

# RV Winterization Checklist

Revision 2

17 October 2017)

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## WINTERIZING RV

**DISCLAIMER:** This Microsoft Word checklist allows users to personalize for their individual needs. This checklist was developed to provide steps for winterizing most RVs with either air or pink RV antifreeze. Each method has advantages and disadvantages which are not discussed here. Manufacturers typically recommend winterizing with RV antifreeze. Many owners prefer air. Some use both. The authors make no recommendations for a preferred practice.

**ERRORS/SUGGESTIONS:** Please contact authors (email addresses on cover page) to alert them of any errors (e.g., technical, sequence, etc.) or improvement suggestions.

**IMPORTANT NOTE:** Different RV models use varying terminology for the fresh water and water heater bypass valves. The terminology can be confusing because **the term “BYPASS” is often used for both valves**. The following is the terminology used in this checklist for these valves.

- a. The **city water** valve is identified as the “city water BYPASS/FILL valve.” (Fill position is used **ONLY** to fill the fresh water tank with city water.)
- b. The **water heater** valve is identified as the “water heater NORMAL FLOW/BYPASS valve.” (BYPASS position is used **ONLY** to prevent water from entering the water heater.)

**Be sure not to confuse the settings for these two valves when winterizing. Change the terminology to match your particular RV if you modify the checklist.**

**NOTE:** Many RV owners and manufacturers consider winterization with antifreeze to be the *ultimate* winter protection for your RV water systems. You may choose to use both air and antifreeze to winterize. If so, perform the air winterization before winterizing with antifreeze. This will allow you to use less antifreeze in the process.

**NOTE:** The antifreeze you use to winterize your RV is designed specifically to protect potable water systems. It is not the kind of antifreeze that you put in your car’s radiator. You can RV Antifreeze at your local RV store or in the RV section of stores like Wal-Mart. Be 100% certain that the antifreeze container clearly states that it is intended to protect potable (drinking) water systems! All of our references to “antifreeze” in this section are referring to antifreeze designed to safely protect potable (drinking) water systems for Recreational Vehicles. This fluid is normally pink in color, and we sometimes refer to that below as well.

**NOTE:** Most of us do NOT introduce RV antifreeze into our water heater tanks because it is difficult to completely remove. Instead, we use gravity to drain the tank, and optional air to drain the water lines between the water heater NORMAL FLOW/BYPASS valve and the water heater. The small amount of residual water in the water heater will not cause damage if it freezes.

**NOTE:** Winterization of tankless water heaters is NOT covered in this checklist. If anyone has specific instructions for this, we’ll include them in the next revision update.

## ALL MODELS – 1<sup>st</sup> STEPS

1. Remove coffee pot and any other items (e.g. dishwashing liquid, first-aid supplies, liquid soaps, cosmetics) that may be susceptible to freezing.
2. Remove all food items, including boxed dry goods as well as canned goods, from your RV. Cans can freeze and split, and dry goods will make winter rodents fat and happy.
3. Account for critters. (Bounce, poison, traps, Fresh Cab, electronic repeller, etc.)
  - a. Setting a good multiple catch mouse trap will keep your RV more secure as four-legged intruders try to make their home inside your RV.
  - b. Plug holes with steel wool and tape to make entry harder.
4. Drain the fresh water tank. Detailed steps are included in air and antifreeze winterization sections below.
5. Shut **OFF** propane source.
6. Shut **OFF** all power to water heater.
  - a. Affix a piece of colorful electrical tape or other physical barrier across the button(s) that control your hot water heater on your control panel. Some RV's have two buttons for the hot water heater - one that turns on/off the propane igniters to heat the water in the tank, and a second that turns on/off an electric heating element. Tape the buttons in the **OFF** position to prevent accidentally turning them ON when there's no water in your water heater tank. This prevents the possibility of heating an empty water heater tank, possibly causing severe damage or even fire.
7. **OPEN** low-point water drains if equipped. Turn on water pump briefly to help drain lines. **CLOSE** when water ceases to drain from them (will reopen later).
8. Bypass or remove all water filters ([See Q/A Topic 8 picture of full house filter bypass](#)).
  - a. Whole-house water filter (usually in the water bay).
  - b. Refrigerator water filter (only if the filter receptacle seals automatically or you have the plug that you can install in place of the filter. Otherwise leave it installed and replace it when you unwinterize).
  - c. Any additional filters you may have installed (e.g., under the kitchen sink).
9. Prop refrigerator and freezer doors open if you are not leaving your coach and refrigerator plugged in during hibernation.

