

Heat Exchanger Cell Replacement Kit

Cancels: IIK 373L-35-19 IIK 373L-35-20
11-98

Installation Instructions Part No. 310203-752

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

This symbol → indicates a change since the last issue.

INTRODUCTION


This instruction covers the installation of the heat exchanger cell kit Part No. 310203-752 in models 330AAV, 330JAV, 331AAV, 331JAV, 333BAV, 333JAV, 373LAV, 376CAV, 383KAV, 393AAV, 394HAD, 395CAV, 396HAD, 480BAV, 481BAV, 58DFA, 58DHC, 58DXT, 58GFA, 58PAP, 58PAV, 58RAP, 58RAV, 58SSC, 58TMA, 58TUA, 58UHV, 58UXT, 58UXV, 58WAV, 58YAV, 58ZAV, GA1AAD, GA2AAD, GB1AAV, GB3AAV, PG8DAA, and PG8UAA Gas Furnaces.

→ **NOTE:** A releasing agent (PAM cooking spray or equivalent, must not contain corn or canola oil, aromatic or halogenated hydrocarbons or inadequate seal may occur.) and RTV sealant (G.E. 162 or Dow-Corning 738) are needed before starting installation. DO NOT substitute any other type of RTV sealant.

SAFETY CONSIDERATIONS

Installing and servicing 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 coils, or 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.

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 **would** 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.

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

DESCRIPTION AND USAGE

The heat exchanger cell replacement kit can be utilized to restore units having heat exchanger cells that require repair.

This heat exchanger cell replacement kit contains the following items:

Heat exchanger cell	1
Fiberglass gasket	2
Screw	9
Installation Instructions	1

INSTALLATION

Step 1—Remove Heat Exchanger Assembly

1. Turn off gas and electrical supplies to unit.
2. Remove blower and control access doors.
3. Disconnect and remove vent pipe.
4. On hot surface ignition models:
 - a. Unplug control box connectors from blower deck.
 - b. Unplug inducer motor.
 - c. Disconnect wires from pressure switch, draft safeguard switch, and primary limit switch.
 - d. Remove wires from retainer clip on casing side.

NOTE: On hot surface ignition models, it is not necessary to disconnect wires from gas valve, limit over temperature switch, hot surface ignitor, or flame sensor.

5. On continuous-pilot models, disconnect all gas control compartment wiring and carefully feed wires down through the blower deck into the blower compartment.
6. Remove burner control assembly mounting screws and remove assembly from furnace. Be careful not to damage hot surface ignitor or flame sensor if applicable.
7. Remove screws securing relief box to top plate (upflow) or to blower shelf (downflow/horizontal).
8. Remove screws securing inducer assembly to cell panel and remove inducer assembly from furnace.
9. Remove auxiliary junction box and blower door interlock switch.
10. Remove screws securing cell panel to casing.
11. If necessary, remove 2 front screws of top plate (upflow) or 2 screws of bottom plate (downflow/horizontal).
12. Remove cell panel and attached heat exchanger cells through front of furnace.

Step 2—Install Replacement Cell(s)

1. Determine which cell(s) need to be replaced.
2. Place heat exchanger on a flat surface with cell panel facing upward.
3. Remove 8 screws from cell opening of cell(s) being replaced. Remove and replace 1 cell at a time.

NOTE: The word "top" is stamped on cell inlet plates to aid in correct assembly.

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

4. Using care not to damage insulation around inlet and outlet openings, remove cell from cell panel and discard.
5. Install new cell as follows:
 - a. Center fiberglass insulation gaskets over inlet and outlet openings of cell.
 - b. Tape each end of gasket to cell using short pieces of tape.
 - c. Position cell under cell panel.
 - d. Align holes and start ALL 8 screws.
 - e. After all screws are started, check position of gaskets and cell inlet plates. When materials are properly aligned, tighten screws.
6. Cut away any insulation extending into cell openings. Do not drop pieces of insulation into cell.
7. Repeat Step 2, items 3 through 6, for additional cells being replaced.

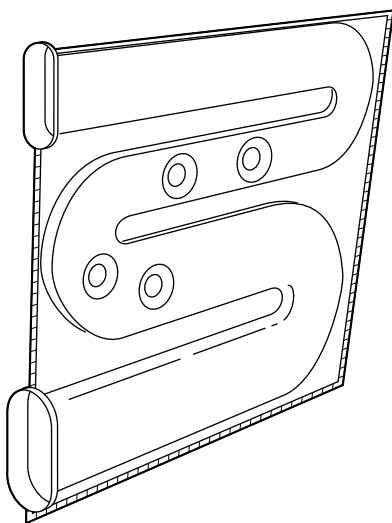


Fig. 1—Replacement Cell

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8. Remove baffles from old cells (if applicable) and install on new cells. See Fig. 2 and Table 1 or 2 for baffle location.

