Installation Instructions

LP Conversion Kit

Used with 3 to 8.5 Ton Packaged Units with Single Stage Gas

Model Number: **Used With:**

BAYLPKT050* YSC033-063G(3,4,W)*(L,M,H,X,Y,Z)A, Y*C036E(1,3,4,W)*, Y*C090E/F/H**(L,X), Y*C048E/F(1,3,4,W)*, Y*C092E/F/H**(L,X), Y*C060E/F(1,3,4,K,W)*,Y*C102E/F/H**(L,X), Y*C072E/F/H**(L,M,X,Y), YHC037-067E(3,4,W)R(L,M,H,X,Y,Z), YHC074F(3,4)*(L,X,M,Y), DHC074H**(L,X,M,Y), DHC(092/102)H**(L,X)

BAYLPKT030* YSC060ED, YSC072ED*L, YSC090ED*L

⚠ 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-SVN102P-EN**

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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

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.

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⚠ 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.**

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General Information

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

Inspection

1. Unpack all components of the LP 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 parts required for LP conversion. Refer to Table 3 to determine proper orifice selection. The kit contains the following items.

Table 1. BAYLPKT030*

Qty.	Description
3	Orifice Spuds, Drill #51 -.067 in. (1.70 mm) Dia.
5	Orifice Spuds, Drill #49 -.073 in. (1.854 mm) Dia.
1	LP Nameplate Label
2	LP Conversion Literature
1	Block Off Plate - 2 Hole
1	Block Off Plate - 3 Hole
1	Block Off Plate - 4 Hole
1	Block Off Plate - 5 Hole
2	Sheet Metal Screws - 10-16 x 1/2
2	Self Drilling Hex Head Screws 10-16 x 1/2

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Table 2. BAYLPKT050*

Qty.	Description
3	Orifice Spuds, Drill # 48 -.076 in. (1.930 mm) Dia.
3	Orifice Spuds, Drill # 49 -.073 in. (1.854 mm) Dia.
3	Orifice Spuds, Drill # 51 -.067 in. (1.702 mm) Dia.
2	Orifice Spuds, Drill # 52 -.064 in. (1.626 mm) Dia.
2	Orifice Spuds, Drill 1/16" -.0625 in. (1.588 mm) Dia.
3	Orifice Spuds, Drill # 53 -.0595 in. (1.51 mm) Dia.
1	LP Nameplate Label
1	LP Conversion Spring Kit
1	LP Conversion Literature
1	1.593 in. Air Orifice Plate, Part No. 436646150210
1	1.844 in. Air Orifice Plate, Part No. 436646150310
1	2.0 in. Air Orifice Plate, Part No. 436646151310
1	2.1 in. Air Orifice Plate, Part No. 436646151810
1	2.18 in. Air Orifice Plate, Part No. 436646152210
1	2.25 in Air Orifice Plate, Part No. 436646150410
1	2.50 in Air Orifice Plate, Part No. 436646152910
1	Block Off Plate - 2 Hole
1	Block Off Plate - 3 Hole
2	Sheet Metal Screws 10-16 x 1/2
2	Self Drilling Hex Head Screws 10-16 x 1/2

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Table 3. Orifice size selection

Unit	Gas Input		LP Gas Spud Orifice Size	Air Orifice Plate (Part No. Last 4 Digits)
	Gas Input Rating (MBh)	KW		
YHC036E1*(L,X)	60	17.6	Drill # 52	0210
YHC036(3,4,W)*(L,X)	60	17.6	Drill # 52	no change
YHC037E**(L,X)	60	17.6	Drill # 52	no change
YSC036E**(L,X)	60	17.6	Drill # 52	no change
YZC036E**(L,X)	60	17.6	Drill # 52	no change
YHC036E1*(M,Y)	80	23.5	Drill # 49	0310
YHC036E(3,4,W)*(M,Y)	80	23.5	Drill # 49	no change
YHC037E**(M,Y)	80	23.5	Drill # 49	no change
YSC036E**(M,Y)	80	23.5	Drill # 49	no change
YZC036E**(M,Y)	80	23.5	Drill # 49	no change
YHC036E1**(H,Z)	100	29.3	Drill # 51	0310
YHC036E(3,4,W)*(H,Z)	120	35.2	Drill # 49	no change
YHC037E**(H,Z)	100	29.3	Drill # 51	no change
YSC036E**(H,Z)	120	35.2	Drill # 49	no change
YZC036E**(H,Z)	100	29.3	Drill # 51	no change
YHC048F1*(L,X)	60	17.6	Drill # 52	0210
YHC048E/F(3,4,W)*(L,X)	60	17.6	Drill # 52	no change
YHC047E/F**(L,X)	60	17.6	Drill # 52	no change
YSC048E**(L,X)	60	17.6	Drill # 52	no change
YZC048E**(L,X)	60	17.6	Drill # 52	no change
YHC048F1*(M,Y)	80	23.5	Drill # 49	0310
YHC048E/F(3,4,W)*(M,Y)	80	23.5	Drill # 49	no change

