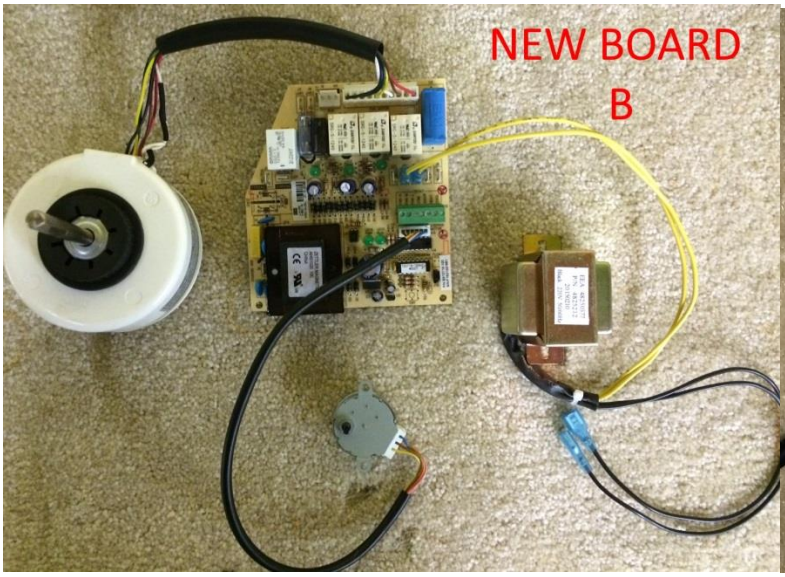
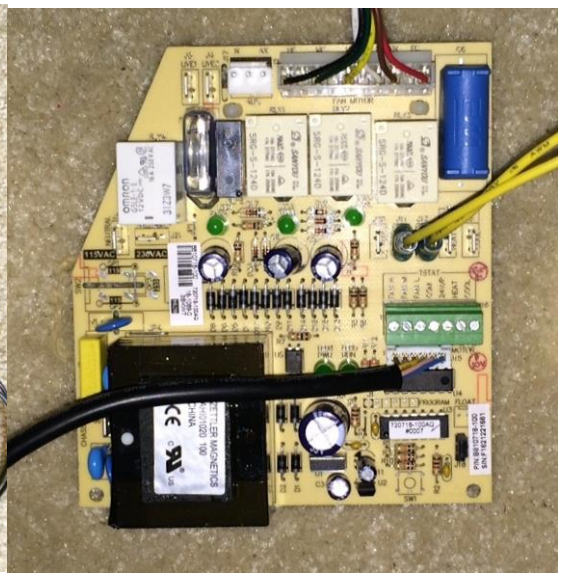
PCB-U-HW-B 24V Thermostat Adapter Board
(Installation Procedure)

Rev. 1.31

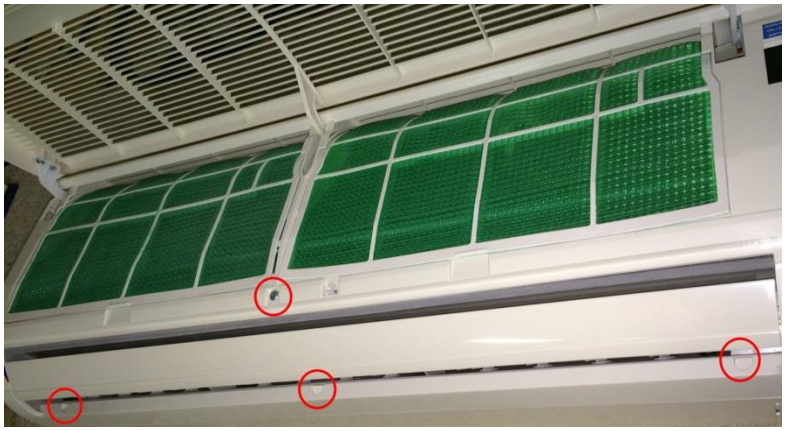
COMPONENT OVERVIEW





The above images show an overview of MHWW fan coil components connected to the PCB-U-HW-B thermostat adapter board. This new control board will be referred to as **New Board "B"** throughout this document. In addition to the components above, a 24V thermostat and 24V water zone valve can also be connected to this board (not shown in image above).

