

"12 RV Expert Tips"

RV Travel Tips For The Beginner And Seasoned RV Enthusiast

There's never been a better time to take up the RV life. Whether you're a weekend wanderer, a snowbird or a full-timer, there's an RV to suit any travel budget and any taste. With baby boomers starting to hit retirement age, more and more people are taking to the road with their motor home, RV or travel trailer. The Recreation Vehicle Industry Association recently reported that nearly 10 million American households have an RV, motor home or travel trailer and that there are as many as 30 million RV enthusiasts in the US.

Seeing the country in an RV offers many benefits to the traveler looking for an affordable and exciting way to spend quality family time. According to one study, a family of four can save up to 74% traveling by RV instead of more conventional ways. And with more than 16,000 public and privately-owned campgrounds in the US, there's a site to fulfill everyone's vacation fantasy, whether it's an oceanfront view, hiking trails, casino gambling or tennis.

RV travel is easy to learn, and once you've got the hang of it, there'll be no going back! Here are 12 helpful tips that will come in handy for both the beginning and seasoned RV enthusiast.

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FUEL TIPS

Here are 5 cost-cutting RV travel tips that are good any time of the year:

1. RV Travel On One Tank of Gas

Remember the ending to *The Wizard of Oz*, when Dorothy says she doesn't have to look any further than her own backyard to find her heart's desire? Well, we're not suggesting camping out right outside the house, but think about going to places not too far away that you've always meant to check out.

You'll be surprised at how many new and interesting destinations are just one tank of gas away. A lot of territory can be covered in just a few hundred miles, and you're bound to discover exciting locations you never knew existed so close to home.



The Internet and your neighborhood library is a terrific resource for researching local and state information and attractions – and most of it is free!

2. Put Your RV On A Diet And Get Better Gas-Mileage

It's a simple fact that the less your RV weighs, the more mileage you'll get on the road. Look around for places in your rig where you can institute a "less is more" policy.

For example, you don't have to set out with a full, fresh water tank for your RV excursion. Take what you need for the first day's travel, plus a small reserve, and fill up once you've reached your day's destination.

Forget that bulky, economy-sized can of coffee: empty a smaller amount into an airtight plastic container that you can refill later. (One place not to

cut back, though, is tire inflation: riding on fully inflated tires is a sure way to increase your gas mileage.)



When buying food staples, consider dehydrated items like soup and dried fruit, and transfer cereal and pasta from bulky boxes into heavy-duty plastic bags – not only do they take up less space, you can reuse them once they’re empty!

3. Plastic not Paper Dinnerware - A More Economical Approach Overall

Sure, the eat-and-toss approach of paper plates and cups is the easy way to go – and might even seem economical when you buy in bulk. But lightweight, inexpensive plastic dishes are easy to find, and while they might not last forever, they’ll certainly see you through the duration of a long-distance RV excursion.

Choosing plastic over a big stack of paper goods is also another way to save on weight, especially when you’re starting out on your RV trip.



Buy your plastic ware in a mix-and-match variety of vibrant colors, and these snazzy dishes will brighten up even the simplest road fare!

4. Drive Less, Stay More - Save on Gas AND Get Campsite Discounts

When creating your RV travel itinerary, consider making fewer stops and spending more time at each destination. This will save on fuel and campsites costs as most of them offer discounts for lengthier stays.

By driving less and staying more, you’ll receive an additional benefit: It’s much more relaxing to know that once you’ve turned off the ignition you’re settling in for a while. Also, by spending more time in one place, you’ll be able to do some more in-depth exploring of the area.



Look online at the local newspaper for the area you’ll be visiting. Check for listings of events that you might not

hear about otherwise ... and don't forget to look in the classifieds for yard sales and flea markets, too!

5. Stop and Shop - At Local Discount or Dollar Stores

When you need to refill on groceries avoid supermarkets and convenience stores where prices are at a premium. Instead, look for local discount and dollar stores and roadside fruit and vegetable stands -- depending on the season. You might not save much money there, but there's nothing better than freshly picked produce.

Keep an eye open for discount outlets in the area. And stop at flea markets and yard sales where you might find a one-of-a-kind treasure. Not only do these unconventional choices offer the opportunity to find unusual items, it's a great way to get to know the local neighborhoods and people.



Keep your birthday and holiday gift list handy – you might spot the perfect knickknack for a family member at someone's yard sale!

Know-How Keys to Save:



If you haven't already, change to synthetic motor oil. It reduces engine friction and can improve gas mileage.



Adding fuel injector cleaner at every oil change will keep injector nozzles clean, and spraying properly, which will create better combustion and deliver maximum power.



Consider installing window film in southern climates, it can reduce cabin temperature as much as 20 degrees; dramatically reducing the need for air conditioning that consumes additional gas.



After filling up, be sure the gas cap clicks 3 times. Improperly seated gas caps allow 147 million gallons of fuel to vaporize every year in the U.S.



Consider a locking gas cap, but be sure it meets/exceeds your vehicle manufacturer specifications.



Plan your day efficiently. The less trips you have to make, the more you save in fuel.

Buying gas the right way:



Buy gasoline during the coolest time of day—early morning or late evening is best. During these times gasoline is densest. Keep in mind that gas pumps measure volumes of gasoline, not densities of fuel concentration. You are charged according to volume of measurement. *

Know-How Keys to Drive and Save:



Eliminate "jackrabbit starts." Accelerate slowly when starting from a dead stop.



Traveling at 55 mph produces up to 21% better mileage when compared to 65 - 70 mph.



Maintain momentum everywhere possible. The less inertia your vehicle has to overcome, the less fuel it will use.



Think ahead when approaching hills. If you accelerate, do it gently before you reach the hill, not while you're on it.

Start your engines:



Avoid prolonged warming up of engine, even on cold mornings—30 to 45 seconds is plenty of time.



For 1996 & newer vehicles that utilize a vast array of sensors which tell the fuel delivery system exactly how much fuel (lean or rich) to give at startup, turn off your engine if you are stopping for more than 30 seconds. The lean startup mixture usually translates to less gasoline than what the engine would have used sitting at idle for an extended time.



For older vehicles that do not have engine management sensors in place, or are carbureted engines, don't start and

stop engine needlessly. Idling your engine for one minute consumes the same amount of gas as when you start the engine.

Know-how in Advance:



Stoplights are usually timed for your motoring advantage. By traveling steadily at the legal speed limit you boost your chances of having the "green light" all the way.



Regular tune-ups ensure the best fuel economy; check your owner's manual for recommended maintenance intervals. Special attention should be given to maintaining clean air filters and proper tire pressures.



Inflate all tires to the manufacturer's recommendations for the vehicle; rolling resistance created by low tire pressure can reduce mileage as much as 25%.



Running your vehicle's air conditioner can reduce fuel economy by 10% to 20%.



Remove excess weight from trunk or inside of car. Extra weight reduces mileage, especially when driving up inclines.



Car pools reduce travel monotony and gas expense—all riders chip in to help you buy gas. Conversation helps to keep the driver alert.



During cold weather, remove snow and ice from your vehicle, which otherwise can cause tremendous wind resistance and add up to 100 additional pounds to the vehicle.

RV Insurance Tips

Buying RV insurance for your motorhome, fifth wheel or travel trailer, doesn't have to be as complicated or expensive as you may think. You just need to do a little homework. You don't necessarily want the least insurance necessary at the lowest price.

Your goal instead is to get the most coverage for the best price.

Of course you want to have collision coverage for your RV. But you need to know what kind of collision coverage is being offered. For instance, if the entire motorhome, fifth wheel or travel trailer is destroyed or damaged too badly to be repaired at a fair cost, how much will you receive for it?

