**

Water Testing Program

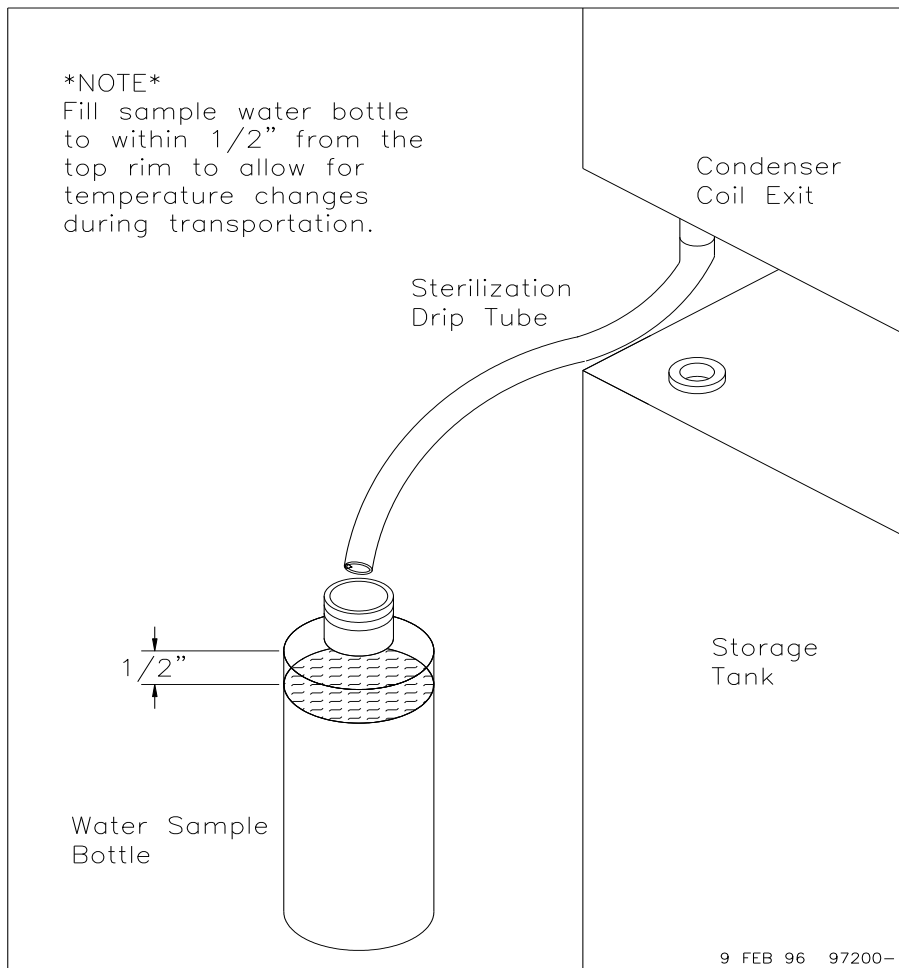
In a continuing effort to provide the purest drinking water possible, Polar Bear is proud to offer you a water testing program. Choosing to be part of this program will ensure your investment runs trouble free and you receive the quality of water promised. The Polar Bear testing program is available through all of our distributors across Canada and the USA and where all products are sold Internationally. By sending a distilled water sample in at least every six months for analysis, Polar Bear can determine whether your machine is operating properly or if it may require cleaning or repair.

A water sample bottle is enclosed with your Polar Bear Water Distiller as well as a bubble-pack envelope.

Please follow the following procedure:

1. Ensure sample bottle is clean and free of debris as well as structurally intact (no holes or leaks).
2. The charcoal filter must first be removed. (see owners manual; use **caution** as canister may be hot) Attach sterilization drip tube to nipple. Run the tube into the small water bottle until 3/4 full. Do not completely fill the bottle. Leave some room in bottle for water expansion in case of freezing temperatures during shipping.(see illustration on next page) Place charcoal filter back on unit following procedure.
3. Firmly screw top on sample bottle and place bottle in bubble pack envelope.
4. Send package to your local authorized Polar Bear Dealer, Polar Bear head office or Polar Bear USA. Please ensure that a return name and address is clearly marked so that the test results and a new Water sample kit can be sent to you. Enclose appropriate payment and send package prepaid by mail or courier.

