HBL Retro Control Board Installation

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HBL-McDonalds Retro Control Board Installation

TOOL(S) NEEDED:
- Phillips Screwdriver
- Flat tip Screwdriver
- 3/8" Socket or Nut Driver
- Needlenose Pliers
- Wire Cutters
- SV1144 Kit

1. Disconnect the unit from power. Open the water drain valve and drain the water from the unit. (Fig.1-2)

Fig.1

Fig.2

*** Both the air and water probes must be replaced for the new control board to function.**

2. Using a Phillips screwdriver, remove the air probe access panel on the right side of the unit. Using a 3/8" nutdriver, remove the two probe retaining nuts.(Fig.3-4)

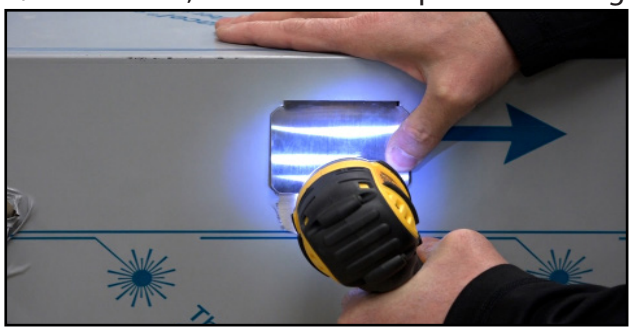

Fig.3

Fig.4

3. Locate the two pin molex connection and cut the zip tie off if present. Disconnect the two pin connection. Carefully remove the air probe.(Fig.5-6)

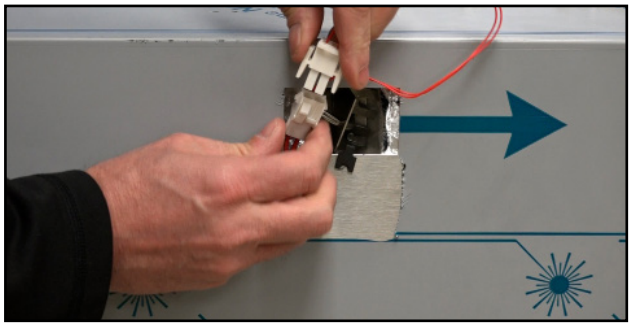

Fig.5

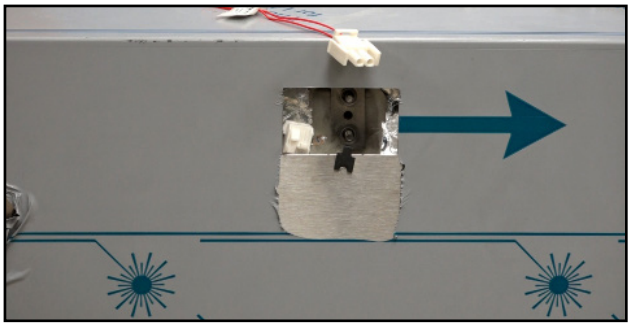

Fig.6

4. Remove the back retainer and the orange rubber washer. (Fig.7-8)

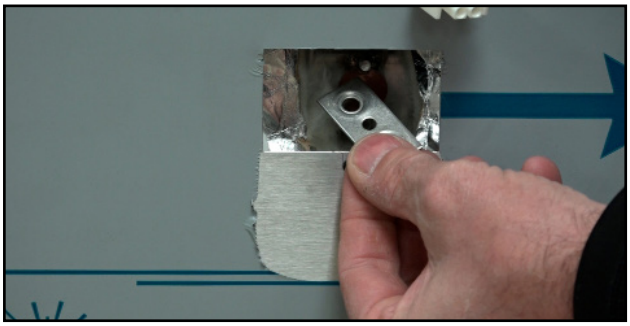

Fig.7

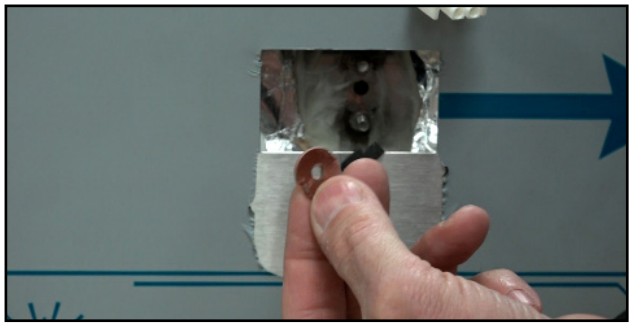

Fig.8

5. Locate the replacement air probe in the kit. Thread the mounting bracket, followed by the back bracket, and finally the orange washer. (Fig.9-10)

