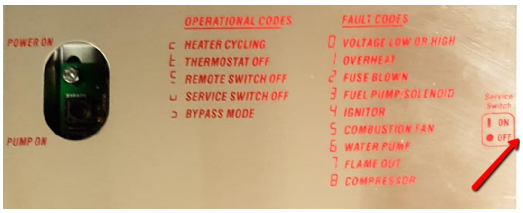
INTERNATIONAL LTD
THERMAL RESEARCH

SERVICE BULLETIN

Servicing the Nozzle	
Applies to the following systems:	Oasis: CH50, NE, NE-S, COMBI, Zephyr Hurricane: H2, H2L, COMBI, Zephyr, SCH25 Water Heater, Window Washer, Polar

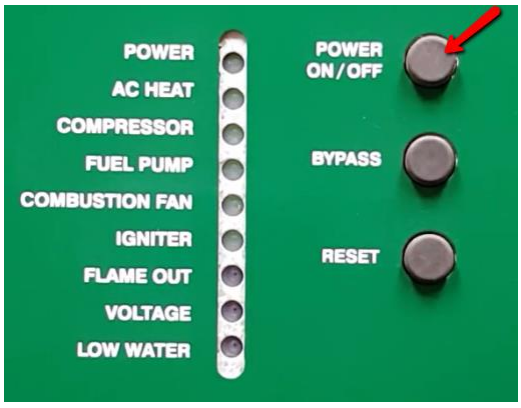
These instructions have been created using an Oasis CH50. Each of the products identified above may look different than depicted in the various steps of this document. However, these pictures can be used as reference for all of the listed products. If there are major differences in the service procedure between the CH50 and the other listed products, then the alternate procedure(s) will be outlined as well.

Step 1: (For Zephyr and SCH25)



Turn the service switch on the side of the V2001 control box to the OFF position and wait for the Power LED to turn off. This will take 2 minutes.

Step 1: (For CH50, NE, NE-S, COMBI, H2, H2L, WaterHeater, WindowWasher and Polar)

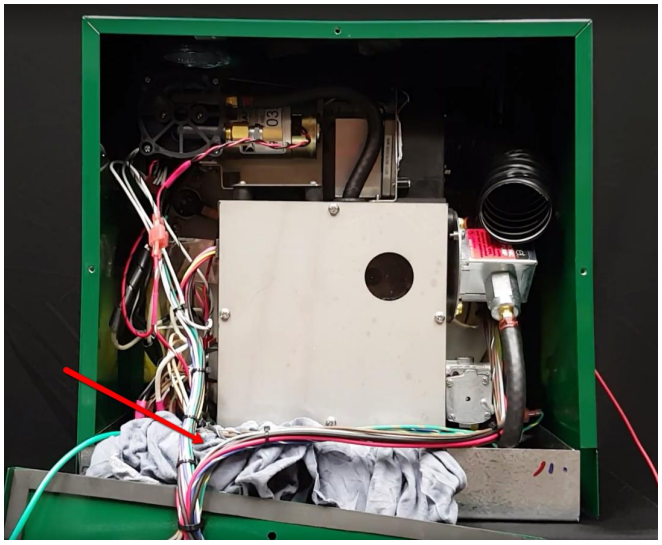


Press the power button and make sure the Power LED has turned off. Wait until the combustion fan turns off. This will take 2-4 minutes.

Step 2:

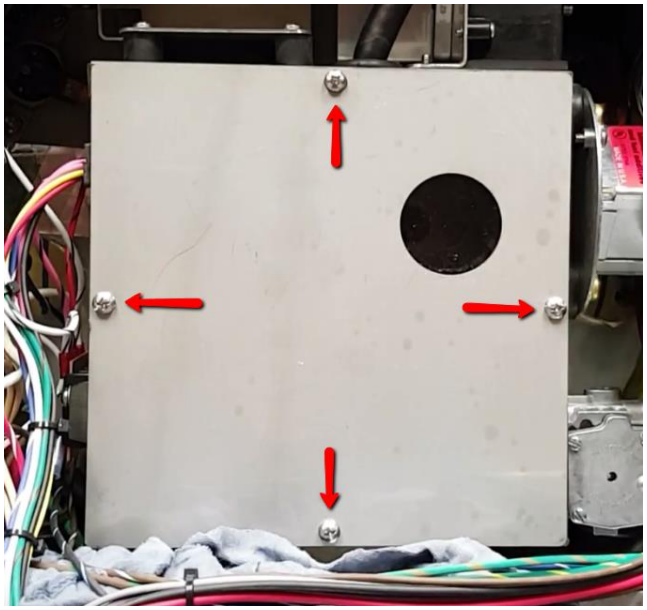
Remove these screws to gain access to the inside of the heater.

