

1184482 through 1184490
1186790 through 1186792
1184779, 1186808

CELL INLET PANEL KIT for use with 35-in. (889mm) High Efficiency Gas Furnace

Installation Instructions


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

SAFETY CONSIDERATIONS

Improper installation, adjustment, alteration, service, maintenance, or use can cause explosion, fire, electrical shock, or other conditions which may cause death, personal injury, or property damage. Consult a qualified installer, service agency, or your distributor or branch for information or assistance. The qualified installer or agency must use factory-authorized kits or accessories when modifying this product. Refer to the individual instructions packaged with the kits or accessories when installing.

Follow all safety codes. Wear safety glasses, protective clothing, and work gloves. Have a fire extinguisher available. Read these instructions thoroughly and follow all warnings or cautions included in literature and attached to the unit. Consult local building codes, the current editions of the National Fuel Gas Code (NFGC) NFPA 54/ANSI Z223.1 and the National Electrical Code (NEC) NFPA 70.

In Canada, refer to the current editions of the National Standards of Canada CAN/CSA-B149.1 and .2 Natural Gas and Propane Installation Codes, and Canadian Electrical Code CSA C22.1.

Recognize safety information. This is the safety-alert symbol . When you see this symbol on the unit 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 hazards 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, ELECTRICAL SHOCK HAZARD

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

The ability to properly perform maintenance on this equipment requires certain knowledge, mechanical skills, tools, and equipment. If you do not possess these, do not attempt to perform any maintenance on this equipment other than those procedures recommended in the Home Owner's Manual.



WARNING

FIRE, EXPLOSION, ELECTRICAL SHOCK AND CARBON MONOXIDE POISONING HAZARD

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

Improper installation, adjustment, alteration, service, maintenance, or use can cause carbon monoxide poisoning, explosion, fire, electrical shock, other conditions, which could result in personal injury or death. Consult your distributor or branch for information or assistance. The qualified installer or agency must use only factory-authorized kits or accessories when servicing this product.



WARNING

ELECTRICAL SHOCK, FIRE OR EXPLOSION HAZARD

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

Before installing, modifying, or servicing system, main electrical disconnect switch must be in the OFF position and install a lockout tag. There may be more than one disconnect switch. Lock out and tag switch with a suitable warning label. Verify proper operation after servicing.



CAUTION

CUT HAZARD

Failure to follow this caution may result in personal injury.

Sheet metal parts may have sharp edges or burrs. Use care and wear appropriate protective clothing, safety glasses and gloves when handling parts, and servicing furnaces.

INTRODUCTION

This instruction covers installation of the Primary Cell Inlet Panel. Kit Part No. 1184482, 1184483, 1184484, 1184485, 1184486, 1184487, 1184488, 1184489, 1184490, 1186790, 1186791, 1186792, 1184779, 1186808 in 35-in. (889 mm) tall, condensing gas furnaces. See **Table 2** for kit contents.

NOTE: A releasing agent such non-stick cooking spray or equivalent (must not contain corn or canola oil, halogenated hydrocarbons nor aromatic contents to prevent inadequate seal) may be used.

There are two different RTV sealants used on this assembly and are needed before starting the assembly.

The low adhesion sealant used on the Coupling Box cover is Novaguard RTV 400-900™ (part number 1185242).

The high adhesion sealant is Novaguard 400-303-RTV™ (part number 1185241), G.E. 162™, G.E. 6702™, or Dow-Corning 738™. **DO NOT** substitute any other type of RTV sealant.

DESCRIPTION AND USAGE

Use this Cell Panel Kit to replace failed Cell Panel Assembly. See **Table 1** for Kit Numbers and **Table 2** for Cell Panel Assembly Kit contents.

Table 1 – Kit Numbers

Table 1	WHERE USED – Model Size, Series	
PART NUMBER	MODEL	CASING WIDTH in(mm)
26,000 BTUh		
1184482	0401408A	14-in. (360)
1184482	0401410A	14-in. (360)
40,000 BTUh		
1184482	0401410A	14-in. (360)
1184482	0401410B	14-in. (360)
1184482	0401410C	14-in. (360)
1184490	0401712A	17-1/2 in. (445)
1184490	0401712B	17-1/2 in. (445)
1184490	0401712C	17-1/2 in. (445)
1184482	040A030A	14-in. (360)
1184482	040A030B	14-in. (360)
1184482	040A030C	14-in. (360)
60,000 BTUh		
1184483	0601410A	14-in. (360)
1184483	0601412A	14-in. (360)
1184483	0601412B	14-in. (360)
1184483	0601412C	14-in. (360)
1184484	0601714A	17-1/2 in. (445)
1184484	0601714B	17-1/2 in. (445)
1184484	0601716B	17-1/2 in. (445)
1186808	0601716B *	17-1/2 in. (445)
1186808	0601716C	17-1/2 in. (445)
1184779	0602120A	21-in. (533)
1184484	060B042A	17-1/2 in. (445)
1184484	060B042B	17-1/2 in. (445)
1184484	060B048B	17-1/2 in. (445)
1186808	060B048C	17-1/2 in. (445)
80,000 BTUh		
1184485	0801714A	17-1/2 in. (445)
1184485	0801716A	17-1/2 in. (445)
1184485	0801716B	17-1/2 in. (445)
1186792	0801716B *	17-1/2 in. (445)
1186792	0801716C	17-1/2 in. (445)
1184486	0802120A	21-in. (533)
1184486	0802120B	21-in. (533)
1186791	0802120C	21-in. (533)
1184485	080B048A	17-1/2 in. (445)
1184485	080B048B	17-1/2 in. (445)
1186792	080B048C	17-1/2 in. (445)
1184486	080C060A	21-in. (533)
1184486	080C060B	21-in. (533)
1186791	080C060C	21-in. (533)
100,000 BTUh		
1184487	1002114A	21-in. (533)
1184487	1002116A	21-in. (533)
1184487	1002116B	21-in. (533)
1184487	1002116C	21-in. (533)
1184487	1002120A	21-in. (533)
1184487	1002120B	21-in. (533)
1184487	1002120C	21-in. (533)
1184487	1002122A	21-in. (533)

* R9MSB only

PART NUMBER	MODEL	CASING WIDTH in(mm)
100,000 BTUh (continued)		
1184487	1002122B	21-in. (533)
1184487	100C042A	21-in. (533)
1184487	100C048B	21-in. (533)
1184487	100C048C	21-in. (533)
1184487	100C060A	21-in. (533)
1184487	100C060C	21-in. (533)
1184487	100C066B	21-in. (533)
120,000 BTUh		
1184488	1202420A	24-in. (622)
1186790	1202420B	24-in. (622)
1186790	1202420C	24-in. (622)
1184488	1202422A	24-in. (622)
1184488	1202422B	24-in. (622)
1184488	120D060A	24-in. (622)
1186790	120D060C	24-in. (622)
1184488	120D066B	24-in. (622)
140,000 BTUh		
1184489	1402420A	24-in. (622)

Table 2 – Cell Panel Kit Contents

QUANTITY	DESCRIPTION
1	Insulated Cell Panel
1	Main Limit Gasket
25 – 38	Screws – HEX HD 8A 1/2
1	Installation Instructions

INSTALLATION



WARNING

ELECTRICAL SHOCK AND FIRE HAZARD

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

Turn off the gas and electrical supplies to the furnace and install lockout tag before performing any maintenance or service. Follow the operating instructions on the label attached to the furnace.



CAUTION

UNIT OPERATION HAZARD

Failure to follow this caution may result in improper furnace operation or failure of furnace.

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation.



PRUDENCE

D'EQUIPEMENT D'OPERATION

Toute erreur de câblage peut être une source de danger et de panne.

