YORK® A JOHNSON CONTROLS COMPANY	ACCESSORY KIT INSTALLATION INSTRUCTIONS - HIGH ALTITUDE	
INSTALLATION INSTRUCTIONS	New Release	Form 100.50-N16 (506)

035-21029-000

eco2™

"MOD D" & "MOD E"

ACCESSORY KIT INSTALLATION INSTRUCTIONS

Natural Gas Heat High Altitude Conversion Accessory Model (385-01861-000) for ECO2 units (not applicable for 50-105 Mod Gas Model C and Below).

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, explosion or production of carbon monoxide may result causing property damage, personal injury or loss of life. The qualified service agency performing this work assumes the responsibility for the proper conversion of the appliance with this kit.

WARNING

For U.S. units, installation must be made in accordance with American National Standard National Fuel Gas Code, ANSI Z223.1 – latest edition, unless superseded by local codes. For Canadian installations, the conversion shall be carried out in accordance with the requirements of the provisional authorities having jurisdiction and in accordance with the CAN1-B149.1 and .2 installation codes.

WARNING

Check with natural gas supplier concerning gas ratings. If supplied natural gas is already derated for high altitude use, the following conversion is not necessary.

GENERAL

This accessory provides the parts to operate a natural gas furnace between 2,000 and 6,000 feet for U.S. installation. In Canada, this kit is certified for installation form 2,000 to 4,500 feet (610 to 1372 meters). The installation instruction supplied with the unit is to be used for all other aspects of the installation including setting the input rate.

TABLE 1: PARTS IN KIT 385-01861-000

ITEM	QTY	PART NO.	DESCRIPTION
1	3	026-43004-000	8 Burner Orifice, #31
2	1	035-21029-000	Instruction Form
3	1	035-11635-000	Conversion Label
4	1	035-14959-000	Laminate Overlay

WARNING

Improper installation, adjustment, service or maintenance can cause injury or property damage. Therefore, only a qualified installer or qualified service personnel should perform this conversion.

WARNING

If the unit is connected to power sources, make sure that all electrical power to the unit has been disconnected and the gas supply to the unit has been shut off before proceeding.

1. Open the access door to the gas heat section after shutting off power, via the rocker switch below keypad, and gas supply.
2. Disconnect the piping to the inlet side of the gas valve.
3. Disconnect the wiring from the gas valve as well as the wiring to the spark igniter and flame sensor.

4. Remove the four screws (two on each side of the gas manifold) holding the manifold to the burner tray.
5. Carefully remove the manifold assembly from the unit.
6. Remove the main burner orifices from the manifold and discard them.
7. Remove the appropriate orifices from the kit, apply a sealant that is resistant to the action of LP gases to the orifices' threads, and install them in the gas manifold.

The kit contains twenty-four orifices. If your unit has less than twenty-four orifices, you will have orifices left over. All old and extra orifices can be discarded.

8. Replace the manifold in the unit securing the assembly to the burner tray with the four screws removed earlier. The burner orifices should fit inside the orifice retention ring in the front of each burner. If the orifices are not seated deeply enough, the manifold will not secure properly and burner misalignment may result.
9. Reconnect the gas piping to the inlet of the gas valve.
10. Reattach the wiring to the gas valve. In addition, reconnect the wires to the spark igniter and flame sensor.
11. Fill out and install conversion label provided in the kit adjacent to the unit nameplate.
12. Apply laminate overlay on label.
13. Turn on the gas supply.

Do not check for leaks with an open flame! Damage to unit, building, and installer could result.

14. Check for leaks at all gas fittings. Repair all leaks and recheck for leaks.
15. Turn off the gas supply after completing the leak check.

TESTS AND ADJUSTMENTS

All adjustments and testing must be performed at the time of conversion.

ALITITUDE CONTROL ADJUSTMENT

(for modulated gas heat only)

Open control panel and enter the operating altitude of the unit into the altitude input.

