

Condensing Heat Exchanger Kit

Cancels: IIK 340M-40-77 IIK 340M-40-89
9-05

Installation Instructions Part No. 330540-751, -752, -753, and -754

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

ELECTRICAL SHOCK AND FIRE HAZARD
Failure to follow this warning could result in personal injury, 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.

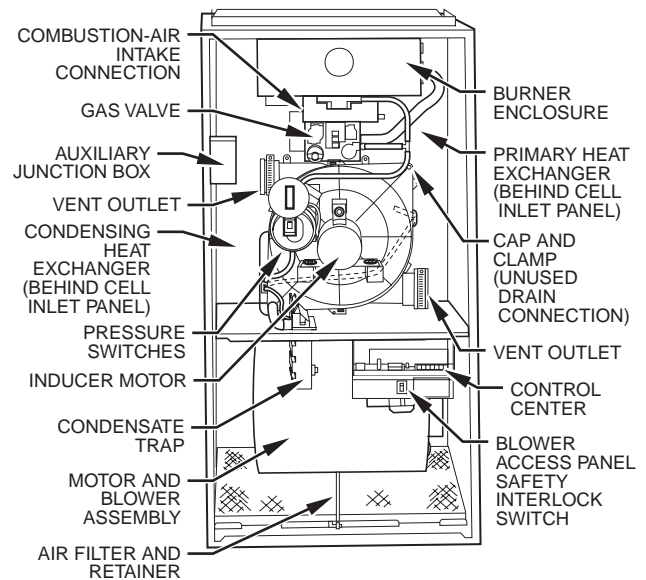
⚠ CAUTION

UNIT DAMAGE HAZARD
Failure to follow this caution may cause improper operation. Label all wires prior to disconnection when servicing controls to prevent miswiring.

INTRODUCTION

This instruction covers installation of the condensing heat exchanger kit Part No. 330540-751, -752, -753, -754 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 hydrocarbons nor aromatic contents to prevent inadequate seal from



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Fig. 1—Fixed and Two-Stage Models

occurring) and RTV sealant (G.E. 162, G.E. 6702, or Dow-Corning 738) are needed 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 condensing heat exchanger kit to replace a failed condensing heat exchanger.

This condensing heat exchanger kit contains the following items:

Condensing heat exchanger assembly (includes collector box)	1
Outlet cell panel gasket	1
Outlet cell panel screw	7 max
Installation Instructions	1

INSTALLATION

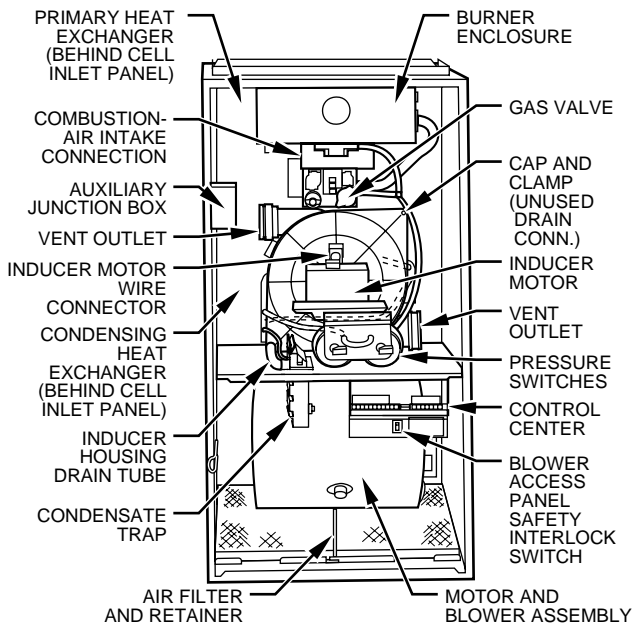
Step 1—Remove Whole Cell Panel Assembly

See Fig. 1 and 2 for furnace component locations. See Fig. 3 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.

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.

