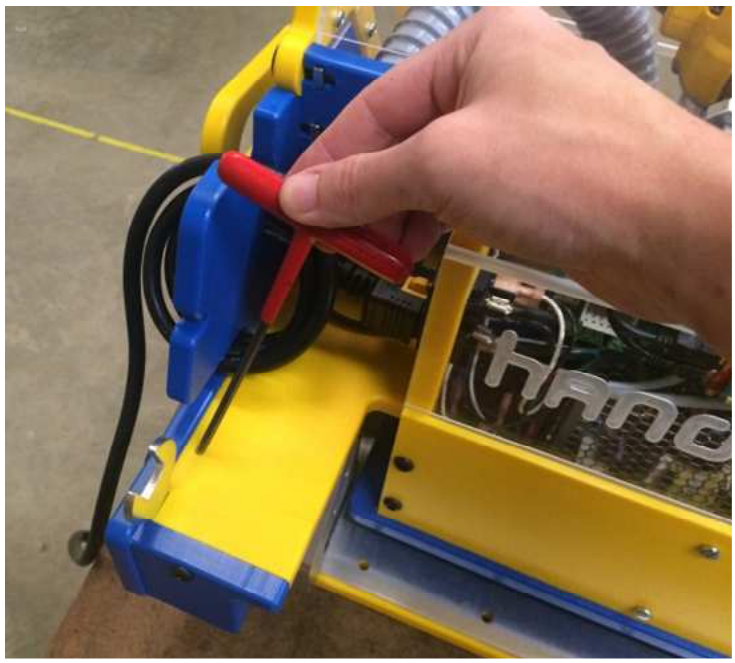
handibot®
smart power tool

Replacing Interface Board

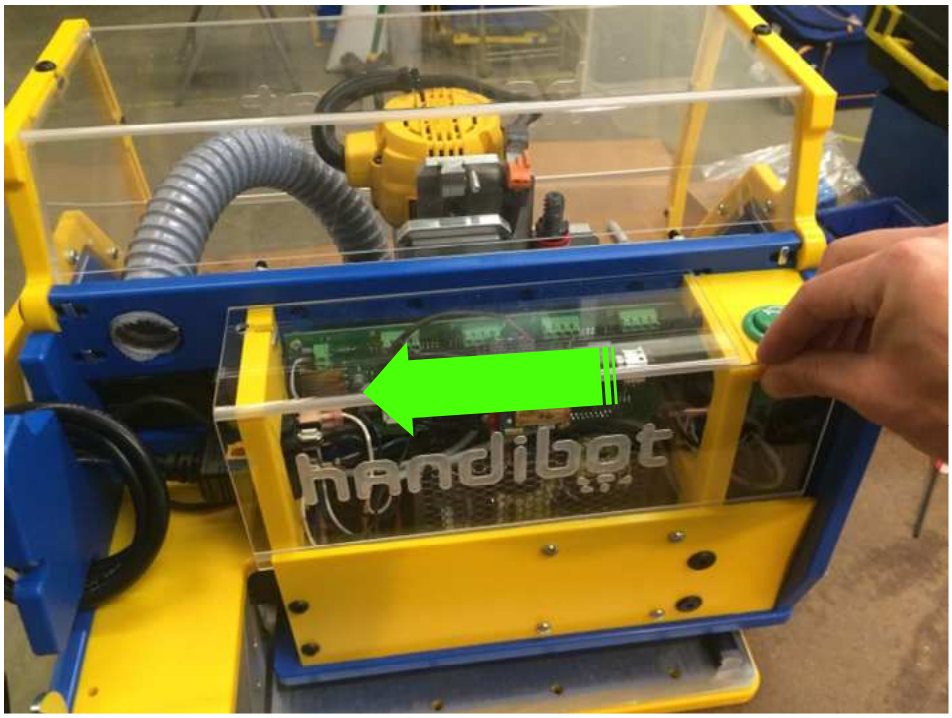
1 For safety, switch off the power and unplug your Handibot before touching any electronics.

2 Grab your trusty 4mm wrench from the back of the tool.

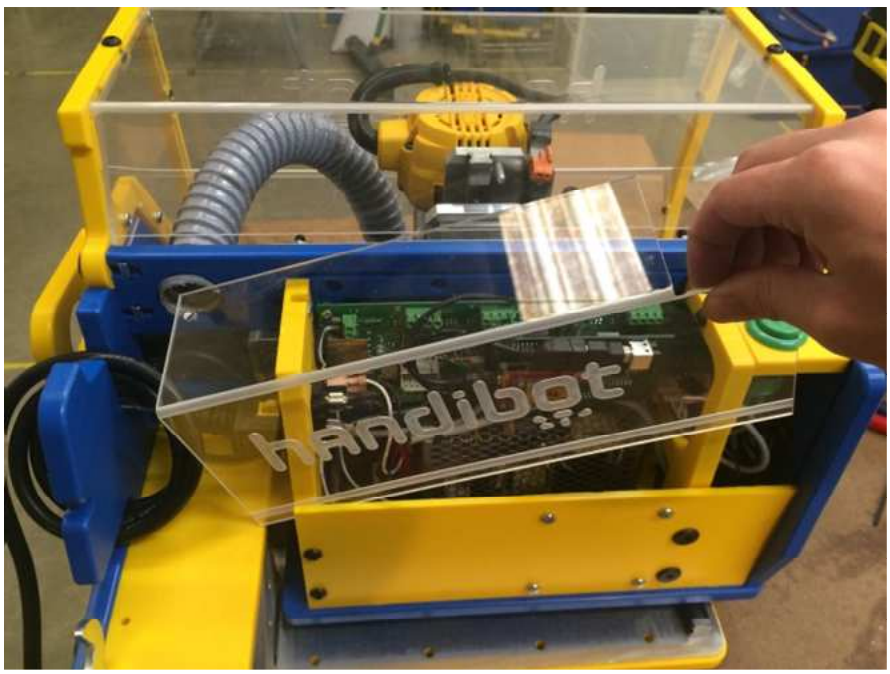


3 Remove the button head screw from the left, top side of the clear electronics enclosure.

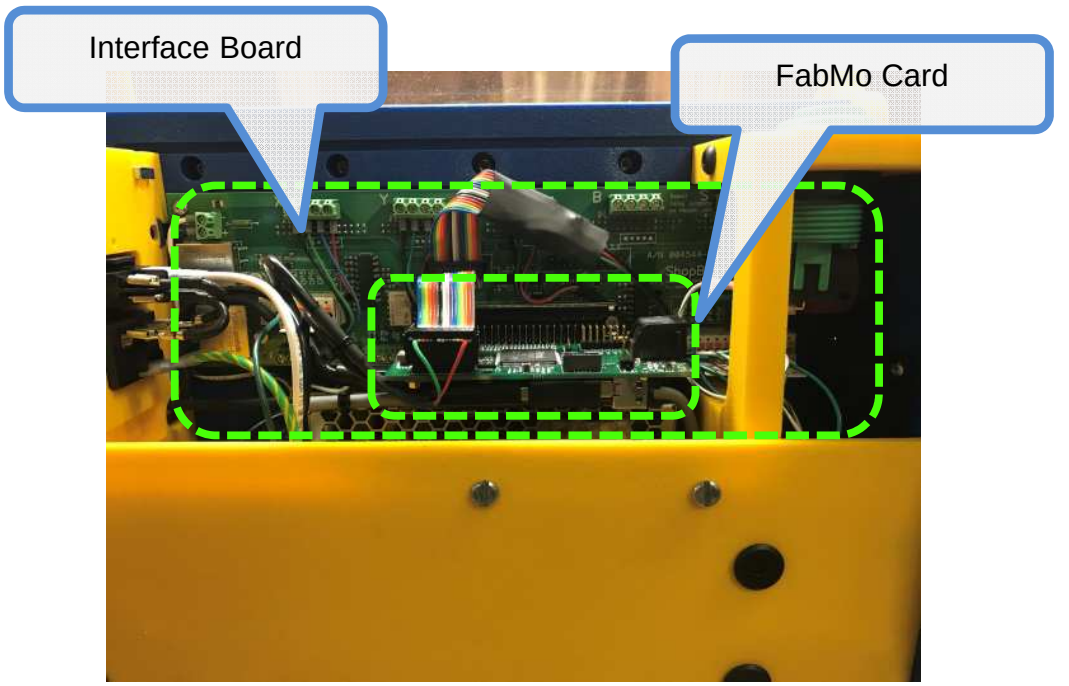
4 Slide the electronics enclosure to the left.



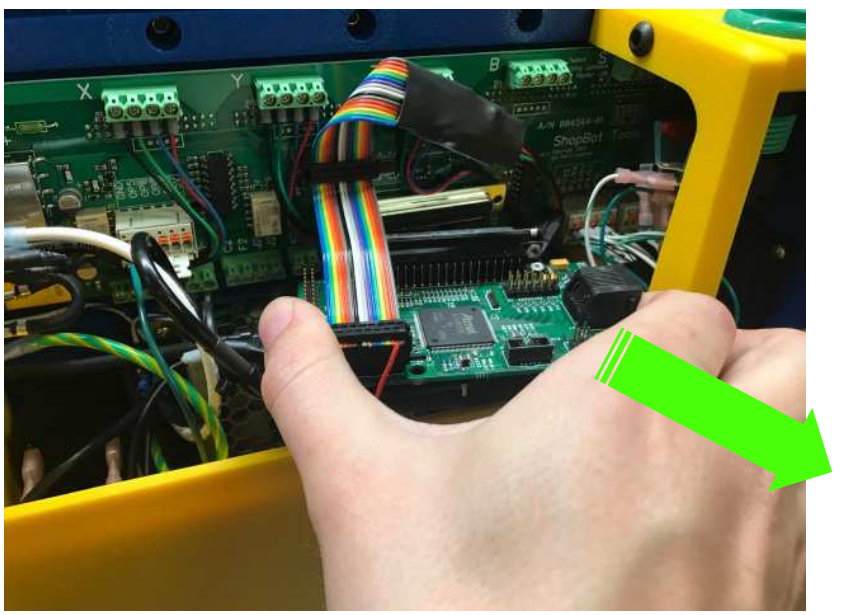
5 Pull the electronics enclosure away from the tool.



