

***COLD WEATHER  
START KIT***  
**Ceiling Mount 4000**

Cold Weather Start Kit:  
To be used in conjunction with  
**Ceiling Mount 4000 (Manufactured  
Before 01/07/15)** cooling system.

***Whisper*KOOL™**  
*The Coolest Thing In Wine Storage*

CWSK.CM4000 051515

**Conforms to ANSI/UL Std 427**

**Certified to CAN/CSA Std C22.2 No. 120**

***We manufacture, test and certify 100% of our wine cooling units in the USA. By sourcing the best components and closely controlling our manufacturing processes, we can assure the highest-quality, lowest defect manufacturing rates in the industry.***

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REV 02

CWSK.CM4000 051515

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# INTRODUCTION

## Customer Service

Thank you for purchasing a WhisperKOOL Cold Weather Start Kit. We strive to provide the highest quality products and the best possible customer service. If you have any questions about your system, please call us at 1-800-343-9463 or visit [WhisperKOOL.com](http://WhisperKOOL.com).

## Using the Manual

This Owner's Manual is intended to provide detailed instructions for the installation of the Cold Weather Start Kit on the Ceiling Mount 4000 cooling system. In order to ensure the proper longevity of your cooling unit, the equipment should be installed as outlined in this Owner's Manual. It is also vital to establish a proper care and maintenance schedule. Please read and review this Owner's Manual carefully and keep it for future reference.

## What is a Cold Weather Start Kit?

The Cold Weather Start Kit is designed to insure that your cooling system will start in low ambient temperature. The Cold Weather Start Kit uses temperature controlled heaters on the receiver, in conjunction with an electronic bypass, to maintain a pressure inside the system high enough for proper operation.

## How Does the Cold Weather Start Kit Work?

The Cold Weather Start Kit provides heat to specific components in the condensing unit for proper operation when the cooling system is in a below freezing setting. The Cold Weather Start Kit comes equipped with sensors to enable an ideal temperature boost every time.

# WARRANTY REGISTRATION

In order to activate the warranty of your system, the Verification and Operational Documentation must be completed by the certified refrigeration technician installing your system and submitted via mail, fax or e-mail.

Mail to:

WhisperKOOL

ATTN: Warranty Registration

1738 E. Alpine Avenue

Stockton, CA 95205-2505

USA

OR

Fax to:

209-466-4606

OR

Scan and e-mail to:

[warranty@whisperkool.com](mailto:warranty@whisperkool.com)

For the equipment warranty to be valid, WhisperKOOL requires that the installation is performed by a certified HVAC-R technician (NATE certified technician is recommended) per the specifications outlined in this Technician's Manual. The technician shall be required to be equipped with the proper tools of the trade including: R-134a, brazing equipment, dry nitrogen, an accurate manifold gauge set (digital preferred), plus a 4 valve manifold set for evacuation, digital micron gauge, digital scale, deep vacuum pump and accurate digital thermometers. Without the proper equipment, a professional job cannot be accomplished. Evidence of the certified tech's NATE# or other certification is required.

# RECEIVING & INSPECTING THE SYSTEM

## Receiving and Inspecting the System

- Inspect the packaging for any obvious signs of damage or mishandling before opening.
- Note any discrepancies or visual damage on the Bill of Lading before signing.

## Review the Packing Slip to Verify Contents

- Check the model number to ensure it is correct.
- Check that all factory options ordered are listed.

**If any items listed on the packing slip do not match your order information, contact WhisperKOOL Customer Service immediately.**

## Upon Opening the Package

1. **Inspect the Kit before installation.** If damage is found, please contact your distributor or WhisperKOOL Customer Service at 1-800-343-9463.
2. Verify that you have received all of the items on the "Components Provided" list below and that the Kit corresponds to your specific WhisperKOOL cooling system.
3. The system is intended **for use in properly designed and constructed wine cellars.** Hire a professional wine storage consultant with a valid contractor's license to build your wine cellar.
4. WhisperKOOL requires that all systems and Cold Weather Start Kits be installed by a certified HVAC-R technician only.
5. Warranty is not active until a Warranty Checklist has been received, reviewed, and approved.

### Condensing Unit Components Provided:

- (1) Cold Weather Start Kit Electrical Box Assembly
- (1) Thermal Switch Assembly
- (1) H1 Lever Connector Assembly
- (2) Silicone Heaters
- (2) Yellow Female Disconnects
- (1) Red Female Disconnect
- (2) Hose Clamps
- (1) Wire End Terminal
- (1) N1 Lever Connector
- (25) Zip Ties
- (3) Metal Zip Ties
- (4) 1/2" Hex Head Self Taping Screws
- (1) Piece of Heat Shield
- (1) Bag of Thermal Paste

### Evaporator Unit Components Provided:

- (4) Lever Connectors
- (1) 120v/24v Transformer (with double sided tape on bottom edge for mounting)
- (5) Zip Ties
- (1) 6/32 Kep Nut
- Ceiling Mount 4000 Evaporator Unit Cold Weather Start Kit Field Installation Instructions

### Tools Needed:

- #1 Philips Head Screw Driver
- #2 Philips Head Screw Driver
- 5/16" Nut Driver
- 1/4" Nut Driver
- Drill
- Wire Cutters
- Wire Strippers
- Crimpers
- Needle Nose Pliers
- Utility Knife

### Components Needed (Not provided):

- 2 wire t-stat wire for routing from the evaporator unit (air handler) to the condensing unit.
  - Use 18-20 wire stranded or solid

After verifying that you have received all of the correct components for your specific system, please keep the Cold Weather Start Kit in its original box until you are ready for installation. This will allow you to move the product safely without damaging it. When you are ready to remove the product from the box, refer to the installation instructions.

**TIP:** Save your box and all packaging materials. They provide the only safe means of transporting/shipping the unit.

## BEFORE YOU START THE INSTALLATION



**Disconnect both the evaporator unit (air handler) and the condensing unit from each power source.**



**WARNING: Failure to do so may cause electrical shock which can result in injury or death.**



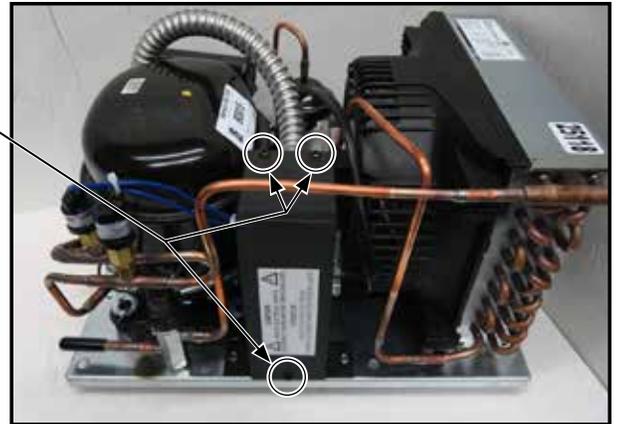
A 2 wire 18-20 awg thermostat wire will need to be ran from the evaporator unit to the condensing unit prior to installing the Cold Weather Start Kit.

