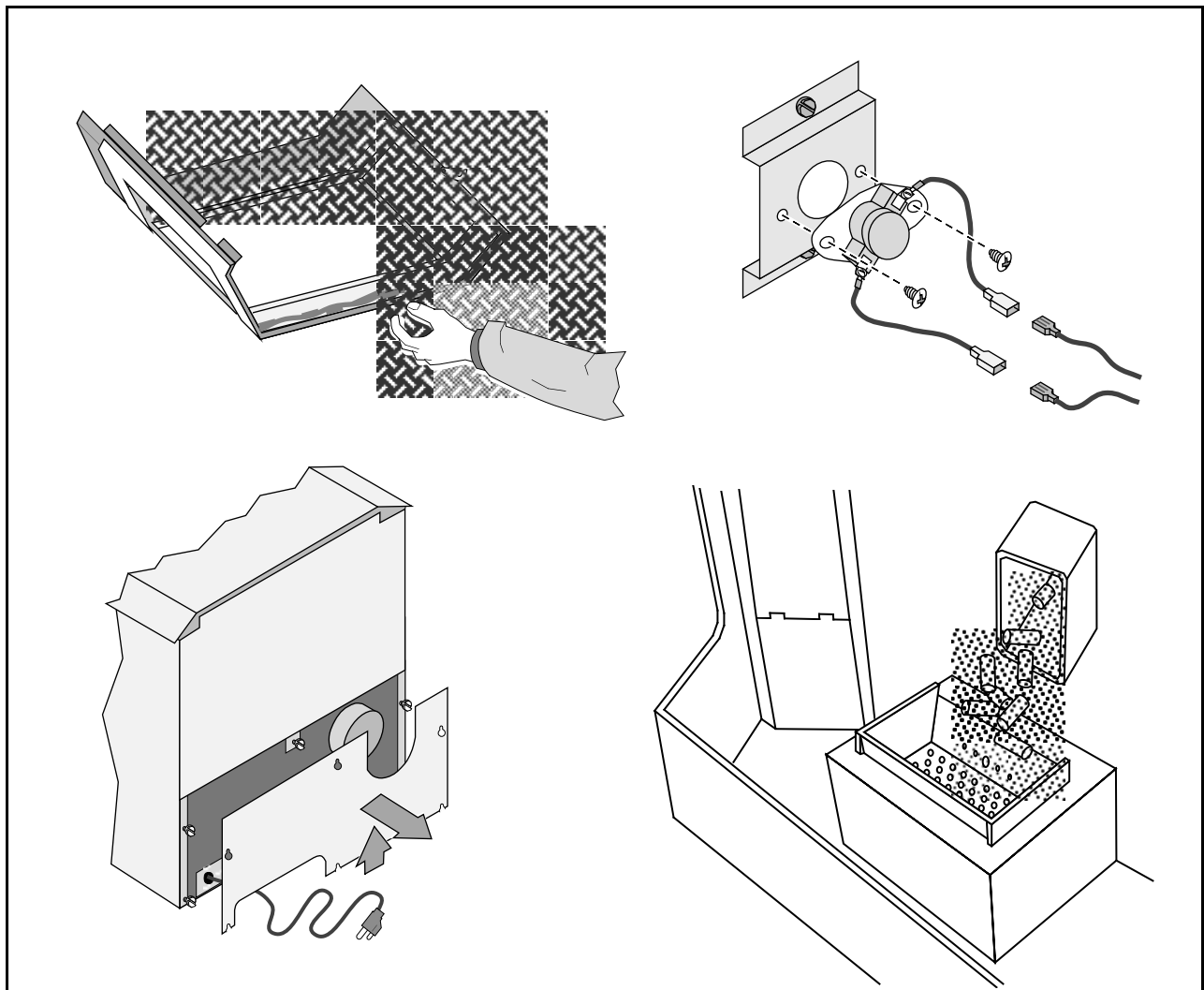


Pellet Stove Service Guide



This manual addresses the following models:

- Avanti PS
- Avanti PI
- Heritage Bay PS
- Heritage Bay PI

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Models Addressed in This Guide

This guide addresses the Avalon Avanti and Lopi Heritage Bay pellet stoves and inserts. For earlier Avalon 900 and Lopi FoxFire and 400 models, refer to the 1994 Pellet Troubleshooting Guide.

Who Should Use this Guide

This guide was developed for service personnel and those selling Travis Industries products. Because of the inherent danger involved with heating appliances, all work must be done by qualified personnel only. The heater must be installed in accordance with the owner's manual and all local building codes. Bring an owner's manual for the heater being serviced in case any installation or maintenance questions arise.

Precautions



This heater becomes very hot during operation - use care to prevent burns or property damage while servicing.



Make sure the appliance is unplugged before conducting service or replacing a component. Some procedures may require the heater to be plugged in while diagnosing the problem. In these cases, use caution to prevent arcing or electrical shocks.



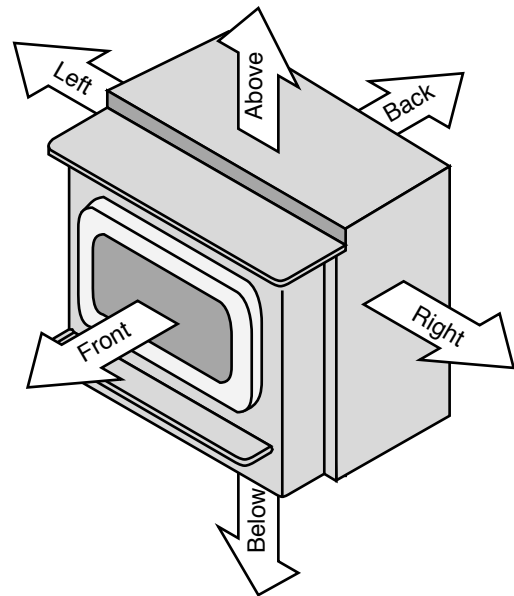
Before conducting service, lay down a drop cloth to prevent flyash and other debris from staining the carpet or other flooring. On inserts, lay down a piece of cardboard on the hearth to prevent scratches.

How to Use this Service Guide

This guide uses several sections to address pellet stove service. The flowchart section (section 1) details the troubleshooting process from start to finish. Section 2 addresses each troubleshooting step individually (if you know the problem, you may wish to go directly to the troubleshooting step). Section 3 is dedicated to removal and replacement instructions. Section 4 contains technical specifications.

When this troubleshooting guide refers to a side or direction, use the diagram to the right to determine direction.

When this troubleshooting guide refers to a electrical connectors, use the following diagram to determine the type of connector.



Key to Quick Connects



Male



Female

Items to Bring on Service Calls

Tools

- Nutdrivers, open end & socket wrenches in 1/4", 5/16", 11/32", 3/8", 7/16", 1/2", 7/8", 1"
- Door Tool (1/4" Allen Wrench)
- Multimeter
- Standard and Phillips-head Screwdrivers
- Wire with a male quick-connect attached to each end (called a jumper wire)

Hot Wire



Jumper Wire



- Power cord with female quick-connects attached to the hot and common wires (called a hot wire)
- Ash Vacuum (or shop vacuum with drywall filter) and bottle brush for cleaning the stove
- Lock Ties (for keeping all wires from contacting hot portions of the stove)
- Cleaner, paper towels, drop cloth, cardboard & other supplies to clean any flyash entering home.

Spare Components

- | | |
|---------------------------------|--|
| • Circuit Board | • Convection Blower |
| • Auger Motor | • Heater Fuses (5 Amp Quick - 1/4" x 1-1/4") |
| • Exhaust Blower | • Circuit Board Fuses (6 Amp 5 mm x 20 mm) |
| • Snap Disks (System & Hopper) | • Burn Pot |
| • Wiring Harness | • Door Gasket Kit (includes cement) |
| • Exhaust Motor & Blower Gasket | • Igniter |
| • Power Cord | • Flow Switch |

3 Bags of High-Quality Pellets

Many pellet stove problems are due to poor quality pellets. Burning high quality pellets on-site often convinces the pellet heater owner to switch to a higher quality fuel.

Silicone Sealant

RTV 500° Silicone must be used to seal the joints between vent sections.

Eliminating False Fixes

Unfortunately, many service calls provide only a temporary solution. Unless the true problem is found, conducting service may only provide a slight performance increase. Often, when a part is exchanged with a new part, the stove's performance will improve enough to operate at a low performance level. For example, if you install a new exhaust blower you may improve performance enough to let the stove burn. But unless you clean the stove and show the customer how to maintain a clean stove, you will not fix the real problem. This stove with a "false fix" may work for several months, only to fail again. To eliminate false fixes and help make correct diagnosis, keep in mind these principles when diagnosing pellet stoves:

Treat the Pellet Stove as an Entire System

Air leaking through the door seal will decrease performance; a dirty stove will decrease performance; poor pellets will decrease performance: before you leave a service call, make sure all aspects of the pellet stove are working correctly. Just because you fixed a door leak does not mean that you should not check for flyash buildup.

Test Components Individually

Before replacing a component, test it against a new component. This is especially important for blowers and auger motors. Simply plug them in directly to a hotwire and compare performance.

Test the Stove Thoroughly

Before leaving a customer's home, make sure to operate the stove for at least one-half hour. Use the time to clean up or finish paperwork. Furthermore, test the stove on various burn rates to ensure proper operation.

Know the Stove's Performance Level

Become familiar with how a brand new stove performs. Check the flame quality (on high and low), heat output, blower noise, blower cfm, air wash, normal ash buildup, and door seal. Everything should be noted. With a new stove as a benchmark, you can test a customer's stove for relative performance.

The 5 Most Common Problems

Before leaving a service call, make sure the following items have been checked:

- Air Leaks
- Dirty Stove
- Jammed Auger
- Poor Pellets
- Blocked Vent

Warranty Procedure

Most components inside Travis Industry stoves are warranted. To receive credit for a component covered on the warranty, follow the PRA (**P**roduct **R**eturn **A**uthorization) procedure below:

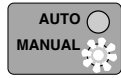
- 1) Fill out a PRA form (white, pink, & gold carbon paper form) - keep the gold copy for your records.
- 2) Send the form, along with the component, to Travis Industries, Attn: PRA Returns, 15530 Woodinville Redmond Road, Suite # 300, Woodinville, WA 98072.
- 3) When it is tested defective, you will receive full credit.
- 4) Order a new component (if needed to replace existing stock).

NOTE:

The items must be defective and under warranty to receive credit. If the component is tested and found to be workable, or if it is not under warranty, it will be returned to you at your expense. The items must be accompanied by a PRA form with all the information completed.

Stove Won't Start

Re-start the stove by moving the mode switch to "OFF" then "MANUAL" and pressing the "MANUAL START" button (press this button firmly).



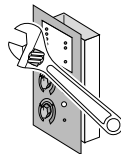
Plug in a lamp or other appliance to verify the power outlet is supplying power.



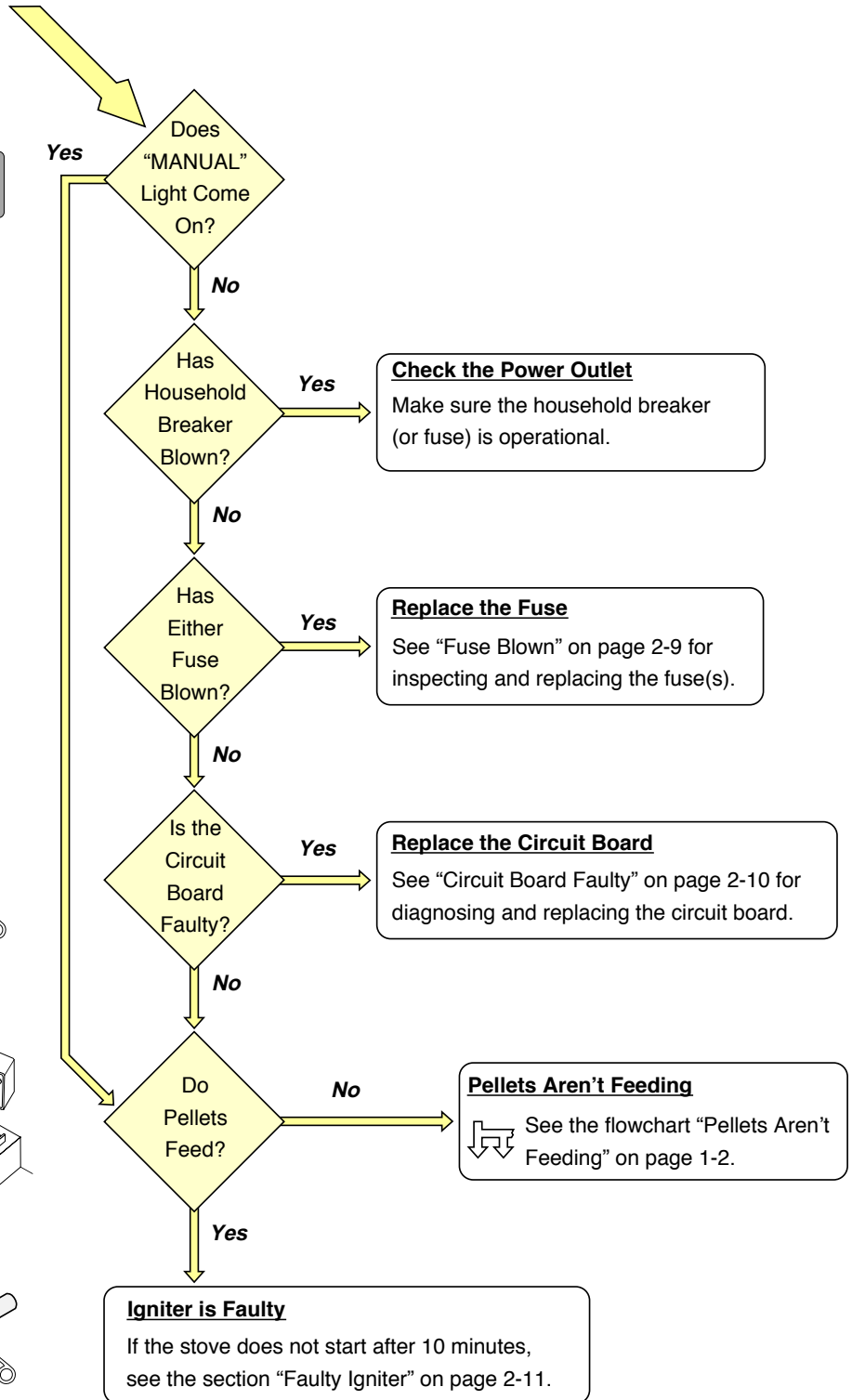
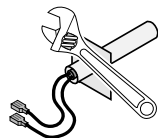
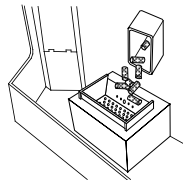
There are two fuses on the stove - one on back of the heater near the power cord, one on the back of the circuit board.



To check the circuit board, replace it and check operation.

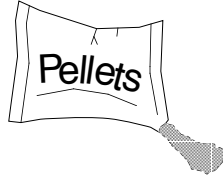


Start the stove and check for pellets feeding into the burnpot.



Pellets Don't Feed

Make sure the hopper has pellets. If the stove recently ran out of pellets, it will take approximately 10 minutes for new pellets to feed.



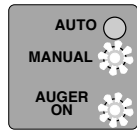
Pellets in Hopper & Auger Primed?

No

This is Normal
Fill the hopper and start the heater. It should start in 7 to 10 minutes.

Yes

Re-start the stove by moving the mode switch to "OFF" then "MANUAL" and pressing the "MANUAL START" button (press this button firmly).



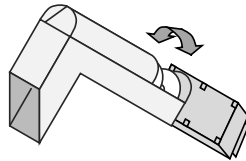
Does Auger Light Come On?

No

Stove Does Not Start
See the flowchart "Stove Does Not Start" on page 1-1.

Yes

Empty the hopper of pellets and carefully look at the auger. If it moves slightly back and forth during operation, the auger is most likely jammed.



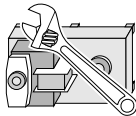
Is the Auger Jammed?

No

Clear the Auger
See "Clearing the Auger" on page 2-12 for details on un-jamming the auger.

Yes

Listen to the auger motor to detect if it is working (see "Auger Motor Defective" for more details).



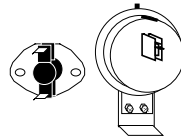
Is Auger Motor Working?

No

Auger Motor Defective
See "Auger Motor Defective" on page 2-13 for details on diagnosing and fixing auger motors.

Yes

The auger circuit is used to disable the auger in cases where the flue becomes hot or the hopper overheats.



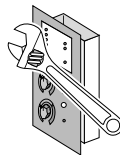
Is Auger Circuit Faulty?

Yes

Auger Circuit Faulty
See "Auger Circuit Faulty" on page 2-14 for details on diagnosing and fixing auger circuits.

No

To check the circuit board, replace it and check operation.



Replace the Circuit Board
See "Circuit Board Faulty" on page 2-10 for details on diagnosing and replacing the circuit board.

Stove Burns Poorly

A poorly burning stove will have a dark, sooty flame.
Often the burnpot will fill up with smoldering pellets.

Look for dark "clinkers" inside the burnpot.

