



SERVICE BULLETIN # 00223

201 INDUSTRIAL BOULEVARD • KEARNEYSVILLE, WV 25430

Phone: (304) 728-7056 • Fax: (304) 725-6579 • Toll Free: (800) 931-9214

PAGE: 1 of 6

DATE: 6-20-02

REVISION: 03

SUBJECT: Installation of an Efficiency Relay Kit

MODELS: 20 Plus, GIII, Merlin IV, Merlin III

KIT NUMBER

KIT DESCRIPTION

231025

Efficiency Relay Kit



The following areas of this vender contain voltage, which can cause serious injury or even death. The main power cord, supplying 110 VAC to the evaporator, EMI filter, and refrigeration system. The power line from the EMI filter to the ballast and transformer. The ballast can produce upwards of 600 volts. Remove power from vender before working in any of these areas.

Tools Required: Drill, 11/32 Drill Bit, Phillips Screwdriver

Estimated Installation Time: 10 Minutes

REASON FOR BULLETIN: An "Energy Saving" kit that allows the main control board to put the vender in a "sleep" mode.

INSTALLATION INSTRUCTIONS:

STEP 1.

1. Remove power from vender by unplugging vender's main power cord from the AC voltage power source.
2. Open your vender's main door and locate the main door power harness, which attaches to the EMI filter and supplies power to the ballast and also to the transformer.
3. Remove the original 117V Line Harness from the vender.
4. Install the new 117V Line Harness from the kit (842314). **Note:** This is necessary due to the thicker gauge of the wire of the new harness. Plug in the two boots at the one end of the harness to the EMI filter (see Figure 2). Plug in the two-wire connector at the other end of the harness to the transformer (see Figure 3). **DO NOT PLUG IN THE BALLAST CONNECTION!**

STEP 2.

5. Mount the included relay (Figure 1a or 1b) inside the vender's main door, using the included screws and nuts. On Landscape venders, this relay should be mounted behind the changer vault (see Figure 5). On Marketing venders, this relay should be mounted in the control panel vault (see Figure 4).

STEP 3.

6. If you have a 6-Boot Relay (836065), Connect the boots on the one end of the 24V Power Lead harness (842316) to the two-prong side of the relay (see Figures 1 & 6). At the other end of this harness, plug the black wire into position 6 of the harness coming from the top side of the regulator board (see Figure 7). Plug the red wire into position 4 of the 4-way refrigeration harness jumper.

Note: If you have a 4-Boot Relay (836065), A Jumper harness will be needed between the Relay and 24 VDC Power Lead harness (842316). See Figure 1a and page 6

STEP 4.

7. Connect the two pink receptacles at one end of the Main Power Lead harness (842313) to the main control relay (see Figures 1 & 8). Connect the male Mate 'n' Lok housing on the harness to the female housing on the 117V Line Harness. Plug the female Mate 'n' Lok housing on the Main Power Lead harness to the ballast (see Diagram & Figure 9).
8. Locate the refrigeration control relay in the base of the vender's cabinet. Unplug the ribbed black wire and **cap it by using the included .250 molded tab (940095)**. Plug the pink receptacle from the main power lead harness (842313) in place of the ribbed black wire.
9. Locate the evaporator fan lead connection (underneath the left side of delivery chute). Unplug the smooth lead and **cap the smooth lead coming from the lower cabinet (main wiring harness) using the .250 molded receptacle (940096)**. Plug the single rubberized boot of the main power lead harness (842313) to the smooth lead going to the evaporator fan.

IMPORTANT NOTE: It is extremely important to use dummy plugs 940095 and 940096 as shown in the diagram to reduce the risk of electric shock! Make sure to split and connect ribbed and smooth wires from the main wiring harness as shown in the diagram.

10. Re-plug vender's power cord and test the relay by accessing the control board's "FriG" mode ("tEst" on EVS and KO), then scroll and enter into the "rely" mode to access the "Lit" mode. Enter into the "Lit" mode, set it to "1", then press the "Enter" button. (Refer to programming instructions.) The lights, evaporator fan, and refrigeration unit should now be disabled. This allows you to test the control board's ability to turn the relay on or off. Closing the vender's main door will return everything to a normal state.