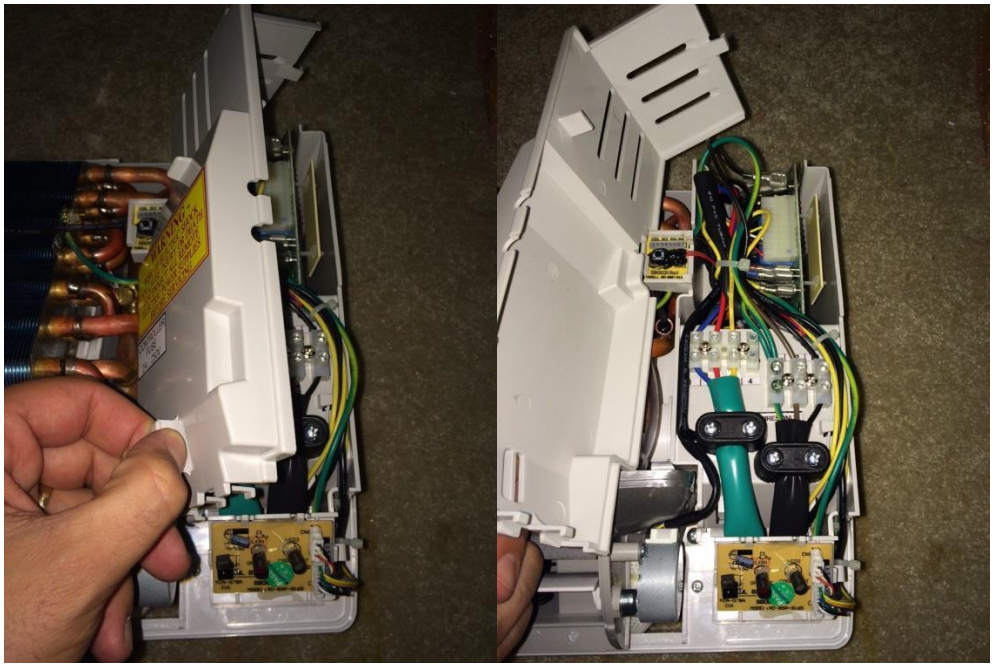
1. Ensure the fan coil power cord or disconnect is unplugged or in the off position before starting this procedure. Care should be taken to ensure the fan coil has **no** power going to it before starting this procedure. Only properly licensed electricians and technicians should perform this procedure. **All local safety and electrical codes must be followed.**



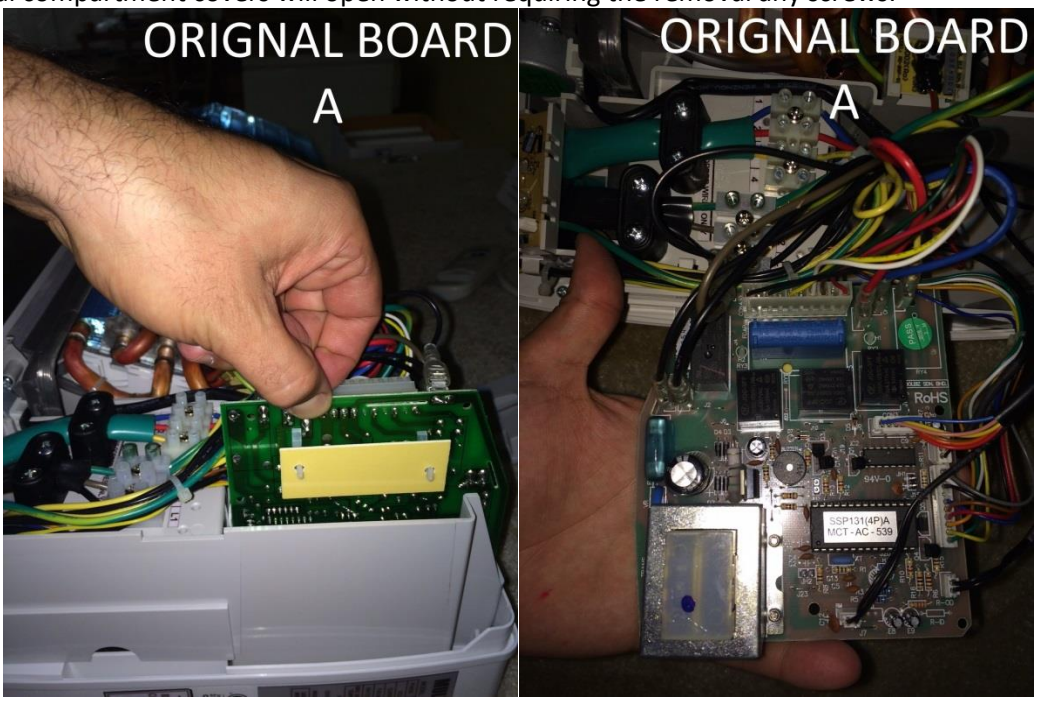
2. Open the fan coil **Deco Panel** and locate the front **Screw Covers** along the bottom of unit base pan and filter area. Depending on which size hi-wall model you have, there may be more or less screw covers and screws to remove than shown in the image above.

3. Use a razor blade or small flathead screw driver to remove **Screw Covers** and expose the screws. **Ensure care is taken when working with sharp objects.**
4. Remove screws with a Phillips head screw driver.

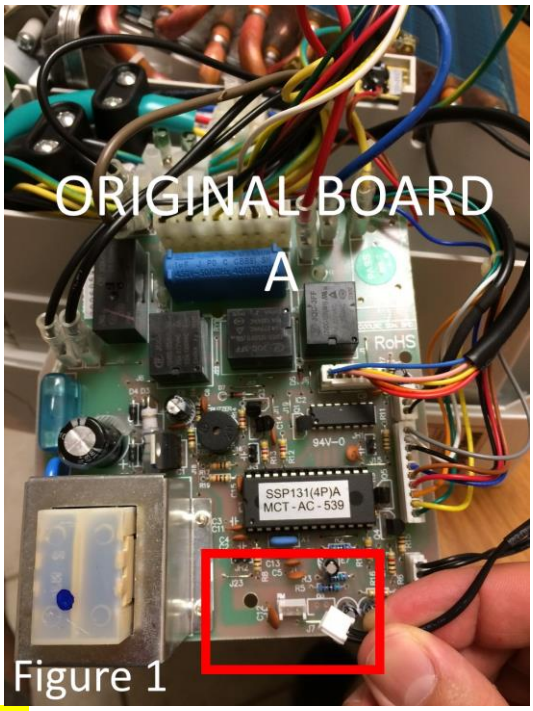
5. Lift up **Frame Grill** to expose coil and **Electrical Compartment Cover**.

