

Installation Instructions

High Altitude Conversion Kit

Model Number: BAYHAKT010*
Used With: Y*C036-67E/F (1,3,4,W), YSC036-060G(3,4,W)**A, Y*C072E/F(3,4,W), Y*C102E/F/H(3,4,W), YSC090E/F/H(3,4,W), Y*C120E/F/H(3,4,W), Y*C092E/F/H(3,4,W), YHC074F(3,4), YZC090F(3,4,W), DHC074H(3,4,W), DHC092H(3,4,W), DHC102H(3,4,W), DHC120H(3,4,W)
 BAYHAKT011* DHC036-060H(3,4,W), YSC036-060G(3,4,W)**B

SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

April 2020

ACC-SVN54U-EN

© 2020

1 Warnings, Cautions, and Notices

Read this manual thoroughly before operating or servicing this unit. Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

- WARNING** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- CAUTION** Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.
- NOTICE** Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns

Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants-including industry replacements for CFCs such as HCFCs and HFCs.

Important Responsible Refrigerant Practices

Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

2 WARNING

Proper Field Wiring and Grounding Required!
 Failure to follow code could result in death or serious injury. All field wiring MUST be performed by qualified personnel. Improperly installed and grounded field wiring poses FIRE and ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in NEC and your local/state electrical codes.

WARNING

Personal Protective Equipment Required!
 Installing/servicing this unit could result in exposure to electrical, mechanical and chemical hazards. Before installing/servicing this unit, technicians MUST put on all Personal Protective Equipment (PPE) recommended for the work being undertaken. ALWAYS refer to appropriate SDS sheets and OSHA guidelines for proper PPE. When working with or around hazardous chemicals, ALWAYS refer to the appropriate SDS sheets and OSHA guidelines for information on allowable personal exposure levels, proper respiratory protection and handling recommendations. If there is a risk of arc or flash, technicians MUST put on all necessary Personal Protective Equipment (PPE) in accordance with NFPA70E for arc/flash protection PRIOR to servicing the unit. Failure to follow recommendations could result in death or serious injury.

WARNING

Follow EHS Policies!
 Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

3 General Information

These instructions describe converting gas package unit models from natural gas to high altitude gas. Conversion from natural gas to High Altitude gas is a critical procedure, therefore, these instructions must be followed closely.

Model Number Description

All products are identified by a multiple-character model number that precisely identifies a particular type of unit. Its use will enable the owner/operator, installing contractors, and service engineers to define the operation, specific components, and other options for any specific unit. When ordering replacement parts or requesting service, be sure to refer to the specific model number and serial number printed on the unit nameplate.

Inspection

1. Unpack all components of the high altitude conversion kit.
2. Check carefully for any shipping damage. If any damage is found it must be reported immediately and a claim made against the transportation company.
3. This kit contains the correct orifices for high altitude conversion. Refer to Table 3 to determine proper orifice selection. The kit contains the following items.

Table 1. BAYHAKT010*

Quantity	Description	
3 Orifices	Drill # 31	0.1200 Dia.
5 Orifices	Drill # 32	0.1160 Dia.
4 Orifices	Drill # 33	0.1130 Dia.
5 Orifices	Drill # 35	0.1100 Dia.
3 Orifices	Drill # 36	0.1065 Dia.
3 Orifices	Drill # 40	0.0980 Dia.
3 Orifices	Drill # 42	0.0935 Dia.
5 Orifices	Drill 1/8 inch	0.1250 Dia.

4 Table 2. BAYHAKT011*

Quantity	Description	
3 Orifices	Drill # 33	0.113 Dia.
4 Orifices	Drill # 35	0.110 Dia.
4 Orifices	Drill # 36	0.1065 Dia.
4 Orifices	Drill # 38	0.102 Dia.
4 Orifices	Drill # 40	0.098 Dia.

Installation

Conversion Procedure

Important: Conversion should be made prior to installation of equipment at the job site.

