Comfort Glow®

VENT-FREE GAS DUAL FUEL HEATER

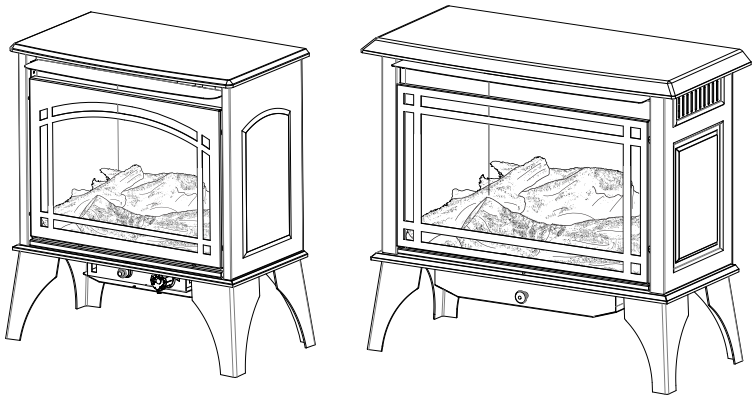
MODEL #GSD2211
GSD2846

Patent Pending Dual Fuel System

NG LP
Dual Fuel

US
ANSI Z21.11.2-2013

⚠ WARNING: This appliance is equipped for (Natural and Propane) gas. Field conversion is not permitted other than between natural or propane gases.



⚠ CAUTION - FOR YOUR SAFETY

⚠ 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 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.

⚠WARNING: Do not attempt to access or change the setting of the fuel selection means.

Access to and adjustment of the fuel selection means must only be a performed by a qualified service person when connecting this appliance to a specified fuel supply at the time of installation.

Change of the selector setting to other than the fuel type specified at the time of installation could damage this appliance and render it inoperable.

The installer shall replace the access cover before completing the installation and operating this appliance.

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 Air For Combustion and Ventilation section on page 8-10 of this manual.

INSTALLER: Leave this manual with the appliance.
CONSUMER: Retain this manual for future reference.

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 propane or natural gas. This appliance is equipped with a simple means to switch between propane and natural gas. Field conversion by any other means including the use of a kit is not permitted.

⚠WARNING: When the appliance is installed directly on carpeting, tile or other combustible material, other than wood flooring, the appliance shall be installed on a metal or wood panel extending the full width and depth of the appliance.

⚠WARNING: Any safety screen or guard removed for servicing an appliance must be replaced prior to operating the heater.

Questions, problems, missing parts? Before returning to your retailer, call our Technical Service Department at 800-776-9425.

TABLE OF CONTENTS

⚠ WARNING: Read the Installation & Operating Instructions before using this appliance.

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

Model	GSD2211		GSD2846	
Input Rating	20,000 BTU/Hr		30,000 BTU/Hr	
Minimum Input Rating	16,000 BTU/Hr	10,000 BTU/Hr	24,000 BTU/Hr	15,000 BTU/Hr
Gas Type	LP	NG	LP	NG
Manifold Pressure	10" WC	5" WC	10" WC	5" WC
Max. Inlet Pressure	14" WC	14" WC	14" WC	14" WC
Min. Inlet Pressure	11" WC	6" WC	11" WC	6" WC

SERVICE HINTS

When Gas Pressure Is Too Low

- pilot will not stay lit
- burners will have delayed ignition
- heater will not produce specified heat
- for propane/LP units, propane/LP gas supply may be low

You may feel your gas pressure is too low. If so, contact your local natural or propane/LP gas supplier.

IMPORTANT SAFETY INFORMATION

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.

Only a qualified installer, service agent, or local gas supplier may install and service this product.

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

WARNING: This appliance can be used with propane or natural gas. It is shipped from the factory adjusted for use with propane.

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 immediately! Have heater serviced. Some people are more affected by carbon monoxide than others. These include pregnant women, people with heart or lung disease, people who are anemic, those under the influence of alcohol, and those living in high altitudes.

NATURAL AND PROPANE/LP GAS: Natural and Propane/LP gases are odorless. An odor-making agent is added to the gas. The odor helps you detect a gas leak. However, the odor added to the gas can fade. Gas may be present even though no odor exists. Make certain you read and understand all warnings. Keep this manual for reference. It is your guide to operating this heater safely.

- **WARNING:** Any change to this heater or its controls can be dangerous.
- **WARNING:** Do not use any accessories not approved for use with this heater.
- **WARNING: Carefully supervise young children when they are in the room with the heater.**
- **WARNING:** Heater becomes very hot when operating. Keep children and adults away from hot surfaces to avoid burns or clothing ignition. Heater will remain hot for a time after shutoff. Allow surfaces to cool before touching.
- **WARNING:** Keep the appliance area clear and free from combustible materials, gasoline, and other flammable vapors and liquids.
- **WARNING:** Due to high temperatures, locate this appliance out of traffic and away from furniture and draperies.
- **WARNING:** Do not place clothing or other flammable material on or near the appliance. Never place any objects in the heater.

WARNING

This product and the fuels used to operate this product (liquid propane or natural gas), and the products of combustion of such fuels, can expose you to chemicals including benzene, which is known to the State of California to cause cancer and reproductive harm.
For more information go to www.p65Warnings.ca.gov

SAFETY INFORMATION

1. 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.
2. Do not place propane/LP supply tank(s) inside any structure. Locate propane/LP supply tank(s) outdoors.
3. If you smell gas
• shut off gas supply
• 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
4. This heater shall not be installed in a bedroom or bathroom.
5. Do not use this heater as a wood-burning heater. Use only the logs provided with the heater.
6. Do not add extra logs or ornaments such as pine cones, vermiculite or rock wool. Using these added items can cause sooting. Do not add lava rock around base. Rock and debris could fall into the control area of heater.
7. This heater is designed to be smokeless. If logs ever appear to smoke, turn off heater and call a qualified service person. Note: During initial operation, slight smoking could occur due to log curing and heater burning manufacturing residues.
8. To prevent the creation of soot, follow the instructions in Cleaning and Maintenance, page 21-22.
9. Before using furniture polish, wax, carpet cleaner or similar products, turn heater off. If heated, the vapors from these products may create a white powder residue within burner box or on adjacent walls or furniture.
10. This heater needs fresh air ventilation to run properly. This heater has an Oxygen Depletion Sensing (ODS) safety shutoff system. The ODS shuts down the heater if not enough fresh air is available. See Air for Combustion and Ventilation, page 8. If heater keeps shutting off, see Troubleshooting, page 23-25.
11. Do not run heater
• where flammable liquids or vapors are used or stored.
• under dusty conditions.
12. Do not use this heater to cook food or burn paper or other objects.
13. Never place any objects in the heater or on logs.
14. Do not use heater if any part has been 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. Turn off and unplug heater and let cool before servicing. Only a qualified service person should service and repair heater.
16. Operating heater above elevations of 4,500 feet could cause pilot outage.
17. Do not operate heater if log is broken. Do not operate heater if log is chipped (dime-sized or larger).
18. To prevent performance problems, do not use propane/LP fuel tank of less than 100 lb. capacity.
19. Provide adequate clearances around air openings.

