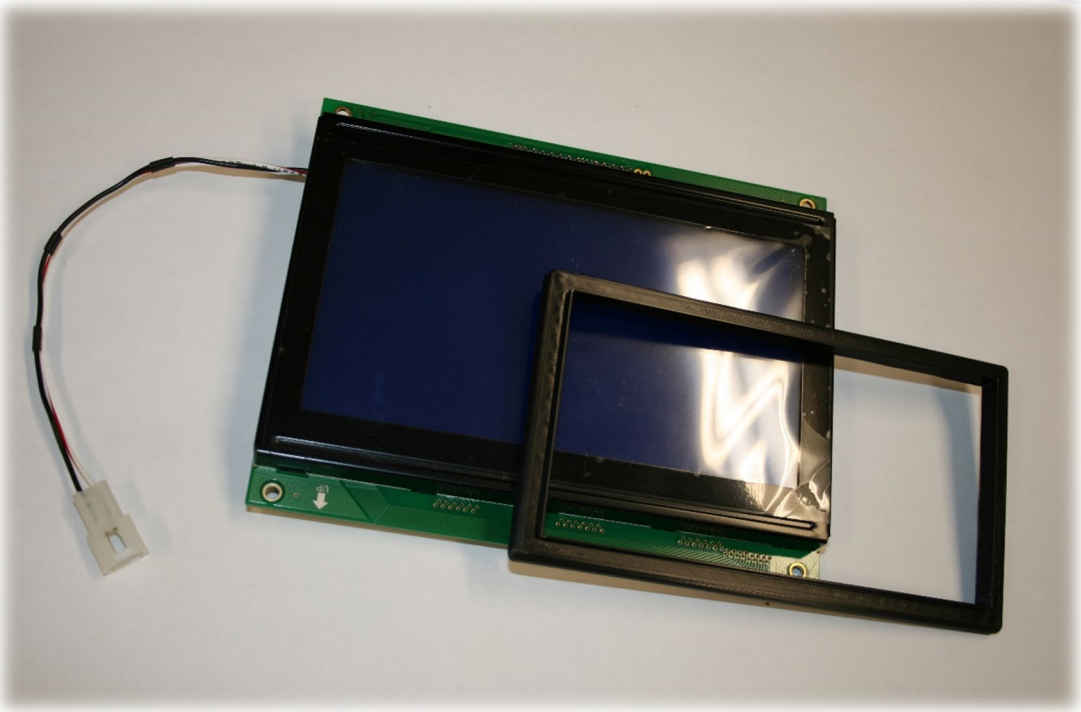
Humidity Generation and Calibration Equipment
THUNDER SCIENTIFIC®
CORPORATION THE HUMIDITY SOURCE

Model 3900

Liquid Crystal Display Replacement Procedure



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Model 3900 Liquid Crystal Display Upgrade Replacement Procedure

Tools Required for this procedure:

- 9/16” Open end wrench
- 11/16” Thin blade open end wrench
- 1/2” Open end wrench
- Small flat head screwdriver
- Wire cutters
- #2 Phillips head screwdriver

Kit Parts:

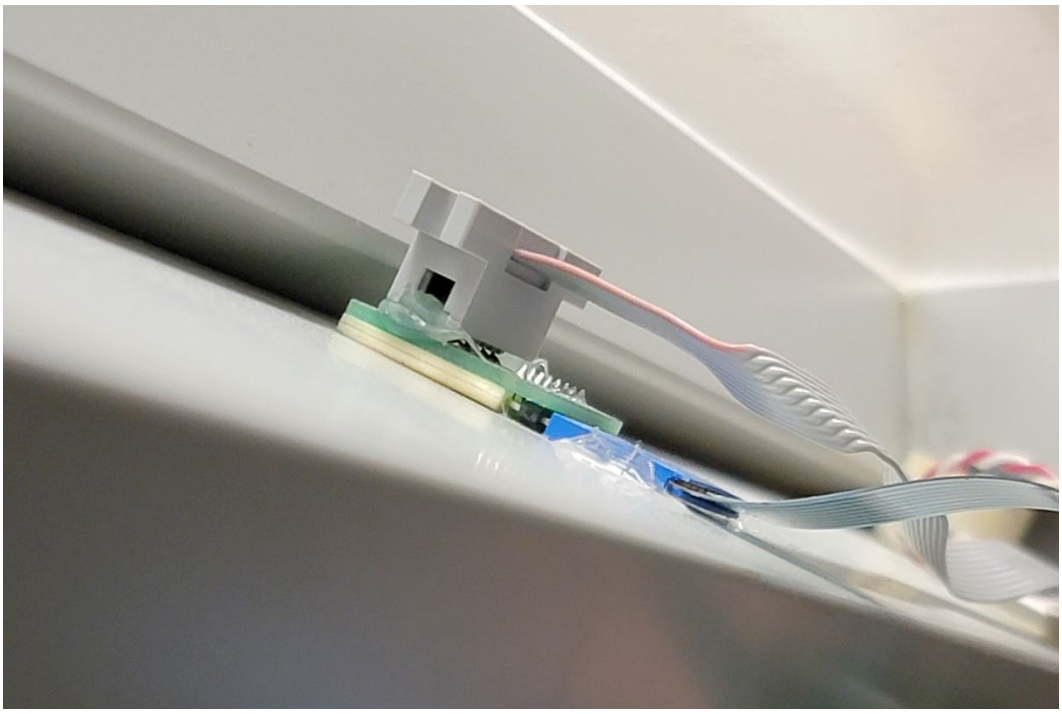
- LCD Board module
- LCD Bezel
- 4 Each 6-32 x 3/8” Pan head screws

1. First turn the main power switch off and unplug the power cord.

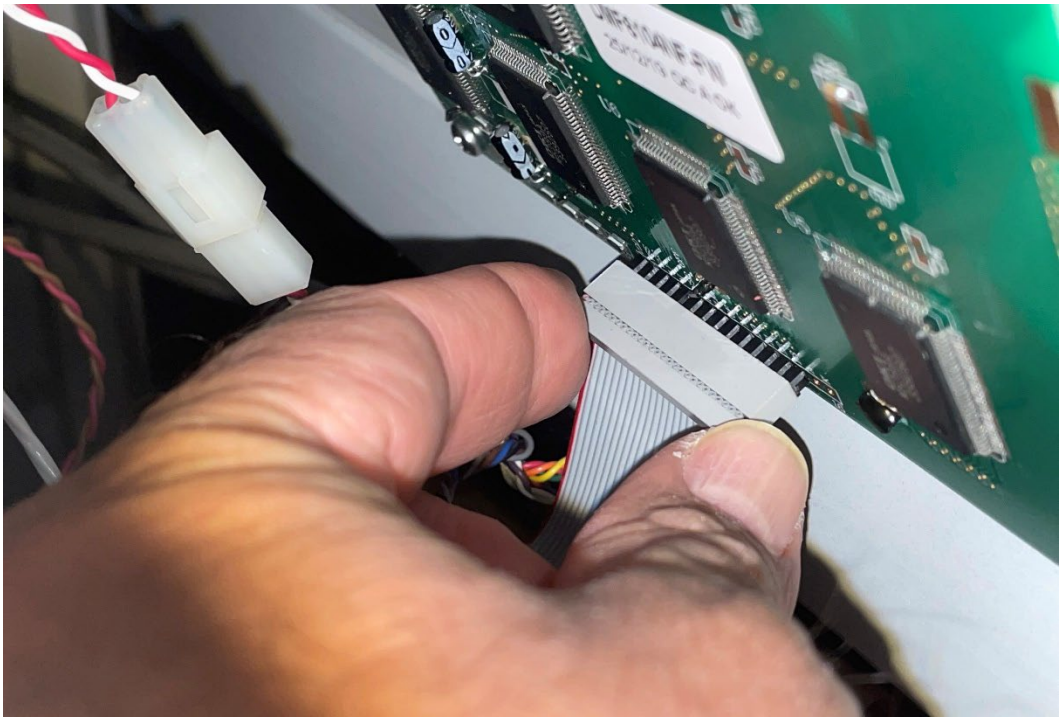
2. Remove the right and left side panels.

