



INSTALLATION INSTRUCTIONS

B-VENT

GHC-5500/6500 AND GRD-5500/6500 SERIES

B-VENTED GAS FIREPLACES
P/N 700,027M REV. A 11/2001

MODELS

Millivolt Models

GHC-5500N
GHC-5500P
GRD-5500N
GRD-5500P
GHC-6500N
GHC-6500P
GRD-6500N
GRD-6500P

Electronic Models

GHC-5500NE-2
GHC-5500PE-2
GRD-5500NE-2
GRD-5500PE-2
GHC-6500EN
GHC-6500EP
GRD-6500EN
GRD-6500EP

This appliance may be installed in an aftermarket permanently located, manufactured home (USA only) or 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.

RETAIN THESE INSTRUCTIONS FOR FUTURE REFERENCE

Warnock Hersey



For GHC/GRD-5500
WH Report No. J20046562

For GHC/GRD-6500
WH Report No. J20046564

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.

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

FOR YOUR SAFETY: What to do if you smell gas:

- DO NOT light any appliance.
- DO NOT touch any electrical switches.
- DO NOT use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone.

Follow your gas suppliers instructions.

- If your gas supplier cannot be reached, call the fire department.

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

AVERTISSEMENT: ASSUREZ-VOUS DE BIEN SUIVRE LES INSTRUCTIONS DONNÉES DANS CETTE NOTICE POUR RÉDUIRE AU MINIMUM LE RISQUE D'INCENDIE OU POUR ÉVITER TOUT DOMMAGE MATÉRIEL, TOUTE BLESSURE OU LA MORT.

POUR VOTRE SÉCURITÉ: Ne pas entreposer ni utiliser d'essence ni d'autre vapeurs ou liquides inflammables dans le voisinage de cet appareil ou de tout autre appareil.

POUR VOTRE SÉCURITÉ: Que faire si vous sentez une odeur de gaz:

- Ne pas tenter d'allumer d'appareil.
- Ne touchez à aucun interrupteur. Ne pas vous servir des téléphones se trouvant dans le bâtiment où vous vous trouvez.
- Evacuez la pièce, le bâtiment ou la zone.
- Appelez immédiatement votre fournisseur de gaz depuis un voisin. Suivez les instructions du fournisseur.
- Si vous ne pouvez rejoindre le fournisseur de gaz, appelez le service des incendies.

L'installation et service doit être exécuté par un qualifié installer, agence de service ou le fournisseur de gaz.

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This installation manual will help you obtain a safe, efficient, dependable installation for your appliance and vent system. Please read and understand these instructions before beginning your installation.

PACKAGING

The assembled vented gas fireplace is packaged with:

- 1 - one cartoned log set located in firebox area.
- 2 - one bag of glowing embers (rockwool) located in the bottom compartment.
- 3 - one envelope containing the literature package which consists of the homeowner's manual, installation instructions, and warranty; envelope is located in the control area.
- 4 - wall switch for burner operation taped to top of unit.

INTRODUCTION

The GHC-5500/6500N, P models are circulating system appliances; the GRD-5500/6500N, P models are radiant heat system appliances; both types utilize a millivolt gas control valve and a piezo ignition system. There is no need for an external power source to operate these systems. They are designed to operate on either natural or propane gas.

The GHC-5500NE-2, PE-2 and GHC-6500EN, EP models are circulating system appliances; the GRD-5500NE-2, PE-2 and GRD-6500EN, EP models are radiant heat system appliances; both utilize an electronic gas control valve along with an intermittent ignition system.

These systems require an external power source in order to operate. They are designed to operate on either natural or propane gas.

These appliances comply with National Safety Standards and are tested and listed by Warnock Hersey (Report No. J20046562 - for 5500 series; J20046564 - for 6500 series models) to ANSI Z21.50 - 2000 (in Canada, CSA 2.22 - 2000), and CAN/CGA-2.17-M91 in both USA and Canada, as vented gas fireplaces.

Installation must conform to local codes. In the absence of local codes, installation must comply with the current National Fuel Gas Code, ANSI Z223.1 (NFPA 54). (In Canada, the current CAN/CGA B149 installation code.) Electrical wiring must comply with local codes. In the absence of local codes, installation must be in accordance with the National Electrical Code, NFPA 70 - (latest edition). (In Canada, the current CSA C22.1 Canadian Electric Code.)

DO NOT ATTEMPT TO ALTER OR MODIFY THE CONSTRUCTION OF THE APPLIANCE OR ITS COMPONENTS. ANY MODIFICATION OR ALTERATION MAY VOID THE WARRANTY, CERTIFICATION AND LISTINGS OF THIS UNIT.

WARNING: IMPROPER INSTALLATION, ADJUSTMENT, ALTERATION, SERVICE OR MAINTENANCE CAN CAUSE INJURY OR PROPERTY DAMAGE. REFER TO THIS MANUAL. FOR ASSISTANCE OR ADDITIONAL INFORMATION CONSULT A QUALIFIED INSTALLER, SERVICE AGENCY OR THE GAS SUPPLIER.

GENERAL INFORMATION

Note: Installation and repair should be performed by a qualified service person. The appliance should be inspected annually by a qualified professional service technician. More frequent inspections and cleanings may be required due to excessive lint from carpeting, bedding material, etc. It is imperative that the control compartment, burners and circulating air passage ways of the appliance be kept clean.

S'assurer que le brûleur et le compartiment des commandes sont propres. Voir les instructions d'installation et d'utilisation qui accompagnent l'appareil.

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

Provide adequate clearances around air openings and adequate accessibility clearance for service and proper operation. Never obstruct the front openings of the appliance.

WARNING: THESE FIREPLACES ARE VENTED DECORATIVE GAS APPLIANCES. DO NOT BURN WOOD OR OTHER MATERIAL IN THESE APPLIANCES.

These appliances are designed to operate on natural or propane gas only. The use of other fuels or combination of fuels will degrade the performance of this system and may be dangerous.

For elevations of 0-2000 ft. (0-610 m.) the GHC/GRD-5500 input is 24,000 BTU/HR for both natural and propane gases, the GHC/GRD-6500 input is 27,000 BTU/HR for both natural and propane gases.

Table 1 shows the units' factory-installed gas orifice size for installations at elevations of 0-2000 feet (0-610 meters).

GHC GRD Series	Orifice size		Elevation Feet (meters)
	Nat.	Prop.	
5500	#43	#54	0-2000 (0-610)
6500	#41	#53	

Table 1

Table 2 shows the units' gas orifice size for installations at elevations greater than 2000 ft. (0-610 m.). These orifices must be ordered separately using the kit numbers listed in table 2.

GHC GRD Series	Orifice size (Kit Number)		Elevation Feet (meters)
	Nat.	Prop.	
5500	#44 (040611)	#55 (040612)	greater than 2000 (610)
6500	#43 (051916)	#55 (051917)	

Table 2

Nominal operating pressures for the manifold side of the gas control system are; 3.5 inches water column (6.54 MmHg) for natural gas models and 10 inches water column (18.69 MmHg) for propane gas models.

Do not use these appliances if any part has been under water. Immediately call a qualified, professional service technician to inspect the appliance and to replace any parts of the control system and any gas control which have been under water.

Ne pas se servir de cet appareil s'il a été plongé dans l'eau, complètement ou en partie. Appeler un technicien qualifié pour inspecter l'appareil et remplacer toute partie du système de contrôle et toute commande qui ont été plongés dans l'eau.

This appliance may be installed in an aftermarket permanently located, manufactured home (USA only) or 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.

Cet appareil peut être installé dans une maison préfabriquée (É.-U. seulement) ou mobile déjà installée à demeure si les règlements locaux le permettent. Cet appareil doit être utilisé uniquement avec les types de gaz indiqués sur la plaque signalétique. Ne pas l'utiliser avec d'autres gaz sauf si un kit de conversion certifié est installé.

Millivolt appliances may be fitted at time of manufacture with either a Robertshaw millivolt gas control valve or Robertshaw electronic gas control valve. Both valves have been tested with and approved for use with these appliances and are listed accordingly.

A 1/8" NPT test gage connection is provided on either gas control valve adjacent to the outlet to the main burner.

Minimum inlet gas pressure to the appliance is 4.5 inches water column (1.12 kPa) for natural gas and 11 inches water column (2.74 kPa) for propane for the purpose of input adjustment.

Maximum inlet gas supply pressure to the appliance is 10.5 inches water column (2.61 kPa) for natural gas and 13.0 inches water column (3.23 kPa) for propane.

The appliance must be isolated from the gas supply piping system (by closing its individual manual shut-off valve) during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5 kPa).

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

These appliances must not be connected to a chimney or flue serving a separate solid fuel burning appliance.

Do not place clothing or other materials on or near this appliance.

WARNING: FAILURE TO COMPLY WITH THE INSTALLATION AND OPERATING INSTRUCTIONS PROVIDED IN THIS DOCUMENT WILL RESULT IN AN IMPROPERLY INSTALLED AND OPERATING APPLIANCE, VOIDING ITS WARRANTY. ANY CHANGE TO THIS APPLIANCE AND/OR ITS OPERATING CONTROLS IS DANGEROUS. IMPROPER INSTALLATION OR USE OF THIS APPLIANCE CAN CAUSE SERIOUS INJURY OR DEATH FROM FIRE, BURNS, EXPLOSION OR CARBON MONOXIDE POISONING.

Carbon Monoxide Poisoning: Early signs of carbon monoxide poisoning are similar to the flu with headaches, dizziness and/or nausea. If you have these signs, obtain fresh air immediately. Turn off the gas supply to the appliance and have it serviced by a qualified professional, as it may not be operating correctly.

