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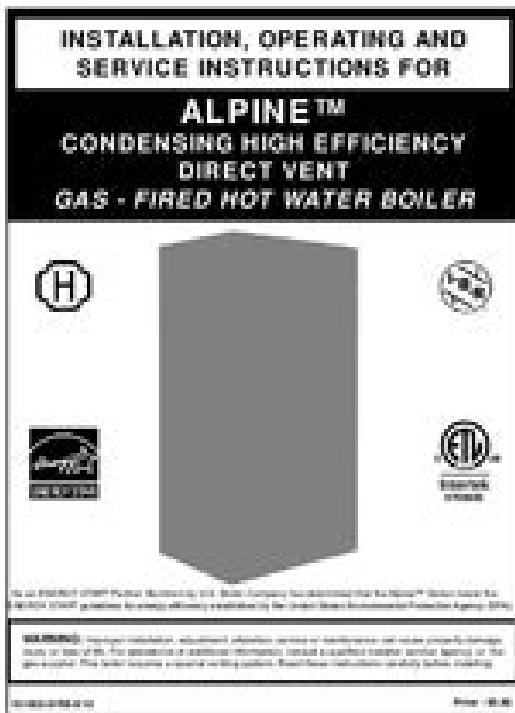
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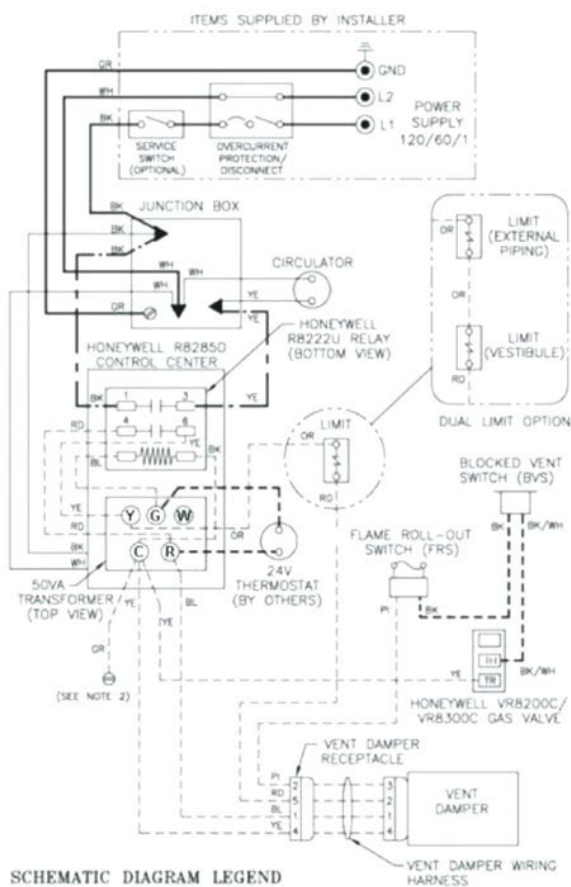
Alan Carson is a past president of ASHI, the American Society of Home Inspectors. Carson Dunlop Associates provides extensive home inspection education and report writing material. The text is intended as a reference guide to help building owners operate and maintain their home effectively. Field inspection worksheets are included at the back of the volume. Special Offer For a 10% discount on any number of copies of the Home Reference Book purchased as a single order. InspectAPedia.com editor Daniel Friedman is a contributing author. Or choose the The HOME REFERENCE eBook for PCs, Macs, Kindle, iPad, iPhone, or Android Smart Phones. Special Offer For a 5% discount on any number of copies of the Home Reference eBook purchased as a single order. For assistance or additional information, consult a qualified installer, service agency or the gas supplier. This boiler requires a special venting system. Read these instructions carefully before installing. Next NOTE The equipment shall be installed in accordance with those installation regulations enforced in. Page 3 WARNING Follow the instructions contained PreInstallation III. Unpacking Boiler Page 10 IV. Venting IV. Venting Page 12 Table 4 Vent System Components Included with Boiler Page 14 Figure 3 Expansion Loop and Offset Vent Piping Snorkel Page 20 Figure 12 Field Installation of Boiler Concentric Vent Collar The terminal vent portion is offset. Page 24 Figure 19 Vertical Concentric Vent Installation Use a drill stop or Be careful to cut the pipe Slip the elbow Page 28 Figure 28 Chimney Chase Installation A. Condensate Trap and Drain Line. 6. If any additional condensate drain line is needed, Water Piping and Trim Page 35 Table 12B Recommended Circulator Models for Alpine ALP Boilers and Alliance SL Indirect Water Heaters Page 37 Table 13 Fitting and Valve Equivalent Length Table 13 Fitting and Valve Equivalent Length cont'd Page 46 VII. Gas Piping VII. Gas Piping Page 49 VIII. Electrical VIII. <http://ivplanet.ru/userfiles/dell-3400mp-projector-manual.xml>



