

Bottom Power Entry Kit

INSTALLATION INSTRUCTIONS

P6SP Model Series Accessory Light Commercial Ton Packaged A/C Units

This kit is designed to allow passage of high and low voltage wiring connections through the unit bottom pan on P6SP Series units.

WARNING:

This kit is to be installed by a qualified service technician in accordance with these instructions and all codes having jurisdiction. Failure to follow these instructions could result in serious injury, property damage, or death.

WARNING:

All electrical wiring must comply with the latest edition of the National Electrical Code ANSI/NFPA 70.

These instructions are primarily intended to assist qualified individuals experienced in the proper installation of this appliance. Some local codes require licensed installation/service personnel for this type of equipment.

This Kit Includes:

- 1) Parts kit:
 - a. 2" diameter, electrical conduit, short elbow
 - b. 2" diameter, electrical conduit nipple, 5" long
 - c. 2" conduit, lock-nuts (4 ea.)
 - d. 2" conduit, plastic bushings (2 ea.)
- 2) Bottom Power entry electrical box assembly
- 3) Bottom Power entry electrical box cover plate
- 4) 7/8" Diameter, plastic star bushing (2 ea.)
- 5) 7/8" Diameter, plastic hole plug
- 6) 1/2" long #10 Screws (x ea.)
- 7) Zip-ties
- 8) Kit Instructions

Field Supplied Items list:

- 1) Thread Sealant
- 2) Unit Disconnect and conduit necessary to connect disconnect to
- 3) All conduit necessary for connections external to the unit

Prior to beginning the installation, ensure the follow conditions are met:

- 1) Read and understand the instructions for all accessory kits to be installed with the unit and the unit installation instructions.
- 2) Unit is installed on roof-curb.
- 3) No electrical power is connected to unit.
- 4) Verify that input power supply is correct, verify with unit rating label.
- 5) Branch circuit protection to be used for unit is sized in accordance with all applicable codes and unit requirements.
- 6) Perform all electrical set-up inspections called for in unit Installation instructions.
- 7) Verify kit contents to inventory list above.
- 8) Verify all field supplied items are on-hand for installation.

1. Remove unit control panel, blower access door and field-wiring, electrical element access door are removed. (Refer to unit installation instructions, Physical data pages)
2. If applicable, install in accordance with the applicable kit instructions, the dual circuit adapter kit and/or H5HK heater kit prior to continuing.
3. Remove the bottom power kit base-plate installed in the unit, under the units blower, by removing the four attaching screws. (see Figure 1, save screws)
 - The base-plate is provided with four – 7/8” knock-outs for both low & high voltage wiring entry to the unit. The two – left side knock-outs are for the low voltage compartment and the two – right side knock-outs are for the high voltage entry(s). If a larger entry hole is required, use a sheet metal hole punch or other applicable method to produce the proper hole diameter for the strain-relief or conduit connection to be utilized. (See Figure 16)
4. Replace bottom power base-plate with wiring conduit or strain-relief and re-attach with the same screws.
5. Install bottom power entry box on to base-plate and attach with four – 1/2” long #10 screws (provided) using a 5/16” nutdriver. (See figure 2)

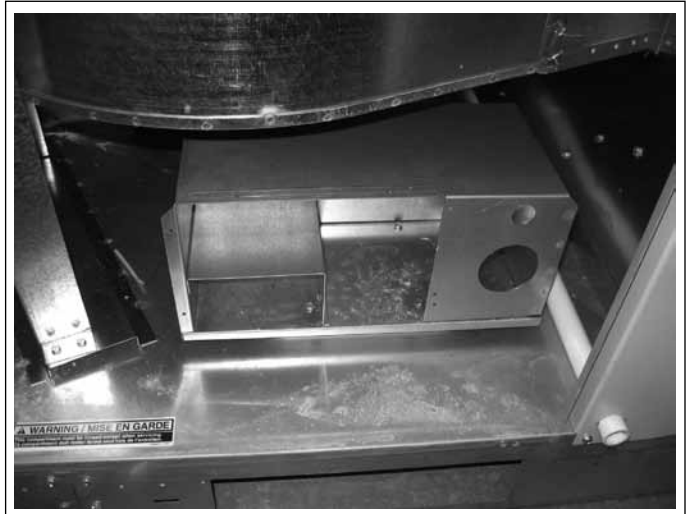


Figure 2.