3. Using a 9/16” wrench remove the gas inlet connection fitting.

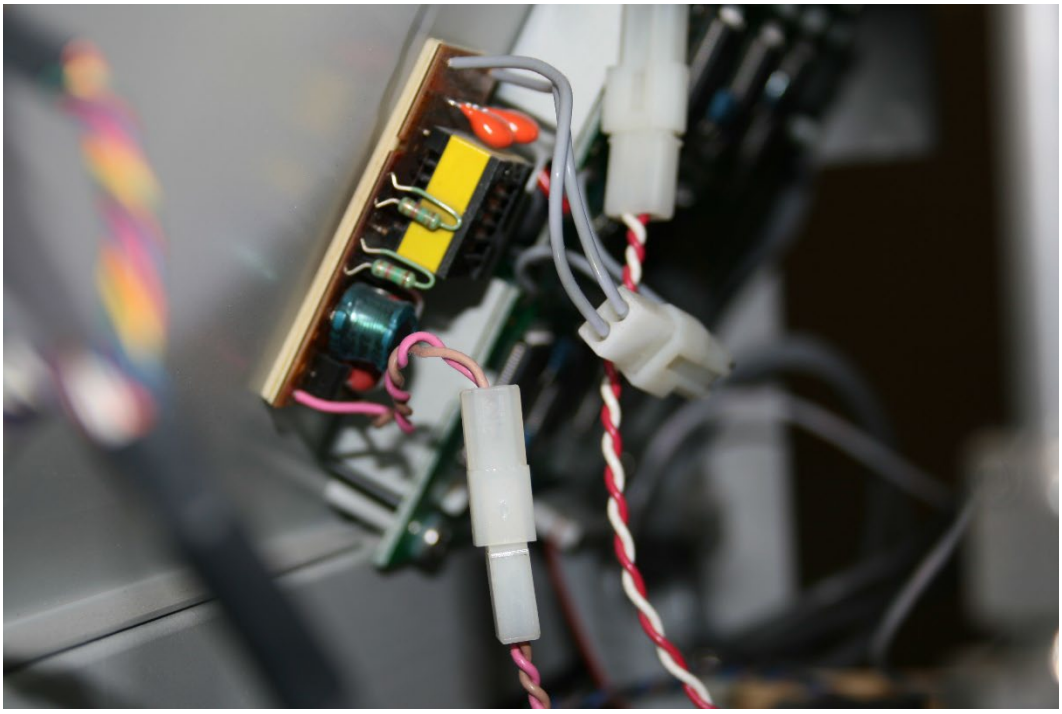
4. Locate the ribbon cable that attaches to the keyboard interface board at the top center of the control panel hood and remove it.



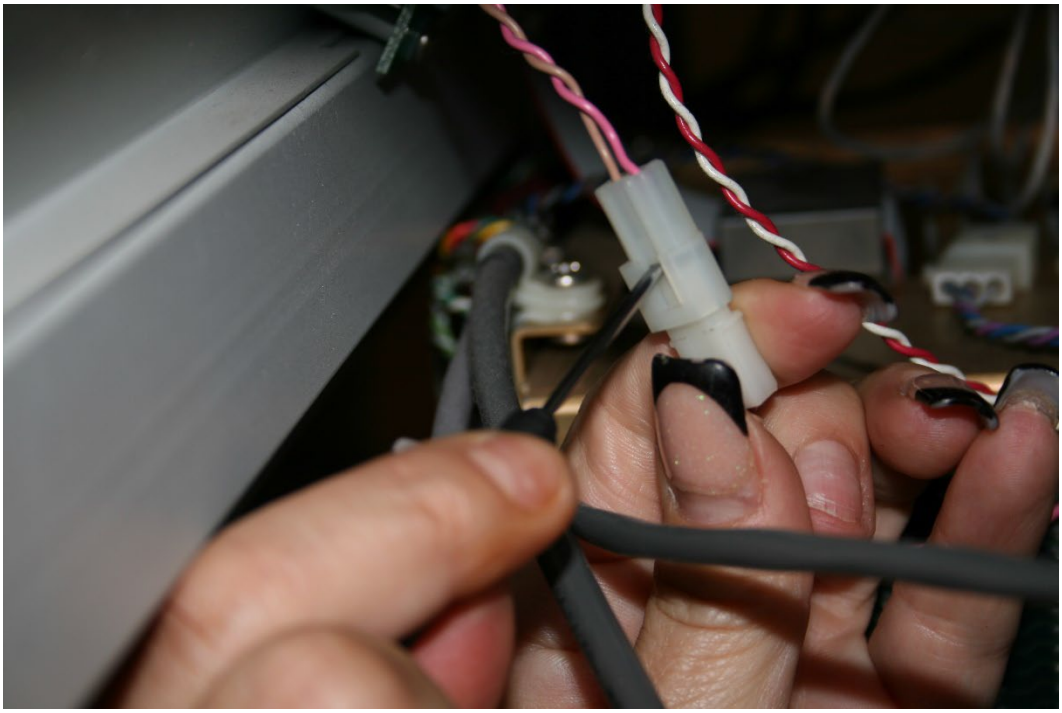
5. Next locate the LCD ribbon cable at the rear of the control panel hood and remove it.



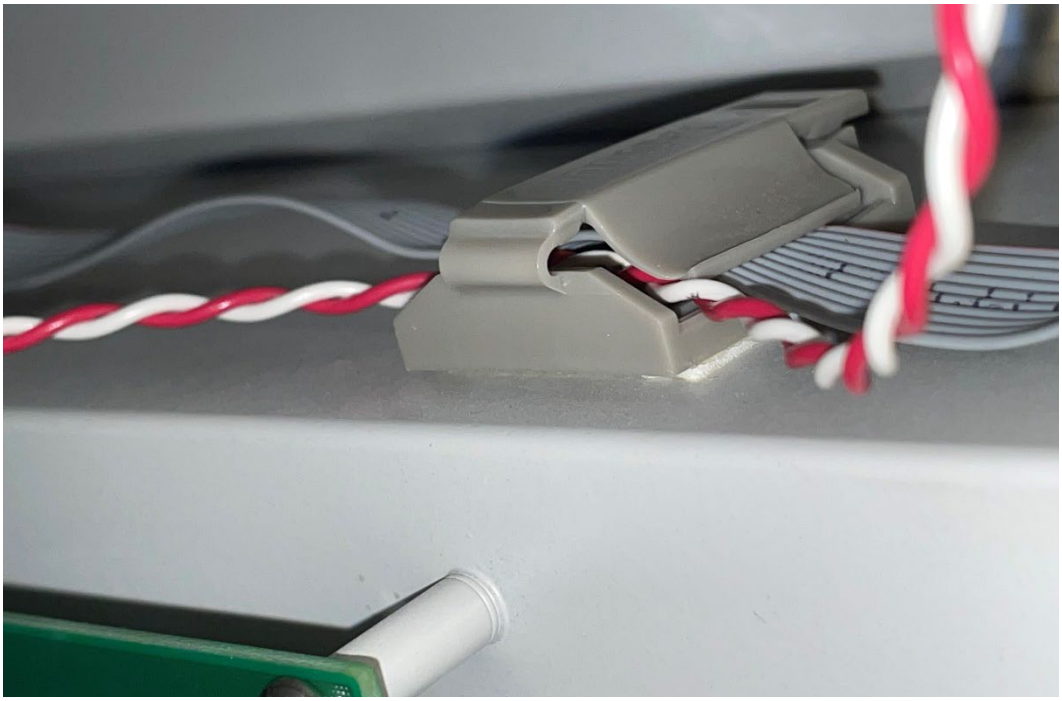
6. Locate the display inverter board next to the LCD board.



7. Take the small flat head screwdriver and place it between the two-pin connector and pry it apart.



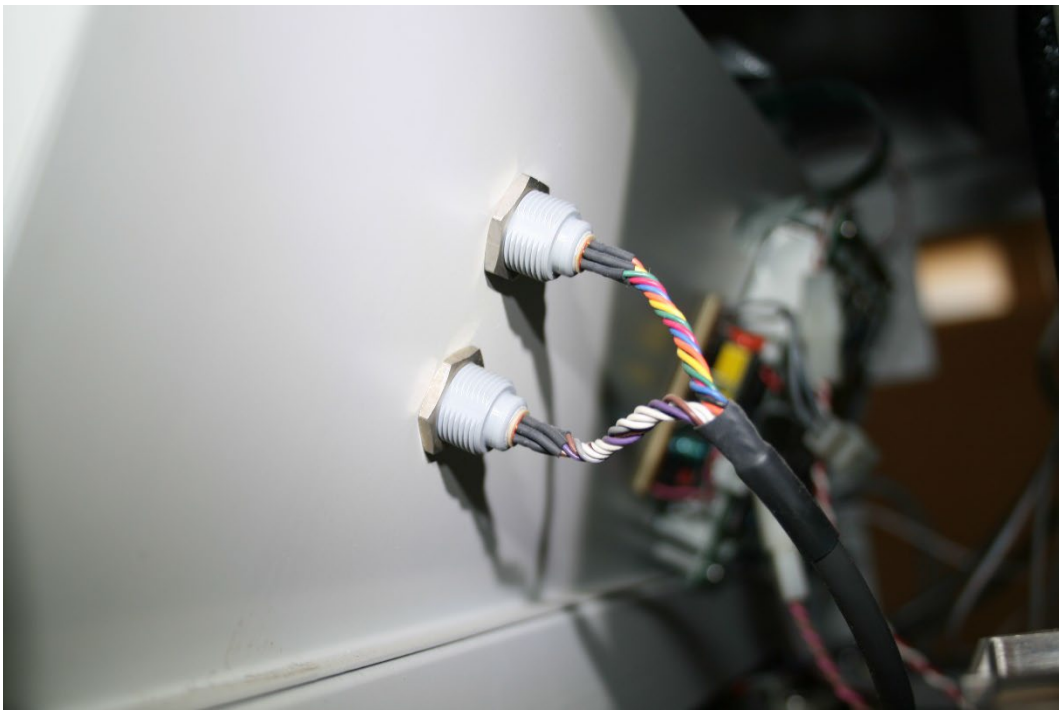
8. Locate the ribbon cable mount at the top inside right control panel hood.