If you don't have a policy that provides for replacement cost, you may wind up receiving a much smaller settlement that will be inadequate for buying a comparable RV to replace it. Your premium may be more if you get this kind of total replacement coverage, but it may be worth having anyway.

Another important coverage RV owners should consider is personal liability insurance that covers not only a personal injury claim resulting from an on the road accident, but also an accident that may happen while you are parked in a campground. Most RV insurance policies have the former, but many lack the latter kind of insurance.

Suppose someone slipped and fell coming out of your RV while it is parked, or was injured in some other way on your campsite. In many cases your homeowner's insurance will cover this situation but you should know for sure that it does before you elect not to have this coverage added to your RV policy.

Keep in mind that many RV insurance policies are not written with the fulltime RV'er in mind. In fact there are special policies just for full time RV'ers that cover contingencies usually covered by one's home owner policy.

Typically the amount of personal property damage coverage in a RV insurance policy is very small and may not cover all of your valuables and other possessions in the case of a major accident. This is especially true in today's modern RVs with computers, plasma TV's, and high capacity air conditioning units, etc.

So if you carry a lot of expensive things with you as you travel, you may need to increase your personal property insurance coverage to an amount that will replace them if they were destroyed. Oftentimes increasing this kind of coverage is not very expensive, so check to see what is offered?


Again, if you are a full time RV'er you do not need a homeowner policy to fall back on so you will certainly want to have a good property damage rider on your RV insurance policy. And since fulltime RV'ers usually carry more stuff it's even more important to know the limit of the property


damage rider compared to the value of the personal property aboard the RV.

Finally, be sure to inquire about any and all discounts that are available to you as an RV owner. Many insurance companies will offer discounts for good driving, for non-smokers, for anti-theft devices and more. It never hurts to ask and see if you can get quality coverage for less.


TOWING TIPS

Here are some important towing tips for increased safety and enjoyment in your RV travels. Know how to tow before you buy and every time you head out on the road. You will have less hassles, more fun and will help promote RV safety. Here are ten towing tips to get you started.

 **Understand the basics:** Start at the beginning. Read our tips on managing RV weight. Understand the weight definitions and the importance of weight distribution in towing. Do this before you buy.

 **Do the math:** Get the specific numbers for your prospective combination of RV and tow vehicle. Obtain and carefully read manufacturer's manuals and product-specific towing tips. Make sure you understand their definitions of weight-related terminology. If you are planning to tow a trailer or fifth wheel, the major truck makers have Towing Guides that include model-specific details.

Develop a realistic estimate of fully loaded weight, and do the calculations to make sure you end up with an RV and tow vehicle combination that will meet your needs. Don't forget any options or accessories you had added (or plan to add). Remember to consider passengers, belongings, full water and fuel tanks. This is time well spent to avoid poor purchase decisions, costly repairs and unsafe travel.

 **Distribute the Load:** Weight Distribution is critical.

- Know your Gross Axle Weight Ratings (GAWR), obtain measurements of specific wheel position loads and set tire pressure appropriately.
- Keep the center of gravity low.

- Keep cargo secured to prevent shifting that could cause a loss of control.
- Distribute weight between right and left and front to back per the specifications for your particular RV and tow vehicle. Trailer towing requires the right amount of tongue weight. Tap into the expertise of hitch and trailer specialists for towing tips on your particular configuration.
- Determine if you need a weight distribution system (generally recommended for trailers over 5,000 lbs. fully loaded.)



Hitching Your Wagon: Select hitches/tow bars that are rated to handle the load in conjunction *with the actual towing capacity of the towing vehicle.*

The maximum towing capacity is determined by the lowest-rated element in the chain of hitch components.

For trailer towing, this chain consists of the trailer rating, the ball hitch rating, the hitch rating, and the towing capacity of the vehicle. The weakest, or lowest-rated, element in this chain always determines the maximum safe towing capability of the entire chain.

For a motorhome towing a dinghy, the same principle applies. You must consider the towing capacity of the motorhome itself, as well as the ratings for a tow bar, cables, and connectors.

Hitch up and unhitch a few times to get the steps down. Use a towing tip checklist to make sure you don't forget anything.

Hook up and un-hook on smooth level surface.

When towing a dinghy, manufacturer towing tips often state that the receiver hitch of the motorhome should never be more than 4 inches higher than the baseplate attachment points -- use an appropriately sized and rated drop receiver.

Most trailers and tow-vehicles should be level (parallel to the ground) during travel. Check for manufacturer towing tips and instructions to correctly set up your combination of vehicles.



Built for Two: When you connect a towing and towed vehicle, you need to make sure that the two can operate together effectively, safely (and legally in some cases).

- Brakes - Many states require a separate braking system on towed vehicles with a loaded weight of more than 1,000 - 1,500 pounds. Legal reasons aside, a separate functional brake system for towed vehicles is recommended for increased safety. Include a breakaway option, in the event the trailer or toad is separated from the towing vehicle.
- Lights - The law also requires that the towed vehicle have operable lights. The brake lights, tail lights and turn signals of the towed vehicle must operate in sync with the towing vehicle.



Oh say, can you see? Make sure you have adequate mirrors to give you the visibility you need for safe RV driving and towing. If your mirrors aren't adequate, change them. If you are towing a trailer, you should have extended side-view mirrors to see rear and side-approaching traffic.

Rear-vision cameras may be included in your motorhome, with a monitor in the driver's cockpit. These provide a view of the dinghy and immediate roadway in back, and help when passing or changing lanes. They are available as an after-market add-on, and there are rear-vision cameras that work with towable RV applications.



Ready, Set, Go? Well, maybe not yet. Another good towing tip - practice first before you head out on your first trip, practice driving, turning, stopping (and backing up for towable trailers) in an area away from heavy traffic. Make sure you know your roof clearance. Try out your mirrors.

- Driving: When starting out, accelerate slowly and steadily. The addition of a trailer or dinghy adds weight and length. More weight means more time. Determine how long it takes you to accelerate and come to a stop. Allow extra time for changing lanes, stopping and passing other vehicles. Pass on level ground with plenty of clearance. Avoid sudden moves. When turning, allow room for the towed vehicle to clear.

Get in the habit of looking ahead – a good rule of thumb is to look as far ahead as you will travel in 12 – 15 seconds. Obviously, this distance will vary depending on how fast you

are going. Give adequate notice of your intentions with turn signals. If you are going to come to a stop, a few taps on the brakes might give a clue to the driver behind you. Watch traffic signals and anticipate light changes so you can stop in time.

- **Backing:** For motorhomes, don't try to back up with a dinghy attached. The key towing tip here is to avoid getting into a spot where you have to back up in the first place. Or disconnect the dinghy before backing.

For towable trailers, back up slowly, with someone spotting near the rear of trailer to guide you. It's a good idea to agree on a set of hand signals beforehand, so you can communicate clearly with the spotter. Move the steering wheel in the direction you want the trailer to go. Make small steering movements so you can get the hang of it. Slight steering movements result in much greater movement in the rear of the trailer.



Swaying in the Breeze: Hopefully not. Appropriate attention to weight limits and distribution in setting up your tow configuration will help avoid problems with sway. Sway control options are available to help with trailer sway, and a weight distributing hitch system is recommended for large towable trailers.

If you do experience trailer sway from a gust of wind, downgrade or draft from a passing truck: remember to *gradually* reduce speed, steady the steering wheel and only apply the trailer brakes. Do not slam on the brakes since jackknifing could occur. Do not try to steer out of a sway, increase speed or make sudden moves – it will only make things worse. Do not tow a trailer that continues to sway – determine what is wrong and correct the problem



No passengers: You should never have passengers traveling in a towed trailer or dinghy.



