What condition is your RV roof in?
Inspect, reseal & recoat your RV roof

Winter RV Preparation Tips
6 What Condition is your RV Roof in? 
Get the most from your RV roof. Read some great tips and watch some helpful videos on how to identify, clean, reseal and recoat your RV roof.

12 Winterize your RV in 7 Easy Steps
Follow these 7 easy steps to help protect your RV water system from damage this winter.

16 Prep your RV for Winter Storage
If you plan to store your RV during the cold winter months don’t miss this article for some helpful tips and advice.

DEPARTMENTS

4 Editor’s Desk

11 Cold Weather Camping Quick Tips
Get some helpful RV quick tips for camping in cold weather.

19 Vintage Truck & Trailer Restoration
RV Education 101 completes a restoration project on a classic truck to tow a vintage travel trailer.

20 RV Tool Box Tips
Find out what tools Mark keeps in his RV tool box and why.

23 Salmon Cheese Spread
Get a easy and tasty salmon cheese spread recipe from our friends The Cooking Ladies
For over 50 years the Equal-i-zer® hitch has been providing safe towing for families.

The Equal-i-zer hitch’s superior design makes it the best performing sway control hitch on the market. Four steel on steel friction points (known as 4-Point Sway Control™) and excellent weight distribution – provide unmatched resistance to your trailer’s attempts to sway. That’s the premium performance that keeps families safe, and the premium performance that keeps owners recommending the Equal-i-zer hitch to their friends.

Get Superior Sway Control - Get the Original Equal-i-zer® Sway Control Hitch.
We just returned from our third fall camping trip and during each of these trips there was a noticeable drop in the temperature.

We don’t have any upcoming RV trips planned, so I will commence with my annual fall preventive maintenance ritual. This includes cleaning and inspecting the RV roof and winterizing the RV’s plumbing system. This is also a good time to repair anything you know is wrong with the RV so it will be ready to use if you decide to take a cold weather RV trip on a moments notice. In this issue I will walk you through some of the important fall maintenance checks you should make prior to putting the RV in winter storage.

Enjoy this issue of RV Consumer Magazine, and if you have RV friends and family tell them to subscribe, and to like us on Facebook

Happy camping & stay safe,
~ Mark
Our digital RV Product Catalog puts all of our RV training products in one place, and we separate what products apply to what type of RV. For example if you own a travel trailer you can browse through the single DVD titles or go directly to the DVD value sets that apply specifically to travel trailers.

This helps accomplish two things; it eliminates the guess work as to which DVD titles go together, and it saves the RV consumer a significant amount of money with our DVD box set discounts. Our goal at RV Education 101 is simple, to help RV owners until they are comfortable operating and using their RV, and to make their entire RV experience safe, fun and stress free. [Browse the product catalog now](#)
What Condition is your RV Roof in?

By Mark Polk

Let me ask you a question. When was the last time you inspected your RV roof, or had it inspected by an RV repair facility? If your answer is six months ago, or more, it is time to get up on the roof and check it out.

In all my years working on and around RVs the number one maintenance problem, in my opinion, is water damage originating at the RV roof. The good news is this damage can be avoided through routine inspection and preventive maintenance. At a minimum you need to Inspect the roof seams and sealants semi-annually, and more often if the RV roof is exposed to the elements throughout the year.

Preventive maintenance for the RV roof consists of cleaning, inspecting, resealing and recoating to help extend the life of the roof and help protect the rest of the RV from costly water damage.

Let’s start with how to determine the type of roofing material your RV has. RV manufacturers use rubber, fiberglass and metal roofing materials, but the majority of modern day RVs use a type of rubber roofing material. The reason it’s important to know what type of roof your RV has is because different roofing materials require different products to clean, reseal and recoat to prevent damage to the roof. For example you should never clean a rubber RV roof using any products that contain citrus or petroleum products or harsh abrasives. And if you use a sealant designed for EPDM roofs it can cause some TPO roofs to bubble and blister.