The following is the sequence for entering the altitude value:

1. Press SETPOINTS.
2. Enter password (9725).
3. Scroll left or right until *"SETPOINTS – VENTILATION"* is displayed.
4. Scroll up or down until the Altitude menu is displayed.
5. Press "√" to edit the value.
6. Enter the desired operating altitude (must be greater than 2000 feet).
7. Press "√" to store the value.

TURNING ON SUPPLY FAN

If the unit is connected to power sources, make sure that all electrical power to the unit has been disconnected and the gas supply to the unit has been shut off before proceeding.

1. Connect a manometer hose to the manifold side of the gas valve on the modulating furnace (1A) and pinch the hose shut.

This step is not necessary for staged heat units.

2. Connect a manometer to the manifold side of the gas valve on the non-modulating furnace (1B) in order to read manifold pressure OR connect a manometer to the manifold side of the gas valve on the non-modulating furnace (1) in order to read manifold pressure.
3. Turn on the power and the gas supply.
4. Press SERVICE.

5. Enter Password (9725) then press "√".
6. Scroll left or right until *"ANALOG OUTPUTS"* is displayed.
7. Scroll up or down until *"SUPPLY FAN VFD"* is displayed.
8. Press "√", "5", "0", "√" to set VFD to 50%.
9. Press SERVICE.
10. Scroll left or right until *"DIGITAL OUTPUTS"* is displayed.
11. Scroll up or down until *"SUPPLY FAN"* is displayed.
12. Press "√", "→", "√" to turn on supply fan.

ADJUSTING MODULATING FURNACE

(Furnace #1 - if applicable)

Do not check for leaks with an open flame! Damage to unit, building, and installer could result

1. During operation check for gas leaks, especially in the following locations: gas valve inlet and outlet, gas supply union, and main burner orifices where they screw into the manifold.
2. Press SERVICE.
3. Scroll left or right until *"ANALOG OUTPUTS"* is displayed.
4. Scroll up or down until *"HEATING VALVE"* output is displayed.
5. Press "√", "8", "5", "√" to set the heating valve to 85%.
6. Scroll left or right until *"DIGITAL OUTPUTS"* is displayed.
7. Scroll up or down until *"MOD GAS FURN 1A HI"* is displayed.
8. Press "√", "→", "√" to turn on the inducer fan.
9. Scroll up or down until *"MOD GAS FURN 1A LO"* is displayed.
10. Press "√", "→", "√" to turn on the 1A furnace.
11. Scroll up or down until *"MOD GAS FURN 1B HI"* is displayed.
12. Press "√", "→", "√" to turn on the 1B furnace.
13. Adjust the manifold pressure to 3.5" WC by turning the adjustment screw on the valve adjacent to the "HI" marking on the valve.

