VAUGHN
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Operation and Installation Manual

Vaughn Hydrastone® Lined Electric A-Model Water Heater

INDEX

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SAFETY INFORMATION

WARNING / CAUTION

1. Tank is to be completely filled with water and all air is to be vented before energizing. Do not turn on the water heater if cold water supply shut off valve is closed.

2. Due to the rigors of transportation, all connections should be checked for tightness before the heater is placed in operation.

3. Safety relief valve must be installed in tapping provided.

4. The unit is designed to operate at pressure not more than 150 psi.

5. KEEP AWAY FROM LIVE ELECTRICAL CIRCUITS. Do not perform any maintenance, make any adjustments, or replace any components inside the control panel with the high voltage power supply turned on. Under certain circumstances, dangerous potential may exist even when the power supply is off. To avoid casualties, always turn the power supply safety switch off, turn the charge or ground the circuit before performing any maintenance or adjustment procedure.

6. Generalized instructions and procedures cannot anticipate all situations. For this reason, only qualified installers should perform the installations. A qualified installer is a person who has licensed training and a working knowledge of the applicable codes regulation, tools, equipment, and methods necessary for safe installation of an electric resistance water heater. If questions regarding installation arise, check with your local plumbing and electrical inspectors for proper procedures and codes. If you cannot obtain the required information, contact the company.

7. In the event of overheating, fire, flood, or physical damage, turn off all power to your water heater. Do not power up the heater until it has been examined by a trained professional.

8. Do not store or use gasoline or other flammable vapors and liquids, such as adhesives or paint thinner, in the vicinity of this water heater. If such flammable materials must be used near the unit, open nearby doors and windows to allow for ventilation.

9. California law requires, and other states may require, that all new and replacement water heaters, and all existing water heaters, must be braced, anchored, or strapped to resist falling or horizontal displacement due to earthquake motion. At a minimum, any water heater shall be secured in accordance with the California Plumbing Code.

GENERAL INFORMATION

PLEASE READ INSTRUCTIONS COMPLETELY BEFORE INSTALLING WATER HEATER

IMPORTANT OWNER'S RESPONSIBILITY

Vaughn Thermal Corporation (herein called the Company) specifically does not expressly or impliedly warrant the merchantability or the fitness for any particular purpose or the performance of the heater within that system, nor does it assume liability for any consequential damage to general property or other components of the system.

This appliance is designed to store water heated only by the electrical elements provided at pressures of not more than 150 psi. Heat input from any external or additional source will void the warranty.

The design anticipates the proper installation and care in use of the product. There is risk of property damage and personal injury inherent in the use of any hot water system. The Company cannot supervise the installation and therefore makes it a specific condition of the warranty that the customer will supervise the installation and use of this product to be sure they are performed in accordance with these instructions, as well as safe industry guidelines and proper local or national codes.

Generalized instructions and procedures cannot anticipate all situations. For this reason, only qualified installers should perform the installation. A qualified installer is a licensed person who has appropriate training and a working knowledge of the applicable codes, regulations, tools, equipment, and methods necessary for safe installation of an electrical resistance water heater.

An installation checklist has been provided to help the customer ensure that all procedures for a safe installation have been followed.

If questions regarding installation arise, check with your local plumbing and electrical inspectors for proper procedures and codes. Local codes take precedence over instructions in this manual.

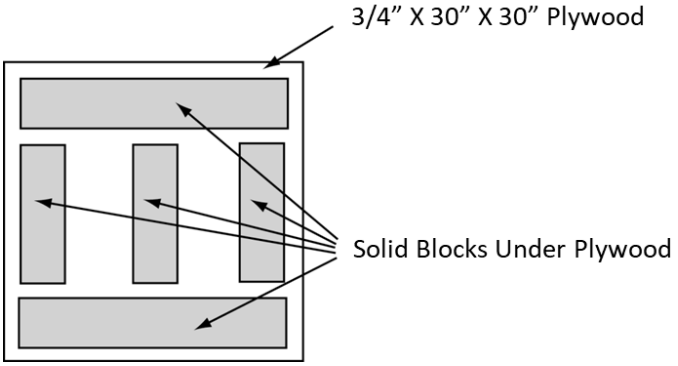
INSTALLATION GUIDELINES

A. INSPECTING AND PREPARING THE HEATER

- Disassemble the crate and remove the shrink wrap packaging.
- The cabinet will contain a temperature and pressure relief valve.
- Do not cover or damage the temperature and pressure relief valve opening located at the top of the tank.

