



**Henny Penny**  
**Heated Holding Cabinet**  
**Model HHC-900**  
**Model HHC-902**  
**Model HHC-903**  
**Model HHC-906**  
**Model HHC-908**  
**Model HC-15**

**TECHNICAL MANUAL**



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## SECTION 1. TROUBLESHOOTING

### 1-1. INTRODUCTION

This section provides troubleshooting information in the form of an easy to read list.

If a problem occurs during the first operation of a new cabinet, recheck the Installation Section of the Operator's Manual.

Before troubleshooting, always recheck the Operation Section of the Operator's Manual.

### 1-2. SAFETY

Where information is of particular importance or is safety related, the words NOTICE, CAUTION, or WARNING are used. Their usage is described below.



**SAFETY ALERT SYMBOL** is used with DANGER, WARNING, or CAUTION which indicates a personal injury type hazard.



**NOTICE** is used to highlight especially important information.



*CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.*



*CAUTION used with the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.*



**The word WARNING is used to alert you to a procedure, that if not performed properly, might cause personal injury.**

### 1-3. TROUBLESHOOTING

To isolate a malfunction proceed as follows:

1. Clearly define the problem or symptom and when it occurs.
2. Locate the problem in the troubleshooting table.
3. Review all possible causes, then one at a time work through the list of corrections until the problem is solved.



**If maintenance procedures are not followed correctly, injuries and/or property damage could result.**

**1-3. TROUBLESHOOTING (Continued)**

| PROBLEM                                      | CAUSE  | CORRECTION  |
|--|--|---|
| <b>OPERATION</b>                             |  |   |
| A. Product not holding temperature           | <ul style="list-style-type: none"> <li>• Doors are left open</li> <li>• Thermostat set too low</li> <li>• Gasket torn or worn</li> <li>• Heater not working</li> <li>• Blower not working</li> <li>• Product held too long</li> <li>• Low or improper voltage</li> </ul> | <ul style="list-style-type: none"> <li>• Keep doors closed except to load and unload product</li> <li>• Increase thermostat setting by moving the knob to a higher number setting</li> <li>• Replace gasket per Door Gasket Replacement Section</li> <li>• Check heater; replace per Heater Section</li> <li>• Check blower; replace per Blower Section</li> <li>• Hold product only for recommended time</li> <li>• Using meter, compare receptacle voltage to data plate voltage</li> </ul> |
| B. Cabinet steaming - product becoming soggy | <ul style="list-style-type: none"> <li>• Too much humidity inside the cabinet</li> <li>• Holding product too long</li> <li>• Vent not set properly (units with vent adjustment only)</li> </ul>  | <ul style="list-style-type: none"> <li>• Empty water from the water pan</li> <li>• Hold product for recommended time</li> <li>• Adjust vent per Operator's Manual</li> </ul>  |
| C. Product dry                               | <ul style="list-style-type: none"> <li>• No water in pan</li> </ul>  | <ul style="list-style-type: none"> <li>• Remove pan and put in approximately 1" of hot water</li> </ul>   |

**HEATING SYSTEM**

|                       |  |   |
|-----------------------|--|---|
| A. Unit will not heat | <ul style="list-style-type: none"> <li>• Faulty thermostat</li> <li>• Faulty high limit</li> <li>• Faulty heater</li> <li>• Faulty wiring</li> </ul> | <ul style="list-style-type: none"> <li>• Check thermostat per Thermostat Section</li> <li>• Check high limit per High Limit Section</li> <li>• Check heater; replace per Heater Section</li> <li>• Check wiring for loose connections or broken wires and repair as needed</li> </ul> |
|-----------------------|--|---|