It will be quite obvious if your RV roof is fiberglass or metal, but more difficult to distinguish what type of rubber or synthetic roofing material it has. The first place to look is in the RV owner’s
manual. The manual will usually specify the type of roofing membrane used on the RV, and provide cleaning and maintenance instructions and intervals as well. If you don’t have an RV owner’s manual, or it doesn’t specify the type of roofing material used watch this video to help determine what type of roofing material your RV has.

After you know what type of roof your RV has it is time to inspect, clean and reseal any loose or damaged sealant. When I inspect for water leaks or damage I start on the inside of the RV. Tell-tale signs will be evident on the inside and can sometimes give you an idea of where the leak originated on the outside.

**This is how I inspect for water leaks:** Look for any discoloration, and feel for any soft spots on the ceiling around roof vents, air conditioners, TV antennas, plumbing vents, and any other openings that were cut in the roof. Soft spots are an indication that water damage is already in the advanced stages. In this situation you need to locate the source of the leak and have it repaired immediately. Open all of the overhead cabinets and look at the top corner where the walls meet the ceiling. Look for any discoloration and feel for any soft spots. This would indicate a leak at the seam where the sidewall and the roof attach.

Next look for any discoloration or wrinkles in the wallpaper, and feel for any soft spots on the walls around all windows, doors, slide outs, or any other openings that were cut in the side walls of the RV. Identify the location of items like the water heater, furnace, outside shower, potable water fill and city water inlet on the outside of the RV and then access those areas from the inside of the RV. Look for any indications of water damage around these openings.

If you don’t discover any issues inside the RV it’s time to go outside.
If your RV has fiberglass sidewalls look and feel the outside walls for any signs of delamination. Delamination is caused by water getting between the exterior fiberglass and the luan backing in the sidewall. When this happens the exterior fiberglass separates from the sidewall of the RV. You can stand at the front or rear of the RV and look down the side for any noticeable ripples or what looks like a bubble. You can also press on the sidewalls; if you feel the exterior fiberglass move it is delaminating. Lots of time delamination starts where an opening was cut in the sidewall of the RV. Have any noticeable damage repaired immediately.

Thoroughly inspect all sealants around the windows and anywhere an opening was cut in the RV. Typically there will be a bead of sealant on the top section of these opening to protect against water intrusion. If this sealant is loose or damaged it will need to be resealed. Next go up on the roof and inspect the areas around every opening. Check for any soft spots on the roof itself especially around the roof seams at the front and rear and sides of the RV. **Caution:** If you are not comfortable working on the RV roof have the repairs done by a qualified repair facility. Be extremely careful when walking and/or working on an RV roof. A fall can result in serious injury or death.

If you discover any loose or damaged sealants watch this video on the proper way to reseal it.

[How to Maintain RV Roof Sealants](#)

It is quite possible the roof will need to be cleaned prior to inspecting for water leaks. And I like to clean the RV roof prior to putting the RV in storage. Your RV
roof should be cleaned semi-annually at a minimum and more often if it is exposed to the elements throughout the year. Watch this video on how to clean and protect your RV roof.

Like everything else, as your RV roof ages it requires more maintenance to extend the roof’s life and protect the RV from potential water damage. This will usually result in recoating the roof at some point in time. Recoating the roof can add years of additional life to the RV roof. This maintenance can be done by a qualified RV service facility or if you are a do-it-yourselfer you can tackle the job on a weekend when the weather is good.

Just click on the video link below for the type of RV roof you have to see how it is done. Caution: some people have experienced problems using frog tape to adhere the plastic to the sides of the RV. I personally did not have this problem but you should use a tape with adhesive that won’t breakdown when it gets wet.

**Cleaning and Protecting your RV Roof**

- [How to Coat an EPDM RV Roof](#)
- [How to Coat a Metal RV Roof](#)
- [How to Coat a Fiberglass RV Roof](#)
R U RV educated? Try the RV play & learn crossword to find out!

Play Now

RV Storage Puzzle

RV DVDs on every topic...

