

Updated 4/2002

AN RV IN STORAGE

phred Tinseth © 1998–2002 Reproduction Permitted

Web site: <http://www.phrannie.org>

Storing an RV, tow vehicle or toad for up to a year or more is fairly simple IF you follow some simple steps, take some basic precautions and avoid the big myth:

MYTH: Park the thing and have someone start the engine and run it for awhile every couple of weeks to "top off" batteries and "exercise" the engine.

TRUTH: Engines don't need "exercise." Starting an engine every two weeks will just cause wear and tear on the engine and transmission. You shouldn't start engine unless you're prepared to move vehicle a minimum of 30 yards both backwards and forward (what auto dealers do and they only do it every few months). Further, running an engine to "top off" batteries is as about as inefficient as you can get (in addition to causing unnecessary wear). Your starting battery (if good) will be topped off in just a few minutes. House batteries probably not at all. Doing it properly requires careful reading of a digital multimeter. Doubtful that your caretaker would want to fool with all that (might not know how to do it).

Parking can be a problem. Ideally, you'll want your rig near you. Like in the back yard so you can keep an eye on it. But you may be storing it so you can go somewhere else. Check out commercial storage places (though they're usually too expensive). Check out local farms and ranches for a covered barn or shed that you might get cheap (and the farmer might agree to be a care taker). A hail storm can really wipe things out if not under cover.

You'll want to find somewhere to park so the RV will be reasonably level. BUT, fuel, over time, will "migrate" (for lack of a better word) toward the (usually lower) front end of a parked vehicle and can saturate emission cannisters, etc. Make sure that if your fuel tank is "kind of" high, you elevate the front end a bit. (I keep my front end about 4–6" above level.)

Do **NOT** use hydraulic leveling jacks when putting an RV in storage.

Eventually, they'll leak. Worse, after a while they'll get "stuck" in position and you'll have a helluva time when you get back.

I do **not** recommend wrapping the RV in one of those "bags" they sell for big \$ at RV stores. Most of the ones I see are in shreds and lying on the ground. Worse, if still in place, they aren't sealed around the edges, so when you unwrap after months it's not fun when you find wasp, squirrel and bird nests.

I suggest you take care of the battery problem as follows:

Get an automotive battery charger (the automatic version--cheap at any auto store in 10 amp capacity). Plug it in and connect to starting battery and bring that battery to full charge. Then connect to house batteries and bring them to full charge. Do NOT attempt to charge starting battery and house batteries simultaneously. This should not have to be done more than once a month--maybe less (assuming you have good batteries). Rule of thumb for charging stored batteries is: Below 40°F = Every 6 months. 40-60° = Every 2 months. 60° or more = Every month. (Never charge a battery with ice in it.)

The above assumes batteries are good and were fully charged when put in storage. It also assumes water level in the batteries is correct. It also assumes NOTHING in the RV is consuming battery power.

Note--particularly, the things people don't pay any attention to: TV antenna booster? Digital clock? 12V TV and Radios? (even if TV/radios and similar are turned "off," some continue to use battery power to run the memory that stores preset stations, etc.). Reefer? (again, even if off, some models continue battery power to circuit board). Make sure "Kill Switch" (if your MH has one) is in proper position. Gas valve? (If you have an automatic gas shut-off valve, it will use a LOT of battery power. Best/easiest way to avoid these "phantom" loads is to pull fuses.

Do **NOT** attempt to rely on your RV converter as a battery charger unless you have one of the rare RVs that actually has a user adjustable, multi-stage battery charger as part of your converter or as an independent unit. Standard RV converters will either cook your batteries or fail to charge them fully. In either case they will die. If you have old, cheap RV batteries, it's often easier (and economical) to remove them or just let

them sit without charging and replace them when you return.