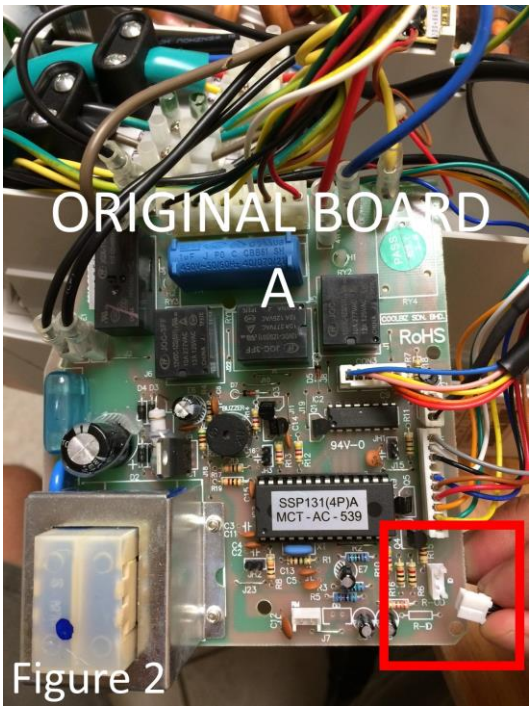


6. Remove **Electrical Compartment Cover**. Some of the larger hi-wall models will require the removal of a screw that can be found on the front of the electrical compartment cover. The smaller size hi-wall electrical compartment covers will open without requiring the removal any screws.

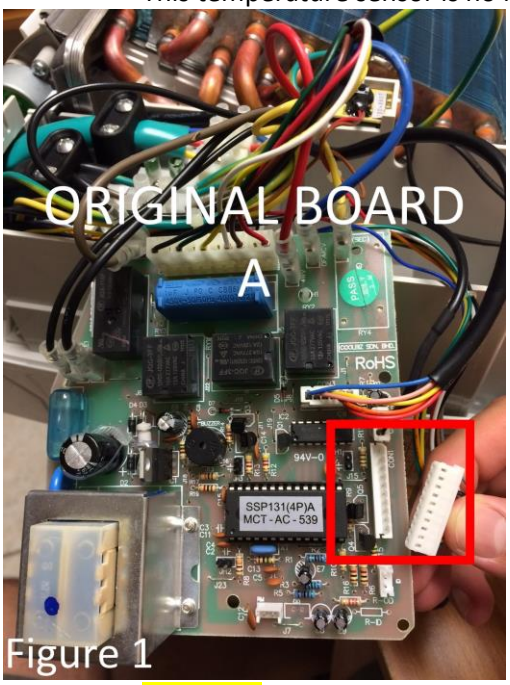


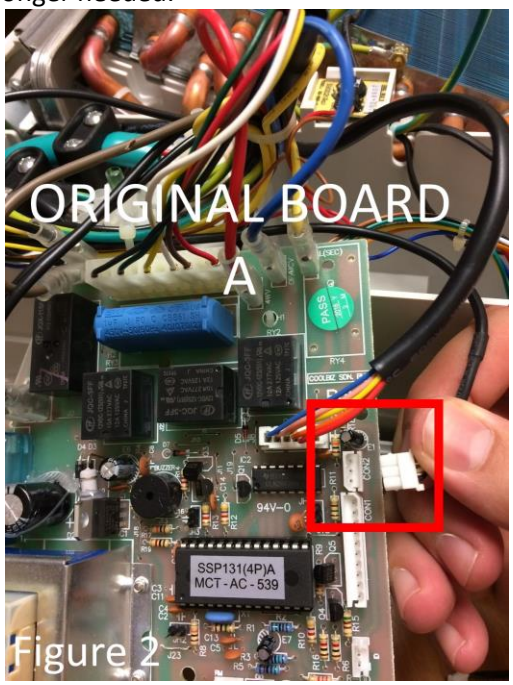
7. Without disconnecting any wires from the board or the fan coil block terminals, carefully slide out **Original Board "A"**.