Figure 1.

- Note: Bottom power base-plate is not designed to support the weight of long conduit or wire runs or installations using large gage wires. Always ensure the conduits and wiring coming into the unit is properly supported from the building structure and not from the unit.

6. Remove 2” conduit nipple, elbow, lock-nuts (4) & conduit bushings (2) from supplied parts kit. (See Figure 3) Assemble conduit nipple to elbow, using thread sealant (field supplied) and then install one of the lock-nuts on each side of the assembly. Thread the lock-nuts fully onto the assembly but do not tighten.

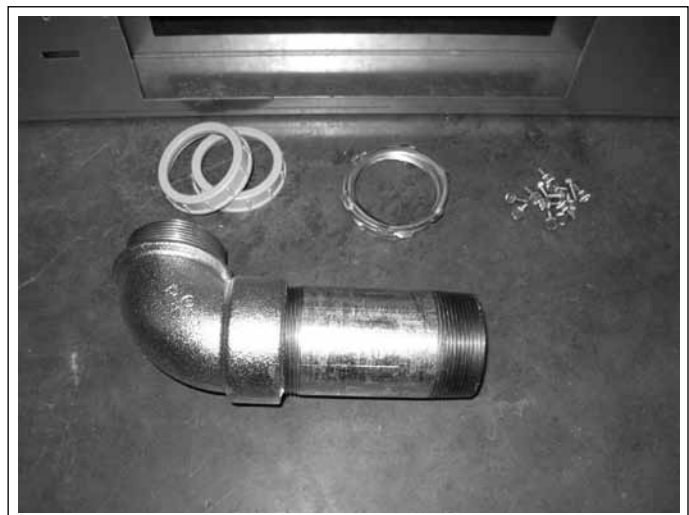


Figure 3.



Figure 4.

7. Remove large plastic plug from the unit internal divider panel (to the right of the bottom power entry box, above condensate drain) and clear away the insulation cutout (pre-cut) to gain access from the blower compartment to the element access compartment. (See Figures 4 & 5)



Figure 5.



Figure 6.

8. Remove small plastic plug from the unit internal divider panel and replace with one of the star bushings provided. (see Figure 6) Remove insulation cutout (pre-cut) in element access compartment. (see Figure 5)



Figure 7.



Figure 8.

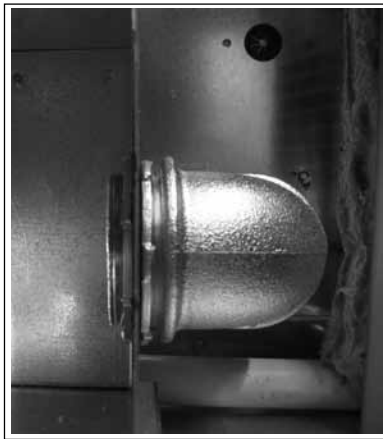


Figure 9.



Figure 10.



Figure 11.



Figure 12.

9. Install 2" Conduit assembly from bottom power entry box to the units internal divider panel, adjust the position of the pre-installed locknuts to provide the best fit. Then install the remaining two locknuts to lock the assembly in place. (See Figures 7-9) Once secure, install the two, 2" conduit plastic bushings to prevent damage to the wires when pulled through the pass-through. (Figures 10-11)

10. For Installations of equipment that do not include the factory installed – convenience outlet option: Install the provided, 7/8" plastic, button plug into the small hole on the front face of the bottom power entry box. (see Figure 12) On units that are equipped with the convenience outlet, install the strain-relief device instead of the button plug. (Field supplied: two-screw or other applicable device.) For more information, refer to the factory installed outlet instructions.



Figure 13.

11. Install the second provided star bushing into the 7/8" diameter hole on the left face of the bottom power entry box for the low voltage cable routing. (See Figure 13)
12. Install unit disconnect and conduit to connect disconnect to the unit's heat exchanger end panel. Refer to the Unit's Installation Instructions, Physical Data Pages, for the recommended disconnect mounting location and connection points.

13. Bring the high voltage, unit power supply wiring (and if applicable, 110V convenience outlet supply wiring) into the right side of the bottom power entry box for connections. Route wires from the bottom power entry box, to the unit disconnect and then to the unit HV inputs. Refer to the unit and other installed accessory kits installation instructions or Figures 17 & 18 for details.

