

# Installation & Operating Manual

## Installation and Appliance Setup - Care and Operation

**INSTALLER:** Leave this manual with party responsible for use and operation.

**OWNER:** Retain this manual for future reference.

Call your dealer for questions on Installation, Operation, or Service.

**NOTICE:** SAVE THESE INSTRUCTIONS

**VERMONT**  
CASTINGS

Stardance® Vent Free Gas Heater

Models: 0004050, 0004051



**INSTALLER:** Leave this manual with the appliance.

**CONSUMER:** Retain this manual for future reference.

### INSTALLER / CONSUMER SAFETY INFORMATION

Please read this manual before installing and using appliance.

**WARNING:** If the information in this manual is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

—Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

—WHAT TO DO IF YOU SMELL GAS

- Do not try to light any appliance.
- Do not touch any electrical switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

Installation and service must be performed by a qualified installer, service agency or the gas supplier.

This appliance may be installed in an aftermarket\* permanently located manufactured (mobile) home where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate.

This appliance is not convertible for use with other gases unless a certified kit is used.

\*Aftermarket: Completion of sale, not for purpose of resale, from the manufacturer.

This is an unvented gas-fired heater. It uses air (Oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. Refer to the Fresh Air Requirements section for further information.

**PLEASE READ THE INSTALLATION & OPERATING INSTRUCTIONS BEFORE USING APPLIANCE.**

Thank you and congratulations on your purchase of a Vermont Castings stove.

**IMPORTANT:** Read all instructions and warnings carefully before starting installation. Failure to follow these instructions may result in a possible fire hazard and will void the warranty.

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**→ = Contains updated information**

**Proposition 65 Warning:** Fuels used in gas, woodburning or oil fired appliances, and the products of combustion of such fuels, contain chemicals known to the State of California to cause cancer, birth defects and other reproductive harm.  
 California Health & Safety Code Sec. 25249.6

## Installation & Operating Instructions

### Important Safety Information

In order to ensure safe and effective installation, this unit must be installed only by a qualified agency, individual, firm, corporation or company that is experienced in the installation, repair and servicing of this type of appliance and is familiar with the building codes and installation techniques appropriate in your area. Contact your hearth products dealer or local gas supplier for the name of a qualified service person.

In the Commonwealth of Massachusetts, all gas fittings and installation of this heater shall only be done by a licensed gas fitter or licensed plumber.

**IMPORTANT:** Read this owner's manual carefully and completely before trying to assemble, operate, or service this heater. Improper use of this heater can cause serious injury or death from burns, fire, explosion, electrical shock, and carbon monoxide poisoning. Failure to follow instructions may result in property damage, bodily injury or loss of life. This manual contains important user information. Keep this manual with the heater after installation is complete.

### FOR SAFE INSTALLATION AND OPERATION, PLEASE NOTE THE FOLLOWING:

1. Use only Natural Gas with model 4050. Use only Propane with model 4051. Do not use any other fuels.
2. Install only in accordance with the National Fuel Gas Code, ANSI Z223.1/NFPA 54-latest edition. (Exception: Do not derate this appliance for altitude. This appliance has been tested and listed for use in altitudes up to 10,000 feet.)
3. Use only the installation instructions provided by the manufacturer for this appliance. Installation and repair should be done by a qualified installer, preferably NFI or WETT (Canada) certified. The appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean.
4. **WARNING:** Any change to this heater or its controls can be dangerous. **DO NOT** make modifications to any heater or associated parts.
5. **DO NOT** install this heater in a bedroom or bathroom.
6. Due to high surface temperatures, **DO NOT** install this heater
  - in a recreational vehicle,
  - where curtains, furniture, clothing or other flammable objects are less than 36 inches from the front, top or sides of the heater,
  - in high traffic areas,
  - in windy or drafty areas.
7. **DO NOT** place clothing or other flammable material on or near the appliance.

### CARBON MONOXIDE POISONING MAY LEAD TO DEATH!

**Carbon Monoxide Poisoning:** Early signs of carbon monoxide poisoning resemble the flu, with headaches, dizziness, or nausea. If you have these signs, the heater may not be working properly. Get fresh air at once! Have the heater serviced. Some people are more affected by carbon monoxide than others. These include pregnant women, people with heart or lung disease or anemia, those under the influence of alcohol, and those at high altitudes.

8. **DO NOT** obstruct the top grille at all. Doing so will cause high levels of carbon monoxide that will lead to death.
9. This heater needs fresh, outside air ventilation to operate properly. Refer to Fresh Air Requirements.
10. This heater shall not be installed in a room or space unless the required volume of indoor combustion air is provided by the method described in the National Fuel Gas Code, ANSI Z223.1/NFPA 54, the International Fuel Gas Code or applicable local codes.
10. If heater shuts off, heater may not have enough fresh air ventilation. Provide more fresh air. If heater keeps shutting off, refer to Troubleshooting.
11. **DO NOT** operate this heater
  - where flammable liquids or vapors are used or stored
  - under dusty conditions.
12. The heater becomes very hot when operating. Alert children and adults to stay away from hot surfaces to avoid burns or clothing ignition. The heater will remain hot for a time after shutdown. Allow surface to cool before touching.
13. Carefully supervise young children when they are in the room with the heater.
14. Do not use the heater if any part has been exposed to or under water. Immediately call a qualified service technician to inspect the room heater and to replace any part of the control system and any gas control which has been under water.
15. **DO NOT** operate the heater if any log is broken or damaged.
16. Turn heater off and let cool before servicing. Only a qualified service person should service and repair heater.
17. **DO NOT** operate this appliance with the safety screen removed. If the safety screen is removed from the appliance for service or cleaning, it must be replaced before operating the heater.

**NOTE:** If any of the original wire as supplied with the appliance must be replaced, it must be replaced with a wire of at least 105°F temperature rating.

## Stove Dimensions

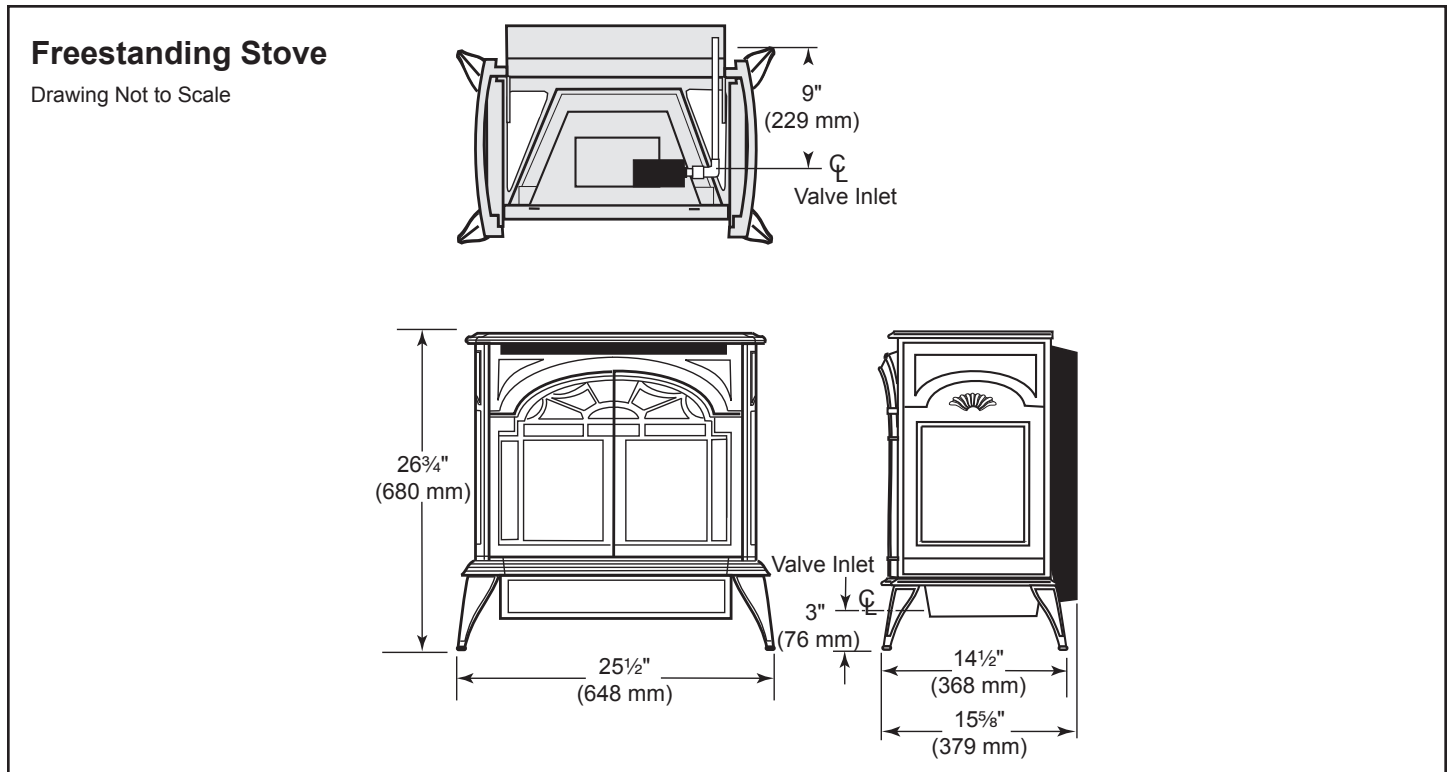
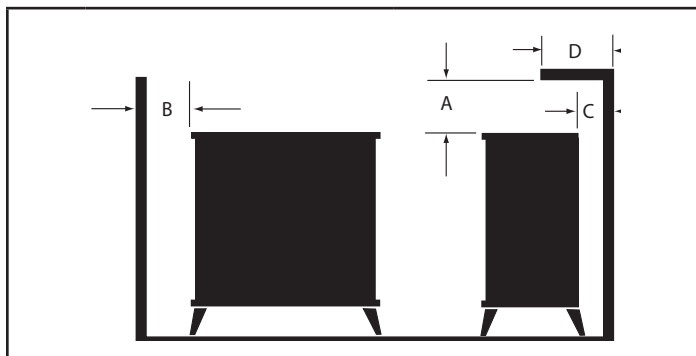