5. Results of the water test will be sent to you within approximately three weeks. Along with the results, a new water sample kit will arrive in the mail. If you would like your water sample analysis to be sent via fax then please indicate on form with kit.



Note: This service is in accordance with NSF (National Sanitation Foundation) Standard 62, Drinking Water Distillation Systems, and must be completed at least once every six months.

Supplies & Accessories

P.B.W.D. CLEANER & DESCALER

Not only for the Distiller Boiling Tank, use wherever scale is a problem: In water distillers, coffee pots, dishwashers, humidifiers and most metal products. Two to three tablespoons per gallon of water does the job! More Descaler may be used if scale build-up is excessive. Available in 600 gram or 1.2 kg jars.

REPLACEMENT COCONUT CHARCOAL

Activated coconut charcoal has the ability to absorb over 50% its own weight in gases and odors. Non-toxic. The coconut charcoal will not breed bacteria, as only distilled water passes through the filter. Made from 100% pure coconut shells. *Do not use aquarium charcoal!* Available in 250 gram and 500 gram jars.

POLAR BRITE STAINLESS STEEL POLISH

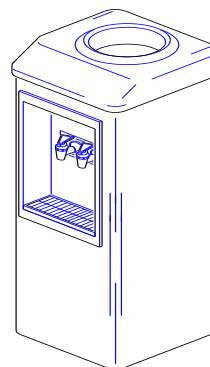
An odorless liquid polish for stainless steel. Use on outside surfaces of your Distiller.

PLASTIC 5 GALLON BOTTLE (c/w handle and screw top lid)

This bottle provides easy transport of distilled water and fits into the top of available water coolers.

WATER COOLER

Water coolers are available through your water distiller dealer. They are available in room temperature, cold only, cook and cold, and hot & cold models.



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Technical Information

The following information can be used for repairing the Distiller, and when contacting your Polar Bear dealer to order replacement parts.

WARNING:

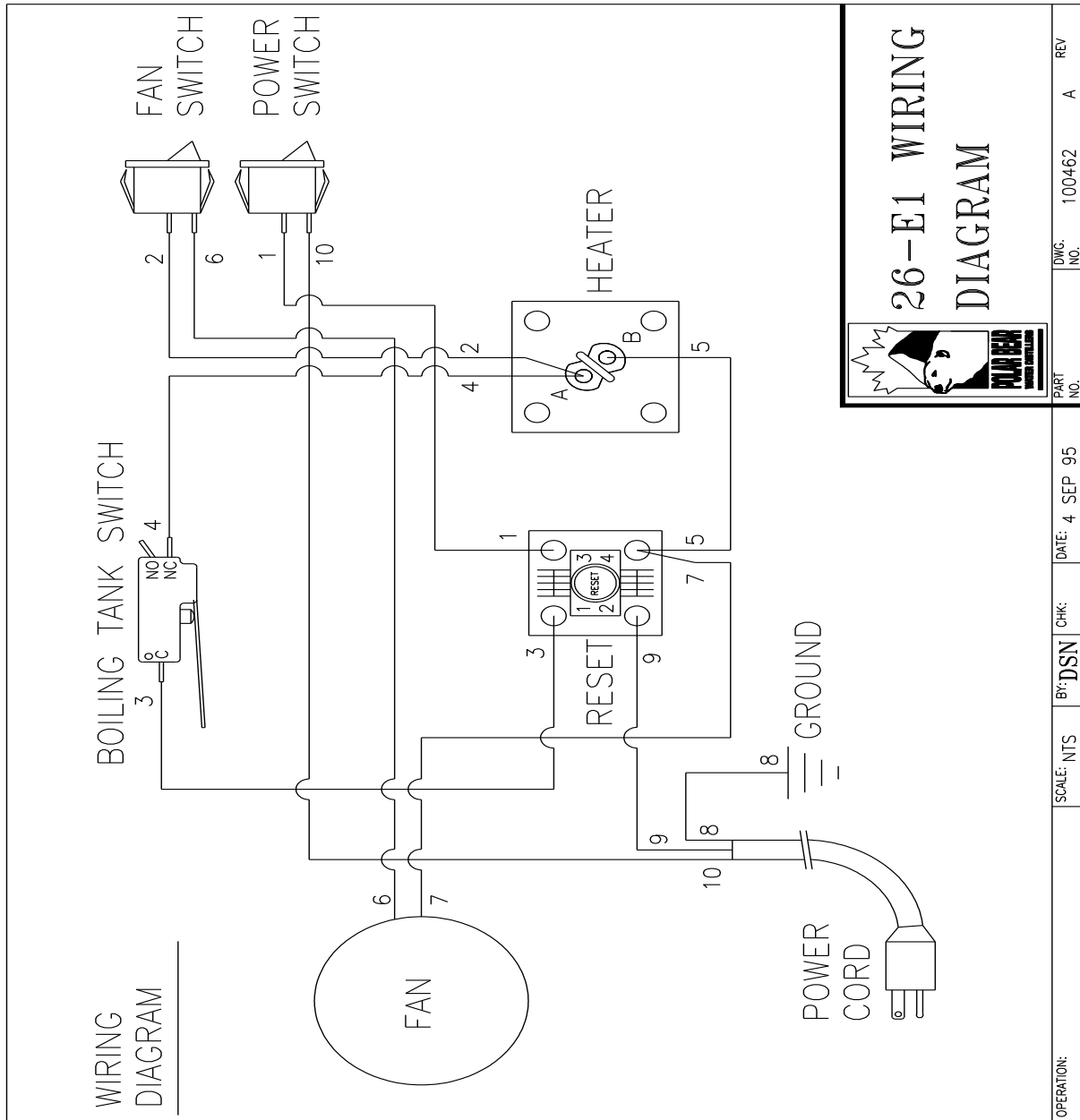
There are exposed high voltage and high temperature areas inside the water Distiller. Do not operate while covers are removed. Repairs must be made by qualified personnel only.

26-E1 Wiring List

#	Part #	Color	Ga.	Length		From Conn.		To Conn.		From Location	To Location
				in.	mm						
1	100466	BLU	16	6.0	127	F250	60001	SPADE	60012	POWER SWITCH	RESET #3
2	100467	ORG	16	7.0	178	F250	60001	SPADE	60012	FAN SWITCH	HEATER #A
3	100468	YLW	6	9.0	229	F250	60001	SPADE	60012	B.T. SWITCH	RESET #1
4	100469	ORG	16	6.0	152	F250	60001	SPADE	60012	B.T. SWITCH	HEATER #A
5	100470	RED	16	3.0	76	SPADE	60012	SPADE	60012	RESET #4	HEATER #B
6	100532	BLK	18	16.0	406			F250	60010	FAN MOTOR	FAN SWITCH
7	100532	BLK	18	11.0	279			SPADE	60012	FAN MOTOR	RESET #4
8	100561	GRN	16	3.0	76			RING	60002	POWER CORD	CHASSIS
9	100561	WHT	16	6.0	152			SPADE	60012	POWER CORD	RESET #2
10	100561	BLK	16	12.0	305			F250	60001	POWER CORD	POWER SWITCH

