SERVICE MANUAL
PPC90 / TSC90

DIGITAL CONTROL PELLET STOVES

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PELPRO TROUBLESHOOTING MANUAL

INTRODUCTION

The purpose of this troubleshooting guide is to provide step by step procedures for diagnosing issues with the PelPRO PPC90 and TSC90. A digital or analog multimeter will be required for many of the troubleshooting steps in this guide.

When troubleshooting with the multimeter, it's important to disconnect the appliance from wall power while locating the electrical connections that need to be checked. Connect the multimeter to the test locations detailed in this guide and then plug the appliance back into wall power. Take care to avoid letting any exposed wires or connectors from contacting the metal chassis of the appliance or from touching exposed skin. The appliance is energized with 115VAC power from the wall and there is a risk of shock or electrocution. If you are not familiar or comfortable working with energized electrical circuits, please contact a certified NFI Installer or certified electrician to complete that portion of troubleshooting.

When instructed to check a appliance for power from the control board, the multimeter will need to be set to check Voltage, often displayed as "V" on the meter. If the meter is not auto-sensing, AC voltage will need to be chosen when specified in the instructions. AC voltage is also sometimes shown as ~ V on a multimeter. If instructed to check VDC, DC voltage will have to be chosen on the multimeter. Voltage checks are typically used when motors and blowers are not running and we are attempting to determine if the component is bad or is the control board is not sending power to the component.

Some components can be verified for functionality by checking the resistance of the part. Igniters and fuses are the most common parts that can be verified by resistance checking with a multimeter. Resistance is measured in ohms (Ω) and most multimeters will have that symbol next to the resistance setting. Unlike voltage, resistance is always measured with the appliance completely de-energized from wall power. There is no risk of shock or electrocution when the appliance is unplugged from wall power and components are being verified for resistance. When resistance is being checked, this manual will provide an expected resistance in Ω, however a number slightly above or below the specified value does not indicate a bad component. If the multimeter shows MAX or Out of Range, this indicates infinite resistance, meaning an open circuit and a bad component. A resistance of 0 ohms for a component indicates an electric short circuit and again a bad component.

PART LOCATIONS

FEED MOTOR

The feed motor is located on the back of the unit towards the bottom. Removing the rear screen and left side panel is the best way to access the motor.
Once access is gained, simply pulling the pin on the auger shaft will release the feed motor.

IGNITER

The igniter is located at the back of the firebox in the middle. Removing the left access panel will allow you to see it. There is a Phillips head screw holding the igniter in place.

EXHAUST BLOWER

Remove the left side panel to access the blower. A Phillips head screwdriver will be needed to remove the blower from the housing.

CONVECTION BLOWER

Remove the right side panel to access the blower. Two wing nuts hold it in place. Removal is a little tight, so the blower will need to be rotated a little to get it out. Removing the vacuum switch is a good option if you need a little more room taking the blower out.

VACUUM SWITCH

Remove the right side panel. Two Phillips screws hold it in place.

EXHAUST TEMP PROBE

Remove the left side panel to access the probe. Two Phillips head screws hold it in place.

#3 SNAP DISC

Remove the left side panel to access the snap disc. Two Phillips head screws hold it in place.

HOPPER SWITCH

It is located under the hopper lid on the right side the stove. The right side panel will need to be removed to access the 2 mounting screws for the hopper switch bracket.

ERROR CODE DEFINITIONS

Error codes will look like this on the display

Code #1	Fuel Feed Alarm. Most likely the appliance ran out of fuel or the flames are adjusted too low.
Code #2	Exhaust Temperature is above or below the acceptable range. Exhaust probe has failed or the flames need to be adjusted.
Code #3	Ambient Temperature is above or below the acceptable range. Ambient probe has failed.
Code #4	Missed Ignition Alarm. Appliance has either ran out of fuel or the firepot needs to be cleaned. Also it is possible that the igniter has failed if the appliance is clean.
Code #5	Digital Display Communication Alarm. Appliance lost power while the appliance was running or there was a bad connection from the display to the control board. Board may need replaced.
Code #7	Exhaust temperature over heat alarm. Appliance got too hot. Check the heat exchanger and exhaust system for obstructions. Make sure the flame height is correct.

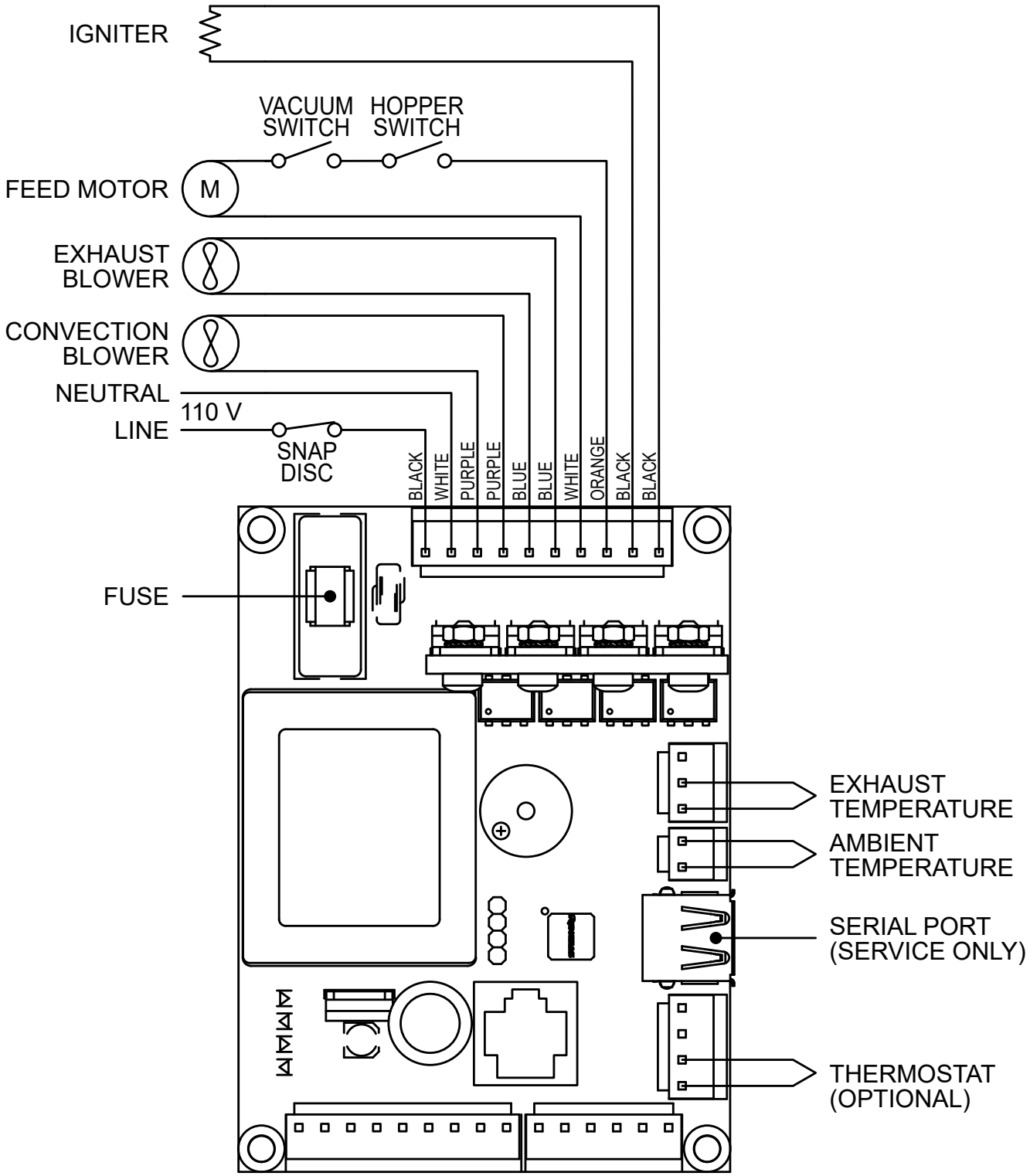
SEQUENCE OF OPERATION FOR STARTUP

1. Set the digital display to the desired temperature setting.
2. The combustion blower/exhaust blower will come on and the display will read “Start-Up”.
3. The igniter turns on.
4. Vacuum switch closes. (This is caused by negative pressure in the stove. Negative pressure is drawn through the stove by the exhaust blower).
5. Feed motor will turn on after the igniter preheats for 1 minute and will run for 60 seconds for the initial feed.
6. Pellets will drop into the fire pot.
7. Pellets will ignite in the fire pot.
8. Stove is looking for Proof of Fire. This is sensed by the exhaust probe. The exhaust probe is looking for a 6 degree rise per minute for 2 consecutive minutes. (Has to be 6 degrees each minute.)
9. Once stove establishes Proof of Fire the igniter will turn off.
10. After the timer goes away flame stabilization mode begins. The feed motor will cycle at .8 seconds “on time” for 3 minutes.
11. The digital display will read “Heating”.
12. Once the exhaust probe reaches 140 degrees the convection/room blower will come on.
13. Bars in the corner of the screen will show the power level the stove is running in. Power level (1-5 bars) will vary depending on room temperature vs. set temperature.
14. Once the stove has reached the temperature it was set on (other than LO or HI) it will go into shutdown mode. After shut down is complete the stove will go into standby mode. It will come back on automatically once the room temperature drops below the set temperature.

SEQUENCE OF OPERATION FOR SHUTDOWN

1. Stove temperature is met and display will read “Shutdown”.
2. Feed motor will turn off.
3. Combustion/Exhaust blower start the shutdown cycle and the blower will run at the max RPM.
4. The fire will go out in the fire pot and the stove will continue to cool down.
5. Once the stove drops below 140 degrees the convection/room blower will turn off.
6. After the 12 minute shut down timer has expired the combustion/exhaust blower will shut off.
7. Stove has now shut down and will go into standby mode. Standby mode is indicated by the stove saying “Standby”. Once the stove drops below the set temperature (only on an actual temperature setting) the stove will automatically start back up.

WIRING DIAGRAM



CODE #1: FUEL FEED ALARM

TO START:
MAKE SURE THE FIRE POT IS CLEAN INCLUDING THE HOLES IN THE FIRE POT, MAKE SURE THE FIRE POT IS INSTALLED CORRECTLY (CLICK HERE OR SEE PG 40 FOR FIRE POT INSTALLATION). CLEAN THE FIRE BOX AREA AND CLEAN BEHIND THE BAFFLES (CLICK HERE OR SEE PG. 41 FOR BAFFLE CLEANING). ALSO MAKE SURE THERE ARE PELLETS IN THE HOPPER AND THE AUGER IS NOT JAMMED (CLICK HERE OR SEE PG. 11 FOR AUGER JAMS)

IS THE AUGER FEEDING PELLETS INTO THE FIRE POT?

NO

CHECK 1:
MAKE SURE THE HOPPER LID IS CLOSED AND THE HOPPER LID SWITCH IS WORKING CORRECTLY. CLICK HERE OR SEE PG. 21 FOR HOPPER SWITCH TROUBLESHOOTING

YES

AFTER A FEW MINUTES, DID A FIRE START IN THE FIRE POT?

NO

YES

ONCE THE STOVE IS RUNNING DID THE CODE 1: FUEL FEED ALARM CODE REPEAT?

NO

SYSTEM REPAIRED

YES

ADJUST THE TRIM SETTING TO THE POSITIVE POSITION. THE STOVE WILL NEED TO COMPLETE A SHUTDOWN SEQUENCE FOR THE SETTING TO TAKE PLACE. CLICK HERE OR SEE PG. 10 FOR TRIM ADJUSTMENT GUIDE

ONCE THE STOVE IS RUNNING DID THE CODE 1: FUEL FEED ALARM CODE REPEAT?