B. LOCATION

- **CAUTION: All tanks will eventually leak at some unpredictable time.**
- **CAUTION: The heater's outer jacket is plastic and can melt.**
- Do not place the heater where there is a risk of property damage in the event of a leak.
- Place the heater on a solid foundation in a clean, dry location.
- The heater should be protected from freezing, and water lines should be insulated to reduce energy and water waste.
- Leave sufficient room to service the heating elements and electrical controls.
- Do not install in an area where flammable liquids or combustible vapors are present.
- Do not install in close proximity to wood burning stove or other high temperature systems.
- **NOTE: If heater is placed on blocks to raise it from the floor, be sure to support the entire bottom with at least ¾" plywood on the top of the blocks.**



C. PROTECTION FROM WATER DAMAGE

- **CAUTION: All tanks will eventually leak at some unpredictable time.**

- **IT IS THE CUSTOMER'S RESPONSIBILITY TO PROVIDE A CATCH PAN OR OTHER ADEQUATE MEANS, SO THAT THE RESULTANT FLOW OF WATER WILL NOT DAMAGE FURNISHINGS OR PROPERTY.**
- The warranty provided assures replacement within its terms, but specifically does not warrant against consequential damage caused by failure to follow these instructions.

D. TEMPERATURE & PRESSURE RELIEF VALVE

- **WARNING: A POTENTIAL HAZARD TO LIFE AND PROPERTY MAY EXIST IN ANY WATER HEATER IF AN APPROVED TEMPERATURE-AND-PRESSURE RELIEF VALVE IS NOT PROPERLY INSTALLED.**
- For protection against excessive pressures and temperatures in this water heater, install temperature-and-pressure protective equipment required by local codes, but not less than a combination temperature-and-pressure relief valve certified by a nationally recognized testing laboratory that maintains periodic inspection of production of listed equipment of materials, as meeting the requirements for Relief Valves and Automatic Gas Shutoff for Hot Water Supply Systems. ANSI Z21.22.1971. This valve must be marked with a maximum set pressure not to exceed the marked maximum allowable working pressure of the water heater (150psi). Install the valve into an opening provided and marked for this purpose in the water heater and orient it or provide tubing so that any discharge from the valve will exit only within 6 inches above, or at any distance below the structural floor and cannot contact any live electrical part. The discharge opening must not be blocked or reduced in size under any circumstances.
- **CAUTION: A relief valve is designed to discharge excessively hot water. THE CUSTOMER IS RESPONSIBLE TO PROTECT PROPERTY AND PERSONNEL FROM HARM WHEN THE VALVE FUNCTIONS.**
- The temperature and pressure relief valve opening is a ¾" NPT female threaded fitting for all models and is located at the top of the tank.
- Install the provided temperature and pressure relief valve in the provided fitting on the side of the tank as shown in INSTALLATION DIAGRAM 1 on page 12.
- The drain line from the relief valve must not be concealed or blocked and must be protected from freezing.
- No valve of any kind should be installed between the relief valve and tank or in the drain line.
- **WARNING: If the water supply is from a well, or known to have hard water, it is recommended to use a pressure relief valve in**

the cold-water line as well as a temperature and pressure relief valve in the hot water line.

E. WATER CONNECTIONS

- **WARNING: Some local codes mandate the use of a backflow preventer or check valve or pressure-reducing valve. An adequate expansion tank (or other adequate means) must be installed to prevent pressure build up or damage from thermal expansion when a check valve or backflow preventer or pressure-reducing valve is used. Failure to do so could result in tank leakage and therefore void the warranty.**
- The hot and cold-water fittings are a threaded connection to the tank. Do not over tighten.
- The water inlet connection is a 1.5" NPT male threaded fitting. This connection is separate from the drain valve. See item 8 in INSTALLATION DIAGRAM 1 on page 12.
- Provide a shut off valve on the cold-water line. Mark for future emergency use.
- **Do not apply heat directly to the cold-water inlet as it includes a plastic dip tube which can melt.**
- The water outlet connection is a 1.5" NPT male threaded fitting. See item 1 in INSTALLATION DIAGRAM 1 on page 12.

F. FILLING THE HEATER

- **CAUTION: Do not put electrical power to the elements until after the heater is completely filled with water.**
- **Check that the temperature and pressure relief valve has been properly installed (mandatory requirement).**
- Completely close the drain valve.
- Open the highest hot water opening to allow all air to escape from piping.
- Open the valve to the cold-water and allow the heater and piping system to completely fill, as indicated by a steady flow of water from the hot water opening.

G. WIRING CONTROLS

- **WARNING: The heater elements will be damaged instantly if energy is supplied before the tank is completely filled with water, thus voiding any warranty.**
- A qualified electrician must provide a separate fused branch circuit, conforming to local or National Electric Codes.
- Supply to the heater only the voltage indicated on the rating plate.
- Mark the electrical shut off clearly for future emergency use.