Figure 1 - Stardance freestanding shell dimensions.

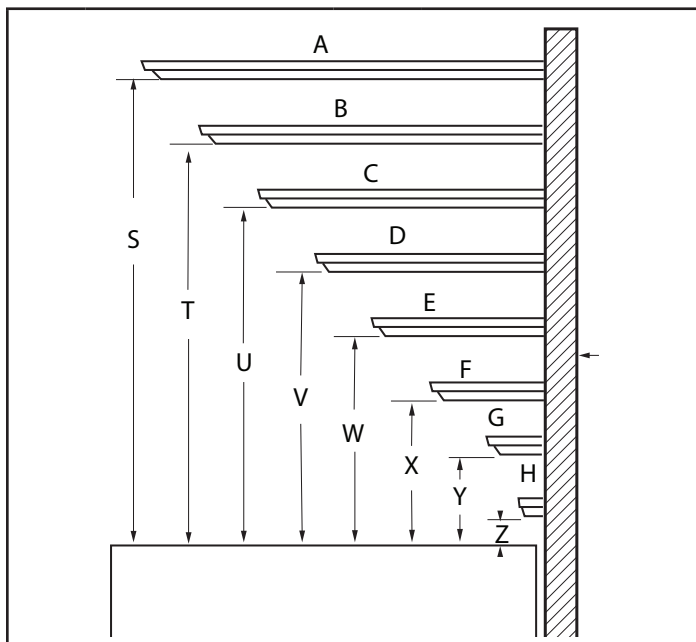
## Clearance Requirements

### Minimum Clearances to Combustible Materials

Maintain clearance, (empty space), between combustible materials and the heater as specified below for the appropriate firebox shell being installed.



A	Ceiling	35" (889mm)
B	Side Wall	2" (51mm)
C	Rear Wall	0" (0mm)
D	Max. Alcove Depth	13" (330mm)



Ref	Mantel Shelf Depth	Ref.	Mantel from Stove Top
A	13" (330mm)	S	35" (889mm)
B	11-1/4" (286mm)	T	30" (762mm)
C	9-3/8" (241mm)	U	25" (635mm)
D	7-1/2" (191mm)	V	20" (508mm)
E	5-3/4" (146mm)	W	15" (381mm)
F	4" (102mm)	X	10" (254mm)
G	2-1/4" (57mm)	Y	5" (127mm)
H	1" (25mm)	Z	2" (51mm)

### Hearth Requirements

The Stardance must be installed on rigid flooring. If the appliance is installed on any combustible surface other than wood flooring, such as carpet or tile, a metal or wood panel must be installed to extend the full length and width of the unit.

### WARNING

- Do not install this heater in a bathroom or bedroom.
- Installation of this heater must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1 / NFPA54.
- This heater creates warm air currents. These currents move heat to wall surfaces next to the heater. Installing the heater next to vinyl or cloth wall coverings or operating the heater where impurities in the air such as tobacco smoke exist, may discolor walls.
- Do not use a blower insert, heat exchanger insert or other accessory not approved for use with this heater.

Gas Specifications					
Model	Fuel	Gas Control	Max Input BTU/h	Min Input BTU/h	Air Shutter Setting*
4050	Nat.	Millivolt	28,000	19,500	Fully Closed
4051	Prop	Millivolt	28,000	19,500	N/A

\*Natural Gas units with air shutter fully closed and rotated with bend outside of burner for less restriction. Propane units have no air shutter.

Firebox weight / shipping 110 lbs.


Gas Inlet & Manifold Pressures		
	Natural	LP (Propane)
Inlet Minimum	5.5" w.c.	11" w.c.
Inlet Maximum	14" w.c.	14" w.c.
Manifold Pressure	3.5" w.c.	10" w.c. (MP) 11" w.c. (RP)

**Stardance Vent-Free  
Certified to:**  

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**ANSI Z21.11.2, Latest Edition  
Unvented Heaters**

The installation of your Vermont Castings stove must conform with local codes, or in the absence of local codes, with the National Fuel Gas Code ANSI Z223.1/NFPA 54 - latest edition. (EXCEPTION: Do not derate this appliance for altitude up to 4,500 feet (1,370m). Maintain the manifold pressure at 3.5" w.c. for Natural Gas and 11.0" w.c. for LP Gas.

 **WARNING**


Failure to keep the primary air opening(s) of the burner(s) clean may result in sooting and property damage.

**High Elevations**

Input ratings are shown in Btu per hour and are certified without deration from elevations up to 4,500 feet (1,370 m) above sea level.

Nuisance outages may occur at altitudes above 4,500 feet (1,370 m) if dirt, dust, lint and/or cobwebs are allowed to accumulate on burner and/or ODS pilot. Monthly inspection and cleaning is recommended for altitudes above 4,500 feet (1,370 m)

For elevations above 4,500 feet (1,370 m), installations must be in accordance with the current ANSI Z223.1/ NFPA 54 and/or local codes having jurisdiction.

 **WARNING**

Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Refer to this manual for correct installation and operational procedures. For assistance or additional information consult a qualified installer, service agency, or the gas supplier.

**Odor During Operation**

Neither natural gas nor propane gas give off an odor when burned. The nature of a vent free combustion system, however, is such that odors may occasionally be produced during heater operation when impurities exist in the immediate area. Cleaning solutions, paint, solvents, cigarette smoke, candles, adhesives, new carpet or textiles, etc., all can create fumes. These fumes may mix with combustion air and can create odor. Such odors will disappear over time, however the condition can be alleviated by opening a window or otherwise providing additional ventilation to the area.

### Vent Free Features

The Stardance Vent Free gas stove is an unvented gas heating appliance tested and listed to the ANSI standard Z21.11.2, Latest Edition. This appliance is specifically configured to burn either Natural Gas or Propane fuel, as indicated on the metal rating plate attached to the rear shroud. The Stardance is not fuel convertible.

The stove is shipped fully assembled and ready for installation.

The stove is equipped with an SIT control valve that allows thermostatic control, on/off switch or a remote switch (not supplied).

Both models incorporate variable regulators that allow you to adjust burner heat output between HIGH, (28,000 Btu), and LOW, (19,500 Btu). See the Operation Section for details.

The standing pilot incorporates an Oxygen Depletion System (ODS/pilot) designed to shut off the appliance if enough fresh air is not available.

### Fresh Air Requirements for Combustion and Ventilation

Modern construction standards have resulted in homes that are highly energy-efficient and that allow little heat loss. Your home needs to breathe, however, and all fuel-burning appliances within it require fresh air in order to function properly and safely. Exhaust fans, clothes dryers, fireplaces, and other fuel burning appliances all use the air inside the building. If the available fresh air is insufficient to meet the demands of these appliances, problems can result.

The Stardance Unvented heater has specific fresh air requirements. **You must determine that these fresh air requirements will be met within the space where the appliance will be installed.** The following information will help you insure that adequate fresh air is available for the heater to function properly.



