



## WINTER IS AROUND THE CORNER.....

**BUS SERVICE, INC.**

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### Winterize Your Coach!!

Greetings!

Winter brings with the weather challenges in coach maintenance unlike any other time of year. The need for winterization of your air brakes, engine and other coach systems becomes critical to eliminate the possibility of a breakdown when the weather turns ugly. The following sections should prove helpful in getting you started on winterizing your vehicle.

In this particular newsletter we will explore the areas of air system maintenance which includes additions to regular servicing.

Next we will cover the area of engine winterization including things like antifreeze, fuel additives, proper oil viscosity, and the use of engine block heaters.

Next we will zero in on your other coach systems including but not limited to: things on the interior that directly effect your coach. Some of those items are inside heat and water circulating pumps, efficient defrost, and the use of your air conditioning in winter.

Finally we will discuss the area of supplemental heating units—Webasto. These units

are helpful in preserving the life of your engine, providing consistent heat and additional benefits to having this system on your coach.

### Air System Maintenance

The number of air brake related road calls rises significantly during the winter months beginning in October and November and peaking in February and March. With the beginning of this phenomenon at hand, it's not too early

to start thinking about your air system.

A wide range of weather conditions exist across the country. Anywhere there is humidity and rain in the cold winter season can make for trouble

in your system. Good winterizing procedures are built on the basics of good air system maintenance. First and foremost, as a driver and/or owner, you should drain your air tanks daily.

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Bus Service, Inc.  
111 Hwy 52 Bypass W.  
Lafayette, TN 37083

Phone: 888-287-3499  
Fax: 615-666-2517

E-mail: [busfixx@hotmail.com](mailto:busfixx@hotmail.com)  
Web: <http://www.busfixx.com>

#### Special points of interest:

- \= Air system maintenance
- \= Your engine in winter
- \= Other systems
- \= Webasto Thermosystems
- \= Look!! Savings in Winter





## Air System Maintenance (continued)

Air dryer service responsibilities also should not be ignored. Be sure that your desiccant material is fresh and that all components of your end cover are in good working order. If either the purge valve or the thermostat is not working properly, replace them immediately. Manual drain valves must be opened regularly to drain captured moisture. It is not enough to just drain the moisture, however. It is important to inspect the type of material being

expelled to check for residues or oil in the exhausted air that may indicate a compressor problem.

When you are doing your air system maintenance the following tips should be emphasized:

1. Drain air tanks regularly by draining to zero and leaving petcocks open for some time.
2. Check air system for leaks where outside moisture can

get in.

3. Lubricate brakes to keep moisture out.
4. Check all filter screens.
5. Thoroughly inspect all air lines.
6. Ensure preferred specification of brake antifreeze is used.

## Preparing Your Engine for Winter

Begin your preparation for winter by checking your coolant freeze point. A good rule of thumb is to have it set at -30 degrees Fahrenheit with a 50/50 antifreeze/water mix. Be sure that your additive level is correct using the various testing equipment or material that are now available. Be sure that if the level is not correct that you use the proper additive with inhibitors. If you consider replacing conventional coolant with extended life coolant, remember that this DOES NOT relieve you of the necessity of making sure that the freeze point is correct. This time of year is often a good time to have your mechanic inspect the entire cooling system.

If you don't normally treat your fuel with additives, the approach of winter is the time to consider them. Fuel additives can lower the cloud point (the point where the fuel begins to "gel") so that fuel will flow when temperatures plunge during winter. In addition, additives can also handle water contamination and keep fuel lines from icing up. A good multifunctional fuel additive will do all of this, as well as clean up dirty injectors and help keep injectors clean. Clean injectors mean optimum power and fuel economy,

and minimum exhaust emissions.

When it comes to engine oils, thinner oil is better for winter. If you have a two cycle engine and are using 40 weight oil for summer, it is recommended to use 30 weight for winter. If you have a low time 4 cycle engine, synthetic oils provide real benefits under winter conditions. On startup, synthetics' flow properties assure rapid oil delivery within the engine. This means better lubrication and reduced wear. And, of course, with faster starts there is less drain on your starting and electric systems, meaning they will last longer too.

