Basic RV Maintenance for the Do-It-Yourselfer

Thank you for downloading this mini-manual and we wish you the best of luck with your RV.

This report is not meant to be the "be all - end all" of RV repair manuals. It is meant as a maintenance guide only. A guide to help you extend the life of your RV, avoid costly repairs and thoroughly enjoy your RVing experience.

If you choose to follow any instructions or procedures in this manual, you must satisfy yourself thoroughly that neither personal nor product safety will be compromised or jeopardized.

Enjoy!

From the Top Down

Roof inspection & maintenance tips (metal and rubber)

Spring is the time to get out the step ladder and take a good look at the roof condition. The membrane on a rubber roof is made of a very tough and durable material but it is fairly thin and can be punctured by a sharp object. Yes, you can carefully walk on the surface, however first check your shoes for embedded stones and such, that could do damage to the roof covering before stomping around up there. Underlying the rubber covering is usually a 3/16th to 1/2 inch plywood or particle board sheeting that evenly supports your weight. If your roof is metal, especially if it is the seamed type, (has crosswise seams every 48" or so), then lay a plywood strip or some wide boards (lengthwise) to walk on. This way the boards span the roof rafters and distribute your weight evenly on several supports.

Closely inspect the roof coat condition on every protruding fixture, any cracks or thin spots can be touched up with the appropriate material. If the roof coat is peeling or flaking in any way, then the old coating must be removed by scraping it off. On metal roofs I use a 1" wide scraper with a firm blade, like the ones used by auto technicians for scraping off old gaskets. For rubber roofs I made a plastic scraper that won't cut the membrane. If you heat the old coating with a hot air gun, it will come off fairly easily.

For metal roofs, use the aluminum roof coat, available in gray or white, and brush it on about 1/8" thick. Stir very thoroughly and apply on a warm day for the best results. For rubber, use elastomeric roof coating that is safe for rubber roofs or the special self leveling sealant sold at RV supply stores for this purpose. Never use a petroleum based product on a rubber roof as damage to the rubber membrane will result. Also, while silicone chalking has a place in the RV, it has no place on the roof. Silicone will not stick well and may damage the rubber, and on a metal roof it will adhere to some places and not others causing pockets that will trap water.

Inspecting the roof sealant is something you should do twice a year. Why?

Because that is the likely place that a water leak will first develop. Water runs downhill, of course, and a tiny leak on the roof will turn into a major problem within the structure of the RV.

Think about this - one drip per minute (through a pinhole leak) adds up to 1440 drips per day or 10,080 drips in a week.

I don't have time to figure out how many gallons of water there are in 10,080 drips, but I think you see my point.

Closely inspect the roof sealant condition on every protruding fixture on the roof. Any cracks or thin spots can be touched up with the appropriate material. If the roof sealant is peeling or flaking in any way, then the old coating must be physically removed.

On metal roofs I use a 1' wide scraper with a firm blade, like the ones used by auto technicians for scraping off old gaskets. For rubber roofs I made a similar sized plastic scraper that won't cut the rubber membrane.

If you heat the old coating with a hot air gun, it will come off fairly easily.

Bottoms Up

Tires, wheel bearing, suspension & brakes

Spring is the time to examine the RV tires closely, looking for cuts or other visible damage on both sides of the sidewall. Inflate the tire to the proper pressure and inspect closely for sun-checking damage. This refers to the small cracks that occur due to constant exposure to the sun and other weathering agents. Check the tread for uneven wear on one side or the other and for other irregularities in the wear pattern that would indicate a possible alignment or wheel balance problem.

You can check for excess wheel bearing play by first jacking the wheel off the ground, then, facing the wheel, grasp it from both sides and check for in and out "wobble".

It's normal for the wheel to move slightly, maybe up to 1/8" or so, but more than that is excessive. Because of the intermittent use and long periods of storage, wheel bearings on a trailer should be inspected and repacked with grease on a yearly basis. You can check the brakes on this wheel for operation by pulling the breakaway pin on the hitch (you must have a charged battery hooked up). The brakes should apply firmly and you will not be able to rotate the wheel by hand once the brakes engage. The condition of the brake linings and the brake magnet should also be checked on a yearly basis for wear and heat damage. As this involves pulling the wheel bearings, unless you are a mechanical type, this job is better left to the professionals.

