



# SERVICE BULLETIN 113

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Date: 24 Oct 2011

Revision: 09

**SUBJECT:** Lamp Relay Kit Installation

Number of  
People  
Required



**MODELS:** GIII, Merlin III, Merlin IV, HVV, and TDV venders

**KIT NUMBER**

**KIT DESCRIPTION**

141160

Lamp Relay Kit (Merlin III, Merlin IV, TDV Merlin, GIII non-CDC)

161111

Lamp Relay Kit (CDC GIII, TDV KO)

343101

Lamp Relay Kit (all HVV)

842235

Relay Door Harness (*only necessary if vender does not currently have one*)\*

**TOOLS REQUIRED:** Phillips screwdriver, drill with 1/8" (3 mm) bit

**ESTIMATED INSTALLATION TIME:** 5 minutes



The following areas of this vender contain voltage which can cause serious injury or even death: the main power cord, supplying 115-230 VAC to the evaporator, EMI filter, and refrigeration system; the power line from the EMI filter to the ballast and transformer; and the ballast, which can produce upwards of 600 volts. Remove all power from the vender before working in any of these areas.

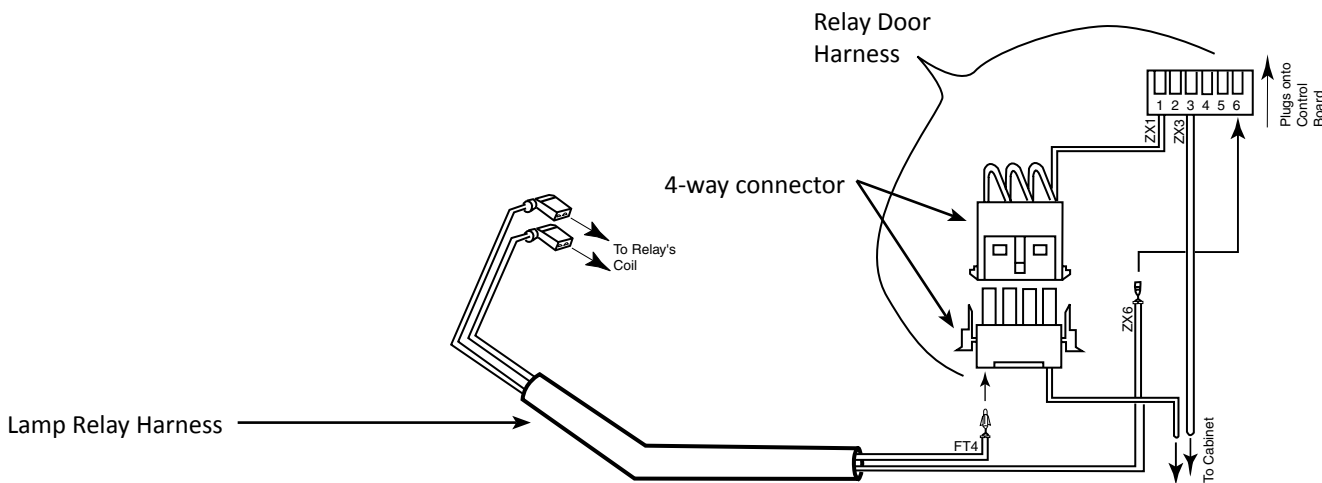
**\*NOTE:** Some types of venders (such as older Merlin III and Merlin IV) are manufactured without the electronic refrigeration control system (Relay Door Harness). The Relay Door Harness is necessary in these venders to allow the use of the Lamp Relay Kit (refer to part number above).

**INTRODUCTION:** This bulletin shows the correct procedure for installing the lamp relay kit, which allows the controller to turn the lighting system on or off.

**INSTALLATION INSTRUCTIONS:**

1. Remove power by unplugging the vender's power cord from the AC voltage source (wall outlet).
2. Open the vender's main door and locate the Relay Door Harness (see figure A). If the vender does not have a Relay Door Harness, one will need to be ordered for each vender in which the Lamp Relay Kit will be installed.
3. Using the Lamp Relay Harness supplied with this kit, insert the metal pin of wire FT4 into the 4-way connector of the vender's Relay Door Harness as shown in figure A. Make sure it 'snaps' into position and will not pull out. Plug the Lamp Relay Harness' circuit board connector terminal of wire ZX6 into position 6 of the Relay Door Harness' control board receptacle, as shown in figure A.

**Figure A.**



In an effort to provide our customers with the latest information on our equipment, Royal Vendors sends service bulletins to customers using the original ship-to address or e-mail addresses, if supplied by our customers. We also post all service bulletins on our website at www.royalvenders.com. If for any reason a vender is moved to another location or is sold to another customer other than to whom Royal Vendors originally sent the machine, it is the responsibility of the original purchaser of the vender to notify the appropriate personnel of the service bulletin.