To make things easier on caretaker, you might invest in a digital volt meter. You can get a cheapie from Radio Shack that reads to one decimal point for \$20. Far better, and every Rver needs one anyway, is a digital meter that reads voltage to two decimal points (called 3½ digits) and 20 amps of current. As long as the batteries read 12.6VDC (with nothing turned on), no charging is needed except under the "topping off" schedule above (if at all). A perfect meter for RVs is cheap (\$40 Metex brand #M3800, JAMECO part# 27115) from **JAMECO**, 1355 Shoreway Rd., Belmont, CA 94002 (800) 831-4242. (www.jameco.com)

Water: Drain tank. It's almost impossible to completely drain most tanks, but a mostly-drained tank won't freeze enough to create a burst. Many fresh tanks have an access port on top. If you remove the plug and cover the hole with screen, left-over water will usually evaporate. Problem might be when you get back and have crud in tank if it didn't evaporate fast enough or was stored in a warm place. No big deal. It can be treated and flushed again with the "freshener" sold in RV stores.

Disconnect pump line and make sure pump doesn't have water in it (or it WILL freeze and WILL damage pump). Pump, if left with water in it, will also grow disgustingly-colored algae before you get back.

Drain water heater. Attach "blow out" plug (any RV store) with tire-filler-type air valve (called Schrader valves) to the RV's city water input. One at a time, open faucet handles, turn on compressed air and let water and crud blow out the line. (If you've never done this, you'll be amazed at what comes out of there.) Go to open next one a bit before fully closing previous faucet. Repeat. **Caution: if you close everything and let air pressure run, you could blow a water line.**

Sewage tanks: Dump and wash out (as best you can, but you needn't be too fastidious). Close valves. Disconnect hose (slinky) and clean it and store it. Before closing valves the final time, I suggest cleaning them thoroughly and giving them a coat of silicone grease (see later). If you don't do this, the "O" rings and seals WILL stick and you'll end up with leaks after you return and use them.

Propane: Turn it off at tank. Make sure auto-safety-shutoff isn't turned on

and using electricity. You might wrap regulator in a piece of mesh or screen to keep bugs--spiders especially--from building a nest in the vent hole.

Toilet: You can fill bowl with water to keep seals lubricated. The water will evaporate in a few weeks (depending where you park). I've found that leaving the toilet empty, but carefully cleaning seal and coating it with plumbers silicone grease (any hardware store, it's used to lubricate faucet valves) works better and lasts over a year. Vaseline works, but not as well.

Shower and sink drains: The water in them will evaporate also. No problem with seals in this case, but the RV will stink when you get back. Pour an ounce of cooking oil (slowly) into them to keep the water from evaporating.

Tires and underside: Air tires to normal pressure and cover to prevent sun from rotting side walls. If good tires, no problem. If lousy, you'll need to replace them anyway when you get back. Do not completely wrap tires (or you'll end up with critters making a home in there).

Sprinkle abundant "Comet" cleanser or "Green Light" ant killer (far better) all around anything touching the ground. Ants and such won't (usually) be a bother. If you're fortunate enough to have a caretaker, the ant killer can be reapplied as needed after rains (or snow?).

Make sure holes on underside (into RV) are either plugged with stainless-steel wool (not regular steel wool) pot scrubber pieces or taped with aluminum duct tape (not just the gray tape). Either will keep (usually) rodents out.

Gas Tank: Here's where you can screw up the whole thing if you don't do it right...

1. Just before going into storage, you need to get the tank pretty near empty. Then (or before if you're a careful planner), go to auto store and get "**Stor-Gas**" or similar gas treatment. This is NOT the alcohol crap they sell to absorb water in gas tanks (which you should never use anyway). This is stuff that people put into lawn mower and boat engines during the "off" season. Ask for help if you need it. Read label carefully to determine how many ounces of the brand you buy will

treat how many gallons of gas. Good auto stores will have large cans of this stuff which is cheaper. Discount stores will have tiny bottles of same stuff for small engines like lawn mowers (cost more but it's the same thing). Buy what they call for, plus a bit more.