Lors des opérations d'entretien des commandes, étiqueter tous les fils avant de les déconnecter.

Unit Shut Down

1. Set room thermostat to lowest setting or "OFF".
2. Disconnect power at external disconnect, fuse or circuit breaker.
3. Turn off gas at external shut-off or gas meter.
4. Remove outer doors and set aside.
5. Turn electric switch on gas valve to "OFF".

Vent Pipe Removal

NOTE: The vent pipe may be connected to the furnace at the rubber vent pipe support. Before cutting the vent pipe, loosen the clamps around the vent pipe coupling and move the vent pipe away from the furnace. Support the vent pipe as close to the furnace as possible to prevent damage to the vent system.

NOTE: If the vent pipe is attached to the top plate of the furnace, it will be necessary to disconnect the combustion air pipe in order to raise the top plate of the casing.

1. Support the vent pipe as close to the furnace as possible to prevent damage to the vent system.
2. Cut vent pipe with a hacksaw and move the remaining vent pipe out of the way. Secure the vent pipe if necessary.
3. Loosen both clamps at the vent pipe support attached to furnace casing.
4. Loosen clamp for the vent pipe at vent elbow on the inducer assembly.
5. Remove remaining vent pipe through the top of the furnace casing and set aside.

Manifold Removal/Burner Box Removal

NOTE: Use a back-up wrench on the gas valve to prevent the valve from rotating on the manifold or damaging the mounting to the burner box (see **Figure 1**).

1. Disconnect the gas pipe from gas valve and remove pipe from the furnace casing.
2. Disconnect the connector harness from gas valve (modulating only) or remove individual wires from terminals on gas valve (all other models).
3. Disconnect the wires from gas valve, flame sensor and hot surface igniter.
4. Remove wires from both rollout switches.
5. Support the manifold and remove the 4 screws that secure the manifold assembly to the burner box and set aside. Note the location of the green and yellow ground wire for reassembly later.
6. Support the burner box assembly and remove the screws that attach the burner box to the heat exchanger cell panel.
7. Set the burner box assembly aside.

Pressure Switch Removal

NOTE: There are two types of pressure switches. The modulating pressure switch assembly has three pressure switches. Two are side-by-side with the third switch mounted to the back of one of the switches.

All other furnaces have two pressure switches mounted back-to-back.

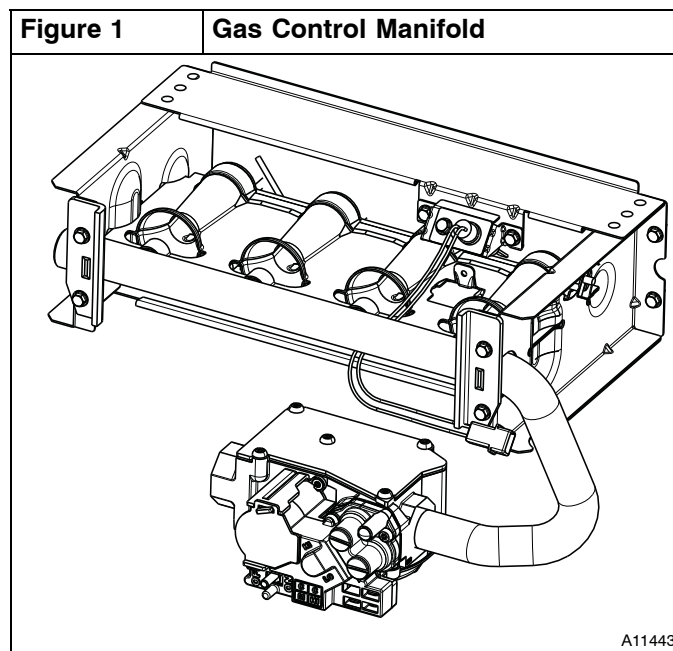
The round tube for the front pressure switch (for all models) connects the switch to the port on the collector box. The tube

for the switch mounted on the back connects the switch to the port on the inducer assembly (PSC only).

1. Remove the front pressure switch tube from the port on the collector box. See **Figure 2**.
2. Disconnect the pressure switch harness (modulating only) from the main wiring harness or remove the individual wires from the front pressure switch (non-modulating). Note the location of the wires for reassembly.
3. Remove the screws that attach the pressure switch assembly to the inducer.
4. Remove the back pressure switch tube that connects to the inducer assembly (PSC only).
5. Remove the wires from the back pressure switch. Note the location of the wires for reassembly.
6. Set the pressure switches aside.
7. If the relief tube for the condensate trap is routed across the inducer assembly, remove the tube from the port on the collector box and from the stand-offs on the inducer and move the tube aside.

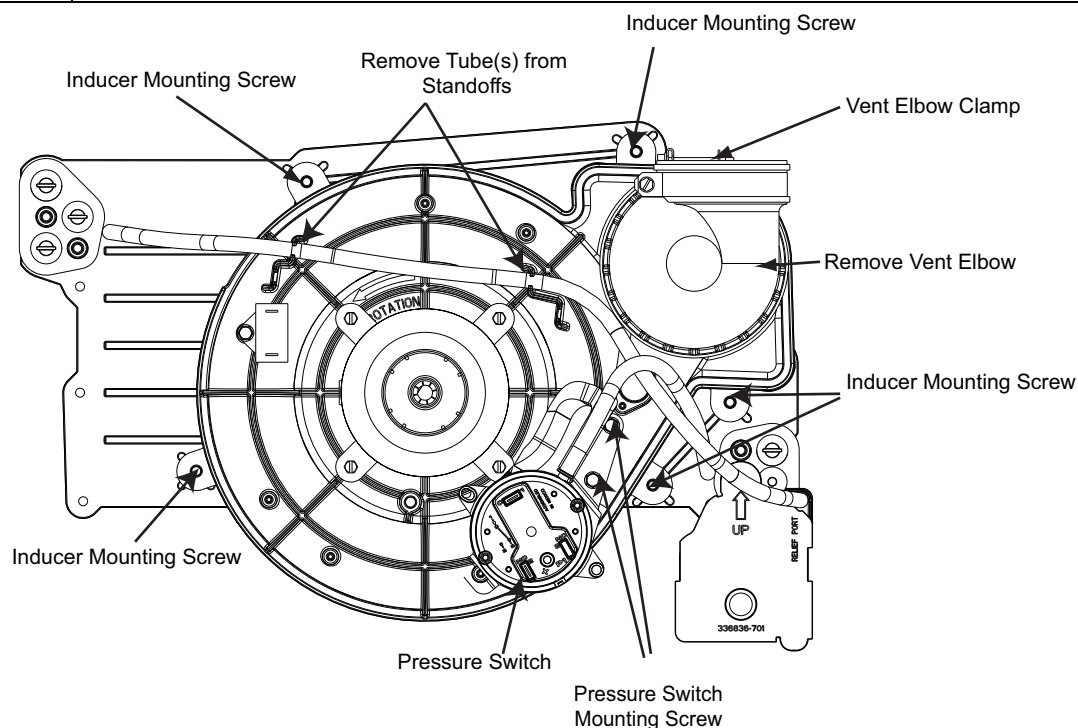
Inducer Assembly Removal

1. Remove the door bracket from the front edge of the blower shelf.
2. Remove the wires that connect the main wiring harness to the inducer motor harness.
3. Remove the condensate trap relief tube from the port on the collector box and the stand-offs on the inducer housing.
4. Remove the screws from the tabs on inducer assembly that secures the inducer to the collector box.
Note: There is one mounting tab directly under the vent elbow.
5. Remove the inducer assembly and set aside.
6. To avoid double gasketing and leakage, check to make sure the drain gaskets for the inducer and the inducer outlet gasket are not still attached to the collector box.
7. Remove any remaining gaskets from the collector box and discard.