ElectricalPage 54 Figure 37B Modified Wiring For DHW Priority When Using Low Flow Circulator Piped Off System Header Page 55 Figure 38 Wiring for MCBA Modulating Boiler Control Time Delay Relay BoxPage 56 IX. Boiler Stacking IX. Boiler StackingPage 57 vertical roof vent terminals, if level with of an individual boiler. When common gas pipingA. General Guidelines Using PVC Pipe for Individual Module CombustionPage 59 Figure 40 Modular Boiler Direct Vent TerminationA. Verify that the venting, water piping, gas piping andH. Purge Air From Gas Train K. Perform Combustion Test Boilers equipped with aThe final throttle setting must be found usingI. Factory Preset Boiler Operating Parameters c. "Stby" for Standby Mode. Upon enteringPage 73 Table 25 Parameter DescriptionsPage 76 Additionally, either the keypad or the personal computer canPage 77 Figure 52 Expanded Menu Tree Cont'd on next pageA window Using Gascom To Monitor The MCBA. Page 83 Table 27 NTC Sensor Resistance ValuesService and MaintenanceA. Troubleshooting problems where no. Page 89 B. Trouble shooting problems where a soft lockout code is displayed. When a soft lockout occurs, the boiler will shut. Page 90 C. Trouble shooting problems where a hard lockout the condition that caused the lockout is corrected, theShould you require. Page 92 Key Quantity Part NumberNo. ALP080 ALP105 ALP150 ALP210 ALP285 ALP399No. ALP080 ALP105 ALP150 ALP210 ALP285 ALP399Page 97 Key Quantity Part NumberNo. ALP080 ALP105 ALP150 ALP210 ALP285 ALP399Warning. The Repair Parts list designates parts that contain refractory ceramic. Page 100 Limited Warranty. Our Live Chat hours areIf you have problems accessing your account, please contact us at 18887574774 and well help you out. Every Alpine boiler is equipped with a number of advanced technologies to constantly monitor boiler performance and match fuel consumption directly to heating demand.

The Alpine incorporates outside temperature sensing technology that automatically adjusts the firing rate of the boiler based on the outside air temperature. It also continuously monitors system safety parameters to ensure years of comfortable, safe, reliable operation. Today's Alpine is the peak of performance. Add item to cart for lowest price. Manufacturers warranty still applies. Join our mailing list to receive exclusive offers and coupons. To protect the health and safety of our employees, we have implemented workfromhome policies in our California, Michigan and Ohio offices. At this time, technical support and customer service will be provided via email with more limited capacity for phone support. To submit your support questions please visit our Knowledge Center below and click

