Keeping It Cool

TIPS TO TUNE UP YOUR RV'S AIR CONDITIONER

By Bill and Jenn Gehr

The joy of summer has finally arrived and in most of the country that means the mercury is rising. Whether your family enjoys exciting outdoor activities or poolside reclining, summer temperatures can still leave you longing for the cool retreat of your home on wheels and the relief and refreshment provided by the air conditioner.

With just a few simple steps to understanding your RV air conditioner's annual maintenance, you can ensure that your unit will always be up to the task of keeping the whole family cool.

Incorrect voltage is often the leading cause of air conditioner compressor failure. Damage to your compressor from inadequate voltage is a permanent, silent killer, but do not dismay! Voltage problems can easily be avoided by using a voltmeter. The most accurate voltmeter is digital. Analog meters can display an incorrect reading by as much as three or four volts, thus giving you a false sense of security. If you already own an analog voltmeter, just be sure to have it tested annually by a calibration professional. For the cost of this service, you may just decide to invest in a digital unit as a dependable voltmeter has many other RV applications.

If you ask 10 different people, you will likely get 10 different answers for the minimum amount of voltage needed to run your air conditioner. The safest reading I like to see is 105 AC volts (make note to allow for a little bit of wiggle room in case you do have an analog meter!). In some cases, low voltage is unavoidable and there are companies that make voltage boosters available in both 30 and 50-amp. My wife and I do not travel without our PowerMaster voltage controller and it has saved us on many occasions!

Another common cause of low voltage can often be attributed to the use of inadequately gauged extension cords. For example, if you have a 30-amp power cord on your RV, it is recommended that you use a minimum of a 30-amp (10 gauge) extension cord with a maximum length of 50 feet. If you have a 50-amp power cord, the same size extension cord applies. Extension cords are very useful, but please pay close attention that either end of the cord do not begin to melt or discolor from the high amount of current that your RV draws in high ambient temperatures.

AIR CONDITIONER UNITS

The most common RV air conditioner would be the roof-mounted unit as they are lightweight, strong and durable enough to withstand the rigors of traveling on even the roughest roads. These units come in a myriad of BTU (British Thermal unit) sizes, including heat pumps, direct discharge or ceiling ducted, but they all require regular, routine maintenance. The other type of RV air conditioner is called the basement model heat pump—this style requires very little maintenance other than routine filter replacement.

Every unit has a cold air intake filter that must be kept clean to avoid dirt and grime buildup on the cold air evaporator. On the ducted type unit, the filter is located within the ceiling assembly. Remove the filter and wash thoroughly with warm, soapy water and towel or air dry. If the filter is beginning to crumble or deteriorate in any way, it will need replacing.

Prior to reinstallation of the filter, you will need to use a bright flashlight and look through the hole in the ceiling assembly at the aluminum-finned evaporator. See if there is any debris obstructing airflow. If so, clean it out with a soft bristled brush. Pay close attention not to damage the delicate fins! Sometimes, the fins are coated with a sticky film that attracts lint and "dust bunnies" that sneak past the air filter which will cannot be removed without some type of cleaner such as Formula 409®. In this case, it is most convenient to remove the ceiling assembly to gain optimum access to the fins for cleaning. Lightly coat the fins with a non-caustic, spray cleaner and soak up the runoff with a cloth or a few paper towels. Once the process is completed, rinse well with clean water.

Before reinstalling the ceiling assembly, check the tie down bolts to be sure they are tight. If they are barely snug, give each bolt a full turn. If one or more of the bolts are loose, the air conditioner may be shifting during travel, thus causing damage to the gasket and may need replacement. If the bolts are tight, reinstall the ceiling assembly. In a ducted system, make sure that the partition between the air intake and the air discharge is sealed to avoid air leaks.

The amount of heat that your RV will absorb in direct sunlight is usually greater than the capacity of your air conditioner(s). Finding a campsite in a shaded area will help the situation. Here are a few other suggestions that will also aid in reducing heat absorption this summer and beyond.

- *Use window or patio awnings, if you have them!*
- *Keep your blinds closed as much as possible.*
- *Purchase a roll of aluminum, bubble type insulation and cut to fit for placement inside your windows, vents and skylights. If you have a motorhome, do consider insulating the windshield, as the heat transfer to the interior of your coach is tremendous when it hot outside!*
- *Limit the amount of time that your entry door is open and closed to help regulate indoor temps. Also, keep your baggage doors closed as much as possible to help keep the heat from penetrating up into the floorboards.*

Part of owning an RV requires us to take the necessary steps to best maintain our rig for optimum enjoyment and overall safety. Hopefully, this information is helpful and will allow you to have maximum continued use of your RV's air conditioner this summer and beyond. ■