

# ERV AND PRV SERIES RAISED VENTS



## Motor Re-wiring Kit PN 701322

## INSTALLATION INSTRUCTIONS

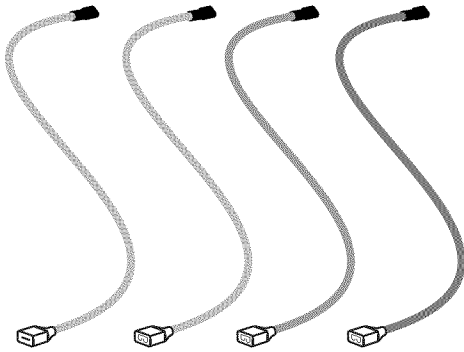
** DANGER:** Electric shock hazard! Before opening the access panels, disconnect the power cord from the electrical outlet.

### Tools Required

- Phillips head screwdriver
- Small set of side cutters
- Flat blade screwdriver
- Permanent marker

### Parts Included With This Kit

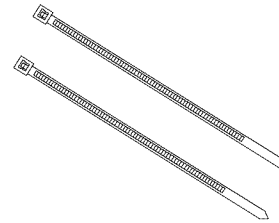
1 set - Wiring harness (PN 106737)



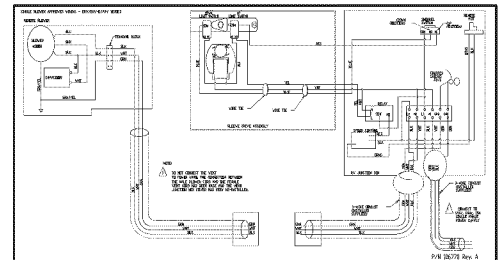
The wiring harness consists of:

- 2 - Yellow wires with connectors
- 1 - Red wire with connectors
- 1 - Blue wire with connectors

2 - Cable ties (PN 83138)

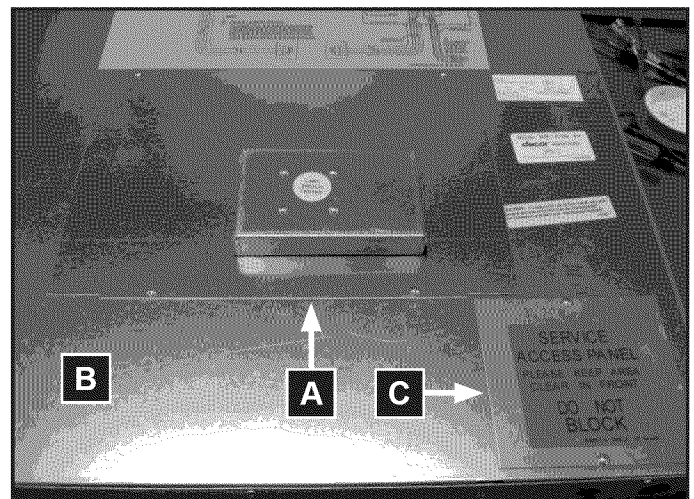


1 - Wiring diagram label (PN 106770)



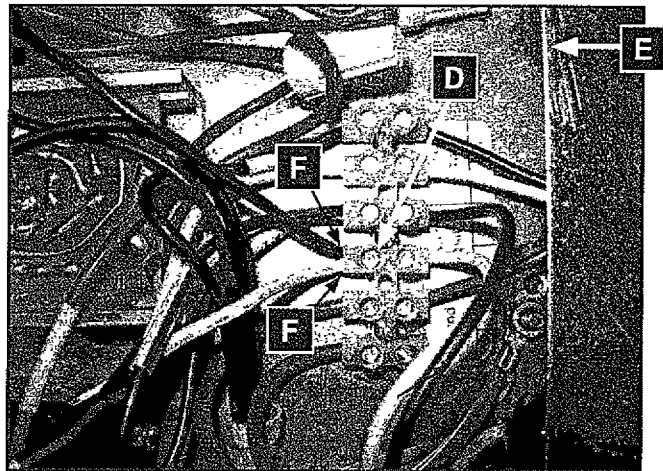
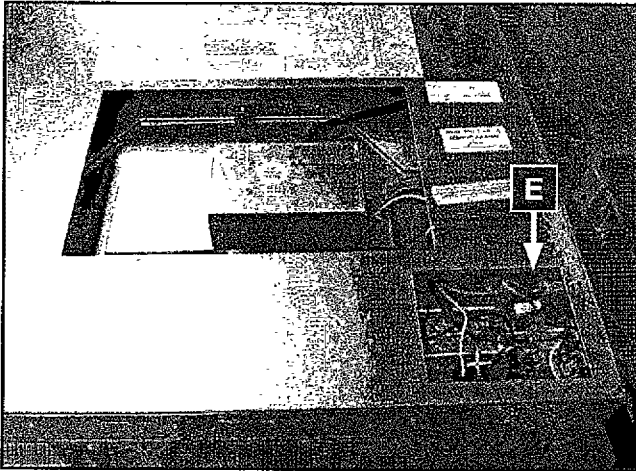
### Instructions