### WARNING

If the area in which the heater may be operated does not meet the required volume for indoor combustion air, combustion and ventilation air shall be provided by one of the methods described in the National Fuel Gas Code, ANSI Z223.1/NFPA 54, the International Fuel Gas Code or applicable local codes.



### WARNING

This heater must have fresh air for proper operation. If not, poor fuel combustion could result. Read the following instructions to insure proper fresh air for this and other fuel-burning appliances in your home.

## Assembly Procedures

### Unpack the Stove

Remove the unit from the skid by loosening the bolts located in the shipping brackets. Once bolts are removed, remove shipping brackets from around the leg levelers.

### CAUTION

Porcelain enamelled surfaces are fragile. Handle porcelain enamelled castings tenderly. Familiarize yourself with the assembly steps before you begin and proceed with deliberation and care. If possible, have assistance available.

Place enamelled castings on a soft, cushioned surface until you are ready to assembly.

Avoid contact between the castings and other hard surfaces or objects.

### Install Optional Fan Kit

1. Remove shroud assembly by loosening two (2) hex head bolts on lower inside of shroud. Lift shroud assembly up and away from stove.
2. Attach the fan to the rear shroud by engaging the upper flange of the fan skirt under the lower edge of the shroud and secure the skirt with the four screws and one star washer provided. (Figs. 2 & 3)

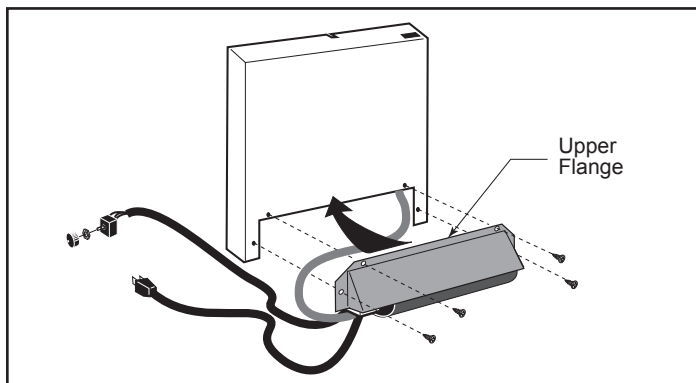


Figure 2 - Place upper flange behind lower edge of shroud.

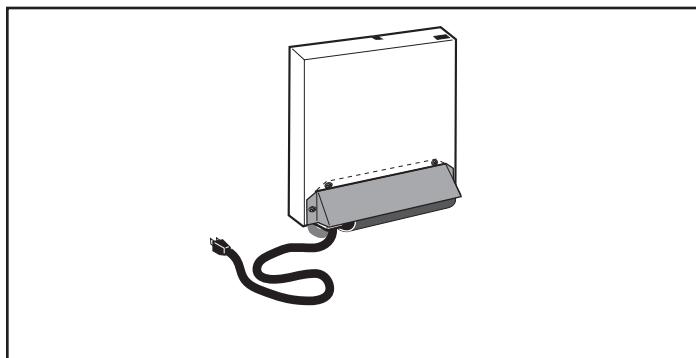


Figure 3 - Correct position of fan skirt installation.

3. Feed the snapstat wire lead up between the inner and outer rear shroud panels and secure the snapstat to the upper right side of the inner shroud. (Figure 4)
4. Secure the snapstat wire harness to the shroud panel using the wire tie provided.
5. Replace shroud and tighten the two (2) hex head nuts on lower inside of shroud.
6. Route the rheostat control switch and wire forward under the stove. Use the wire tie to secure the fan and rheostat wire harnesses together to the tubing under the bottom heat shield.
7. Install the rheostat onto the bracket to the left of the valve. (Figure 5)

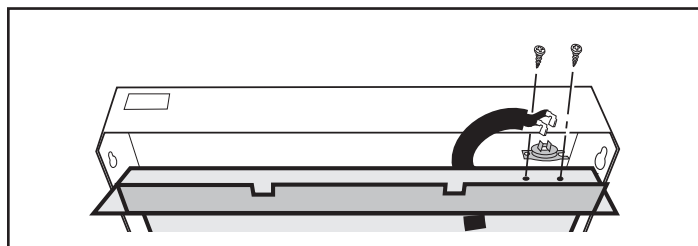


Figure 4 - Attach snapstat to inner shroud.

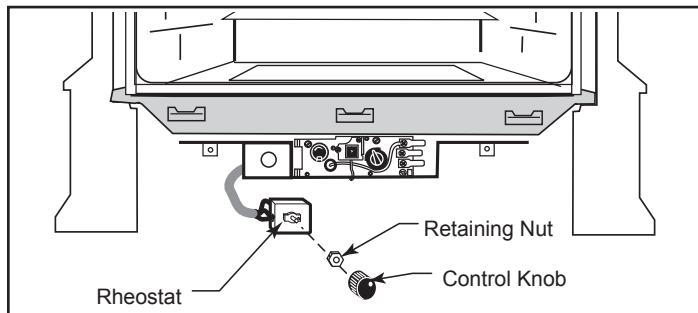


Figure 5 - Attach rheostat to bracket.

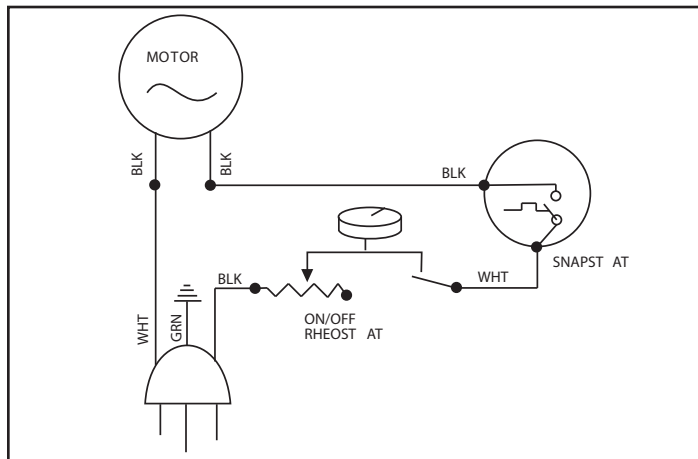


Figure 6 - Fan wiring diagram.

### WARNING

Failure to position the parts in accordance with these diagrams, or failure to use only parts specifically approved with this heater may result in property damage or personal injury.



### Install ON/OFF Switch

The switch assembly parts are found in the parts bag.

1. Attach switch assembly to left rear side of stove shroud using two screws and existing holes in shroud. (Figure 7)
2. Run wires down back of stove, under bottom of rear shroud to valve.
3. Attach wires to valve terminals. (Figure 8)

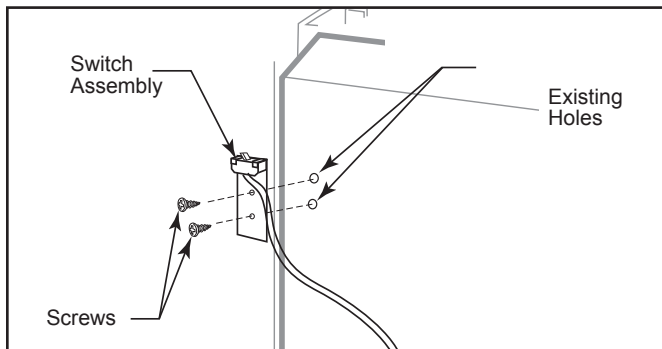


Figure 7 - Attach switch assembly to rear shroud.

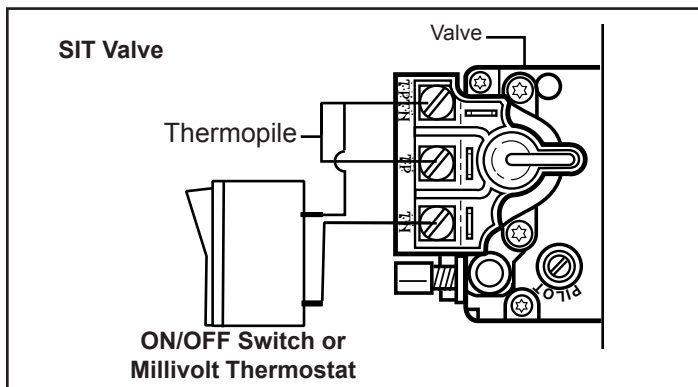


Figure 8 - Install wiring to switch before connecting to valve.

### Thermostat Connection (Optional)

Use only a thermostat rated for 500 - 750 millivolts. Do not use low voltage (24V) thermostats.