## WINTERIZE WITH AIR

**NOTE:** One DOAI member stated that he blows out the system with air, then waits 24 hours and repeats the purge to eliminate residual water.

**NOTE:** At least one other person used on-board coach air as source for winterizing with air. If you choose to use this method, make sure your air pressure input from the coach to the water system is regulated. Remember the coach puts out about 120 PSI, which will over-pressure your water system ([See Q/A Topic 1 and read the next note immediately below](#)).

**NOTE:** Some air compressors may introduce oil or other motor lubricants into the air tank, and thus into the air line. Know your compressor and avoid using one that may introduce contaminants into your RV drinking water.

1. You should have removed or bypassed all filters from your water system. See All Models - First Steps above.
2. Drain your water heater tank. **Allow the water to cool completely before proceeding!**
  - a. Verify that the water heater is **OFF**.
  - b. Open the vent at the top of the water heater.
  - c. Remove the nylon plug or sacrificial element (depending on your water heater model) from the bottom of the water heater tank and allow the water to drain out. It is normal for some sediment to come out as the tank empties.

**NOTE:** You may choose to introduce additional water into your water heater tank, either directly or with an inexpensive cleaning wand (available on Amazon or at RV stores) to remove residue in the tank, and repeat draining.

- d. **OPTIONAL:** Siphon water out of bottom of water heater tank with ½" clear hose if possible. The residual water in the tank will not cause damage if it freezes should you decide not to siphon.
3. Attach air compressor to the RV city water inlet or to a permanently attached RV water hose ([See Q/A Topic 9 for air-chuck picture](#)).
4. Set air pressure to desired pressure (typically 40-55 PSI - err on the low side unless you know for certain that higher pressure is safe for your RV).
5. Leave **water heater** NORMAL FLOW/BYPASS valve in **NORMAL FLOW** position initially.
6. Turn on compressor and allow it to run for a few minutes. The small amount of water that flows into your water heater will not damage it should it freeze. You will bypass the water heater in the next step.

**NOTE:** Steps 5-6 are optional. These steps ensure the hot water line between the bypass valve and water heater are cleared. Because the water heater is empty, there is plenty room for expansion should the line freeze so damage is unlikely should you decide not to perform steps 5-6.

7. Set the **water heater** NORMAL FLOW/BYPASS valve lever to the **BYPASS** position.

**NOTE:** Setting the water heater NORMAL FLOW/BYPASS valve to **BYPASS** means that water (or in this case, air) will not be introduced into your water heater tank.

8. With the **city water** BYPASS/FILL valve in the **BYPASS** position, let compressor air pressure to build to your desired pressure setting. (At this point, city water and water heater valves should both be in the BYPASS position.)
9. Starting with farthest faucet from water inlet, run water from each **hot** water faucet until only air escapes.
  - a. Bathroom sink(s).
  - b. Shower/Bathtub.
  - c. Kitchen sink.
  - d. External shower if equipped.
10. Close all hot water faucets and repeat step 9 for **cold** water faucets. Additionally include,
  - a. Clearing water from lines to toilets.
  - b. Toilet spray hoses and nozzles.
11. With everything else closed, place the **city water** BYPASS/FILL valve in the **FILL** position and blow air toward the fresh tank for a short time to clear the line between the valve and fresh water tank. (Thank you Marv McIntosh)
12. Return the **city water** BYPASS/FILL valve to the **BYPASS** position.
13. Pour a cupful of antifreeze in each sink drain and toilet. Flush toilets to put antifreeze on the toilet valve mechanism.

