

# INSTALLATION INSTRUCTION

## ECONOMIZER MODEL 2EE04703124

Supersedes: 530.46-N1.31V (398)

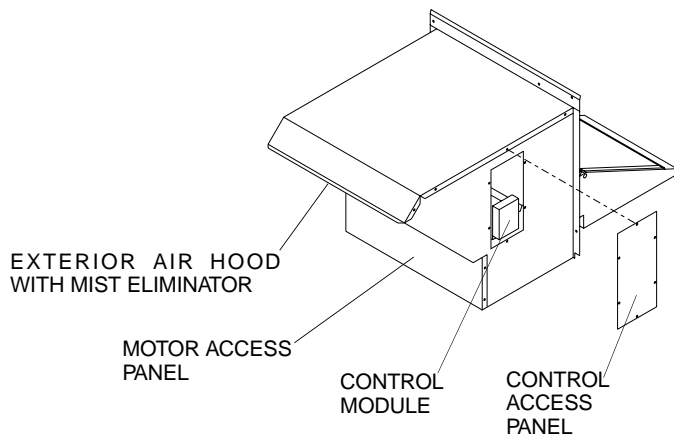
530.46-N1.31U (799)

035-16752-000

### FOR SINGLE PACKAGE GAS/ELECTRIC, COOLING AND HEAT PUMPS 1.5 THRU 5 TON

#### GENERAL

This economizer is used to automatically introduce outdoor air into the system through an electro-mechanically controlled air damper. It is designed to attach to the unit over the side return air duct opening and is used with all downshot applications.



**FIG. 1 - ECONOMIZER KIT**

#### Content of Kit

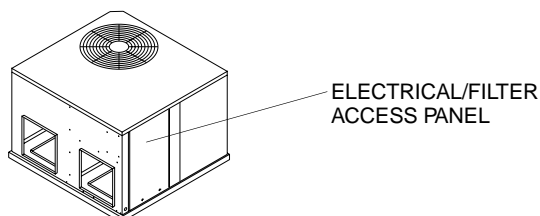
ITEM	QTY.	DESCRIPTION
1	1	Economizer Assembly w/Mist Eliminator
2	1	Outdoor Air-hood (attached to economizer)
3	1	Wiring Diagram Sticker
4	1	Wiring Harness (attached to economizer)
5	1	Economizer Installation Instruction

#### INSTALLATION FOR COOLING AND HEAT PUMP UNITS

1. Disconnect all power supply.

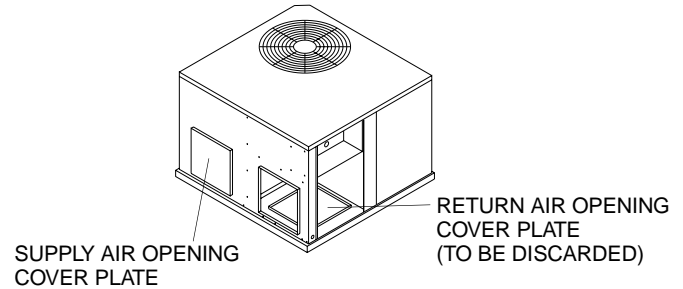
**WARNING:** Failure to disconnect all the power supply can cause electrical shock resulting in personal injury or death.

2. Remove the electrical / filter access panel by removing the two (2) screws located at the panel bottom using a 5/16 inch nut driver. (See FIG.1)
3. Remove the four (4) screws securing each duct cover for the bottom supply and return air openings (requires a 5/16



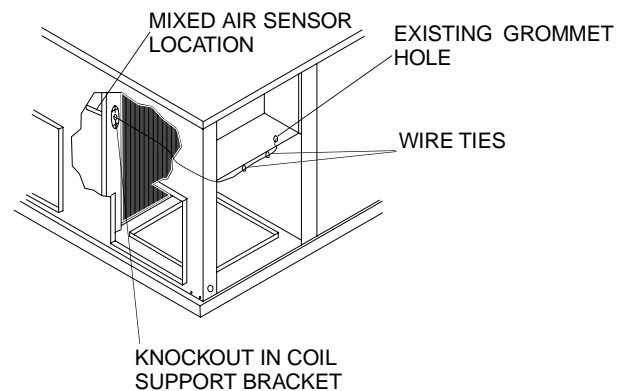
**FIG. 2 - REMOVE ELECTRICAL/FILTER ACCESS PANEL**

inch nut driver). Mount one cover over the side supply air opening using four (4) screws and discard the other cover.



