




# INSTALLATION INSTRUCTIONS PEDCPRL Series Vertical Power Exhaust for

## York PRESTIGE for ZX 08-14, 12,14; ZY 07-12

### Before Starting Installation

Only qualified HVAC service personnel should install, troubleshoot, repair or service HVAC and related HVAC equipment.

 <b>WARNING</b>	
	Electric shock hazard. Can cause injury or death. Before attempting to perform any service or maintenance, turn the electrical power to unit OFF at disconnect switch(es).

#### Step 1:

Verify all unit parts in box.

- 1 ea. - Power Exhaust Assembly
- 1 ea. - Hardware Bag:
- 8 ea. - Self-Tapping #10- 16 x 1/2 Screws

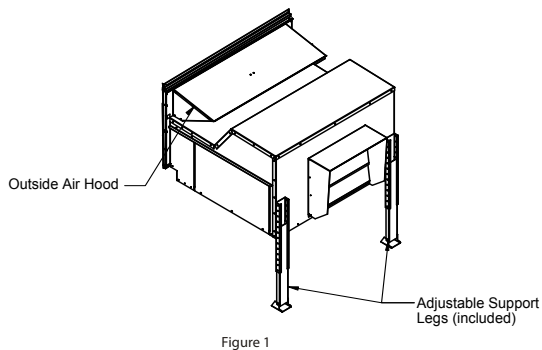


Figure 1

#### Step 2:

Remove horizontal return panel. Remove blower access panel. Remove control access panels. Keep all screws for later use. See Figure 2.

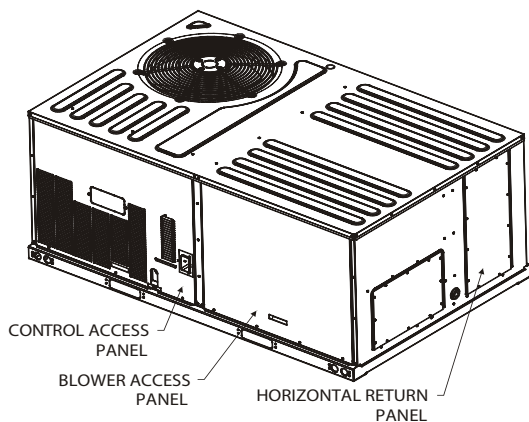


Figure 2

#### Step 3:

Remove filter access panel. Remove adapter panels. Remove existing economizer hood. Keep all screws for later use. See Figure 3.

<b>Important</b>
If supplied with power exhaust option, power exhaust power (Molex) connection is located on economizer next to its power connection. Make sure to plug in power exhaust when connecting economizer power in Step 3 of instructions below.

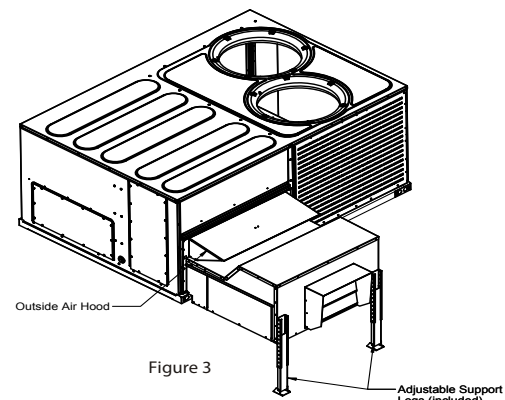


Figure 3

#### Step 4:

Set power exhaust assembly in front of the economizer. Apply gasket to the back side of flanges and divider flange to seal between power exhaust and economizer. Route power and control harnesses from the power exhaust assembly through the return area of the economizer and through the hole in the side of the economizer indicated in Figure 4.

