



SERVICE BULLETIN 285

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SUBJECT: Energy Star Tier 2 Compliant Control Boards

Number of People Required N/A

MODELS: All USA / Canadian venders (except RVV NG - see below)

KIT NUMBER **KIT DESCRIPTION**

N/A N/A

TOOLS REQUIRED: None

ESTIMATED INSTALLATION TIME: N/A



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 power from vender before working in any of these areas.

REASON FOR BULLETIN: Effective 1 July 2007, most new Royal Vendors equipment manufactured for use in the USA (including Puerto Rico) and Canada Energy Star Tier 2-qualified. All Tier 2-qualified equipment can be identified by the placement of the temperature sensor directly below the vender's product chute. All non-Tier 2 venders will have the temperature sensor mounted on the cabinet wall behind the evaporator fan motor. To accommodate use in both older and newer venders, all control boards have a new configuration in the internal menu to switch between Tier 1 (older) and Tier 2 (newer) operation. **NOTE:** All RVV NG's are already Energy Star Tier 2-qualified by design.

TO SWITCH BETWEEN TIER 1 AND TIER 2 IN THE INTERNAL SERVICE MENU:

1. Press the mode button on the vender's main control board.
2. Press <up> in the menu until the Configurations Mode is reached, then press <enter>.
3. **For all KO and HVV models (except RVV):**
 - A. Press <up> until Configuration 11 (E11 on KO displays) is reached, then press <enter>.
 - B. Change the configuration setting to "1" for Tier 2 compliance or "0" for Tier 1 compliance, then press <enter>.
- For all other models (except RVV):**
 - A. Press <up> until Configuration 14 (E14) is reached, then press <enter>.
 - B. Change the configuration setting to "1" for Tier 2 compliance or "0" for Tier 1 compliance, then press <enter>.
4. Exit the service menu by closing the vender's main door.

FEATURES OF ENERGY STAR TIER 2 (when used on compliant equipment):

- **Normal Mode (Energy Saving):** When the main door is closed and the door switch is made, the controller will count the number of refrigeration cycles. When this number equals a stored counter, the refrigeration unit will convert from a pull-down mode, in which the evaporator fan runs continuously, to a normal mode, in which the evaporator fan runs only when the compressor is on.
- **Defrost Mode:** The defrost feature is a 30-minute period in which the compressor is shut off and the evaporator fan is allowed to run. The defrost feature is initiated by a timer. The factory default is three hours, but this setting may be adjusted in the service menu from 3 to 24 hours.

POSSIBLE PROBLEMS IF THE CONFIGURATION IS SET INCORRECTLY:

It is imperative that the Energy Star configuration be set correctly in the vender's programming. Possible problems due to incorrect configuration setting include:

- **TIER 1: If a Tier 1-compliant vender's controller is set for Tier 2 operation, the refrigeration unit could short-cycle, eventually shutting off the unit completely.**
- **TIER 2: If a Tier 2-compliant vender's controller is set for Tier 1 operation, the refrigeration unit could freeze up and shut down. A no-pulldown error will be shown in the vender's error codes.**

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.royalvendors.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 IN NORTH AMERICA, CALL TOLL FREE 1 800 931-9214