- Reference wiring diagrams before making electrical connections. See applicable WIRING DIAGRAM 1 on page 11.
- Field connections with aluminum conductors must use connectors approved for copper to aluminum connection.
- **CAUTION: There is a risk of electric shock in an ungrounded service. It is critical that this unit be wired with a power supply that has a service ground wire available. Be sure to connect the ground wire to the ground lug in the cabinet.**

H. SUPPLEMENTAL HEAT WARNINGS

- **NOTE: Heat input from any external or additional source will void the warranty.**
- When a supplemental heat source is connected to the storage tank water heater, provision must be made to limit the heat source temperature not to exceed that of the water heater thermostat setting.
- **CAUTION: If the water heater has been retrofitted with supplemental heating equipment, you must adjust both the controller on the supplemental heat source (located in the water piping) and the controller on the water heater to the same temperature. Failure to adjust both controllers to the same temperature can cause loss of proper temperature control.**

I. STATE OF CALIFORNIA

- The water heater must be braced, anchored, or strapped to avoid moving during an earthquake.
- Contact local utilities for code requirements in your area, visit http://www.dsa.dgs.ca.gov, or call 1-916-445-8100 and request instructions.

INSTALLATION CHECKLIST

1. INSPECTING AND PREPARING THE HEATER

- ❑ Remove the packaging and locate the temperature and pressure relief valve.
- ❑ Do not cover temperature and pressure relief valve opening.

2. LOCATION

- ❑ Solid foundation and dry location.
- ❑ Protect heater water lines from freezing.
- ❑ Area free of flammable vapors.
- ❑ Sufficient room to service heater.
- ❑ Not in close proximity to high temperature systems.
- ❑ A leak will not damage property.

3. PROTECTION FROM WATER DAMAGE

- ❑ Be sure to make provisions to protect the area from water damage if a leak should occur in the tank or any connected fittings.

4. TEMPERATURE & PRESSURE RELIEF VALVE

- ❑ **WARNING: Improper installation will present potential hazard to life and property.**
- ❑ A temperature and pressure relief valve with an 8-inch stem should be used.
- ❑ Check to be sure that proper relief valve requirements are met.
- ❑ Temperature and pressure relief valve discharge pipe properly protected from freezing and restrictions.
- ❑ No valve between tank and relief valve or in drain line.

5. WATER CONNECTIONS

- ❑ Do not over tighten threaded connections.
- ❑ Mark the water shut off for future reference.
- ❑ Do not apply heat to cold inlet.
- ❑ **If there is a check valve (sometimes in water meter), backflow preventer or pressure-reducing valve, install an adequate size expansion tank.**

6. FILLING THE HEATER

- ❑ Completely fill heater before turning on elements.
- ❑ Check for proper installation of relief valve, hot, and cold fittings.

- ❑ Close drain valve.
- ❑ Open the highest hot water faucet.
- ❑ Open cold water inlet valve and fill system.
- ❑ Water connections free of leaks.

7. WIRING

- ❑ **WARNING: Tank must be full of water before turning the power on.**
- ❑ Separate fused branch circuit (refer to local codes).
- ❑ Mark the electrical shut off for future reference.
- ❑ See WIRING DIAGRAM 1 on page 11.
- ❑ Check to see that voltage on rating plate and supply agree.
- ❑ **CAUTION: Unit must be properly grounded.**

