

### Installation Instructions for Power Exhaust Fans used with ZC, ZG, ZH 092, 102, 120, 150 Packaged Units

#### Shipping and Packing List

- 1 - Power Exhaust Assembly
- 1 - High Voltage Harness (3 pin)
- 1 - Hardware Bag
  - 1 - Instructions
  - 8 - #10 x 5/8" screws
  - 1 - Terminal Adaptor (Z1PWRE10B-1Y only)
  - 1 - 7/8" Webbed Snap Bushing

#### Application

Check packaging for shipping damage. Contact the last carrier immediately if any shipping damage is found.  
Power exhaust fans are applied to units equipped with an economizer in down flow air discharge. The power exhaust fan option cannot be used in horizontal air discharge applications. See Table 1.

Locate all other accessories to be installed. Install accessories in the following order:

- 1 - Economizer Dampers
- 2 - Sensors
- 3 - Power Exhaust Fans
- 4 - 575 volt transformer (if required)
- 5 - Filter Door

**Table - 1**

Unit	Unit Voltage	Cat. No.
ZC,ZG,ZH 092-150	208/230v 575v(*)	Z1PWRE10B-1Y (208*230V 1ph)
	460v	Z1PWRE10B-1G (460v 3ph)

\*For 575 applications, a field-supplied and installed transformer (Cat no. 59E02) must be used with a 208/230V power exhaust assembly.

#### **⚠ WARNING**

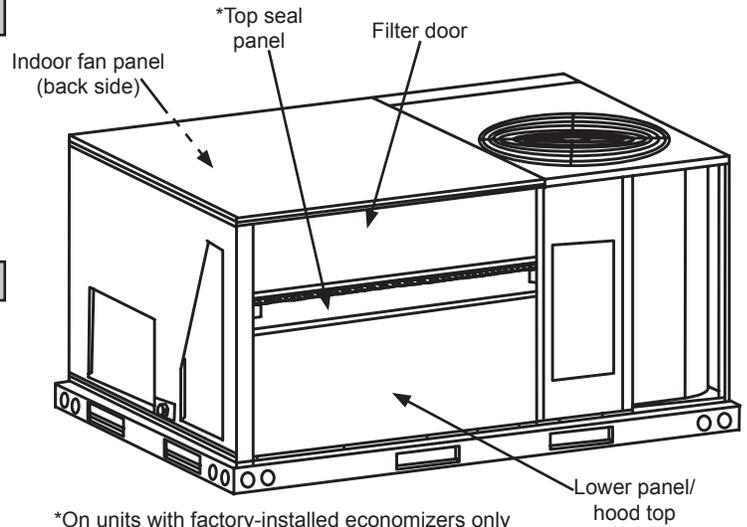
**Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a qualified installer, service agency or the gas supplier.**

#### Installation

1. Disconnect electrical power to unit.
2. If unit does not already contain an economizer, install using instructions provided with economizer.
3. Install any economizer related optional sensors.
4. Remove filter door and indoor fan panel from unit. Retain screws and set aside for later use. (See Fig. 1.)
5. If economizer hood is already installed it can be removed and discarded.

IMPORTANT: Set aside hood's aluminum filter for use in power exhaust.

NOTE: If unit has factory installed economizer also remove and discard top seal panel and lower panel / hood top (see Fig. 1).