RV Education 101
Learning RVs the Easy Way
with MARK POLK
As Seen On TV
America’s most popular RV TRAINING SERIES
RV DVDs, Books, E-books & DOWNLOADS with Step-by-Step Instructions

Click for More Information
The Other Antifreeze
Automotive Glycol antifreeze helps lower the freezing point of water, the corrosion inhibitors help prevent scale and rust build-up in the cooling system and it helps keep the engine operating at its most efficient temperature regardless of operating conditions and outside temperatures. **Do not use for RV plumbing systems!**

Calculating Propane Usage
The first step is to multiply your propane container capacity using one of these formulas, (gallons or pounds), to determine the container BTU capacity. BTUs per gallon equal 91,502 or BTUs per pound equal 21,548. Next, divide your container BTU capacity by the total BTU demand of the appliances you are using. BTU appliance demand can normally be found on the appliance or in the appliance owner’s manual. This will give you an idea of how long you can expect your LP gas to last.

Carbon Monoxide Safety
Carbon monoxide is deadly. You cannot see it, taste it or smell it. Never use your range burners or oven as a source of heat. If your RV is not equipped with a carbon monoxide detector you should purchase a battery operated model designed for use in RVs. Always test the carbon monoxide detector for proper operation before each trip. Check the carbon monoxide expiration date.

For more great RV Quick Tips, How To Videos, RV Product Videos and RV Maintenance Tips check out our [YouTube Channel](#)
7 Easy Steps to Winterize your RV Plumbing System

By Mark Polk

It’s always sad to come to the realization that another camping season is winding down. Depending on where you live, part of this realization is preparing the RV for winter storage so it will be ready to go camping again next spring. A major part of winterizing your RV is to protect the RV water system from potential damage, caused by exposure to freezing temperatures. Frozen and damaged water lines are in fact the most common problem related to not winterizing your RV, or not properly winterizing your RV.

The RV plumbing system is the most vulnerable system to damage caused by plummeting temperatures. The good news is it is easy to protect the RV water system from this potential threat.

Here are my 7 easy steps to winterize your RV plumbing system.

Before you get started there are a few items you will need to have. These items can be found in most RV parts stores:

- Non-toxic RV/Marine antifreeze. The amount depends on the layout and length of your plumbing lines. Two to three gallons will normally do.
- A water heater by-pass kit, if not already installed.
- A wand to clean out the black water holding tank if the RV doesn’t have a built-in clean out system.
- A water pump converter kit, or tubing to connect to the inlet side of the 12-volt water pump.
- Basic hand tools to remove and install drain plugs.

Note: Read your owner’s manuals for unit specific winterizing guidelines. Follow the steps outlined here that apply to your RV.
Step # 1: If you have any inline water filters remove and bypass before starting. Drain the fresh water holding tank. Drain and flush the gray and black water holding tanks. If the RV doesn’t have a built-in flushing system clean the black tank out with a tank flushing wand. Drain the water heater. Open the pressure relief valve and remove the drain plug.

Caution: Never drain the water heater when hot or under pressure. With no water hooked up to the RV and the water pump off open a hot water faucet to remove any pressure on the system. Allow the tank time to cool before draining.

Step # 2: Open all hot and cold faucets; don’t forget the toilet valve and outside shower. Locate and open the low point water drain lines. Use the water pump to help force most of the water out of the system, but turn it off as soon as the system is drained to prevent damaging the pump. Recap all drains and close all faucets.

Step # 3: By-pass the water heater. If you do not have a by-pass kit installed the water heater will fill with RV antifreeze before it goes through the water lines, wasting six or ten gallons of antifreeze.

Step # 4: Install a water pump converter kit, or disconnect the inlet side of the water pump (the line coming from the fresh water holding tank) and connect tubing from the water pump inlet into a one gallon jug of RV antifreeze.

Step # 5: Turn the water pump on and pressurize the system. Starting with the closest faucet to the pump, slowly open the hot and then cold valves until the pink colored RV antifreeze appears. Replace the antifreeze container as required. Repeat on all faucets from the closest to the farthest away. Don’t forget the outside shower.

Step # 6: Flush the toilet until antifreeze appears. Pour a cupful of antifreeze down each drain. Pour some RV antifreeze in the toilet and flush into the holding tank to prevent any water in the tank from freezing. If your water heater has an electric heating element turn it off. This will protect the element if the unit is plugged in while in storage. Make sure all faucets are closed.