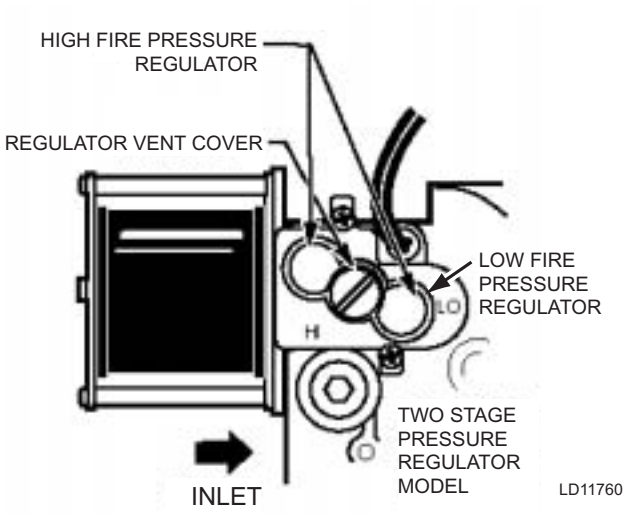

FIGURE 1: HIGH AND LOW ADJUSTMENT SCREWS

14. Scroll up or down until *"MOD GAS FURN 1B HI"* is displayed.
15. Press "√", "→", "√" to turn off the 1B furnace.
16. Pinch the manometer hose closed before disconnecting the manometer from the gas valve for the 1B manifold.
17. Connect the manometer to the manometer hose attached to the manifold side of the gas valve for the 1A manifold.
18. Remove the pinch in the manifold hose.
19. Adjust the manifold pressure to 3.5" WC by turning the adjustment screw on the valve adjacent to the "HI" marking on the valve.
20. Scroll left of right until *"ANALOG OUTPUTS"* is displayed.
21. Scroll up or down until *"HEATING VALUE OUTPUT"* is displayed.
22. Press "√", "4", "0", "√" to set the heating valve to 40%.
23. Scroll left or right until *"DIGITAL OUTPUTS"* is displayed.
24. Scroll up or down until *"MOD GAS FURN 1A HI"* is displayed.
25. Press "√", "→", "√" to turn off the High 1A furnace.
26. Adjust the manifold pressure to 1.7" WC by turning the adjustment screw on the valve adjacent to the "LO" marking on the valve.
27. Scroll up or down until *"MOD GAS FURN 1A LO"* is displayed.
28. Press "√", "→", "√" to turn off the Low 1A furnace.

29. Scroll up or down until *"HEATING VALUE OUTPUT"* is displayed.
30. Press "√", "0", "√" to set the heating valve to 0%.
31. Turn off the power and the gas supply.
32. Remove the manometer and manometer hoses from the gas valves and replace the gas caps.

ADJUSTING STAGED FURNACE

(Furnace #1, 2, and 3 – if applicable)

"#" represents respective furnace being serviced.

Do not check for leaks with an open flame! Damage to unit, building, and installer could result.

1. If the power and gas supply are not on already, do so at this time and during operation check for gas leaks, especially in the following locations: gas valve inlet and outlet, gas supply union, and main burner orifices where they screw into the manifold.
2. Press SERVICE.
3. Scroll left or right until *"DIGITAL OUTPUTS"* is displayed.
4. Scroll up or down until *"STAGED GAS FURN # HI"* is displayed.
5. Press "√", "→", "√" to turn on the Hi # furnace.
6. Scroll up or down until *"STAGED GAS FURN # LO"* is displayed.
7. Press "√", "→", "√" to turn on the Lo # furnace.
8. Adjust the manifold pressure to 3.5" WC by turning the adjustment screw on the valve adjacent to the "HI" marking on the valve.
9. Scroll up or down until *"STAGED GAS FURN # HI"* is displayed.
10. Press "√", "→", "√" to turn off the Hi # furnace.
11. Adjust the manifold pressure to 2.17" WC by turning the adjustment screw on the valve adjacent to the "LO" marking on the valve.
12. Scroll up or down until *"STAGED GAS FURN # LO"* is displayed.
13. Press "√", "→", "√" to turn off the Lo # furnace.
14. Turn off the power and the gas supply.
15. Remove the manometer from the gas valve and replace the gas caps.
16. Connect a manometer to the manifold side of the gas valve on the next staged furnace in order to read manifold pressure.
17. Repeat steps 1-17 for each staged furnace(s).

TURNING OFF SUPPLY FAN

1. Turn on the power and the gas supply.
2. Press SERVICE.
3. Scroll left or right until *"DIGITAL OUTPUTS"* is displayed.
4. Scroll up or down until *" SUPPLY, SUPPLY FAN"* is displayed.
5. Press "√", "→", "√" to turn off supply fan.
6. Scroll left or right until *"ANALOG OUTPUTS"* is displayed.
7. Scroll up or down to "Supply Fan VFD".
8. Press "√", "→", "√" to set VFD to 0%.
9. Turn on unit via the rocker switch below the keypad to resume normal operation.

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P.O. Box 1592, York, Pennsylvania USA 17405-1592
Tele. 800-861-1001
www.York.com

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