**NOTE: Thetford Techma Toilet Procedure**

- a. Flush until water is purged and air escapes.
  - b. Pour 2 cups antifreeze in toilet and flush to winterize waste delivery line between toilet and black tank. Perform this 3-5 times (5 is recommended by manufacturer).
  - c. Pour 2 cups antifreeze in toilet when step b is complete.
14. Introduce a small amount (about a cup full) of antifreeze through on-board water pump to winterize the pump. You can also simply run the pump “dry” for a few minutes to purge any water from it, but a little antifreeze is a safe option.
  15. Winterize wash machine, dishwasher, ice maker, refrigerator water as appropriate.
  16. Replace the water heater tank plug and close the relief valve at the top of the tank to prevent bugs/dust from entering the tank (optional, but keeps critters out).
  17. When all winterization steps (including appliances) have been completed, **RE-OPEN** low point drains and all faucets. This provides a potential path for expansion and protects fittings if any residual water remaining in the system freezes.

**A: Dishwasher**

- a. With air pressure in the system, start the washer cycle to allow air to push water in the lines into the washer. If water in bottom of washer is significant, run on RINSE cycle to drain before next step.
- b. With the machine power OFF, pour 2 cups of RV-type antifreeze into the bottom of the dishwasher.
- c. Run the dishwasher RINSE cycle to drain the antifreeze through the drain system, winterizing it.

## B: Residential Ice Maker

- a. With pressure in the system, activate the ice maker. Run water through refrigerator door water outlet, if equipped, until only air escapes.
- b. Listen for air coming out of ice maker and/or water receptacle (Q/A Topic 2 about alternate method).
- c. NON-RESIDENTIAL water dispenser and ice maker (See Q/A Topics 4 & 5).

## C: Washer

- a. With air pressure in the plumbing system, start **NORMAL** wash cycle with temperature setting to **WARM**. This will open both the hot and cold-water valves and allow air to push water in lines into the washer. Terminate cycle when lines are clear. If there is significant water in the drum, drain before next step.
- b. Turn the machine power **OFF** and pour 2 cups of RV-type antifreeze into the washer drum.
- c. Close the door.
  - 1) Advance the Program Selector knob to a **SPIN** position. Cycle the washer in SPIN position to drain the antifreeze through the washer pump. Some newer washers might have a **DRAIN** button.
  - 2) Turn the water supply hoses **OFF** and disconnect the inlet hoses from the faucets if they are accessible. Drain any remaining water from the hoses.

**NOTE:** If you are going to disconnect hoses or lines, do it **after** all other winterizing steps are done. Flag a note somewhere obvious to remind you when you unwinterize that you have disconnected hoses.

## II: WINTERIZING WITH ANTIFREEZE (3-5 GAL)

**NOTE:** You can use air, even when winterizing with antifreeze, to clear the lines and reduce the amount of antifreeze required to winterize. Some RV owners follow the entire procedure for Air-Winterization (above) before continuing with this section.

**NOTE:** Since the methods we describe here uses your RV's water pump to push RV Antifreeze through the plumbing and valves, your water pump itself is automatically winterized as part of the process.

1. REMOVE all filters from your RV water system before introducing antifreeze. Some members have fabricated a bypass for the full-house filter to save antifreeze. See [Q/A-8 for photos](#).
  - a. Whole-house water filter (usually in the water bay).
  - b. Refrigerator water filter (only if you have the plug that you can install in place of the filter or the filter receptacle is self-sealing. Otherwise leave it installed and discard it in the spring).
  - c. Any additional filters you may have installed (e.g., under your kitchen sink).
2. Drain your water heater tank. **Allow the water to cool completely before proceeding!**
  - a. Verify that the water heater is **OFF**.
  - b. Open the vent at the top of the water heater.
  - c. Remove the nylon plug or sacrificial element (depending on your water heater model) from the bottom of the water heater and allow the water to drain out. It is normal for some sediment to come out as the tank empties.
  - d. **OPTIONAL:** Siphon water out of bottom of water heater tank with ½" clear hose if possible. The residual water in the tank will not cause damage if it freezes should you decide not to siphon.
3. Insert a small water line feeding your RV water pump inlet into a jug or bucket containing RV antifreeze. Some members use a separate line with a valve installed so they need only change the valve position to draw from the jug or bucket rather than the fresh water tank. Kits are available or you can fabricate your own. (See [Q/A-8 for Photos](#))
4. With everything else closed (no faucets in the open position) and the **water heater** NORMAL FLOW/BYPASS valve in the **BYPASS** position, place the **city water** BYPASS/FILL valve in the **FILL** position, and pump a small amount of antifreeze toward the fresh tank. (Thank you Marv McIntosh)

**NOTE:** You should plan to sanitize your tank at the beginning of the next season. This will ensure there is no residual pink fluid in the fresh water tank.