Visually inspect the suspension components for looseness, bent or broken parts and other obvious problems. The

suspension system utilizes nylon bushing in all the joints that will wear out over the miles and should be replaced periodically. Any leakage from the shock absorbers, if so equipped, indicates that they are due for replacement.

Tire Over Load

Overloading the tires on your RV is probably the number one leading cause of tire failure. Poor weight distribution and taking advantage of all of the storage space offered on today's RV's result in tire overloads. The only way to find out is to have the fully loaded RV and / or tow vehicle weighed on platform scales. Load the vehicle with everything you plan to take on a trip including passengers, cargo, fuel, full fresh water and propane tanks. If you tow something behind the RV take it to the scales with you. The problem is that it is quite possible to weigh the RV and not exceed the GVWR, GAWR or GCWR, but you could be exceeding the tire ratings. This is why you MUST weigh each axle end separately to determine if tire ratings are exceeded and if the loaded weight is properly distributed.

This tip contributed by Mark Polk at RV Education 101

From The Inside Out

Propane system owner maintenance and leak test

The propane system is the most important and potentially deadly system in your RV. Propane is a very safe and convenient fuel if all safety considerations are followed and many regulations are in effect to enforce these safety measures. A simple leak test can be preformed in a few minutes by a qualified RV Gasfitter, and the cost is minimal. An effective "home" test can be done using an ordinary spray bottle with a squirt or two of dish washing detergent mixed with water. Spray this solution on each and every connection of your propane system, including all the connections under the coach, all the connections to every appliance and all the connections to your supply tanks and cylinders. ANY bubbles (of any size) indicate that a leak is present and the system should be shut down immediately. Propane is heavier than air .... that means that it will settle to the lowest point that it can find ... and will collect there if a constant leak is present. A mixture of 5 to 10 per cent, propane to air, needs only an ignition source to explode with violent results. I must stress the point that NO propane leak is tolerable.

Shocking News!

You may at some time experience an electrical shock whenentering or exiting your RV. This is often caused by the wiring in the electrical receptacle that your RV is plugged into or an improperly wired extension cord. If the "hot" and "neutral" wires are reversed, your coach and you may become an electrical

circuit with unpleasant or dangerous results.


There is a small polarity checker available that will eliminate the guesswork and the hazards before you plug in your electrical cord. Everyone should have one of these as standard equipment!

The Water System

If you live in the colder climes, where annual winterizing with RV antifreeze is required, you must flush the system thoroughly before use to get rid of the antifreeze. While this antifreeze is non-toxic it tastes really bad. Flush the water system by following the steps below:

1. Fill your on board water tank 3/4 full and add one or two capfuls (not cupfuls) of household bleach. Take the unit around the block to slosh the mixture to all parts of the tank.

2. Turn on the water pump and open all taps one by one to allow this solution to fill every water line and flush out the antifreeze. Once this is done, let it sit overnight.

3. Connect to your city water and flush every outlet for at least 5 mins. Now switch the water heater bypass to allow the water heater to fill. This procedure will prevent the antifreeze from entering the hot water system. While this is not a health problem, as such, the antifreeze will produce a foaming condition that can persist for several days.

4. Drain your fresh water storage tank and refill with fresh water. You can add a capful of bleach every time you fill the water tank to keep it fresh and sanitary. However, due to the unknown quality of campground water supplies, and the fact that the water in your tank may stand for several days or weeks in the hot sun, it is recommended that you use bottled water for drinking supplies.

5. Now is a good time to check the operation of your dump valves. The slide mechanism should operate smoothly with no sticking and should seal completely. Change any suspect valve before a problem develops. There are not many things worse that encountering a stuck or broken sewage dump valve, when the tanks are completely full.