<u>PART #</u>	<u>DESCRIPTION</u>	
60001	Receptacle, F250, 14-16 AWG	60030 Ring, #10, 10-12 AWG
60002	Ring, #10, 14-16 AWG	60031 Receptacle, F250, FLAG, 18-22 AWG
60010	Receptacle, F250, 18-22 AWG	60032 Tab, F250, 14-16 AWG
60011	Receptacle, F187, 14-16 AWG	60033 Ring, 1/4", 14-16 AWG
60012	Spade, #10, 14-16 AWG	60034 Ring, #6, 14-16 AWG
60013	Receptacle, F250, PIGGI, 18-22 AWG	60050 Tab, F250, 18-22 AWG
60014	Pin, Female	60056 Receptacle, F250, 18-22 AWG, large opening
60015	Pin, Male	60057 Receptacle, F250, 10-12 AWG
60016	Receptacle, F250, PIGGI, 14-16 AWG	60058 Receptacle, F187, 14-16 AWG, large opening
60019	Butt Splice, 14-16 AWG	60059 Tab, F250, 18-22 AWG, large opening
60020	Ring, 1/4", 18-22 AWG	60060 Ring, #10, 18-22 AWG
60023	Receptacle, F250, FLAG, 14-16 AWG	60061 Receptacle, F187, 18-22 AWG
60028	Receptacle, F187, 18-22 AWG, large opening	60062 Ring, #6, 18-22 AWG
		60025 Butt Splice, 18-22 AWG

