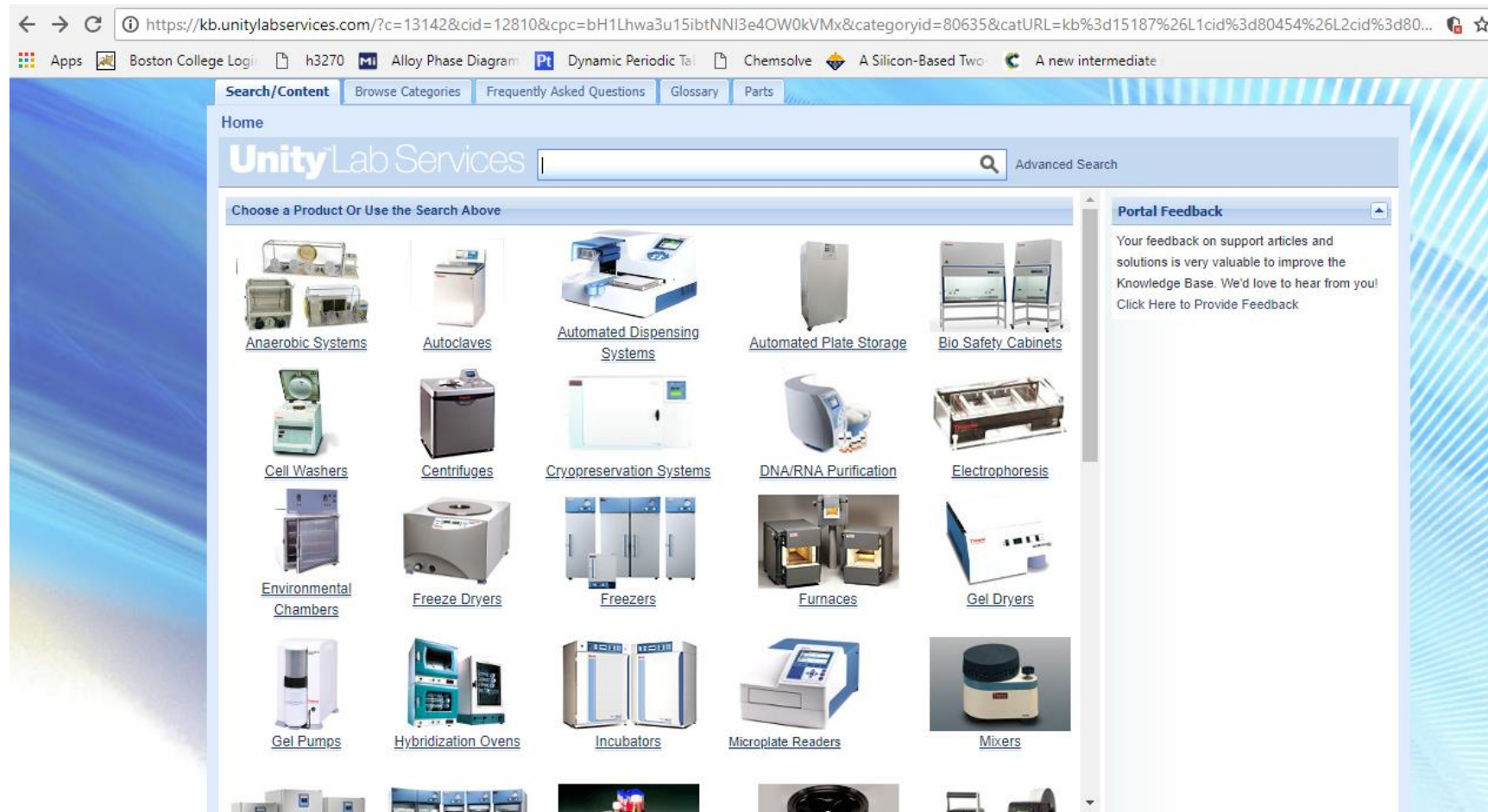


# Replacing Thermocouple

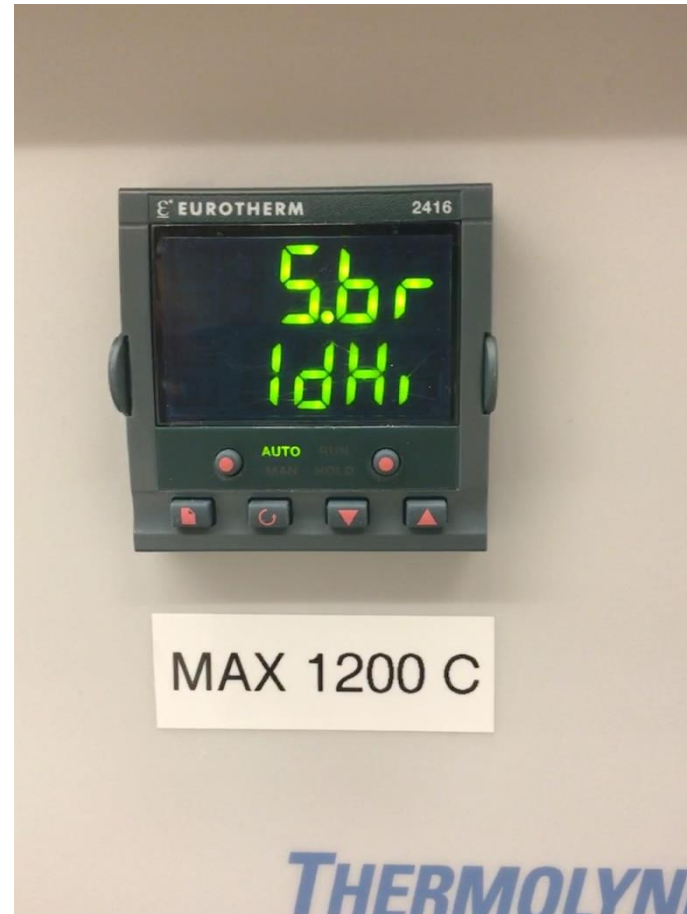
(Model numbers F47925-80 or F48028-80)

All manuals for Thermo Fisher or Fisher Scientific furnaces can be found online at [kb.unitylabservices.com](https://kb.unitylabservices.com), just go to the furnaces section and search for the furnaces part number.



The screenshot shows a web browser window displaying the Unity Lab Services website. The address bar shows the URL: <https://kb.unitylabservices.com/?c=13142&cid=12810&cpc=bH1Lhwa3u15ibtNNI3e4OW0kVMx&categoryid=80635&catURL=kb%3d15187%26L1cid%3d80454%26L2cid%3d80...>. The website features a navigation menu with options like "Search/Content", "Browse Categories", "Frequently Asked Questions", "Glossary", and "Parts". The main content area is titled "Home" and includes the "Unity Lab Services" logo and a search bar. Below the search bar, there is a section titled "Choose a Product Or Use the Search Above" which displays a grid of 20 laboratory equipment categories, each with a representative image and a link. The categories are: Anaerobic Systems, Autoclaves, Automated Dispensing Systems, Automated Plate Storage, Bio Safety Cabinets, Cell Washers, Centrifuges, Cryopreservation Systems, DNA/RNA Purification, Electrophoresis, Environmental Chambers, Freeze Dryers, Freezers, Furnaces, Gel Dryers, Gel Pumps, Hybridization Ovens, Incubators, Microplate Readers, and Mixers. On the right side of the page, there is a "Portal Feedback" section with a message: "Your feedback on support articles and solutions is very valuable to improve the Knowledge Base. We'd love to hear from you! Click Here to Provide Feedback".

If the thermocouple is broken or malfunctioning, the readout of the furnace should display an error message like this, indicating the temperature sensor is not working.