Review the Tools Needed and Components Provided document prior to starting.

# CONDENSING UNIT COLD WEATHER START KIT INSTALLATION INSTRUCTIONS

- 1** Locate the electrical box. Use a Phillips head screwdriver and remove the three screws holding the electrical box cover on the electrical box.

**NOTE:** Save screws



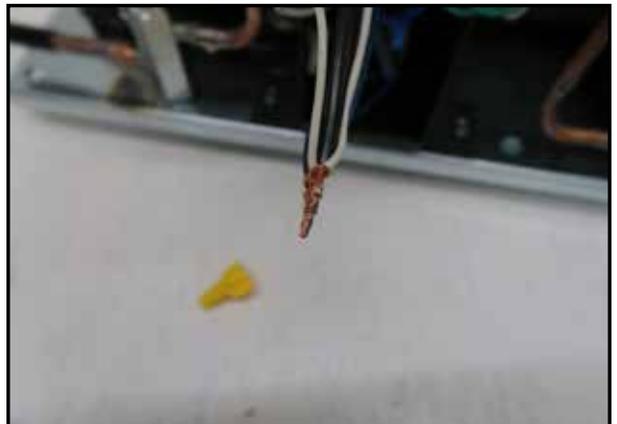
- 2** Remove the electrical panel to expose wiring as shown.



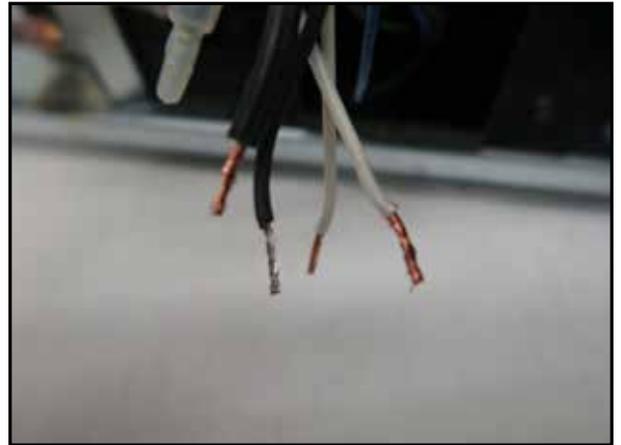
- 3** Cut all zip ties inside of the electrical box.



- 4** Remove the yellow wire nut from the 4 neutral wires.



- 5** Separate, twist, and trim the copper strands of each wire to a length of 3/8".

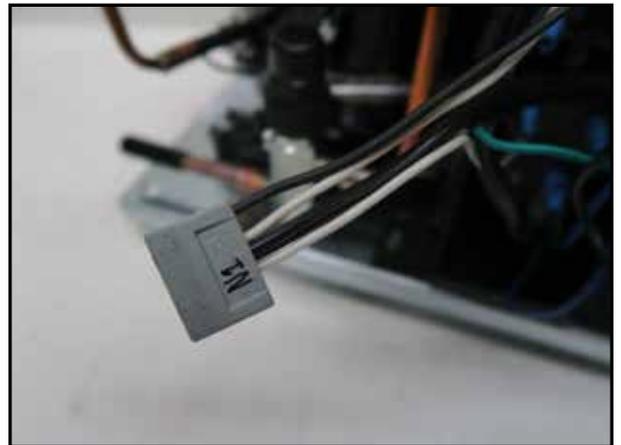


- 6** Loosen the 2 Phillips screws on the cord squeeze.

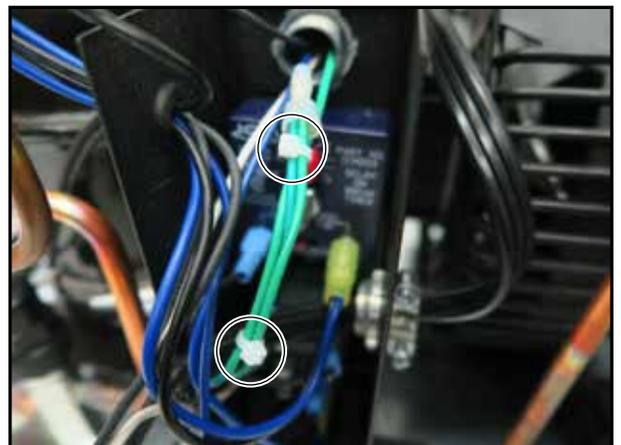


- 7** Secure all 4 neutral wires into the lever connector labeled N1.

**NOTE:** To secure a wire into the lever connector. Pull a lever to the open position, insert wire, and close lever.



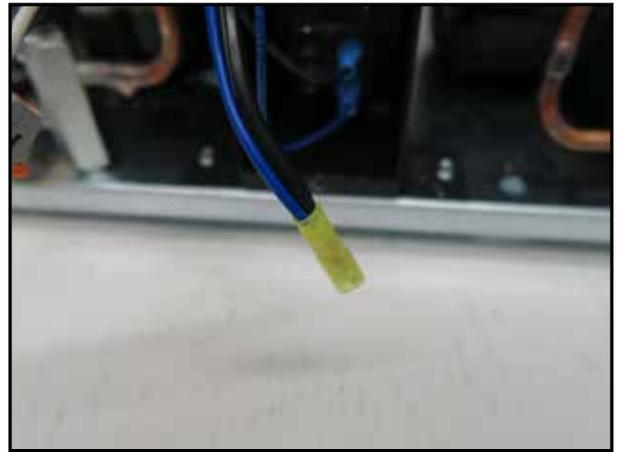
- 8** Zip tie ground wires as shown.



- 9** Zip tie the black wires with the closed end terminal, as shown.



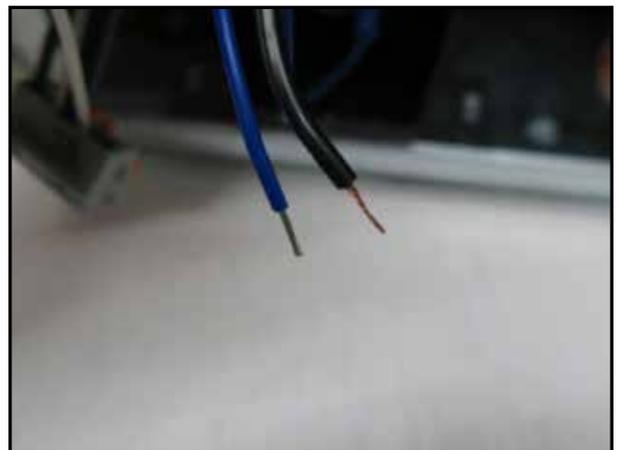
- 10** Remove the yellow female disconnect from the #8 terminal on the contactor.



