

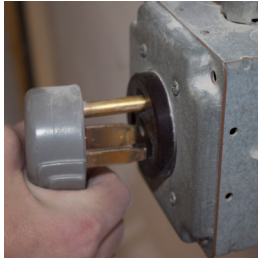
Replacing a heating element in a Skutt Kiln

Replacing an element takes a few specialized tools, but it's an easy process.

Learn about the tools here:
<http://kilnparts.com/PDF/tooltorial.pdf>

Learn about electrical meters here:
<http://kilnparts.com/index.php/learn/>

Learning how to diagnose a bad element and swap it out for a new one is a simple repair every kiln owner should be able to do.



1. Unplug the kiln! If your kiln is hard wired (can't be unplugged) turn off the breaker or the disconnect.



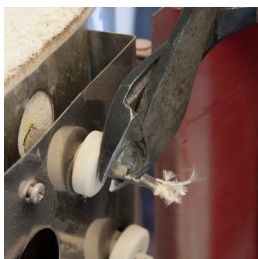
2. Remove the screws from the left side of the box. Skutt kilns have a hinged box which is held closed by 3-6 philips screws depending on the model.



3. Label each feeder wire with a piece of masking tape and a number starting at the top. Taking a picture can also help when you are reinstalling wires.



4. Cut the feeder wire just in front of the barrel connector. Save as much wire as possible. Replacement wires are available if needed.



5. Cut the element pigtail between the porcelain insulator and the connector.



6. Slide the old porcelain insulator off the pigtail and set it aside.



7. Remove the straight pins that hold the elements in place. Look carefully, sometimes they are hard to see. A flashlight can help.



8. Remove the old element. Start at one end and pull the pigtail out from inside the kiln. Go slowly and look for missed pins.



9. Remove the rest of the element from the kiln being careful not to damage the firebrick.



10. Vacuum the element channels. If you see any chunks of glaze or bisque stuck to the channels scrape them out and vacuum out the pieces.



11. Open the replacement element. Set the hardware bag aside for use later. Check the element label to ensure it matches your kiln. Some Skutt kilns, especially larger models, use balanced elements.

You can view wiring diagrams here:
http://kilnparts.com/index.php/learn_skutt/

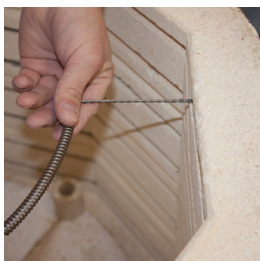
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12. Cut the loop off both ends of the new element. The loop is leftover from the manufacturing process and you will not need it.



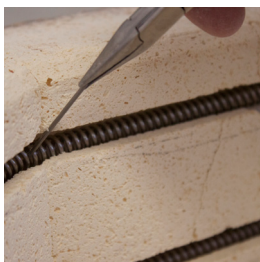
13. Start installing the new element. The two ends of the element are slightly different. Match the bends in the elements with the bends in the brick.



14. Push the pigtail at one end of the element through the terminal brick and into the control box. It does not matter which end you start with.



15. Install the element in the grooves. Skutt elements are pre-bent and you will notice they curve to fit the angles of the brick. Insert the other pigtail after installing the element in the groove.



16. Use the new pins that came with each element and start pushing the pins back into the brick. A pair of needle nose pliers makes this easier. Start

at a steep angle and as you begin to push the element pin into the brick push the element pin down so it is at a shallower angle to the element. The pins job is to hold the element DOWN into the channel so it can't slip forward. Pinning elements takes a little practice, but if you make a mistake just pull out the pin and try again. The new pins do not need to go into the same holes as the old pins.



17. Keep pinning, you're not done yet! This picture shows an element pin when it is almost seated completely. Notice the angle.

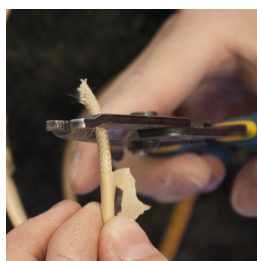


18. A pin placed correctly in the element channel.



19. Put a porcelain insulator back on the element pigtail. You can reuse the old ones if they are in good shape or use the new ones included with the

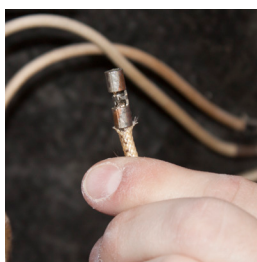
element. The insulator should be pushed tightly against the brick. Its job is to keep the element pigtail from coming into contact with the sheet metal.