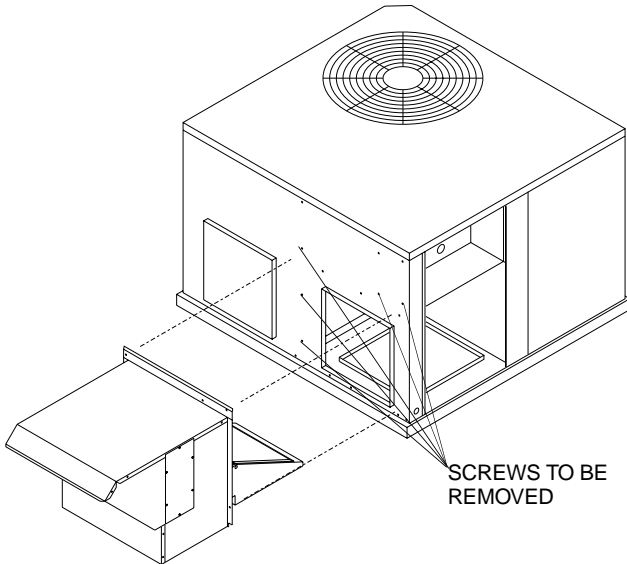
**FIG. 3 - REMOVING COVER PLATES**

4. Using FIG. 5 as a guide, remove the five (5) screws identified from the duct panel. Save the screws for Step 12.



**FIG. 4 - ROUTING ECONOMIZER WIRING HARNESS AND SENSOR**

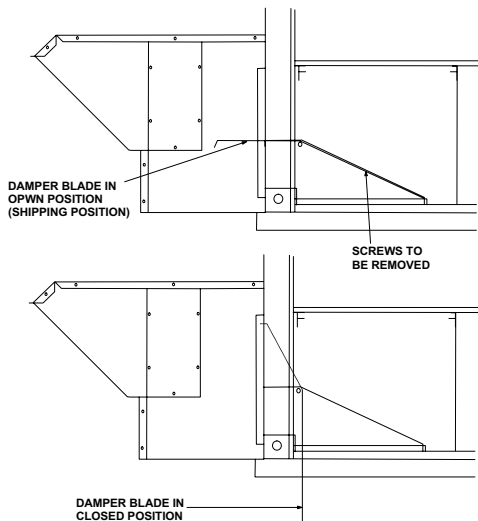
5. If a filter rack is to be used in the unit, it should be installed at this point. Refer to the unit installation instructions to determine the correct filter kit for the unit.
6. Open the electrical compartment access panel.
7. Route the economizer wiring harness through the two wire ties found under the control box and through the grommet on the bottom of the control box (See Figure 4).
8. Route the loose end of the economizer wiring harness through the grommet and hole located in the back of the control box. (See FIG. 4).
9. Install the mixed air sensor through the knockout located in the coil support bracket. (See FIG. 4)
10. Complete all wiring per the wiring diagram (See FIG. 12). Relay kit 2AC04700724 must be installed on all heat pump units.
11. Slide the economizer into place until the damper hood rests inside the return air opening. Check the alignment of the economizer mounting plate with the screw holes created in



**FIG. 5 - LOCATION OF SCREWS TO REMOVE**

Step 4. Make sure that the damper hood does not rest on the filter base bracket assembly

12. Secure the economizer to the unit using the screws that were removed in Step 4.
13. Connect the plug on the economizer to the plug on the wiring harness.
14. Remove the two (2) screws shown in Figure 6 that held the damper blade in place for shipping.
15. Apply wiring diagram to inside of the electrical access compartment panel.