NO

YES

CHECK 2:
MAKE SURE THE VACUUM SWITCH HOSE IS NOT CLOGGED. MAKE SURE THE VACUUM SWITCH IS WORKING CORRECTLY. CLICK HERE OR SEE PG. 22 FOR VACUUM SWITCH TROUBLESHOOTING

IF YES, CONTACT CUSTOMER SERVICE FOR FURTHER ASSISTANCE AT info_PelPro@hearthnhome.com

CHECK 3:
CLICK HERE OR SEE PG. 24 FOR FEED MOTOR TROUBLESHOOTING

CLICK HERE OR SEE PG. 15 FOR IGNITER TROUBLESHOOTING SECTION

TRIM ADJUSTMENT GUIDE

Adjusting Trim to the Negative Side

Adjusting Trim to the Positive Side

The **Negative Side** of the Trim Adjustment will decrease the feed rate of the feed motor and increase the RPM of the exhaust blower. This will give your stove less pellets and more air. To adjust the Trim you will need to select the settings button and then select the Trim option. You will then hit the down arrow to decrease the trim to the minus/negative side.

The **Positive Side** of the Trim Adjustment will increase the feed rate of the feed motor and decrease the RPM of the exhaust blower on setting +1. On settings +2 to +4 it will increase both the feed rate and the RPM of the exhaust blower. To adjust the Trim you will need to select the settings button and then select the Trim option. You will then hit the down arrow to decrease the trim to the plus/positive side.

USES FOR ADJUSTING THE TRIM:

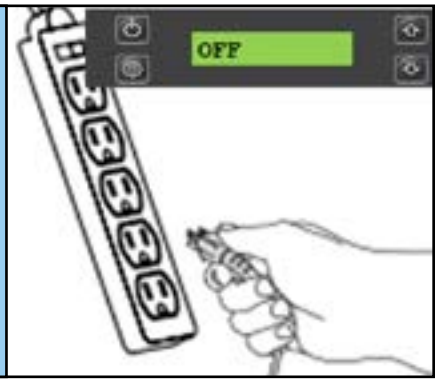
- LAZY FLAMES
- SOOTY FLAME
- EMPTY HOPPER CODE
- FLAMES LOW
- FLAMES HIGH
- DROPPING OUT OF TEMPERATURE

NOTE:

THE TRIM SETTING WILL NOT TAKE EFFECT UNTIL THE STOVE HAS COMPLETED A COMPETE SHUTDOWN SEQUENCE.

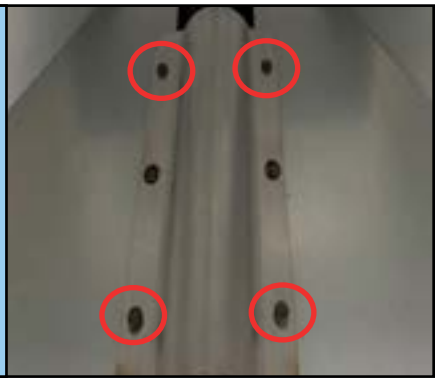
CLEARING AN AUGER JAM

1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



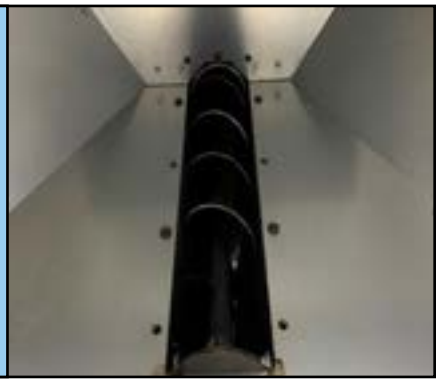
2. Open the hopper lid and remove any pellets in the hopper. Then vacuum the hopper of any remaining pellets or dust.

3. Remove the four screws holding on the auger plate. A putty knife may have to be required to loosen the plate.

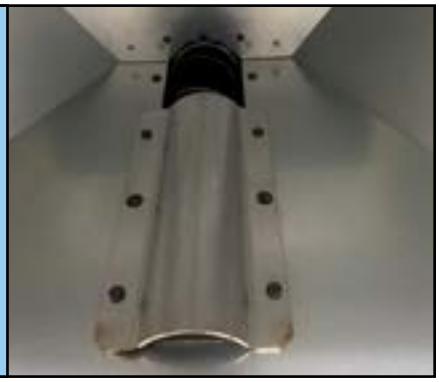


4. Once the auger plate is removed check the auger for any obstructions. After removing any obstructions vacuum any pellet bits or dust from the auger.

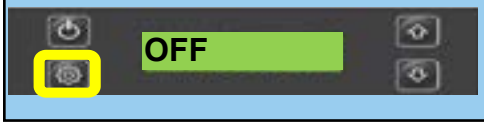
5. Once everything is clean the auger should be able to move a quarter to half a turn.

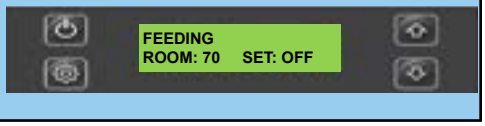


6. Replace the auger plate and add pellets. Only add half a bag till the auger is for sure free.

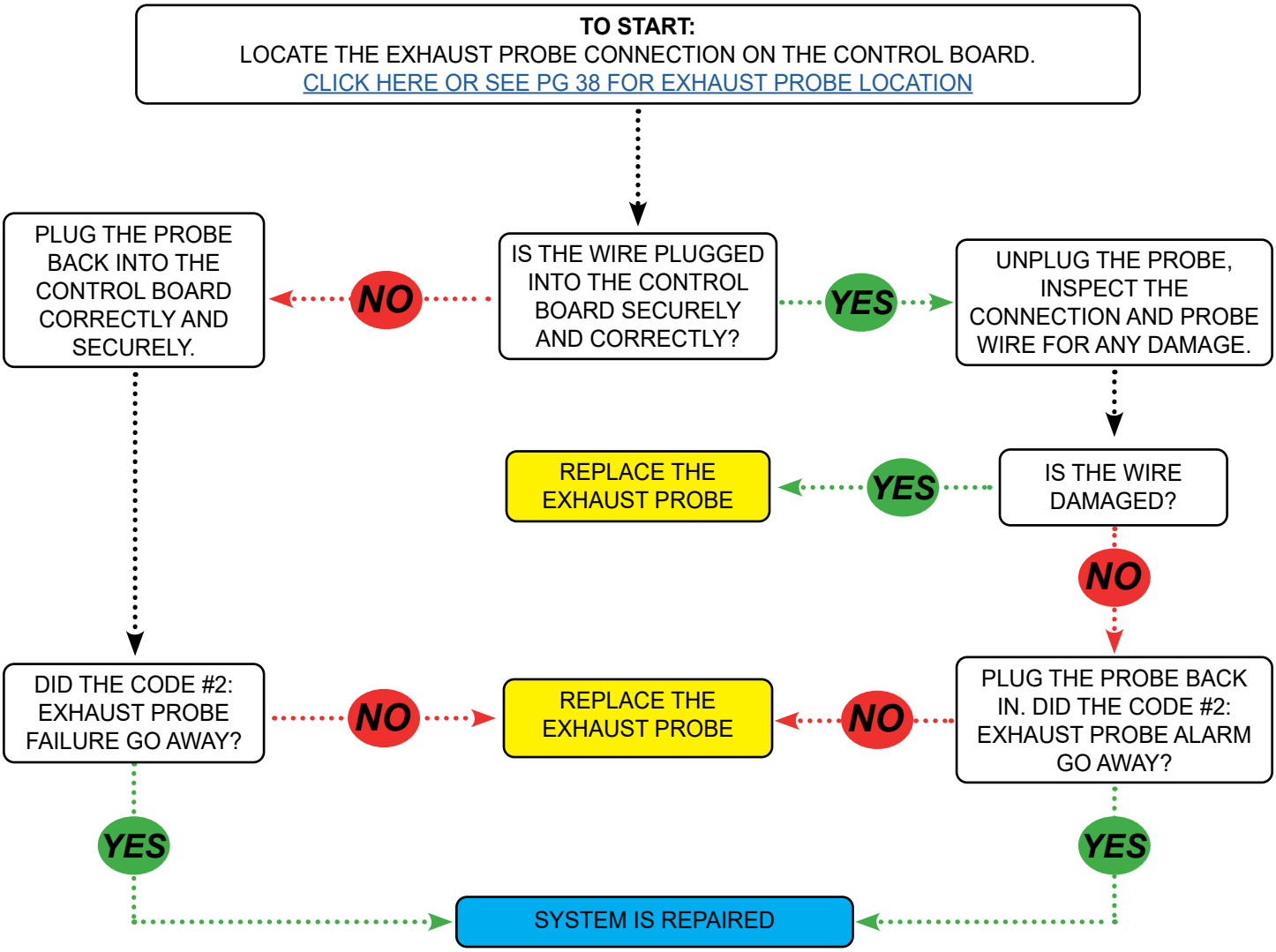


7. PRIME the stove. This is needed to fill the auger tube back up with pellets. The stove will need to be in the OFF position to start. With the stove OFF press the settings button (circled in yellow) then press and hold down the DOWN ARROW (circled in red) until the stove reads FEEDING. The feed motor will run the auger for roughly 2 minutes. If the feed motor/auger does not seem to work refer to the FEED MOTOR TROUBLESHOOTING by clicking HERE or see page 16.





