



**YORK LXS  
HORIZONTAL  
ECONOMIZERS  
I/O/M MANUAL**

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**For information on iAIRE's Economizer Controls Package,  
please refer to IOM-0014**

## York Economizer Description

**PLEASE NOTE:** Our economizer is a low leak, field installed economizer with the iAIRE patented controls packages and actuator, allowing you to reduce the amount of outside air needed from your rooftop HVAC system by up to 2/3 and will improve indoor air quality.

This reduction in system operation creates on-going utility savings. Payback on capital equipment costs with an iAIRE economizer can be realized in fewer than three years. These packages are designed to work directly on existing rooftop HVAC systems.

These economizers are all low leak and meet the IECC 2015 requirement and are Title 24 compliant by meeting section 120.2(i) for the required controls and the efficiency requirements in 140.4(e).

### Unit to RTU Conversion

LXS-H	PCG4B, PCE4B 048-060 / PHE4B, PHG4B 036-060
LXS-V	P***A ALL MODELS

### Part Number

**EC - 1 - 2 3 4 5 - 6**

type	unit/ton (1)							
EC - ECONOMIZER	26	6075	CHAS12	A-BOX	FND35	PREC810	AFF	SCL34
	712	100	CHAS34	B-BOX	PACK13	VOY12	LXS	SCLHE12
	1525	125	CHAS5	C-BOX	PREC35	VOY12HE	LXL	SCLHE34
	3050	150	CHAS69	D-BOX	PREC48	VOY1525HE	SCS12	PRED
	Controls Only		Carrier	E-BOX	PREC610		SCS34	PREDs
				F-BOX			SCSHE12	SL
				Lennox		Trane	SCSHE34	SLL
							SCL12	SLU
							York	

### configuration (2)

0 - NO ECON  
C - CONVERTIBLE  
H - HORIZONTAL  
V - VERTICAL

### actuator (3)

0 - NO ACTUATOR  
A - 20 IN-LB  
B - 62 IN-LB  
C - 160 IN-LB

### controls (4)

0 - ECON ONLY  
A - IAQ  
B - IAQ (NO IONIZATION)  
D - DCV

### power exhaust (5)

0 - NO POWER EXHAUST  
A - 208/230V 1Φ FIXED PE  
B - 208/230V 3Φ FIXED PE  
C - 460V 3Φ FIXED PE

### options (6)

0 - NONE  
B - HUMIDITY  
C - BACNET  
D - BLDG PRESSURE\*  
R - RTU OPEN  
U - ULTRA LOW LEAK

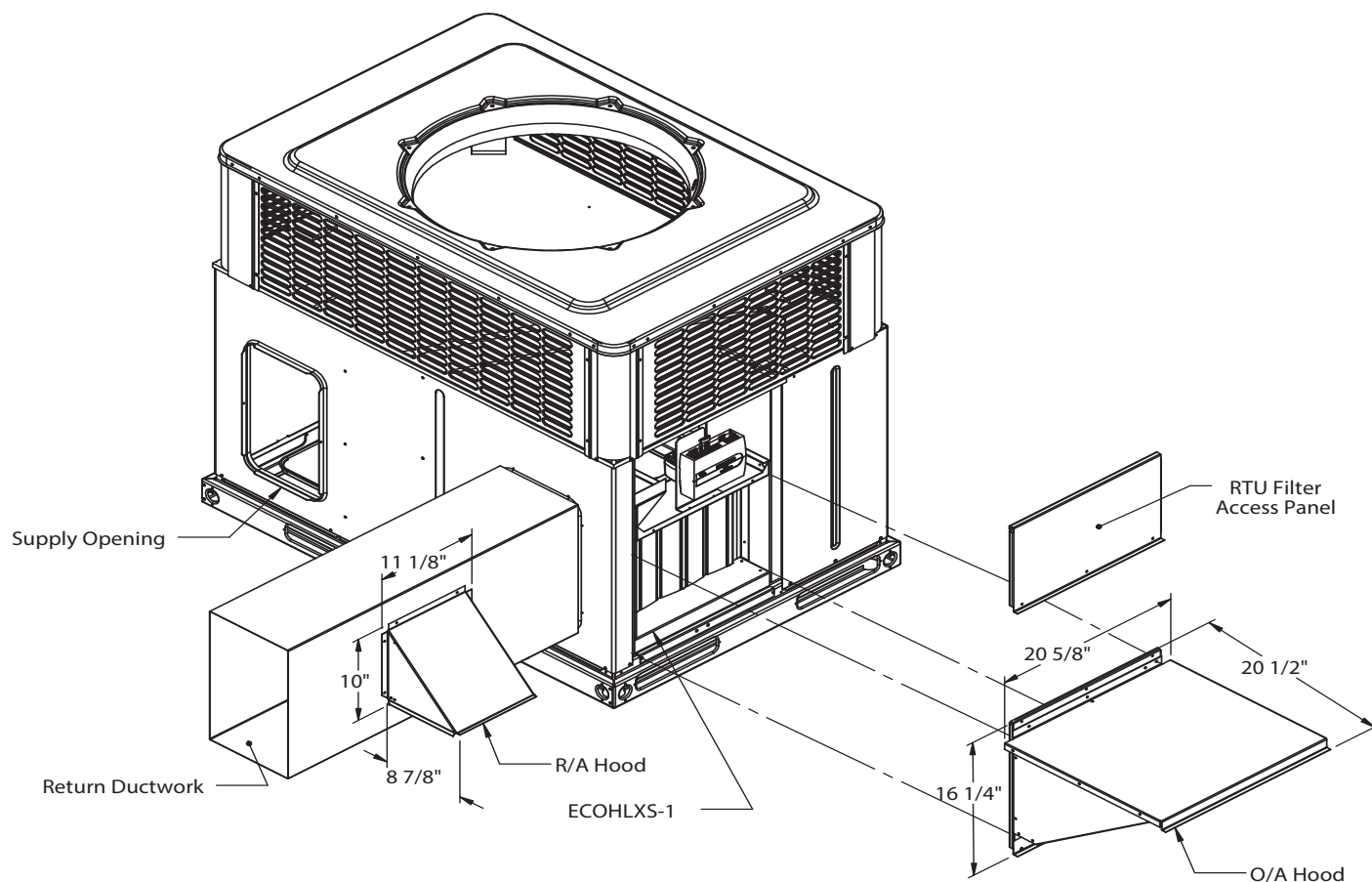
Note: By adding option "D" any powered exhaust will be modulating.

SUB-0027

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## LXS Horizontal Submittal



### Electrical Data

PART #	WEIGHT
EC-LXS-HBA0-*	39 lbs.

PART	AMPS	PART	AMPS	TOTAL
ACTUATOR	.29A	CONTROLS	.27A	.56A

*OPTIONS
0 - No Options
B - Humidity/Enthalpic
C - BACNet

### Features

- **iAIRE Patented Controls Scheme Included**
- Low Leak Damper Included
- VOC, CO<sub>2</sub> and Ionization included
- Heavy Gauge Galvanized Steel Construction
- American Sterling Grey Paint Finish
- One Piece Assembly
- Gear Driven Dampers
- Uses HVAC Unit Filter Access Door
- Capable of Relieving up to 100% of the Outside Air Intake

Economizers with Indoor Air Quality control are Title 24 compliant by meeting section 120.2(i) for the required controls and the efficiency requirements in 140.4(e). They also meet California ozone emissions requirements to be CARB certified.

## LXS 2 to 5 Ton Units- Horizontal Install

**PLEASE NOTE:** This instruction provides the necessary information to properly field- install the economizer assembly on 2 ton through 5 ton single package rooftop units.

The damper accessory provides the return air and outdoor air dampers and actuator for the economizer operations. Contained in this kit are all rain hood components.

**PLEASE NOTE:** If the unit is 208/230V, single phase, power supply, the installed 40VA transformer needs/must be replaced with a 75VA transformer. All other factory units have the 75VA transformer installed standard.

### Before Starting Installation

#### Warning

**Shut power to unit prior to any work being done. Personal injury or death could result.**

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

PARTS INCLUDED	QTY.
#10 x 1/2 Sheet Metal Screw	12
Terminal Block with Wire Harness	1
Tie Wraps	5
Gasket 1/8" x 1/2"	6 ft.
Gasket 3/4"x 1-1/4"	7 ft.
Discharge Air Sensor	1

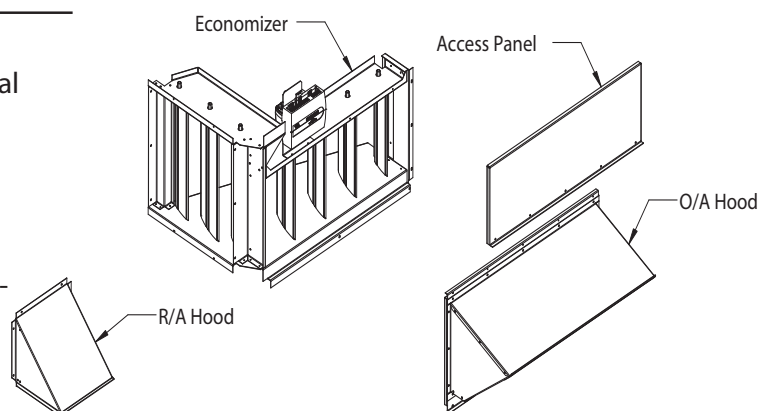
### General

This instruction provides the necessary information to properly field- install a horizontal economizer assembly on 2 ton through 5 ton single package rooftop units.

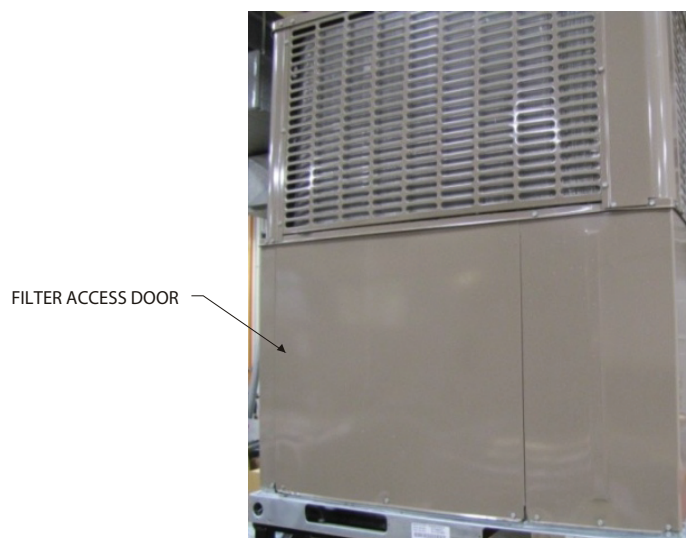
Horizontal Economizers are used with units for automatic sensor- controlled introduction of outdoor air into the system through an electro-mechanically controlled damper.

1. Disconnect the power Supply.
2. Remove electrical/filter access panel from RTU. (ILL. 2)  
  
Please Note: If filter rack is to be installed, please do so at this time.
3. Before installing economizer into the unit, make sure the duct cover has been removed. Place the economizer into the unit and make sure the return damper of the economizer lines up with the return opening. (ILL. 3)
4. Install the outside air hood and secure the hood and economizer with the metal screws provided. (ILL. 4)

ILL. 1



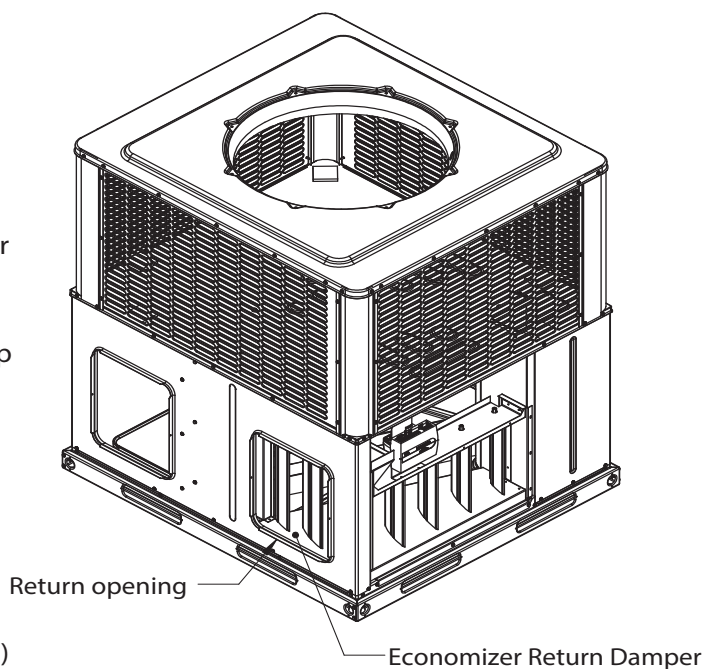
ILL. 2



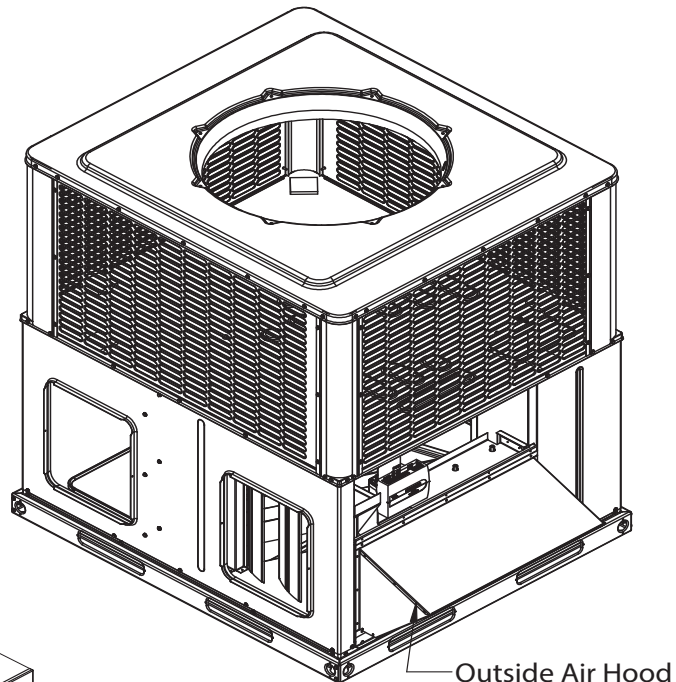
## LXS 2 to 5 Ton Units- Horizontal Install (cont'd)

5. Drill 1/2" hole in compressor barrier as needed to route wiring to main control board and sensors. Tightly seal opening around wires.
6. Route wire through existing openings to control panel. Wire according to wiring diagram. (ILL. 8 thru ILL. 11)
7. The discharge air sensor should be mounted on the blower wheel wrap. Use only #8 screws shorter than 1/2" in length to avoid hitting the blower wheel.
8. Use the top access panel provided to close the gap between the top of the economizer and the unit. (ILL. 5)
9. Install duct on return air duct connection.
10. If the barometric relief is to be installed cut a 9" wide x 8" tall hole in the return air duct near the economizer. (ILL. 6)
11. Secure pressure relief damper near economizer over hole in return air duct using (4) screws. (ILL. 7)
12. Place the adhesive backed wiring diagram on the low voltage compartment access panel by the unit diagram. Reinstall low voltage compartment access panel.
13. Turn power on to RTU.

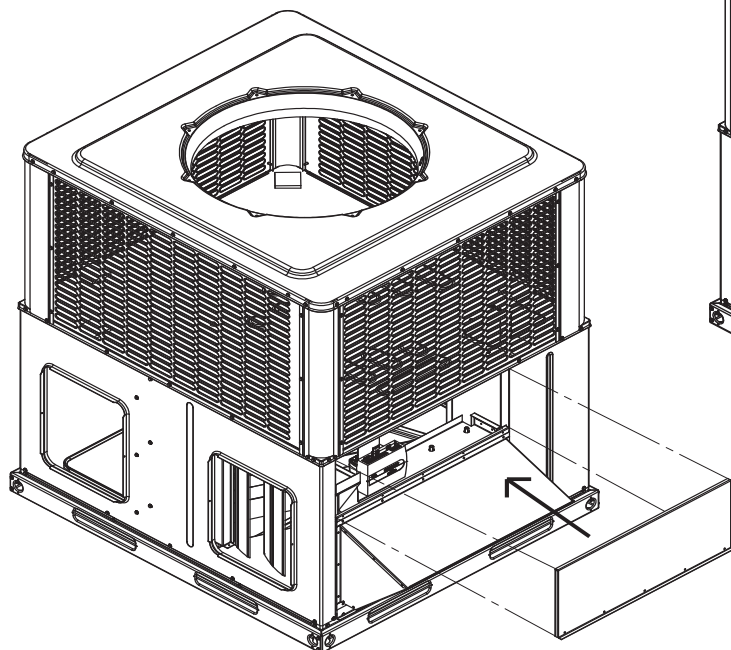
ILL. 3



ILL. 4



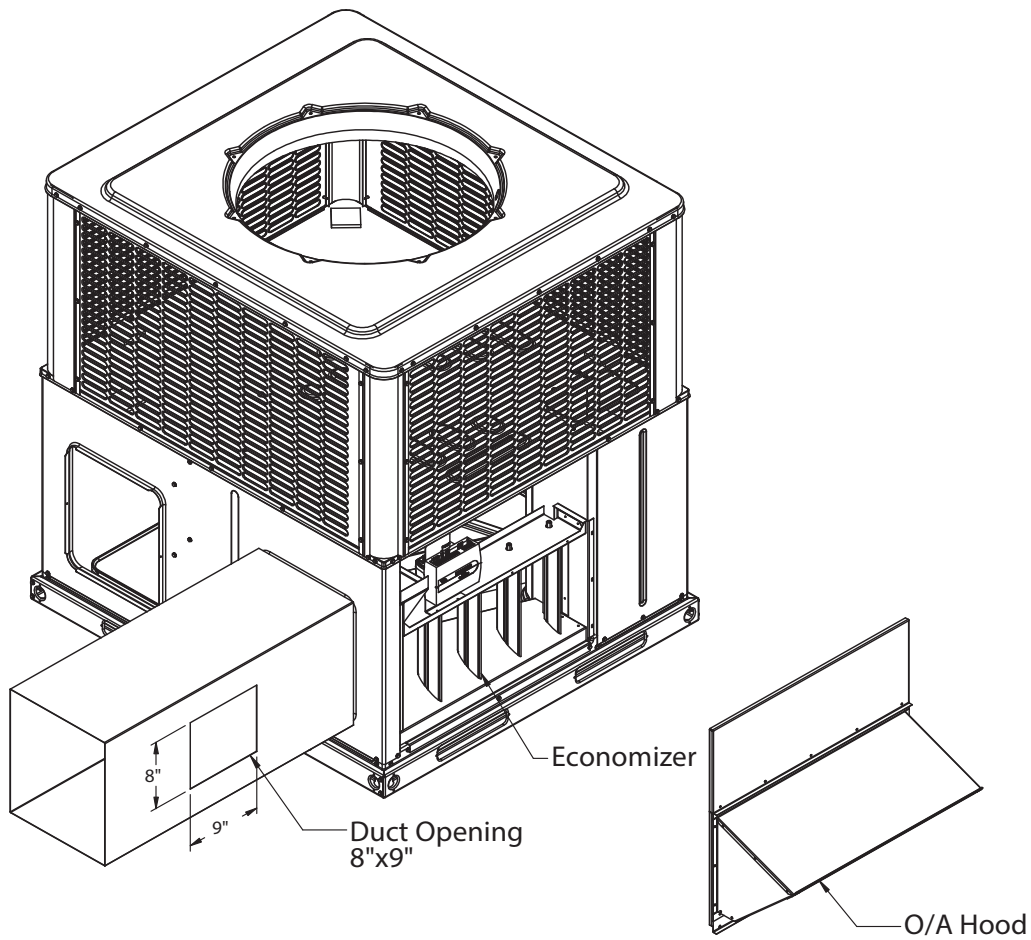
ILL. 5



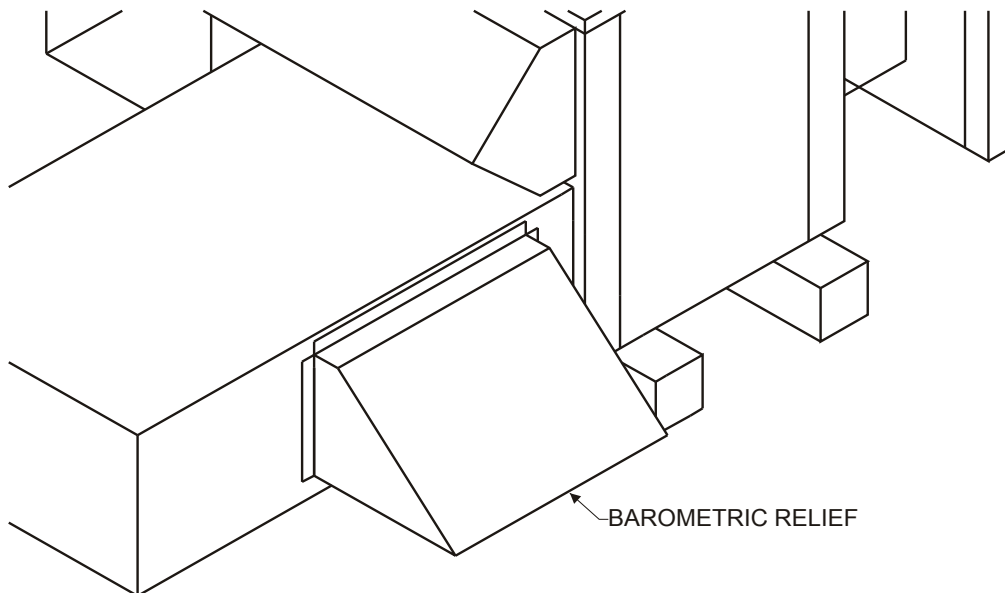


## LXS 2 to 5 Ton Units- Horizontal Install (cont'd)

ILL. 6

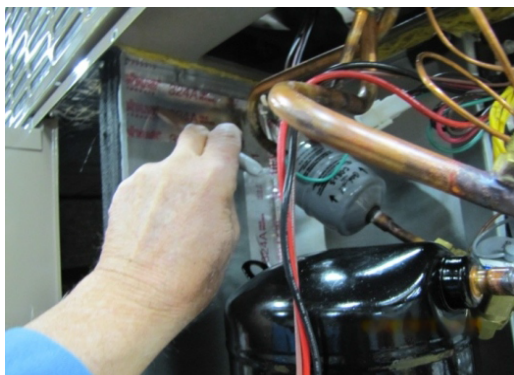


ILL. 7



## LXS 2 to 5 Ton Units- Horizontal Install (cont'd)

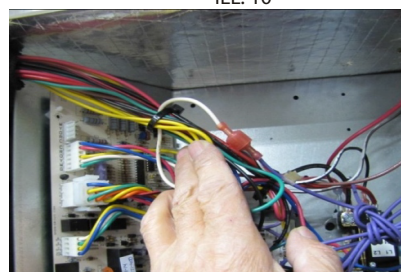
14. Route wiring through existing openings to panel.



ILL. 8



ILL. 10



ILL. 11

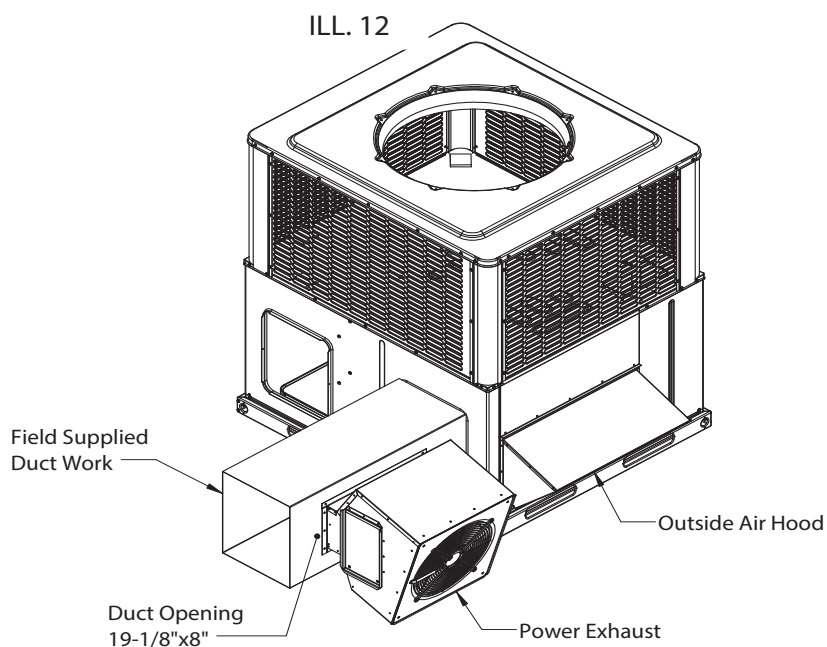


ILL. 9

15. Place the adhesive backed wiring diagram on the low voltage compartment access panel by the unit diagram. Reinstall low voltage compartment access panel.

16. Turn power on to RTU.

17. For economizers with optional power exhaust, route the power cord through the unit following steps 5 and 6. For wiring information refer to page 8 in IOM-0014.





## York Economizer Install Notes

### Additional Notes

1. Power Supply. Provide disconnect means and overload protection as required.
2. Motor Spring>Returns closed when unit is not running.
3. Ensure that equipment transformer is sized to handle the extra load of the economizer and actuator.
4. When using a heat with defrost feedback, add an isolation relay between O and C. (Field provided and installed).