Step # 7: Consult your owner manuals for winterizing icemakers and washing machines.

The unit is winterized. Now, next spring when it’s time to head out in the RV you won’t have any unpleasant, not to mention costly surprises waiting for you. Click here for information on our Winterizing & Storing DVD or E-book. ~ RV101
Cold Weather Camping Tips

- Do not store any water hoses with water in them. When you need to use the hose it will probably be frozen. You can take it inside to thaw out if need be, or use a hair dryer.
- Covering the windows with curtains, blinds or almost anything will help hold some of the heat in. It helps to cover overhead vent openings too.
- Leave cabinets or drawers open where water lines are located to let the heat circulate around plumbing.
- Try to avoid opening the entry door as much as possible.
- Don’t forget the electric blanket. It can be a lifesaver at night.
- If you haven’t purchased your RV yet and you know you will be using an RV in cold weather see if the manufacturer offers an arctic package option when you buy it. Some packages include higher R-factor insulation values, enclosed underbelly, heated holding tanks, dual pane windows and more.
- When your winter camping trip is over and you head back home don’t forget to winterize the water system, if you expect freezing temperatures.
The new RV Education 101 App gives you instant access to the videos you purchase and is available in both Apple and Android operating systems.

Tablets and smart phones are forecast to be the majority platform for video by 2016 and we wanted to offer our customers a bulletproof method for instant video content delivery. Our goal was to perfect this technology, for both download and streamed video, so our customers can view the content with or without an internet connection. It took us awhile, but our new RV Education 101 video App perfected the instant video download process.

The biggest technological feat RV Education 101 faced was developing a system that worked 100% of the time for portable devices using Apple and Android operating systems. “It seemed like every time we got our current download process to work on one device a new product came out that it didn’t work on.” That problem was solved when RV Education 101 developed the new video App. Apps are faster, more convenient and provide additional functionality, like the capability to download videos directly to a device for offline viewing.

The new App is titled “RV Education 101” and is available through both Apple and Android App Stores. The IOS App works on iPhone, iPad and iPod touch devices.

When you open the App’s main menu it lists all of the full-feature RV training titles currently available, and you have the option to purchase individual chapters, or the entire video. And because it is an instant download with limited overhead we can pass the savings onto you.
Here are some tips to help prepare the RV’s interior, exterior and chassis for cold weather storage.

**RV Interior**

When RVs are stored for the winter it’s not uncommon for mice and squirrels to make their winter home in the RV. These rodents are notorious for chewing through vehicle wiring, plastic and rubber components, resulting in extensive damage to the RV. Possibly the most important step is to try and prevent mice and other rodents from accessing your RV. This can be difficult because they can enter the RV through some very small openings. Start by inspecting the underside of your RV for any gaps or holes. Fill these gaps using silicone or expanding foam. A word of caution, if you never used expanding foam before, you should experiment with it on something other than your RV first. When it dries it can expand a great deal more than you expect.

Next, open drawers and cabinet doors inside your RV. Look in all of the corners and crevices, especially where plumbing and wiring enter the RV. If you can see any daylight mice can get in. Fill these areas with silicone or foam.

Remove all food from the RV when it’s being stored and thoroughly clean the RV to remove any remnants of food that might attract mice and other rodents. Some people say mothballs help deter mice from making their home in your RV, and others say an alternative to mothballs is dryer sheets, like Bounce. I have talked to people who swear they work and the smell is much more pleasant. If you are close to where your RV is being stored you may want to use conventional mouse traps and check for mice every week or so.

Next you should defrost the freezer compartment and clean the refrigerator. Leave the doors open and place baking soda in the compartments to absorb any odors. If the RV is in long-term storage, and won’t be plugged in to electricity, it’s a good idea to turn the main breaker in the distribution panel off. Turn all LP gas appliances off and turn the LP gas supply valve off. Close the window blinds to avoid sun exposure to the carpet, drapes and upholstery. Leave doors, drawers and cabinets open. Clean the A/C filter(s). If you have vent covers installed on the overhead vents, that prevent rain from getting inside, leave them cracked open to allow
for some ventilation. Remove any dry cell batteries from devices like smoke alarms, clocks etc. but remember to re-install them next spring.