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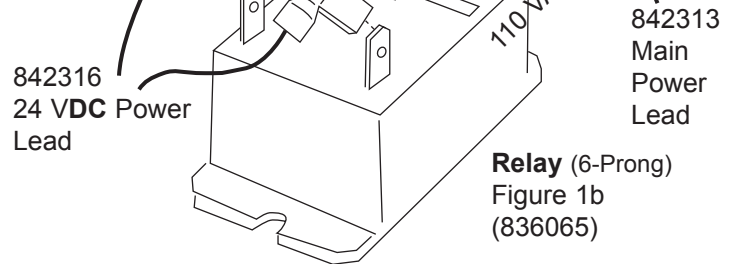
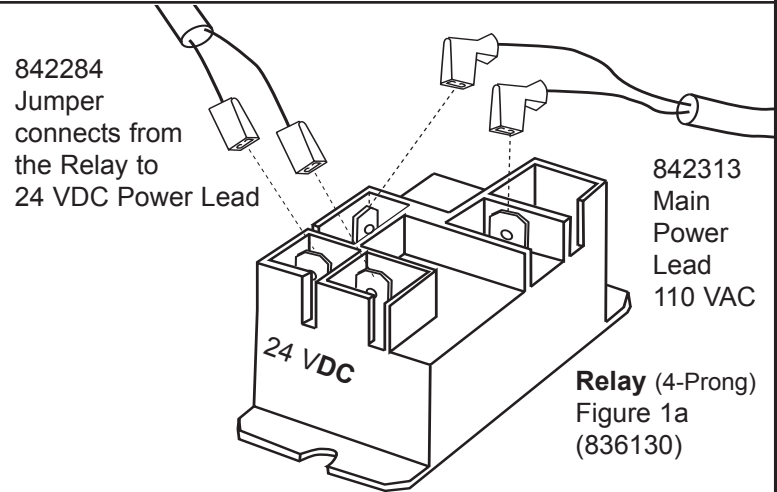
PROGRAMMING:

GIII E.V.S. and K.O.:

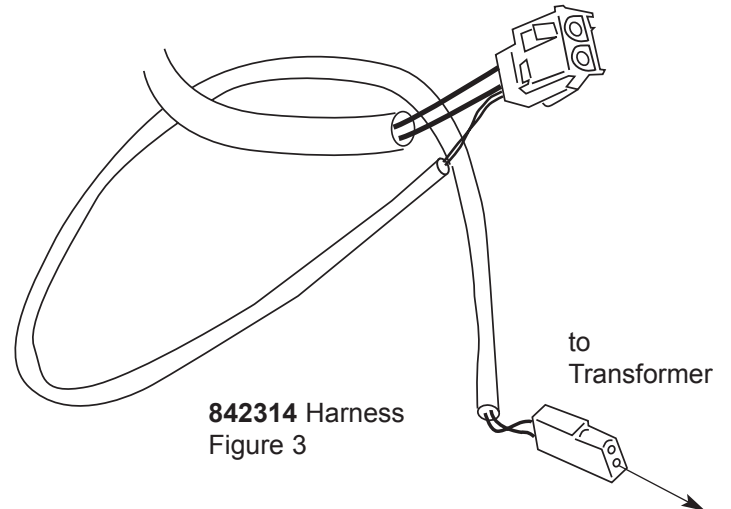
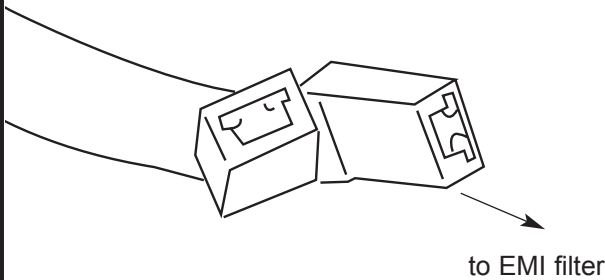
1. Time Mode (tinE) must be set to the current Year, Month, Date, and Hour.
2. Set the Lighting Control Mode (Lit) as follows:
 Enable (Enb): set to "1"
 Strt - day: All to "1"
 - Hour: desired start time for Sleep Mode
 StoP - day: All to "1"
 - Hour: desired stop time for Sleep Mode

GIII (Non-EVS), MERLIN IV, and MERLIN III:

1. Time Mode (tinE) must be set to the current Year, Day (Setd), Date, and Hour.
2. Enter into "day" in the Time Mode (tinE) and set the Light Timer as follows:
 Scroll to the days the vender should be in sleep mode, or "ALL," if it should be in sleep mode every day.
 In each day or in "ALL," scroll to "Lt-1 On" ("LitE On" in GIII). This will be the time the sleep mode should begin.
 Scroll to "Lt-1 Off" ("LitE Off" in GIII). This will be the time the sleep mode should end.