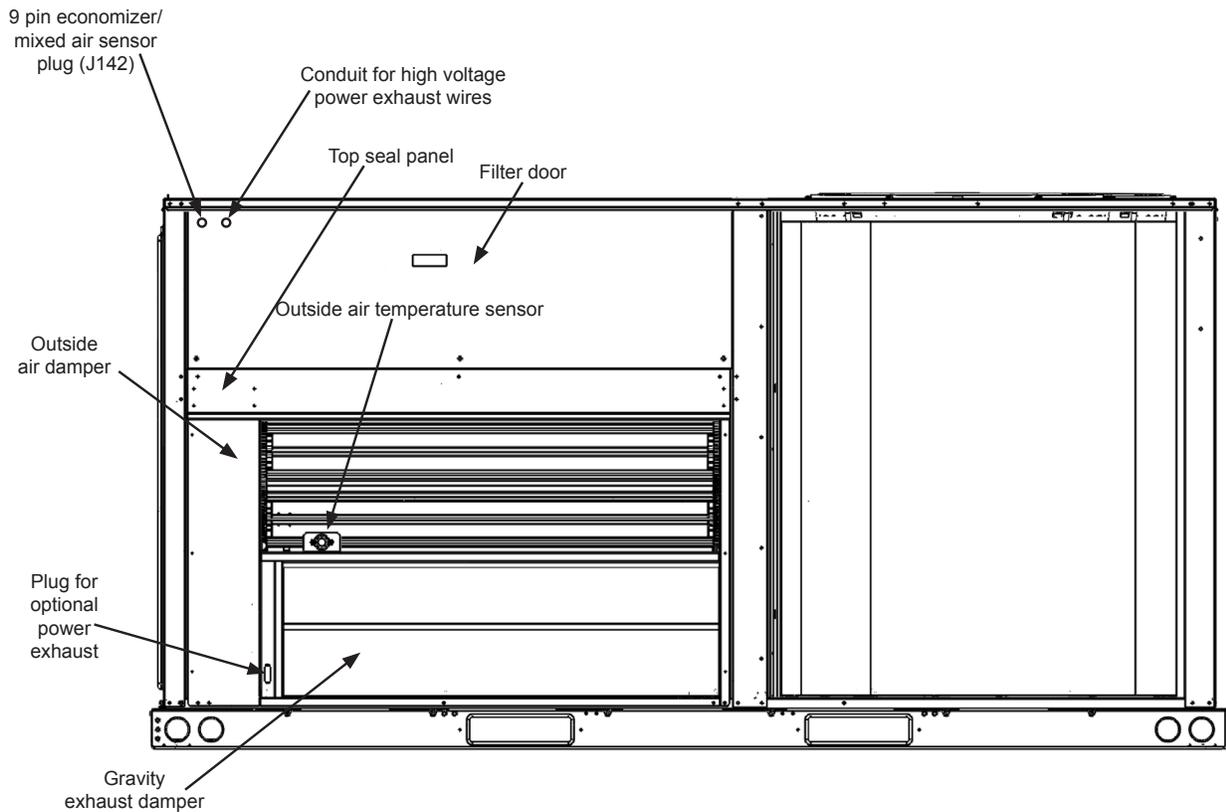
**Figure 1**

6. Set power exhaust in front of installed economizer, close enough to make wiring connections.
7. Connect the 5 pin plug (P18) from power exhaust into plug (J18) on bottom left corner of economizer. (See Fig. 2 and 5.) The 5 pin plug contains 2 wires for the low voltage connection to the economizer controller for power exhaust setpoint activation, and 2 or 3 (depending on voltage) high voltage wires.

#### **⚠ CAUTION**

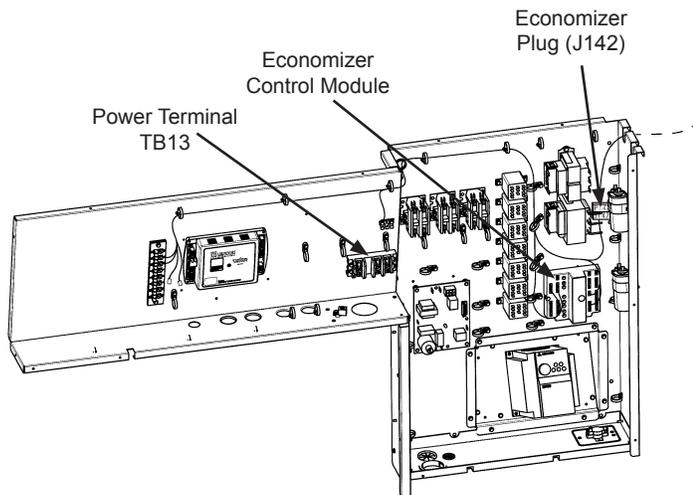
**Danger of sharp metallic edges. Can cause injury. Take care when servicing unit to avoid accidental contact with sharp edges.**

8. Secure wires from power exhaust in place so they do not interfere with gravity exhaust dampers.
9. Lift power exhaust in place over economizer. Bottom of power exhaust will rest on unit. Screw power exhaust to unit and economizer through pre-punched holes in power exhaust side flanges. (See Fig. 5 and 6.)
10. Connect the 3 pin high voltage harness (P24) shipped with the power exhaust, to the 3 pin high voltage plug on the side of economizer (J24). See Fig. 2 for plug location.
11. Locate the black empty flexible conduit on the left top in the filter section (see Fig. 2).
12. Route the high voltage harness through the conduit to the blower compartment and to the control box area through the blower power wire conduit at the top of control box.
13. Connect high voltage harness to unit power connections at terminal block TB13 (see Fig. 7 and 8.) Secure these high voltage wires with other high voltage wires inside the control box.