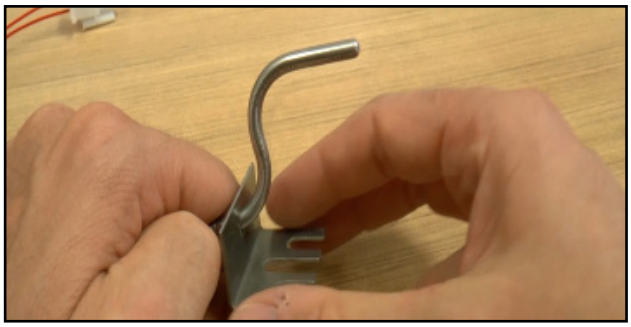

Fig.9

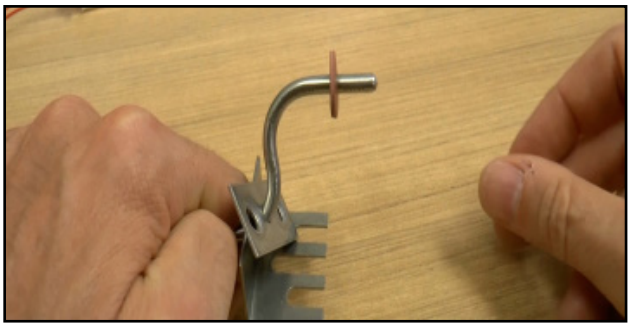

Fig.10

6. Insert the probe back into the unit, Ensure that the tip inside the cabinet is pointed towards the back and that the back retainer plate and front retainer are on the mounting studs. (Fig.11-12)

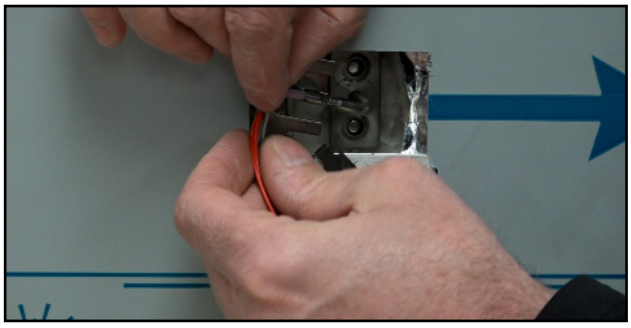

Fig.11

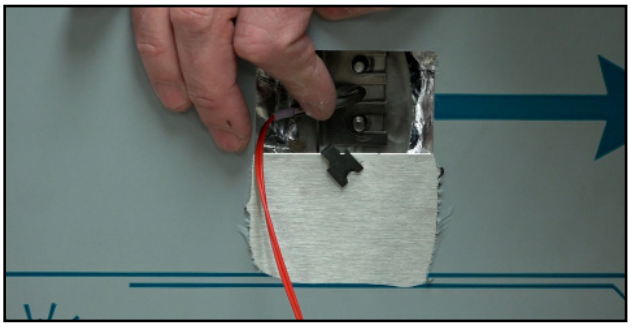

Fig.12

7. Replace the retaining nuts and tighten using a 3/8" nutdriver. Reconnect the two pin molex connection.(Fig.13-14)

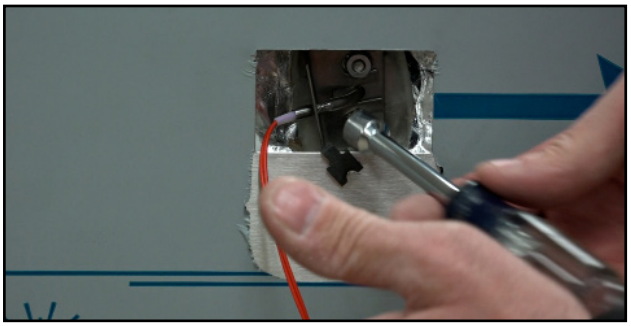

Fig.13

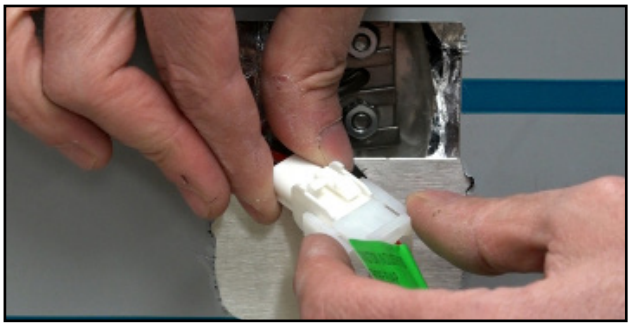

Fig.14

8. Zip tie the molex connection together, and then replace the air probe access cover using a Phillips screwdriver. (Fig.15-16)

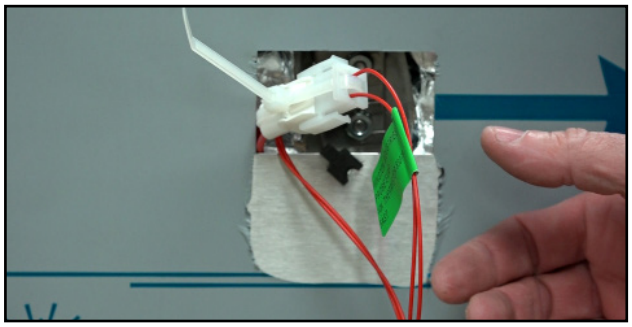

Fig.15

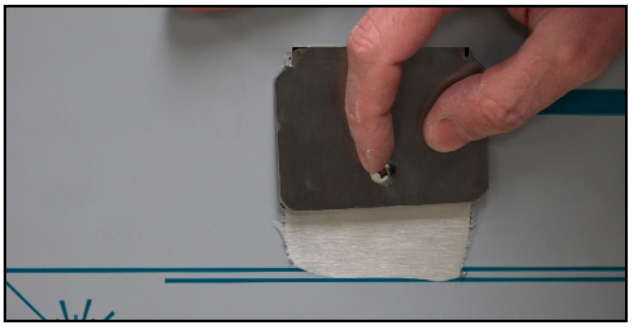

Fig.16

9. Remove the drawer from the unit. Using a Phillips screwdriver, remove the two control board retaining screws. (Fig.17-18)