6 You now have access to the FabMo Control Card and Interface Board of your Handibot.

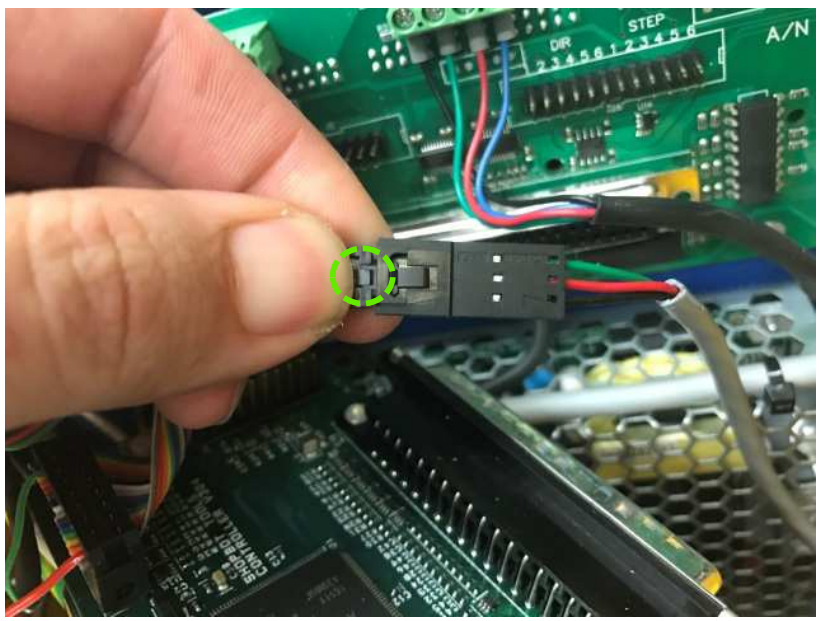


7 Unplug your FabMo card by pulling it away from the interface board. Some older handibots may have two small screws holding the board in place.

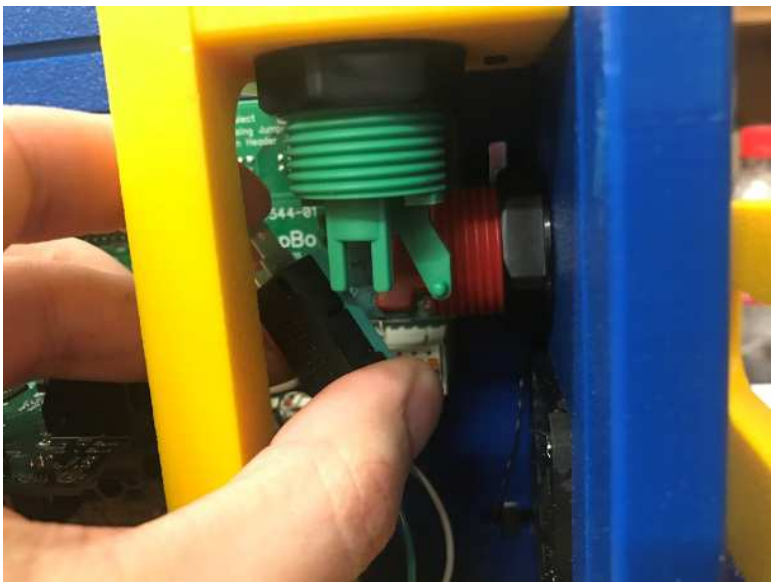


8 Unplug the ribbon cable from the interface board.

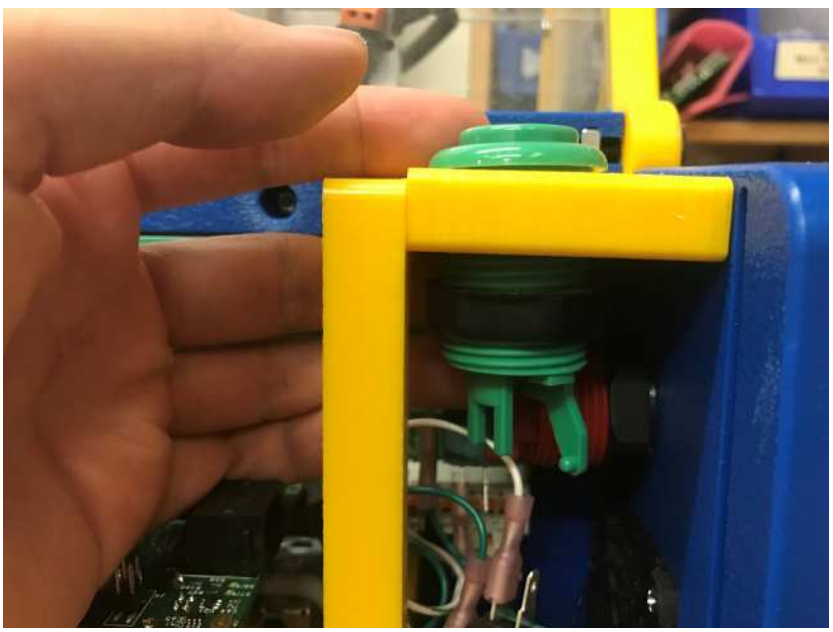
9 Unplug the small black connector from the ribbon cable by pressing down on the tab molded into the connector.



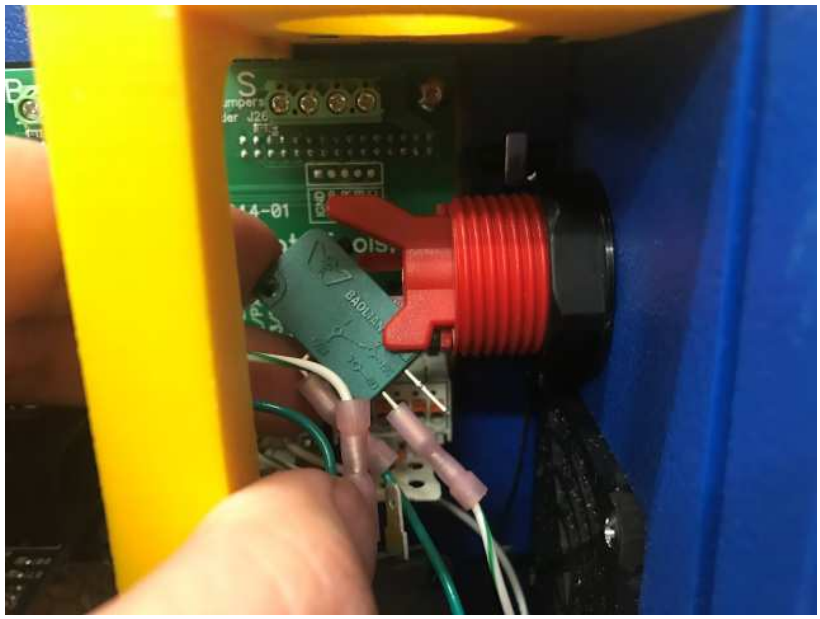
10 Remove the switch from the bottom of the start button by pulling out on the left side and rotating downwards.



11 Spin the black plastic nut off of the start button to remove the button completely from the tool. Set it aside.

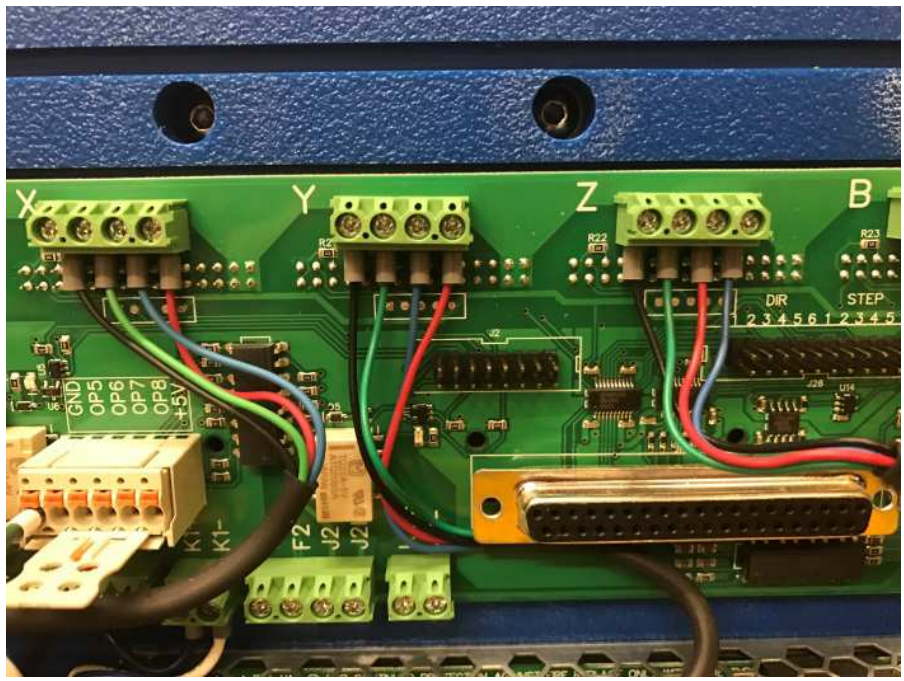


12 Do the same for the stop switch—pushing away at the top left and rotating down. Then spinning the nut off of the button and removing it.