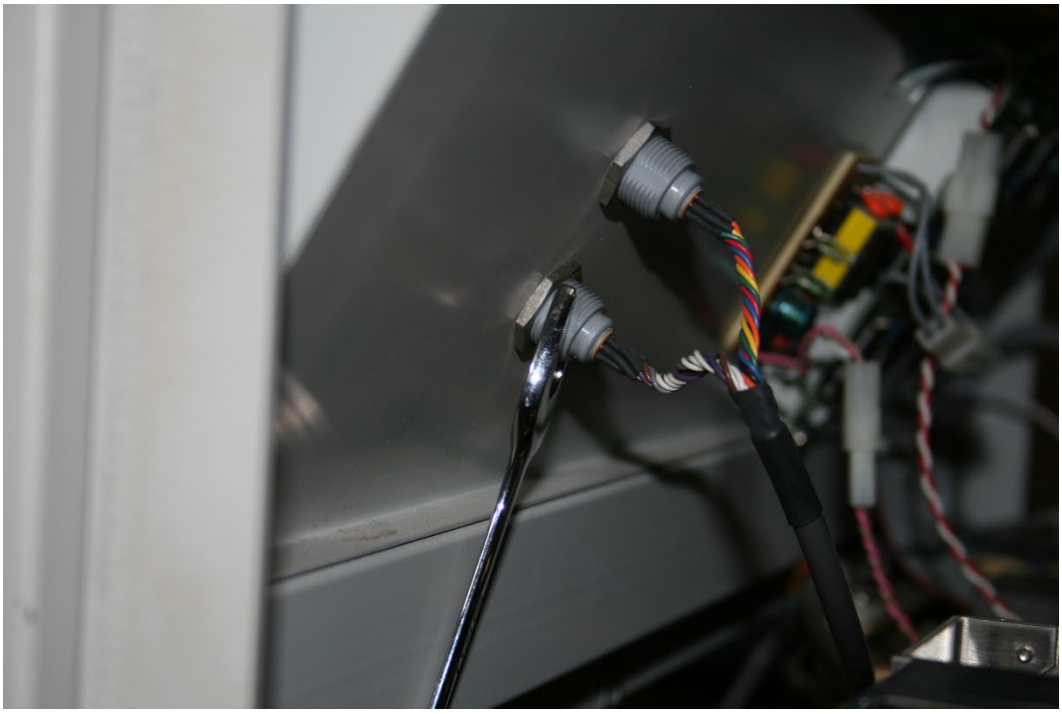
9. Pull it open and remove the red and white wire and the ribbon cable.

10. Disconnect the red and white wire using the small flat head screwdriver.

11. Locate the two connectors on the inside left side of the control panel hood.

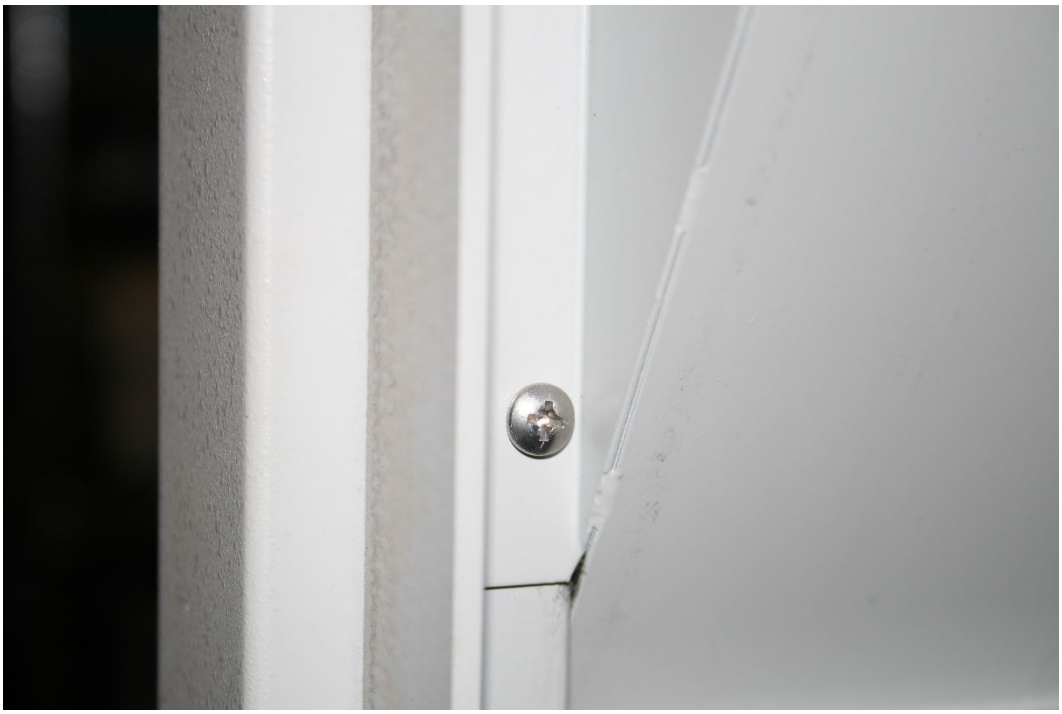


12. Using a 11/16” Thin blade open end wrench, loosen the top and bottom nuts.



13. Go to the front of the system and unscrew each of the connector covers and pull the cables out.

14. Next look for the Phillips head screws located just behind the control panel hood assembly at the right and left sides of the system, four total.