20. Strip 3/4" of insulation from feeder wires if the barrel connector will have ONE wire in it and strip 3/8" of insulation from feeder wires that have TWO wires per connector.



21. If you stripped 3/4" of insulation from a feeder wire fold over the exposed silver wire to make it thicker and improve the fit in the connector.



22. Push a new element connector onto the feeder wire. Twist slightly if needed. If any individual strands of wire are not in the connector cut them off.

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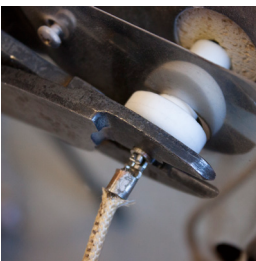
23. Crimp the connector onto the wire. Make sure the dimple is on the **BOTTOM** of the connector. The bottom is the closed side with no seam.



24. Push the element pigtail out from the inside and push the insulator in from the outside.



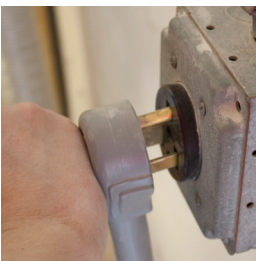
25. After you make sure the pigtail is pulled out and the insulator is pushed in cut the element pigtail so only 5/16" sticks out past the insulator.



26. Crimp the barrel connector onto the element pigtail. Make sure the dimple on the crimping tool is on the **bottom** of the connector.



27. Close the box and replace the screws.

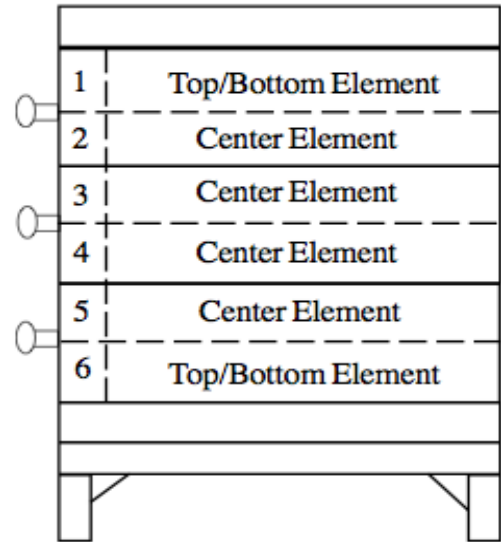


28. Plug the kiln back in and fire away!

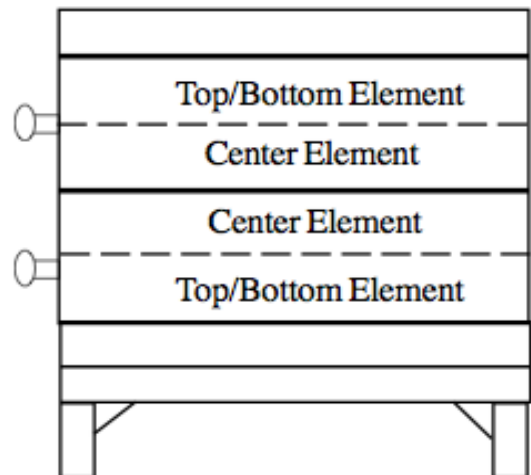
If you have any questions or problems you are not alone! Post on our forum, call us, email us or call Skutt directly at 503-774-6000. We want you to be successful when you fix your kiln!

Skutt Element Diagrams

KM1227, KS1227, KS1027, 280, 235, 230, and 231



KM818, KM818-30A, 231-18 KM1018, and KS1018



PLEASE NOTE: The elements for the models listed below are the same from top to bottom.

Models 609, 614, 714, KS818, KS818P, KS-818WR, KS818PWR, 181, 180, 145, 183, 185, the Pinto, and Octagon Fuser. Element positioning is not effected by phase or brick size