

Replacing the Paragon GL-18, GL-22, or GL-24 series Roof

Remove the Old Roof

- 1) UNPLUG the kiln.
- 2) Remove the door. Do not disconnect the wiring on doors that have elements. Use a 3/8" wrench to remove the two bolts holding the top swivel bracket to the hinge rod. Lift the door upward, leaving the bottom swivel bracket in place.
- 3) Remove the switch box from the side of the kiln using a 1/4" nut driver. You may need to prop the switch box to avoid straining the wires.
- 4) You will see lead wires that go from the switch box to the element connectors on the side of the roof. If necessary, label the wires with pieces of tape, and sketch the element connectors so you will know where to connect the wires on the new lid. (You should also have a wiring diagram, which shows how the elements and wires are connected.) Using a 1/4" nut driver, remove the brass screws that hold the lead wires to the roof element connectors. (Do not disturb the wires that are attached to the sidewall element connectors.)
- 5) Remove the element connectors for the roof elements. Remove and save the porcelain insulators that were behind element connectors.
- 6) Remove the screws in the sheet metal top. Place a nut driver or other tool against the lip of the sheet metal top and tap upward with a hammer. Lift the top out of the way.
- 7) Gently lift the old roof from the kiln.

Install the New Roof

- 1) Place the new roof on the kiln.
- 2) Install the sheet metal top over the new roof. You may be able to use the old screw holes. However, do not force the sheet metal downward to line up the holes. Sand the tops of the walls that support the roof if the new roof is too high for the sheet metal screw holes to line up. Or drill new holes in the kiln case if necessary.
- 3) Reinstall the porcelain insulators. Push them flush against the kiln case/heat shield. They protect the elements from contact with the case, so they must not work their way out after the element connectors are tightened into place.

4) Attach the wires that you removed from the old roof to the new element connectors. Sandpaper the eyelet of the element lead wires until bright and clean of all oxidation. (Install new lead wires if insulation on old ones is brittle.) Use the brass screw to connect the lead wire eyelets to the new element connectors. Before tightening the screw, adjust the eyelet to where it will be tilted away from the kiln case when the connector is attached to the element. Then hold the connector with locking pliers and tighten the brass screw securely with a 1/4" nut driver.

5) Pull the end of the element tight and install new element connectors snugly against porcelain insulators to prevent insulators from slipping away from the brick wall. Use the stainless screw in the element connector to hold the element. (The brass screw holds the lead wire eyelet.) Hold the connector with locking pliers as you tighten the screw with the 1/4" nut driver.

Tighten the screw to 30 inch pounds (about 1 1/4 turns past the point of firm resistance).

6) Cut off the twisted end of element even with the side of the element connectors. Leaving the excess element sticking out past element connector could ruin your new element! (The element could short against something in the switch box.)

7) Install the switch box to the kiln. As you move the switch box back into place, check to see that no wire touches an element connector. Wires and wire nuts must also not touch the kiln's case inside the switch box. Wires and wire nuts will burn if they touch the case or element connectors. Reinstall screws in switch box and tighten.

8) Install the door.

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