An Ounce of Prevention: Avoid serious problems by adopting a “checking it twice” mindset. Use towing tip checklists as handy reminders. Before long trips, make sure your maintenance is current on both the towing and towed vehicle. Follow manufacturer's instructions for maintenance on your towing apparatus. The first time you tow, a general towing tip is to stop after 50 miles to check towing connections, tires, etc.



Make regular stops to stay fresh at the wheel and during these breaks, check around the RV and tow to make sure all is well. General advice is a stop every two hours.

Vehicle Weight and Rating Terminology:

Note the difference between “ratings” and “weights/loads”:

- Ratings cannot be changed – they are maximum allowable limits determined by the manufacturer in the design of the vehicle.
- Weight and load are generally used interchangeably. In RV applications, vehicles have *weight*, which imparts *loads* to tires, axles, and hitches. Scale measurements taken when weighing are loads carried by the tires. These measured loads are used to calculate Gross Vehicle Weight (GVW), Gross Axle Weight (GAW), Gross Combination Weight (GCW), and hitch loads.

GVWR (Gross Vehicle Weight Rating) means the maximum allowable weight of the fully loaded vehicle, including liquids, passengers, cargo and the tongue weight of any towed vehicle. Note: The tow vehicle and RV each have a GVWR.

GAWR (Gross Axle Weight Rating) is the maximum allowable weight each axle assembly is designed to carry, as measured at the tires, including the weight of the axle assembly itself. The GAWR is specified by the vehicle manufacturer. It is established by considering the rating of each of its components (tires, wheels, springs, axle), and rating the axle on its weakest link.

Over the years, there have been strides made in standardizing RV vehicle weight definitions, through the efforts of the [Recreational Vehicles Industry Association \(RVIA\)](#), [RV Dealer’s Association \(RVDA\)](#) and [RV Safety Education Foundation \(RVSEF\)](#).

Note that manufacturers of trucks used to tow trailers fall outside of the realm of the RVIA, so you should always check specific manufacturer guides and manuals to understand vehicle weight definitions used.

Do the math for your specific RV and tow vehicle, and make sure you know what is included (or not included) in any numbers you get from a manufacturer, private owner, or dealer. The main thing is to account for

all weight and weight distribution in selecting and using your RV, tow vehicle and hitch mechanisms.

The GAWR assumes that the load is equal on each side. This is a rating of the maximums for an axle. It is possible to be overloaded on one end of the axle, and still not exceed the GAWR – hence the recommendation that you obtain individual wheel position weight measurements and inflate tires according to the load.

GCWR (Gross Combination Weight Rating) is the maximum allowable combined weight of the tow vehicle and the attached towed vehicle. GCWR assumes that both vehicles have functioning brakes, with exceptions in some cases for very light towed vehicles (less than 1,500 lbs). Check your chassis manual or manufacturer towing guide

UVW (Unloaded Vehicle Weight) is the weight of the unit as built at the factory. With full fuel tanks, engine oil and coolants. The UVW does not include cargo, fresh water, LP gas, occupants or dealer-installed accessories.

NCC (Net Carrying Capacity), used from 1996 – 2000, is the maximum weight of all personal belongings food, fresh water, LP gas, tools, dealer-installed accessories and other items that can be carried by the unit.

CCC (Cargo Carrying Capacity), used Sept 2000 – present, means GVWR minus the following: UVW, full fresh (potable) water weight (including that for the water heater) full LP gas weight, and SCWR. Note: Remember that optional accessories or equipment not included in the UVW will take up part of the Cargo Carrying Capacity.

SCWR (Sleeping Capacity Weight Rating) is the manufacturer–designated number of sleeping positions multiplied by 154 lbs (70 kgs).

Example of Cargo Carrying Capacity computation on a Motorhome Vehicle Weight Information plate:

GVWR 22,000 lbs.
Less UVW - 16,000 lbs.
Less 20 Gallons Fresh Water x 8.3 lbs. Each - 166 lbs.
Less 16 Gallons Propane x 4.5 lbs. Each - 72 lbs.
Less SCWR (4 x 154 lbs.) - 616 lbs.
Cargo Carrying Capacity (CCC) - 5,146 lbs.

GVW (Gross Vehicle Weight) is not a limit or specification. It is obtained when the fully loaded vehicle is driven onto a scale. The Gross Vehicle Weight, should not exceed the Gross Vehicle Weight Rating (GVWR) or the

vehicle's warranty could be voided. Refer to the owner's guide for the specific vehicle.

GTW (Gross Trailer Weight), often used in towable RV applications, this is the same concept as GVW. Gross Trailer Weight, including tongue load or king pin weight, is measured by putting the trailer on a scale.

GAW (Gross Axle Weight) is the weight of a fully loaded vehicle that is supported by a single axle, obtained by weighing the vehicle on a scale.

GCW (Gross Combination Weight) is the combined weight of the fully loaded vehicles, as measured on a scale.

Hitch Ratings: Hitches are rated by the manufacturer, so always check the manufacturer specifications. Trailer hitches have Gross Trailer Weight ratings, for the maximum towed vehicle weight allowed. Each component (receiver, drawbar and ball) of a ball-type hitch has its own rating. A ball is rated by its towing capacity. A hitch is rated by its towing capacity but also by the tongue weight. Some ball-type hitches have separate ratings when used with a weight distributing system.

Use the hitch rating in conjunction with the actual towing capacity of the towing vehicle. The maximum towing capacity of a vehicle is determined by the lowest-rated element in the chain of hitch components.

- For trailer towing, this chain consists of the trailer rating, the ball hitch rating, the hitch rating, and the towing capacity of the vehicle. The weakest, or lowest-rated, element in this chain always determines the maximum safe towing capability of the entire chain.
- For the motorhome towing a dinghy, consider the towing capacity of the motorhome itself, as well as the ratings for a tow bar and associated cables, base plates and connector.

TWR/TLR, VLR (Tongue Weight, Tongue Load, Vertical Load Rating):

These tow ratings are different terms for the maximum vertical load that can be carried by the hitch. Tongue weight measurements should be made before towing. Tongue weight, or king pin weight for fifth wheel trailers, refers to amount of the trailer's weight that presses down on the trailer hitch.

Too much tongue weight can press the tow vehicle down in back, causing the front wheels to lift to the point where traction, steering response and braking are severely decreased. Suspension or drivetrain damage can result.

Too little tongue weight can reduce rear-wheel traction and cause instability, swaying or jackknifing.

For proper handling, tongue loads should be:

- For trailers up to 2,000 lbs., not to exceed 200 lbs.
- For trailers over 2,000 lbs., 10 - 15% of trailer weight.
- For fifth-wheel trailers, 15% to 25% of trailer weight.

For example: For a 5,000-lb. trailer, multiply 5,000 by .10 and .15 to obtain a proper tongue load range of 500 to 750 lbs.

For an 11,500-lb. fifth wheel trailer, multiplying 11,500 by .15 and .25 yields a king pin weight range of 1,725 to 2,875 lbs.

Tongue load is measured by disconnecting the trailer and placing only the tongue - with the coupler at hitch ball height - on a scale.

If the tongue load exceeds the upper weight limit, move more of the trailer contents toward the rear to achieve the recommended tongue load.

If the tongue load is less than the lower limit, shift the load forward. Weight should also be balanced right to left and secured in place.

LIQUID WEIGHTS (pounds per gallon)

- Water: 8.3
- Gasoline: 5.6
- Diesel Fuel: 6.8
- Propane: 4.2

The RVIA does not regulate truck manufacturers, so you may see variations in vehicle weight definitions used. Just be sure you understand how the definitions are being used by a specific manufacturer.