CODE #2: EXHAUST PROBE ALARM

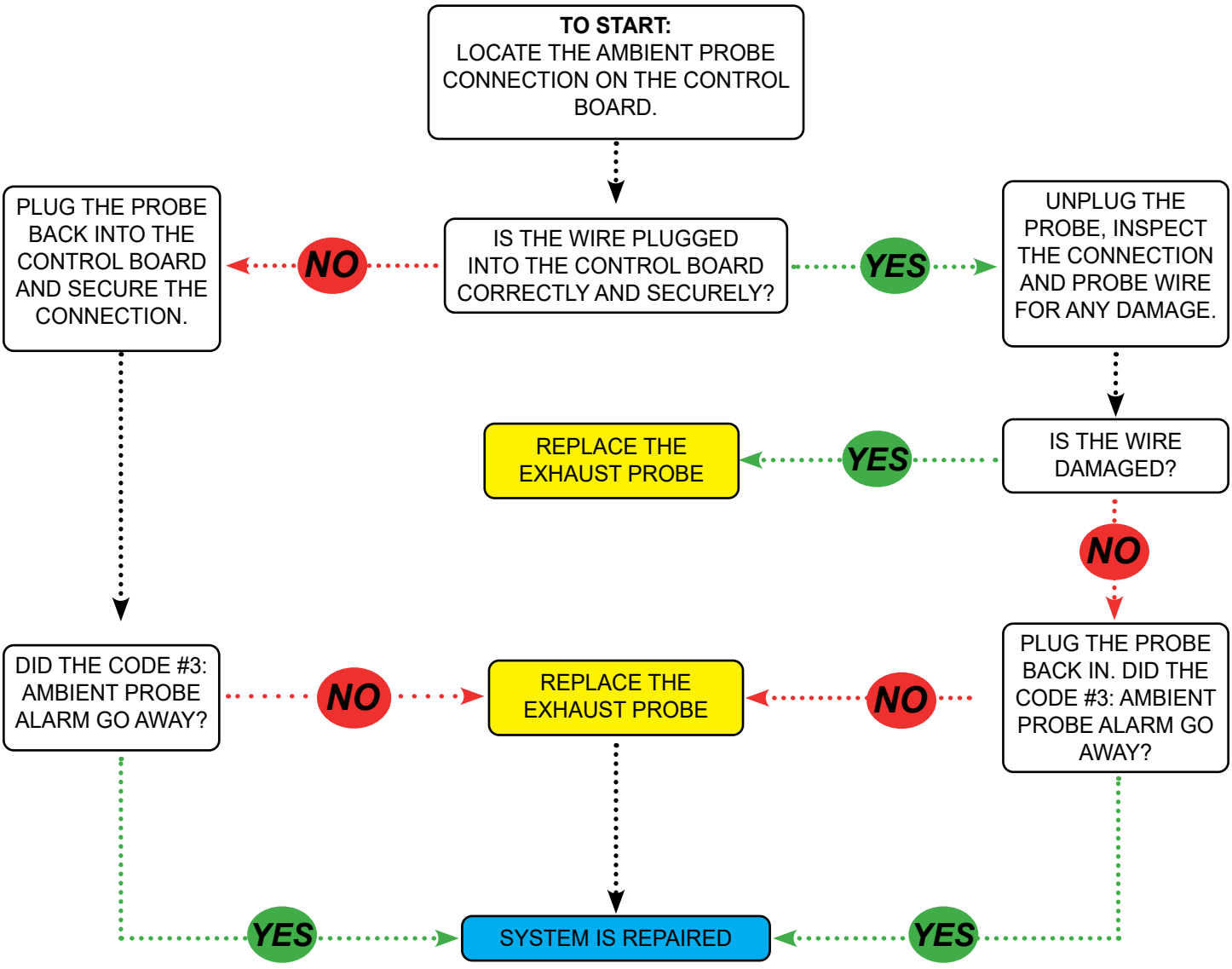


NOTE:

If the exhaust probe has been replaced and the problems still exist the control board may need replaced also. For further assistance please contact customer service at info_PelPro@hearthnhome.com

CODE #3: AMBIENT PROBE ALARM

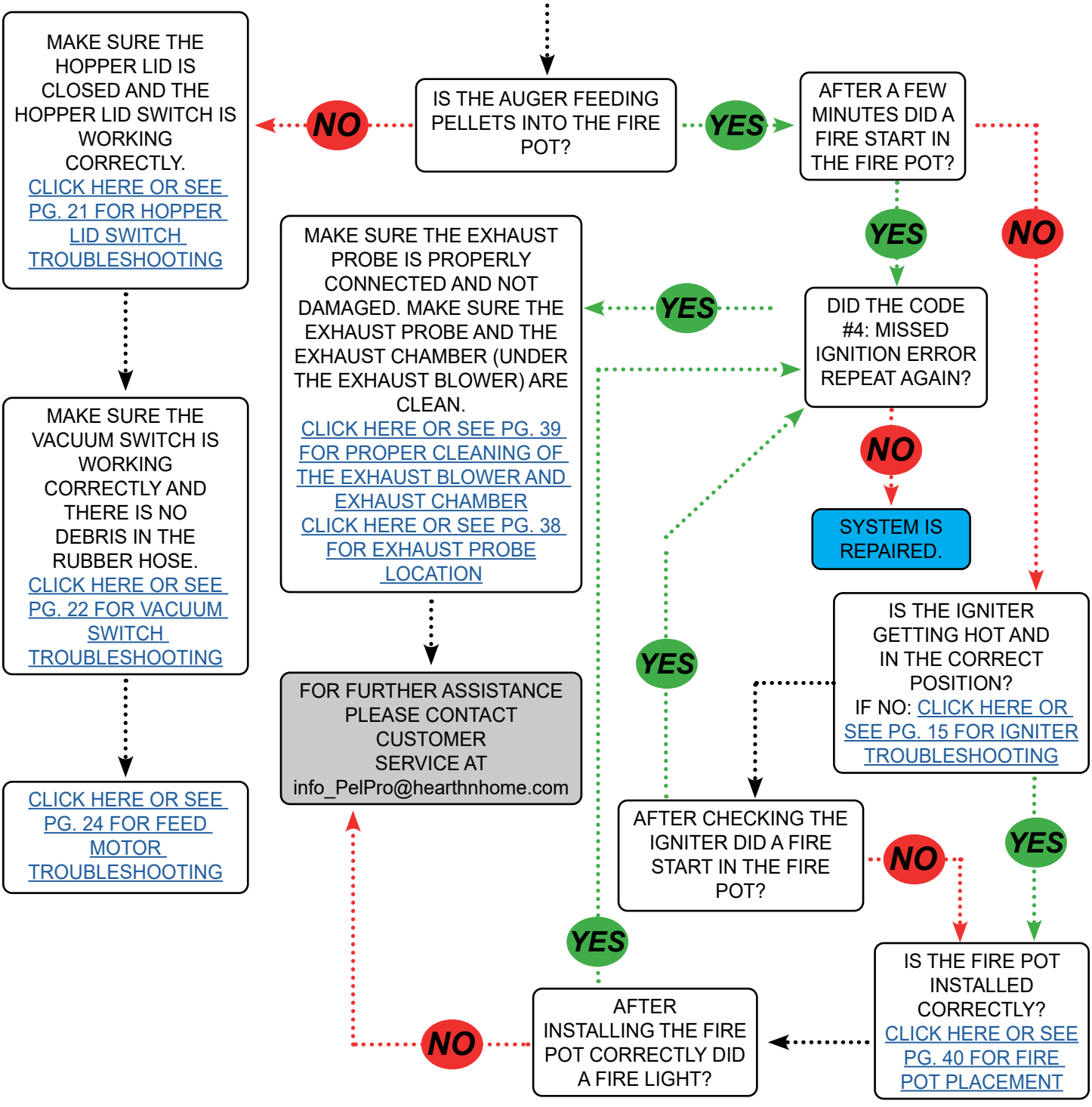
TECH TIP:
THE AMBIENT PROBE SENSES THE TEMPERATURE IN THE ROOM. IF THE STOVE IS CYCLING ON AND OFF SOONER THAN EXPECTED, MOVE THE AMBIENT PROBE FURTHER AWAY FROM THE STOVE.



CLICK HERE OR SEE PG. 42 FOR AMBIENT PROBE LOCATION AND INFORMATION

CODE #4: MISSED IGNITION

TO START:
MAKE SURE THE FIRE POT IS CLEAN INCLUDING THE HOLES IN THE FIRE POT, MAKE SURE THE FIRE POT IS INSTALLED CORRECTLY (CLICK HERE OR SEE PG 40 FOR FIRE POT INSTALLATION). CLEAN THE FIRE BOX AREA AND CLEAN BEHIND THE BAFFLES (CLICK HERE OR SEE PG. 41 FOR BAFFLE CLEANING). ALSO MAKE SURE THERE ARE PELLETS IN THE HOPPER AND THE AUGER IS NOT JAMMED (CLICK HERE OR SEE PG. 11 FOR AUGER JAMS).



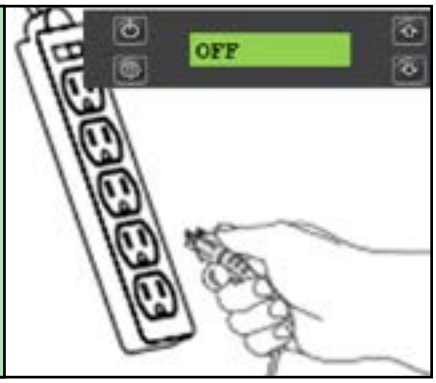
IGNITER TROUBLESHOOTING

Testing for OHMS (Ω)

This test will require a multimeter.

For correct placement of igniter position see pg 39 or click here.

1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Remove the left hand side panel of the stove. This would be the left side when looking at the stove.

3. Locate the igniter and the igniter wire connection. Unplug the igniter connection. Inspect the wires and connectors for any damage.

4. Test the white wires coming off the igniter its self.

5. Set the multimeter to the OHMS (Ω) setting.

6. Place one lead of the multimeter into each of the igniter wires. Make sure the leads touch the metal inside the wire connection. A reading of roughly 48 ohms is required.

IS THERE ROUGHLY 48 OHMS?

NO: replace the igniter.

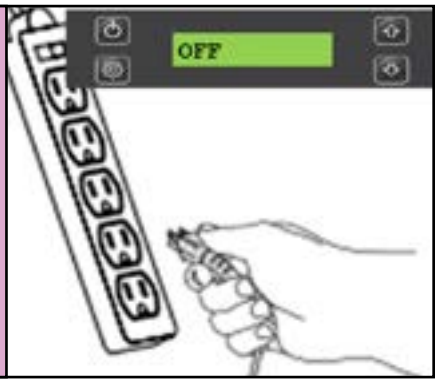
YES: make sure the control board is sending voltage to the igniter. Click HERE or see page 12 for testing the voltage to the igniter.

TESTING VOLTAGE TO THE IGNITER

This test will require a multimeter.

WHEN TESTING ELECTRICITY PLEASE USE CAUTION.

1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Remove the left hand side panel of the stove. This is the side when looking at the stove.

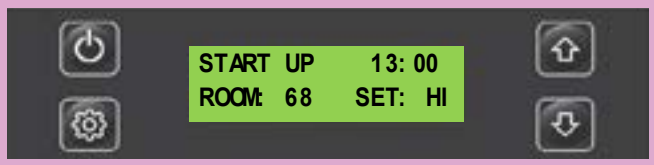
3. Locate the igniter and the igniter wire connection. Unplug the igniter connection. Inspect the wires and connectors for any damage.

4. This test will be testing the igniter wires that come from the control board. Theses are the black wires.

5. Set the multimeter to VAC. VAC stands for Voltage in Alternating Current.

When testing electricity always use caution.

