

# ACCESSORY KIT INSTALLATION INSTRUCTIONS

## ECONOMIZER ACCESSORY MODEL 2EE4703724

FOR SINGLE PACKAGE EQUIPMENT  
AIR CONDITIONERS AND HEAT PUMPS  
3, 4, 5 & 6 TON

### GENERAL

This instruction provides all the necessary information to properly field-install an economizer on the above indicated equipment.

Economizer Model 2EE04703724 has a single input electronic enthalpy sensor provides automatic 100% outdoor air capability with 2% leakage dampers.

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

Dual Enthalpy Control Kit #2EC04700924 can be used to convert this economizer from single enthalpy to dual enthalpy.

### INSTALLATION

Install this economizer per the following procedures.

1. Remove filter section access panel and outdoor air opening cover from the unit. Discard cover only, keeping the six (6) sealing screws for later use.

**NOTE:** When operating the unit with side air discharge applications, the side duct covers may be discarded and the bottom supply and return duct covers must remain secured in place. When operating the unit with down air discharge applications, the bottom duct covers may be discarded and the side supply and return duct covers must remain secured in place.

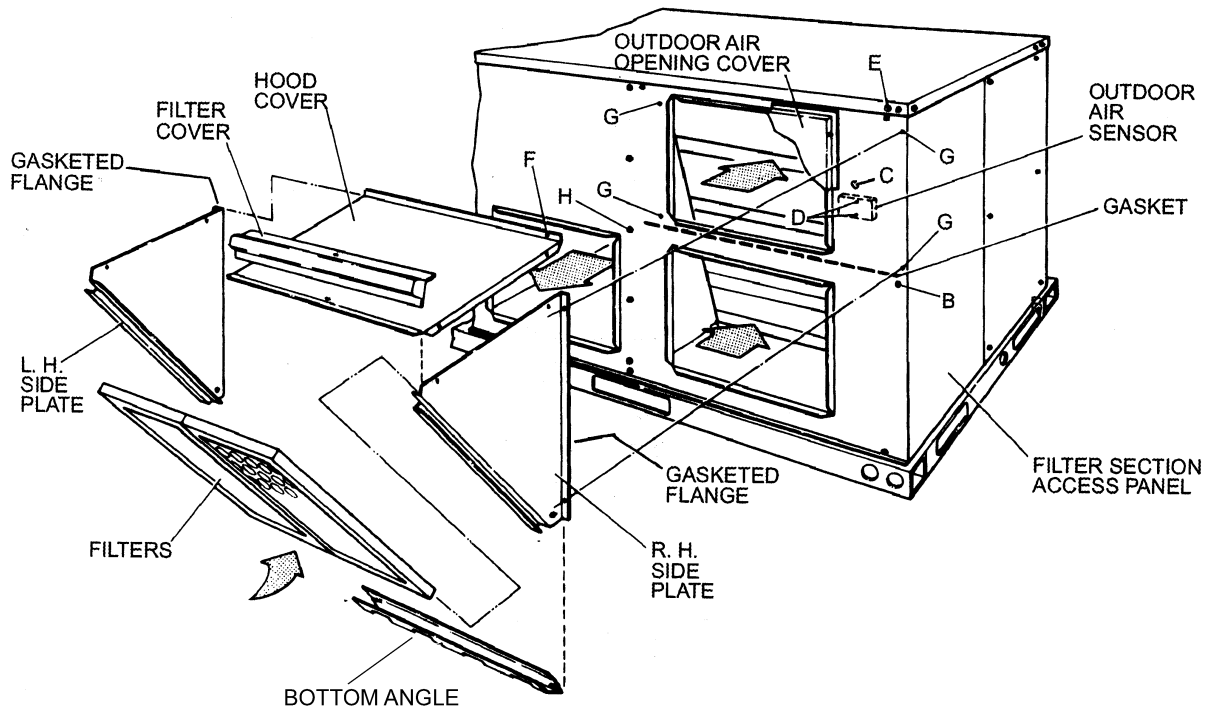
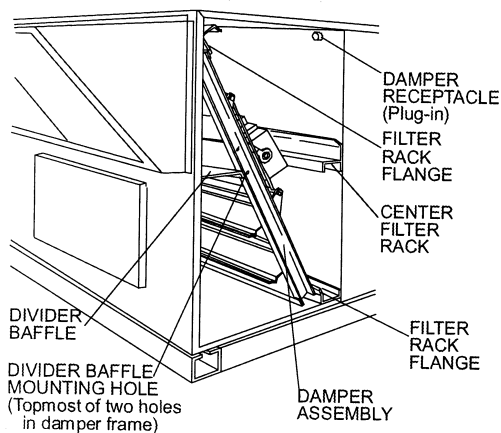


FIGURE 1 : ECONOMIZER RAIN HOOD ASSEMBLY

2. Before installing the damper assembly into the unit, the following steps must be performed.

- a. Remove the 1/2" knockout in the divider baffle, and the 7/8" knockout in the motor support channel on the damper assembly.
- b. On the side opposite the damper motor and linkage, attach the 60° flange of the divider baffle (positioned downward) to the damper assembly frame with two (2) #10 screws provided. Refer to Figure 2. Use the topmost hole on each end of the damper frame for mounting this baffle. The 1/2" knockout hole in the divider baffle must be toward the same end as the damper motor.