⚠ CAUTION

Failure to install baffles in proper location may cause premature heat exchanger failure and/or main limit cycling.

Step 3—Reinstall Heat Exchanger Assembly

NOTE: Check the insulation around the top, bottom, and sides of the cell panel. The insulation must overlap enough to provide a good air seal when the assembly is installed.

1. Slide heat exchanger assembly into furnace, engaging cells into cell support. Avoid bending any internal casing baffles when assembling.
2. Align holes and start screws. Ensure insulation stays in place to provide the necessary air seal.
3. Tighten screws into sides, top, and bottom of cell panel.
- 4. Remove old sealant from collector box and cell panel. Apply sealant releasing agent to cell panel where collector box attaches. (Refer to **NOTE** in Introduction section.) Apply 1/4-in. bead of silicone around flange of collector box. Do not drop sealant into cell openings.
5. Reinstall inducer assembly.
6. Reinstall auxiliary junction box and blower door interlock switch.
7. Reinstall burner control assembly. Ensure that all burners are level.
8. Replace screws in top plate (upflow) or bottom plate (downflow/horizontal).
9. Reconnect all wiring using diagram located on blower access door. Put wiring behind retainer clip on casing side.
10. Reconnect gas pipe.
11. Reconnect vent pipe.
12. Reinstall blower access door.
13. Turn on gas supply and check for gas leaks.

⚠ WARNING

Never use a match or other open flame to check for gas leaks. Use a soap-and-water solution. Failure to follow this warning could result in fire, explosion, personal injury or death.

14. Turn on electrical supply.
- **Step 4—Check for Air Leaks**
 1. Turn on blower only and block discharge air registers to create a high-static condition.
 2. Using a match, check around cell inlet openings, inducer housing, flue collector box, and along sides and bottom of cell panel.
 3. Turn off blower.
 4. Seal any air leaks with silicone.
 5. Recheck for air leaks, repeat item 4 if necessary.
 6. After completing air leak check, unblock discharge air registers. Operate furnace through 1 complete heating cycle and check for proper operation.
 7. Using procedures in unit Installation Instructions, and information on the unit rating plate, verify input rate and temperature rise.
 8. Reinstall gas control access door.
 9. Set room thermostat to desired temperature.

**Table 1—Bryant Brand Heat Exchanger
Baffle Location***

BRYANT FURNACE MODEL NO.	HEAT EXCHANGER BAFFLE LOCATION SEE FIG.
330AAV036100	2A
330AAV048100	2A
330AAV060100 (Produced before date code 1098†)	2B
330AAV048120	2C
330AAV060120	2C
330AAV060135	2D
330JAV048100	2A
330JAV060100 (Produced before date code 1098†)	2B
330JAV060120	2C
331AAV036065	3B
331AAV060105	3C
331JAV036060	3B
331JAV060100	3C
333BAV060100	2B
333BAV060120	2C
333JAV060100	2B
333JAV060120	2C
373LAD036055	3B
373LAD060090	3D
373LAD060105	3E
373LAV036035 (Series C and later)	3A
373LAV036050	3A
373LAV036055	3B
373LAV036070	3B
373LAV060090	3C
373LAV060115	3C
376CAV036040	3A
376CAV036050	3A
376CAV036055	3B
376CAV036070	3B
376CAV060095	3C
376CAV060115	3C
376CAV066115	3C
383KAD036085	2A
383KAD048085	2A
383KAD048100	2C
383KAD060100	2C
383KAD036105	2A
383KAD060120	2D
383KAV036090	2A
383KAV048090	2A
383KAV060090 (Series B and later)	2B
383KAV048110	2C
383KAV060110	2C
383KAV036111	2A
383KAV048111	2A
383KAV060111 (Series C to date code 0798†)	2B
383KAV060125	2D
383KAV048135	2C
383KAV060135	2C
383KAV060155	2D
393AAV048111	2A

393AAV060135	2C
393AAV060155	2D
394HAD036085	2A
394HAD048085	2A
394HAD048100	2C
394HAD060100	2C
394HAD036105	2A
394HAD048105	2A
394HAD060120	2D
394HAD048130	2C
394HAD060130	2C
394HAD060150	2D
395CAV036090	2A
395CAV048090	2A
395CAV060090 (Series C and later)	2B
395CAV048110	2C
395CAV060110	2C
395CAV036111	2A
395CAV048111	2A
395CAV060111 (Series D to date code 0798†)	2B
395CAV060130	2D
395CAV048135	2C
395CAV060135	2C
395CAV060155	2D
396HAD036055	3B
396HAD036071	3B
396HAD060090	3D
396HAD060110	3D
396HAD060105	3E
396HAD060135	3E

* Only models listed are equipped with baffles.
† Units produced after date specified no longer require a baffle.