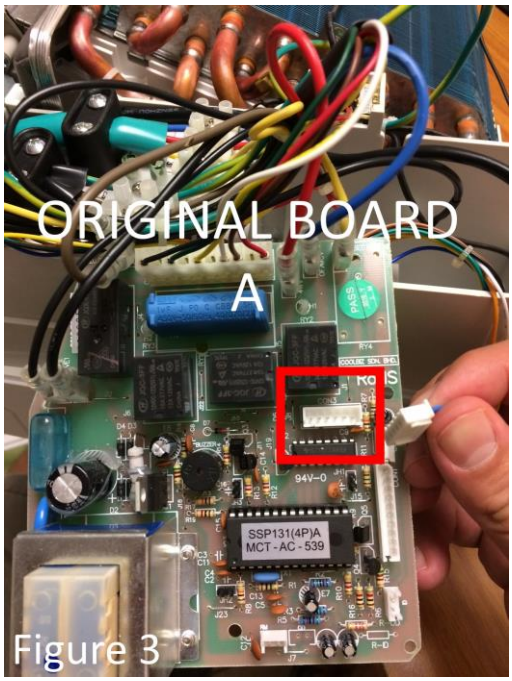




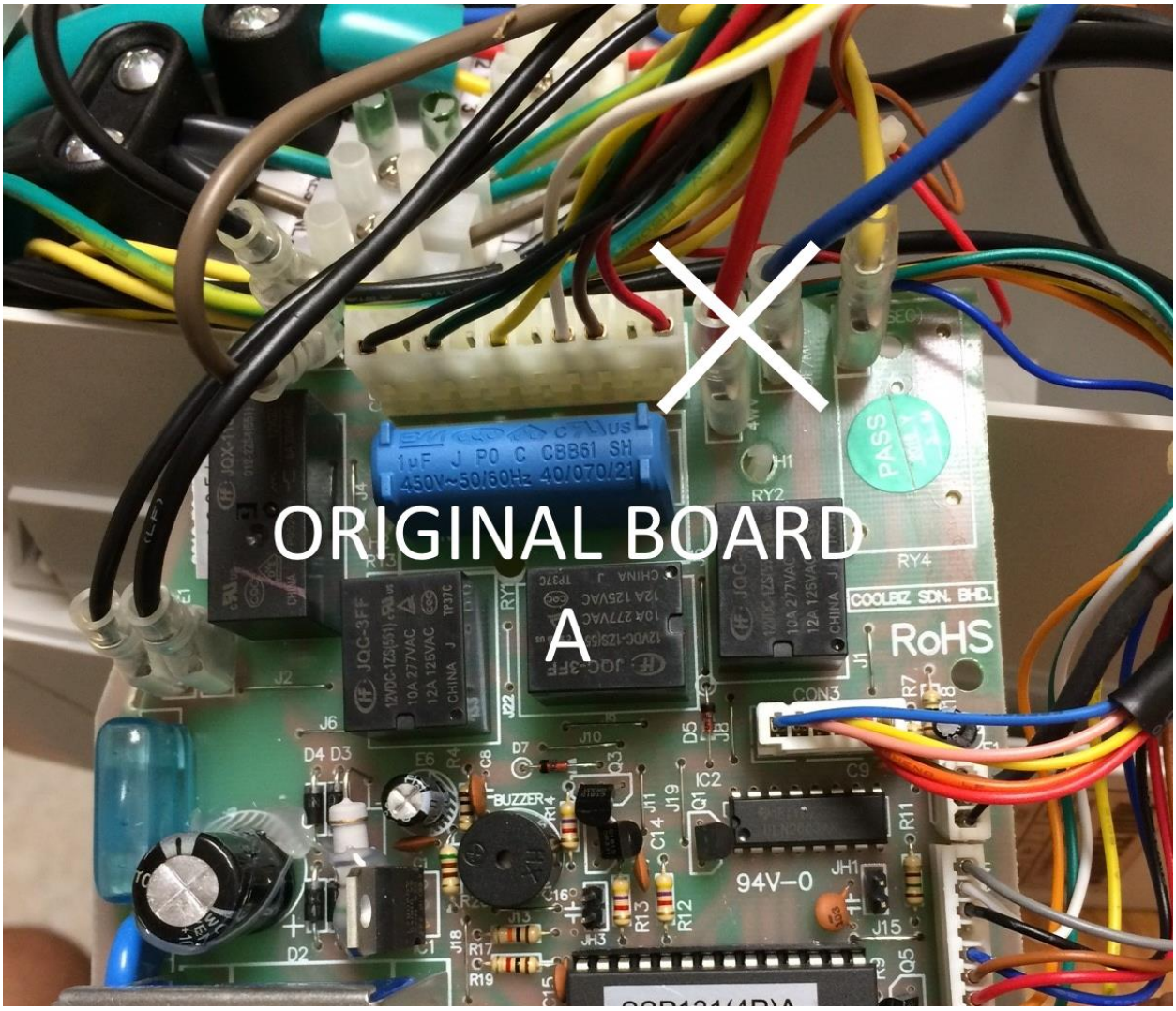
8. **FIGURE 1:** Remove the fan coil air temperature sensor from terminal marked "**RM**" on **Original Board "A"**. This sensor is no longer needed.
9. **FIGURE 2:** Remove the coil water temperature sensor from terminal marked "**ID**" or "**D**" on **Original Board "A"**. This temperature sensor is no longer needed.