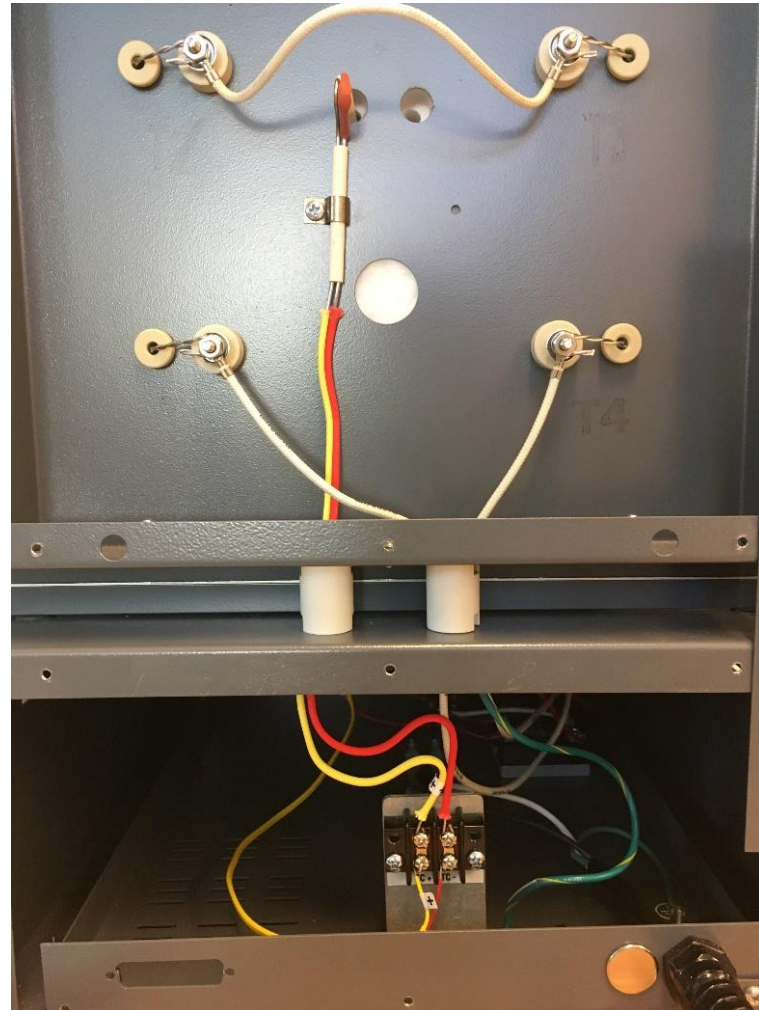


“S.br” = Sensor Broken

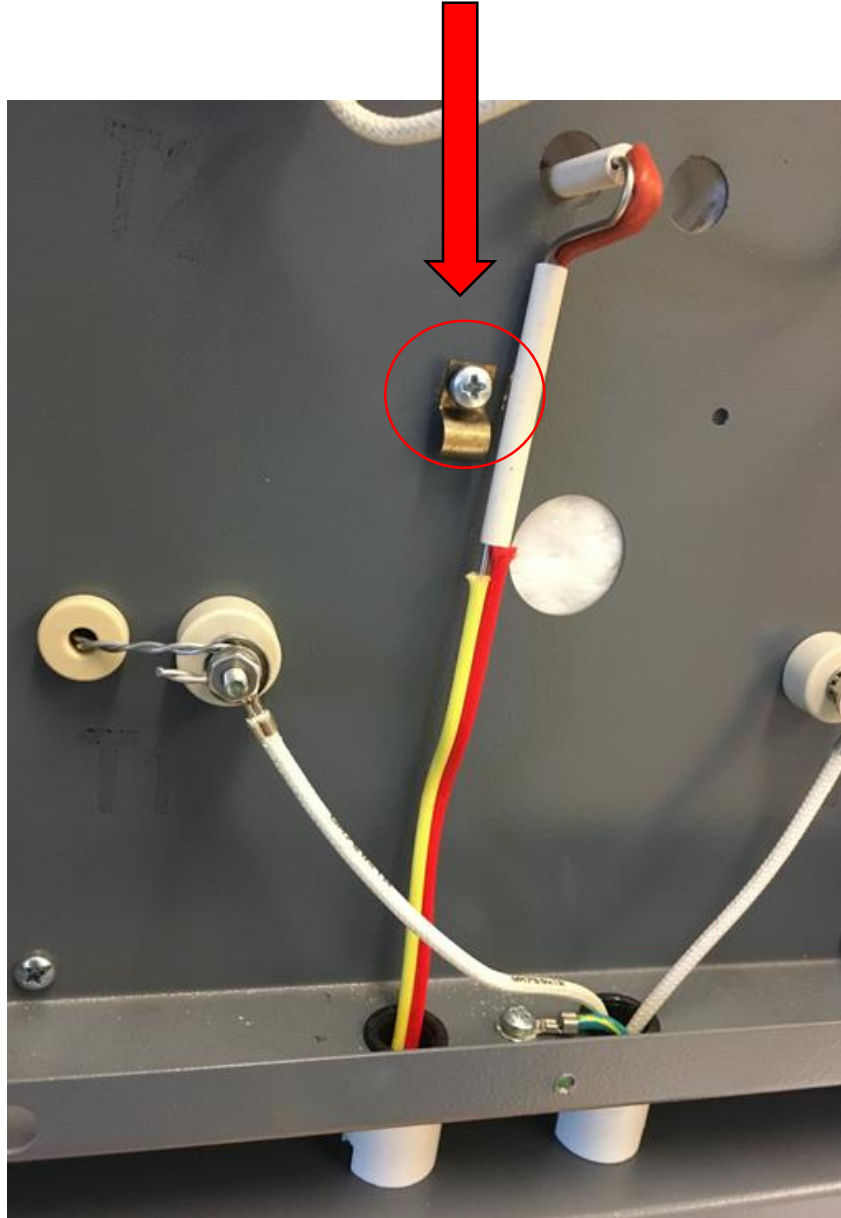
After ensuring the furnace is disconnected from power and at room temperature, begin by removing the two panels on the back of the furnace. Make sure all screws are saved so they can be replaced later.



