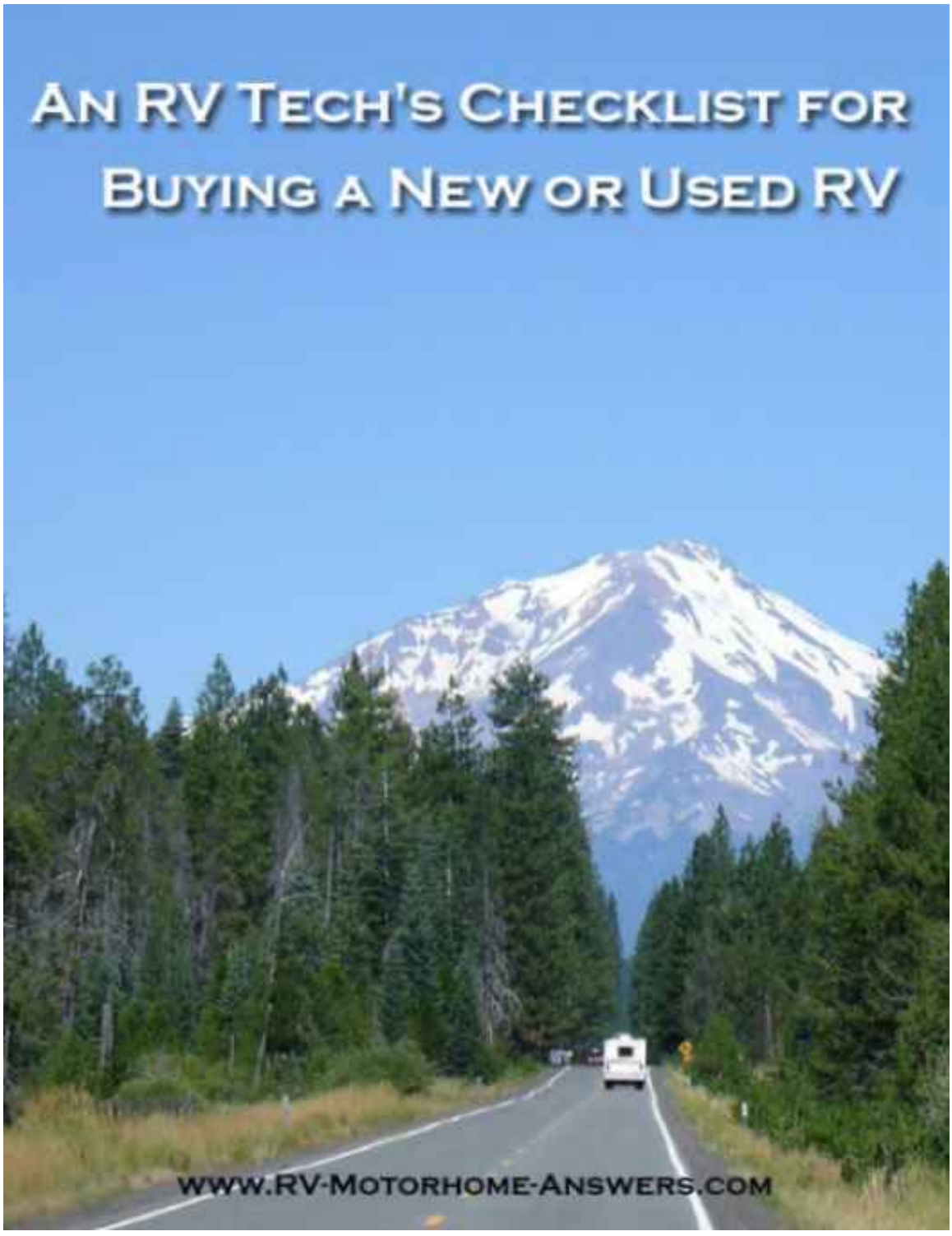
An RV Tech's Checklist for Buying a New or Used RV



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Ray Oberreuter

www. rv-motorhome-answers.com

CONGRATULATIONS!!!

