

# Instructions For Cleaning The Pilot Burner Of the Chofu Propane Heater

Most problems with igniting the Chofu Propane Heater are caused by an obstruction in the pilot burner orifices. Cleaning the orifices is not difficult and it will usually solve the problem. The cleaning procedure can be accomplished with the heater connected to a tub full of water (see # 4 below); however, it is easier with the heater disconnected from the tub. Five screws must be removed to gain access to the burners. Cleaning the orifices requires either: pipe cleaner or a small electric shaver cleaning brush, a can of compressed air (available from most hardware stores), or an air compressor.

## Disassembly Procedure:

1. Using a Philips head screwdriver, remove the three sheet metal screws that secure the white enamel top cover of the heater housing - two screws on the front sides and one in the back. NOTE: The stainless cowling vent on top does not need to be removed.
2. Remove the heat exchanger from the heater body by removing two screws that hold it in place. (The heat exchanger is the part of the heater that transfers heat into the water. It has a galvanized chimney on top and two water circulation ports in the back.) One screw is located in the top front of the heat exchanger and the second screw is located in the lower rear just below the bottom circulation port.
3. Remove the emergency shut-off sensor located at the back of the heat exchanger, connected to the external white wire. Grab the black knob of the sensor and turn it counter clockwise, while pushing in. It should pop out.
4. You can now lift off the heat exchanger from the heater body. If your tub has water in it, you can leave the heat exchanger attached to the tub, but you'll need to support it by placing wood blocks underneath.

## Locating The Pilot Burner Orifices

After removing the heat exchanger, look down into the burner compartment of the heater body. You will see six long stainless steel burners. Mounted below the front wall of the burner compartment between the third and fourth burner is a flat metal disk that has the four orifice holes (they're a little smaller than the diameter of a pencil) radiating out in different directions. This is the pilot burner. Each one of the orifice holes must be free of obstructions for the pilot burners to operate properly. NOTE: Obstructions or debris will not be visible.

Cont.

## **Testing The Burners**

With the burners exposed and the heater connected to the gas supply, light the heater to see if the pilot flames are operating properly. NOTE: With the heat exchanger removed, you can safely operate the burners without damaging the heater. CAUTION: Before lighting the burners, make sure there is no obstruction above the burner for at least three feet. The burners should only be ignited outside in the open air. Remember to turn on the timer before lighting. The pilot burners will not remain lit unless the timer is turned on ½ hour or more.

Ignite the pilot burners using the normal lighting procedure, turning the control knob left to number (1). You should hear a loud clicking sound between numbers (0) and (1). This should light the ignition burner (the single flame on the far right) and the four pilot burner flames. (If the ignition burner does not light, call Island Hot Tub Company 1-888-878-5512.) The ignition burner should make an audible roaring sound. The pilot burner disk should have four flames coming from it: two stronger flames in the middle directed toward the six stainless main burners, and two smaller flames, one on each side. The orifice that usually causes the lighting problem is the one on the left (looking from front to back). This flame should engulf the millivolt sensor – a metal rod about 1/8-inch in diameter x 1-inch long. A weak flame will not get the sensor hot enough to do its job – open up the gas valve to the pilot and main burners.

After holding the control knob at (1) for at least eight seconds, turn the control knob back to the right to number (2). If there is sufficient heat on the millivolt sensor, the four pilot flames should remain lit. If the flame is weak and the pilot flames go out, you will need to clean the pilot burner orifice openings.

## **Orifice Cleaning Procedure**

Using one or more of the cleaning tools listed above; clean out any obstruction in the four burner orifices. Insert the brush or pipe cleaner as far as possible into the orifices, thoroughly cleaning out debris or insects that may have gotten in. A blast of compressed air will help dislodge any remaining debris. Repeat the lighting procedure. If the left side flame is still weak and the pilot flames do not stay lit, repeat the cleaning procedure. If the pilot flames stay lit at number (2), test the main burners by turning the control knob left to number (3). If the pilot burner and main burner are operating properly, reassemble the heater.

If after cleaning, either the pilot burners or the main burners do not ignite properly, contact Island Hot Tub Company for assistance: 1-888-878-5512.