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Figure 2 Inducer Assembly Motor (Inducer Motor Fan Subject to Change)



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Condensate Drain and Trap Removal

NOTE: If the condensate trap is removed, a new gasket between the trap and collector box is required. Verify a condensate trap gasket is included in the service kit or obtain one from your local distributor.

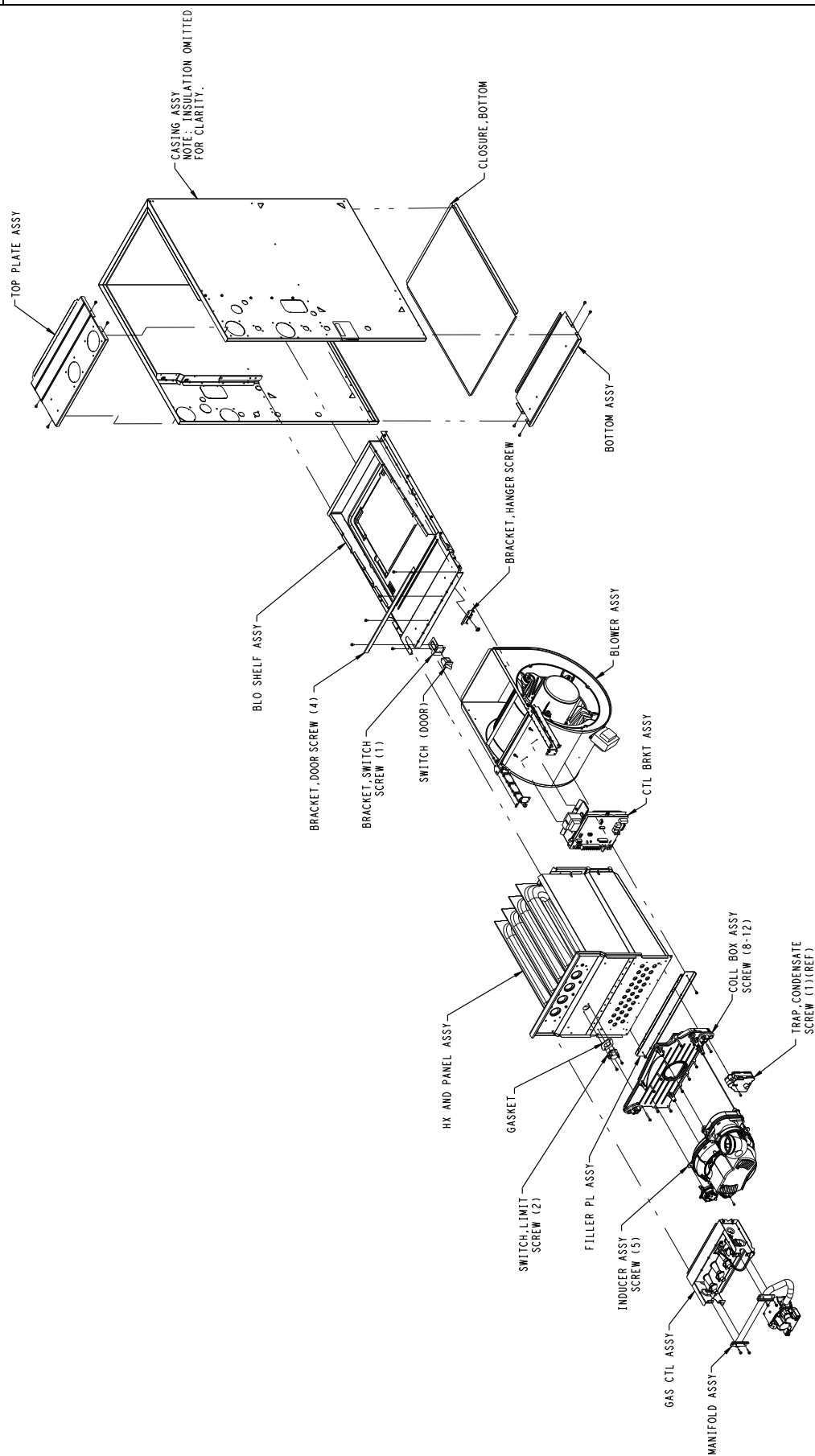
1. Disconnect external drain from condensate drain elbow or drain extension pipe inside the furnace and set aside.
2. Disconnect the condensate trap relief hose from collector box port and the molded retainer clips on the inducer housing.

NOTE: If condensate trap has a heat pad attached to the trap, trace the wires for the pad back to the connection point and disconnect the wires for the heat pad.

3. Remove the screw that secures the condensate trap to the collector box, remove the trap and set aside.
4. Remove the trap gasket from the collector box if it did not come off when the trap was removed.
5. Discard the old trap gasket.
6. Rinse condensate trap in warm water until trap is clean.
7. Flush condensate lines with warm water.
8. Shake trap dry.

Figure 3

Final Assembly for Cell Panel and HX Assembly



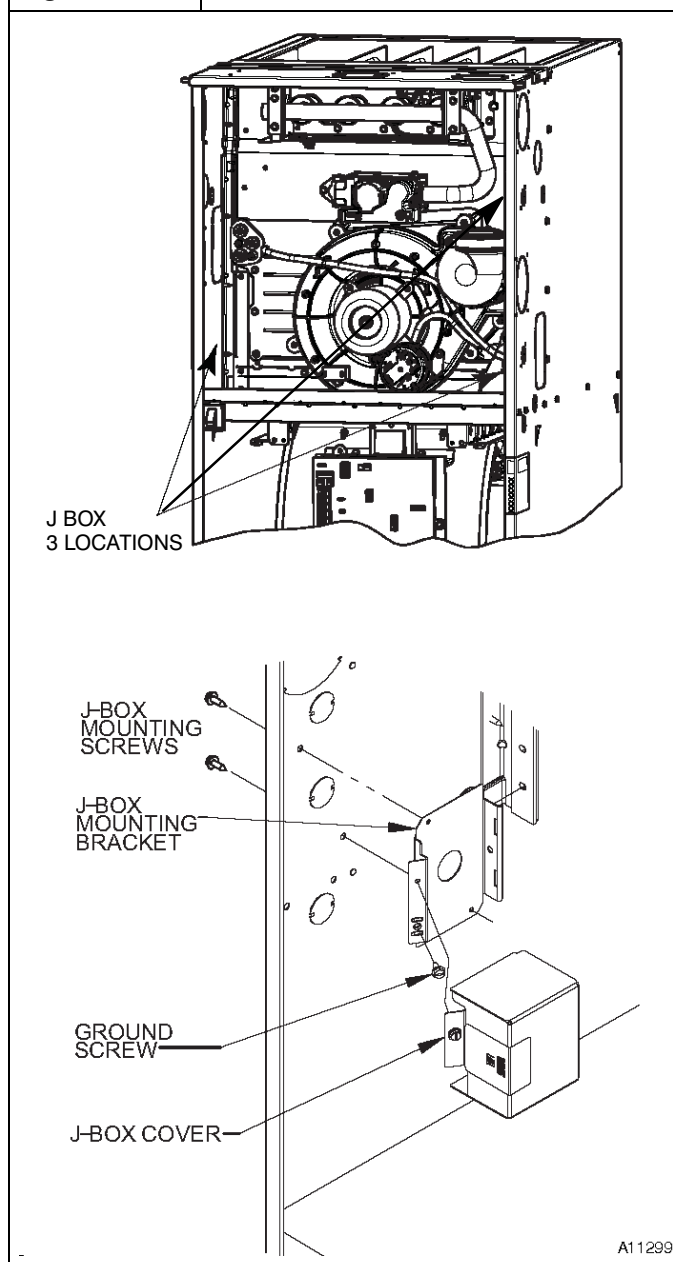
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Remove J-Box and Main Harness

1. Remove the screw that secures the J-Box cover to the J-Box bracket See **Figure 4**.

Figure 4

J-Box Removal / Installation



2. Disconnect the field wiring from the factory wiring and remove the ground wire from the green ground screw on the J-Box bracket.
3. Remove factory wiring from the J-Box.
4. Disconnect the factory wires from the main limit switch.