- STEP 1:** The raised vent must be in the down position and the power cord disconnected from the electrical outlet before proceeding.
- STEP 2:** Remove the motor access panel **A** on the front of the unit **B**.
- STEP 3:** Remove the electrical access panel **C**.

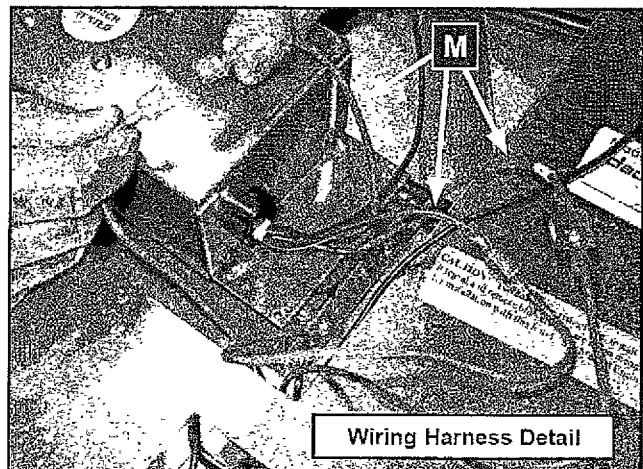
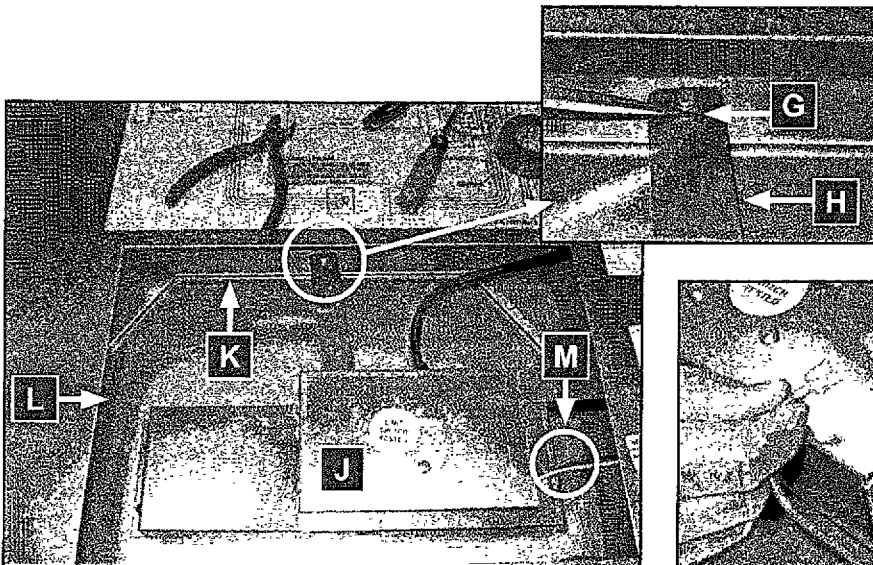


## ERV/PRV Motor Wiring Kit Instructions

- STEP 4:** Using a flat blade screwdriver, loosen the screw for the left "N1" (POWER INPUT) terminal **D** inside the electrical access hole **E**. It is the fourth one down from the top on the left side of the terminal block.
- STEP 5:** Remove the black and white wires **F** from the terminal block. Separate the two wires from each other.