“ask a question”. We apologize for any inconvenience and will address your support questions as quickly as possible. Customer Service Have questions. Hear it first! Arrow Signup to get Alpine news. Do not store or use gasoline or other Suivez les instructions du fournisseur. The following terms are used throughout this manual to bring attention to the presence of hazards of various risk levels. Basic Operation and Maintenance Attempts to service this boiler by someone other than a Do not use this boiler if any part has been under water. Immediately call a qualified service technician to Where such a shutdown could result in damage Boiler. Control locations If the boiler fails to fire, call a qualified gas service Call a qualified gas A shutdown of the burner due to the pressure B. Maintenance APPLIANCE” in Figure 2 and contact a qualified No true yellow tipping Installation, Operating, and Service Instructions. Figure 2 Lighting Instructions Do not add any chemicals to the boiler not listed Warranty is void if the Section XII of the Alpine instruction manual is not Carbon “soot” in or near the burner If carbon is found, Figure 3 Burner Flame Important Product Safety Information.

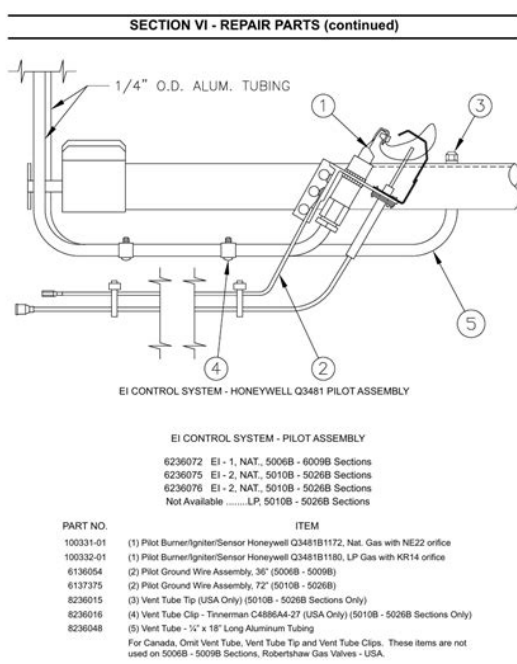


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Refractory Ceramic Fiber Product. Warning. The Repair Parts list designates parts that contain refractory ceramic fibers RCF changes into crystalline silica, a known carcinogen. When disturbed as a AVOID Breathing Fiber Particulates and Dust. Precautionary Measures. Do not remove or replace RCF parts or attempt any service or repair work Take steps to assure adequate ventilation. Wash all exposed body areas gently with soap and water after contact. Wash work clothes separately from other laundry and rinse washing Discard used RCF components by sealing in an airtight plastic bag. RCF States and Canada. First Aid Procedures. If contact with eyes Flush with water for at least 15 minutes. Seek If contact with skin Wash affected area gently with soap and water. Seek immediate medical attention if irritation persists. If breathing difficulty develops Leave the area and move to a location Seek immediate medical attention if breathing Ingestion Do not induce vomiting. Drink

plenty of water. Seek. Please check your inbox, and if you can't find it, check your spam folder to make sure it didn't end up there. Please also check your spam folder. For assistance or additional information, consult a qualified installer, service agency or the gas supplier. Read these instructions carefully before installing. These regulations shall be carefully followed in all cases. Authorities having jurisdiction shall be consulted before installations are made. See the Massachusetts Board of Plumbers and Gas Fitters website, for the latest Approval Code or ask your local Sales Representative. Immediately, call the gas supplier from a remotely located phone. Follow the gas supplier's instructions or if the supplier is unavailable, contact the fire department. Follow the instructions contained in this manual. Read and understand the entire manual before attempting installation, startup operation, or service.