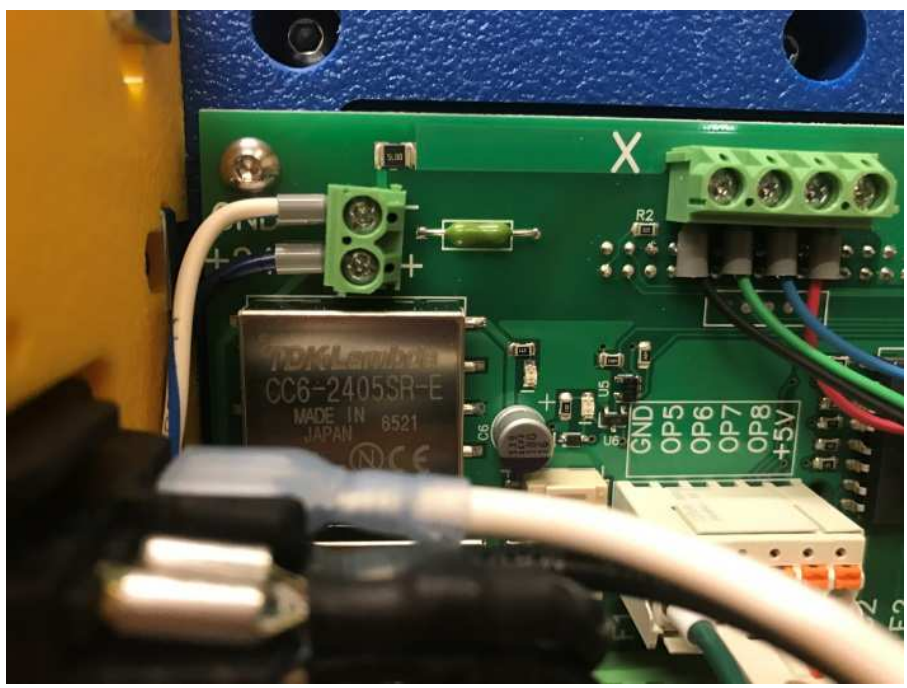


13 Take note of the current positions of connectors a wires. (This guide will cover how to re-attach them to your new board but it is good to have a look in person first!) These connectors link to your start and stop buttons.

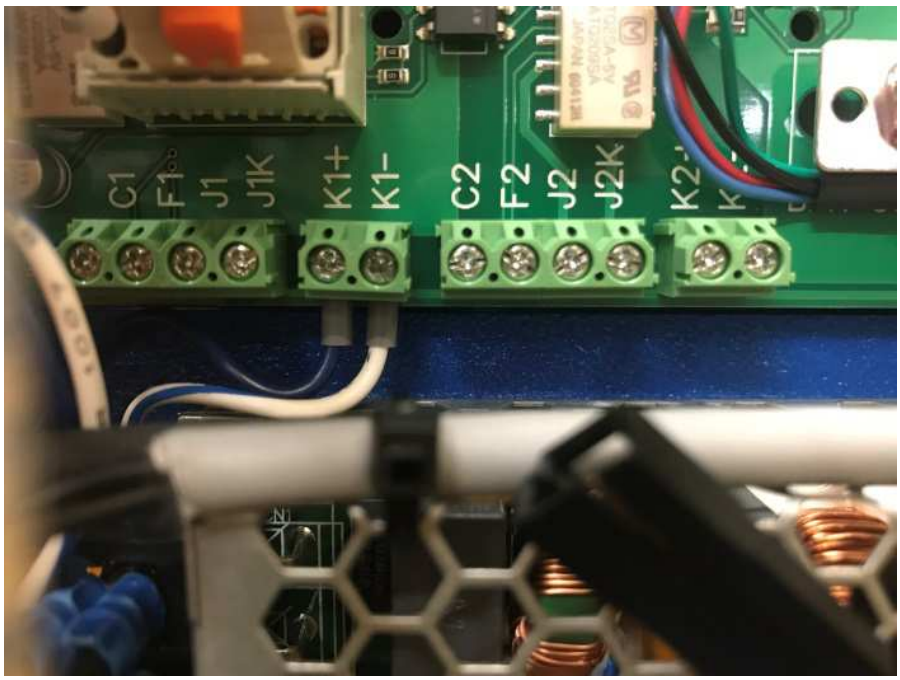
14 These three cables connect to your X, Y and Z motors. The order of the cables determines which direction the motor will spin.



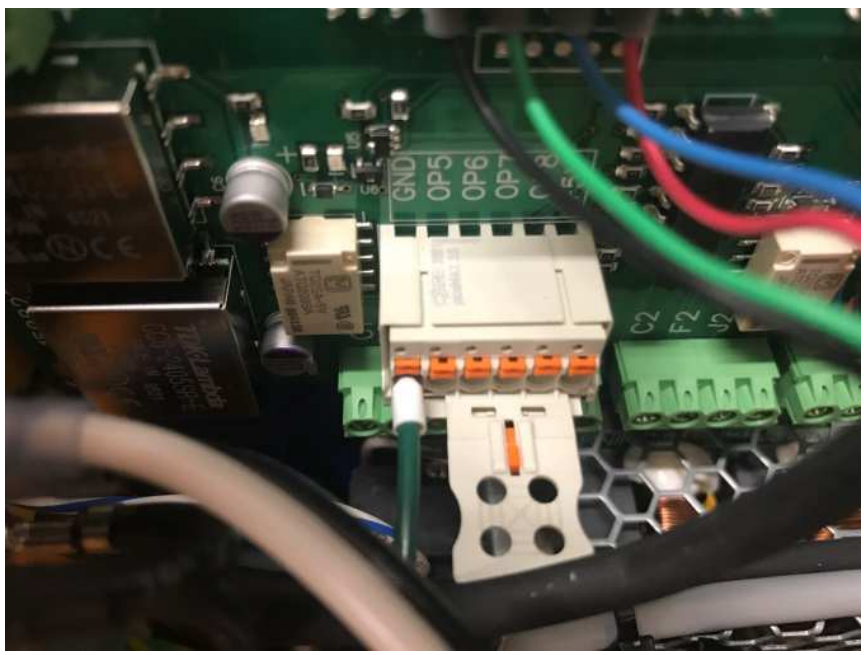
15 These two cables delived 24 VDC to power your interface board.



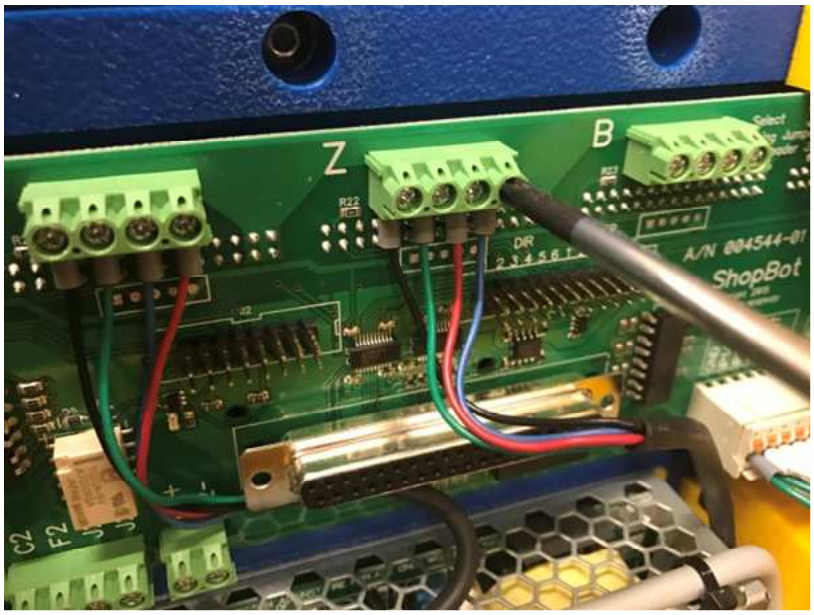
16 These two wires provide the signal to switch on your router during cuts.



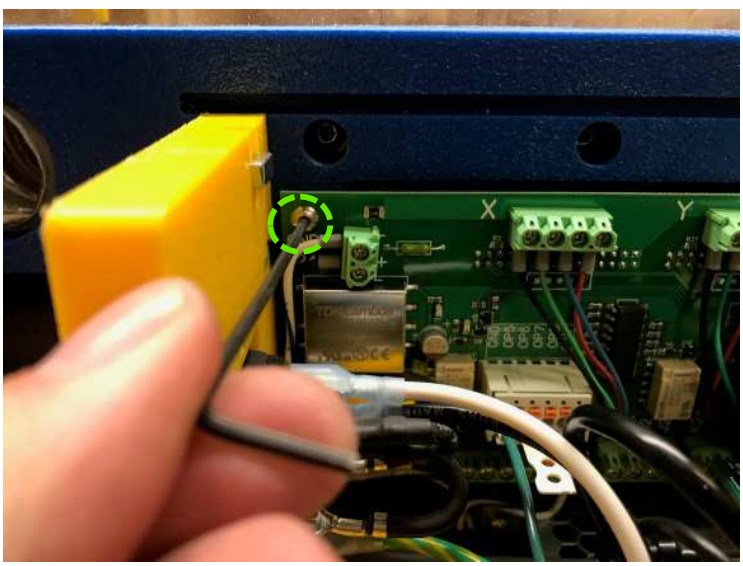
17 This connector is the ground for your Z-Zero plate.



