



 **CHROMALOX**
Advanced Thermal Technologies

**HVH REPLACEMENT MOTORS
PROCEDURE**

HVH REPLACEMENT MOTORS PROCEDURE

PURPOSE

Provide clear and specific Instructions to Chromalox customers on Disassembly and Assembly of Replacement Motors PN 302912-003

SCOPE

This procedure is applicable for HVH units of 480V/3PH, 5kW or less.

RESPONSIBILITIES

It is the responsibility of Chromalox to provide a detailed procedure for disassembling and reassembling replacement motors for HVH model Air heaters.

It is the customer's responsibility to follow the instructions provided by Chromalox in detail to avoid any undesired situation.

WARNING

Risk of shock or electrocution!
**Disconnect power before performing
any maintenance or repairs on heaters.**

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TOOLS NEEDED FOR THE MOTOR REPLACEMENT



- **Cordless drill/driver**
- **1/4 Nut driver bit**
- **Torque wrench with 17mm crows foot**
- **Wire/cable cutter**
- **Wire stripper**
- **Terminal Crimp Tool**
- **Flat Blade Screwdriver**
- **Mechanics gloves**
- **Eye protection**



HVH REPLACEMENT MOTORS PROCEDURE

MATERIAL NEEDED FOR THE MOTOR REPLACEMENT

Material Provided by Chromalox

- Cable Ties
 - Terminals
 - Loctite 290
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- Cable Ties = PN 075424019
- CABLE STRAP FOR DWH-
LT
 - Terminals = PN 075504001
- TERM.CRIMP QCK.25",22-
18AWG



HVH REPLACEMENT MOTORS PROCEDURE

DISASSEMBLE MOTOR PROCEDURE

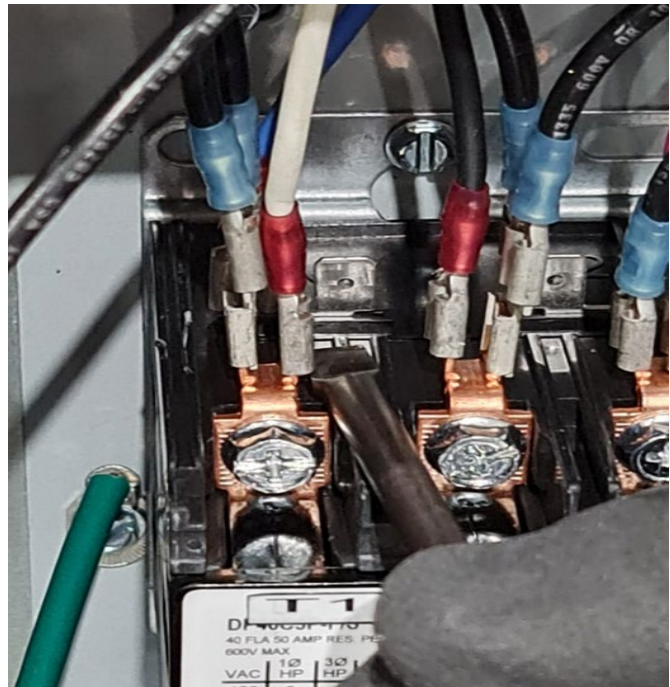
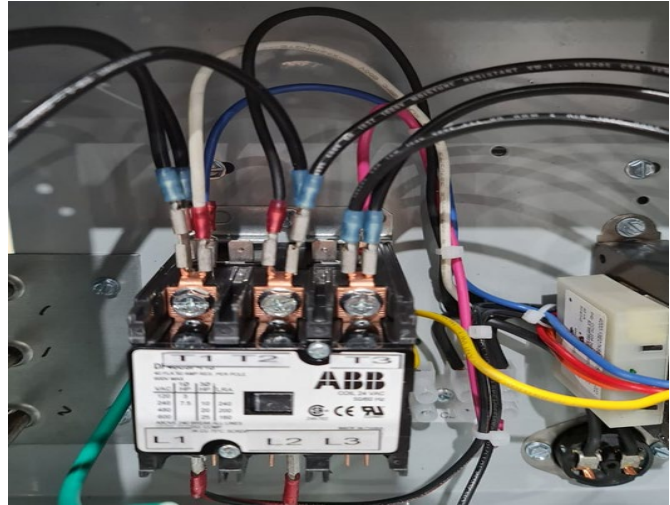
1.1 Screw out the control panel cover screws located on the bottom of the heater case using the drill and the 1/4" nut driver