8. INSTALLATION COMPLETED AND CHECKLIST FILLED OUT

BY: _____

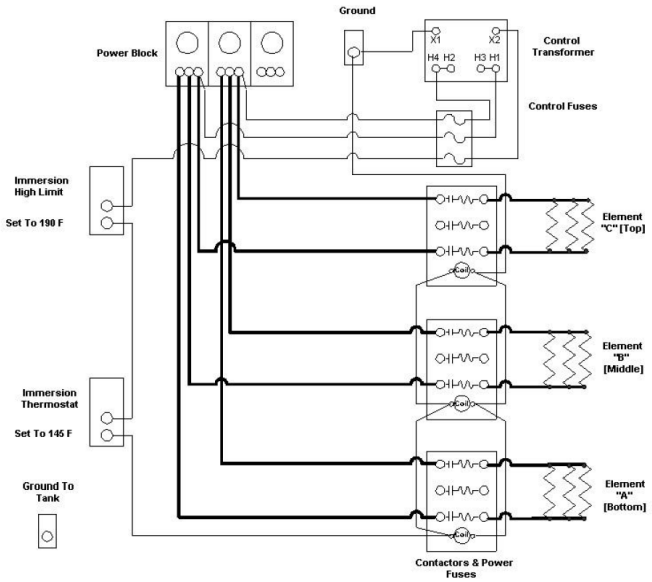
DATE: _____

NOTES: _____

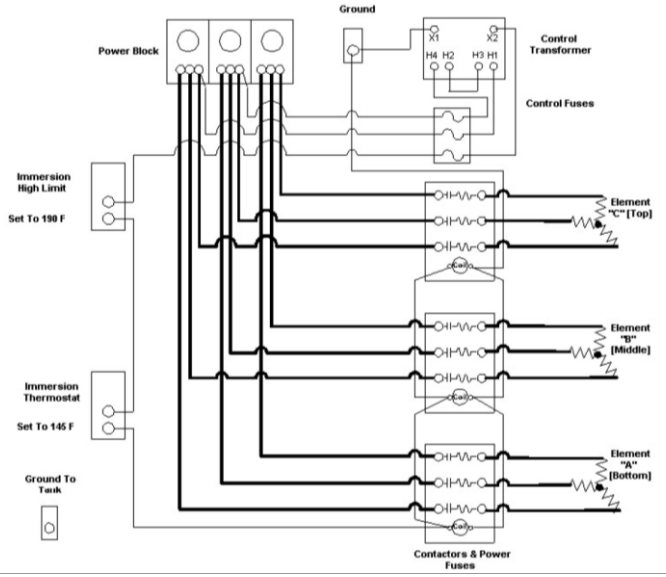
SPECIAL NOTE: Test of hot water after installation is necessary to be sure temperature controls are working properly. See Water Temperature Regulation on page 15.

WIRING DIAGRAM 1

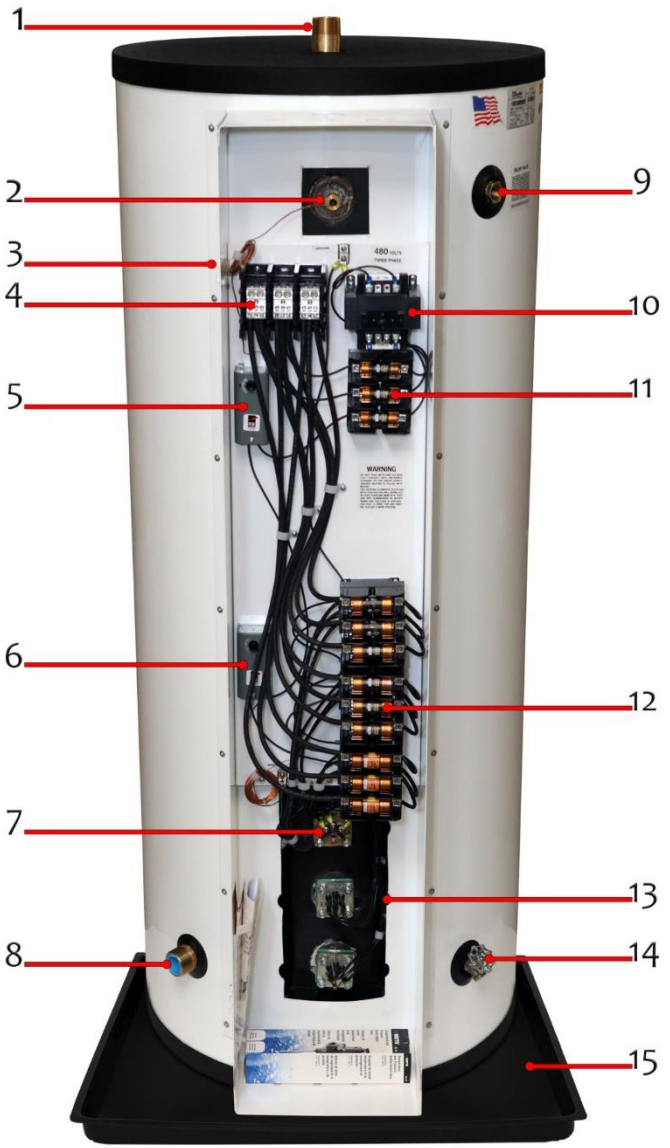
Single Phase, 3 Element



Three Phase, 3 Element



INSTALLATION DIAGRAM 1



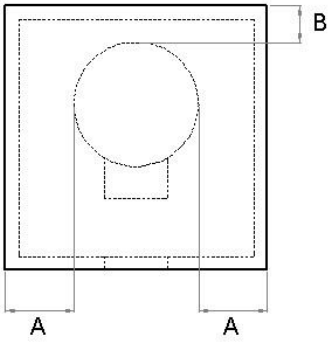
NOTE: When ordering parts, please specify model and serial number of tank, shown on the rating plate, as well as parts name, information and number.

