

# Furnaces

**6 Month Maintenance: Disconnect all power before servicing equipment and use lockout/tagout procedure detailed in the safety section. *\*\*All electrical connections are to be done by qualified technician.\*\****

**Confirm all safety systems are functioning properly.** Disconnect the “High Limit” Thermocouple, the Flame Safety should shut down the system and show an FA2 or Interlocks open error. Remove the back two sections of the UV Scanner during operation. The Flame Safety should shut down the system with an FA8 or Flame Failure error. Close the valve at the bottom of the blower enclosure. The Flame Safety should shut the system down with an Fab or FAA Air Failure. Adjust the High Gas Pressure Switch below your incoming gas pressure, the Flame Safety should shut down the system and show an FA2 or Interlocks Open error. Adjust the Low Gas Pressure Switch above your incoming gas pressure, the Flame Safety should shut down the system and show an FA2 or Interlocks Open error.

**Clean and repaint metal showing wear.** Paint wears off with use and heat, and metal will degrade much more quickly without paint.

**Adjust the door** for a tight fit on furnaces, and to a 1/4” on glory holes. This prevents excessive heat from escaping and making the equipment inefficient or damaging the equipment.

**Clean and replace blower filters as necessary.** This may need to be done more often depending on environment.

**Inspect the flue cleanout** blocks and the recuperator of furnaces and recuperated Glory Holes. Some build up is normal, but there should not be a significant blockage of flow. Cleanout out with a wire chimney brush or similar, or with hook and torch for glass buildup.

**Inspect refractory for cracks.** This is most common on the door portal and flue blocks. Patch with mortar, or fiber soaked in mortar. Contact WDG for replacement castings.

**In Free Standing Pot Furnaces** open the front cleanout port and inspect for glass buildup around the pot. If too much builds up, it can seep around castings

and destroy the fiber backing.

**Inspect thermocouple ports** for wear. Add fiber/mortar as needed to prevent excess heat to thermocouple head.

**Replace glory hole diapers** as needed to prevent damage to the brick. Diapers are insulating castable spread dry in the GH bottom and sprayed lightly with water.

**Inspect Furnace Crucibles** for cracks and damage. Free standing crucibles should be replaced as soon as possible to prevent excessive glass buildup in the tank and spillway. Day Tank crucibles should be patched as soon as possible or during the next shut down to slow the spread of the crack and the amount of glass working its way through the crucible to the backing castable. Patch can be ordered from WDG. Grind out as much glass as possible before patching, any remaining glass under the patch will significantly decrease the life of the patch. A WDG Day Tank can run for many years after a crack appears in the pot, and more with good maintenance and patching.