



SELECTION AND INSTALLATION INSTRUCTIONS

high altitude orifice kit

model WGH

! WARNING

The use of this manual is specifically intended for a qualified installation and service agency. All installation and service of these units must be performed by a qualified installation and service agency. Hamilton manuals may contain excerpts from component supplier literature adapted for Hamilton products. Any accompanying component supplier literature is for general information.

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High Altitude Conversion for Existing Natural or Propane Gas Units

Hamilton gas-fired equipment ratings are certified by A.G.A. and C.G.A. For elevations above 2000 ft., ANSI Z223.1 requires ratings be reduced 4 percent for each 1000 ft. above sea level. C.G.A. requires that ratings be reduced 10% at elevations above 2000 ft. **To accommodate higher altitude operation, equipment must be converted by changing orifices as explained in this instruction sheet.** Table 2.1 list orifice kits which comply with both ANSI Z223.1 recommendations and C.G.A. requirements.

High Altitude Conversion for Units that are also being Converted from Natural Gas to Propane Gas Concurrently

IMPORTANT:

Conversion from natural gas to propane gas is allowed for WGH models with a 34 control code. **For this conversion, both a propane conversion kit and a propane high altitude kit must be used.**

Follow carefully the propane conversion instructions, found in Bulletin 75-513-VHHP, using the proper high altitude main burner orifices called out in this literature (75-537-VHHP) **instead of** the orifices in propane conversion kit.

Selection of the Proper Kit

To select the proper high altitude kit it is necessary to obtain the specifics of the heater to be converted, as well as the altitude it will be installed at. If the high altitude kits are ordered at the same time as the unit heater, all pertinent information relative to the heater can be obtained from the catalog. If the high altitude kit is needed after the unit heater is in the field, you need to refer to the carton label or unit heater serial plate to obtain the necessary information. Figure 2.1 shows a portion of the unit heater serial plate where this information may be obtained. Referring to this figure, the prefix letters and successive numbers which are needed for kit selection are WGH45. The letters identify the model and the numbers identify the size of the unit. To determine the type of gas the unit is designed for, refer to the left side of serial plate in section "type of gas" (shown in figure 2.1). Also check for previous gas type conversion label next to the serial plate.

After obtaining this information, refer to the proper selection chart. The selection charts are differentiated by product type, altitude and fuel type. **Remember, if you are converting from natural gas to propane gas and want to operate at high altitude, both a propane conversion kit and a propane high altitude kit must be used.** Selection charts include the proper kit suffix, the orifice drill size, and the number of orifices required for the unit being converted. Drill sizes are also stamped on each orifice.

Figure 2.1
Typical Serial Plate



MODEL Hamilton Home Products, Inc. Columbus, Ohio 43212 Phone: 1-614-837-0006		POWER CODE 45AH0134		CONTROL CODE		UNIT HEATER FOR INDUSTRIAL / COMMERCIAL USE AEROTHERME POUR USAGE INDUSTRIEL / COMMERCIAL RESIDENTIAL UNIT HEATER RÉCHAUFFEUR POUR UNITÉ RÉSIDENNELLE Made in U.S.A.					
MODEL NUMBER NUMÉRO DE MODELE WG ¹ H ¹		MIN. INPUT BTU/HR DEBIT CALORIFIQUE MIN. BTU/HEURE		VOLTS 115		AMPS 3.65		PHASE 1		HERTZ 60	
SERIAL NUMBER NUMÉRO DE SERIE 30011011898-585		MIN. INLET PRESS. FOR PURPOSE OF INPUT ADJUSTMENT PRESSION D'ALIMENTATION EN GAZ MIN. ADMISE 6		IN. WC. P.O.C.D.E VENT CATEGORY ÉVÉNEMENT CATÉGORIE I or III		DESIGN COMPLIES WITH: ANS Z83.8 - 1996 CGA 2.6 - M96 IAS Req 10-96					
TYPE OF GAS TYPE DE GAZ Natural		MANIFOLD PRESSURE PRESSION A LA TUBULURE D'ALIMENTATION 3.5		IN. WC. P.O.C.D.E		APPROVALS ACCEPTED BY CITY OF NEW YORK:					
(IN USA) FOR INSTALLATIONS ABOVE 2000 FEET, DERATE 4 PERCENT FOR EACH 1000 FEET OF ELEVATION ABOVE SEA LEVEL.		0 TO 2000 FT. 0 ET 610 M.		(IN CANADA) 2000 TO 4500 FT. 610 ET 1370 M.		MINIMUM CLEARANCE TO COMBUSTIBLE MATERIAL DÉGAGEMENT MINIMUM POUR MATIÈRES COMBUSTIBLES				PENNSYLVANIA APPROVAL NO. 3465	
INPUT BTU/HR DEBIT CALORIFIQUE BTU/HEURE 45000		40500		TOP HAUT 1		IN. PO. NON ACCESS SIDE CÔTÉ SANS ACCÈS 1		IN. PO. APPROVED FOR USE IN MASSACHUSETTS			
OUTPUT BTU/HR RENDEMENT BTU/HEURE 36000		32400		BOTTOM BAS 1		IN. PO. VENT CONNECTOR CONNECTEUR D'AÉRATION 2		IN. PO. APPROVED FOR USE IN CA BY THE CEC			
ORIFICE SIZE DIM. DE L'INJECTEUR 49		50		ACCESS SIDE CÔTÉ AVEC ACCÈS 18		IN. PO.		FOR REPLACEMENT LITERATURE CALL MODINE MANUFACTURING AT 1-800-828-4328. POUR DES INFORMATIONS RELATIVES AU REMPLACEMENT DE LA PIÈCE, VEUILLEZ CONTACTER MODINE MANUFACTURING AU 1-800-828-4328.			

