

## Installation Instructions Part No. 320723-751

**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 SHOCK HAZARD

Failure to follow this warning could result in personal injury or death.

Turn off gas and electrical supplies to unit before beginning any installation or modification. Follow operating instructions on label attached to furnace.

### INTRODUCTION

This instruction covers installation of the primary cell kit Part No. 320723-751 in 40-in. tall, condensing gas furnaces.

→ **NOTE:** A releasing agent such as PAM cooking spray or equivalent (must not contain corn or canola oil, halogenated hydrocarbons nor aromatic content, to prevent inadequate sealing) and RTV sealant (G.E. 162 or Dow-Corning 738) are needed before starting installation. DO NOT substitute any other type of RTV sealant.

### DESCRIPTION AND USAGE

Use this primary cell kit when replacement of factory-installed primary cell(s) is required.

This primary cell kit contains the following items:

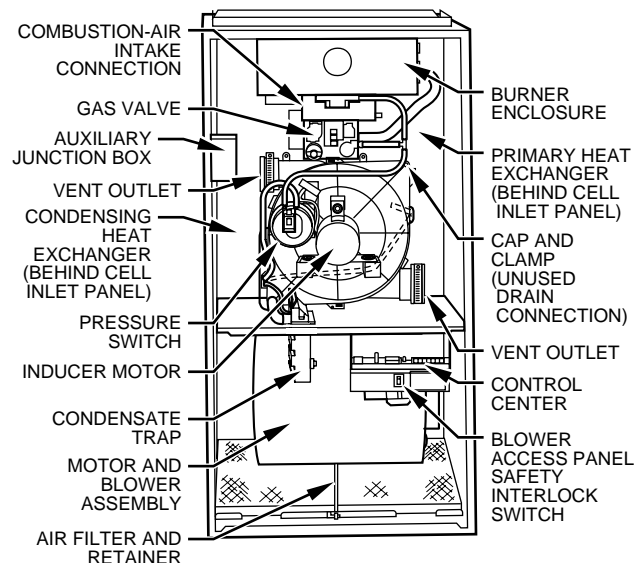
Primary cell	1
Cell inlet opening gasket	1
Cell outlet opening gasket	1
Screw (No. 8D X 3/8-in. LG)	9
Installation Instructions	1

### INSTALLATION

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

See Fig. 1 for furnace component location. See Fig. 2 for exploded view of heat system components.

1. Turn off gas and electrical supplies to furnace.
2. Remove furnace door.
3. Remove blower access panel.
4. Disconnect field power supply wires from J-box.
5. Remove 2 screws securing J-box.
6. Disconnect combustion-air intake pipe from intake housing. Move pipe out of furnace casing.
7. Disconnect vent pipe from inducer housing by loosening coupling clamp on vent pipe. Move pipe out of furnace casing.
8. Disconnect gas supply pipe from gas valve using backup wrench.
9. Remove 2 screws securing top filler panel and rotate panel upwards to remove or allow the heat exchanger to be removed from front of furnace.
10. Remove inducer motor leads, pressure switch, flame sensor, hot surface ignitor, gas valve, and limit switch wires and remove harness from blower shelf. Allow harness and J-box to hang below blower shelf.
11. Remove 2 screws securing blower to blower shelf.
12. Remove 2 screws (next to blower mounting screws) securing blower shelf to cell panel.
13. Remove 3 screws from each side of cell panel through front of furnace opening.
14. Remove control center by removing screw and pressing tabs inward when control center is mounted on furnace casing side.
15. Disconnect field drain connection from condensate trap.
16. Disconnect drain and relief port tube from condensate trap.



**Fig. 1—Furnace Component Location in Upflow Orientation**

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17. Remove condensate trap from furnace casing or blower shelf.
18. Remove whole cell panel assembly with heat exchanger, burner enclosure, and inducer assembly, attached through front of furnace.

### **⚠ 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.

### **Step 2—Remove Burner Enclosure Assembly**

1. Remove pressure switch tube from intake housing.
2. Remove 2 screws attaching intake housing to burner enclosure, and rotate intake housing away from burner enclosure for removal.
3. Disconnect pressure tubing from gas valve.
4. Remove screws attaching burner enclosure to cell panel.

**NOTE:** Burner enclosure cover, manifold, gas valve, and burner assembly should be removed as 1 assembly.

### **Step 3—Remove Coupling Box**

1. Remove screws securing coupling box to primary cell outlet panel and condensing heat exchanger.
2. Break seal between top flange of coupling box and cell panel using screwdriver blade.
3. Remove coupling box.

### **Step 4—Remove Cold Spot Baffle (If Not Attached to Coupling Box)**

1. Remove all screws securing cold spot baffle to primary cell outlet panel and condensing heat exchanger except 2 end screws in slotted holes. Loosen 2 end screws but do not remove.
2. Remove cold spot baffle.

### **Step 5—Install Primary Cell**

1. Remove screws attaching primary cell inlet panel to primary cell(s).
2. Remove screws attaching primary cell outlet panel to primary cell(s).