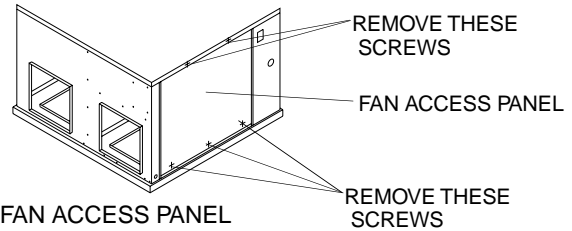
**FIG. 6 - REMOVING DAMPER BLADE SCREWS**

16. Replace the electrical access compartment panel.
17. Replace the electrical / filter access panel.
18. Restore all power.

## INSTALLATION FOR GAS/ELECTRIC UNITS

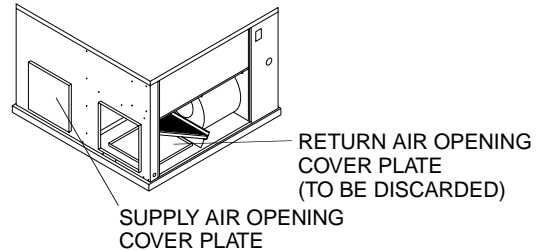
1. Disconnect all power supply from the unit.

**WARNING:** Failure to disconnect all power supply can cause electrical shock resulting in personal injury or death.



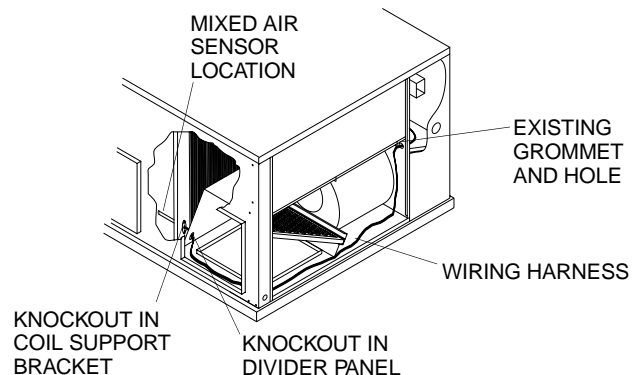
**FIG. 7 - FAN ACCESS PANEL**

2. Remove the fan access panel by removing the two (2) top and three (3) bottom screws using a 5/16 inch nut driver (See FIG. 6).
3. Remove the four (4) screws securing each duct cover on the bottom supply and return air openings (requires a 5/16 in. nut driver). Mount one cover over the side supply air opening using four (4) screws and discard the other cover.



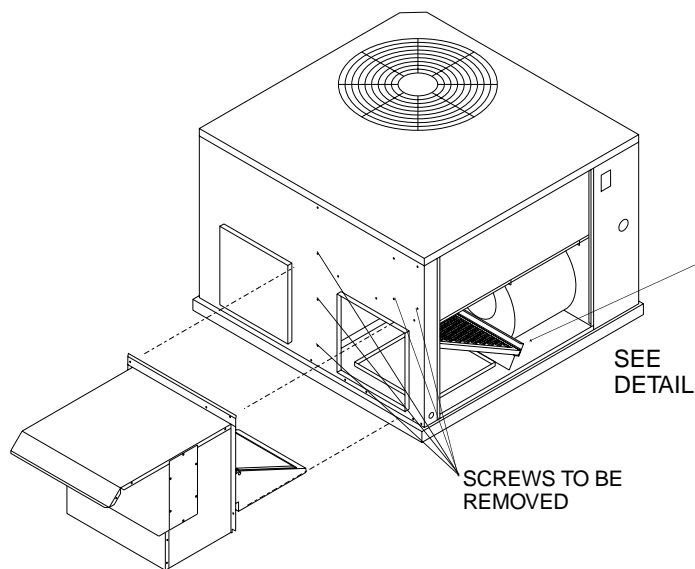
**FIG. 8 - REMOVING COVER PLATE**

4. Using FIG. 8 as a guide, remove the five (5) screws identified from the duct panel. Save the screws for Step 12.
5. If a filter rack is to be used in the unit, it should be installed at this point. Refer to the unit installation instructions to determine the correct filter kit for the unit.
6. Remove the burner / electrical compartment access panel.
7. If the unit is rated for a 208/230-1-60 power supply, the existing 40 VA transformer must be replaced with a 75 VA transformer (035-25973-000) and a circuit breaker (035-24055-000); both provided in kit 2EC06700124. All other units have a factory installed 75 VA transformer.