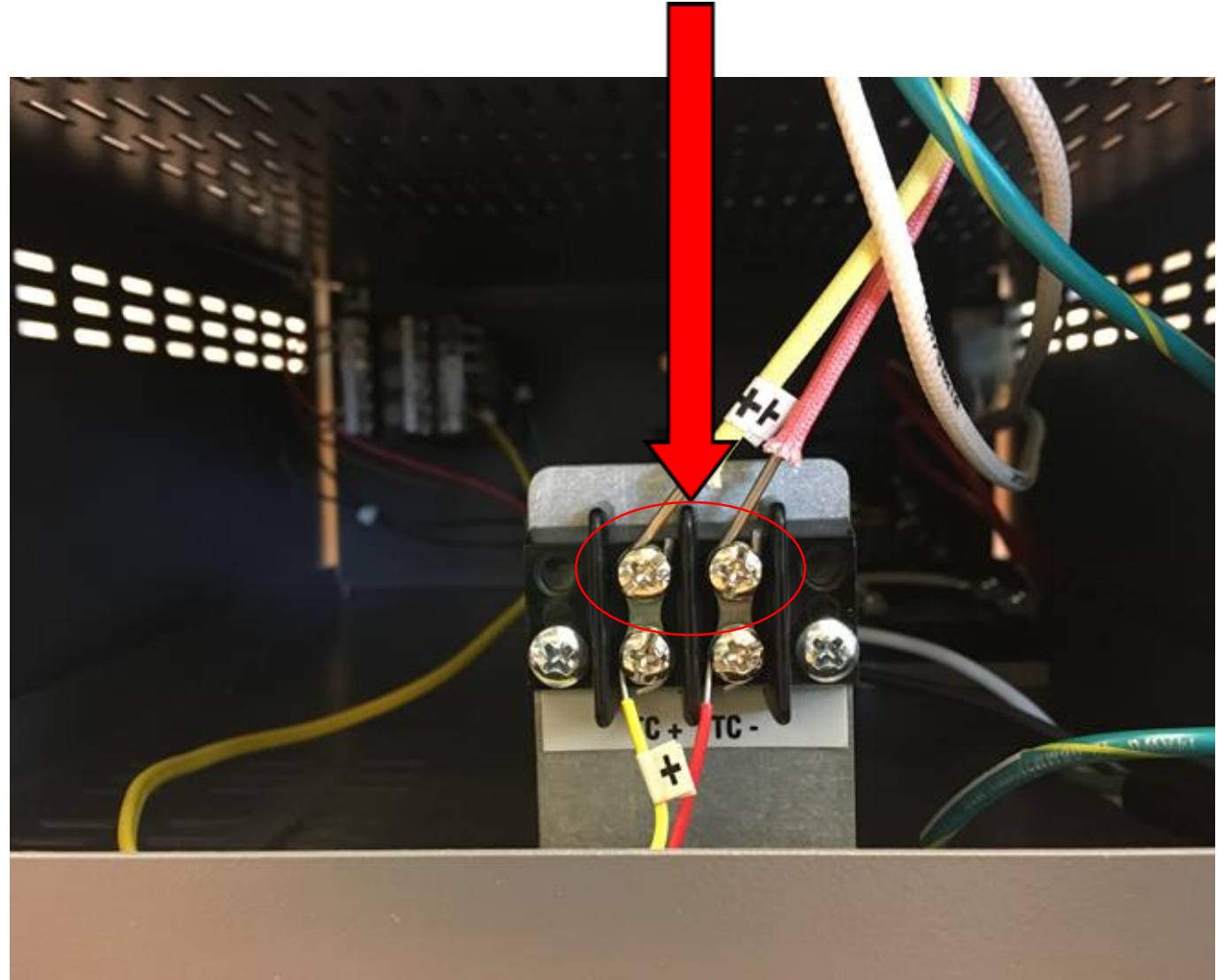
The back of the furnace should look something like this. Remove the thermocouple by unscrewing the flange holding it in place in the top portion, and then unscrew the wires from the electrical components before passing said wires through the plastic bushings, and removing the thermocouple entirely.



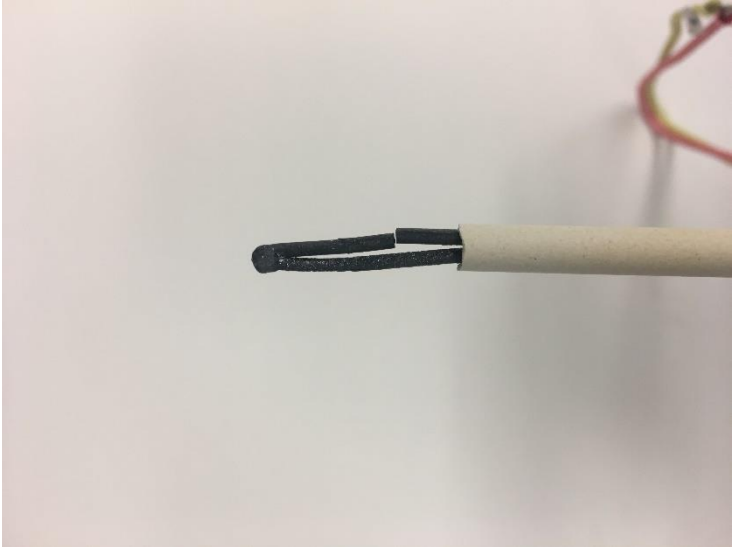
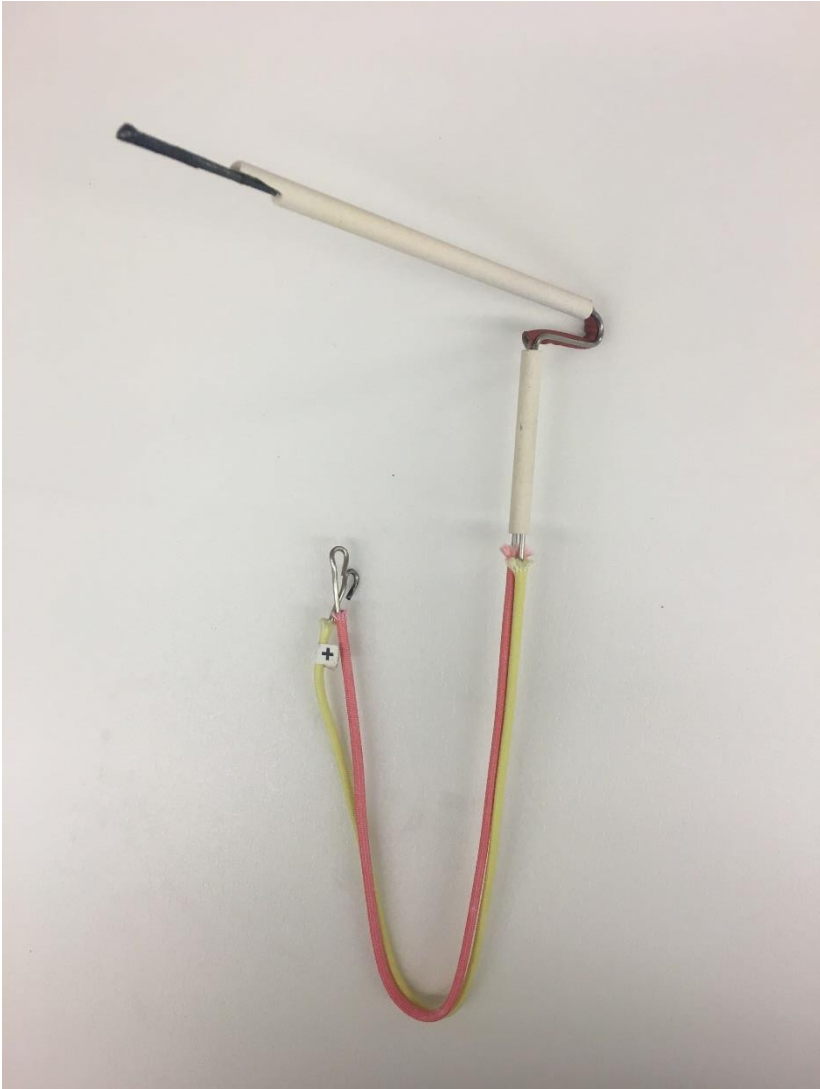
Unscrew flange



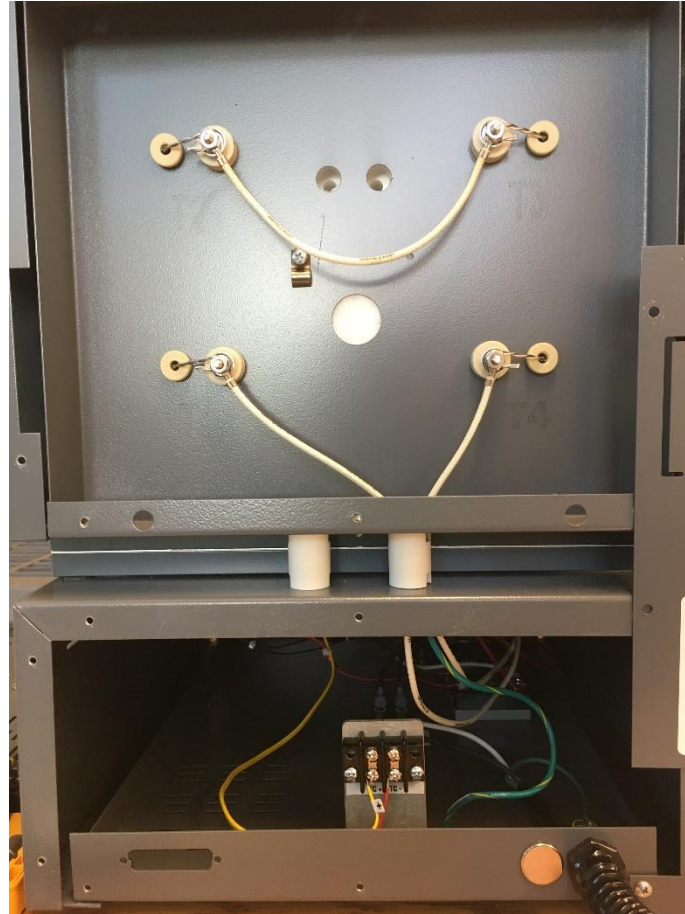
Unscrew electrical components



The removed thermocouple should look something like this, there may be signs of damage.