5. Return the **city water** BYPASS/FILL valve to the **BYPASS** position.

6. Starting with faucet farthest from the water pump, run water from each **hot** water faucet until pink liquid flows (This works better with a partner—one person turning on/off the faucets while the other person monitors the source of the pink fluid being drawn into the water pump, adding fluid as necessary).
  - a. Bathroom sink(s).
  - b. Shower/Bathtub.
  - c. Kitchen sink.
  - d. External shower if equipped.
7. Repeat #4 with **cold** water from each faucet, including
  - a. Toilets.
  - b. Toilet spray nozzles.

**NOTE:** Where the city water hose connects in the wet bay, there is a spring-loaded ball valve at the female fitting. Using a pen or similar tool, gently push it in until RV antifreeze escapes to clear the small amount of residual water from the fitting ([Q/A Topic 6 – see photo](#)). This **step is optional and not recommended by some members**.

8. Pour a cupful of antifreeze down each drain and toilet. Flush toilets to winterize the flush valve mechanisms. This also helps lubricate the seal and prevent it from sticking.

**NOTE: Thetford Techma Toilet Procedure**

- a. Flush until pink antifreeze is seen in bowl.
  - b. Flush additional 5 times as recommended by manufacturer.
9. Winterize wash machine, dishwasher, ice maker, refrigerator water as appropriate (see below).
10. Close the water heater vent valve and/or reinsert the plug in the water heater if you have not already done this (optional, but keeps critters out).
11. When all winterization steps (including appliances) have been completed, re-open low point drains and all faucets. This provides a potential path for expansion and protects fittings if any residual water remaining in the system freezes.

**A: Dishwasher**

- a. Run the washer **RINSE** cycle to push antifreeze in the lines into the washer.
- b. Verify the liquid in the bottom of the dishwasher is pink.
- c. Antifreeze will drain via washer pump at end of **RINSE** cycle.

**B: Ice Maker**

**NOTE:** Authors do not know how to winterize non-residential type ice maker/door water, but think you have to remove the solenoid. If someone will send detailed steps, we'll update this section.

- a. Activate the ice maker and let it run until pink fluid is dropped from the cube tray into the ice cube bin. The fluid may be slushy but won't freeze ([Q/A Topic 3 about pink; Q/A topic 2 about alternate method](#)).
- b. Run water through door water outlet if equipped until it dispenses RV antifreeze.



- c. NON-RESIDENTIAL water dispenser and ice maker (See Q/A Topics 4 &5 for instruction).

### C: Washer

- d. Start **NORMAL** wash cycle with temperature setting to **WARM**. This will open both the hot and cold-water valves and allow antifreeze into the washer.
- a. Terminate cycle when liquid entering the machine is pink.
- e. Advance the Program Selector knob to a **SPIN** position. Cycle the washer in **SPIN** position to drain the antifreeze through the washer pump. Some newer washers might have a **DRAIN** button.
- f. Turn the water supply hoses **OFF** and disconnect the inlet hoses from the faucets if they are accessible.

**NOTE:** If you are going to disconnect hoses, do it after all other winterizing steps are done. Flag a note somewhere obvious to remind you when you unwinterized that you have disconnected hoses.

### D: Splendide Washer/Dryer

- b. With the machine's power OFF, turn the WASH TEMP knob to HOT.
- c. Advance the Program Selector to REGULAR in Cotton Heavy Duty.
- d. Press the ON/OFF Button (IN) and let the machine fill until anti-freeze is in the drum.
- e. Advance Program Selector to RESET. Wait 5 seconds (Status/Door Lock LED will blink).
- f. Advance Program Selector knob to a SPIN position. Let the antifreeze drain from the drum.
- g. Advance Program Selector to RESET. Wait 5 seconds (Status/Door Lock LED will blink).
- h. Turn the Wash Temp knob to COLD.
- i. Advance the Program Selector to REGULAR in Cotton Heavy Duty.
- j. Let the machine fill until you see anti-freeze in the drum.
- k. Advance Program Selector to RESET. Wait 5 seconds (Status/Door Lock LED will blink).
- l. Advance Program Selector knob to SPIN. Let the antifreeze drain from the drum.
- m. Press the ON/OFF Button (OUT).