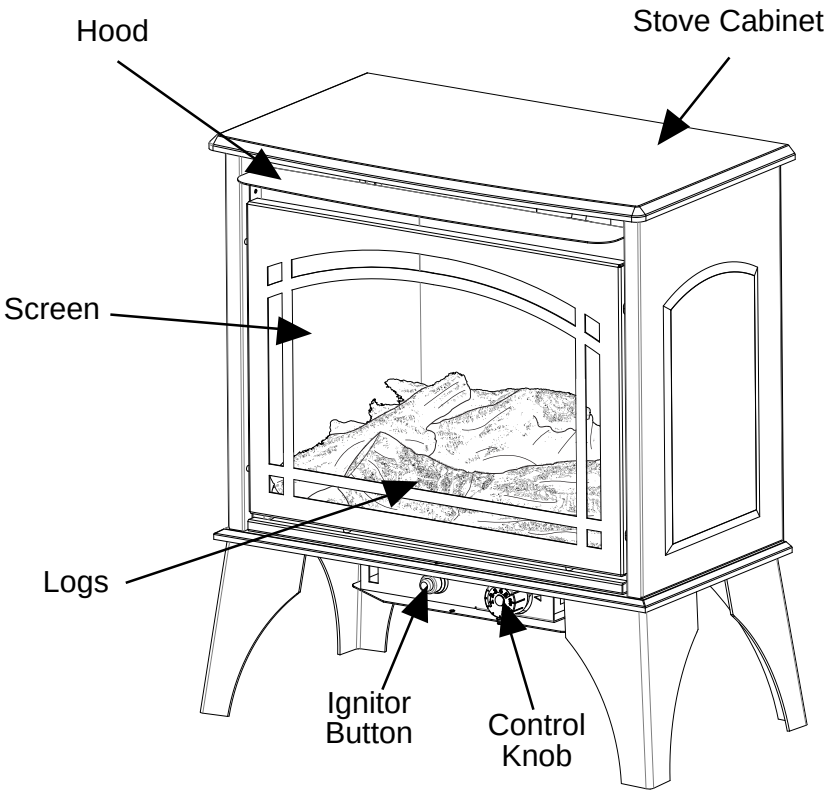
QUALIFIED INSTALLING AGENCY

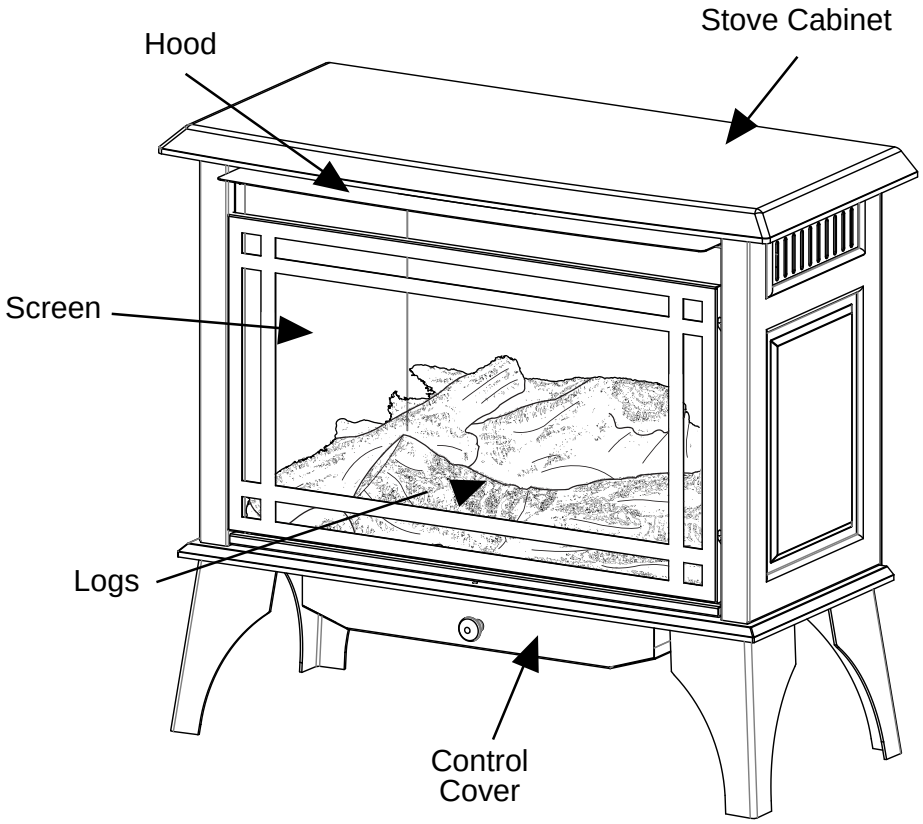
Only a qualified agency should install and replace gas piping, gas utilization equipment or accessories, and repair and equipment servicing. The term "qualified agency" means any individual, firm, corporation, or company that either in person or through a representative is engaged in and is responsible for:

a) Installing, testing, or replacing gas piping or

b)Connecting, installing, testing, repairing, or servicing equipment; that is experienced in such work; that is familiar with all precautions required; and that has complied with all the requirements of the authority having jurisdiction.

PRODUCT IDENTIFICATION





PRODUCT FEATURES

SAFETY PILOT
This heater has a pilot with an Oxygen Depletion Sensing (ODS) safety shutoff system. The ODS/pilot shuts off the heater if there is not enough fresh air and cuts off main burner gas in the event of flame out.

ELECTRIC PUSH BUTTON IGNITION SYSTEM
This heater is equipped with an electronic push button control system. This system requires one AAA battery (provided).

THERMOSTAT HEAT CONTROL
The control automatically cycles the burner on and off to maintain a desired room temperature.

DUAL FUEL CAPABILITY
Your heater is equipped to operate on either propane or natural gas. The heater is shipped from the factory ready for connecting to propane. The heater can easily be changed to natural gas by having your qualified installer follow the instructions on page 14 and the markings on the heater.

BLOWER KIT (OPTIONAL)
The blower kit helps to distribute the warmed air into the space more rapidly.

State of Massachusetts: The installation must be made by a licensed plumber or gas fitter in the Commonwealth of Massachusetts. Sellers of unvented propane or natural gas-fired supplemental room heaters shall provide to each purchaser a copy of 527 CMR 30 upon sale of the unit.

In the State of Massachusetts, unvented propane or natural gas-fired space heaters shall be prohibited in bedrooms and bathrooms.

In the State of Massachusetts the gas cock must be a T-handle type. The State of Massachusetts requires that a flexible appliance connector cannot exceed three feet in length.

LOCAL CODES
Install and use heater with care. Follow all codes. In the absence of local codes, use the latest edition of The National Fuel Gas Code, ANSI Z223.1, also known as NFPA 54*.

*Available from:

American National Standard Institute, Inc.
1430 Broadway
New York, NY 10018

National Fire Protection Association, Inc.
1 Batterymarch Park
Quincy, MA 02269-9101

This heater is designed for vent-free operation. State and local codes in some areas prohibit the use of vent-free heaters.

UNPACKING
1. Remove heater cabinet and hood from carton. Log is wrapped and inside heater. Do not remove at this time.
2. Remove all protective packaging applied to heater for shipment.
3. Make sure your heater includes one hardware packet.
4. Check heater for any shipping damage. If damaged, call our Technical Service Department at 1-814-643-1775. Please do not return it to the store.

AIR FOR COMBUSTION AND VENTILATION

WARNING: 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 ***Nation Fuel Gas Code, ANSI Z223.1/NFPA 54***, the ***International Fuel Gas Code***, or applicable local codes.

PRODUCING ADEQUATE VENTILATION

All spaces in homes fall into one of the three following ventilation classifications:
1. Unusually Tight Construction
2. Unconfined Space
3. Confined Space

The information on pages 8-10 will help you classify your space and provide adequate ventilation.

Confined and Unconfined Space

A confined space as a space whose volume is less than 50 cu. ft. per 1,000 BTU/hr (4.8 m^3 per kw) of the aggregate input rating of all appliances installed in that space and an unconfining space as a space whose volume is not less than 50 cu. ft. per 1,000 BTU/hr (4.8 m^3 per kw) of the aggregate input rating of all appliances installed in that space. Rooms connecting directly with the space in which the appliances are installed*, through openings not furnished with doors, are considered a part of the unconfined space.

This heater shall not be installed in a confined space or unusually tight construction unless provisions are provided for adequate combustion and ventilation air.

* Adjoining rooms are connecting only if there are doorless passageways or ventilation grills between them.

Unusually Tight Construction

The air that leaks around doors and windows may provide enough fresh air for combustion and ventilation. However, in buildings of unusually tight construction, you must provide additional fresh air.

Unusually tight construction is defined as construction where:

a) walls and ceilings exposed to the outside atmosphere have a continuous water vapor retarder with a rating of one perm (6x10-11kg per pa-sec-m2) or less with openings gasketed or sealed and

b) weather stripping has been added on windows that can be opened and on doors and

c) caulking or sealants are applied to areas such as joints around window and door frames, between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical, and gas lines, and at other openings.

If your home meets all of the three criteria above, you must provide additional fresh air. See “Ventilation Air From Outdoors” (page 9). If your home does not meet all of the three criteria above, proceed to “Determining Fresh-Air Flow For Heater Location”.

DETERMINING FRESH-AIR FLOW FOR HEATER LOCATION

Determining if You Have a Confined or Unconfined Space

Use this worksheet to determine if you have a confined or unconfined space.

Space: Includes the room in which you will install heater plus any adjoining rooms with doorless passageways or ventilation grills between the rooms.

1. Determine the volume of the space Length × Width × Height = cu. ft. (volume of space)
   Example: Space size 20 ft. (length) × 16 ft.(width) × 8 ft. (ceiling height) = 2560 cu. ft. (volume of space)

If additional ventilation to adjoining room is supplied with grills or openings, add the volume of these rooms to the total volume of the space.

2. Divide the space volume by 50 cu. ft. to determine the maximum BTU/hr the space can support.
   _____ (volume of space) ÷ 50 cu. ft.= (Maximum BTU/hr the space can support)
   Example: 2560 cu. ft. (volume of space) ÷ 50 cu. ft. = 51.2 or 51,200 (maximum BTU/hr the space can support)
3. Add the BTU/hr of all fuel burning appliances in the space.
   Vent-free heater _____ BTU/hr
   Gas water heater* _____BTU/hr
   Gas furnace _____BTU/hr
   Vented gas heater _____BTU/hr Example:
   Gas heater logs _____BTU/hr Gas water heater 30,000 BTU/hr
   Other gas appliances*+ ____BTU/hr Vent-free heater + 26,000 BTU/hr
   Total = ____BTU/hr Total = 56,000 BTU/hr

*Do not include direct-vent gas appliances. Direct-vent draws combustion air from the outdoors and vents to the outdoors.

4. Compare the maximum BTU/hr the space can support with the actual amount of BTU/hr used.
   _____ BTU/hr (maximum the space can support)
   _____ BTU/hr (actual amount of BTU/hr used).
   Example : 51,200 BTU/hr (maximum the space can support) 56,000 BTU/hr (actual amount of BTU/hr used)

The space in the above example is a confined space because the actual BTU/hr used is more than the maximum BTU/hr the space can support.

You must provide additional fresh air. Your options are as follows:

a) Rework worksheet, adding the space of an adjoining room. If the extra space provides an unconfined space, remove door to adjoining room or add ventilation grills between rooms. See “Ventilation Air From Inside Building,” page 9.

b) Vent room directly to the outdoors. See “Ventilation Air From Outdoors”, page 9.

c) Install a lower BTU/hr heater if lower BTU/hr size makes room unconfined. If the actual BTU/hr used is less than the maximum BTU/hr the space can support, the space is an unconfined space. You will need no additional fresh air ventilation.

Ventilation Air From Inside Building

This fresh air would come from adjoining unconfined space. When ventilating to an adjoining unconfined space, you must provide two permanent openings: one within 12 in. of the wall connecting the two spaces (see options 1 and 2, Fig. 4). You can also remove door into adjoining room (see option 3, Fig. 4). Follow the National Fuel Gas Code NFPA 54/ANS Z223.1. Air for Combustion and Ventilation for required size of ventilation grills or ducts.