WARNING: B-VENT APPLIANCES ARE NOT DESIGNED TO OPERATE IN NEGATIVELY PRESSURED ENVIRONMENTS (PRESSURE WITHIN THE HOME IS LESS THAN PRESSURES OUTSIDE). SIGNIFICANT NEGATIVELY PRESSURED ENVIRONMENTS CAUSED BY WEATHER, HOME DESIGN, OR OTHER DEVICES MAY IMPACT THE OPERATION OF THESE APPLIANCES. NEGATIVE PRESSURES MAY RESULT IN POOR FLAME APPEARANCE, SOOTING, DAMAGE TO PROPERTY AND/OR SEVERE PERSONAL INJURY. DO NOT OPERATE THESE APPLIANCES IN NEGATIVELY PRESSURED ENVIRONMENTS.

WARNING: CHILDREN AND ADULTS SHOULD BE ALERTED TO THE HAZARDS OF HIGH SURFACE TEMPERATURES. USE CAUTION AROUND THE APPLIANCE TO AVOID BURNS OR CLOTHING IGNITION. YOUNG CHILDREN SHOULD BE CAREFULLY SUPERVISED WHEN THEY ARE IN THE SAME ROOM AS THE APPLIANCE.

WARNING: DO NOT PLACE CLOTHING OR OTHER FLAMMABLE MATERIALS ON OR NEAR THIS APPLIANCE.

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

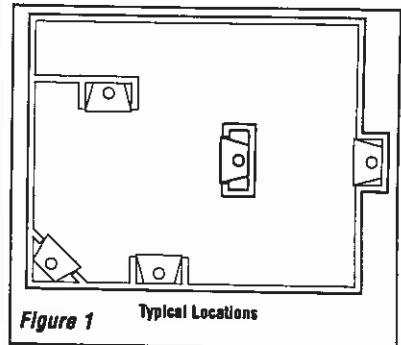
AVERTISSEMENT: SURVEILLER LES ENFANTS. GARDER LES VÊTEMENTS, LES MEUBLES, L'ESSENCE OU AUTRES LIQUIDES À VAPEUR INFLAMMABLES LOIN DE L'APPAREIL.

WARNING: THIS APPLIANCE MAY ONLY BE FITTED WITH DOORS CERTIFIED FOR USE WITH THE APPLIANCE.

AVERTISSEMENT: POUR UTILISATION UNIQUEMENT AVEC LES PORTES EN VERRE CERTIFIÉES AVEC L'APPAREIL.

These appliances are equipped with an integral combustion air door and actuator arm. Combustion air kits are optional. Install as shown in step 7 on page 11.

LOCATION



In selecting the location, the aesthetic and functional use of the appliance are primary concerns. However, vent system routing to the exterior and access to the fuel supply are also important. Due to high temperatures the appliance should be located out of traffic and away from furniture and draperies. Consideration should be given to traffic ways, furniture, draperies, etc., due to elevated surface temperatures. The location should also be free of electrical, plumbing or other heating/air conditioning ducting.

The appliance should be mounted on a fully supported base extending the full width and depth of the unit. The appliance may be located on or near conventional construction materials. However, if installed on combustible materials, such as carpeting, vinyl tile, etc., a metal or wood barrier covering the entire bottom surface must be used.

These appliances may be used for bedroom installations in the United States and are listed accordingly. These units may not be installed in bedrooms in Canada.

APPLIANCE SPECIFICATIONS GHC/GRD-5500

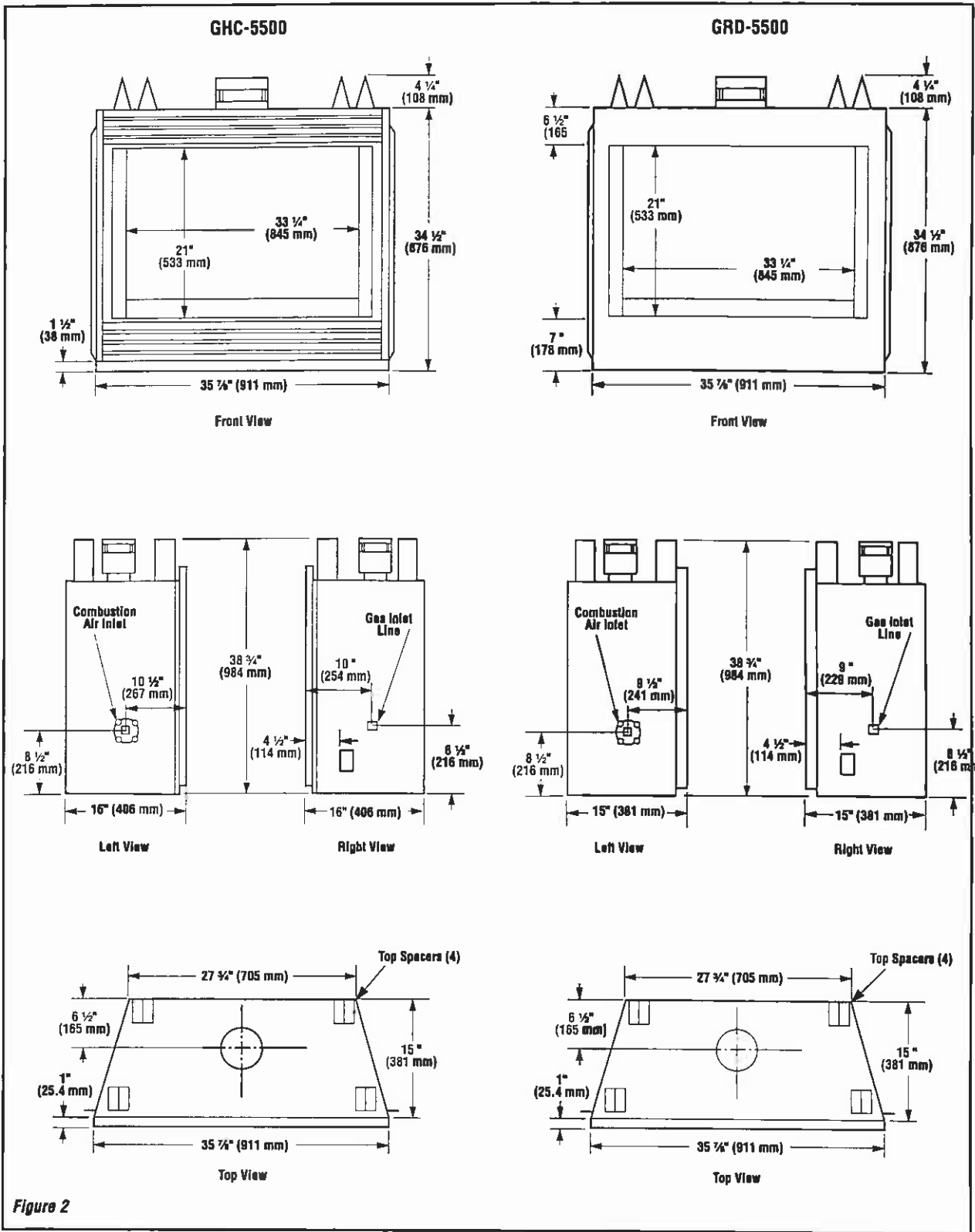


Figure 2

APPLIANCE SPECIFICATIONS GHC/GRD-6500

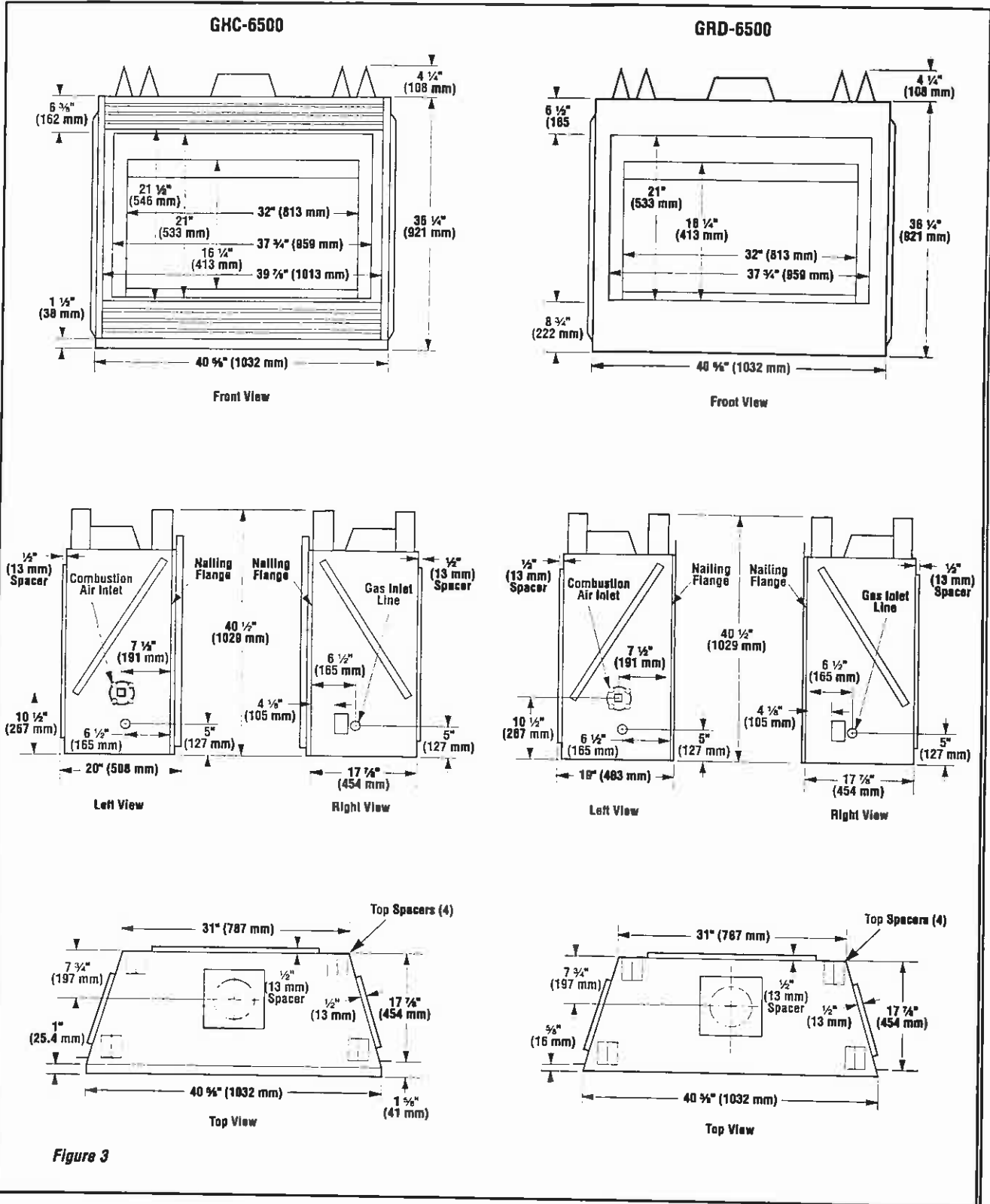
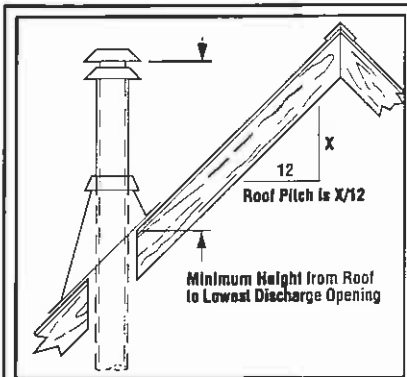