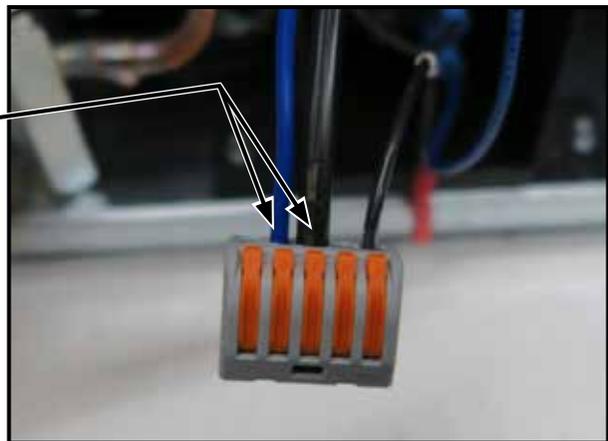
- 11** Cut the yellow female disconnect off of the black and blue wires.



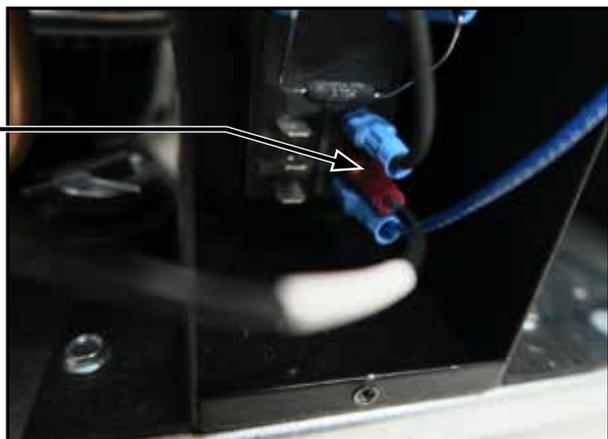
- 12** Strip the black and blue wires as shown.



- 13** Secure both wires into the H1 lever connector.



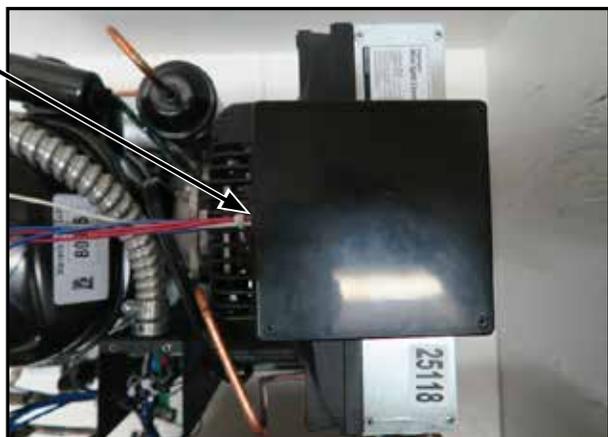
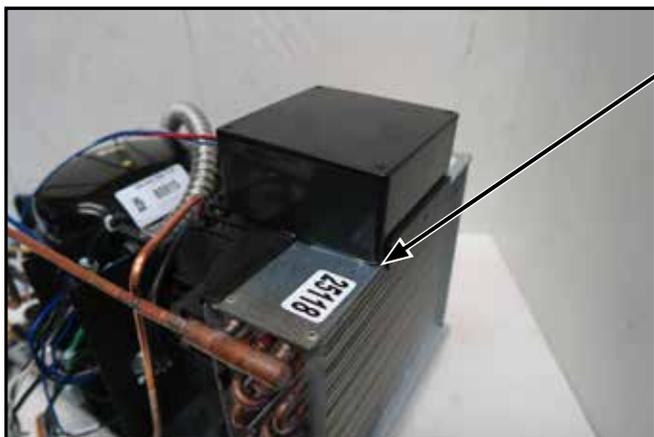
- 14** Secure the red female disconnect labeled 8 onto the #8 terminal on the contactor.



- 15** Remove the backing of the double sided tape from the bottom of the Cold Weather Start Kit electrical box.



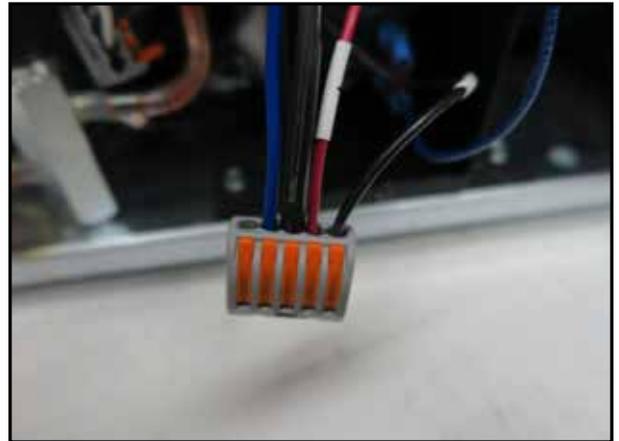
- 16** Center the Cold Weather Start Kit box on the top of the condenser coil. (BE SURE TO PUSH THE PLASTIC STRAP ON THE BOX ALL THE WAY AGAINST THE COIL COVER.)



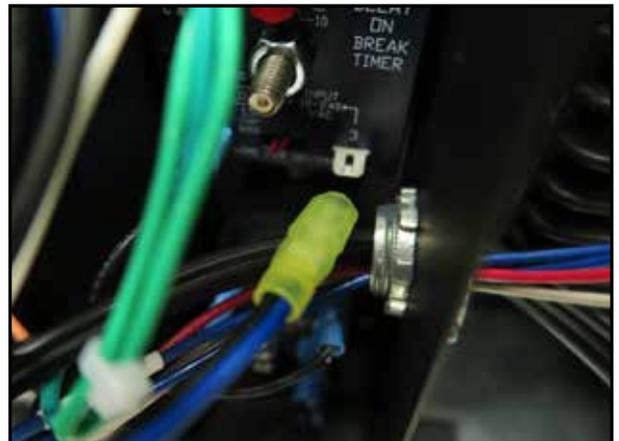
- 17** Route wires 7, 10, 11 & 12 from the Cold Weather Start Kit box down the fan shroud and into the cord squeeze as shown.



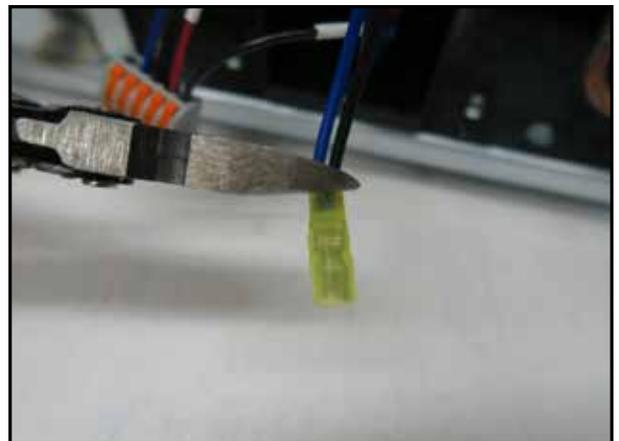
- 18** Secure wire 7 into the H1 lever connector.



