A VARIAC HAS ONLY ONE WINDING. IT IS NOT AN ISOLATION TRANSFORMER. MISWIRING BETWEEN BREAKER BOX AND YOUR HOTWIRE TOOL CAN ELEVATE EXPOSED CONDUCTORS TO VERY UNHEALTHY VOLTAGE LEVELS. IT'S EASY TO SET UP THIS SYSTEM FOR SAFE USE.

1. Check the finished setup with a voltmeter. Measure between exposed hotwire tool and ground (water pipe, or even just a long screwdriver stuck in the ground) with the variac set for zero output. The measured voltage should be low...not more than a few volts.

2. Install ground fault interrupting outlets in your shop. They are inexpensive and can keep you from toasting your funny. One GFI outlet can be wired to protect all of the outlets in your shop. This is a thing to do whether or not you plan to use a variac and hotwire tool. There are other failures in power tools that can make them hazardous to use on concrete floors.