You're either going to buy an RV, you are contemplating buying an RV sometime in the future, or you are "extremely" curious about RV's and just couldn't help yourself and you purchased my Checklist for Buying a New or Used Motor Home, 5th Wheel, or Travel Trailer. Whatever your reason you did the right thing because this checklist will save you hundreds of dollars and perhaps more as it will give you the basis to negotiate the price you are willing to pay for an RV. If you are buying from an RV dealer, you will be able to coerce them into making the necessary repairs which you have found in order for them to "make the deal". (Believe me; they want to "make the deal")

When dealing with a private party the checklist is invaluable, as it will aid you in putting you in the best position of minimizing your risk in purchasing a used RV. The checklist will enable you to place yourself in a better position of knowing "what you're getting" with this RV. The time to figure this out is before you buy…not on your first camping expedition. Yes, there are unscrupulous people out there but not everyone is out to "put it to you". A prospective seller may indeed try to hide things from you but never assume he or she knows everything about their RV because they may not. This only means it is up to you to conduct a thorough inspection.

Once you have a list of items, which require attention you are in a position to decide how much you are willing to spend on this or that RV and you will also know how much extra money you may have to put into it to get it to the condition you require. This does not mean your going to find every problem but you will be a better position had you decided to go into this just "flying by the seat of your pants".

With that, I will end with two parting thoughts:

1. Never assume anything!
   If you are questioning something… check it out!

2. No RV is perfect.
   The perfect RV has not been made…so do even try to find it.

Thank you for your purchase. Use this checklist and Happy RV'ing to you and yours.

Ray

MAJOR CHECKLIST FOR BUYING A NEW OR USED MOTOR HOME, 5TH WHEEL OR TRAVEL TRAILER

1. RV TYPE AND RV SIZE MUST BE RIGHT FOR YOU…OR EVERYTHING ELSE WILL BE WRONG!

- Thoroughly assess your needs and how you will be using this RV.
- Many buy too large rigs – when emotion overtakes logic, it always costs you money.
- Consider where will you be parking, driving and using your RV? Urban sightseeing and parking are not conductive to large rigs.
- Are you comfortable towing?
- Travel Trailers are the safest type of purchase in terms of risk. Most people have a tow vehicle; they are relatively light, very versatile and inexpensive.

2. IMPORTANCE OF HOMEWORK

- Search internet for manufacturers, models, types and etc.
- Learn types of construction used in RV

- Learn safety issues or more correctly danger issues like weights, tow ratings and the like. (For example, there has never been a pickup truck designed to carry a truck camper. Truck manufacturers design their pickups to safely carry a payload, which does not extend higher than the cab – period!)

3. ASSESSING USED MOTOR HOMES (CHASSIS)

The following is a general guideline in assessing motor home chassis's. Obviously, a person would not approach buying 20-year-old Class C the same as a 2-year-old diesel pusher.

- Check all fluids for proper level and consistency of the fluid. Dirty motor oil and in addition, burnt transmission fluid is not what you are looking for.
- I always suggest an engine oil and transmission fluid analysis. They are inexpensive and they give you a glimpse on what is going on inside.
- You can also do this on the rear end. Routine analysis of this type well tells you even more as your RV gets older. Any purchase over $10,000 should be checked out by a service center experienced with the type of chassis you are contemplating purchasing. Check all dash instruments, switches, and gauges.
- Check backup monitor if so equipped

4. **ROAD TEST**

- That goes without saying. Make it long enough, get engine and transmission hot. You want to see how it handles on the open road. The windier the better. You want a true picture of how it handles. Look for any shimmying or excess vibration, air leaks especially at the windshield and around the windows and doors. Listen for any howling. (This is something, which can drive you crazy) Have someone walk throughout the motor home during the road test. Observe the motor home from the middle on back to the rear to "feel" and "listen" As it goes down the road. It should be smooth with little vibration. Often you can feel the results of bad tires and worn drive trains.
- How does it handle hills? You want to be sure that it can get you to the types of campgrounds and other places you want to go.