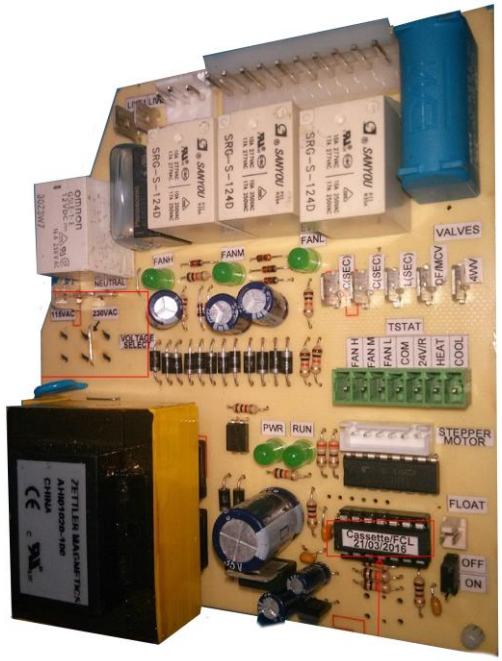


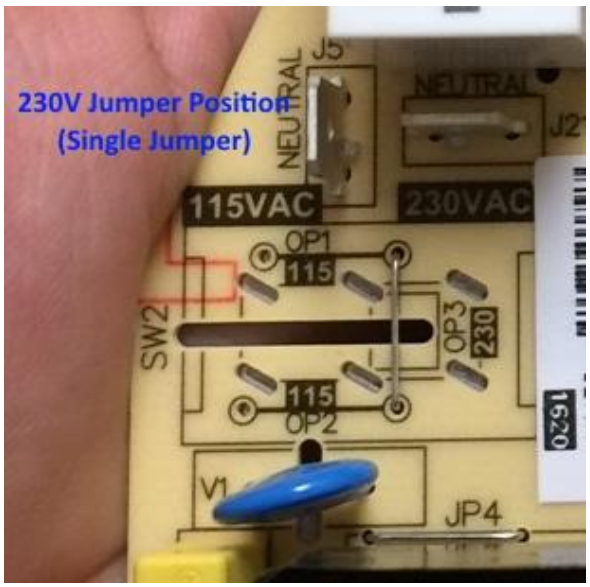
10. **FIGURE 1:** Remove the **Lamp Board Molex** from terminal marked "**CON1**" on **Original Board "A"**.
11. **FIGURE 2:** Remove the **2nd Lamp Board Molex** from terminal marked "**CON2**" on **Original Board "A"**.
12. **FIGURE 3:** Remove the **Swing Motor Molex** from terminal marked "**CON3**" on **Original Board "A"**.

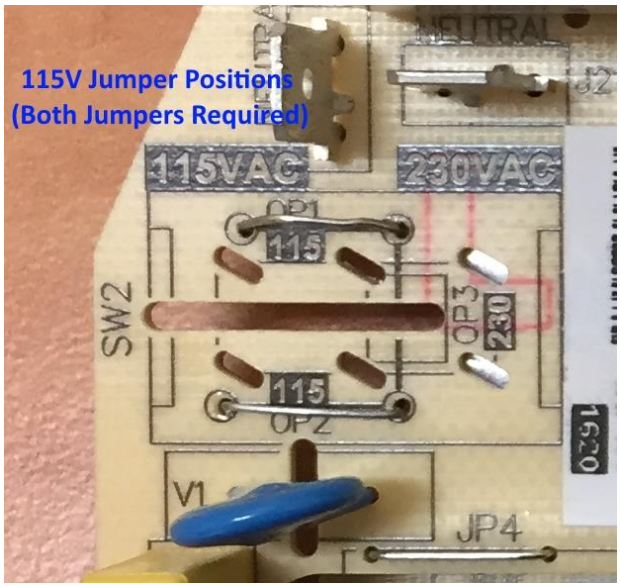


13. Remove the **RED and BLUE wires** from **Original Board "A"**. These are no longer required. Be sure to cap off any loose or unused wires with individual wire nuts.

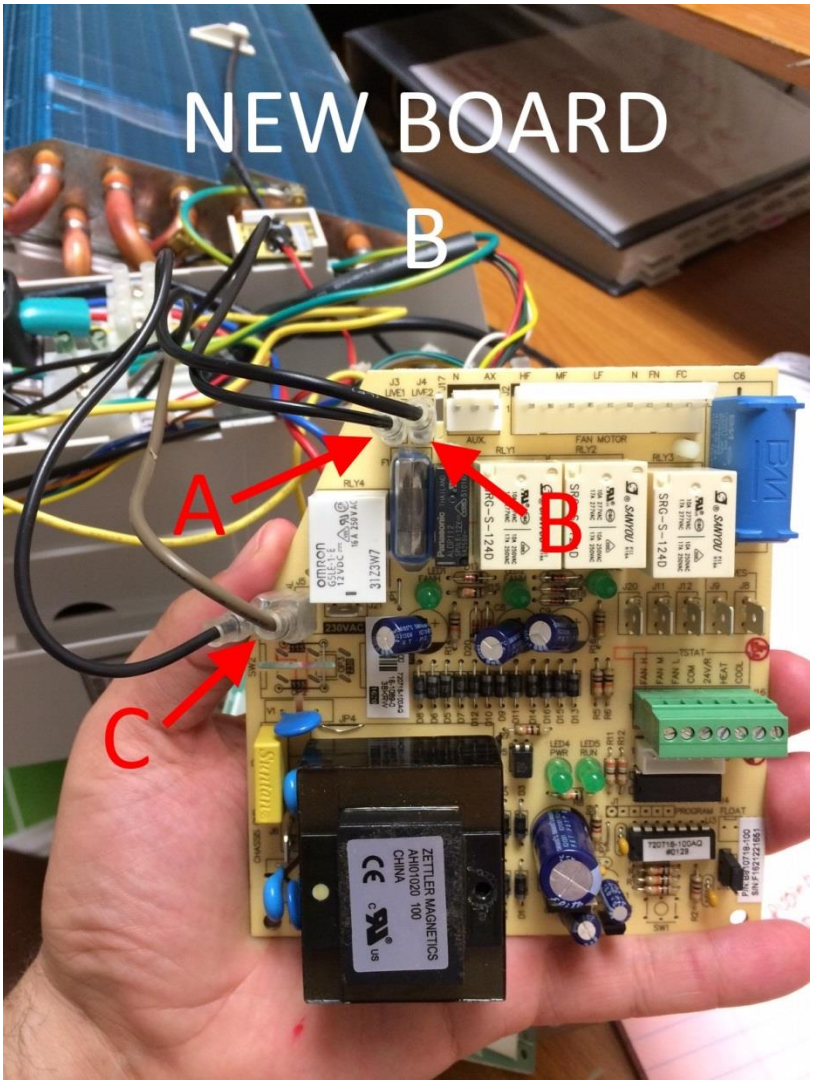
NEW BOARD "B"
24V Adapter Board (# PCB-U-HW-B)





