

# Tennant Company Summer Internship

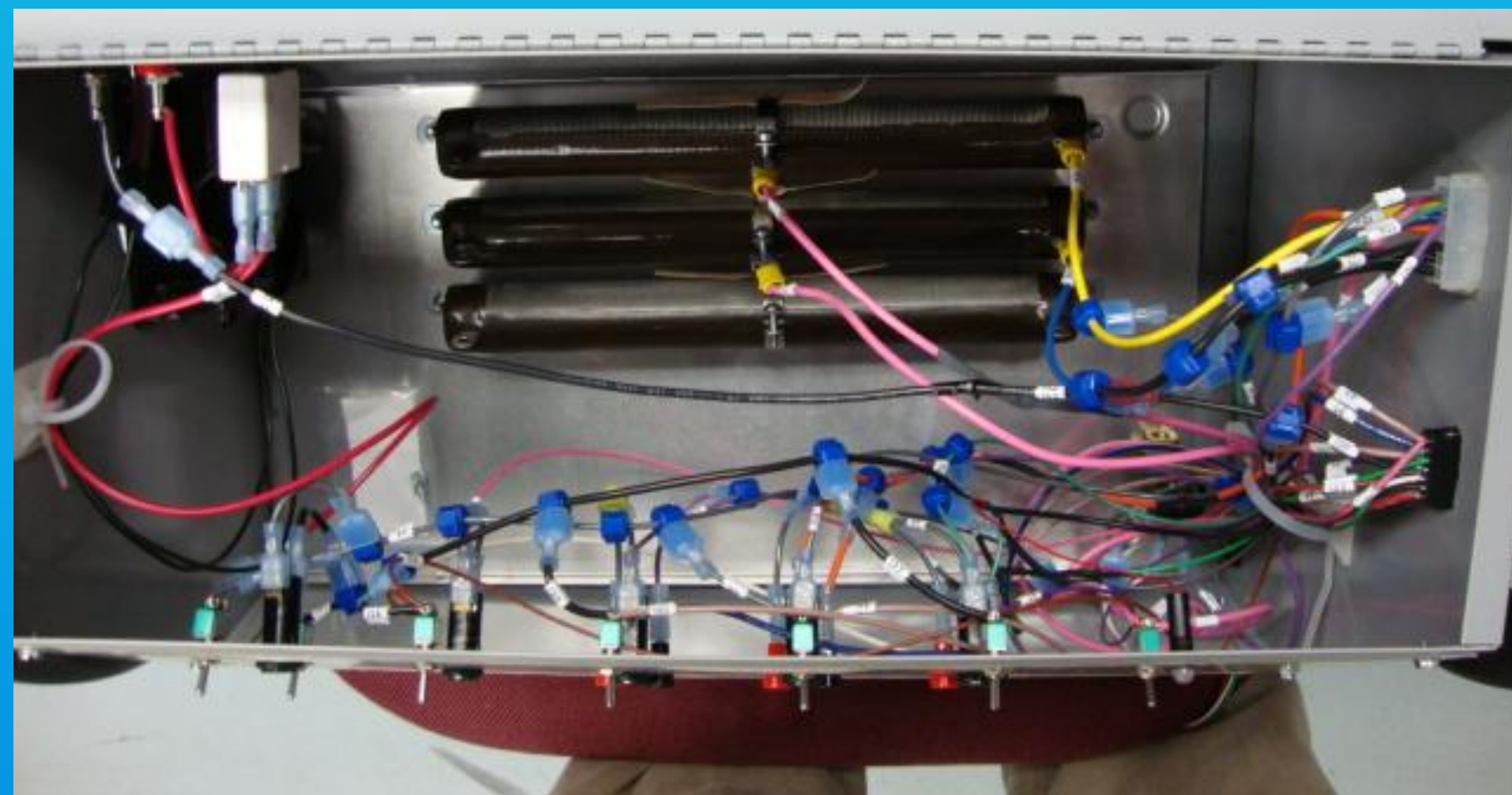
Dan Ziegler, Junior at Calvin College, Electrical Engineering Concentration

Tennant Company Commercial Division

Holland, MI



Test Box



Test Box Interface



My internship with Tennant Company consisted of being shared between the multiple divisions of engineering at Tennant. Tennant Company is a manufacturer of commercial cleaning machines, walk behind and riding scrubbers, sweepers, vacuums, and burnishing machines. With the current products division I helped support engineers making decisions for cost savings and dealing with problems with machines. In addition, I got a lot of hands-on work with a soldering iron making wire harness prototypes. I also helped in revising machine operator manuals with the technical publications division. I got some time working with the approvals and certification division in reviewing the company's files with Underwriter's Laboratories. With the new products division I got to help design, and then build on my own, four test fixtures for a new control board. I helped test motors and batteries with the lab technicians, as well as running some tests of my own on digital hour meters. Finally, I spent a lot of time picking up odd jobs from engineers. I made a wire specification chart for insulation types, organized warranty data into a useable format, tested control boards for functionality on a test fixture, wrote testing requests, looked up parts of certain specifications with manufacturers, and got to take apart and re assemble many machines to replace parts or look into some issue. Overall, it was a very interesting summer with a lot of learning about being part of an engineering team and being part of a corporation.



Other Test Fixtures

(In Order: Battery Charge/Discharge Cycle Test, Motor Burnout Test, Control Board Function Test)

