



Gadget Box

Protect Your Fridge

Compiled by Mark Nemeth #45776

RV refrigerators are expensive, so anything we can do to extend their life is worthwhile. One culprit that will contribute to the demise of your fridge is off-level operation.

An RV refrigerator operates on gravity. The ammonia absorption system has no pumps or compressors to move the refrigerant (a mixture of ammonia and

water) around, so it depends on gravity to keep things moving. If you try to run the fridge while it is off-level, the fluids can't flow, and that's when the problems start. With no fluid flow, the boiler begins to heat up beyond its normal operating temperature. If the off-level condition persists, the boiler overheats and the refrigerant begins to break down. This also causes significant thermal stress on the cooling system and can lead to a stress crack and a leak. Each time the boiler overheats, the damage accumulates, and, eventually, you'll have a dead refrigerator and a big drain on your bank account.

There are times when we park in places that prevent us from successfully leveling the RV, and we are never really sure just how far off level is safe. Thankfully, those days may be behind us. Recently, an engineer, who is also an RVer, came up with a gadget that protects refrigerators from the effects of off-level operation. Paul and Mao Unmack designed the ARP device, patented it and began producing it about a year ago. Since then, the device has been extensively field tested in hundreds of RVs.

The operating concept is simple. The controller monitors the temperature of the boiler and shuts down the fridge for a short period of time if safe operating temperature is exceeded. It automatically restarts the fridge after a time delay and continues to monitor it for dangerous operation. Installation is simple, requiring the addition of a clip-on

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sensor on the boiler tube and the wiring of a relay. The ARP unit learns your refrigerator's normal operating parameters during the first 24 hours of use, and then monitors your fridge and protects it without any further operator intervention. It draws only a few milliamps of current when in operation, so it won't run your battery down while boondocking. Gee, why didn't I think of that?

Needless to say, there is one on my fridge; it is working flawlessly, and I no longer worry about whether my fridge is level. Now that's a good gadget! 🐼



Photo by Mark Nemeth #45776.

ARP L.L.C.
Absorption Refrigerator Protection
 List Price: \$120
 Paul and Mao Unmack
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www.arprv.com

Do you have a favorite RV gadget?

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