**1-3. TROUBLESHOOTING (Continued)**

| PROBLEM   | CAUSE  | CORRECTION  |
|---|--|---|
| <b>HEATING SYSTEM (Continued)</b>                   |  |   |
| <p>B. Unit will not heat to desired temperature</p> | <ul style="list-style-type: none"> <li>• Faulty blower</li> <li>• Thermometer not indicating true temperature</li> <li>• One of heaters defective</li> <li>• Doors being left open too much</li> <li>• Gaskets torn or worn</li> <li>• Defective high limit on one of heaters</li> </ul> | <ul style="list-style-type: none"> <li>• Check blower; replace per Blower Section</li> <li>• Check cabinet temperature with another thermometer; if necessary, replace per Thermometer Section</li> <li>• Check heater; replace per Heater Section</li> <li>• Only open doors as necessary</li> <li>• Replace gasket per Door Gasket Replacement Section</li> <li>• Check high limit; replace per High Limit Section</li> </ul> |
| <p>C. Unit overheating</p>                          | <ul style="list-style-type: none"> <li>• Faulty thermostat</li> <li>• Faulty blower</li> </ul>   | <ul style="list-style-type: none"> <li>• Check thermostat; replace per Thermostat Section</li> <li>• Check blowers; replace per Blower Section</li> </ul>   |
| <b>VENTILATING SYSTEM</b>                           |  |   |
| <p>A. Both blowers not working</p>                  | <ul style="list-style-type: none"> <li>• Faulty blowers</li> <li>• Faulty fuse (if equipped)</li> </ul>  | <ul style="list-style-type: none"> <li>• Check blowers; replace per Blower Section</li> <li>• Check fuse; replace per Fuse Section</li> </ul>   |



## SECTION 2. MAINTENANCE

### 2-1. INTRODUCTION

This section provides procedures for the testing and replacement of the various parts used within the cabinet. Before replacing any parts, refer to the Troubleshooting Section. It will aid you in determining the cause of the malfunction.

### 2-2. TEST INSTRUMENTS

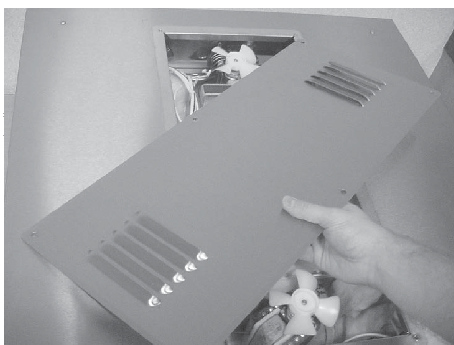
You may use two test instruments to check the electric components.

1. A continuity light
2. An ohmmeter

When the manual refers to the circuit being closed, the continuity light illuminates or the ohmmeter reads zero unless otherwise noted. When the manual refers to the circuit being open, the continuity light will not illuminate or the ohmmeter will read 1 (one) or infinite resistance.

A continuity tester cannot be used to check coils.

### 2-3. REMOVAL OF THE MODULE ACCESS PANEL



In most procedures of the maintenance section, the access panel must be removed from the top of the module. This access panel can easily be removed by taking out the four screws that fasten it to the module shell.

### 2-4. MODULE REMOVAL



## NOTICE

If the component module of the cabinet has to be removed, be sure to remove the four screws (one at each corner) before lifting it from the unit. Also, when work has been completed on the module, be sure to relocate it properly and reinstall the screws that fasten the module to the cabinet. Failure to do so might cause the unit to perform inadequately.

## **2-5. REMOVAL OF MODULE HOUSING**



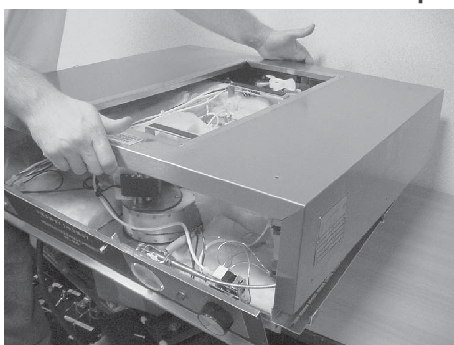
**Step 2**



**Step 3**



**Step 4**



**Step 5**

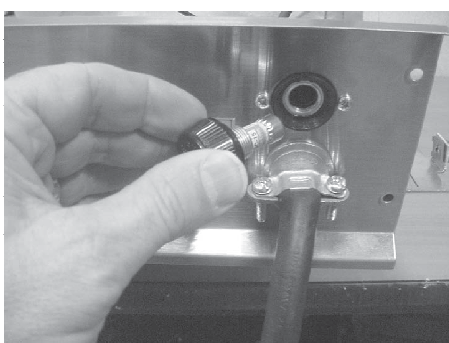
If the need for extensive service is required on the module components, the entire outer shell of the module can be removed to make servicing easier. To remove the outer shell of the module, follow these procedures:

1. Remove the module from the cabinet per Module Removal Section.
2. Remove the six (6) screws that are located on the sides of the module.
3. Remove the four (4) screws located at the corners of the module top.
4. Remove the screws from the control panel and the back panel, that fasten them to the module housing.
5. Lift the shell of the module off the unit.
6. When work is completed, reassemble in reverse order.

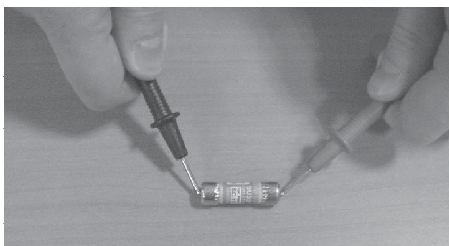
## 2-6. FUSE



Step 2



Step 3



Step 4

### NOTICE

All units are not equipped with fuses.

If both blowers quit working at the same time:

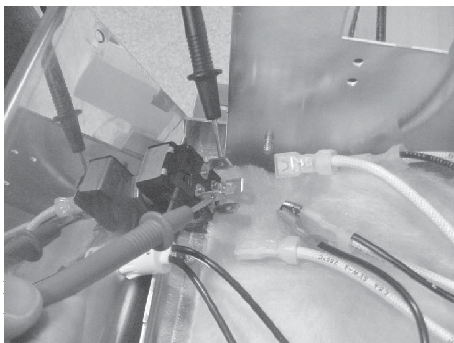
1. Remove electrical power supplied to the cabinet.



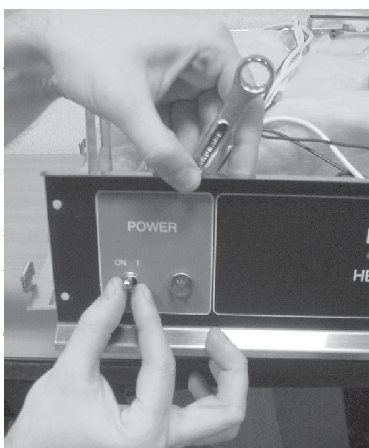
To avoid electrical shock or property damage, move the power switch to OFF and disconnect main circuit breaker, or unplug cord at wall receptacle.

2. Remove the cap from the fuse holder by turning it counter-clockwise. (Located above the power cord.)
3. Pull the fuse from the holder.
4. Check the fuse for defectiveness by putting both leads of the ohmmeter or continuity light on opposite ends of the fuse. The fuse should be closed, or read no resistance. If the fuse is found to be defective, replace it with a new one. Be sure to use an identical fuse as the one being replaced.
5. Replace the cap to the fuse holder.
6. Reconnect the electrical supply to the cabinet.

## 2-7. POWER SWITCH



Step 3



Step 4

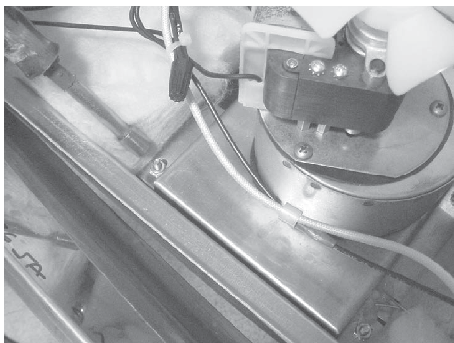
1. Disconnect the electrical supply to the cabinet.