842314 Harness
Figure 2



842314 Harness
Figure 3

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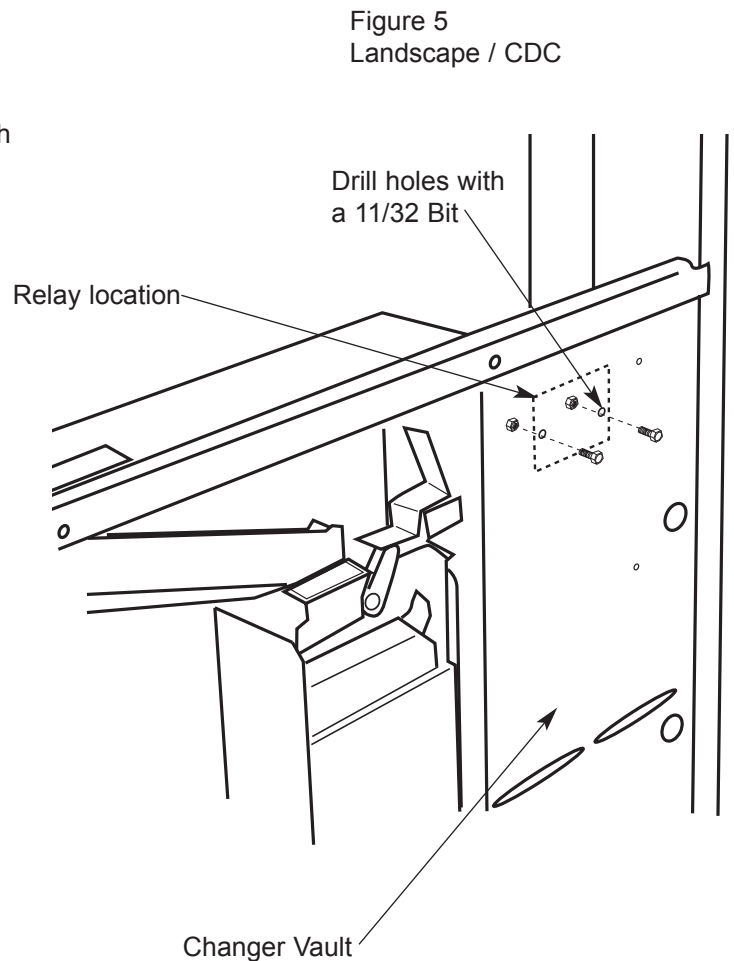
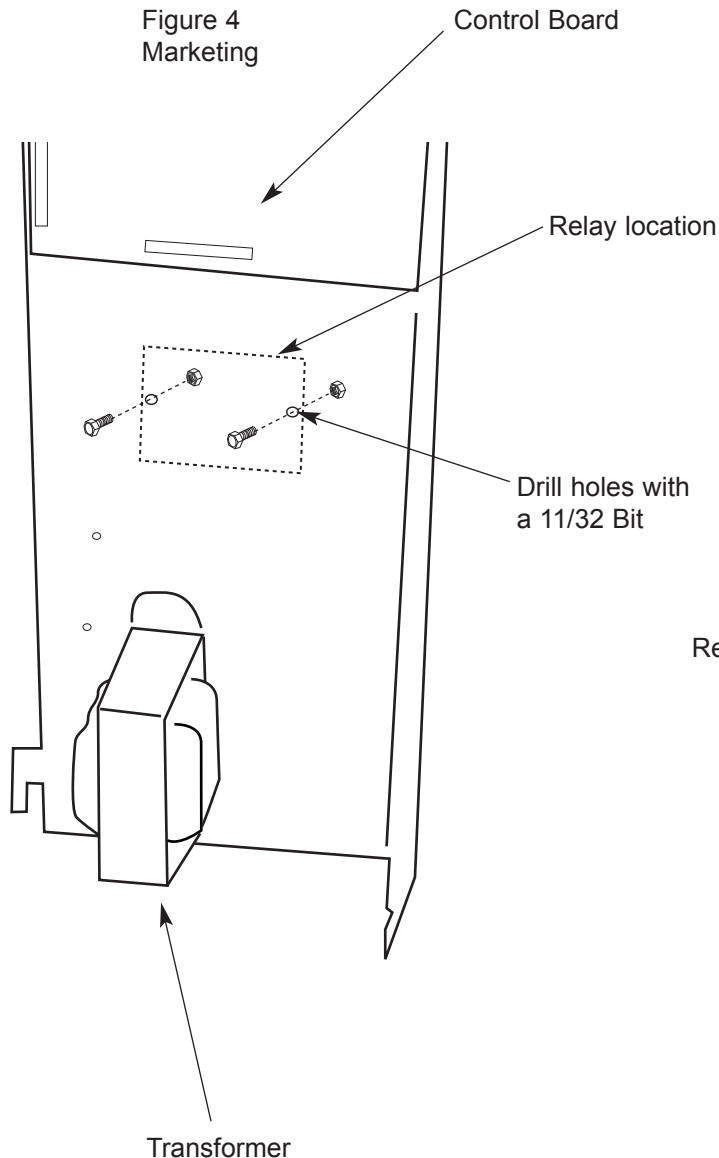
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MODELS: 20 Plus, GIII, Merlin IV, Merlin III