From the Outside In

Clearance Light Fix-it's

One spring chore that inevitably crops up, especially on aging RV's, is the clearance light shuffle. You repair one light and then shuffle your ladder, tools and other paraphernalia to the next one. The most common problem with clearance lights is the corrosion that builds up over time on the electrical connections. Pop off or unscrew the lenses, and clean up the connections on the bulbs and their contacts with fine sandpaper. A good tool for this job is an emery coated fingernail file. Sometimes the ground connection (the return path for the electrical current) is supplied by the skin of the RV through the clearance light mounting screw. If this screw is corroded or rusty, replace it with a new one. If the screw is loose and cannot be tightened then substitute a slightly larger one. Remember that the screws are usually just penetrating the aluminum skin with no backing behind them so overtightening them will strip out the hole. If this happens you can move the screws slightly up or down to a fresh area as long as the light will still cover the old holes. Once you have the light operational, spray all the connections with WD40 or a similar product to help prevent future corrosion. Snap on the lens and put a bead of silicone on the top and sides of the lens-to-mount joint to prevent water penetration. Don't silicone the bottom joint as this will plug up the drain holes and seal in moisture, turning the light fixture into a mini-greenhouse.

Clearance Lights by Wallace Mize

As you enjoy your Recreational Vehicle, the years and the miles start to show themselves in the outside lights. Running lights flicker, then fail completely;

backup lights work sporadically; indicator and stop lights do not always give fair warning to other motorists.

ALWAYS START BY CHECKING THE BULBS.

If a bulb is blown, it will never work. But if it works on and off, and the filament inside is sound, suspect bad connections.

No need to rush over to a repair shop to get the connections repaired. This is a job you can do yourself, even with no electrical knowledge. Repair shops like to make it look like a very tough job when, in fact, it is one of the simplest tasks.

WARNING: if the shop starts talking about re-wiring your lights, jump in the cab and drive away as fast as you can. Either they do not know what they are talking about, and will wreck your vehicle, or they have marked you as an easy dupe and are about to take you for a lot of money. Here is why:

1. The wiring of the outside lights is very solidly done at the factory. The wires are stapled in place and will likely never need replacement. Almost all troubles with outboard RV lights are due to faulty ground connections, which are easy to remedy.

2. An outboard light has one wired connection, carrying the +12 volt battery supply. This is the only actual wire connecting to the bulb fixtures. (Two wires for brake-signal-backup bulbs.)

3. The connection to the negative side of the battery (the ground return) is through the vehicle chassis. In other words, the battery is grounded to the chassis, and the electrical circuits are normally grounded to the chassis, as well. This makes it simpler to supply power to the circuits; only one physical wire needs to be routed to each device. The negative connection for an outside light is a simple sheet metal screw fastened through the grounded aluminum siding of the vehicle.

4. Are any of the other running and signal lights working? If so, the fuses are probably OK.

Again: make sure the bulbs are still good, and that the metal spring contacts are tight against the bulb contacts. Running lights have only one filament in the bulb, while the signal-brake-backup bulbs have two, and therefore two wires and spring connections to the back of the bulb.

THE USUAL PROBLEM? The grounding screw! The ground return is through a screw fastened to the weakest part of the system -- the thin aluminum exterior siding of the RV. Bumpy roads, rain, dirt, all help weaken the connections. The older the vehicle, the more these screws work their way loose. Once the ground screw starts to loosen even a little bit, the electricity starts to arc; corrosion gathers in the joints between the screw and the bulb connector, and between screw and chassis.

THE FIX? Clean up the connections. Here is how:

1. Remove the plastic light covers. The larger ones will have little tabs on either side: push in the tab on one side and gently lift the cover off. The small running lights will pry off with gentle pressure from behind any one of the sides.

2. Inspect the grounding screw and the metal connection to the light underneath it. You will likely see some corrosion, and the screw may even be rattling around loose.

3. Remove the screw and polish up the connection with some fine emery cloth (not sand paper) You want as smooth and shiny clean a surface as possible for good electrical connectivity. Look behind, at the screw hole in the aluminum siding. Clean that up, too!

4. Replace the screw with a new one of the same size. If the screw hole in the siding has been enlarged through miles of vibrations, or over-tightening, then use a screw one size larger in diameter. This will cut a slightly larger hole, making a clean, new connection.

NEVER USE A LONGER SCREW! You never know what you might puncture behind the aluminum sheeting!