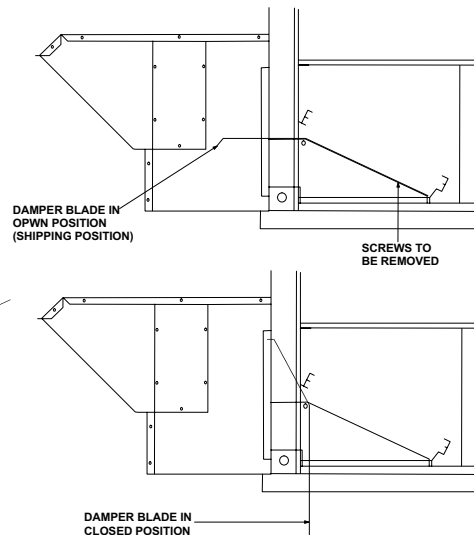
**FIG. 9 - ROUTING ECONOMIZER WIRING HARNESS AND SENSOR**

8. Route the loose end of the economizer wiring harness through the grommet and hole located in the back of the control box (See FIG. 4).
9. Install the mixed air sensor through the divider panel knockout and coil support bracket knockout (See FIG. 10).
10. Complete all wiring per the wiring diagram (See FIG. 12).
11. Slide the economizer into place until the damper hood rests inside the return air opening. Check the alignment of the economizer mounting plate with the screw holes created in Step 4.



**FIG. 10 - LOCATION OF SCREWS TO REMOVE**

12. Secure the economizer to the unit using the screws that were removed in Step 4.
13. Connect the plug on the economizer to the plug on the wiring harness.
14. Remove the two (2) screws (see FIG. 11) that held the damper blade in place for shipping. Any filters must be removed to perform this operation.



**FIG. 11 - REMOVING DAMPER BLADE SCREWS**

15. Apply wiring diagram to the inside of the electrical access compartment panel.
16. Replace the gas / electrical access compartment panel.
17. Replace the electrical / filter access panel.
18. Replace the fan access panel.
19. Restore all power supply.