6. Set the stove to the HI setting. Make sure the stove is in the START UP MODE.



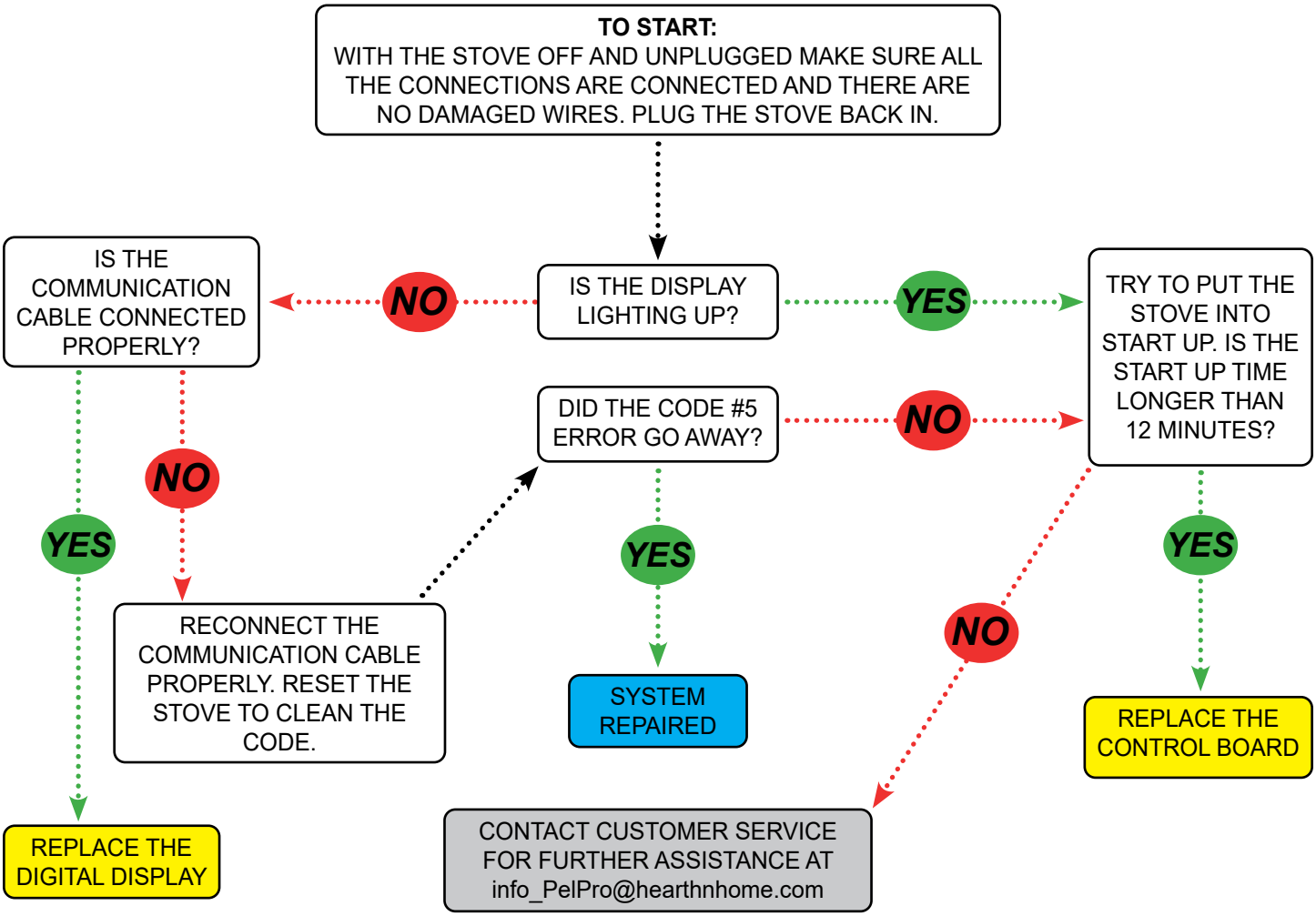
7. Place the multimeter leads into the black igniter wire ends. A reading of 115-120 VAC is required.

IS THERE A GOOD VOLTAGE READING?

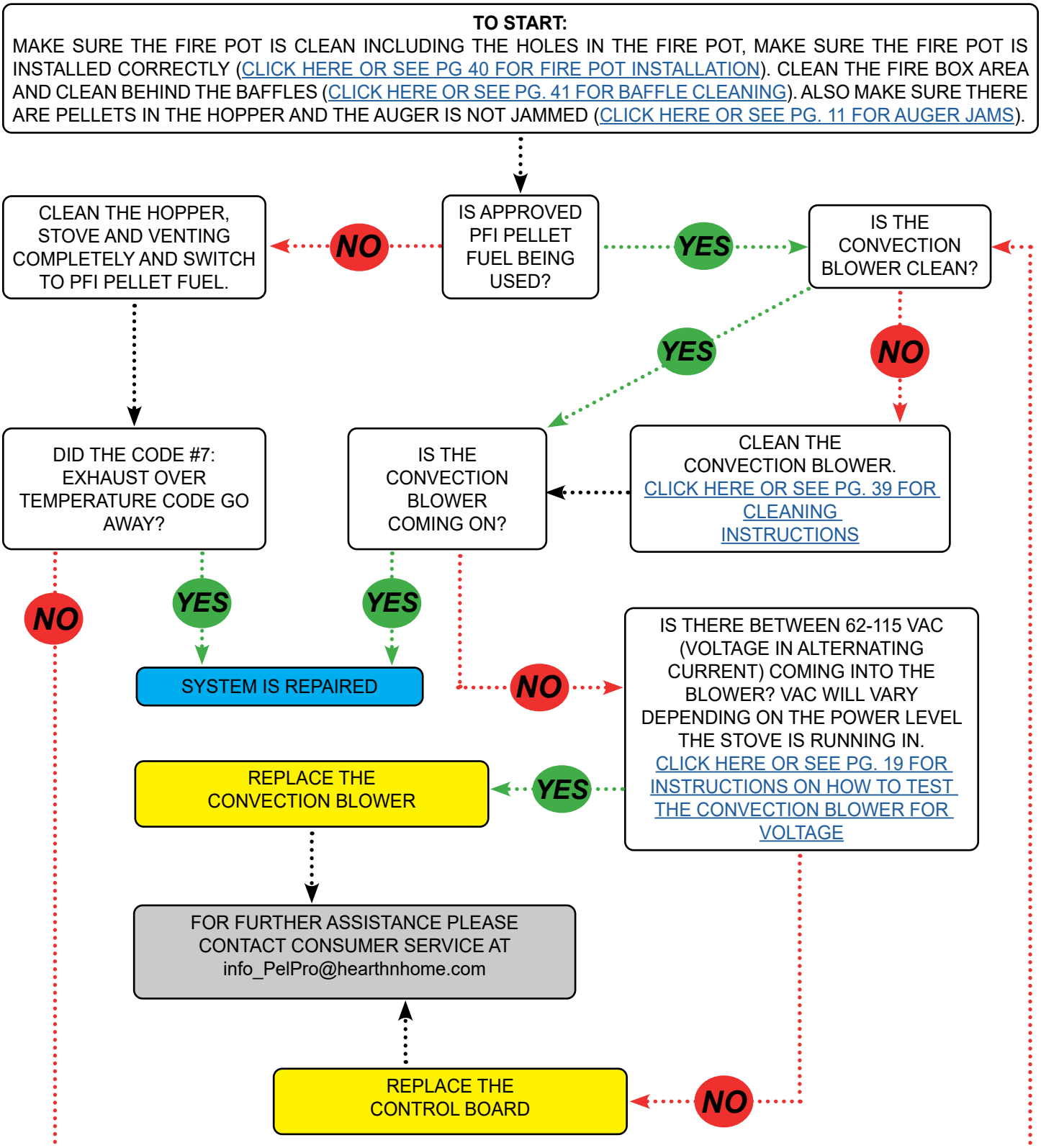
NO: replace the control board.

Yes: if there is a good OHMS reading at the igniter **AND** a good VAC reading then the wire harness will need replaced.

CODE #5: DIGITAL DISPLAY COMMUNICATION ALARM



CODE #7: EXHAUST OVER TEMPERATURE



TESTING THE VOLTAGE TO THE CONVECTION BLOWER

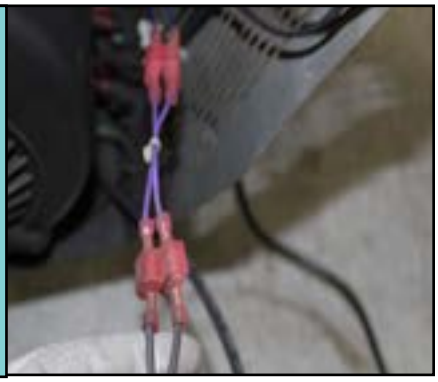
This test will require a multimeter.

WHEN TESTING ELECTRICITY PLEASE USE CAUTION.

1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.

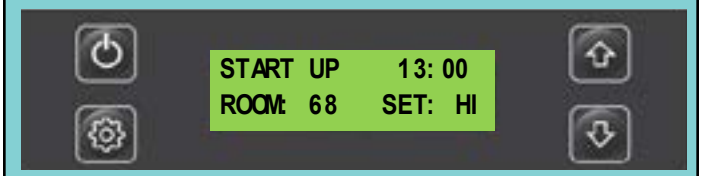
2. Remove the right hand side panel of the stove. This would be the right hand side when looking at the stove.

3. Locate the convection blower wire connection and unplug the connection from the blower.



4. This test will be testing the convection blower wires coming from the control board.

5. Plug the stove back in and set the stove on the HI setting.



6. Set the multimeter to VAC. VAC stands for Voltage in Alternating Current.

When testing electricity always use caution.

7. When the stove has heated to an estimated 140 degrees place one multimeter lead in each of the convection blower wires. A reading of 60 VAC or higher is required.

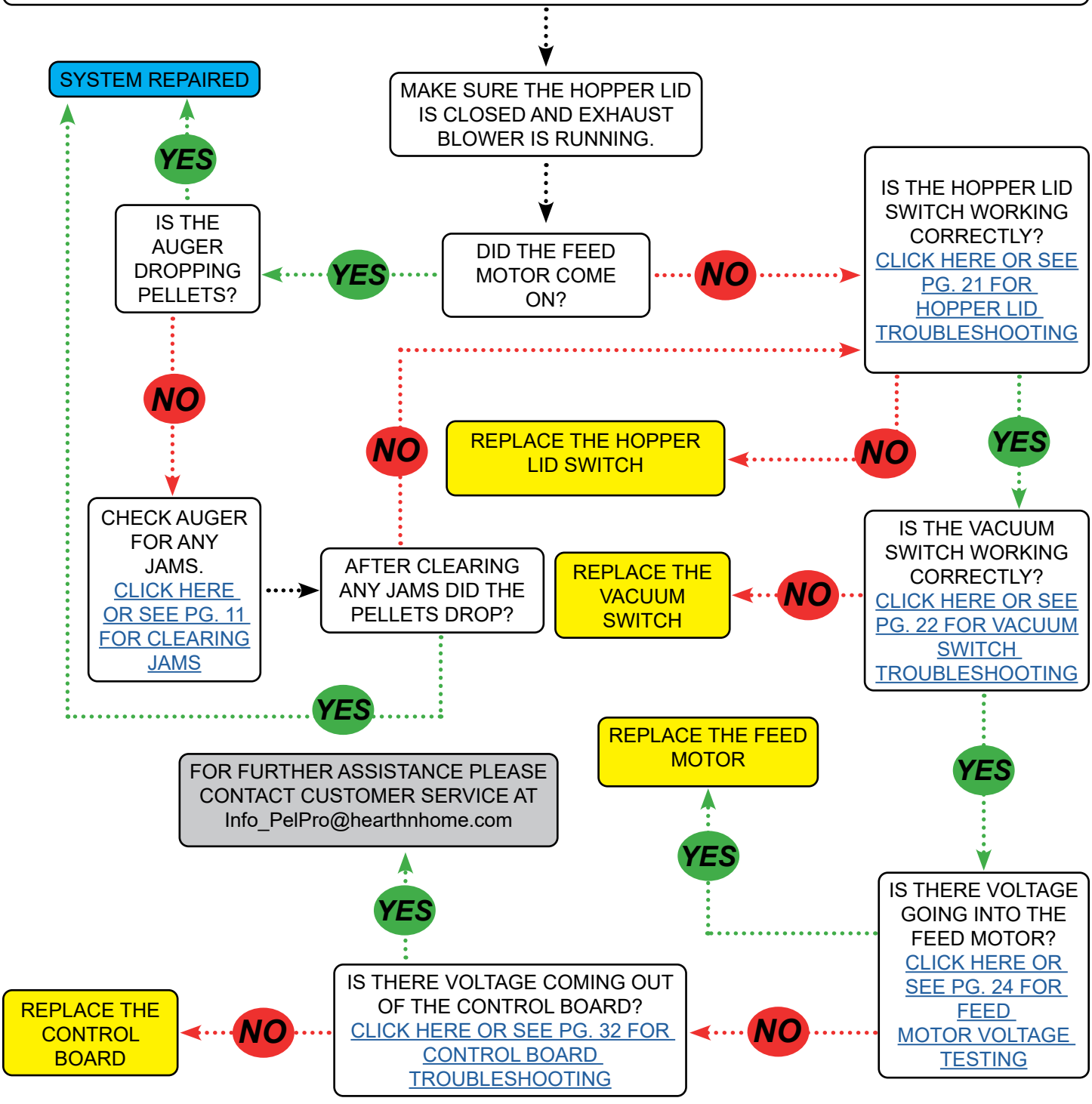
IS THERE A GOOD VOLTAGE READING?