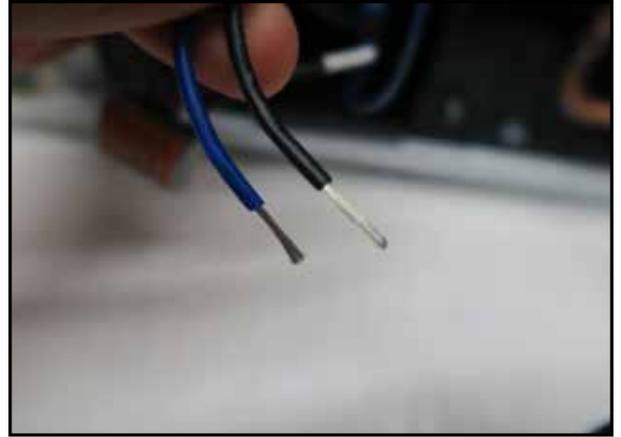
- 19** Disconnect the yellow female disconnect from the #3 terminal on the DOB relay.



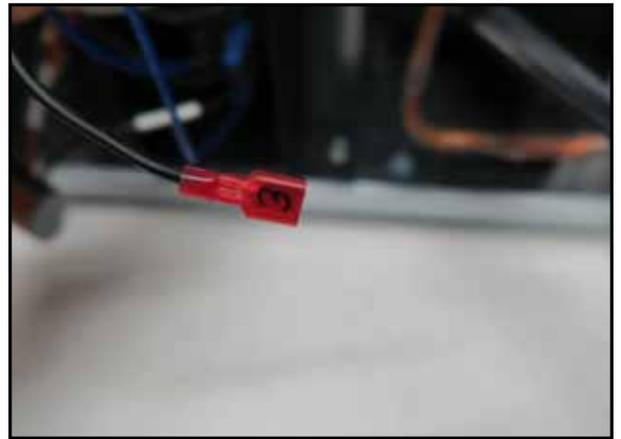
- 20** Cut the yellow female disconnect off of the black and blue wires from the previous step.



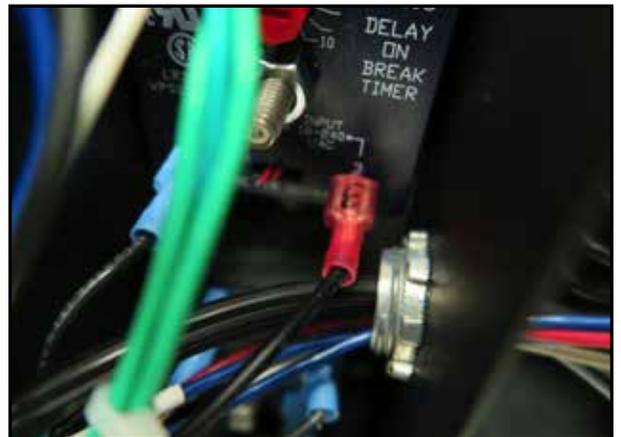
- 21** Strip the black and blue wires from the previous step.



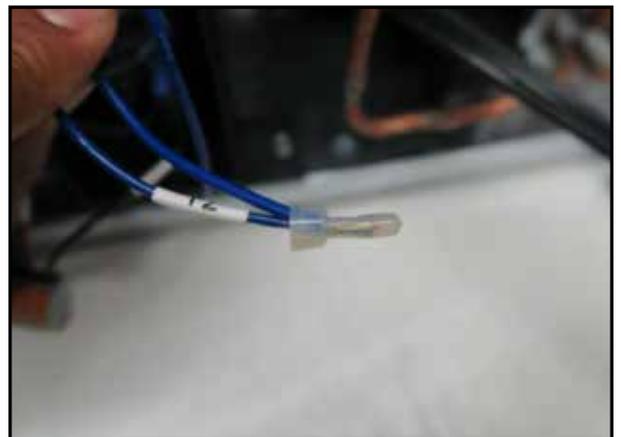
- 22** Crimp a red female disconnect labeled 3 onto the black wire from the previous step.



- 23** Secure the red female disconnect from the previous step to the #3 terminal on the DOB relay.



- 24** Crimp a wire end terminal onto wire 12 and the other stripped wire from step 21.





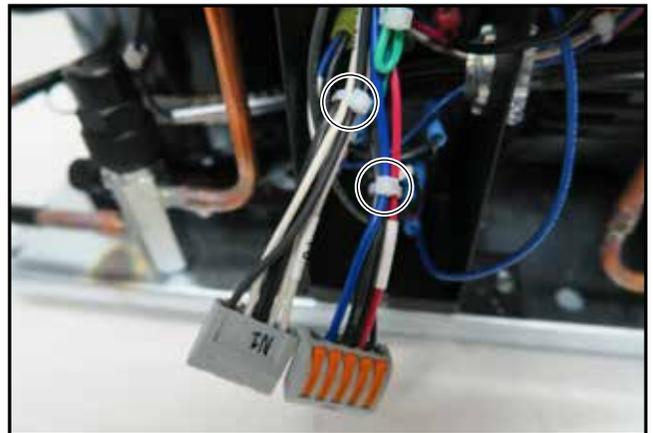
- 29** Secure the yellow female disconnect from the previous step to the #1 terminal on the DOB relay.



- 30** Zip tie wires 7, 10, 11 & 12 from the Cold Weather Start Kit box to the fan shroud as shown.



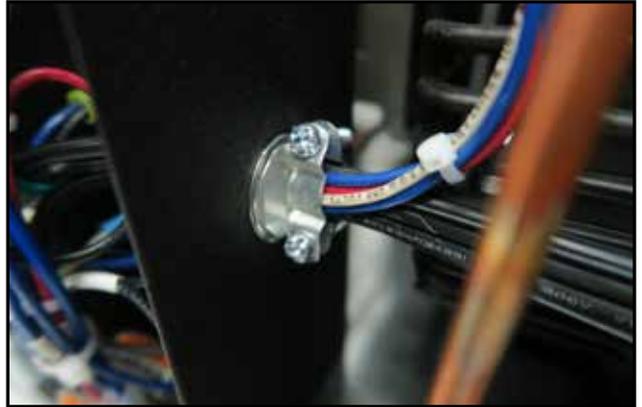
- 31** Zip tie the wires going into the N1 and H1 lever connectors as shown.



- 32** Tuck the wires into the electrical box and zip tie as shown.



- 33** Secure the 2 screws on the cord squeeze.



- 34** Secure top onto the electrical box using the removed screws.

