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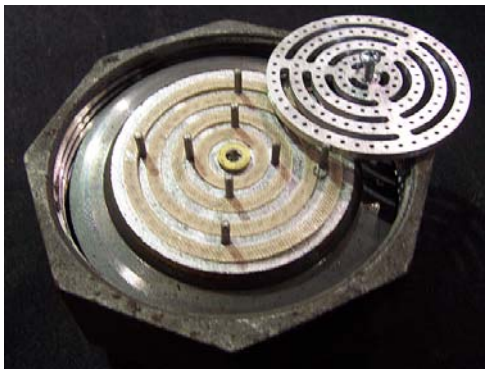
Fulton Pulse Gas Flapper Maintenance



The gas flapper assembly is the same in each unit. It is made up of two aluminum plates with multiple ports with a center spacer and 4 gas flapper gaskets.

To disassemble, first use valves to isolate the fuel train. Expose the gas flapper assembly. Current design requires that the two unions on the fuel train assembly be loosened. The gas flapper is machined into the larger union. Older design had the gas flapper installed in the bell housing on the fuel train. Models PHW-0300 through PHW-1400 are as shown in this picture. Model PHW-2000 has the gas flapper union located under the access cover at the top of the boiler.

After gas flapper is exposed, use a flat-headed screwdriver to remove the center screw. With screw loosened, the two plates can be separated and gas flapper gaskets exposed. Be careful in removal not to lose the center spacer.

Gas flapper gaskets can be cleaned with a damp cloth or light cleaning solution. (Before cleaning, note which side of gasket is dirty. Upstream dirt can represent a problem with the fuel supply and may require a fuel filter/strainer. Downstream dirt can represent poor combustion.) Do not use an abrasive cleaner on the gaskets. Torn or frayed gaskets should be replaced. Interior services of the gas flapper plates should be cleaned as well. Light rubbing with brass brush should accomplish this.

To reassemble, place gaskets around appropriate radius using the pins as a guide. Put plates together making sure that center spacer is present. Apply Loctite or similar product to screw and install. Reassemble fuel train and open isolation valves.

After reassembly, turn heater on and attempt to cycle. It is normal for the unit to fail to light off the first several attempts when gas flapper gaskets have been replaced. This problem ends after the unit runs the first time.

NOTE: Although the gas flapper assembly has no adjustment, it is always better to test and adjust combustion by use of a combustion analyzer after cleaning or replacing gaskets. The setting above should allow the unit to operate, but does not necessarily guarantee optimum combustion efficiency.