CAUTION

UNIT OPERATION HAZARD

Failure to follow this caution may result in unit damage or improper operation.

Label all wires prior to disconnection when servicing controls.



PRUDENCE

D'EQUIPEMENT D'OPERATION

Toute erreur de câblage peut être une source de danger et de panne.

Lors des opérations d'entretien des commandes, étiqueter tous les fils avant de les déconnecter.

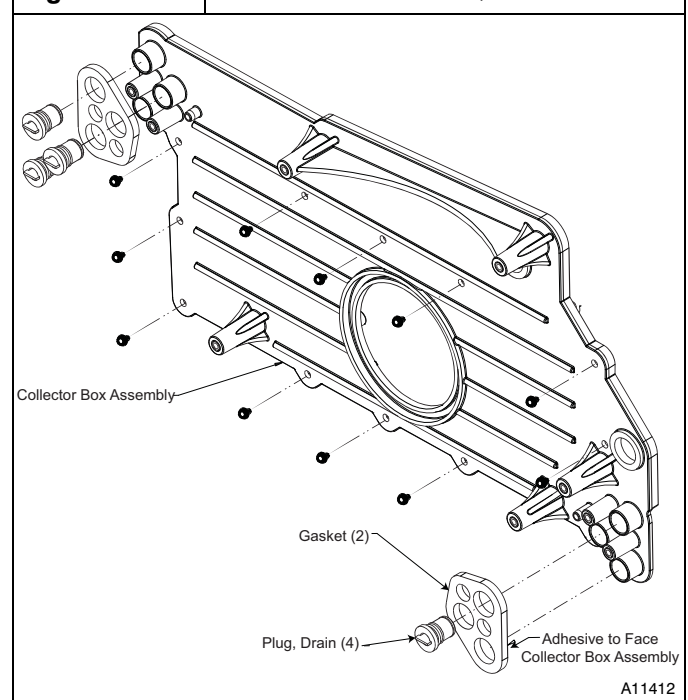
5. Remove the screw that secures the door switch to the blower shelf and remove remaining door switch bracket screws. Remove part.
6. Turn the grommet on the wiring harness sideways and slide it out of the slot in the blower shelf.

Collector Box Removal

1. Remove the screws that secure the collector box to the heat exchanger cell panel and set aside. See **Figure 5**.

Figure 5

Collector Box Removal / Installation



2. Remove collector box gasket. Verify old collector box gasket is re-useable or obtain new from distributor (preferred).
3. Flush out the Collector Box with warm water including the tube ports. Clean tube ports on Collector Box with a thin wire or paper clip, rinse with warm water and set aside.

Heat Exchanger Assembly Removal

1. Remove the main limit switch and gasket from the primary cell panel.
2. Remove the screws that attach the filler plate to the bottom edge of the condensing heat exchanger assembly and casing.
3. Remove screws that secure the heat exchanger assembly to the furnace casing. Do Not remove the screws around the burner inlets of the cell panel at this time.
4. Pull assembly forward until the back edge of the heat exchanger assembly is resting on the front edge of the blower shelf.

5. Lift the heat exchanger assembly out of the casing and set aside.

Remove Coupling Box

1. Remove the screws that secure the finger baffle from the Coupling Box Cover. See **Figure 8**.
2. Remove the screws that secure the Coupling Box Cover to the rear of the Heat Exchanger Assembly.
3. Use a putty knife or gasket scraper to get between the coupling box cover and the Primary Cell Outlet panel to break the silicone seal between the parts.
4. Pry upwards with the putty knife as you move around the Coupling Box cover.
5. Once the Coupling Box cover is sufficiently loosened, remove the coupling box cover from the rear of the Heat Exchanger Assembly. See **Figure 6**.



CAUTION

UNIT OPERATION HAZARD

Failure to follow this caution may result in improper furnace operation or failure of furnace.

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation.



PRUDENCE

D'EQUIPEMENT D'OPERATION

Toute erreur de câblage peut être une source de danger et de panne.

Lors des opérations d'entretien des commandes, étiqueter tous les fils avant de les déconnecter.

Separate Primary and Condensing Heat Exchangers

1. Remove screws that attach the sidewall baffles to the inlet and outlet primary and condensing heat exchanger cell panel. See **Figure 9**.

NOTE: The front edge of the sidewall baffle has a slot that engages a tab on the primary cell panel. See **Figure 9**.

2. Avoid damaging the cell panel insulation by pulling the sidewall baffle outward from the rear of coupling box, then pull the baffle backward to slide the baffle off of the locator tab on the cell panel.
3. Repeat the procedure for the opposite side baffle.
4. Remove the screws that attach the condensing heat exchanger assembly to the primary cell outlet panel.
5. Use a putty knife or gasket scraper to get between the primary cell inlet panel and condensing heat exchanger to break the silicone seal between the parts.
6. Repeat the procedure at the primary cell outlet panel and containment plate attached to the inlet of the secondary heat exchanger.

Remove Primary Cell Panel From Heat Exchanger

NOTE: The primary heat exchanger assembly is factory-assembled at primary cell attachment plate and the primary rear cell outlet panel. The individual heat exchanger cells cannot be removed in the field and are replaced as one assembly.

1. Remove the screws around each burner inlet opening that attaches the heat exchanger cell panel to the attachment plate of the primary heat exchanger assembly.
2. Remove the primary cell panel from the attachment plate with insulation and set aside.

Install Primary Heat Exchanger Cell Panel

1. Align the primary cell panel and insulation with the attachment plate of heat exchanger assembly and the top edge of the condensing heat exchanger assembly. See **Figure 8**. Foil side of insulation must face attachment plate of heat exchanger.
2. Avoid damaging the cell panel insulation during alignment.
3. Insert the screws around each burner inlet opening that attaches the heat exchanger cell panel to the primary inlet plate of the primary heat exchanger assembly.
4. Align the Primary Heat Exchanger with the Condensing Heat Exchanger assembly.
5. Install the screws along the bottom edge of the Primary Cell Panel and the top edge of the Condensing Heat Exchanger. Be sure foam seal is in place between panels.

Install Limit Switch and Gasket

NOTE: Series A model – R9MSB0801716A and Series B models – N9MSB0801716B & WFAR080B048B does NOT use a gasket on the limit switch.