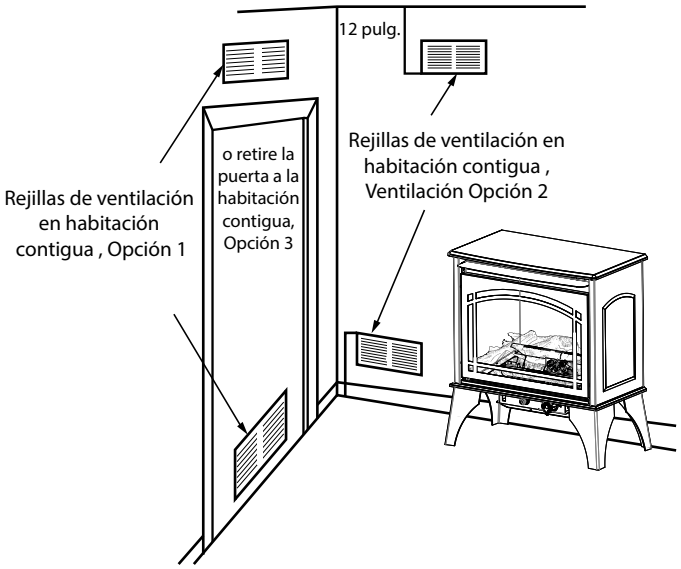


Fig. 4 - Ventilation Air from Inside Building

Ventilation Air From Outdoors

Provide extra fresh air by using ventilation grills or duct. You must provide two permanent openings: one within 12 in. of the ceiling and one within 12 in. of the floor. Connect these items directly to the outdoors or spaces open to the outdoors. These spaces include attics and crawl spaces. Follow the National Fuel Gas Code NFPA 54/ANS Z223.1. Air for Combustion and Ventilation for required size of ventilation grills or ducts.

IMPORTANT: Do not provide openings for inlet or outlet air into attic if attic has a thermostat-controlled power vent. Heated air entering the attic will activate the power vent. Rework worksheet, adding the space of the adjoining unconfined space. The combined spaces must have enough fresh air to supply all appliances in both spaces.

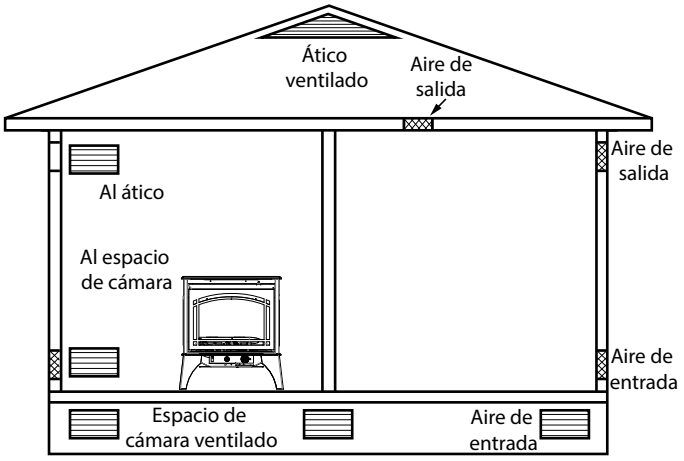


Fig. 5 - Ventilation Air from Outdoors

INSTALLATION

⚠ **NOTICE:** This heater is intended for use as supplemental heat. Use this heater along with your primary heating system. Do not install this heater as your primary heat source. If you have a central heating system, you may run system's circulating blower while using heater. This will help circulate the heat throughout the house.

⚠ **WARNING:** A qualified technician must install heater. Follow all local codes.

⚠ **WARNING:** Never install the heater:
- in a bedroom or bathroom
- in a recreational vehicle
- where curtains, furniture, clothing, or other flammable objects are less than 42 in. from the front, top or sides of the heater.
- in high traffic areas
- in windy or drafty areas

⚠ **WARNING:** Maintain the minimum clearances. If possible, provide greater clearances from the floor, ceiling, and adjoining wall than required.

⚠ **CAUTION:** This heater creates warm air currents. These currents move heat to wall surfaces next to heater. Installing heater next to vinyl or cloth wall coverings or operating heater where impurities (such as tobacco smoke, aromatic candles, cleaning fluids, oil or kerosene lamps, etc.) in the air exist, may cause walls to discolor.

IMPORTANT: Vent-free heaters add moisture to the air. Although this is beneficial, installing heater in rooms without enough ventilation air may cause mildew to form from too much moisture. See Air for Combustion and Ventilation, pages 8-10.

CHECK GAS TYPE
Be sure your gas supply is right for your heater.

CLEARANCES TO COMBUSTIBLES
Carefully follow the instructions below. This heater is a wall mount unit designed to sit directly on the mantel base.

IMPORTANT: Maintain the minimum clearances shown in Figure 6 on page 11. If you can, provide greater clearances from floor, ceiling and joining wall.

Heater CLEARANCES

⚠ CAUTION: If you install the heater in a home garage
• heater pilot and burner must be at least 18" above floor.
• locate heater where moving vehicle will not hit it.

For convenience and efficiency, install heater
• where there is easy access for operation, inspection and service
• in coldest part of room
• If this appliance is to be installed directly on carpeting, tile or other combustible material, other than wood flooring, the appliance must be installed on a metal or wood panel extending the full width and depth of the appliance.

An optional blower kit is available from your retailer. See Accessories, page 27. If planning to use blower, follow instructions provided with blower for power source.

Minimum Clearances For Side Combustible Material, Side Wall and Ceiling
A. Clearances from the side of the heater cabinet to any combustible material and wall should follow diagram in Figure 6.
B. Clearances from the top of the heater to any combustible surface should not be less than 36".
C. Clearances from the front of the heater to any combustible surface shall not be less than 36''.

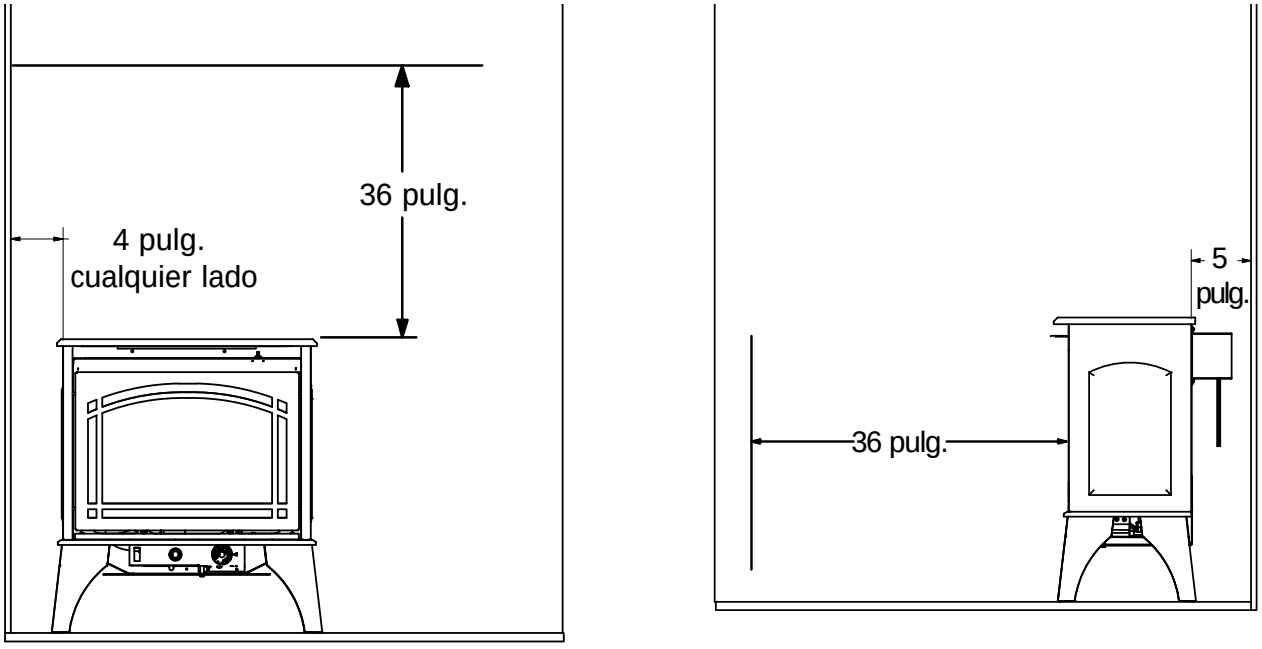


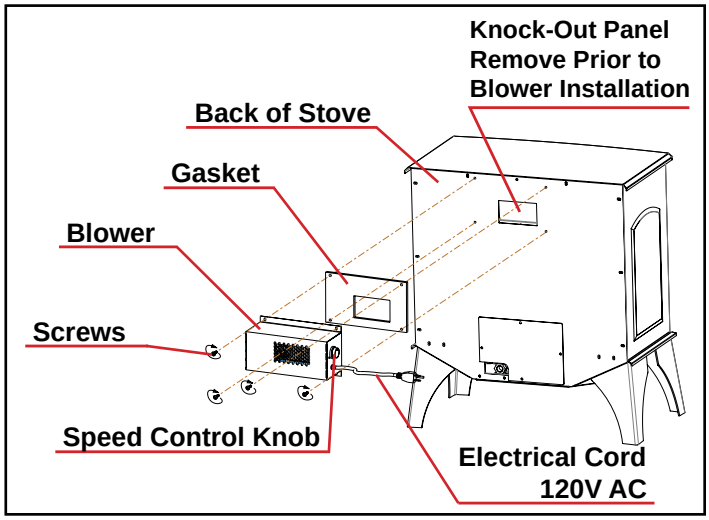
Fig. 6 - Minimum Clearance to Combustible Material

WARNING: The optional blower is equipped with a three-prong (grounding) plug for your protection against shock hazard and must be plugged directly into a properly grounded three-prong receptacle.

Heater must be disconnected from gas supply before installing fan accessory. Contact a qualified service person to do this.