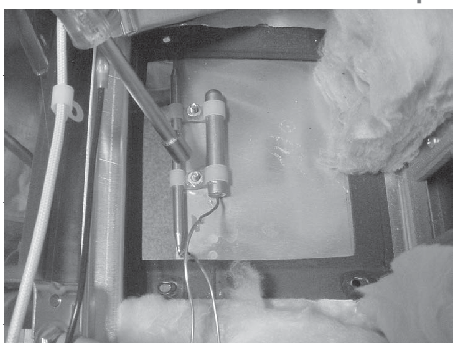
**To avoid electrical shock or property damage, move the power switch to OFF and disconnect main circuit breaker, or unplug cord at wall receptacle.**

2. Remove the four (4) screws from the control panel and pull it down.
3. Remove all wires from the switch. Check across the two terminals of the switch for continuity. With the switch in the ON position, the circuit should be closed. With the switch in the OFF position, the circuit should be open. If the switch is found to be defective, replace it by continuing with the following instructions in this section.
4. Loosen the nut holding the switch on the back side of the control panel and then remove the nut on the front of the control panel.
5. Remove the switch.
6. Install a new switch in reverse order.
7. Reconnect the wires to the switch on the same terminals that they were previously on.
8. Push the control panel back in place and put in screws.
9. Reconnect the electrical supply to the cabinet.

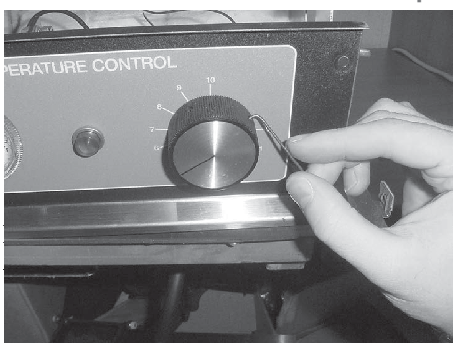
**2-8. THERMOSTAT**



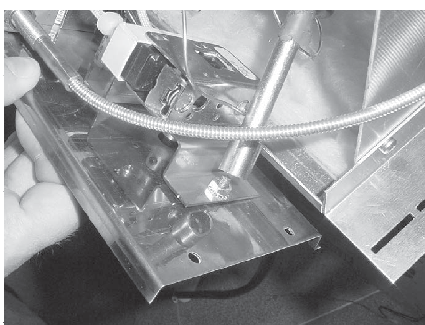
Step 5



Step 7



Step 8



Step 11

1. Disconnect the electrical supply to the cabinet.



**To avoid electrical shock or property damage, move the power switch to OFF and disconnect main circuit breaker, or unplug cord at wall receptacle.**

2. Remove the access panel from the top of the module.
3. Remove the four (4) screws from the control panel and pull it down.
4. Remove the wires from the thermostat. With the thermostat set at the maximum setting (all the way clockwise), the circuit should be closed. With the thermostat in the 0, or OFF, position (all the way counterclockwise), the circuit should be open. If the thermostat is found to be defective, replace it by continuing with the following instructions in this section.
5. Remove the four (4) nuts that hold the blower box to the cabinet.
6. Lift the blower box up to expose the thermometer and thermostat bulbs.
7. While holding the blower box, remove the two (2) nuts that secure the bulb retaining clamps and remove the thermostat bulb from the clamps.
8. Using a 5/64" Allen wrench, loosen the two (2) set screws in the thermostat knob and remove the knob.
9. Remove the two (2) nuts that hold the thermostat bracket to the control panel.
10. Remove the thermostat shaft extension with a 1/16" Allen wrench.
11. Remove the two (2) screws that hold the thermostat to the bracket.
12. Remove the thermostat from the unit.

**2-8. THERMOSTAT**  
**(Continued)**

13. Install a new thermostat in reverse order.
14. Reposition the blower box and secure it with the four (4) nuts previously removed.

**CAUTION**

*Be sure that both the thermometer and thermostat capillary tubes pass through the notches in the front corners of the blower box. Failure to do so could permanently damage the thermometer or thermostat and cause improper operation of the cabinet.*

15. Reseal the notches in the blower box corners with silicone rubber sealant.
16. Push the control panel back in place and put in screws.
17. Replace the access panel to the module.
18. Reconnect the electrical supply to the cabinet.

**2-9. INDICATING LIGHTS**

**NOTICE**

This section should be followed when replacing either of the two (2) indicating lights in the control panel.

