

## Installation Instructions

### Part No. 320721-765, 330539-751, -752, -753, -754, -755, -756, and -757

**NOTE:** Read the entire instruction manual before starting the installation.

This symbol → indicates a change since the last issue.

#### SAFETY CONSIDERATIONS

Installing and servicing of heating equipment can be hazardous due to gas and electrical components. Only trained personnel should install or service heating equipment.

Untrained personnel can perform basic maintenance functions such as cleaning and replacing filters. All other operations should be performed by trained service personnel. When working on heating equipment, observe precautions in the literature, on tags, and on labels attached to the unit.

Follow all safety codes. Wear safety glasses and work gloves. Have a fire extinguisher available.

Recognize safety information. This is the safety-alert symbol ⚠. When you see this symbol on the furnace and in instructions or manuals, be alert to the potential for personal injury.

Understand the signal words DANGER, WARNING, and CAUTION. These words are used with the safety-alert symbol. DANGER identifies the most serious hazards which **will** result in severe personal injury or death. WARNING signifies a hazard which **could** result in personal injury or death. CAUTION is used to identify unsafe practices which **may** result in minor personal injury or product and property damage. NOTE is used to highlight suggestions which **will** result in enhanced installation, reliability, or operation.

#### ⚠ WARNING

##### → FIRE, EXPLOSION AND ELECTRICAL SHOCK HAZARD

Failure to follow this warning could result in personal injury, death, and/or property damage. Turn off gas and electrical supplies to unit before beginning any installation or modification. Follow the operating instructions on label attached to furnace.

#### ⚠ CAUTION

##### → UNIT DAMAGE HAZARD

Failure to follow this caution may cause improper and dangerous operation. Label all wires prior to disconnection when servicing controls.

#### INTRODUCTION

→ This instruction covers installation of the coupling box kit Part No. 320721-765, 330539-751, -752, -753, -754, -755, -756, and -757 in 40-in. tall, condensing gas furnaces.

→ **NOTE:** A releasing agent such as PAM cooking spray or equivalent (must not contain corn nor canola oil, halogenated hydrocar-

bons nor aromatic contents to prevent inadequate seal from occurring) and RTV sealant (G.E. 162, G.E. 6702, or Dow-Corning 738) are required before starting installation. DO NOT substitute any other type of RTV sealant. G.E. 162 (P771-9003) is available through RCD in 3-oz tubes.

#### DESCRIPTION AND USAGE

Use this coupling box kit to replace failed coupling box assembly.

This coupling box kit contains the following items:

Coupling box assembly	1
Cold spot baffle	1
Screw (No. 8AB X 1/2-in. long hex head)	6 max
Installation Instructions	1

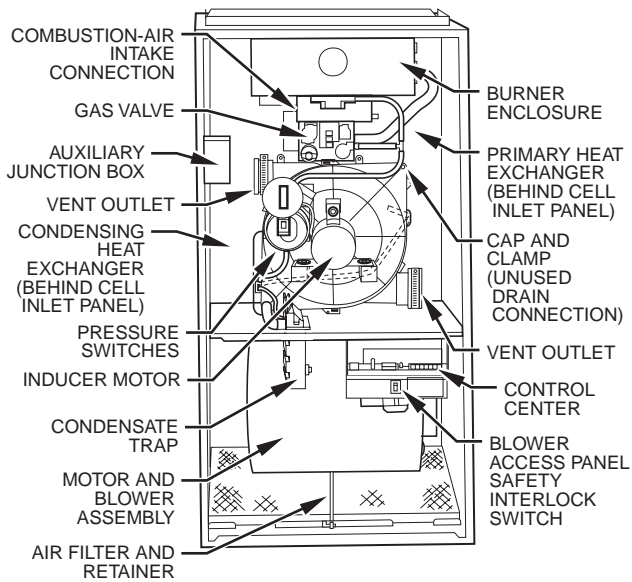
#### INSTALLATION

##### Step 1—Remove Whole Cell Panel Assembly

See Fig. 1 and 2 for furnace component locations. See Fig. 4 for expanded view of heating system components.