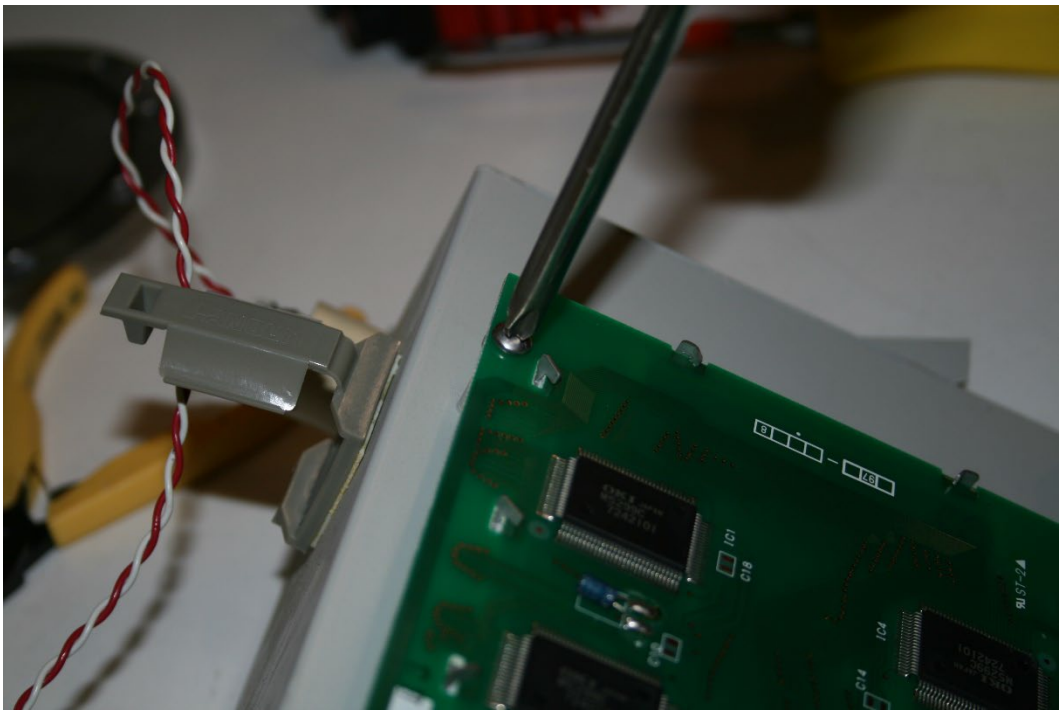


15. Use the #2 Phillips head screwdriver and remove all four screws and save them for later installation.

16. Pull the control panel hood assembly towards the rear of the system and slide it out on the right side.

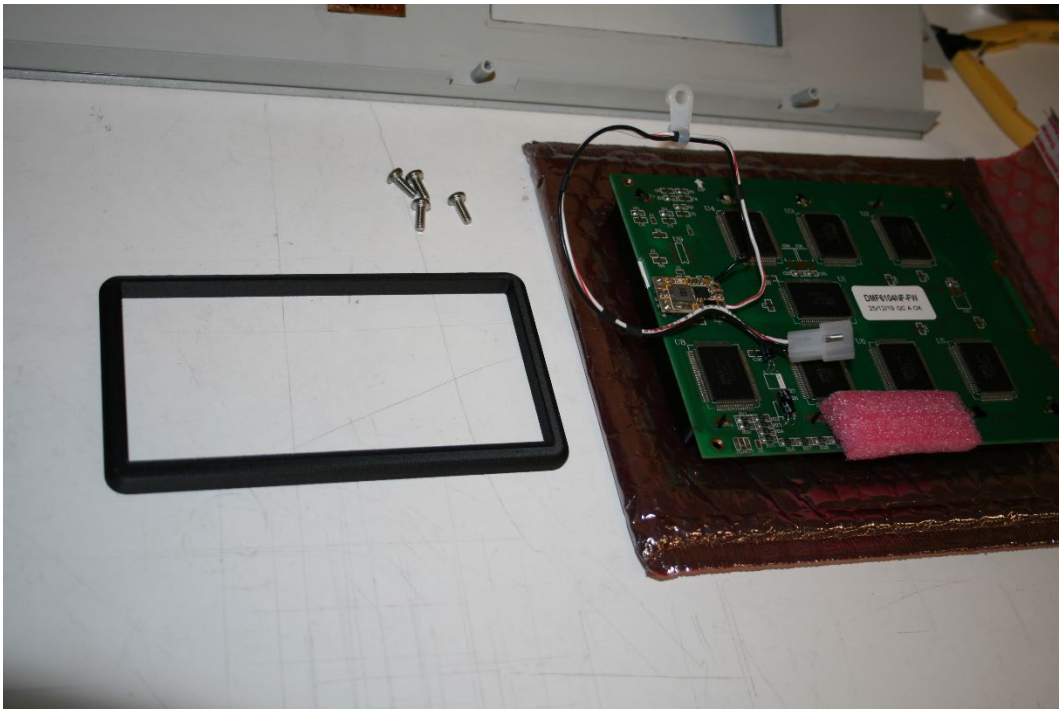
17. Using the wire cutters, cut all four wires on the inverter board assembly.

18. Using the #2 Phillips head screwdriver and remove all four screws from the LCD board assembly and remove it and discard properly.