HVH REPLACEMENT MOTORS PROCEDURE

DISASSEMBLE MOTOR PROCEDURE

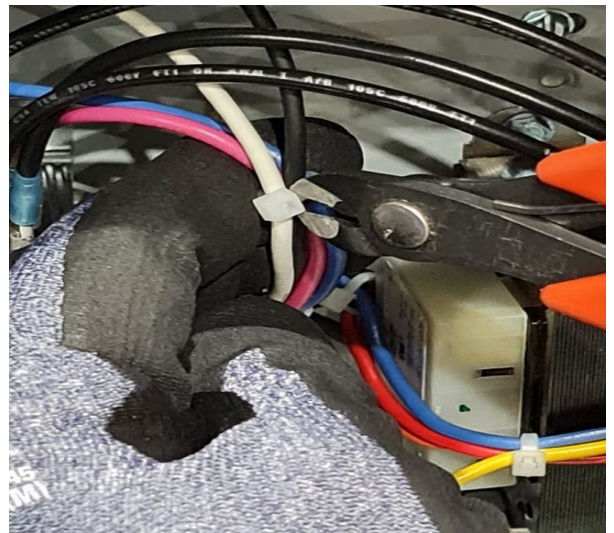
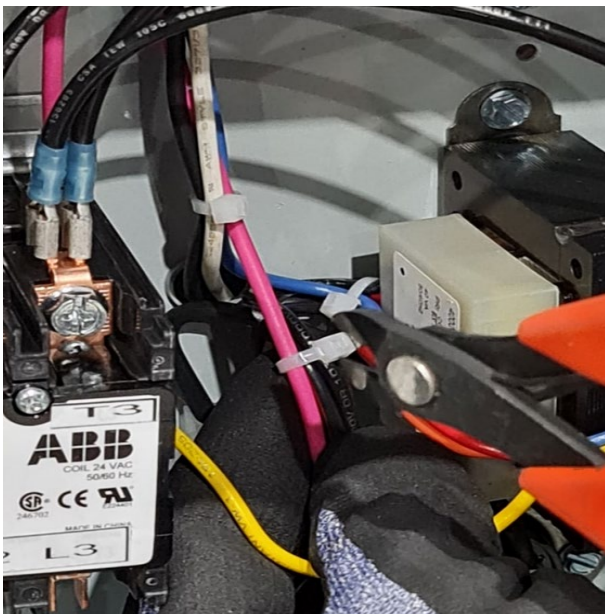
1.2 Screw out the motor wires from contactor using the flat blade screwdriver (Black & White wires). If difficult to identify, follow wires from motor into control compartment.



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DISASSEMBLE MOTOR PROCEDURE

1.3 Cut the motor's cable ties



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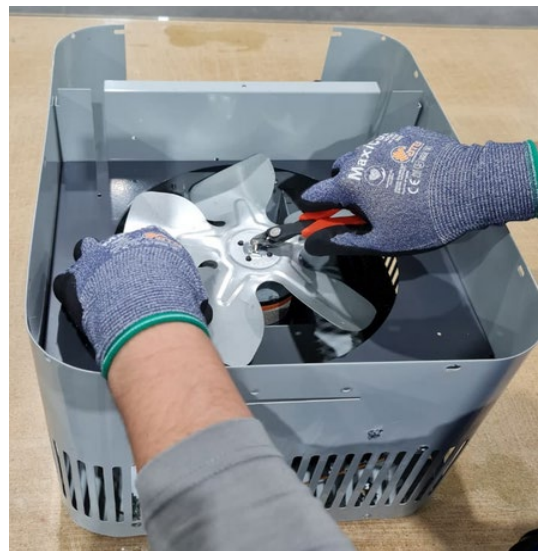
1.4 Screw out the screws from the front panel and pull away from case to remove.