5. FRAME INSPECTION (use for motor homes and towables as applicable)

Get underneath and check.

- Check engine, tyranny, rear end, for leaks. (this is a good time to also check the "house" portion of the RV for any signs of water leaks)
- If the motor home has any hydraulics check those for leaks. Any sign of excess accumulation of dirt is usually the result of the presence of a liquid, quite possibly a leak.
- Check shocks, springs, look for rust, check jacks for damage and damage to frame.
- Inspect all towing hardware and installation to motor home frame.

- Check towing electrical hardware for proper operating condition.
- Operate jacks.
- Check out all leveling systems to be sure all are working as designed.
- TIRES
  Check the tread; tread wear, and sidewalls for any signs of damage or extra Wear. Differences in tread wear from side to side point to alignment problems. (also applies to travel trailers and 5th wheels)

  In addition, check tire rating to be sure tire is capable of handling its load. Low-end travel trailer manufacturers are notorious for the **"junk tires"** they sometimes install on their trailers.

EXTERIOR RV INSPECTION

6. ASSESSING RV QUALITY BEGINS OUTSIDE AT THE ROOF

- Frame quality is crucial in a RV and the quickest way to determine a manufacturers quality standards are to get on the roof, walk around, and look for soft spots or weak areas.
- Sight down the natural "lines" of the roof from front to rear and side to side. Any Inconsistencies reveal the degree of quality materials and workmanship employed by the manufacturer.
- Inspect the roof covering for any tears, breaks, cuts, signs of any previous repairs, etc.

- Inspect all covers for damage or weather wear. Air conditioners will not work properly with out a cover, which means a cracked air conditioner cover will eventually have to be replaced.
- NEVER buy an RV, new or used, without inspecting the roof.
- Inspect every vent and air conditioning cover for its condition
- Check all seams and moldings. Cracked or mildewed caulking means the roof has not been maintained on a routine basis. Severe cracked caulking should be replaced.
- For additional piece of mind run water over the roof to see if there are any water leaks inside.
- Run water over the windshield and check for leaks.

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7. RV EXTERIOR WALLS

- Check paint, decals etc for any chipping or flaking of paint.
- Look down the side of the RV to see if it is straight. You are looking for any signs of delamination (outside layer of wall material separating from inner layer of the wall materical)
- Check windows to see paying particular attention to excessive caulking or other attempted repairs.
- Operate all cargo doors. (Cargo doors are notorious for not working correctly) Do they latch at all latch points? These can open easily in transit so be sure all locks lock.
- Check weather seals on all storage doors. Better yet run water over doors and down the sides. (A storage area that does not stay dry is not of much use to you.
- Awning
  Awnings should not be taken for granted. There's plenty that can go wrong (fabric, springs, awning arms) so check them out. Roll it out, adjust the arms, and inspect the fabric, return arms to store position, and roll it back up. If it rolls up slow, the springs need to be adjusted, if it does not roll up at all, a spring is broken.

8. STEPS AND ENTRY DOOR

- Are steps secure? Do not take this lightly. If steps are secured to rotten or inadequate material, they will NEVER be secure until a repair is made.
- Check opening and closing operation. Is it uniform, smooth and quiet? Operate it a number of times.

9. ENTRY DOOR

- Does it open and close freely.
- Does it lock freely?
- Does the deadbolt work?
- The entry door and screen door should not hang up when opening and closing.
- The screen door should open with the entry door
- The screen door should easily detach from the entry door.
- Check the condition of the screen.

10. CHECK ALL VERTICAL AND HORIZONTAL MOLDINGS

- They should be secure in all areas.
- If they are caulked, check the condition of the caulk.
- If they are designed with inserts, they should be in place.