BLOWER INSTALLATION (OPTIONAL)

The blower is to be installed at the rear of the stove, on the rear heat shield. Align the blower and gasket mounting holes with those on the rear heat shield.



VENT-FREE BLOWER INFORMATION

This blower is a rotary tangential fan. It is designed to direct heated air radiating from the rear of the stove to the front at a low velocity. DO NOT expect a large volume of air to be felt when standing in front of the stove.

The blower is NOT thermostatically controlled. The blower speed is manually controlled with variable speeds, which are selected by rotating the speed control knob clockwise. When routing the power cord, be sure that the cord does not come into contact with any hot surface. Operating Voltage is 110 to 120 VAC at 60 Cycle.

IMPORTANT : Ensure the blower and gasket are oriented correctly. The blower wheel and gasket cut-out must align with the cut-out in the rear heat shield. Fasten the blower and gasket to the rear heat shield using the four (4) screws provided. DO NOT over tighten screws. Be sure to plug the blower into a 3 prong gounded outlet. DO NOT tamper with the grounding prong on the cord.

WARNING: DO NOT submerge the blower into any liquids. This will create an electric shock hazard. Disconnect power before installing or servicing unit.

CAUTION: Extreme caution is necessary when any fan is used by or near children or invalids and whenever the fan is left operating unattended.

CLEANING

Periodic cleaning of the blower is recommended. Dust or dirt accumulation could significantly restrict airflow. Restriction in airflow will reduce the efficiency of the blower and possibly damage the motor.

INSTALLATION

BATTERY INSTALLATION

Step 1 – Locate the Push Button Ignitor by lowering the cover on the bottom of the stove. (Fig. 1)
Step 2 – Unscrew the cap on the push button ignitor with your fingers by turning it counterclockwise. (Fig. 2)
Step 3 – Insert the battery with the positive (+) side facing forward.
Step 4 – Replace the cap by turning it clockwise until the cap is finger tight.

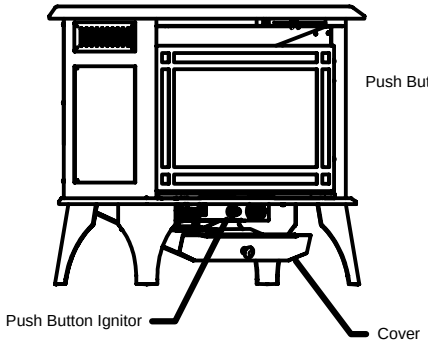


Figure 1

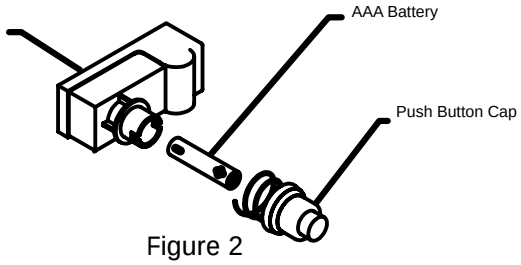
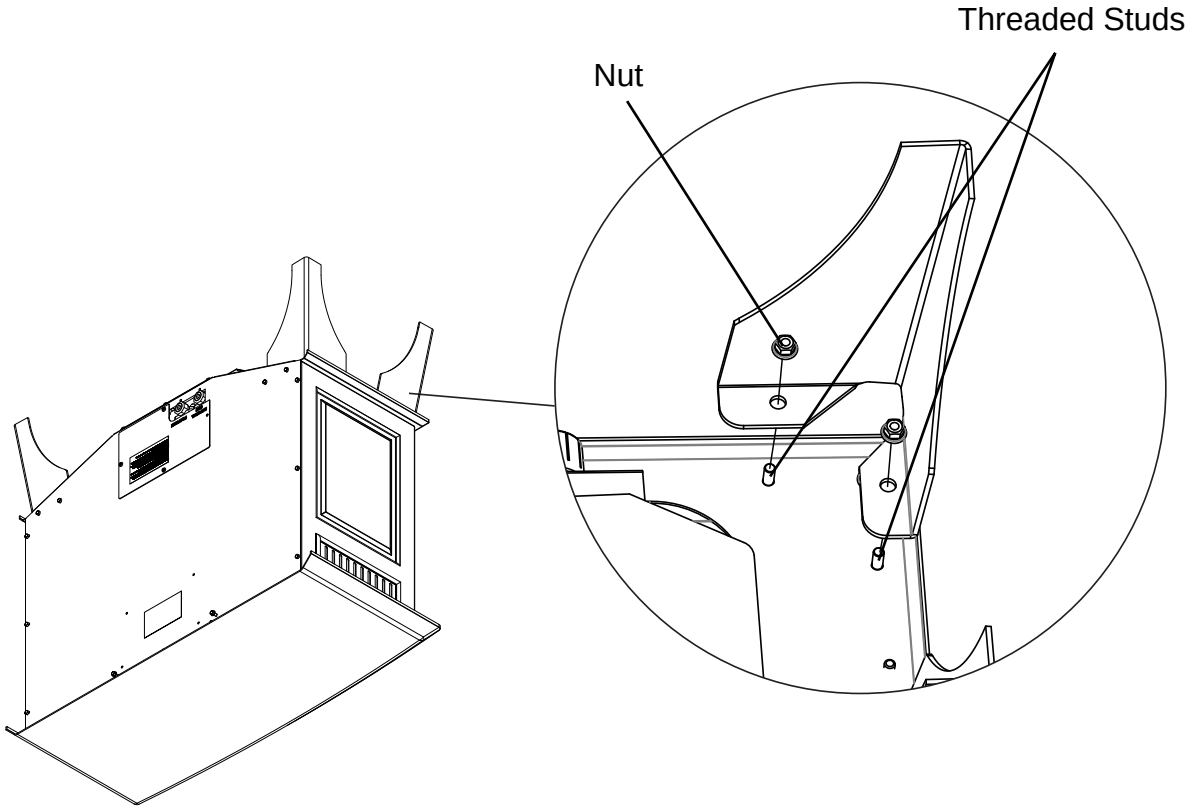


Figure 2

LEG INSTALLATION (If required)

Before Installing Heater, Follow These Steps for leg Installation.
1. Set a blanket or cardboard on the floor to create a padded surface.
2. With assistance, carefully place stove on its top onto the padded surface.
3. Insert the holes of a leg into the two (2) Threaded Studs shown in Figure 0.1.
4. Tighten the nuts securely (DO NOT over tighten) to the Threaded Studs.
5. Repeat steps 3-4 to install the other three (3) legs.
6. With assistance, lift the stove off of the padded surface, and set upright onto the newly installed legs.

Figure 0.1



GAS SELECTION INSTRUCTIONS

⚠ **WARNING:** This appliance can be used with propane or natural gas. It is shipped from the factory adjusted for use with propane.

⚠ **CAUTION:** The knob to the gas selection means shall not be accessed or adjusted while the appliance is in operation.

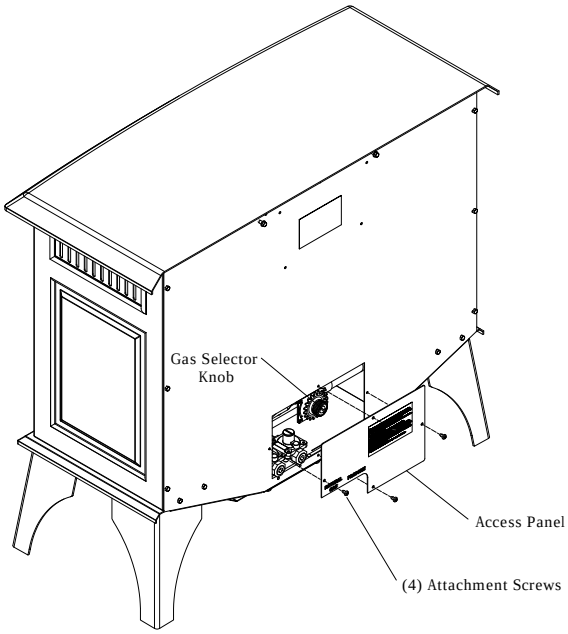
⚠ **CAUTION:** Two gas line installations at the same time are prohibited. The access plate to simple switching means shall not be opened while heater is in operation.

Installation and adjustments shall be made by a qualified technician only.

NOTE: If you are connecting this appliance to propane do not make any adjustments. Proceed to installing the gas line as instructed in the Owner's Manual.

Convert to natural gas:

Step 1 - Remove access panel



Step 2 - Adjust the gas selector valve

Push in on the selector valve Knob and rotate the knob counter clockwise until it stops. Release the knob (See Fig. 8)

Do not operate the appliance between locked positions.

Step 3 - Replace Access Panel

Reverse step 2 to convert back to propane gas.

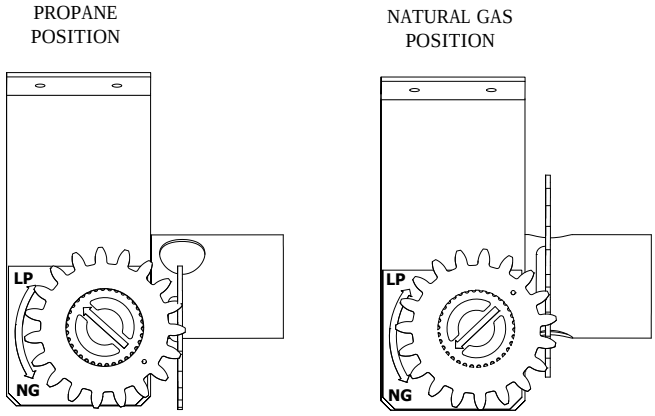


Fig. 8 - Selector Valve

CONNECTING TO GAS SUPPLY

⚠ **WARNING**: A qualified service technician must connect heater to gas supply. Follow all local codes.

⚠ **CAUTION:** Never connect heater directly to the gas supply. This heater requires an external regulator (not supplied). The external regulator between the gas supply and heater must be installed. Gas supplier provides external regulator for natural gas.