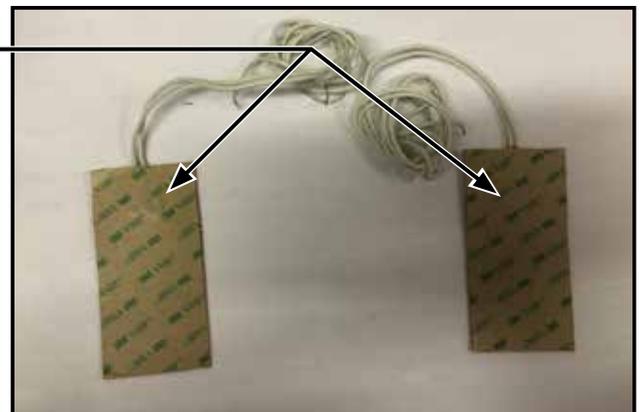


- 35** Cut and remove the zip tie holding the fan and ground wires to the capacitor bracket on the compressor.

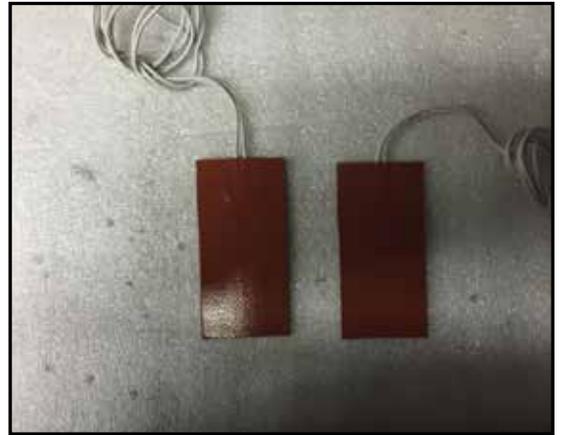
**NOTE:** Remove all labels from receiver.  
**BE CAREFUL NOT TO CUT THE WIRES.**



- 36** Locate the (2) 40 watt silicone heaters.



- 37** Peel off adhesive backing from each of the silicone heaters.



- 38** Place one of the silicone heaters on the receiver in the location shown. The heater will not adhere completely, there are hose clamps installed later in these instructions that will keep them firmly in place.

**NOTE:** Line up the heater so the wires are located at the fan shroud, and the bottom of the heater is touching the liquid line.

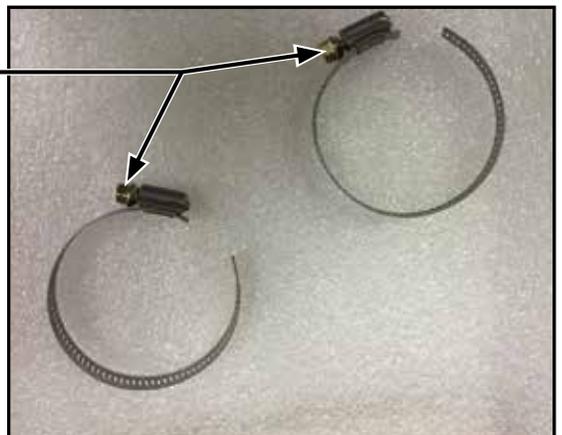


- 39** Place the other silicone heater on the receiver in the location shown. The heater will not adhere completely, there are hose clamps installed later in these instructions that will keep them firmly in place.

**NOTE:** Line up the heater so the wires are located at the fan shroud, and the back edge of the heater is touching the back edge of the other heater, as shown.



- 40** Using a 5/16" nut driver loosen the hose clamp and remove the strapping from the screw housing as shown.



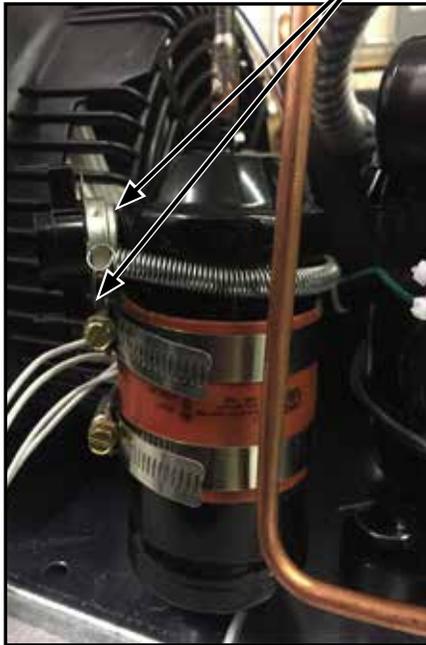
- 41** Slide the hose clamps on the receiver over the silicone heaters. One at the top of the heaters and one at the bottom. Secure in place as shown.



- 42** Wrap the spring from the thermal switch around the liquid line and secure the clasp of the spring to the thermal switch as shown.



- 43** Slide the thermal switch to the location shown. Make sure the tab of the thermal switch rests on the screw terminal of the top hose clamp.

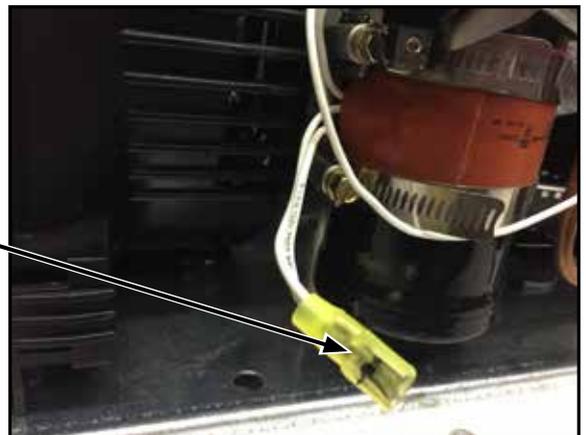


**NOTE:** Make sure the surface of the thermal switch is located at the ridge of the receiver, and is making good contact.

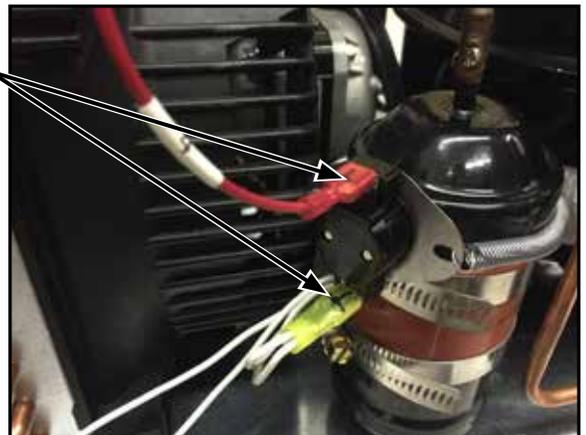
- 44** Pull the two bottom wires towards the fan shroud and cut as shown (One wire from each heater).



- 45** Strip and crimp on the yellow female disconnect labeled T.



- 46** Connect the yellow disconnect labeled T and the red disconnect labeled T from the Cold Weather Start Kit electrical box, to the thermal switch.



- 47** Remove the top from the Cold Weather Start Kit electrical box.



- 48** Route white wires from the heaters up into the Cold Weather Start Kit box and zip tie wires in orientation shown.