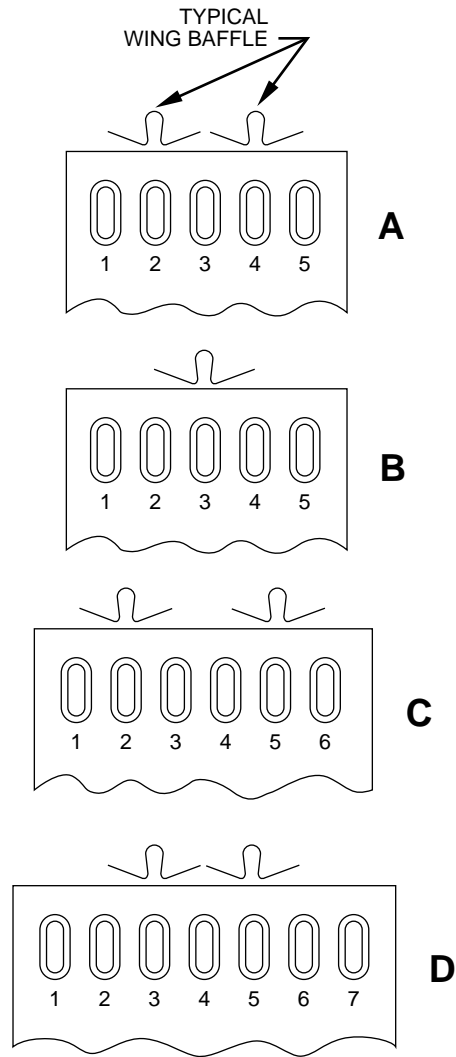


Fig. 2—Upflow or Upflow/Horizontal Furnace Wing Baffle

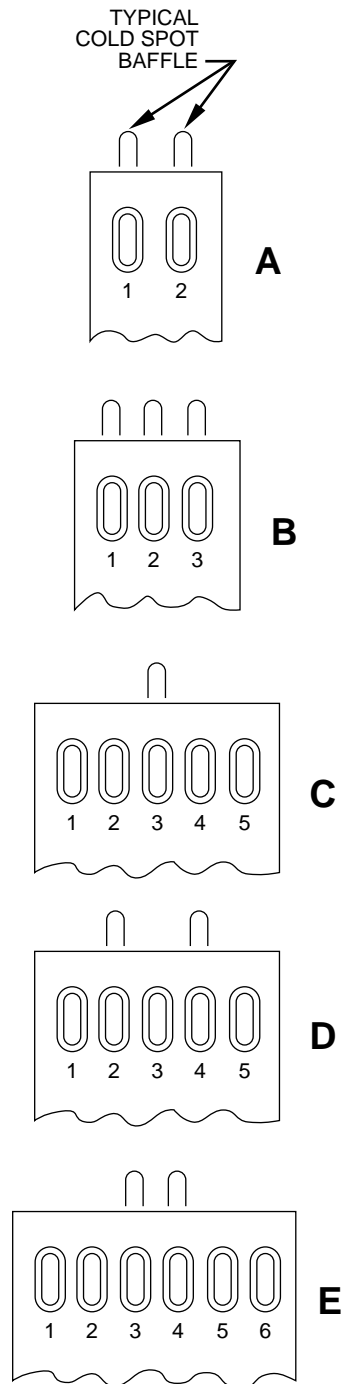
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Table 2—Carrier Brand Heat Exchanger Baffle Location*