Check the table below for the appropriate gauge thermostat wire to use for the length of lead required in your installation.

Thermostat Wire / Gauge	Maximum Run
18	40 Feet
20	25 Feet
22	16 Feet

1. Install the wall thermostat in the desired location and run the wires to the stove location. Terminate these leads with 1/4" female connectors.
2. Connect the thermostat wires to the valve. (Figure 9)

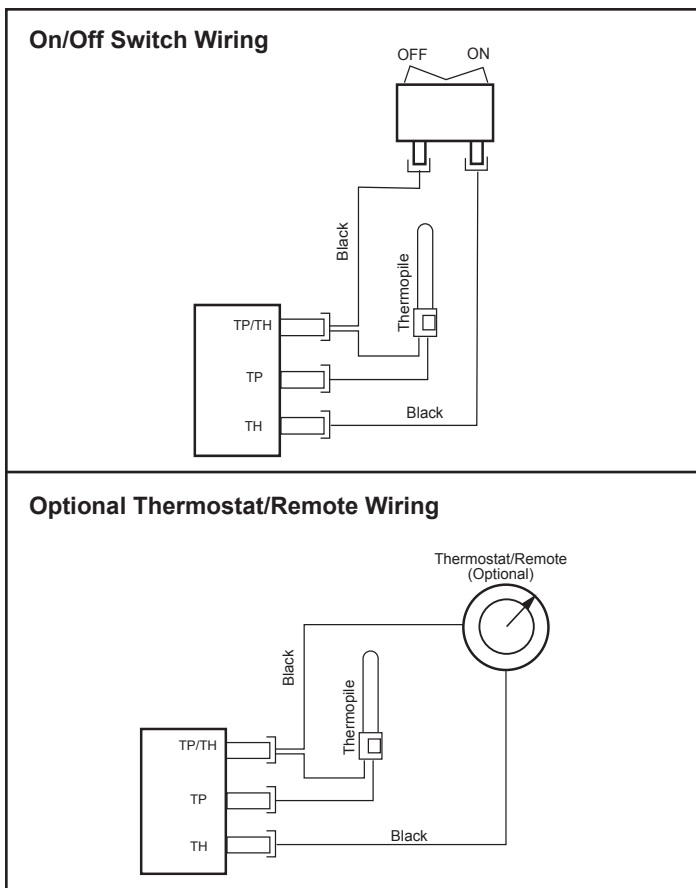


Figure 9 - ON/OFF switch and optional Thermostat/Remote wiring.

**Connect the Gas Supply Line**

Check the Rating Plate attached by a steel cable to the firebox, to confirm that you have the appropriate firebox for the type of fuel to be used.

The appliance should have a main gas valve provided in an accessible location for turning on or shutting off the gas to the main burner.

**This appliance should only be connected by a qualified gas technician. Test to confirm manifold pressures as specified below.**

**The Stardance and its individual shutoff valve must be disconnected from the gas supply piping during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa).**

**The Stardance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressure equal to or less than 1/2 psig.**

**There must be a gas shutoff between the stove and the supply.**

**In order to connect Natural Gas, use a fitting with 3/8" NPT nipple on the valve side and 1/2" natural gas supply line with an input of 28,000 Btus at a manifold pressure of 3.5" and minimum inlet supply for adjustment of 5.5" w.c.**

**In order to connect Propane, use a fitting with 3/8" NPT nipple on the valve side and 1/2" propane gas supply line with an input of 28,000 Btus at a manifold pressure of 11.0" and minimum inlet supply for adjustment of 11.0" w.c.**

Gas connection should be made in accordance with current National Fuel Gas Code, ANSI Z223.1/NFPA 54. Since some municipalities have additional local codes, be sure to consult you local authority.

Connect the gas supply and test for leaks. Use a 50/50 solution of liquid soap and water to test for leaks at gas fittings and joints. **NEVER test with an open flame.** Light the pilot according to the directions in the Lighting and Operating section of this manual, before going to the next step.

 **CAUTION**

This appliance should only be connected by a qualified gas technician. Test to confirm manifold pressures as specified below.

The Stardance and its individual shutoff valve must be disconnected from the gas supply piping during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5 kPa).

The Stardance must be isolated from the gas supply piping system by closing its individual manual shutoff valve during any pressure testing of the gas supply piping system at test pressure equal to or less than 1/2 psig.

There must be a gas shutoff between the stove and the supply.

In order to connect Natural Gas, use a fitting with 1/2" NPT on the valve side and 1/2" natural gas supply line with an input of 28,000 BTUs at a manifold pressure of 3.5" between minimum inlet supply of 5.5" w.c. and maximum of 14.0" w.c.

In order to connect Propane, use a fitting with 1/2" NPT on the valve side and 1/2" propane gas supply line with an input of 28,000 BTUs at a manifold pressure of 11.0" between a minimum inlet supply of 11.0" w.c. and maximum of 14.0" w.c.

**Install Log Set**
 **WARNING**

Failure to position the parts in accordance with this diagram or, failure to use only parts specifically approved with this heater, may result in property damage or personal injury. Do not alter the logs!

**NOTE:** Loose material shall be installed per the instructions. Replacement of loose material must be purchased from the original room heater manufacturer and application of excess loose material may adversely affect performance of heater.

 **WARNING**

All previously applied loose material must be removed prior to reapplication.

1. Remove the logs from their packaging, and inspect each piece for damage. **DO NOT INSTALL DAMAGED LOGS.**
2. Install the rear log by placing it on the sheet metal shelf at the back of the firebox. (Figure 15) The log should touch the back wall of the firebox and be centered.

3. Install the right log by placing it on the sheet metal bracket behind the grate with the right end of the log, “the thicker end”, touching the grate and the right side the firebox. Swing the left end of the log “painted end”, backward until it comes in contact with the branch on the rear log. Set the log down over the bent tab on the right. When the log is in place it rests on the tab mentioned earlier and the tip of it comes in contact with the branch on the rear log. (Figure 10)
4. Install the left log by placing it on the sheet metal bracket behind the grate with the left end of the log, “the thicker end” touching the grate and the left end of the firebox. Lay the log into the recessed area on the left branch of the rear log. When the log is in place, it will rest on the left branch of the rear log toward the left side of the branch.
5. Loosely sprinkle the lava rocks directly on top of the burner just behind decorative grate. (Figure 11) Do not place lava rocks toward back of burner. The lava rock is shipped inside the bag assembly.

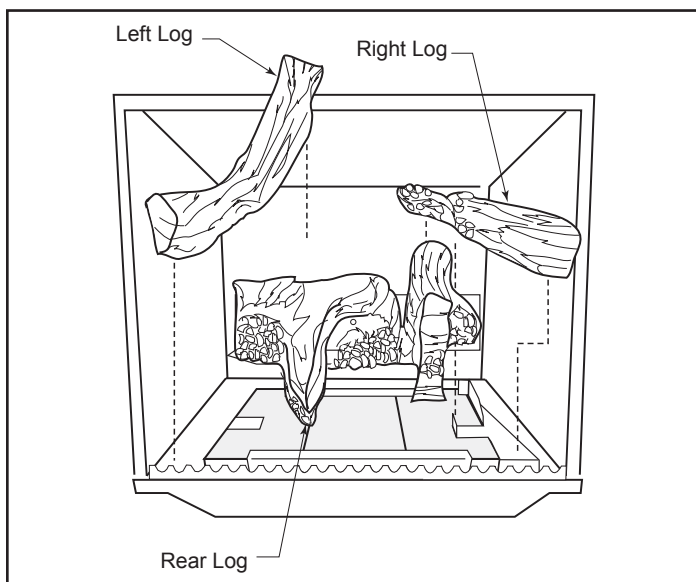


Figure 10 - Install rear, left and right logs.

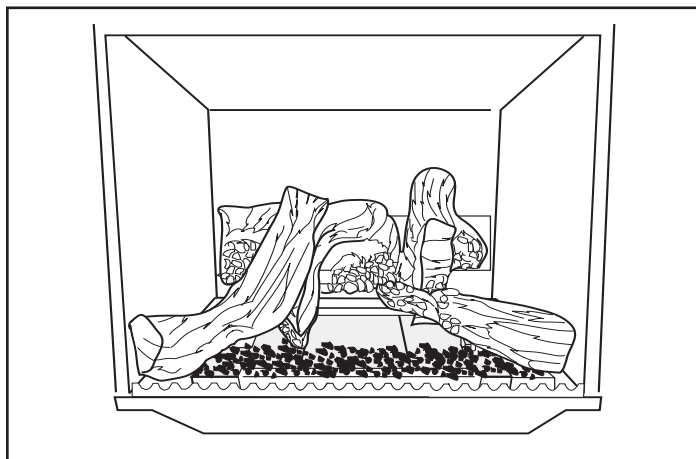


Figure 11 - Stardance logs in place.