<https://www.arquetopia.org/images/bower-14mm-f-2.8-ultra-wide-angle-manual-focus-lens.pdf>



Installation and service must be performed only by an experienced, skilled, and knowledgeable installer or service agency. A clean and unobstructed venting system is necessary to allow noxious fumes that could cause injury or loss of life to vent safely and will contribute toward maintaining the boiler's efficiency. If damage due to frozen pipes is a possibility, the heating system should not be left unattended in cold weather; or appropriate safeguards and alarms should be installed on the heating system to prevent damage if the boiler is inoperative. Do not unscrew any pipe fittings nor attempt to disconnect any components of this boiler without positively assuring the water is cool and has no pressure. Always wear protective clothing and equipment when installing, starting up or servicing this boiler to prevent scald injuries. Do not rely on the pressure and temperature gauges to determine the temperature and pressure of the boiler. This boiler contains components which become very hot when the boiler is operating. Do not touch any components unless they are cool. Always use proper safety clothing, respirators and equipment when servicing or working nearby the appliance. Read all instructions, including all those contained in component manufacturers manuals which are provided with the boiler before installing, starting up, operating, maintaining or servicing. It is the responsibility of the installing contractor to see that all controls are correctly installed and are operating properly when the installation is complete. These boilers are not designed for use in

gravity hot water space heating systems or systems containing significant amount of dissolved oxygen For elevations above 2000 Feet, ratings should be reduced at the rate of four percent 4% for each 1000 Feet above sea level.

<http://www.giorgioantrone.com/images/bowens-quadx-3000-manual.pdf>



For basement installation provide DO NOT oversize the boiler to The PVC combustion In the absence of such Do not install boiler on Recommended Recommended front clearance Moisture and ice may form on surface around vent termination. To prevent deterioration, surface must be in good repair sealed, painted, etc.. Severe boiler corrosion and failure will result. At the time of removal of an existing boiler, the following steps shall be followed with each appliance remaining connected to the common venting system placed in operation, while the other appliances remaining connected to the common venting system are not in operation Turn on clothes dryers and any appliance not connected to the common venting system. Do not operate a summer exhaust fan. Close fireplace dampers. Follow the Lighting or Operating Instructions. Adjust thermostat so appliance will operate continuously. Use the flame of a match or candle, or smoke from a cigarette, cigar or pipe. Contact local building or fire officials about restrictions and installation inspection in your area. Refer to Paragraph C through F for specific details. The inner pipe serves as conduit to expel products of combustion, while outdoor fresh combustion air is drawn through the space between the inner and outer pipes. Refer to Paragraphs G through P for specific details. CPVC vent components must be used prior to exit of any closet or confined space. Maximum support spacing is four 4 feet. Avoid low spots where condensate may pool. Do not penetrate any part of the vent system with fasteners. Table 6 lists equivalent lengths for fittings. The vent termination location is restricted as follows refer to Figures 6 and 9 Maintain minimum clearances to combustibles materials. See Figure 2 and Table 5 for details. Start at vent connector at rear of boiler and work towards vent termination. Runs of 20 ft. or longer that are restrained at both ends must use an offset or expansion loop. Refer to Figure 3. See Figure 4. See Figure 4.

The CPVC 30" straight section may be cut to accommodate desired vent configuration for. Ensure that the Follow the instructions provided on the primer and cement. Insert thimble through wall from outside. Secure outside flange to wall with nails or screws, and seal ID, OD and vent holes with sealant material. Install inside flange to inside wall, secure with nails or screws, and seal with sealant material. Sealant should not restrain the expansion of the vent pipe. If not, slope toward boiler. Combustion air terminal can be installed closer to wall than vent. The fire stop must close Allow additional vertical distance for expected snow accumulation. Provide brace as required. Apply Dow Corning Silastic 732 Combustion air terminal can be installed closer to roof than vent. Follow flashing manufacturers' instructions for installation procedures. Allow additional vertical distance for expected snow accumulation. Provide brace as required. See Figure 11. If not, slope toward boiler. See Figure 11. The Collar mounting hardware See Figure 12. See Figure 12. See Figure 11 for details. See Figure 12 for details. 1. Vertical terminal can be used with either of the roof flashings listed beneath it. Do not restrict thermal expansion or movement of vent system. Do not penetrate any part of the vent system with fasteners. See Table 11 for specified vent length details. Do not exceed maximum vent length. Table 8 lists available Do not include vent terminal into total vent length calculations. See Figure 2 and Table 10 for details. Refer to Figure 7. Do not install the terminal over public walkway where local experience indicates that appliance flue gas vapor or condensate creates a nuisance or hazard. This distance may be reduced if equipment is protected from damage due to flue gas vapor or condensation by enclosure, overhang, etc. If a roof overhang width exceeds twelve 12 inches the terminal vertical clearance must be increased to avoid flue vapor condensation.