CAUTION

UNIT OPERATION HAZARD

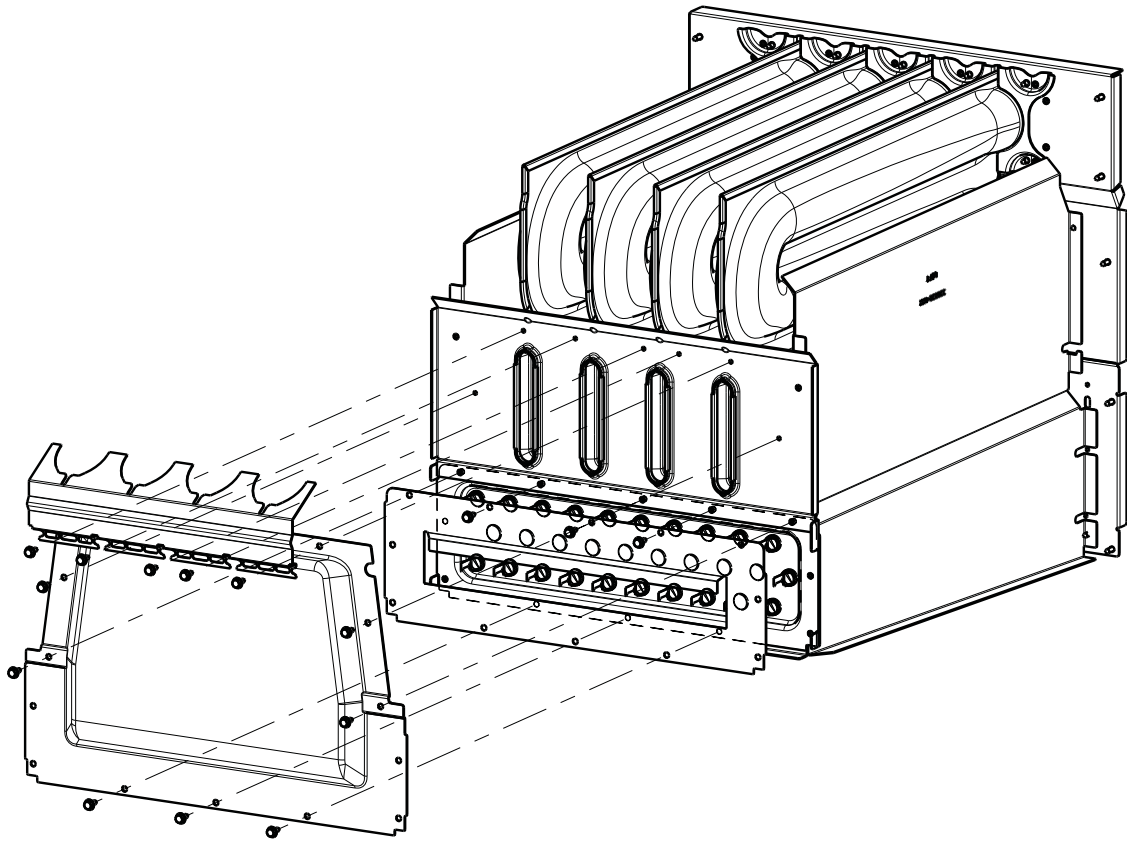
Failure to follow this caution may result in intermittent furnace operation.

Use of a gasket on the limit switch for Series A model – R9MSB0801716A and Series B models – N9MSB0801716B & WFAR080B048B will result in nuisance limit cycling. Nuisance limit cycling could result in intermittent operation or a no heat situation.

1. Install the gasket on the limit switch. See **Figure 3**.
2. Align the limit switch with the open in the cell panel and insert the 2 screws to attach the limit to the primary cell panel.

Figure 6

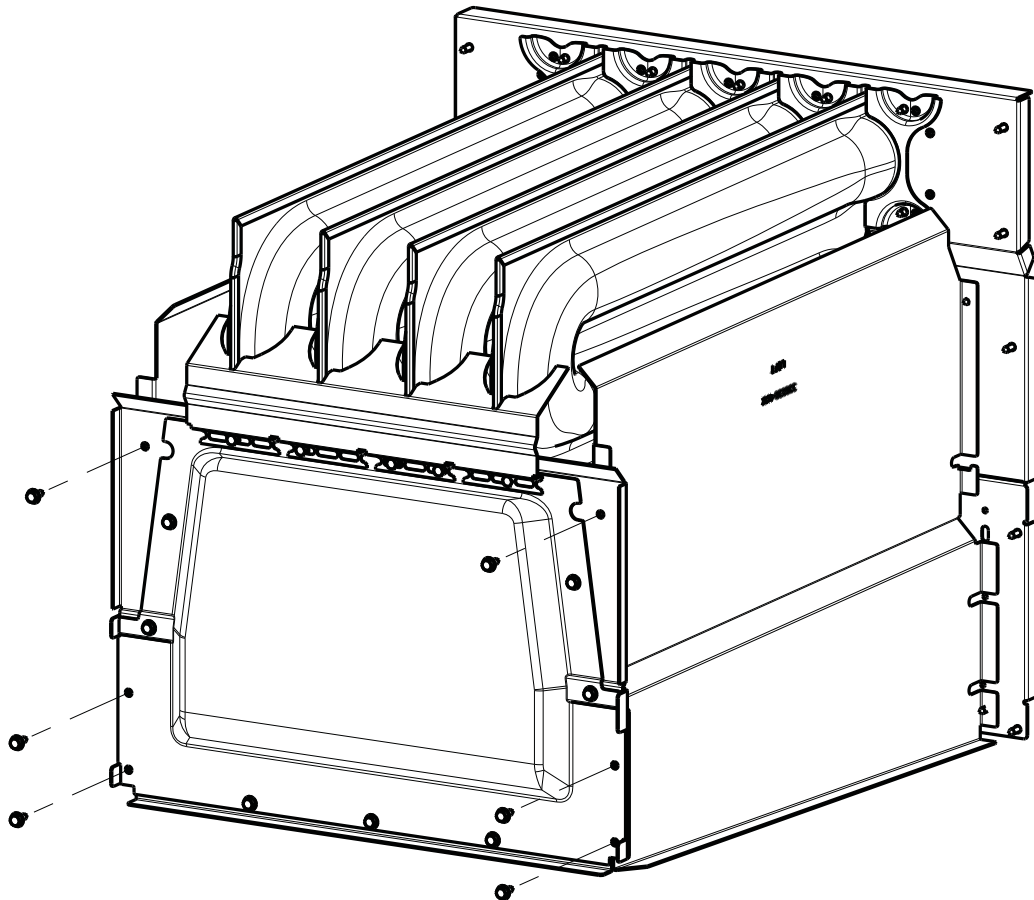
Coupling Box Cover & Finger Baffle Removal / Installation



