

Lid and Door Safety Switches

by Arnold Howard

Photos Courtesy of Arnold Howard

Sometimes a kiln stops heating for no apparent reason. Has an element or relay burned out? The electricity is still on, yet the temperature begins to drop, and you can't hear the elements? If this happens to you, check to see if your kiln has a safety switch.

Checking for a Safety Switch

Safety switches are required on all kilns in Europe and Canada. The safety switch turns off the heating elements when the lid or door of a kiln is opened. From my experience, most people don't know whether their kiln has a safety switch. You may be able to hear the switch by raising the lid or opening the door an inch or two while the elements are turned on. Do this at room temperature. Now listen for the sound of the elements turning off.

To perform this test, the room must be silent, or you won't hear the elements. One time I arrived at a studio to work on a kiln, and nearby, students were grinding steel parts for a metal sculpture art project. The grinding noise was so loud that I couldn't hear the kiln. Diagnosing the kiln was more difficult than usual, because listening for the faint sounds from a kiln is like a doctor using a stethoscope or a mechanic listening to an engine.

Adjusting Safety Switches

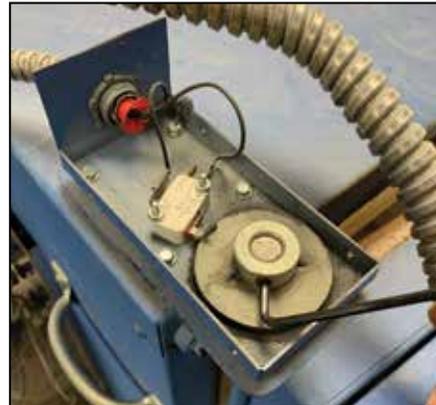
On some of the newer kilns, "Lid" or "LID" appears in the digital display window when the safety switch turns off the elements. If that happens when the lid is closed, you can adjust the switch. Sometimes, though, the LID message is a false reading due to a jumper falling off the back of the controller circuit board. When the safety switch is out of adjustment, the elements may turn off at a higher temperature, even though the lid or door is closed. Sometimes the elements don't turn on at all.

There are many types of safety switches. In these photos, two common types are shown that I see in Texas studios. The first photo shows a door switch. You can adjust the switch by loosening the adjustment disk with an Allen wrench. Turn the disk so that the door switch turns off the elements when the door is opened about two inches.

The center photo shows a lid switch. If the gap between the switch button and switch box is too large, you can add a spacer, as shown in the bottom photo. That will close the gap and cause the elements to turn on again.

When you order a new kiln, consider adding a safety switch. Having one is especially important if you rake or emboss glass.

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This type of safety switch is located on the top of the kiln door shaft. Loosen the adjustment disk with an Allen wrench, then turn the disk to adjust the switch.

The space between the two switch boxes determines when the lid safety switch turns off the elements.



In this photo, a shim was added that pressed the lid switch down so that the elements would stay on while the kiln fired.

While Arnold worked at Paragon Industries, he saw kiln controls evolve from switches to touch screen displays, tested early glass kilns, and wrote instruction manuals. In September 2019, Arnold started Howard Kilns, LLC, a kiln repair and sales business, to serve the Dallas-San Antonio, Texas, area and works on all brands of kilns. Feel free to contact him at arnoldhoward@gmail.com or call/text 972-333-1437.