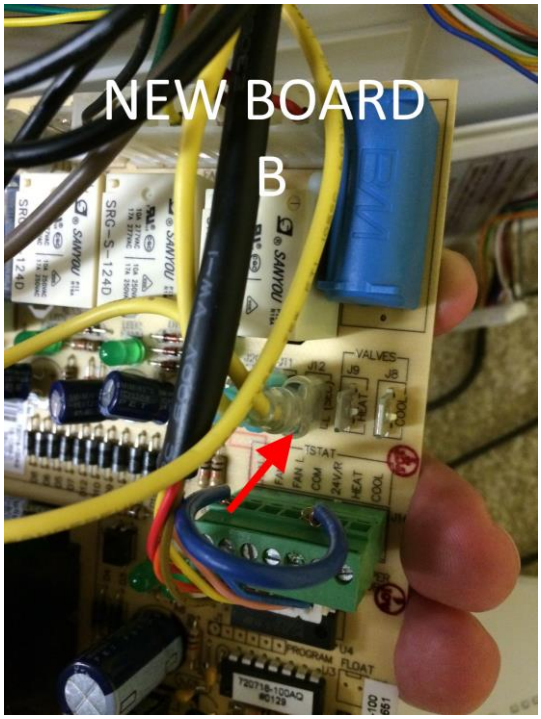


14. On **New Board "B",** ensure the fan coil supply voltage **jumper or jumpers** are in the correct position for your application before proceeding with the installation of **New Board "B"**. The jumper selector voltage options are indicated on **New Board "B"**. The choices are 115VAC or 230VAC. If necessary, the jumper(s) must be moved to the correct voltage for the application. 21 AWG solid copper wire is acceptable for jumper.

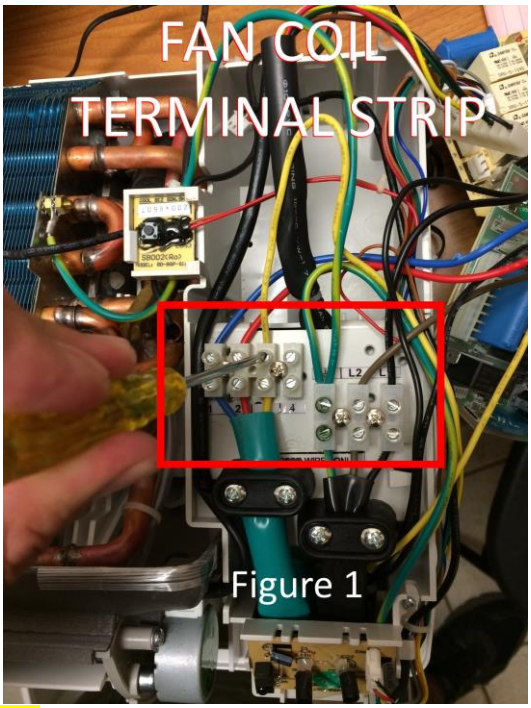


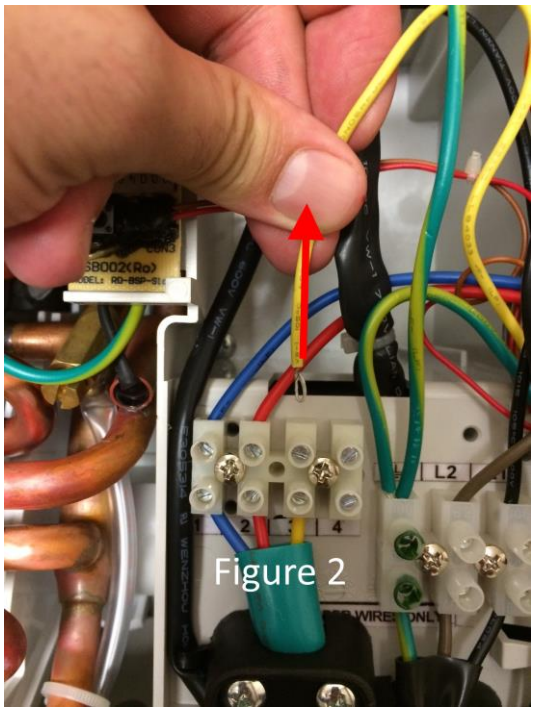
* The (3) wires referenced in the following **steps 15, 16 & 17** are to be transferred directly from **Original Board "A"** to **New Board "B"**. Wire colors may vary.