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Figure 7

Sidewall Baffle Removal / Installation – Rear View



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Figure 8

Cell Panel Removal / Installation

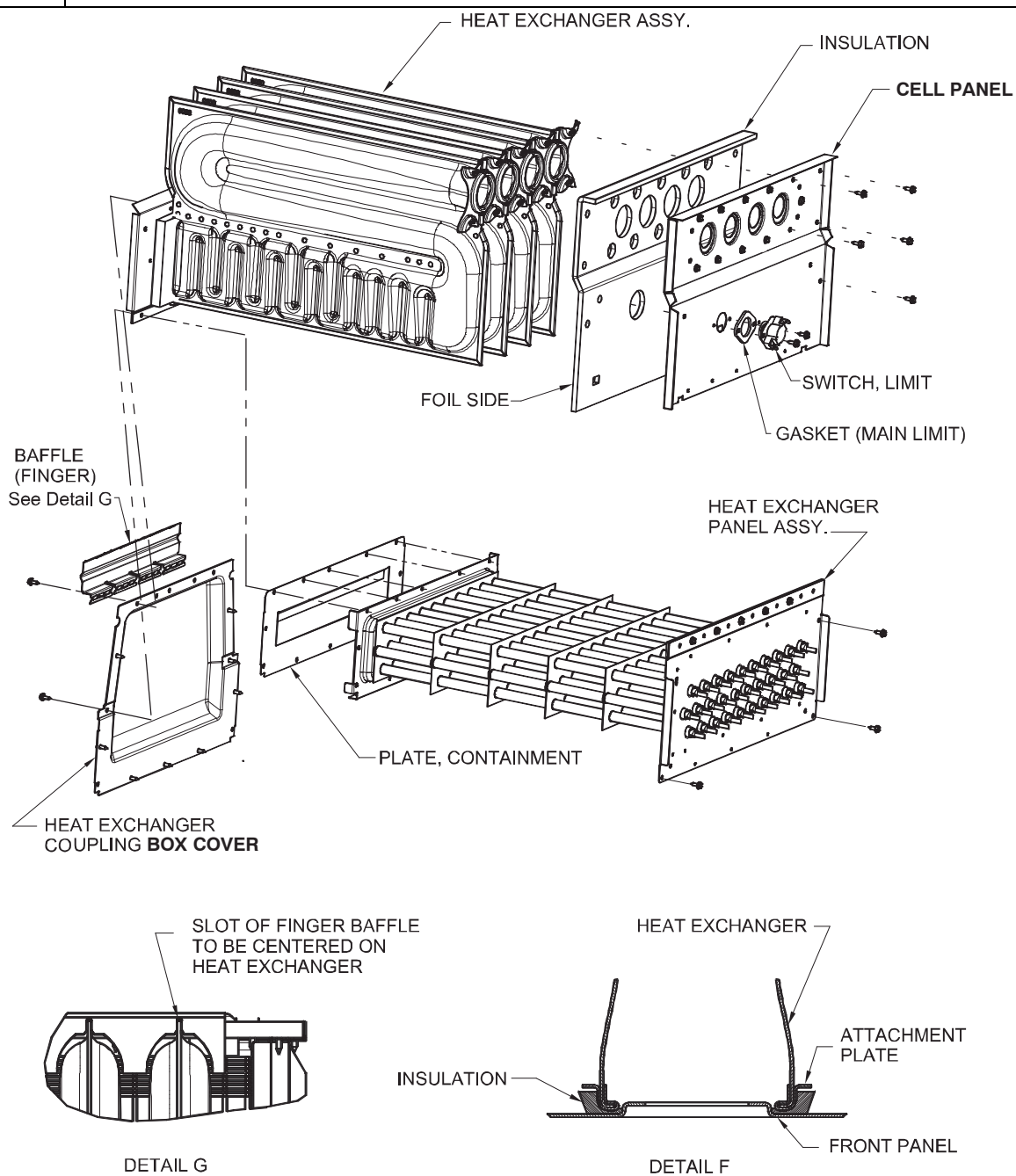
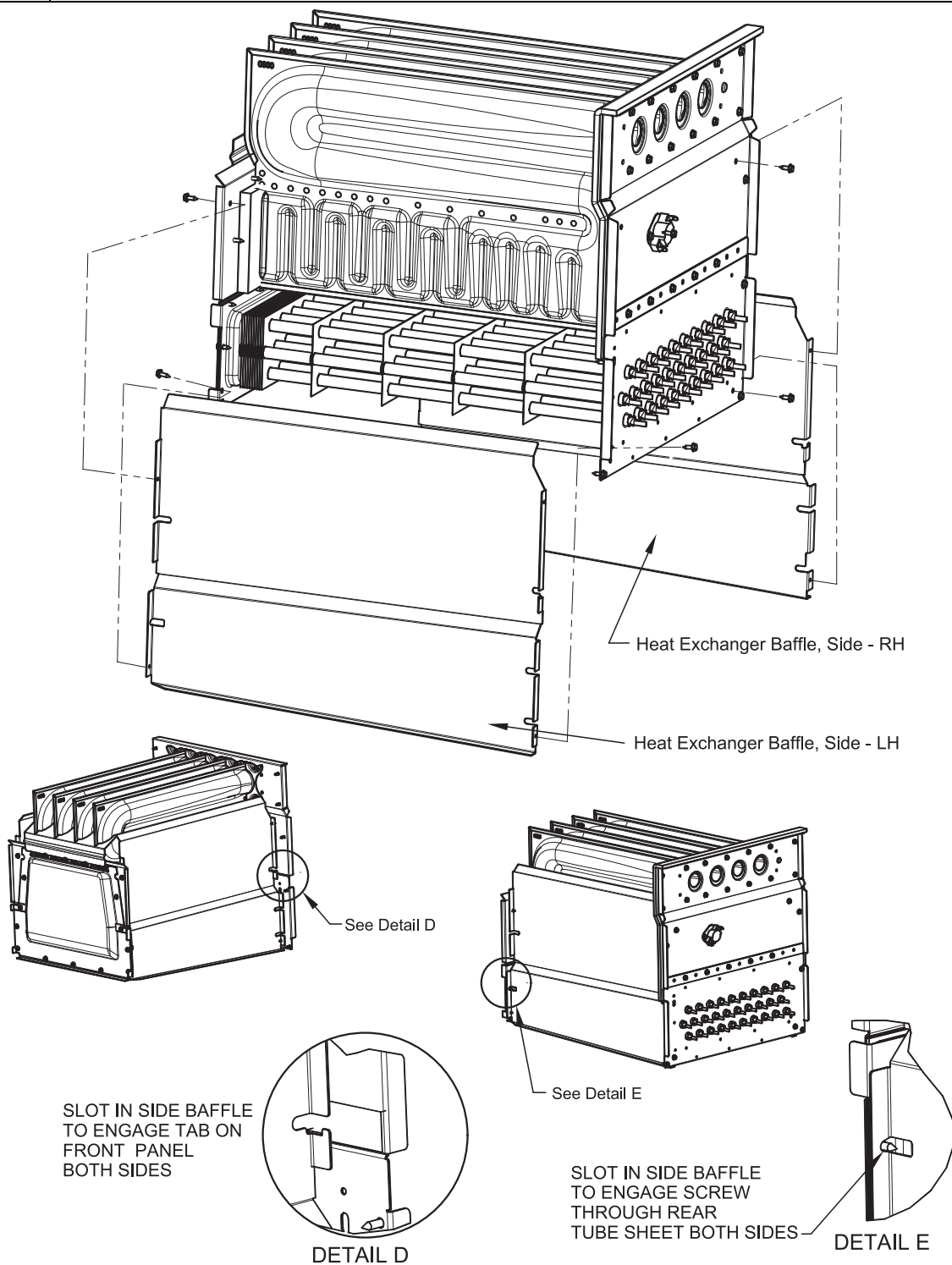