PARTS LIST

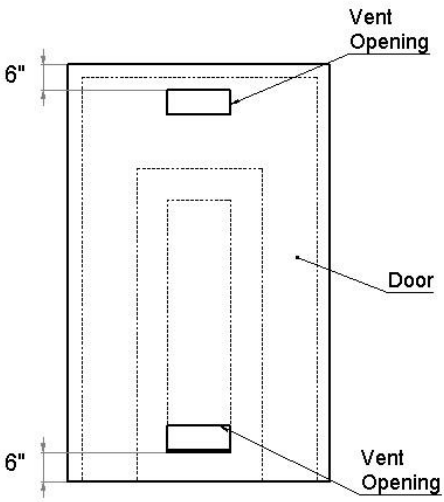
1. Hot Water Outlet – 1.5” Brass NPT Male
2. Immersion Well for High Limit
3. Metal Control Cabinet Door – extends 8” from jacket
4. Power Distribution Block – provides a single electrical connection point
5. Immersion High Limit – with manual reset cut-off
6. Immersion Operating Thermostat – provides accurate temperature control and is user adjustable
7. Long Life Heating Elements - up to three incoloy sheath heating elements for long life and reduced mineral build-up
8. Cold Water Inlet – 1.5” Brass NPT connector
9. Temperature & Pressure Relief Valve – .75” NPT Female
10. Control Circuit Transformer-provides 120V power to all operating controls.
11. Control Circuit Fusing
12. Fused Circuits and Contactors – provides over current branch circuit protection.
13. Premium Insulation – 2-3” thick polyurethane foam insulation combined with heat-retaining cement lining ensures low stand by heat loss.
14. .75” Brass drain valve.
15. Catch Pan and/or adequate means of leak drainage

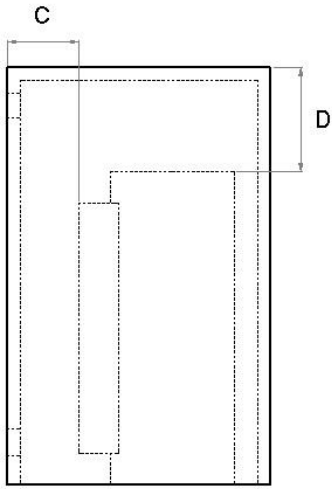
INSTALLATION DIAGRAM 2

Clearances for Closet or Alcove Installations



Required Clearance in Inches			
	Tank Size (Gallons)		
	80	100	120
A	10	10	9
B	8	8	7
C	6	6	6
D	26	17	17





NOTES:

- Vent openings must be at least 50 square inches of open area regardless of the type of louver or grill.
- Combustible floor acceptable.

TEMPERATURE CONTROL

A. WATER TEMPERATURE REGULATION

WARNING: Exposure to water hotter than 125°F can cause scalding injuries. Appropriate caution must be taken when using hot water. Special supervision must be given to those who cannot act quickly such as children, disabled, or elderly persons.

The temperature of the water in the heater is regulated by a mechanical thermostat. This control is set at the factory to maintain a water temperature of 145°F. Although these controls are designed to meet industry standards, they can fail to control temperatures properly without any notice, and therefore should be tested periodically for your protection.

To test the temperature, turn on the hot water faucet and measure the maximum temperature with an accurate thermometer. If the temperature is above the safe limits for your circumstances call a service technician to adjust or replace the control.

DANGER: IF YOU DISCOVER EXTREME HOT WATER COMING FROM THE FAUCET, IMMEDIATELY SHUT OFF THE ELECTRICITY AT THE MAIN SWITCH AND CALL COMPETENT SERVICE PERSONNEL. ANY OVERHEATED WATER HEATER IS A POTENTIAL HAZARD TO LIFE AND PROPERTY. DO NOT OPERATE UNTIL THE SOURCE OF THE PROBLEM HAS BEEN DETERMINED AND ELIMINATED.

- ❑ Water temperature over 125° F can cause severe burns instantly or death from scalds.
- ❑ Children, disabled, and elderly are at the highest risk of being scalded.
- ❑ See instruction manual before setting the temperature at the water heater.
- ❑ Feel water before bathing or showering.

B. SAFETY CONTROLS

- The heater has a high-limit control that is located at the top opening of the tank.
- This immersion mounted high limit is designed to interrupt the flow of electricity to all elements when it senses dangerously high temperatures. If this switch operates, do not attempt to reset. A dangerous situation is indicated, and a qualified service person should be called to find the source before the unit is operated again.
- The temperature of the water should be tested periodically at the faucet to be sure temperature controllers are working properly.

C. MECHANICAL THERMOSTATS

- The standard Vaughn A Model electric water heater is equipped with a mechanical immersion thermostat for all installed electric elements.
- The standard mechanical thermostat provides the user with the ability to control the temperature of their water heater. It allows basic customization, limited to temperature set point. Once the setup is complete, the water heater is in automatic operation and will maintain a full tank of water at the temperature setting of the thermostat.
- Any temperature adjustments of thermostat must be made by qualified service personnel as follows:
  - Disconnect the electrical power.
  - Open the cabinet door.
  - Adjust the dial on the thermostat to the desired temperature and check to see that the proper temperature is achieved.
  - Close the cabinet door and reconnect electrical service.