## UNWINTERIZING

1. ***ALWAYS BE LOOKING FOR LEAKS AT EVERY STEP DURING THIS ENTIRE PROCESS***
2. **CLOSE** low-point water drains and leave **water heater** NORMAL FLOW/BYPASS valve in **BYPASS** position.
3. Fill fresh water tank to desired level (This would be a good time to sanitize the fresh water tank).
4. Using the on-board water pump, run fresh water from the fresh water tank through system to clear any pink liquid from water pump and input lines.
5. Using either the on-board water pump or city water, run **hot and cold** water from each faucet, shower, and toilet (don't forget external shower) until water runs clear.
6. Verify external shower knobs are in the **OFF** position.
7. Change **water heater** NORMAL FLOW/BYPASS valve from BYPASS to **NORMAL FLOW**.
8. Replace or reinstall all water filters (If filters were bypassed, reconfigure for normal flow).
  - a. Main whole house canister filter in water bay.
  - b. Refrigerator.
  - c. Any under-sink filters.
9. Verify water heater drain plug is inserted and tight and close pressure/temperature relief valve (If you have an anode rod, now is the time to inspect and/or replace it).
10. Open hot water faucet near water heater.

**NOTE:** You can **either** open the pressure/temperature relief valve on the water heater **OR** a hot water faucet or both. Either ensures that the water heater tank has a proper void above the water level, needed for the water heater to function properly.

11. Turn on water source to fill water heater (This is often easier and more quickly done with city water connected rather than water pumped from the fresh water tank. Either can be used).
12. Fill water heater until air is voided at the pressure/temperature valve or hot water faucet near water heater (**See Q/A Topic 7 about necessary expansion pocket**).
13. Close hot water faucet and or pressure temperature valve when water heater is full.
14. Turn Hot Water Propane or Electric heat on, as you normally would (Optional).
15. Perform **Post-Unwinterization Inspections (See inspection steps in next section below)**.
16. Replace items that were susceptible to freezing and removed during winterization.
  - a. Coffee pot.
  - b. Dish soap.
  - c. First-aid supplies.
  - d. Make-up.

### **A: Dishwasher**

- a. Open the input water line valve to dishwasher to allow flow to the dishwasher. The valve, if equipped, is usually found under galley sink.
- b. Run dishwasher through a **FULL** cycle to clear antifreeze or air and verify proper operation.

### **B: Ice Maker**

- a. Open the input water line valve to ice maker/refrigerator to allow water flow to the ice maker.
- b. Activate the ice maker. Make ice until ice is clear (no pink if antifreeze was used).
- c. Make a few additional trays of ice to ensure there is no residual smell.
- d. Verify ice maker and water dispenser are working properly.

### **C: Clothes Washer**

- a. Reconnect the hot and cold water hoses if they were disconnected during winterization.
- b. Turn faucets on if they were turned off during winterization.
- c. Run washer through a **FULL WARM** cycle to remove pink antifreeze and ensure proper operation.

### **D: Splendide Washer**

- a. Reconnect the water inlet hoses to the proper HOT/COLD faucets if you have previously removed them. Be sure to verify that the gaskets and hoses are in good shape and that no leaks exist. Turn the faucets ON.
- b. Plug the washer-dryer's power cord back in if disconnected, or reconnect the power supply.
- c. With the ON/OFF Button in the OFF position (OUT), pour 1/2 TBSP. of powder detergent (or liquid equivalent) into the "Detergent" compartment inside the Dispenser Drawer.
- d. Advance the Program Selector to an EXPRESS cycle.
- e. Press the ON/OFF Button (IN) and allow the machine to run through the complete cycle to clean out any remaining antifreeze.

## POST-UNWINTERIZING INSPECTIONS

These are the things you should do or check after unwinterizing and before the first time out.