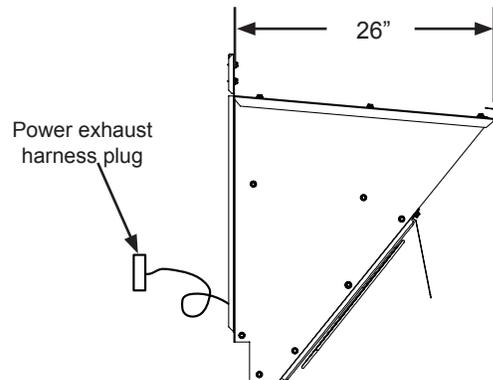


**Figure 2**

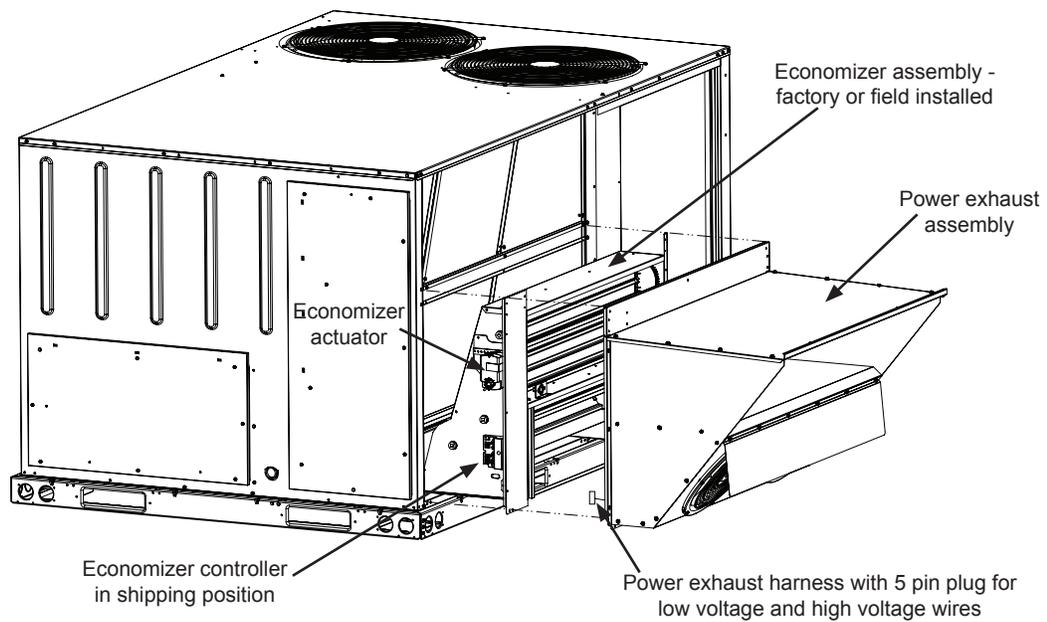
14. Install aluminum filter, shipped with economizer, in outside air intake section of power exhaust hood.
15. Adjust power exhaust setpoint on economizer control module. (See Fig. 3.) Adjust control module per economizer instructions. Note that economizer control module is installed in the HVAC control box. (See Fig. 3.)
16. Reinstall filter door above economizer. (See Fig. 6.)
17. Reapply power to unit.