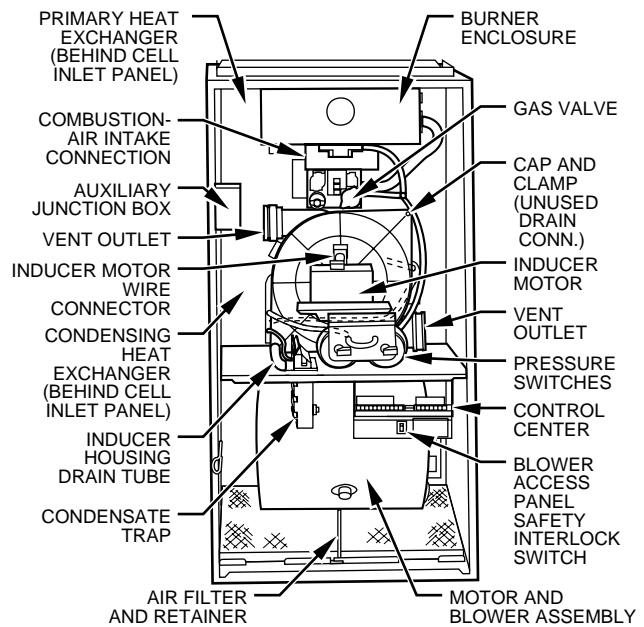
**NOTE:** Actual component location may vary depending on model and series.

1. Turn off gas and electrical supplies to furnace.
2. Remove main furnace door.
3. Remove blower access panel.
4. Disconnect field power wires from J-box.
5. Remove 2 screws securing J-box.
6. Remove 2 screws securing top filler panel and rotate upwards to remove or allow the whole cell panel to be removed from front of furnace.
- 7. Disconnect combustion-air intake pipe from intake housing and move pipe out of furnace casing.
8. Disconnect gas supply pipe from gas valve using backup wrench.
9. Disconnect vent pipe from inducer housing by loosening coupling clamp on inducer outlet. If coupling has 2 clamps, loosen clamp on vent pipe side. Move pipe out of furnace casing.
10. If control center is located in burner compartment of furnace, remove motor leads, transformer wires, door switch wires, and auxiliary limit switch wires (if present) from control center and pull wires through blower shelf.
11. If control center is located in blower compartment of furnace, disconnect wires from flame sensor, hot surface ignitor, overtemperature switch, gas valve, pressure switch(es), inducer motor, limit switch, and J-box, then pull wires through blower shelf.
12. Remove 2 screws securing blower to blower shelf.
13. Remove 2 screws (next to blower mounting screws) securing blower shelf to cell panel.



→ **Fig. 1—Fixed Capacity and Two-Stage, Two-Speed Models in Upflow Orientation**

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**Fig. 2—Variable-Speed Models in Upflow Orientation**

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14. Remove 3 screws from each side of cell panel.
15. If control center is located in burner compartment of furnace, remove control center by removing screw and pressing tabs inward.
16. If control center was removed from furnace casing, secure control center (and J-box) to manifold for removal purposes only.
17. Disconnect field drain connection from condensate trap.
18. Disconnect drain and relief port tube from condensate trap.
19. Remove whole cell panel assembly with heat exchanger, burner box, inducer assembly, J-box (if applicable), and control center (if applicable) attached through front of furnace.

2. Position cold spot baffle so curved bottom flange is facing condensing heat exchanger. Slide cold spot baffle under loose end screws.
3. Start screws that secure cold spot baffle to primary cell outlet panel. Use screws provided in kit.

**CAUTION**  
**PERSONAL INJURY HAZARD**  
 Failure to follow this caution may result in personal injury. Whole cell panel assembly is heavy. Get help to remove and lift assembly.

**WARNING**  
**CARBON MONOXIDE POISONING HAZARD**  
 Failure to follow this warning could result in personal injury or death. Ensure gasket between primary cell outlet panel and condensing heat exchanger assembly is in position to prevent leakage of combustion products.

4. Tighten all cold spot baffle screws.

**Step 2—Remove Old Coupling Box and Cold Spot Baffle Assembly**

1. Remove screws securing coupling box to cell panel and condensing heat exchanger.
2. Break seal between top flange of coupling box and cell panel using screwdriver blade.
3. Remove and discard old coupling box and cold spot baffle from whole cell panel assembly.