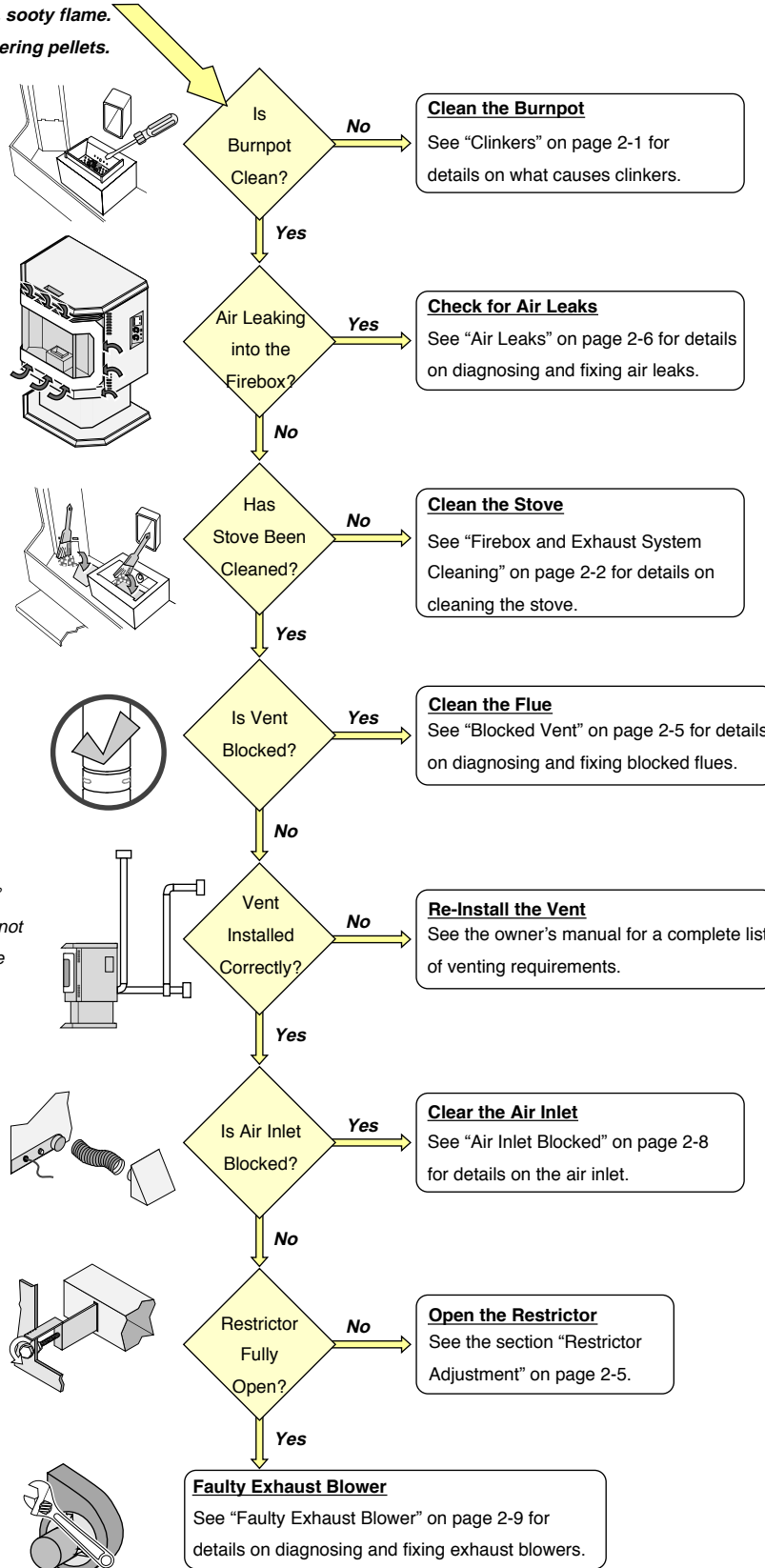
Air leaks are the most over-looked area when troubleshooting pellet stoves.

Check for blockage where the flue turns upwards and at the cap.

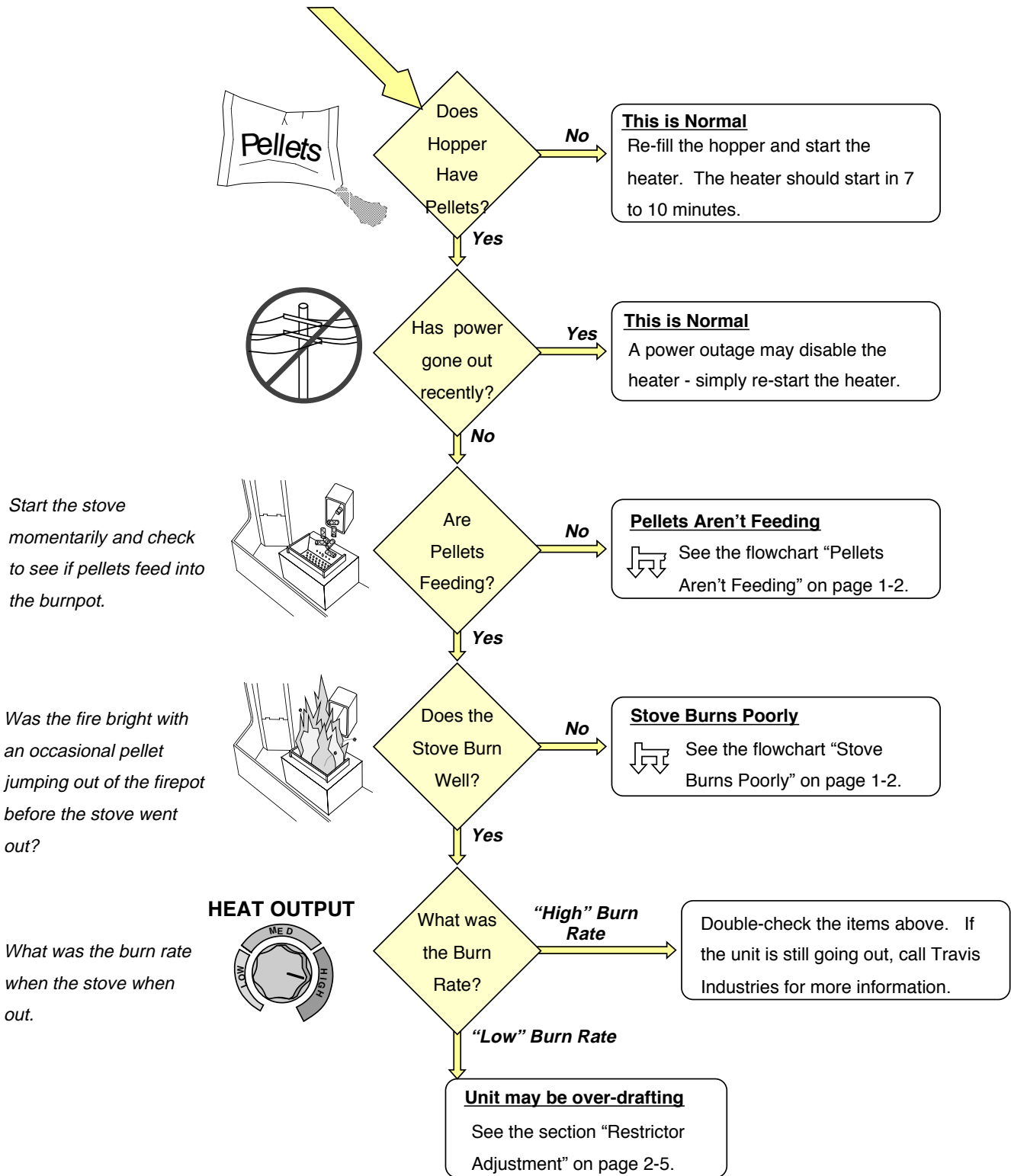
The vent may have a maximum of two 90° elbows, must not be higher than 35', must not run horizontally more than 10', and in some cases, must be 4" in diameter.

Make sure the air inlet cap is not blocked and the flex tube is not crushed.

The restrictor is only for stoves that over-draft .

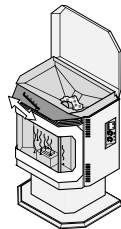
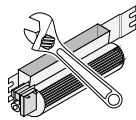
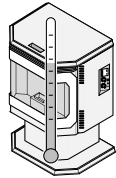
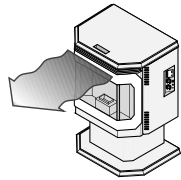


Stove Goes Out

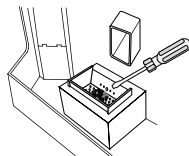


Stove Doesn't Heat

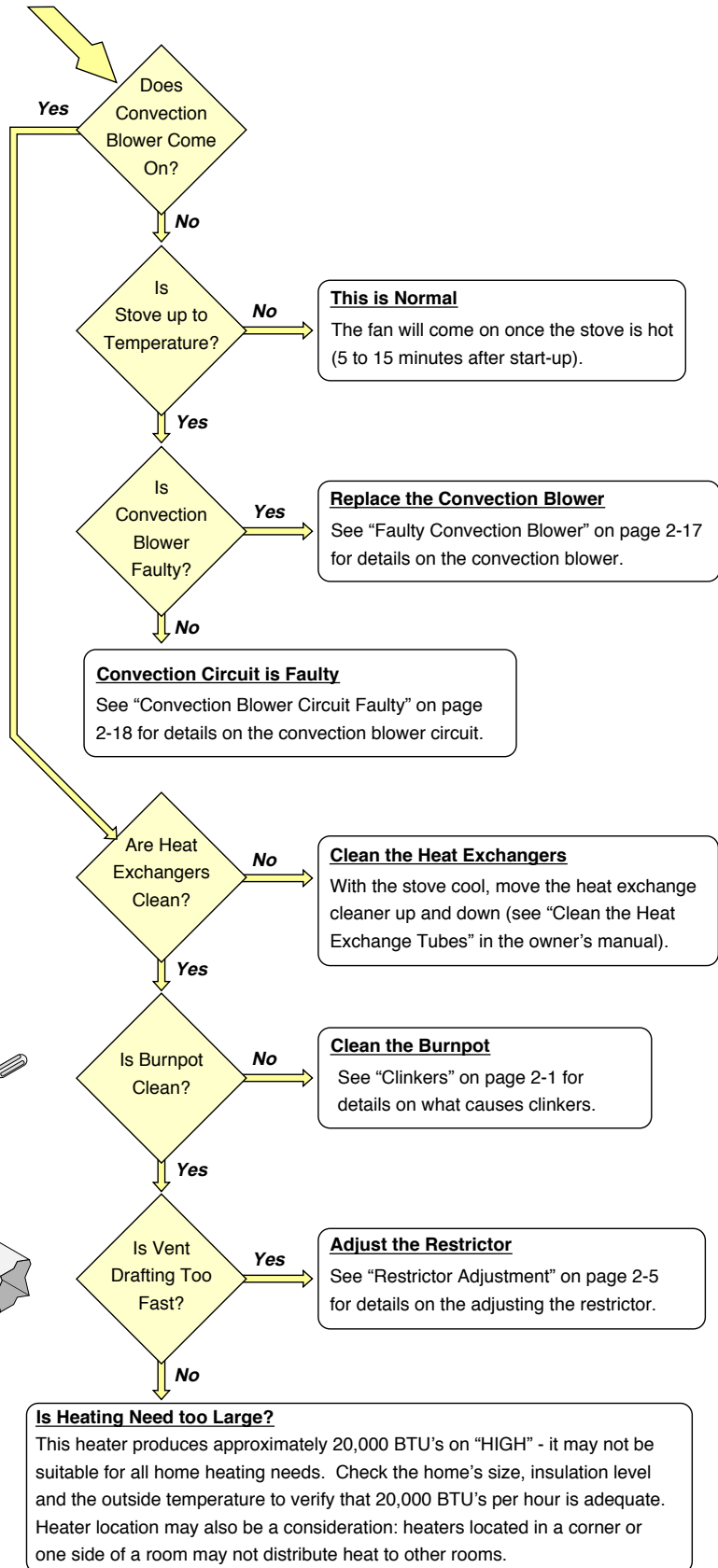
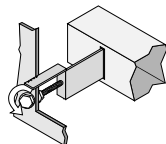
The convection air blows heated air above the door.



Look for dark "clinkers" inside the burnpot.

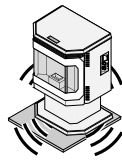


To check draft, inspect the pellets inside the burnpot while on "Low". If un-burned pellets jump out of the burnpot, you may wish to adjust the restrictor (watch for several minutes).

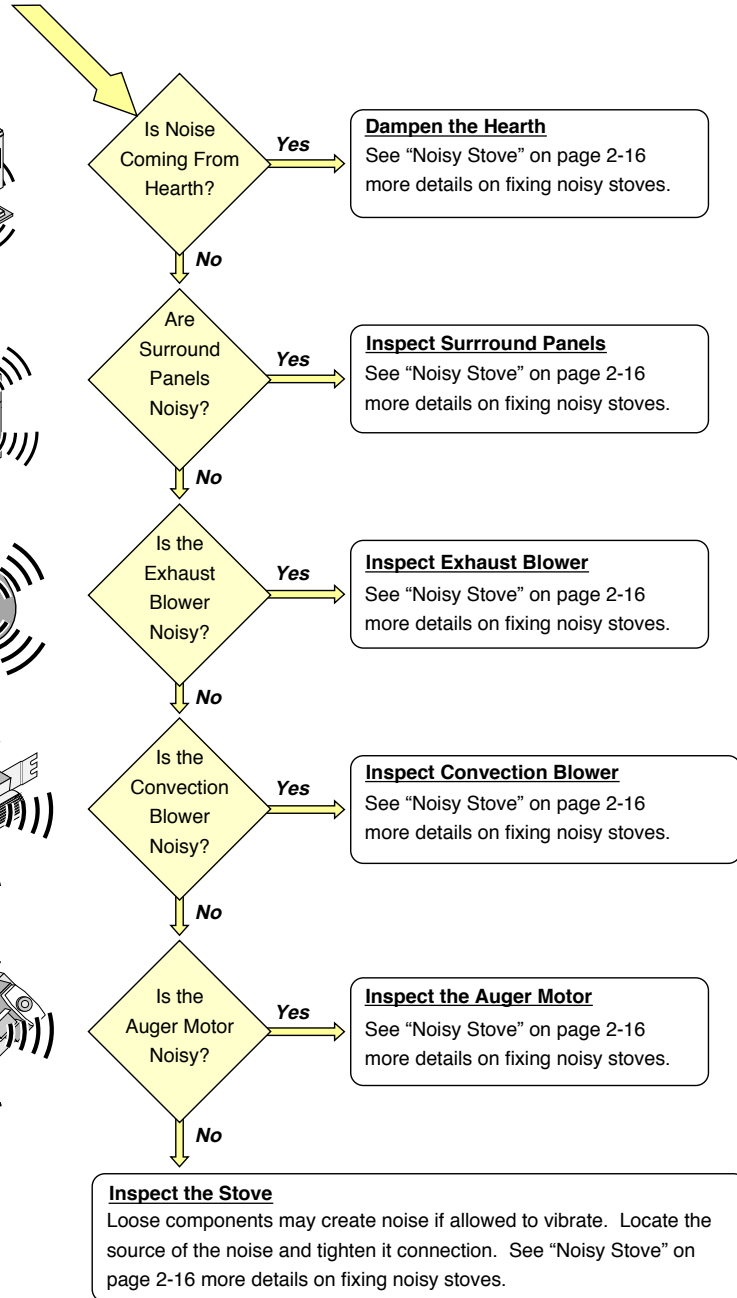


Stove is Noisy

Try pressing down on various points around the base of the heater to see if it decreases noise.

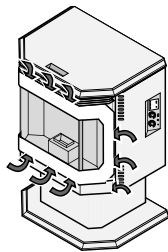


Try pressing down on the surround panels and decorative trim to see if it decreases noise.

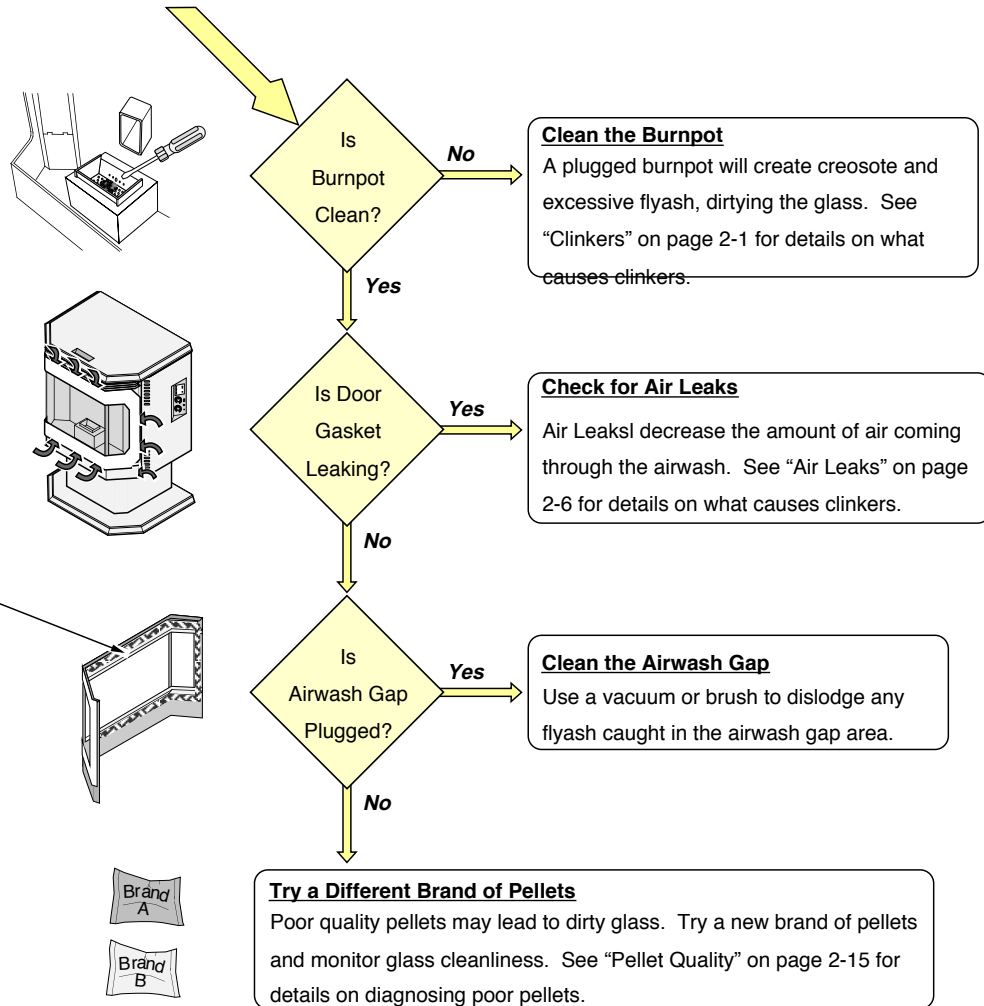
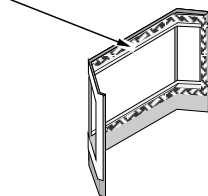


Glass is Dirty

The door seal can be checked by closing the door on a piece of paper. If the paper slides out easily, the door seal is not tight enough.



The lower airwash gap, located next to the burnpot, may become plugged with ash. Look for ash piling up in the area directly behind the glass on the bottom.

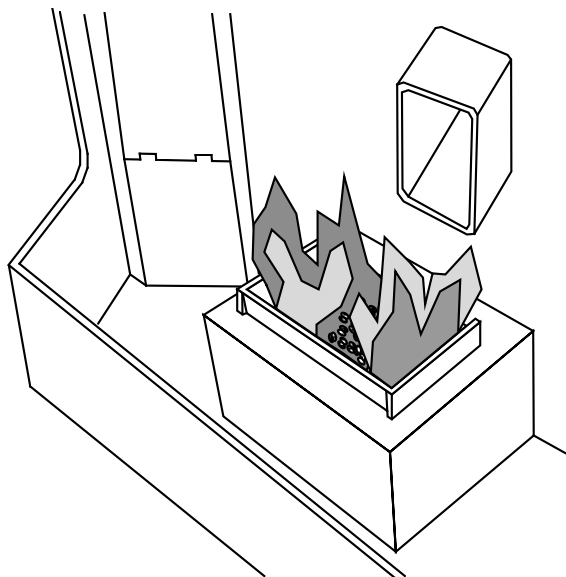


Clinkers

If the flames are coming only from the sides, or are orange and black, turn the stove off and check for clinkers. Clinkers are hardened clumps that form over the air holes inside the firepot.