18 Carefully remove all the cables from your interface board, using a phillips head screwdriver to loosen the terminal blocks holding each wire.

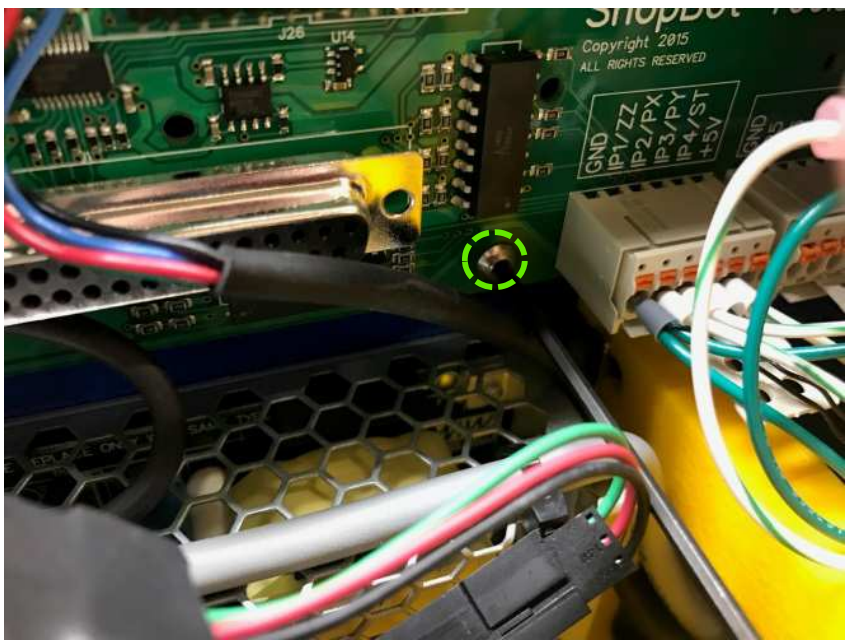


19 Once all of the wires have been removed—(we'll worry about the white connectors in a minute)—remove the four screws that hold the interface board in place.

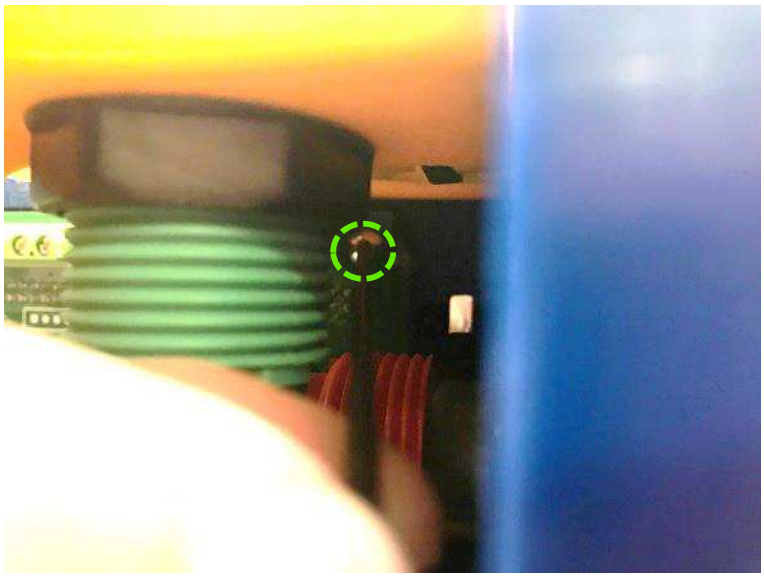


20 The second screw is in the bottom left corner.

21 The third screw is to the right of the fabmo card connector.

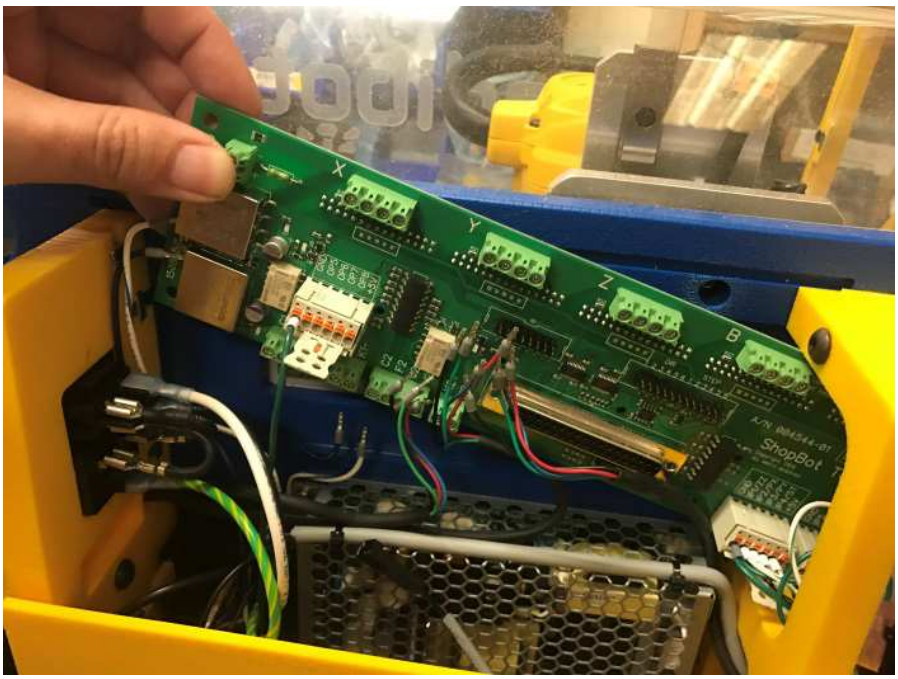


22 The fourth screw should be easier to get to if you've already removed the red and green buttons on the right side.

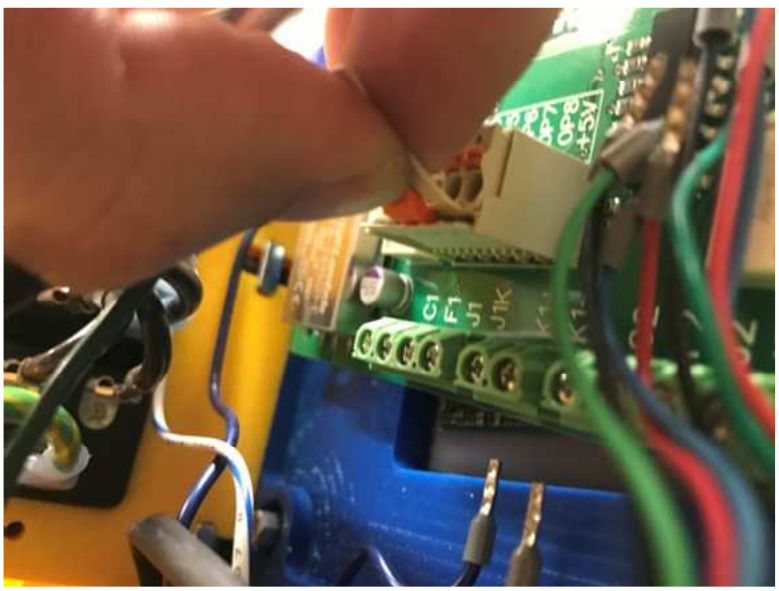


23 Pull the interface board away from the drivers.

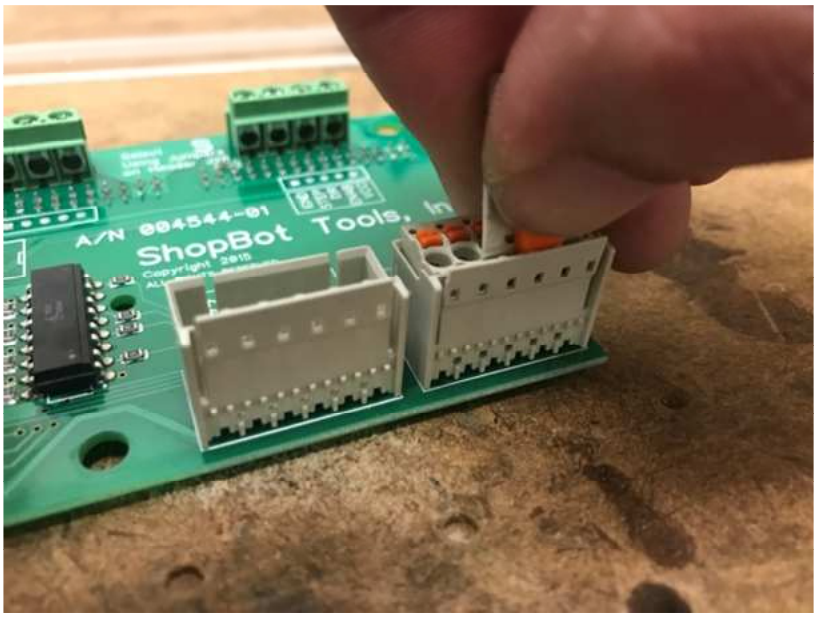
24 You should be able to maneuver it up and out of the electronics bay.