TROUBLESHOOTING

CAUTION: Make certain power to heater is OFF before opening the cabinet door for any reason.

FOR QUALIFIED SERVICE PERSONNEL ONLY

Symptom	Probable Cause	Corrective Action / Remedy
No hot water	Water Heater Turned Off	Turn On
	Improper Wiring	Rewire per diagram
	All Hot Water Used	Wait for tank to recover
	High Limit Switch Tripped	Reset high limit switch
	(Blown Fuse) Shorted Wiring	Replace or repair
	(Blown Fuse) Circuit Overload	Provide adequate circuit
	(Blown Fuse) Grounded Element/Thermostat	Replace Safety Controls
	(Blown Fuse) Improper Wiring	Recheck Wiring
Not enough Hot Water	Heater Undersized	Install proper sized heater
	Element Malfunction	Replace Element
	Thermostat Malfunction	Check Wiring- replace
Water too hot or too cool	Thermostat Setting too High or Low	Change setting as required
	Thermostat Out of Calibration	Adjust setting or replace*
	Insulation Around Elements Not Properly Replaced	*Replace insulation properly

TABLE 1

CAUTION: For your safety, DO NOT attempt repair of electrical wiring, thermostat, heating elements or other operating controls. Refer repairs to qualified service personnel.

MAINTENANCE

Properly maintained, your water heater can provide years of dependable, trouble-free service. It is suggested that the purchaser follow the preventive maintenance program outlined below. The electric service switch to the water heater MUST BE TURNED OFF and the cabinet door opened to allow for a visual inspection before servicing the water heater.

A. GENERAL

- ❑ The reset button on the high limit cut-off should be depressed by hand to ensure that it is not in its tripped position.
- ❑ All components and wiring connections should be checked for evidence of welding, arcing, or burning.
- ❑ All screws and nuts should be checked with a screwdriver or wrench to be certain that they are tight.
- ❑ The thermostat dial should be checked to ensure that it is set at the desired water temperature.
- ❑ Thermostat bulbs should be checked to make sure that they are seated at the bottom of the immersion well.

B. CONTROLS

- ❑ After the completion of the previous procedures, with the cabinet door still open, the electric service switch for the water heater should be turned on.
- ❑ If the water temperature is below the temperature set point on the thermostat, the contactors should become energized to deliver power to the heating elements.
- ❑ If the contactors DO NOT OPERATE upon application of power to the heater, the thermostat may be set to a higher temperature with a screwdriver to demand power to the heating elements.
- ❑ Some of Vaughn's A Model water heaters are furnished with an optional control relay to allow external control of power to one or more of the heating elements during certain periods of the day.
- ❑ If the control relay is present, it may need to be overridden before troubleshooting the controls. If the relay is normally closed and appears to be energized, it should be de-energized by turning off the electric service switch, removing one external wire from the external control terminal block and turning the electric service switch back on to repeat the above checkout procedure. If the relay is normally open, energize it with external control or refer to wiring diagram to bypass it.

- If this procedure fails to operate the contactors, additional trouble shooting, requiring either an A/C voltmeter or clip-on amp meter is necessary.
- With the electric service switch on, measure voltage across each phase of the input power terminal block at the top of the control box. It should be equal to that specified on the heater nameplate; if it is not, there is something wrong in the electric service to the water heater.
- If it is correct, the temperature control thermostat should be set to 145°F and the voltage at the contactor coils should be measured. If the high limit cut-off and the operating thermostat are operating properly, a voltage of 110V should appear on the contactor coil terminals.
- If this voltage is not present, there is a problem with the control transformer, a contactor, the high limit cut-off or the operating thermostat. A licensed electrician can remove the covers of the high limit cut-off and operating thermostat and measure voltage between each terminal of these control components and the low side of the control circuit (refer to wiring schematic located inside the cabinet door). If there is no voltage at the transformer, check the contactor coils for shorts before replacing the transformer.
- Lack of a 110V reading at any point indicates that a previous contact (high limit cut-off or operating thermostat) is inoperative, and that control component must be replaced.

C. THERMOSTAT OR HIGH LIMIT REPLACEMENT

- Turn off the electric service switch, remove the thermostat or high limit covers and disconnect the wires. Remove the thermostat bulb from its immersion well by loosening the set screw on the immersion well and removing the bulb and clip from the well. Unscrew the thermostat from the control panel as well as the clamps which secure the thermostat capillary tubing to the panel. Remove the complete thermostat assembly from the panel and replace it with a new unit taking care to ensure that the wires are reconnected, the bulb is bottomed in the well, the clip is secured in place and capillary tubing clamps are replaced on the panel.
- Set the thermostat to 145°F, (high limit cut-off to 190°F) close the cabinet door and turn on the electric service switch. If the thermostat or high limit cut-off which has just been replaced was faulty, the heater should now operate properly.
- If proper voltage appears at the contactor coil terminals and the contactor(s) do not operate, the contactor coil is faulty, and the contactor(s) should be replaced.