The most likely causes are:

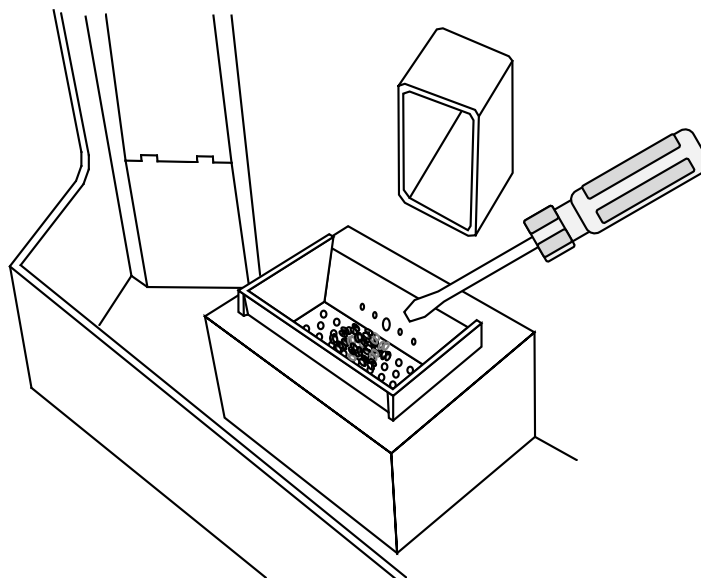
- Poor pellet quality
- The door or glass has an air leak
- The stove or vent requires cleaning



Make sure the stove has fully cooled (approximately 25 minutes) before conducting service.

Cleaning the Firepot

To clean the firepot, open the door (see page 23) and knock away any debris on the firepot with a screwdriver. If severely clogged, remove the firepot to gain better access. Use a screwdriver, or other tool, to fully dislodge any clinkers on the firepot.



Stove Cleaning

Ash buildup is the leading cause of poor performance. Excessive buildup can even lead to stove failure. Regular cleaning is required to keep pellet stoves operating. Whenever service is conducted, consider cleaning the stove in front of the homeowner to display how this process is conducted. The four sections of stove cleaning, and the appropriate cleaning frequency are displayed below:

Section	Frequency
Clean the Firebox	Twice a Week – or Every 10 Bags
Clean the Vertical Exhaust Duct	Once a Year – or Every 2 Tons
Clean the Horizontal Exhaust Duct	Once a Year – or Every 2 Tons
Clean the Exhaust Box and Exhaust Blower	Once a Year – or Every 2 Tons



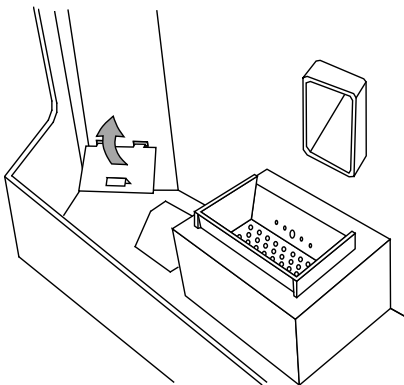
Make sure the stove has fully cooled (approximately 25 minutes) before conducting service.



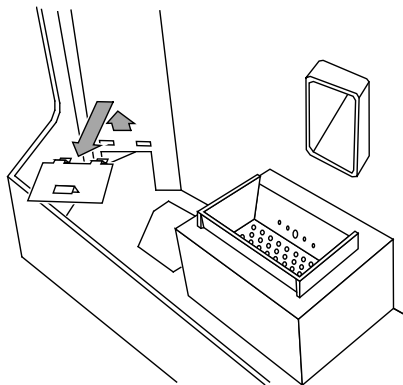
A shop vacuum with a drywall filter (available at most hardware stores) will remove flyash well. The drywall filter prevents the fine ash particles from entering the air.

Clean the Firebox

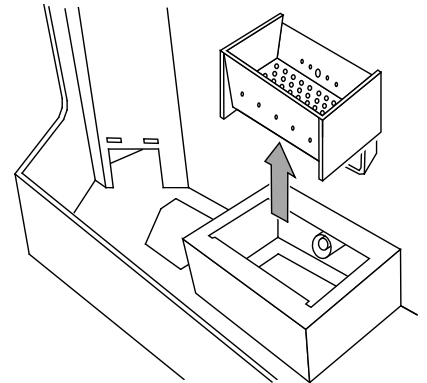
a Swing the side ash trap door up.



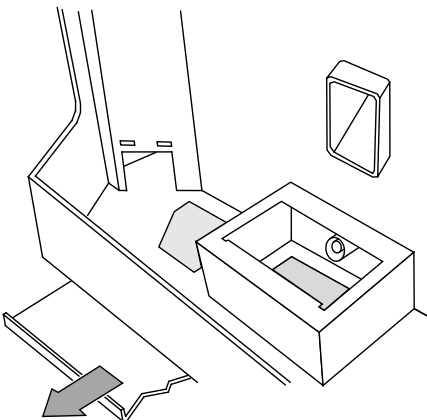
b Lift it up and away from the firebox. Repeat for the opposite side.



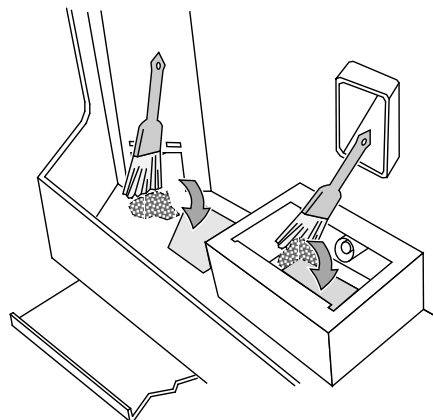
c Lift the firepot out of its holder.



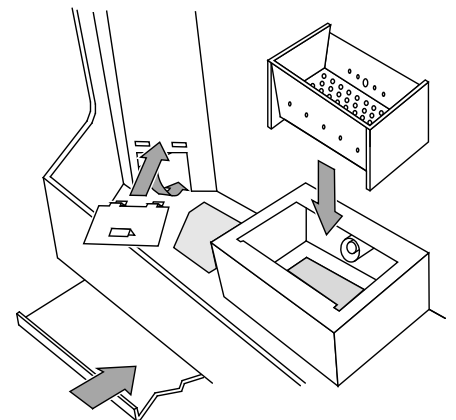
d Slide the ash pan trap door forward to expose the ash dumps.



e Brush all flyash into the ash dumps, including the flyash inside the firepot holder.



f Replace the ash trap doors and firepot. Slide the ash pan trap door forward.



Stove Cleaning (continued)

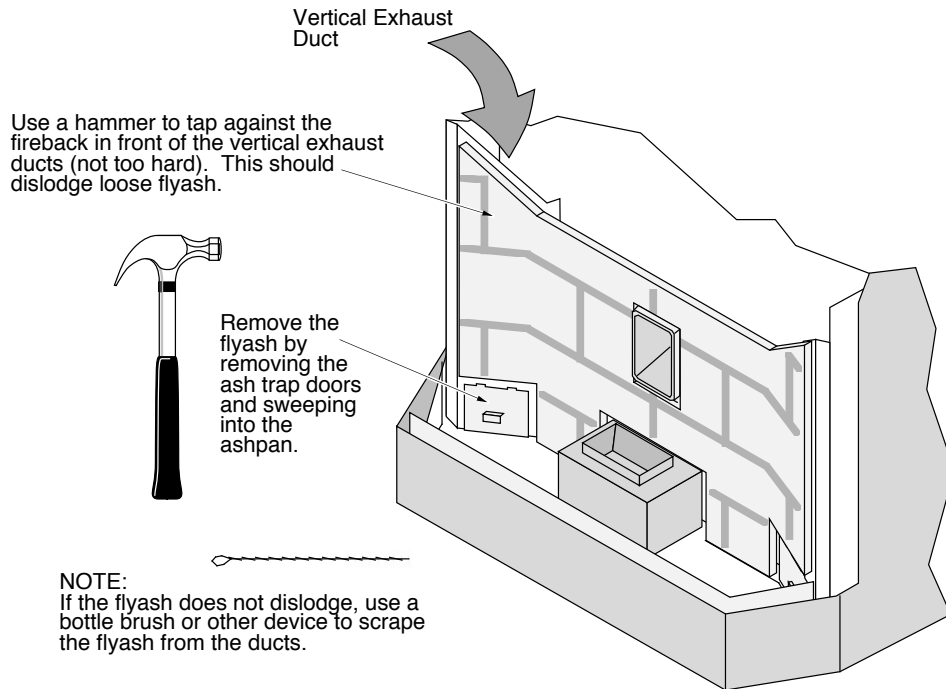
Clean the Vertical Exhaust Duct

The following models have vertical exhaust ducts welded in place.

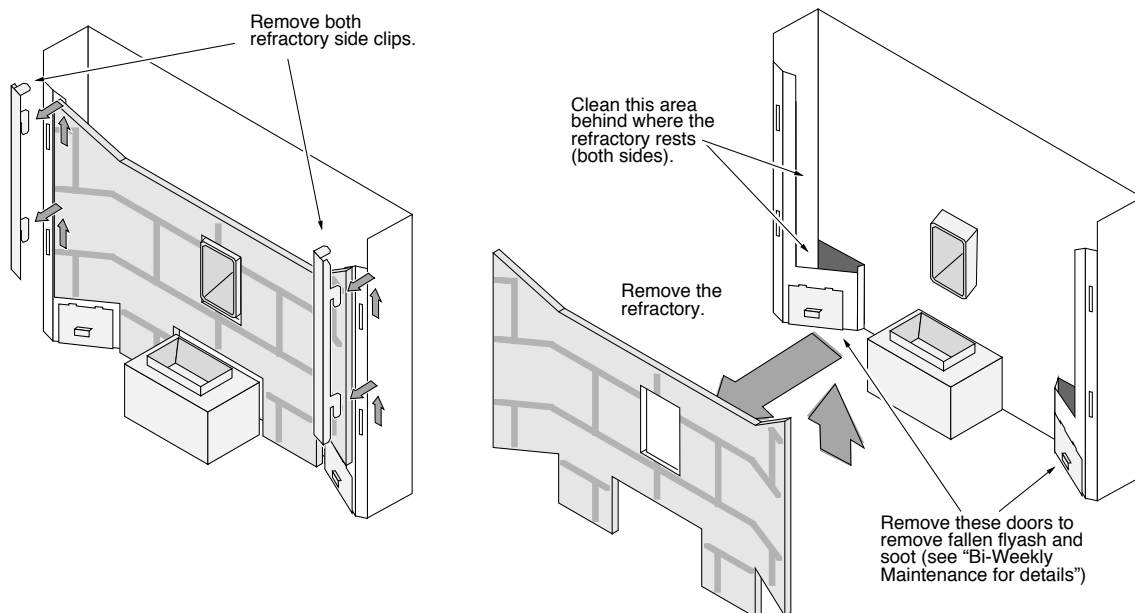
Heritage Bay PS serial # below 211650
Avanti PS serial # below 121700

Heritage Bay PI serial # below 410650
Avanti PI serial # below 320525

To clean, follow the directions below.

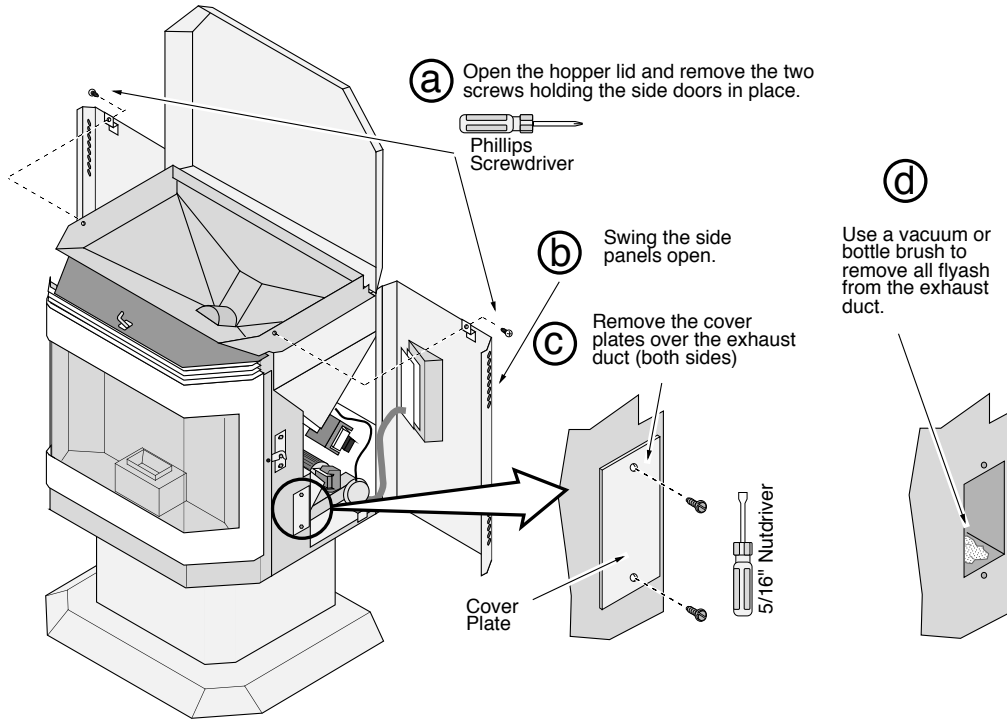


More recent models use the cast-iron fireback as the front of the vertical exhaust duct. To clean, follow the directions below.

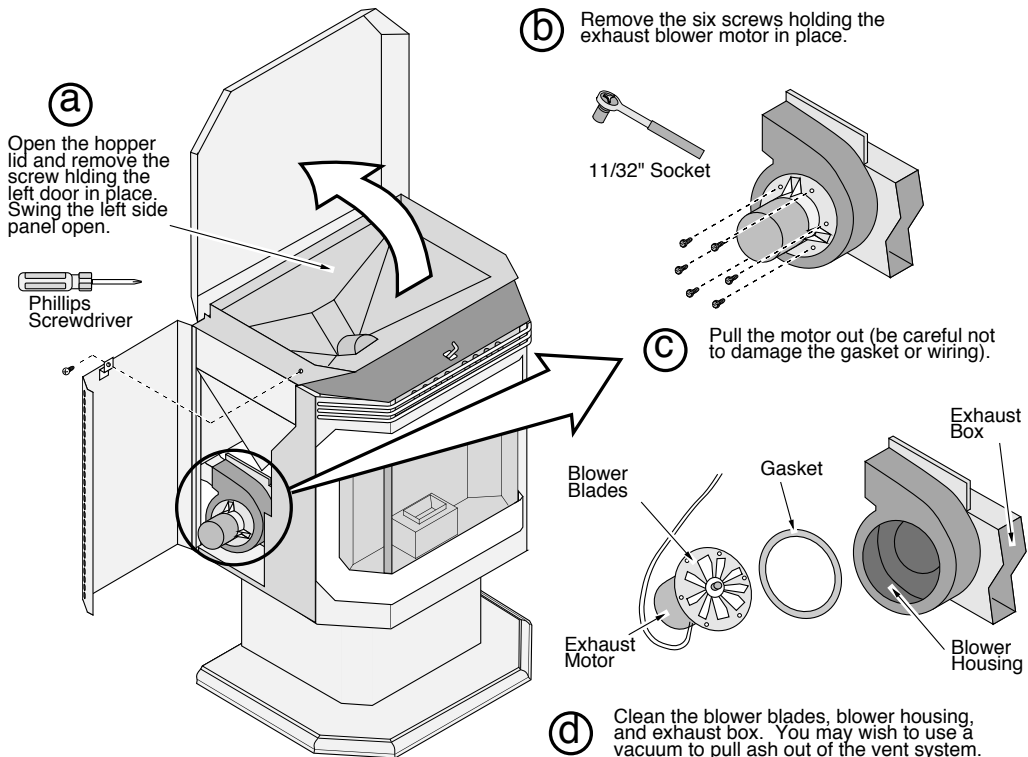


Stove Cleaning (continued)

Clean the Horizontal Exhaust Duct



Clean the Exhaust Box, Exhaust Blower

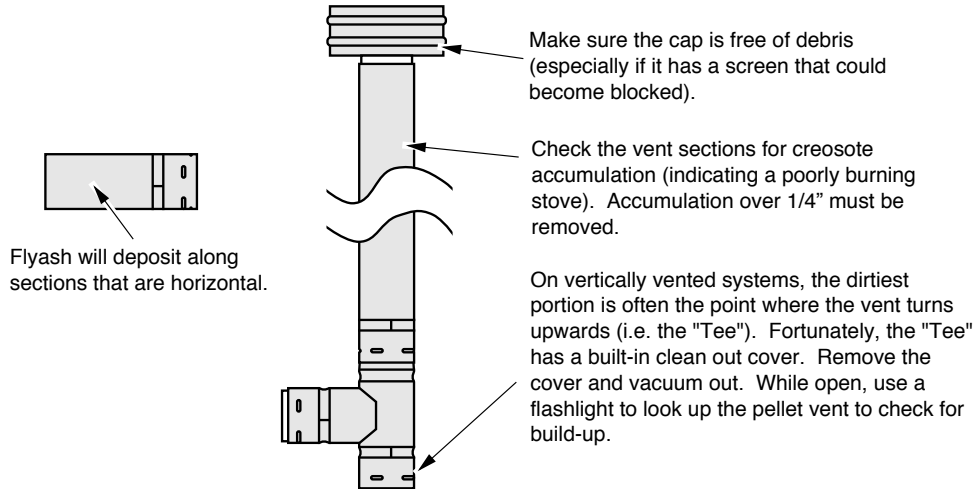


Blocked Vent

Flyash that has been expelled by the exhaust blower will accumulate in the vent sections. Check the locations shown below for flyash buildup, and, if necessary, clean the entire vent system.



Make sure the stove has fully cooled (approximately 25 minutes) before conducting service.



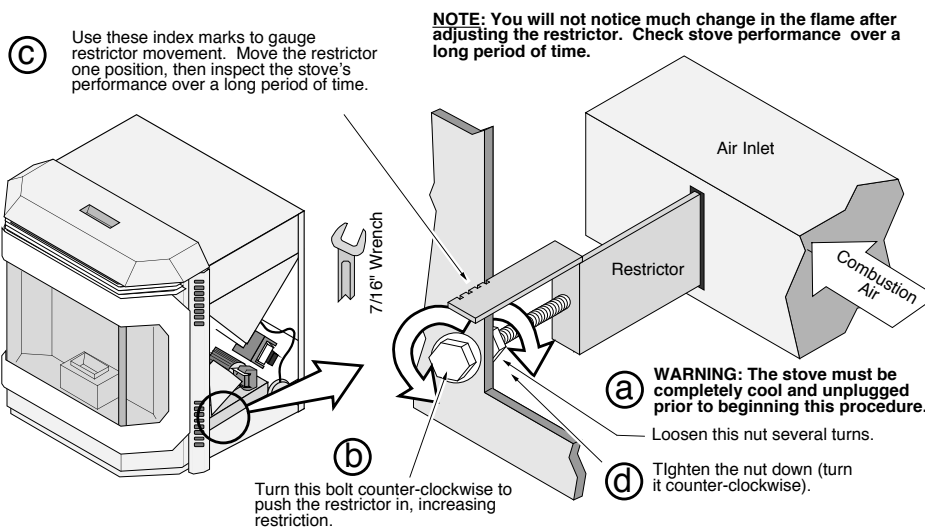
Restrictor Adjustment

In some cases the vent will produce too much draft for the stove. This leads to an inefficient burn, and in some cases, the flame going out. Excessive draft typically happens in tall vertical installations or very short horizontal installations. The factory restrictor setting is wide open.

When to Adjust the Restrictor

- If un-burned pellets are expelled from the firepot often (make sure they are un-burned, not just cylindrical embers), the restrictor needs adjustment.
- If on LOW the pellets burn too quickly and the flame goes out, the restrictor needs adjustment.

How to Adjust the Restrictor



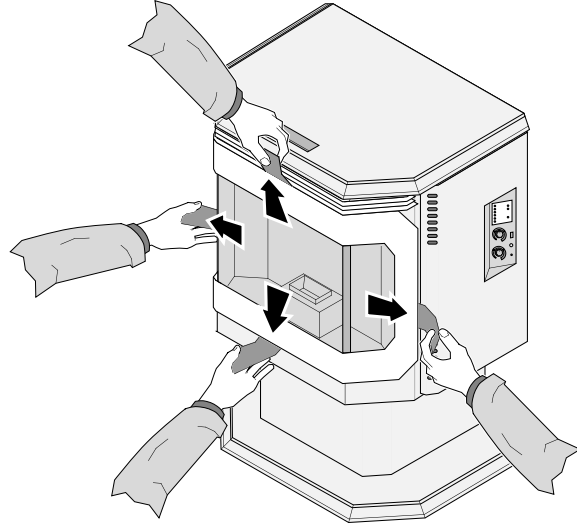
Air Leaks

Air leaks can come from the door or ash pan. Follow the directions below to diagnose and fix any air leaks.

Checking the Door Seal

Close the door on a dollar bill (or a piece of paper). Then try pulling the bill out. If it comes out easily, the door gasket is not forming a seal. Repeat this process around the perimeter of the door to ensure a complete seal. If the seal is inadequate, check the door gasket. If it is flattened, or does not protrude at least 3/16" from the door frame, replace the door gasket. If the gasket is adequate the door will require adjustment.

To check the glass seal, press on each panel of glass. If the glass moves easily, the glass gasket has become displaced or damaged. To fix the glass seal, disassemble the door and re-assemble, ensuring the glass gasket is properly placed.



Replacing the Door Gasket

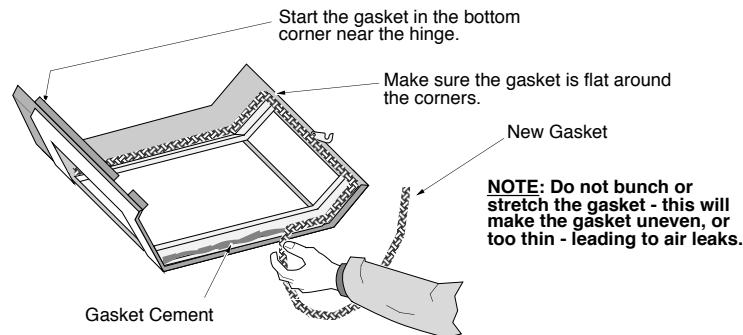


Make sure the stove has fully cooled (approximately 25 minutes) before conducting service.



Use only Travis Industries gasket when replacing the door gasket.

- 1 Remove the decorative trim above the door by opening the hopper and removing the two screws holding it in place (use a phillips-head screwdriver).
- 2 Remove the door by unlatching it, opening it wide open and lifting it straight up off the hinge mounts. You may need to swing the door back and forth to loosen the hinge pins.
- 3 Place the door on a flat, soft surface with the inside of the door facing upwards (do not scratch the gold). Find the beginning of the gasket, usually near a corner, and pull it away from the door assembly. Prepare the surface for the new gasket by scraping off any large pieces of debris with a flat-head screwdriver, scraper, or wire brush. Remove any loose particles.
- 4 Apply a liberal amount of the gasket cement around the area where the new gasket will lie.
- 5 Apply the new gasket onto the gasket cement. Start in the bottom corner near the hinge. Be careful not to bunch or stretch the gasket. Make sure the corners lie flat. The gasket is cut to fit the door - there should be little or no excess length (at most 3").

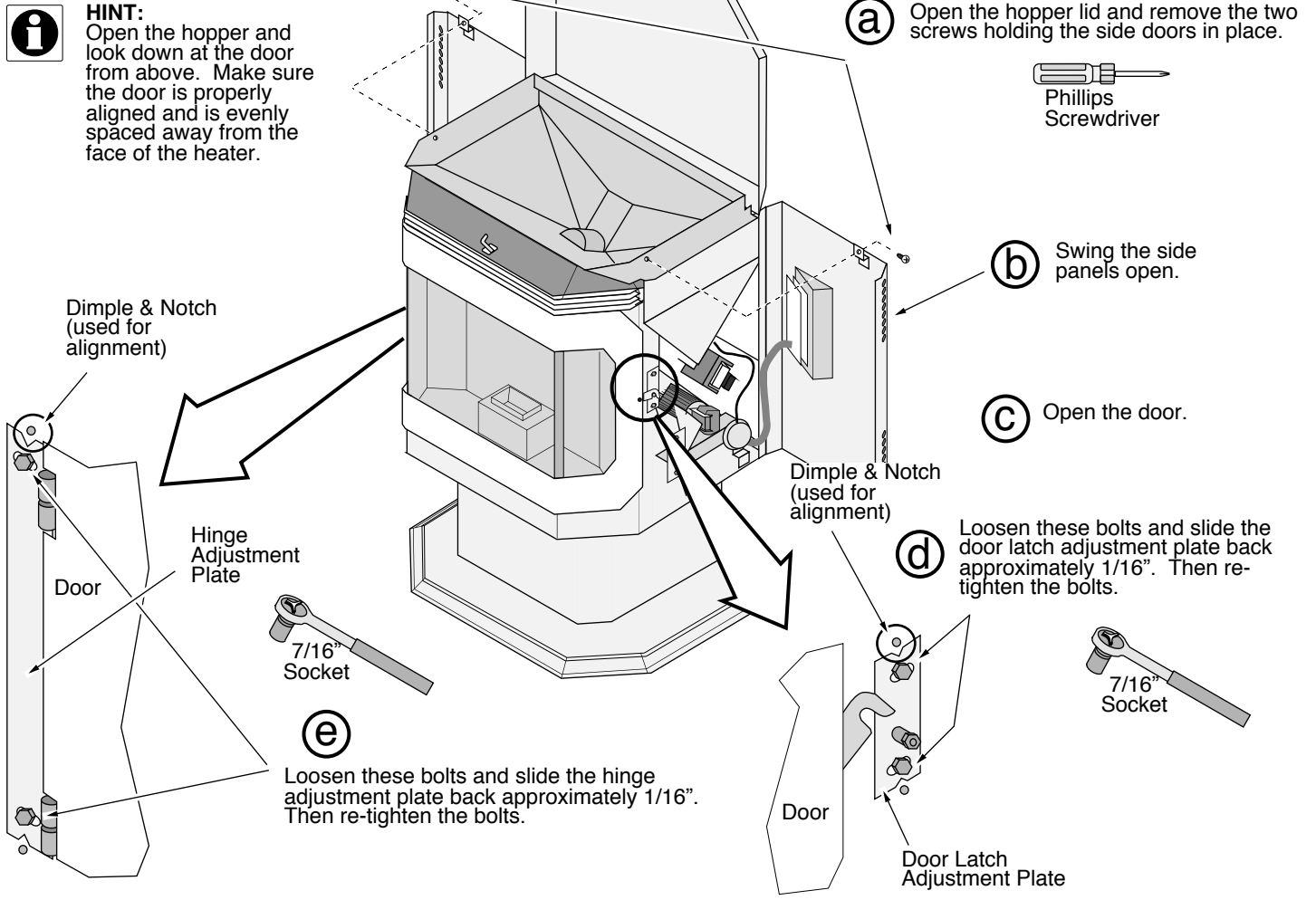


- 6 Wipe any excess adhesive off all free surfaces and let the adhesive set about 30 minutes.
- 7 Re-attach the door assembly and decorative trim. Close the hopper lid.

Air Leaks (continued)

Door Adjustment

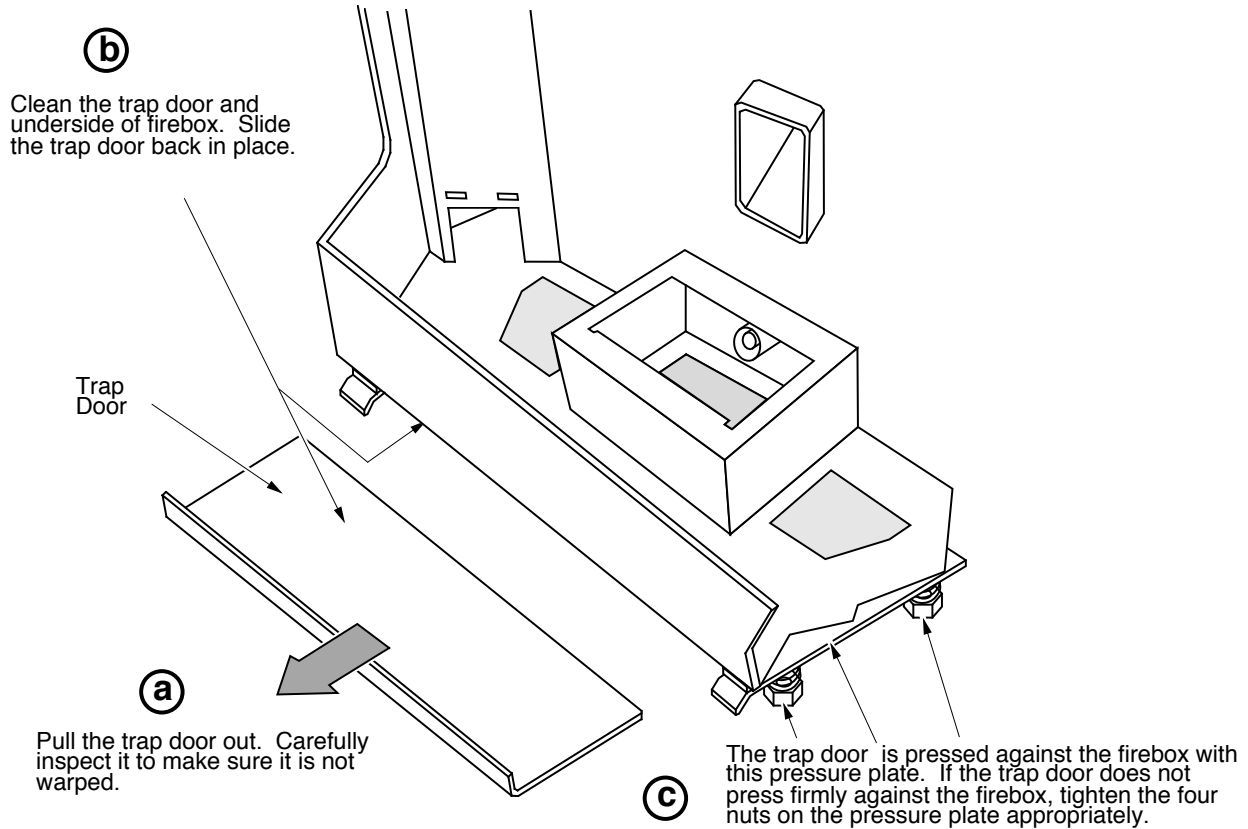
The door latch plate and hinge plate are adjustable, allowing the door to be pulled in closer to the stove. These plates have notches that line up with dimples on the side of the stove. To adjust the door, loosen both plates and move them back $1/16"$. Use the notch and dimple to ensure correct alignment (so the door does not tilt up or down). Re-check the door seal after each adjustment. If you notice the door is tight against one side, but loose against the other, tighten only the side that is loose.



Air Leaks (continued)

Ash Pan Seal

The trap door above the ash pan seals air from entering the firebox. Check the items below to ensure the trap door is sealing.



Air Inlet Blocked

In rare cases the air inlet becomes blocked. Snow or debris can clog the opening. The flexible aluminum duct can be flattened.

To verify the air inlet is functional, remove the air inlet hose from the stove. If stove performance improves dramatically, the air inlet may be restricted or blocked.

Faulty Exhaust Blower

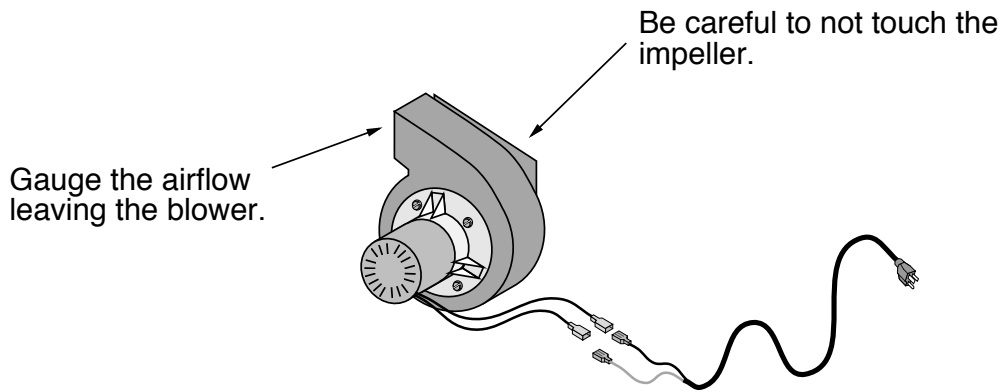
The exhaust blower pulls air through the air inlet, burnpot, and exhaust ducts. If these channels are blocked or restricted, performance will decrease. Therefore, before checking the exhaust blower, make sure the stove is clean.



Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.

The only way to check the exhaust blower is to remove it from the stove, hotwire it, and compare it to a new exhaust blower. See the directions below.

Use a hot-wire to check blower performance (you should do this outside to prevent stray flyash from entering the home).



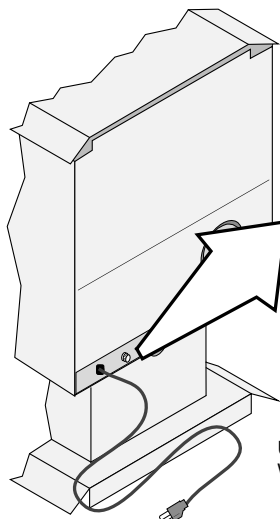
Fuse Blown



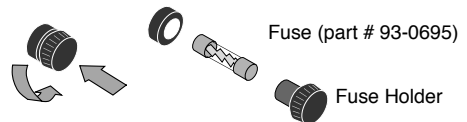
Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.

There are two fuses on the pellet stove. An in-line fuse is found at the rear, near the power cord.

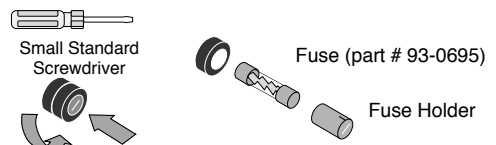
A circuit board fuse is found on the back of the circuit board. See the section "Circuit Board Faulty" for details.



The fuse is located at the back of the stove near the location where the power cord connects. There are two different types of fuse holders:



This type unscrews with your fingers. Press in slightly while turning the fuse holder counter-clockwise to release.



Use a small standard screwdriver for this type. Press in slightly while turning the fuse counter-clockwise to release.

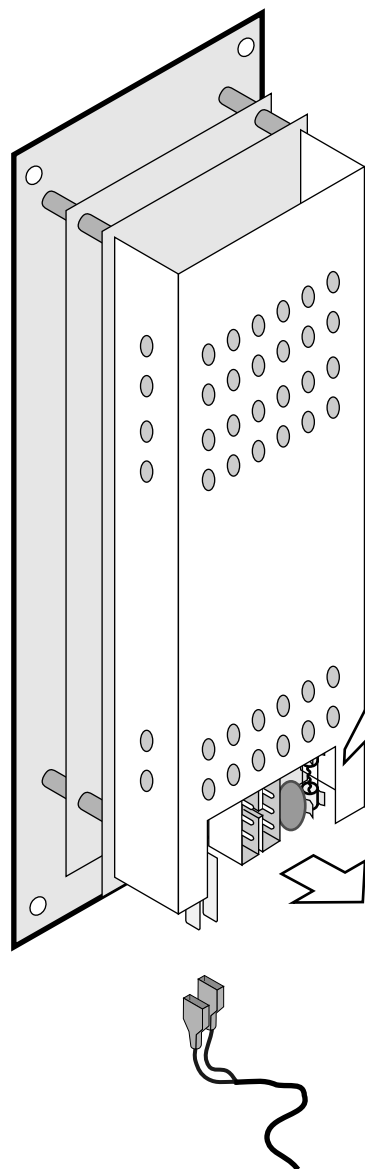
Blown fuses will have a break in the element. In rare cases the fuse may have a loose cap - replace the fuse if uncertain.

Circuit Board Faulty

The circuit board is not serviceable (with the exception of the circuit board fuse – see below). Test this component by replacing it and checking operation of the stove.



Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.



- a** Access the back of the circuit board.

On stoves, open the right side panel. On inserts, remove the surround panel trim, the top panel, and right side panel.

- b** Check the circuit board fuse. If the element inside the fuse is broken, replace it and check operation (in rare cases the fuse cap detaches from the element - replace the fuse if uncertain).

Circuit Board Fuse
(part # 93005019)

- c** Detach the wiring harness from the circuit board.

Pinch these tabs to remove the wiring harness.

Wiring Harness

- d** Attach the wiring harness to the new circuit board and test operation.

If using a thermostat, detach the thermostat wires.