Relay Location for Marketing and CDC



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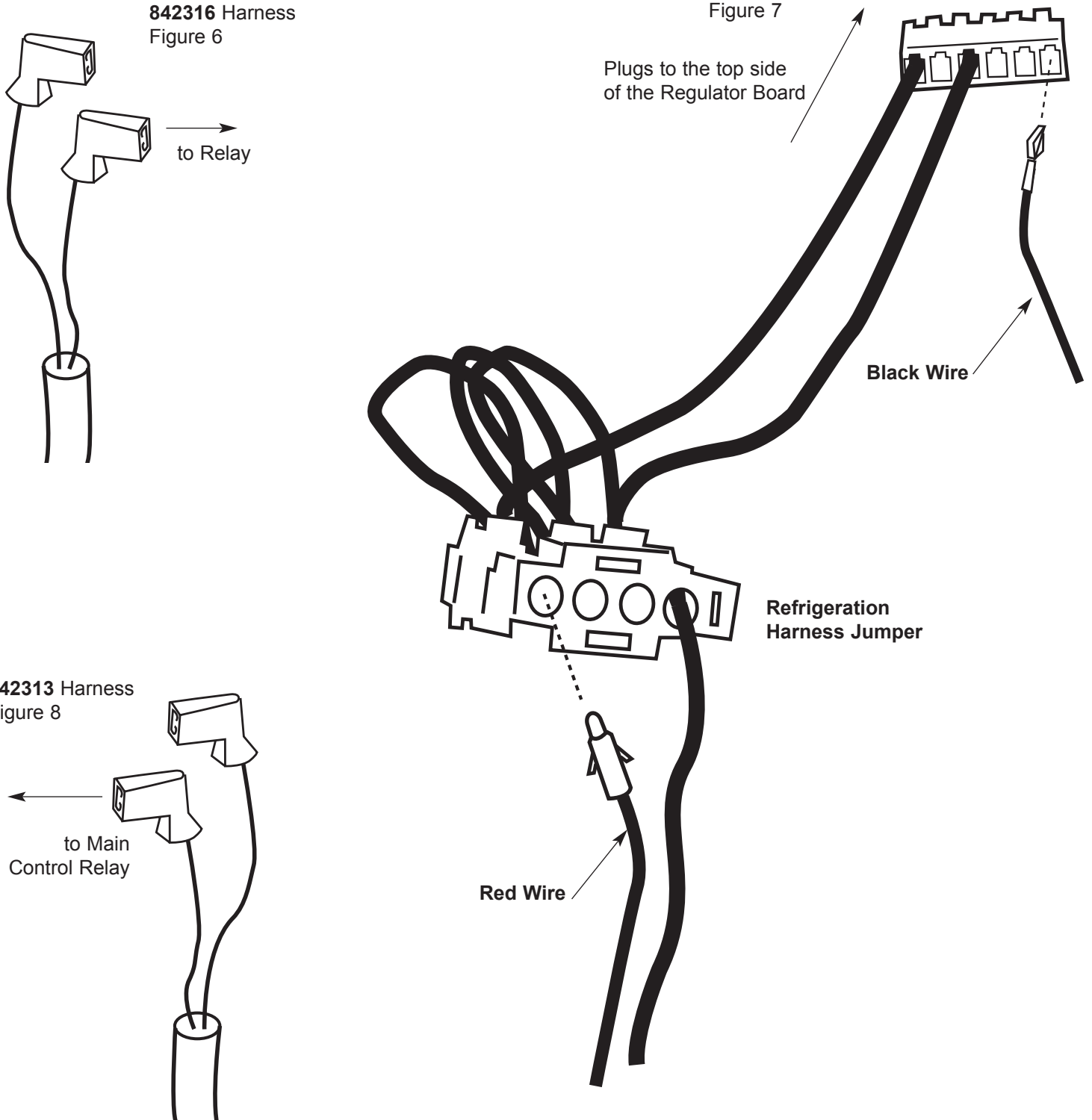
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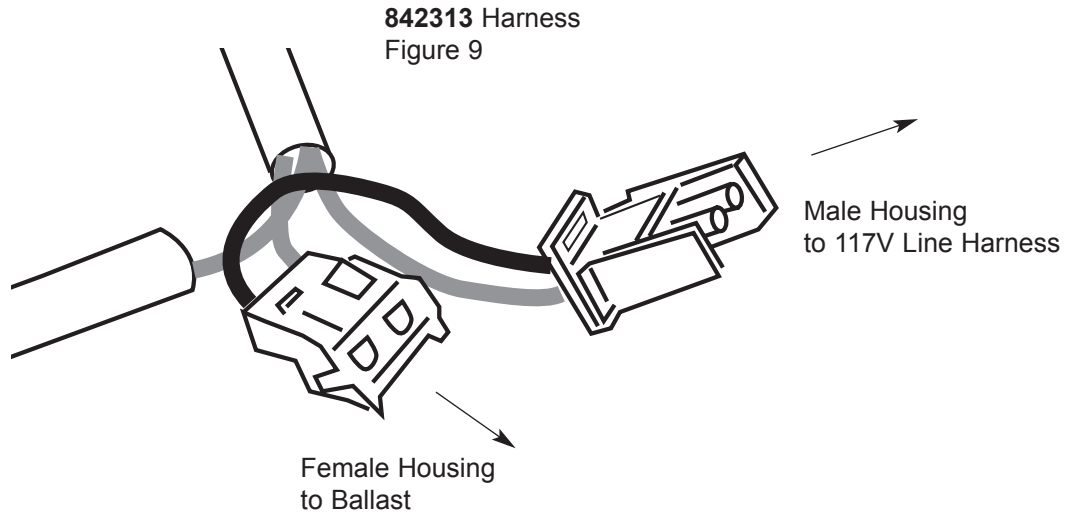
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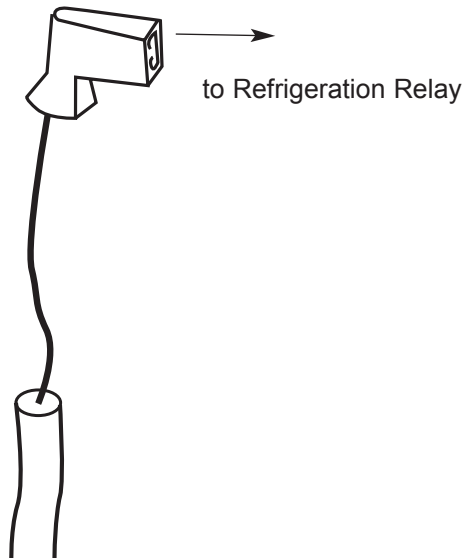
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SUBJECT: Installation of an Efficiency Relay Kit

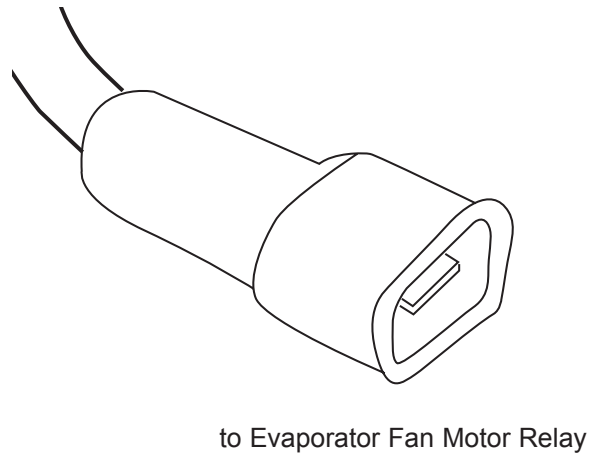
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842313 Harness (single Boot)
Figure 10