NO: replace the control board.

YES: replace the convection blower.

NOT FEEDING PELLETS

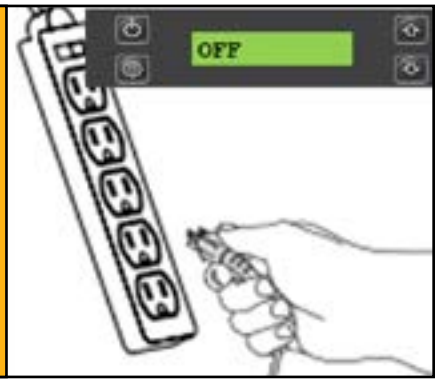
TO START:
MAKE SURE THE FIRE POT IS CLEAN INCLUDING THE HOLES IN THE FIRE POT, MAKE SURE THE FIRE POT IS INSTALLED CORRECTLY (CLICK HERE OR SEE PG 40 FOR FIRE POT INSTALLATION). CLEAN THE FIRE BOX AREA AND CLEAN BEHIND THE BAFFLES (CLICK HERE OR SEE PG. 41 FOR BAFFLE CLEANING). ALSO MAKE SURE THERE ARE PELLETS IN THE HOPPER AND THE AUGER IS NOT JAMMED (CLICK HERE OR SEE PG. 11 FOR AUGER JAMS).



TESTING THE HOPPER LID SWITCH WITH A MULTIMETER

This test will be testing the Continuity shown by the Ohms symbol (Ω).

1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Remove the right hand side panel of the stove. This will be the right side when looking at the stove.

3. Remove the two hopper lid switch cover screws.

4. After removing the screws remove the hopper id switch cover to gain access to the hopper lid switch wires.

5. Remove the two wire on the bottom of the hopper lid switch.

6. Place one lead of the multimeter on each of the metal switch terminals that are on the bottom of the switch.

7. With the meter lead on the switch terminals press down on the switch. A reading of anything other than OL is good. OL stands for Open Line.

Is there a good continuity reading?

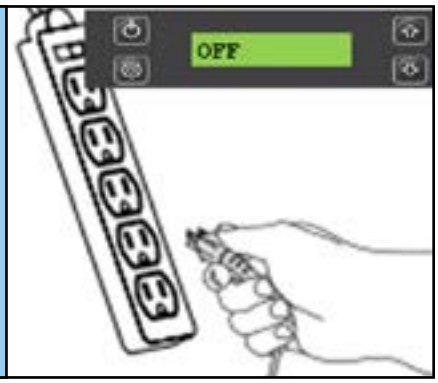
NO: replace the hopper lid switch.

YES: the switch is good.

TESTING THE VACUUM SWITCH WITH A MULTIMETER

This test will be testing the Continuity shown by the Ohms symbol (Ω).

1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Remove the right hand side panel of the stove. This is the right side when looking at the stove.

3. Locate the vacuum switch and remove the two red wires from the switch.

4. Remove the rubber hose from the auger drop tube.

5. Place the multimeter in the OHMS (Ω) setting.

6. Place one lead of the multimeter on each of the vacuum switch metal terminals making sure they make contact. At the same time draw/suck on the rubber hose.

7. Any reading on your multimeter other than OL is acceptable. OL stands for Open Line which means the switch is not closing.

Is there a good continuity reading?

NO: make sure the venting and stove are clean and/or replace the vacuum switch.

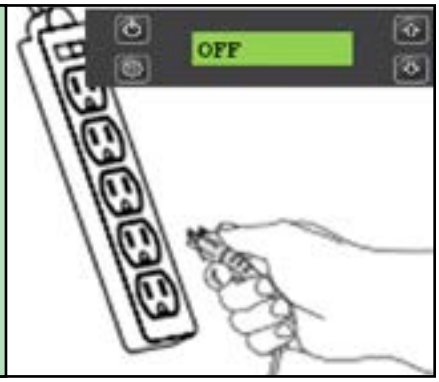
YES: the switch is good.

CONTROL BOARD VOLTAGE TEST FOR FEED MOTOR

This test will require a multimeter.

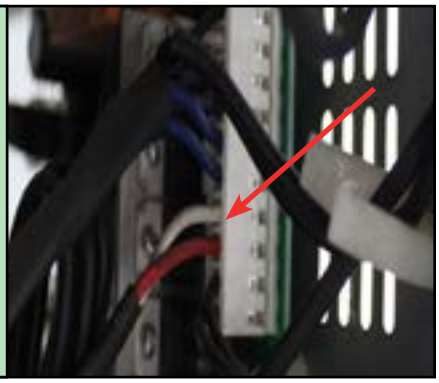
WHEN TESTING ELECTRICITY PLEASE USE CAUTION.

1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Remove the right hand side panel of the stove. This is the right hand side when looking at the stove. Also remove the convection blower to gain access to the control board.

3. Locate the red and white wires on the control board.



4. Set the multimeter to VAC. VAC stands for Voltage in Alternating Current.

When testing electricity always use caution.

5. Place the multimeter leads into the red and white wire pins. Insert them right into the pins where the red and white wires are on the clip.

6. Plug the stove back in and set the stove to the PRIME MODE. The stove will say FEEDING once in PRIME.

7. A reading of roughly 115-120 VAC is required. VAC stands for Voltage in Alternating Current.

IS THERE VOLTAGE TO THE CONTROL BOARD?

YES: repeat the hopper lid and vacuum switch test to make sure nothing was missed.

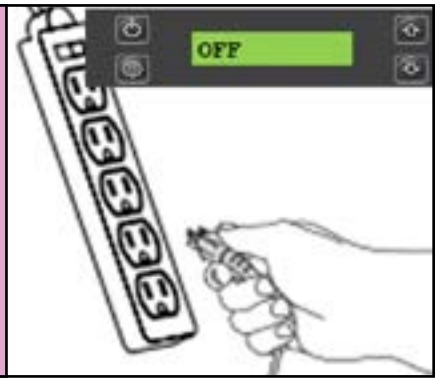
NO: test the power circuit up to the point of the control board. Click HERE or see pg. 26 for power troubleshooting

FEED MOTOR VOLTAGE TESTING

This test will require you a multimeter.

WHEN TESTING ELECTRICITY PLEASE USE CAUTION.

1. Turn the stove off and make sure the strove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Remove the right hand side panel of the stove. This is the right side when looking at the stove.

3. Locate the white Molex feed motor connector and unplug the connection. This test will be using the side the has the red and white wires only.

4. Set the multimeter to VAC. VAC stands for Voltage in Alternating Current.

When testing electricity always use caution.

5. Plug the stove back in and set the stove to PRIME. The stove ill say FEEDING when in PRIME.

6. Place the multimeter leads into the pins where the red and white wires are on the Molex connector.

7. A reading of roughly 115-120 VAC is required.

NOTE:

If there is no voltage at this connection, test the red and white pins on the control board and make sure you are getting voltage at the control board. Click HERE or see page 32 to test the control board for voltage.

NOT LIGHTING THE FUEL

TO START:
MAKE SURE THE FIRE POT IS CLEAN INCLUDING THE HOLES IN THE FIRE POT, MAKE SURE THE FIRE POT IS INSTALLED CORRECTLY (CLICK HERE OR SEE PG 40 FOR FIRE POT INSTALLATION). CLEAN THE FIRE BOX AREA AND CLEAN BEHIND THE BAFFLES (CLICK HERE OR SEE PG. 41 FOR BAFFLE CLEANING). ALSO MAKE SURE THERE ARE PELLETS IN THE HOPPER AND THE AUGER IS NOT JAMMED (CLICK HERE OR SEE PG. 11 FOR AUGER JAMS).

ARE PELLETS DROPPING INTO THE FIRE POT?

NO → SEE "NOT FEEDING PELLETS" TROUBLESHOOTING. CLICK HERE OR SEE PG. 20 NOT FEEDING PELLETS TROUBLESHOOTING

YES → IS THE FIRE POT INSTALLED CORRECTLY? CLICK HERE OR SEE PG. 40 FOR FIRE POT INSTALLATION INSTRUCTIONS

NO → REINSTALL THE FIRE POT CORRECTLY. DID THE PELLETS LIGHT?

YES → SYSTEM REPAIRED

NO → AFTER CHECKING THE IGNITER PLACEMENT DID THE PELLETS LIGHT?

YES → SYSTEM REPAIRED

NO → MAKE SURE THE EXHAUST BLOWER IS WORKING PROPERLY AND IS CLEAN. CLICK HERE OR SEE PG. 35 FOR EXHAUST BLOWER TROUBLESHOOTING

IS THE EXHAUST BLOWER WORKING PROPERLY?

NO → REPLACE THE EXHAUST BLOWER

YES → DID THE PELLETS LIGHT? CHECK THE EXHAUST BLOWER.

YES → SYSTEM REPAIRED

NO → MAKE SURE THE IGNITER IS IN THE CORRECT POSITION. CLICK HERE OR SEE PG. 43 FOR IGNITER PLACEMENT INSTRUCTIONS

YES → IS THE IGNITER WORKING CORRECTLY? CLICK HERE OR SEE PG. 15-16 FOR IGNITER TROUBLESHOOTING

NO → REPLACE THE IGNITER

YES → IS THE IGNITER GETTING HOT?

NO → REPLACE THE IGNITER

YES → DID THE PELLETS LIGHT?

YES → SYSTEM REPAIRED

NO → MAKE SURE THE IGNITER IS IN THE CORRECT POSITION. CLICK HERE OR SEE PG. 43 FOR IGNITER PLACEMENT INSTRUCTIONS

FOR FURTHER ASSISTANCE PLEASE CONTACT CUSTOMER SERVICE AT Info_PelPro@hearthnhome.com

TECH TIP:
THE STOVE NEEDS THREE THINGS TO LIGHT: AIR, FUEL AND HEAT. IF ONE OF THESE THINGS IS OUT OF BALANCE THE STOVE MAY NOT LIGHT OR RUN PROPERLY. MAKE SURE THERE ARE NO AIR FLOW OBSTRUCTIONS IN THE STOVE OR VENTING. MAKE SURE THE PELLETS ARE GOOD QUALITY. MAKE SURE THE HEATED AIR CAN REACH THE PELLETS THROUGH THE FIRE POT BY MAKING SURE THE FIRE POT HOLES ARE NOT OBSTRUCTED.

LAZY OR SOOTY FLAMES

TO START:
MAKE SURE THE FIRE POT IS CLEAN INCLUDING THE HOLES IN THE FIRE POT, MAKE SURE THE FIRE POT IS INSTALLED CORRECTLY (CLICK HERE OR SEE PG 40 FOR FIRE POT INSTALLATION). CLEAN THE FIRE BOX AREA AND CLEAN BEHIND THE BAFFLES (CLICK HERE OR SEE PG. 41 FOR BAFFLE CLEANING). ALSO MAKE SURE THE DOOR GASKET IS MAKING A TIGHT SEAL.

IS PFI CERTIFIED PELLET FUEL BEING USED?

NO → CLEAN THE STOVE, HOPPER, AND VENTING. CHANGE TO A PFI CERTIFIED PELLET FUEL AND RESTART THE STOVE.

YES → IS THE FEED MOTOR RUNNING IN A ON/OFF MODE? THE FEED MOTOR SHOULD RUN ON FOR 1-3 SECONDS.