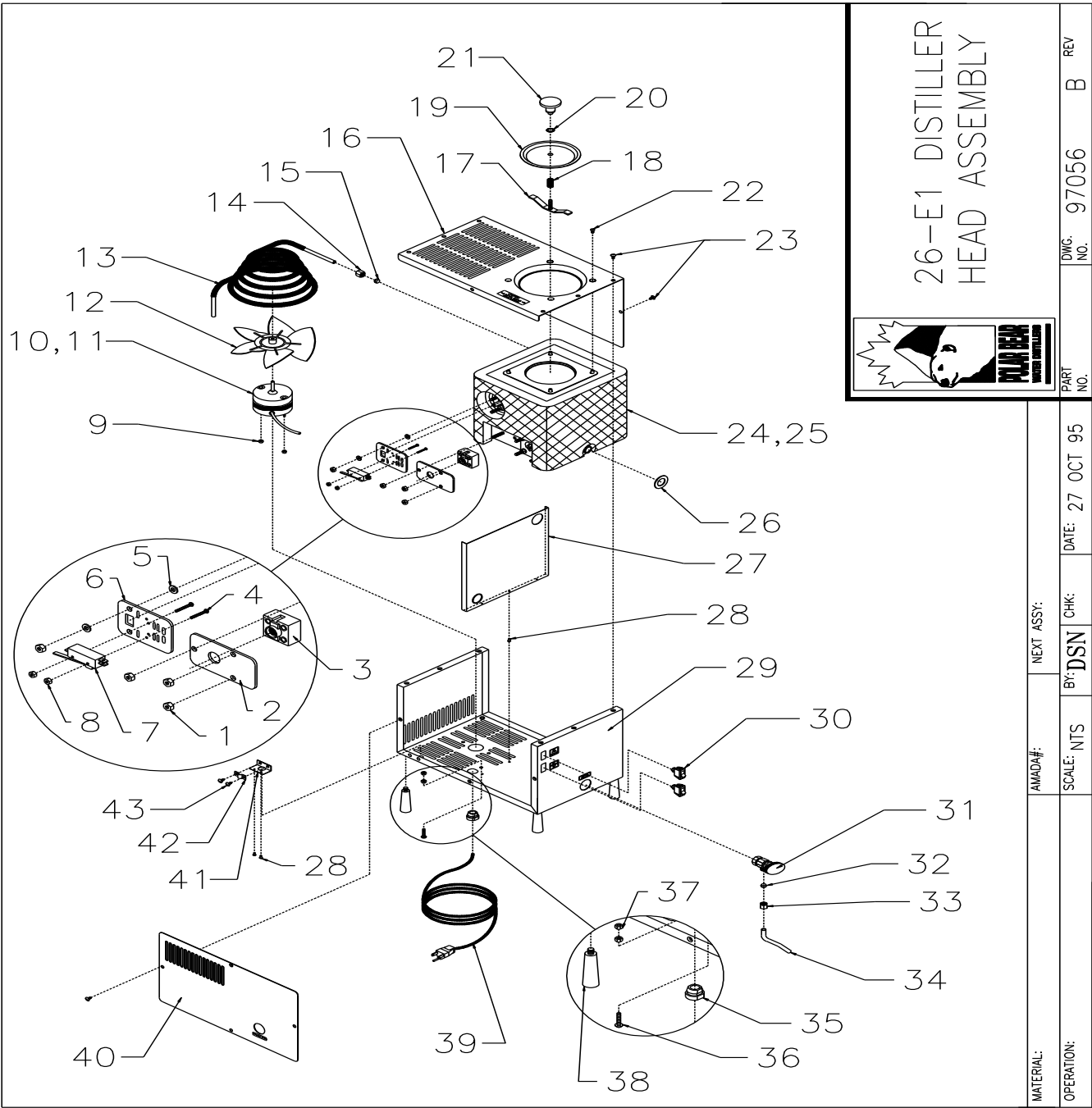
26-E1 Wiring Diagram



Parts List: 26-E1 Head Assembly

Line	Qty	Item	Description
1	5 EA	15502	NUT, GALVANIZED, 1/4", HEX
2	1	100119	PLATE-B.T.-LEXAN-RESET
3	1 EA	100122	SWITCH,BOILER TANK RESET
4	2 EA	10112	SCREW, MACH,RND,SLOT,#6-32X 1"
5	4	15003	WASHER, FLAT,S.S.,5/16"X11/16"
6	1	100428	UNIVERSAL LEXAN SWITCH PLATE
7	1 EA	60024	MICROSWITCH,LARGE
8	2 EA	15507	NUT,KEP,#6-32
9	2 EA	15505	NUT,KEP #8-32
10	1	100640	FAN MOTOR ASSM,120V,D-8/CT
11	1	100641	FAN MOTOR ASSM,220V,D-8/CT
12	1 EA	100088	FAN,BLADE,ALUMINUM, 7"
13	1	100225	CONDENSER COIL, 26-E1, M, 14
14	1	30002	NUT, COMPRESION,PLTD. BRASS
15	1 EA	30003	SLEEVE,COMPRESSION,3/8"
16	1	100444	COVER TOP & BACK-26E1 SERIES 3
17	1	100302	B.T. T-BAR ASSEM
18	1 EA	100069	SPRING, B.T. LID
19	1	100070	LID DISC, B.T. S.S.
20	1 EA	100205	ORING,RUBBER,1/2"IDx11/16"OD
21	1 EA	100071	KNOB,LID,PLASTIC STAMPED
22	4 EA	10123	SCREW,SS,#10-24X3/8"
23	13 EA	10116	SCREW,SHTMTL,WHT. PNTD.,#10-12x1/2"
24	1	100512	SERIES 3, MANUAL FILL B.T.,
25	1	100527	SERIES 3 MANUAL FILL B.T.
26	1	15102	WASHER,FLAT,ALUM,7/8x1-1/2"
27	1	100078	DIVIDER-MIDDLE-E1
28	5 EA	80004	RIVET, ALUMINUM, 1/8"X1/4"
29	1	100442	MAIN BODY-26E1, SERIES 3
30	2 EA	100188	SWITCH,ROCKER,ON/OFF , R/B
31	1 EA	100079	VALVE,ANGL STP,1/2"FPT-3/8COMP
32	1 EA	30003	SLEEVE,COMPRESSION,3/8"
33	1	30002	NUT, COMPRESION,PLTD. BRASS
34	1	100152	TUBE-DRAIN-B.T-E1,M,14,CT
35	1 EA	80061	STRAIN RELIEF 7K2
36	1 EA	10103	SCREW,MACH,SS,TRS/SKT#10-24X1"
37	2 EA	15503	NUT,KEP,#10-24
38	4 EA	100198	LEG,PLASTIC,2 1/2, TAPERED
39	1 EA	100561	POWER CORD ASSM,26E1 /NA
40	1	100446	COVER, FRONT-26E1 SERIES 3
41	1	100080	CLIP, CONDENSER, S.S., SECT.
42	1	100081	CLIP, CONDENSER, ALUM, SECT.
43	2 EA	10109	SCREW,SHTMTL,S.S.,#10-12x1/2"