Figure 3

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

Venting

Gas Vent Rule— Gas vent caps are not permitted within 8 feet (2.4 mm) of a vertical wall or similar obstruction. Gas vent caps that are located 8' or more from a portion of a building which extends at an angle greater than 45° upward from the horizontal may terminate in accordance with the table in **Figure 4**, provided that in no case shall any discharge opening on the cap be less than 2' (610 mm) horizontally from the roof surface (National Fuel Gas Code ANSI Z223.1 (NFPA 54) 7.6.2) (CAN/CGA B149).



Roof Slope	Minimum Height from Roof to Lowest Discharge Opening	
	Feet	Meters
Flat to 6/12	1' 0"	0.3
Over 7/12 to 9/12	2' 0"	0.6
Over 10/12 to 12/12	4' 0"	1.2
Over 13/12 to 16/12	6' 0"	1.8
Over 17/12 to 21/12	8' 0"	2.4

Note: Venting terminals shall not be recessed into a wall or siding.

Figure 4

APPLIANCE CLEARANCES

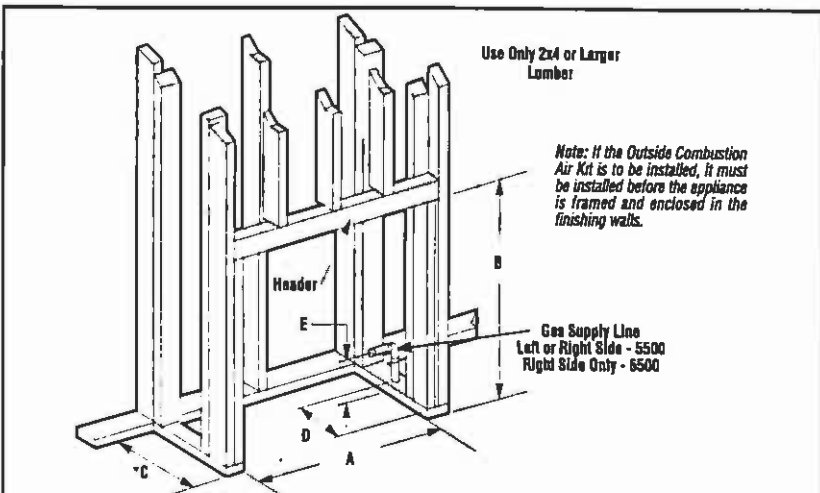
	GHC/GRD-5500	GHC/GRD-6500
Back	1/2 in. (13mm)	1/2 in. (13mm) 0 in. (0 mm) to spacers
Sides	1/2 in. (13mm)**	1/2 in. (13mm)** 0 in. (0 mm) to spacers
Top Spacers	0 in. (0 mm)	
Floor	0 in. (0 mm)	
*From Bottom of Unit to Ceiling	65 1/2 in. (1664 mm)	67 1/2 in. (1715 mm)
Vent	1 in. (25.4 mm)	
SERVICE CLEARANCE		
Front	3 Feet (0.9 meters)	

* **Note:** See also **Figure 32** on page 14 for an illustration of this clearance, for clearances to a sidewall and for mantel clearances.

** **Note:** The nailing tabs and the area directly behind the nailing tabs are exempt from the clearances described in the above table. See **Figure 9** on page 8.

Table 3

FRAMING SPECIFICATIONS



* **Note:** The framed depth - dimension "C" - from a framed wall, must always be measured from a finished surface. If a wall covering such as drywall is to be attached to the rear wall, then dimension "C" must be measured from the drywall surface. It is important that this dimension be exact.

Model No.		A	B	C	D	E
GHC/GRD-5500	In.	33 1/4	38 3/4	15 1/2	8 1/2	8 1/2
	mm	845	984	394	216	216
GHC/GRD-6500	In.	40 3/4	40 3/4	18	6 1/2	5
	mm	1035	1035	457	165	127

Figure 5

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

FRAMING SPECIFICATIONS CONTINUED

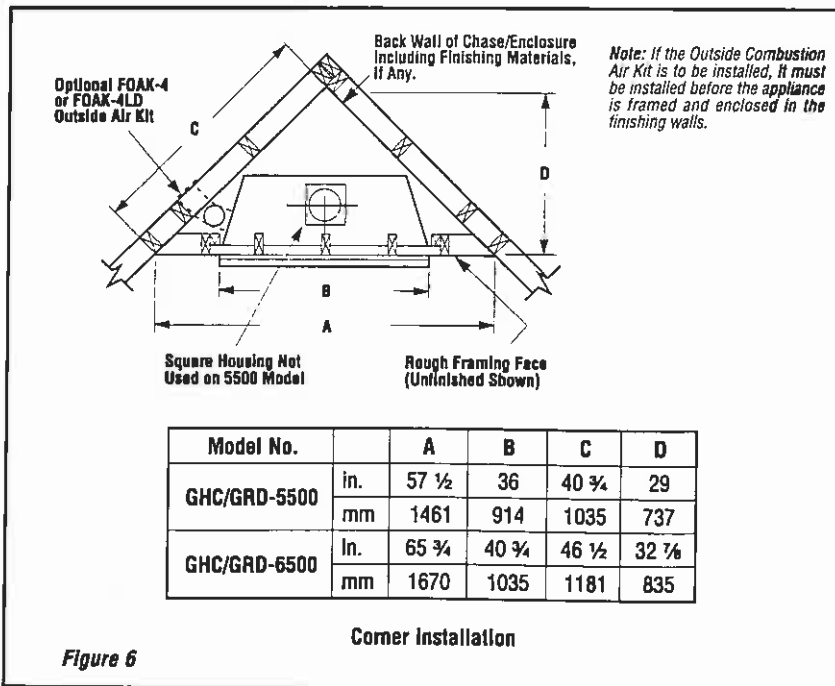


Figure 6

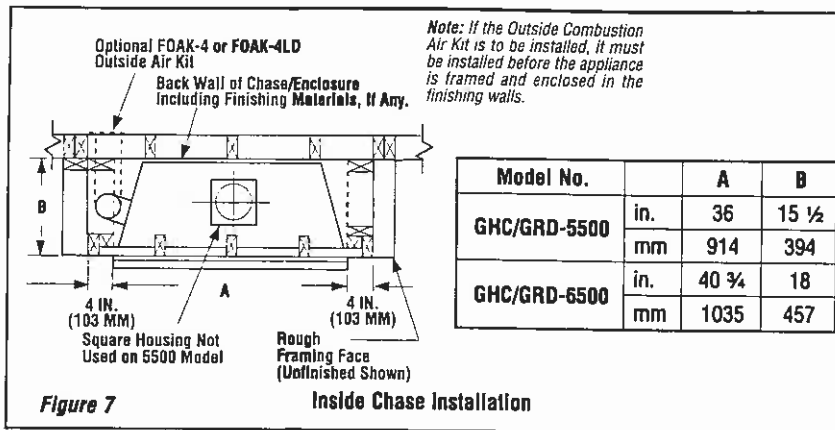


Figure 7

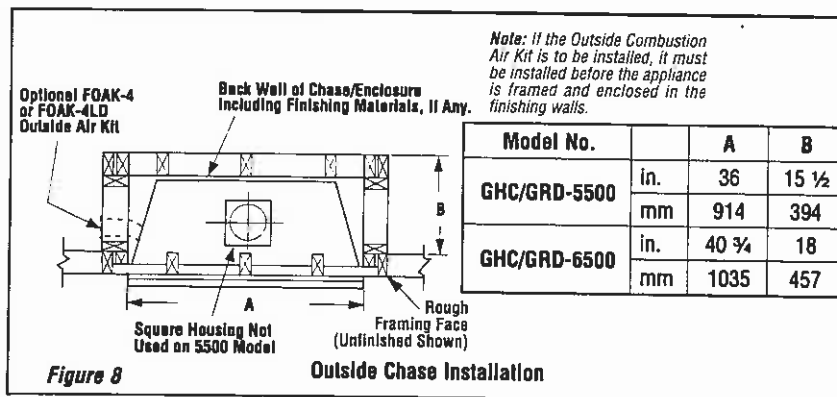


Figure 8

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

TYPICAL INSTALLATION SEQUENCE

The typical sequence of installation follows, however, each installation is unique resulting in variations to those described.

1. Construct the appliance framing.
2. Route gas supply line to appliance location.
3. Position the appliance.
4. Install the vent system and exterior termination.
5. Field wire and install operating control switch. Install optional Forced Air Kit, if required.
6. Make connection to gas supply.
7. Install optional Outside Combustion Air Kit, if required.
8. Install the logs and rockwool.
9. Install the optional glass doors/enclosure panel, if required.
10. Checkout appliance operation.
11. Spillage Test and Safety Limit Switch Operation.
12. Adjust burner to ensure proper flame appearance.