INTERIOR INSPECTION

- **ASSESSMENT OF RV INTERIOR QUALITY BEGINS IN THE KITCHEN**

  The quality of sink, countertops, faucet, splashguard, and entire work area is the Number 2 Tippoff of the quality of an RV. Also check for adequate lightning and kitchen cabinet quality.
- Operate doors to see if hinges are secure and door latch closes
- Does kitchen have drawers capable of handling heavy cooking utensils (pots and pans). Do they feel secure when opening and closing? Pull drawers totally out and inspect drawer rail materials for quality and sturdiness (be prepared to be surprised)
- Observe the amount and accessibility of storage space.
- How many 110 outlets are there? (One is not enough!)
- Make sure all the lights work.

11. FLOORS

- Pay particular attention to the floor at the entryway to the RV. Is it sturdy? If not you know, the RV has substandard flooring.
- Look for soft, squishy or squeaky areas.
- Inspect floor covering in all high traffic areas. Is anything due for replacement?

12. WINDOWS

When doing this check out every window in the RV.

- Do they operate easily?
- Do any have visible caulking
- Do any have signs of water entry – carefully inspect below every window in the RV.
- Inspect blinds, shades, curtains and window treatments to be sure all work and are secure.

13. WALLS AND CEILINGS

- Carefully inspect the walls and wall treatments. Wallpaper is prone to become unglued and even more so if coming into contact with moisture. Obviously, moisture will affect any type of wall material so again be cognizant of any discoloration or warping of any wall material.
- Check walls under every window for evidence of water leaks

- The same applies to ceilings. The condition of the ceiling reveals much about the environment in which the RV has been used. Look for warping, sagging, discoloration etc. paying especially close attention to all vents and air conditioners and other holes cut into the ceiling.

14. BATHROOMS

- Check the position of the toilet- can it be used comfortably? If it looks cheap it will stand out like a sore thumb.
- Get in the shower – is it sturdy?
- What is the condition and type of shower surround
- Run water from the shower nozzle all the way around the shower and doors to be sure there are no leaks.
- Is there any storage area in the bathroom?
- What is the position of the towel racks?
- What is the number of 110-volt outlets?
- What is the quality and quantity of lighting?
- Does the ceiling vent open and close freely? Does fan work? (all bathrooms, not matter how cheap the RV should have a ceiling fan in the bathroom

- What is the quality of the sink, faucet and sink cabinet?
- Does the bathroom door close and latch correctly? (I've seen many new RV's where they don't)

BEDROOM

15. BED

- What size is the bed?
- Lie down on mattress – most RV's do not have good mattresses (even the new ones – I've seen many high end motor homes where owners have added foam layers to their mattresses)
- Make sure all lights are working.

16. BED LOCATION

- A center bed is easier to maintain.
- Corner bed leaves more floor space but very difficult to maintain.

17. STORAGE UNDER BED

- Amount available can vary widely – for example in a 5th Wheel there is a lot of space.

18. BEDROOM LIGHTING

- Again quantity and quality – note position of switches. Many manufacturers could care less about convenience of such a simple things.

19. WINDOWS

- Check out as previously instructed.

20. CEILING AND VENTS

- Does it have any signs of moisture damage?
- Is it flat and secure?
- Check all vent fans to be sure they are working and you understand how they are supposed to operate.

21. TV

- Does it work?
- If there, is only a spot for a TV check for accessibility of power and is it 12V or 110V?
- Check out antenna hook-ups and booster to be sure it works.

22. CLOSET

- Are the main clothes rod secure? I've seen new $200,00 motor homes where it is almost impossible to adequately secure the main clothes rod)
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- Any lighting? Bedrooms are usually dark so sometime additional lighting is needed.

23. LIVING AREA

- Check out the windows.
- Check out shades, drapes, blinds and window treatments to see if secure to the wall.
- Sofa – is it a sofa bed? Does it open? Sit on it. Most are not comfortable.
- Recliners – try it out. Is there ample room to maneuver it? Does it recline?
- TV – what is the location? Most of us have been "knocked silly" by front mounted overhead TV's although they are easy to view. More importantly – does it work? (Also, see section on entertainment systems.)
- Last but not east do you find the living area comfortable and pleasing to be in? If you are not, sure…**you do not want this RV.**
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24. DINETTE

- Is the table secure, level and does it enlarge?
- Try the seating – is it comfortable?
- Does it have adequate lighting?