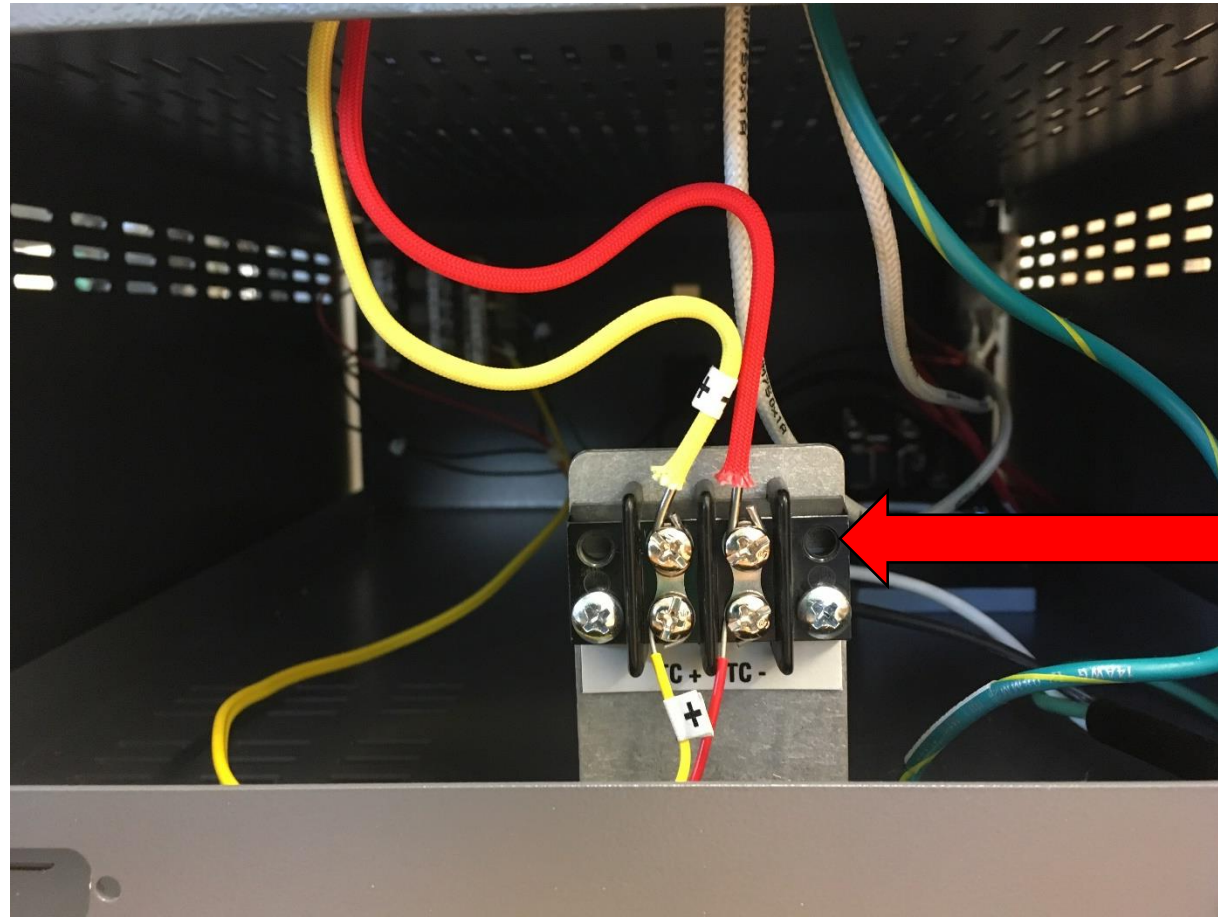


Once the old thermocouple is removed, replace the flange and electrical component screws, as well as the back plates if the new thermocouple is not ready yet.





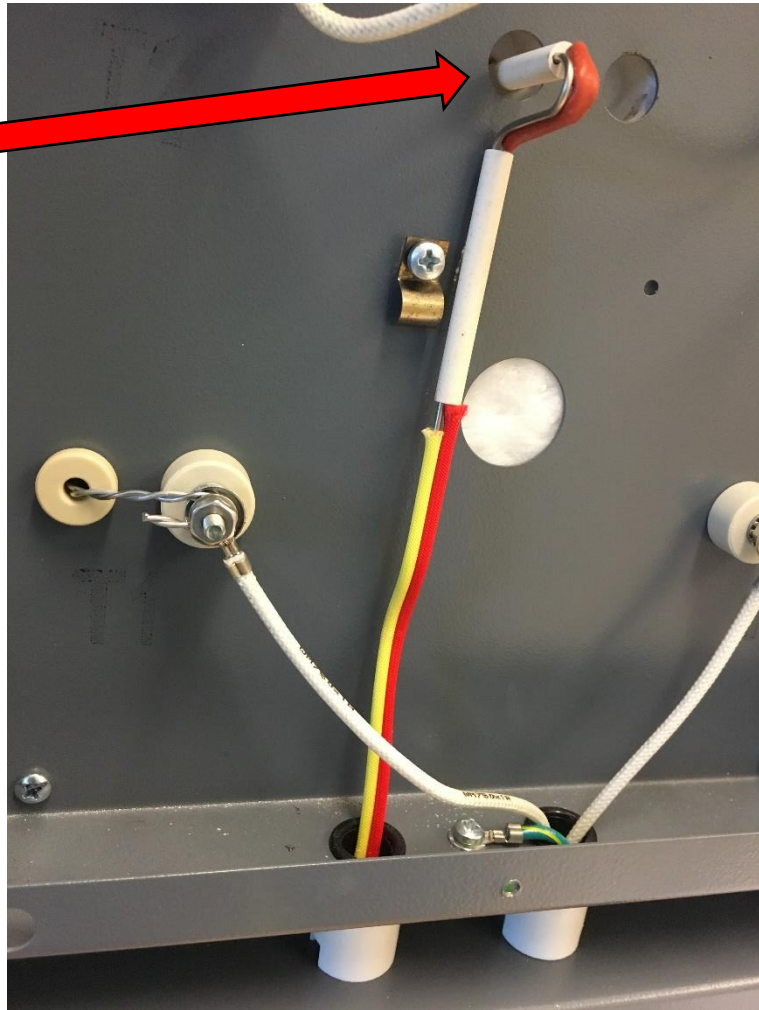
If the new thermocouple is ready, begin by bending the electrical wires so that they can pass through the plastic bushings and be connected to the electrical components. The new wires should then be screwed into position.



Pass screws through wire loops to reconnect.

Once the electrical components are connected, carefully maneuver the top portion into position and pass it through the LEFT channel into the furnace's heating chamber. It should be visible if the front door is open.

Push through carefully, you should not feel much resistance.



Screw the flange back into place on the thermocouple's lower ceramic covering, and the furnace should be operational. If the proper chromel/alumel thermocouple is used (Part # TC1165X1), no calibration should be necessary. Plug in the furnace and turn it on to make sure it is functional.