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Table 3. Orifice size selection (continued)

Unit	Gas Input		LP Gas Spud Orifice Size	Air Orifice Plate (Part No. Last 4 Digits)
	Gas Input Rating (MBh)	KW		
YHC047E/F**(M,Y)	80	23.5	Drill # 49	no change
YSC048E**(M,Y)	80	23.5	Drill # 49	no change
YZC048E**(M,Y)	80	23.5	Drill # 49	no change
YHC048F1**(H,Z)	120	35.2	Drill # 49	1810
YHC048E/F(3,4,W)*(H,Z)	120	35.2	Drill # 49	no change
YHC047E/F**(H,Z)	120	35.2	Drill # 49	no change
YSC048E**(H,Z)	120	35.2	Drill # 49	no change
YZC048E**(H,Z)	120	35.2	Drill # 49	no change
YHC060F1*(L,X)	60	17.6	Drill # 52	0210
YHC060E/F(3,4,W)*(L,X)	60	17.6	Drill # 52	no change
YHC067E/F**(L,X)	60	17.6	Drill # 52	no change
YSC060E**(L,X)	60	17.6	Drill # 52	no change
YZC060E**(L,X)	60	17.6	Drill # 52	no change
YHC060F1*(M,Y)	80	23.5	Drill # 49	0310
YHC060E/F(3,4,W)*(M,Y)	80	23.5	Drill # 49	no change
YHC067E/F**(M,Y)	80	23.5	Drill # 49	no change
YSC060E**(M,Y)	80	23.5	Drill # 49	no change
YZC060E**(M,Y)	80	23.5	Drill # 49	no change
YHC060F1*(H,Z)	130	38.1	Drill # 48	1810
YHC060E/F(3,4,W)*(H,Z)	130	38.1	Drill # 48	2910
YHC067E/F**(H,Z)	130	38.1	Drill # 48	no change
YSC060E**(H,Z)	130	38.1	Drill # 48	no change
YZC060E**(H,Z)	130	38.1	Drill # 48	no change

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Table 3. Orifice size selection (continued)

Unit	Gas Input		LP Gas Spud Orifice Size	Air Orifice Plate (Part No. Last 4 Digits)
	Gas Input Rating (MBh)	KW		
DHC074H**(L,X)	80	23.5	Drill # 53	0310
YHC072E/F**(L,X)	80	23.5	Drill # 53	no change
YSC072E/F/H**(L,X)	80	23.5	Drill # 49	no change
YZC072F**(L,X)	80	23.5	Drill #53	0310
DHC074H**(M,Y)	120	35.2	Drill # 49	0410
YHC072E**(M,Y)	120	35.2	Drill # 49	2210
YSC072E/F/H**(M,Y)	120	35.2	Drill # 49	1310
YZC072F**(M,Y)	120	35.2	Drill #49	0410
DHC092H**(L,X)	120	35.2	Drill #49	0410
YSC090E/F/H**(L,X)	120	35.2	Drill # 49	1310
YZC090F**(L,X)	120	35.2	Drill #49	0410
YHC074F**(L,X)	80	23.5	Drill #53	1810
YHC074F**(M,Y)	120	35.2	Drill #49	Remove
YHC072F**(M,Y)	120	35.2	Drill #49	0310
YHC092E**(L,X)	120	35.2	Drill # 49	no change
YHC092F**(L,X)	120	35.2	Drill # 49	0410
YSC092E/F/H**(L,X)	120	35.2	Drill # 49	no change
DHC102H**(L,X)	120	35.2	Drill # 49	0410
Y*C102E/F/H**(L,X)	120	35.2	Drill # 49	0410
YZC102F**(L,X)	120	35.2	Drill #49	0410
YSC060ED*L	67	19.6	Drill # 51	no change
YSC060ED*H	100	29.3	Drill # 51	no change
YSC072ED*L	100	29.3	Drill # 51	no change