PRE-INSTALLATION NOTES

The fireplace may be installed directly on a combustible floor or raised on a platform of an appropriate height. Do not place fireplace on carpeting, vinyl or other soft floor coverings. It may, however, be placed on flat wood, plywood, particle board or other hard surfaces, extending the full depth and width of the appliance. Be sure fireplace rests on a solid continuous floor or platform with appropriate framing for support and so that no cold air can enter the room from under the fireplace.

The fireplace may be positioned and then the framing built around it, or the framing may be constructed and the fireplace positioned into the opening.

Usually, no special floor support is needed for the fireplace, however, to be certain:

1. Estimate the total weight of the fireplace system and surround materials such as brick, stone, etc., to be installed.

2. Measure the square footage of the floor space to be occupied by the system, surrounds and hearth extensions.

3. Note the floor construction, i.e. 2 x 6's, 2 x 8's or 2 x 10's, single or double joists, type and thickness of floor boards.

4. Use this information and consult your local building code to determine if you need additional support.

If you plan to raise the fireplace and hearth extension, build the platform assembly then position fireplace and hearth extension on top. Secure the platform to the floor to prevent possible shifting.

INSTALLING THE FIREPLACE

Step 1. Construct the Appliance Framing - Frame appliance enclosure as illustrated in *Figures 5 through 8 on page 6 and 7.* (Note: Appliance may be positioned first and then the framing constructed around it.)

If the appliance is to be elevated above floor level, a solid continuous platform must be constructed.

IMPORTANT: UNDER NO CIRCUMSTANCES CAN THE FIREPLACE TOP SPACERS (FIGURE 2 OR 3) BE REMOVED OR MODIFIED, NOR MAY YOU NOTCH THE HEADER TO FIT AROUND OR BE INSTALLED LOWER THAN THE SPACERS. THE HEADER MAY BE IN DIRECT CONTACT WITH THE TOP SPACERS BUT MAY NOT BE SUPPORTED BY THEM.

Consult all local codes.

Step 2. Route Gas Supply Line - Route gas line (*Figure 5*) using techniques and materials prescribed by local and/or national codes. It is recommended that a gas line of 1/2" or greater diameter be used to allow full gas volume to the fireplace. Undue pressure loss will occur if the pipe is too small.

The gas line should extend a total of 2 in. (51 mm) maximum into the appliance control compartment.

When rigid pipe is used, an ANSI approved manual shut-off valve and union must be installed upstream of the fireplace.

Ensure that a sediment trap is installed in the existing gas line, if not, install a sediment trap upstream to prevent moisture and contaminants from passing through trap to the appliance controls and burners. Failure to do so could prevent the appliance from operating reliably.

An external regulator must be used on all propane (L.P.G.) heaters to reduce the supply tank pressure to 13" w.c. (maximum). Any copper tubing used to supply propane (L.P.G.) from the tank must be internally tinned.

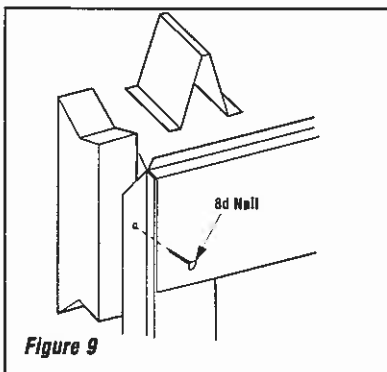
IMPORTANT: HOLD GAS VALVE SECURELY TO PREVENT MOVEMENT WHEN CONNECTING TO INLET GAS LINE

WARNING: CONNECTING DIRECTLY TO AN UNREGULATED PROPANE (L.P.G.) TANK MAY CAUSE AN EXPLOSION.

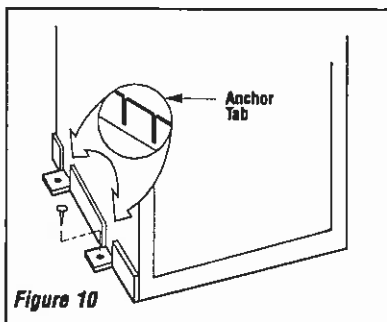
Step 3. Position the Appliance - Slide the fireplace into prepared framing. (Note: Appliance may be positioned first and then the framing constructed around it.)

Fireplace should be secured to side framing members using the full length 1/2 inch nailing flanges that are integral to the appliance at each side. Use 8d nails (*Figure 9*).

Note: The nailing tabs and the area directly behind the nailing tabs are exempt from the clearances described on the fireplace clearance label.



Fireplace may be anchored to floor. Bend down four (4) anchor tabs located at the base of the fireplace and secure to the floor by nailing with 8d nails (*Figure 10*).

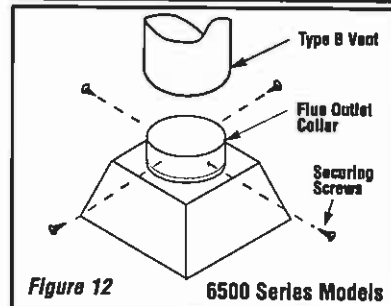
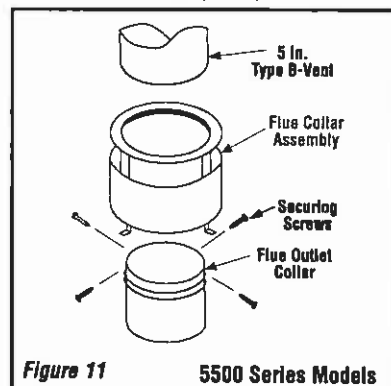


Step 4. Install the Vent System & Exterior Termination -

Connect a 5 in. (127 mm) Type B vent system to the appliance flue collar with four, No. 8 or larger, sheet metal screws. See *Figure 11* for 5500 series units and *Figure 12* for 6500 series.

Then install the remainder of the Type B vent to the outside.

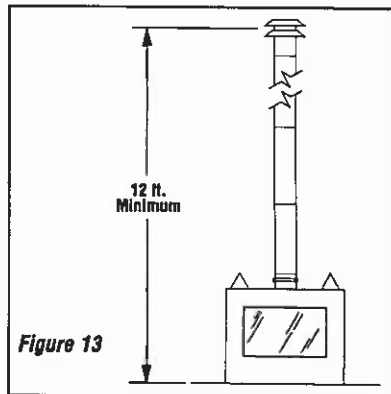
Minimum overall height of the vent system and appliance must be 12' (3.7 m). See *Figure 13*.



Install the B-vent system in accordance with the vent manufacturer's instructions.

CAUTION: THIS APPLIANCE CANNOT BE VENTED HORIZONTALLY.

Note: Refer to the vent manufacturers installation instructions for variations of venting techniques. If common venting of several units is contemplated, it should be discussed with an architect and the local Building Department.

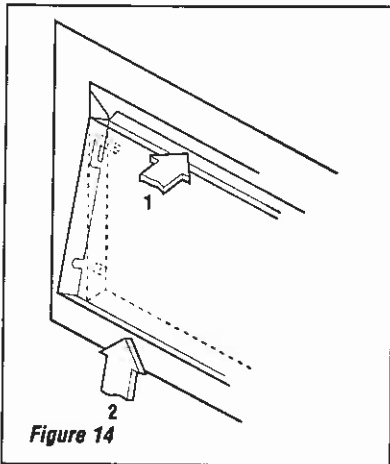


**Control Compartment Access - GRD Units
5500 Series units**

The lower control compartment access panel has been designed to cover the control compartment from view. To attach the panel to the appliance, hook both ends of the panel over the two brackets mounted on each side of the front combustion opening. The cover should hang from the brackets with the flared edge at the bottom allowing for a small air gap between the cover and the appliance.

6500 Series units

The lower control compartment access panel is attached to each side of the fireplace by pins that engage locking slots on the sides of the panel (Figure 14). To remove the panel push in on it's top edge with both thumbs, one on each end of the panel. When the bottom edge of the access panel swings out, cup it with the finger tips of both hands. Lift with the finger tips, moving the panel up and into the appliance. Pull the panel top edge out from the appliance with the thumbs to remove it from the lower compartment opening.



Control Compartment Access - GHC Units

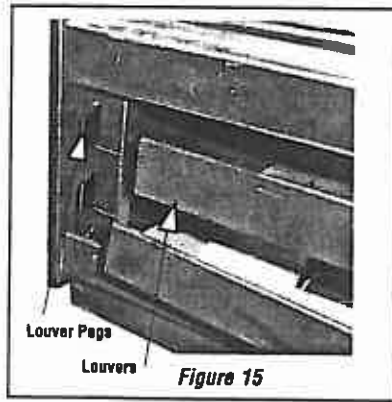
The GHC lower control compartment access is provided by removing the three louvers (5500 series units) or four louvers (6500 series units). To remove the louvers, pull them straight out from the unit. To replace, tilt each of them with the top edge over the top of each peg and snap the lower edge to lock in place. See Figure 15.

Step 5. Field Wiring

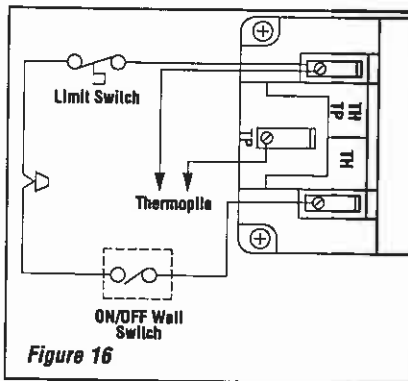
A. Millivolt Wiring

Millivolt Wiring (Without Forced Air Kit Usage) -

The control tray has been set in place and has been pre-wired at the factory. All that is required, regarding wiring, is to locate and install the wall switch (supplied) in a desired location and connect it to the millivolt circuit using the 18 ft of 2 conductor wire supplied with the unit (Figure 16).