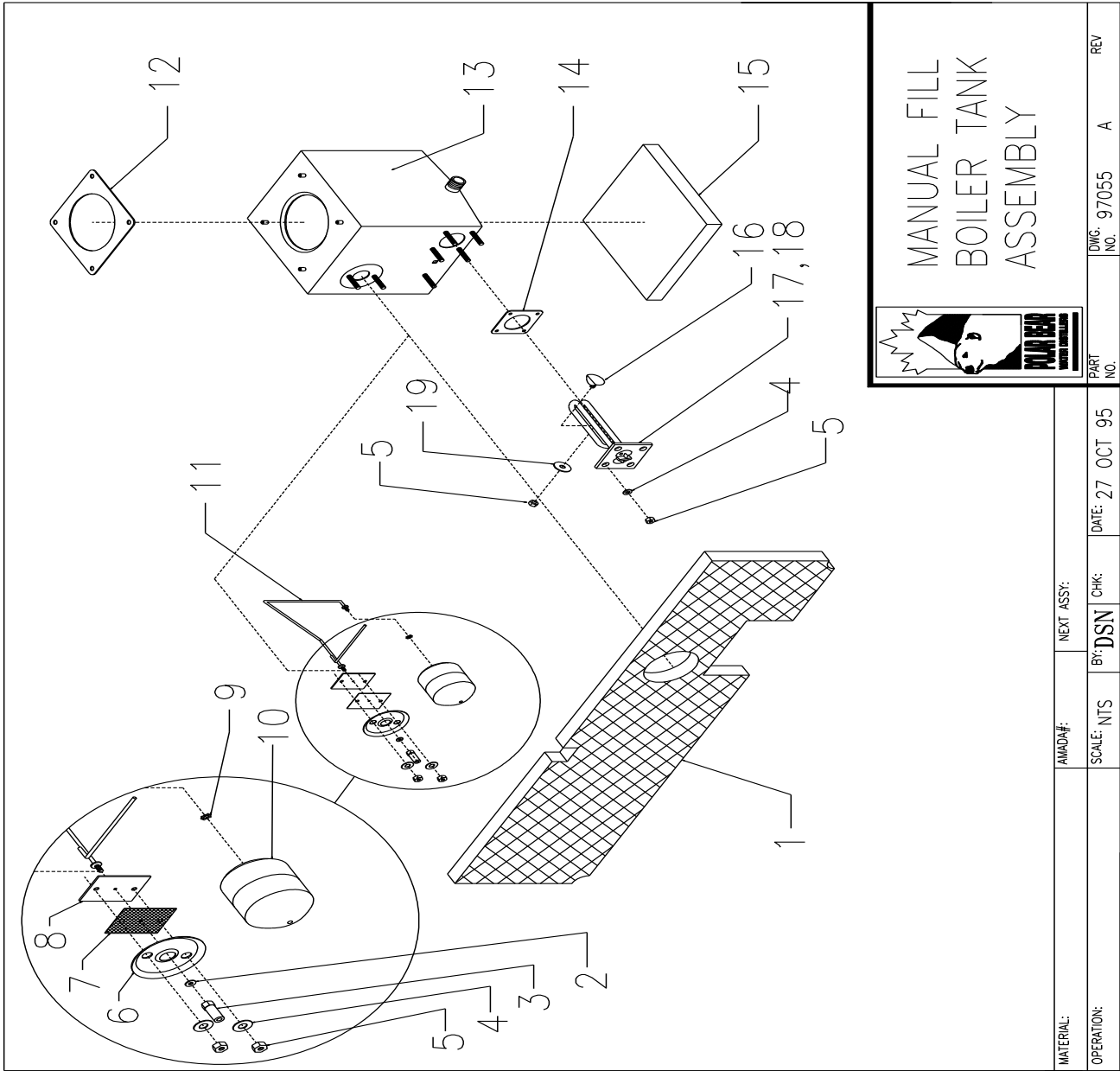
Parts Diagram: 26-E1 Head Assembly



Parts List: Manual Boiler Tank Assembly

Line	Qty	Item	Description
1	1	100472	INSULATION, 26 MANUAL FILL,
2	1	15001	WASHER, FLAT, SS, 5/32 X 3/8"
3	1 EA	100060	FLOAT,BRASS CONTACT
4	6	15003	WASHER, FLAT,S.S.,5/16"X11/16"
5	7 EA	15501	HEX NUT, SS, 1/4" - 20
6	1	100062	BOILER TANK FLOAT WASHER
7	1	100067	BOILER TANK FLOAT GASKET,NTEAR
8	1	100066	BOILER TANK FLOAT GASKET SILIC
9	1 EA	15204	WASHER,LOCKTOOTH,SS,EXTRNL #8