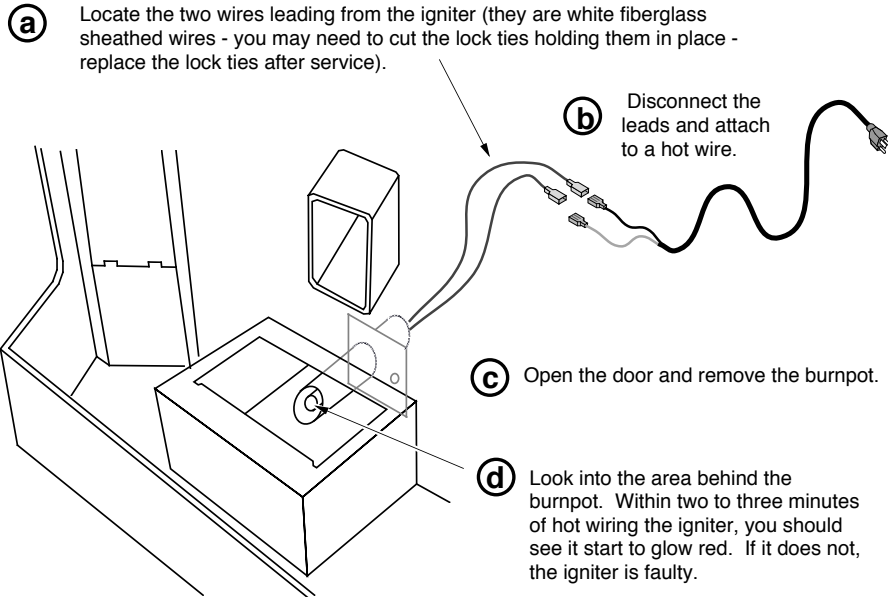
For more details on circuit board operation, see "Circuit Board" in the technical specifications section of this guide.

Faulty Igniter

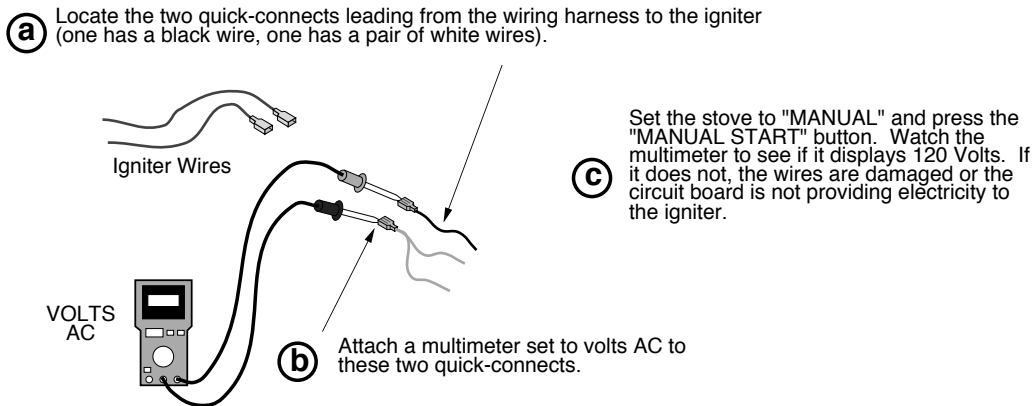
During the start-up sequence the igniter receives electricity for 10 minutes under normal circumstances. To check the igniter, access the right side of the stove and connect a hot wire to the two igniter leads.



Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.



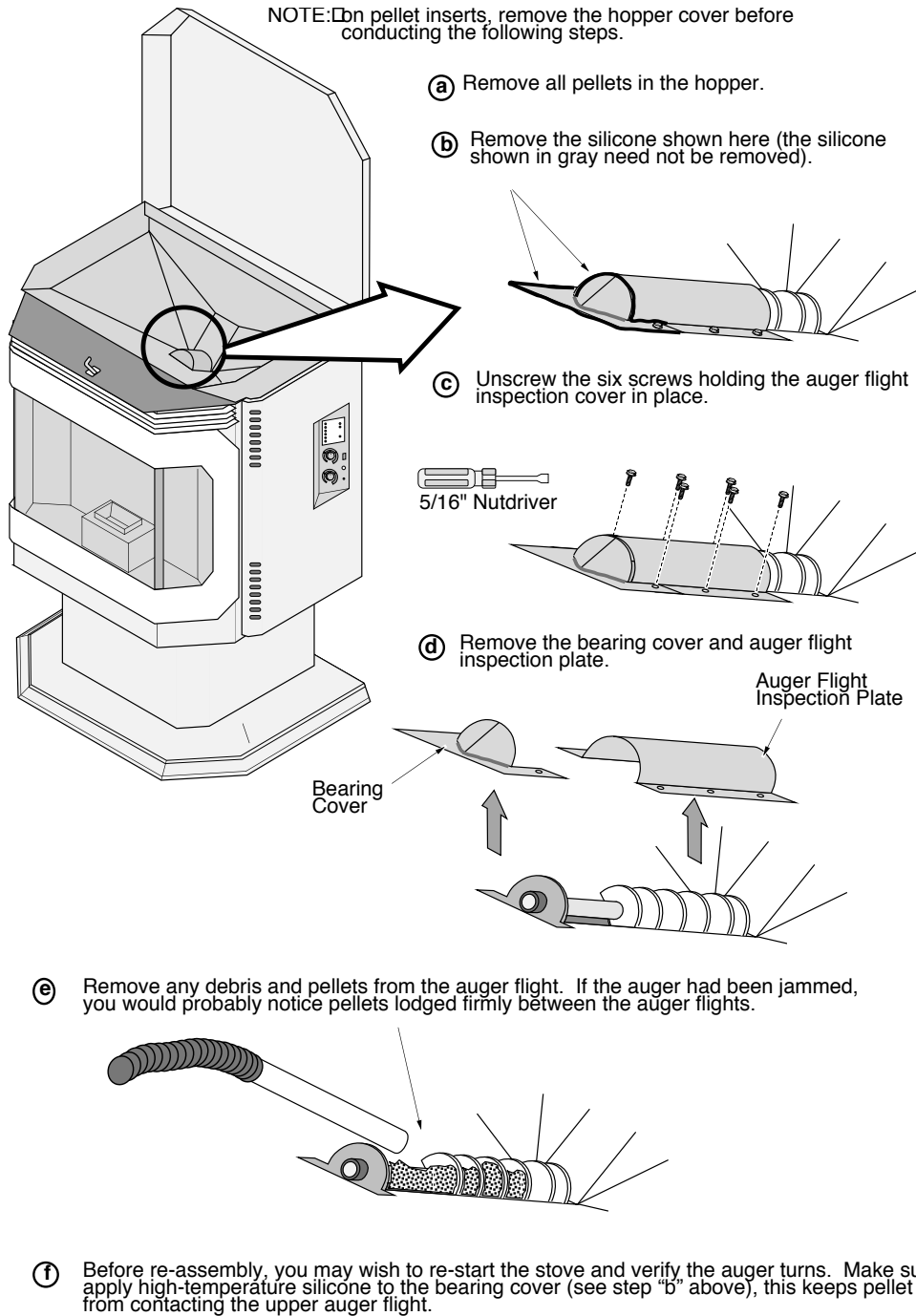
If the igniter does glow red, the igniter is functional. Next, check the wires leading to the igniter.



Clearing the Auger

Several different factors can cause the pellets inside the auger to compress and jam the auger. Pellets, left over the summer, can absorb water, expand, and jam the auger. Pellets piling up inside the burnpot can fill the drop tube and then jam the auger. Foreign objects left in the hopper can jam the auger. To remove the auger flight inspection plate and clear any items jamming the auger, follow the directions below.

NOTE: On pellet inserts, remove the hopper cover before conducting the following steps.

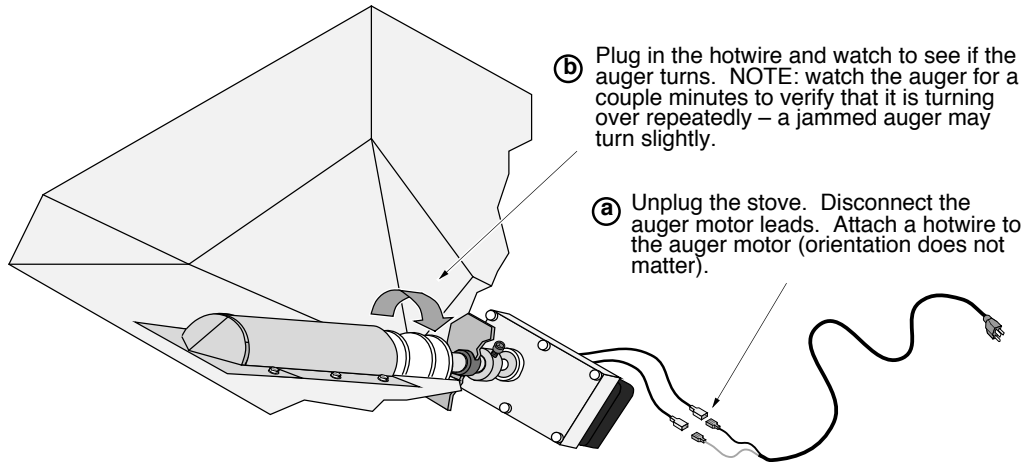


Auger Motor Defective

The auger motor can be checked while it is still installed inside the stove. Follow the directions below to check the auger motor.



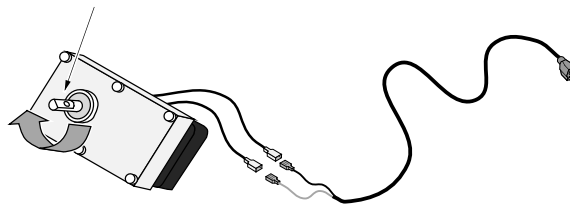
Unplug the stove to prevent electrical shock.



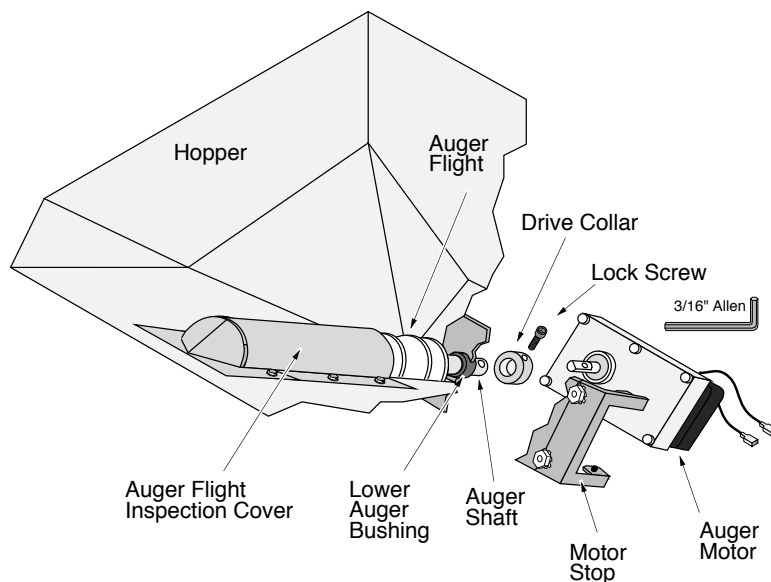
(b) Plug in the hotwire and watch to see if the auger turns. **NOTE:** watch the auger for a couple minutes to verify that it is turning over repeatedly – a jammed auger may turn slightly.

(a) Unplug the stove. Disconnect the auger motor leads. Attach a hotwire to the auger motor (orientation does not matter).

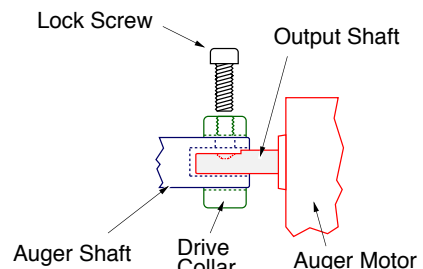
(c) If the auger does not turn over, remove the auger motor, attach a hotwire, and check the output shaft.



If the auger motor is working correctly, the auger may have been incorrectly connected to the auger shaft. Use the illustration below to verify the auger motor connection.



Make sure the lock screw goes through the auger shaft and contacts the dimple on the output shaft of the auger motor.



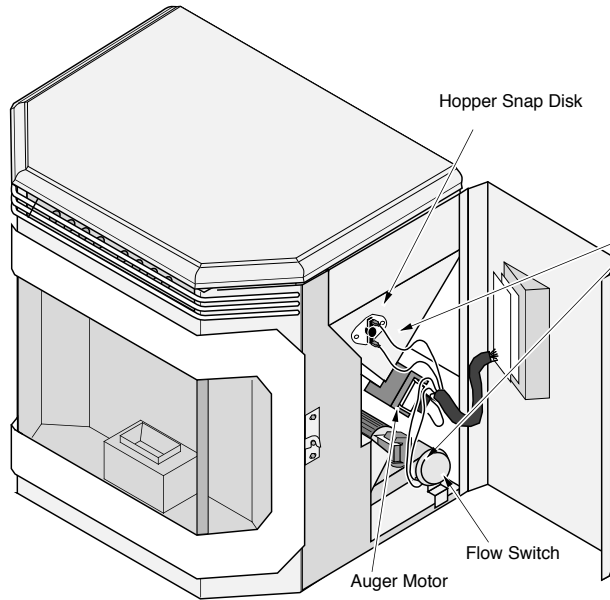
NOTE: If the output shaft on the auger motor does not light up with the auger shaft hole, you may hotwire the auger motor to turn the shaft until it lines up.

Auger Circuit Faulty



Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.

The auger circuit consists of the auger motor, flow switch, hopper snap disk, and the wiring between. If the auger motor is not receiving electricity during normal operation, you should check the auger circuit for malfunctions. The first step is to check the wiring. Make sure no wires have been pulled loose, severed, or melted.



Check the four red wires leading to the hopper snap disk and flow switch. Check the red and white wires leading to the auger motor. Disconnect each quick-connect and re-connect, making sure full contact is made.

Next, check the flow switch and hopper snap disk. These safety components were designed to disable the auger motor in the event of a malfunction. The hopper snap disk disables the circuit if the hopper becomes too hot. The flow switch disables the circuit if the vent becomes blocked. Follow the directions below to test the flow switch.

a Unplug the stove. **b** Disconnect the two wires leading to the flow switch. **c** Attach a jumper wire to the two wires removed. **d** Turn the stove on and test operation. If the stove still does not work, replace the wires and test the hopper snap disk (see the directions below). If the stove does work, the flow switch is not working. Make sure the vacuum hose is attached at both ends and in good shape. Replace the flow switch if the hose is correct.

Back of Flow Switch

Vacuum Hose

Follow the directions below to test the hopper snap disk.

a Unplug the stove. **b** Disconnect the two wires leading to the hopper snap disk. **c** Attach a jumper wire to the two wires removed. **d** Turn the stove on and test operation. If the stove works normally, the hopper snap disk is malfunctioning and should be replaced. If the stove still does not work, see the section for testing the circuit board.

Hopper Snap Disk (on the right side of the hopper near the top)

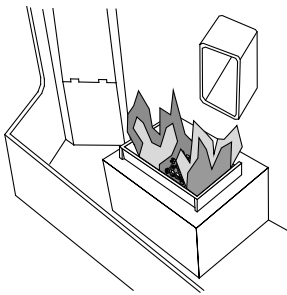
CONTINUITY

If you do wish to test the snap disk, heat the back side of the snap disk with a lighter. It should show continuity until it is warmed to 200° (3 to 10 seconds under a lighter) - you can also listen for a "click".

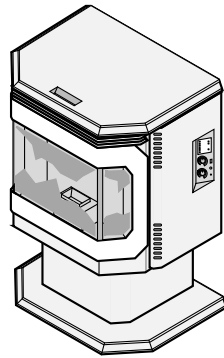
Pellet Quality

With the surge in popularity of pellet heaters came the tremendous increase in pellet demand. Because pellets are made from wood by-products, pellet manufacturing is dependent upon the supply of these by-products and the quality found therein. Unfortunately, this surge in pellet manufacturing has led to a decline in the quality of the raw materials used to produce the pellets. Ideally, pellets should have a very low moisture, ash, dirt, and salt content. Some pellets do not. Pellets should have a consistent diameter of 1/4", 5/16", or 7 mm. Pellets should also be no longer than 1 1/2" long. Some pellets are longer. There is no real pellet monitoring agency, so you must monitor pellet quality yourself. Pellets left outside in damp conditions may absorb water, decreasing performance. Poor pellets may lead to the symptoms listed below.

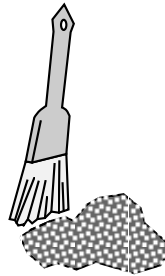
Poor quality pellets may lead to clinkers in the firepot (look for dark spots on the burn grate while the stove is burning)



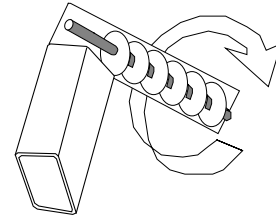
Poor quality pellets may lead to dirty glass, especially if it is black and sooty



Poor quality pellets may lead to excessive flyash, making the stove require more frequent cleaning



Poor quality pellets may lead to the auger jamming frequently



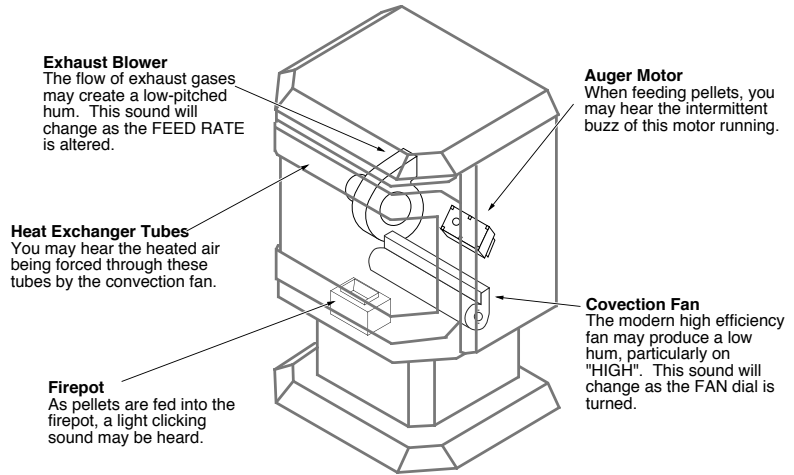
Recommendation:

Bring 3 bags of pellets that you have tested and are high quality. Let the customer burn the pellets and check for these signs of bad pellets: clinkers develop in the air holes on the bottom of the firepot; the auger jams for no apparent reason, and when the hopper is cleaned out, the auger runs again; there is more than one-half cup of sawdust in the bottom of the bag of pellets; or, the pellets don't burn well on a low burn rate. It is best to check one brand of pellets versus another to see the difference first-hand. The Association of Pellet Fuel Manufacturers has set the following standards for pellets: density of at least 40 lbs. per cubic foot; 1/4" to 5/16" diameter; length no greater than 1 1/2"; 8200 BTU's/lb.; moisture under 8% by weight; ash under 1% by weight; and, salt under 300 parts per million.