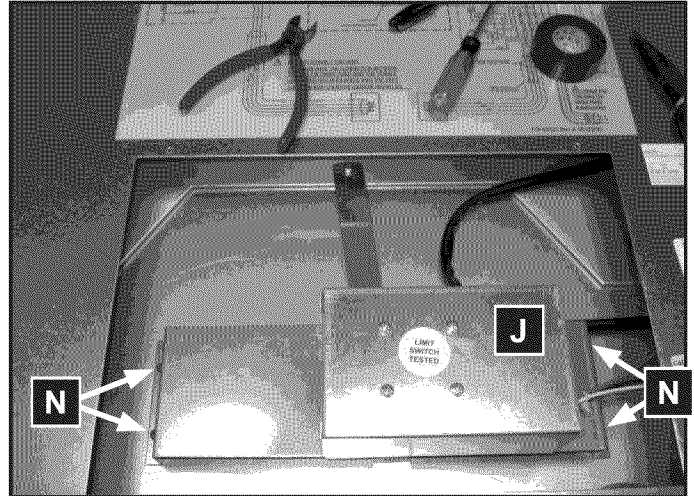


- STEP 6:** Using a flat blade screwdriver, pry off the clip **G** that connects lifting arm **H** from the motor assembly **J** to the pin on the bottom of the plenum **K** (the plenum is the portion of the vent that raises up when activated). Remove the lifting arm from the pin on the plenum. Keep the clip for later use.
- STEP 7:** Inside the motor assembly compartment **L**, disconnect the red and blue wires **M** on the motor wiring harness.

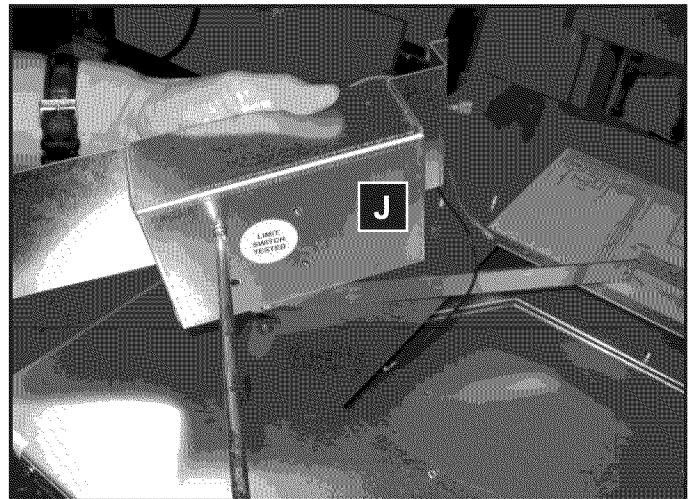


## ERV/PRV Motor Wiring Kit Instructions

**STEP 8:** Remove and retain the four (4) screws **N** that hold the motor assembly **J** in place. Pull the motor assembly out of the access hole. As you pull the motor assembly out, pull the black wire attached to it out of the hole leading to the electrical access panel.

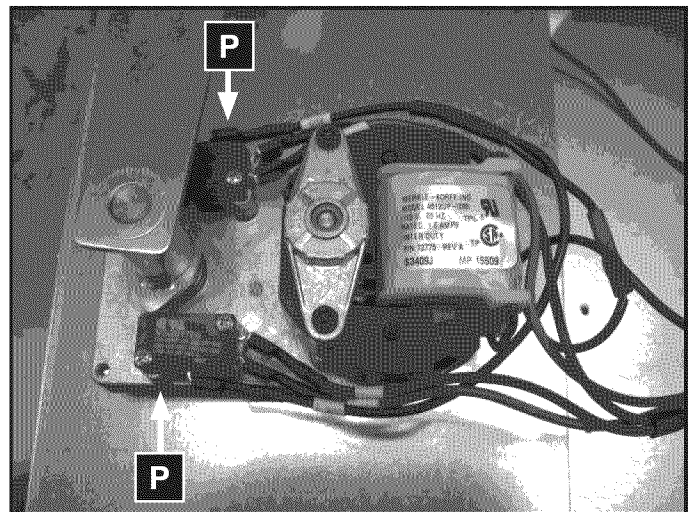


**STEP 9:** Remove and retain the four (4) screws on the back of the motor assembly **J** and remove the motor from the enclosure. Slide the wires out of the hole on the side of the enclosure as you remove it.



**STEP 10:** Cut the cable tie around the motor wiring harness.

**STEP 11:** Disconnect all of the wires from the two (2) micro switches **P** on the motor mounting plate. The black wire remains connected to the motor. Separate the red and blue wires and discard them.