### Complete the Installation

1. Install the screen frame by sliding the hooks over the top front edge of the firebox and resting the bottom on the support brackets. Rotate the top edge of the assembly toward the firebox, and center it. Rotate the right and left cams towards the back of the firebox to secure glass frame in place.
2. Grasp the front plate by the window bars and lift into position engaging the two steel tabs behind the adjacent bosses in the side plates. (Figure 12) Seat the front against the sides so the tabs at the bottom lip engage with the notches in the stove legs.

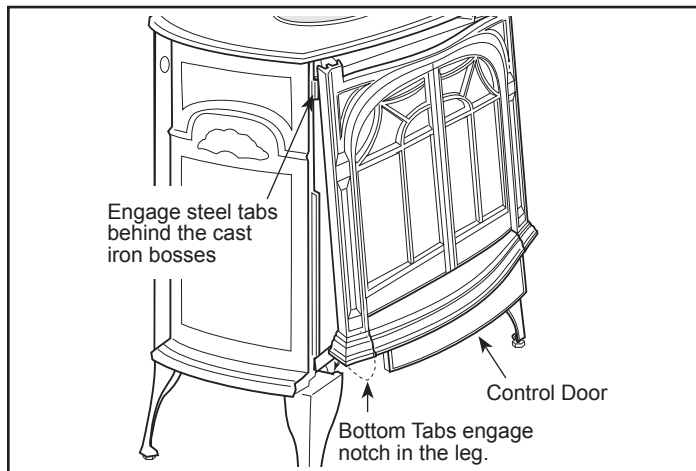


Figure 12 - Install the Front Plate. Your Front may look different from that shown.

When properly installed, the bottom of the front plate cannot be pulled away from the sides without lifting it.

**NOTE:** Be sure the control door can swing out. It should close against the steel tab stop.

If installing the optional warming shelf, you may find it easiest to attach it to the top plate before placing the top in position on the stove. Follow the instructions supplied with the kit.

3. Lay the screen and top grille in place. (Figure 13)

This completes assembly of the Stardance.

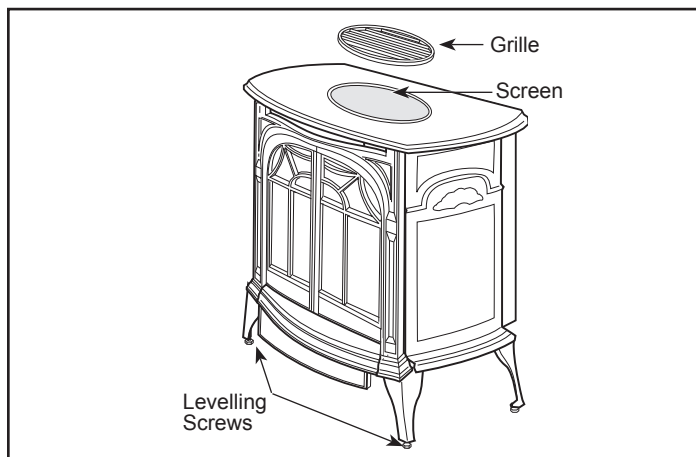


Figure 13 - Install the Top Plate and Grille.

## Operation

### Your First Fire

Read these instructions carefully and familiarize yourself with the burner controls. Locate the pilot assembly, Figure 14. Follow the lighting instructions on the next page exactly.

During the first fire, it is not unusual to smell some odor associated with new logs, paint and metal being heated. Odors should dissipate within the first eight to ten hours, however, you can open a window to provide fresh air to alleviate the condition.

### Pilot and Burner Inspection

Each time you light your heater check that the pilot flame and burner flame patterns are as shown in Figures 16 and 17. If flame patterns are incorrect, turn the heater off. Contact your dealer or a qualified gas technician for assistance. Do not operate the heater until the pilot flame is correct.

Follow regular maintenance procedures as described in the Maintenance section of this manual.

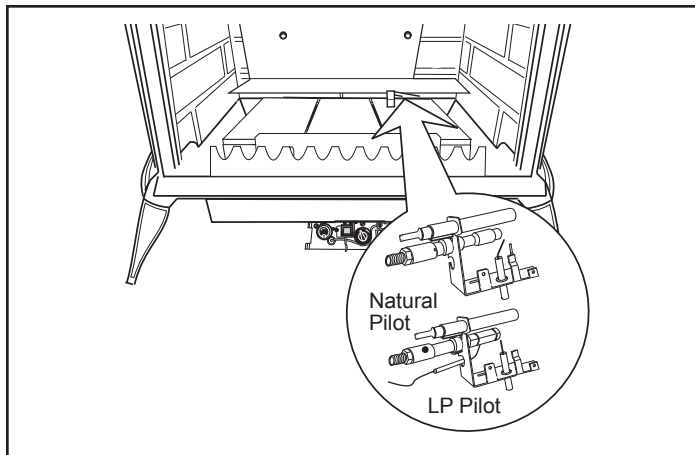


Figure 14 - Pilot assembly location.

### Flame & Temperature Adjustment - RN/RP Models

For units equipped with 'HI/LO' valves the flame adjustment is accomplished by rotating the 'HI/LO' adjustment knob located near the center of the gas control valve. (Figure 15)

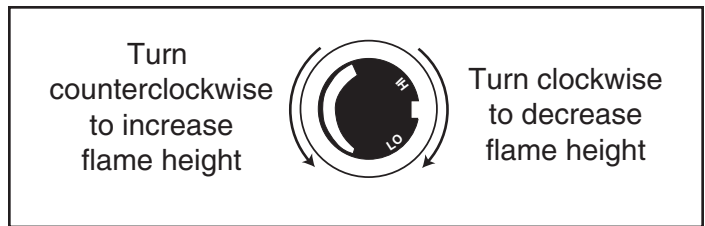


Figure 15 - Flame adjustment knob for SIT Valve.

### Flame Characteristics

It is important to periodically perform a visual check of the pilot and burner flames. Compare them to the pictorial illustrated below. (Figs. 21 & 22) If the flame patterns appear abnormal contact a qualified service provider for service and adjustment.

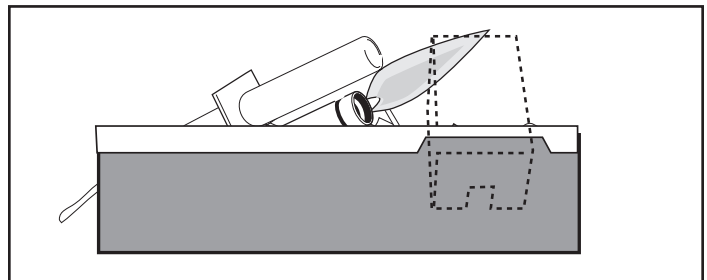


Figure 16 - Correct pilot flame appearance.

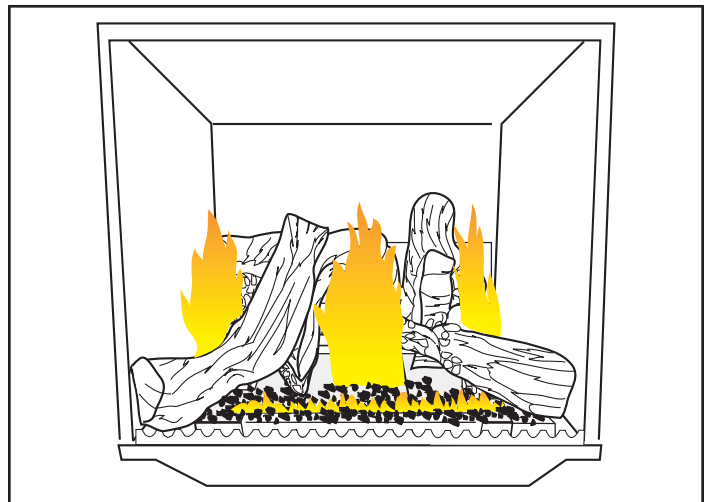


Figure 17 - Correct burner flame pattern.