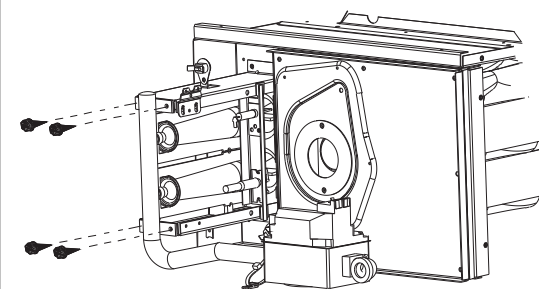
1. Place the thermostat selector switch to the OFF position.
2. Open the unit electrical disconnect switch.

WARNING

Hazardous Voltage and Gas!
 Failure to turn off gas or disconnect power before servicing could result in an explosion or electrocution which could result in death or serious injury. Turn off the gas supply and disconnect all electric power, including remote disconnects, before servicing the unit. Follow proper lockout/tagout procedures to ensure the power can not be inadvertently energized.

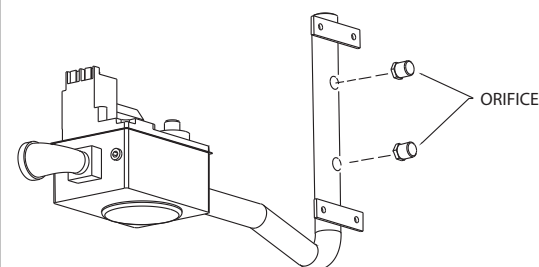
3. Shut off gas supply to the unit.
4. Remove gas valve access panel.
5. Break pipe union.
6. Remove pipe from street elbow.
7. Remove four (4) screws from manifold bracket. See Figure 1.

5 Figure 1. Remove screws from bracket



8. Remove natural gas orifices from manifold. See Figure 2.

Figure 2. Remove orifice from manifold



9. Install the high altitude orifices listed in Table 3 for the unit being converted by engaging threads of manifold and tightening orifice three and one half turns.
10. With the high altitude orifices in place, reverse the disassembly procedure and secure all components in their respective position.
11. Attach the nameplate and label supplied with the conversion kit below the unit nameplate.

12. Check all piping joints and electrical connections for tightness.
13. Turn on the gas supply to unit.
14. Measure the gas inlet pressure. Inlet pressure should be between 4.5" wc to 14" wc. (Modulating gas models, Digit 10 = V, require 5.5" wc minimum inlet pressure). Adjust the regulator at the gas supply as necessary.
15. Restore unit power.
16. Place the thermostat selector switch to the HEAT position and adjust the setpoint indicator to its highest setting. The burners should light.
17. If required, adjust the unit manifold pressure to the value listed on the unit nameplate.
18. Install the access panel.

7 Table 3. High altitude conversion table

Unit	Gas Input Rating (MBh)	Orifice Size
YSC036G**(L,X)**A	60	Drill # 40
YSC036G**(M,Y)**A	80	Drill # 33
YSC036G**(H,Z)**A	120	Drill # 33
YSC036G**(L,X)**B	80	Drill # 33
YSC036G**(M,Y)**B	100	Drill # 38
YSC036G**(H,Z)**B	120	Drill # 40
Y*C036-037E**(L,X)	60	Drill # 40
Y*C036-037E**(M,Y)	80	Drill # 33
YHC036E/F(3,4,W)*(H,Z)	120	Drill # 33
YHC036E/F1*(H,Z)	100	Drill # 36
YHC037E**(H,Z)	100	Drill # 36
YSC036E**(H,Z)	120	Drill # 33
YZC036E**(H,Z)	100	Drill # 36
YSC048G**(L,X)**A	60	Drill # 40
YSC048G**(M,Y)**A	80	Drill # 33
YSC048G**(H,Z)**A	120	Drill # 33
YSC048G**(L,X)**B	80	Drill # 33
YSC048G**(M,Y)**B	100	Drill # 38
YSC048G**(H,Z)**B	130	Drill # 38
Y*C047-048E/F**(L,X)	60	Drill # 40
Y*C047-048E/F**(M,Y)	80	Drill # 33
Y*C047-048E/F**(H,Z)	120	Drill # 33
YSC060G**(L,X)**A	60	Drill # 40
YSC060G**(M,Y)**A	80	Drill # 33

