

DOMETIC REFRIGERATOR SWITCHES/FREEZE PROTECTION

Discussions:

- -Climate Control Switch
- -Low Ambient Temperature Switch
- -Interior Light Won't Turn Off
- -Ice Maker Fill Line Freeze Protection
- -Ice Maker Fill line Failure/Water leak



Some Dometic Refrigerators have switches under the eyebrow panel (where the controls are). These switches are best visible with the freezer door open. There may be one or two switches there labeled "Low Ambient Temp" and/or "Climate Control". I will explain the purpose of these switches and the proper use of them.

The "**Climate Control**" switch controls a 12 volt heat tape behind the metal frame around the refrigerator and freezer doors. Much like a cold glass of water sweating on a humid day, the cold frame around the doors can cause water condensation to form and accumulate and even drip off the front of the refrigerator in high humidity conditions. Since this switch controls a source of heat that the refrigerator has to dissipate, it should only be used if condensation on the frame is noted. Use of this switch does cause the refrigerator to work harder, especially if just started, and can cause a delay in coming to temperature. It is also an electrical draw on the battery system when "dry camping".

The "**Low Ambient Temp**" switch is found on certain refrigerators models. Its function is to create a heat load within the refrigerator compartment thereby causing routine cycling of the cooling unit when outside temperatures drop below freezing and the unit would otherwise cease to cycle. When this switch is turned on, it will keep the refrigerator interior light on. Many people mistakenly think the door light switch is broken because the **interior light won't turn off** (or are having to replace bulbs frequently). The purpose of keeping the interior light on is to create a source of heat to force the cooling unit to cycle on when outside temperatures drop below freezing and help regulate food compartment temperature. This switch should only be turned on when outside temperatures are expected to drop below freezing, as use of this switch during normal temperatures will cause unnecessarily heating of the interior of the food compartment. Some newer models are equipped with an automatic thermostat for this function and do not have this switch. *In any case, please refer to your refrigerator's owner's manual for further information.*

Ice Maker Freeze Protection uses an electrical resistance wire which is controlled by a thermostatic switch in the exterior refrigerator compartment. This wire is wrapped in foil tape around the ice maker fill valve and can be seen from the rear of the refrigerator by following the water supply line to the ice maker solenoid valve. You should make sure that the foil tape is securely attached to the ice maker solenoid valve.

From the valve, the wire travels up the back of the refrigerator in a vinyl tube which encases the water line and the resistance wire in contact with each other to the icemaker. When the thermostatic switch activates, a small amount of electrical current flows through this wire causing it to get warm therefore protecting the water in the ice maker valve and fill line from freezing. On many units, this system works independently from the refrigerator and may come on when the unit is in storage and freezing temperatures occur and the system has 12 volts available to it. Therefore, it is important to follow the manufacturer's instructions on winterizing the ice maker system and disconnect the battery during storage to prevent battery drain during freezing conditions from the icemaker protection system.

When the icemaker freeze protection thermostat fails, it can allow the resistance wire to heat and causes the fill line to age prematurely and become hard and brittle and eventually causes it to crack or break thereby creating a water leak during the fill cycle. The repair for this condition requires replacement of the fill hose from the solenoid valve to the ice maker. The repair kit includes a new thermostatic switch. In some cases, partial removal of the refrigerator may be required to access and replace this line. Some rare cases require complete removal of the refrigerator from the cabinet to complete the repair.

Should you experience a leak in the ice maker water supply system, the first thing you need to find out is if the leak is coming from the water supply source to the ice maker water solenoid valve, or if it is from the solenoid valve to the ice maker. Normally, a continuous leak indicates it's before the solenoid water valve. Most manufacturers use a ¼ poly line for the water supply, and over time, the line can develop pin hole leaks. They are often hard to spot since they put out a very fine spray, but on close inspection the source can usually be visualized. In this instance, in order to stop the leak, you will have to locate your coach's ice maker supply line shut off valve. Some manufacturers "T" off of a filter to supply the ice maker and there is usually a separate inline valve to turn it off – please refer to your coach manufacturer's documentation for the location of the valve. If the water leak is intermittent, chances are it is from the ice maker solenoid valve to the ice maker, and the leak only presents when the ice maker goes through a cycle. Depending on the extent of the leak, the ice cubes can be considerably smaller or non-existent. The simple way to stop this leak until it can be repaired is to lift the ice maker bail arm which stops the unit from cycling. Another choice would be to remove the brown wire from the solenoid water valve and tape it up.

In either case of leaks, it is vitally important to dry out the water that may accumulate at the base of the refrigerator rear compartment. Most manufactures use plywood or OSB to support the refrigerator base in the cabinet, and if water soaked, can compromise the integrity of the cabinets' ability to hold the weight of the refrigerator. Water has a tendency to "wick" underneath the refrigerator and can be very difficult to dry out, so commercially available desiccants should be placed around the base, and air flow will help dry the compartment. Call me for service as soon as possible, as the repair requires moving the refrigerator so the area underneath can be accessed and dried.

I hope you find this information helpful, and if you're in need of repair, please contact me.

Thank you,

Kevin Bell
Sundance Custom RV Inc.
760-408-2836
www.sundancecustomrv.com