



BOSCH HEATER Troubleshooting Guide

S-BH-1



SERVICE

In Canada:

Toll Free: 1-800-663-8405

Tel: (604) 929-5488 Fax: (604) 929-4883

In United States:

Toll Free 1-800-824-7337

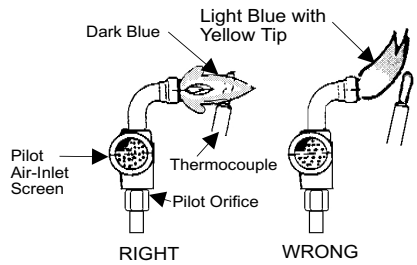
Tel: (206) 860-8448 Fax: (206) 860-8388

ASTRAVAN DISTRIBUTORS LTD

123 Charles St, North Vancouver BC Canada V7H 1S1

A. PILOT FLAME

1. The pilot flame should be blue and steady, with no orange color.
2. The flame should envelope the top 1/4" to 3/4" of the thermocouple.
3. Clean the AIR-FILTER SCREEN with a soft brush.
4. Clean the PILOT ORIFICE if necessary.
5. Do not use metal or hard material to clean the PILOT ORIFICE hole. The hole could



SOOT OR CARBON BUILD-UP

If the pilot or the main burner is yellow, soot can rapidly build up and cause odor and damage to the heat exchanger. Clean the pilot as in A.

If the burner or heat exchanger requires cleaning, remove and clean with water or air hose.

B. PILOT CAN BE LIT BUT FLAME GOES OUT DURING USE

1. Check the PILOT FLAME as above.
2. Have your gas serviceman check that the gas supply and pressure regulators are properly sized per the cover plate. You will have pilot problems if the gas supply pressure is too low.
3. The heater should not be exposed to
- or a negative pressure caused by exhaust fans.
4. Restriction or excessive preheat of incoming water may cause the high-limit safety device to trip.
5. Check the thermocouple and wiring connections for loose contact.

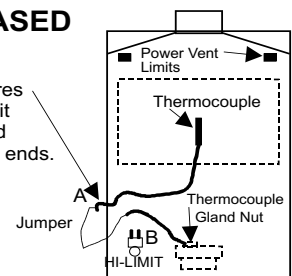
7. If a POWER VENTER is attached to the heater, the venter should come on when the main burner lights.

8. In areas where the water is hard, check the heat exchanger for lime build-up.

C. PILOT LIGHTS BUT GOES OUT WHEN KNOB OR BUTTON RELEASED

1. Check the PILOT FLAME as above.
2. Check the thermocouple wire connections to the LIMIT CONTROL and to the GAS VALVE magnet. They should be tight, and the end terminal secured firmly by the thermocouple gland nut on the back of the GAS VALVE.
3. Check the HI-LIMIT and wiring harness by jumping between A and B. If the PILOT stays lit, replace the HI-LIMIT or wire harness.
4. If the PILOT still goes out, replace the thermocouple.
5. If a POWER VENTER is attached, check the HIGH LIMIT and wiring.
6. Have a qualified gas serviceman check the gas valve magnet.

Remove wires from Hi-Limit terminal and jumper wire ends.



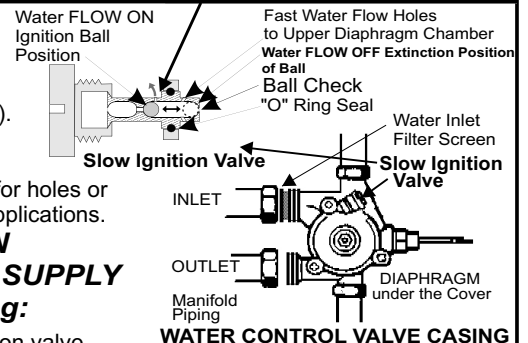
D. PILOT WILL NOT LIGHT WHEN KNOB DEPRESSED

1. ON NEW INSTALLATIONS, IT WILL TAKE TIME TO RELEASE THE AIR FROM THE SYSTEM. IS THE GAS TURNED ON???
2. Is there a SPARK? Check the electrode and wiring.
3. Have a serviceman check the PILOT ORIFICE.
4. Have proper GAS REGULATORS been installed?

Slow Metering Hole This hole must be cleaned

E. PILOT LIGHTS BUT MAIN BURNER WON'T LIGHT.

1. Is the GAS BUTTON OR KNOB turned to the "ON" position?
2. You must have a minimum water flow of 0.5 USGPM to get ignition.
3. Check the WATER PRESSURE. Minimum inlet pressure is 20-30psi (40ft).
4. Check the WATER INLET FILTER SCREEN.
5. Remove, clean, clear small holes, and reinstall the slow-ignition valve.
6. Disassemble the water control valve casing and check the DIAPHRAGM for holes or failure. The diaphragm should be replaced every 5 years on commercial applications.



F. MAIN BURNER REMAINS LIT WITH NO WATER FLOW

THIS IS AN UNSAFE CONDITION-TURN OFF THE GAS SUPPLY
Call a qualified gas serviceman to check the following:

1. Turn off the gas supply valve. Remove, clean and replace the slow ignition valve.
2. Disassemble the water control valve casing only, and check that all parts including diaphragm, slow-ignition valve, and casing ports are undamaged and clean.

G. WATER TOO HOT

1. Check for low water pressure, or water flow restriction.
2. Check and clean the INLET WATER SCREEN.
3. Check the INLET WATER TEMPERATURE.
4. Call your serviceman to check the GAS SUPPLY PRESSURE.
5. If in a HARD WATER AREA, check HEAT EXCHANGER for lime build-up.

H. WATER TOO COLD

1. Check for excessive HIGH WATER PRESSURE. The ideal range is 30-60 psi.
2. Check water flow rate.
3. Check for a RESTRICTED GAS SUPPLY to the heater.
4. On older units, check the venturi for corrosion and wear, especially in acid water or high sediment conditions. Replace if necessary. Check the diaphragm and venturi every seven years.