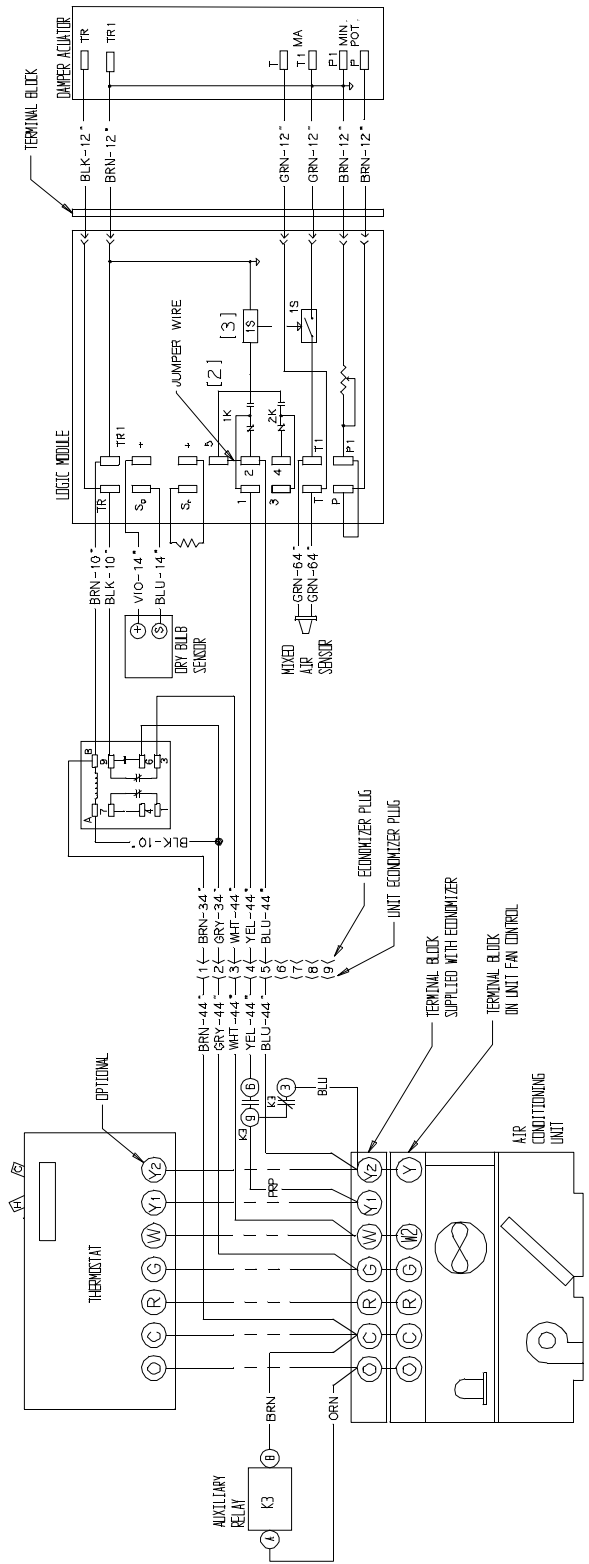


FIG. 11 - WIRING DIAGRAM FOR HEAT PUMP UNITS

NOTE: 1. Relays 1K and 2K actuate when the Outdoor Air Enthalpy is lower than the Return Air Enthalpy.  
 2. 1S is an electronic switch which closes when powered by a 24 VAC input.  
 3. Y2 must be energized for the compressor to operate during economizer operation.

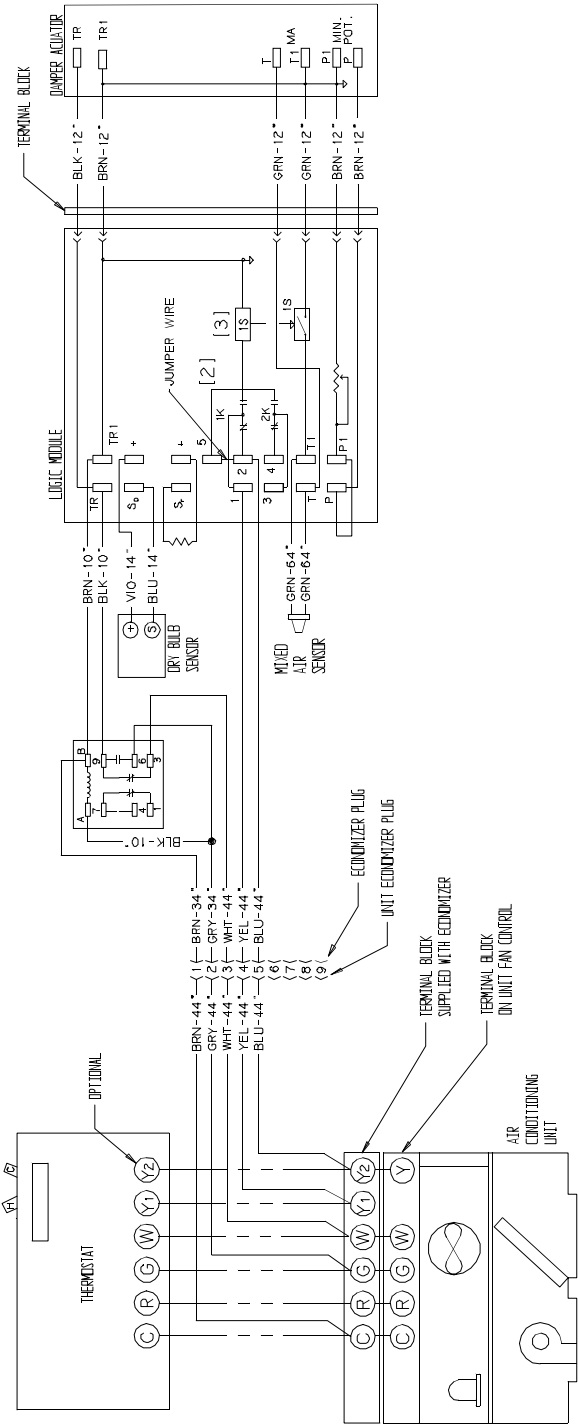


FIGURE 12 - WIRING DIAGRAM FOR COOLING AND GAS/ELECTRIC UNITS

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