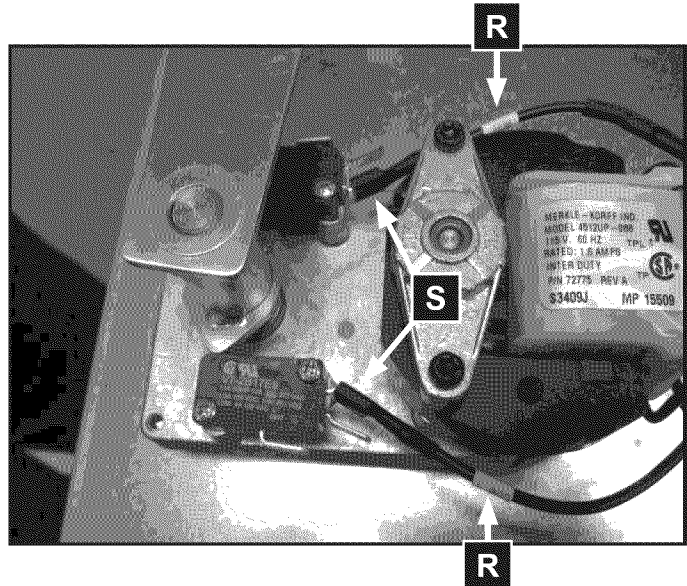


# ERV/PRV Motor Wiring Kit Instructions

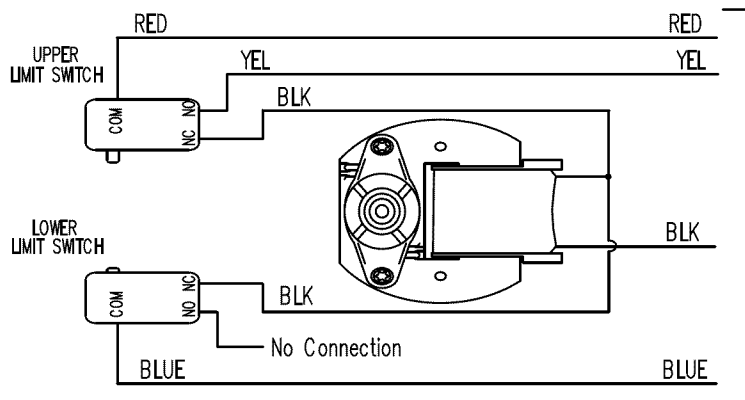
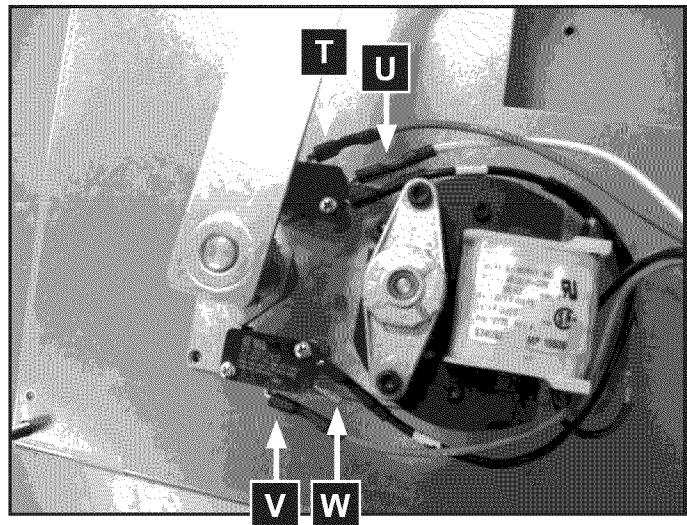
**⚠ WARNING:** Failure to connect the wiring harnesses as instructed may result in an electric shock or fire hazard.

**STEP 12:** Using a permanent marker, cross out the word “COM”, on the labels **R** on the black wire connected to the motor. Relabel the labels “NC”.

**STEP 13:** Connect the ends of the black wire to the “NC” (normally closed) terminals **S** on the two micro switches located on the motor base plate. The black wires are interchangeable and may be connected to either switch.