**RV Exterior**

When you store your RV outside for extended periods of time the exterior begins to show signs of wear, caused by constant exposure to the elements. Ozone in the air and ultraviolet, (UV) rays from the sun start to take their toll. Ozone causes the paint to fade and makes products like rubber and vinyl dry out, crack, and start to deteriorate. The UV rays from the sun make this aging process happen quicker. Before you store your RV you need to give the exterior a thorough cleaning.

Whenever I wash or clean anything, whether it’s an automobile or the RV, I start from the top and work my way down. It’s a good idea to clean the RV roof before putting the RV in storage too. The type of roof your RV has will determine the cleaner you will need to use. Wash the exterior and if you’re really motivated wax it, using a quality wax formulated for the type of exterior surface your RV has. A good coat of wax protects your RV finish the same as it does an automobile. When you are cleaning the RV’s exterior inspect all roof seams, body seams and window sealant for any cracks and openings that would allow water to get in. Consult your RV dealer for sealants compatible with these materials and seal as required. Don’t forget to clean the awning fabric, and let it dry completely before storing it. If you have a pop-up or hybrid trailer make sure all of the tenting material is clean and dry before storage.

Ideally you should try to store your RV under a covered area and on a solid surface like pavement or concrete. If this isn’t possible avoid parking the RV under trees and in tall grass, fields or wooded areas. If the RV won’t be parked under some type of covered shelter you may want to invest in a cover. Covering your RV can be a logical and cost effective way to help protect your investment. If you decide to use a cover make sure it is made of a breathable material.

Service all locks with a spray lubricant and lubricate all hinges. Insects are attracted to the odorant added to LP gas. You may want to cover LP gas appliance vents to prevent insects from making their winter home inside these vents. If you do cover the vents, remember to remove the cover next spring.

In addition to the RV’s interior and exterior there are other important items like tires, batteries and fuel systems that need to be protected during storage.

Visit my RVing with Mark Polk Blog to get more helpful information on these topics and other information on using and maintaining your RV. ~**RV101**
Our new Pick 6 for $60 is a big hit! Pick any 6 single DVD titles and pay just $10.00 per title.

**Insider TIP:** Each additional DVD added to your order will receive the same discount: 7 for $70, 8 for $80 etc.

Now you can select and build your own DVD box set based on your specific needs, and get the best discount we ever offered at the same time. This offer may only be available for a limited time so act now.

To get this special discounted offer [you must go here](#) and pick from the 14 DVD titles on this page.

Don’t want to wait for DVDs to arrive in the mail? Try our [new video Apps](#)

**Tired of dead RV batteries?**

Stop the problem for good with the charger, maintainer & conditioner that Mark uses on all his batteries.

[The Battery Minder](#)
A few years ago RV Education 101, an RV training video and information company, produced a 17 episode Internet video series titled *Mark’s RV Garage*. The video series featured a ground-up restoration project on a vintage 1967 travel trailer. Co-owner Mark Polk said, “After the travel trailer project was finished I thought it was only fitting to find and restore a time period correct classic truck to tow the vintage trailer.” Two plus years later Polk finished another ground-up restoration project on a 1971 Dodge Power Wagon. Rather than producing a video series on the classic truck restoration Polk documented the entire process on one of his Blogs.

Longtime RV Education 101 friend and business associate, Rich Elliott, Sales and Marketing Director for Progress Manufacturing had this to say about the truck and trailer restoration projects, “We loved watching the restoration of the Yellowstone trailer and following the Dodge Power Wagon restoration. We love the history these projects represent and appreciate the hard work that went into them. We were excited to see Mark using an Equal-i-zer hitch to tow the vintage trailer. (see video below) The Equal-i-zer Sway Control Hitch has a 70 year history and is the ideal hitch for pulling this classic combination.” With the restoration projects complete Polk’s plan is to take the vintage trailer and classic truck combination to some classic car and RV shows in the future.
Keep a tank flushing tool in your RV tool box to keep the water heater tank clean and operating properly.
How will you Remember your travels?