Figure 9

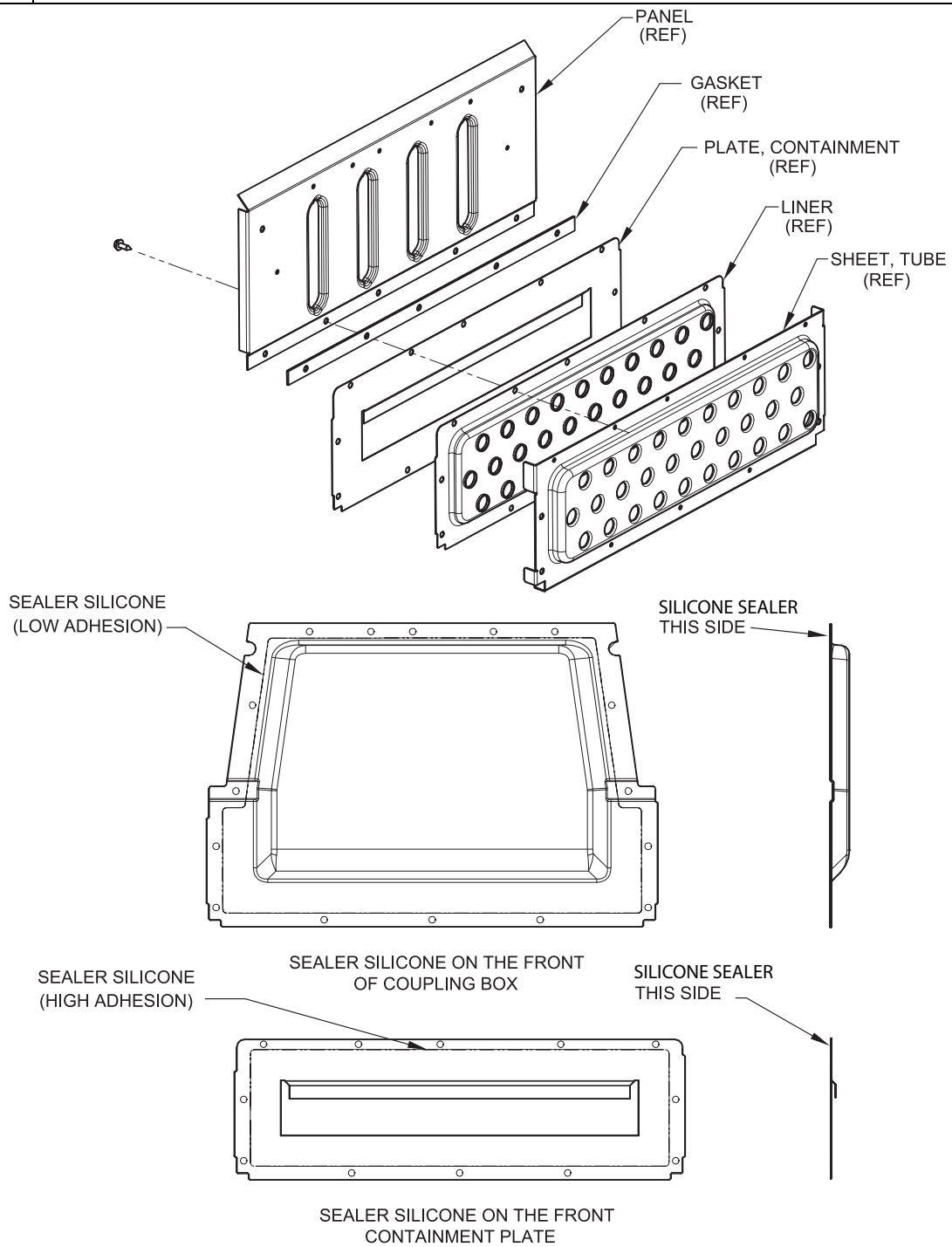
Heat Exchanger Panel Assembly



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Figure 10

Containment Plate and Collector Box Sealant Application



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RE-ASSEMBLY

Attach Primary and Condensing Heat Exchangers

1. Align the bottom edge primary cell outlet panel with the top edge of the condensing heat exchanger assembly.
2. The orange foam gasket must be between the primary cell outlet panel and the containment plate.
3. Insert all the screws except the outboard screws through the primary cell inlet plate to secure the primary heat exchanger to the condensing heat exchanger. See **Figure 8**.

Install Coupling Box Cover/Finger Baffles

⚠ CAUTION

EQUIPMENT OPERATION HAZARD

Failure to follow this caution may result in improper operation.

To prevent inadequate seal from occurring, sealant releasing agent must not contain corn oil, canola oil, halogenated hydrocarbons or aromatic contents.

1. Apply a 1/4" bead of low adhesion silicone (white) to the inside edge of the collector box cover. See **Figure 10**.
2. Align the Coupling Box Cover over the rear of the Heat Exchanger Assembly. See **Figure 6** and **Figure 8**.
3. Install the screws that secure the bottom edge and sides of the Coupling Box to the Heat Exchanger Assembly.
4. Align the Finger Baffles along the top edge of the Coupling Box Cover. See **Figure 6** and **Figure 8**.
5. Install the screws for the Finger Baffles and the remaining screws for the top edge of the Coupling Box Cover.
6. Align the sidewall baffles to the inlet and outlet primary and condensing heat exchanger cell panel. See **Figure 7** and **Figure 9**.

NOTE: The front edge of the sidewall baffle has a slot that engages a tab on the primary cell panel.

7. Avoid damaging the cell panel insulation by inserting the sidewall baffle inward from the rear of coupling box to the indexing tab on the Primary Cell Panel, then align the baffle with the Coupling Box Cover.
8. Secure the Sidewall Baffles with the screws.

Heat Exchanger Assembly Installation

1. Lift the heat exchanger assembly and set the rear of the assembly on the blower deck.
2. Slide the heat exchanger onto the support rails in the furnace casing.
3. Raise the rear of the heat exchanger and set the bottom of the sidewall baffles on top of the support rails in the blower deck.
4. Lift the heat exchanger slightly and slide the heat exchanger assembly into the casing, making sure the bottom edge of the sidewall baffle slides into the engagement tab on the support rails.
5. Continue to slide the heat exchanger assembly backward into the casing until the primary cell panel is flush with the mounting brackets on the side of the casing.

6. Align the primary cell panel with the mounting brackets.
7. Insert the screws that attach the primary cell panel to mounting brackets on the casing.
8. Align the filler plate to the bottom edge of the condensing heat exchanger assembly.
9. Secure the filler plate to the condensing heat exchanger and casing.

Collector Box Installation

1. Verify old collector box gasket is re-usable or obtain a new gasket from the distributor (preferred).
2. Verify old trap gasket is re-usable or obtain new from distributor (preferred) and install.

NOTE: There is a slot on each side of the front panel of the condensing heat exchanger. The collector box has alignment tabs on the back that fit into the slots on the condensing heat exchanger panel.

3. Align the tabs on the collector box to the slots on the condensing heat exchanger. See **Figure 11** and **Figure 12**.
4. With the collector box fully seated against the condensing heat exchanger cell panel, install the screws through the collector box.
5. Tighten the screws in an alternating pattern around the collector box. DO NOT over-tighten.

Figure 11 Rear View of Collector Box

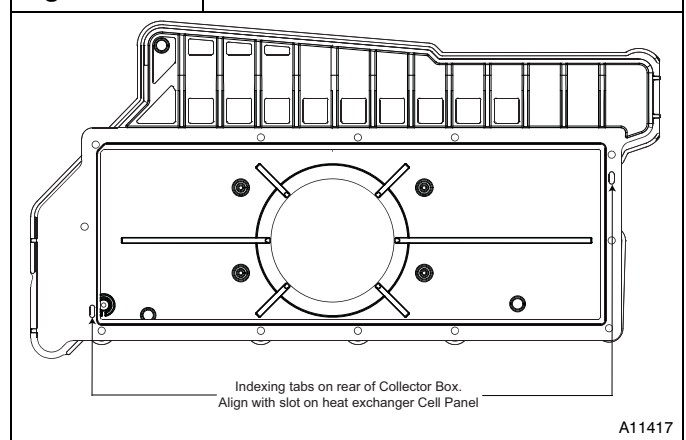
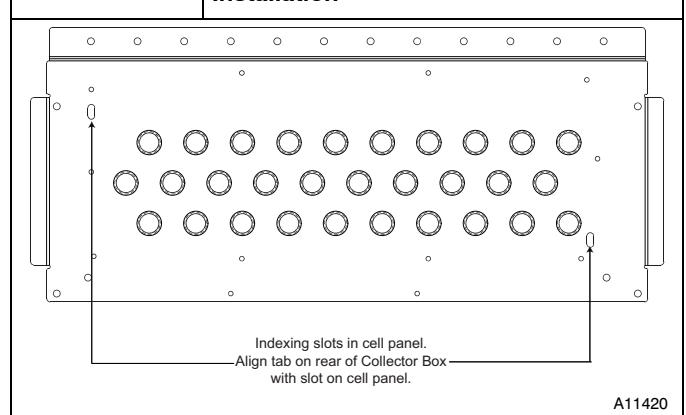


Figure 12 Indexing Slot for Collector Box Installation



Inducer Assembly Installation

1. Verify any remaining gaskets on the collector box are removed and discarded.
2. Verify the inducer assembly has gaskets on the drain stubs and at the inducer inlet.