Noisy Stove

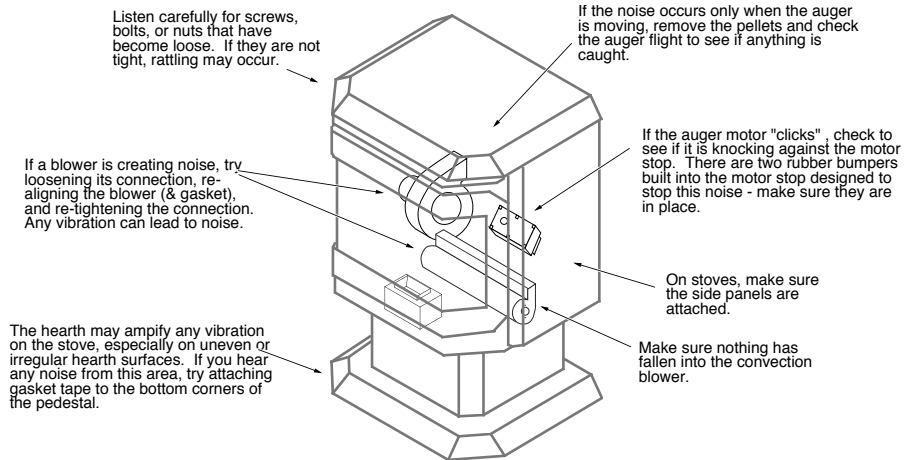
Normal Operating Sounds

Before conducting a service call for a noisy stove, try to quantify the amount of sound coming from the stove. Pellet stoves have several components with moving parts that will create noise. You may wish to go over the normal operating sounds with the customer before conducting a service call.

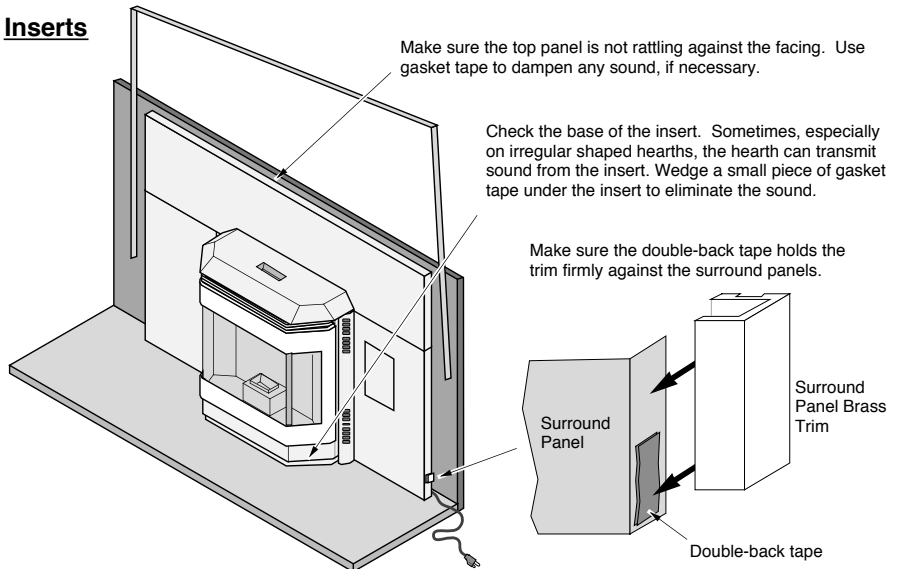


Diagnosing Stove Noises

Noise may be created by several factors. Moving components (blowers or auger motors) may create noise or a vibration that leads to a rattle. The process of eliminating a noise is to identify which component is creating the noise and either securing it better, placing a piece of gasket to dampen the rattle, or replacing the component. Use the illustrations to the right to help diagnose stove noises.



Inserts

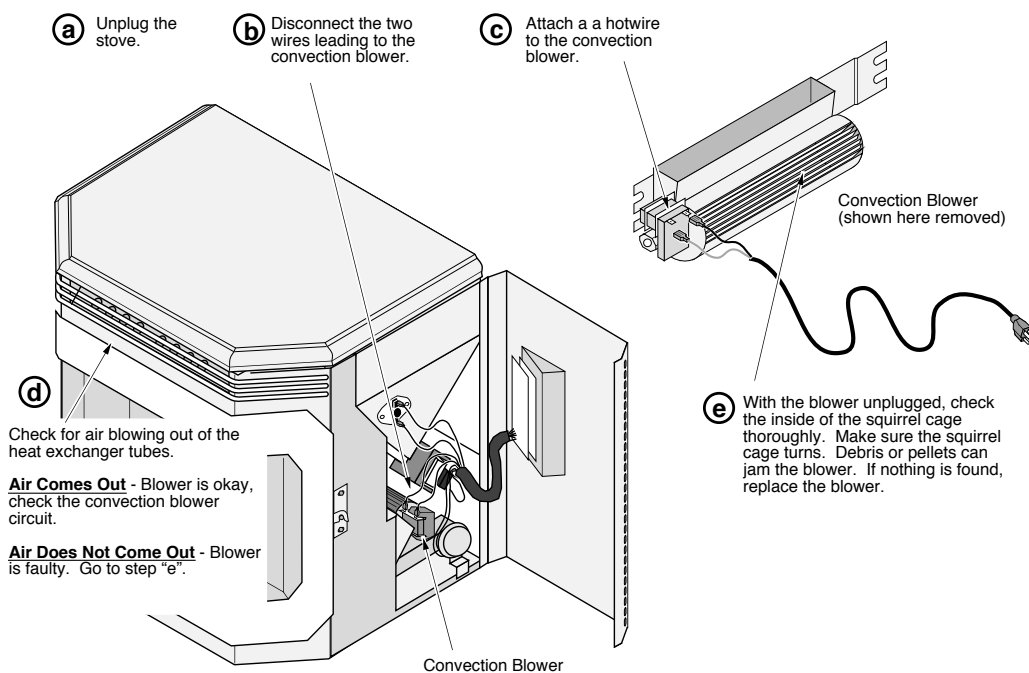


Faulty Convection Blower

The convection blower pushes air through the heat exchanger tubes located along the top of the firebox, transferring heat from the firebox to the room. It also performs a necessary cooling function for internal components*. To check the convection blower, follow the steps below.



Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.



* If the convection blower does not work, the stove may overheat, causing the hopper snap disk to disable the auger. Replace the convection blower if it does not work correctly – see the instructions on page 3-13.

Convection Blower Circuit Faulty

The convection blower is controlled directly by the circuit board. Follow the directions below to check the convection blower circuit.



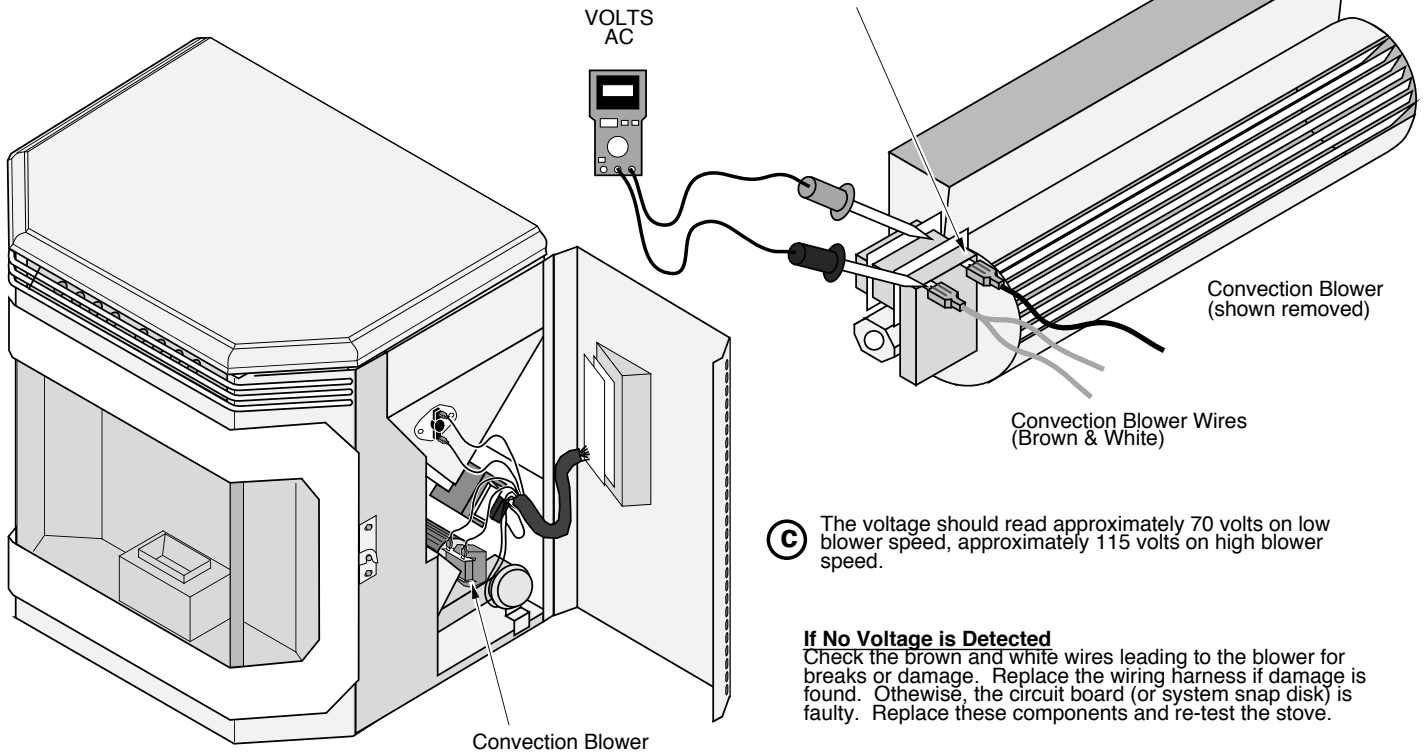
Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.

a

Start the stove and let it reach normal operating temperature (10 to 15 minutes).

b

Attach the multimeter leads, set to voltage AC, to the two posts on the convection blower (there is enough bare metal on the post to get a good reading).



c

The voltage should read approximately 70 volts on low blower speed, approximately 115 volts on high blower speed.

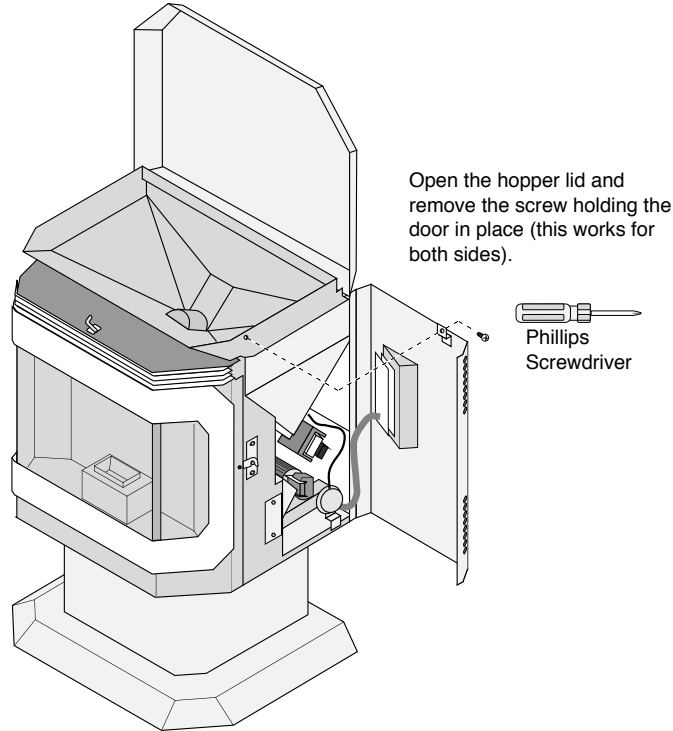
If No Voltage is Detected

Check the brown and white wires leading to the blower for breaks or damage. Replace the wiring harness if damage is found. Otherwise, the circuit board (or system snap disk) is faulty. Replace these components and re-test the stove.

Side Panel Opening (Stoves Only)



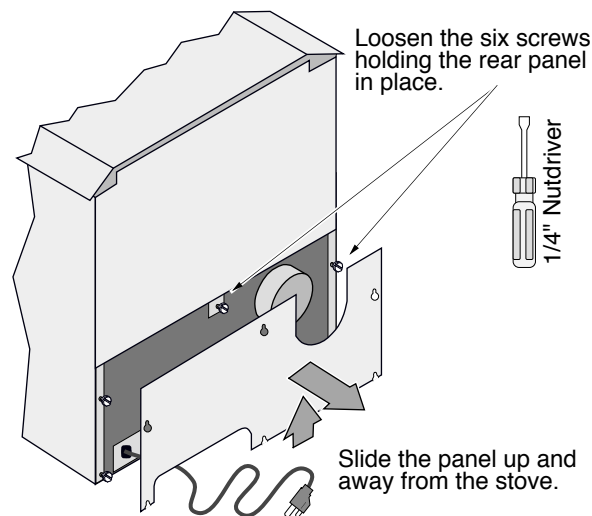
Make sure the stove has fully cooled (approximately 25 minutes) before conducting service.



Rear Panel Removal (Stoves Only)



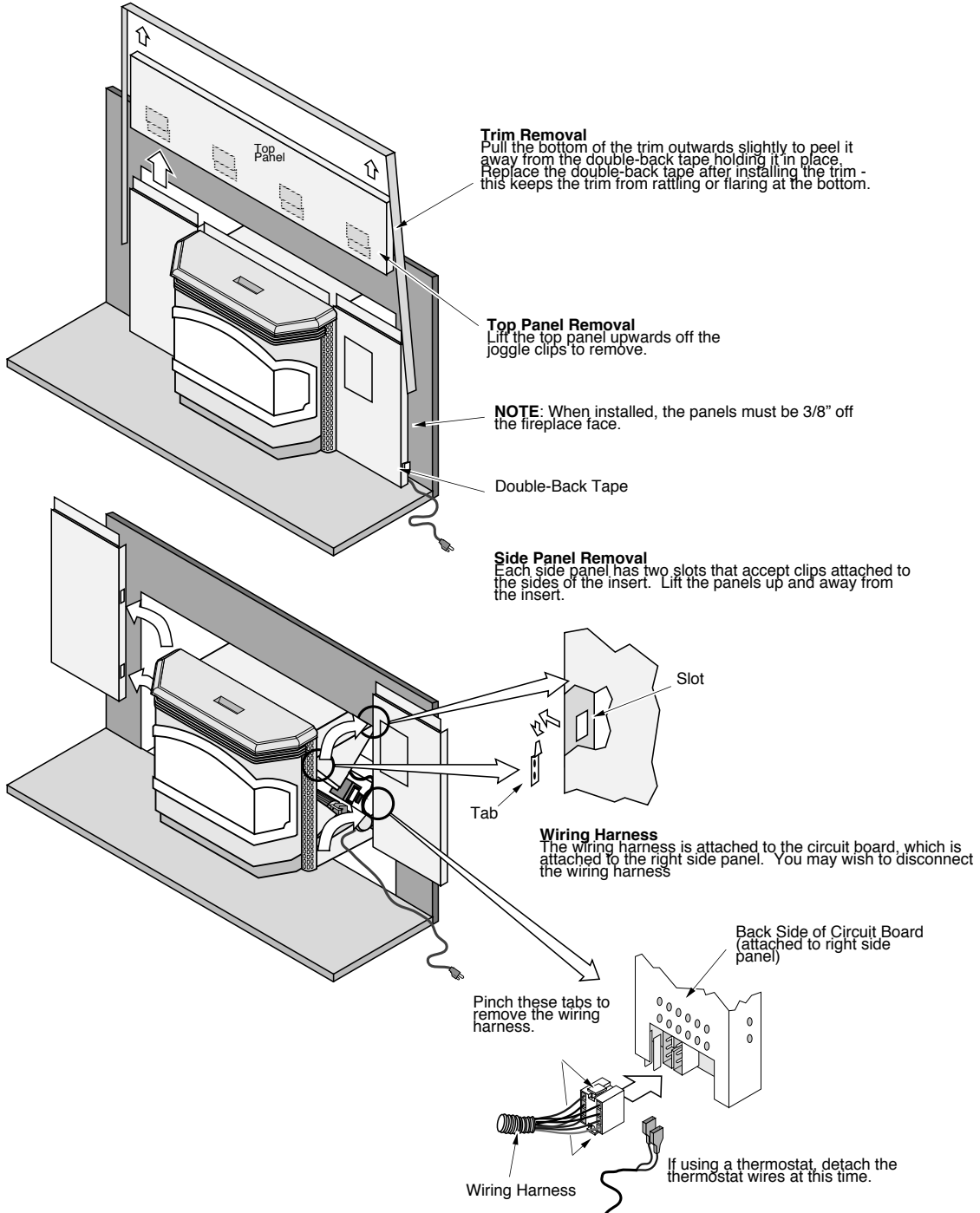
Make sure the stove has fully cooled (approximately 25 minutes) before conducting service.



Surround Panel Removal (Inserts Only)



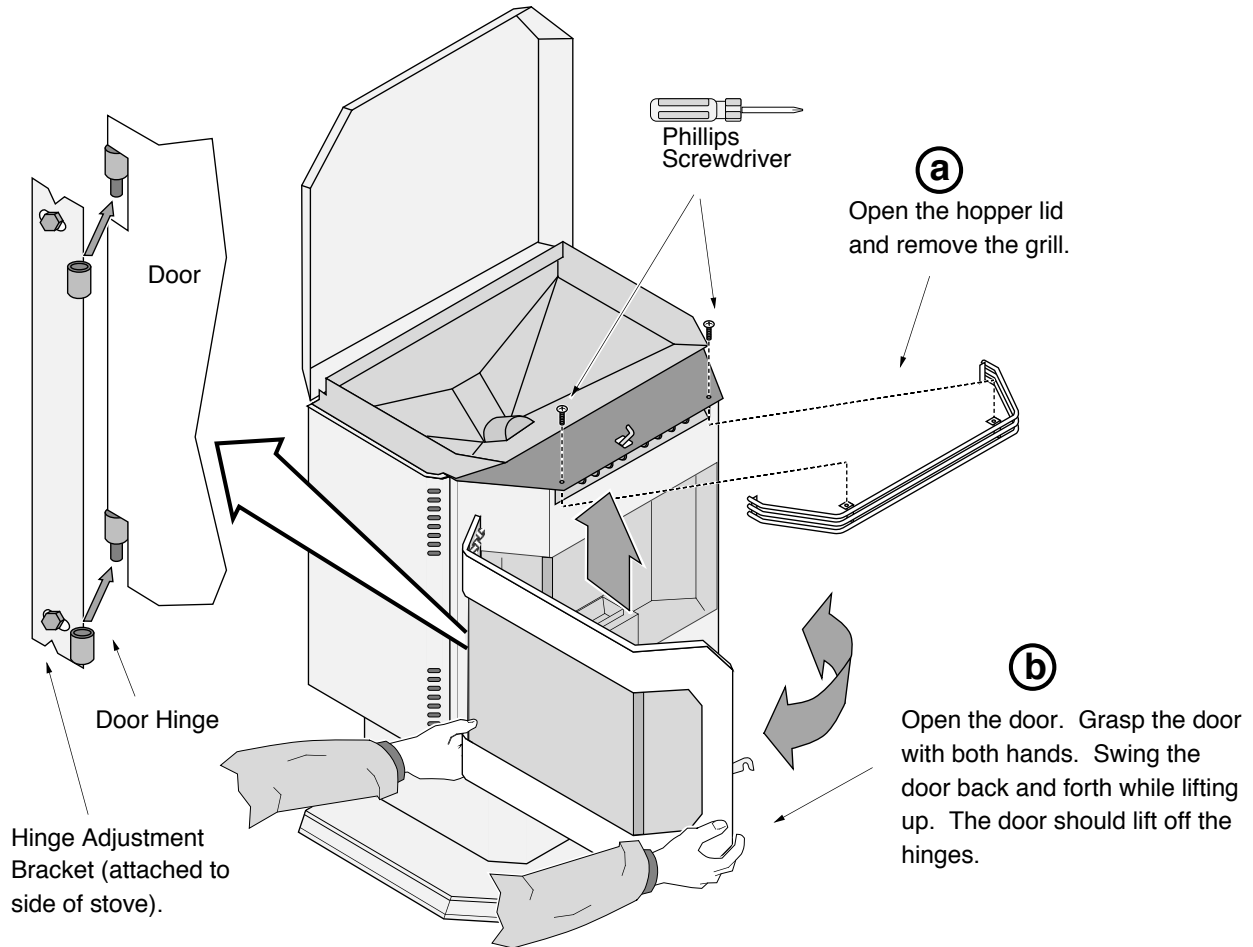
Make sure the stove has fully cooled (approximately 25 minutes) before conducting service.