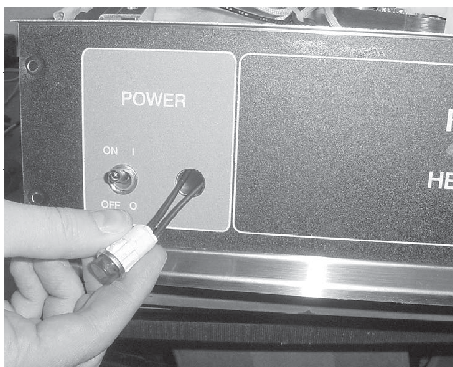
1. Disconnect the electrical supply to the cabinet.



**To avoid electrical shock or property damage, move the power switch to OFF and disconnect main circuit breaker, or unplug cord at wall receptacle.**

2. Remove the four (4) screws from the control panel and pull it down.
3. Cut the light wires just behind the body of the light.

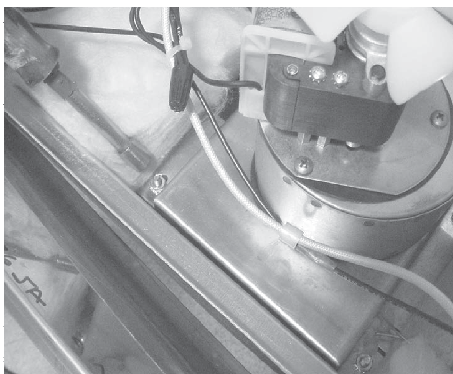
**2-9. INDICATING LIGHTS**  
**(Continued)**



**Step 4**

4. Remove the light by squeezing the retainers on the body and pushing the light out through the control panel.
5. Install a new light by pushing it through the front of the control panel until it snaps securely in place.
6. Strip the ends of the cut wires and connect them to the new light with wire nuts.
7. Push the control panel back in place and put in screws.
8. Reconnect the electrical supply to the cabinet.

**2-10. THERMOMETER**



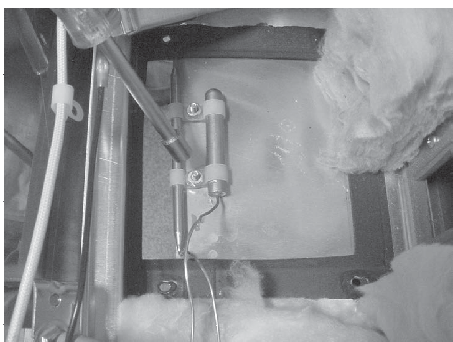
**Step 4**



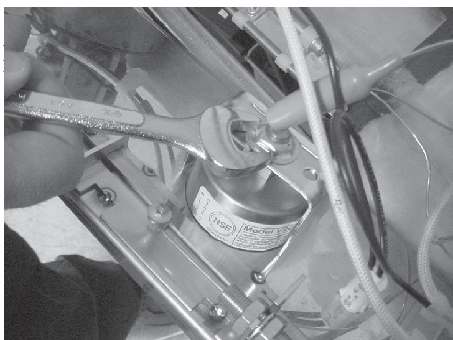
**To avoid electrical shock or property damage, move the power switch to OFF and disconnect main circuit breaker, or unplug cord at wall receptacle.**

1. Disconnect the electrical supply to the cabinet.

2. Remove the access panel from the top of the module.
3. Remove the four (4) screws from the control panel and pull it down.
4. Remove the four (4) nuts that hold the blower box to the cabinet.
5. Lift the blower box up to expose thermometer and thermostat bulbs.
6. While holding the blower box, remove the two nuts that secure the bulb retaining clamps and remove the thermometer bulb from the clamps.
7. Remove the two (2) nuts that hold the mounting brackets on the back of the thermometer body.
8. Remove the thermometer by pulling the body and capillary tube through the control panel.
9. Install a new thermometer in reverse order.
10. Reposition the blower box and secure it with the four (4) nuts previously removed.