Step 3:



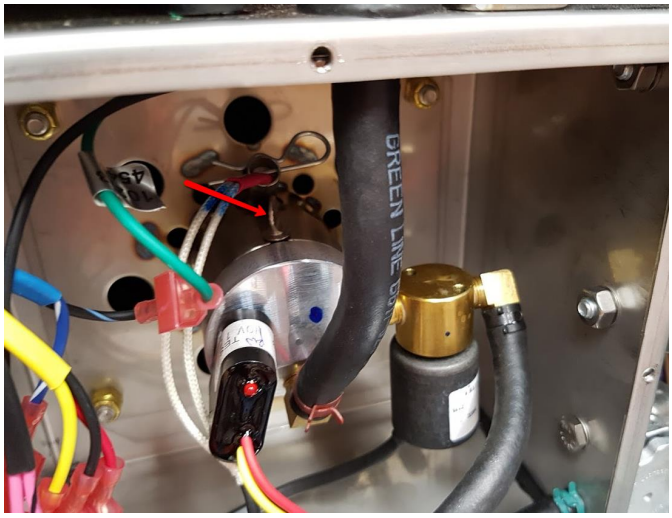
1. Place a rag underneath the wires to protect them from getting damaged on the edge of the bottom tray, and fold down the front cover.
2. Place a spacer underneath the front cover to ensure the buttons don't get pushed accidentally during service.

Step 4:



Remove the screws to gain access to the inside of the burner box.

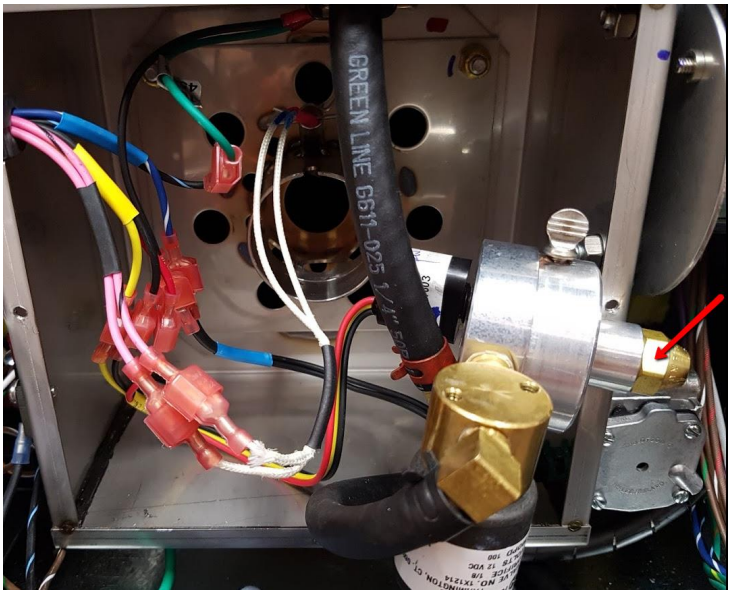
Step 5:



Using needle nose pliers, rotate the thumb screw counter-clockwise 90 degrees to loosen it.

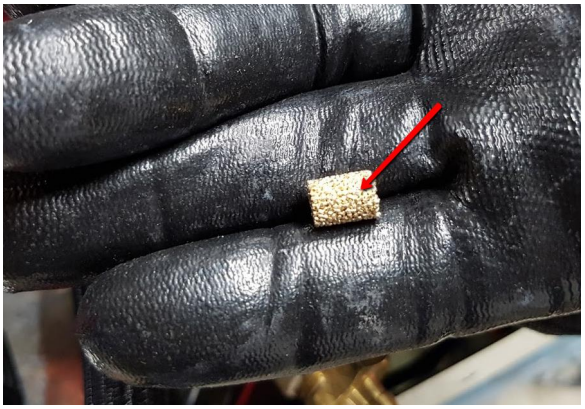
Servicing the Nozzle

Step 6:



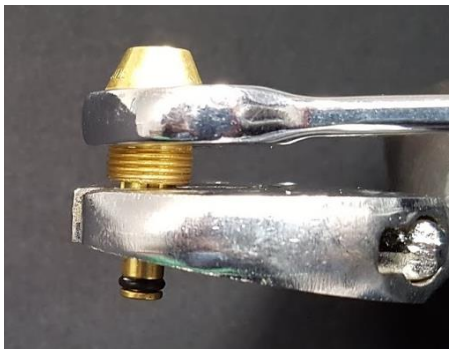
1. Pull the burner block out of position.
2. Use a 5/8 wrench to remove the nozzle from the burner block by turning it counter-clockwise.

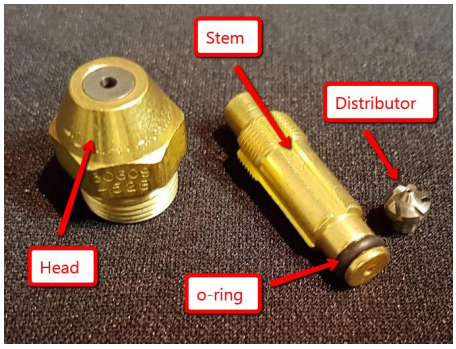
Step 7:



1. Behind the nozzle, there will be an sintered filter. Hold the burner block over a rag so the sintered filter falls out. You may have to tap the burner block to get the filter to fall out of position.
2. When the unit is being serviced, it's recommended that the sintered filter be replaced. If you don't have a replacement, as a temporary measure, you can try cleaning it with an industrial parts cleaner and degreaser and blow it out with pressurized air.

Step 8:

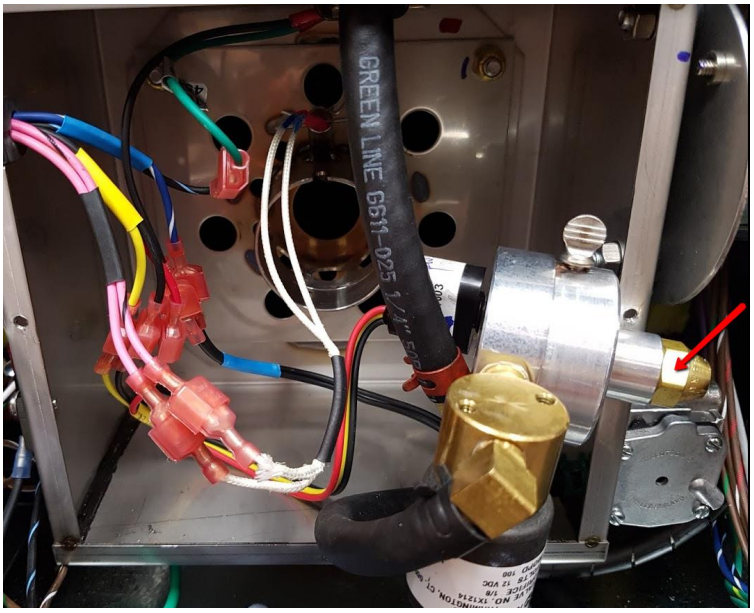




1. To clean the nozzle, it must be disassembled into three pieces.
2. Hold the nozzle in the vertical position using a crescent wrench on the stem. When gripping the stem, be sure that the stem does not get damaged. Don't use a vice or pliers to hold the stem. If the stem is damaged, it could lead to flame faults.
3. Use a 5/8" wrench on the nozzle head and turn it counter-clockwise.
4. One the nozzle head is removed, the distributor on top of the stem will be visible.
5. Clean the stem, distributor, and nozzle head with an industrial parts cleaner and degreaser. Use forced air to blow debris out of the orifice of each part. Make sure all of the slots in the distributor and stem are clean, and that there is nothing restricting the orifice of each part.
6. Inspect the o-ring for damage. It might be difficult to see, but it's possible that a half-moon shaped slice has been taken out of the o-ring when the nozzle was inserted into the fuel block. Replace the o-ring if necessary.
7. To re-assemble the nozzle, hold the stem in the vertical position and place the distributor on top of the stem. Grip the stem with a crescent wrench, and screw the nozzle on top of the stem with a 5/8 wrench. Do not overtighten. Note that if the nozzle is not assembled in the vertical position, then it's possible that the distributor will not be sitting flush against the top of the stem when the nozzle head is screwed in place. If this happens, the nozzle head will push the distributor into the top surface of the stem at an angle and create a nick in the top of the stem. This will result in constant flame faults.