- If the contactors are all working and proper voltages are measured at the heating elements and no hot water is generated by the elements, then one or more elements may be faulty.
- The electric service switch should be turned off and the resistance at each phase of each heating element should be measured with an ohm meter without removing any connections. This resistance should be between 6 ohms and 14 ohms depending on the element power rating and each phase of a particular three phase element should have equal resistance readings. If the elements are open or shorted, they need to be replaced.

D. ELEMENT REPLACEMENT

- Turn off the electric switch, shut off the cold water supply to the heater and open any hot water faucet. Open the heater drain cock at the bottom of the tank and drain the tank completely.
- Remove the electrical connections from the heating element and remove the flange nuts taking care not to lose the flange bolts. The heating element may now be removed. Replace the element being careful to observe that the gasket is in good condition. A new gasket should always be used when replacing an element. Tighten the flange nuts and replace the electrical connections exactly as they were removed.
- REFILL the tank with water before turning on the electric service switch.
- DO NOT APPLY ELECTRICAL ENERGY TO THE HEATER BEFORE FILLING THE TANK WITH WATER.
- To fill the tank, close the drain, turn on the cold water supply to the heater and wait until water runs from the previously opened hot water faucet which indicates that the tank is full of water and all air is out of the system. Turn off the hot water faucet, close the cabinet door and turn on the electric service switch. The water heater should now be in operation.

E. ANNUAL INSPECTION

- Lift test lever on relief valve and let water run through valve for a period of approximately 10 seconds.
- Inspect element fittings for leakage.
- Check for loose electrical connections (Turn off power first).
- Flush tank at 10 years (or earlier if needed).

F. DRAINING THE HEATER

- **CAUTION: Shut off all power to the heater before draining water.**

- To drain the tank, a hot water faucet must be opened to admit air to the tank.
- Close valve on the cold-water line to the heater.
- Attach a hose to the drain on the heater and direct to a drain.

G. LONG TERM SHUT DOWN

- If the water heater is to remain idle for an extended period of time, the power and water to the heater should be turned off to conserve energy.
- The water heater should be drained if it might be subjected to freezing temperatures.
- After a long shutdown period, qualified service personnel should check the heater's operations and controls.

H. EMERGENCY

- Should the heater be subject to flood, fire, or other damaging conditions, turn off the power and water to the heater.
- **DO NOT place the water heater in operation again until it has been thoroughly checked by qualified service personnel.**

HOW TO OBTAIN SERVICE ASSISTANCE

Vaughn Thermal Corporation does not have a service department or personnel to service your heater in the field. A qualified installer or service technician must do all service work. Therefore, if you have any questions about your new water heater concerning service adjustment, repair, routine maintenance, or replacement - **first contact your installer, plumbing contractor, or service agency.**

In the event that the contractor is unable to help, refer to the telephone directory commercial listings for qualified service assistance.

If neither action has solved your problem, please have your plumbing contractor contact us for assistance.

CUSTOMER RELATIONS DEPARTMENT
General@vaughncorp.com
978-462-6683

VAUGHN THERMAL CORPORATION
26 OLD ELM STREET
P.O BOX 5431
SALISBURY, MA 01952

When contacting Vaughn, the following information should be made available:

1. **The model and serial number of the water heater as listed on the rating plate on the heater.**
2. **Address where water heater is installed.**
3. **Name and address of dealer from whom the heater was purchased and installer's name and address.**
4. **Date of original installation and any service work performed since then.**
5. **Details of the problem as you can best describe.**
6. **List of people who have been contacted regarding the problem.**

WARRANTY

Five Year Limited Tank Replacement Policy
One Year Limited Parts Warranty

Vaughn Thermal Corporation, (hereinafter called the Company) offers the following Limited Warranty and Tank Replacement Policy to the original purchaser/owner of this water heater.

This Limited Warranty and Tank Replacement Policy is not transferable beyond the original purchaser/owner and is not valid if the tank is removed from initial installation site. The Company reserves the right to require proof of purchase as a condition of this warranty. Excludes any implied warranty of merchantability or fitness for any particular purpose. This limited Warranty is the only Warranty for this unit given by the Company. No one is authorized to make any other warranties on behalf of the Company. ANY IMPLIED WARRANTIES, INCLUDING MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE, SHALL NOT EXTEND BEYOND THE APPLICABLE WARRANTY PERIODS SPECIFIED PREVIOUSLY. THE Company SOLE LIABILITY, WITH RESPECT TO ANY DEFECT, SHALL BE AS SET FORTH IN THIS LIMITED WARRANTY, AND ANY CLAIMS FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES (INCLUDING DAMAGE FROM WATER LEAKAGE) ARE EXCLUDED.