Note: The supplied 18 feet of 2 conductor wire has one end of each conductor connected to the gas valve circuit and the other end of each conductor placed loose on top of the unit.



CAUTION: DO NOT WIRE THE MILLIVOLT REMOTE WALL SWITCH TO THE MAIN POWER SUPPLY.

Millivolt Wiring (With Forced Air Kit Usage) -

GHC-5500 series models may use the optional FAB-1500 or FAB-1600 Forced Air Kit; GHC-6500 the FAB-1600 Kit.

If an optional forced air kit is to be installed now or sometime in the future, the appliance must be connected to the main power supply at this time.

- 1 - Remove the junction box cover from the outside right bottom corner of the unit by removing the hex head screw. The junction box cover has a 7/8 in. (22 mm) knockout hole for a conduit bushing.
- 2 - Route a 3 wire 120V 60Hz power supply line through a wall switch to the junction box and connect the ground wire to the junction box ground screw, and the black and white supply wires to the appliance receptacle as shown in Figure 17.
- 3 - Install the provided "J" box plate on the "J" box within the control compartment using the screw and washer provided with the plate.

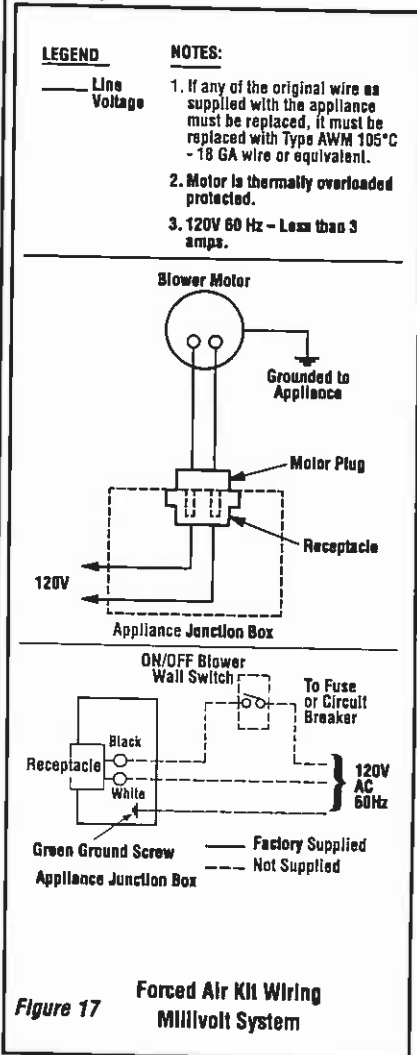
NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

- 4 - Refer to Figure 17 and 18 and the installation instructions provided with the forced air kit(s) for blower connections to the appliance receptacle and ground.

- 5 - Locate and install the millivolt wall switch (supplied) in a desired location and connect it to the millivolt circuit using the 18 ft of 2 conductor wire supplied with the unit (See Figure 16).

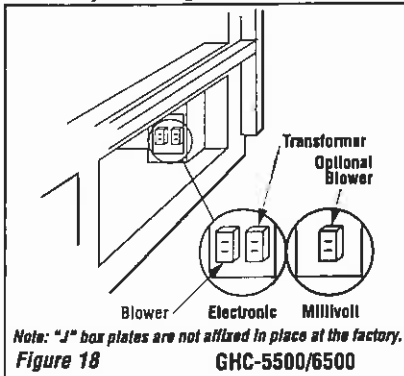
Note: The supplied 18 feet of 2 conductor wire has one end of each conductor connected to the gas valve circuit and the other end of each conductor placed loose on top of the unit.

- 6 - After wiring is complete, replace the appliance junction box cover into the slide access opening, from which it was removed, and secure with the hex head screw previously removed.



B. Electronic Wiring

Note: These appliances may be equipped with either of two ignition control modules: Robertshaw or Honeywell. The Robertshaw module wiring is shown in Figures 20 and 21; the Honeywell, in Figure 22.



IMPORTANT: Ground lead must be connected to the green screw located on the junction box. See Figure 17, 20, 21, or 22. Failure to do so will result in a potential safety hazard. The appliance must be electrically grounded in accordance with local codes or, in the absence of local codes, the National Electrical Code, ANSI/NFPA 70- (latest edition). (In Canada, the current CSA C22-1 Canadian Electrical Code.)

Electronic Wiring (Without Forced Air Kit Usage)

- 1 - Remove the junction box cover from the outside right bottom corner of the unit by removing the hex head screw. The junction box cover has a 7/8 in. (22 mm) knockout hole for a conduit bushing.
- 2 - Route a 3 wire 120V 60Hz power supply line through a wall switch to the junction box and connect the ground wire to the junction box ground screw, and the black and white supply wires to the appliance receptacle as shown in Figures 18, 19; and 20 (Robertshaw Ignition Module) or 22 (Honeywell Ignition Module).
- 3 - Install the provided "J" box plate on the "J" box within the control compartment using the screw and washer provided with the plate.
- 4 - Locate and install the low voltage wall switch (supplied) in the desired location and connect it to the low voltage circuit using the 18 ft of 2 conductor wire supplied with the unit as shown in Figure 20.
Note: The supplied 18 feet of 2 conductor wire has one end of each conductor connected to the gas valve circuit and the other end of each conductor placed loose on top of the unit.
- 5 - After wiring is complete, replace the appliance junction box cover into the side access opening, from which it was removed, and secure with the hex head screw previously removed.

Electronic Wiring (With Forced Air Kit Usage) -

GHC-5500 series models may use the optional FAB-1500 or FAB-1600 Forced Air Kit; GHC-6500 the FAB-1600 Kit.

If an optional forced air kit is to be installed now or sometime in the future, the appliance must be connected to the main power supply at this time.

- 1 - Remove the junction box cover from the outside right bottom corner of the unit by removing the hex head screw. The junction box cover has a 7/8 in. (22 mm) knockout hole for a conduit bushing.
- 2 - Route a 3 wire 120V 60Hz power supply line through a wall switch to the junction box and connect the ground wire to the junction box ground screw, and the black and white supply wires to the appliance receptacle as shown in Figure 18; and 21 (Robertshaw Ignition Module) or 22 (Honeywell Ignition Module).
Note: If a Honeywell Ignition control module is being used, refer to Figure 22 for the control wiring and Figure 21 for the blower wiring.

- 3 - Install the provided "J" box plate on the "J" box within the control compartment using the screw and washer provided with the plate.
- 4 - Refer to Figure 18 and 21 and the installation instructions provided with the forced air kit(s) for blower connections to the appliance receptacle and ground.
- 5 - Locate and install the low voltage wall switch (supplied) in a desired location and connect it to the millivolt circuit using the 18 ft of 2 conductor wire supplied with the unit (See Figure 21).
Note: The supplied 18 feet of 2 conductor wire has one end of each conductor connected to the gas valve circuit and the other end of each conductor placed loose on top of the unit.

- 6 - After wiring is complete, replace the appliance junction box cover into the side access opening, from which it was removed, and secure with the hex head screw previously removed.

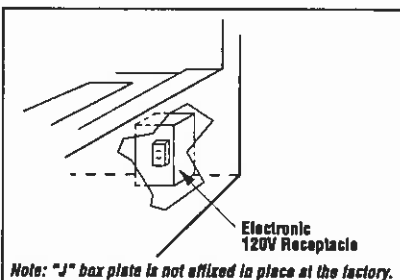


Figure 19 GRD-5500/6500

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE

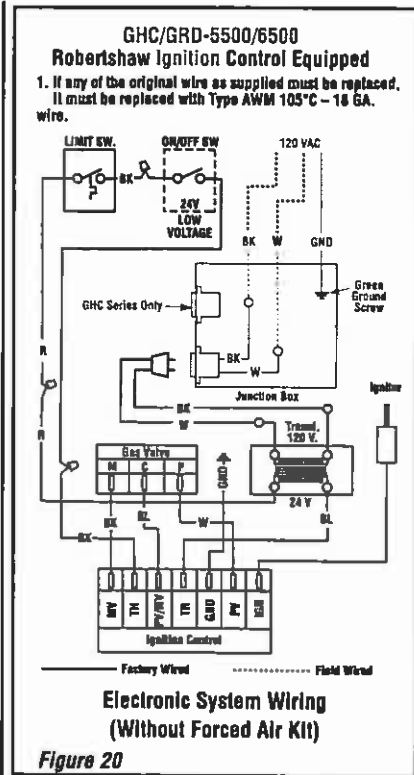


Figure 20

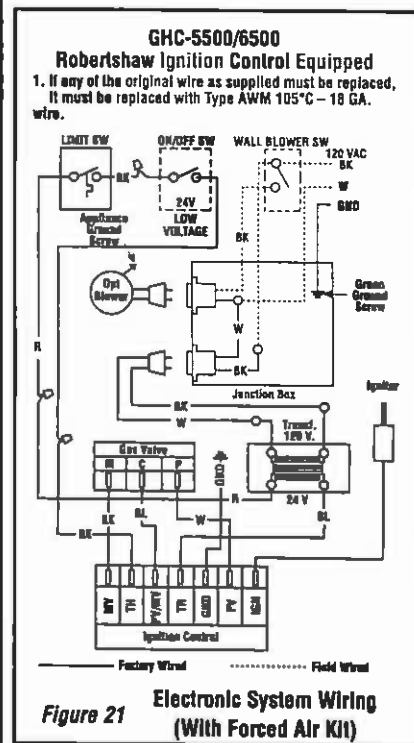
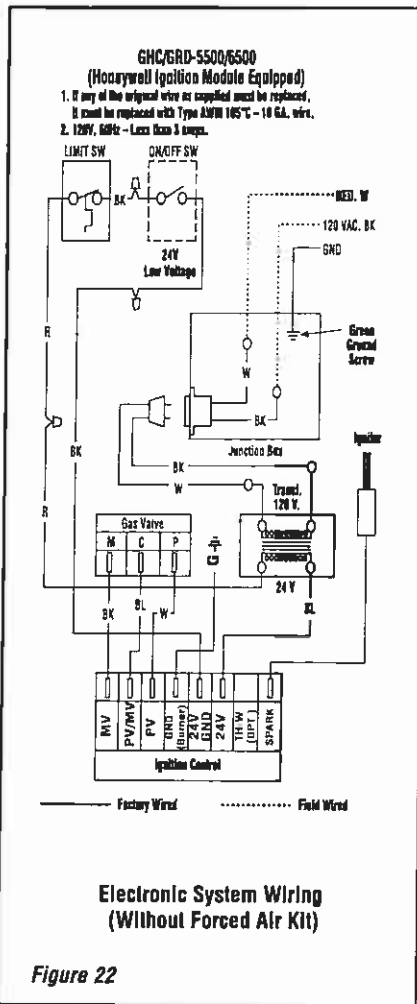