<http://www.cuerpomenteyespiritu.es/wp-content/plugins/formcraft/file-upload/server/content/files/1626d83159e417---3m-noisepro-dosimeter-manual.pdf>

Maintain minimum clearances to combustible materials. See Figure 2. Start at vent connector on top of boiler and work towards vent terminal. See Figure 12. See Figure 13 "Horizontal Wall Terminal Installation". Ensure the pipe is cut square and cut end is deburred. To achieve a square cut of the inner pipe, place several marks around the inner pipe to establish a cut line. Insure the proper position of the Horizontal Concentric Vent before securing the Outside Wall Plate to the wall with provided fasteners. Seal plate edges with exterior grade sealant to prevent moisture penetration. It is imperative to properly mount the vent terminal. Insure the vent terminal is positioned as shown in Figure 18 before securing the Outside Wall Plate to exterior wall. Secure the plate with provided fasteners, then, apply the sealant around plate sides to seal it to interior wall. Allow additional vertical distance Provide brace as required. Use collar rivets as reference attachment points. Do not use sheet metal screws longer than ". Always cut the pipe from plain male end. These pipes have beaded male and beaded female ends. Mark the cut line on the outer pipe. Be careful to cut the pipe square. Deburr the cut end with a file or emery cloth. Use a fine tooth hacksaw or a PvC saw to cut the plastic pipe and be careful to cut the pipe square. Deburr the cut edge of the plastic pipe with a file, razor blade or fine sandpaper. Lubricate the brown gasket in the boiler vent collar with a few drops of water. The male end of cuttable sections should go 1" into the collar until the insertion mark made in Step 2d above is covered. On other fittings, the bead on the male pipe will be bottom out on the collar see Figure 24. Do not use a sheet metal screw longer than Refer to Figures 26, 27 and 28. For sloped roof, cut a hole in the roof large enough for the terminal to pass through the roof while remaining plumb.

The last section of pipe needs to be on the same center line as the terminal Carefully mark this length on the pipe as shown in Figure 26. Be careful to cut the pipe square. Deburr the cut end with a file or emery cloth. Deburr the cut edge of the plastic pipe with a file or emery cloth. Push into the last section of vent pipe until the mark made in Step h is not longer visible. Refer to Figure 28. Slip the elbow over the M10 x 35 screw in the support bracket. The front of the elbow mounting bracket

should be supported either by bottom of the opening into chimney or installer supplied spacer. Install the vertical terminal through this roof using the flat roof flashing. The trap has factory installed overflow switch, which shuts down the boiler in the event the drain line becomes obstructed, preventing proper condensate removal. Refer to Section XIII "Service and Maintenance" for condensate trap and condensate overflow switch removal and replacement procedure, if required. Do not route the drain line through areas that could be damaged by leaking condensate. Select a condensate pump approved for use with condensing furnaces. If overflow from the pump would result in property damage, select a pump with an overflow switch. Wire this switch in series with installer provided external high limit, to shut off Refer to Figures 1A and 1B. To fill the trap, inject water in the amount of 1 cup 8 fluid ounces through condensate trap stub opening. Do not overfill the trap. Do not over tighten coupling compression nuts when connecting drain line and condensate trap stub. Route condensate drain line in a manner such that any condensate leakage will not cause property damage. Follow local codes pertaining to condensate disposal. Follow local codes and instructions enclosed with the kit for Condensate Neutralizer installation. Therefore, periodic condensate neutralizer maintenance and limestone chip replacement must be performed. Please call to verify price validity.