**ANY QUESTIONS? CONTACT ROYAL VENDORS' CUSTOMER SERVICE DEPARTMENT  
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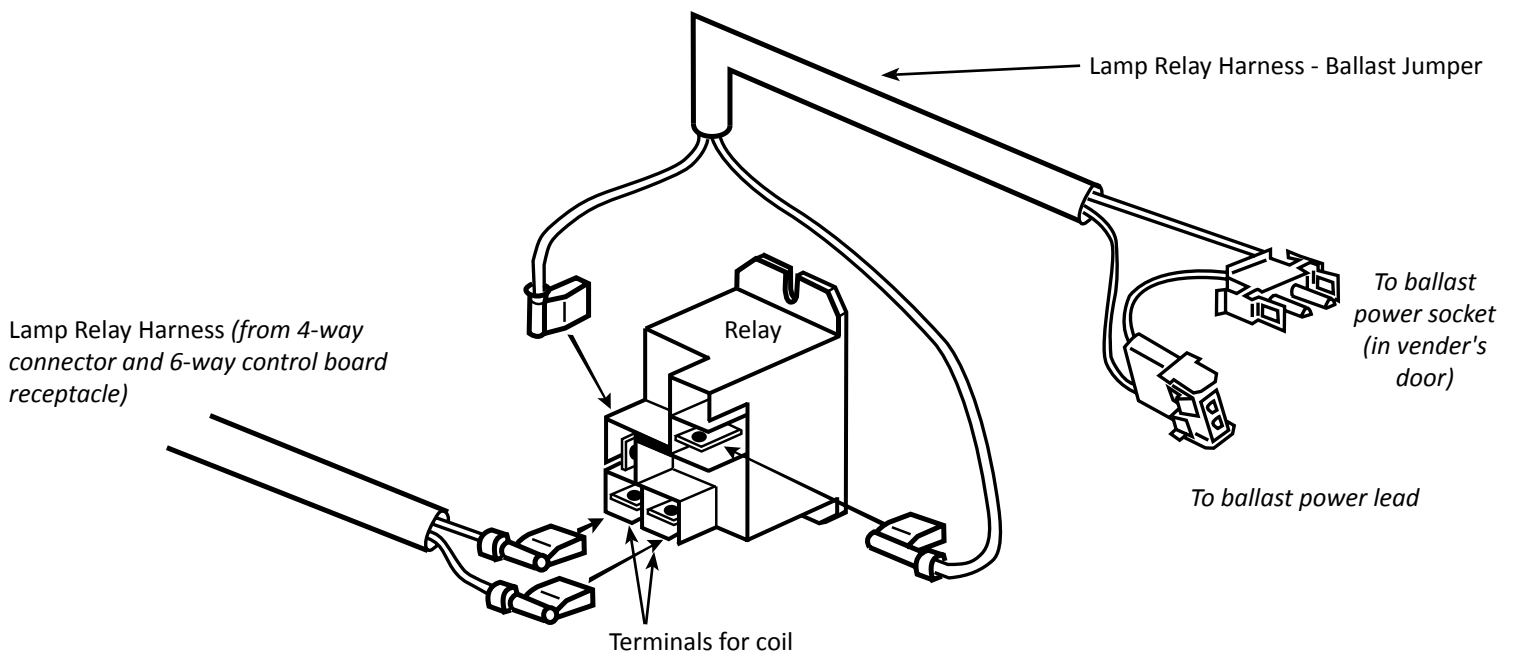
**MODELS:** GIII, Merlin III, Merlin IV, HVV, and TDV venders

4. Route the Lamp Relay Harness to a suitable mounting spot for the Relay (supplied in kit).
5. Unplug the ballast power connector (2-way Mate-N-Lok connector). Using the Lamp Relay Harness-Ballast Jumper, plug the male 2-way Mate-N-Lok connector into the ballast 2-way power supply provided by the vender. Plug the remaining Lamp Relay Harness-Ballast Jumper 2-way receptacle to the ballast's power lead. Route the two remaining connectors to a suitable mounting spot for the Relay (supplied in kit).
6. Plug the Lamp Relay Harness wires FT4 and ZX6 to the relay's two 'coil' terminals as shown in figure B. Plug the two Lamp Relay Harness-Ballast Jumper wires to the two relay switch terminals as shown in figure B.
7. With all harnessing connected, find a suitable mounting place for the relay for the particular type of vender. Scribe the two mounting holes for the relay. Using a 1/8" (3 mm) drill bit, drill the two mounting holes. Mount the relay using the two self-drilling screws included in the kit.
8. **GIII EVS, GIII KO, TDV KO, and HVV:** Restore power by plugging in the vender's power cord. To test the relay, access "tEst" ("Test Modes" in HVV), scroll to "rELy" ("Test Relays"), and then scroll to "Lit" ("Lighting"). Turn "Lit" ("Lighting") to "On." To set the timers for the Lamp Relay, access "Lit" ("Lighting Control") in the main menu. Refer to programming instructions for setting the light timers.  
**All other models:** Restore power by plugging in the vender's power cord. Test the relay by accessing the control board's "Frig" mode, scrolling to the "rELy" mode, and then scrolling to the "Lit" mode (refer to programming instructions). This will allow you to temporarily turn the Lamp Relay on or off. Keep in mind the main programming for the Lamp Relay is done within the timer mode ("tinE"). Refer to programming instructions for setting the light timers.



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**Figure B.**



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