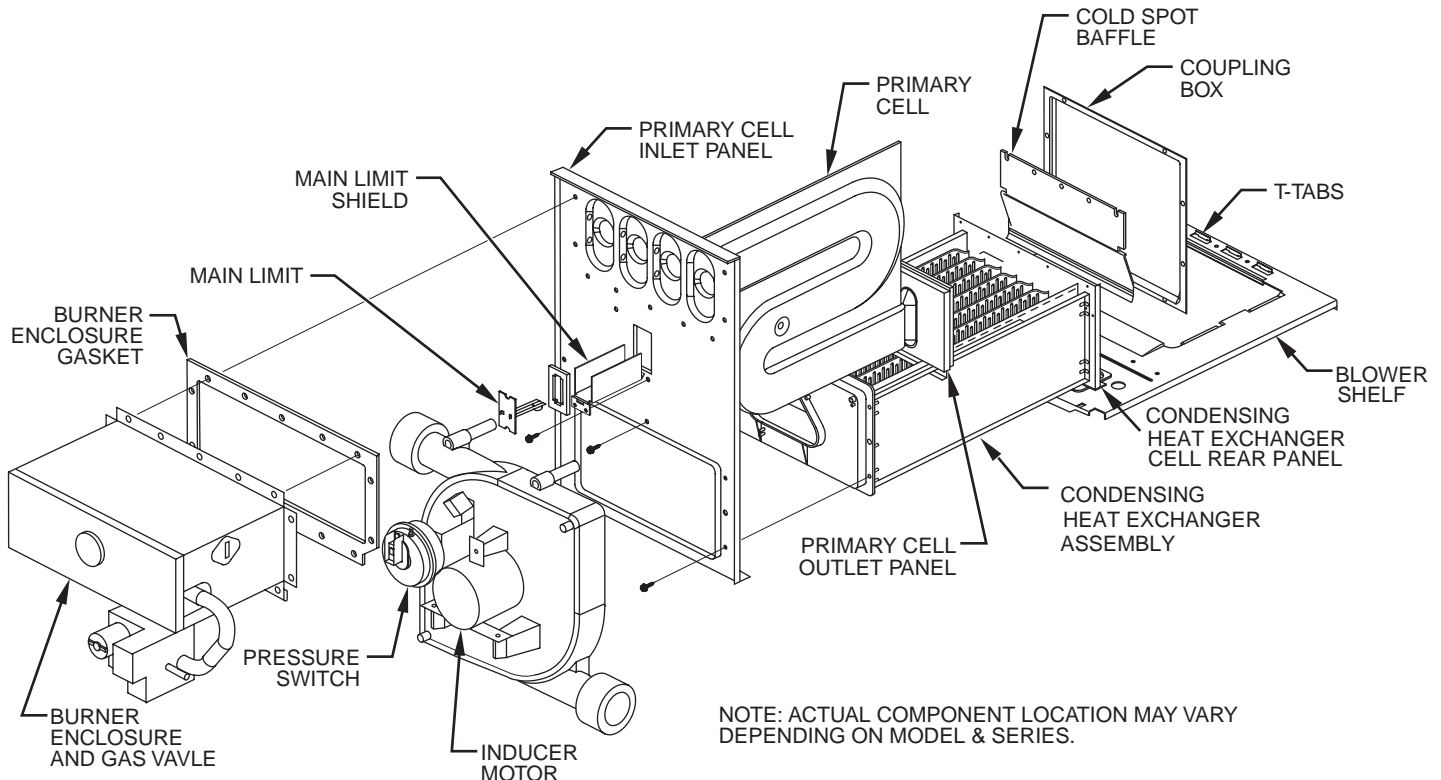


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Fig. 2—Variable Capacity Models

4. Disconnect field power supply wires from J-box.
5. Remove 2 screws securing J-box.
6. 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.
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 blower 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 (4 screws on 120 and 140 sizes).
13. Remove 2 screws adjacent to blower mounting screws that secure blower shelf to cell panel.
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 connections from condensate trap.
18. Disconnect drain and relief port tube from condensate trap.
19. Disconnect all tubing from condensate trap and remove condensate trap from furnace casing or blower shelf.
20. 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.



NOTE: ACTUAL COMPONENT LOCATION MAY VARY DEPENDING ON MODEL & SERIES.

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Fig. 3—Expanded View of Heat System Components in Upflow Orientation

Table 1—Kit Usage

KIT PART NO.	UNIT									
	340AAV 350AAV 340MAV 350MAV 490AAV	351DAS	345MAV	352AAV 352MAV	355AAV 355MAV	58MCB 58MXB 58MCA 58MXA	58MSA	58MTB 58MTA	58MVB 58MVP	PG9MAB PG9MAA
330540-751	024040 036040 024060 036060 048060	—	024040 036040 024060 036060 048060	036060	042060	040-08 040-12 060-08 060-12 060-16	040-08 040-12 060-08 060-12 060-16	060-12	060-14	024040 036040 024060 036060 048060
330540-752	036080 048080 060080	036080 048080 060080	036080 048080 060080	036080 048080	042080 060080	080-12 080-16 080-20	080-12 080-16 080-20	080-12 080-16	080-14 080-20	036080 048080 060080
330540-753	048100 060100	—	048100 060100	048100 060100	060100	100-16 100-20	100-16 100-20	100-16 100-20	100-20	048100 060100
330540-754	060120 060140	—	060120	060120	042040 060120	120-20 140-20	120-20	120-20	040-14 120-20	060120 060140

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 Inducer Assembly

1. If not previously disconnected, disconnect inducer motor wire connector at quick-connect.
2. If not previously disconnected, disconnect pressure switch wires.
3. If not previously disconnected, remove wires from gas valve. Note location for reassembly.
4. Remove burner box cover.
5. Remove screws securing manifold to burner box.
6. Remove manifold, orifices, and gas valve as one assembly.
7. Remove collector box pressure switch tube from pressure switch.
8. Remove 4 screws attaching inducer housing to cell panel.

NOTE: Inducer assembly comprised of inducer housing, inducer motor, and pressure switch(es) should be removed as one assembly.

Step 3—Remove Coupling Box

1. Remove screws securing coupling box to primary cell panel and condensing heat exchanger. (See Fig. 3.)
2. Break seal between top flange of coupling box and cell panel using screwdriver blade.
3. Remove coupling box from heat exchanger assembly.

Step 4—Remove Cold Spot Baffle

1. Remove all screws securing cold spot baffle to primary cell outlet panel and condensing heat exchanger.
2. Remove cold spot baffle.

Step 5—Remove Old Condensing Heat Exchanger Assembly

1. Remove screws attaching primary cell inlet panel to condensing heat exchanger assembly.
2. Slide condensing heat exchanger assembly away from cell panels.

3. Remove and discard primary cell outlet panel gasket.

Step 6—Install New Condensing Heat Exchanger Assembly

1. Remove and discard 4 shipping screws as shown in Fig. 4.
2. Remove and discard installer labels as shown in Fig. 4.

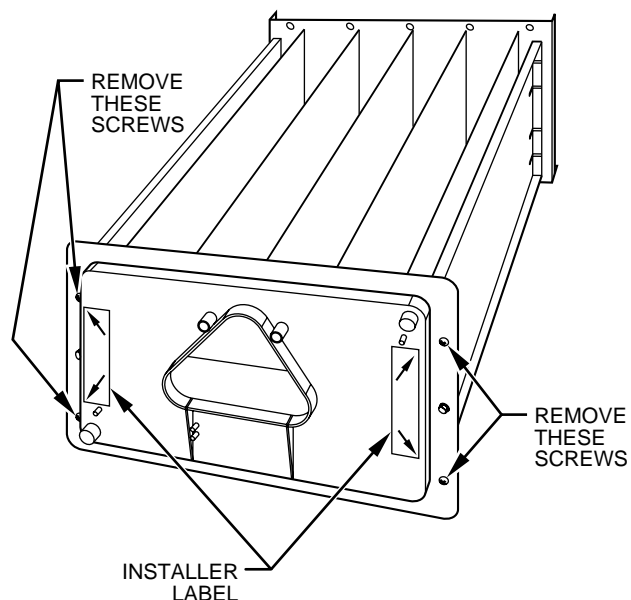


Fig. 4—Condensing Heat Exchanger Assembly as Shipped

3. Slide condensing heat exchanger assembly into primary cell inlet panel opening.
4. Position gasket between primary cell outlet panel and condensing heat exchanger assembly flange.
5. Attach condensing heat exchanger assembly to primary cell inlet panel.
6. Attach condensing heat exchanger assembly to primary cell outlet panel by starting 2 outside screws using new screws supplied in kit.

Step 7—Reinstall Cold Spot Baffle

1. Position cold spot baffle so positioning tab is facing away from condensing heat exchanger. Slide cold spot baffle under loose end screws installed in previous step.

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2. Start screws that secure cold spot baffle to primary cell outlet panel. Use screws provided in kit.

⚠ WARNING

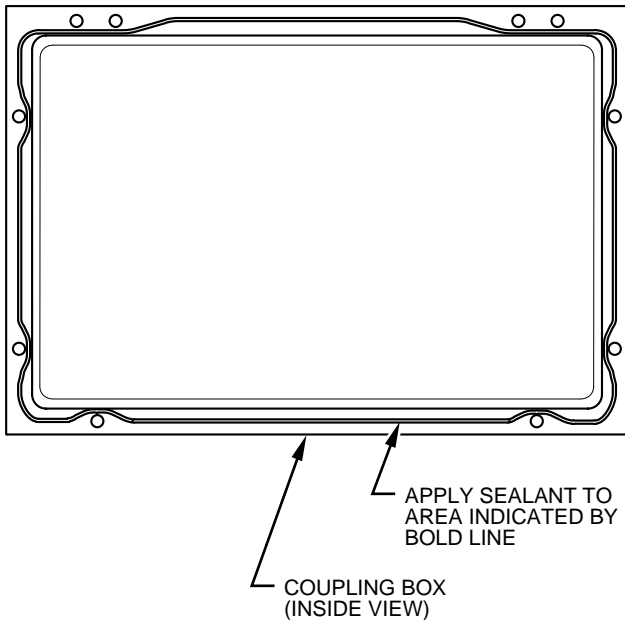
CARBON MONOXIDE POISONING HAZARD

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 8—Reinstall Coupling Box

1. Clean old sealant from primary cell outlet panel.
- 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 bead 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. 5.)



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Fig. 5—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 align in only one position. (See Fig. 5.)

Step 9—Reinstall Inducer Assembly

1. Inspect collector box gasket where inducer housing will mate.
- **NOTE:** If gasket is damaged in any way, it must be repaired. To repair, apply a small bead of G.E. RTV 162, G.E. RTV 6702, or Dow-Corning RTV 738 to damaged gasket area. 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 inducer housing mating surface.

2. Attach inducer assembly to cell panel by aligning 4 screws with inducer housing spacers.
3. Attach collector box pressure switch tube to pressure switch. See tubing diagram on furnace for proper attachment location.
4. If control was removed from furnace with whole cell panel assembly, reconnect inducer motor wire connector at quick-connect.
5. If control was removed from furnace with whole cell panel assembly, reconnect pressure switch wires. Refer to wiring diagram on furnace for proper attachment.

Step 10—Reinstall Whole Cell Panel Assembly

⚠ 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. 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 (4 screws on 120 and 140 sizes) and 2 screws adjacent to blower housing.
3. Install 3 screws to each side of inlet cell panel and 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 blower 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. Reinstall manifold assembly with gas valve to burner box. Replace mounting screws.
8. Replace burner box cover.
9. Install J-box.
10. Reattach wires to control center or components. See wiring diagram on furnace for proper attachment.
11. Reinstall condensate trap where it was previously located in furnace casing or blower shelf.
12. Reconnect condensate trap drain tubes. See tubing diagram on furnace for proper tube location.
13. Connect field drain to condensate trap.

- **NOTE:** When re-installing condensing heat exchanger assembly, the lower flange of the condensing heat exchanger cell rear panel must engage on the T-tabs in rear blower shelf. (See Fig. 3.)

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

- 14. 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.
- 15. Connect combustion-air intake pipe to intake housing and install screw to secure. Do not use RTV unless previously used.
- 16. Install top filler panel.
- 17. 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

EXPLOSION AND FIRE 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.

- 18. Connect field power supply to J-box.

- 19. Install blower access panel.
- 20. Turn on gas and electrical supplies to furnace.
- 21. Check for gas leaks.

⚠ WARNING

EXPLOSION AND 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.

- 22. Check furnace operation through 2 cycles.
- 23. Check for condensate leaks.
- 24. Replace main furnace door.

Manufacturer reserves the right to discontinue, or change at any time, specifications or designs without notice and without incurring obligations.