Fig.17

Fig.18

10. Slide the control board out. Disconnect the nine pin and six pin molex connections. Remove the control board.(Fig.19-20)

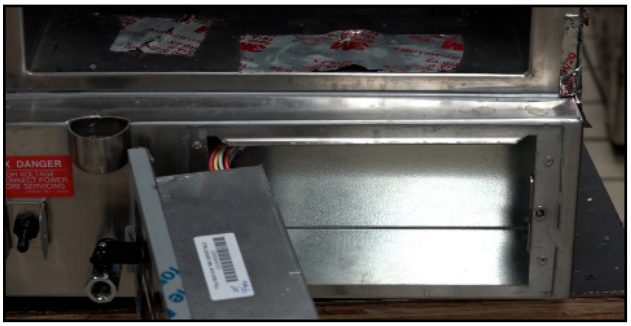

Fig.19

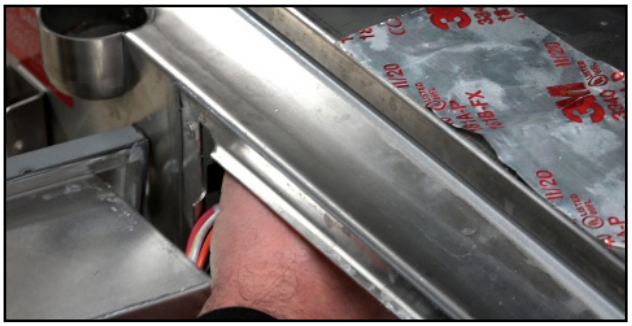

Fig.20

11. Lay the unit on it's side and remove the bottom retaining screws. Remove the unit bottom.(Fig.21-22)

Fig.21

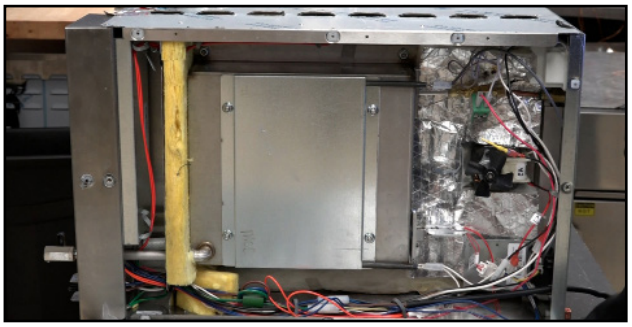

Fig.22

12. Locate the water probe at the back of the evaporator pan. It is mounted on a bracket with the water level sensor. (Fig.23-24)

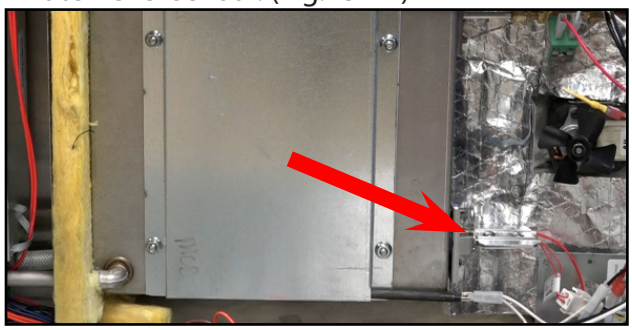

Fig.23

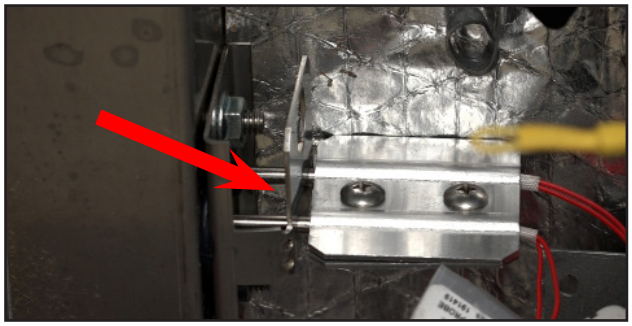

Fig.24

13. Using a 7/16" socket, remove the two water sensors retaining nuts. Slide the sensors and bracket off of the mounting studs. (Fig.25-26)