15. **A:** Transfer **wire** from **Original Board "A"** terminal marked "**LIVE 1**" to **New Board "B"** terminal marked "**J3 LIVE 1**".
16. **B:** Transfer **wire** from **Original Board "A"** terminal marked "**LIVE 2**" to **New Board "B"** terminal marked "**J4 LIVE 2**".
17. **C:** Transfer **"Piggybacked" wires** from **Original Board "A"** terminal marked "**NEUTRAL**" to **New Board "B"** terminal marked "**J5 NEUTRAL".**

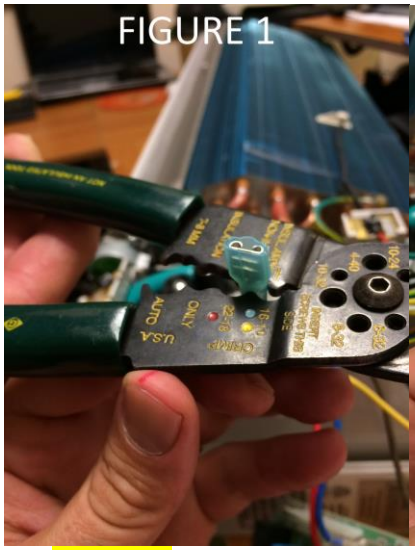


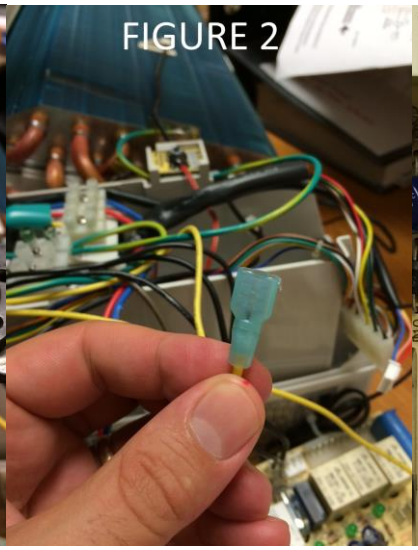
18. Transfer 24V transformer wire from **Original Board "A"** terminal marked "**L(SEC)**" to **New Board "B"** terminal marked "**L(SEC) J12".**

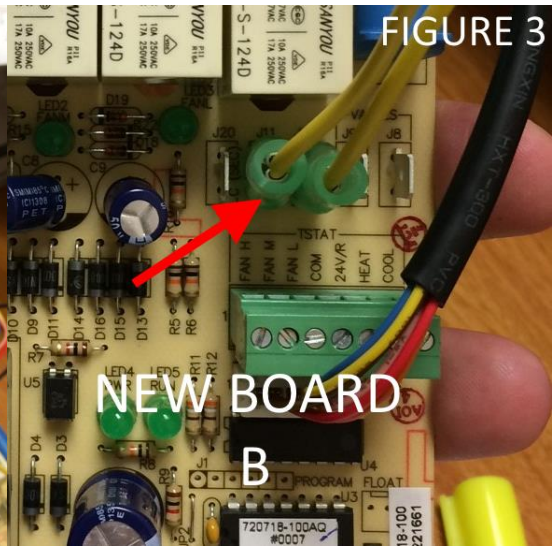




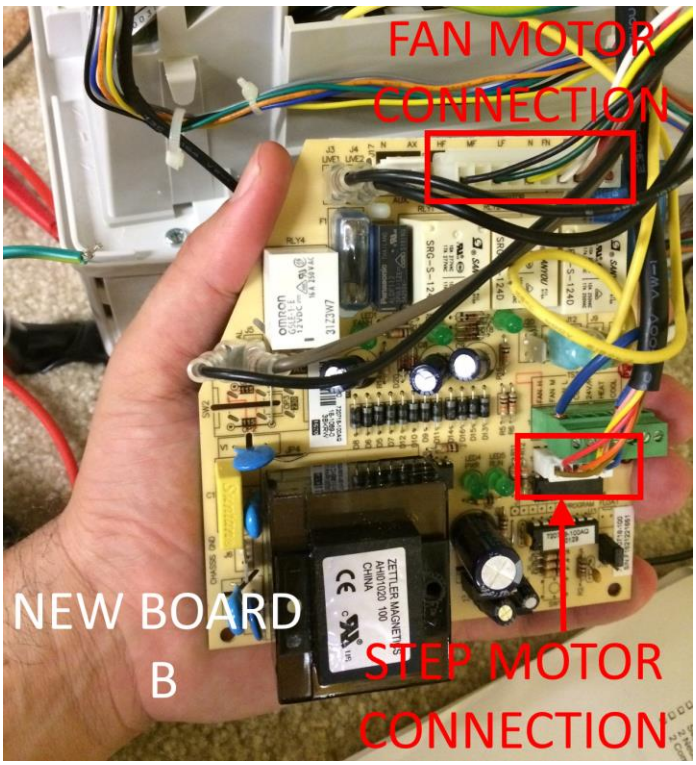
19. **FIGURE 1:** Using a small flathead screw driver, remove second 24V transformer wire from the fan coil terminal barrier strip.
20. **FIGURE 2:** Remove 24V transformer wire from fan coil terminal barrier strip.



