

Be wise and winterize



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by Kelly Heavey
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Old Man Winter is preparing to blow across our roads and take a toll on our vehicles. One annoyance far worse than waiting for a windshield to defrost is having a bus malfunction due to cold weather, with a day's schedule of work ahead. Read on for advice easily applicable to any agency looking to winterize its vehicles before the first big freeze.

Make a list, check it twice

A simple check-off sheet can help. Ken Swanson, (retired) manager of Iowa's Region 7 Regional Transit Commission, describes the use of a checklist in his article for the Iowa Office of Public Transit, "Preparing Your Buses for Winter." The checklist itself in on page 11. Some tasks are the same as for any diesel vehicle, such draining the fuel tank of any moisture so water doesn't freeze and prevent fuel from reaching the engine. Other tasks on Swanson's winterizing checklist include making sure that all tires have the proper tread depth and

covering the air conditioner condenser and its fans to protect them from the elements and prevent paying for new ones in the spring. Checking electrical components is important, too. His agency tests the starting motor and alternator, and examines batteries for charge levels.

"Any component that is marginal is repaired or replaced," Swanson said in his article. "We believe the cost of [vehicle] failures is better spent on preventive maintenance."

The Chicago Transit Authority (CTA) also uses a similar checklist with 30 tasks that include checking heaters, engine thermostats, batteries and making sure that windows and doors can close to keep out the cold.

Sources:

"How to Winterize your Vehicle." Brent Romans. <http://www.edmunds.com/ownership/howto/articles/43799/article.html>

"Winterizing your Vehicle." Debbie Murphy. http://www.automedia.com/Winterizing_Your_Vehicle/ccr20031101wv/3

"How to Winterize your Vehicle." Motor Cars Limited. <http://www.motorcarsltd.com/technician-tips/winterizeyourvehicle.asp>

"Preparing Your Buses for Winter." Ken Swanson. Iowa Office of Public Transit.

"CTA Announces Preparations for Winter 2003-2004." <http://www.transitchicago.com/news/archpress.wu?action=displayarticledetail&articleid=113574>.

Preventative maintenance

Every year CTA's fleet of buses is thoroughly evaluated. In 2003 the CTA began a system of pulling buses out of service for maintenance so that they can work-in rebuilt buses during winter months when needed. This strategy helps prevent a service disruption caused by simple negligence or lack of preparedness for winter, long before the season begins.

"We believe that the best response to winter weather is to operate a well-maintained bus and rail fleet. New and rehabbed buses and trains help to improve the reliability of our fleet," CTA President Frank Kruesi said in a statement.

Another tactic CTA uses to battle winter weather is using preheaters on buses that are stored outside to allow the vehicles' engines to warm up quickly without idling. This saves on gas costs, and also heats the engine coolant to keep the insides of buses warm, as well.

CTA completely overhauled 65 of its buses, which entailed rebuilding the engine and transmission, revamping the air conditioning, installing new seating fabric and destination signs, and reconstructing wheelchair ramps. This kind of maintenance isn't cheap, though. It came with a price tag of \$7.3 million.

If your fleet includes vans and cars, make sure you complete your basic vehicle maintenance before winter. Brent Romans, in his article "How to Winterize your Vehicle,"

Safety

offers some good tips. Romans is senior automotive editor at Edmunds.com, a car research Web site that also has tips on vehicle maintenance.

Romans' tips are:

- Check the tire pressure, and keep in mind that pressure falls one psi for every 10 degree Fahrenheit drop in temperature.
- Check the windshield wiper fluids and the blades.
- Put antifreeze in the radiator with water so it meets a 50/50 ratio. If done correctly, the antifreeze prevents water in the radiator from freezing until -34 degrees Fahrenheit.
- Always keep an emergency kit in the vehicle, with a flashlight, first aid kit, jumper cables and tools, an ice scraper, warm clothes and extra food and water.
- Carry a bag of abrasive material such as sand or salt to put under a tire if you get stuck.

Taking these precautions will save you and your riders time and energy that are better spent fighting winter in other ways, like shoveling drive-ways, or maybe even throwing a few snowballs around. ▲

Winterization checklist

Vehicle Number _____ Service Date _____
Mileage _____

- Install the vehicle's winterfront or locate it and put in bus for installation in November
- Drain bottom of fuel tank
- Drain water separator on fuel filter housing
- Change-out the fuel filter
- Complete appropriate service check-off sheet (if required)
- Check operation of engine block heater
- Check glow plug timing and set if necessary
- Check tires for tire wear, change-out if tread is less than 4/32 inches
- Check coolant strength: Enter degrees:
- Install air conditioners condenser covers
- Turn on rear heater valve
- Inspect the electrical system
- Inspect alternator drive belt
- Inspect cable connections for tightness and corrosion. Enter readings.
- Check cranking motor amp draw
- Check alternator output
- Check battery condition and state of charge
- Check voltage regulator output
- Test diodes

Signature _____

Adapted from: http://www.iatransit.com/news/winter_checklist.asp