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Table 3. Orifice size selection (continued)

Unit	Gas Input		LP Gas Spud Orifice Size	Air Orifice Plate (Part No. Last 4 Digits)
	Gas Input Rating (MBh)	KW		
YSC090ED*L	100	29.3	Drill # 51	no change
YSC033-036G**(L,X)A	60	17.6	Drill 1/16" (.0625")	Remove
YSC033-036G**(M,Y)A	80	23.5	Drill #49	Remove
YSC033-036G**(H,Z)A	120	35.2	Drill #49	Remove
YSC043-048G**(L,X)A	60	17.6	Drill 1/16"(.0625")	Remove
YSC043-048G**(M,Y)A	80	23.5	Drill #49	Remove
YSC043-048G**(H,Z)A	120	35.2	Drill #49	Remove
YSC060-063G**(L,X)A	60	17.6	Drill 1/16"(.0625")	Remove
YSC060-063G**(M,Y)A	80	23.5	Drill #49	Remove
YSC060-063G**(H,Z)A	130	38.1	Drill #48	Remove

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Installation

Conversion Procedure

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

1. Place the thermostat selector switch to the OFF position.

⚠ WARNING

Hazardous Voltage w/Capacitors!

Failure to disconnect power and discharge capacitors before servicing could result in death or serious injury. Disconnect all electric power, including remote disconnects and discharge all motor start/run capacitors before servicing. Follow proper lockout/tagout procedures to ensure the power cannot be inadvertently energized. For variable frequency drives or other energy storing components provided by Trane or others, refer to the appropriate manufacturer's literature for allowable waiting periods for discharge of capacitors. Verify with an appropriate voltmeter that all capacitors have discharged.

For additional information regarding the safe discharge of capacitors, see PROD-SVB06A-EN

⚠ WARNING

Hazardous Voltage w/Capacitors!

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.

2. Open the unit electrical disconnect switch.
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.

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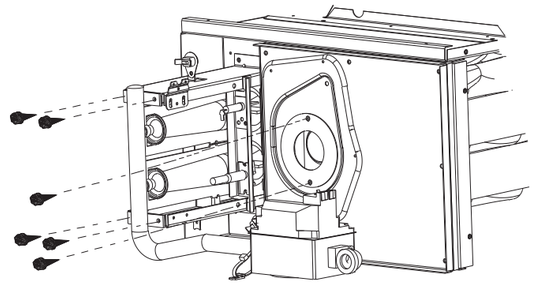
Figure 1. Remove screws from manifold bracket



8. Remove natural gas orifices from manifold. See Figure 2.
9. Install LP orifices specified in Table 3. Engage threads of manifold and tighten orifice three and one half turns.
10. Disconnect the wiring leads attached to the flame rollout switch, flame sensor, igniter wire, and the tubing connected to the pressure switch. See Figure 3.
11. Remove the four screws securing the burner bracket assembly to the heat exchanger vestibule.
12. Install the appropriate size flame shaper block off plate with two metal screws provided. If there are no attachment holes in the burner bracket carefully secure utilizing the two self drilling screws. See Figure 4.
13. Reinstall burner bracket assembly with block off plate, reconnect all wiring and tubing connections, and reinstall manifold bracket with LP orifices.