Here are a few terms you are apt to see for trucks that can tow trailers:

Dry Weight/Wet Weight/Curb Weight: Dry Weight is normally used to refer to the empty weight of the vehicle or trailer.

Curb Weight or Wet Weight definitions generally refer to the vehicle weight including standard equipment, oil, lubricants and a full tank of fuel. It does not include optional contents or other optional equipment, the weight of driver, passengers or cargo. Sometimes, but not always, it includes fresh water and LP.

Yikes! Just make sure you get the written definition of what's included from whoever has given you the numbers.

Payload: Payload capacities generally are computed by subtracting the curb weight of the vehicle from its specified Gross Vehicle Weight Rating

(GVWR). The addition of any optional equipment or passengers adds to the vehicle weight and subtracts from the allowable payload.

SERVICE TIPS

Buyer beware: RV advice at the RV fuel pumps - advertised fuel prices may be misleading. If you see a great price on the signs, make sure you know if taxes are included or not. Some fuel stations post the price for tax exempt purchases (which applies to some truckers doing interstate traffic). This gets the unknowing driver into the station, and more likely fueled up, before the real price is discovered.

Stuck in service? Unless you have incredible luck, there will come a time for RV service work beyond the usual maintenance. Having been there ourselves a few times, we have some thoughts on the subject:

For new rigs, take advantage of the initial warranty period. Upon delivery of a new RV, there are apt to be some items that need to be resolved. Take notes during the walk-through, make a comprehensive list and try to get the items resolved before you take off with your new rig. No doubt there will be other items that shakeout as you start using the RV. Keep track and be sure to get these items resolved within the warranty period covered by the manufacturer and/or applicable component supplier.

Plan ahead. Unless service work is of an emergency nature, book service appointments well ahead of time. Most RV service centers (whether independent, dealer or factory service departments) have a busy schedule.

Be prepared. Make a list of the work you want done and prioritize. Put it in writing to give to the service center and use it to follow up on progress. If the RV service center rewrites your list in their own form, do yourself a favor and compare their write-up with your version of the list. It is easy for something to be missed, and it is best to clear up any discrepancy from the get-go.

Understand root causes. If something is broken or malfunctioning, make sure you find out *why* before you agree to *how* it will be repaired or resolved. Otherwise you may end up spending time and money treating symptoms without addressing the underlying problem.

Know who is paying. This means understanding what is covered and not covered under manufacturer and component warranties and any extended

warranty policy you may have purchased. Get your thoughts together on your rationale and expectations for any coverage issues that you think you might have to negotiate.

In our experience, when there is any question about who might cover a particular repair item, the RV service department usually doesn't start the work until it is clear who is footing the bill. It is best to bring any debate to closure as quickly as possible in order to minimize the amount of time spent stuck in service. In reality, however, this often turns out to be an iterative process as troubles are diagnosed and the extent of the needed repair work is determined.

One thing we have learned about extended warranties is that they usually will only cover labor time per a documented labor guide. The extended warranty company will likely have an RV-focused labor guide that they use, and they may also accept a manufacturer's documented guide for the time required to perform a specific repair or RV service. The guides usually indicate a specific number of total hours that is supposed to cover the diagnosis AND the repair.

The bottom line: it's a good idea if you and the RV service shop understand upfront how many hours are going to be covered. It helps minimize haggling over payment later on. And, who knows, it may increase efficiency in diagnosing and fixing whatever is ailing your RV.

Follow up. Even for minor repairs, it is a good idea to keep track of what work is being done and the expected completion. If you are spending time in a waiting room while a day's worth of service work is being done, you are right there to keep tabs on things. But if you have more extensive service being done or a laundry list of items to be addressed, the work can take days or weeks to complete.

For preplanned RV service work, we are usually operating in the latter mode, with a service advisor project-managing the work at the dealer or factory service department. The service advisor acts as the customer liaison and go-between for individual techs and departments and those that make the decisions about warranties.

This is no easy task since the service advisor gets pulled in many directions by many masters, and often has a larger than ideal workload of customer demands to juggle.

Under these circumstances, we have found that the "squeaky wheel gets the grease" axiom holds true more often than not. It is worth it to proactively ride herd on progress being made. We have usually been in centers where we could physically pop in from time to time to visually

check out the work being done. This has sometimes proved to be a good safety net to make sure that the details given to a service advisor have been communicated to the tech doing the work.

We appreciate the access to service bays that we have encountered - so we try to avoid getting in the way while we check up on progress.

Overestimate. Even if you have no qualms about paying for all the RV service work, it may cost more and/or take longer than initially expected. We have found it a good idea to build some wiggle room into any travel plans or appointments following the scheduled service work. You should start a "repair savings account," where you set aside a little at a time.

Make the most of your time when you are "stuck in service". Full-timers or those living in their RV for extended seasonal travel will likely have to vacate their home on wheels for days or even nights at a time, depending on the extent of their RV service. So there is time to kill outside the comfort of home.

Major service centers will usually have a waiting room, and there can be value in spending some time there chatting with other customers. You can pick up all sorts of tips from fellow RV'ers on all aspects of the RV lifestyle. If you are in a service center specific to your brand of RV, or that does a lot of work on your brand, the tips and ideas may be even more relevant. Often these informal conversations are the start of ongoing friendships.

On the other hand, if the waiting room experience turns out to be a gripe session with a lot of negative energy, it might be better to spend your time elsewhere.

We try to strike a balance. We spend some time in the RV service center waiting room, sometime following up and most of our time out exploring the local sights and scenery.

MAINTENANCE TIPS

Quick and Easy RV Maintenance Tips

A recreational vehicle can certainly introduce you to the romance of the road. You really don't know how many adventures await you, once you purchase your first RV. But, in order to ensure that your journey is safe, it is important that you engage in some simple maintenance. Here are some

tips for keeping your rig rolling on the road:

Check the Hardware

At the beginning of each season, be sure to do a hardware check. This means you will need to lubricate buttons, handles, and threaded knobs. However, be careful that you don't get petroleum-based lubricants on your RV awning fabric. If you are going to leave your awning on during extended rainstorms, be sure to lower one end. Also, be sure to clean your awning periodically in order to fight dust and mildew.

Keep Tabs on the Running Gear

You'll also want to check the running gear, including the axles, springs, spring hangers, and spring shackles. It's best to do this when you have your bearings lubricated. The spring shackles on high-mileage units should be checked annually.

Lubricate Your Bearings

Experts recommend that you lubricate your wheel bearing every 12 months or 12,000 miles. Bearings on boat trailers should be lubricated at least once each year-more if the trailer is in the water frequently. Also, remember to replace the grease seals when you do the bearings, and check the brake shoes for grease contamination.

Engine and Drive train - Always check the engine oil and coolant levels, and tire pressures before you head out for a trip.

Moisture - Moisture can be a real problem in an RV, particularly during the cold weather when temperatures drop below freezing and moisture inside the RV begins to condense on any un-insulated surface. This can cause staining, particularly around the window and window frames. The biggest producer of moisture in an RV is the shower in the bathroom and cooking in the kitchen.

Our experience has provided the following advice:

Isolate the bathroom by closing pocket doors and opening the roof vent and turning on the vent fan when showering. This consumes a certain amount of heat out of the RV in the process, but seems well worth the added fuel expense to lessen the amount of moisture generated by the shower.

Do as little water boiling (i.e. soup, rice, noodles, vegetables, etc.) in the kitchen as possible. This is the time that the usefulness of the microwave really shines. In the cold weather we use the microwave almost exclusively, lessening the use of the stove top for heating or

cooking with fluids. If you need to boil fluids on the stovetop open up the roof vent and a window across the room and suck through some fresh (and cold) dry air through the RV. Again this costs some in heat but worth getting the moisture out, especially if that moisture starts to freeze and build up on the interior side of your windows!