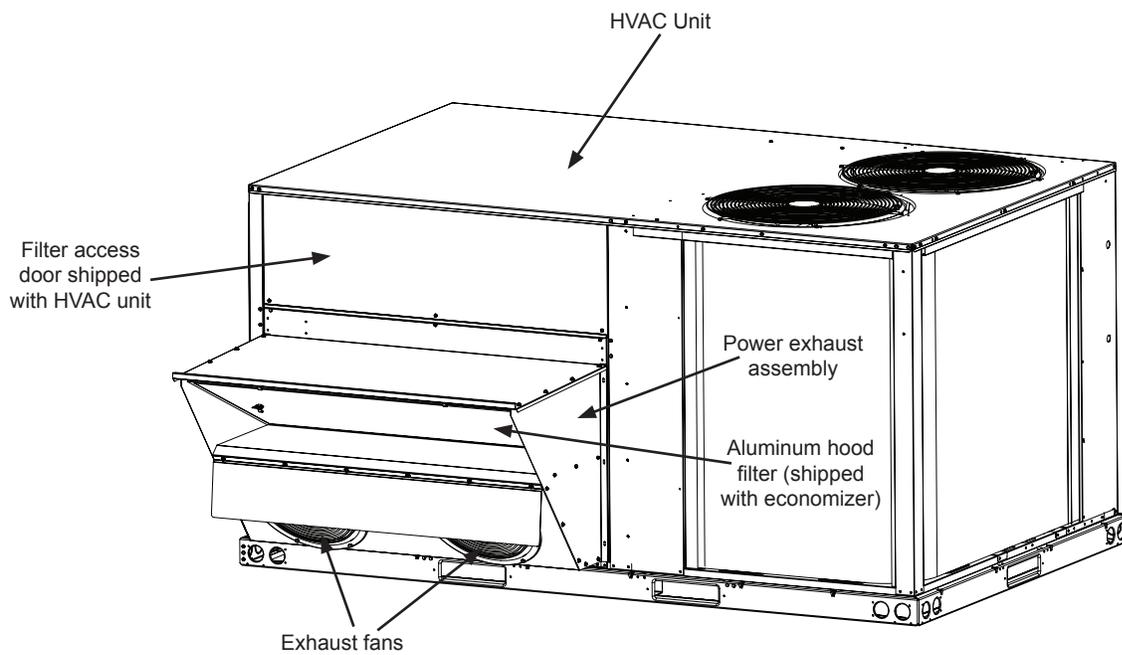
**Figure 3 - HVAC Control Box**



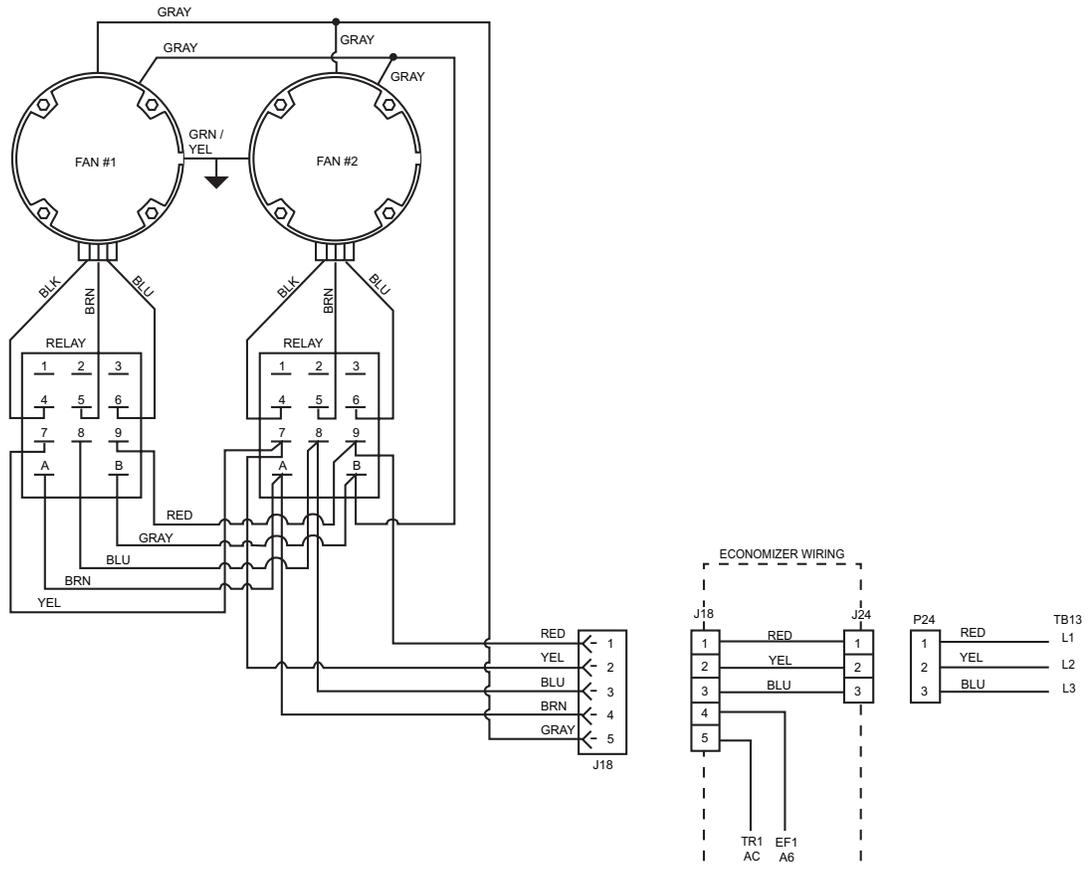
**Figure 4 - Power Exhaust Side View**



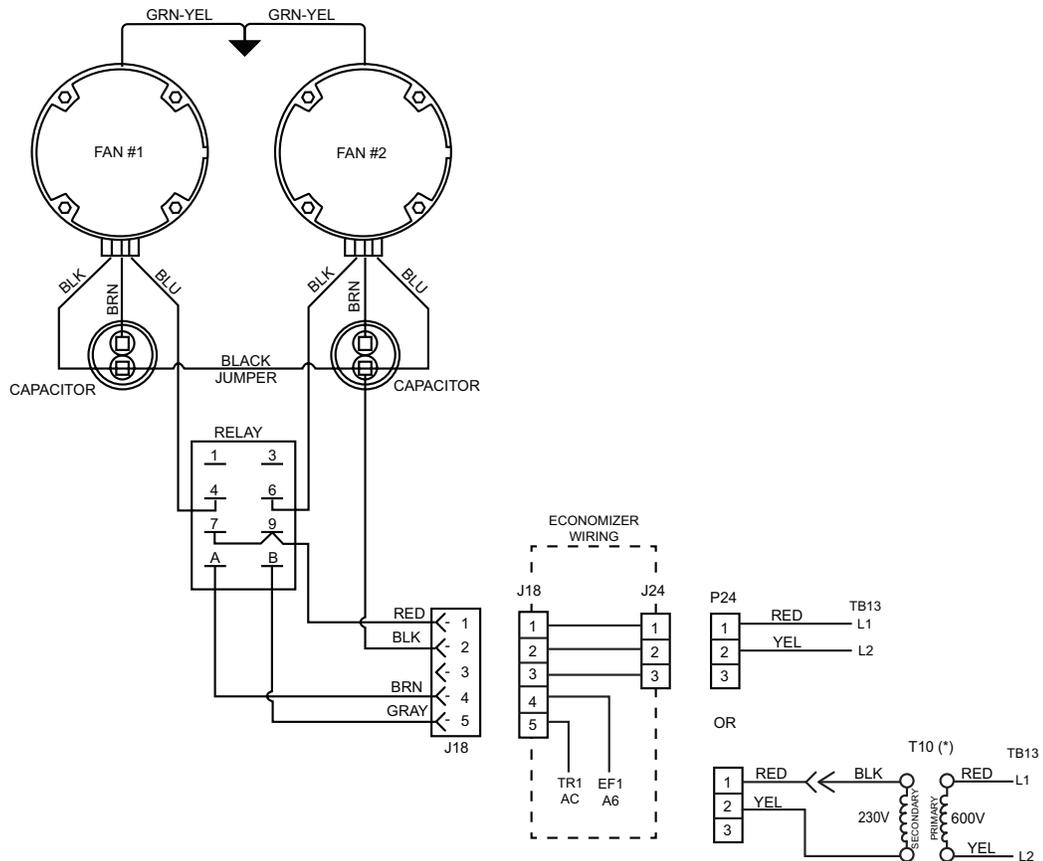
**Figure 5 - Power Exhaust Installation**



**Figure 6**



**Figure 7 - Wiring Diagram for 460v 3PH**



**Figure 8 - Wiring Diagram for 230v 1PH**

\*Field-supplied and installed for 575v models