**Step 6**



**Step 7**

**2-10. THERMOMETER**  
**(Continued)**



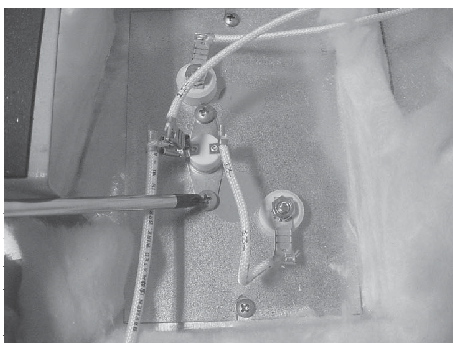
**Step 8**

**CAUTION**

*Be sure that both the thermometer and thermostat capillary tubes pass through the notches in the front corners of the blower box. Failure to do so could permanently damage the thermometer or thermostat and cause improper operation of the cabinet.*

11. Reseal the notches in the blower box corners with silicone rubber sealant.
12. Replace the access panel to the top of the module.
13. Push the control panel back in place and put in screws.
14. Reconnect the electrical supply to the cabinet.

**2-11. HEATER**



**Step 3**

**NOTICE**

This section should be followed when replacing either of the two (2) heaters in the cabinet. If there is a heating problem, both heaters should be checked.

1. Disconnect the electrical supply to the cabinet.



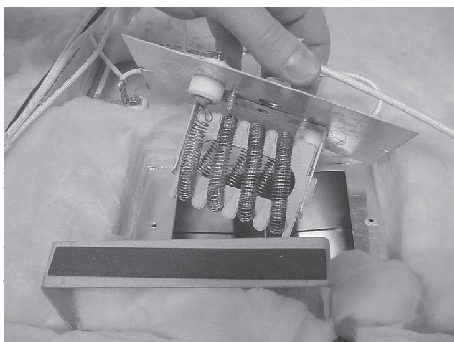
**To avoid electrical shock or property damage, move the power switch to OFF and disconnect main circuit breaker, or unplug cord at wall receptacle.**



**Step 5**

2. Remove the access panel from the top of the cabinet.
3. Remove the two (2) screws holding the high limit to the heater.
4. Remove the wires attached to the two (2) heater terminals.
5. Remove the two (2) screws holding the heater to the module.

**2-11. HEATER**  
**(Continued)**



**Step 6**

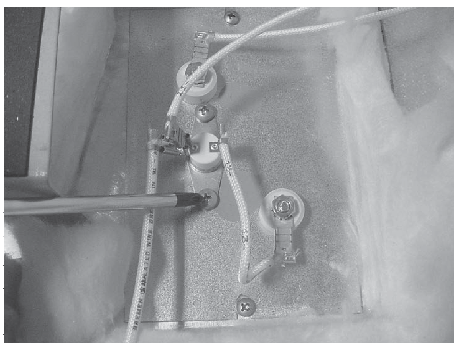
6. Remove the heater.
7. Install a new beater in reverse order.

**NOTICE**

If you have a 240V, 3,000 W unit, you must install the new heater so that the coils are spread furthest apart where air from the blower enters the heater.

8. Reattach the heater wires.
9. Refasten the high limit to the new heater.
10. Replace the access panel to the module.
11. Reconnect the electrical supply to the cabinet.

**2-12. HIGH LIMIT**



**Step 5**

1. Disconnect the electrical supply to the cabinet.

**NOTICE**

This section should be followed when replacing either of the two (2) high limits in the cabinet. If there is a heating problem in the cabinet, both high limits should be tested.



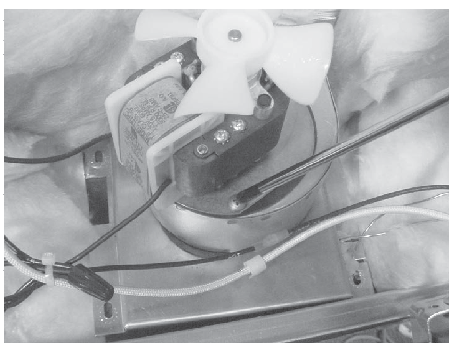
To avoid electrical shock, before beginning any work, move the power switch to OFF and disconnect main circuit breaker, or unplug cord at wall receptacle.

2. Remove the access panel from the top of the cabinet.
3. Remove the wires attached to the high limit.
4. Check across high limit terminals for continuity. As long as cabinet temperature is below 210°F and blower has been operating properly, high limit should be closed, or read no resistance. If high limit is found to be defective, replace it by continuing with the following instructions.
5. Remove two (2) screws that hold high limit to the heater.