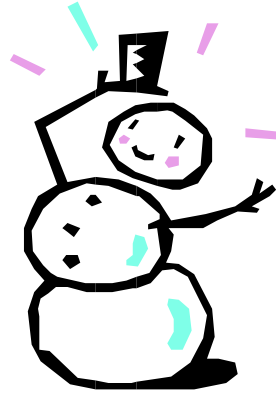


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## Preparing Your Engine for Winter (continued)

Lastly would be the engine block heater. If you don't have one in your engine, this winter might be the one that you want to add it. They are relatively inexpensive and can be installed in a short period of time. Once in place their operation is as simple as plugging them in to a 110 volt source. More information about block heaters is available on our website. Call us today for additional information.



## Taking Care of Your Other Systems

The heat of your coach comes from your engine. We have already discussed what you can do to winterize your engine. You can winterize the inside of your coach beginning with your heater valves. Make sure that all your heater valves are completely open and working properly. Check the integrity of the hoses and the tightness of the clamps. Consider changing from standard hose clamps to constant torque clamps to prevent what are called "cold water leaks". If you do decide to convert to constant torque clamps, remember that the initial torque on the clamps is 110 inch pounds and 90 inch pounds any time thereafter.

Next on your winterizing list might be to check your defrost motors. Brushes are critical and are a very simple maintenance item. If they are not replaced regularly they can damage the armature and make the defrost motor essentially useless. While you are in the area of your defrost motor, the time would be well invested to check your defrost hosing and the defrost vents.

It may also be time to check your air conditioning. If you haven't had to do it for the summer, check it for the winter. It will be the thing you need to dehumidify your coach when its hot inside and so, so cold outside. Are your freon and compressor oil levels correct? Is your air conditioning compressor working correctly? Have you checked your air conditioning hoses and fittings? Are your return air vents free of debris?

Have you checked the brushes on your air conditioning blower motors? These simple checks can change the feel of the inside of your coach.





## Warming Up to Winter

How great does it feel to get into a warm coach on a cold winter day?! Now that you have winterized your coach you may be wanting more. If you are looking for supplemental heat or a preheat option, take a moment to check out Webasto Thermosystems. What does a Webasto do?

Webasto heaters are designed to preheat, heat, and defrost. They deliver a consistent and reliable flow of heat, using hot coolant, to the heating system of your coach, which optimizes both passenger and driver comfort. The greatest benefit is with decreased idle time you extend the life of your engine. While they are compact, they offer variable heat output depending on the type of heater setup you choose. All Webasto units are made up of a nozzle burner system, which provides instant heat. In addition, there is an optional timer, which can be preset to automatically start without you even entering the coach.

These small units are full of heat and have very low maintenance. On new units Webasto offers a two year parts and labor warranty which is the strongest in the industry. Webasto has a network of dealers and distributors across the country. They offer free technical support. As a distributor for Webasto, we also offer free technical support (which is part of our policy on all items we sell) and we stock a comprehensive inventory of parts for your unit.

## Savings for Winter

How about saving some money during this “spending oriented” season? Why not start with services that you need anyway like telephone and internet? There is help for those high phone bills. How does 5 cents per minute, ALL DAY, EVERY DAY sound? In State and Out!!

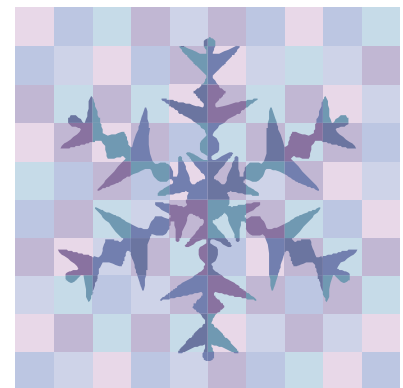
In selected areas you may be able to get local service with unlimited long distance starting at only \$49.95 per month. This price also includes up to 10 custom calling features. For those areas where unlimited service is not available, many people can save from \$10.00 to \$40.00 per month with one of the best services available from the largest privately

held telecommunications companies in North America.

For everything from local service, including unlimited long distance, to Internet access, wireless, web hosting, e-commerce and paging, you can do all your business with one company.

If you have questions on available services you can e-mail [brian@pricetrimmer.com](mailto:brian@pricetrimmer.com) or call toll free to 866-339-2266. Want to sign up today? Go to <http://www.pricetrimmer.com>. There is also an opportunity to earn from your own usage each month as an Independent Representative.

Have a wonderful holiday season. Enjoy those heartfelt conversations with your loved ones without the concern of the large telephone bill to pay.



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Have a wonderful holiday!