Door Removal



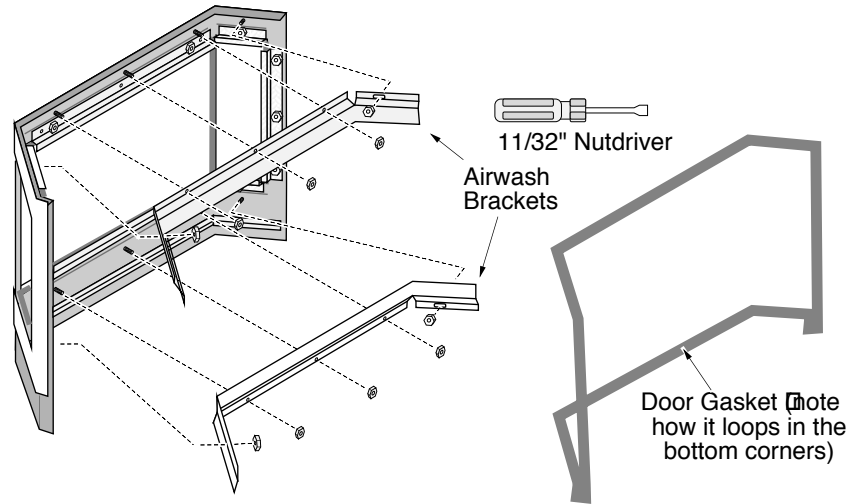
Make sure the stove has fully cooled (approximately 25 minutes) before conducting service.



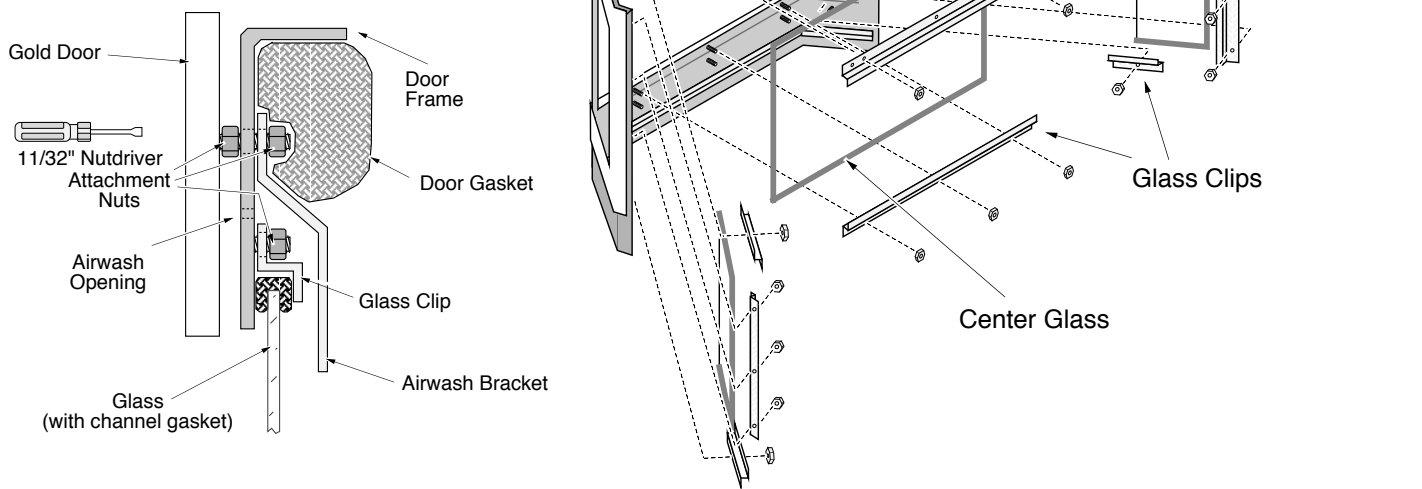
Glass Removal

Remove the door and place it face down on a soft surface. To disassemble the door, follow the directions below.

- Remove the door from the stove (see page 3-3) and place it face down on a soft surface.
- Peel the door gasket away from the door, noting how it is positioned. Remove the upper and lower airwash brackets (see the illustration below).



- The three pieces of glass are held in place with eight glass clips. Remove the glass clips to access the glass.
- Before replacing the glass, make sure the glass gasket is in place, forming a seal around the perimeter of the glass. Place the center glass first. Place the side glass up against the center glass, making sure the center piece is centered in the door frame. Re-attach the glass clips from the center outwards. Replace the airwash brackets and door gasket (see page 2-6).



Circuit Board Removal

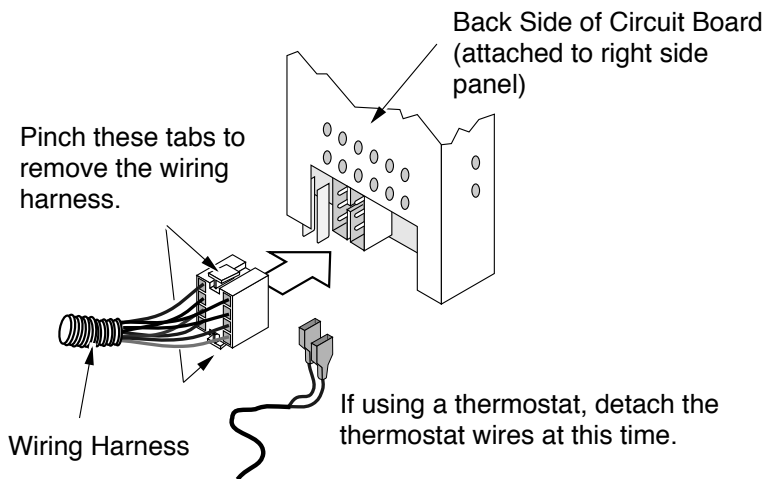


Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.

- 1 For stoves, open the right side panel (see page 3-1). For inserts, remove the surround panels (see page 3-2).
- 2 Remove the circuit board following the directions below.

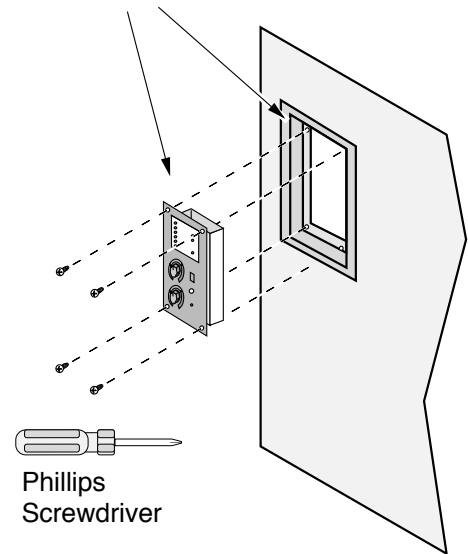
a

Detach the wiring harness (and thermostat wires, if used) from the circuit board.



b

Remove the four screws holding the circuit board in place.



Wiring Harness Removal



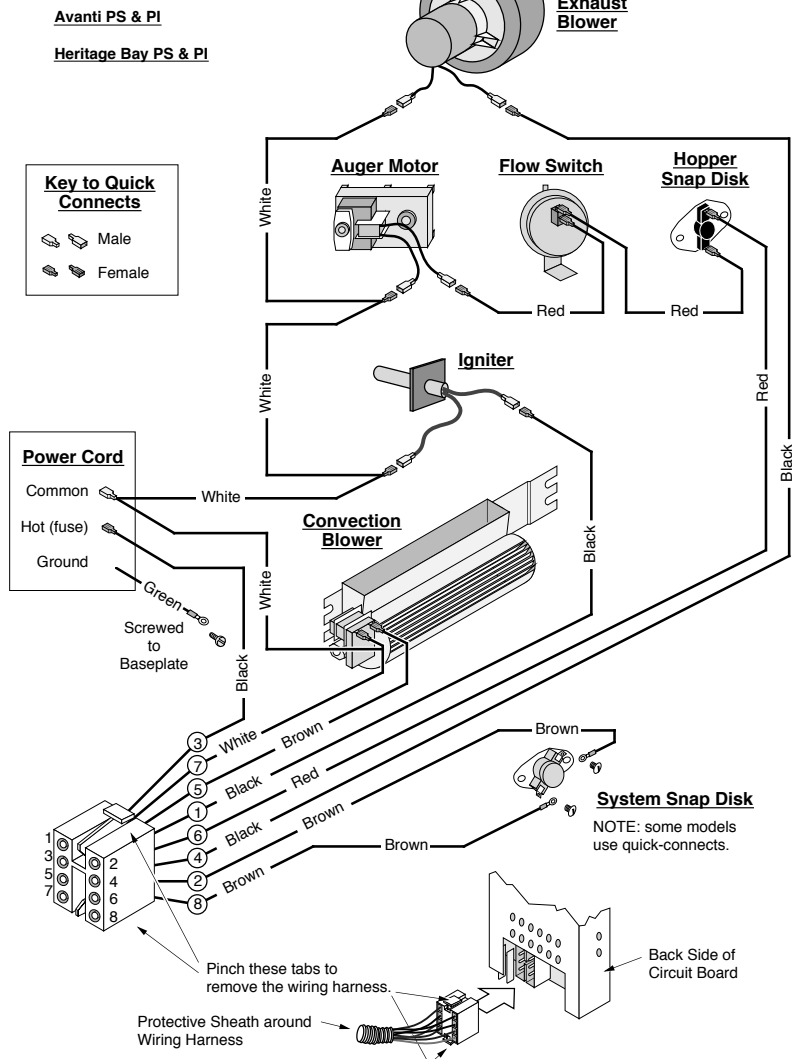
Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.



Make sure no wires contact the exhaust box or other high-temperature surface. Furthermore, make sure no wires come near the auger lock screw or convection blower intake (the wires may become snagged in these areas). Use lock-ties to secure the wiring harness away from these areas where they may become damaged.

- 1 For stoves, open the both side panels (see page 3-1). For inserts, remove the surround panels (see page 3-2).
- 2 The wiring harness connects to every electrical component inside the stove. If the wiring harness does require removal, disconnect all of the wiring and replace. If only one wire is damaged, you may wish to attach a new wire to replace it (use the appropriate connectors and replacement wire). After installing the wires, make sure to lock-tie any loose wiring to prevent contact with hot or moving components.

Wiring Diagram



System Snap Disk Removal

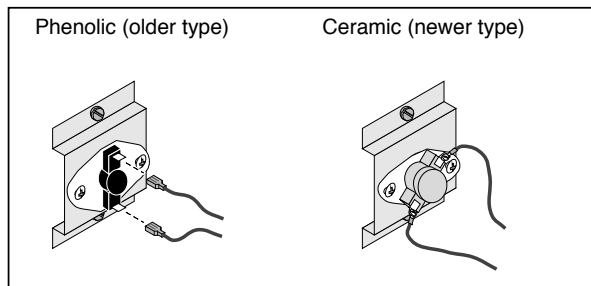


Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.

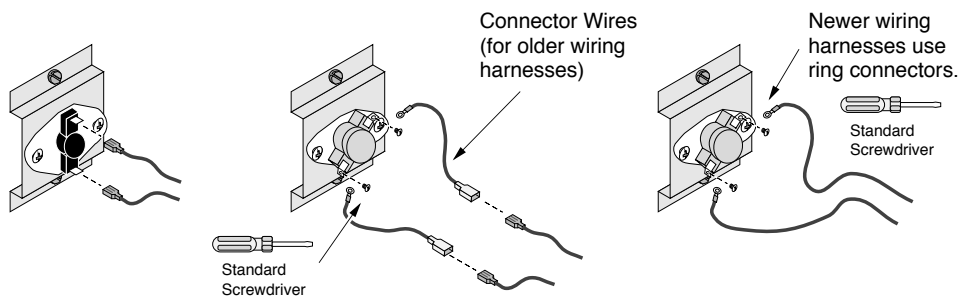
- 1 For stoves, open the left side panel (see page 3-1). For inserts, remove the surround panels and pull the insert out to access the left side (see page 3-2).
- 2 The system snap disk is located on the exhaust duct, just in front of the exhaust blower.
- 3 Remove the snap disk following the directions below.



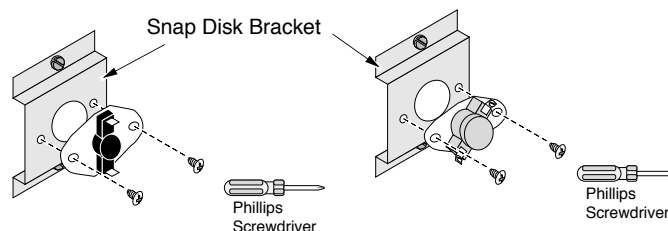
There are two types of system snap disks. Both operate in the same manner. If replacing the snap disk, the ceramic snap disk should be used (if the phenolic type failed, Travis will replace free of charge).



Disconnect the wires leading to the snap disk. Some models use wiring harnesses with quick-connects. When replacing the snap disk, use the connector wires included with the replacement system snap disks (discard the wires for wiring harness with ring connectors).



The snap disk is held in place with two screws.

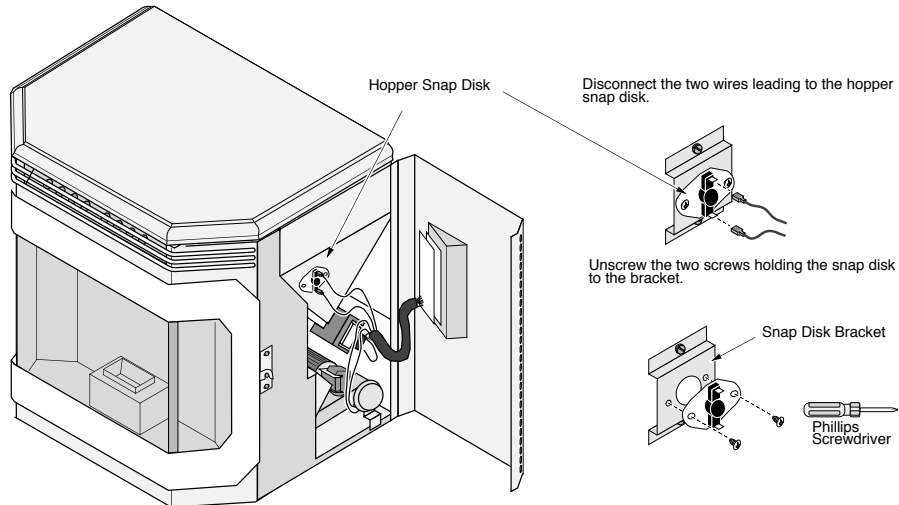


Hopper Snap Disk Removal



Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.

- 1 For stoves, open the right side panel (see page 3-1). For inserts, remove the surround panels and pull the insert out to access the right side (see page 3-2).
- 2 The hopper snap disk is located on the hopper, near the top.
- 3 Remove the snap disk following the directions below.

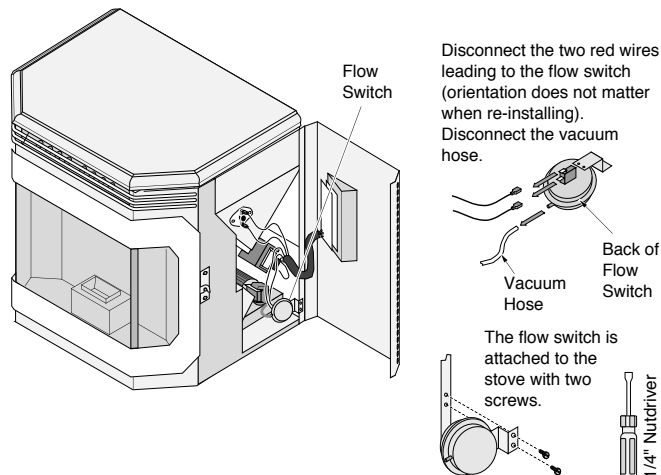


Flow Switch Removal



Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.

- 1 For stoves, open the right side panel (see page 3-1). For inserts, remove the surround panels and pull the insert out to access the right side (see page 3-2).
- 2 The flow switch is located at the rear left of the appliance near the baseplate.
- 3 Remove the flow switch following the directions below.



Igniter Removal



Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.

- 1 For stoves, open the right side panel (see page 3-1). For inserts, remove the surround panels and pull the insert out to access the right side (see page 3-2).
- 2 Remove the convection blower (see page 3-10)
- 3 Remove the igniter following the directions below.

Remove this screw



5/16" Nutdriver



Remove the igniter



Disconnect the two wires leading to the igniter

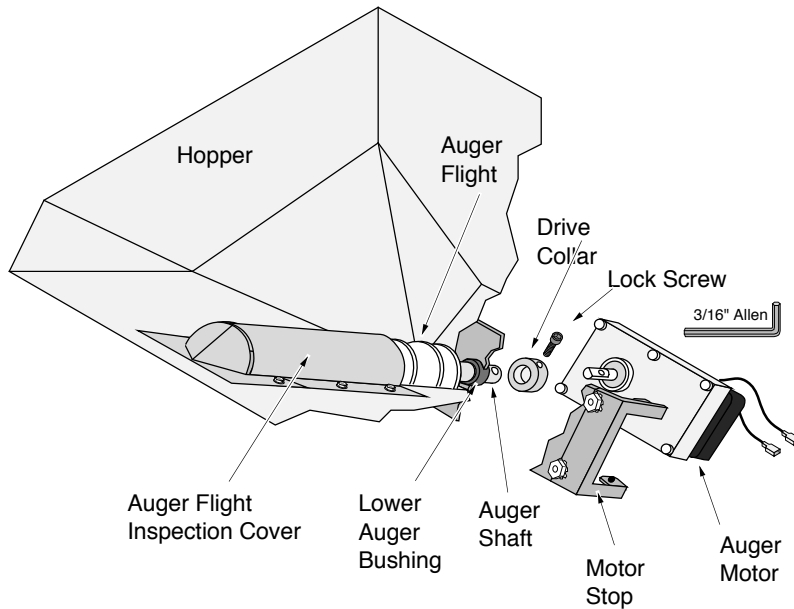


Auger Motor Removal

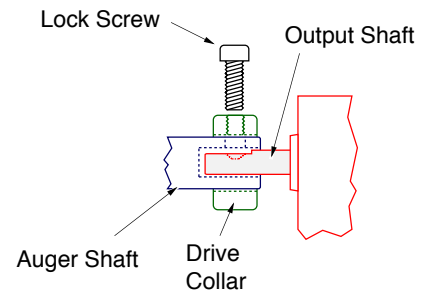


Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.

