

## Garage Refrigerators – Dec. 2006

If you put a refrigerator in the garage as a second source of food chilling, be very, very careful during the winter season. The compressor, which is designed to work at room temperature, shuts down when the air drops anywhere near the freezing mark. Then you have the absurdity of a device designed to keep things cold becoming warm inside because it's cold outside. I think that's called a conundrum.

The thermostat in a modern frost-free refrigerator is set about (40F) temp in the fresh food section.

In theory, that means when the ambient temperature drops to 40, the thermostat no longer calls for cooling and any food stored in the freezer (0-5F) begins to thaw. In the real world, when the temperature in the unheated room drops below about 55-60F, there's not enough compressor run time to keep the freezer cold enough.

You'll want to keep this in mind if you're using a frost-free refrigerator as a backup and it's in an unheated garage. You'll be able to store fresh food OK in the refrigerator section if you need the 'overflow' room, but I recommend you empty the freezer section in the fall to prevent food loss.

But even then, if the ambient garage temperature falls below 40 degrees, the operating thermostat may not cycle because the garage temperature is below the refrigerator/freezer temperature inside the refrigerator.

When the ambient temperature is too low your fridge gets confused and so it doesn't run the compressor as long as it should. That means that the temperature *inside* the fridge winds up being too warm. A General Electric manual says not to run the fridge when the ambient temperature is below 60 degrees F.

Your Refrigerator, while operating at a low ambient temperature is unable to complete the cooling process because the air surrounding the Condenser and Compressor is so cold it is inhibiting the compressor's ability to raise the pressure and temperature of the refrigerant to the necessary level to promote its change of states from a vapor to a liquid. The refrigerator may get warmer inside than it is supposed to at night and food could spoil quicker than it should. A safe bet would be to keep only bottles and cans or containers that will not spoil if the item goes through a few cold and warm cycles.

I had accidentally knocked the plug out of the wall outlet on a refrigerator at a summer home in August some years back. The freezer was full of bluefish and when I returned the next weekend the whole house smelled bad but it was when I opened the freezer door my family ran out and I was left to gag and bag the rotten remains and throw it to the crabs in the bay. It took me a week with all kinds of cleaners to get the

refrigerator back to smelling normal.

Also, keep in mind that a refrigerator in a hot garage in the summer has to work extremely hard to keep the inside cold. So if it is just keeping a couple of soda or beer bottles cold you may want to shut it off until a couple days before the big barbecue.

A stand alone freezer will work in the garage though, because it is always calling for a temperature of 0 to 10 degrees and the compressor will keep working.

If you plug the refrigerator in an outlet in the garage the circuit will usually be protected by a ground fault interrupter. Check often to make sure it hasn't tripped.

Do not block the condenser that is usually underneath or on the back of the refrigerator with garage junk. The coils need air circulation to dissipate the heat.

There are special refrigerators made for garages that will work in very cold temperatures. See one at

<http://www.gladiatorgw.com/detail.asp?BaseModelID=GARF19XXPK>