NO → FOR FURTHER ASSISTANCE PLEASE CONTACT CUSTOMER SERVICE AT info_PelPro@hearthnhome.com.

YES → IS THE EXHAUST BLOWER RUNNING?

NO → CHECK THE EXHAUST BLOWER CONNECTIONS AND MAKE SURE THE EXHAUST BLOWER IS CLEAN. CLICK HERE OR SEE PG 35 FOR EXHAUST BLOWER TROUBLESHOOTING

YES → ADJUST THE TRIM SETTING. THE STOVE HAS TO COMPLETE A SHUT DOWN SEQUENCE BEFORE THE TRIM SETTING WILL TAKE EFFECT. CLICK HERE OR SEE PG. 10 FOR TRIM ADJUSTMENT GUIDE

AFTER ADJUSTING THE TRIM DID THE PROBLEM RESOLVE?

NO → FOR FURTHER ASSISTANCE PLEASE CONTACT CUSTOMER SERVICE AT info_PelPro@hearthnhome.com.

YES → SYSTEM REPAIRED

IS THE EXHAUST BLOWER WORKING PROPERLY?

NO → REPLACE THE EXHAUST BLOWER

YES → DID THE PROBLEM RESOLVE?

NO → ADJUST THE TRIM SETTING. THE STOVE HAS TO COMPLETE A SHUT DOWN SEQUENCE BEFORE THE TRIM SETTING WILL TAKE EFFECT. CLICK HERE OR SEE PG. 10 FOR TRIM ADJUSTMENT GUIDE

YES → SYSTEM REPAIRED

IS THE CORRECT CONTROL BOARD INSTALLED? THE LABEL ON THE CONTROL BOARD SHOULD MATCH THE SERVICE PARTS LIST.

NO → REPLACE THE CONTROL BOARD WITH THE CORRECT BOARD

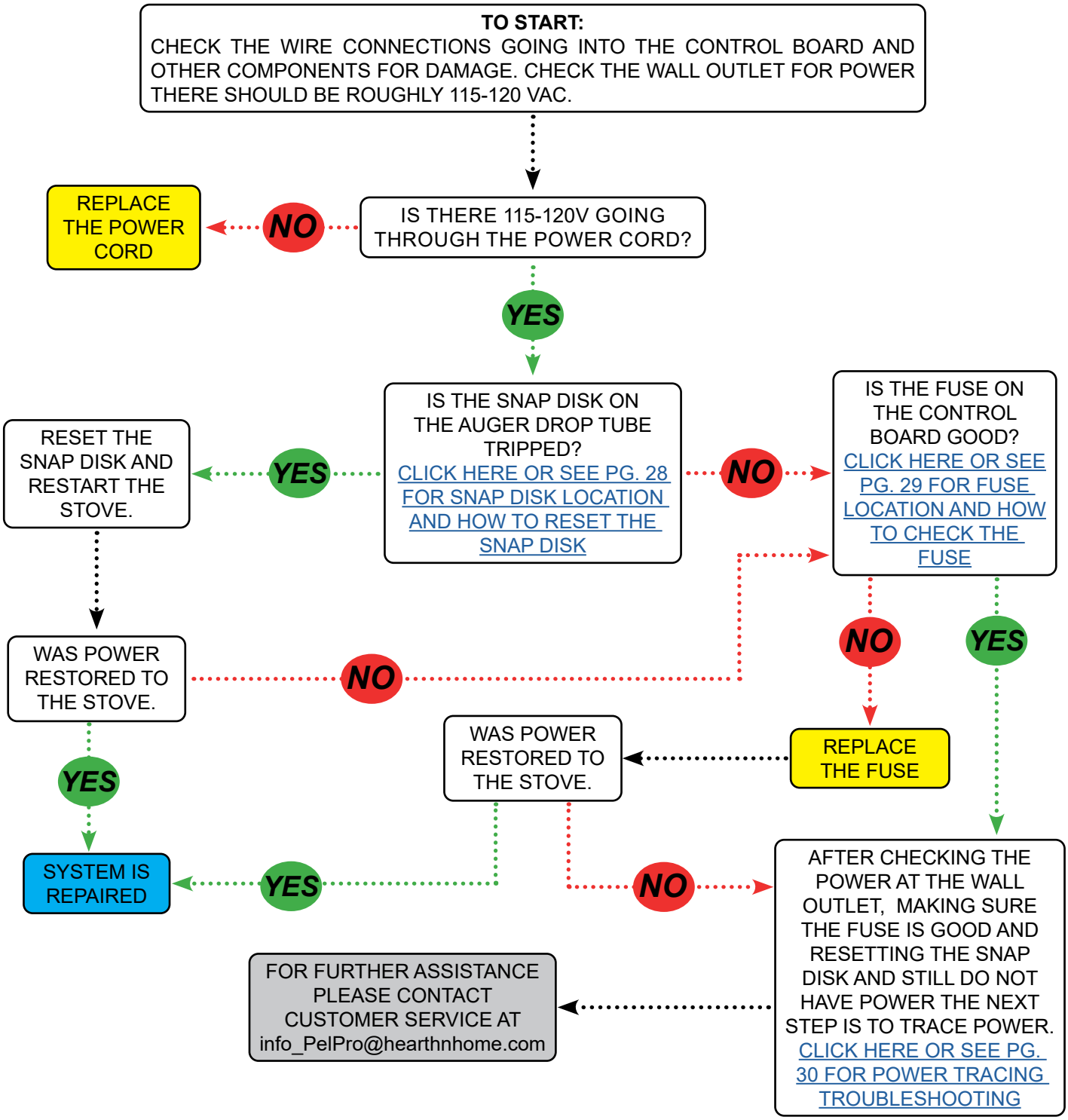
YES → DID THE PROBLEM RESOLVE?

NO → FOR FURTHER ASSISTANCE PLEASE CONTACT CUSTOMER SERVICE AT info_PelPro@hearthnhome.com.

YES → SYSTEM REPAIRED

NO POWER

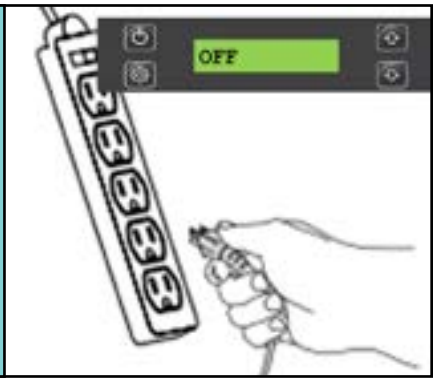
This test will require a multimeter.



SNAP DISK LOCATION AND HOW TO RESET THE SNAP DISK

THE SNAP DISK IS LOCATED ON THE LEFT SIDE A THE STOVE WHEN YOU LOOK AT THE STOVE. IT IS LOCATED ON THE DROP AUGER TUBE. THE SNAP DISK IS ABOUT THE SIZE OF A DIME AND HAS TO WIRES THAT CONNECT TO IT. IN BETWEEN THOSE TWO WIRES THERE IS A RESET BUTTON.

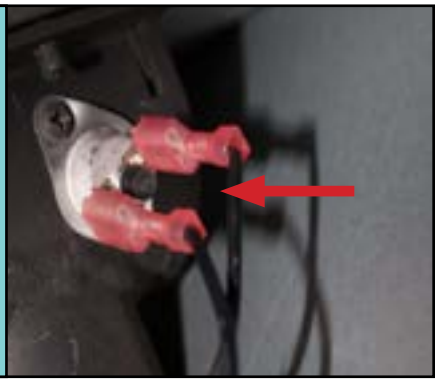
1. Turn the stove off and makes sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Remove the left hand side panel of the stove. This is the left side when looking at the stove.

3. Locate the snap disk on the drop auger tube.

4. Locate the reset button between the two snap disk wire. Press the button. This should restore power to the stove.

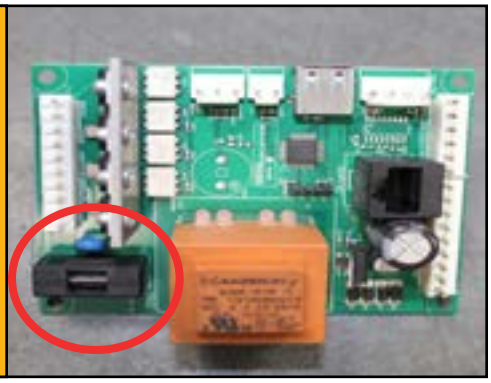


NOTE:

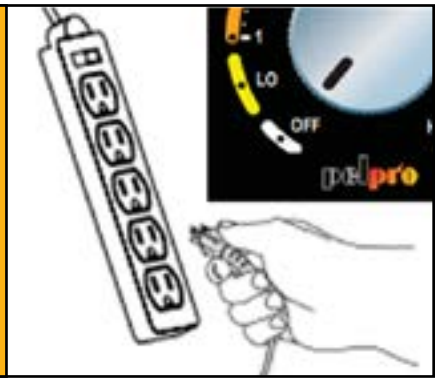
If the button clicked when pressed then the snap disk needed to be reset and power should be restored to the stove. If the button did not click then continue to troubleshoot.

FUSE LOCATION AND HOW TO CHECK THE FUSE

THE FUSE IS LOCATED ON THE CONTROL BOARD. THE CONTROL BOARD IS LOCATED ON THE RIGHT SIDE OF THE STOVE. IT IS MOUNTED ON THE BACK INSIDE PANEL OF THE STOVE. THE FUSE IS HOUSED IN A BLACK RECTANGULAR BOX.



1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Remove the right hand side panel of the stove. This is the right side when looking at the stove.

3. Locate the control board on the back of the stove.

5. Remove the top of the black box to access the fuse. Check the fuse for any damage.

4. Locate the black rectangular box on the control board. Shown with control board unplugged for better reference. Leave the control board in the stove.

NOTE:
It is recommended to replace the fuse even though it does not look bad. Sometimes there can be hairline damage to the fuse that can not be seen. You can test the fuse for OHMS also. You would want any reading by OL. You can purchase a new fuse at any hardware or auto part store. The fuse is a 5 AMP fuse.

POWER TRACING TROUBLESHOOTING

This test will require a multimeter.

DOES THE WALL OUTLET FOR POWER. ROUGHLY 115-120 VAC (VOLTAGE IN ALTERNATING CURRENT) IS REQUIRED. IF THE MULTIMETER PINS CAN NOT FIT INT HE OUTLET PROPERLY CHECK THE POWER AT THE END OF THE POWER CORD THAT PLUGS INTO THE STOVE.

NO → MAKE SURE THE BREAKER IS NOT TRIPPED. MAKE SURE THE OUTLET IS WIRED CORRECTLY.

YES

IS THERE 115-120 VAC COMING OUT OF THE ONE END OF THE POWER CORD? ONE END OF THE POWER CORD NEEDS TO BE PLUGGED INTO THE OUTLET AND TEST THE END THAT PLUGS INTO THE STOVE.

NO → REPLACE THE POWER CORD

YES

IS THERE POWER GOING IN AND OUT THE SNAP DISK?

CLICK HERE OR SEE PG. 28 FOR SNAP DISK POWER TEST

NO → RESET OR REPLACE THE SNAP DISK

YES

IS THERE POWER AT THE CONTROL BOARD?

CLICK HERE OR SEE PG. 32 FOR CONTROL BOARD TESTING

NO → (RESET OR REPLACE THE SNAP DISK)

YES

REPLACE THE CONTROL BOARD

TESTING THE SNAP DISK FOR VOLTAGE

This test will require a multimeter.

WHEN TESTING ELECTRICITY PLEASE USE CAUTION.