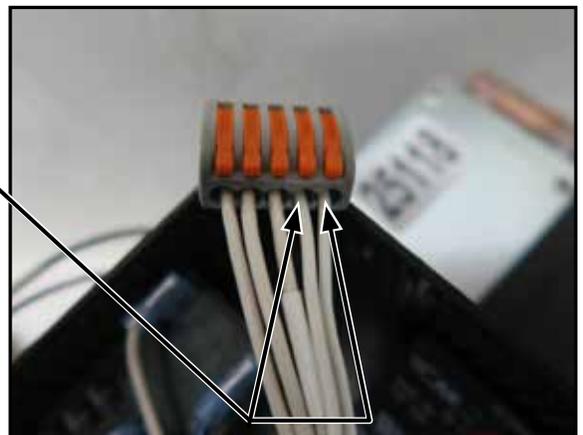
- 49** Cut corner of zip lock bag containing Thermal Paste, as shown.



- 50** Apply thermal paste on the surface of the thermal switch. This will help with the accuracy of the thermal switch. Re-align switch so it sits in the same orientation as step 43.



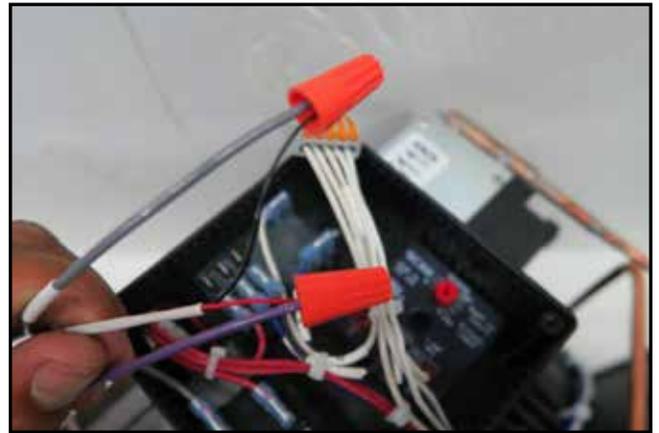
- 51** Secure the white wires from the heaters to the lever connector labeled N2.



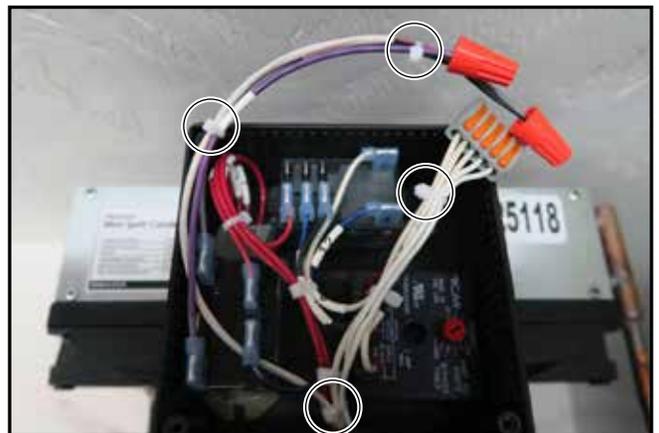
- 52** Route the 24v control wires from the evaporator unit into the Cold Weather Start Kit electrical box.



- 53** Connect the 24v control wires to the grey and purple wires using the wire nuts provided.



- 54** Zip tie wires as shown.



- 55** Secure the Cold Weather Start Kit box to the top of the coil using the 1/2" self tapping screws provided. (Using screws or mounting locations other than the ones specified, may result in a punctured coil.)



- 56** Tuck wires in Cold Weather Start Kit box as shown.



- 57** Secure top onto Cold Weather Start Kit box with removed screws.



- 58** Place a piece of heat shield behind the condenser fan wires and the ground wire.



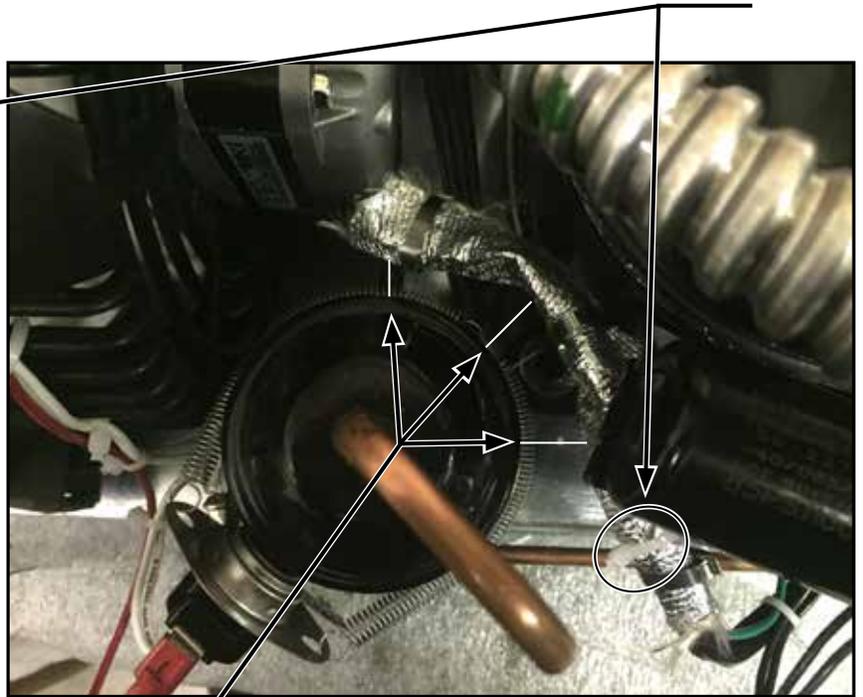
- 59** Tightly wrap the heat shield around the wires.



- 60** Secure the heat shield in place using the 3 metal zip ties.



- 61** Slide the heat shield over the wires up to the condenser fan motor and zip tie to capacitor bracket as shown.



**NOTE:** Ensure there is a distance of 1" between the receiver and the heat shield. This is very important as it will prevent the silicon heaters from burning the wires.

**The Cold Weather Start Kit has been successfully installed on the condensing unit, next proceed to the evaporator unit instructions.**

# EVAPORATOR UNIT COLD WEATHER START KIT INSTALLATION INSTRUCTIONS

- 1** Before beginning the installation process, locate the Evaporator Unit Cold Weather Start Kit. All parts for the Evaporator Unit are located inside of this box.



- 2** Open box and remove the 24v transformer and the zip lock bag.



- 3** The kit will include five zip ties, four lever connectors, one 6/32 kee nut, and one 120v/24v step down transformer.