10	1 EA	100058	FLOAT BALL, 2.5" S.S.
11	1	100513	26D BOILER FLOAT ROD, W.A.
12	1	100068	BOILING TANK LID GASKET SILICO
13	1	100471	MANUAL BOILER TANK,S3,W.A.
14	1	100065	HEATING ELEMENT GASKET, SILICO
15	1	100451	INSULATION, 26D B.T. BOTTOM
16	1	100063	HEATING ELEMENT CLIP WELD ASSE
17	1 EA	100177	HEATING ELEMENT,1100W,125V
18	1 EA	100178	HEATING ELEMENT,1100W,230V
19	1	15002	WASHER, FLAT, SS, 5/16"X 1"

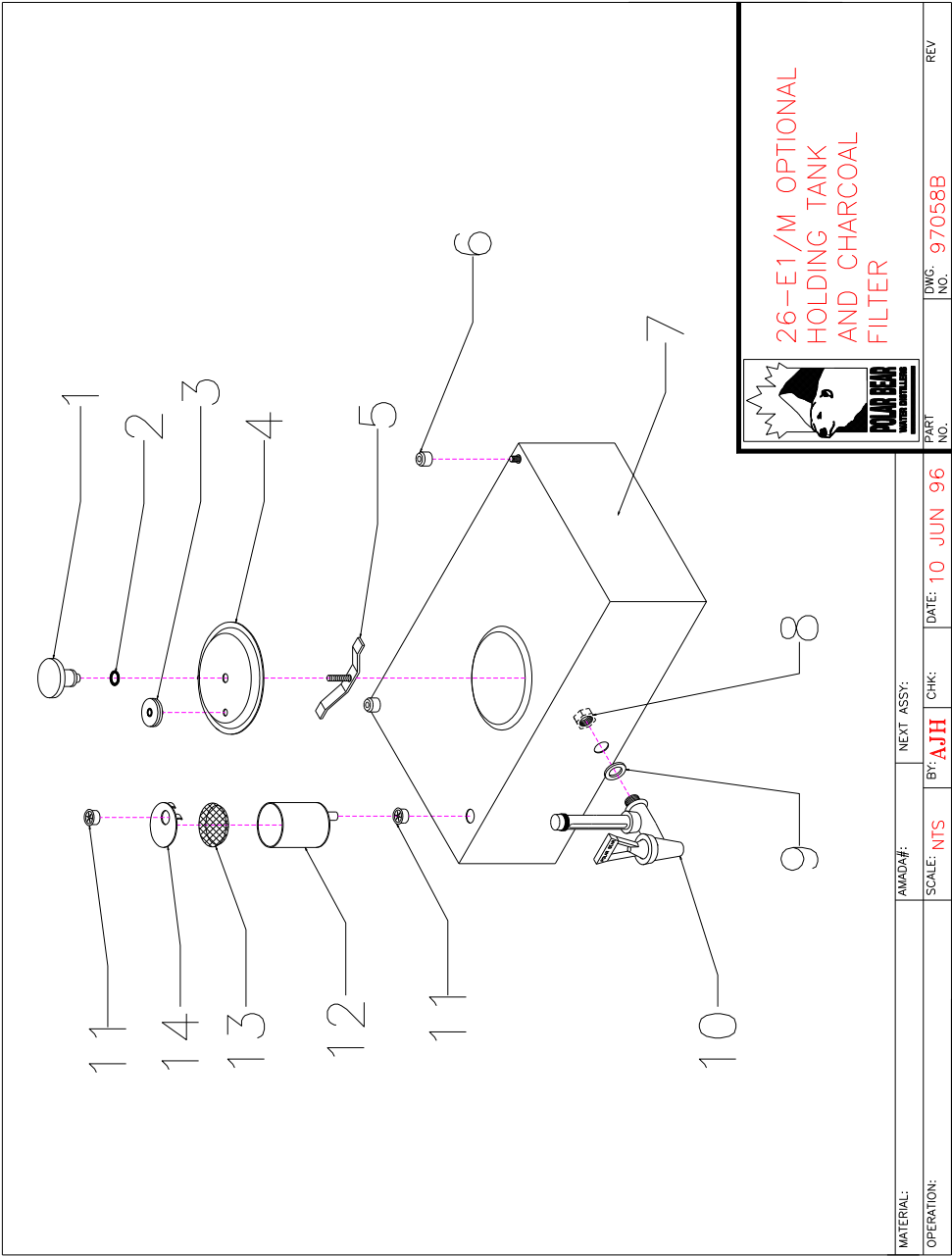
Parts Diagram: Manual Boiler Tank Assembly