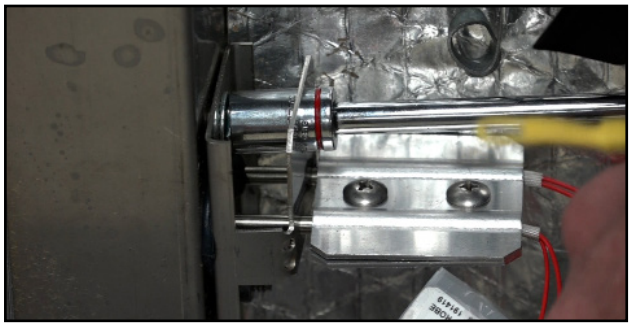

Fig.25

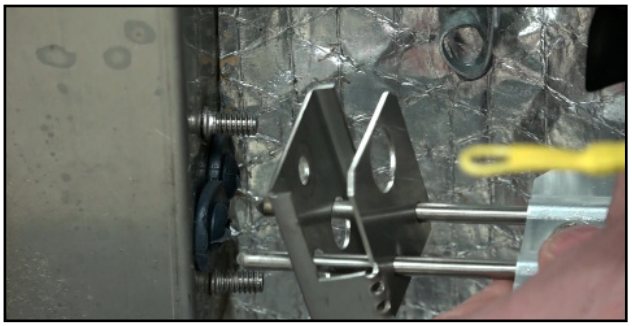

Fig.26

14. Disconnect both sensors from their molex connections. Remove the two rubber sensor grommets. (Fig.27-28)

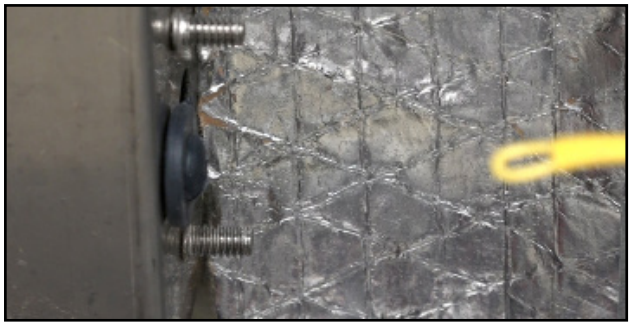

Fig.27

Fig.28

15. Locate the water level sensor, water temp probe, mounting bracket, and two rubber grommets in the kit. Insert the water level sensor into the top hole in the back of the water pan. (Fig.29-30)

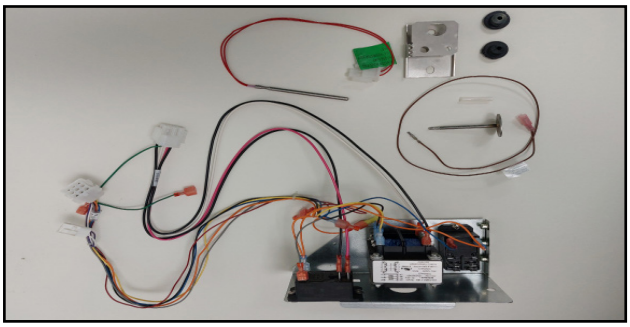

Fig.29

Fig.30

16. Insert one of the rubber grommets onto the water level sensor and ointo the hole in the water pan. Insert the other rubber grommet into the water probe opening. (Fig.31-32)

Fig.31

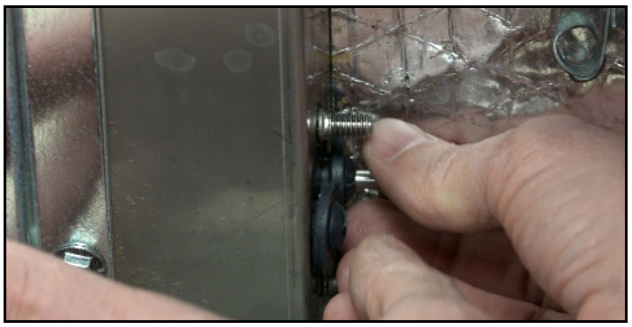

Fig.32

17. Slide the rubber tube over the water sensor as shown. Place the bracket through the water sensor and onto the mounting studs. Secure with one of the retaining nuts. (Fig.33-34)

Fig.33

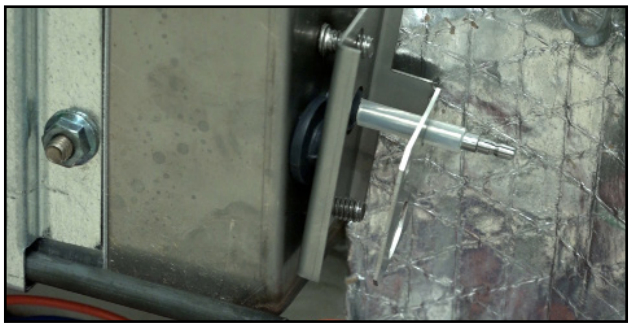

Fig.34

18. Insert water temperature probe as shown. Replace bottom retaining nut and tighten the top and bottom nuts using a 7/16" socket. Connect water probe to existing blue wire molex connection (Fig.35-36)