Table 2.1
High Altitude Orifice Kit Selection Guide (natural and propane gas) - WGH

(for all elevations, 2001 to 7500 ft.)

NOTE: All conversion kits have the same base number, only the suffix of the part number changes by model size.

Base Kit Number - 3H35604... choose correct suffix -1, -2, etc., per instructions before ordering kit.

	U.S.A.		Canada		U.S.A. and Canada					
	ALT 2001-4500 ft		ALT 2001-4500 ft		ALT 4501-5500 ft		ALT 5501-6500 ft		ALT 6501-7500 ft	
	NAT	PROP	NAT	PROP	NAT	PROP	NAT	PROP	NAT	PROP
Suffix	-1	-3	-6	-7	-1	-3	-1	-4	-2	-5
Drill Size	51	57	50	57	51	57	51	58	52	59
Orifices in Kit	5	5	5	5	5	5	5	5	5	5

Table 2.2
High Altitude Kit Cross Reference (3H # to Item Code)

3H #	FP #, Item Code
3H35604-1	33623
3H35604-2	33624
3H35604-3	33625
3H35604-4	33626
3H35604-5	33627
3H35604-6	34504

INSTALLATION

Conversion of any unit is the responsibility of, and the risk of the person making the conversion.

⚠ WARNING
Possible fire or explosion hazard.
Turn off gas supply before attempting gas conversion.

⚠ WARNING
Possible electrical shock hazard.
Turn off electric supply before making gas conversion.

Figure 3.1
WGH Unit Heater Access Panel Location

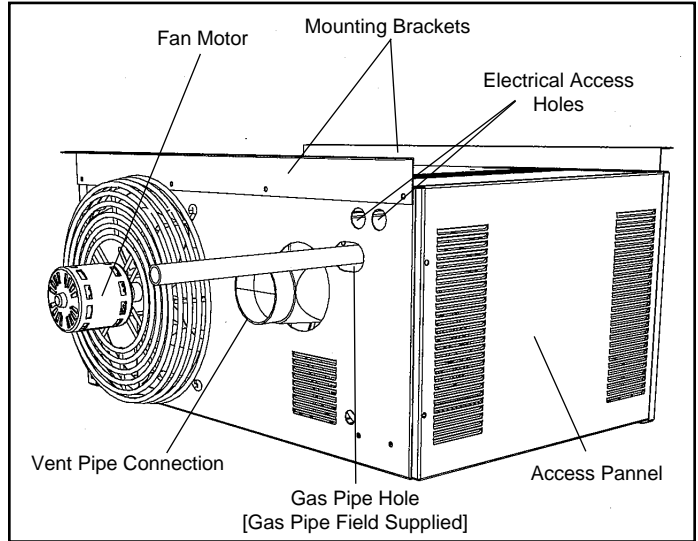
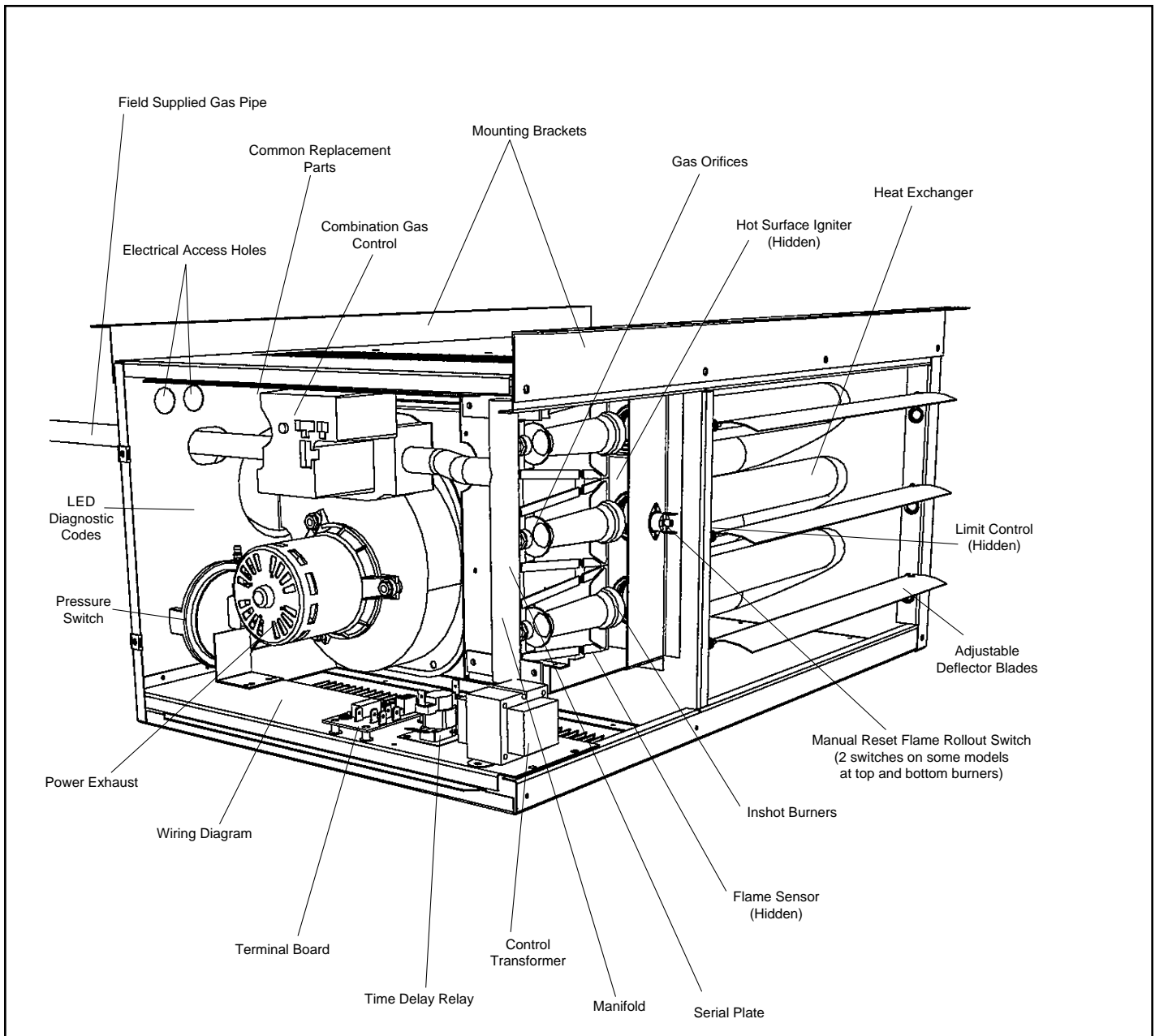


Figure 3.2
WGH Unit Heater Component Identification



INSTALLATION

Step 1 Turn off all electricity and gas to unit.

WGH Models

Remove access panel from side of unit shown in figure 3.1. Disconnect gas supply line and remove manifold screws. Exchange gas orifices found in manifold of unit shown in Figure 3.2. Check the orifice number stamped on each orifice. Be sure that this number is the same number indicated on the kit parts list for the kit being installed (see previous tables).

Step 2 On the High Altitude Conversion Label (see Figure 4.1) write the drill size, as stamped on the orifice, with a permanent marker. Be sure to check correct orifice size using the selection instructions beginning on page 1.

Affix the High Altitude Conversion Label (Figure 4.1) adjacent to the unit serial plate.

Step 3 Reinstall gas manifold screws and reconnect gas supply line.

Step 4 Restore fuel supply to the unit.

Step 5 Check gas supply pressure at unit upstream from combination gas control. The supply pressure should be 6" - 7" W.C. on natural gas or 12" - 14" W. C. on propane gas.

Step 6 Check for leaks at all joints and connections in the gas lines. This is most easily done with a soap/water solution. Simply brush or spray some of the solution on a joint or connection and look for bubble formation.

Step 7 Connect the manometer (or gage) to the outlet pressure tap on the combination gas control.

Step 8 Restore electric supply to unit.

Step 9 Follow lighting instructions on unit. Turn up thermostat setting to call for heat. After the main burners light, measure the outlet (manifold) pressure of the combination gas control. The pressure should be 3.5" W.C. for natural gas and 10" W.C. for propane gas. The outlet pressure can be adjusted at the control's regulator. Turning the adjustment clockwise will increase the outlet pressure while turning it counterclockwise will decrease the pressure.

Step 10 Observe the burner flame. It should have a well defined conical shape, pointed to the respectful heat exchanger tube.

Step 11 Remove manometer and replace access panel.
Conversion of the unit is complete.

Figure 4.1
High Altitude Conversion Label

NOTICE	
THIS APPLIANCE EQUIPPED FOR HIGH ALTITUDE.	
IN U.S. ACCORDING TO ANSI Z223.1	
IN CANADA, ACCORDING TO C.G.A. CERTIFICATION	
MAIN BURNER ORIFICES CHANGED TO	[] DRILL SIZE.
PLACE THIS LABEL ADJACENT TO SERIAL PLATE.	
5H70857A	

As Hamilton Home Products has a continuous product improvement program, it reserves the right to change design and specifications without notice.

For service contact your local qualified installation and service contractor or appropriate utility company.



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