A The pipe your referring to is most likely attached to the pressure relief valve, and is leaking because it has reached its blowoff point pressure over 30psi. This is a safety device which is designed to keep the boiler from reaching pressures above 30psi. All boilers should have mechanical parts such as pressure regulator, backflowpreventor, pressure relief valve, and expansion tank replaced every ten to twelve years. Furnaces and air handlers with evaporator coils should be cleaned and washed down every three to five years, same goes for the outdoor condenser. Evaporator coils and condensers get pluggedup with pollen and small particles of dust, which reduce the efficiency and effective transfer of hot or cool air. Q Adding AC Is it possible to add AC cool air to my heating furnace. A Most furnaces can be retrofitted with a cased or uncased evaporator coil depending on the existing furnace age; blower motor and controls. Have your HVAC specialist assess the system first. Q Heat Pumps Will a heat pump work in New England winters. A Heat pump technology has come a long way. Many minisplit systems will now operate effectively under harsh winter conditions 3F20F whereas a whole house split systems may not be as effective. Q Radiant heat I want to install radiant heat in my basement. Is this possible without having to ripup the concrete floor. A Any installation of radiant flooring which keeps the tubing off the concrete is recommended and preferred. Some of our best installations of radiant heat have been done in basements, using a floating floor system which acts as both a vapor barrier and an insulator, we install a slotted radiant track which provides even heat to the entire area. Below are some pictures of a section of radiant flooring in which antifreeze was needed note the red color in the tubing for a separate section of the heating system which was exposed to the elements on a four season deck.

Q Frozen baseboard I have a section of baseboard in a four season porch which freezes up occasionally. How do I prevent this from happening. A The first and most cost efficient way of keeping any part of your heating system from freezing would be to pump antifreeze non toxic solution into the heating system. With the exception of systems containing Aluminum, CPVC and Galvanized Steel. Most antifreeze solutions will even protect the metals in your heating system against corrosion and lubricate moving parts. Antifreeze solution should last up to 67 years depending on the size of your heating system, and should be checked every two to three years for high acidity pH levels. The second solution to your problem is to create a seperate zone just for that four season room, by adding a switching relay to your boiler and rerouting the piping going to and coming from the radiators. This room can now be controlled by its own thermostat. Condenser installed on wall bracket. Salisbury, MA. It may not display this or other websites correctly. You should upgrade or use an alternative browser. Then the water temperature will begin to rise in 2 degree increments, 92, 94, 96 etc. Then when it reaches arround 100 degrees plus or minus it will

do this 92, 94, 96, 98, 100, 98, 96, 100 then soft lockout because it says the temperature rise was too fast. I cleaned the combustion chamber as per manual. very little to clean Circulation pump is fine and working proper. Burnham is no help, just try to get advise from these people. You would think that they would go out of their way to help there customers. NOT! I do believe that I made a grave mistake of purchasing a BURNHAM ALPINE 105 boiler, and would never recommend to anyone the purchase of one of these products. My intuition tells me that its probably a malfunctioning water temperature sensor, or a computer malfunction. Its starting to get cold here in Alaska, the temp. And my Plumber is booked until Sept. 30th.