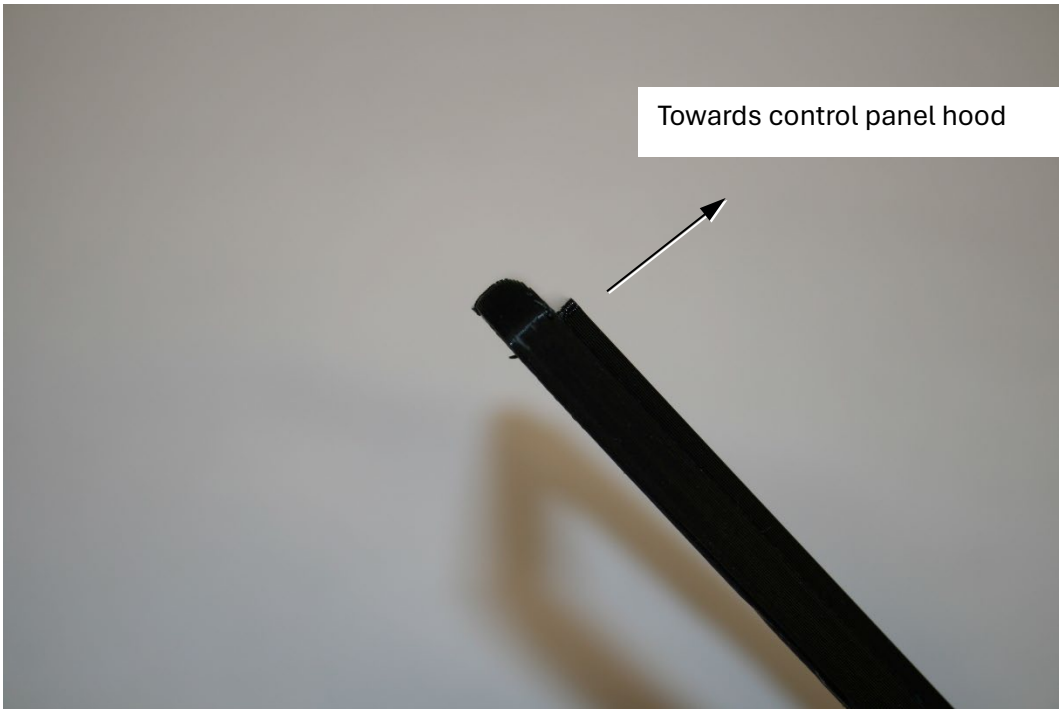


19. Clean the back side of the control panel hood assembly.

20. Next get all the kit parts together.

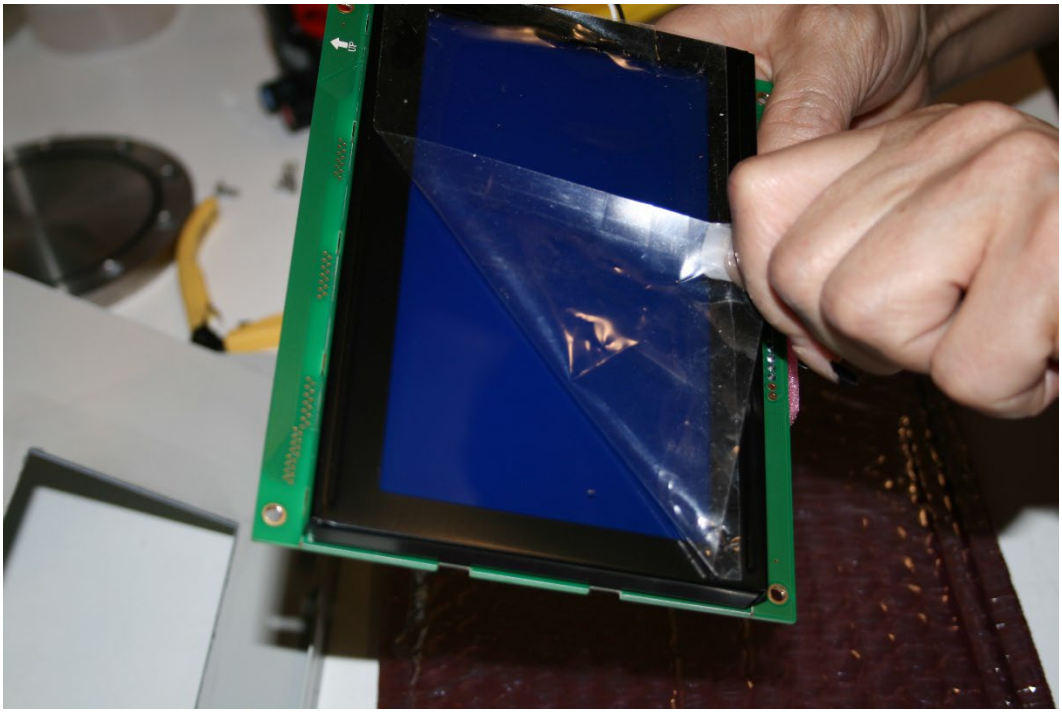


21. Takt the bezel and make sure that the small side goes towards the rear side of the control panel hood assembly.

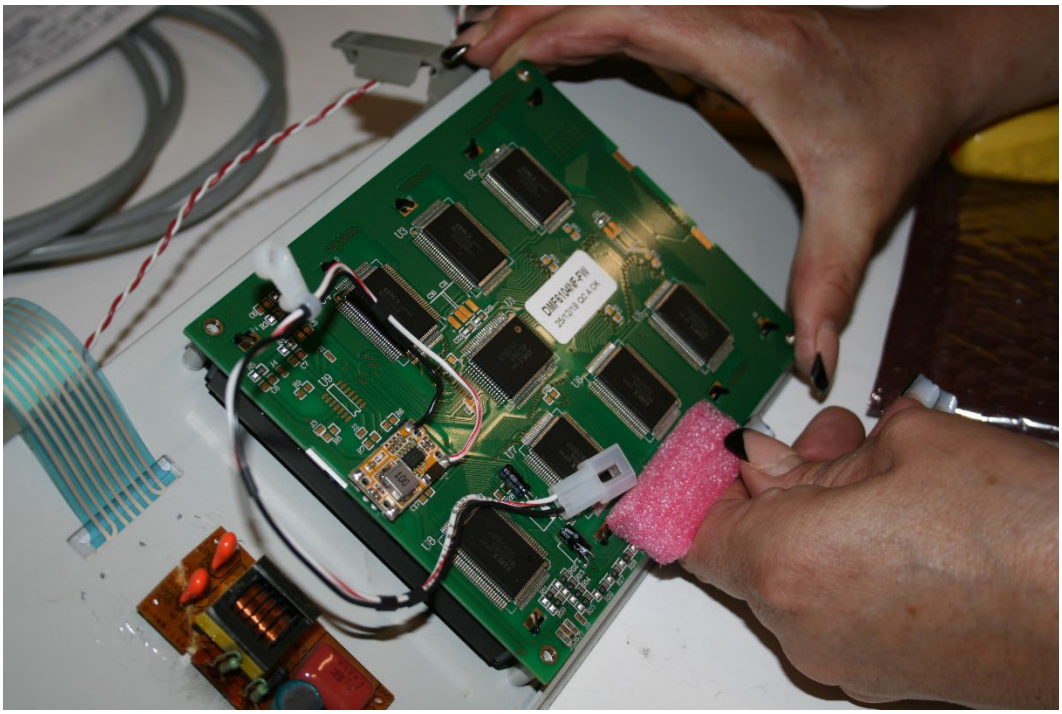


22. Snap the bezel in the rear of the control panel hood.

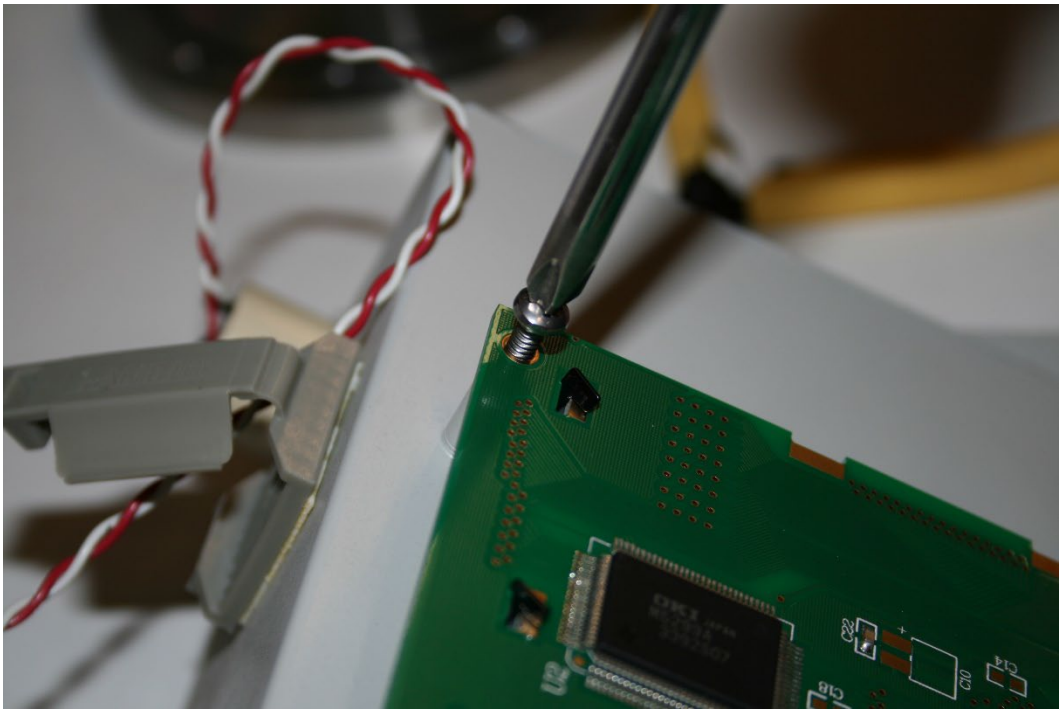
23. Remove the protective film from the new LCD board module.



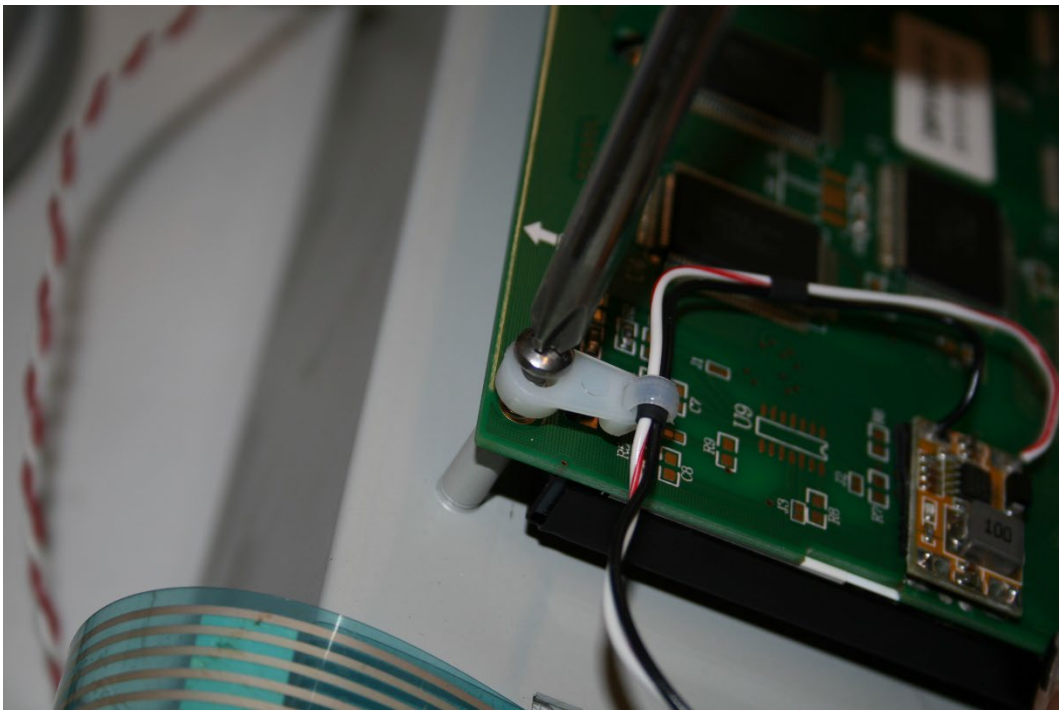
24. Position the LCD board module so that the wires coming out of the board are at the left side of the board and lettering is right reading, this will indicate top.



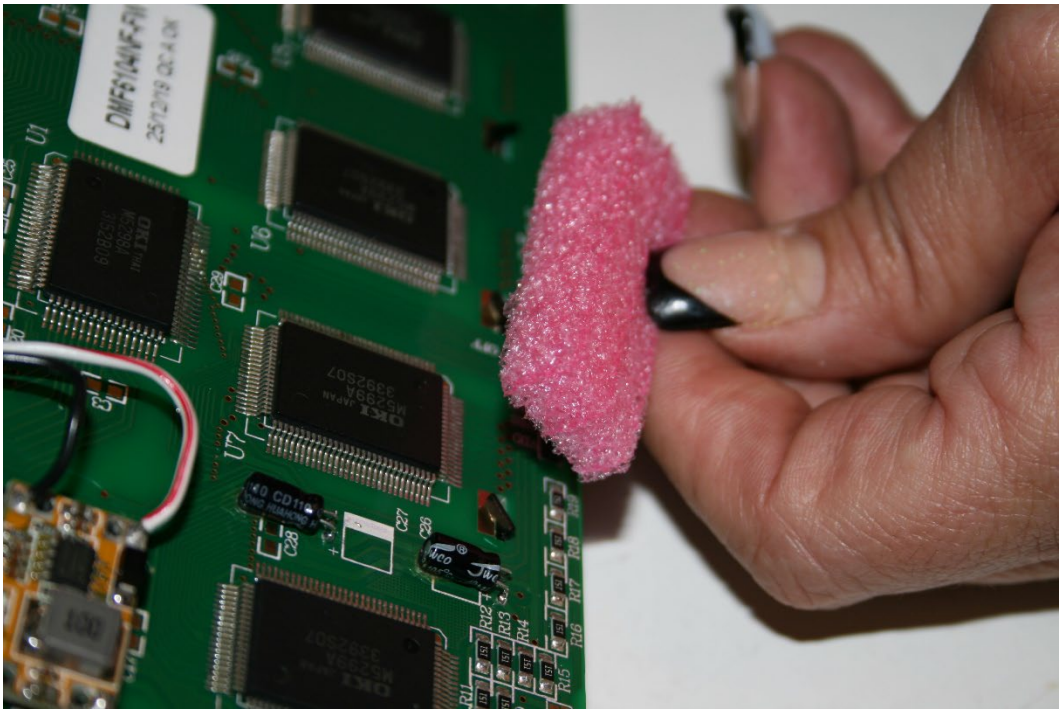
25. Insert three of the 6-32 x 3/8” Pan head screws, two on the right and one at the lower left corner of the LCD board module.



26. Take the last 6-32 x 3/8” Pan head screw and insert it through the wire hold down clamp at the upper lefthand corner.



27. Remove the protective foam from pins at the base of the LCD board.



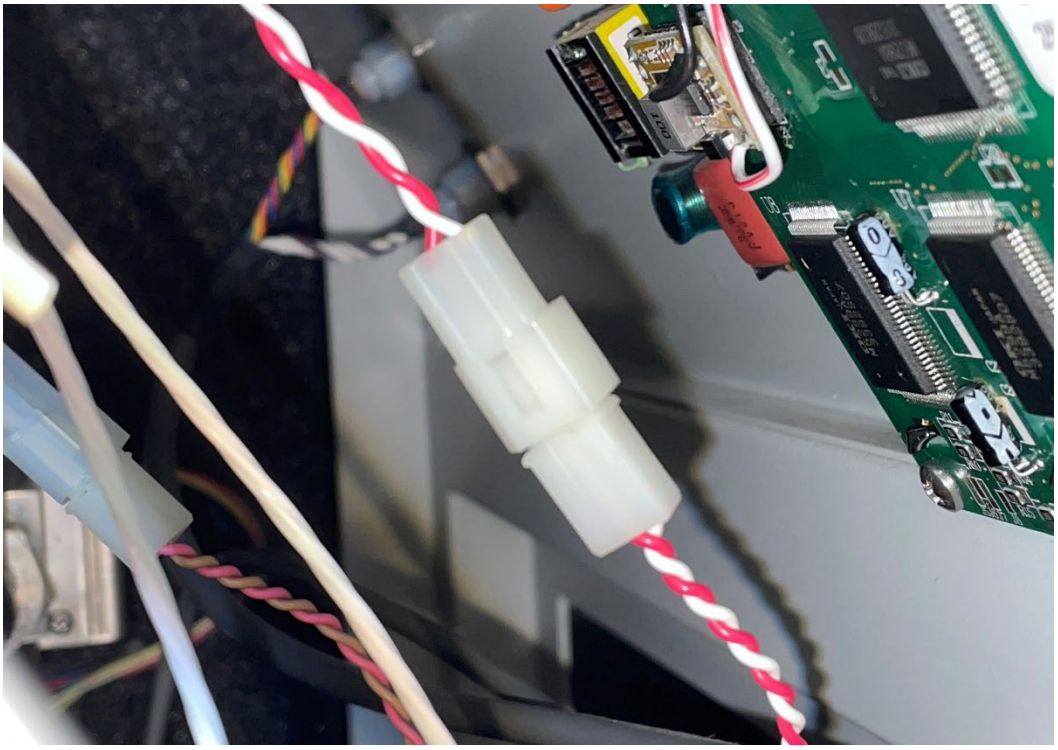
28. Take care when sliding in the control panel hood assembly on the right front side.