2. On your last drive before going into storage, with tank fairly empty, pour Stor-Gas in and fill the tank with fuel. Then store your rig. The Stor-Gas will have permeated your whole gas system (including carb or injectors) by the time you park. This maneuver will keep your gas from turning into a sludgy varnish paste (which gasoline WILL do if left in a tank, without this treatment, for more than a few months). Do NOT neglect this step, you don't want a fuel system full of varnish.

Diesel systems are treated similarly. Check with auto store or, better yet, with a "**John Deere**" store for proper chemical. (I have done all this and left RV in storage for over 2 years and it started right up--but see below.)

ENGINE: Let's assume some things. Before you put your RV in storage, you'll have done the above, had transmission serviced (including change of fluid), lubed and changed oil and filter.

- It isn't necessary to remove spark plugs and squirt oil in each cylinder then reinsert plugs unless the RV will be in storage for more than a year.
- If it will be in storage more than six months, you should get a pint of "**Marvel Mystery Oil**" and when you run the engine the last time, at idle, air cleaner removed, slowly pour oil into main (front) carb throttle bores (or throttle body air inlet on fuel injection systems). When down to about ½ a pint, pour faster to stall engine out. Do not start it again. Your cylinders and upper valve train will be nicely coated with preservative oil.
- There's little to do in the engine compartment. Cover air cleaner with screen or aluminum foil. Taped with aluminum duct tape to keep critters from getting into the filter element. Some people spread moth balls around, but I can't see that it does much good. If you park in a rodent-infested area they may very well eat wire insulation, hoses, etc., anyway.

Removing from storage:

1. Don't forget to clear the air cleaner.
2. Inspect hoses, fuel lines (the only rubber the critters ate in AZ),

general wiring and belts (they eat those too).

3. Make sure you clean out critter nests.
4. Check radiator water.
5. Check transmission fluid.
6. Check batteries.
7. Check power steering fluid.
8. **Change oil and filter** (it will have turned acidy if you've been gone more than six months).
9. **Do not start engine up right away.** Disconnect coil wire (check manual--some vehicles need a different step) and turn engine over several seconds to get oil up to valve train, etc.
10. Reconnect coil and start engine. In most cases, it will start right up. Sometimes, gas at carburetor or injectors will have evaporated. Pump the hell out of the thing and it'll usually start.
11. **Don't drive it until** you have run it through all the gears a few times.
12. **Make sure brakes are OK.** Sometimes critters chew the flexible lines near wheels.

Answers to some questions:

1. Don't leave heat and electricity on (unless you have a caretaker).
2. Don't forget to turn off AC circuit breakers to unused circuits.
3. Don't forget to pull fuses to unused 12 volt circuits--especially the water pump.
4. **Reefer:** Clean it out! Never leave it running with anything in it if you or reliable caretaker aren't there (if electricity is disconnected or your LP tank runs out (even if going away for a short time, you do NOT want your reefer to quit while it has food in it), you'll have the equivalent of a dead body in your RV--no fun to clean up). Some people put an open can of coffee in to keep fresh smell. I prop door open and use lightly-wadded newspapers and an open box of baking soda.
5. Should you cover windows on inside with aluminum foil? Loosely only. Too tight a seal can crack a window if heat builds up. There are enough natural air leaks in most RVs so closing it up is OK.
6. An uncovered plastic garbage can with about 20-30 gal of water in it will evaporate and provide enough humidity to prevent cracking and peeling inside for a few months.
7. **Cover roof vents.** Plywood boxes and bricks aren't usually needed

and can become deadly missiles in a storm. Scraps of foam or bubble-packaging material taped down (and over air conditioner and reefer vent) are ordinarily OK.

8. Solar panels shouldn't need a cover.
9. **A screen cap** over end of exhaust pipe, more screen or ready-made screens over furnace and water heater vents along with a screen taped to inside of reefer rear access panel helps.
10. Are **all** the storage step necessary? Depends on how long it will be stored. The Stor-Gas/diesel stabilizer step is recommended for 2 months or more, water draining for 3 months.

Return to list of [Poop Sheets](#)