Giannoni Heat Exchanger
Detailed Cleaning Instructions

This boiler must be serviced by a qualified heating technician. Failure to properly maintain or service this appliance may result in property damage, serious injury to occupants or, death.

Applicable Boilers:
Ti100 – 400
Ti150(C)-200(C)
Tx51-200
Tx151(C)-200(C)
Lx150-800

Tools Required
- Pliers
- Phillips #2 screwdriver
- Flat screwdriver
- 1/4” nut driver or wrench
- 5/16” nut driver or wrench
- 10mm wrench
- 1/2” wrench
- 7/16” wrench
- 9/16” wrench
- Pipe wrench
- Torx T25 screwdriver
- Torx T20 screwdriver
- Adjustable wrench
- Stiff bristle nonmetallic scrub brush

Read these instructions thoroughly before beginning your cleaning procedure.

Allowing any Trinity boiler to operate with a dirty combustion chamber will not only adversely affect the operation of the boiler but will also void the warranty. Failure to clean the combustion chamber on a frequency that matches the needs of the application may result in fire, property damage, or death.
Cleaning Instructions

- Turn off power and gas to the boiler.
- Disconnect the condensate drain.
- Disconnect the wiring harnesses on the blower motor, gas valve, flame rod and igniter.

(Tx151C shown)

- Detach the vinyl tube from the gas valve.
- Loosen the MJ coupling and remove the air inlet from the venturi.
- Disconnect the gas line from the gas valve.

(Tx151C shown)
- Remove the nuts securing the burner door to the combustion chamber (4 nuts on Tx boilers, 6 nuts on Ti and Lx boilers).
- Remove burner door, blower motor and gas valve as a unit.

- Photograph or document the condition of the combustion chamber.

- Record the duration from installation to the first cleaning as this will aid in developing a cleaning schedule.

- Use a vacuum with a high efficiency filter to remove any loose debris or dust.

**NOTICE** Refer to Refractory Ceramic Fibers in the Installation and Operations Manual.

- Place a bucket under the condensate drain.

- Use cardboard or plastic to protect divider plate from getting saturated with water.
- Wet the inside of the combustion chamber with water. Spray pressurized water through the coils.
- If pressurized water is not available a bucket and sponge can be used.
- Water should pass between the coils in the heat exchanger and exit via the condensate drain.
- Allow water to drain through the condensate drain.

- Use a stiff nylon or other non-metallic scrub brush to loosen the incrustations and any other contaminants that remain on the surface and openings of the coils.
- Use the cleaning card to remove incrustations and any other contaminants that remain between the water tubes.
- Continue scrubbing and rinsing with clean water until the water runs clear from the condensate drain.
- Apply a coating of white vinegar to the coils and let it sit for five minutes.
- Scrub the coils with the nylon brush and cleaning card and rinse with fresh water until water runs clear and there is no aroma of the vinegar.
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- Clean the condensate trap including the ball inside.

**NOTICE** Ensure that the ball in the condensate trap is floating freely prior to leaving the job site. Failure to do so may result in property damage.

- Inspect the boiler including the divider plate ceramic disc, the burner door gasket, rope gasket, and door insulation for wear and/or damage.

- Replace any worn or damaged components.

- Reassemble in reverse order.

- Torque the nuts on the burner plate to 48 in. lb. (4 ft. lb.)

- **Burner Plate Gasket** – Do not over-tighten the burner plate nuts. This could result in gasket failure and a gas leak. This may result in fire, property damage, or death.

  - After reassembly perform the following check for leaks:
  - With gas turned off disconnect the communication harness (5pin connector) from the blower motor and turn the boiler on. This will cause the blower motor to run at high speed.
  - Then temporarily block the exhaust vent.
  - Use a mixture of soap and water to check for leaks throughout the boiler assembly.
  - Confirm there are no leaks, then, remove the blockage from the exhaust vent. And reconnect the 5 pin wire harness to the blower.
  - Check for proper operation including smooth ignition.
  - Perform a combustion analysis (refer to the Installation and Operation Manual).

**Parts for Service:** Refer to the parts list in the Installation and Operation Manual.