Figure 21

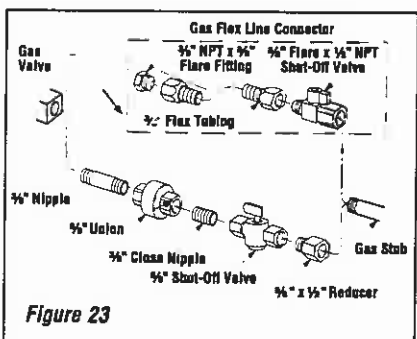
Electronic System Wiring (With Forced Air Kit)



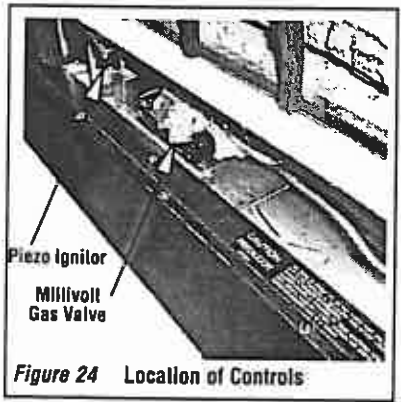
Step 6. Connecting Gas Line –

Make gas line connections. All codes require a shut-off valve mounted in the supply line. Figure 23 illustrates two methods for connecting the gas supply. The flex-line method utilizing the gas flex line provided with the appliance is acceptable in the U.S., however, Canadian requirements vary depending on locality. Installation must be in compliance with local codes. The millivolt and electronic control valve have 3/8" (10 mm) NPT thread inlet ports.

WARNING: TO PREVENT DAMAGE TO THE VALVE AND OTHER ATTACHED COMPONENTS, HOLD VALVE FIRMLY IN PLACE WHILE TIGHTENING FITTINGS USED IN THE NEXT STEP.



The gas control valve is located in the lower control compartment. See figure 24. To access the valve see page 9, the Control Compartment Access Section.



Secure all joints tightly using appropriate tools and sealing compounds (ensure propane resistant compounds are used in propane applications).

Turn on gas supply and test for gas leaks using a soapy water solution. **Never use an open flame to check for leaks.**

- A. Mix a 50% dish soap, 50% water solution.
- B. Light the appliance (refer to the lighting instructions provided in the Homeowner's Care and Operation Instructions).
- C. Brush all joints and connections with the soapy water solution to check for leaks. If bubbles are formed, or gas odor is detected, turn the gas control knob to the "OFF" position. Either tighten or refasten the leaking connection and retest as described above.
- D. When the gas lines are tested and leak free, observe the individual tongues of flame on the burner. Make sure all ports are open and producing flame evenly across the burner. If any ports are blocked, or partially blocked, clean out the ports.

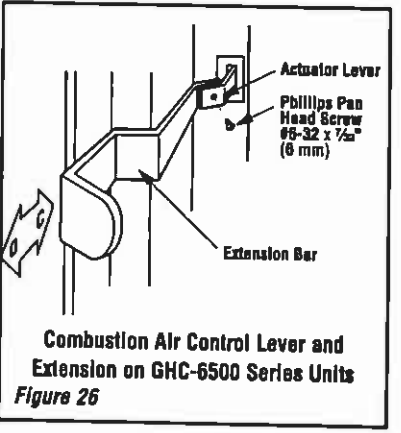
NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

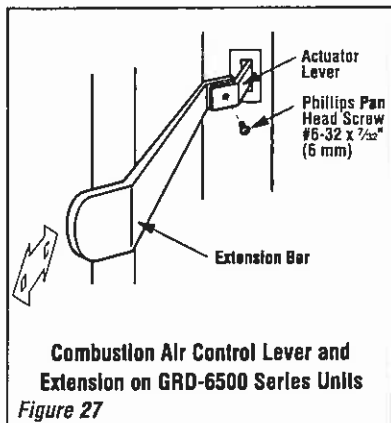
Step 7. Install Optional Outside Combustion Air Kit

When outside combustion air is desired, Lennox' Model FOAK-4 or Model FOAK-4LD combustion air kit should be used. Refer to the installation instructions packed with the air kit for specific installation information. The outside air kit must be installed before the appliance is framed and enclosed in the finished walls.

The control lever, located on the left side of the appliance front opening, controls the entrance of combustion air from the outside. See Figure 25 for 5500 series units, Figure 26 for GHC-6500 series units or Figure 27 for GRD-6500 series units. The 6500 series units have a cover over the control lever fastened by one screw. Remove the screw and then the cover and discard them.

If an optional "All-Glass" enclosure panel is to be installed on the 6500 Series appliances, an extension bar must be attached to the actuator lever as illustrated in Figures 26 and 27. Both versions of the actuator lever extension bar are packaged with the glass enclosure panel.





CAUTION: NEVER LOCATE INLET WHERE IT CAN BE BLOCKED BY SHRUBS, SNOW DRIFTS, ETC. NEVER LOCATE INLET IN GARAGE OR ANY AREA WHERE THERE IS ANOTHER FUEL BURNING APPLIANCE OR PRODUCTS EMITTING COMBUSTIBLE GASES SUCH AS PAINT, GASOLINE, ETC. IN COLD CLIMATES, IT IS RECOMMENDED THE COMBUSTION AIR DUCT BE INSULATED.

Outside combustion air ducting may be run upwards or vertically through framing and ceiling joists, with the hood installed through an outside wall and 3' (1 m) below the B-Vent termination. Ducting may also be run downward through floor joists and under the home to a ventilated crawlspace not considered part of the living area of the home.

Note: Do not terminate combustion air kit in attic space under any circumstances.

After completing the installation of the optional combustion air vent system the actuator arm must be put in service and tested to ensure proper operation before completing any enclosure around the firebox. Failure to do so may result in extensive and costly rework.

Operate the actuator through several cycles including the closed position. Ensuring proper operation and freedom of movement. Return the actuator arm to the closed position.

Step 8. Installing Logs and Rockwool -

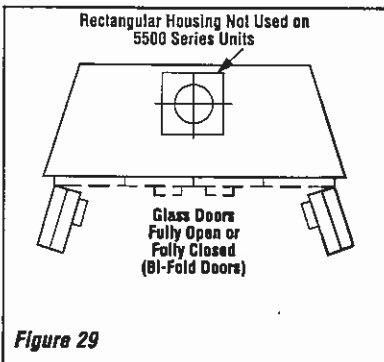
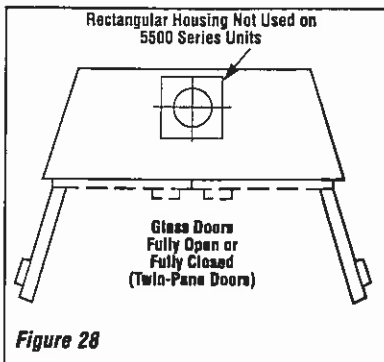
The logs are packaged within the firebox. The bag of rockwool is in the lower control compartment. Refer to the Homeowner's Care and Operating Instructions for detailed placement instructions for the logs and rockwool.

Step 9. Optional Glass Doors/Enclosure Panel Availability, Precautions and Instructions -

See the Homeowner's Care and Operating Instructions for a selection of glass doors/enclosure panels available for installation in these appliances. Installation Instructions for the doors/enclosure panels are provided with them.

- Never clean glass when doors or panel are hot due to overalling the appliance.
- Glass and metal frames get hot. Use only the wooden handles to open and close the doors or to lift out panel.

CAUTION: THE APPLIANCE SHOULD ONLY BE OPERATED WITH THE GLASS DOORS FULLY OPEN OR FULLY CLOSED.



APPLIANCE OPERATION

Step 10. Checking the System -

With gas line installed, run initial system checkout before closing up the front of the unit. Follow the pilot lighting instructions provided in the Homeowner's Care and Operation Instructions. For piezo ignitor location see Figure 24 on page 11 (millivolt appliances only).

Note: Lighting instructions are also found on the pull-out label attached near the gas valve in the control compartment. When first lighting the appliance, it will take a few minutes for the line to purge itself of air. Once purging is complete, the pilot and burner will light and operate as indicated in the instruction manual.

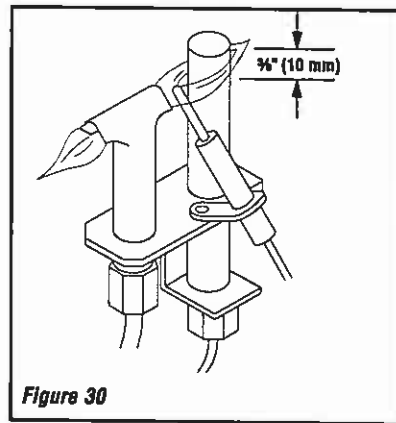
Subsequent lightings of the appliance will not require such purging. Inspect the pilot flame (remove logs, if necessary, handling carefully).

Millivolt Appliance Checkout

The gas control system on these appliances is a millivolt standing pilot type. It consists of a pilot burner, a piezo ignitor, a gas control valve, a burner assembly and an ON/OFF wall switch. A temperature limit switch is wired in series with the millivolt wall switch and gas control valve. If a higher than normal temperature is sensed due to a blocked vent or prolonged downdraft, the limit switch will open and cause the burner to shut off.