1. Turn the stove off and make sure the stove is completely shut down. The stove will need to remain plugged IN.

2. Remove the left hand side panel of the stove. This is the left side when looking at the stove.

3. Locate the snap disk on the drop auger tube.

4. Set the multimeter to VAC. VAC stands for Voltage in Alternating Current.

When testing electricity always use caution.

5. Select which side of the snap disk to test first. Both sides will need to be tested individually as one side is power in and one side is power out. Back the snap disk wires off the terminals slightly. Create a gap that the meter leads can fit into and still making a connection with the terminals. Place one meter lead on one of the snap disk terminals and ground the other meter lead to a any unpainted part of the stove. A reading of roughly 115-120 VAC is required. Repeat this test for the other side of the snap disk.

NOTE:

If there is power to one side of the snap disk but not to the other side replace the snap disk.

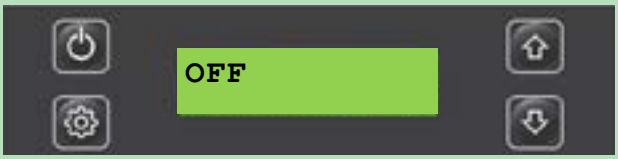
If there is power to both sides of the snap disk then move on to testing the control board. Click HERE or see page 28 for control board testing.

CONTROL BOARD POWER TESTING

This test will require a multimeter.

WHEN TESTING ELECTRICITY PLEASE USE CAUTION.

1. Turn the stove off and makes sure the stove is completely shut down. The stove will need to remain plugged IN.



2. Remove the right hand side panel of the stove. This is the right side when looking at the stoved.

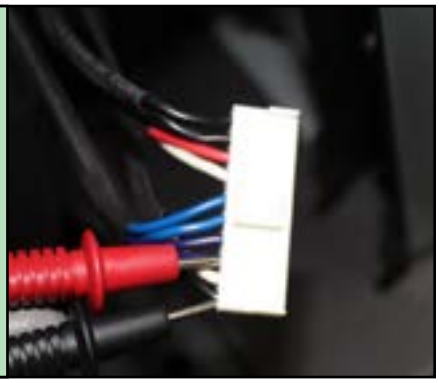
3. Locate the control board in the back of the stove.

4. Locate the wire clip that contains the two purple wires. Shown pulled off the control board for better reference. Leave the control board in place.

5. Set the multimeter to VAC. VAC stands for Voltage in Alternating Current.

When testing electricity always use caution.

6. Place one multimeter lead in the black pin and the other multimeter lead in the white pin as shown. A reading of roughly 115-120 VAC is required.



IS THERE VOLTAGE AT THE BLACK AND WHITE PINS?

NO: replace the snap disk.

YES: replace the control board.

CONVECTION BLOWER NOT COMING ON

TO START:
CLEAN THE CONVECTION BLOWER(CLICK HERE OR SEE PG. 39 FOR CLEANING INSTRUCTIONS) AND MAKE SURE IT SPINS FREELY. AFTER CLEANING THE BLOWER APPLY HEAT TO THE EXHAUST PROBE. APPLY HEAT WITH A HEAT GUN TO TRIGGER THE EXHAUST PROBE (CLICK HERE OR SEE PG. 38 FOR EXHAUST PROBE INFORMATION). THIS CAN BE COMPLETED IN THE OFF POSITION AS WELL.

IS THE BLOWER RUNNING?

YES

IS THE EXHAUST PROBE CLEAN, MOUNTED CORRECTLY AND THE EXHAUST CAMBER UNDER THE EXHAUST BLOWER CLEAN. CLICK HERE OR SEE PG. 37 ON HOW TO CLEAN THE EXHAUST CHAMBER

YES

IS THE BLOWER RUNNING?

YES

SYSTEM REPAIRED

NO

CLEAN THE COMPONENTS, RECONNECT OR REPAIR THE CONNECTIONS AND RESTART THE STOVE.

NO

CHECK THE CONVECTION BLOWER WIRES AND CONNECTIONS FOR ANY DAMAGE. THEN RESTART THE STOVE.

IS THE BLOWER RUNNING?

NO

CHECK THE VOLTAGE TO THE BLOWER. IS THERE 60 VAC (VOLTAGE IN ALTERNATING CURRENT) OR HIGHER? CLICK HERE OR SEE PG. 19 FOR CONVECTION BLOWER VOLTAGE TESTING

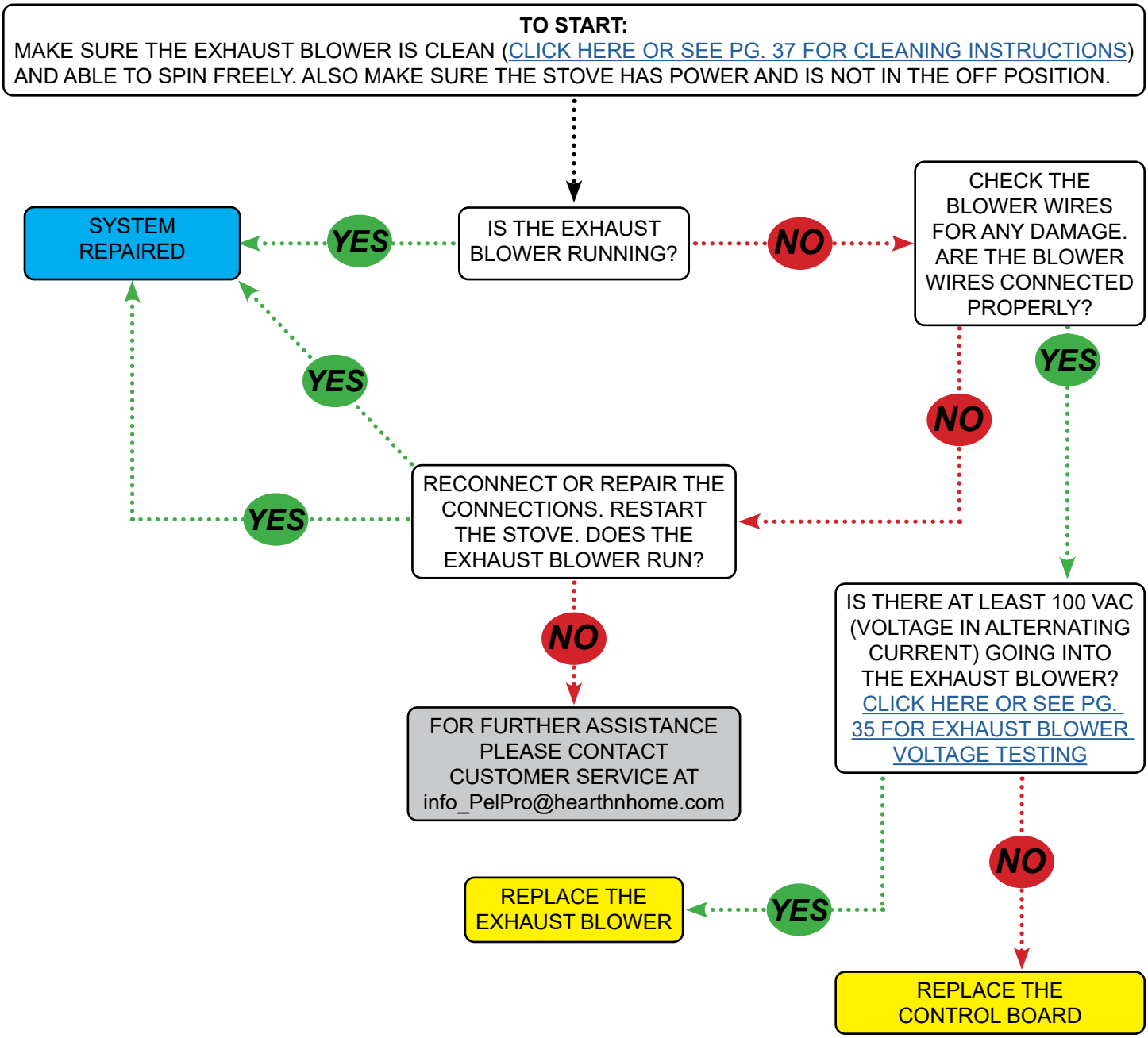
YES

REPLACE THE CONVECTION BLOWER

NO

REPLACE THE CONTROL BOARD OR CONTACT CUSTOMER SERVICE AT info_PelPro@hearthnhome.com FOR FURTHER ASSISTANCE.

EXHAUST BLOWER NOT COMING ON

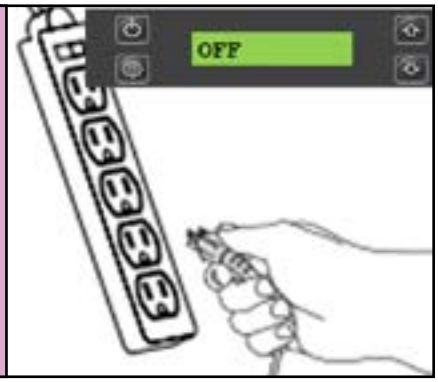


EXHAUST BLOWER VOLTAGE TESTING

This test will require a multimeter.

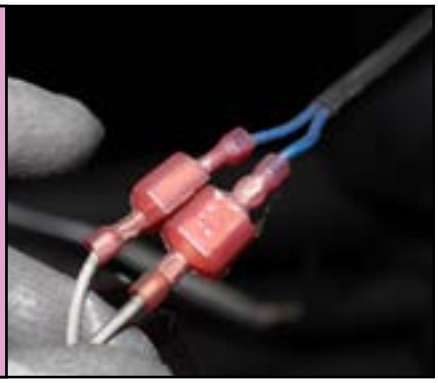
WHEN TESTING ELECTRICITY PLEASE USE CAUTION.

1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.

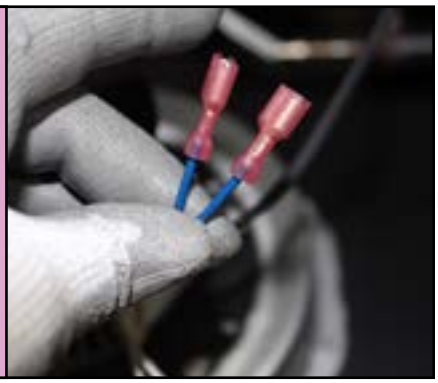


2. Remove the left hand side panel of the stove. This is the left side when looking at the stove.

3. Locate the exhaust blower and the exhaust blower connection.



4. Unplug the exhaust blower connection. This test will be testing the blue wires coming from the control board.



5. Set the multimeter to VAC. VAC stands for Voltage in Alternating Current.

When testing electricity always use caution.

6. Plug the stove back in and set the stove to PRIME. The stove will say FEEDING when in PRIME.

7. Place the multimeter leads into the wires coming from the control board. A reading of at least 100 VAC is required.

IS THERE VOLTAGE?

NO: Replace the control board.

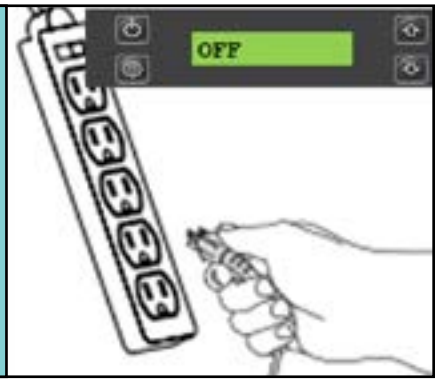
YES: If there is voltage into the exhaust blower and eliminated any other possible problems via the troubleshooting guide then replace the exhaust blower.

VACUUM SWITCH VOLTAGE TEST

This test will require a multimeter.