Parts List: Optional Holding Tank Assembly

Line	Qty	Item	Description
1	1 EA	100071	KNOB,LID,PLASTIC STAMPED
2	1 EA	100205	ORING,RUBBER,1/2"IDx11/16"OD
3	1 EA	100117	FILTER CANNISTER,2U,PTFE .2uM
4	1	100054	H.T. LID DISC
5	1	100302	B.T. T-BAR ASSEM
6	2 EA	100199	LEG,ALUMINUM, 1/4"
7	1	100402	HOLDING TANK, W.A. 2.75 GAL.
8	1 EA	80010	NUT, JAM, 3/8"-18NPS, POLY
9	1 EA	80006	WASHER,BLK NEOPREAN,1"x5/8x1/8
10	1 EA	100154	DRAIN VALVE ASSEM., 4"
11	2 EA	100115	BUSHING,WIRE,5/8"
12	1	100502	ASSEMBLY, CHARCOAL FILTER,
13	1	100121	SCREEN, C.F. 2-1/4"
14	1	100306	C.F. TOP ASSEM

Parts Diagram: Optional Holding Tank Assembly



Other Miscellaneous Parts and Options

Line	Qty	Item	Description
1	1	99009	MANUAL, PBD 26-E1, BOUND
2	1	100237	TUBE,STERILIZATION 24" CLEAR
3	1	80015	GEAR CLAMP, 1/4" S.S.
4	1	100362	ASSEMBLY, 8"C.F., 26E1/M
5	1	100008	PBD MST-3,S1
6	1	100503	ASSEMBLY, CHARCOAL FILTER
7	1	80214	CHARCOAL,250G,JAR OF
8	1	80265	CHARCOAL,500G,JAR OF
9	1	80215	DESCALER,600G,JAR OF
10	1	80266	DESCALER,1.5KG,JAR OF

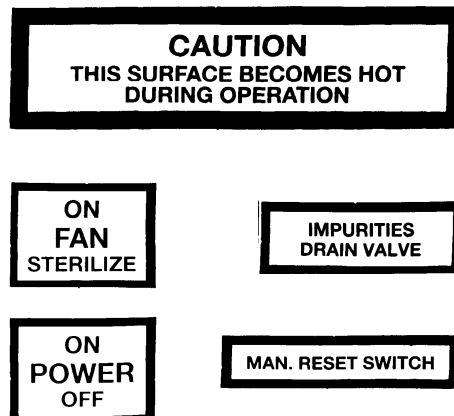
26-E1 Replacement Decals

Part # **Description**

80195 Polar Bear Large Decal



80194 Combination Sheet Decal



Dealer Information

For Dealer information, please contact:

Polar Bear Water Distillers Mfg. Co. Ltd.

P.O. Box 113 Main Street
Pickardville, Alberta
CANADA T0G 1W0

Telephone: (403) 349-4872

Facsimile: (403) 349-5904

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