



HOSHIZAKI CARE TECH-TIPS

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1996 SERVICE SEMINAR UPDATE

The service seminar schedule for the first quarter of 1996 has been finalized. We have 90 basic seminars scheduled across the country. These 3 1/2 hour basic seminars include a service introduction to the KM & Flaker/DCM products. We will provide additional service tips on these products and cover the new RH-2 reach-in and DM-180 counter top dispenser.

The seminar program will shift towards a more diagnostic format. This will arm you with a better service knowledge to attack a Hoshizaki service call. Contact your local Hoshizaki Distributor for information on the 1996 Basic Seminar nearest you.

We have also scheduled 7 Advanced Seminars in this time period. The dates and locations are as follows:

January 9, 1996 La Mirada, CA
January 30, 1996 Houston, TX
February 13, 1996 Peachtree City, GA
February 27, 1996 Elmhurst, IL
March 12, 1996 N. NJ / NY, NY
March 26, 1996 Peachtree City, GA
April 23, 1996 Columbus, OH

The Advanced Seminar is a 2 day training session on the KM, Flaker, and DCM products. The operational sequence, water system, refrigeration system and electrical circuits are covered in-depth. Hoshizaki provides the training, handouts and meals during the seminar. The attendee is responsible for travel and lodging. To attend, you must have attended a basic seminar within the last two years.

The Peachtree City Advanced programs include a factory tour. Additional Advanced programs will be

offered in the fall. Watch for details. To register for an Advanced program, contact your local Hoshizaki Distributor and request a pre-registration form.

WATER SOFTENER APPLICATIONS

Hardness in water causes many problems in an ice machine application. The hardness is caused by the presence of calcium and magnesium ions in the water. These particular ions precipitate out during the ice freezing process and begin to build up as scale on the evaporator and in the reservoir.

The amount of hardness in water is expressed in parts per million or as grains of hardness. A grain is equal to 1 / 7,000th of a pound per gallon of water. One grain equals 17.1 ppm.

When hard water conditions below 300 ppm exist, scale build up can be reduced by several methods. Extending the built-in flush on the KM by adjusting the defrost completion timer longer will help to flush excess minerals out. There are also many different filter systems and water treatment devices in the market that will help.

When water hardness is 300 ppm or more, scale build up occurs rapidly inside an ice machine. In a KM cuber, this excess scale build up can be curbed by operating the cuber on a water softener. Some

manufacturers do not recommend operating their ice machine's on a water softener. This is not a problem with the KM design.

A typical water softener uses ion exchange as the method to correct hardness. The minerals used in a

water softener have a high sodium content. When the hard water is passed through a softener system, calcium and magnesium ions are exchanged for sodium ions. These sodium ions are flushed out through the pump-out and flush system and do not form scale in the KM cuber.

Most talc or softener sediment which may precipitate out during freeze, will be flushed out, however if an excess exist, you can adjust for a longer flush to help eliminate it.

Excessive talc can show up after a softener is serviced. This is especially true if the softener is over filled or not purged properly during service. It will show up as heavy talc in the bottom of the reservoir, soft cloudy ice, or a clear coating on the evaporator plates. The coating reduces heat transfer and can cause ice to stick to the plates, leading to a freeze-up. If the evaporator plates are coated, cleaning with Hoshizaki Scale Away is required.

While water softeners are acceptable on the KM cuber, they should never be used on a Flaker or DCM unit. Remember that softened water contains sodium which is salt. Salt is very abrasive and can cause premature bearing wear. You will also find that the ice quality and production of flaked ice will be affected if softened water is used on any auger type machine.

BIN CONTROL CHANGES

Over the years, Hoshizaki has made several changes in the thermostatic bin control used on the KM series units. The bulb and mounting for this thermostatic control is subjected to frequent abuse. Unfortunately this control bulb must be located in the ice drop zone for proper operation. Ice hitting against the bulb, as well

as a frequent smacks with an ice scoop, takes it's toll on the bin control.

The improvements we have made have definitely served to decrease the bin control failure rate. A new ABS mounting bracket is now shipped with replacement parts. Ranco Controls has also provided us with a replacement control that has a larger capillary and a larger charging tip. This improved control is now used on production units.

COPELAND COMPRESSORS

Up to mid 1989, Hoshizaki used Toshiba compressors in KM, F, & DCM units. Since that time, we have used Copeland compressors in all F & DCM units except the F-250 and DCM-240 models. Copeland compressors are also used in our KM series up through the KM-1200 model.

Standard model Copelaweld compressors are used in the above applications. You will find important technical data for these standard compressors included in the Copeland Electrical Handbook. This information is also provided in Service bulletin SB94-0011 and on the compressor data page of the Tech- Specs.

Over the years, we have had many requests from the field to provide a Copeland replacement number for the older Toshiba compressors. Testing to find the appropriate replacements is scheduled. As an update to the status of this project, Copeland has tested the following compressors and found them equivalent in performance. The compressor equivalents are :

KM-451 Toshiba CL75JD-1U is equivalent to Copeland RSF5-0075-CAA202

KM-631 Toshiba KL100JD-3U is equivalent to Copeland REK5-0125-PFV206

KM-1201 Toshiba KL187JC-3U is equivalent to Copeland CRE2-0225-PFV230

** It is important to note that testing by Hoshizaki Engineering Department and approval to use these replacements has not been completed at this time.

When final testing is completed, the Care department will have the necessary technical information to assist you in a conversion from a Toshiba to a Copeland compressor. We will keep you advised on the status of this important project.

COMING NEXT MONTH...

1. Reverse Osmosis
2. Compressor Diagnosis
3. PM Reminder

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