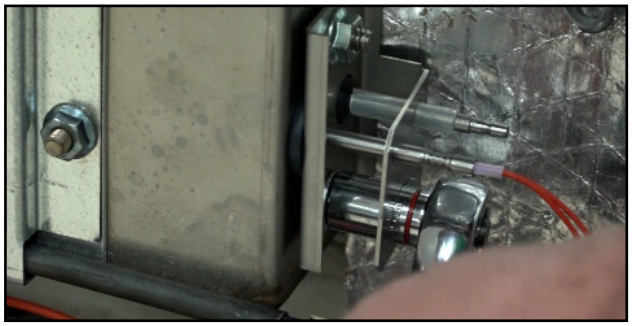

Fig.35

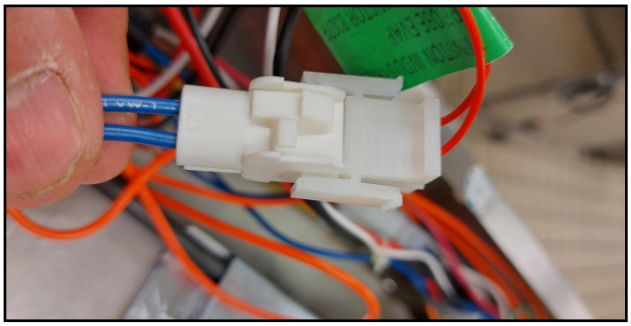

Fig.36

19. Using a Phillips screwdriver, remove the two relay bracket screws. Carefully remove the existing relay bracket. (Fig.37-38)

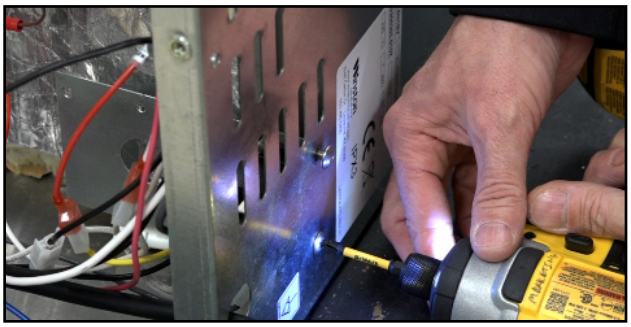

Fig.37

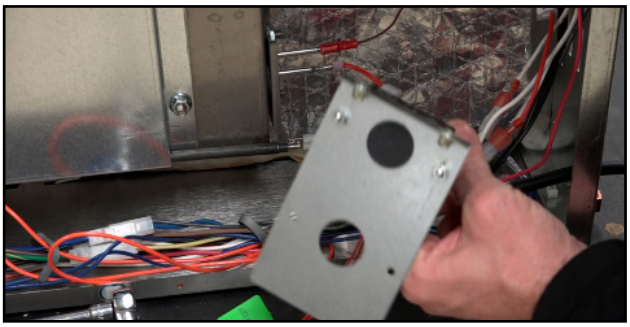

Fig.38

20. Remove the double white wire and the grey wire from the existing relay. Next, remove the yellow/black wire and the grey wire from the relay. Dispose of the relay and bracket (Fig.39-40)

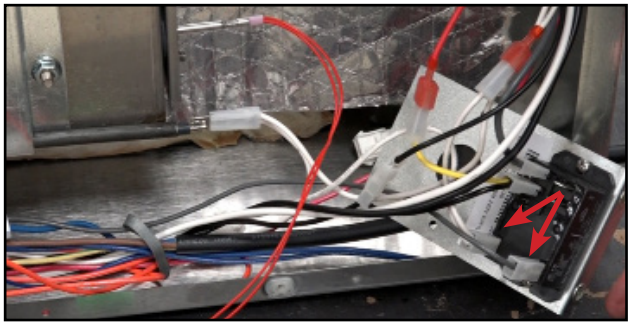

Fig.39

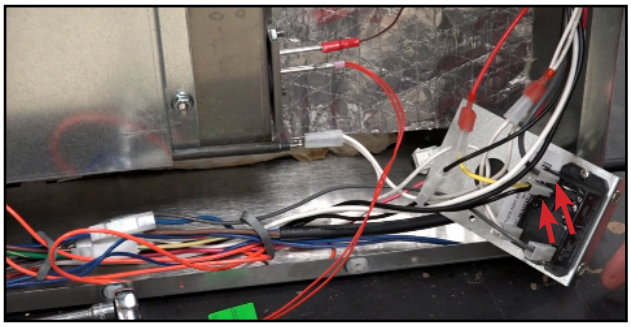

Fig.40

21. Locate new relay bracket and position where the old bracket was. Using the existing bracket screws and a Phillips screwdriver, secure new relay bracket to drawer unit. (Fig.41-42)

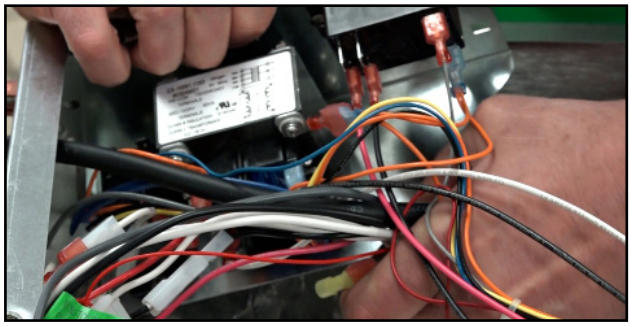

Fig.41

Fig.42

22. Locate the grey wire that is connected to the water heater and connect to the relay that is closest to the unit back as shown. Locate the black/yellow wire and connect to the relay as shown.(Fig.43-44)