The laptop we would’ve used to keep in touch with the kids.

The guy from Ed’s Towing. Spent three hours with him.

Cook’s Field, the week after we missed the Bluegrass Festival.

Not all insurance is equal. Just because you have your RV insured, doesn’t mean your whole RV experience is covered. Things like personal effects coverage, vacation liability, and towing expenses are frequently left out of other carriers’ policies. But at Explorer RV, we believe it’s more than just your RV we’re covering. It’s the travels, the good times, the memories. Visit us online to learn more or to get a quote.

PROTECTING YOUR RV. PROTECTING YOUR MEMORIES.

GET A FREE QUOTE

EXPLORER RV INSURANCE AGENCY INC.
If you want access to informative RV how-to videos, RV product videos, RV installation videos and more take a minute to visit our RV Education YouTube channel.

You can subscribe to our channel and get notified every time we post a new video. We currently have over 250 RV Education 101 produced videos posted on our channel with over 19,250 subscribers and 5,225,000 video views.

It’s a great place to sharpen up on your RV skills and learn more about how to use and maintain your RV.
Salmon Cheese Spread
Makes 1 1/2 cups

7 1/2 ounces (213 g) canned salmon
1 tablespoon (15 mL) horseradish, drained
8 ounces (250 g) cream cheese
1 tablespoon (15 mL) Worcestershire sauce

• Drain the salmon and remove the bones and skin.
• Combine the salmon, drained horseradish, cream cheese, and Worcestershire sauce in a food processor.
• Blend until smooth.
• Transfer the salmon spread to a small serving bowl and refrigerate to chill.
• Serve with crackers.
Learn more about our products

For all your RV training needs we have you covered
Did you miss previous issues of RV Consumer e-Magazine? Catch up on all the information packed issues right here.

Happy RV Learning

Go To Archives now

Video download & DVD Box Set Deals

RV Education 101
Learning RVs the Easy Way
with MARK POLK

Americas most popular RV Training Series

Videos, Books, E-books
Looking for a bargain on some RV training materials? Check out Box Set deals in our Bargain Room

BARGAIN ROOM

www.rvconsumer.com
Visit our sponsors who help make this free publication possible

www.koa.com

www.explorerrv.com

www.vdcelectronics.com

www.equalizerhitch.com

RV Education 101 Learning RVs the Easy Way

Media Kit
Our goal with RV Consumer E-Magazine is to provide you with helpful information to make all of your RV experiences more enjoyable. I left my position as an RV Sales and F&I manager in 2000 to start RV Education 101.

We produce RV educational videos & DVDs and publish books and e-books on how to safely & properly use and maintain your RV. The reason I left my job was because of my concern about the lack of educational and safety awareness material available to the RV consumer, in other words you.

My wife Dawn left her position in RV sales to help start the company, and is our Sales and Marketing Director. We currently have a 35-foot Class A motor home. We have two boys, Tyler 18 and Josh 24, both avid RVers and two dogs, Roxie and Gracie. If you would like to learn more about us and about RV Education 101 please visit www.rveducation101.com

RV Consumer E-Magazine, Copyright 2011, 2012, 2013, 2014, 2015 Mark J. Polk except where indicated otherwise. All Rights Reserved worldwide. Reprint only with permission from copyright holder(s). All trademarks are the property of their respective owners. All content provided as is. Not all content may be the opinion of the RV Consumer Magazine editorial staff or of RV Education 101. Advertisers are solely responsible for ad content.

To subscribe please visit our sign up page. All RV Education e-publications are opt-in, available by subscription only. We neither use nor endorse the use of spam. Your e-mail address will only be used to distribute RV Education 101 e-news and will never be sold or given to any other entity.

If you no longer wish to receive e-news from RV Education 101 you can unsubscribe in the e-mail notification you receive in your in box.

RV Education 101
150 Bay Ridge Rd.
Harrells, NC 28444
910-484-7615

Contact:
Mark@rveducation101.com
Dawn@rveducation101.com