Be sure to **prepare your RV for travel**. Take a few minutes to secure all items inside that may fall or break and shut all drawers and cabinet doors completely. Take a final walk around outside to insure jacks and steps are up, all exterior doors are closed and locked, antennas and vents are down, and all cords and hoses secured. Make one final check of your hitch, safety chains, exterior lights, tires etc.

Solar Tinting - Inexpensive solar tinting for the inside of your RV can help keep it cooler in the summer. Easily attached, it can reduce the cool loss through the windows substantially.

Check your trailer **brakes** once a year. Check preloaded bearings and grease them once a year.

Sanitize your water system: The best way is to take household bleach, 1/4 cup to each 15 gallons of tank capacity. Mix some in water (so you're not using straight bleach), and fill the tank. Run all the faucets (except the toilet) to get the solution in all the lines. Drive around the block to slosh it; then empty it. Next use a half cup of regular baking soda dissolved in a bucket of water. Fill the tank again and then drain it. Then fill and drain it one more time. At this point your tank should be pristine. Make sure you drain the system if your RV is to be left in cold weather. Burst pipes can cause a great deal of damage.



Water leaks are the bane of RV'ers. If a connection gets loose, water gets in. A good seal is essential to avoid dry rot. Check your roofs for gaps. Do not use a silicone sealer anywhere except around windows as it can become brittle.

Clean your roof with a medium bristle brush and lots of water. Do not use petroleum distillates as they may make the roof bubble.

Dumping: Don't ever open both gray water and black water valves at the same time. It's okay to keep the gray water open when you're connected; but don't flush the black water until it's about 2/3 full -- and then only after the gray system is shut down. Only use holding tank deodorizer -- other types will dry out the valves. Use single ply toilet paper only. If you line the bowl with toilet paper before use, it will help keep it cleaner.

Inverters: Most buyers want to use microwave ovens. They figure a 1,000 watt inverter will run a 800 watt microwave. Wrong. Usually the "800" watt microwave will draw as much as 1,500 watts. Check inside the microwave door to get the "real" power consumption.

Use a **surge protector** (computer type) where the microwave plugs into the wall. Surges will cause the microwave fuse to trip, and the entire unit needs to be taken out of the wall to repair it.

Air conditioners: Maintain the filter on the inside. Wash it with soap and water and let it dry. Also, watch for puddling of water around roof air conditioners. If the seal should fail, it could be a serious problem in a short time. The unit should be mounted on a portion of the roof where the water will run away from it.

The **pressure relief valve** on the water tank is designed TO leak. Don't worry if you get a few drops from it from time to time. It's just doing its job.

The **drain plug** (anode rod) in the Suburban hot water tank is MADE to be "sacrificed". Bad water is intended to eat them up so they don't eat the tank up. They can need replacement in as little as a few months.

Do not ignore small problems. A minor problem left unprepared can lead to a major expense or safety hazard. If you are qualified and perform your own maintenance, develop a set schedule you follow every year. A great time for a checkup is after periods of storage when your unit is being prepared for the season's use.

RV CHECKLIST:

Water Pressure Regulator - A **must have** and buy a good one. Some campgrounds have too much water pressure, and you could end up blowing out the water lines in your RV. Also keep in mind that these regulators could lose their regulating abilities over time, so it's a good idea to buy a new one every couple of years or so, depending on how often you use it.

Fresh Water Hose - The "white" hose. Don't use a regular garden hose for your fresh water connection; they are not safe. A 25-footer will do in most situations, but it might be a good idea to carry an extra 25-footer for those times when you're further away from the water connection.

- In-Line Water Filter** - This is well worth the price for clean, safe drinking water.
- Sewer Hose** - We recommend two sections; a 10-foot section and a 20-foot section, each with a fitting on one end for the RV connection. Or, you can purchase something like Camco's *Quick Connect* system; two 10-foot sections that connect together quickly when you need that extra reach.
- Sewer Hose Fittings** - You might want a couple of different types for the sewer-end of the hose, and a rubber *Sewer Ring*. The sewer ring is a **must have** as some campgrounds require this fitting.
- Electrical Adapters** - A range of adapters to be able to plug your RV into whatever electrical service is available. If your RV is set up for 50-amp service, you'll need adapters to plug into either 30-amp service or 20-amp service. If your rig is 50-amp, there are also adapters that allow plugging in to **both** the 30-amp service **and** the 20-amp service to provide the 50-amps you need (depending on how the campground electrical service is wired).
- Garden Hose** - For rinsing out your black water tank or for whenever you might need a length of regular garden hose. Include a nozzle in you RV and remember, **don't** use your fresh water hose for rinsing out your black water tank. Use your fresh water hose for **fresh water only**.
- Wheel Chocks** - Or some form of locking the wheels of your RV. There are many options available on the market, but good old ordinary wheel chocks work best.
- Leveling Blocks** - The orange *Lynx* levelers work great, but any pieces of wood cut into squares will do just fine. Don't depend on your stabilizer jacks to level your RV. They are meant for *stabilizing*, not leveling.
- Level or Stick-On Levelers** - How else can you make sure your RV is level?
- Extra Fuses** - Check your RV manual for the types and sizes of fuses in your RV and carry extras of each.
- Extra Bulbs** - Again, check your manual for the types and sizes and carry extras. Remember extras for the interior as well as the exterior, for the stop lights, running lights and such.
- Fire Extinguisher** - if you buy your RV new, it will already come equipped with a fire extinguisher. But if you buy used, it may or may not

have one. This is certainly **essential**, and make sure to check the charge regularly.

- First Aid Kit** - A **good** one is essential. Make sure it includes (or you take along with it) things such as aspirin, antacid, cough syrup and the like, along with tweezers and a thermometer, bandages, first aid cream.
- Black Water Chemicals** - Don't even think about using your toilet without adding waste chemicals first; trust me!
- RV Toilet Paper** - the degradable type used for RVs and portable toilets. Using regular toilet paper **will** clog your black holding tank eventually.
- Rags** - You always need rags for something.
- Disposable Rubber Gloves** - Needed when you're dumping and flushing the black water tank.
- Non-Slip Cabinet Linings** - You'll be sorry if you don't line those cabinets with this stuff.
- Flashlight** - although not absolutely **essential** we include this in our **must have** list. Include extra batteries also.
- Matches** - or one of those butane match sticks, for lighting the range, oven, grill or starting your campfire in the evening.
- Electrical Extension Cord** - A 25-foot extension cord to match your RVs electrical rating (20-amp, 30-amp or 50-amp extension cord) for the times when you can't get close enough to the electrical outlet. It's not often, but when that time occurs you'll be glad you have the extension.