25 Now we can get to these white connectors. Press the orange tab on the bottom inwards, while wiggling and tugging on the connector. It should work its way out of the board.

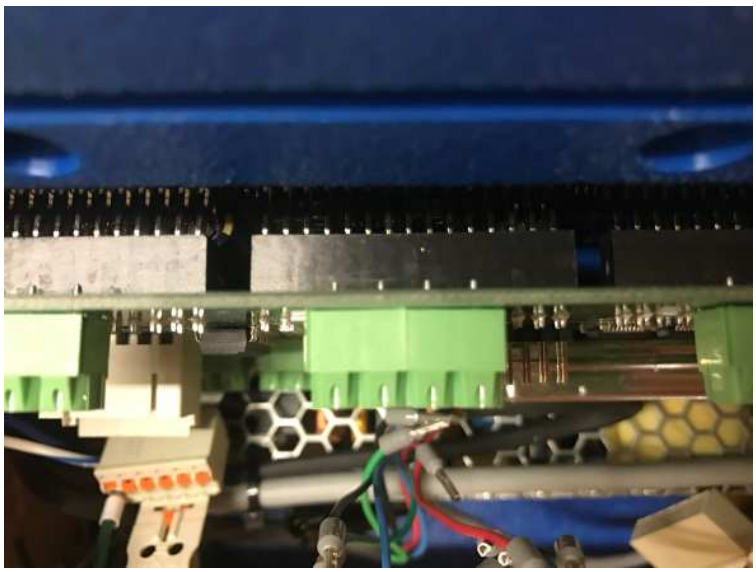


26 Remove the other two connectors as well. Then set the old interface board aside—it should be completely free of the machine now.

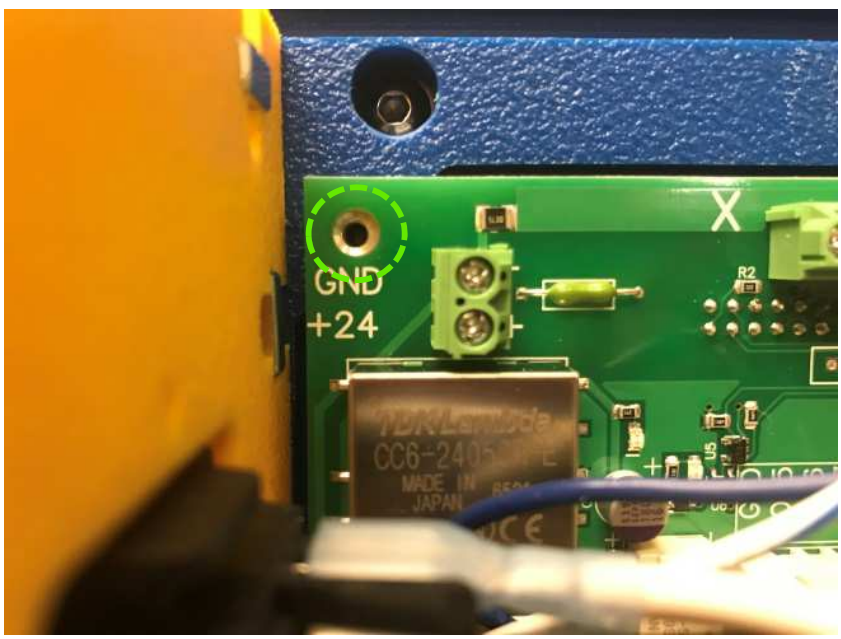


27 If you are also replacing drivers, they are easy to access now—just remove the two screws holding them in place and swap in the new drivers.

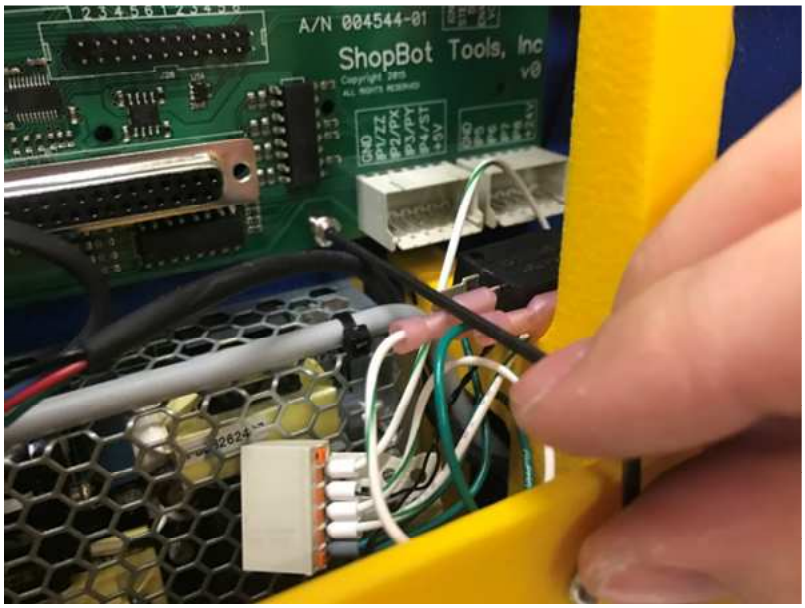
28 Now slide your new interface board into place. As you push it onto the driver pins—be very careful to line them up with the connectors. Being off by even one pin can damage the drivers on startup of the tool.



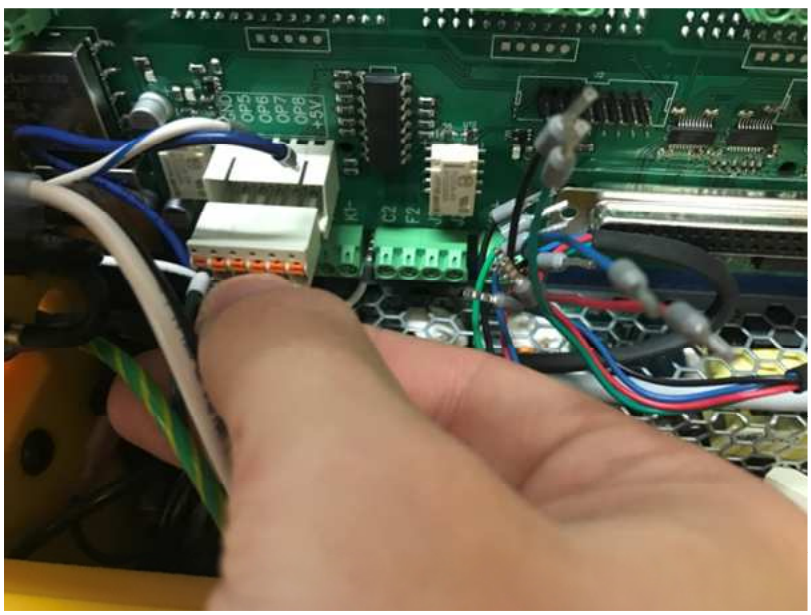
29 You can check alignment by making sure the holes on the board all line up perfectly with the threaded spacers that are under the board.



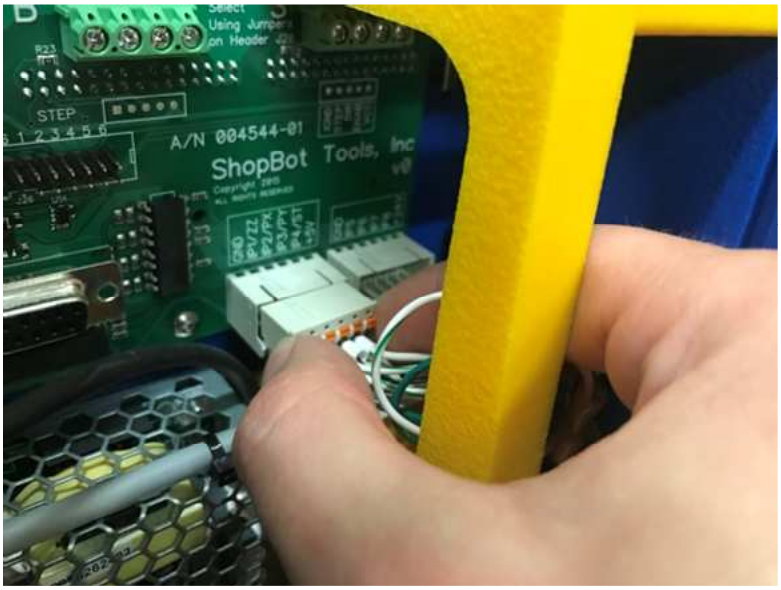
30 Now reinsert all four screws that hold the interface board in place.



