



HOSHIZAKI CARE TECH-TIPS

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A SUMMER REMINDER by Perry Maxwell

Summer is coming! This is the time of year that maximum ice production is required. To obtain maximum production and efficiency the equipment must be properly maintained.

If you are in a location conducting service on any piece of equipment, sell your customer on the benefits of doing a preventative maintenance check on their ice machine now, versus waiting until mid-summer. It is a win-win situation. You get the extra billing and they run less risk of down-time in the peak season.

When conducting a proper PM check, the water distribution system should be inspected for any mineral build-up. The entire system should be thoroughly cleaned and sanitized following the instructions listed on the cleaning label.

While the cleaner is circulating through the water system, visually inspect the refrigeration compartment. Assure the filter and condenser coil are clean to provide proper air flow (this includes remote systems). Check the inlet water valve screen and remove any trash that may cause restriction of the water flow. Look for oil spots and loose wires or components which could cause problems.

Allow the cleaner to circulate until the water system is clean. The evaporator should be completely free of scale, including the separator ribs. Cleaning time will depend on the type and amount of mineral build-up in the system. Once clean, the unit should be sanitized using a commercial ice machine sanitizer. Sanitizing will remove the bacteria which causes algae growth.

After cleaning and sanitizing, flush the water system thoroughly. If an inlet water filter system is utilized, the filter should be checked and changed, as necessary, to guarantee the maximum water flow. Check that the flow rate of the filter is adequate for the system's requirements.

Finally, check the bin control for proper mounting and operation, and wipe down the exterior of the machine and bin with a soft cloth and neutral cleaner.

FLAKER BEARING GAUGE

Bearing Gap is the clearance, or "play", between the auger shaft surface and the sleeve bearing surface. The maximum allowable gap for all Hoshizaki Flakers or DCM's is .02" (twenty thousandths inch) with the auger shaft pressed tight against one side of the bearing surface. If the clearance exceeds .02", both the upper and lower bearings should be replaced.

The upper bearing can be checked by using a .02" feeler gauge. Hoshizaki has provided a flat 1/8th. inch wide .02" feeler gauge designed for this purpose at previous seminars. Recently concerns have been raised that this gauge could allow excessive bearing gap. This is due to the lack of flexibility in the 1/8th. inch gauge.

The present gauge will not conform to the round shape of the auger shaft and can allow excessive tolerances

ranging from .002” to .006”. This, of course, will depend on the size of the auger shaft.

As a result, **Hoshizaki no longer recommends the use of this 1/8” gauge to check the bearing gap.**

In lieu of this gauge, you should use a pin or “round stock” gauge, which will give a more accurate picture of the gap. This present flat gauge will be replaced by a round pin gauge as a handout for future service seminars.

Remember that **annual bearing inspections are recommended.** Bearings should be inspected every six months in bad water areas, especially where no filtration is used. The Flaker Service Video, available through your local Hoshizaki Distributor, explains the bearing inspection process in detail.

FLUSH MOUNTED KM'S

Due to requests from the field, Hoshizaki America, Inc. has provided two remote “M” series models which will mount flush against wall. This saves approximately 6” of valuable floor space and will be ideal for tight hallways, storage room, or kitchen locations.

The two models are the KM-800MRE-FM and KM-1200MRE-FM. A flush mounted bin, B-500SD-FM, is also available to complete these models.

The remote line set, inlet water supply, power supply, and condenser wiring connections have been relocated to the top of the unit. The drains for the KM's and bin are relocated to the lower left side. You will find that the condensate drain has changed from the 3/8 inch braided tubing to a 1/4 inch female pipe thread fitting. This drain should be connected in the normal manner.

To gain access to the electrical junction boxes for making the wiring connections, you must remove the top panel. The top panel is secured by two screws located on either side of the connection panel.

Other than the relocation of the connections, the design, installation, and start-up are the same.

CONTROL BOARD TIPS

The primary controller in the Hoshizaki **KM** CUBER is the electronic control board. This control board contains a micro-processor and acts as the unit brain, to both protect and sequence the cycle of operation. You will find a series of four different control boards out in the field. They are the “A”, “B”, “C”, and “Alpine” control boards.

“A” and “B: style control boards were used on the following older models: KM-451, KM-601, KM631, and KM-1201. These models have a different sequence of operation that “C” or “Alpine” models because they start immediately in the harvest mode. They do not include a one minute fill cycle or a pump-out. Consequently, they have a single outlet pump motor housing and no pump-out check valve. A quick visual inspection will let you know which control board model you are working on.

There are four important things to remember about Hoshizaki control boards. They are:

1. Always hold the control board by the edges. This is true with any electronic controller board.
2. Do not expose the board to static electricity. One static spark can damage the memory of the micro-chip. You should always touch the frame of the machine to discharge any static from your body before you touch the board. Also, you should keep the board in the static resistant shipping bag until you are ready to install it.
3. Do not short the board terminals. Shorting any board terminals, other than the float switch connection, will damage the circuitry.
4. Do not attempt to repair the board. A bad control board should be replaced.

The adjustments on the board are factory set for normal operating conditions. These adjustments allow the service technician the flexibility to adjust the unit to

operate cleaner in dirty water conditions. Next month's issue will cover how and when to make the adjustments.

COMING NEXT MONTH...

1. KM Control Board Adjustments
2. Flaker Cublet Conversions
3. Recovery Tips Volume 117 Page 2