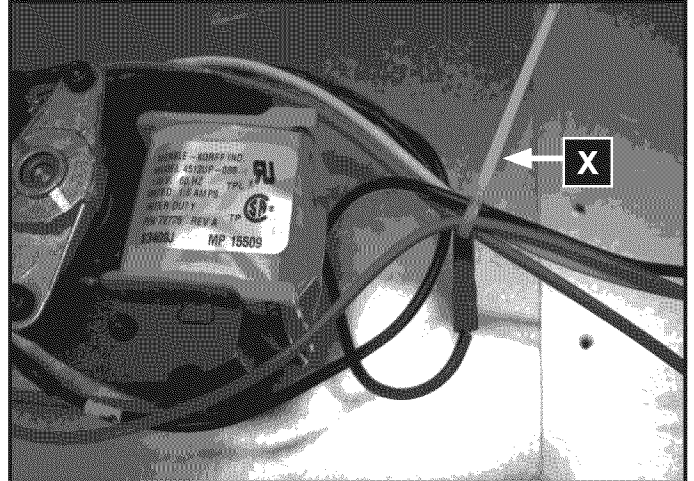
**STEP 14:** Connect the red, the blue and one of the yellow wires from the kit to the micro switches as shown in the picture. **IMPORTANT:** The end of the wire with the black insulation is the end that connects to the switch terminal. The RED wire connects to the “COM” terminal **T** on the upper limit switch. The YELLOW wire connects to the “NO” (normally open) terminal **U** on the upper limit switch. The BLUE wire connects to the “COM” terminal **V** on the lower limit switch. The “NO” terminal **W** on the lower limit switch remains unconnected.



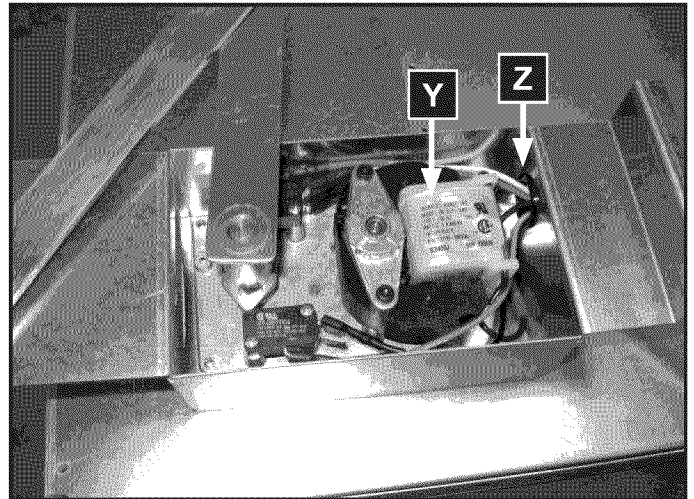
**Motor Wiring Diagram**

## ERV/PRV Motor Wiring Kit Instructions

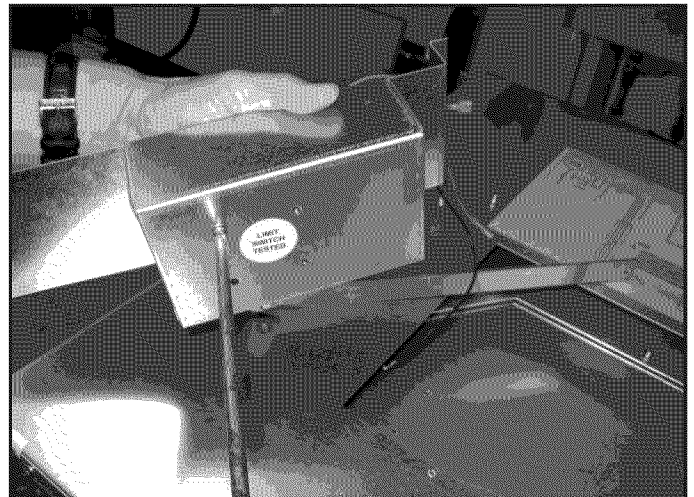
**STEP 15:** Use the cable tie from the kit to bundle the wires on the end of the motor as shown. Trim the excess **X** off the end.



**STEP 16:** Re-insert the motor and base plate into the motor assembly enclosure, with the label **Y** on the motor closest to the wire access hole **Z**. As you insert the motor, slip each of the wires into the hole on the side of the enclosure.