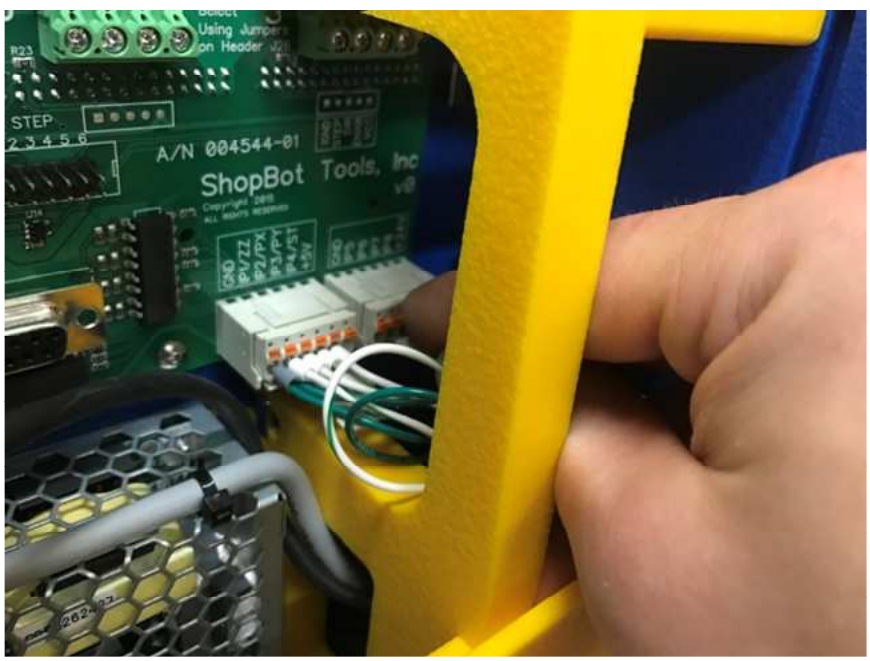
31 Start plugging the white connectors back into the board. The connector with one green wire goes into the socket on the far left of the board.



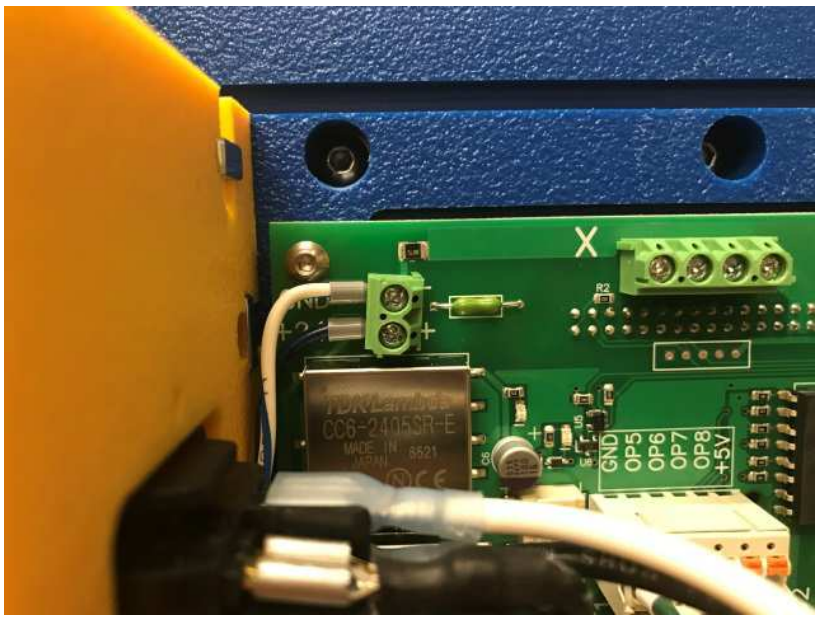
32 The connector with a number of wires plugs into the second socket from the right on the bottom right corner of the board.



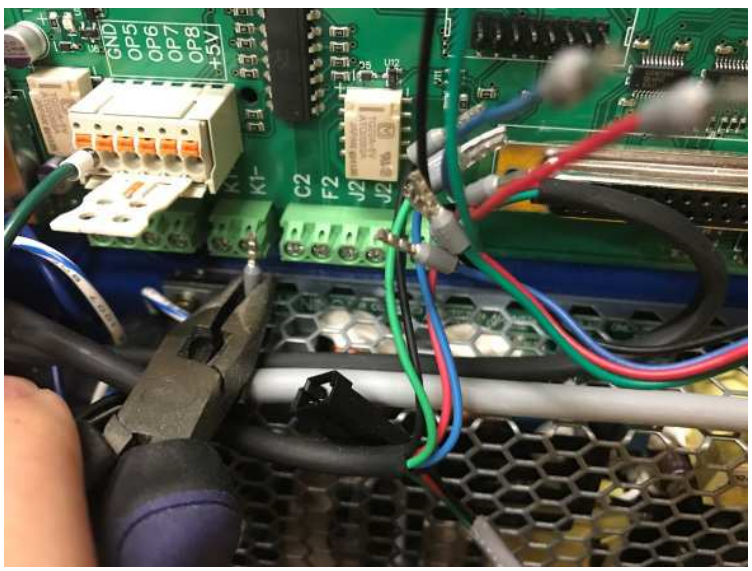
33 The empty expansion connector goes in the first socket from the right.



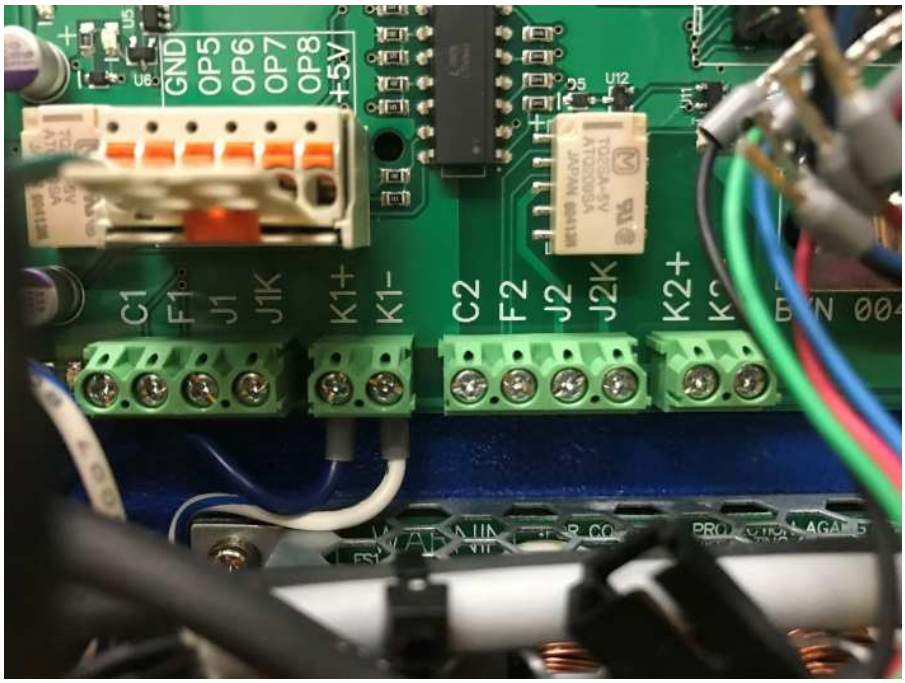
34 The two wires connected to the large power supply go into the 24V terminal, White is GND and Blue is +24V



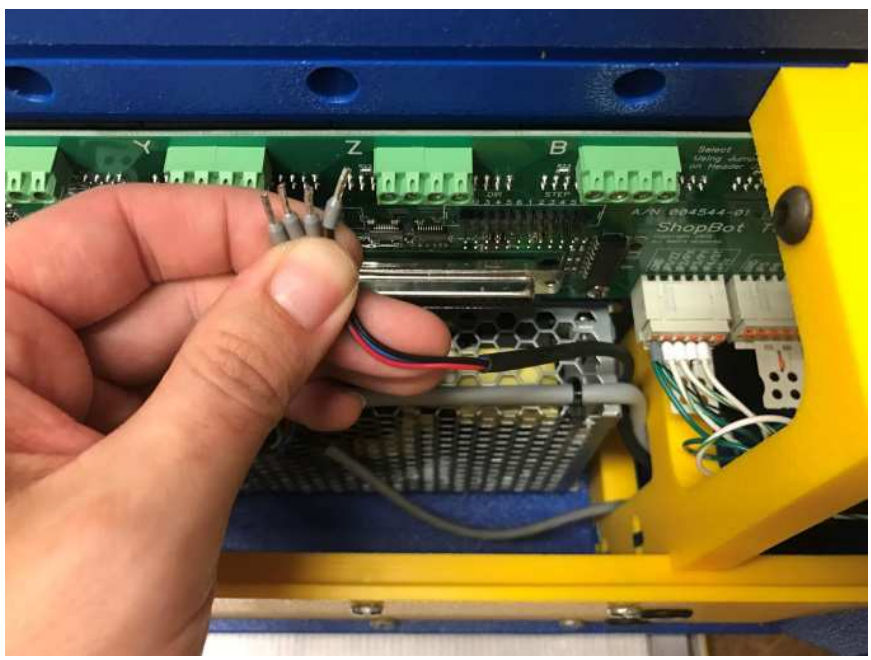
35 The two cables that trigger the router are a little trickier and may require a pair of tweezers to maneuver into place. The white wire goes in K1- and the blue wire goes in K1+