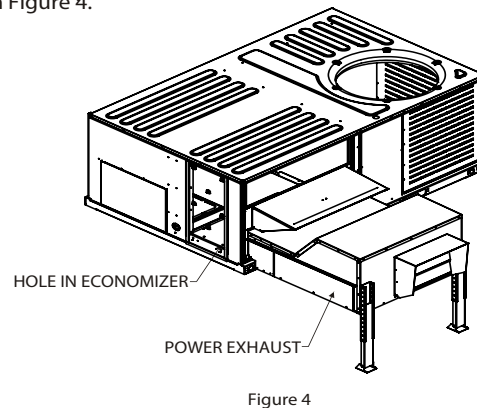


Figure 4

After the wires are routed through the hole, insert bushing that is on harness into hole where wires were routed. Complete the attachment of the power exhaust to the unit. The Power exhaust assembly should mount to the unit at the same hole locations where the economizer hood was attached. The bottom of the power exhaust assembly should be about the same level as the bottom of the unit base rail. Use the screws that originally held the economizer hood to attach the power exhaust.

When the power exhaust assembly has been attached to the unit, pull the slack of the power and control harnesses through the hole in the side of the economizer. See Figure 5.

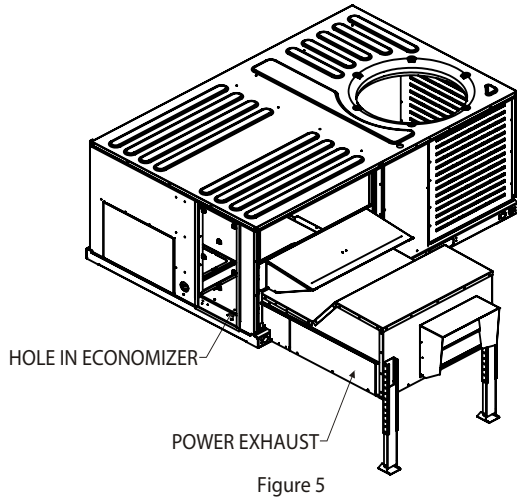


Figure 5

Locate the control harness with wire numbers 843 (grey) and 844 (brown). Connect this harness to the location marked EX-FAN /COM on the economizer controller. Secure this harness to avoid damage during normal damper operation. See wiring diagram for details.

Step 5:

Locate high voltage harness with black, blue and yellow wires (NOTE- yellow wire is not included with single phase power exhaust assemblies).

Route the harness through the unit and along the existing harnesses in the unit back to the unit control panels as illustrated in Figure 6. Secure the power exhaust power harness to the existing harnesses throughout the unit with (field supplied) wire ties.

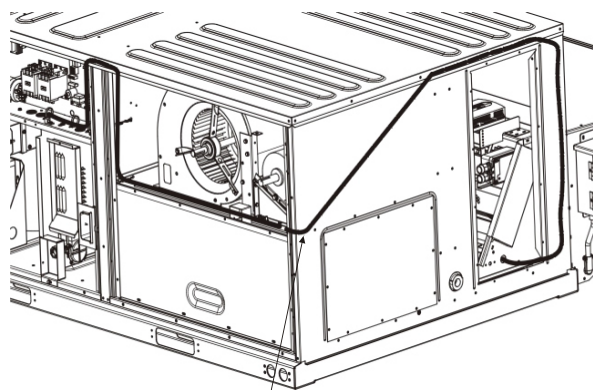


Figure 6

Connect the harness to the line side of contactor M1 (see unit control panel component map for location of contactor M1). Remove and reconnect existing wires as necessary using the pigtails provided with the power exhaust power

wires. Connect the black wire to terminal 1 on contactor M1, the blue wire to terminal 2 on contactor M1 and the yellow wire to terminal 3 on contactor M1 (Yellow wire only on 3 phase units). See wiring diagram.

Step 6:

Using the screws retained in Step 2, install the horizontal return panel, blower access panel and control access panel. See Figure 7.

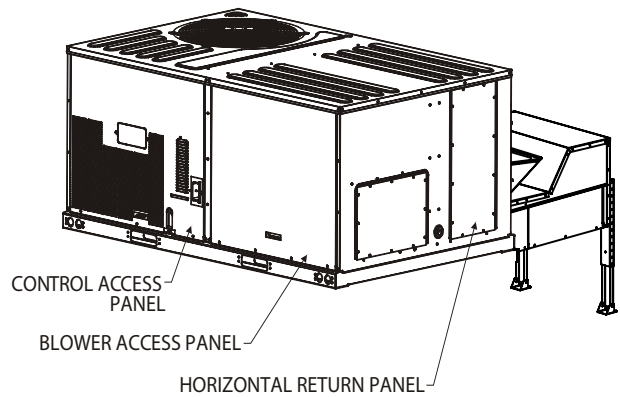


Figure 7

Step 7:

Using the screws retained in Step 2, install the adaptor panel. Reinstall the filter access panel with the "T" handles. See Figure 8.

