

## At the Repair Bench – Simpson 260 – September 2022

A few weeks ago, I received a carton in the mail, with a plea for help tucked into the carton alongside a Simpson 260 Series 5 analog VOMM. (Yes – VOMM is correct in this case, as the meter is a volts, ohms, and milliamperes meter.) The owner wrote that it had quit working in all modes and he had no idea why. Of course, I was up for the challenge, and it turned out to be quite interesting.



I first verified that there was no response in the meter on any function or scale. I then took off the rear cover – four screws and it was off. The first thing that I noticed was that there was no battery installed for the ohmmeter function. The 260 uses a total of five cells – four “AA” cells and one “D” cell to power the ohmmeter. Naturally, I installed a set of cells and tested the ohmmeter function again, to find that it was still inoperative.

I began a more thorough examination of the meter componentry, looking for burned components or broken wire solder points. What I found instead was quite surprising, and goes to show that you cannot always believe what people say. A close inspection revealed that the PCB on which most of the meter’s components are installed was cracked along its left (from the rear) side, about an inch in from the edge of the board and at an angle from the outer corner towards the center.

I removed the PCB to examine the opposite (foil) side, and found that five traces were broken along the crack. This might turn out to be a simple repair. I began by applying some cyanoacrylate glue to the crack to strengthen the board. When the glue had cured, I simply solder-bridged the cracks in the foil traces, a task made easier by the fact that the traces were solder-covered. I re-installed the “AA” and “D” cells, and tested the meter. Full operation was restored! I did some cleaning of the switches and pots inside the meter with some DeoxIT® Gold, cleaned up the exterior, and secured the back to the meter assembly.

The meter’s folding handle was quite misshapen (read: bent). I decided to remove it and repair it. The handle is secured by a shoulder bolt on either side of the case, so I removed those bolts. The handle itself is a sandwich of metal encased by a plastic covering, making it a simple task to straighten the handle completely, and then to re-bend it to its proper contour. I then re-installed the handle and the job was done.

I do not know how the PCB got broken, but it is quite obvious to me that the unit had been dropped at some point in its history, based upon the way the handle was bent. I also have a hard time believing that the owner was unaware of the broken PCB, especially as he had removed the battery for shipping the meter. He also did not take any care in packing the meter for shipment – he simply stuck it in a carton with its test leads, but with no wrapping or packing at all, leaving the meter free to bounce around in the carton. Needless to say, it did NOT go back to him the same way.