3. Remove primary cell(s).
4. Attach primary cell INLET panel to primary cell(s) by doing the following:
  - a. Locate new gasket over primary cell inlet opening.
  - b. Center primary cell inlet panel over primary cell openings.
  - c. Use an awl to align holes and start ALL screws in primary cells.
  - d. After all screws are started, check position of fiberglass gasket and tighten screws in cells.
  - e. Trim any excess gasket material from opening.

### **⚠ WARNING**

#### **FIRE OR CARBON MONOXIDE POISONING HAZARD**

Failure to follow this warning could result in personal injury or death. DO NOT allow any foreign materials such as screws, gasket, etc., to fall inside cell.

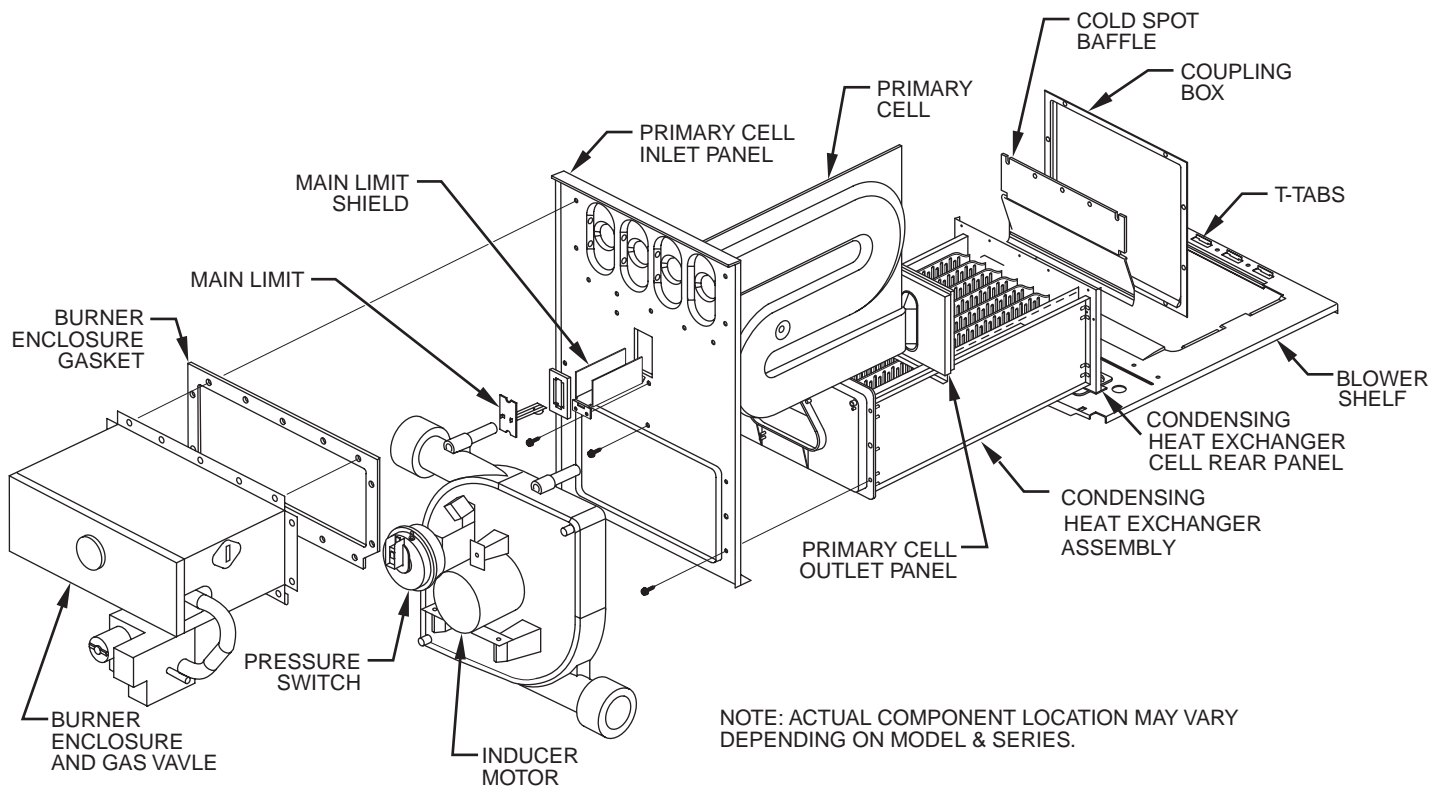
5. Attach primary cell OUTLET panel to primary cell(s) by doing the following:
  - a. Locate new gasket over primary cell outlet opening.
  - b. Center primary cell outlet panel over primary cell openings.
  - c. Use an awl to align holes and start ALL screws in primary cells.
  - d. After all screws are started, check position of fiberglass gasket and tighten screws in cells.
  - e. Trim any excess gasket material from opening.

### **⚠ WARNING**

#### **FIRE OR CARBON MONOXIDE POISONING HAZARD**

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6. Inspect main limit and shield between primary cell(s).



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**Fig. 2—Exploded View of Heat System Components in Upflow Orientation**

**NOTE:** Visually check location of main limit and shield to ensure shield is not touching primary cells. If shield is touching, short cycling of limit will occur.

**Step 6—Reinstall Cold Spot Baffle (If Not Attached to Coupling Box)**

1. Position cold spot baffle such that curved bottom flange is facing condensing heat exchanger. Slide cold spot baffle under loose end screws.
2. Start screws that secure cold spot baffle to primary cell outlet panel. Use screws removed earlier.

**⚠ WARNING**

**CARBON MONOXIDE POISONING HAZARD**

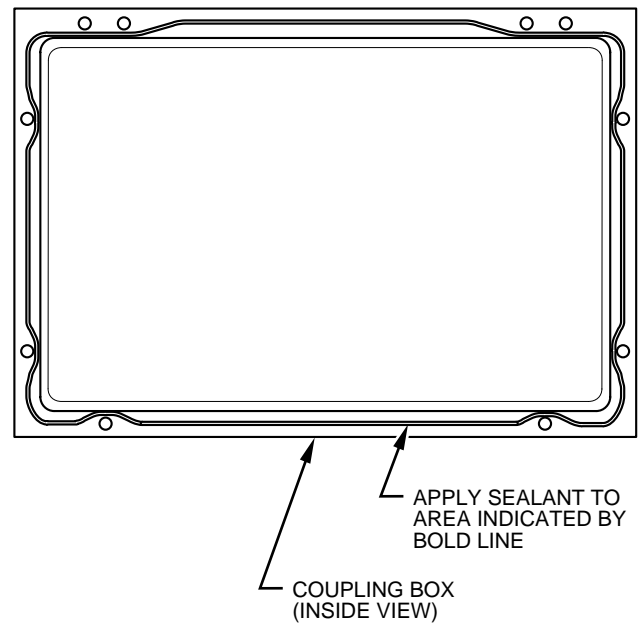
Failure to follow this warning could result in personal injury or death.

Ensure gasket between primary cell outlet panel and condensing heat exchanger assembly is in position to prevent leakage of combustion products.

3. Tighten all cold spot baffle screws.

**Step 7—Reinstall Coupling Box**

1. Clean old sealant from condensing heat exchanger assembly.
- 2. Apply sealant releasing agent such as PAM cooking spray or equivalent (must not contain corn or canola oil, halogenated hydrocarbons or aromatic content to prevent inadequate sealing) to primary cell outlet panel and condensing heat exchanger surface where new coupling box sealant will mate. (See Fig. 2.)
3. Apply generous bead of RTV sealant to coupling box flange. Sealant must not set more than 10 minutes prior to installation. (See Fig. 3.)



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

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 only align in 1 position. (See Fig. 2.)

**Step 8—Reinstall Burner Enclosure Assembly**

1. Position burner enclosure gasket between the burner enclosure and inlet cell panel and secure burner enclosure on inlet cell panel using screws removed earlier.
2. Connect pressure tube to gas valve.

3. Inspect gasket, then install intake housing on burner enclosure.
- **NOTE:** If gasket is damaged in any way, it must be repaired. To repair, apply a small bead of G.E. RTV 162 or Dow-Corning RTV 738 to damaged gasket area. Apply sealant releasing agent such as PAM cooking spray or equivalent (must not contain corn or canola oil, halogenated hydrocarbons or aromatic content to prevent inadequate sealing) to burner enclosure mating surface.
4. Connect pressure tube to intake housing.

### Step 9—Reinstall Whole Cell Panel Assembly

#### ⚠ CAUTION

##### PERSONAL INJURY HAZARD

Failure to follow this caution may result in personal injury. Whole assembly is heavy. Get help to lift and install.

1. Install whole cell panel assembly with heat exchanger, burner enclosure, and inducer assembly 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. 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 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. 2.)

3. Install 3 screws to each side of inlet cell panel and into cell panel supports.
4. Install control center in casing flange when it was located there previously.
5. Relocate wire harness and J-box through blower shelf and position grommet in blower shelf.
6. Install J-box.
7. Reinstall inducer motor leads, (See Step 1. item 10.) and limit switch wires through blower shelf. See wire schematic on furnace for proper attachment.

8. Reinstall condensate trap where it was previously located in furnace casing or blower shelf.
9. Connect condensate trap drain tubes. See tubing diagram on furnace for proper tube location.
10. Connect field drain to condensate trap.

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

- 11. 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.

#### ⚠ WARNING

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

Failure to follow this warning could result in personal injury, death and/or property damage.

After completing installation, vent pipe must be installed and fully seated against inducer housing internal stop. Coupling clamp screw(s) must be tightened to 15 in.-lb of torque to prevent disassembly of vent from furnace, and to prevent vent gas and condensate leakage.

12. Connect combustion-air intake pipe to intake housing and install screw to secure. Do not use RTV unless previously used.
13. Install top filler panel.
14. Install gas supply pipe to gas valve using backup wrench.

#### ⚠ 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 must be facing forward or tipped to the UP position.

15. Connect field power supply to J-box.
16. Install blower access panel.
17. Turn on gas and electrical supplies to furnace.
18. Check furnace operation through 2 cycles.
19. Check for condensate leaks.
20. Replace furnace door.