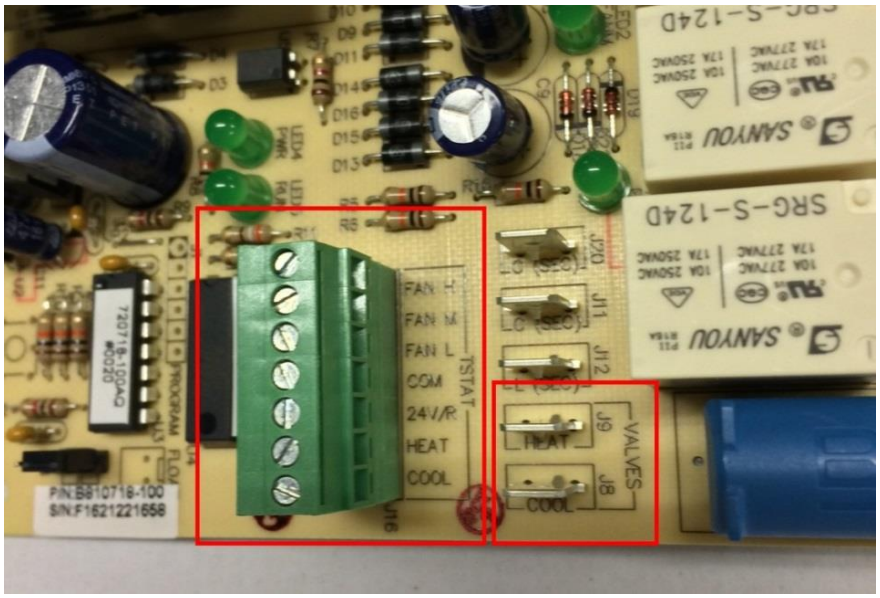




21. **FIGURE 1:** Using a wire crimping tool, crimp female disconnect fitting onto wire removed from terminal barrier strip in previous step 20.
    FIGURE 2: Before connecting this wire to **New Board "B",** ensure you have a good connection by pulling on the female disconnect.
22. **FIGURE 3:** Connect newly crimped 24V transformer wire to **New Board "B"** terminal marked **"J11".**



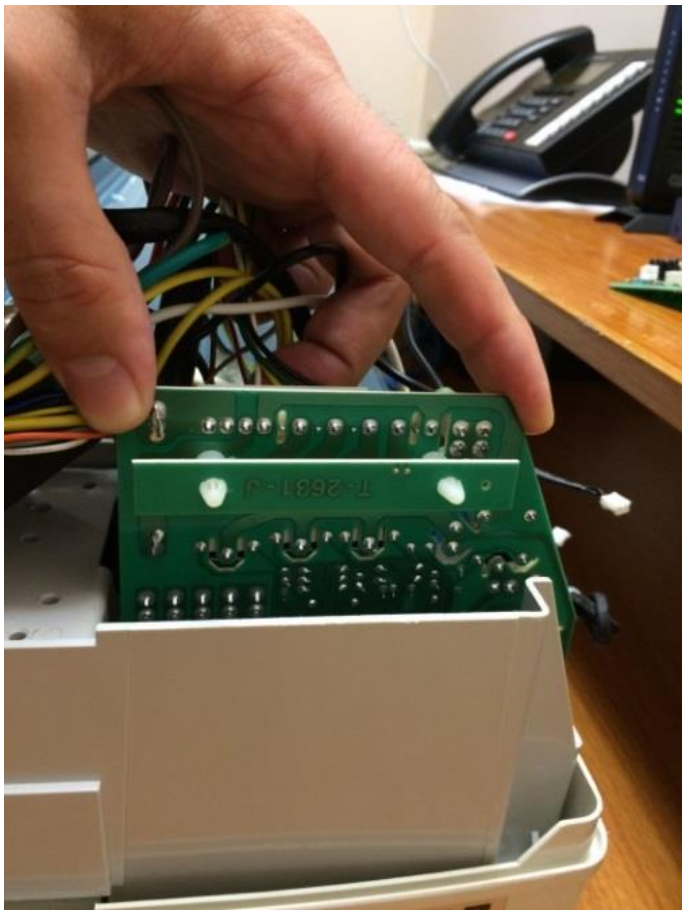
23. Transfer **louver STEP MOTOR Molex connector** from **Original Board "A"** to **New Board "B"**.
24. Transfer **FAN MOTOR Molex connector** from **Original Board "A"** to **New Board "B"**.



20. Connect 24V **thermostat** wires to **New Board B GREEN terminal block marked "TSTAT"**.
22. Water zone valves are controlled and powered from the thermostat and can be directly wired to the thermostat or wired through the green terminal block "HEAT" and "COOL" terminals provided on the control board. Wiring a thermostat to the "HEAT" and "COOL" terminals passes 24V to either "J9" or "J8" terminals marked "VALVES" on a call for heating or cooling.

GREEN "TSTAT" TERMINAL BLOCK OVERVIEW

a. **FAN H, M, L** – 24V from the thermostat will energize any of the 3 fan speed relays on the board. You can utilize a single speed, two speeds, or all three if you have a 3-wire, three-fan-speed thermostat.
b. **COM** – Thermostat Common
c. **24V/R** – 24V is supplied by the board to power the thermostat by this terminal.
d. **HEAT**– 24V from the thermostat to the "HEAT" terminal energizes valve terminal "J9" which is directly across from the "HEAT" green block terminal.
e. **COOL** – 24V from the thermostat to the "COOL" terminal energizes valve terminal "J8" which is directly across from the "COOL" green block terminal.



25. Ensure any unused wires are removed and/or capped off with individual wire nuts.
26. Side **New Board "B"** back into **Original Board "A"** slot.
27. Fully test all the functions of **New Board "B"** before reassembling the fan coil.
28. Replace **Electrical Compartment Cover** removed in step 6.
29. Replace unit **Frame Grill**.
30. Install screws and **Screw Covers** removed in steps 2 though 6