



HOSHIZAKI AMERICA, INC.

SERVICE BULLETIN

SB03-0003

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Subject: FREEZE UP CHECK LIST

Of the many important troubleshooting tools provided by the Hoshizaki Technical Support Department the Freeze Up Check List could be one of the most important. Many times service calls related to ice machines are related to an evaporator freeze up condition. Many times these freeze ups are easily diagnosed as being problems with low water flow during the harvest cycle, dirty evaporators, defective bin controls or float switches.

However, in some cases the cause of the freeze up is not as easily diagnosed. Freeze ups can sometimes take several days to build up and when the service technician arrives he only sees the end result. At this point it can make the diagnosis a little difficult. Attached you will find a copy of the freeze up check list. This list can also be found in the Tech Spec Technicians Pocket Guide, the cover of the Warranty Labor Claim Form package, and Tech Tip Vol. 204.

We encourage you to make copies of this form and use them when troubleshooting those difficult freeze up situations. If you are discussing a freeze up problem with a Technical Advisor on our Help Desk, you may be asked to complete this form and fax it in. The information gained from this form will assist in helping you diagnose the reason for your freeze up. Although some time must be spent to complete the form, this time could be only a portion of the time spent to thaw an additional freeze up that was not corrected on the first call.

There is additional information related to freeze ups in Tech Tip Vols. 103, 126, 128, 134, 141. These articles are available at www.hoshizakiamerica.com under the support heading. If you experience freeze up problems please review these articles and use the freeze up checklist to resolve the issue. In the event of evaporator damage due to a freeze up condition or any time an evaporator is replaced a copy of this check list must accompany your warranty labor claim form.

If you would like additional technical assistance with your particular freeze up you can e-mail the technical support department at techsupport@hoshizaki.com or call 1-800-233-1940

PLEASE COMPLETE WHEN DIAGNOSING A FREEZE-UP
REFRIGERANT LEAK OR LOW CHARGE
TECHNICAL SUPPORT FAX 1-800-843-1056

“MAKE COPIES AND USE AS NEEDED”

MODEL# _____ SERIAL# _____ INSTALL DATE _____ FAIL DATE _____

- | | | | |
|---|--------|-------|--|
| | Single | Stack | |
| 1. Single unit or stacked equipment? | [] | [] | 18. Does the unit have any water filtration? [] [] |
| | | | If yes please list the following: |
| | | | Filter brand _____ Model _____ |
| | | | Filter pressure gauge reading during the fill cycle _____ |
| | | | Date filter was last replaced? _____ |
| | | | GPM or LPM flow rate of filter system? _____ |
| 2. Is the float switch dirty? | [] | [] | 19. Please list the DIP switch settings. |
| 3. Is the water pump always running in freeze? | [] | [] | 1 _____ 2 _____ 3 _____ 4 _____ 5 _____ 6 _____ 7 _____ 8 _____ 9 _____ 10 _____ |
| 4. Is the thermistor properly mounted? | [] | [] | 20. Is the cube size consistent from inlet to outlet [] [] |
| 5. Is the TXV bulb tight and insulated? | [] | [] | of evaporator? _____ |
| 6. Does the water sump fill to overflow in 60-90 seconds or less when empty? Note: 1800, 2000 2400 should be 60-120 seconds | [] | [] | 21. Is ice still dropping when the unit goes into freeze [] [] |
| 7. Is water line size 1/2"? If not _____ | [] | [] | 22. After defrosting, was the unit leak checked? [] [] |
| 8. Is the water flow 3GPM for KM-150 to KM-900 or 5GPM for KM-1200-KM-2400? | [] | [] | Were any leaks found? [] [] |
| 9. Only one water line per unit? If not _____ | [] | [] | If so where? _____ |
| 11. Will the thermostatic bin control cycle the unit OFF within 6-10 seconds when in contact with ice? | [] | [] | 23. Was any refrigerant added to the unit? [] [] |
| 11a. Is the bin control capillary touching a heated surface? | [] | [] | If so, how much? _____ |
| For units with mechanical style bin control: | | | 24. What was the head pressure? Freeze _____ Harvest _____ |
| 12. Will mechanical control cycle unit off in 6 seconds within the first 5 minutes of freeze? | [] | [] | (Freeze pressure should be taken 5 minutes into the cycle) |
| 12a. Is the deflector shield in place over the control bracket. | [] | [] | 25. What was the suction pressure? Freeze _____ Harvest _____ |
| 12b. Is DIP switch number 7 ON? | [] | [] | (Freeze pressure should be taken 5 minutes into the cycle) |
| 12c. Is machine mounted on a dispenser? | [] | [] | 26. What was the length of the cycles? |
| 13. Are the evaporator separators positioned properly? | [] | [] | Harvest _____ Freeze _____ |
| 14. Is the cube guide positioned correctly? | [] | [] | 27. Ambient temperature at condenser? _____ °F |
| 15. Date evaporators were last cleaned? _____ | | | 28. Water-cooled condenser outlet temperature _____ °F |
| 16. Date water valve screen was last cleaned? _____ | | | 29. Is the hot gas valve opening? [] [] |
| 16a Does water valve close completely when de-energized? | [] | [] | 30. List model and manufacture of the bin _____ |
| 17. What is water pressure? _____ Temperature _____ | | | 31. Has the stainless steel extension bracket been added? (All “S” models) [] [] |
| | | | 32. What is the ice drop weight? _____ |

**Note: Please make copies of this form and use it when diagnosing a freeze up condition.
Please submit a completed copy of the checklist with any Freeze-up labor claim form**