⚠ **WARNING**: Never connect heater to private (non-utility) gas wells. This gas is commonly known as wellhead gas.

The installer must supply an external regulator for liquid propane. The external regulator is provided by the gas supplier for natural gas. The external regulator will reduce incoming gas pressure. You must reduce incoming gas pressure to between 11 and 14 in. of water column for propane and between 6 and 14 in. of water column for natural gas. If you do not reduce incoming gas pressure, heater regulator damage could occur. Install external regulator with the vent pointing down as shown in Fig. 9. Pointing the vent down protects it from freezing rain or sleet.

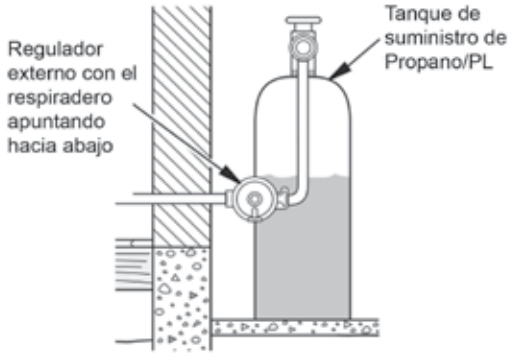


Fig. 9 - Regulator Conversion

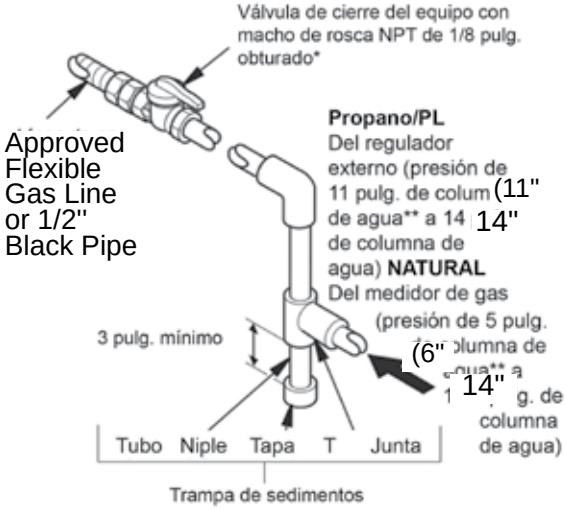


Figure 14 - Gas Connection

Fig. 10 - Gas Connection

* Purchase the optional equipment shutoff valve from your local Home Center store.

⚠ **CAUTION**: Use only new black iron or steel pipe. Internally tinned copper tubing may be used in certain areas. Check your local codes. Use pipe of ½ in. diameter or greater to allow proper volume gas to heater. If pipe is too small, loss of pressure will occur. Installation must include an equipment shutoff valve, union, and plugged 1/8-in. NPT tap. Locate NPT tap within reach for test gauge hook up. NPT tap must be upstream from heater (See Fig. 10).

IMPORTANT: Install equipment shutoff valve in an accessible location. The equipment shutoff valve is for turning on or shutting off the gas to the appliance. Apply pipe joint sealant lightly to male threads. This will prevent excess sealant from going into pipe. Excess sealant in pipe could result in clogged heater valves.

CAUTION: Use pipe joint sealant that is resistant to gas (PROPANE or NG). We recommend that you install a sediment trap in a supply line as shown in Fig. 10. Locate sediment trap where it is within reach for cleaning and not likely to freeze. Install in the piping system between fuel supply and heater. A sediment trap traps moisture and contaminants. This keeps them from going into heater controls. If sediment trap is not installed or is installed incorrectly, heater may not run properly.

CAUTION: Avoid damage to regulator. Hold gas regulator with wrench when connecting into gas piping and/or fittings. NG Models: 6 in. and 14 in. W.C. Gas supplier provides external regulator for natural gas.

Installation Items Needed (Not Provided)

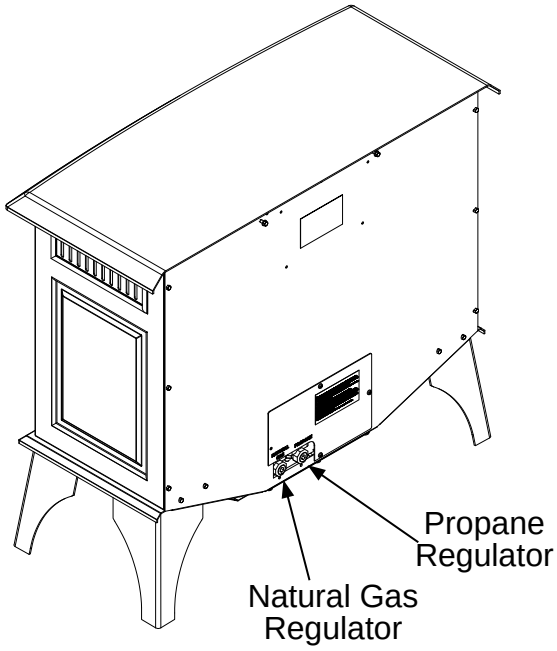
- 8'' Adjustable Wrench
- 8'' Pipe Wrench
- Flexible Gas Line (24'' Min.) or 1/2'' Black Pipe
- 90 Deg. 3/8 NPT x 3/8'' Flare Fitting or 3/8'' Street Elbow
- Sealant (Resistant to Propane (LP) Gas)
- Shut Off Valve

1) A variety of options are possible for routing the Gas Connection Lines depending on where your Gas Supply line is located. Install the 3/8'' Fitting to the Heater Cabinet Regulator using Sealant and direct the attachment and either left or right toward the Gas Supply Line.

NOTICE: Most building codes do not permit concealed gas connections. Check your local building code prior to using a Flexible Gas Line for this installation.

2) Install the Gas Line to the 90 Deg. fitting and attach to the Shut Off Valve.

3) Check all connections for gas leaks.



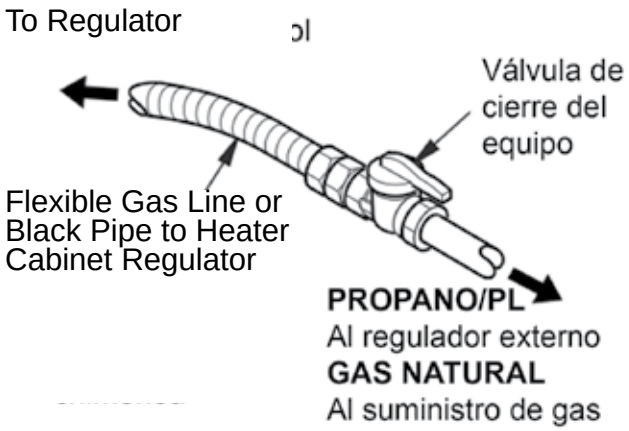


Fig. 11 - Attaching Flexible Gas Line to Equipment Shutoff Valve

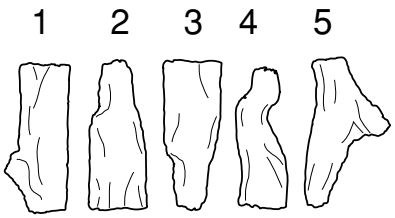
ASSEMBLING LOGS

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.

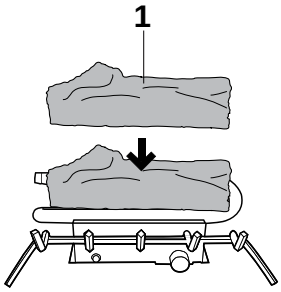
CAUTION: After installation and periodically thereafter, check to ensure that no yellow flame comes in contact with any log. With the heater set to High, check to see if yellow flames contact any log. If so, reposition logs according to the log installation instructions in this manual. Yellow flames contacting logs will create soot.

It is very important to install the logs exactly as instructed. Do not modify logs. Use only logs supplied with heater. Each log is marked with a number. this number will help you identify the logs when installing.

Provided Logs: 5

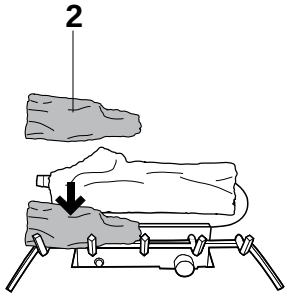


Installing Log #1



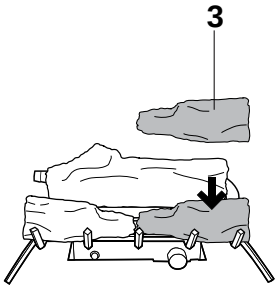
1. Insert log #1 onto the rear row of pins on the base pan.

Installing Log #2



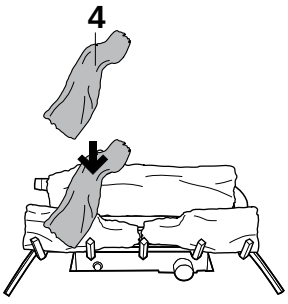
2. Insert log #2 onto the front left pin on the base pan.

Installing Log #3



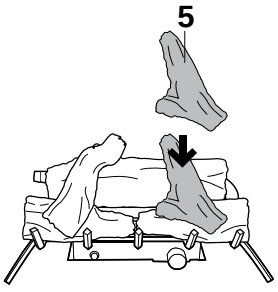
3. Insert log #3 onto the front right pin on the base pan.

Installing Log #4



4. Insert log #4 onto the left pin of log #1 and the pin of log #2.

Installing Log #5



5. Insert log #5 onto the right pin of log #1 and the pin of log #3.

CHECKING GAS CONNECTIONS

⚠ **WARNING:** Test all gas piping and connections for leaks after installing or servicing. Correct all leaks immediately.

⚠ **WARNING:** Never use an open flame to check for a leak. Apply a mixture of liquid soap and water to all joints. If bubbles form, there may be a leak. Correct all leaks immediately.