Note: For units equipped with the Dual Circuit Adapter kit: ensure that both power supplies are properly routed through a means of disconnect.

14. Bring the Low voltage, unit control wiring into the bottom power entry box, under the low voltage divider. Make connections in the bottom power entry box, low voltage area – or – route wires/cable through both of the star bushings installed in steps 11 and 9 to the unit low voltage connections in the element access vestibule.
 - 15) Check all wiring and conduit connections and tighten as required.
 - 16) Attach service box cover using the remaining four screws provided.
 - 17) Caulk around area where conduit passes through interior divider panel to ensure an air/water tight seal.
 - 18) Replace all panels.
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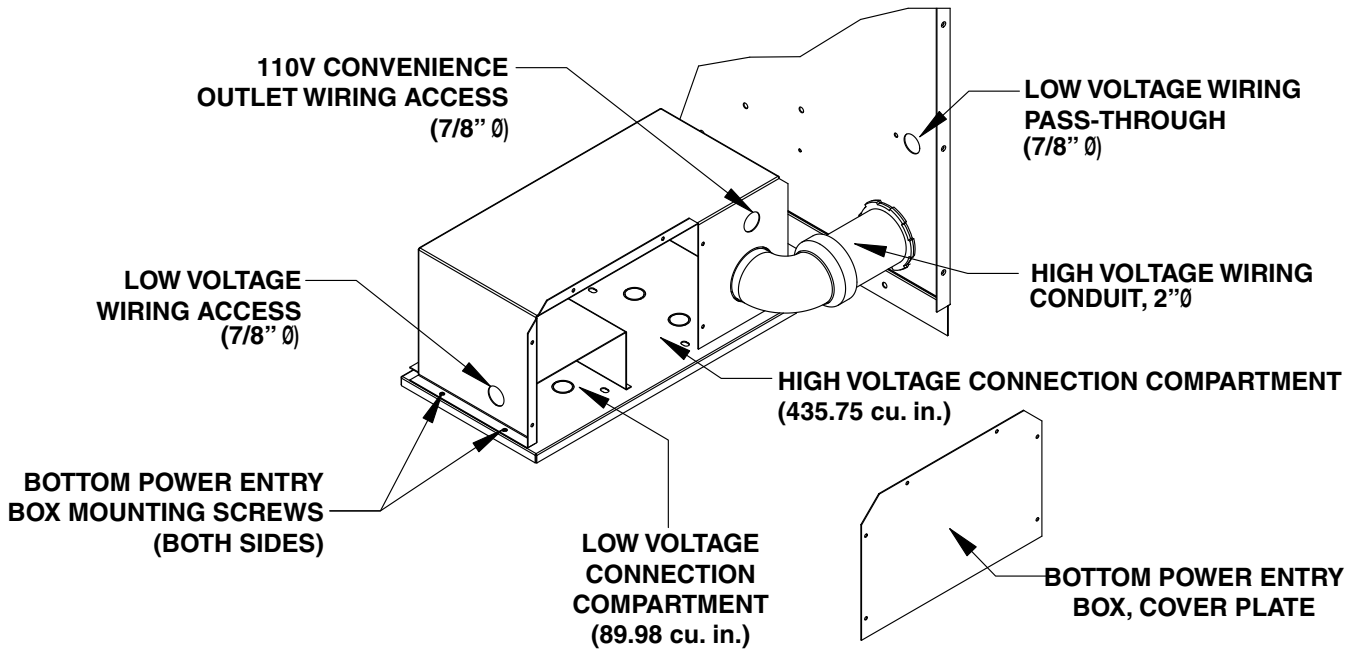