- 1 For stoves, remove the rear panel (see page 3-1). For inserts, remove the surround panels and pull the insert out to access the rear (see page 3-2).
- 2 Disconnect the two wires leading to the auger motor. Unscrew the lock screw (see the illustration below). With the lock screw removed, the auger will slide out.

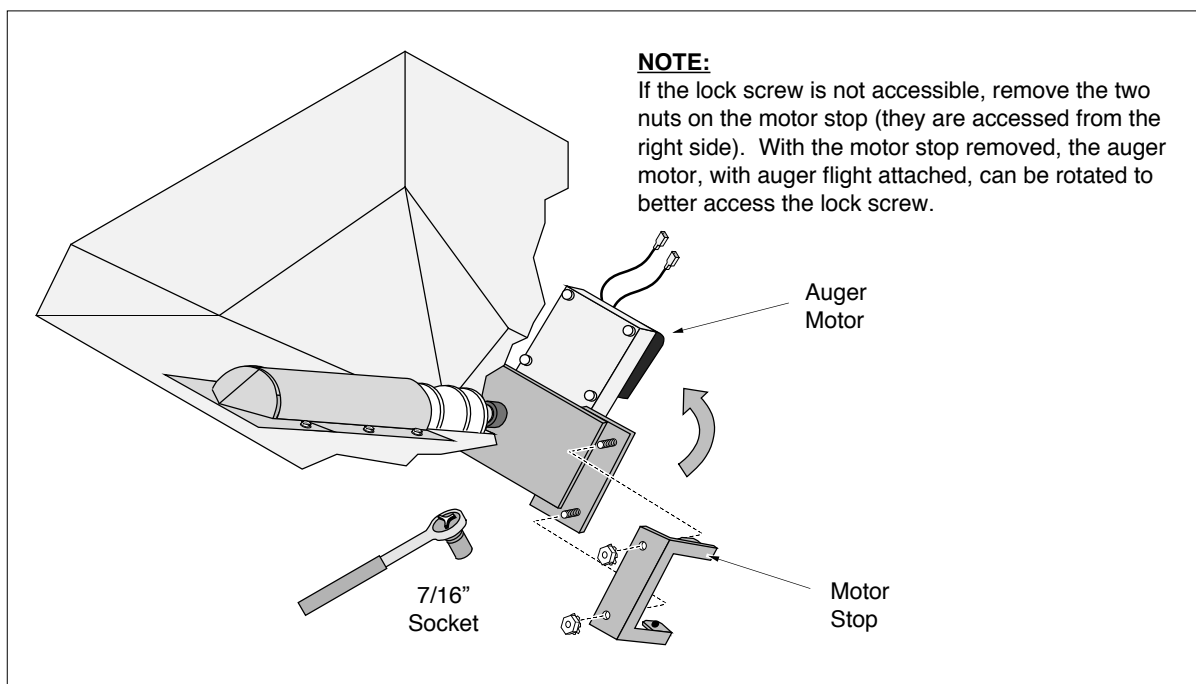


When re-installing, make sure the lock screw goes through the auger shaft and contacts the dimple on the output shaft of the auger motor.



NOTE:

If the output shaft on the auger motor does not light up with the auger shaft hole, you may hotwire the auger motor to turn the shaft until it lines up.

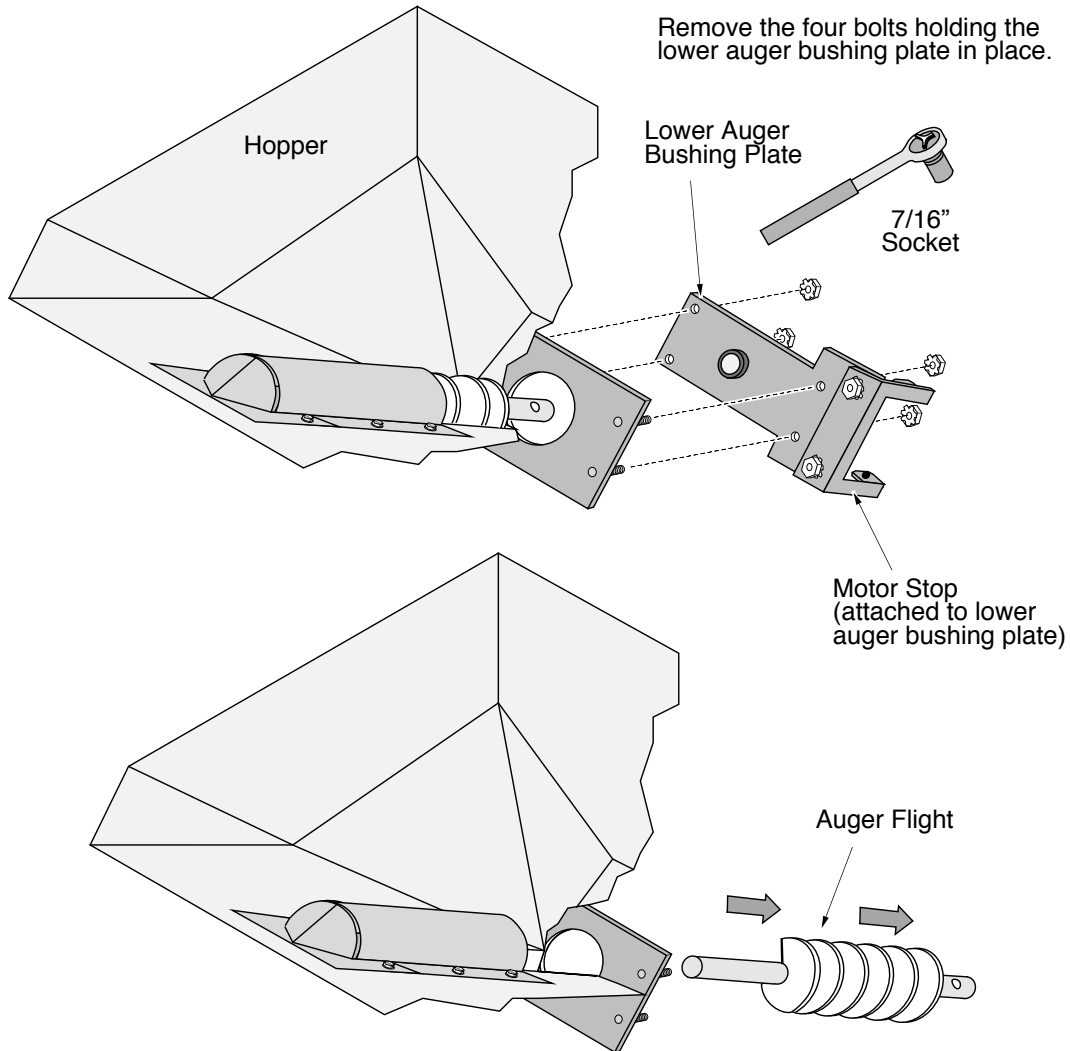


Auger Flight Removal



Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.

- 1 For stoves, remove the rear panel (see page 3-1). For inserts, remove the surround panels and pull the insert out to access the rear (see page 3-2).
- 2 Remove the auger motor following the directions on the previous page.
- 3 Remove the lower auger bushing plate following the directions below. The auger flight can now be slid out of the auger (on inserts you will need to lift the rear edge of the appliance slightly).

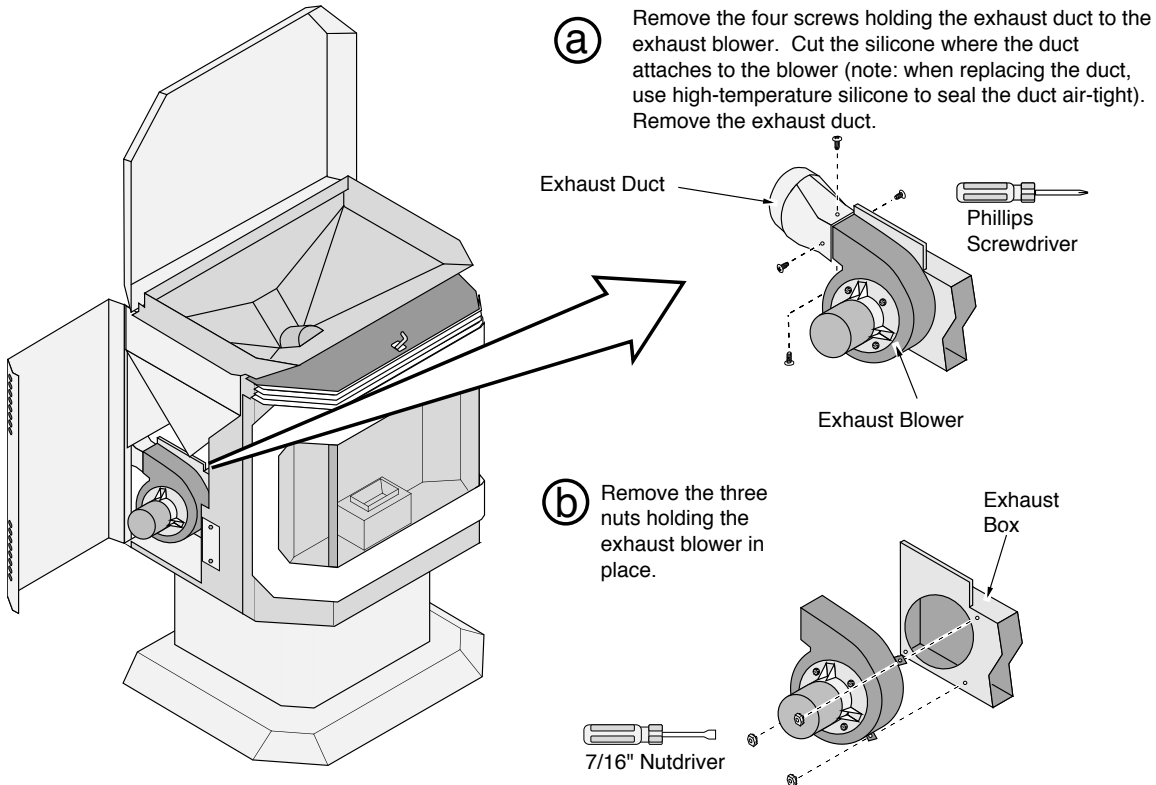


Exhaust Blower Removal



Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.

- 1 For stoves, open the left side panel (see page 3-1). For inserts, remove the surround panels and pull the insert out to access the left side (see page 3-2).
- 2 Remove the exhaust blower following the directions below.



Convection Blower Removal



Make sure the stove has fully cooled (approximately 25 minutes) before conducting service. Unplug the stove to prevent electrical shock.

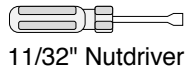
- 1 For stoves, open the right side panel (see page 3-1). For inserts, remove the surround panels and pull the insert out to access the right side (see page 3-2).
- 2 Disconnect the wiring from the convection blower following the directions below (orientation of the wires does not matter when re-connecting).

Disconnect the two wires leading to the convection blower.

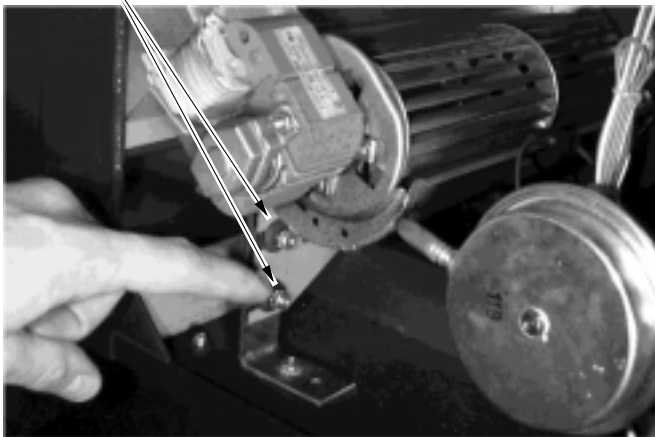


- 2 Disconnect the right side of the convection blower following the directions below.

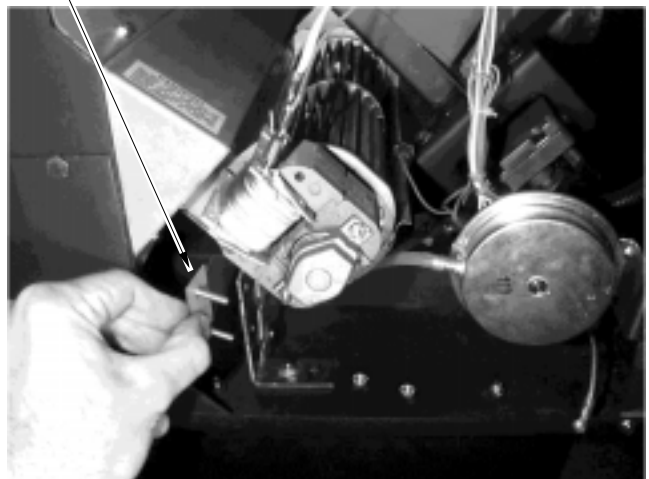
Remove the two nuts holding the right side of the blower mount.



11/32" Nutdriver



Remove the stud bracket

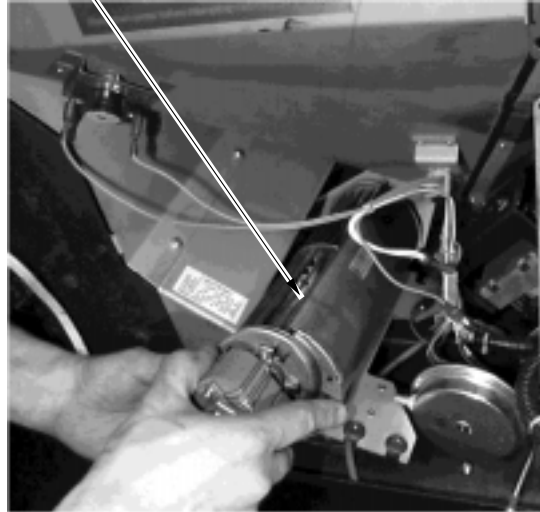


Removal Instructions

3 Remove the blower following the directions below.

Thread the blower out of the heater. You will need to rotate the blower slightly.

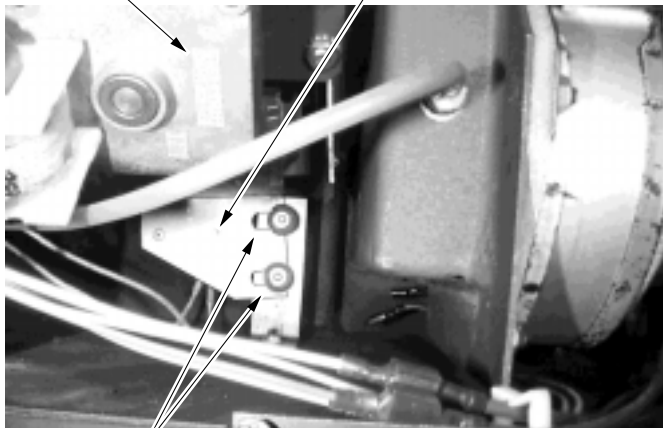
NOTE: Be careful not to damage wiring.



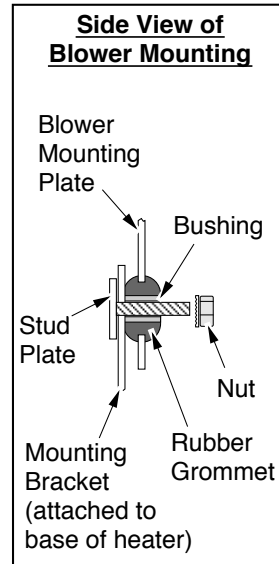
4 When replacing the blower, make sure the blower mounts correctly (see below).

View from Rear of Heater

Auger Motor Blower Mounting Plate



When replacing the blower, make sure the slots on the blower mounting plates slide into the groove on the rubber grommets.



Parts List

Air Control Restrictor	93005061
Ash Door, Stove & Insert	93005051
Ash Dump Seal Plate, Spring Loaded	93005052
Ashpan, Pellet Freestanding Stove	93005050
Ashtrap Clean-Out Doors	93005054
Auger Assembly	93005092
Auger Bushing, Lower	93005094
Auger Bushing, Upper	93005093
Auger Flight	93005091
Auger Motor,	90-0191
Brush, Bottle Brush Style	93005531
Brush, Broom Style	93005530
Burn Pot	99300170
Circuit Board	93005000
Convection Blower	98900755A
Convection Blower Knob, for Rheostat	99300657
Convection Blower Mounting Grommets, Rubber with Spacers	93005017
Convection Blower Mounting Plate	93005016
Convection Snap Disk, 120 Degree - 2 Prong	98900720
Door Gasket	93005085
Door Gasket	91001300
Door Gasket, 7/8" Multi-use, Black, 120" Long	99900402
Door Latch Hook	93005011
Door Latch Tool	93005010
Door Roller Plate Assembly	93005012
Exhaust Adapter, Vertical	99300137
Exhaust Blower	90-0391
Exhaust Blower Gasket (between Blower & stove)	90-0392
Exhaust Blower Gasket (between motor & housing)	99300135
Fireback, Cast Steel, Brick Pattern	93005057
Flow Switch	93005060
Flow Switch Tubing, 1/4" dia, High Heat	99300164
Fuse Holder, Pellet	99300570
Fuse, 5-Amp In-line fuse, Pkg of 5	93-0695
Fuse, 6 Amp Circuit Board, Pack of 5	93005019
Glass Gasket, 7/8" X 50 Ft, 302-B	99900401
Glass Gasket, 7/8" X 54"	99900408
Glass, Front	93005080
Glass, Side	93005081
Grill, Black	93005035
Grill, Gold	93005034
Handle, Hopper Lid, 1997	93005040
Hinge Plate Assembly	93005082
Hopper Snap Disk, 200 Deg.	91-1791
Igniter	99300148
Motor Stop, Stove & Insert	93005095
Power Cord	93005015
System Snap Disk, Ceramic, 120 Degree, 2 Prong	93005018
Thermostat, Remote	99300653
Thermostat, Wall Mounted, All Gas, 1997 Pellet	99300650
Wiring Harness	93005013

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