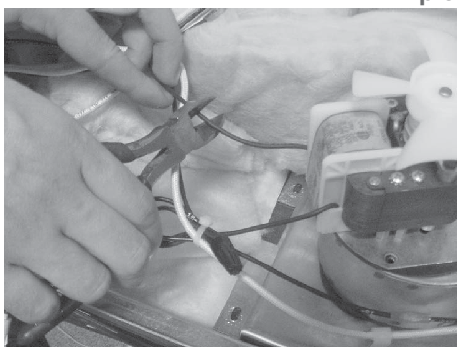
**2-12. HIGH LIMIT**  
**(Continued)**

6. Remove the high limit.
7. Install a new high limit in reverse order.
8. Reconnect the two wires to the high limit.
9. Replace the access panel to the module.
10. Reconnect the electrical supply to the cabinet.

**2-13. BLOWER**



**Step 3**



**Step 4**

**NOTICE**

Procedures for blower motor replacement are the same on both blowers.

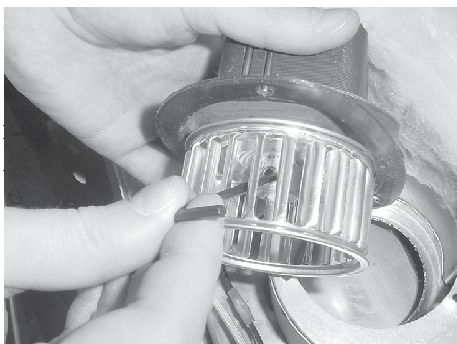
1. Disconnect the electrical supply to the cabinet.



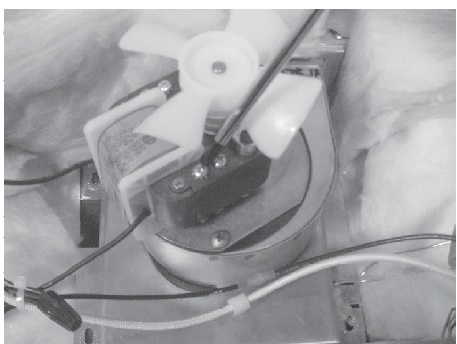
**To avoid electrical shock or property damage, move the power switch to OFF and disconnect main circuit breaker, or unplug cord at wall receptacle.**

2. Remove the access panel from the top of the cabinet.
3. Remove the three (3) screws that fasten the blower motor to the blower housing.
4. Cut the two (2) blower wires approximately 2” away from the blower.
5. Lift the blower motor and wheel out of the blower housing.
6. If replacing motor, fan, and wheel as an assembly, install new assembly in reverse order. If replacing just the motor, continue onto step 7.

**2-13. BLOWER**  
**(Continued)**



Step 7



Step 8

**NOTICE**

The blower motor can be ordered as an assembly. This will include the motor, the fan, and the wheel. Normally, just the motor would need replacing if found to be defective. If you are just replacing the motor, continue with the following procedures.

7. The fan can be pulled off the shaft of the motor.
8. With a 5/64" Allen wrench, loosen the set screw that holds the blower wheel to the motor shaft and remove the wheel.
9. Remove the four (4) screws that hold the blower cover to the motor.
10. Install a new blower motor in reverse order.
11. Be sure to put the spacers back between the blower cover and the motor.

**NOTICE**

When replacing a blower motor, be sure that the motor coil is positioned away from the heater when reinstalling.

12. Reconnect the two wires to the new blower by stripping the wire ends and fastening with wire nuts.
13. Replace the access panel to the module.
14. Reconnect the electrical supply to the cabinet.

**2-14. DOOR GASKET  
REPLACEMENT**



**Steps 1 & 2**

1. Pull the gasket to the side to expose the screws that hold the retainer to the cabinet.
2. Loosen the screws around the full outside perimeter of the gasket.
3. With the screws loose, the gasket should slide out from under the retainer.
4. Remove the gasket and replace with a new one by reversing the above procedures.