TOOLS: Make sure you carry the following at minimum:

- Pliers, both large and small
- Needle-Nose Pliers
- Channel Locks
- Assortment of flat-head screwdrivers
- Assortment of Phillips-head screwdrivers
- Hammer
- Fuse Puller
- Basic Wrenches, both box and open end
- Socket set
- Tire Gauge

Traveling Check List

Packing Up: Inside

- Stow everything loose; coffee maker, toaster, dishes, cups, etc.
- Take down all portable clocks that could fall
- Disconnect and stow any electrical cords
- Wrap TV in a blanket and place on the floor
- Lower roof TV antenna
- Lower roof satellite dish
- Put travel bars in refrigerator
- Lock refrigerator door (safety pin or latch)
- Turn off water pump
- Turn off electric water heater
- Secure bathroom shower door
- Close and/or secure all other doors (pass-thru, bathroom and bedroom closet doors)
- Stow and secure all bathroom items
- Lower roof vents
- Close and secure all cabinets, doors and drawers
- Double check items in cabinets to make sure they won't fall over
- Stow and secure any stand-alone tables, chairs and other objects
- Turn off refrigerator -or- switch to gas operation
- Shut off all gas pilot lights
- Shut off all lights, radios and electrical items
- Lower range top cover
- Close windows and secure blinds/drapes
- Secure refrigerator door
- Put cutting boards in sink or stow in a cabinet
- Make sure the weight inside is as evenly distributed as possible
- Retract all slide-outs
- Lock in the slide-out (travel bars and/or lock pins)

Packing Up: Outside

- Take down and stow awning lights
- Stow all outside items: carpets, chairs, grill, etc.
- Stow satellite dish and stand
- Put up all awnings
- Close/lock outside range hood vent
- Close front (and rear) window shutters
- If not operating the refrigerator, shut off the LP gas bottles
- Turn off gas water heater

- Put stabilizer jacks up and secure -or- Stow portable jacks
- Stow wheel chocks
- Put steps up
- Remove and stow any outside electrical connectors
- Drain and flush black water holding tank

- Put in 2-3 gallons of water and appropriate amount of holding tank chemical into the black water tank
- Drain gray water tank
- Double check that sewer drain valves on RV are closed and remove the sewer hose
- Cap the RV sewer drain outlet
- Drain sewer hose, clean and stow
- Disconnect shore power electrical cord and stow; close and secure the hatch
- Remove fresh water hose, drain and stow
- Cover the outside water connection
- Remove and stow TV cable and/or phone cords
- Check lugs on wheels
- Check tire pressure
- Make sure all exterior storage items are secure; close and lock all compartments

New RV'ers Start up Guide:

The following items are meant to give new RV owners a start at the initial inventory for heading out on that first excursion. It is certainly not all-encompassing and will not fit everyone's lifestyle and preferences. Rather this is meant as a starting point to get you thinking about what you might need to pack. Items can certainly be added or removed as necessary to fit your needs. Remember to watch your weight!

Staples, such as salt, pepper, sugar and the like are included, as are toiletry kits, soap and other "general" items. Specific food and clothing is not included, as this can be determined for each family.

- | | |
|--------------------------------------------------------------------------------|--------------------------------------------------------|
| <input type="checkbox"/> Toaster | <input type="checkbox"/> Propane grill and accessories |
| <input type="checkbox"/> Plates (large and small) | <input type="checkbox"/> Small propane bottles |
| <input type="checkbox"/> Silverware (regular and plastic) | <input type="checkbox"/> Assortment of pots and pans |
| <input type="checkbox"/> Can opener | <input type="checkbox"/> Mixing/serving bowls |
| <input type="checkbox"/> Kitchen gadgets: spatula, carving knives, tongs, etc. | |
| <input type="checkbox"/> Measuring cups & spoons | <input type="checkbox"/> Dish pan |

- | | |
|----------------------------------------------------------------|--------------------------------------------------------|
| <input type="checkbox"/> Pot holders | <input type="checkbox"/> Dish drainer |
| <input type="checkbox"/> Table cloth | <input type="checkbox"/> Serving tray(s) |
| <input type="checkbox"/> Water glasses / Drinking cups | <input type="checkbox"/> Vacuum cleaner |
| <input type="checkbox"/> Coffee Cups | <input type="checkbox"/> Broom and dust pan |
| <input type="checkbox"/> Paper plates | <input type="checkbox"/> First-Aid kit |
| <input type="checkbox"/> Plastic paper plate holders | <input type="checkbox"/> Aspirin and Medications |
| <input type="checkbox"/> Small trash can | <input type="checkbox"/> Bug spray |
| <input type="checkbox"/> Radio-AC and battery operated | <input type="checkbox"/> Suntan lotion |
| <input type="checkbox"/> Propane grill and accessories | <input type="checkbox"/> Bed spreads |
| <input type="checkbox"/> Small propane bottles | <input type="checkbox"/> Pillows, sheets, pillow cases |
| <input type="checkbox"/> Assortment of pots and pans | <input type="checkbox"/> Bath towels/wash cloths |
| <input type="checkbox"/> Beach towels | <input type="checkbox"/> Cleaning supplies (SOS pads) |
|
 | |
| <input type="checkbox"/> Blankets | <input type="checkbox"/> Toiletry kit |
| <input type="checkbox"/> Kitchen towels | <input type="checkbox"/> Windbreaker |
| <input type="checkbox"/> Travel clock | <input type="checkbox"/> Folding chairs |
| <input type="checkbox"/> Paper towels | <input type="checkbox"/> Playing cards / Games |
| <input type="checkbox"/> Napkins | <input type="checkbox"/> Pens/pencils & paper |
| <input type="checkbox"/> Ziploc bags | <input type="checkbox"/> Umbrella |
| <input type="checkbox"/> Aluminum foil | <input type="checkbox"/> Salt & Pepper |
| <input type="checkbox"/> Plastic wrap | <input type="checkbox"/> Sugar |
| <input type="checkbox"/> Trash bags (large and trash can size) | <input type="checkbox"/> Coffee & Tea bags |
| <input type="checkbox"/> Bar soap and dishwashing detergent | <input type="checkbox"/> Toilet paper (RV-type) |
| <input type="checkbox"/> Kleenex | |
| <input type="checkbox"/> Sponges | |
| <input type="checkbox"/> Rags | |

Getting Ready for Camping Season:

Listed below is a basic checklist for preparing your coach for the first spring/summer use.

Step 1: Supply power to the coach or install your freshly charged battery.

Step 2: After opening the coach, visually inspect the entire floor, including cabinets and under drawers, for signs of rodents or moisture. If signs of moisture are present, try to find the source. This could be a broken water heater.

Step 3: If you're confident that none of the water lines froze, and four to five gallons of water and a cup of bleach to the fresh water tank. Leaving the water heater bypassed (you don't want to flush RV antifreeze into the water heater), run water through all faucets to clear out the RV antifreeze and sanitize the

water lines. If you happen to flush your system the first time with your water heater bypass open, you'll want to flush your entire system four to five times to make sure all the RV antifreeze has left your water heater.

Step 4: Pull the drains for the fresh water lines. Repeat step #3.

Step 5: After flushing the water lines twice, open the water heater bypass and allow the water heater to be flushed out as well.

Step 6: Make sure the holding tank termination valves are not leaking. Flush both waste holding tanks well to remove any buildup that may have occurred during storage.

Step 7: Turn on your LP gas supply and inspect the system for leaks using your leak detector, your nose.

This will remove any air pockets that may have formed in your LP gas system if you removed your LP tank(s) for storage (trailers only). Turn the burner off after a few minutes.

Step 8: Test the operation of your furnace.

Step 9: Test the operation of your water heater (make sure its full of water!)

Step 10: Test the operation of your refrigerator on LP gas. You may have to retry your refrigerator on LP a few times before it will light. This is normal after being in storage.

Step 11: Test the operation of all interior and exterior lights.

Step 12: Install fresh batteries in all flashlights and your smoke detector.

Step 13: Test the operation of any other alarm installed in the coach (LP, CO, etc.).

Step 14: Check the air pressure in all tires.



Review the maintenance schedule and perform any necessary maintenance (bearing grease, oil change, tighten lug nuts, etc.).

Step 15: Wash the exterior and apply your preferable protectant.

Wash the roof using a soapy water solution.

Wipe down and clean the interior.

Open and wash off all awnings.

Step 16: Test the operation of all compartment doors and compartment door

locks.

Step 17: (The most important!) Load the coach and have some fun!

Depending on what options you have, there may be more items to check before using your coach. Make a checklist so you can be sure to test everything before your first spring/summer use. Happy Camping!