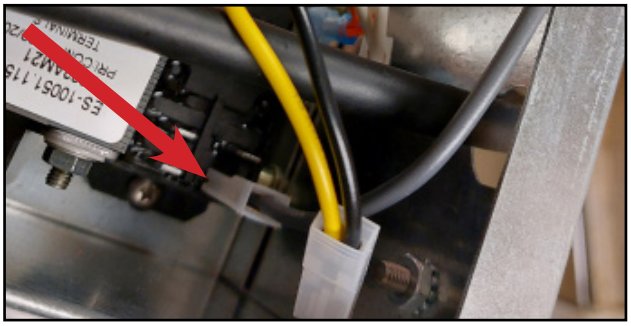

Fig.43

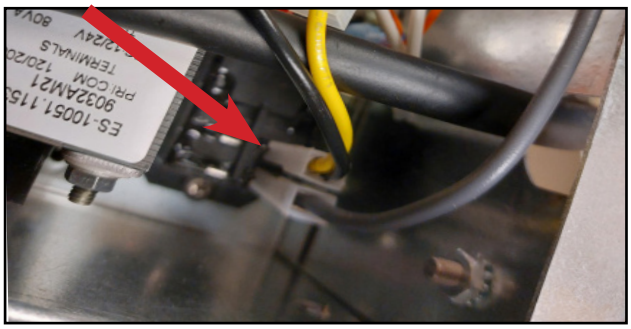

Fig.44

23. Remove insulation that is between water pan and control housing. Using a flat tipped screwdriver, depress the tabs and push out the 9-pin molex and 6-pin molex control housing connections.(Fig.45-46)

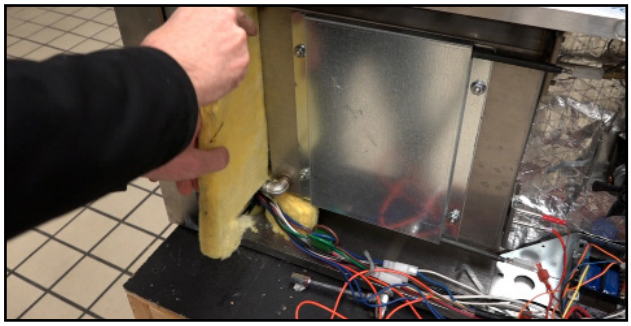

Fig.45

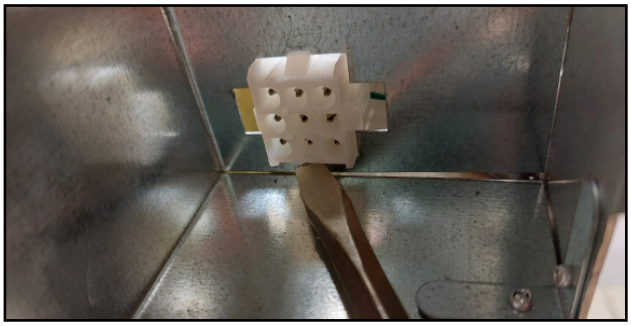

Fig.46

24. Pull the 6-pin molex connection up to where you can access it. Locate the single brown wire in the kit and insert into the opening above the red probe wires as shown.(Fig.47-48)

Fig.47

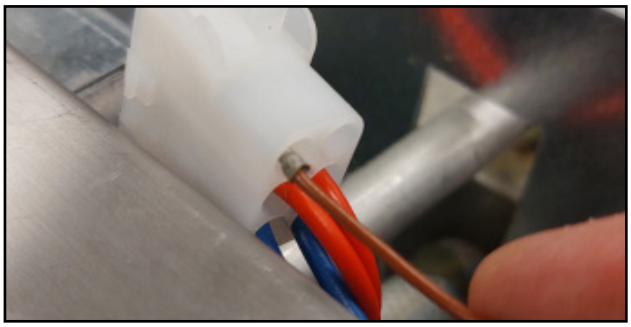

Fig.48

25. Ensure to push the pin all the way in. Reinsert the 6-pin molex back into the control housing. Connect the other end of the brown wire to the water level sensor.(Fig.49-50)

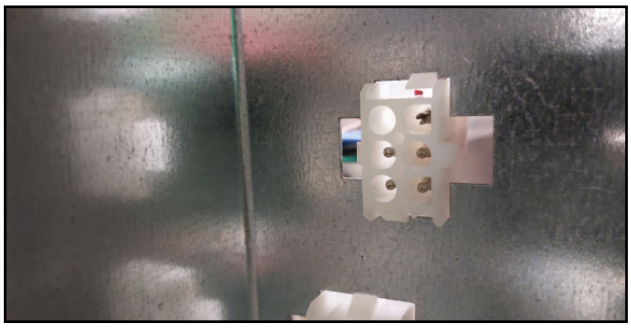

Fig.49

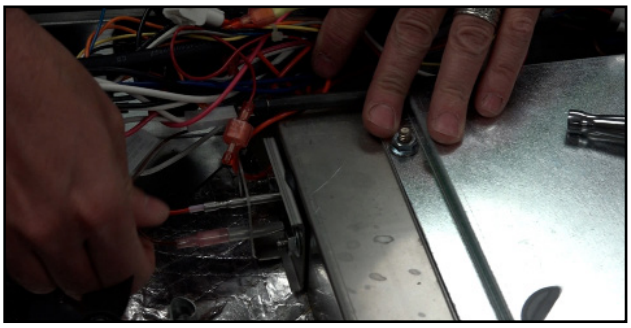

Fig.50

26. Carefully remove the wire strain relief for it's opening. Remove the 9-pin molex wires from the strain relief and route the brown water sensor wire through it. (Fig.51-52)