LIMITED WARRANTY

DURATION: The warranty is effective for (1) one year beginning with the date of original installation and installed in a single-family dwelling. At the time the claim is filed, if the original purchaser cannot provide an original installation sales receipt, deed or equivalent document in the case of a new home purchase, this warranty shall begin from the date of manufacture as indicated by the serial number. If the heater is installed anywhere other than a single-family dwelling the warranty is (1) year beginning from the date of original purchase. At the time the claim is filed, If the original purchaser cannot provide an original sales receipt, deed, or equivalent document in the case of a new home purchase, this warranty shall begin from the date of manufacture as indicated by the serial number.
COVERAGE: The warranty covers any component part of the water heater proven to be defective in workmanship or material. Recovery under the terms of this agreement is subject to prior approval by the company.
COMPANY OBLIGATION: Repair or replacement is the option of the Company and constitutes the fulfillment of **ALL** obligations of the Company hereunder.
LIMITATION: All repairs or replacements will be made F.O.B. the Company. The purchaser must pay for transportation service, labor, installation, administrative fees, or other costs involving the repair or replacement of such component parts.
YOUR ACTION: When you discover a defect, immediately notify the dealer from whom the heater was purchased. If you cannot locate the dealer, contact the Company.

TANK REPLACEMENT POLICY

DURATION: The warranty is effective for (5) five years beginning with the date of original installation. If the original purchaser cannot provide an original installation sales receipt, deed, or equivalent document in the case of a new home purchase, this warranty shall begin from the date of manufacture as indicated by the serial number.
COVERAGE: Replacement policy covers only the storage tank for leaks caused by the corrosive effects of the water under normal and proper use. Recovery under the terms of this agreement is subject to prior approval by the company. The tank replacement policy excludes any performance warranty implied or specific merchantability and fitness for its intended use.
COMPANY OBLIGATION: Repair of the original tank or replacement of the entire heater with a new comparable model is the option of the Company and constitutes the fulfillment of all the obligations of the Company hereunder. In replacing or repairing the water heater, the Company reserves the

right to make such changes in details of design, construction or material as shall in their judgment constitute an improvement of former practices.

REPLACEMENT: When a replacement is made under the terms of this policy, the replacement unit will have a policy of replacement only for the remaining time under the original policy. The Company reserves the right to require the return of the defective unit at the expense of the purchaser.

LIMITATION: All repairs or replacements will be made F.O.B. the Company. The purchaser must pay for transportation, service, labor installation, administrative fees or other costs involving the repair or replacement of such part.

YOUR ACTION: When you discover a defect, immediately notify the dealer from whom the heater was purchased. If you cannot locate the dealer, contact the Company.

EXCLUSIONS AND LIMITATIONS

Limited Warranty and Tank Replacement Policy are valid only if you comply with the following conditions and limitations:

1. The water heater must be correctly installed according to the installation manual provided with the unit and all applicable local and national codes.
2. Proper safety practices such as but not limited to a properly sized drain pan.
3. The unit must be operated within the factory calibrated temperature limits and water pressure not exceeding 80 psi static pressure. Any failure or malfunction that results from improper or negligent operation, accident, abuse (including freezing), misuse, unauthorized alteration or improper maintenance is specifically excluded, fire, lightening, acts of God, and the like.
4. Any failure or malfunction that results from failure to keep the tank full of potable water, free to circulate at all times, and free of damaging water sediment or scale deposits, is specifically excluded. In areas where adverse water conditions are suspected (i.e., calcium and other minerals), it is essential that the water be tested, and appropriate action be taken to prevent damage to the water heater.
5. This Limited Warranty and Tank Replacement Policy specifically excludes any implied warranty of merchantability or of fitness for any particular purpose, as well as any performance warranty.
6. Installed in the United States, or Canada
7. Sized in accordance with proper sizing techniques for water heaters.
8. Connected to the proper voltage per rating plate.
9. Installed with no attempted, nor actual modification or alteration of the water heater's design in any way, including but not limited to, the attachment of non-company approved appliances or equipment, including any additional aftermarket equipment introduced into the sealed system.
10. Units with their rating plate removed.

IN NO EVENT SHALL THE COMPANY BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER.

Some states do not allow the exclusion or limitation of implied warranties or of liability for incidental or consequential damages, so the above limitation(s) or exclusion(s) may not apply to you.

NOTES

The following information should be noted at time of installation and retained for future reference.

Model No: _____

Serial No: _____

Date Installed: _____

Dealer's Name: _____

Address: _____

City: _____

State: _____Zip: _____

VAUGHN
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Revision 2.1