842313 Harness (End Boot)
Figure 11



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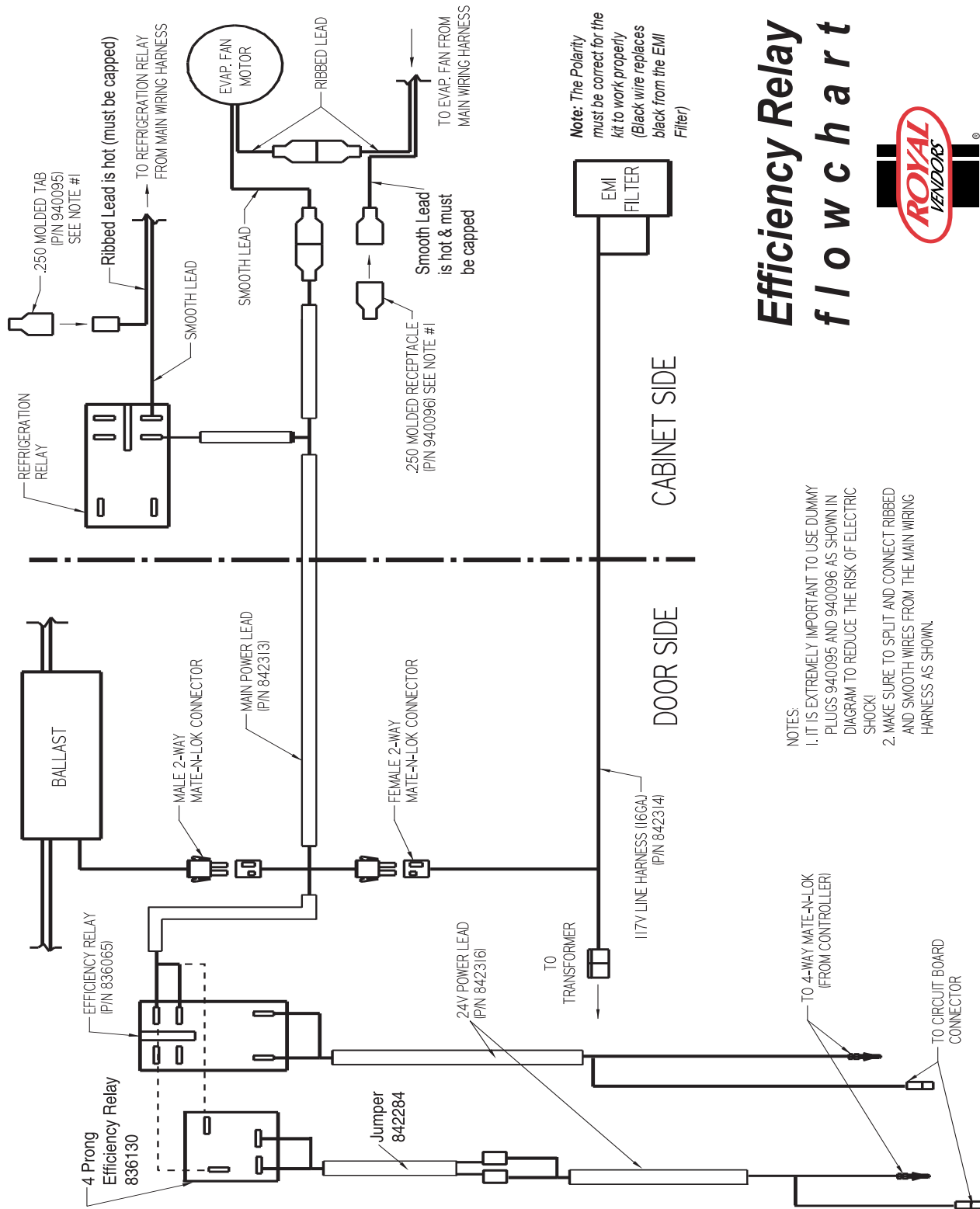
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Efficiency Relay f l o w c h a r t



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