## Lighting and Operating Instructions



### FOR YOUR SAFETY READ BEFORE LIGHTING

#### WARNING


If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

- A. This heater has a pilot which must be lit manually. When lighting the pilot follow these instructions exactly.
- B. BEFORE LIGHTING smell all around the heater area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.
- WHAT TO DO IF YOU SMELL GAS**
- Do not try to light any fireplace
  - Do not touch any electric switch
  - Do not use any phone in your building
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the Fire Department
- C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, do not try to repair it, call a qualified service technician. Applying force or any attempted repair may result in a fire or explosion.
- D. Do not use this fireplace if any part has been under water. Immediately call a qualified service technician to inspect the heater and to replace any part of the control system and any gas control which has been under water.

### Lighting Instructions

1. **STOP!** Read the safety information above.
  2. Turn off all electrical power to the fireplace.
  3. Turn the On/Off switch to "OFF" position or set thermostat to lowest level.
  4. Open control access panel.
  5. Push in gas control knob slightly and turn clockwise  to "OFF".
- 
6. Wait five (5) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above. If you do not smell gas, go to the next step.
  7. Remove glass door before lighting pilot. (See Glass Frame Removal section).
  8. Visibly locate pilot by the main burner.
  9. Turn knob on gas control counterclockwise  to "PILOT".
  10. Push the control knob all the way in and hold. Immediately light the pilot by repeatedly depressing the piezo spark ignitor until a flame appears. Continue to hold the control knob in for about one (1) minute after the pilot is lit. Release knob and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 5 through 8.
- 
- If knob does not pop up when released, stop and immediately call your service technician or gas supplier.
  - If after several tries, the pilot will not stay lit, turn the gas control knob to "OFF" and call your service technician or gas supplier.
11. Replace glass door.
  12. Turn gas control knob to "ON" position.
  13. Turn the On/Off switch to "ON" position or set thermostat to desired setting.
  14. Turn on all electrical power to the fireplace.

### To Turn Off Gas To Heater

1. Turn the On/Off switch to Off position or set the thermostat to lowest setting. (R models only)
2. Turn off all electric power to the fireplace if service is to be performed.
3. Open control access panel.
4. Push in gas control knob slightly and turn clockwise  to "OFF". Do not force.
5. Close control access panel.

## Troubleshooting

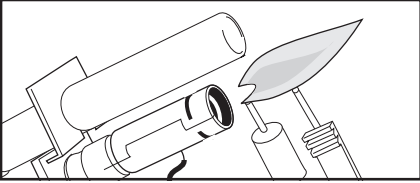
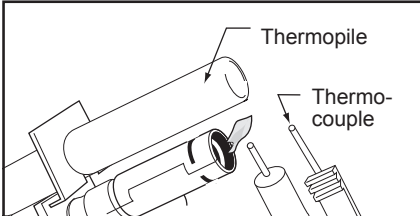
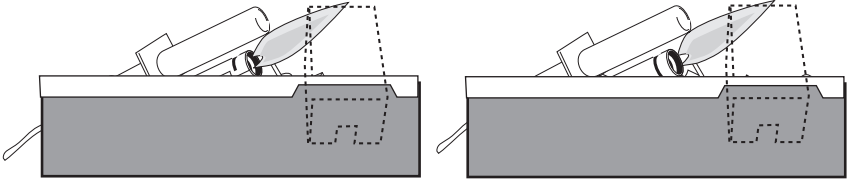
Follow these procedures in the order presented.



### WARNING

Turn off heater and allow to cool completely before servicing.

CONDITION	POSSIBLE CAUSE	SOLUTION
<b>No spark at pilot when Ignitor is operated.</b>	A. Ignition Electrode is disconnected from ignition wire, broken or incorrectly positioned.	Inspect and re-connect, replace or repair as necessary
	B. Ignitor wire is broken.	Inspect and re-connect, replace or repair as necessary
	3. Bad Piezo Ignitor.	Replace Piezo Ignitor
<b>The Ignitor Electrode sparks, but Pilot does not light.</b>	A. Gas supply is turned off or supply line shut-off valve is closed.	Turn on gas supply or open supply line shut-off valve.
	B. Control Knob is not in PILOT position.	Turn Control Knob to PILOT.
	C. Control Knob not pressed in while in PILOT position.	Press Control Knob in while in the PILOT position.
	D. Air present in gas lines.	Continue holding in Control Knob and repeat ignition procedure until air is bled from the lines.
	E. Inlet supply pressure is not within correct settings.	Call local gas supplier. Adjust inlet supply pressure to specification: NG; 5.5" w.c.-14.0"w.c. LP; 11.0" w.c.-14.0"w.c.
	F. Other conditions that should be identified only by a qualified gas technician	Call qualified gas technician.

CONDITION	POSSIBLE CAUSE	SOLUTION
<p><b>Pilot lights but flame goes out when Control Knob is released.</b></p>  <p>Pilot flame is lifting.</p>  <p>Pilot flame is weak - does not touch Thermocouple.</p>	<p>A. Control Knob not fully depressed or held in long enough.</p> <p>B. Gas supply line shut-off valve is not fully open.</p> <p>C. Thermocouple connection is loose at the Control Valve.</p> <p>D. Pilot flame does not touch the Thermocouple. This can be caused by: A) Incorrect gas pressure, and/or B) other conditions that should be identified only by a qualified service technician.</p> <p>E. Thermocouple is damaged.</p> <p>F. Control Valve is damaged.</p>  <p>Correct LP Pilot Flame.      Correct NG Pilot Flame.</p>	<p>Depress Control Knob fully and hold in for a full 30 seconds.</p> <p>Fully open gas supply line shut-off valve.</p> <p>Inspect and tighten securely.</p> <p>1. Call local gas supplier. Adjust inlet supply pressure to specification: NG; 5.5" w.c.-14.0"w.c. LP; 11.0" w.c.-14.0"w.c.</p> <p>2. Call local gas service technician.</p> <p>Call local gas service technician.</p> <p>Call local gas service technician.</p>
<p><b>Pilot lights but Main Burner does not.</b></p>	<p>A. Gas supply line shut-off valve is not fully open.</p> <p>B. Foreign material is blocking Burner ports.</p> <p>C. Main Burner orifice is clogged.</p> <p>D. Thermostat or remote switch not activated on JUVS.</p> <p>E. Bad Thermopile.</p>	<p>Fully open gas supply line shut-off valve.</p> <p>Inspect and clear debris away from Burner port</p> <p>Call local gas service technician.</p> <p>Set thermostat to higher temperature or check remote switch.</p> <p>Call local gas service technician.</p>
<p><b>Main Burner shuts off and Pilot flame goes out while in operation.</b></p>	<p>A. Insufficient fresh air.</p> <p>B. Incorrect inlet supply pressure.</p>	<p>Determine that adequate ventilation exists to provide sufficient fresh air. Open a window or provide additional ventilation. (See Fresh Air Requirements)</p> <p>Call local gas supplier. Adjust inlet supply pressure to specification: NG; 5.5" w.c.-14.0"w.c. LP; 11.0" w.c.-14.0"w.c.</p>

## Maintenance

The following procedures will help ensure that your heater continues to perform safely and efficiently.

### Cleaning Firebox & Inspection

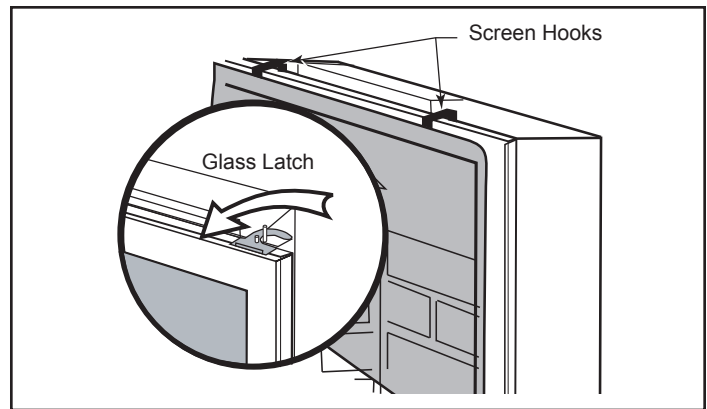
**Cleanliness is critical to correct operation of the heater. The log set, burner, valve controls and air circulation areas must all be kept free of dust and unobstructed by debris. Inspect these areas before each use and clean whenever accumulation is evident.** Follow the simple procedure outlined below.