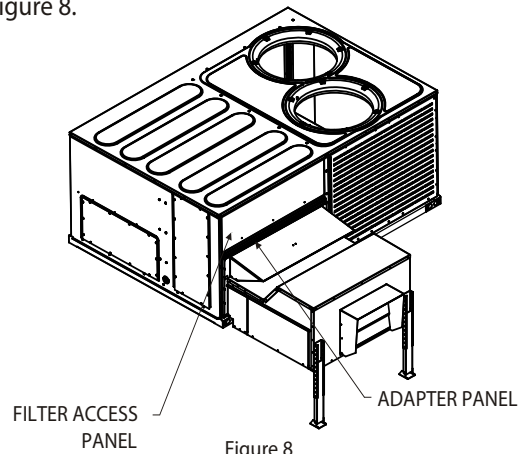


Figure 8

Step 8:

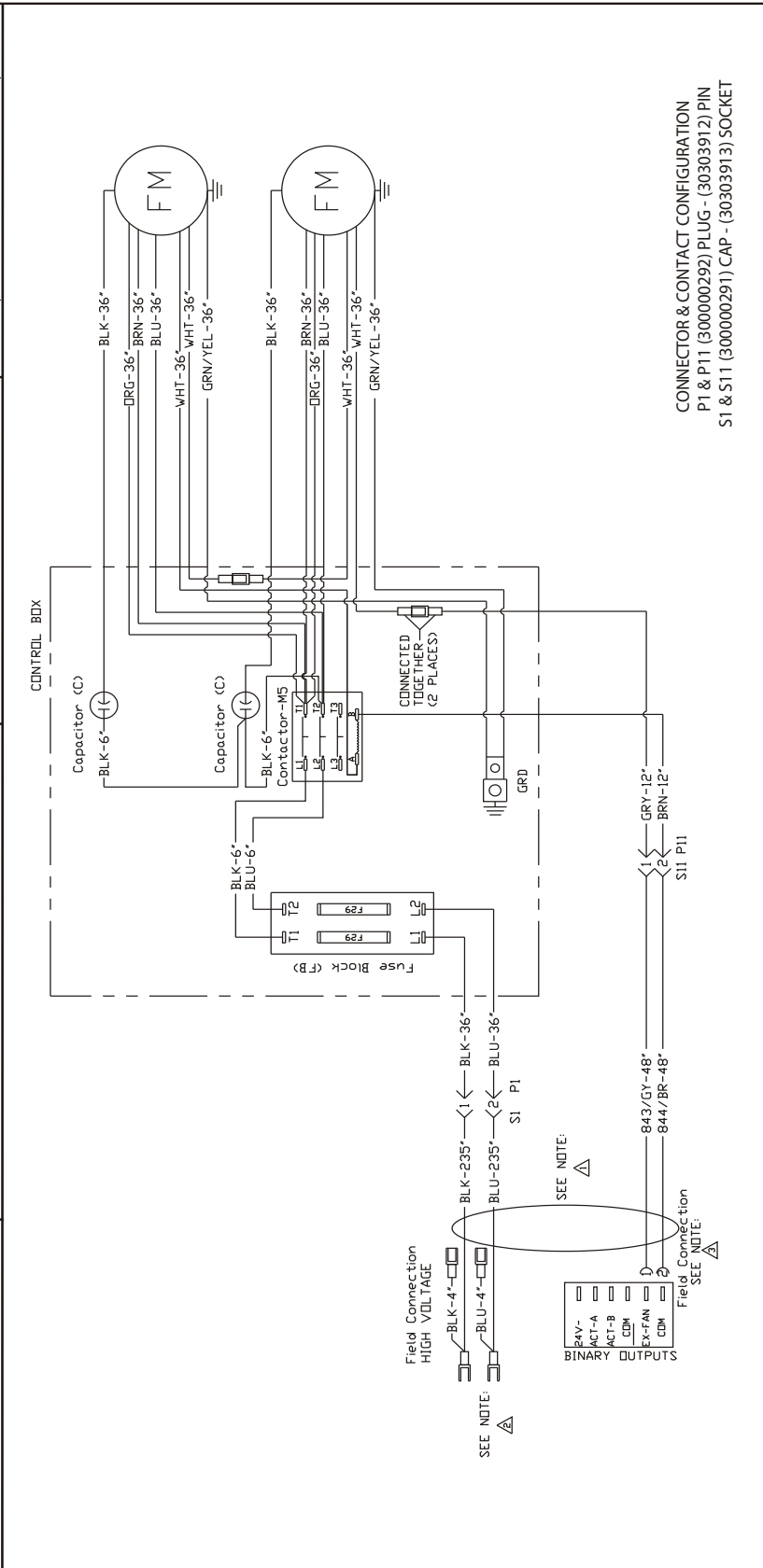
Reconnect power to the unit - follow all safety instructions, rules and codes.

