

HOSHIZAKI TECHNICAL SUPPORT TECH -TIPS

Rodd Burger
Writer/Editor

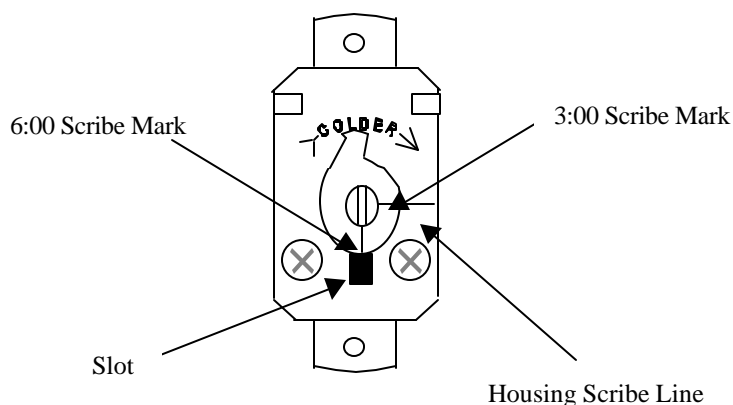
Hoshizaki America, Inc.
618 Hwy. 74 South
Peachtree City, GA 30269
Ph: (800) 233-1940 Fax: (800) 843-1056 E-mail: techsupport@hoshizaki.com

Volume 187
Feb. 29, 2002

WARRANTY PARTS RETURN (BIN THERMOSTAT)

This is the fourth article in our series of warranty parts return reviews. This month we will discuss the thermostatic bin control. This control has been used on all KM series ice machines. You may also find a mechanical style of bin control used on some of the KM-280~900 and KML models. (See Tech Tip 178 and 183 and Service Bulletin SB01-0001 for more information on the mechanical control)

The thermostatic control is a simple mechanical thermostat that will open its contacts on temperature drop. The factory setting is 35.5°F+/-2° to open the contacts and 41°F+/-2° to close the contacts. This adjustment will be affected by altitude so it should always be checked for proper operation at startup. The factory setting can be clearly identified by removing the control from the control box. Insure that the slot is aligned with the 6:00 o'clock scribe mark on the bottom of the dial and the 3:00 o'clock scribe mark is aligned with the scribe mark on the housing as shown below.



To bench test the bin control, place your Ohmmeter leads across the two terminals. Submerge the bulb

end into ice. When the control is adjusted properly, the contacts should open within 10 seconds, showing infinite resistance on your Ohmmeter. (The control may have been adjusted from the factory setting in order to operate within 10 seconds at higher altitudes). You should also hear a "Click" as the control opens. Next, remove the bulb from the ice and the switch should close in a couple of minutes or less. Showing "0" Ohms on your meter. If you hear the "clicking" sound after you meter has reacted to the switch opening or closing, the switch should be considered bad and replaced. For more information on the bin control see tech tip volume 104.

Flaker and DCM Cleaning

By Miguel Maldonado

In last months issue we discussed the cleaning procedures for KMs and KMLs. This month we will be covering the cleaning procedures for the Flaker and DCM units. Before we get into the actual cleaning procedure let's look at what the flaker does to reduce the amount of sediment and scale build up in the evaporator. The Flakers have a periodic flush cycle that occurs every 12 hours; this flush is controlled by a mechanical cam timer. This timer will cycle the unit down for 20 minutes and open a flush valve, allowing the complete water system to drain. This removes any mineral and sediment that has built up in the bottom of the evaporator. The life of the bearings is greatly extended by removing the debris from the water system during this flush cycle.

Hoshizaki America highly recommends that a water filtration system be installed on all Flakers and DCMs. Almost every drop of water that enters the flaker is

made into ice (with the exception of what drains during the flush cycle). Also, the life of the bearing is directly dependent on the quality of water that comes into the unit. Good water filtration not only keeps the unit cleaner but also extends bearing life.

The cleaning instructions are posted on the front or top panel of the unit. You will also find the recommended cleaning and sanitizing solution mixture listed in the Tech-Spec's pocket guide as well as other Flaker tips such as auger inspection, bearing replacement and checking ice production.

Now let's get down to the cleaning procedure. Since Hoshizaki's evaporators are made of high quality stainless steel, any ice machine cleaning solution can be used. Hoshizaki recommends using Lime-Away or Hoshizaki's Scale-Away for cleaning your unit. The first thing we need to do is to turn off the water inlet supply to the unit and drain the system. This can be done by moving the Ice and Flush control switch to the flush position. After approximately 90 seconds the unit will begin to sequence down. At the end of the shut down sequence the flush valve will open and allow all the water to drain from the evaporator and reservoir. (Some older Flaker and DCM models will have a manual flush system that is controlled by a valve or hose and cap assembly.) Next, mix your cleaning solution in a separate pail using the correct ratio of cleaning solution and warm water. Begin pouring this solution into the reservoir until it starts to overflow the overflow pipe. This will assure that the evaporator is completely filled to the normal water level. Since the extruding head is above the evaporator water level, the cleaning solution will not reach the top bearing area. To reach the extruding head it will be necessary to pinch off the rubber hose that feeds water from the reservoir to the evaporator. Remove the top spout and cutter and pour more cleaning solution down the extruding head into the evaporator from the top.

While the unit is soaking, re-install the cutter and spout and remove the inlet water valve and clean and inspected the inlet screen. When the unit has been soaking for 15~20 minutes unclamp the hose. Leaving the water supply off, turn the unit to the ice

position and start to make ice with the cleaning solution. As the level in the reservoir starts drops it will eventually cause the unit to cycle off on the low water safety. Inspect the reservoir and if necessary, pour more solution in to the reservoir. This will close both floats and start the ice-making process again. Repeat the process until the reservoir is clean which usually indicates that the evaporator and auger are also clean.

This is a good time to remove and disassemble the float switch and mechanical bin control for cleaning. Allow these components to soak and then use a small brush to remove any scale that may be present. Note: Before disassembly of the float, it is important to clearly mark the top of the floats. The float must be re-assembled correctly or the water level will not be controlled correctly. Now open the water supply and allow the unit to fill with fresh water. Then move the flush switch to the flush position to allow this water to be drained from the unit. Repeat the flush and drain process. Now, you can re-start the normal ice making process. You should catch the first 10 minutes of ice production in a bucket or deep tray and discard the ice. The next step is to sanitize the unit to kill any bacteria that may be developing in the unit. Follow the same procedures above to sanitize the ice machine. Now you're set to go. Hoshizaki recommends that you clean your unit once a year or more in areas where water conditions are harsh. Cleaning the unit on a regular basis will help prevent the need to dis-assembly the unit for a more detailed cleaning.

While you're at the unit for cleaning is an excellent time to check for bearing wear. This is done by using a .02 feeler gauge to determine the distance between the auger and upper bearing surface. For more information on bearing inspections please refer to Tech Tip 102 and 170. Keeping the flaker clean and the bearings inspected will assure that the unit will have a long, trouble free life.

COMING NEXT MONTH...

1. KM-900 Mechanical bin control shield
2. More Hoshizaki technical information