The pilot flame should be steady, not lifting or floating. Flame should be blue in color with traces of orange at the outer edge.

The top 3/8" (9 mm) at the pilot generator (thermopile) should be engulfed in the pilot flame (Figure 30).



If the pilot flame pattern is not as shown in *Figure 30* on page 12, adjust it as follows:

1. Remove the pilot adjustment cap located on the main gas valve.

2. Adjust the pilot screw to provide properly sized pilot flame (*Figure 30*). Turn counter clockwise to enlarge pilot flame and clockwise to reduce the pilot flame. DO NOT attempt to adjust pilot flame more than one half turn.

3. Replace the pilot adjustment cap.

Replace logs if removed for pilot inspection.

To light the burner, rotate the gas valve control knob counterclockwise to the "ON" position and then turn "ON" the remote wall switch.

Electronic Appliance Checkout

The gas control system on these appliances is an electronic low voltage gas control valve with an intermittent ignitor. It consists of a low voltage gas control valve, an intermittent ignition system, an electronic control module, transformer and a burner assembly. A temperature limit switch is wired in series with the gas control valve. If a higher than normal temperature is sensed, due to a blocked vent or prolonged downdraft, the limit switch will open and cause the burner to shut off.

The pilot flame should be steady, not lifting or floating. Flame should be blue in color with traces of orange at the outer edge.

To light the burner, push the gas control lever in and toward the left to the "ON" position. Turn "ON" the remote wall switch. Ensure the ignitor lights the pilot. The pilot flame should engulf the ignitor.

Step 11. Safety Limit Switch Operation

Automatically-Reset Safety Limit Switch

This appliance is equipped with an automatically-reset blocked flue safety limit switch. If, during appliance operation, the flame goes out (independently of the burner on/off wall switch) in a regularly repeated pattern, it may be due to the operation of this safety limit switch. Call a qualified service technician immediately, to determine the cause of the cycling ON/OFF burner condition.

Step 12. Adjustments – The following paragraphs address adjustment concerns and procedures.

Flame Appearance and Sooting

Proper flame appearance is a matter of taste. Generally most people prefer the warm glow of a yellow to orange flame. Appliances operated with air shutter openings that are too large, or with long vertical vent runs, will exhibit flames that are blue and transparent. These weak, blue and transparent flames are termed anemic.

If the air shutter opening is too small sooting may develop. Sooting is indicated by black puffs developing at the tips of very long orange flames. Sooting results in black deposits forming on the logs, appliance inside surfaces and on exterior surfaces adjacent to the vent termination. Sooting is caused by incomplete combustion in the flames and a lack of combustion air entering the air shutter opening.

To achieve a warm yellow to orange flame with an orange body that does not soot, the shutter opening must be adjusted between these two extremes.

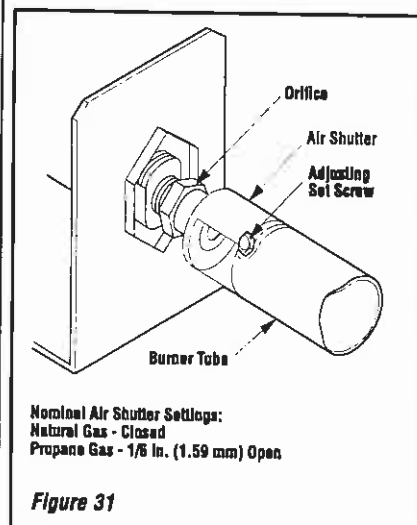
No smoke or soot should be present. Reposition the log set if the flames impinge on any of them.

If sooting conditions exist, the air shutter opening on the main burner can be adjusted. Normally, the more offsets in the vent system, the greater the need for the air shutter to be opened further.

WARNING: AIR SHUTTER ADJUSTMENT SHOULD ONLY BE PERFORMED BY A QUALIFIED PROFESSIONAL SERVICE TECHNICIAN.

Adjustment

To adjust the flame, position the air shutter to the nominal setting (*Figure 31*). Allow the burner to operate for at least 30 minutes. Observe the flame continuously. If it appears weak or sooty as previously described, adjust the air shutter open or closed until desired effect is achieved.



When satisfied that the appliance operates properly, proceed to finish the installation. Leave the control knob/lever in "ON" position and turn the remote switch "OFF." Replace the refractory access panel.

FINISHING REQUIREMENTS Wall Details

Appliance Facing Flush with Finished Wall - Complete finished interior wall. To install the appliance facing flush with the finished wall, position framework to accommodate the thickness of the finished wall (*Figure 33 and 35*).

Surround Materials Relative to Appliance Facing-

Surround materials (noncombustible) can be placed around the appliance facing to provide a flush surface between the surround materials and the appliance front facing. Do not cover the louvers of the GHC or the bottom control compartment access on the GRD. (*Figures 34 and 36*).

Note: Combustible wall finish materials and/or surround materials must not be allowed to encroach the area defined by the appliance front face (black sheet metal). Never allow combustible materials to be positioned in front of or overlapping the appliance front face.

Hearth Extensions

A hearth extension is not required with this appliance. Any hearth extension used is for appearance only and does not have to conform to standard hearth extension installation requirements.

Mantels

See *Figure 32* for combustible mantel shelf projections from the wall and for the mantel's minimum vertical distance from the top of the firebox opening.

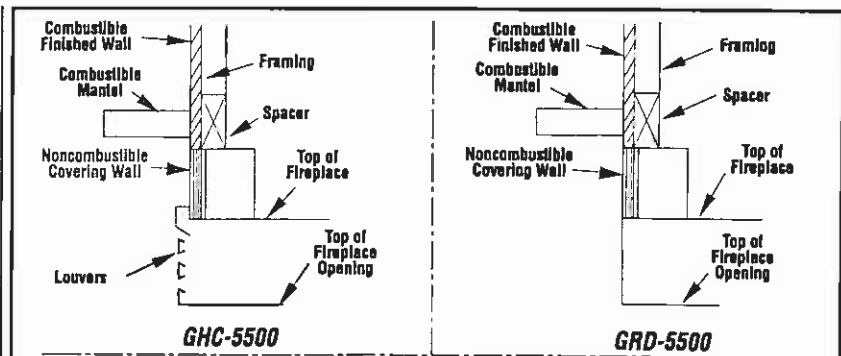
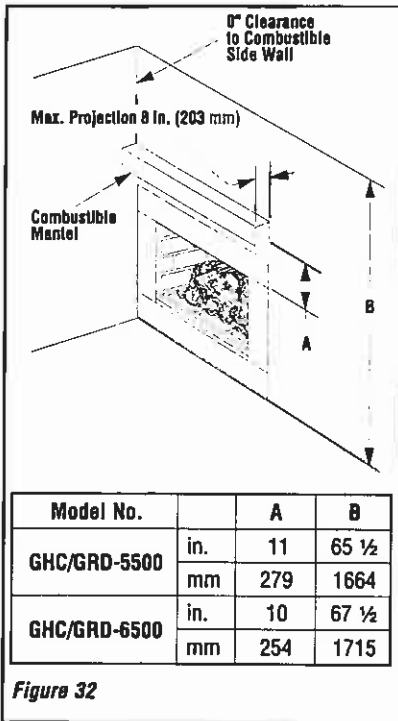


Figure 33 Appliance Facing Flush with a Finished Wall

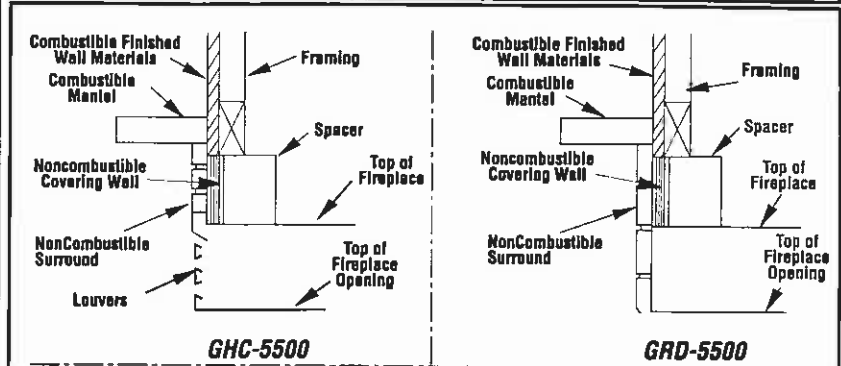


Figure 34 NonCombustible Surround Materials Relative to Appliance Facing

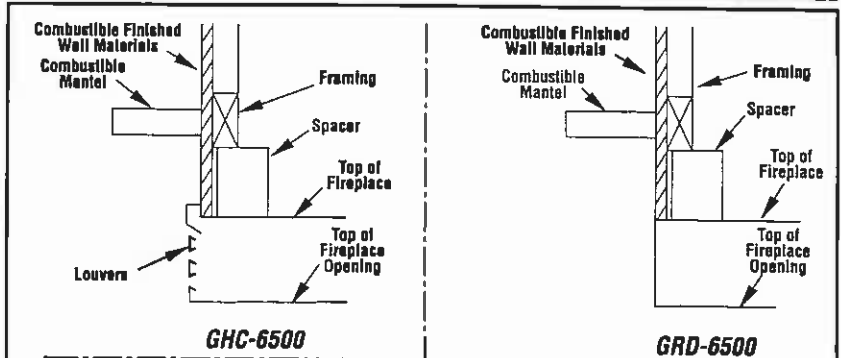


Figure 35 Appliance Facing Flush with a Finished Wall

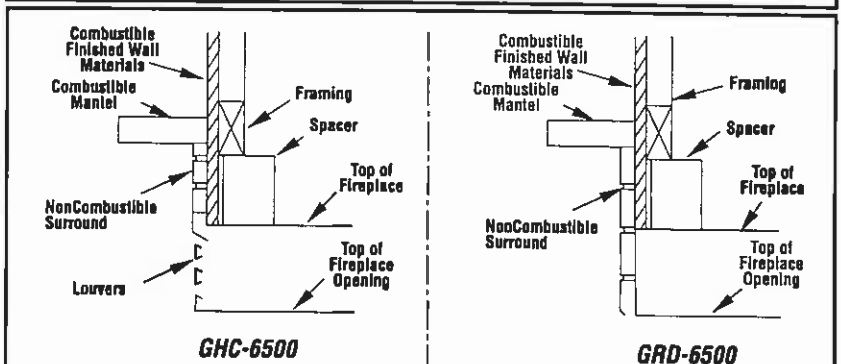


Figure 36 NonCombustible Surround Materials Relative to Appliance Facing

NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

COLD CLIMATE INSULATION

If you live in a cold climate, seal all cracks around your appliance with noncombustible material and wherever cold air could enter the room. It is especially important to insulate outside chase cavity between studs and under floor on which appliance rests, if floor is above ground level. Ensure that the clearance requirements for venting are always maintained.