See unit Installation, Operation and Maintenance manual for instructions to verify the unit controller recognizes the installation of the power exhaust.

Note: Once the unit is operating properly, seal any open joints, holes or seams with silicone caulking (field supplied), to make the power exhaust completely air and water tight.

ILL. 1  
Control Wiring Diagram

HARNESS DETAIL	COMPONENT CODE	WIRE COLOR CODE	Revision	Change	Date
E# = WIRE END DESIGNATION	FB Fuse Block	BLK Black			
E2 STUD #6 18 Ga. Wire	FM Fan Motor	BLU BLU			
E3 Female ¼ Quick Disc.	GRD Ground	BRN BRN			
E4 Male ¼ Quick Disc. Insul.	P1 Fan Plug Male	GRA GRN			
E6 Wire Nut Size 738	P11 Field Plug Male	ORN ORN			
HARNESS LEADS ARE 14 GA.	M5 Contactor	RED Red			
WIRE WITH NO END DESIGNATION	S1 Control Box Female	WHT White			
	S11 Field Cap Female	YEL Yellow			



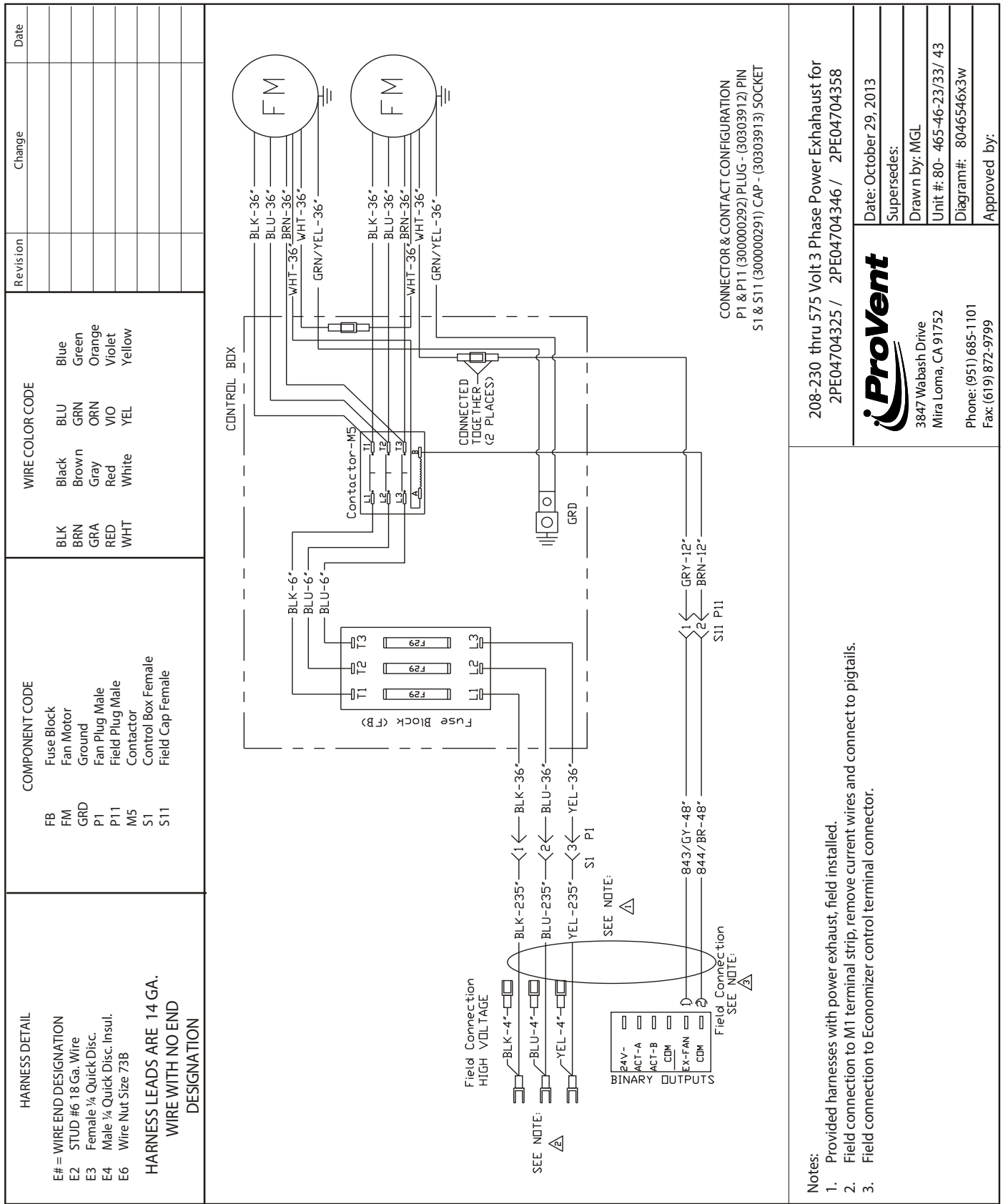
208-230 Volt 1 Phase Power Exhaust for  
2PE04704306

**ProVent**  
3847 Wabash Drive  
Mira Loma, CA 91752  
Phone: (951) 685-1101  
Fax: (619) 872-9799

Date: October 29, 2013  
Supersedes:  
Drawn by: MGL  
Unit #: 80- 465-46-21  
Diagram#: 804654621w  
Approved by:

Notes:  
1. Provided harnesses with power exhaust, field installed.  