SLIDES

- Slides are usually either electric motor driven (12 Volt) or hydraulic cylinder driven.
- Slide room slides over roller mechanisms mounted into the floor at the outside edge of floor.

25. PRODECURE TO CHECK OUT SLIDE ROOM OPERATION

- Operate all slides in and out at least two to three times.
- Observe the room operation from inside and outside.
- Slide room tilting on large slides is common but slide should **not** dig into flooring.
- Observe slide movement – there should not be any jerking or changes in sound of slide room or slide drive mechanism as it moves in and out.

26. SLIDE FULLY RETRACTED (IN)

- Observe slide room from outside of RV – there really should not be any gaps on the vertical ends of slide.
- From the inside of a RV inspect rubber "wipe seals" at each end of slide for their quality and condition (any cracking?). You are also looking for good contact between the seal and the slide room. Inspect wiper seal at the top of room also.

27. SLIDE FULLY EXTENDED

- Feel behind the right and left vertical walls of slide. There should be a seal there and it should be tight everywhere. The same is true for top horizontal header of the room.

28. CORNERS OF SLIDE ROOM

- Corners are by design the most challenging and the most suspect areas for leaks – air, light, water, etc.
- No slide is perfect in this regard.

HOWEVER –

- Slide should **never** leak light.
- It is ok to water test a slide by running water over the slide room. If you spray water on the up and down edge of slide room, you most likely will get water inside. With the RV level, you should not get much water inside. If there is water, running inside obviously there is a problem.

APPLIANCES

29. REFRIGERATOR

- Most efficient cooling is on LP.
- It should cool down to 35 degree or lower.
- The freezer should be 10 to 20 degrees.
- Look for signs of frost build-up, which is a sign of an air-leak.
- Check door seals. Slip a dollar bill in any questionable areas. You should feel resistance when pulling it out.

30. AIR CONDITIONER

- If the temperature is 60 degrees or under it is difficult to access the operating capability of an air conditioner – heat up inside of RV to at least 80 degrees and then run the air-conditioner.
- Observe the operation for at least an hour.
- It should have at least 20 degrees (the larger the difference the better) difference between ambient air temperature and air temperature coming out of the air conditioner. (Can check with infrared thermometer or regular outdoor thermometer.
- Listen for the "hum" of the compressor when it is running. The compressor should turn on when the thermostat is set below the ambient temperature (room temperature) inside the RV. It should be a

low pitch hum. If it is louder or sounds as if it is vibrating, it is not operating correctly. If the air conditioner always "sounds", the same compressor probably is not operating.

- If the air conditioner has, a heat pump or heat strip turn them on and be sure they are working.

31. FURNACE

- Turn furnace on and off at least three times.
- Listen for burner ignition – should hear the "cracking" of the igniter and burner ignition if furnace is equipped with direct spark ignition.
- Let it run and warm the RV up to 70-80 degrees
- Check the heat output at all outlets and inspect fresh air return using the large register in front of furnace to insure it is clear.
- Any fan or motor noise will most likely get worse.
- Life of furnace beyond 10 ears is questionable because of possibility of a cracked heat exchanger. If you are concerned about the heat exchanger run furnace with a carbon monoxide detector nearby.
- Inspect air intake (if equipped) and hot air exhaust on outside of RV. Both should be flush to either the outside of the furnace case or the outside wall of the RV.

32. STOVE AND OVEN

- All burners should ignite and change from low flame to high flame.
- Light oven pilot and observe pilot flame to insure it stays lit.
- Turn oven control up and observe burner ignition. Look for good consistent blue flame over the entire burner.

33. WATER SYSTEM

- Check system first with the RV's water pump
- Look for good water pressure at all outlets inside and outside (also showers).
- Water pump should not cycle when all faucets are closed (cycling means there is a leak).
- Run water system on **city water** at all outlets.
- Look for any signs of water leaks or previous signs of water damage under all sinks and any water lines you can get to.