3. Verify the Inlet Choke Plate (when used) is installed on the inlet opening of the inducer.
4. Align the tabs on inducer assembly to the brass inserts on the collector box.
5. Insert the mounting screws by hand through the tabs to secure the inducer to the collector box. There is a mounting tab located under the vent elbow.
6. Tighten the screws in an alternating pattern by hand. Do not use a screw gun or over-tighten the mounting screws.
7. Connect the inducer leads from the main wiring harness to the inducer motor harness.
8. Route condensate trap relief tube through standoffs on inducer housing and connect to the port on the collector box.

Install J-Box & Main Harness

1. Insert grommet for main harness in the slot in the blower shelf. See **Figure 3** and **Figure 4**.
2. Align the door switch to the blower shelf.
3. Align and install door bracket to front edge of blower shelf and secure door switch bracket during door bracket installation.
4. Connect the field wiring from the factory wiring and attach the ground wire to the green ground screw on the J-Box bracket.
5. Attach the J-Box cover to the J-Box bracket.

Pressure Switch Installation

NOTE: There are two types of pressure switches. The modulating pressure switch assembly has three pressure switches. Two are side-by-side with the third switch mounted to the back of one of the switches.

All other furnaces have two pressure switches mounted back-to-back.

The round tube for the front pressure switch connects the switch to the port on the collector box. The square tube for the switch mounted on the back connects the switch to the port on the inducer assembly. Refer to furnace installation instructions for wiring and tubing diagrams.

1. Connect the wires to the back pressure switch.
2. Connect the tube for the back pressure switch to the inducer assembly.
3. Connect the tube for the front pressure switch to the port on the collector box.
4. Attach the pressure switch assembly to the inducer.
5. Connect the pressure switch harness (modulating only) to the main wiring harness or attach the individual wires to the pressure switch (non-modulating).
6. If necessary, route the pressure switch tubing for the front pressure switch through the stand-off on the inducer assembly.
7. If necessary, route the condensate trap relief tubing through the stand-off on the inducer assembly. Reconnect tubing to the ports on the condensate trap and collector box.

Install the Condensate Trap and Drain

1. Align the trap with the drain outlet on the collector box. See **Figure 2**.

2. Secure the trap to the collector box with the screw.
3. Connect the condensate trap relief tube from collector box port and insert the tube into the molded retainer clips on the inducer housing.
4. Insert the condensate drain elbow through the casing until it is properly seated. Or, connect the drain elbow to the drain extension pipe and route the pipe behind the inducer.
5. Connect the drain elbow to the condensate trap.

NOTE: If condensate has a heat pad attached to the trap, trace the wires for the pad back to the connection point and connect the wires for the heat pad.

Burner Box/Manifold Installation

1. Support the burner box assembly and install the screws that attach the burner box to the heat exchanger cell panel. See **Figure 3**.
2. Align the orifices in the manifold assembly with the support rings on the end of the burner.
3. Insert the orifices in the support rings of the burners. Manifold mounting tabs should fit flush against the burner box.

NOTE: If manifold does not fit flush against the burner box, the burners are not fully seated forward. Remove the manifold and check burner positioning in the burner box assembly.

4. Attach the green/yellow wire and ground terminal to one of the manifold mounting screws.
5. Install the remaining manifold mounting screws.
6. Connect the wires to both rollout switches.
7. Connect the wires to the flame sensor and hot surface igniter.
8. Connect the connector harness from gas valve (modulating only) or attach the individual wires to the terminals on gas valve (all other models).

NOTE: Use only propane-resistant pipe dope. Do not use Teflon tape.

9. Insert the gas pipe through the grommet in the casing. Apply a thin layer of pipe dope to the threads of the pipe and thread the pipe into the gas valve.

NOTE: Use a back-up wrench on the gas valve to prevent the valve from rotating on the manifold or damaging the mounting to the burner box.

10. With a back-up wrench on the inlet boss of the gas valve, finish tightening the gas pipe to the gas valve.
11. Turn gas on at electric switch on gas valve.
12. Turn power on at external disconnect, fuse or circuit breaker.

Vent Pipe Installation

1. Insert the vent pipe through the top of the furnace casing and insert into the outlet of the inducer vent elbow.
2. Tighten the clamp for the vent pipe at vent elbow on the inducer assembly 15 lb-in.
3. Align the remaining vent pipe system to the vent pipe in the furnace casing.
4. Solvent cement the pipes as required for the type of material used or attach the plastic vent pipe adapter to the top plate of the furnace.

5. Ensure that the vent pipe is inserted into the vent pipe adapter and tighten both clamps at the vent pipe support attached to furnace casing 15 lb-in.

Unit Checkout



WARNING

FIRE OR EXPLOSION HAZARD

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

Never purge a gas line into a combustion chamber. Never test for gas leaks with an open flame. Use a commercially available soap solution made specifically for the detection of leaks to check all connections. A fire or explosion may result causing property damage, personal injury or loss of life.



WARNING

RISQUE D'EXPLOSION ET D'INCENDIE

Le non-respect des avertissements de sécurité pourrait d'entraîner des blessures graves, la mort ou des dommages matériels.

Ne jamais utiliser une flamme nue pour vérifier la présence des fuites de gaz. Pour la vérification de tous les joints, utiliser plutôt une solution savonneuse commerciale fabriquée spécifiquement pour la détection des fuites de gaz. Un incendie ou une explosion peut entraîner des dommages matériels, des blessures ou la mort.

1. Set thermostat to "OFF".
2. Turn on power at external disconnect, fuse or circuit breaker.
3. Turn on gas at external shut-off or gas meter.
4. Check for gas leaks with a commercially available soap solution made specifically for the detection of leaks to check all connections.
5. Manually close blower door switch.
6. Initiate component test through circuit board by referring to "**Component Test**" on status code label on blower access door for complete test sequence information.
7. If any status codes are flashed, refer to status code label on unit blower door.
8. Turn thermostat fan switch to "ON", "Continuous" or jumper R to G terminals at furnace control board.
9. Check for air leakage around cell panel. It may be necessary to remove heat exchanger assembly and top gasket between cell panel and furnace casing top plate. Re-install and re-check for blower air leaks.

10. Remove jumper(s) or set thermostat fan to "Auto" or "OFF".
11. Release blower door switch.
12. Install blower access door.
13. Set thermostat to call for heat.
14. Allow unit to initiate a complete call for heat cycle.
15. Check for air leakage around collector box. A whistling noise may indicate air leak in collector box seal.

NOTE: If there is a severe air leak in the collector box seal, pressure switch may not close or will re-open, resulting in no ignition or erratic burner operation.

NOTE: Cell Panel corrosion and failure may have been caused by one or more of the following conditions. As part of the system check-out, verify that the following conditions are not affecting the operation of the furnace:

- Short Cycling—Defective thermostat: Incorrect thermostat anticipator setting, dirty filter or over-sized furnace.
 - Under firing/low Btu input: Set manifold pressure and verify firing rate as shown on rating plate by clocking the gas meter.
 - Over firing/high Btu input: Set manifold pressure and verify firing rate as shown on rating plate by clocking the gas meter.
 - Low temperature rise: Set unit for correct temperature rise range as shown on unit rating plate.
 - Contaminated combustion air: Remove contaminants or provide ample fresh air for combustion.
 - Excessive amounts of outside ventilation air: Return air temperature cannot be below 60°F (15.6°C) for extended periods of time.
 - Incorrect venting or termination: Recirculation of products of combustion into the combustion air pipe can damage the furnace. Verify proper venting and vent termination per Installation Instructions. For additional information, and a complete sequence of furnace operation, refer to furnace Installation, Start-Up and Operating Instructions.
16. After System Check-out is complete, set thermostat below room temperature.
 17. Verify that burner shuts down and blower completes selected off delay time.
 18. Verify furnace operates properly and set thermostat to desired room temperature.
 19. Re-install outer door.