Figure 15. Bottom Power Kit

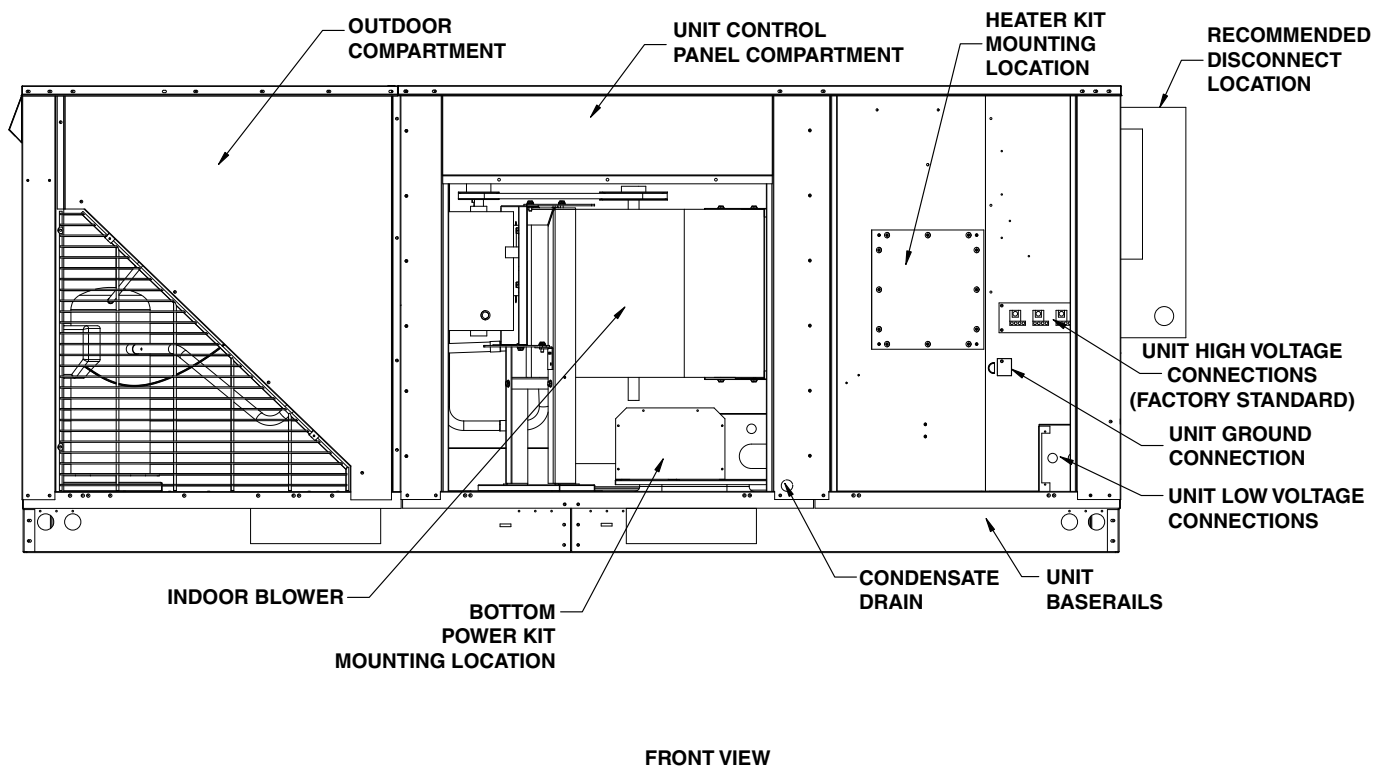


Figure 14. Unit Component Locations

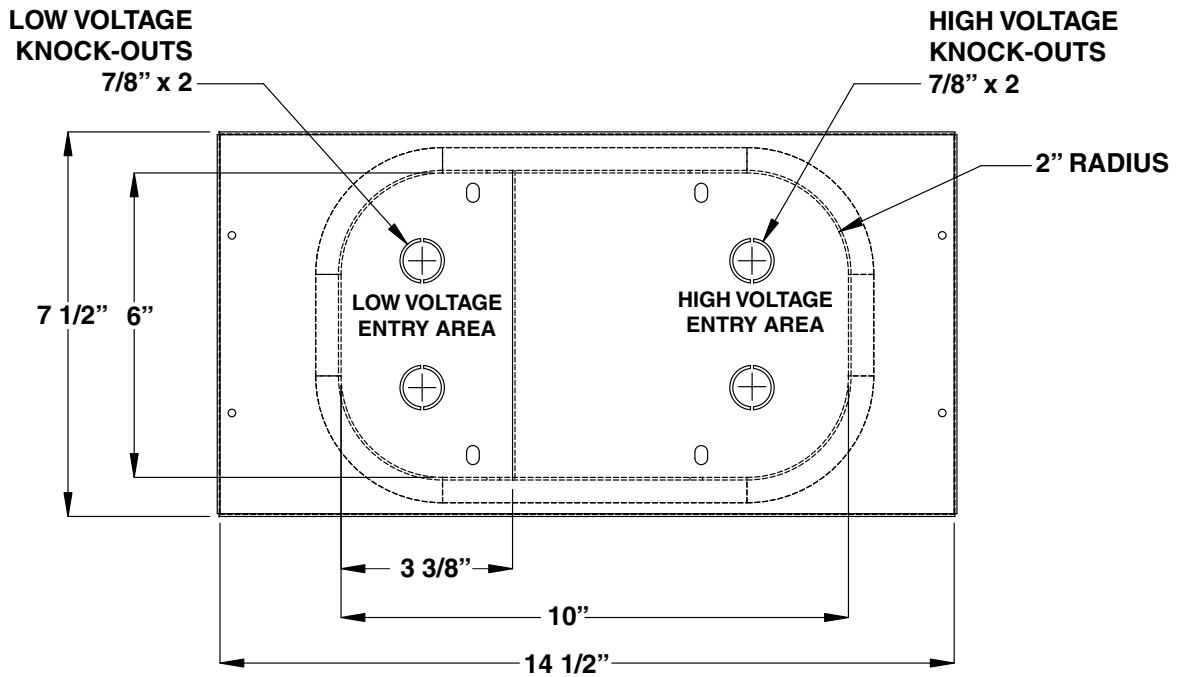


Figure 16. Bottom Power Entry Box Base Plate

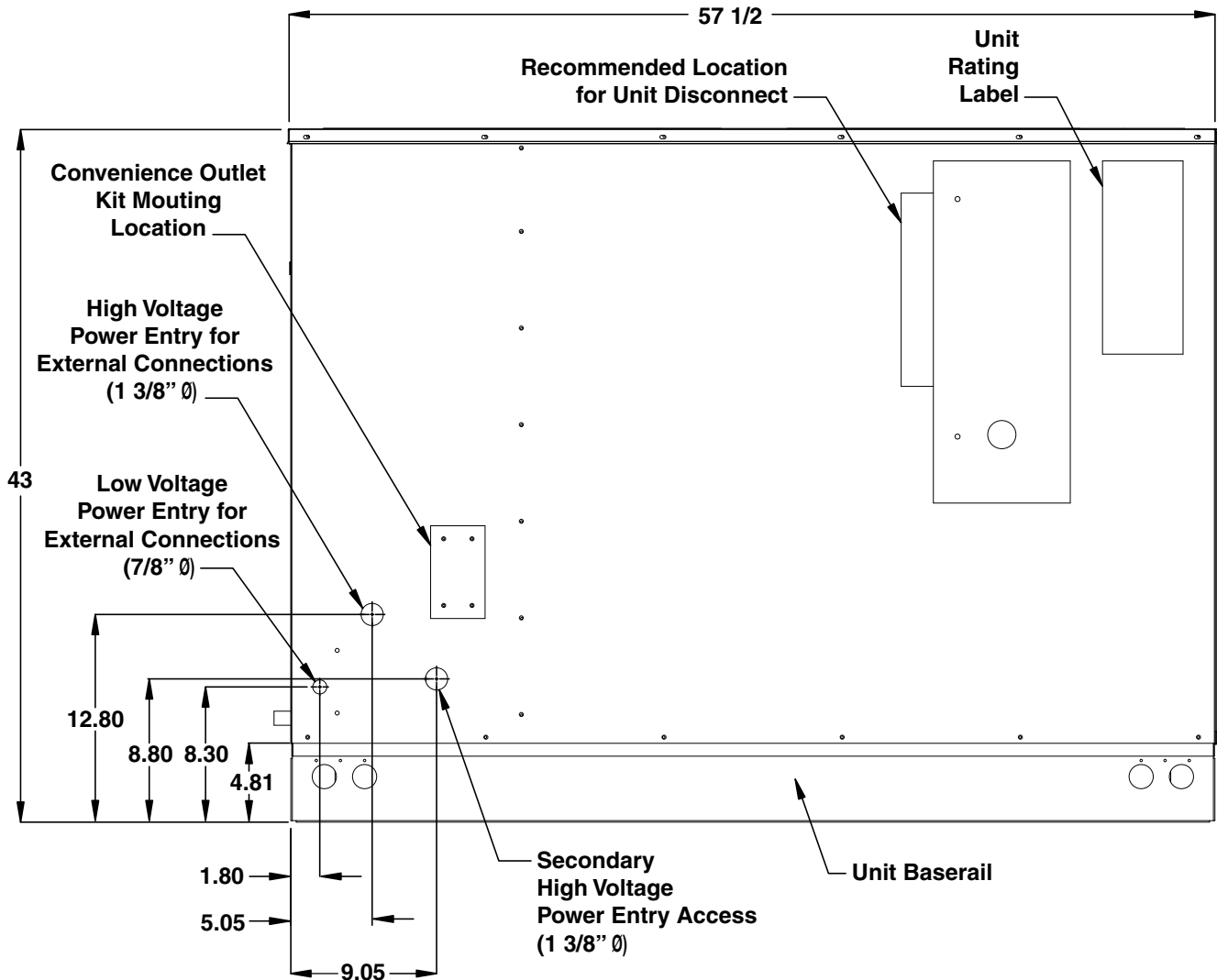


Figure 17. Side View

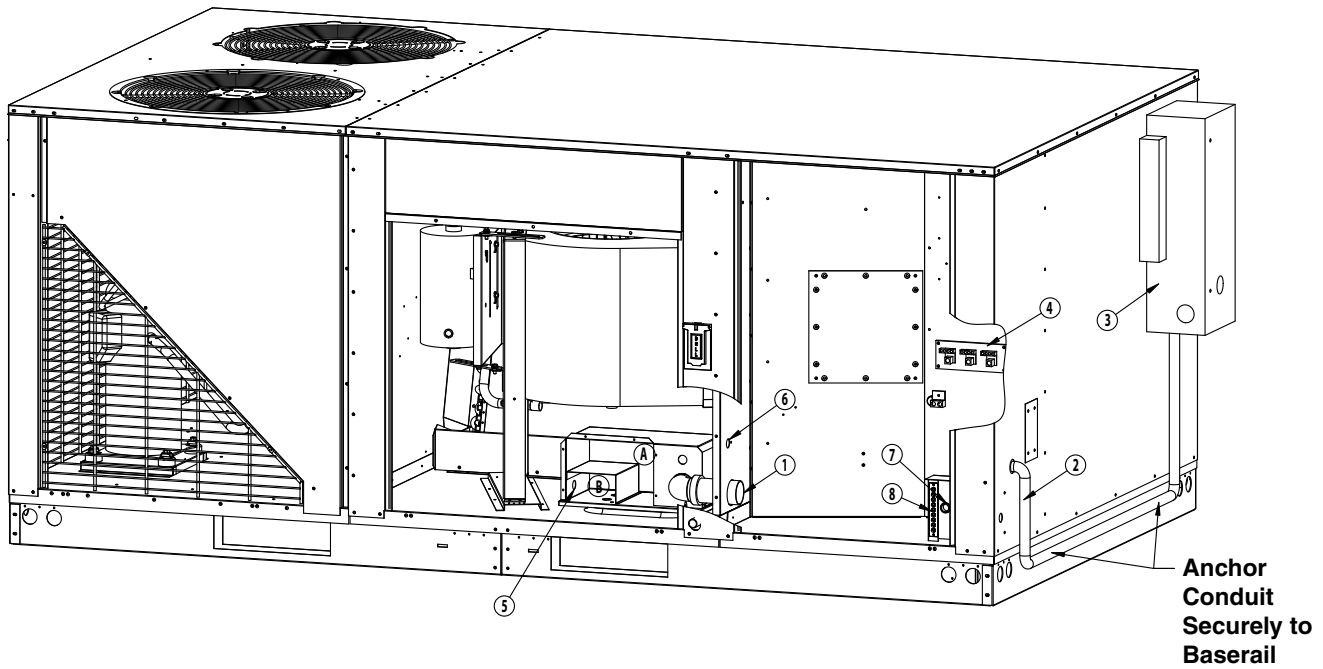


Figure 18. Wire Routing Diagram

Wire Routing Instructions

High Voltage Wiring

- Bring Branch Circuit wiring into Compartment **(A)**
- Route through conduit **(1)** across the element access compartment to the field supplied conduit **(2)** and into the disconnect **(3)**.
- After disconnect **(3)** route wiring & ground back through conduit **(2)** to the unit inputs & ground at location **(4)**.

Low Voltage Wiring

- Bring thermostat wiring into Compartment **(B)**.
- Route out of hole **(5)** to hole **(6)** to enter the element compartment.
- Route across the compartment through the back of the low voltage divider panel **(7)**.
- Make connections on appropriate terminals **(8)**.