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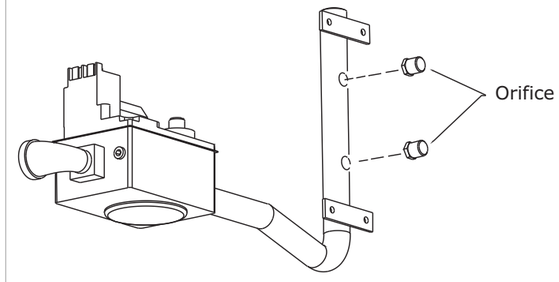
Figure 2. Remove gas orifices



14. If the unit model as listed in Table 3 requires a change to the air orifice plate or no air orifice plate, perform Step 15 through Step 20; otherwise, proceed to Step 22.
15. Disconnect the inducer motor wiring harness.
16. Remove the five (5) screws securing the inducer motor assembly (see Figure 5).
17. Remove the inducer motor assembly.
18. Remove the two (2) screws securing the air orifice plate (see Figure 1).
19. Remove or install the air orifice plate, if required, as noted in Table 3.
20. Installation is the reverse of Step 15 through Step 18.

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Figure 3. Remove burner bracket assembly

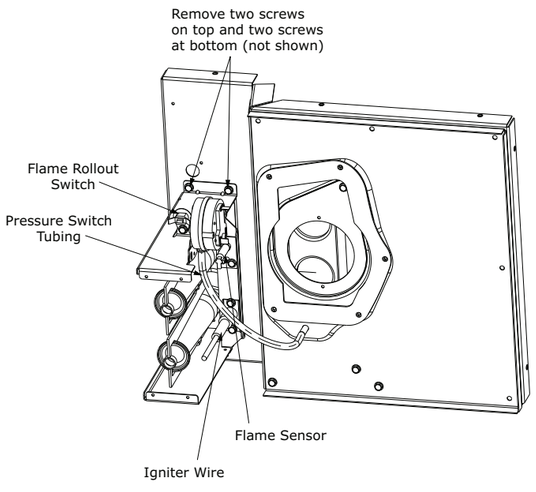

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Figure 4. Install flame shaper blockoff plate

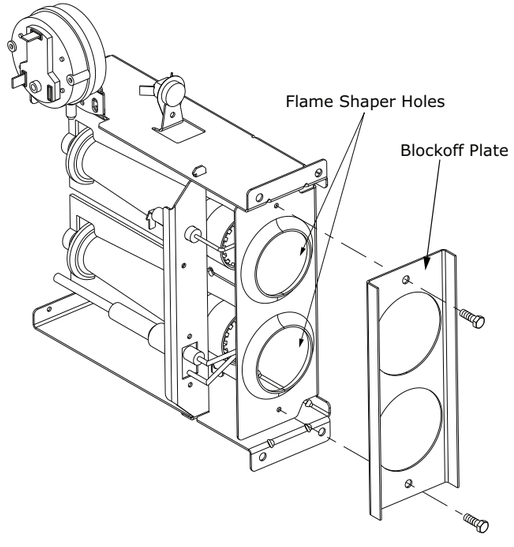

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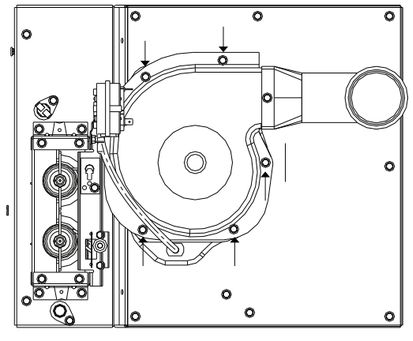
Figure 5. Remove 5 screws securing inducer motor assembly



21. For the YSC060ED, YSC072ED, and YSC090ED models, no gas valve spring change is required. Proceed to Step 23.
22. Install LP gas valve spring. Follow instructions of literature provided with the conversion spring kit.
23. Reverse the disassembly procedure and secure all components in their respective position.
24. Attach the nameplate and label supplied with the conversion kit below the unit nameplate.
25. Check all piping joints and electrical connections for tightness.
26. Turn on the gas supply to unit.
27. Measure the gas pressure. If the pressure exceeds 14 inches water column (34.8 mbar), reset the regulator at the gas supply.
28. Restore unit power.
29. Place the thermostat selector switch to the HEAT position and adjust the setpoint indicator to its highest setting. The burners should light.

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30. Adjust the unit manifold pressure to 10 inches water column (24.9 mbar) per the rating plate.
31. Install the access panel.

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