Maintenance Check List: Motorized Maintenance Checklist

Items to Inspect	Before Each Trip	Monthly	Every 3 Months	Every 6 Months	Yearly	As Required by Manufacture
Roof Sealant				X		
Window Sealant				X		
Windshield Sealant			X			
Sidewall Sealant				X		
Wiper Conditioner	X					
LP Gas System					X	
Service Appliances						X
Tires (Condition and Pressure)	X					
Coolant Fluid Level						X
Engine Oil Level		X				X
Brake Fluid Level		X				X
Generator Oil Level		X				X
Generator Coolant Level		X				X

Exterior Lighting	X					X
All Belts and Hoses		X				X
Tire Lug Nuts						X

Towables Maintenance Checklist

Items to Inspect	Before Each Trip	Every 6 Months	Yearly	As Required by Manufacturer
Roof Sealant		X		
Window Sealant		X		
Sidewall Sealant		X		
LP Gas System			X	
Service Appliances				X
Tires (Condition and Pressure)	X			
Tire Lug Nuts	X			
Exterior Lighting	X			

RV Winterizing / De-Winterizing



Winterizing your unit when you do not know what you are doing can be extremely costly!! It is always best to allow a professional to winterize your unit.

Winterizing your unit.

Read Your owners-manual for directions on winterizing your RV.

Winterization

RV components can be damaged from the effects of freezing. Protection of the plumbing system and related components is crucial. Damages due to weather are not covered under warranty at any time. Many recreation vehicle owners choose to have their units winterized by their dealer, while others choose to do it themselves. The following are descriptions of two methods used to winterize:

Compressed Air (Dry) Method: 1

Use compressed air to blow out any remaining water in the system after draining it of all water. This method requires an air compressor and appropriate adapters.

RV Anti-Freeze (Wet) Method: 2

Uses, RV approved, nontoxic potable anti-freeze in the system and does not require any special tools.

Method 1 - Compressed Air

1. Purchase 1-2 gallons of RV non-toxic anti-freeze.
2. Drain the fresh water tank and empty the waste water holding tanks*
3. Turn water heater by-pass valve to by-pass position.
4. Drain water heater.

If installed, remove water filter from assembly and discard. Install diverter if included.

5. Open all faucets including showerhead, sprayer, toilet flushing device and any other waterlines that are closed.
6. Turn on the water pump for 30 seconds to clear out any water in the lines.



Connect an air hose with an adapter to the city water fill connection. Set pressure no greater than 30 pounds and blow out the water lines until no water can be seen coming out of the fixtures and lines. Pour RV anti-freeze into drains, p-traps, toilets, and tanks.

Method 2 - RV Antifreeze

1. Purchase 4-6 gallons of RV approved, non-toxic anti-freeze.
2. Drain all tanks: fresh water and sewage tanks.*
3. Turn water heater by-pass valve to by-pass position.
4. Drain water heater.
5. If installed, remove water filter from assembly and discard. Install diverter if included. Pour an amount of RV non-toxic filter from assembly and discard. Install diverter if included.
6. Turn on pump switch an open cold water side of all faucet fixtures. Leave open until the anti-freeze comes out. Repeat hot water side.
7. Flush toilet until anti-freeze begins to flow into the bowl and then pour one gallon of anti-freeze down the toilet to winterize the black tank.

8. Pour anti-freeze down each shower/tub, lavatory sink, and kitchen sink to fill p-traps.



To winterize grey tank(s) pour one gallon down each related sink drain.

Plumbing System – De-Winterization **DE-WINTERIZATION / REMOVAL OF ANTI-FREEZE**

1. If purchasing a coach that is winterized with RV anti-freeze or having had an existing unit winterized before winter storage, the plumbing system must be flushed and sanitized prior to use. Do not attempt to turn on water heater if system is winterized. Perform the following prior to attempting to operate the water heater or use the plumbing system.
2. Drain all tanks (fresh water and sewage)*
3. Attach garden hose to fresh water fill and fill tank.
4. Turn on pump switch and open cold water side of all faucet/ shower fixtures. Leave open until water runs clear. Repeat for hot water side.
5. Flush toilet until clear water runs into bowl.
6. Dump tanks again.
7. Sanitize water system.

8. If a water filter is installed, drain lines, remove filter assembly, clean and reinstall with new filter.
9. When ready to use the water heater, turn by-pass valve to open position to allow water to enter hot water heater tank and fill according to instructions.



Wastewater tanks must be dumped at state approved locations.

Winterizing

The easiest way to winterize your water system is to take your camper south to warmer weather for the winter. Unfortunately for most of us, that isn't always practical. If you are going to do it yourself, there are a few things you can do to ensure an easy and thorough job.

These items apply to demand type water systems. If you have a pressure water system, you can eliminate the pump converter kit. The water heater bypass kit as the name implies, allows you to winterize without filling the water heater with antifreeze. The pump converter kit allows you to pump antifreeze through the system without dumping a lot of antifreeze into your fresh water tank.

The blowout plug screws into your city water hookup and gives an easy way to blow water out of the lines and water heater. After blowing out the lines, don't forget to remove the water heater drain plug and let the water drain until air blows out the drain. Pump the antifreeze throughout the system. Don't forget to dump some in the traps.

The safest way is to bring it to your dealer for winterizing. Finally, before parking for the winter, be sure your waste tanks are empty and closed.

Don't seal the water heaters with plastic, as it can trap moisture and do more harm than good. Check the condition of your roof vents. A normal roof vent is shin if the plastic is dull looking or pitted; consider replacing them before storing for the winter if you are storing outdoors.

Winter Storage –

- 1) Use protective caps of cut up tennis balls, Styrofoam balls or similar material to prevent tarp damage from abrasion on sharp edges.
- 2) Some appliances draw electricity even when turned "off". When storing your RV, unplug ALL appliances and disconnect the battery

Air Conditioner Tips

Trouble Shooting:

Air conditioner (Roof)

- **Nothing Works on AC**
 - Check to make sure thermostat is set below room temperature.
 - Make Sure 120 Volts AC is available from generator or shore power.
 - If using the generator check all circuit breakers on the generator.
 - Check coach circuit breakers.
- **Runs but coil freezes and compressor cycles to soon.**

- Control may be set too low.
- Make sure the filter is clean and unobstructed.
- Check to see if too many outlet vents are closed.

- **Doesn't get cold enough.**

- Give the air a head start on the heat of the day.

To offset heat gain:

- Close windows and blinds.
- Limit use of entrance doors.
- Use awnings.
- Avoid heat-producing appliances.

- Make sure outside power supply is not below 108 volts.

Refrigeration and Air Conditioning

One of the most common complaints related to RV refrigerators and air conditioners takes the form of "my refrigerator or air conditioner isn't working very well." This complaint is frequently related to electrical supply problems and in the case of the refrigerator is easily checked by switching to gas (assuming that you have kept it in operating condition.)

If you are running an air conditioner, you should be using a voltage monitor of some type! Your air conditioner requires 120 volts +/- 10% to operate correctly. With low voltage, either the compressor will not run or if it does, you risk damaging the compressor motor.

Protecting your appliances from low voltage is fairly easy. You need a voltage monitor or voltmeter to check voltage at an outlet in your unit, with and without the AC running. One of the other easy protections is to use either NO extension cords or a cord that is properly sized.

If you are running an air conditioner and you must have an extension cord, you should be using the 10 gauge RV extension. Don't forget to check your refrigerator vents and vent door for obstructions. You should be able to look up from the bottom vent to the roof vent trap without anything but refrigerator coils to restrict the view. The vent door should not have any screens or furnace filters over it. They are not supposed to be there and will restrict air flow.

Clean your air conditioner filter and check the condenser fins on the roof occasionally. Wash the filter (foam) in mild detergent and rinse well. Non foam filters should be vacuumed or replaced. Any other maintenance should be done by qualified technicians.