**FIGURE 2 : DAMPER ASSEMBLY**

- c. Insert the two outdoor air enthalpy sensor wires (451/BK and 452/W) through the knockout hole in the motor support channel and up through the 1/2" knockout hole in the divider baffle.

**NOTE:** Do not install strain relief bushings into these holes until later so that wire length adjustments can be made.

- d. Locate square opening (A) in evaporator partition (Figure 3), cut away insulation and insert discharge air sensor bulb (with bracket) through this opening.

Secure sensor bracket to partition with screw provided. Make sure sensor bulb protrudes past the end of the bracket to insure it will be in the air stream. Sensor leads will be connected to the damper motor later.

**NOTE:** Sensor may be more easily inserted into the evaporator partition by access through the side return air duct opening (providing there is no ductwork installed).

- e. Drill a 1/4 " clearance hole at dimple (B) shown in Figure 1 and remove the gasketed screw from position (H).
3. Insert the damper assembly into the filter section. Flex divider baffle downward so that the assembly will slide into place. Slide onto flange of the filter rack at the top and bottom of the filter compartment.
4. Secure the divider baffle to the unit duct panel at hole (B) and (H) using the gasketed screw removed in Step 2 (e) and one of the gasketed screws removed in Step 1.
5. Remove the 1/2" knockout (C), and drill two 1/8" (or #30 drill) holes at dimples (D) in the unit duct panel.

The outdoor air sensor is included in the bag of parts shipped with each economizer accessory. Mount it at the holes just drilled using the two #8 x 3/4" Phillips head screws supplied in the bag attached to the motor.

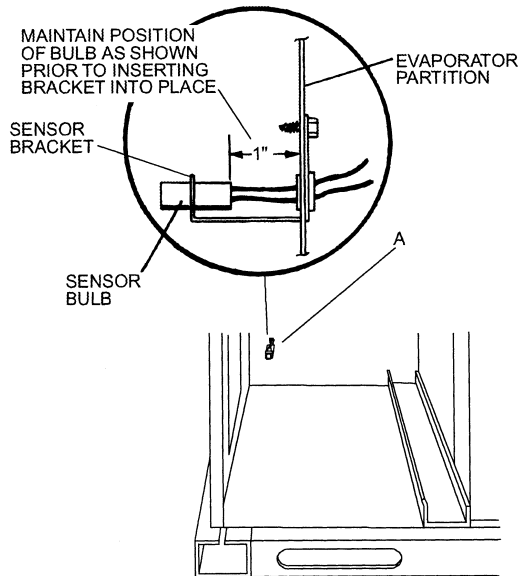
**NOTE:** Sensor must be positioned so that the sensing ports are at the top (louvers pointing downward) and terminal connections to the right.

6. Insert the two leads (451/BK and 452/W) from inside the unit through the 1/2" knockout hole indicated in Step 5. Connect wire 451/BK to terminal (+) and wire 452/W to terminal (S) on the sensor.

**NOTE:** Do not install strain relief bushings into the 1/2" holes until later so that wire length adjustments can be made.

7. Route the leads from the discharge air sensor installed in Step 2 (d) through the knockout hole in the motor support channel and attach them to terminals T and T1 on the damper motor. Install the two wire ties on the underside of the divider baffle to support the sensor leads.
8. Adjust all sensor leads to be slack at the terminals but away from moving parts or sharp edges and insert the appropriate strain relief bushings in the unit duct panel, the divider baffle and the motor support channel.
9. Assemble the rainhood by attaching the LH and RH side plates to the top cover (2 screws each side). Apply gasketing to flange surface on each side plate. Extend gasketing beyond top and bottom of each flange to insure adequate corner sealing. Secure this assembly to the unit duct panel (upper right corner). First, remove screw (E) on unit

top cover. Then slip flange of hood cover in under flange of unit top cover, replace screw (E), engaging hole (F) in hood flange and tighten. Attach the two side plates to the unit duct panel by drilling 2 holes, 9/64" dia., (#26 drill) for each side plate, at dimples (G) provided in the unit panel. Secure with 4 of the gasketed screws that were removed in Step 1.