Pressure Testing Gas Supply Piping System
Test Pressures In Excess Of 1/2 PSIG (3.5kPa)

1. Disconnect heater with its appliance main gas valve (control valve) and equipment shutoff valve from gas supply piping system. Pressures in excess of 1/2 PSIG will damage heater regulator.
2. Cap off open end of gas pipe where equipment shutoff valve was connected.
3. Pressurize supply piping system by either using compressed air or opening gas supply tank valve.
4. Check all joints of gas supply piping system. Apply mixture of liquid soap and water to gas joints. If bubbles form, there may be a leak.
5. Correct all leaks immediately.
6. Reconnect heater and equipment shutoff valve to gas supply. Check reconnected fittings for leaks.

Test Pressures Equal To or Less Than 1/2 PSIG (3.5 kPa)

1. Close equipment shutoff valve (See Fig. 12).
2. Pressure supply piping system by either using compressed air or opening gas supply tank valve.
3. Check all joints from gas meter to equipment shutoff valve (See Fig.13). Apply mixture of liquid soap and water to gas joints. If bubbles form, there may be a leak.
4. Correct all leaks immediately.

Pressure Testing Heater Gas Connections

1. Open equipment shutoff valve (See Fig. 12).
2. Open gas supply tank valve.
3. Make sure control knob of heater is in the OFF position.
4. Check all joints from equipment shutoff valve to control valve (See Fig. 13). Apply mixture of liquid soap and water to gas joints. If bubbles form, there may be a leak.
5. Light heater (see Operation, page 19-20). Check all other internal joints for leaks.
6. Turn off heater (see "To Turn Off Gas to Appliance," page 20).

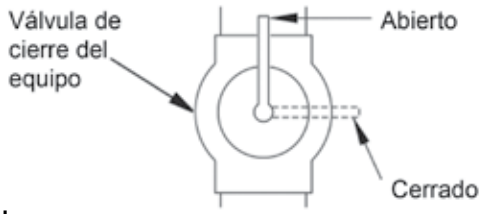


Fig. 12 - Equipment Shutoff Valve

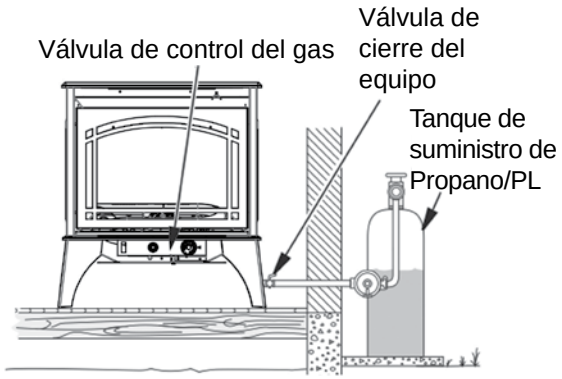


Fig. 13 - Checking Gas Joints (Propane/LP Only)

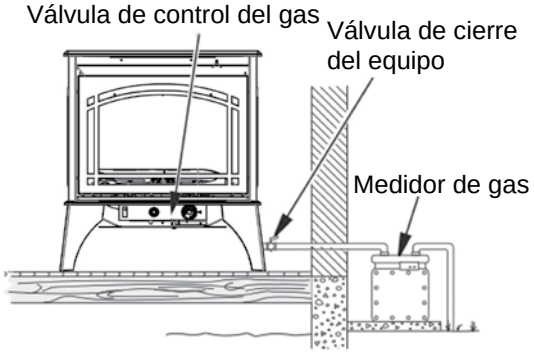


Fig. 14 - Checking Gas Joints (Natural Gas Only)

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 appliance has a pilot which must be lighted by the electronic ignitor. When lighting the pilot, follow these instructions exactly.

B. **BEFORE LIGHTING** smell all around the appliance 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 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

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, don't try to repair it, call a qualified service technician. Forced or attempted repair may result in fire or explosion.

D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

E. Any safety screen or guard removed for servicing an appliance must be replaced prior to operating the heater.

LIGHTING INSTRUCTIONS

1. STOP! Read the safety information as noted above.
2. (Select units) Open the lower access panel located below the heater screen.
3. Turn control knob clockwise ↷ to the "OFF" position (See Fig. 15).
4. 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 to the left on this label. If you don't smell gas, go to the next step.
5. Turn control knob counterclockwise ↶ to the "PILOT" position (See Fig. 16). Depress control knob.
6. With control knob depressed, push down on the ignitor button until the pilot lights. The pilot is located behind the heater screen, centered near the rear of the burner.
7. Keep control knob depressed for (30) seconds after pilot lights. Release control knob.

- If the control knob does not pop up when released, stop and immediately call a qualified service technician or gas supplier.
- If pilot goes out repeat steps 3 through 7. Wait (1) minute before attempting to light pilot again. If after several tries the pilot still goes out, turn the gas control knob clockwise ↷ to the "OFF" position and call a qualified service technician.

8. Turn control knob counterclockwise ↶ to desired setting.
9. (Select units) Close lower access panel.

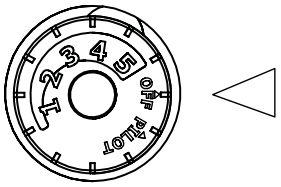


Fig. 15 - Control Knob

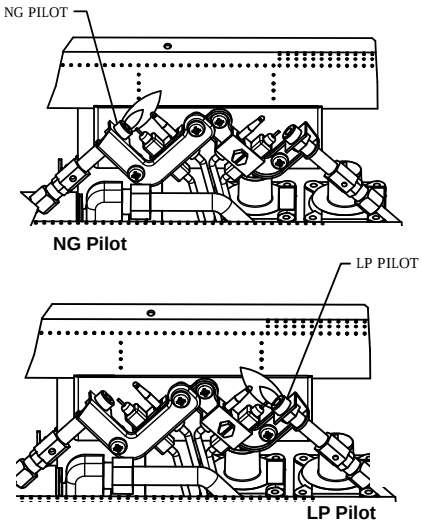


Fig. 16 - Pilot

TO TURN OFF GAS TO APPLIANCE

1. (Select units) Open the lower access panel located under the heater screen.
2. Turn control knob clockwise ↷ to the “OFF” position.
3. (Select units) Close lower access panel.

INSPECTING BURNERS

Check pilot flame pattern and burner flame patterns often.

PILOT FLAME PATTERN

Figure 20 shows a correct pilot flame pattern. Figure 21 shows an incorrect pilot flame pattern. The incorrect pilot flame is not touching the thermocouple. This will cause the thermocouple to cool. When the thermocouple cools, the heater will shut down.
If pilot flame pattern is incorrect, as shown in Figure 21.
• turn heater off (see To Turn Off Gas to Appliance, page 20.
• see Troubleshooting, page 23-25.
Note: The pilot flame on natural gas units will have a slight curve, but flame should be blue and have no yellow or orange color.

Fig. 20 - Correct Pilot Flame Pattern

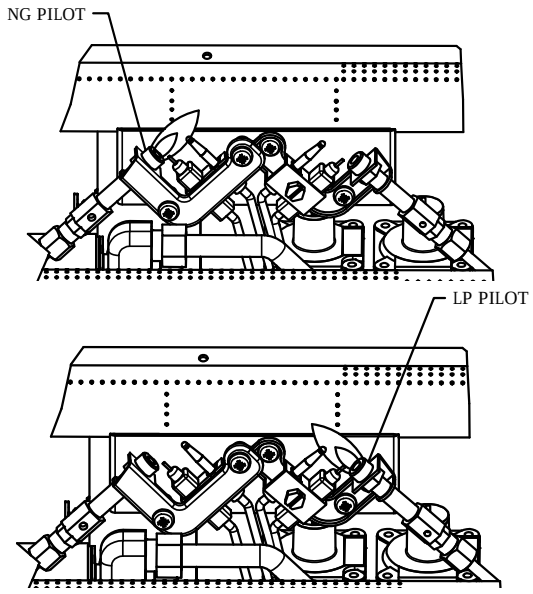
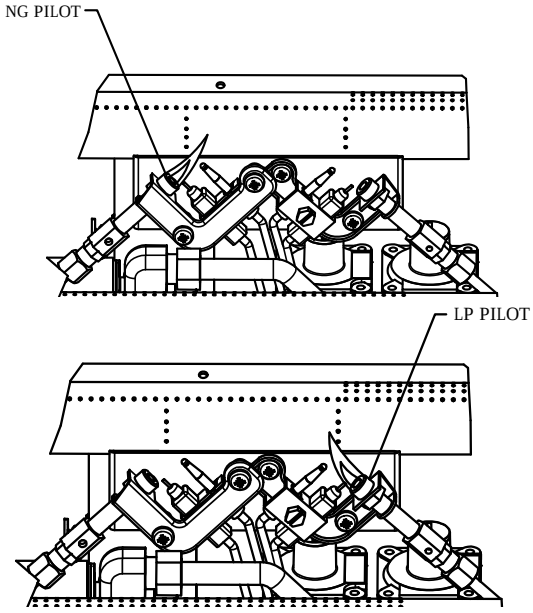


Fig. 21 - Incorrect Pilot Flame Pattern



⚠ **WARNING**: If yellow tipping occurs, your heater could produce increased levels of carbon monoxide. If burner flame pattern shows yellow tipping, follow instructions at bottom of this page.

⚠ **WARNING**: Do not allow fans to blow directly into the heater. Avoid any drafts that alter burner flame patterns.

⚠ **WARNING**: Do not use a blower insert, heat exchanger insert or other accessory not approved for use with this heater.

Notice: Do not mistake orange flames with yellow tipping. Dirt or other fine particles enter the heater and burn causing brief patches of orange flame.

BURNER FLAME PATTERN

Figure 22 shows a correct burner flame pattern. Figure 23 shows an incorrect burner flame pattern. The incorrect burner flame pattern shows sporadic, irregular flame tipping. The flame should not be dark or have an orange/reddish tinge.

Note: When using the heater the first time, the flame will be orange for approximately one hour until the log cures.

If burner flame pattern is incorrect, as shown in Figure 23.

- turn heater off (see To Turn Off Gas to Appliance, page 20).
- see Troubleshooting, page 23-25.

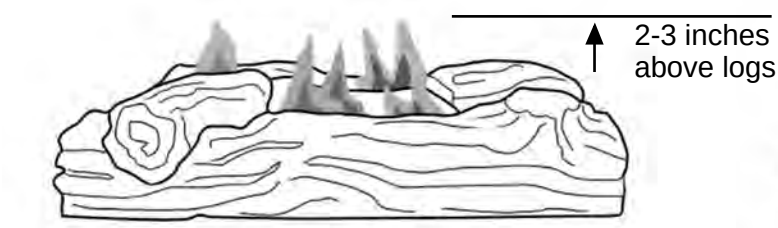


Fig. 22 - Correct Burner Flame Pattern

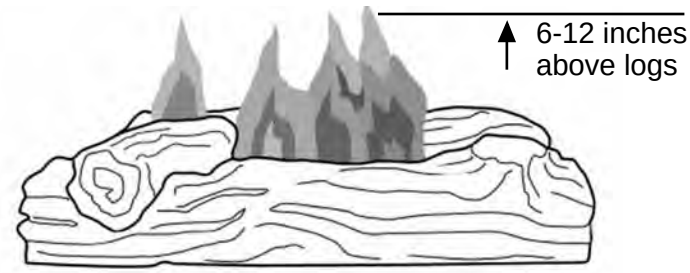


Fig. 23 - Incorrect Burner Flame Pattern

⚠ **WARNING:** Turn off heater and let cool before servicing.

⚠ **CAUTION:** You must keep control areas, burner, and circulating air passageways of heater clean. Inspect these areas of heater before each use. Have heater inspected yearly by a qualified service person. Heater may need more frequent cleaning due to excessive lint from carpeting, bedding material, pet hair, etc.

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

BURNER ORIFICE HOLDER AND PILOT AIR INLET HOLE

The primary air inlet holes allow the proper amount of air to mix with the gas. This provides a clean burning flame. Keep these holes clear of dust, dirt, lint and pet hair. Clean these air inlet holes prior to each heating season. Blocked air holes will create soot. We recommend that you clean the unit every three months during operation and have heater inspected yearly by a qualified service person.

We also recommend that you keep the burner tube and pilot assembly clean and free of dust and dirt. To clean these parts we recommend using compressed air no greater than 30 PSI. Your local computer store, hardware store or home center may carry compressed air in a can. If using compressed air in a can, please follow the directions on the can. If you don't follow directions on the can, you could damage the pilot assembly.

1. Shut off unit including pilot. Allow unit to cool for at least 30 minutes.
2. Inspect burner, pilot and primary air inlet holes on orifice holder for dust and dirt (See Fig. 24).
3. Blow air through the ports/slots and holes in the burner.
4. Check the orifice holder located at the end of the burner tube again. Remove any large particles of dust, dirt, lint or pet hair with a soft cloth or vacuum cleaner nozzle.
5. Blow air into the primary air holes on the orifice holder.
6. In case any large clumps of dust have now been pushed into the burner repeat steps 3 and 4. Clean the pilot assembly also. A yellow tip on the pilot flame indicates dust and dirt in the pilot assembly. There is a small pilot air inlet hole about 2" from where the pilot flame comes out of the pilot assembly (see Figure 25). With the unit off, lightly blow air through the air inlet hole. You may blow through a drinking straw if compressed air is not available.

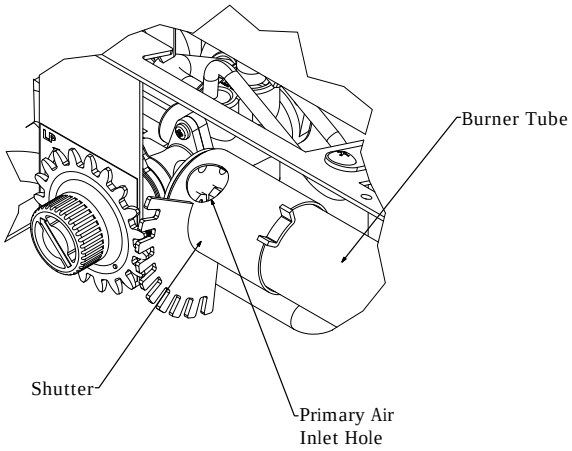


Fig. 24 - Primary Air Inlet Slot on Burner Tube

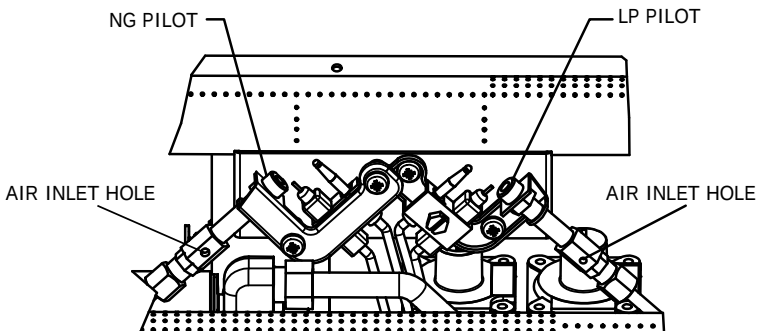


Fig. 25 - Pilot Inlet Air Hole

LOG SET

- If you remove the log set for cleaning, refer to page 17 for placement instructions.
- Replace log set if broken or chipped (dime sized or larger).

CABINET

Air Passageways

Use a vacuum cleaner or pressurized air to clean.

Exterior

Use a soft cloth dampened with a mild soap and water mixture. Wipe the cabinet to remove dust.

TROUBLESHOOTING

WARNING: If you smell gas:
- Shut off gas supply.
- 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.

IMPORTANT: Operating heater where impurities in air exist may create odors. Cleaning supplies, paint, paint remover, cigarette smoke, cements and glues, new carpet or textiles, etc., create fumes. These fumes may mix with combustion air and create odors.

WARNING: Make sure that power is turned off before proceeding.

WARNING: Turn off and let cool before servicing. Only a qualified service person should service and repair heater.

CAUTION: Never use a wire, needle, or similar object to clean ODS/pilot. This can damage ODS/ pilot unit.

SERVICE HINTS

When Gas Pressure Is Too Low
- pilot will not stay lit
- burners will have delayed ignition
- heater will not produce specified heat
- for propane/LP units, propane/LP gas supply may be low

You may feel your gas pressure is too low. If so, contact your local natural or propane/LP gas supplier.

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
When ignitor button is pressed in, there is no spark at ODS/ pilot.	1. Ignitor electrode is positioned wrong. 2. Ignitor electrode is broken. 3. Ignitor electrode is not connected to ignitor cable. 4. Ignitor cable is pinched or wet. 5. Damaged ignitor cable. 6. Bad push button ignitor. 7. Bad Battery	1. Replace electrode. 2. Replace electrode. 3. Replace ignitor cable. 4. Free ignitor cable if pinched by any metal or tubing. Keep ignitor cable dry. 5. Replace ignitor cable. 6. Replace push button ignitor. 7. Check Battery and replace if needed.
When ignitor button is pressed in, there is a spark at ODS/ pilot but no ignition.	1. Gas supply is turned off or equipment shutoff valve is closed. 2. Control knob not fully pressed in while pressing ignitor button. 3. Air in gas lines when installed. 4. ODS / pilot is clogged. 5. Gas regulator setting is not correct. 6. Control knob not in PILOT position. 7. Depleted gas supply (propane).	1. Turn on gas supply or open equipment shutoff valve. 2. Fully press in control knob while pressing ignitor button. 3. Continue holding down control knob. Repeat igniting operation until air is removed. 4. Clean ODS/pilot (see Care and Maintenance, page 21-22) or replace ODS/pilot assembly. 5. Replace gas regulator. 6. Turn control knob to PILOT position. 7. Contact local propane/LP gas company.