### A: Galley Stove

- a. **Have patience. Idea is to light the burner – not ignite the air around and above it.**
- b. Verify Propane is turned on.
- c. Attempt to light one galley stove burner.
- d. Push sparker knob in until you smell propane (rotten egg smell). You can also use a butane lighter wand and hold it close to the burner until it lights).
- e. Wait at least 2 minutes (5 is better), then attempt to light the burner.
- f. If burner doesn't light in a few seconds, wait a few minutes, then try again.
- g. After 1 burner lights, exercise the other burners to verify each operates correctly.

### B: Batteries (Exercise proper battery safety at all times)

- a. Clean batteries and battery compartment with baking soda/water solution and rinse.
- b. Top off distilled water in house batteries.
- c. Check battery connections for corrosion; clean if necessary.
- d. Verify battery connections are all secure.

### C: Tires (Have them professionally inspected every two years)

- a. Inspect for (especially abnormal) wear.
- b. Inspect sidewalls for weather cracks.
- c. Check air pressures (based on corner weights if you know them).

### D: Water Heater

- a. Turn on water heater using **propane source** first to verify water heater flame ignites and stays lit for about at least a minute or two (if it stayed lit that long, it is probably working correctly).
- b. Shut off water heater and turn back on, this time with electric source, and leave on to verify that it is heating the water fully.

### E: Sanitize Water Heater (Optional)

- a. Turn off water heater sources (electric and gas).
- b. Turn off city water or pump.
- c. **Water heater** NORMAL FLOW/BYPASS valve should be in **NORMAL FLOW** position.
- d. Drain the water heater and reinstall the drain plug.
- e. Remove the pressure/temperature valve.
- f. Make a mixture of 65% white vinegar to 35% clean water and fill water heater (10-gal water heater requires about 6 ½ gal of solution).
- g. Using funnel or other innovative idea, pour mixture into the pressure/temperature valve opening.
- h. Let sit for approximately 4 hours.
- i. **Optional Step – not universally recommended.** FMC magazine recommends running through hot water lines until vinegar is smelled; Authors are not sure this step is necessary, and it could break loose debris in the lines and create unwanted consequences.
- j. Drain the water heater.
- k. Reinstall pressure/temperature valve.
- l. Turn on water source, open the pressure/temperature valve and refill the water heater.
- m. Repeat steps j-l until there is no residual vinegar smell.
- n. Use a water heater flush attachment to flush the inside of the water heater to remove particulates.
- o. Final tank fill: Reinstall drain plug and, with the pressure/temperature valve open, fill the tank until water exits the valve. Close the valve using 1 finger so that the valve “pops” shut (don’t close softly). This helps the valve seat. Press the center inward of the valve with your finger. You may hear or feel a slight click as it seats.

### F: Fresh Water Tank (Sanitize)


- a. Remove filters before sanitizing or replace them after sanitizing.
- b. Drain Tank.
- c. Mix ¼ to ½ cup bleach/15-gal water and refill tank.
- d. Turn hot **water heater** NORMAL FLOW/BYPASS to the **BYPASS** position.
- e. Using water pump run water through the entire system. Open each hot and cold faucet until you smell bleach.
  1. Showers.
  2. All sink faucets.
  3. Toilets.
  4. Refrigerator water/ice maker.
- f. Let it sit for at least 4 hours; overnight is better.
- g. Drain fresh water tank and refill.
- h. Run fresh water through entire system until no bleach smell.
- i. If needed, repeat drain/refill/system flush again.

## **G: Miscellaneous**



- a. Inspect carefully for any signs of critters.
  1. Webs.
  2. Droppings.
  3. Etc.
  4. Clean and disinfect if necessary.
- b. Smoke, Propane, Carbon Monoxide Detectors.
  1. Know where they are and what each is for.
  2. Replace batteries annually if battery operated.
  3. Test each detector and always test before each trip.
- c. Lubricate locks with graphite-based lubricant.
- d. Lubricate all step joints (Silicon NOT recommended. Use a non-sticking lubricant such as DuPont Non-Stick Dry Film Lubricant with Teflon or Boeshield T-9).
- e. Clean and lubricate Jacks.
- f. Check (particularly on roof) for cracked or peeling sealants (Be sure to use the CORRECT sealant for any resealing).
- g. Inspect, clean, and treat rubber seals. (Use products such as Protect All Slide-Out Rubber Seal Treatment – available on Amazon).
- h. Inspect windshield wipers and replace if necessary.
- i. Fill windshield washer reservoir.
- j. Check around windows for leaks.