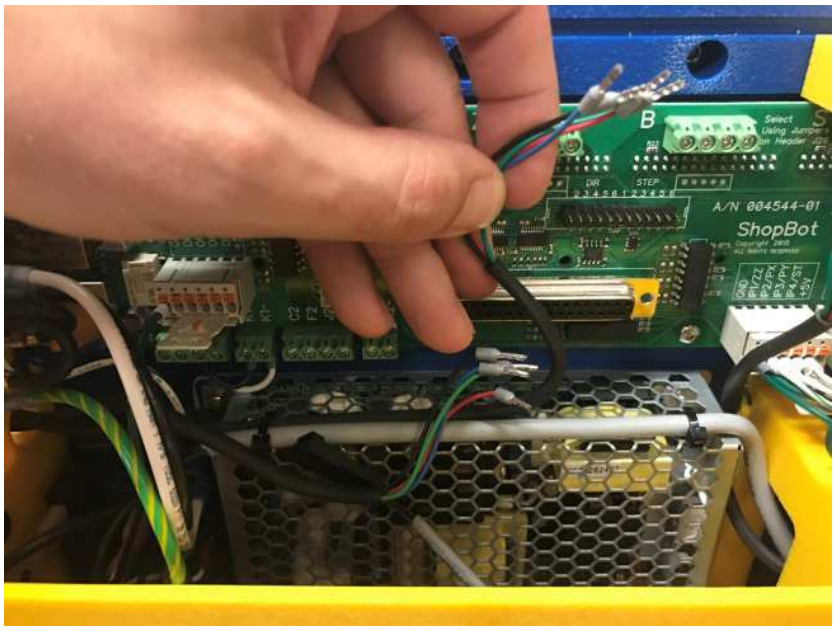
36



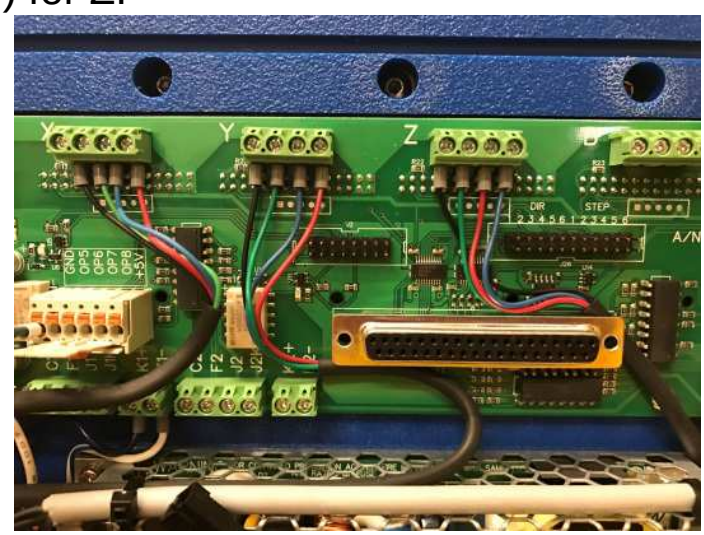
37 The Z Motor cable is the one that enters the electronics bay from the right.



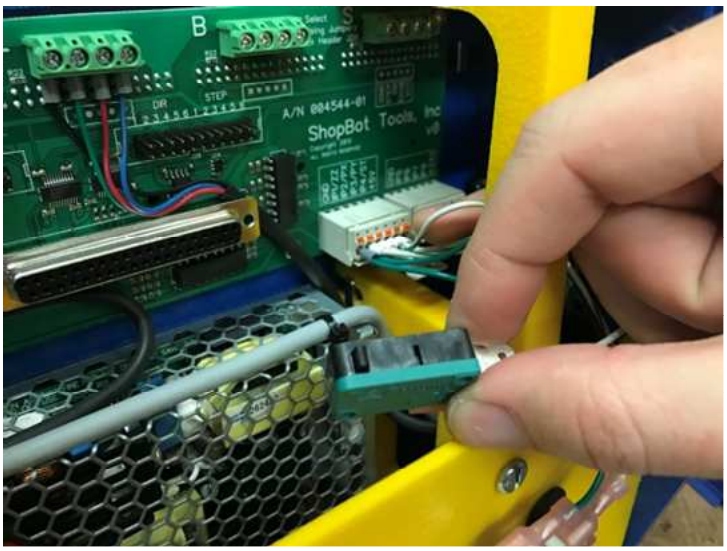
38 The X and Y motor cables enter the electronics bay from the left—the Y motor cable is longer.



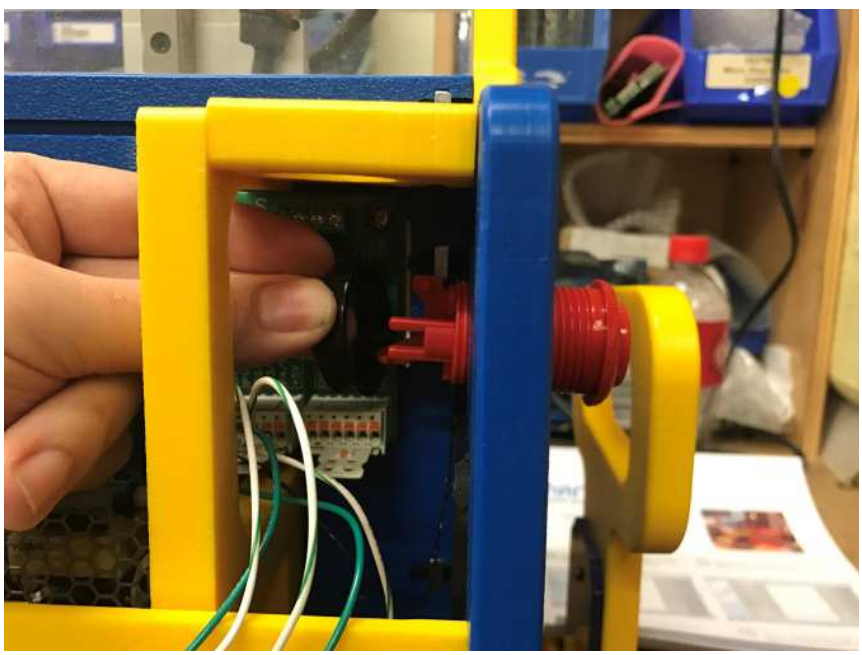
39 Reattach the motor cables to their corresponding axes. Note: some cables may be Brown, White, Green, Yellow…instead of Black, Green, Blue, Red. Insert those in that order (Br, W, Gr, Y) for X and Y and (Br, W, Y, Gr) for Z.



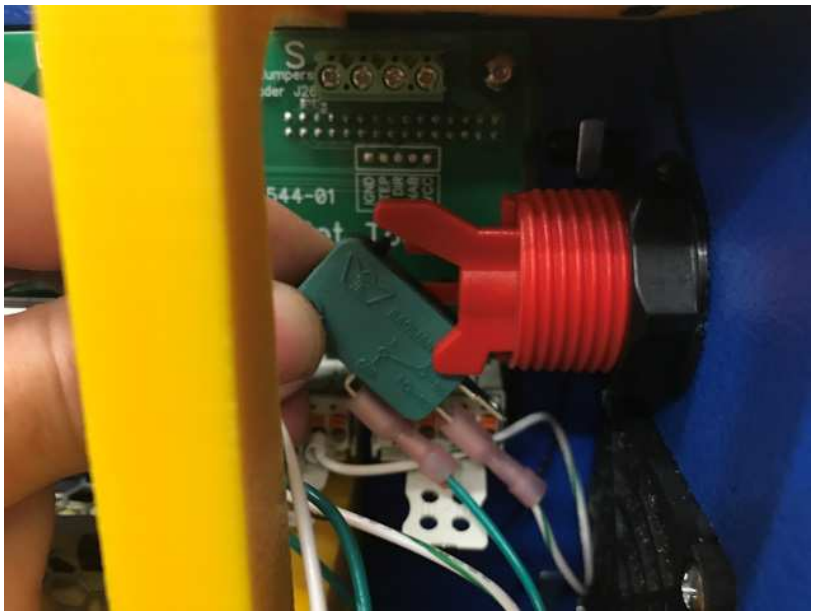
40 Find the switch for your Stop Button. It will have a white wire running into the “IP4” pin on the white connector.



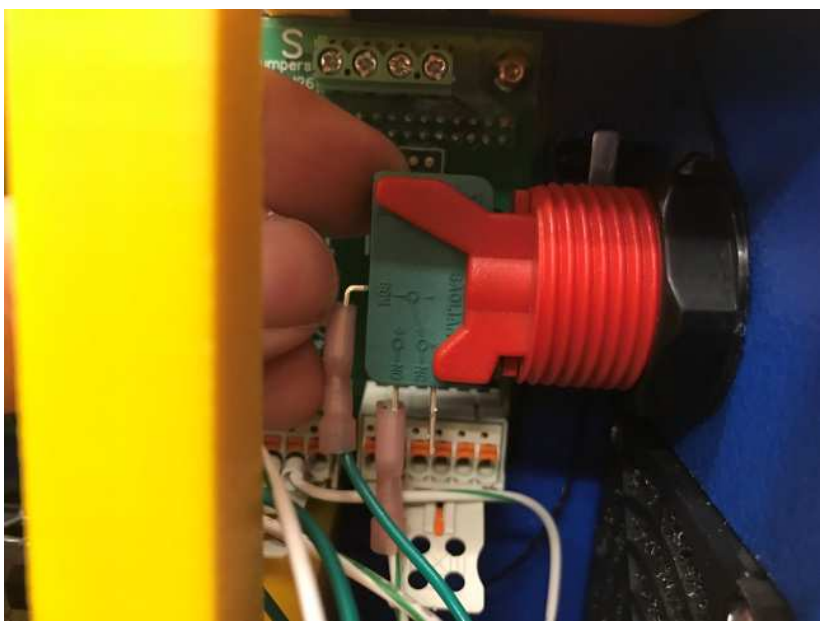
41 Slide the stop button back into the side of the tool and thread the black plastic nut onto its body.