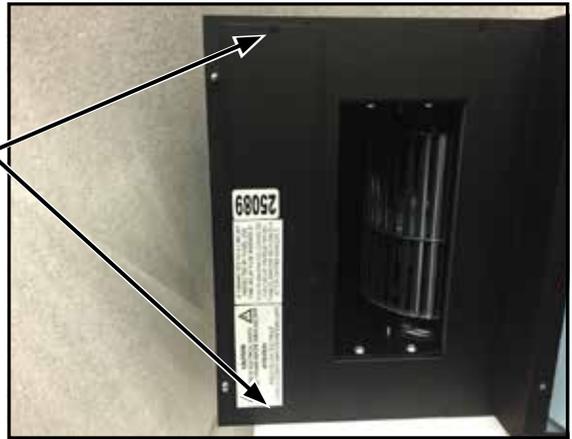
- 4** Using a Phillips head screw driver remove the 8 screws holding the grill in place. (Set screws aside for later use)



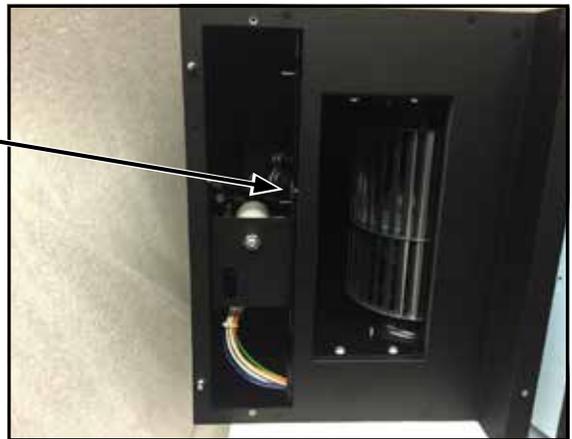
**5** Remove the grill.



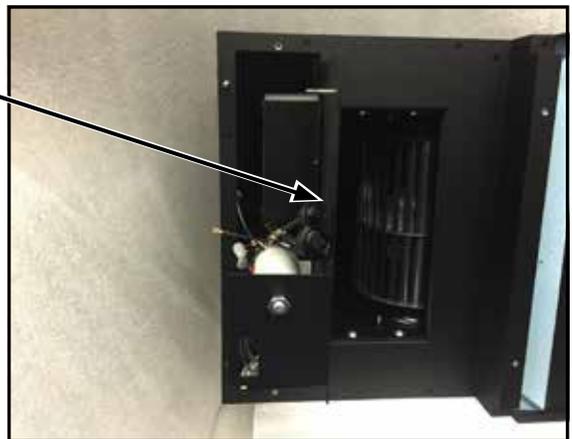
**6** Locate the electrical panel access door, and remove the two Phillips head screws. (Set screws and panel aside for later use)



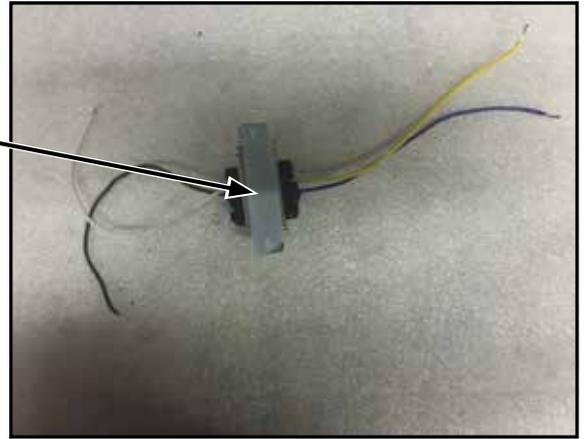
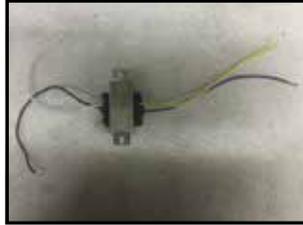
**7** Remove the thumbscrew by rotating it counter clockwise. (Set thumbscrew aside for later use)



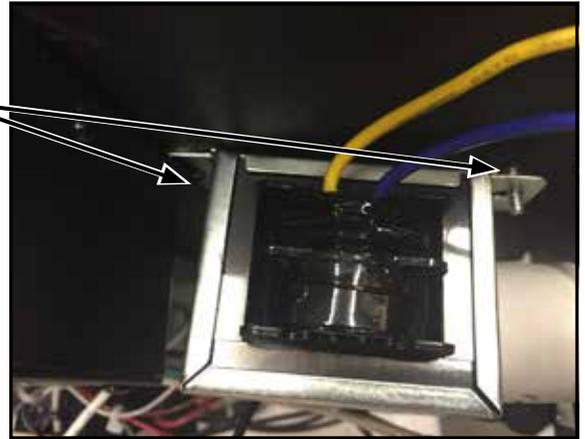
**8** Pull electrical panel down as shown.



- 9** Remove the backing from the double sided tape on the transformer.

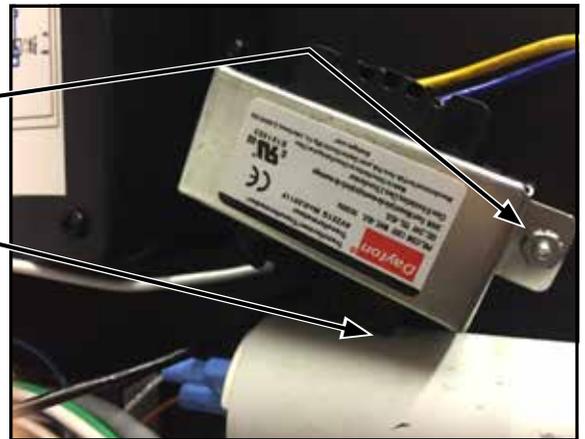


- 10** Place one edge of the transformer under the control box and the other edge over the 6/32 stud.

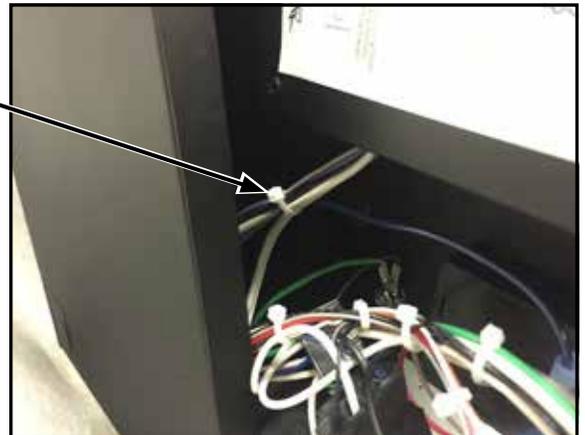


- 12** Push transformer against the electrical panel and secure it in place using the 6/32 nut provided.

Make sure there is a distance of 1/16" between the transformer and the capacitor.



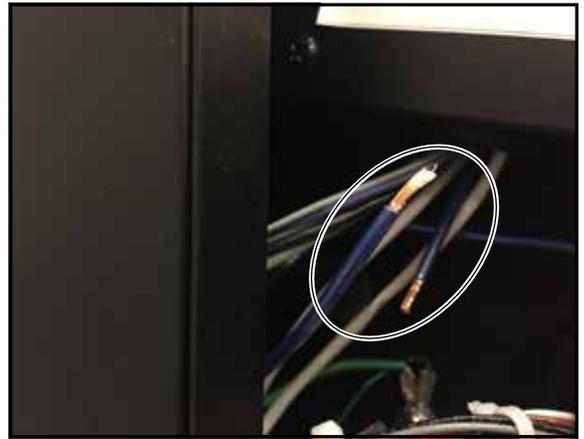
- 13** Cut the zip tie off the wires entering the control box.