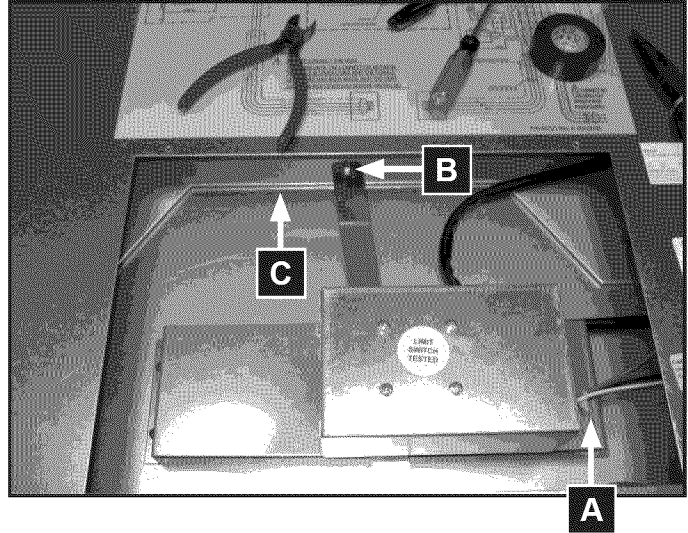


**STEP 17:** Reattach the motor to the motor enclosure using the four (4) existing screws.



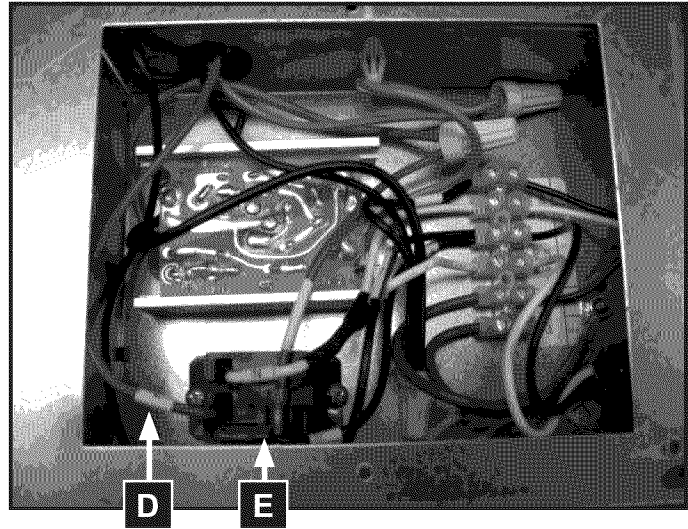
## ERV/PRV Motor Wiring Kit Instructions

**STEP 18:** Reinsert the motor assembly into the raised vent and reattach it using the existing screws. Insert the motor assembly so that the wires come out of the right side **A** of the motor enclosure as you face the raised vent. Before tightening into place, make sure that the hole **B** on the end of the lifting arm from the motor assembly is placed over the top of the pin on the bottom of the plenum **C**.

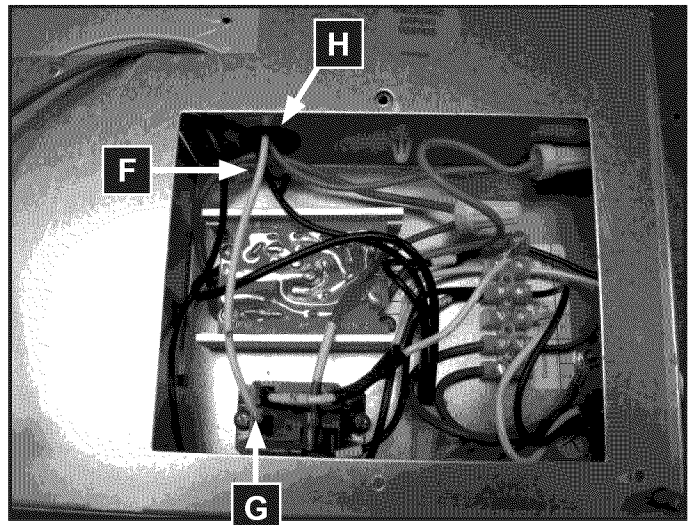


**STEP 19:** Reattach the lifting arm using the existing retaining clip removed in step 6.

**STEP 20:** Remove the red wire **D** (marked "L") from the "L" terminal on the relay **E**. It is located on the bottom left, inside the electrical access hole. Pull the red wire completely out of the unit and discard.