2. Field connection to M1 terminal strip, remove current wires and connect to pigtails.  
3. Field connection to Economizer control terminal connector.

ILL. 2  
Control Wiring Diagram



208-230 thru 575 Volt 3 Phase Power Exhaust for  
 2PE04704325 / 2PE04704346 / 2PE04704358

**Provent**  
 3847 Wabash Drive  
 Mira Loma, CA 91752  
 Phone: (951) 685-1101  
 Fax: (619) 872-9799

Date: October 29, 2013  
 Supersedes:    
 Drawn by: MGL  
 Unit #: 80- 465-46-23/33/ 43  
 Diagram#: 8046546x3w  
 Approved by:  

- Notes:**
1. Provided harnesses with power exhaust, field installed.
  2. Field connection to M1 terminal strip, remove current wires and connect to pigtails.
  3. Field connection to Economizer control terminal connector.

**AIR ECONOMIZER CONTROLS ACCEPTANCE**

CEC-NRCA-MCH-05-A (Revised 06/14)

CALIFORNIA ENERGY COMMISSION



CERTIFICATE OF ACCEPTANCE		NRCA-MCH-05-A
Air Economizer Controls Acceptance		(Page 1 of 3)
Project Name:	Enforcement Agency:	Permit Number:
Project Address:	City:	Zip Code:
System Name or Identification/Tag:	System Location or Area Served:	
Note: Submit one Certificate of Acceptance for each system that must demonstrate compliance.		Enforcement Agency Use: Checked by/Date

