



HOSHIZAKI AMERICA, INC.

SERVICE BULLETIN

SB09-0004

May 21, 2009

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Subject: FS-1001MLH INFRARED SENSOR

The FS-1001MLH FLAKER is equipped with an infrared ice level control sensor located at the base of the cabinet by the ice chute. The infrared sensor is epoxy encapsulated with green and yellow LED indicators:

- **Steady green LED = unit is calling for ice.**
- **Yellow LED blinking = ice approximation detected by sensor.**
- **Yellow LED on = unit is in satisfied condition.**

The sensor works by comparing the reflection of its emitted light beam from an object (ICE) back to the sensor, these signals energize or de-energize a time delay relay which controls unit operation. Both, the time delay and infrared sensor, operate by the unit's 24V transformer in the control box. See the following instructions and diagram for diagnostic and repairs.

Checking the shutdown sequence:

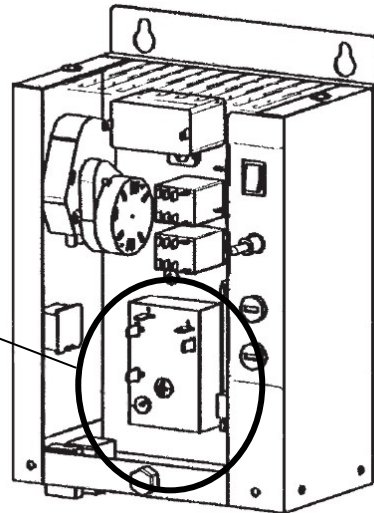
- 1) With the ice machine operating place an object within 3" of the sensor
- 2) The LED lights on the sensor should switch from green to flashing yellow to a steady yellow
- 3) The unit should continue to operate for 130 seconds at factory setting. (Time delay relay setting is 40 seconds plus an additional 90 sec shut down delay in the control board)
- 4) The compressor should shut down first and then the gear motor 60 seconds later.
- 5) The complete shut down sequence will be 190 seconds after the sensor detects the object.

Diagnosing the sensor and time delay relay:

- 1) Remove control box from unit, by removing the two top thumb screws and the bottom thumb screw.
- 2) Carefully slide the loosened control box forward and rotate to the left, in order to have full frontal view of the controls.

- 3) Temporarily affix the control box to the frame with tape or wire tie, for stability.
- 4) Locate time delay relay in control box.

TIME DELAY RELAY



(Fig. 1)

- 5) Check terminals 3 and 1 on the relay for 24 Volts, if power is not present, check 24-V transformer and fuse.
- 6) Next, place your hand or object 3" or less away from front of infrared sensor, yellow LED should light up indicating object has been detected. Relay terminals 6 & 1 will read 24-V. If unable to read voltage, insure object is in front of sensor. If so, sensor is defective and must be replaced.
- 7) To verify the operation of the time delay relay; disconnect terminal 4 & 2 (yellow and dark blue wire) and place Ohm meter between the terminals. See Fig.2 for terminal location.
- 8) Next. Repeat step 6, after 24-V is read at (6 & 1) terminal 4 & 2 should open within 6 seconds. If terminals fail to open time delay relay is defective and must be replaced



Timer Setting: The ice machine is equipped with an adjustable timer in the control box. It controls the amount of time the machine waits before shutting down after ice is detected by the bin control; the timer thereby controls the ice level in the bin or dispenser. The timer is factory set to the minimum delay of 40 seconds. (130 second total shut down time)

Observe the following guidelines when selecting a timer setting.

- When installed on a Hoshizaki bin, any timer setting is acceptable. Increasing the timer setting will allow a higher level of ice in the bin before the ice machine shuts down.
- When installed on a Lancer dispenser designed for Cubelet ice, the timer setting must remain at 40 seconds. (130 sec total)
- For other dispenser applications the ice level at shutoff may need to be adjusted depending on the dispenser agitation or dispense method. Observe the ice level in the bin after the unit cycles off with the 40 second setting (130 sec total) and adjust as necessary for the proper fill level.

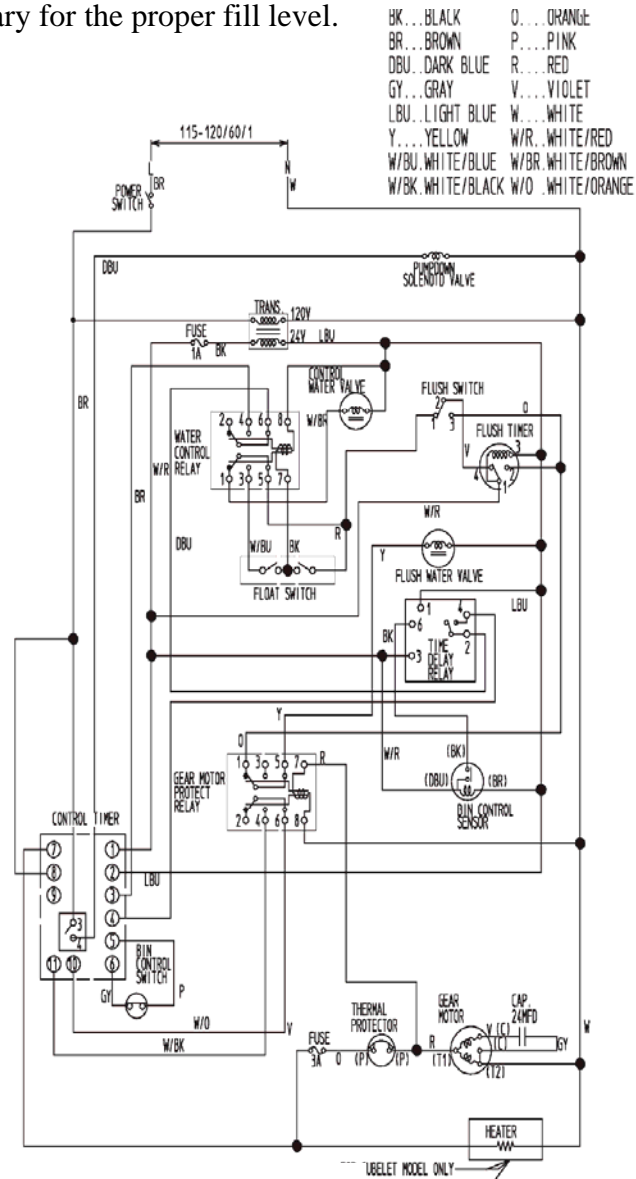


Fig. 3

If you have any questions regarding this information please contact technical support department at: 1-800-233-1940.