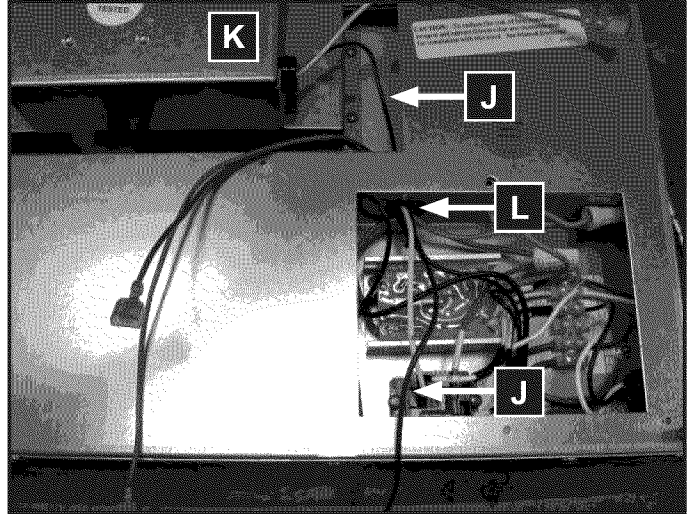


**STEP 21:** Connect the remaining yellow wire **F** from the kit to the same terminal **G** on the relay the red wire was connected to in step 20 (the "L" terminal). **IMPORTANT:** The end of the wire with the black insulation is the side that connects to the relay terminal. Slide the other end of the wire through the hole **H** in the top right of the electrical access panel, and into the motor assembly compartment.

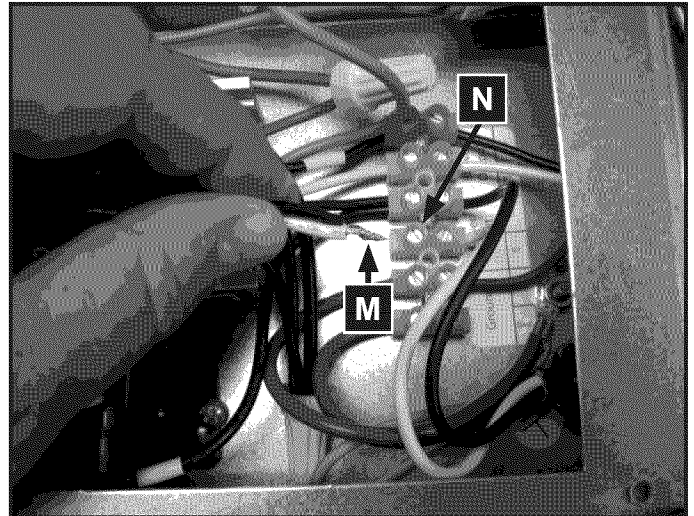


## ERV/PRV Motor Wiring Kit Instructions

**STEP 22:** Slide the black wire **J** from the motor assembly **K** through the hole **L** into the electrical access panel as shown.

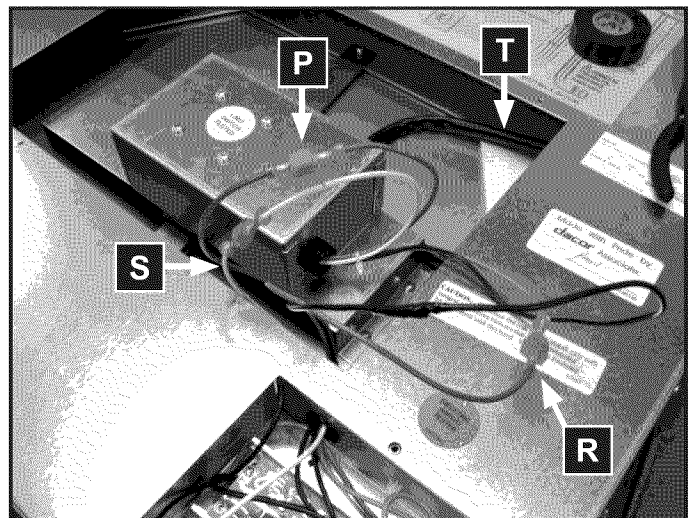


**STEP 23:** Inside the electrical access panel, twist together the un-insulated ends **M** of the black wire routed from the motor assembly (see step 22) and the white wire disconnected from the “N1” terminal in step 5.