Finally, tighten the grounding screw firmly in place, but not so hard that you strip the hole.

5. Older light covers have flat putty strips on the inside for waterproofing. (Most people prefer instead to run a thin bead of silicone caulking around the outside edge of the colored lens covers to keep dirt and moisture out.) Clean away all the old putty first, though.

6. It pays to check all of the running or signaling lights once you are at it. Re-tightening ALL the screws ensures that all your lights will function well for a long time to come. While you are at it, clean all those colored plastic lenses: brush the dirt out and then give them a wash-up with a little dish washing liquid. Your outboard lights will shine like new.

Now you are ready for many more years of road-running with safe lights, and you will avoid fines for improper lighting.

About the Author

Wallace Mize is the owner of Mize RV Parts & Accessories at http://www.mizerv.com. Mize RV is a family owned and operated business located in the Houston metropolitan area, that provides affordable, name-brand RV parts and accessories.

Storage Compartment Security

Did you know that I have the keys to your storage compartments in my pocket? Take out your key ring, right now, and examine your compartment key. Does it have a number stamped on it? And would that number be, say, CH751

or ES201?

You know, with those keys, you could probably open your neighbors compartments, the compartments in the trailer next in line, and so on, to the end of the row.

If that is the case ... anyone with those keys could also open your compartments!

Think about that! See this article for more ...

Hitch and Wire Inspection

Check all mounting bolts for tightness and lubricate any parts that require it. Spray the wiring plug on the trailer and the socket on the tow vehicle with a product like WD-40 - this will help clean out any build up of corrosion and will help prevent further corrosion from happening.

Exterior (care and feeding)

The exterior can be washed with any automotive type car wash detergent or with a few squirts of dishwashing liquid in a five gallon bucket. Also the siding can be waxed with a non-abrasive auto polish to brighten up the surface.

Battery Woes and Worries

If you have neglected your battery through the winter months then the chances are that it is in a severely discharged condition and therefore possibly damaged. A battery will discharge slowly even when not being used and should be given a top up charge about once a month when in storage. Bring the battery back up to a fully charged state with a trickle charger on it for several days. When being charged, a lead acid battery will emit hydrogen gas which is explosive, so only charge in a well ventilated area and well away from any ignition source. When unhooking the battery charger, first unplug the charger and then disconnect the battery to prevent any disconnect sparking. Most battery stores and RV service shops will be able to do a load test to determine the battery capacity but the battery needs to be fully charged for this. Check the water level in all cells and top up with distilled water only. Clean the terminals with a wire brush and wipe off the case.

The Awning

The awning is one of those have-to-have accessories that at 3 am, with a howling wind , you wish you didn't have. Who can remember the dozen or so steps required to lower the thing under these conditions ? Have you ever awakened after that midsummer overnight thunderstorm and your awning is sagging alarmingly. Have you ever tried to empty the hundred or so gallons of water that has collected in that sagging awning ? Trust me when I say that you don't need to go through that "joy" of camping. The awning is designed as a sunshade, period. If, perhaps, it starts to sprinkle a bit and also kicks up a mild breeze - don't worry - your awning can handle that. But if those dark

clouds are building on the horizon and the birds are seeking shelter, then you really should consider rolling up. And you really should consider rolling up, NOW.

Operating Your Awning Awning roll-out

1. Release the travel locks on both awning arms.
2. Switch the ratchet mechanism to roll out position with the awning rod.
3. Hook the pull strap with the awning rod and roll out the awning.
4. Slide the rafters up into position on the awning arms.
5. Tighten the rafter knobs on both rafters.
6. Raise the awning to the desired height.

Awning retraction

1. Lower the awning arms to the rest position.
2. Loosen the rafters knobs and release the rafter catches.
3. Slide the rafters down to the rest position.
4. Grasp the awning to prevent it from rolling up by itself.
5. Switch the ratchet mechanism to the roll-up position
6. Control the roll-up with the pull strap and awning rod.
7. Secure the travel locks and snug up the rafter knobs.