Maintain Your RV Air Conditioner in Working Order

A number of RV owners complain that their air conditioners don't work well. The problem is usually related to trouble with the electrical supply. If you have an air conditioner on your vehicle, use a voltage monitor in order to maintain a constant check of the voltage being used. Otherwise, you might run the risk of damaging the unit. If you use you're a/c often, it is wise to have it serviced at the beginning of each season.



Including the tips above in your RV maintenance routine will help you keep your vehicle in good working order.

Roof Air Conditioners

Q: Why does my air conditioner freeze up — does it need Freon?

A: Your air conditioner will freeze up because you have turned down the fan speed and not the temperature setting. Too low of an air flow over the coils will cause them to freeze. If you are too cold turn down your thermostat first, then adjust your blower/fan speed.

Q: I'm getting water dripping from my roof air conditioner why?

A: The drain plug on top could be clogged, restricted air flow, or bad air conditioner seal on the roof top.

Q: How cold will my air conditioner get?

A: The air coming out of the air conditioner will blow 18 to 20 degrees cooler that it draws in. If it is 90 degrees in you camper it will blow out 70 degrees air, and will keep reducing the temperature as it sucks in cooler air.

Q: When should I have my air conditioner recharged?

A: These units are not like a car with rubber seals that can leak out over time. They are sealed from the factory, the same as your in house refrigerator. You do not recharge roof air conditioners.

Refrigerators

Q: I have an ammonia smell in my RV's refrigerator, and it has stopped working!

A: The smell is coming from a leak in your refrigerator's core — you need a new fridge. You can replace the core with a new core, and it is cheaper than a new refrigerator, but remember, all of your other components are used. If you have a brain board go out, you could be spending another \$300-\$400 to replace the board. When purchasing a re-cored RV refrigerator the warranty is only on the replaced core.

Q: I was told if I turned my refrigerator upside down it would start working again?

A: A refrigerator core is like a clogged artery. Turning it upside down may break the core loose but once it collects up again in the line it will stop the flow of ammonia and stop cooling. You need a new fridge.

Q: Last year I put my RV away for the season and my fridge was working fine. But now it won't get cold. What's wrong?

A: RV refrigerators need a 12 volt source to operate the brain board. Make sure your battery is charged, or the refrigerator will not come on.

Q: My RV refrigerator works great on gas, but not on 110 volt.

A: If it works great on gas, your problem could be a bad heating element, or it could be a board. Some refrigerators have a separate thermostat for gas and one for electric.

Q: My refrigerator gets cold on the top but not the bottom. Why?

A: You probably have a blockage you the coil, you can replace the coil, but it's recommended that you replace the complete refrigerator.



The answer is the outside temp is too hot for the condenser to condense the ammonia vapor back to a liquid; what vapor is changed back to a liquid is used up in the freezer section leaving no or very little liquid for the refrigerator section. When this occurs put a good thermometer inside the refrigerator section and at night when the temp cools the refrigerator temp will drop and the next day when the temperature rises so will the temperature inside the refrigerator. The cooling unit is good, there is no blockage, it just needs some help. The solution is more air movement through the condenser coils/fins. 12v fans...can solve this problem.

Q: How cold should my refrigerator get?

A: 40°F is the food safe zone.

Q: My RV refrigerator takes a long time to get cold. Why?

A: The refrigerator in your house blows cold air into the box and makes it cold, but your RV has what's called "heat exchange", meaning it absorbs hot air. The more it absorbs out of the box the colder it gets. It's best when stocking your refrigerator to have the items already cold to start with. If you have children getting soft drinks a lot of the time, keep soft drinks in another cooler (ice chest) to keep from open and closing the door so much.

Q: I have a 2008 Class C. I am experiencing problems with the refrigerator. It's making a boiling or gurgling sound on LP and electric and it will not get cold. The fridge worked perfect at the end of the season last year. It will turn on but it will not get cold. What should I do about this problem?

A: You have a bad cooling unit. Replace the cooling unit or the complete refrigerator.

Q: My Dometic refrigerator's check light is on, what do I check? Is it on gas or AC?

A: Make sure the gas is on and you have gas. If check light is on you are on gas.

Cleaning Tips

To keep your refrigerator clean and smelling good between uses, remove any food from it. Wipe the inside down with warm water and baking soda. Allow it to dry. Always store the RV with the refrigerator and freezer doors propped open to prevent mildew.

Winter Care –

Place a piece of plastic across areas where ice forms (not on the cooling fins!) and when it comes time to defrost the ice and frost will fall off! Also, replace the hex-head screws (10-24) in the freezer compartment of the NORCOLD refrigerator with high-tempered steel screws. Problems with ice getting in behind the fender washers and snapping off the heads of the original screws

Summer Care –

Summer and fall temperatures can be hot. Give your refrigerator a cooling break by not parking where the sun is directly on the refrigerator

compartment. The sun can make your refrigerator work twice as hard as it should.

Cool the refrigerator on propane NOT on electricity. Electricity is a maintenance cycle once the refrigerator has cooled down. If possible put cold food and beverages into the refrigerator and do NOT stuff you refrigerator with too much food. Use a refrigerator fan inside the refrigerator to keep cold circulation going at all time.

Is your refrigerator compartment door turning yellow? Applying a UV protection will prevent it from turning yellow.

Refrigerators: While they want to be "level", the newer ones are quite forgiving. As a rule of thumb, if you are comfortable with the position, the refrigerator will be too. To check the seal on the refrigerator door, shut a dollar bill in it. If it falls out or is easily removed, your seal is faulty. Always prop the doors open when storing your rig.

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**IMPORTANT
QUESTIONS FOR
YOUR INSURANCE
AGENT!**

1. Does my car or truck insurance cover me when pulling a trailer?

NOTE: many people have fallen into the pitfall when they **ASSUME** that their trailer is automatically covered by their particular auto insurance. This is as far from the truth that you can get! The truth is that very few car or truck insurance companies will automatically cover your trailer when involved in an accident, and they will refuse all types of claims.

2. What kind of coverage do I need to protect my assets (wages, home, retirement plans and other forms of personal and real property) ?

3. What kind of coverage will be required by my lender? Different lenders require different levels of coverage.

4. Is there a difference in coverage, if I am a part-time RV or verses of full-time RV or?

Knowing the answer to this question can literally save you \$5000-\$20000! Why? Because accidents or other claims associated with a full time accidents or claims, may not be covered unless you have a full-time RV coverage!

5. Does my homeowners insurance cover the contents of my RV?

NOTE: USUALLY NOT!!

6. Does where I live affect the premium and coverage on a policy?

7. What is liability coverage?

8. What is comprehensive coverage?

9. What is collision coverage?

10. How much coverage do I need to protect the contents of my RV?

NOTE: A lot will depend on whether you live in your rig or not! Consider that if you will be full time you probably will have more valuables with you than if you are out in the mountains over a weekend!

11. Does my insurance protect me if I drive to Mexico or Canada? In one particular case, I know a gentleman who lived in South Carolina that traveled to Mexico. While he was there, the RV was broken into, and many of his personal belongings were stolen. Unfortunately, he didn't realize that he needed a special rider on his current insurance policy to protect him all he traveled in Mexico." No coverage-no protection."
12. What about uninsured motorists, do I need protection from them?
13. Will I be covered for fire, theft, flood and/or wind damage?

Not knowing how to properly shop for the right insurance for your RV, can literally cause you to lose thousands, perhaps even tens of thousands of dollars. Selecting the wrong type of insurance, is one of the biggest pitfalls people face when owning an RV.

The 13 questions above have been proven questions to ask your insurance agent to protect yourself.