<b>A. Construction Inspection</b>
<p>1. Supporting documentation needed to perform test includes:</p> <ol style="list-style-type: none"> <li>2013 Building Energy Efficiency Standards Nonresidential Compliance Manual (NA7.5.4 Air Economizer Controls Acceptance At - Glance).</li> <li>2013 Building Energy Efficiency Standards.</li> </ol>
<p>2. Instrumentation to perform test includes:</p> <ol style="list-style-type: none"> <li>Hand-held temperature probe Calibration Date: _____ (must be within last year)</li> <li>Device capable of calculating enthalpy Calibration Date: _____ (must be within last year)</li> <li>1.2 k Ohm Resistor ( when specified by the manufacturer)</li> </ol>
<p>3. Installation: (all of the following boxes should be checked)</p> <p><input type="checkbox"/> Economizer high limit shutoff control complies with Table 140.4-B found in the 2013 Building Energy Efficiency Standards Section 140.4(e)3.</p> <p><input type="checkbox"/> Economizer reliability features are present per 2013 Building Energy Efficiency Standards Section 140.4(e)4:</p> <ol style="list-style-type: none"> <li>5-year manufacturer warranty of economizer assembly</li> <li>Provide a product specification sheet proving capability of at least 60,000 actuations</li> <li>Provide a product specification sheet proving compliance with AMCA Standard 500 damper leakage at 10 cfm/sf at 1.0 in w.g. A product specification sheet showing the manufacturer's results after following the testing procedures of AMCA Standard 500 or AMCA certification by a third party under AMCA Publication 511 can be used to satisfy this requirement (Class 1A, 1, and 2 are acceptable).</li> <li>If the high limit setpoint is fixed dry-bulb or fixed enthalpy + fixed dry-bulb then the control shall have an adjustable setpoint</li> <li>Outdoor air, return air, mixed air, and supply air sensors shall be calibrated as follows: <ol style="list-style-type: none"> <li>Drybulb and wetbulb temperatures accurate to <math>\pm 2^{\circ}\text{F}</math> over the range of <math>40^{\circ}\text{F}</math> to <math>80^{\circ}\text{F}</math></li> <li>Enthalpy accurate to <math>\pm 3</math> Btu/lb over the range of 20 Btu/lb to 36 Btu/lb</li> <li>Relative humidity (RH) accurate to <math>\pm 5\%</math> over the range of 20% to 80% RH</li> </ol> </li> <li>Check that the sensor performance curve(s) is provided by the factory and sensor output values measured during sensor calibration are plotted on the performance curve(s)</li> <li>Sensors used for high limit control shall be located to prevent false readings, including but not limited to being properly shielded from direct sunlight.</li> </ol> <p><input type="checkbox"/> Unitary systems with an economizer have control systems, including two-stage or electronic thermostats, that cycle compressors off when economizers can provide partial cooling</p> <p><input type="checkbox"/> System has return fan speed control, relief dampers, or dedicated relief fans to prevent building over pressurization in full economizer mode.</p> <p><input type="checkbox"/> For systems with DDC controls, sensor used for economizer lockout has been factory or field calibrated.</p> <p><input type="checkbox"/> For systems with non-DDC controls, manufacturer's startup and testing procedures have been applied.</p>

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CEC-NRCA-MCH-05-A (Revised 06/14)

CALIFORNIA ENERGY COMMISSION



CERTIFICATE OF ACCEPTANCE		NRCA-MCH-05-A
Air Economizer Controls Acceptance		(Page 2 of 3)
Project Name:	Enforcement Agency:	Permit Number:
Project Address:	City:	Zip Code:
System Name or Identification/Tag:	System Location or Area Served:	

