Diversified Product Inspections, LLC Since 1991

DPI Investigator

June 2012

Ahhh... June is here and thoughts of hot summer days and lots of ice in a pitcher of lemonade come to mind. Ice is great in lemonade but not so hot (pun intended) in the plumbing. Most freeze damage obviously occurs in the cooler months, but the evidence may not arrive at DPI for inspection until several weeks after the event. The Popular Science article reproduced below may help explain some of those odd situations such as when a plastic shower cartridge located in the middle of a heated house suddenly explodes. Downstream hydraulic pressure due to a freeze event may cause damage at a weak point some distance away.

The Physics of Freezing Pipes

Burst water pipes are caused by the expansion of freezing ice against the wall of the pipe, right? Wrong.

In a remarkable series of laboratory and field experiments, researchers at the University of Illinois have demonstrated that the actual cause of damage to freezing water pipes isn't the force of expanding ice on the pipe, but rather an extreme rise in water pressure downstream from the blockage. According to the study, the water pressure can rise in these situations from about 40 pounds psi (per square inch) to more than 4,000 pounds psi.

A typical scenario might go like this: A stretch of copper pipe is exposed to unusually cold temperatures, and ice begins to form on the pipe's inside walls. Since water volume expands by about eight percent as it turns to ice, the ice formation eventually can completely block the water flow. Water upstream from the blockage is able to flow back to its source, such as the street connection. But the water downstream is trapped because the faucets are closed. As the ice continues to form and expand, pressures downstream from the blockage skyrocket. Because this entire section of pipe experiences the same elevated pressure, the failure can occur at any point, even within the heated space of the building.

Now that researchers better understand the problem, they have devised a simple effective solution: a modified faucet washer that enables the faucet to leak a little under high pressure. This inexpensive device could eliminate much of the $400 million per year of insurance claims now paid to homeowners for freeze-related plumbing damages.

Source: Ned Nisson, Popular Science Magazine, February 1997

Evidence Submission 101

PHOTO TIPS FROM THE INSPECTORS

- ☑ When sending evidence, don't forget to include color on-site photos. Emailing is fine, just include your claim info.
- ☑ Please send photos *before* we have completed the inspection.
- ☑ Please send photos of the actual evidence and its area of installation. Fifty photos of the property loss aren't that helpful, but two or three of the evidence are often the key to an accurate conclusion.

There, I fixed it!

More Shipping Tips

Everybody knows that duck tape (a.k.a. duct tape) is the best tool in the shop. Its even great for a really unique prom dress or wedding gown. As you can imagine, we see duct tape repairs gone bad as part of the evidence, and that's OK. However, duct tape loses its magic when it is used to wrap and restrain your valuable evidence. Wrapping items in tape may result in spoliation. And having to remove the sticky stuff to get to key parts of evidence may also cause spoliation.

Pack evidence in foam or other suitable material. Do not fold, spindle, or mutilate evidence. Save the duct tape for the outer package (or to make a new wallet!) and leave your evidence undisturbed as much as possible.

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NEWS from CPSC U.S. Consumer Product Safety Commission

FOR IMMEDIATE RELEASE
April 10, 2012
Release #12-147

Viking Range Recalls Dishwashers Due to Fire Hazard

WASHINGTON, D.C. - The U.S. Consumer Product Safety Commission, in cooperation with the firm named below, today announced a voluntary recall of the following consumer product. Consumers should stop using recalled products immediately unless otherwise instructed. It is illegal to resell or attempt to resell a recalled consumer product. **Name** of Product: Viking dishwashers **Units:** About 2,000 **Manufacturer:** Viking Range Corporation of Greenwood, Miss. **Hazard:** An electrical component in the dishwasher can overheat, posing a fire hazard. **Incidents/Injuries:** Viking has received 21 reports of incidents, including five reports of property damage from fires. No injuries have been reported. **Description:** The recall includes Viking 24" Professional, Designer and Custom Panel dishwashers manufactured between May and September 2010. They were sold in black, white and 24 other custom colors, stainless steel and with custom wood panels. The name "Viking" appears on the control panel at the top of the door. The model and serial number are located on the identification plate mounted on the inside on the left side of the dishwasher door opening. The first six numbers in the serial number are the manufacture date in mmddyy format, e.g., serial number 052610 was manufactured on May 26, 2010. Model and manufacture dates included on this recall are:

Model Numbers Starting With*:	Date Codes - first six digits of serial number:
DDB325 DFB450 VDB325 VDB450	052610 through 091510

* Model numbers ending with an E are not included on the recall.

Sold at: Appliance and specialty retail stores nationwide from June 2010 through March 2012 for between $1,425 and $2,000. **Manufactured in:** United States **Remedy:** Consumers should immediately stop using the recalled dishwashers and contact Viking's hotline for a free in-home repair. **Consumer Contact:** For additional information, contact Viking toll-free at (800) 241-7239 from 8 a.m. to 5 p.m. ET, Monday through Friday or visit Viking's website at www.vikingrange.com