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1.5 Remove the fan blade by unscrewing the setscrew.



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1.6 Unscrew the motor screws by entering the flat blade screwdriver by the sides of the HVH at the height of the motor screws.



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DISASSEMBLE MOTOR PROCEDURE

1.7 Remove motor from case.



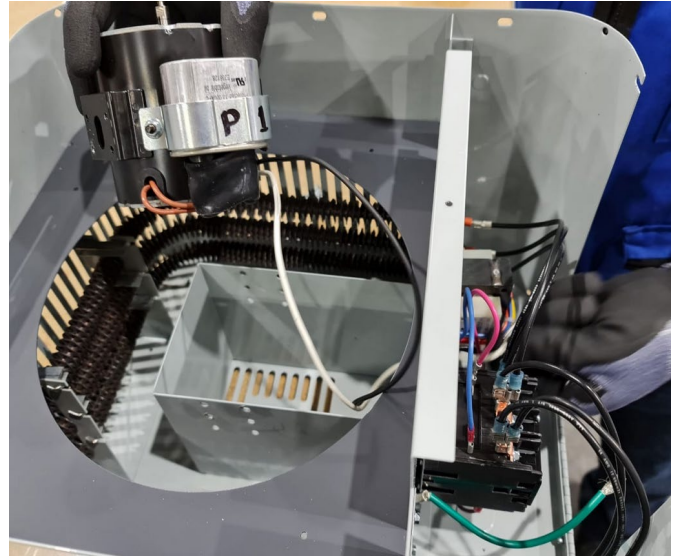
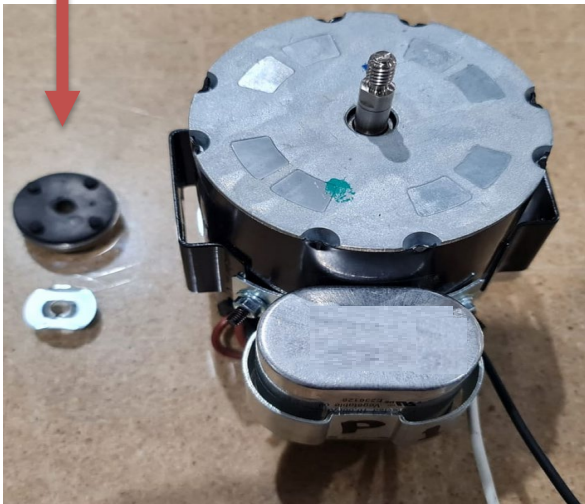
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ASSEMBLE REPLACEMENT MOTOR PROCEDURE

2.1 Install replacement motor 302912-003 in the case.

Motor's Included Hardware

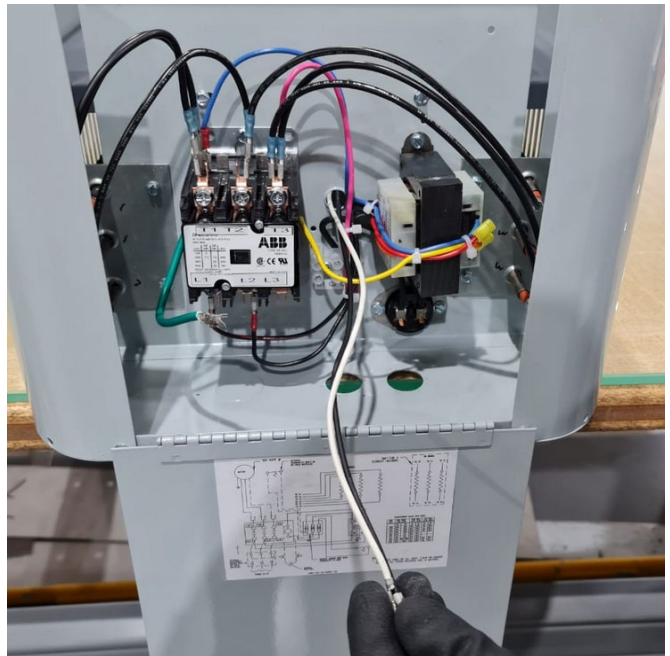
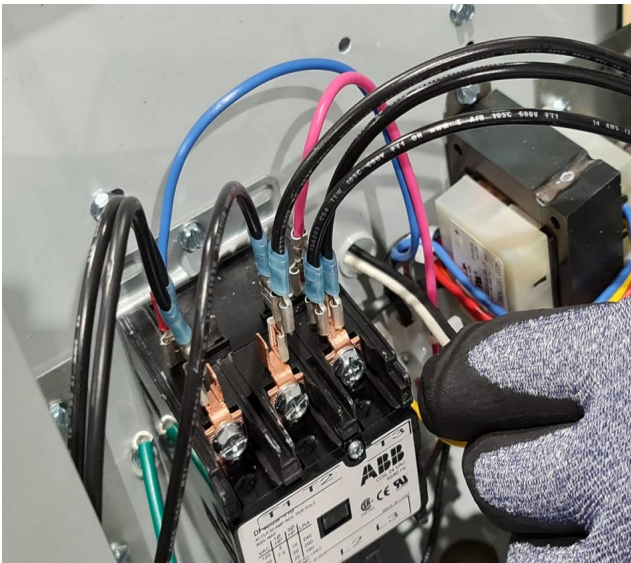
- Bracket
- Gasket
- Screw Set



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2.2 Pull the black & white cables through the orifice



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ASSEMBLE REPLACEMENT MOTOR PROCEDURE

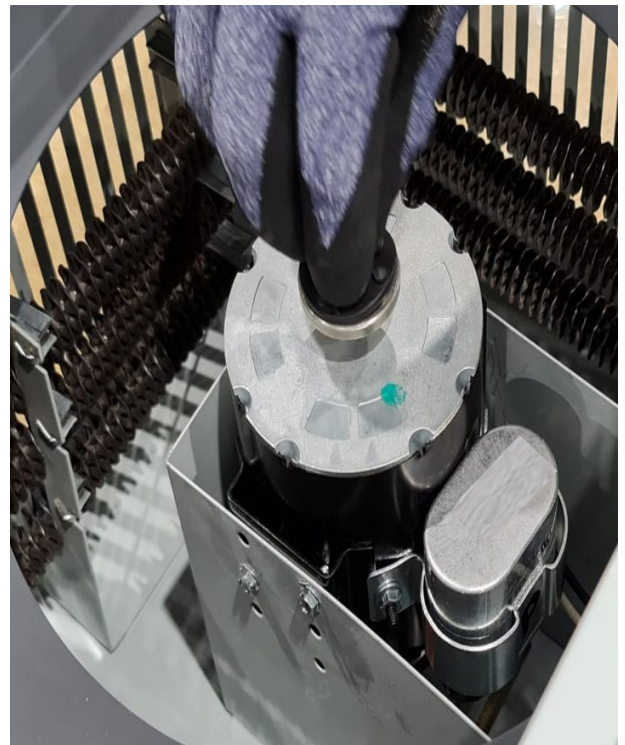
2.3 Screw the 4 screws of the motor through the grid using the flat blade screwdriver.



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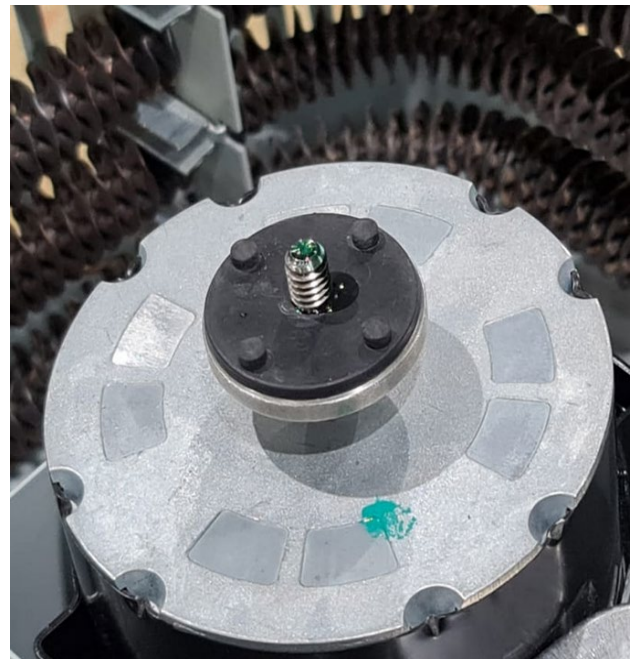
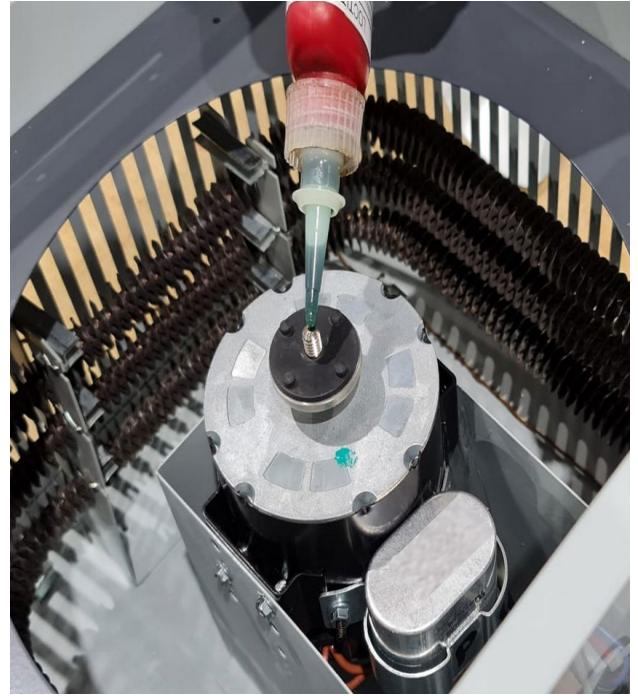
2.4 Once mounted, install the hardware bracket on the motor shaft along with the black rubber provided with the hardware included.



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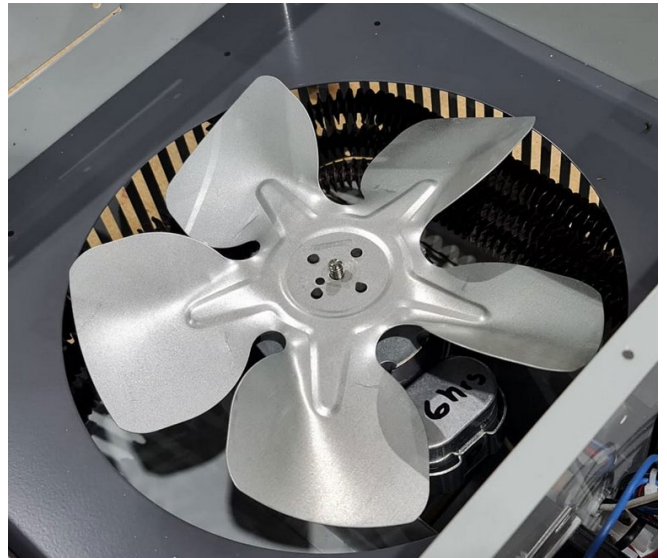
2.5 Place a drop of Loctite 290 on the bottom of the motor shaft.



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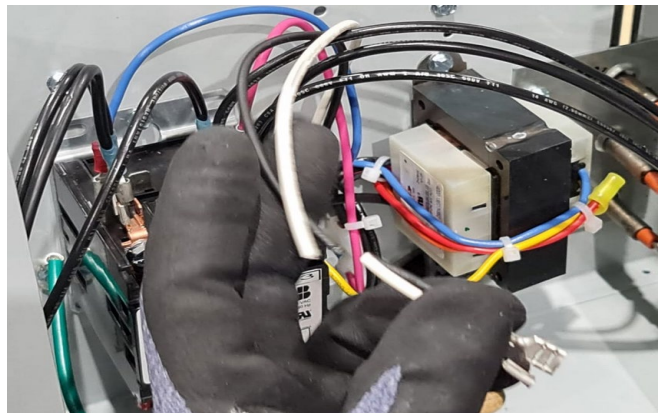
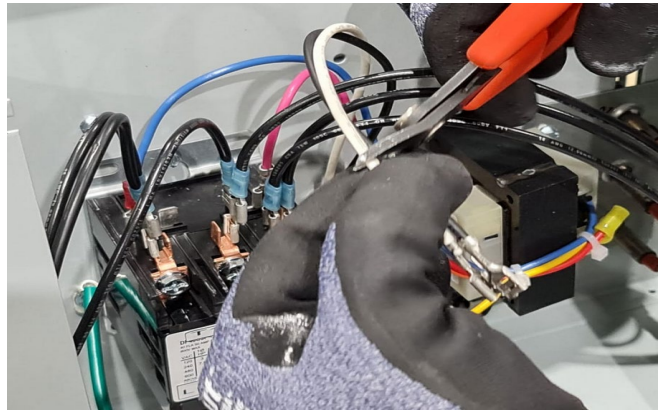
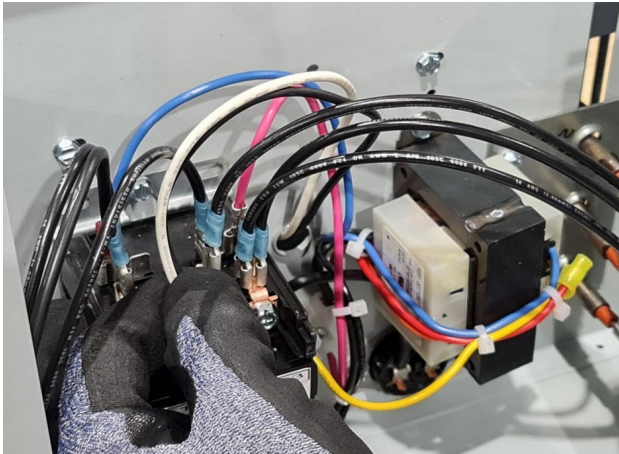
2.6 Install the fan blade, ensuring that it is properly seated on the motor shaft. Installed the flanged locknut, tightening by hand. Once tightened by hand use the torque wrench to tighten to 8-10 in-lb. Stop if locknut flange begins to distort.



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2.8 Cut the cables (black & white) from the motor the ones that were pulled out from the orifice on point (7.2) cut these at the length of the contactor using the flush cutter.



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2.9 Strip down the motor cables (black & white) to $\frac{1}{4}$, using a stripper wire.



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ASSEMBLE REPLACEMENT MOTOR PROCEDURE

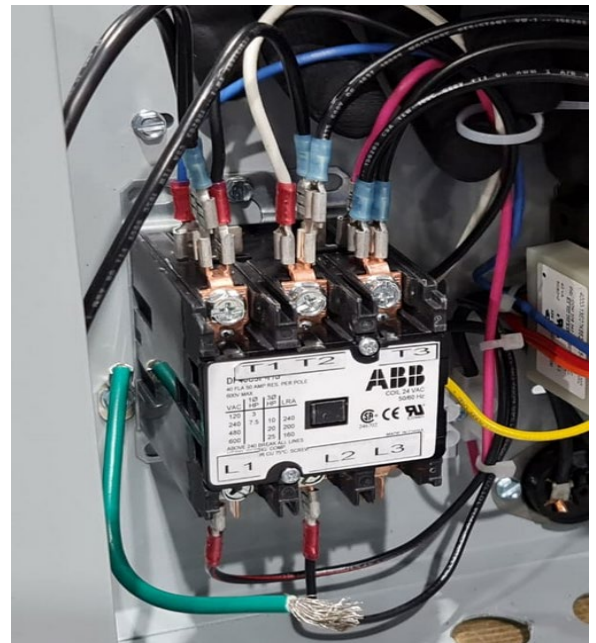
2.10 Crimp the stripped motor cables (black & white) using the terminals provided by Chromalox (PN 075504001) and a crimping tool, crimp it using the color code of the terminal (red)



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2.11 Connect the motor cables (black & white) to the contactor lines T1 (black cable) & T2 (white cable)



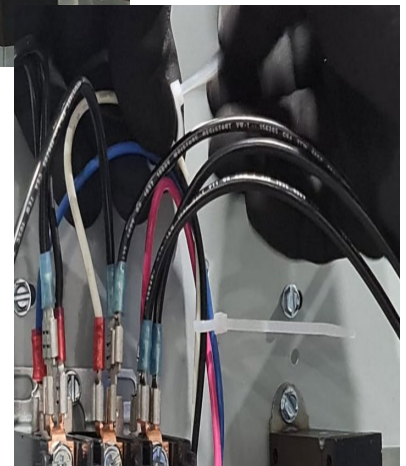
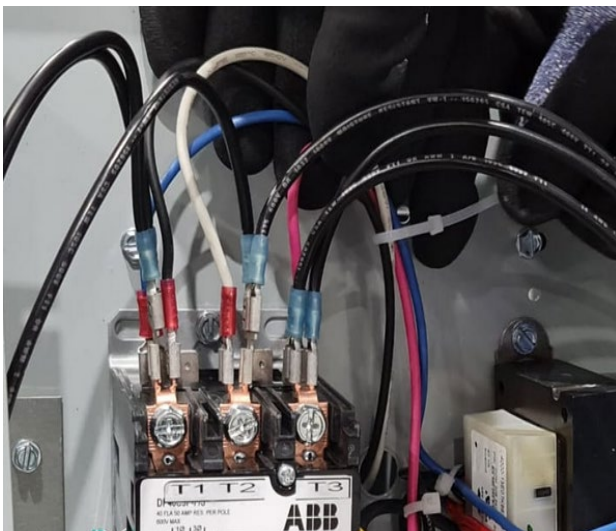
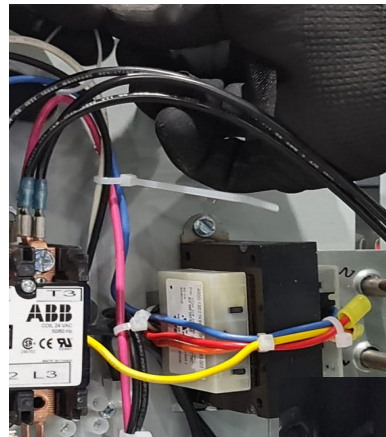
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2.12 Pull the terminals from the cable, to confirm that they were crimped correctly



2.13 Use the cable ties provided by Chromalox (PN 075424019) to wrap the motor cables.



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2.14 Remove the cable tie excess using the flash cutter.



2.15 Place the panel frontal on the HVH unit.



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2.16 Start to screw the screws of the panel frontal, start with the one of the top (middle) and continue with the side screws.



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2.17 Finally close the connection box lid by screwing the screws.



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Final Inspection

1.24 Reconnect power to unit and turn on heater.

Ensure fan blade and motor wiring are correct by inspection airflow direction.

Listen for any signs that the fan blade is not balanced, such as a loud intermittent whirring or excessive vibration.