## DISCUSSION/Q & A

Q/A No. Locator	Topic	Discussion
Q/A-1	Use of on-board air to winterize.	I thought I would share what I put together last year to blow out my water lines that has a regulator on it so you could use your on-board compressor. It is basically a paint spray gun regulator from Lowes, a dishwasher supply line with a 3/4" female to 3/8" male connector and a garden hose quick disconnect coupling from where the garden water hoses are located in the store. Two 3/8 " air chucks. I had most of this around the house and if you go out and buy all of it would be around \$35 - 40 dollars not cheap but should be a onetime buy that should last for many seasons. (Thank you, Joseph Jones)
Q/A-2	Alternative method for residential water dispenser & Ice Maker	I am able to empty the water line to the icemaker by putting a glass at the water dispenser and flushing it until only air comes out. Then I turn the shut off valve to the Icemaker that on my coach is under the stove, pump the pink antifreeze in the water lines up to the shut off valve. When I de winterize I disconnect the supply line to the Icemaker connect a spare supply line to the shutoff valve and put the other end in a bucket and flush the water line out until it runs clean of pink. Then reconnect the supply line to the Icemaker. That way I don't have pink antifreeze in my Icemaker lines or my \$50.00 water filter in my refrigerator. Sounds like a pain. Others may not agree or have a different or better way but that's how I do mine. (Thank you Joe Jones)
Q/A-3	Residential Icemaker -pink antifreeze	Running pink liquid through icemaker will not freeze antifreeze solid, but may produce slush, which will collect in ice storage pan. Seeing the pink assures you that antifreeze has gotten to the icemaker. Downside is inconvenience. It can leave an aftertaste and you'll need to make several trays of ice cubes until you clear the line and taste when you un-winterize. (Thank you, Jason)
Q/A-4	Non-Residential Ice Maker	Don't let pink stuff get in the upper part of the ice maker. There is no valve at the top of the ice maker hose so all you have to do is remove it from the solenoid and all the water runs out. Leave it disconnected all winter. Remove the hose which goes in side of the solenoid and most if not all of the water will dribble out of the solenoid valve. You can loosen it and turn it over

		to shake out the last drops. The supply line comes from below and can be winterized with <b>either air or pink</b> stuff. Leave it off the ice maker solenoid all winter but don't forget to put it back on before turning on the water next spring or you'll be sopping up some water behind the fridge. (Thank you, Gary Osburn)
Q/A-5	Non-Residential Ice Maker	I just completely remove the solenoid and put it in my shop. I remove the water filter underneath the sink and blow the water out of the ice maker feed line. The line from the solenoid to the ice maker will drain by gravity. (Thank you, Ross Murphy)
Q/A-6	Winterization: Input water check valve	<p>Photo of check valve (Thank you Joe Jones)</p>  <p><b>Note: This is optional and not recommended by some members.</b></p>
Q/A-7	Required air pocket in Water Heater	<p>Excessive dripping from the pressure/temperature valve could indicate a bad valve, but also could indicate that the expansion area inside the tank has filled with water. This occurs in all water heaters over time due to the chemical reaction between water and the air in the expansion area. It is easy to rectify</p> <ol style="list-style-type: none"> <li>1. Turn off the water heater and sources</li> <li>2. Open hot water faucet in RV</li> <li>3. Open the Pressure/temperature relief valve</li> <li>4. Close the P/T valve when water stops dripping from the opened valve</li> <li>5. Turn on water sources</li> <li>6. Close faucet in RV</li> <li>7. Restart water heater</li> </ol>



<p>Q/A-8</p>	<p>Full-house water filter bypass</p>	
<p>Q/A-8 Continued</p>	<p>Fresh Water/Antifreeze Valve Modification</p>	

<p>Q/A-9</p>	<p>Air Chuck Attachment for water inlet.</p>	 <p>Available on Amazon for about \$6. Search for: <b>Camco 36143 Blow Out Plug with Brass Quick Connect</b></p>
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