B. Functional Testing	Results
Step 1: Disable demand control ventilation systems (if applicable)	
Step 2: Enable the economizer and simulate a cooling demand large enough to drive the economizer fully open. Verify the following:	
a. Economizer damper modulates 100% open.	Y / N
b. Return air damper modulates 100% closed.	Y / N
c. For systems that meet the criteria of 2013 Building Energy Efficiency Standards Section 140.4(e)1, verify that the economizer remains 100% open with the use of mechanical cooling. This occurs when the cooling demand can no longer be met by the economizer alone.	Y / N
d. All applicable fans and dampers operate as intended to maintain building pressure.	Y / N
e. The unit heating is disabled (if applicable).	Y / N / NA
Step 3: Disable the economizer and simulate a cooling demand. Verify the following:	
a. Economizer damper closes to its minimum position.	Y / N
b. All applicable fans and dampers operate as intended to maintain building pressure.	Y / N
c. The unit heating is disabled (if applicable).	Y / N / NA
Step 4: If the unit is equipped with heating, simulate a heating demand and enable the economizer. Verify the following:	
a. Economizer damper closes to its minimum position.	Y / N / NA
b. Return air damper opens.	Y / N / NA
Step 5: Turn off the unit and verify the following:	
a. Economizer damper closes completely.	Y / N
Step 6: System returned to initial operating conditions	Y / N

C. Testing Results	PASS / FAIL
Step 2: Simulate cooling load and enable the economizer (all answers are Y).	
Step 3: Simulate cooling load and disable the economizer (all answers are Y).	
Step 4: Simulate heating demand and enable the economizer (all answers are Y).	
Step 5: Turn off the unit (all answers are Y).	

D. Evaluation :
<input type="checkbox"/> PASS: All Construction Inspection responses are complete and all Testing Results responses are "Pass"

Notes:

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Air Economizer Controls Acceptance		(Page 3 of 3)
Project Name:	Enforcement Agency:	Permit Number:
Project Address:	City:	Zip Code:
System Name or Identification/Tag:	System Location or Area Served:	

<b>DOCUMENTATION AUTHOR'S DECLARATION STATEMENT</b>	
1. I certify that this Certificate of Acceptance documentation is accurate and complete.	
Documentation Author Name:	Documentation Author Signature:
Documentation Author Company Name:	Date Signed:
Address:	ATT Certification Identification (if applicable):
City/State/Zip:	Phone:

<b>FIELD TECHNICIAN'S DECLARATION STATEMENT</b>		
I certify the following under penalty of perjury, under the laws of the State of California:		
<ol style="list-style-type: none"> <li>The information provided on this Certificate of Acceptance is true and correct.</li> <li>I am the person who performed the acceptance verification reported on this Certificate of Acceptance (Field Technician).</li> <li>The construction or installation identified on this Certificate of Acceptance complies with the applicable acceptance requirements indicated in the plans and specifications approved by the enforcement agency, and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7.</li> <li>I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and signed by the responsible builder/installer and has been posted or made available with the building permit(s) issued for the building.</li> </ol>		
Field Technician Name:	Field Technician Signature:	
Field Technician Company Name:	Position with Company (Title):	
Address:	ATT Certification Identification (if applicable):	
City/State/Zip:	Phone:	Date Signed:

<b>RESPONSIBLE PERSON'S DECLARATION STATEMENT</b>		
I certify the following under penalty of perjury, under the laws of the State of California:		
<ol style="list-style-type: none"> <li>I am the Field Technician, or the Field Technician is acting on my behalf as my employee or my agent and I have reviewed the information provided on this Certificate of Acceptance.</li> <li>I am eligible under Division 3 of the Business and Professions Code in the applicable classification to accept responsibility for the system design, construction or installation of features, materials, components, or manufactured devices for the scope of work identified on this Certificate of Acceptance and attest to the declarations in this statement (responsible acceptance person).</li> <li>The information provided on this Certificate of Acceptance substantiates that the construction or installation identified on this Certificate of Acceptance complies with the acceptance requirements indicated in the plans and specifications approved by the enforcement agency, and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7.</li> <li>I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and is posted or made available with the building permit(s) issued for the building.</li> <li>I will ensure that a completed, signed copy of this Certificate of Acceptance shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a signed copy of this Certificate of Acceptance is required to be included with the documentation the builder provides to the building owner at occupancy.</li> </ol>		
Responsible Acceptance Person Name:	Responsible Acceptance Person Signature:	
Responsible Acceptance Person Company Name:	Position with Company (Title):	
Address:	CSLB License:	
City/State/Zip:	Phone:	Date Signed: