ACCESSORY KIT INSTALLATION INSTRUCTIONS

FIELD INSTALLED HORIZONTAL ECONOMIZER ACCESSORY

MODEL 2EE04706924

WARNING: Cancer and Reproductive Harm – www.P65Warnings.ca.gov.

General

The instruction provides all the necessary information to field install this economizer on the equipment listed in Table 1.

Table 1: Compatible units

Kit	Compatible units
2EE04706924	ZF078 thru ZF150, ZS-06 thru ZS-12, J06 thru 12ZF Series 10, ZST06 thru ZST12,
	ZH037 thru ZH061, ZU-A3 thru ZU-A5, JA3 thru A5ZH Series 10, ZUTA3 thru ZUTA5
	ZH078 thru ZH150, ZU-06 thru ZU-12, J06 thru 12ZH Series 10, ZUT06 thru ZUT12
	ZJ037 thru ZJ061, ZW-A3 thru ZW-A5, JA3 thru A5ZJ Series 10, ZWT06 thru ZWT12
	ZT037 thru ZT150, ZV-A3 thru ZV-12, JA3 thru 12ZT Series 10, ZVTA3 thru ZVT12
	XP078 thru XP150, XA-06 thru XA-12, J06 thru 12XP Series 10, XAT06 thru XAT12
	ZR037 thru ZR061, ZK-A3 thru ZK-A5, JA3 thru A5ZR Series 10, ZKTA3 thru ZKTA5
	ZR078 thru ZR150, ZK-06 thru ZK-12, J06 thru 12ZR Series 10 and ZKT06 thru ZKT12

Economizer model 2EE04706924 has a single dry bulb sensor that provides automatic 100% outdoor air capability.

Refer to the respective unit wiring diagram for information regarding electrical circuitry on the economizer.

For single or dual enthalpy operation either the 2EC0401 or 2EC0402 kit is required.

If a relief air damper for barometric air balance is required, you must order part# 1EH0408 separately and install the part on the return air duct. See Step 10 and 11 of this installation instructions.

Figure 1 - Kit contents

Installation

Table 2 lists the contents of the kit. Verify the contents of the kit before you begin installation.

Table 2: Kit contents

Quantity	Description
1 ea.	Return air damper
1 ea.	Fresh air damper
1 ea.	Fresh air hood
1 ea.	22" x 30 18" x 1" mist eliminator filter
21 ea.	Type A #10 - 16 x ½ screws
4 ea.	Self tapping #10 - 16 x ½ screws
18 ea.	#8 Tinnerman clips
1 ea	10 ft. - 18 x ½ gasket

Assembling the fresh air hood

You require the following items to assemble the fresh air hood.

- Fresh air hood components
- 21 -Type A #10 - 16 x ½ screws
- 10 ft of -18 x ½ gasket

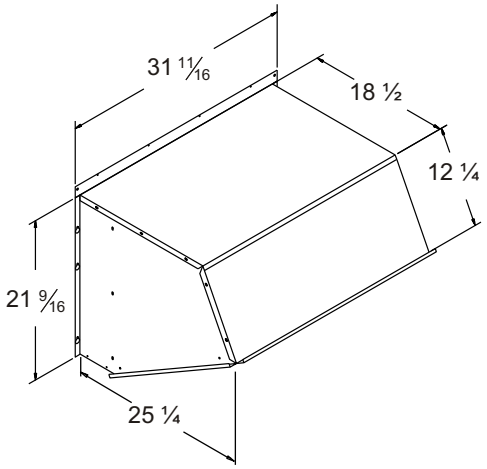
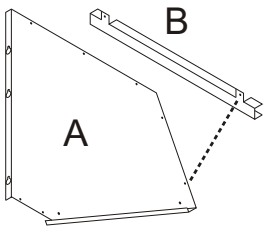
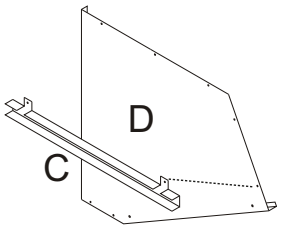


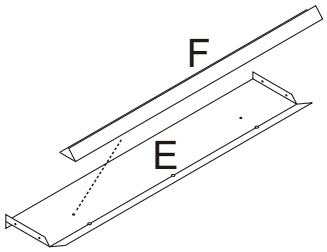
Figure 2 - Fresh air hood dimensions



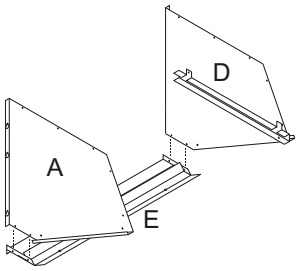
1. Align the screw holes on opp. hood side and the filter channel. Attach with two #10 screws. Do not fully tighten the screws.



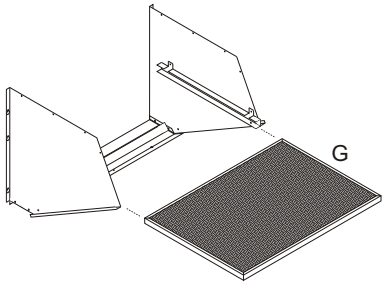
2. Align the screw holes on the other hood side and the filter channel. Attach it with two #10 screws. Do not fully tighten the screws.



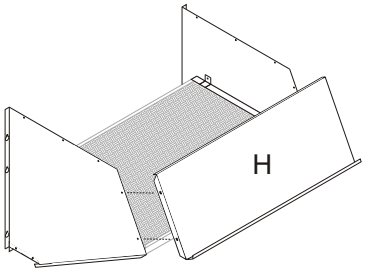
3. Align the screw holes on the hood bottom and the angle. Ensure that the angle is sloped forward and attach it with two #10 screws.



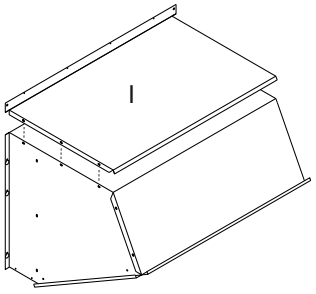
4. Align the screw holes on the hood bottom and the hood sides. Attach it with two #10 screws on each side.



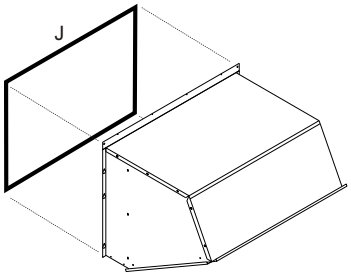
5. Slide the filter into the filter channels.



6. Align the screw holes on the filter access pan with the hood sides. The side flanges of the filter access pan must sit inside the hood sides. Attach it with two #10 screws on each side. Tighten the two #10 screws on the filter channel.



7. Align the screw holes of the hood top with the assembly. Attach it with three #10 screws on each side.



8. Install the sealing gasket around the flange of the hood where it joins to the unit.

Table 3: Fresh air hood components

Item	Description
A	Opp. hood side
B	Filter channel
C	Thus. hood side
D	Filter channel
E	Hood bottom

Item	Description
F	Angle
G	Filter
H	Filter access pan
I	Hood top
J	Gasket

Installing the accessory

1. Remove the return air duct cover and the two rear panels from the end of the unit as shown. Keep the screws for later use.

Note: Tinnerman clips are supplied in case the holes in the side flanges of the unit have been stripped. Attach 14 clips to the two side flanges as shown in Figure 7.

2. Install the return air damper into the horizontal return air duct opening as shown. Using the self tapping #10 - 16 x ½ screws provided to secure to duct connection (two on each side). The two holes with bushings are on the right hand side and the damper bracket is on the damper bottom inside the unit.

Figure 3 - Install return air damper

3. Slide the fresh air damper into the unit as shown. Secure it with screws removed in step 1.

Figure 4 - Slide the fresh air damper into the unit

4. Secure the fresh air damper to the unit with the screws removed in Step 1 through the slotted holes in the damper section. **Do not tighten screws at this time.**

5. Connect the linkage from the fresh air damper to the return air damper. The linkage rod is shipped connected to the fresh air damper.

   a. Open the return air damper and insert the rod through the opening in the damper bracket.

   b. With the rod through the return air damper bracket, tighten the set screw on the return air damper bracket as shown.

Note: A. The damper bracket is shipped in a lower position. If you install it in a small cabinet, reposition the bracket to holes 8 inches above shipped location.

Note: B. The linkage rod must be flush with the back of the fresh air damper bracket.

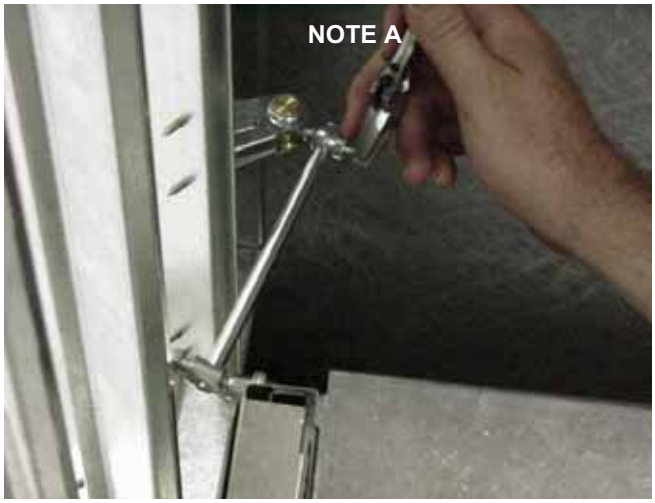


Figure 5 - Connect the linkage

6. Plug the economizer cable (P12) into the unit (S12) as shown. Plug in the two pin Smart Equipment™ economizer control power wires (S20) and the three pin SA BUS connection (S17) in the economizer control module.

Note: Take care to note that economizer SA BUS connection S7/P7 and economizer connector S12 are the same visually. Ensure that the wiring is installed exactly like the top image of Figure 8.

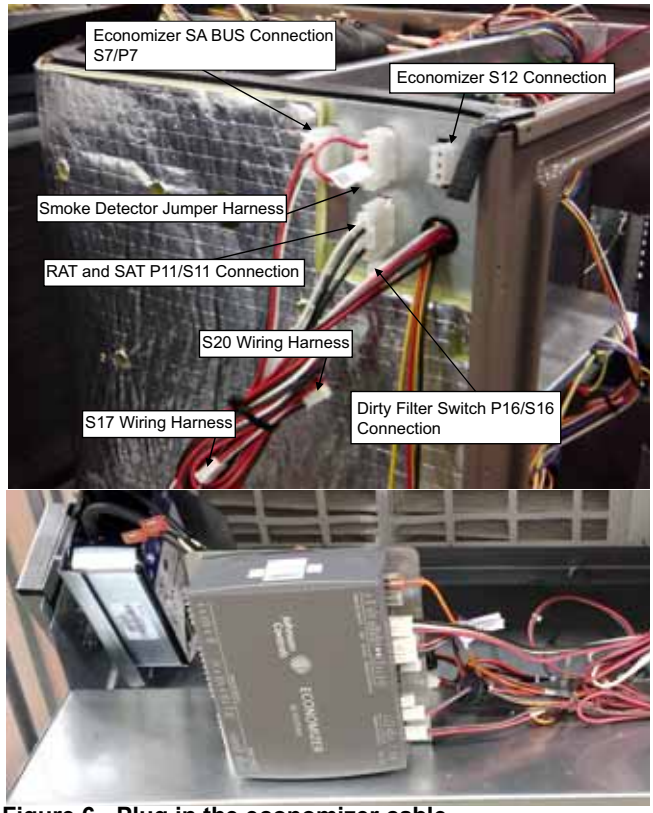


Figure 6 - Plug in the economizer cable

7. Install the assembled fresh air hood as shown. Using the "keyhole" slots on the hood, place the Fresh Air Hood over the screws and slide down into the slots and tighten screws in place. Attach four tinnerman clips to the top flange of Fresh Air Hood as shown in figure.

   Tighten all screws that were previously not tightened.

Figure 7 - Install the assembled fresh air hood

8. If the barometric relief is to be installed cut a 31" x 21" hole in the return air duct near the Economizer.

Note: You must order the barometric relief damper separately.

Note: IMPORTANT: When installed correctly, the damper blades face outward and the screen is not visible.

9. Secure the barometric relief damper over the hole in return air duct using 8 screws.

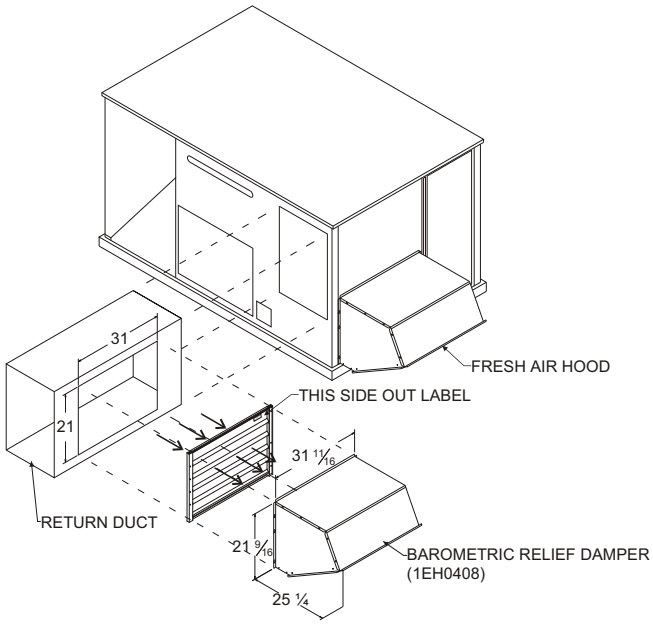


Figure 8 - Barometric relief installation

10. Reinstall the top rear panel which was removed in Step 4 of the unit using the remaining screws also removed in Step 4.

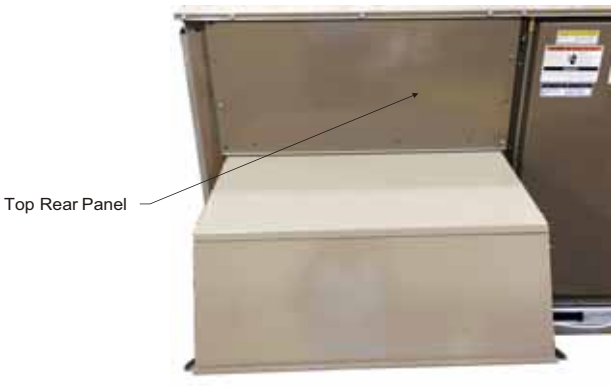
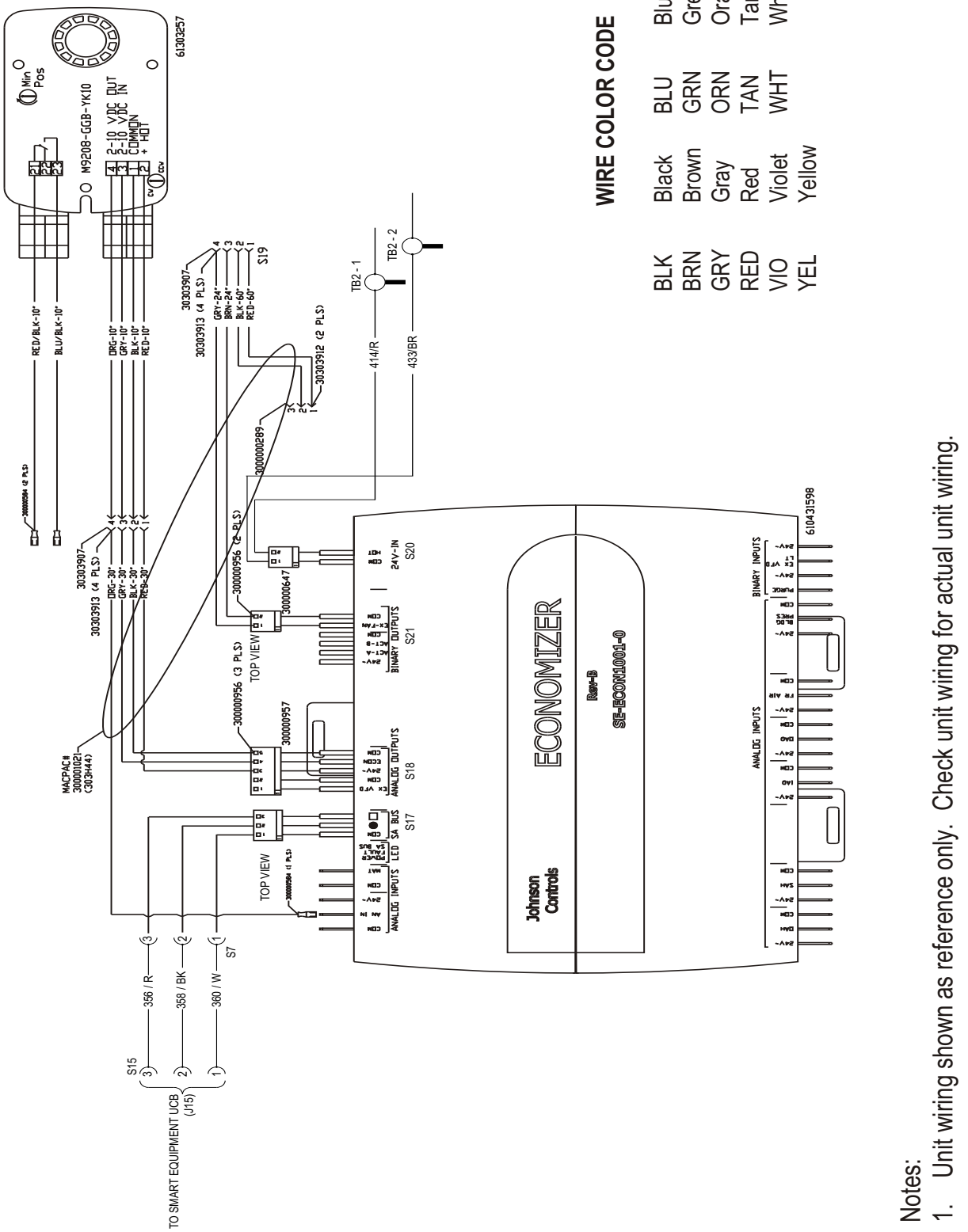


Figure 9 - Reinstall the top rear panel



Notes:

1. Unit wiring shown as reference only. Check unit wiring for actual unit wiring.

Figure 10 - Wiring diagram

When wiring between the economizer board to the Smart Equipment™ unit control board (UCB) is complete, the Smart Equipment™ UCB automatically recognizes the presence of the economizer board.

All economizer boards come with the following default settings:

- **Economizer Free Cooling Enabled:** Default: Yes. Writable point to allow free cooling or not.
- **Economizer Firmware version:** 3.3.1.186
- **Economizer Damper Position:** As shipped, this value will show 0% (closed)
- **Economizer Minimum Position:** 10% open
- **Economizer OAT Setpoint:** 55 deg.F
- **Economizer Free Cooling Available:** YES or NO depending on if the conditions are suitable. This is not a manually writable value.
- **Economizer Mechanical Setup:** Option B. This should NOT be changed unless the operator intends to alter the algorithm configuration between Free Cooling and Compressors. Please refer to LIT-12011950 before making changes.
- **All Compressor OFF –Economizer:** NO. This means that the compressors can come on when in Free Cooling.
- **Econ OA Enthalpy Setpoint:** 27 BTU/lb
- **Free Cooling Selection:** Auto. If Auto is left on, the UCB will detect all the sensors that are connected and determine if the system is Dry Bulb, Single Enthalpy or Dual Enthalpy

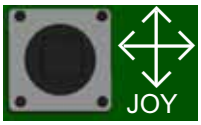
Note: Nothing needs to be done in the UCB unless you want to check status or adjust parameters.

▼▲◀▶ Joystick navigation

☞Press Enter 1 time

☞▼Press Enter Scroll Down

Press Cancel to return to Previous Menu



Use the following procedure for status validation and custom configuration. This can be done through the LCD screen and joystick or with a MAP Gateway.

To confirm the economizer damper position:

MENU	▼Details	
SUB MENU	☞▼Econ	
SUB MENU	☞▼Service☞	
ECONDAMPPOS	38	(AI-IN 0-10VDC INPUT)

To change the setting for economizer damper minimum position:

MENU	▼Details	
SUB MENU	☞▼Econ	
SUB MENU	☞Setup☞	
LOWAMB-MINPOS	0%v	(OCCLOAMBMINPOS)

To change the OAT Setpoint:

MENU	▼Details	
SUB MENU	☞▼Econ	
SUB MENU	☞Setup☞	
ECONOAT-SPEN	55 F	(DRYBLBCHGOVRSETPT)

NOTE: This value can be changed in single digit increments between 40°F and 80°F

To change the Economizer Mechanical Setup:

MENU	▼Details	
SUB MENU	☞▼Econ	
SUB MENU	☞▼Setup☞	
ECONMECHSTP	OPTION B	(ECON MECH SETUP)

NOTE: This should NOT be changed unless the operator intends to alter the algorithm configuration between Free Cooling and Compressors. Please refer to LIT-12011950 before making changes.

To modify whether the compressors can come on when Free Cooling is available:

MENU	▼Details	
SUB MENU	☞▼Econ	
SUB MENU	☞Setup☞	
ALLCOMPOFF-ECON	No	(ALL COMPRESSORS OFF IN FREE COOLING)

To change the Economizer Outdoor Air Enthalpy Setpoint:

MENU	▼Details	
SUB MENU	☞▼Econ	
SUB MENU	☞Setup☞	
ECONOAENTH-SP	27 B/#	(ENTHCNGOVRSETPT)

To change the Free Cooling Selection (Dry Bulb, Single Enthalpy, Dual Enthalpy):

MENU	▼Details	
SUB MENU	☞▼Econ	
SUB MENU	☞Setup☞	
FREECLG-SEL	AUTO	(FRECLGCHNGOVRMETHOD)

1190673-UAI-D-1018
Supersedes: 1190673-UAI-C-0216

York International Corporation
5005 York Drive
Norman, OK 73069