CARRIER FURNACE MODEL NO.	HEAT EXCHANGER BAFFLE LOCATION SEE FIG.
58DFA055-GC	3B
58DFA071-12	3B
58DFA090-LC	3D
58DFA105-LC	3E
58DFA110-20	3D
58DFA135-20	3E
58DHC040-GC	3A
58DHC055-GC	3B
58DHC095-LC	3C
58DXT060-12	3B
58DXT100-20	3C
58GFA085-GC	2A
58GFA085-JC	2A
58GFA100-JC	2C
58GFA100-LC	2C
58GFA105-12	2A
58GFA105-16	2A
58GFA105-22	2A
58GFA120-LC	2D
58GFA130-16	2C
58GFA130-20	2C
58GFA150-20	2D
58PAP085-GC	2A
58PAP085-JC	2A
58PAP100-JC	2C
58PAP100-LC	2C
58PAP120-LC	2D
58PAV090-GC	2A
58PAV090-JC	2A
58PAV090-LC (Series 110 and later)	2B
58PAV110-JC	2C
58PAV110-LC	2C
58PAV111-12	2A
58PAV111-16	2A
58PAV111-20 (Series 120 to date code 0798†)	2B
58PAV125-LC	2D
58PAV135-16	2C
58PAV135-20	2C
58PAV155-20	2D
58RAP055-GC	3B
58RAP090-LC	3D
58RAP105-LC (Series 120 and later)	3E
58RAV035-GC	3A
58RAV050-12 (Series 120 and later)	3A
58RAV055-GC	3B
58RAV070-12	3B
58RAV090-LC	3C
58RAV115-20	3C
58SSC090-GC	2A
58SSC090-JC	2A
58SSC110-JC	2C
58SSC110-LC	2C
58SSC130-LC	2D
58TMA065-12	3B

CARRIER FURNACE MODEL NO.	HEAT EXCHANGER BAFFLE LOCATION SEE FIG.
58TMA105-20	3C
58TUA100-12	2A
58TUA100-16	2A
58TUA100-20 (Produced before date code 1098†)	2B
58TUA120-16	2C
58TUA120-20	2C
58TUA135-20	2D
58UHV100-20	2B
58UHV120-20	2C
58UXT100-16	2A
58UXT100-20 (Produced before date code 1098†)	2B
58UXT120-20	2C
58UXV100-20	2B
58UXV120-20	2C
58WAV090-GC	2A
58WAV090-JC	2A
58WAV090-LC	2B
58WAV110-JC	2C
58WAV110-LC	2C
58WAV111-12	2A
58WAV111-16	2A
58WAV111-20 (Produced before date code 0798†)	2B
58WAV130-LC	2D
58WAV136-16	2C
58WAV136-20	2C
58WAV155-20	2D
58YAV111-16	2A
58YAV136-20	2C
58YAV155-20	2D
58ZAV040-GC	3A
58ZAV050-12	3A
58ZAV055-GC	3B
58ZAV070-12	3B
58ZAV095-LC	3C
58ZAV115-20	3C
58ZAV115-22	3C

* Only models listed are equipped with baffles.
† Units produced after date specified no longer require a baffle.



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Fig. 3—Downflow or Downflow/Horizontal Furnace Cold Spot Baffle

**Table 3—Payne Brand Heat Exchanger
Baffle Location**

PAYNE MODEL NO.	HEAT EXCHANGER BAFFLE LOCATION SEE FIG.
480BAV036111	2A
480BAV048111	2A
480BAV060111	2B
480BAV048135	2C
480BAV060135	2C
480BAV060155	2D
481BAV036050	3A
481BAV036070	3B
481BAV060115	3C
PG8DAA036050	3A
PG8DAA036070	3B
PG8DAA060115	3C
PG8UAA036111	2A
PG8UAA048111	2A
PG8UAA060111 (Produced before date code 0798†)	2B
PG8UAA066111 (Series B and later)	2B
PG8UAA048135	2C
PG8UAA060135	2C
PG8UAA060155	2D

* Only models listed are equipped with baffles.
† Units produced after date specified no longer require a baffle.

**Table 4—RESCO Brand Heat Exchanger
Baffle Location***

RESCO MODEL NO.	HEAT EXCHANGER BAFFLE LOCATION SEE FIG.
GA1AAD036085	2A
GA1AAD048085	2A
GA1AAD048100	2C
GA1AAD060100	2C
GA1AAD036105	2A
GA1AAD048105	2A
GA1AAD060120	2D
GA1AAD048130	2C
GA1AAD060150	2D
GA2AAD036055	3B
GA2AAD036071	3B
GA2AAD060090	3D
GA2AAD060110	3D
GA2AAD060105	3E
GA2AAD060135	3E
GB1AAV036090	2A
GB1AAV048090	2A
GB1AAV060090	2B
GB1AAV048110	2C
GB1AAV060110	2C
GB1AAV036111	2A
GB1AAV048111	2A
GB1AAV060111	2B
GB1AAV060125	2D
GB1AAV048135	2C
GB1AAV060135	2C
GB1AAV060155	2D
GB3AAV036035	3A
GB3AAV036050	3A
GB3AAV036055	3B
GB3AAV036070	3B
GB3AAV060090	3C
GB3AAV060115	3C

* Only models listed are equipped with baffles.

SERVICE TRAINING

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

- Unit Familiarization
- Maintenance
- Installation Overview
- Operating Sequence

A large selection of product, theory, and skills programs is available, using popular video-based formats and materials. All include video and/or slides, plus companion book.

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