29. While holding the control panel hood assembly in place insert the four Phillips head screws that were saved from earlier in this procedure.

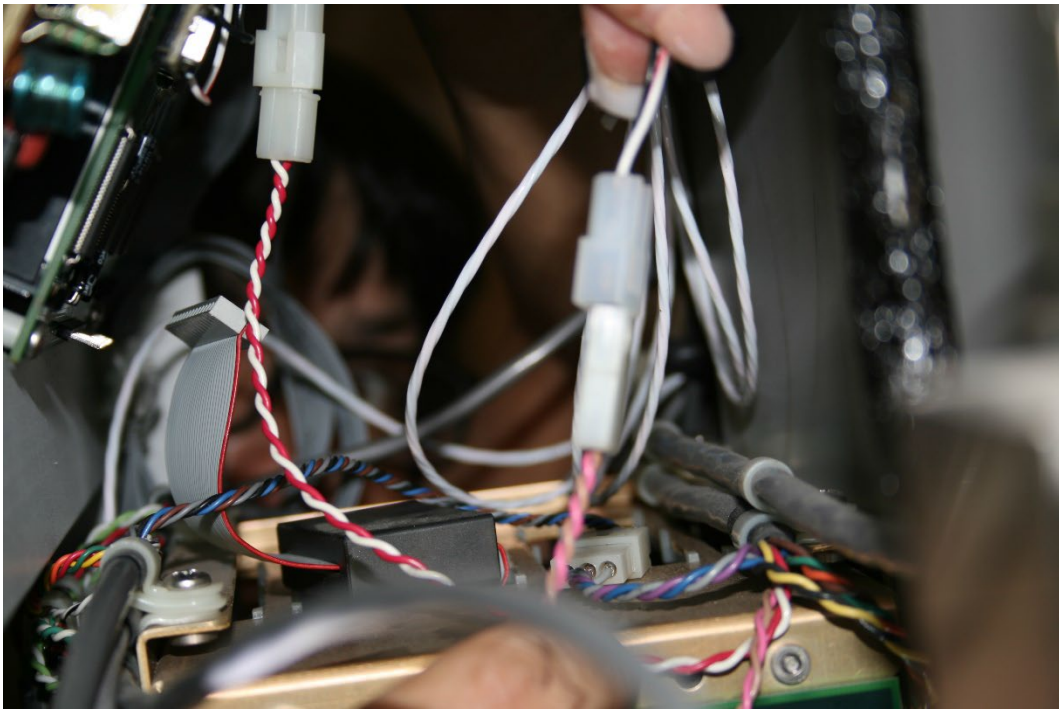
30. First bottom then top screws on the right side.

31. Then insert the screws, top and bottom on the left side.

32. Push the red and white wire connector back together.

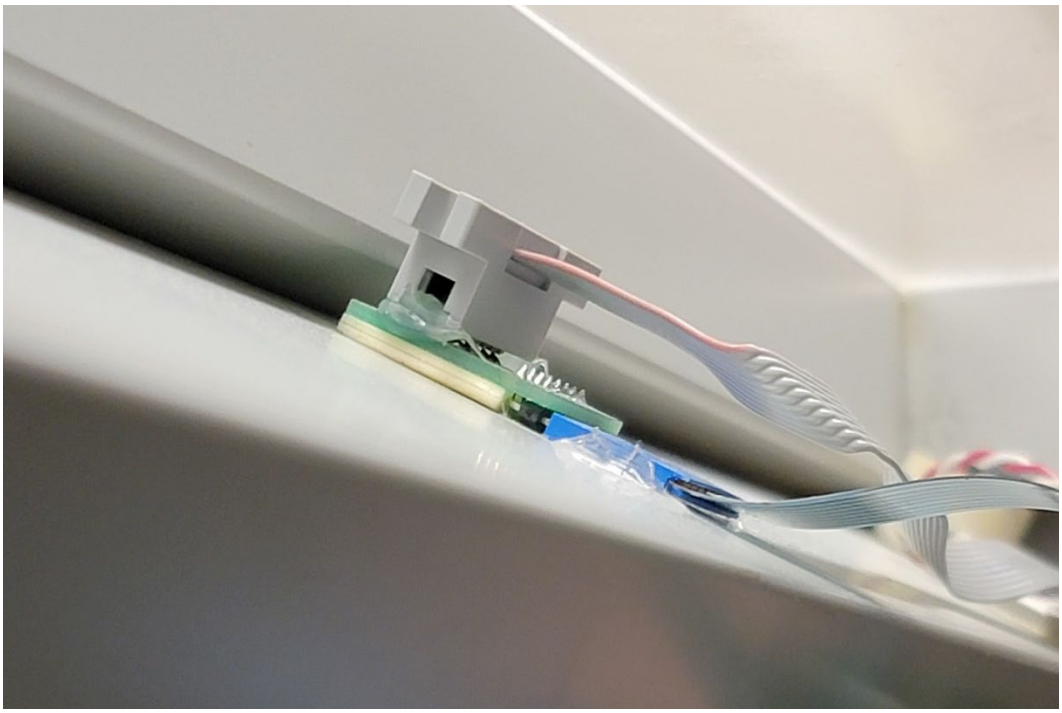


33. Then push together the tan and pink wire connector with the black and red/white wire connector.

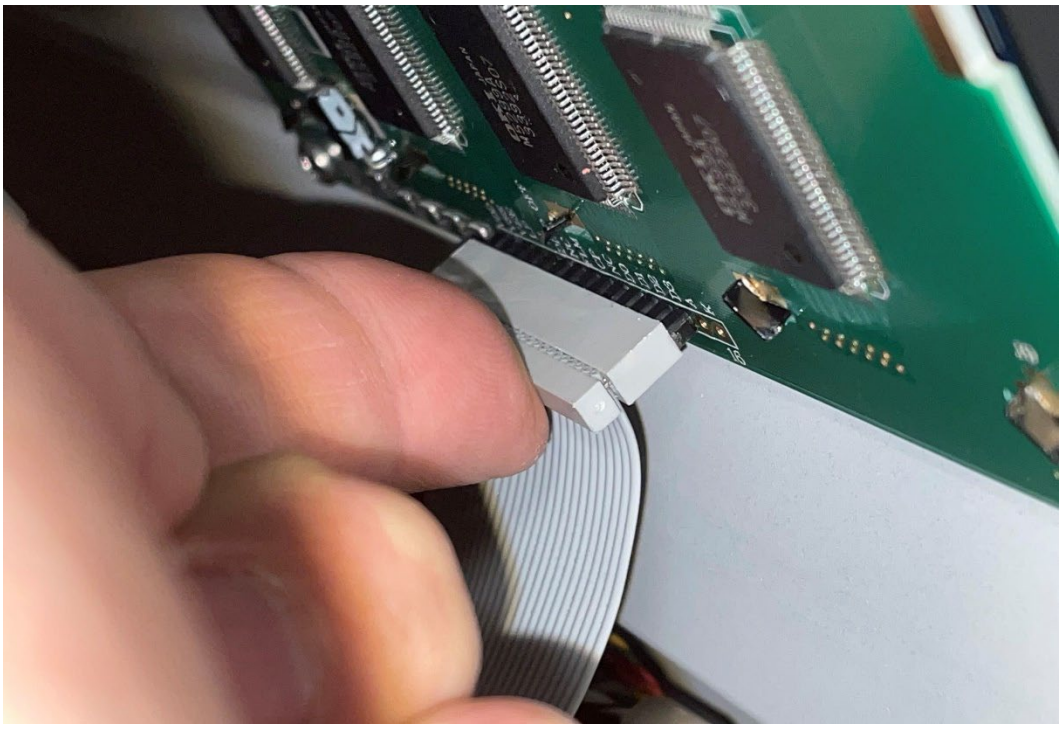


34. Feed through the keyboard interface ribbon cable and the red and white wire through the cable mount clamp at the top of the control panel hood and push it closed.