Table 3. High altitude conversion table (continued)

Unit	Gas Input Rating (MBh)	Orifice Size
YSC060G**(H,Z)**A	130	Drill # 31
YSC060G**(L,X)**B	80	Drill # 33
YSC060G**(M,Y)**B	100	Drill # 38
YSC060G**(H,Z)**B	150	Drill # 35
Y*C060-067E/F**(L,X)	60	Drill # 40
Y*C060-067E/F**(M,Y)	80	Drill # 33
Y*C060-067E/F**(H,Z)	130	Drill # 31
YSC072E/F/H**(L,X)	80	Drill # 33
YHC072E/F**(L,X)	80	Drill # 40
Y*C072E/F/H**(M,Y)	120	Drill # 33
YSC072E/F/H**(H,Z)	150	0.125 Dia
YHC072E/F**(H,Z)	150	Drill # 33
YHC074F**(L,X)	80	Drill # 42
YHC074F**(M,Y)	120	Drill # 33
YHC074F**(H,Z)	150	Drill # 35
YSC090E/F/H**(L,X)	120	Drill # 33
YSC090E/F/H**(M,Y)	150	0.125 Dia
YSC090E/F/H**(H,Z)	200	0.125 Dia
Y*C092E/F/H**(L,X)	120	Drill # 33
Y*C092E/F/H**(M,Y)	150	0.125 Dia
Y*C092E/F**(H,Z)	200	0.125 Dia
YSC092H**(H,Z)	200	Drill # 35
Y*C102E/F**(L,X)	120	Drill # 33
Y*C102E/F**(M,Y)	150	0.125 Dia

Table 3. High altitude conversion table (continued)

Unit	Gas Input Rating (MBh)	Orifice Size
Y*(S,H)C102E/F*(H,Z)	200	0.125 Dia
YSC102H*(H,Z)	200	Drill # 35
Y*C120E/F/H**(L,X)	150	0.125 Dia
Y*C120E/F/H**(M,Y)	200	0.125 Dia
Y*C120E/F/H**(H,V,Z)	250	0.125 Dia
YSC120H**(H,Z)	235	Drill # 32
YZC072F**(L,X)	80	Drill # 42
YZC072F**(H,Z,V)	150	0.125 Dia
YZC090F**(L,X)	120	Drill # 33
YZC090F**(M,Y)	150	0.125 Dia
YZC090F**(H,Z,V)	200	Drill # 35
YZC102F**(H,Z,V)	200	Drill # 35
DHC036-060H**(L,X)	60	Drill # 40
DHC036H**(M,Y)	80	Drill # 35
DHC036H**(H,Z)	100	Drill # 38
DHC048H**(M,Y)	100	Drill # 38
DHC048H**(H,Z)	130	Drill # 33
DHC060H**(M,Y)	100	Drill # 38
DHC048H**(H,Z)	130	Drill # 33
DHC060H**(H,Z)	150	Drill # 36
DHC074H**(L,X)	80	Drill # 42
DHC074H**(M,Y)	120	Drill # 33
DHC074H**(H,Z)	150	Drill # 35
DHC092H**(L,X)	120	Drill # 33
DHC092H**(M,Y)	150	0.125 Dia.

Table 3. High altitude conversion table (continued)

Unit	Gas Input Rating (MBh)	Orifice Size
DHC092H**(H,Z)	200	Drill # 35
DHC102H**(L,X)	120	Drill # 33
DHC102H**(M,Y)	150	0.125 Dia.
DHC102H**(H,Z)	200	Drill # 35
DHC120H**(L,X)	150	Drill # 0.125
DHC120H**(M,Y)	200	Drill # 0.125
DHC120H**(H,Z)	250	Drill # 0.125

Trane and American Standard create comfortable, energy efficient indoor environments for commercial and residential applications. For more information, please visit trane.com or americanstandardair.com.

Trane and American Standard have a policy of continuous product and product data improvement and reserve the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.