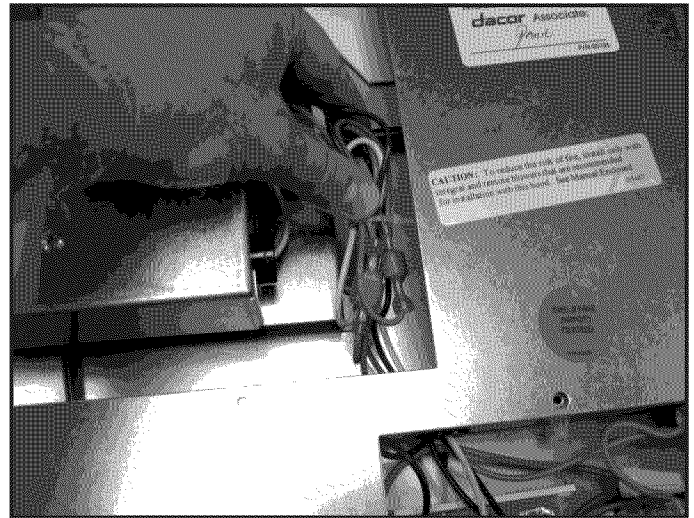
**STEP 24:** Reconnect the black and white wires to the left side of the “N1” terminal **N** inside the electrical access panel.

**STEP 25:** Connect the wiring harness from the motor to the wiring harness from the electrical access panel. Match the colors, red to red **P**, blue to blue **R**, yellow to yellow **S**. **IMPORTANT: Do not** loop the wires around the plenum wiring harness **T**.

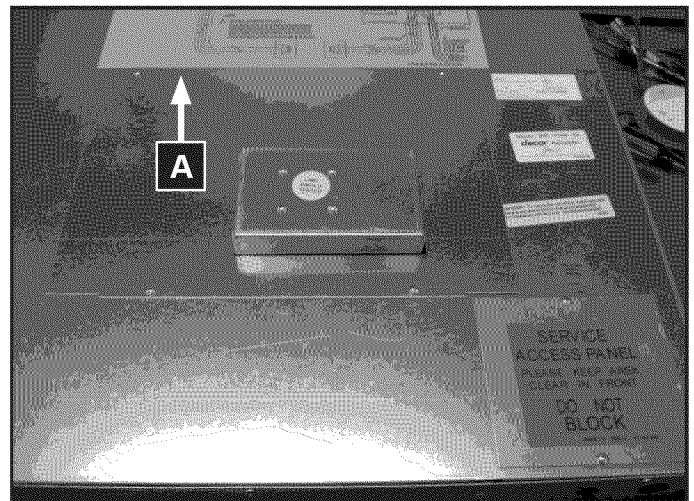


**STEP 26:** Use the remaining cable tie from the kit, bundle the wiring harnesses and stow them under the right edge of the access hole, away from the moving parts toward the center of the unit.

**STEP 27:** Re-attach both access panels using the existing screws.



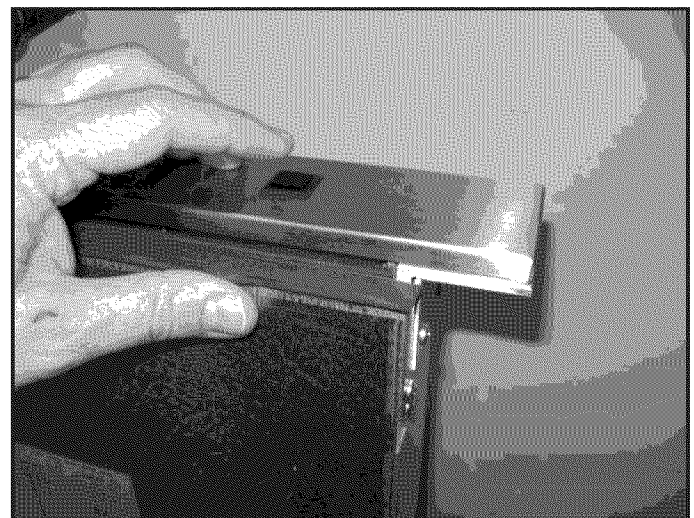
**STEP 28:** Peel the backing off of the wiring diagram label included with the kit. Affix it to the front of unit, over the top of the existing label **A**.



**STEP 29:** Reconnect the unit to the electrical outlet. Make sure it is in the upright position for proper operation. Test the unit as outlined in the following steps.

**STEP 30:** Push the switch on top of the unit. The vent should rise while the blower remains off. Once the vent is in its highest position, the blower should come on.

**STEP 31:** Push the switch on top of the unit again. The blower should turn off and remain off as the vent lowers.



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