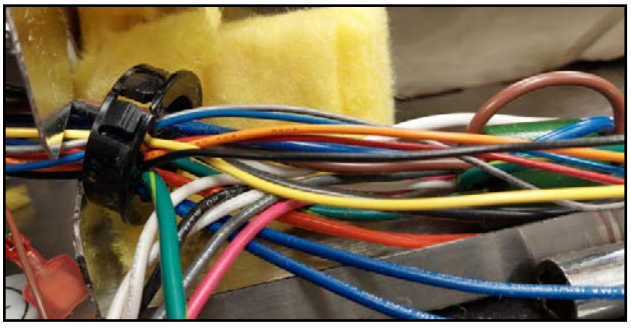

Fig.51

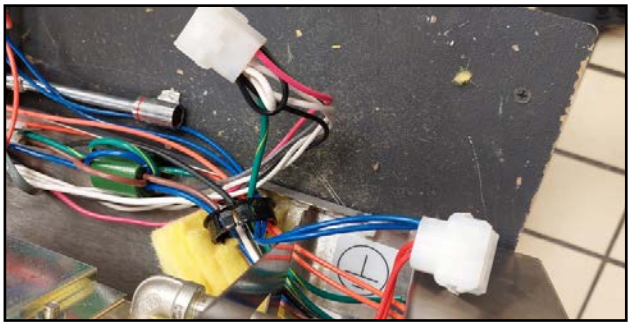

Fig.52

27. Locate the 9-pin molex connection coming from the relay board with the thicker wires. Connect the relay 9-pin to the 9-pin that was removed from the control housing.(Fig.53-54)

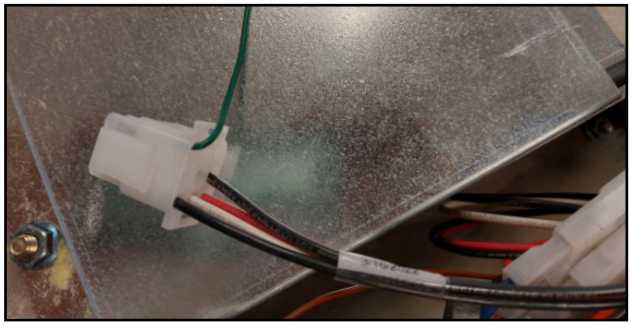

Fig.53

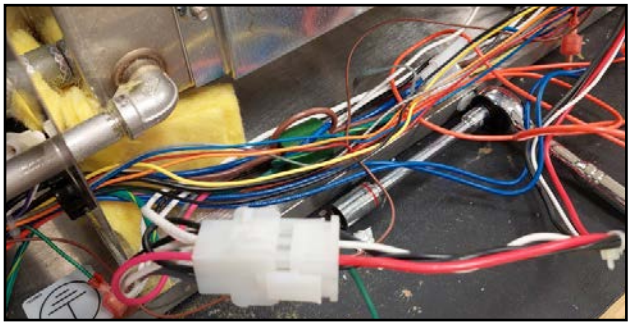

Fig.54

28. Locate the green grounding wire on the relay 9-pin connection and connect to the green wire lead coming from the unit grounding lug. (Fig.55-56)

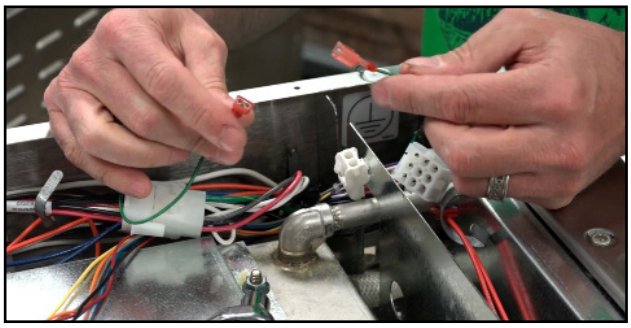

Fig.55

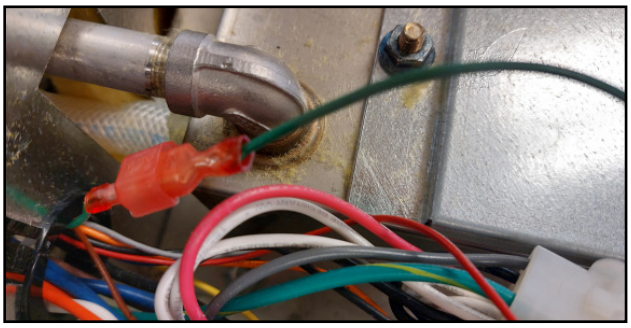

Fig.56

29. Locate the nine pin signal wire (thinner) connection coming from the relay board. Insert the connection into the control board housing where the nine pin was removed from. (Fig.57-58)