**Step 3—Install New Cold Spot Baffle**

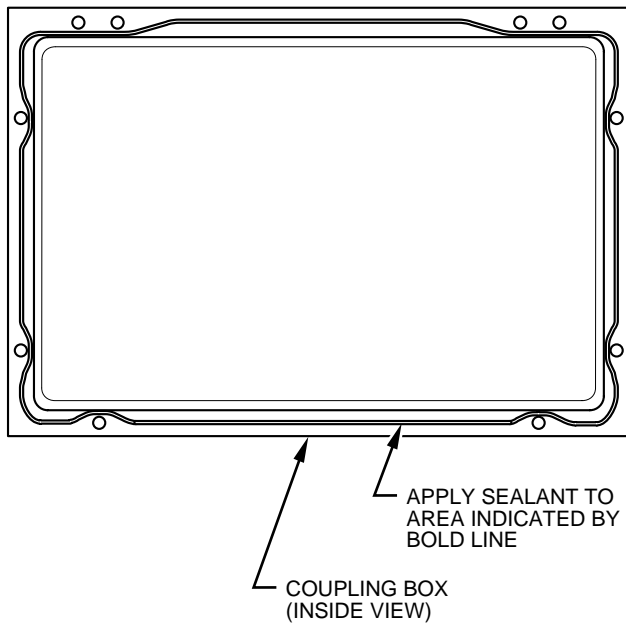
1. Remove all screws securing primary cell outlet panel to condensing heat exchanger except 2 end screws. Loosen 2 end screws but do not remove.

**Step 4—Install New Coupling Box**

1. Clean old sealant from primary cell outlet panel and condensing heat exchanger.
2. Apply sealant releasing agent such as PAM cooking spray or equivalent (must not contain corn nor canola oil, halogenated hydrocarbons nor aromatic contents to prevent inadequate seal from occurring) to primary cell outlet panel and condensing heat exchanger surface where new coupling box sealant will mate.
3. Apply generous beat of RTV sealant (G.E. 162, G.E. 6702, or Dow-Corning 738) to coupling box flange. Sealant must not set more than 10 minutes prior to installation. (See Fig. 3.)
4. Attach coupling box using screws removed earlier, keeping coupling box movement to a minimum to avoid spreading sealant.

**NOTE:** Coupling box mounting holes will align in only 1 position. (See Fig. 3.)

## Step 5—Reinstall Whole Cell Panel Assembly



**Fig. 3—Coupling Box Sealant Application**

### ⚠ CAUTION

→ **PERSONAL INJURY HAZARD**  
Failure to follow this caution may result in personal injury. Whole cell panel assembly is heavy. Get help to lift and install.

1. Install whole cell panel assembly with heat exchanger, burner box, inducer assembly, J-box (if applicable), and control center (if applicable) through front of furnace.

### ⚠ CAUTION

→ **UNIT AND PROPERTY DAMAGE HAZARD**  
Failure to follow this caution may result in property damage. DO NOT cut or tear foil face insulation inside casing. If cuts or tears occur, repair with foil tape.

2. Secure whole cell panel assembly to blower shelf by installing 2 screws through blower housing and 2 screws through blower housing and 2 screws next to blower housing.

→ **NOTE:** When re-installing condensing heat exchanger assembly, the lower flange of the condensing heat exchanger cell rear panel must engage on T-tabs in rear blower shelf. (See Fig. 4.)

3. Install 3 screws to each side of primary cell inlet panel into cell panel supports.
4. If previously removed, reinstall control center in casing flange.

5. If control center is located in burner compartment or furnace, reinstall motor leads, transformer wires, door switch wires, and auxiliary limit switch wires (if present) through blower shelf and grommet.
6. If control is located in blower compartment of furnace, pull wires to flame sensor, hot surface ignitor, overtemperature switch, gas valve, pressure switch(es), inducer motor, limit switch, and J-box through blower shelf.
7. Install J-box.
8. Reattach wires to control center or components. See wiring diagram on furnace for proper attachment.
9. Reinstall condensate trap where it was previously located in furnace casing or blower shelf.
10. Connect condensate trap drain tubes. See tubing diagram on furnace for proper tube location.
11. Connect field drain to condensate trap.

**NOTE:** Ensure tubes are not kinked or pinched, as this will affect operation.

- 12. Connect vent pipe by inserting pipe through the elastomeric (rubber) coupling and then fully into inducer housing outlet. Tighten coupling clamp screw(s) to 15 in.-lb of torque.
13. Connect combustion-air intake pipe to intake housing and install screw to secure. Do not use RTV unless previously used.
14. Install top filler panel.
15. Install gas supply pipe to gas valve using backup wrench.

**NOTE:** Use propane gas resistant pipe dope to prevent gas leaks. DO NOT use Teflon tape.

### ⚠ WARNING

→ **FIRE AND EXPLOSION HAZARD**  
Failure to follow this warning could result in personal injury, death, and/or property damage. For upflow or downflow applications, gas valve knob or switch must be facing forward or tipped to the UP position.