Practice rolling up your awning on a calm day until you have the procedure memorized. Then do the same thing while blindfolded, with someone spraying a hose in your face. This will simulate a typical emergency storm take-down. Except for the wind, of course. For this simulation you will need three fairly burly guys, all yanking the awning in a different direction at the same time. Once you have gone through the preceding exercise, you will understand why the experienced camper will take down the awning at the first sign of trouble.

After being rolled up and possibly damp for several months your awning will appreciate a good airing out and a bath with warm water and a mild detergent. Use a car wash type brush to scrub the surface of both the top and the underside. A little WD-40 on the moving parts helps to free up and protect these components. Dry it thoroughly before re-rolling it.

Lower one end of your open awning to allow rainwater to drain off. Peg down the awning feet when the awning is free standing so that a gust of wind will not flip over the awning. Also, the awning may be straped down with the special awning straps available at your local RV store. If you suspect a strong wind or storm is coming the safest thing to do is roll up the awning.

Gizmo's & Gadgets

The new season is finally here and the call of the open road is strong. It's time to head down to the RV place to see what new goodies are on display. Solar panels are becoming more and more popular for boondocking power needs and the new products are becoming more affordable and efficient. Don't forget to pickup your black water treatment chemicals and the RV toilet paper. Oh, also, remember those burnt out light bulbs ? Replace them with the recommended bulbs to avoid discoloring the plastic lenses. Check out some of the RV shows and try not to drool too much.

Above all, enjoy the season and happy camping !

Well okay, fuel prices are up ... by Les Doll

Is that the death of RVing? Absolutely not!

Twenty years ago a fishing license was $8... today it's $42 ...

Is that the end of fishing as we know it? Absolutely not!

Will I quit fishing? Absolutely not!

Twenty years ago a hamburger cost maybe $.45 at the Golden Arches ...now it's ... well I don't know (the wife will not let me go there)

Our big dollar RV does not do us any good sitting in the driveway, and it's only another $XX.xx to go to the lake, so ...

In other words, cancel the cross-country trip and do a short run. Your RV still has all the amenities that it always had and they are all still available.

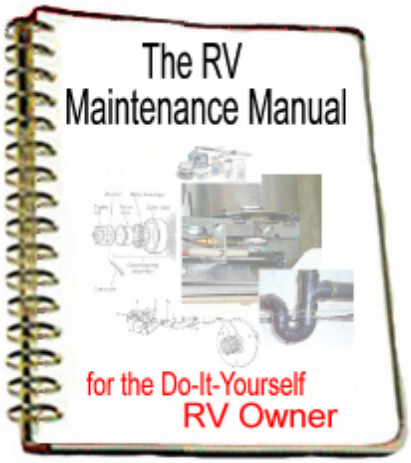
If it costs an extra twenty, or so, in fuel to get there, so be it!

Think of it this way:

If the cost of living is too high, what are you going to do?

Quit living?

Hmmm?



Who else wants to beat the high cost of RV repair shops?

Do the math ...

Cost to move the RV to and from the repair shop ... $0 to $? depending on how far you have to go and what the value of your time is ... if you are on vacation, well, now how valuable is your time and who knows when you could schedule a service appointment?

Hourly rate charged by the repair shop ... $80 to $110 per hour (or more) ...

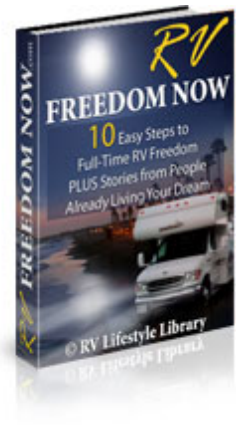
Cost of My Do-It-Yourself Guide to RV Maintenance ... only ~~$17.00~~ $9.95 (or priceless, depending on your viewpoint)

One trip to the repair shop will cost you well over $100 on labor charges, just for a minor maintenance chore.

With this e-manual you could do some (or all) of those maintenance jobs yourself, even if you have no previous experience.

If you liked the information presented here,

you will LOVE my **RV Maintenance Manual.**



RV Freedom Now

If you are dreaming of a Full-Time RV Life it's time to stop dithering over details!

You can trade your same-old, same-old life for a life of adventure on the road!

10 Easy Steps Plus Personal Stories from People Already Living Your Dream Show you How!

More Info