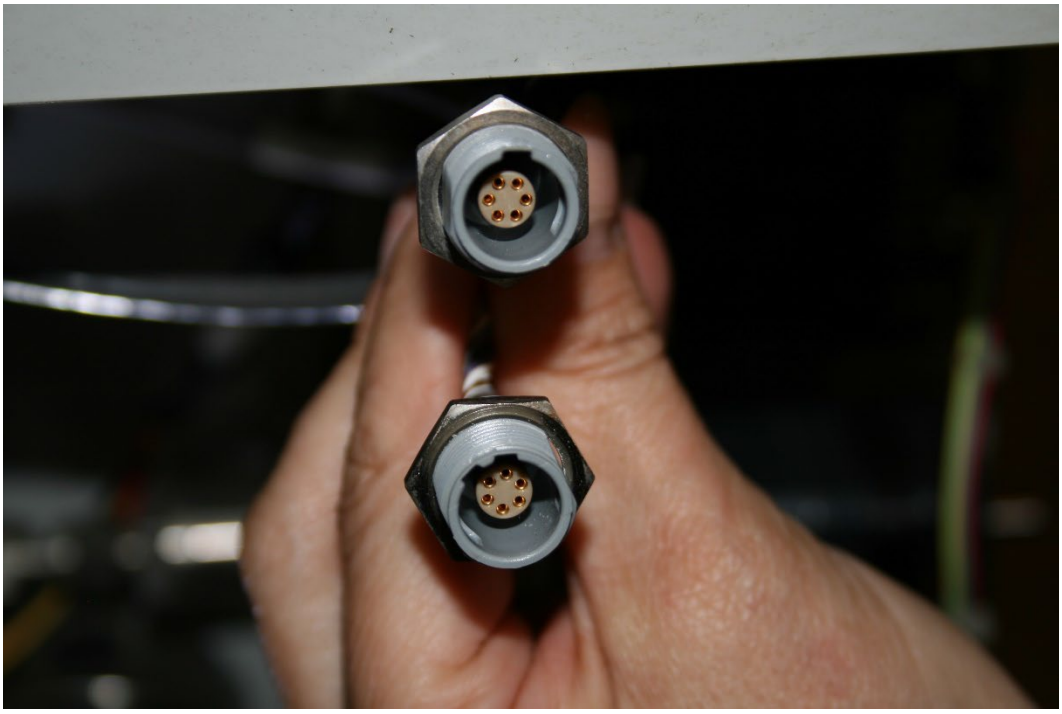
35. Push on the keyboard interface ribbon cable on the keyboard interface board.



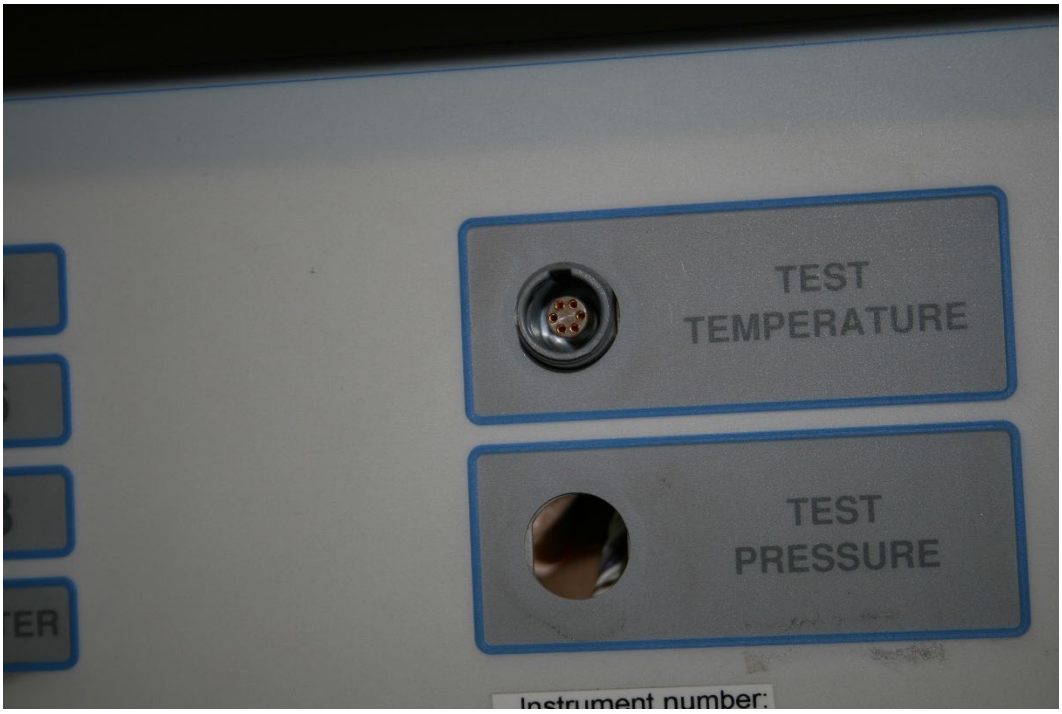
36. Push on the LCD ribbon cable at the base of the LCD board module, making sure the red wire is located at the left, pin 1.



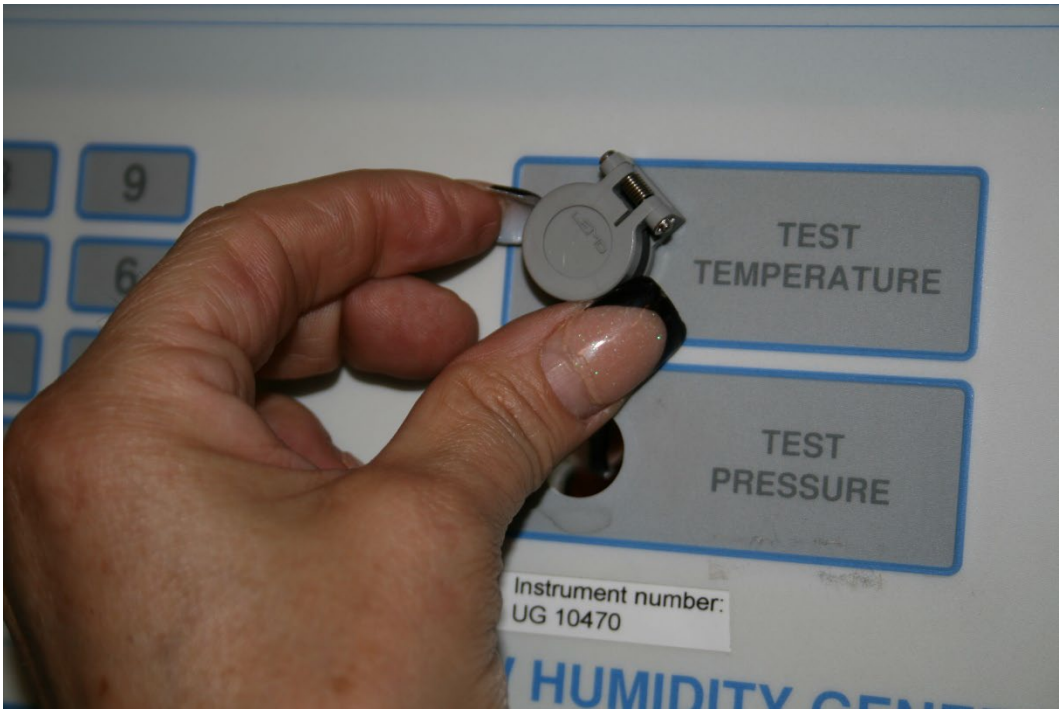
37. Get the Test Temp and Test Pressure cable harness and position them in this orientation with the single slot connector at the top position and the two-slot connector at the bottom.



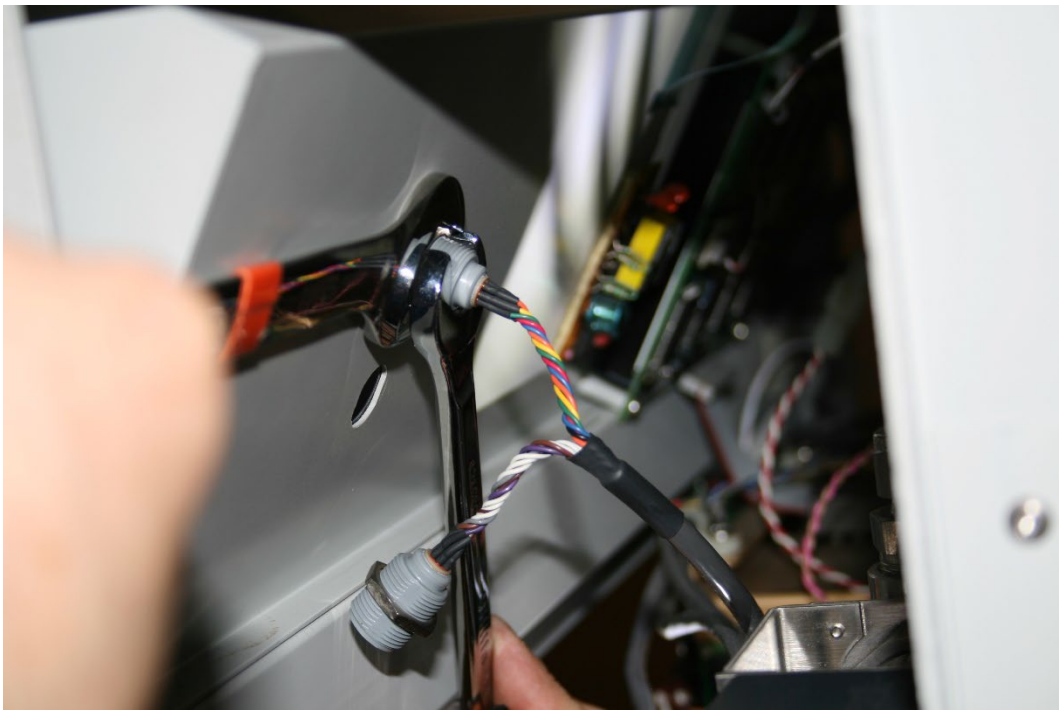
38. Push through the Test Temp single slot connector at the top.