- Run water in shower and all the way around shower enclosure and shower doors. (Showers in low end RV's are prone to leaking).

34. WATER HEATER

- First inspect water heater at outside of RV – excessive rust or corrosion at burner tube and gas valves could spell problems.
- Observe burner ignition or gas, observe burner flame – it should be mostly blue with a hint of yellow at the tip. The flame should be of consistent size and sound. If it sounds like it wants to suck you into the water heater, it is **not** burning correctly
- Check for hot heater at all hot water outlets.
- Check for any water leaks at water heater outside and inside the RV.
- At outside of water heater pay particular attention to the drain plug (located toward bottom of water heater). Drain plug should not leak. However, the pressure relief valve (located at the top of water heater) is designed to release pressure (and water) during the heating cycle if the pressure inside the water heater is excessive. It should not leak between heating cycles. Excessive corrosion at the burner tube "could' be an indication that the pressure relief valve is bad.

35. LP GAS SYSTEM

- While you may not be able to take gas pressure tests on the LP system there are a number of things you can do to cover yourself.

- LP Tank and/or Cylinder Inspection (Tanks are on motor homes, cylinders on travel trailer, 5th wheels, and campers)

- Start with a visual inspection and look for the obvious, physical damage, rust, gouges, scrapes, etc. If you see anything questionable, remove the cylinder and inspect it.

For older RV's be sure they are they up to date???

- OPD (overfill prevention devices) have been required on LP tanks since 1984 and cylinders since 1998. Up to date cylinders the service valve (open and closing valve) has a triangular 3 prong Handle. If you're not sure about the OPD's have an LP service center look at your tanks and/or cylinders.

Are there any LP Gas odors?

- Obviously if you smell gas anywhere an alarm should go off, one in your head and the other in the RV at the LP detector if the smell is inside. A small hint of gas smell is acceptable in an enclosed tank or cylinder area but once opened the gas smell should dissipate. If not… there probably is a leak in the tank and/or cylinder area.

- Inspect the LP Detector

  Be sure LP detector is on which is usually indicated with a green light. LP detectors are designed to beep when detecting gas or exhibiting a fault, or in other words the detector is not functioning properly. (Which is why you sometimes you find LP detectors unhooked)

As stated previously under RV Appliances a good LP flame is primarily blue. Excessive yellow or orange indicates a gas pressure or oxygen mixture problem.

36. ENTERTAINMENT SYSTEMS

- Entertainment systems is RV's are as diverse as the RV's themselves which means they can be as inexpensive as $59 and up to the multiples of thousands of dollars. Whatever type of entertainment system you are inspecting you want to be sure it is operating correctly.

- FIRST,check the system in all modes. For example if it has a VCR and DVD be sure both are operational. Today you may not care about the VCR but that doesn't mean some-time in the future you may want to use it. If it's in the RV it should be operational OR you should not be paying for it. Agreed???

One of the most confusing and ever changing aspects of more sophisticated entertainment systems are those with surround sound. (True surround sound systems use 5 speakers, 3 up front and 2 in the rear) Many people assume as soon as they see or hear that the system is surround sound that **all speaker are live all the time.** Well….you could not be more wrong! The system

in my 5th wheel is" live" all the time and that's the way I like it. However, there are systems in which surround sound works only in the DVD mode and no other modes. That means with the radio and TV only the front speakers are live which is OK as long as you understand that is how it is supposed to work. However
it is not a true surround sound system and that is what I want you to understand. Technically, for true surround sound, the DVD itself must be set up for surround sound and surprisingly not all are. While its true I technically don't always have true surround sound (in my 5th wheel) all speakers are" live" and I don't have to turn up my stereo system to compensate for any "dead" rear speakers. So anytime, someone is telling you you are
getting a surround sound system make them PROVE it to you. Now you are really confused…right?)