Frequent cleaning may be necessary in living environments subject to excessive carpet lint or pet hair. For example, if you live with a dog that sheds continuously, you will need to inspect the burner area frequently and clean it as often as the accumulation requires. **In extreme conditions, it may be necessary to clean the burner and log set monthly or bi-weekly.**

**This appliance should be inspected and thoroughly cleaned annually by a qualified gas technician.**

### Cleaning Procedure

1. Turn the burner OFF and let the heater cool completely before cleaning.
2. Lift the Front plate up and then swing the bottom out to disengage it from the heater shell.
3. Remove the screen by lifting up and away from the unit. Or, if so equipped, remove the glass panel by rotating the two cams toward the front of the firebox. Lift the panel up and off of the firebox frame. (Figure 16)
4. Carefully inspect the log set for damage. Contact your local dealer if any damage is evident. **DO NOT OPERATE THE HEATER WITH A DAMAGED OR LOOSE LOG SET.**  
Use a soft-bristled brush vacuum cleaner attachment to remove dust or debris from the log set, pilot and burner. Use care as the log set is fragile.
5. Inspect the catalytic combustor at the top of the firebox. Replace the combustor if any damage or deterioration is evident.
6. Replace the screen or glass panel and the front plate. **DO NOT OPERATE THE HEATER WITH THE SCREEN / GLASS PANEL OR FRONT PLATE REMOVED.**



**Figure 16** - Remove the screen or glass panel.

### Glass Replacement

If so equipped, do not operate this appliance with the glass panel cracked, broken, or removed. Replace damaged glass only with an approved Vermont Castings Group ceramic glass panel. Follow the Cleaning Procedure instructions regarding parts removal.

### Care of Cast Iron

An occasional dusting with a dry rag will help keep the painted surfaces looking new. Use high-temperature stove paints, available through your local dealer, to touch-up areas as needed. Clean areas to be painted with a wire brush and be sure to cover the log set, burner and valve assembly. Apply the paint sparingly; two light coats of paint will give better results than a single heavy coat.

Porcelain enamel surfaces should be cleaned with a soft, damp cloth. Do not use abrasive cleaning agents. If necessary, use only a cleaning agent formulated specifically for use on porcelain enamel surfaces.



### WARNING

Turn the burner Pilot OFF before applying paint. NEVER paint pilot or around pilot area.

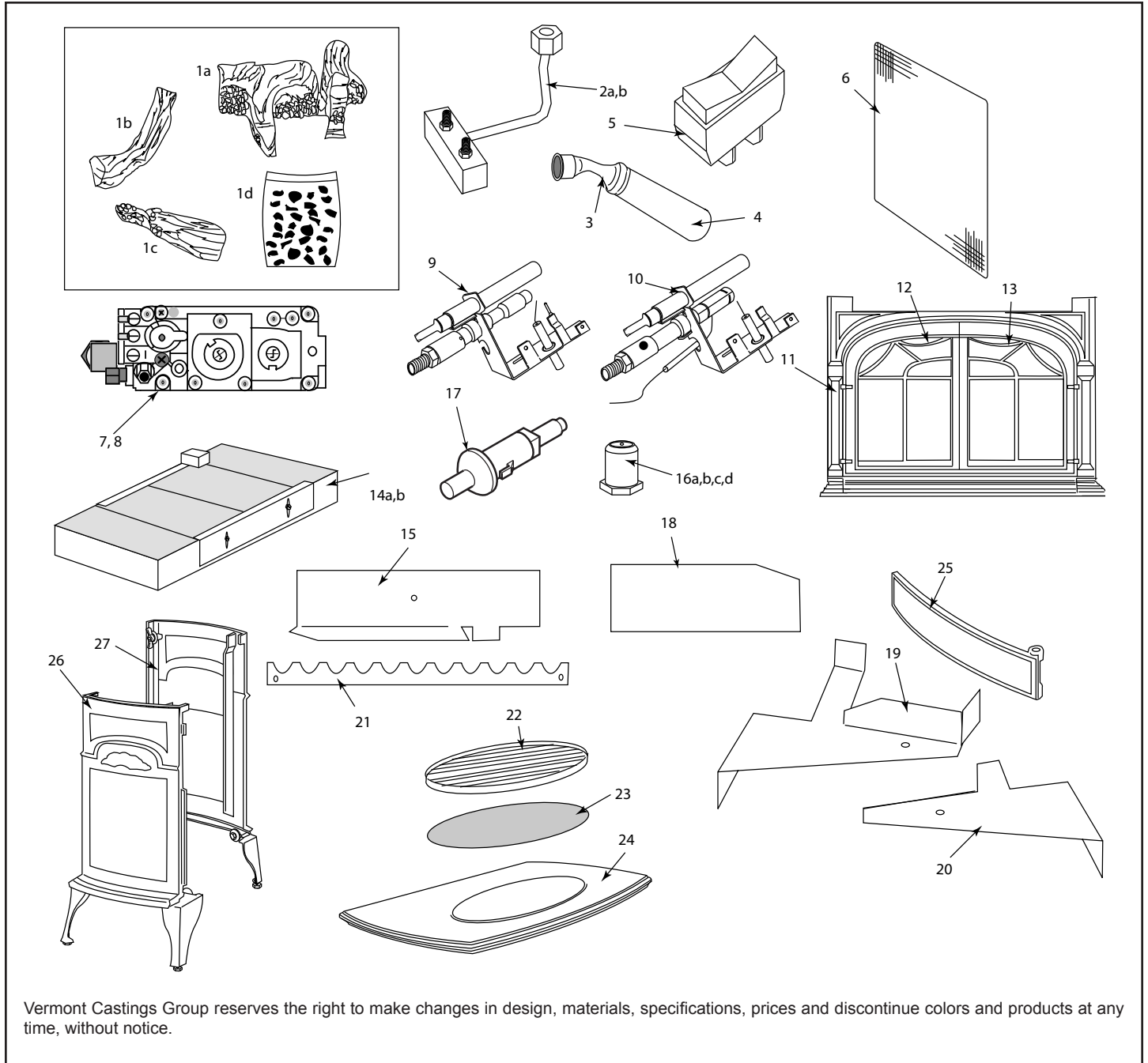


### WARNING

Dust and debris accumulation can result in poor performance. Inspect the Valve compartment, burner parts and log set frequently and Clean these parts monthly or as often as accumulation warrants.



Stardance Vent Free Gas Heaters - Models 4050, 4051



## Stardance Vent Free Gas Heaters - Models 4050, 4051

1.	Gas Log Assembly	20005005
1a.	Log #V40 Rear	20005006
1b.	Log #V42 Left	20005008
1c.	Log #V41 Right	20005007
1d.	Lava Rocks Burner	57897
2.	Manifold Assy.	20003739
3.	Damper Steel Handle/Screw	30002720
4.	Handle Package, Ceramic w/Screw	30004175K
5.	Trim ON/OFF Switch	30000874
6.	Screen	20005009
7.	Valve SIT - Nat.	14D0467
8.	Valve SIT - LP	14D0468
9.	Oxygenerator, NG OP #8204	55464
10.	Oxygenerator, LP OP #8404	55465
11.	Front, Stardance OP DR Black	30001496A
12.	Door, Left - Black	30004082A
13.	Door, Right - Black	30004081A
14a.	Burner Housing Assy. - Nat.	20003130
14b.	Burner Housing Assy. - LP	20004995
15.	Bracket, Rear Log - JUV	20003274

16a.	Orifice Hood #69 (.0292") - Front - LP	30000513
16b.	Orifice Hood #54 (.055") - Front - Nat.	20000130
16c.	Orifice Hood #54 (.055") - Rear - LP	20000130
16d.	Orifice Hood #44 (.086") - Rear - Nat.	30000334
17.	Ignitor Piezo	14D0503
18.	Gasket, Base Pan Inner	20002566
19.	Bracket Support Right Log	20004920
20.	Bracket Support Left Log	20005022
21.	Grate Decorative Burner	20003022
22.	Grille	30000393A
23.	Mesh, Grille	30000508
24.	Top, Stardance Black	30001278A
25.	Door, Control Black	1301087A
26.	Left End Black	30001280A
27.	Right End Black	30001279A
28.	1/4" Fiberglass Gasket (not shown)	1203560
29.	*Magnet, Door (not shown)	30004112
30.	*Magnet, Control Door (not shown)	1408818
	Flexline - Black	20H1011

\*Use common super glue or silicone to attach magnets.

## Optional Accessories Available

### Fan Kits

#### FK28 Fan Assembly

The FK28 fan kit helps distribute heated air from within the firebox out into the room. The fan is controlled by a snapstat that turns power on and off as the firebox temperature rises above and falls below a preset temperature. A rheostat provides for variable fan speeds.

#### Specifications

115 Volt / 60Hz / .75 Amps

#### Maintenance

The fan itself does not require regular maintenance, however periodic cleaning of the fan and the surrounding area is required.

#### Installation

Refer to Assembly Section for installation instructions.

