

## SELECTION AND INSTALLATION INSTRUCTIONS

### conversion from propane gas to natural gas for models HD, HDS

#### (For hot surface ignition, control code 74)

### **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 authority having jurisdiction. If the information in these instructions is not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life. The qualified service agency performing this work assumes responsibility for the proper conversion of this furnace with this kit.**

### **AVERTISSEMENT**

**Cet ensemble de conversion ne doit être installé que par le représentant d'un organisme qualifié et conformément aux instructions du fabricant et à tous les codes et exigences applicables de l'autorité compétente. Quiconque ne respecte pas à la lettre les instructions dans le présent manuel risque de déclencher un incendie ou une explosion entraînant des dommages matériels, des lésions corporelles ou la perte de vies humaines. L'organisme qualifié qui effectue les travaux est responsable de la conversion correcte de ce générateur d'air chaud à l'aide de cet ensemble.**

The natural gas kits appearing in this bulletin are for use with units which are going to be installed between 0 and 2000 ft. elevation. If a unit is to be installed at higher elevations, a special "high altitude" natural gas orifice kit must be ordered in addition to the natural gas conversion kits shown here. See Modine Bulletin 75-537 for selection of "high altitude" orifice kits.

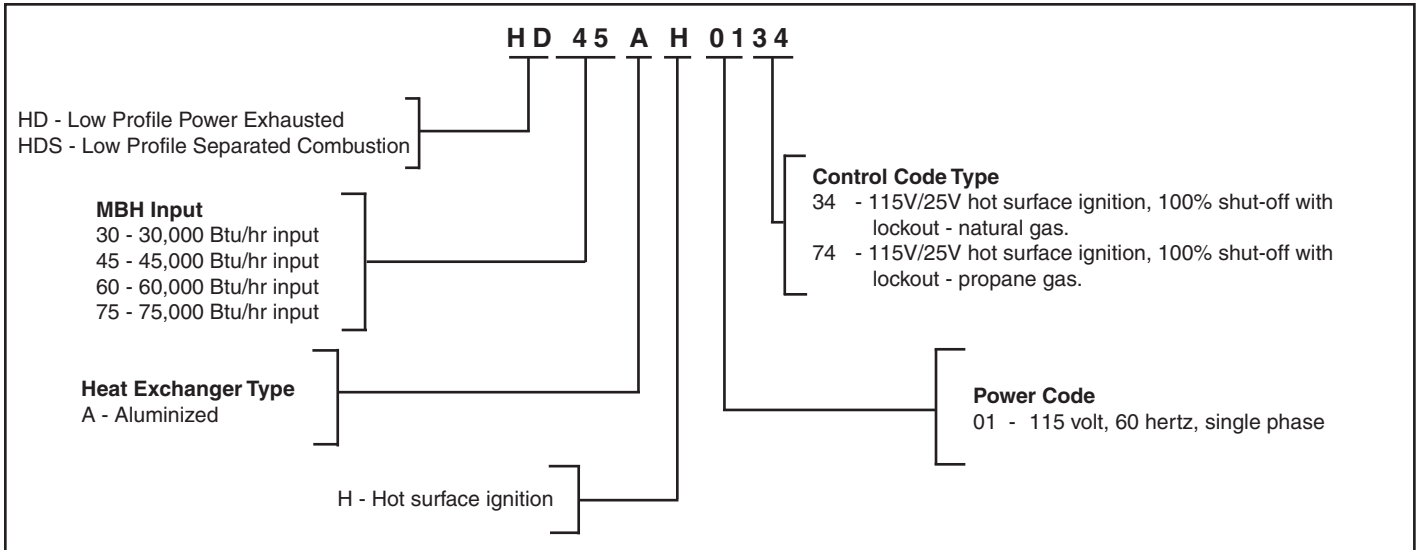
When converting units to propane at elevations over 2000 ft., the main burner orifices in the natural conversion kit must be replaced with the orifices from the "high altitude" orifice kit. The remaining components of the natural gas kit, those other than the main burner orifices, are still required to complete the conversion to natural gas, regardless of the elevation at which the unit is installed.

### **Identifying the Model, Control Code and Date of Manufacture**

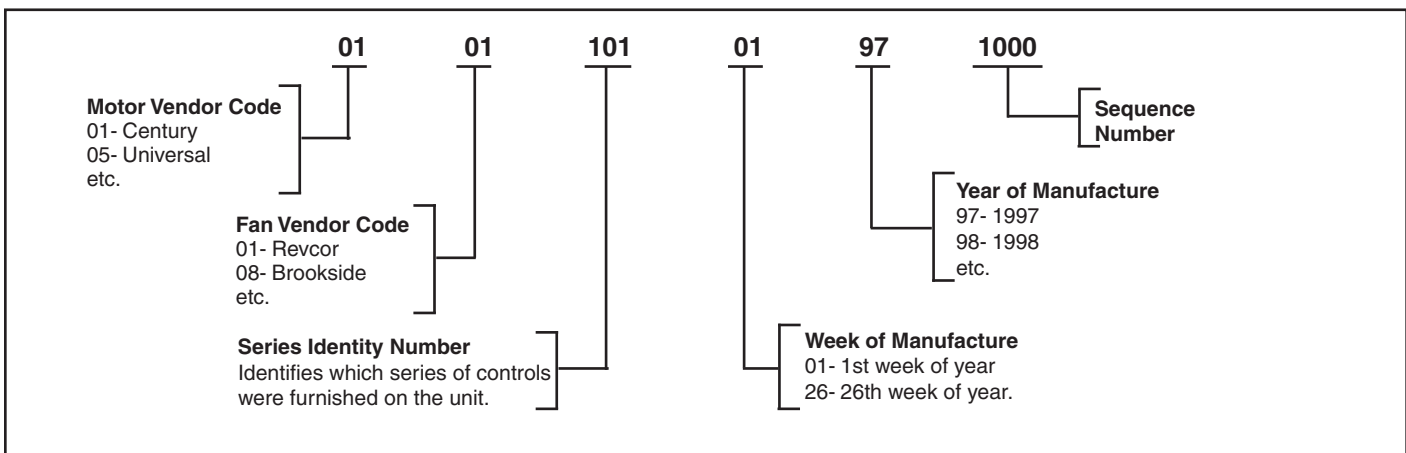
Figure 2.1 on the next page explains Modine HD/HDS unit heater model number designations and serial number designations. Markings pertinent to verifying correct application of the conversion kit are identified and explained in detail. **All prerequisites must be satisfied before the unit is deemed convertible.**

1. The first two characters in the model number are letters. These letters identify the style of unit heater. These first three characters must be HD or HDS for it to be convertible.
2. The control code for the unit to be converted must be 74.
3. Finally, the serial number shown in Figure 2.2 calls out the date the unit was built. Any unit manufactured after the 12th week of 1998, is acceptable for conversion.

**Figure 2.1**  
**Model Number Designations**



**Figure 2.2**  
**Serial- Number Designations**



## Installation of Kit

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

### **CAUTION**

Gas supply shall be shut-off prior to disconnecting the electrical power, before proceeding with the conversion. Failure to do so could result in fire, explosion or electrical shock.

1. Read these instructions carefully. Failure to follow instructions can damage product or cause a hazardous condition.
2. This conversion kit must be installed by a qualified service person.

3. This conversion kit is for converting the HD/HDS 30, 45, 60 and 75 models from natural gas to propane gas at 0 – 2,000' elevations.
4. This kit contains the following:
  - Five (5) #49 natural gas orifices
  - A conversion rating plate
  - A combination gas control (gas valve) conversion kit containing:
    - a cap screw
    - an adjustment screw
    - spring
    - label
5. Prior to servicing, set the thermostat to the lowest setting. Shut off the gas supply to the unit. Disconnect the electrical power to the unit.

## Conversion



# CAUTION

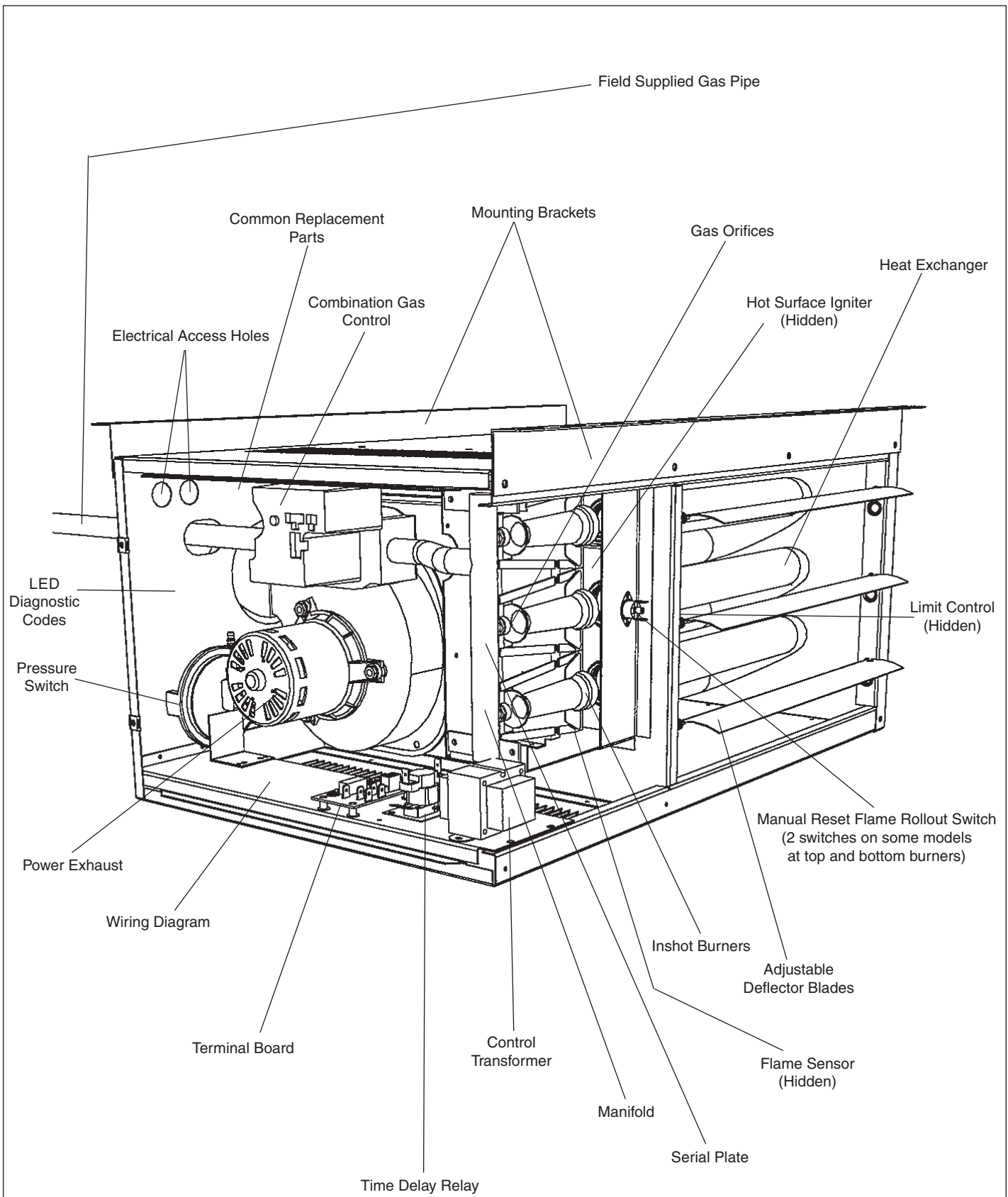
Shut-off the gas supplies and disconnect the electrical power before servicing the heater.

1. Remove the access panel to the heater.
2. Disconnect the gas supply to the heater.
3. Remove the electrical connections from the gas valve. This should not require the use of tools.
4. Remove the four (4) screws holding the manifold to the burner box. This will allow for the removal of the manifold and gas valve assembly.
5. Remove the orifices from the manifold assembly and place them where they can be used if the heater should need to be converted back to natural gas.
6. Insert the #49 natural gas orifices from the kit into the manifold assembly. If you are converting an HD/HDS 30, 45, or 60 heater you will have extra orifices, which should be discarded. Tighten the orifices using a wrench so that they are gas tight.
7. Convert the combination gas valve by following the instructions in the regulator kit.
8. Affix the Propane Rating Plate label on the heater, near the serial plate on the same panel as the common replacement parts label.
9. Place the manifold assembly back on the burner box using the four (4) screws.
10. Replace the electrical connections to the gas valve.
11. Verify that the igniter and sensor are in the same location and have not been damaged.
12. Connect the gas supply to the heater.

## Check

1. Place pressure taps on both the inlet and outlet pressure tap of the gas valve.
2. Connect a pressure-measuring device capable of reading inches of water column on both the inlet and outlet pressure tap.
3. Place the unit in operation. Verify the proper ignition sequence. The inlet pressure should be 6" - 7" water column. The manifold pressure should be 3.5" water column.
4. There are no adjustments that can be made to the burner flame. Some yellow in the flame is acceptable as long as no carbon (black soot) is being formed.  
  
Make certain to verify the input rate as described in item #7 below.
5. Turn the heater off and replace the inlet and outlet pressure tap plugs.
6. Place the heater back into service and leak test the inlet and outlet pressure tap plugs as well as the connection between the gas valve and the manifold pipe.
7. See the original rating plate for the unit heater's rated input. The input can be verified at any time simply by checking the correct main burner orifice size and manifold pressure. This information is presented on the conversion kit rating plate.

**Figure 4.1**  
**Power Vented Component Identification (Separated Combustion Similar)**



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