- 14** Locate the blue wire entering the control box.



- 15** Cut the blue wire and strip each end to a length of 3/8"

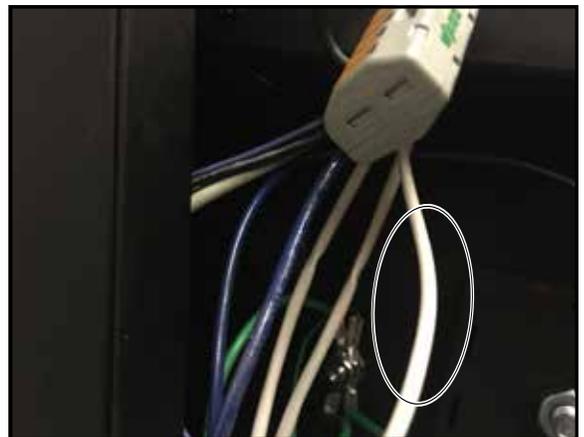


- 16** Secure the two blues from the unit and the black wire from the transformer into a lever connector.

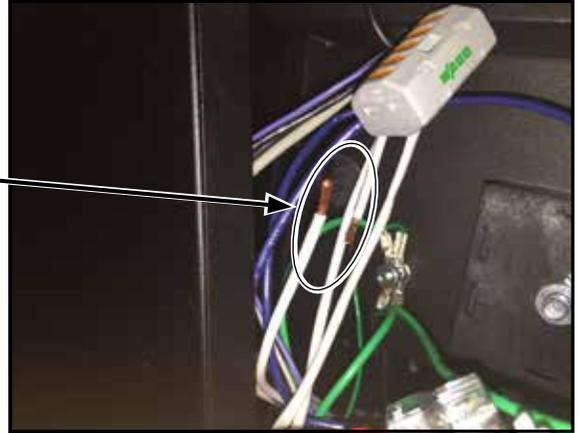


- 17** Locate the white 16awg white wire coming out of the control box.

**Note:** There may be other wires with white insulation around them, they will be a little thicker do not cut those wires.



- 18** Cut the white wire and strip each end to a length of 3/8".

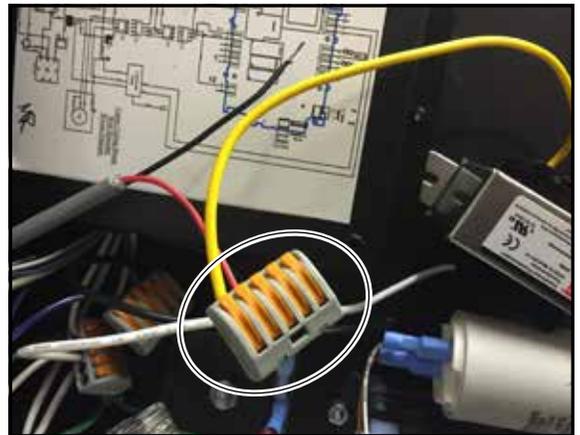


- 19** Secure the two white wires from the unit and the white wire from the transformer into a lever connector.



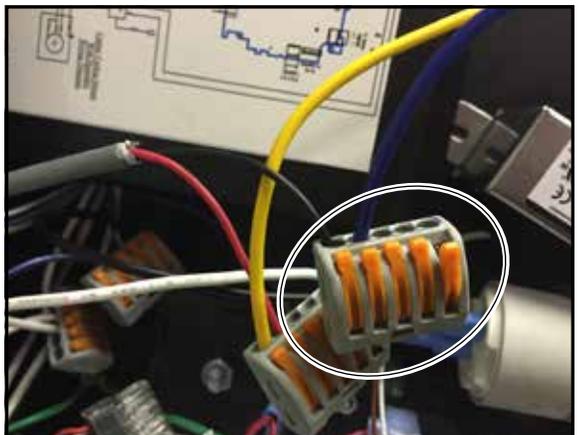
- 20** Secure one of the thermostat wires and the yellow wire from the transformer into a lever connector.

**Note:** The thermostat wire is the wire that was ran from the evaporator unit to the condensing unit.



- 21** Secure the other thermostat wire and the blue wire from the transformer into a lever connector.

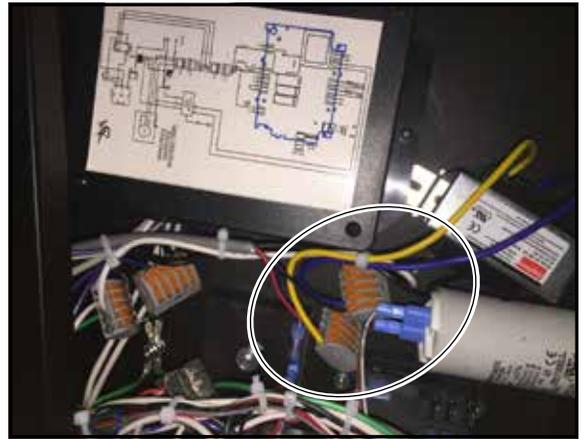
**Note:** The thermostat wire is the wire that was ran from the evaporator unit to the condensing unit.



**22** Zip tie wires in locations shown.



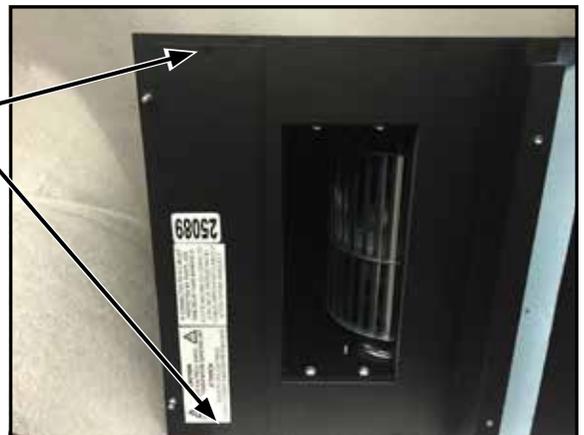
**23** Tuck lever connectors into location shown.



**24** Push electrical panel back up inside the unit and reinstall the thumbscrew removed in step #7.



**25** Re-install the electrical panel using the 2 Phillips head screws removed in step #6.



- 26** Install the grill back on the evaporator unit and secure it to the unit using the 8 Phillips head screws removed in step #4.



**The Cold Weather Start Kit has been successfully installed on the evaporator unit. If the installation process is complete on the condensing unit as well, plug both the condensing unit and evaporator units back into a power source.**

*Whisper***KOOL™**

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