39. Screw on the connector cover so that the slot is at the top position.



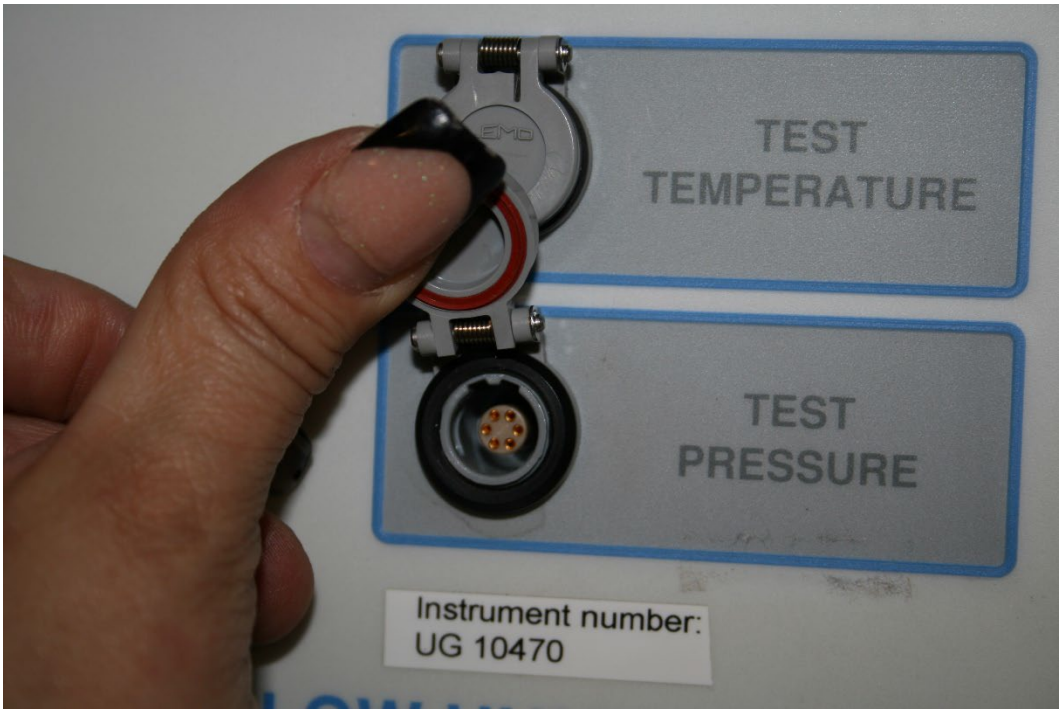
40. Get the 11/16” Thin blade open end wrench and the 1/2” Open end wrench and tighten the back nut, but not too tight.



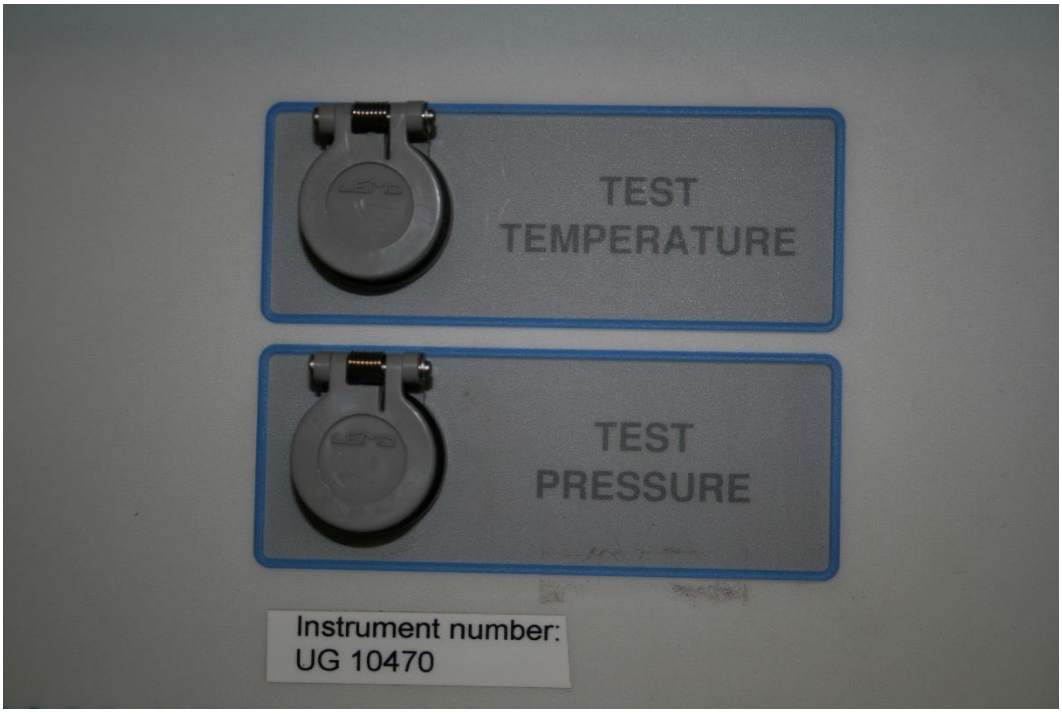
41. The connector slot should remain at the top when tightened down and the cover should flip upward.

42. Do the same for the Test Pressure connector making sure the two slots are at the top.

43. Screw on the connector cover so that it flips upward as well. Using the same two wrenches as before tighten the nut at the rear of the connector.



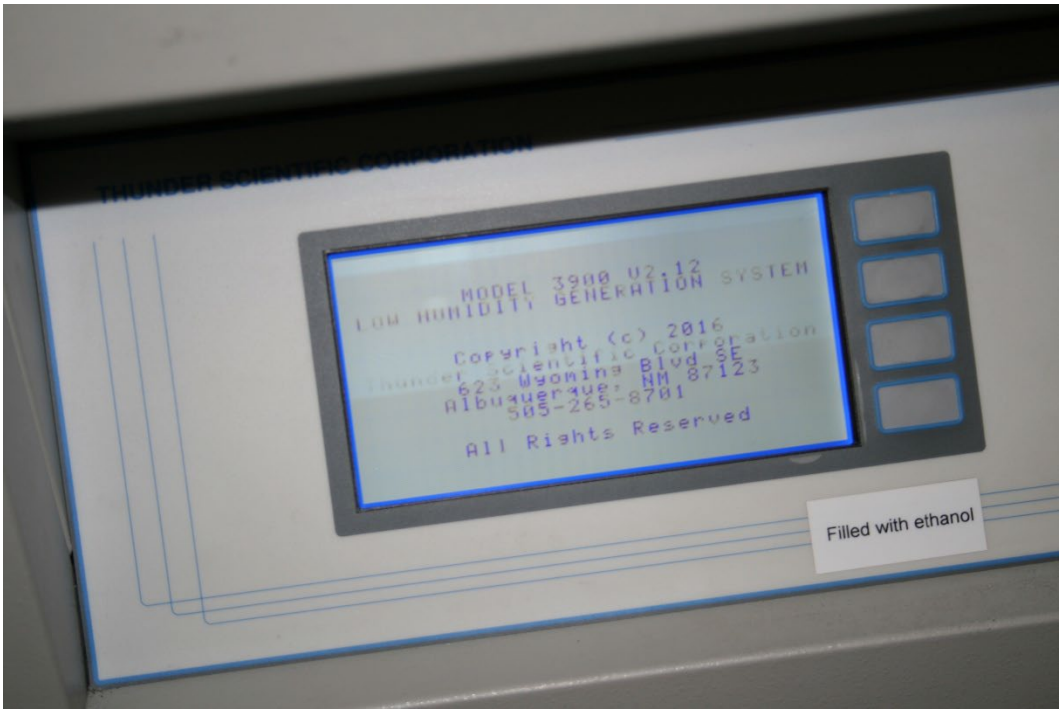
44. Finished connector alinement should look like this.



45. Plug in the main power cord.

46. Turn on the power switch.

47. Look at the LCD and see how it looks; if it looks like this, then you need to adjust the contrast for the display.



48. You adjust the display contrast using the zero and one keys, the one makes it darker and the zero key makes it lighter.

49. This should be your final step.

Please Call 1-800-872-7728 or E-mail support@thunderscientific.com should you have any questions.