### Remote Controls

The remote control allows you to turn the heater on or off from anywhere in the room. Remote controls are available for the Stardance only.

#### Model

RCB,RCMT

RCBE,WMTD

RCST,RCSTE,RCT,

WWTD,RCSTEB,

RCSITE,RCSIT

WT

#### Functions Controlled

ON/OFF

ON/OFF and Temperature

Wall mounted thermostat control

### Warming Shelf

Warming shelves add versatility to your stove. The warming shelf can be used to keep foods warm at mealtime.

#### Model

2702

#### Color

Classic Black

The shelf installation is done in three stages. First you attach the shelf loosely to the stove, leaving the screws loose enough to allow final adjustments. Then, you position the shelf and adjust the brackets so the shelf fits correctly. Finally, you tighten the screws.

Refer to the instructions included with each warming shelf for complete installation procedures.

**Hearth & Home Technologies  
LIMITED LIFETIME WARRANTY**

Hearth & Home Technologies, on behalf of its hearth brands (“HHT”), extends the following warranty for HHT gas, wood, pellet and electric hearth appliances that are purchased from an HHT authorized dealer.

**WARRANTY COVERAGE:**

HHT warrants to the original owner of the HHT appliance at the site of installation, and to any transferee taking ownership of the appliance at the site of installation within two years following the date of original purchase, that the HHT appliance will be free from defects in materials and workmanship at the time of manufacture. After installation, if covered components manufactured by HHT are found to be defective in materials or workmanship during the applicable warranty period, HHT will, at its option, repair or replace the covered components. HHT, at its own discretion, may fully discharge all of its obligations under such warranties by replacing the product itself or refunding the verified purchase price of the product itself. The maximum amount recoverable under this warranty is limited to the purchase price of the product. This warranty is subject to conditions, exclusions and limitations as described below.

**WARRANTY PERIOD:**

Warranty coverage for consumers begins at the date of installation. In the case of new home construction, warranty coverage begins on the date of first occupancy of the dwelling or six months after the sale of the product by an independent, authorized HHT dealer/distributor, whichever occurs earlier. However, the warranty shall commence no later than 24 months following the date of product shipment from HHT, regardless of the installation or occupancy date. The warranty period for parts and labor for covered components is produced in the following table.

The term “Limited Lifetime” in the table below is defined as: 20 years from the beginning date of warranty coverage for gas appliances, and 10 years from the beginning date of warranty coverage for wood and pellet appliances. These time periods reflect the minimum expected useful lives of the designated components under normal operating conditions.

Warranty Period		HHT Manufactured Appliances and Venting					
Parts	Labor	Gas	Pellet	Wood	Electric	Venting	Components Covered
1 Year		X	X	X	X	x	All parts and material except as covered by Conditions, Exclusions, and Limitations listed
2 years			X	X			Igniters, auger motors, electronic components, and glass
		X	X	X			Factory-installed blowers
				X			Molded refractory panels
		X					Ignition Modules
3 years			X				Firepots, burnpots, mechanical feeders/auger assemblies
5 years	1 year	X					Vent Free burners, Vent Free ceramic fiber logs, Aluminized Burners
			X	X			Castings and Baffles
6 years	3 years			X			Catalyst - limitations listed
7 years	3 years		X	X			Manifold tubes, HHT chimney and termination
10 years	1 year	X					Burners, logs and refractory
Limited Lifetime	3 years	X	X	X			Firebox and heat exchanger, Grate and Stainless Steel Burners, FlexBurn® System (engine, inner cover, access cover and fireback)
90 Days		X	X	X	X	X	All replacement parts beyond warranty period

**WARRANTY CONDITIONS:**

- This warranty only covers HHT appliances that are purchased through an HHT authorized dealer or distributor. A list of HHT authorized dealers is available on the HHT branded websites.
- This warranty is only valid while the HHT appliance remains at the site of original installation.
- This warranty is only valid in the country in which the HHT authorized dealer or distributor that sold the appliance resides.
- Contact your installing dealer for warranty service. If the installing dealer or distributor is unable to provide necessary parts, contact the nearest HHT authorized dealer or supplier. Additional service fees may apply if you are seeking warranty service from a dealer other than the dealer from whom you originally purchased the product.
- Check with your dealer in advance for any costs to you when arranging a warranty call. Travel and shipping charges for parts are not covered by this warranty.
- Limited Catalyst Warranty
  - o For wood burning products containing a catalyst, the catalyst will be warranted for a six-year period as follows: if the original catalyst or a replacement catalyst proves defective or ceases to maintain 70% of its particulate emission reduction activity (as measured by an approved testing procedure) within 36 months from the purchase date, the catalyst will be replaced for free.
  - o From 37 to 72 months a pro-rated credit will be allowed against a replacement catalyst and labor credit necessary to install the replacement catalyst. The proration rate is as follows:

<b>Amount of Time Since Purchase</b>	<b>Credit Towards Replacement Cost</b>
0 - 36 Months	100%
37 - 48 Months	30%
49 - 60 Months	20%
61 - 72 Months	10%

- o Any replacement catalyst will be warranted under the terms of the catalyst warranty for the remaining term of the original warranty. The purchaser must provide the name, address, and telephone number of the location where the product is installed, proof of original purchase date, date of failure, and any relevant information regarding the failure of the catalyst.

**WARRANTY EXCLUSIONS:**

This warranty does not cover the following:

- Changes in surface finishes as a result of normal use. As a heating appliance, some changes in color of interior and exterior surface finishes may occur. This is not a flaw and is not covered under warranty.
- Damage to printed, plated, or enameled surfaces caused by fingerprints, accidents, misuse, scratches, melted items, or other external sources and residues left on the plated surfaces from the use of abrasive cleaners or polishes.
- Repair or replacement of parts that are subject to normal wear and tear during the warranty period are not covered. These parts include: paint, wood and pellet gaskets, firebricks, grates, flame guides, batteries and the discoloration of glass.
- Minor expansion, contraction, or movement of certain parts causing noise. These conditions are normal and complaints related to this noise are not covered by this warranty.
- Damages resulting from: (1) failure to install, operate, or maintain the appliance in accordance with the installation instructions, operating instructions, and listing agent identification label furnished with the appliance; (2) failure to install the appliance in accordance with local building codes; (3) shipping or improper handling; (4) improper operation, abuse, misuse, continued operation with damaged, corroded or failed components, accident, or improperly/incorrectly performed repairs (5) environmental conditions, inadequate ventilation, negative pressure, or drafting caused by tightly sealed constructions, insufficient make-up air supply, or handling devices such as exhaust fans or forced air furnaces or other such causes; (6) use of fuels other than those specified in the operation instructions; (7) installation or use of components not supplied with the appliance or any other components not expressly authorized and approved by HHT; (8) modification of the appliance not expressly authorized and approved by HHT in writing; and/or (9) interruptions or fluctuations of electrical power supply to the appliance.
- Non-HHT venting components, hearth connections or other accessories used in conjunction with the appliance.
- Any part of a pre-existing fireplace system in which an insert or a decorative gas appliance is installed.
- HHT’s obligation under this warranty does not extend to the appliance’s capability to heat the desired space. Information is provided to assist the consumer and the dealer in selecting the proper appliance for the application. Consideration must be given to the appliance location and configuration, environmental conditions, insulation and air tightness of the structure.

**This warranty is void if:**

- The appliance has been over-fired, operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals. Over-firing can be identified by, but not limited to, warped plates or tubes, deformation/warping of interior cast iron structure or components, rust colored cast iron, bubbling, cracking and discoloration of steel or enamel finishes.
- The appliance is subjected to prolonged periods of dampness or condensation.
- There is any damage to the appliance or other components due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation.

**LIMITATIONS OF LIABILITY**

- The owner's exclusive remedy and HHT's sole obligation under this warranty, under any other warranty, express or implied, or in contract, tort or otherwise, shall be limited to replacement, repair, or refund, as specified above. In no event will HHT be liable for any incidental or consequential damages caused by defects in the appliance. Some states do not allow exclusions or limitation of incidental or consequential damages, so these limitations may not apply to you. This warranty gives you specific rights; you may also have other rights, which vary from state to state. EXCEPT TO THE EXTENT PROVIDED BY LAW, HHT MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY SPECIFIED HEREIN. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO DURATION OF THE EXPRESSED WARRANTY SPECIFIED ABOVE.

**NATIONAL  
FIREPLACE  
INSTITUTE**



**CERTIFIED**  
[www.nficertified.org](http://www.nficertified.org)

We recommend that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

# VERMONT CASTINGS

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