To avoid air intrusion, surround material must be caulked where it meets the black metal facing of the appliance. Only use a noncombustible caulking material to seal this area.

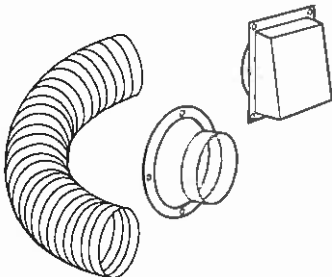
Do not place insulation materials within the 1" gas vent system clearance space.

INSTALLATION ACCESSORIES

The following accessory items are available for use in the installation of this appliance.

Outside Air Kits Models FOAK and FOAK-LD

Outside Air kits are available with duct (FOAK-4) and without duct (FOAK-4LD) for use if outside combustion air is required or desired. If model FOAK-4LD is used it must be used in conjunction with locally purchased, non-combustible Class 1 or Class 0 flexible duct.



Outside Combustion Air Kits

(with duct)
(without duct)

81L87
81L88

FOAK-4
FOAK-4LD

Gas Conversion Kits

WARNING: THIS CONVERSION KIT SHALL BE INSTALLED BY A QUALIFIED SERVICE AGENCY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND ALL APPLICABLE CODES AND REQUIREMENTS OF THE AUTHORIZED AGENCY HAVING JURISDICTION. IF THE INFORMATION IN THESE INSTRUCTIONS ARE NOT FOLLOWED EXACTLY, A FIRE, EXPLOSION OR PRODUCTION OF CARBON MONOXIDE MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE. THE INSTALLATION IS NOT PROPER AND COMPLETE UNTIL THE OPERATION OF THE CONVERTED APPLIANCE IS CHECKED AS SPECIFIED IN THE OWNER INSTRUCTIONS SUPPLIED WITH THE KIT.

AVERTISSEMENT: CET ÉQUIPEMENT DE CONVERSION SERA INSTALLÉ PAR UNE AGENCE QUALIFIÉE DE SERVICE CONFORMÉMENT AUX INSTRUCTIONS DU FABRICANT ET TOUTES EXIGENCES ET CODES APPLICABLES DE L'AUTORISÉS AVOIR LA JURISDICTION. SI L'INFORMATION DANS CETTE INSTRUCTION N'EST PAS SUIVIE EXACTEMENT, UN FEU, EXPLOSION OU PRODUCTION DE PROTOXYDE DE CARBONE PEUT RÉSULTER LE DOMMAGES CAUSER DE PROPRIÉTÉ, PERTE OU BLESSURE PERSONNELLE DE VIE. L'AGENCE QUALIFIÉE DE SERVICE EST ESPONSABLE DE L'INSTALLATION PROPRE DE CET ÉQUIPEMENT. L'INSTALLATION N'EST PAS PROPRE ET COMPLÈTE JUSQU'À L'OPÉRATION DE L'APPAREIL CONVERTI EST CHÉQUE SUIVANT LES CRITÈRES ÉTABLIS DANS LES INSTRUCTIONS DE PROPRIÉTAIRE PROVISIONNÉES AVEC L'ÉQUIPEMENT.

In Canada

THE CONVERSION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROVINCIAL AUTHORITIES HAVING JURISDICTION AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE CAN1-B149.1 AND .2 INSTALLATION CODE.

LA CONVERSION DEVRA ÊTRE EFFECTUÉE CONFORMÉMENT AUX RECOMMANDATIONS DES AUTORITÉS PROVINCIALES AYANT JURISDICTION ET CONFORMÉMENT AUX EXIGENCES DU CODE D'INSTALLATION CAN1-B149.1 ET.2.

Gas conversion kits are available to adapt your appliance from the use of one type of gas to the use of another. These kits contain all the necessary components needed to complete the task including labeling that must be affixed to ensure safe operation.

Kit part numbers are listed on the next page and the following steps detail the conversion procedure.

Note: These kits contain a main orifice which can be used for installation at elevations of 0-2000 Ft. (610 m.) For elevations greater than that, use the correct orifice as shown in table 2 on page 2.

Step 1. Turn off the gas supply to the appliance. Open the doors or remove the enclosure panel.

Step 2. Carefully remove the two (5500 Models) or four (6500 Models) smaller logs on top. Then remove the two (2) main logs. **Exercise care as not to break the logs.**

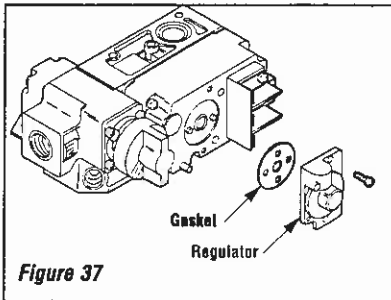
NOTE: DIAGRAMS & ILLUSTRATIONS NOT TO SCALE.

Natural To Propane Gas Conversion Kit Application			
Unit Models No.	Kit Model No.	Unit Type	Part No.
GHC/GRD-5500	GCK-5500-MNP	millivolt	058092
GHC/GRD-6500	GCK-6500-MNP	millivolt	063431
GHC/GRD-5500	GCK-5500-ENP	electronic	058061
GHC/GRD-6500	GCK-6500-ENP	electronic	058069

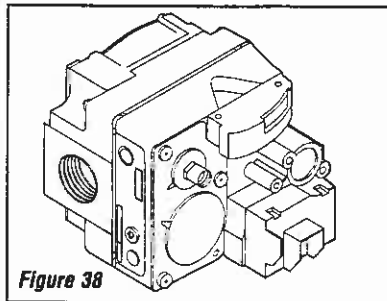
Propane To Natural Gas Conversion Kit Applications			
Units Models No.	Kit Model No.	Unit Type	Part No.
GHC/GRD-5500	GCK-5500-MPN	millivolt	058072
GHC/GRD-6500	GCK-6500-MPN	millivolt	063441
GHC/GRD-5500	GCK-5500-EPN	electronic	058051
GHC/GRD-6500	GCK-6500-EPN	electronic	058059

Step 3. Remove three (3) screws from the back of the burner tray. Lift the rear of the burner tray up slightly and to the right to disengage the burner tube from the manifold and orifice. Remove the burner tray.

Step 4. Millivolt Appliances – Remove and replace the regulator assembly located on the front of the gas valve (*Figure 37*). Ensure that the gasket is seated properly and is not kinked.



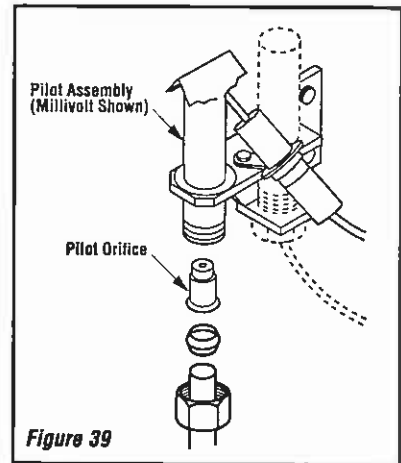
Step 5. Electronic Appliances – Mark the wires to the gas valve and remove the valve (*Figure 38*). Replace the valve with the one provided with the kit.



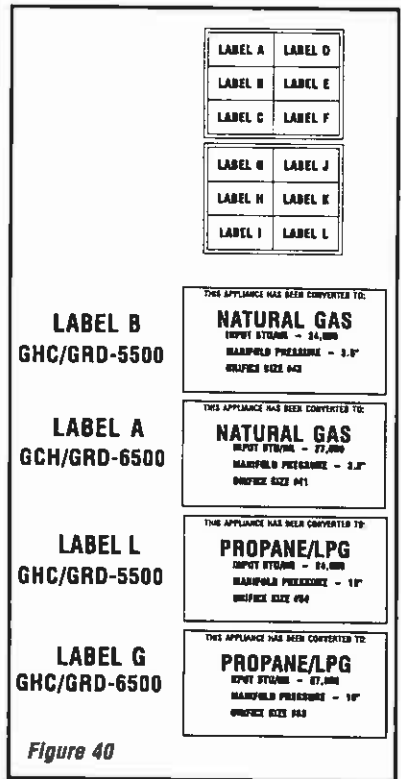
Step 6. Remove the orifice from the manifold and replace it with the one provided in the kit; 5500 models - #43 for natural gas and #54 for propane, 6500 models - #41 for natural gas units and #53 for propane.

Step 7. Replace the pilot orifice with the one provided with the kit (*Figure 39*).

Step 8. Reassemble all removed components by reversing the procedures outlined in the preceding steps. Use pipe joint compound or Teflon tape on all fittings before installing (ensure propane resistant compounds are used in propane applications).



Step 9. Attach conversion kit label to the rating plate on the appliance as shown in the *Figure 40*.



Step 10. Turn on gas supply and test for gas leaks as described in the gas line connection instructions, *Step 6 on page 11*.

LHP reserves the right to make changes at any time, without notice, in design, materials, specifications, prices and also to discontinue colors, styles and products. Consult your local distributor for fireplace code information.

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