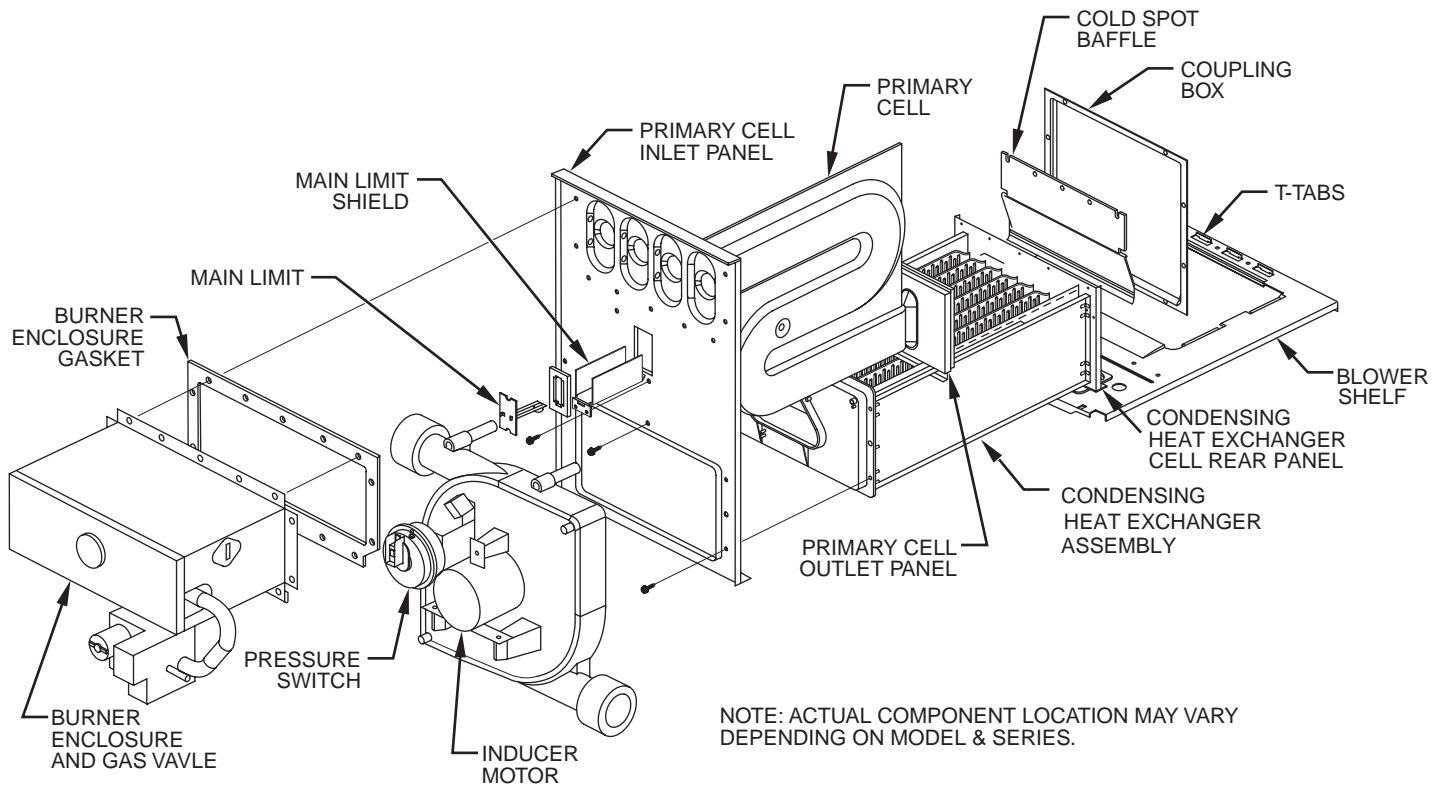
16. Connect field power to J-box.
17. Install blower access panel.
18. Turn on gas and electrical supplies to furnace.
19. Check for gas leaks.

### ⚠ WARNING

→ **FIRE AND EXPLOSION FIRE HAZARD**  
Failure to follow this warning could result in personal injury, death, and/or property damage. Never use matches, candles, flame, or other sources of ignition to check for gas leakage. Use a soap-and-water solution.

20. Check furnace operation through 2 cycles.
21. Check for condensate leaks.
22. Replace main furnace door.





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**Fig. 4—Expanded View of Heat System Components in Upflow Orientation**

# SERVICE TRAINING

**Packaged Service Training** programs are an excellent way to increase your knowledge of the equipment discussed in this manual, including:

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