



HOSHIZAKI TECHNICAL SUPPORT TECH -TIPS

Rodd Burger
Writer/Editor

Hoshizaki America, Inc.
618 Hwy. 74 South
Peachtree City, GA 30269

Volume 175
January 17, 2001

Ph: (800) 233-1940 Fax: (800) 843-1056 E-mail: techsupport@hoshizaki.com

WHERE IN THE WORLD IS DANNY MOORE

As you know, Danny Moore has published the Tech Tips newsletter for the past six years. Tech Tips is a monthly newsletter published by the Technical Support Department at Hoshizaki America. The purpose of this newsletter is to provide technical information, troubleshooting tips and general information on Hoshizaki products.

Danny has now assumed the position of Director of Technical Support. In his new position, Danny is responsible for all tech support operations. I (Rodd Burger) have moved to the position of National Training Manager. I will be assuming the responsibilities of Editor for the Tech Tips, as well as other responsibilities related to training and technical publications.

During the transition, between August and December of 2000, we took a break from publishing Tech Tips. Beginning in January of 2001 we will once again publish this letter on a monthly basis. To help us provide information that will be beneficial to you, please fax any comments or suggestions for material that you would like to see included in future volumes to the Tech Support Department at 1-800-843-1056, Attn:Rodd Burger.

TECHNICAL INFORMATION UPDATE

We have been busy updating and adding new resources for you to access technical information.

The first update is the green and orange Tech Spec books have now been combined into one book. The part number is 80046. The orange and green combination Tech Specs along with the Purple R-502 book are also available on one CD. The part number for this CD is 80044. The Tech Spec books, as well as the CDs, are available through your local distributor. There is one more source to find the information contained in these books and that is our website www.hoshizaki.com.

At our website you can also find the latest training schedule for the upcoming training season. This list contains the cities as well as contacts for scheduled service schools. If you are interested in attending one of these seminars just contact the company shown on the list and make arrangements.

There are several other items provided in the Technical Support portion of our website. You will find all previous versions of the Tech Tips, Service Bulletins, Spanish versions of the Tech Specs and an HCSR locator. So if you get time stop in our site and take a look around.

We also now have our Parts Manuals on CD format. These will soon be available through your local distributor. Order part number 71999.

SERVICE Q & A

Question: In error, I installed a 24V transformer on a KM machine with the new "E" board. Why did I hear a low voltage alarm when this is obviously high voltage?

Answer by Miguel Maldonado: It should be noted that the new “E” board has several alarms that will lock out the machine and prevent operation. For more information on these alarms see Tech Tips volumes 148 through 151. Some of these alarms are manually reset however, the high voltage and low voltage alarms will automatically reset when the correct voltage is restored.

First, let’s understand how our “E” board reads the incoming voltage. All of our KM series ice machines use an OEM transformer that is 120V primary and 12V secondary. This transformer supplies control voltage for board operation. It is the brown wire in the junction box connection that will supply primary voltage to the transformer. If voltage goes up, the secondary voltage will go up from 12V. If the board reads voltage over 14.5V the board will lockout with a high voltage alarm of 7 beeps every 3 seconds.

If the primary voltage drops below 92V and in turn the secondary voltage drops too low it will lock out on a low voltage alarm of 6 beeps every 3 seconds.

Second, we want to address the problem of why the “E” board gave a low voltage alarm when a 24V transformer was installed. The “E” board is designed to operate in what’s called an 8-bit circuit. This means that the Board is designed to read from 0 V (1 bit) to 15V (8 bits) only. When the Board receives any voltage above 15 it does not recognize or compute this and it sends it back to 0 (1 bit) which the board sees as low voltage. Therefore you will hear the 6 beeps that tells you low voltage has occurred. Think of it as your automobile odometer when you pass 100,000 miles it reverts back to 000000.

If this type of extreme situation is not corrected damage to the board or other components may result. This is why we only recommended OEM parts to be used when servicing Hoshizaki products.

I hope this gives you more insight on how our KM control board with EverCheck™ technology protects itself as well as other components in the machine.

NEW KM-1300NRF /BIN CONTROL

The KM-1300NRF is a new model that has been released for sale. This model is 42 inches wide and is designed for dispenser applications. It will match the larger 42-inch multi-head countertop dispensers used in many chain stores. Due to various styles of dispenser applications, this unit incorporates a new type of bin control. This new type of control is a capacitive proximity sensor. This type of control is used instead of the normal thermostatic bin control, since we may encounter many different dispenser applications.

This new bin control works with low voltage through a relay and the red K-4 connector on the board. When the control senses mass (ice) within ½ to 1 inch from the end of the sensor it will operate the relay. This will give the board a resistance of 15.8 k-ohms. If the machine is within the first five minutes of freeze the unit will shut down in 3~5 seconds. If the unit has already passed the first five minutes of freeze and the sensor operates, the machine will complete the entire freeze and harvest cycles before shutting down. When the mass (ice) is removed the unit will start in the one minute fill cycle in 3~5 seconds.

This new switch will only operate with the new “E” board and the #7 dip switch must be set in the “on” position. With this sensor installed and dipswitch #7 “on” the board will have two new alarms. The first is 4 beeps every three seconds. This means there is a short in the connection between K-4 and the sensor. The second is 5 beeps. This means there is an open circuit between the red K-4 and the board.

To test this control, start the machine and allow it to run into the freeze cycle for one minute. Place your hand on the end of the control and the unit should shut down in 3~5 seconds. When you remove your hand the unit should restart in the fill cycle within 3 ~5 seconds.

COMING NEXT MONTH...

1. More on the KM-1300NRF
2. Water regulating valves