37. RV SEWER SYSTEMS

- Last but not least is the sewer or holding tank system. There are certain things you need
- To check out so you know what you are getting now rather than later.
- **FIRST,** run water into the fresh water tank. (At the fresh water tank fill on outside of RV) You can't believe the number of systems in which you need an act of congress to get the tank full. (Some manufacturers see no problem in running water **uphill** to fill a fresh water tank. It would be OK except for the matter it does not work. You want to be sure the tank "takes water" at a decent rate and that it isn't spitting back at you.

- **SECOND,** check the monitor system. You want to see it working for all the tanks but they seldom do. Check them out by adding water to all the tanks to see if the monitor changes. Black tanks are notorious for not reading right but I would still use it as a negotiating point because there are things you can do to get them working correctly.

  (Many times an empty black tank will read as if there is something in it) The gray and fresh tanks are less bothersome but they are prone to problems as well.

- **THIRD:** DUMP VALVES

The origin of the term "happy camper" or more correctly "unhappy camper" may have come from campers experiences with dump valves. You are looking for two things and they are whether they OPEN and whether they CLOSE. Both are crucial. As stated at the beginning never assume anything. If you're ready to buy any RV personally, monitor the operation of the dump valves for both the black and gray tanks which means you may have to go to a dump station. So what….Do it! At the same time, you want to monitor both tanks to insure they are not seeping (leaking) so run water in both tanks with the valves CLOSED but with the sewer cap OFF. Visualize what you might experience if a black tank dump valve is seeping when you remove the sewer cap. It's not pretty and you won't forget it. (Nor will those around you even after you get rid of the odor).

- Fill all the tanks and monitor them for leaks. Crazy things can happen and you don't want to learn after the RV is yours that one of the tanks leak when full.

ELECTRICAL

38. BATTERIES (12 Volt)

The condition of an RV's batteries, battery terminals, and battery connections provide an insight into care and maintenance, an RV has had. If these have been neglected chances are good other things have been neglected as well. In addition, you can count on having 12-volt problems down the road.

- Check "chassis" and "house" (runs RV section) batteries for fluid levels – if plates are visible batteries are damaged. Since you have no way of determining how long they have been in this state I would plan on replacing them.

39. BATTERY CONNECTIONS

- Should be clean and secure. Inspect battery cables. If seriously corroded they should be replaced.

40. BATTERY CASE

- Any bowing on side of battery is a sign of battery deterioration and it should be replaced.

41. BASIC BATTERY ANALYSIS

- Remove positive cable (+) from battery and take battery voltage reading.
- If RV has been plugged in for a day or more batteries should be fully charged and read above l2.5 volts. If they don't read 12.5V there is either a battery problem OR battery charger problem and understand the system if going to require attention.
- Reattach positive (+) battery cable (leave RV unplugged from shore power)
- If you have a load tester test the battery under load to see how it tests.

Operate refrigerator and water heater (on LP gas), furnace, water pump, and lights. This will give you a "general" idea of the condition of the batteries and now continue your inspection. If light begin to dim you know you have a problem.

- CONVERTER: The above helps to determine the operating condition of the battery charger. As for the converter if you have good 12V power inside the RV (at least 12.5Volts) you know the converter is working but the true test is taking it on the road and using it.

42. Outside Lights

- While checking all inside switches you should have found at least one outside light which operates from inside.
- Also check RV's running lights, brake lights, turn signals, and headlights (for motor homes). For towables the time to do this is not after the deal has been made and you are ready to pull away with your new RV. Do it as part of your inspection to insure they are working.

43. 110 VOLT SYSTEM

- Inspect power cord and plug for any fraying, cuts, kinks, etc. A plug which all the
- Prongs are rusted could spell "trouble" in the future
- Boil water in the microwave to be sure it works. Also, pay attention to digital readouts.

- Check all 110V outlets.(this is easily done with an inexpensive polarity tester)

- If time warrants run refrigerator and water heater on 110 volts AC. (If you end up purchasing this RV you want to verify these appliances are working on 110. This may mean leaving and coming back 6-8 hours later and verifying refrigerator is still at temperature and water is still HOT.

- Check ALL switches to insure they are working and determine the function of all switches.