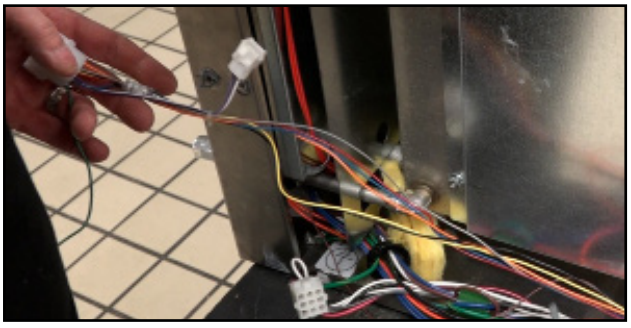

Fig.57

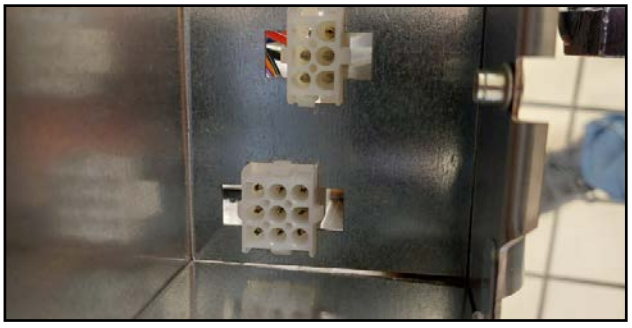

Fig.58

30. Route all new wires through the strain relief and reseat the strain relief. Bundle all wires in the existing wire straps.(Fig.59-60)

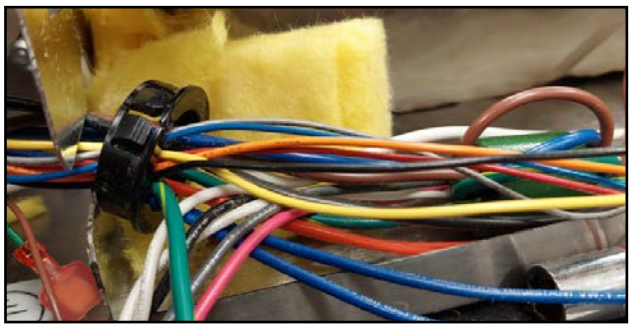

Fig.59

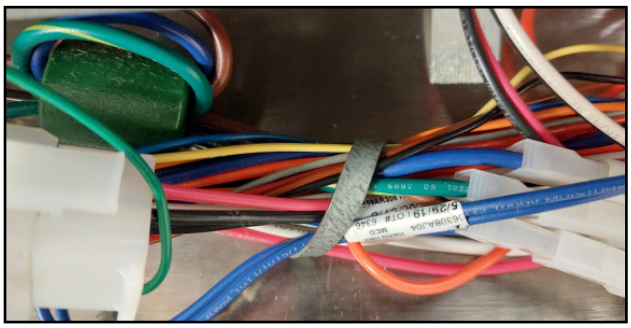

Fig.60

31. Replace the insulation between the control housing and the water pan. Reattach the unit bottom. (Fig.61-62)

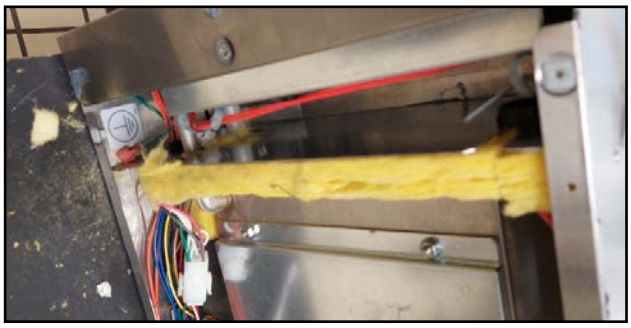

Fig.61

Fig.62

32. Flip unit right side up. Locate new control board and connect the 9-pin molex and 6-pin molex connections. Insert control board into housing and secure with the two retaining screws. (Fig.63-64)

Fig.63

Fig.64

33. Fill water pan with water. Plug unit in and test to verify that the unit is working correctly.(Fig.65)

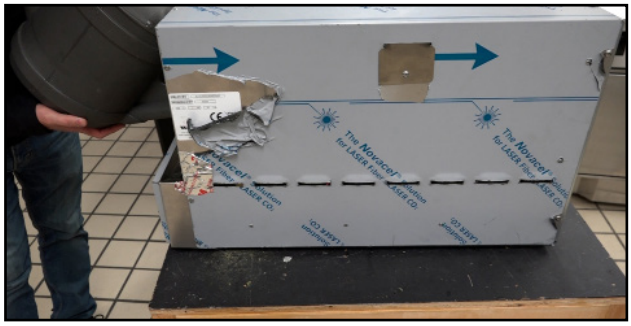

Fig.65