TROUBLESHOOTING

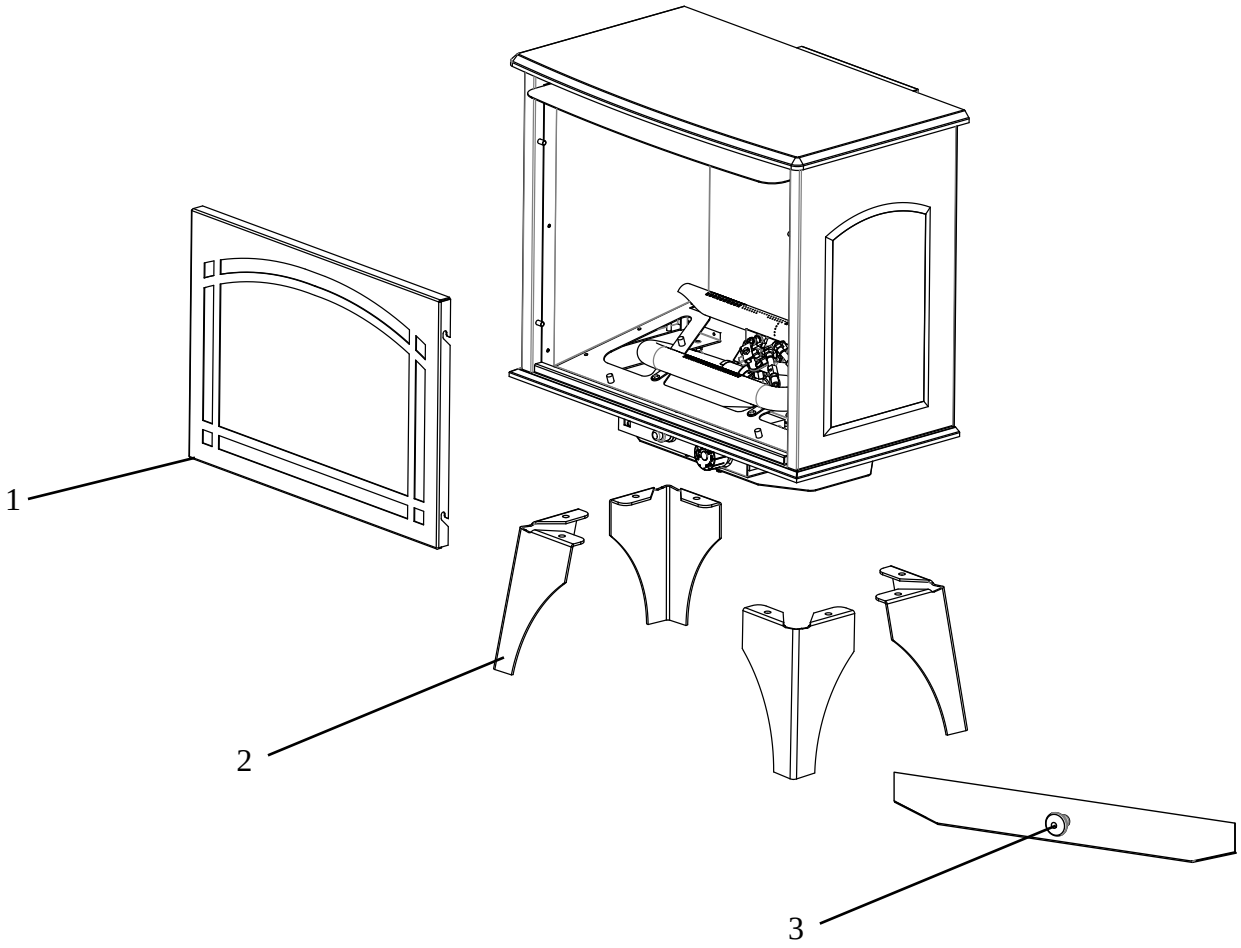
PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
ODS/pilot lights but flame goes out when control knob is released.	1. Control knob is not fully pressed in. 2. Control knob is not pressed in long enough. 3. Equipment shutoff valve is not fully open. 4. Thermocouple connection is loose. 5. Thermocouple damaged. 6. Control valve damaged.	1. Press in control knob fully. 2. After ODS/pilot lights, keep control knob pressed in 30 seconds. 3. Fully open equipment shutoff valve. 4. Hand tighten until snug, and then tighten ¼ turn more. 5. Replace thermocouple. 6. Contact customer service.
Burner(s) does not light after ODS/pilot is lit.	1. Burner orifice is clogged. 2. Burner orifice diameter is too small. 3. Inlet gas pressure is too low.	1. Clean burner orifice (see Care and Maintenance, page 21-22) or contact customer service. 2. Contact customer service. 3. Contact your gas supplier.
Delayed ignition of burner(s).	1. Manifold pressure is too low. 2. Burner orifice is clogged.	1. Contact your gas supplier. 2. Clean burner (see Care and Maintenance, page 21-22) or contact customer service.
Burner backfiring during combustion.	1. Burner orifice is clogged or damaged. 2. Burner is damaged. 3. Gas regulator is damaged.	1. Clean burner orifice (see Care and Maintenance, page 21-22 or contact customer service. 2. Contact dealer or customer service. 3. Replace gas regulator.
High yellow flame during burner combustion	1. Not enough air. 2. Gas regulator is defective. 3. Inlet gas pressure is too low.	1. Check burner for dirt and debris. If found, clean burner (see Care and Maintenance, page 21-22. 2. Replace gas regulator. 3. Contact your gas supplier.
Gas odor during combustion.	1. Foreign matter between control valve and burner. 2. Gas leak. (See Warning Statement at top of page 23).	1. Take apart gas tubing and remove foreign matter. 2. Locate and correct all leaks (see “Checking Gas Connections,” page 18).
Heater produces a clicking/ticking noise just after burner is lit or shut off.	1. Metal is expanding while heating or contracting while cooling.	1. This is common with most heaters. If noise is excessive, contact qualified service technician.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	CORRECTIVE ACTION
White powder residue forming within burner box or on adjacent walls or furniture.	1. When heated, the vapors from furniture polish, wax, carpet cleaners, etc., turn into white powder residue.	1. Turn heater off when using furniture polish, wax, carpet cleaner or similar products.
Heater produces unwanted odors.	1. Heater is burning vapors from paint, hair spray, glues, etc. See IMPORTANT statement, page 23. 2. Gas leak. See Warning Statement, page 23. 3. Low fuel supply.	1. Ventilate room. Stop using odor causing products while heater is running. 2. Locate and correct all leaks (see "Checking Gas Connections," page 18). 3. Refill supply tank (Propane /LP models).
Heater shuts off in use (ODS operates).	1. Not enough fresh air is available. 2. Low line pressure. 3. ODS/pilot is partially clogged.	1. Open window and/or door for ventilation. 2. Contact local gas supplier. 3. Clean ODS/pilot (see Care and Maintenance, page 21-22).
Gas odor exists even when control knob is in OFF position.	1. Gas leak. See Warning Statement at top of page 23. 2. Control valve is defective.	1. Locate and correct all leaks (see "Checking Gas Connections", page 18). 2. Contact customer service.
Moisture/condensation noticed on windows.	1. Not enough combustion/ ventilation air.	1. Refer to "Air for Combustion and Ventilation" requirements, page 8-10.
Slight smoke or odor during initial operation	1. Residues from manufacturing process.	1. Problem will stop after a few hours of operation.
Heater produces a whistling noise when burner is lit.	1. Turning control knob to high (5) position when burner is cold. 2. Air in gas line. 3. Air passageways on heater are blocked. 4. Dirty or partially clogged burner orifice.	1. Turn control knob to low (1) position and let warm up for a minute. 2. Operate burner until air is removed from line. Have gas line checked by local propane/LP gas company. 3. Observe minimum installation clearances (Fig. 6, page 11) 4. Clean burner (see Care and Maintenance, page 21-22) or contact customer service.

REPLACEMENT PARTS

For replacement parts, call our Technical Service Department at 1-814-643-1775, 8:30 a.m. –4:30 p.m., CST, Monday – Friday.



ITEM No.	DESCRIPTION	QTY	PART NUMBER	
			GSD2211 Series	GSD2846 Series
1	Screen Assembly	1	EXP-A3007	EXP-A3005A
2	Legs	4	EXP-3039	EXP-3004ipt
3	Control Cover Knob	1	N/A	EXP-3044

REPLACEMENT PARTS LIST

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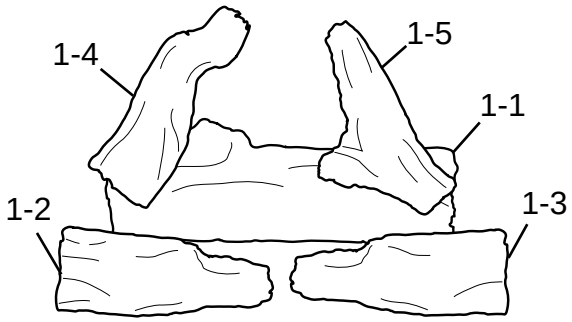

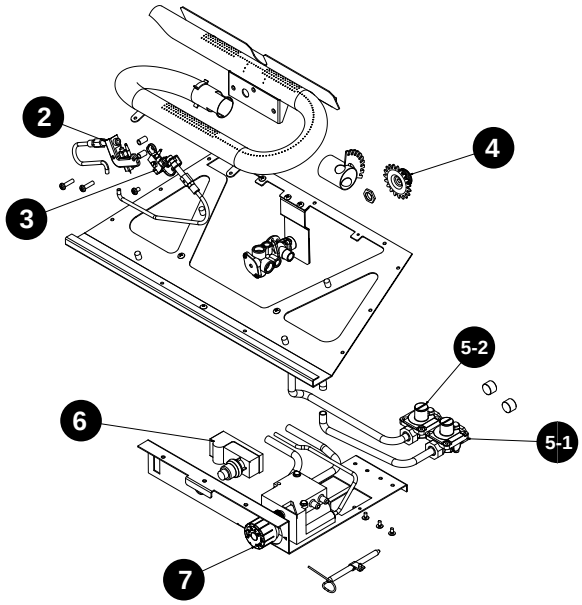

ITEM NO.	DESCRIPTION	QTY	PART NUMBER	
			GSD2211	GSD2846
1	Log Set (Complete)	1	700-S1018	700-M1018
1-1	Log 1	1	700-S1018-01	700-M1018-01
1-2	Log 2	1	700-S1018-02	700-M1018-02
1-3	Log 3	1	700-S1018-03	700-M1018-03
1-4	Log 4	1	700-S1018-04	700-M1018-04
1-5	Log 5	1	700-S1018-05	700-M1018-05
2	ODS Pilot - NG	1	GZ20-30B	GZ20-30B
3	ODS Pilot - LP	1	GZ20-29B	GZ20-29B
4	Selector Knob	1	GZ20-17	GZ20-17
5-1	Regulator, Natural Gas 5" WC	1	GR-130(20k)	GR-130(30k)
5-2	Regulator, Propane Gas 10" WC	1	GR-130A(20k)	GR-130A(30k)
6	Ignitor Module	1	GZ20-32a	GZ20-32a
7	Control Valve, EuroSIT 630	1	0630560	0630560

ACCESSORIES

NOTICE: All accessories may not be available for all heater models.

BLOWER KIT - 20-6143 For all models. Provides better heat distribution. Makes heater more efficient.