Thank You, An air lock can cause this. First thing I'd try is to bleed it to see if there is any trapped air. How is yours installed. When the call for heat occurs, are the circulators actually coming on. Do you have an air extraction device. Is it gunked up and no longer functioning. If you have zone valves, are the valves actually opening. Many of those have a manual override, you could try manually opening the one that is calling for heat. How many zones do you have. How about an indirect WH. If you have one, is that warming up properly, or does it fail when that zone calls for heat as well. Got any pictures of the installation. What type of radiation. An air lock can cause this. If you have one, is that warming up properly, or does it fail when that zone calls for heat as well. Click to expand. It has the primary and secondary loop so that the boiler can circulate independently of zone control valve circulation. And it also has an automatic air bleed valve. It has worked fine for the past 46 months with no problem. The main circulator is working fine, as well as the zone valves. At one point I set several thermostats to call for heat, then manually forced zone valves open, all with the same soft lockout. He thinks it might be the High limit switch is malfunctioning. So I have one on order by Blue streak air. Will be here this afternoon and will try. Thank You, Capindres Its set up where I can easily check for air, either in a single zone, or the system in general. The problem is not that its overheating and shutting down, rather, it rarely reaches its set point of 180 degrees, yet reports that the temp is rising too fast and then soft lockout the system and shuts down. Then after about 20 minutes if left alone will reset itself and start over again. I have 2 types of radiation. Baseboard heaters upstairs, and in the concrete floor heat down stairs. The HW is on its own zone going through one of those rectangle laminated copper heat exchangers.

I was able to contact a plumber in the know in the Washington area Burnham gave me the number and he thinks its a malfunctioning Limit switch. Have one on order, will be here this PM and will report back once I get it installed and determine the outcome. Thank You, Capindres Noticed when I drained the water from the boiler it was discolored, so I also flushed the system until I got clear water. So far seems to be working just fine Temperature climbed without any softlockouts except while I was flushing the system while it was running, but I kinda expected that because I was messing with the water temperature. SO, thinking it might be the main computer board I have a brand new one purchased last winter while fighting another malfunction I switched the main board computers out. Still does the same thing. All zone valves are working, when activated by tstat and call for heat, then the boiler responds, you can feel the individual zone pipes getting hot fast. Any one out there have any other thoughts. My plumber will be here Friday this is Monday Thank you, Capinders The sensor that monitors the supply temperature may be bad, or the connection loose. it sounds like the controller is doing what it is supposed to it appears to think theres no or little flow, the temperature is rising too fast, and predicting the possibility that it might flash to steam which can cause an explosion and thus not good!, so it is shutting the flame down. After a cooldown period, it tries again. If the connection from the sensor has push on leads, make sure they are tight, then remove them and reinsert which, if they are corroded at all, may clean them enough to work. If it is a solid state sensor, it is very sensitive to the overall resistance, and any corrosion can mess up the reading. They are both the same make and model. One of them was bad.

Hired the Plumbing outfit who installed the boiler, and The installer very knowledgeable individual

suggested I redo part of my plumbing, that it might be the problem. 2 days later after ME redoing the plumbing to his specifications, the boiler continued on with the same old soft lockout problem. So what did I have to lose, I ordered 2 new temp sensors. 5 days later they came in, and I installed the first one, refilled the boiler and turned it on. No more problems. Been almost 4 days now. Circulation problems I would tend to agree if. Anyway for any of you out there with a Burnham Alpine, having soft lockout problems. Check your 2 temperature sensors on the boiler. I now keep a spare handy, as it takes about a week to get parts here in Alaska. And when its 30 below zero that could spell disaster. Then the water temperature will begin to rise in 2 degree increments, 92, 94, 96 etc. Its starting to get cold here in Alaska, the temp. And my Plumber is booked until Sept. 30th. Thank You, Click to expand. They make it very hard to reach anyone that can help and then just pass you on to a list of contractors on their site to call for service. Contractors that are actually certified to work on Alpine boilers are few a far between. Most of tech on their website that Ive dealt with just throw parts at the unit and hope it works. FWIW, I always try to read the manual and try to understand how it is supposed to work when they provide that info, and then, have a better chance of figuring out what could be wrong. Most every time I just try to wing it, something goes wrong either it doesnt work, or worse yet, it destroys something. This is why it is very important to select a device that is well supported locally and from the manufacturer, in the long run, it ends up lots less expensive and stressful. Unfortunately they rarely have the number nor are directly to it by the local distributor. We know how to use an amp meter, but then, our customers dont mind paying for competent service.

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