**FIGURE 3 : DISCHARGE AIR SENSOR LOCATION**

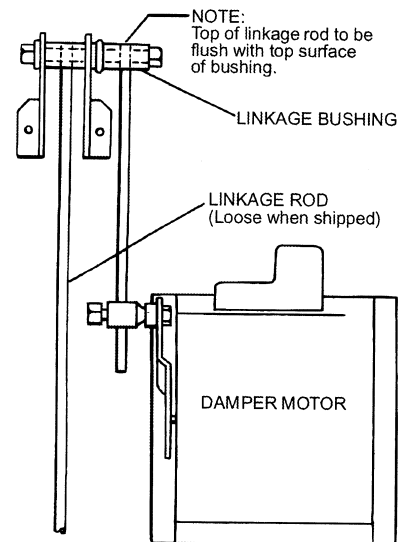
10. Position bottom angle at bottom of hood, between the two side plates, but do not secure at this time. (Slotted openings MUST be downward for drainage as shown in Figure 1). After bottom angle is properly positioned, note where contact is made with the unit duct panel. Remove bottom angle and supply gasket (shipped with accessory) to this area to provide a seal. Reposition bottom angle and secure with 2 screws.

11. Install the two filters into the hood assembly, sliding down along retainers on side plates, into bottom angle at bottom of hood.

**NOTE:** Install filters so that "Air Flow" arrows point toward the unit.

12. Install filter cover over the end of the hood with one screw (center of hood), securing filters into position.

13. One linkage rod on the damper assembly (loose for shipping purposes only) must be inserted into the bushing as shown in Figure 4. Adjust rod so that it is flush with top surface of the bushing, then tighten.



**FIGURE 4 : LINKAGE ROD ADJUSTMENT**

**NOTE:** When linkage is properly adjusted, outdoor air damper blades will be fully closed, return air damper blades will be fully open when the motor is de-energized.

14. Route the wiring harness around the back side of the economizer motor (opposite linkage end) and then behind end of center filter rack (on end of unit). Plug into receptacle above indoor coil. (See Figure 2)

**CAUTION**

Extreme care must be exercised in turning both the set point and minimum position adjusting screws to prevent twisting them off.

15. The enthalpy set point may now be set by selecting the desired set point shown in Figure 5. Adjust as follows:

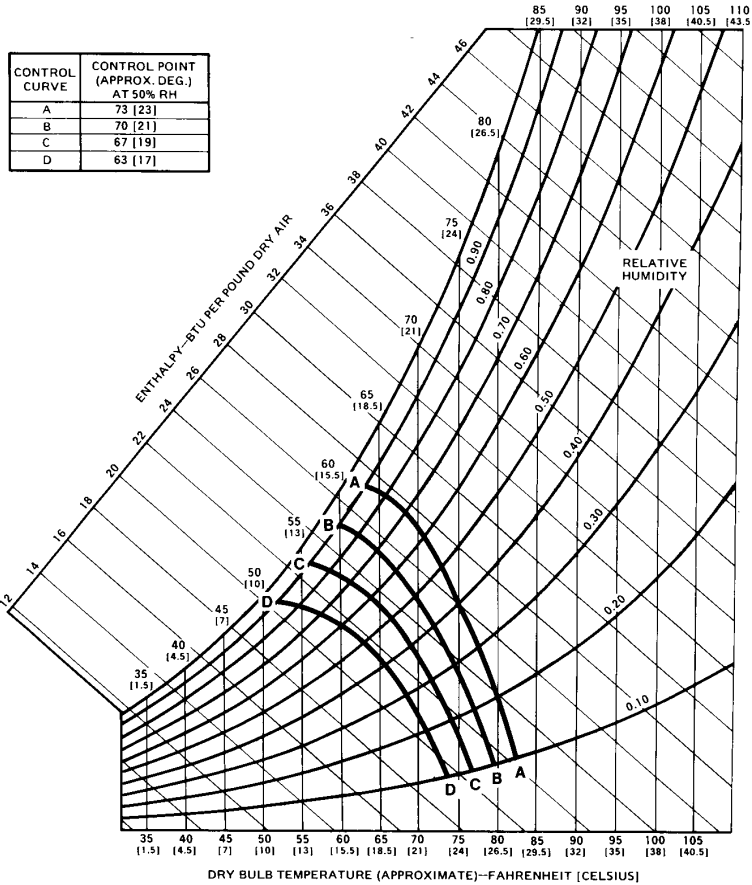
- For single enthalpy economizer, carefully turn the set point adjusting screw to the "A", "B", "C" or "D" setting corresponding to the lettered curve.

•For dual enthalpy economizer, carefully turn the set point adjusting screw fully clockwise past the “D” setting.

tion screw counter-clockwise until the desired minimum position has been attained.

16. To check that the damper blades move smoothly without binding, carefully turn the minimum position adjusting screw fully clockwise and then energize and de-energize terminals “R” to “G”. With terminals “R” to “G” energized, turn the minimum posi-

17. Replace the filter section access panel.



**FIGURE 5 : ENTHALPY SET POINT ADJUSTMENT**