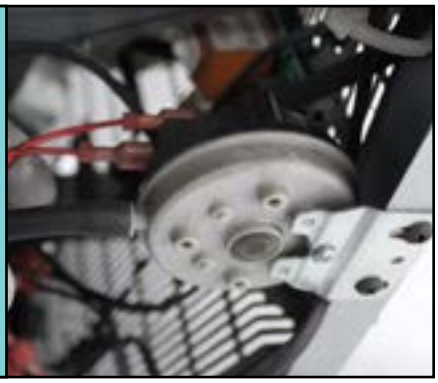
WHEN TESTING ELECTRICITY PLEASE USE CAUTION.

1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Remove the right hand side panel of the stove. This is the right side when looking at the stove.

3. Locate the vacuum switch and back the red wires off the switch terminals slightly. Make room for your meter leads but still have the wires make a connection.



NOTE:

If there is voltage on one side of the vacuum switch but not the other side make sure your venting is clean or replace the vacuum switch.

If there is voltage on both sides of the vacuum switch the vacuum switch is good.

4. Set the multimeter to VAC. VAC stands for Voltage in Alternating Current.

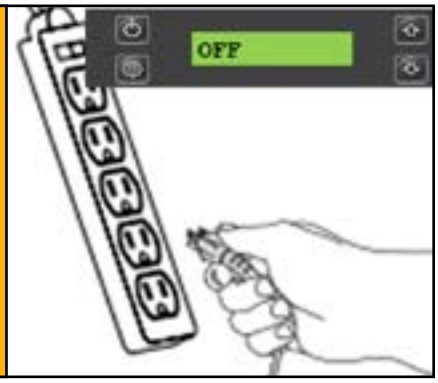
When testing electricity always use caution.

5. Plug the stove back in to the outlet and set the stove to PRIME. The stove will say FEEDING once in PRIME.

6. With the exhaust blower running place one lead of meter leads on one of the switch terminals. Make sure that the meter lead tip is making contact with the metal on the switch terminal. Place the other lead on any unpainted surface of the stove. A reading of roughly 115-120 VAC is required. Repeat the same steps for the other switch terminal. One terminal is voltage in and one is voltage out.

CLEANING THE EXHAUST BLOWER

1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Remove the left hand side panel of the stove. This is the side opposite the dial control.

3. Locate the exhaust blower and disconnect the blower connection.

4. Loosen the 6 screws holding the blower motor onto the blower housing. You do not need to fully remove the screws. Twist the plate and remove the blower motor.

5. Use a paint brush or compressed air to clean the exhaust blower.

6. Make sure the blades can spin freely and are not catching on any debris. Reinstall the blower by lining up the screws with the bigger hole on the slot then twist to catch the screw in the narrow portion of the slot. Re-tighten the screws.

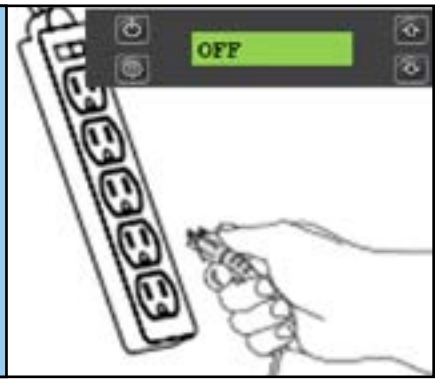
NOTE:

This would also be a good time to check the exhaust venting to the outside for any build up of ash and to do a thorough cleaning of the venting.

Cleaning the blower should be down at least twice a year or whenever the venting is cleaned.

EXHAUST PROBE INFORMATION

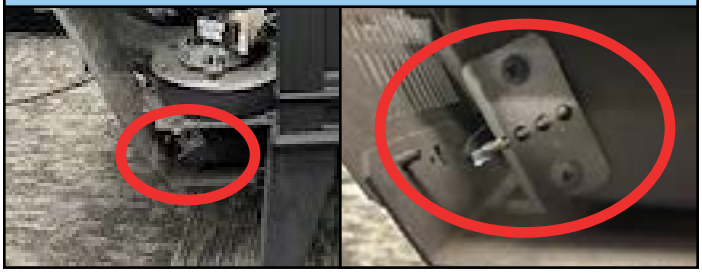
1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Remove the left hand side panel of the stove. This is the left side when looking at the stove. Locate the exhaust blower.

3. Locate the exhaust probe. Make sure it is mounted securely in the bracket. Check the wires for any damage. Make sure there is no ash on the probe.

Probe location
The exhaust prone is located under the exhaust blower. It is mounted on the exhaust chamber pipe.



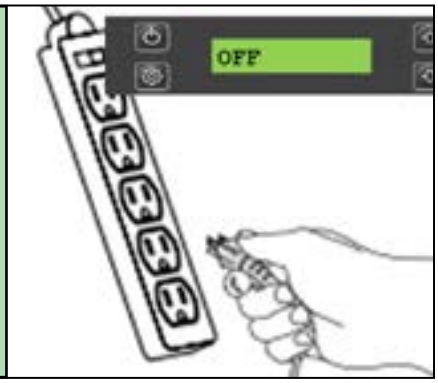
NOTE:

If the probe is loose from the bracket or dirty it can cause the stove to not operate correctly. Also if there is ash build up in the exhaust chamber it could also effect the way the stove operates.

This should be done when ever you clean the exhaust blower.

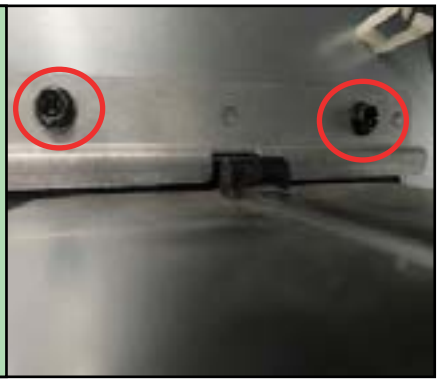
CLEANING THE CONVECTION BLOWER

1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Remove the right hand side panel of the stove. This is the right side when looking at the stove. Locate the convection blower and disconnect the wires.

3. Remove the 2 screws holding the blower in place.



4. Lift up on the blower to remove the bottom tab from the slow in the back of the stove. Carefully remove the blower from the stove.

5. Use a paint brush or compressed air to clean the blower. You can not take the blower apart. Make sure the blower can spin freely.

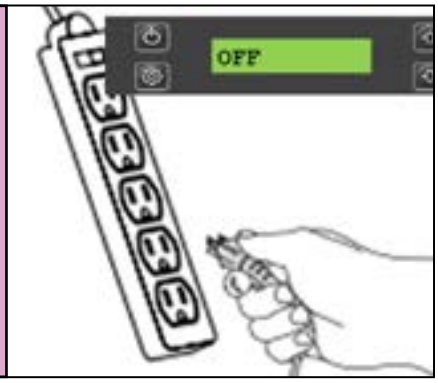
NOTE:

The convection/room blower pulls air from the room. Any dust, debris, and pet hair can be pulled into the blower causing it not to work correctly.

The blower should be cleaned at least twice a year or as needed.

FIRE POT CLEANING AND PROPER INSTALLATION

1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Once the stove is completely cool. Open the front door to access the fire pot area.

3. Remove the fire pot. Use an ash vac to remove any ash or debris in the fire pot/box area. This includes the ash over flow areas on the sides of the fire pot.

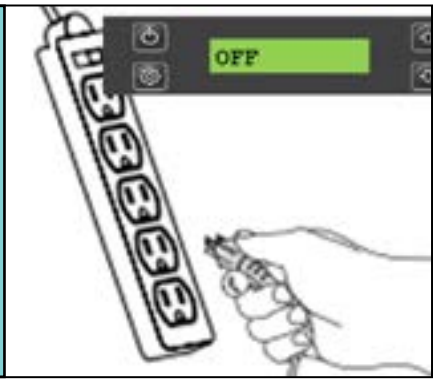
4. With the scraper tool scrap out any ash build up on the fire pot. Also make sure the holes in the fire pot a clean and clear.

5. Reinstall the fire pot. The fire pot is 2 pieces and the removable piece should face the front of the stove. Also make sure the fire pot is seated fully in place.

Correct installation of the fire pot.

CLEANING THE BAFFLES

1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Once the stove is completely cool. Open the front door to access the fire pot area.

3. Locate the middle panel and the tab at the top of the panel. Lift up and out on the tab.

4. Remove the left and right panels.

5. Use scraper to scrap any ash build up on the back wall and on the panels. Then use a ash vacuum to sweep up any debris.

6. Replace the panels by replacing the left and right panels first and then the middle panel last. Make sure all the panels are correctly aligned or it could cause the stove to not receive proper air flow causing the stove not to work properly.

NOTE:

When replacing the panels make sure they are flush an not crocked as this could cause the stove not to operate correctly.

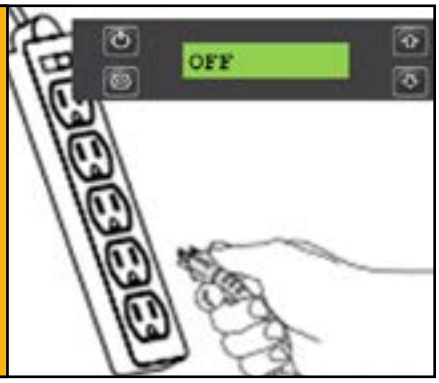
The left panel has an air chamber behind it which is important to have clean for proper air flow through the stove.

The baffles should be cleaned at least once a week.

AMBIENT PROBE INFORMATION

THE AMBIENT PROBE IS LOCATED ON THE BACK LOWER RIGHT SIDE OF THE STOVE. IT IS A SMALL RUBBER END ON ABOUT A 3' WIRE. IT TELLS THE STOVE WHEN TO KICK ON AND OFF BY SENSING THE TEMPERATURE OF THE ROOM AIR.

1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Remove the right hand side panel of the stove. This is the right side when looking at the stove.

3. Locate the probe on the back panel of the stove. It will be a single black wire leading to a grommet in the back of the stove that holds the end of the probe.

4. Locate the wire/ twist tie securing the ambient probe wire. Remove the tie so you can adjust the probe if needed.

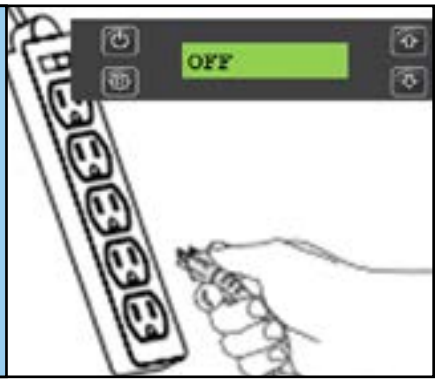
5. Pull the probe carefully through the grommet out of the back of the stove. You will want to place the probe about waist high as far away from the stove as possible.

NOTE:

Avoid laying the probe on the floor, taping to the wall or in a drafty area. If you stove seems to be kicking off sooner or later than it should be the probe may need to be adjusted to another area.

IGNITER PLACEMENT

1. Turn the stove off and make sure the stove is completely shut down. After the stove is completely shut down unplug the stove from the outlet.



2. Make sure the stove is completely cool. Clean the fire box and fire pot area.

3. After cleaning the fire box area. Remove the fire pot and find the igniter chamber under the fire pot.

4. Make sure the igniter is sitting centered in the igniter chamber and back about 1/4 inch.

NOTE:
If the igniter is dirty or the fire pot holes are clogged the stove may have trouble lighting. The igniter itself does not light the pellets but the hot air moving around the igniter. If there is no air flow to travel the hot air the stove may not light.