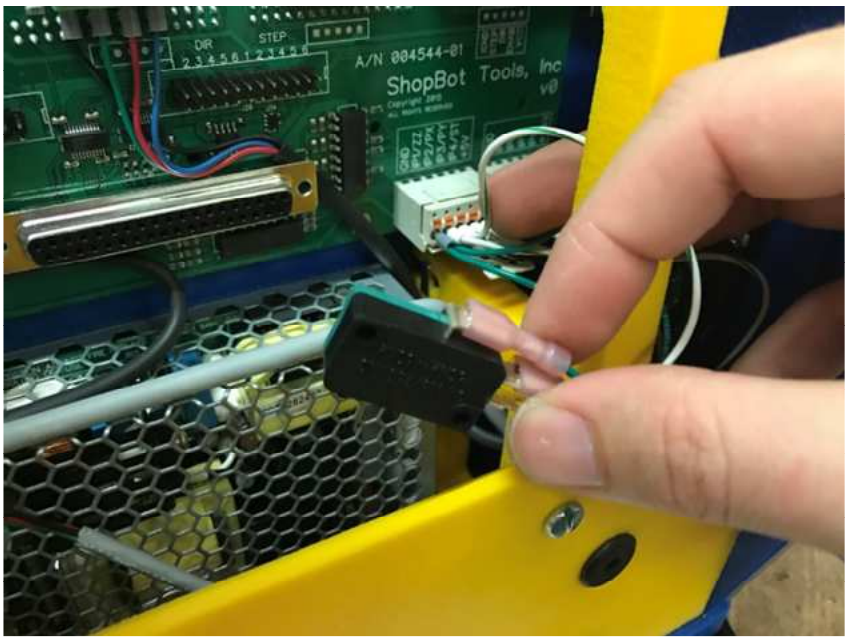
42 Angle the button so that the base appears as shown below. Then hook the switch onto the button casing.



43 Rotate the switch up to click it into place. Now when you press the button you should feel a springy click.



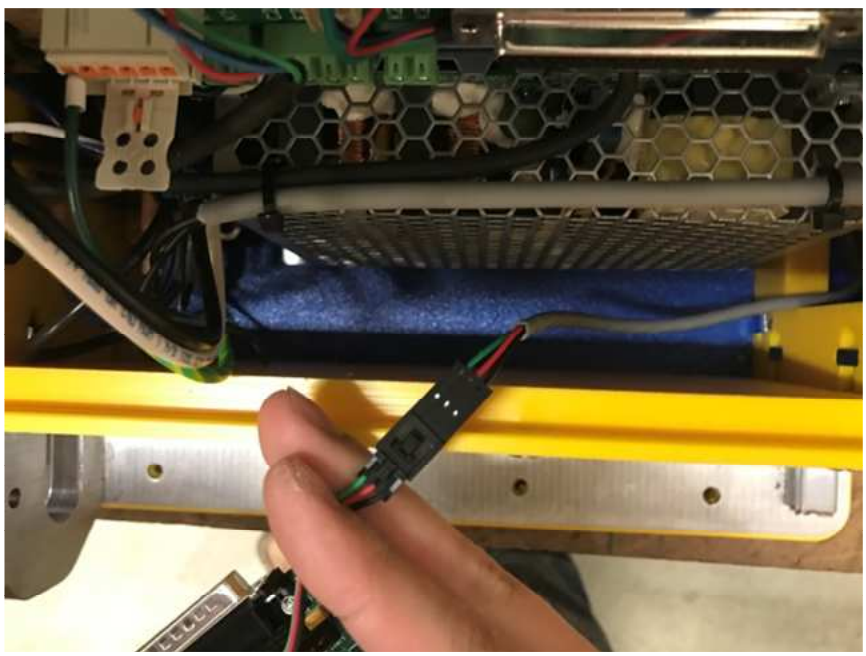
44 Grab the switch for the Start Button. It will have a white wire connected to “IP2”.



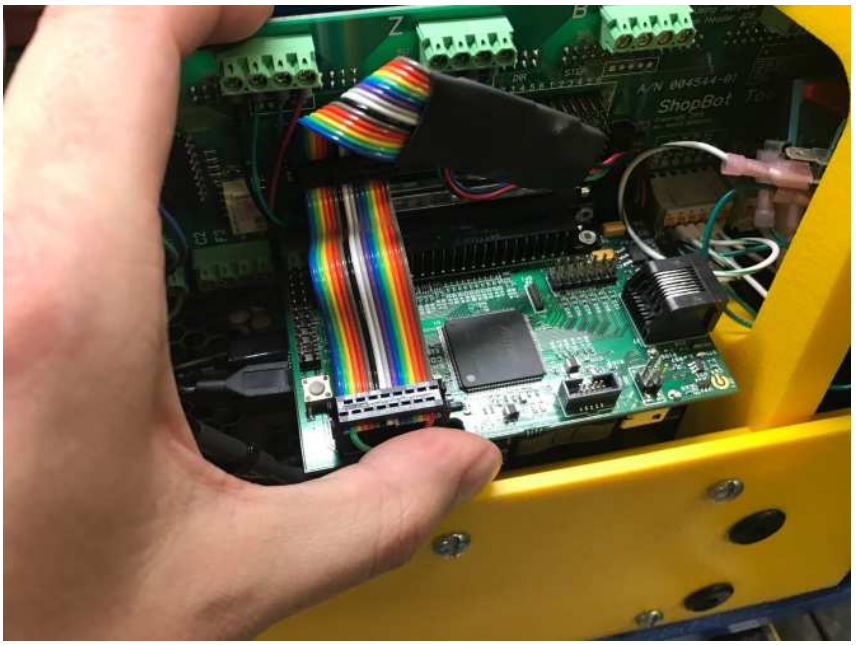
45 Reinsert the green button and angle the base as shown.

46 Swing the switch into place and test the button for that springy click.

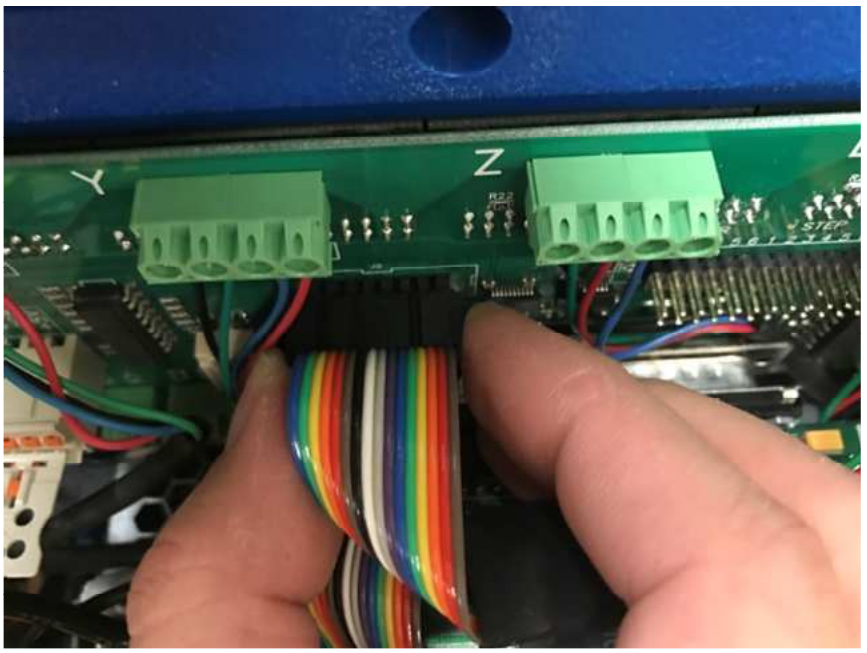
47 Reconnect the three wire cable from the FabMo Card.



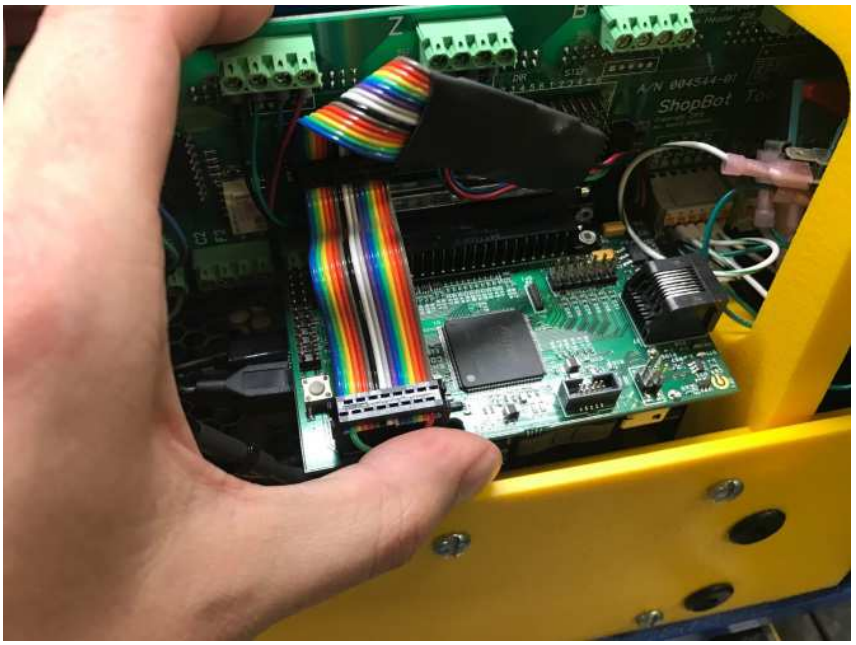
48 Plug the FabMo card back into the interface board.



49 Plug the ribbon cable back into the interface board.



50 Now plug the FabMo card back into the interface board.



51 Replace electronics cover, plug in your tool, and you should be good to go!