

Surviving a Winter

Post by: mmanning

Does anyone either fulltime or operate their bus in cold climates like Minnesota during the winter?

- How do you prepare?
- What extra insulation is needed, if any?
- Do you have to insulate the bays?
- What kind heat do you use? Hydronic heating? Wood stove?
- Do you skirt your bus?

Post by: buswarrior

Many bus conversions are built for summer and southern use.

Extended sub-freezing conditions require specific design elements for easy/inexpensive freeze protection. Otherwise you have to throw a lot of BTU at the bays and plumbing to stay operational. Bay doors do not offer much protection, further insulation and heat retention strategies need to be taken in the bays.

Upstairs, heating with multiple sources allows you to throttle the energy usage according to conditions. You want a fuel burning appliance in the mix, that does not depend on the electric power failing. 40,000 btu is barely sufficient in a stock coach. Nobody complains of having too much heat. Everyone describes the lengths they had to go to stay warm with too little. Electric heaters at 1500 watts are 5000 BTU. You run out of extension cords and electric circuits in a hurry. Burning a fuel becomes a necessity as the temps drop. Skirting the coach has some advantages, it is very hard to stop the breezes into the front end of the coach, too many controls pass thru the floor.

Haybales work well, but mice like 'em too... boat shrink wrap has been a great success for stopping drafts where you can get it to work. Once it snows, the snow also makes a good insulator/wind block. This is a big topic, winter operations are very difficult in the wrong conversion, and really easy in the right one!

Post by: mmanning

Have you insulated your bays? If so, do you have any pictures or video? I'm very curious to see what that looks like.

I was thinking a combination of diesel fueled hydronic heat and gasifier wood stove would work well. Have you used either?

I never thought of boat shrink wrap before, interesting idea. There are companies that create custom snap on skirting for RVs, I bet they could do something that could mimic the boat wrap. In the past, I have had to winterize my campers and put them to bed for 6 months or more. I'd really like to be able to use a bus at least a couple times in the winter.

Post by: mmanning

Another question; I have never had the opportunity to use a diesel fired furnace. Do they produce a lot of moisture? Propane furnaces need a dehumidifier, I was hoping this might be avoided with a diesel.

Post by: Jim Blackwood

Moisture mostly accumulates from the occupants. Any decent firebox will vent all combustion byproducts to the outside including the water. I've used aluminized foam board for underpinning before around a camper. It was pretty effective and cheap if not particularly attractive. The thicker the better.

Post by: DoubleEagle

If you have a diesel fired heater like the kind that is used for a bunk heater in sleeper trucks, you should not need that, but you will also need more of them or a bigger system like the Webasto's. Since you are in firewood country, a wood stove might be good, but you have to have appropriate protections and spacing of materials. Insulation will be critical in sub-zero temperatures, all of the metal structures will sweat or form frost when the moist air hits them. Bolts or rivets that protrude the shell that are not insulated will frost up. The entire coach needs to be insulated, as well as the bays with tanks in them (which should have heaters). Your body and cooking activities will release moisture, and any fresh air from the outside might carry more moisture as well.

Post by: richard5933

If your propane furnace added moisture to the inside of the bus that's an indication that either a) you're using a non-vented heater, or b) something is wrong