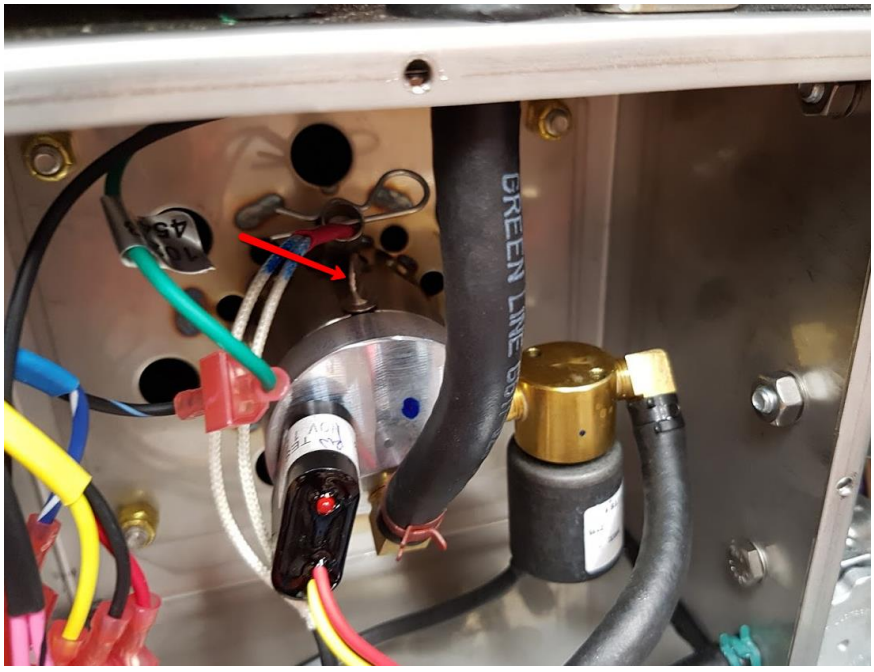
Servicing the Nozzle

Step 9:



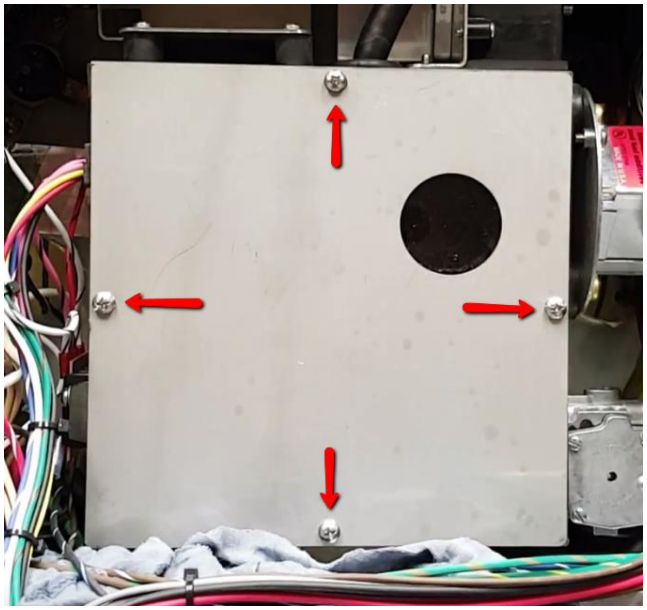
1. Make sure the new sintered filter is installed in the burner block before screwing the nozzle in position.
2. Before screwing the nozzle into position, wet the o-ring with some diesel fuel.
3. Screw the nozzle into the burner block. Do not overtighten.

Step 10:



Place the burner block back in position and use Needle nose pliers to rotate the thumb screw clockwise until it is snug. Do not overtighten.

Step 11:



Secure the burner box cover back in position, making sure it is oriented so that the sight glass is located in the top right. If the sight glass is not located in this position, the flame will not be visible when the front cover is in place.

Step 12:

Remove the rag from underneath the wires and secure the front cover back in position.