



## Airstream Tech Help Group

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This group, part of the WBCCI Technical Standing Committee, has been established to help the membership with any of their technical RV problems. Examples of questions that might be of interest to many members will be published in the *Blue Beret*. We will respond directly to you, in response to your email or letter describing a problem you are having. We hope you will find this new service of value in the care and feeding of your RV. You may contact us as follows: [techhelp@wbcci.org](mailto:techhelp@wbcci.org) or by mail: Howard Lefkowitz, 11508 Colt Terrace, Silver Spring, MD 20902

## REFRIGERATOR FIRE

I was awakened my first night in Florida at an Airstream Park at 4:00 AM in the morning by a siren that was on for almost two minutes. I looked out the window and saw some men running towards the fire truck located at the park. The next day I walked down two streets to see a motorhome totally destroyed by the fire, which had obviously started in the refrigerator compartment. Besides the fridge, the roof was burned through and the interior was covered with soot, smoke and water. A salvage operation company came around the next day and said the plastic material in the motorhome, which had burned, produced toxic gases and we should not be going into the rig without masks, further, nothing left was of any value since it was so contaminated. This fire resulted in a total loss for the RV as well as most of the owner's belongings. The local Park Fire Station people had put out the fire just before the regular Fire Department arrived within about 10 minutes. This fridge was operating on electric.

I also visited another motorhome that had arrived at the park several days earlier with the refrigerator not working at all. After opening the outside fridge cover it was discovered that most of the components were gone and there were burn marks all over the compartment. This fridge had been operating on gas during the trip to Florida, had caught fire and burned up most of the parts. Fortunately, the gas valve had shut off the propane supply.

Both of these were Norcold Refrigerators that had been recalled by the manufacturer. In fact, Norcold has expanded their recall to include some models up to 2010. You should check here to determine if your fridge is included:

**Norcold recall:** <http://www.norcoldrecall.com/> 1-800-767-9101

Even if you have had other recalls you must check with Norcold to see if the latest modification has been done.

RV refrigerators use a mixture of ammonia, hydrogen, water and an anti-corrosive agent solution in a sealed cooling unit. This liquid is circulated through a boiler, converted to an ammonia vapor and sent thru a series of tubes where it removes heat from your refrigerator box (condenser). The conversion to a vapor is accomplished with a source of heat using either a

110 VAC and sometimes a 12 VDC (three way fridge) element or a propane flame. Over the years fatigue failures can occur in the tubing and allow the refrigerant to slowly leak from the cooling unit (usually near the boiler). This leak, with the right conditions, can cause a fire in the external refrigerator box.

When operating with propane if the coolant is leaking hydrogen may be present as well as very high temperatures, which could ignite with the presence of an open flame. When operating with 110 VAC the temperatures can get extremely high due to the loss of coolant and the inability of the system to remove the heat. This could result in the burning of wire insulation and a fire. No operational mode is safe if your refrigerator has developed a coolant leak. Information on how many times this has occurred is not readily available but numbers in the several thousands have been mentioned on the Internet.

This applies to **Dometic Refrigerators** as well, where over **900,000** units have been recalled.

**Dometic recall:** <http://67.238.126.140/recall.php> 1-888-446-5157

The recalled models and serial numbers have been expanded a number of times so you should check the recall lists several times during the year.

**Turn the refrigerator off immediately if you notice any of the following indicators:**

- **Leakage or staining at the back of the refrigerator.**
- **Yellow residue at the back or sides of the refrigerator.**
- **The smell of ammonia.**
- **Refrigerator does not properly cool.**

**Any unit found to have one or more of the characteristics mentioned above MUST be shut down and not operated until the unit is fixed and the recall rework administered.**

The recall solution for both Dometic and Norcold involve opening up the 12 volt supply to the refrigerator control board, which will cut off the entire system. This includes the main propane valve and the 110 VAC or 12 VDC heaters.

Norcold's recall uses a thermocouple mounted to the main

cooler tube to monitor the temperature. It is connected to a control box, which has a latching type relay. If the coolant gets too hot the thermocouple will trigger the control box and turn off the fridge 12 volt supply. A red light on the box will also light indicating that the relay has been operated.

Dometic's recall uses a thermal disk and a heat sensitive fuse, which are installed near the burner and boiler tube. The 12 volt supply is routed through these components, so they will turn off the main circuit board if either device is triggered by excessive heat. They are also installing a secondary enclosure around the burner to keep leaking coolant from the flame.

The recalls will be installed at no cost to you and should be performed as soon as possible. Both manufacturers will provide lists of authorized repair shops that can do the work.

**I strongly suggest that you add to your weekly check list an inspection of the rear refrigerator compartment for any leakage of the coolant.**

Howard

## No Hot Water and/or No Water Flow

This time of year we get many calls and emails in two plumbing areas:

1. I am not getting any hot water (The water heater lights and then turns off).

2. I am not getting any or just limited water flow from my kitchen faucet (or bathroom faucet or shower, etc.).

When we winterized our RVs (or had a dealer do it) most RVs have bypass valves, which take the water heater out of the plumbing system. This significantly reduces the amount of antifreeze (several gallons) that is needed when winterizing. Make sure that the heater bypass valves are reset to the operating position before turning on the heater. There are two valves each of them having two positions. When they are both in the winterize position, the water goes through a short bypass line. In their operating position the water goes through the water heater. If they are in the bypass (winterize) position the water heater will turn on and then immediately shut off.

During long periods when our RVs are not being used deposits build up in the aerator that is used on each faucet. This is particularly true during the winter months. The symptom of no or limited water flow from any faucet is usually due to a build-up of lime deposits in the aerators. These should be cleaned every few months and as part of your winterization procedure. They can be removed by screwing in a clockwise direction. You may have to use pliers to remove the aerator; however, you should re-install it by hand. Make sure the washer seal is in good shape. If it will not seal correctly just change the aerator. Shower heads also tend to clog up and should be cleaned as well when we are doing the aerators.

Howard

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