GUIDE

Eliminating RV Toilet Odors

Plenty of RVers (even seasoned pros) have struggled with how to eliminate and avoid RV toilet odors, and because the issue of RV toilet odors is so prevalent, it's easy to give up and assume that there is no workable solution. Whether you're new or experienced, toilet odor problems can happen to anyone. There are many "solutions" claiming to eliminate RV toilet odors, but we know from talking to thousands of RVers that these solutions provide very little odor-zapping power. The tips and care practices in this guide will show you how to eliminate RV toilet odors, so don't let anyone (even yourself) tell you that you just have to live with a stinky RV.

Why Your RV Toilet Stinks

RV toilet odors always stem from the black tank because that's where the human waste is stored. The primary reason for stinky odors in your black tank is the anaerobic bacteria that rides in on human waste (both solid and liquid). This type of bacteria breaks down waste, but creates nasty odors while it does that. You want to add aerobic bacteria in your tank, which retains the same breakdown abilities but without the smell.

What Can I do?

There are a variety of reasons that odors could be breaking through and many of these reasons can be fixed by following the habits discussed in The Unique Method. We highly encourage you to follow this method, but in this guide, we will briefly review each odor-causing scenario and how to fix it.

Not Using Enough Water

Scenario 1

The poop in the black holding tank(s) is not covered by water

Make sure the solid waste inside your black holding tank(s) is completely covered by water. If you've ever used a Porta Potty that smells like death, it probably had poop stacking above the waterline, but when waste is covered by water, it doesn't smell so bad. The water acts as a barrier to the sewage odor. The best, most convenient way to always have enough water in your black holding tank(s) is to hold the flush mechanism down for at least 10 seconds every time you use the toilet.

Scenario 2

Your toilet bowl should always have water in it (unless driving)

Your holding tanks aren't the only thing that need a healthy supply of water; you need to keep a moderate amount of water in the toilet bowl itself and refill it after every use, which adds yet another layer of odor control. You can add water to your toilet bowl by either partially holding down your flush pedal until the bowl fills or by choosing the "fill" option on your toilet if your RV is equipped with this feature.

Scenario 3

The odor-free bacteria can't survive and thrive

Use products containing good, aerobic bacteria (like Unique RV Digest-It) in conjunction with ample amounts of water to push out the stinky, anaerobic bacteria. Aerobic bacteria must have ample amounts of water to survive and reach the waste. Hold down the flush pedal for 10 seconds every time you flush to provide ample amounts of water to the bacteria. Aerobic bacteria will push out the stinky bacteria, but only when it's working at its highest potential, and that requires lots of water.

Hot or Cold Holding Tanks

High heat and extreme cold can severely limit the effectiveness of aerobic bacteria and can increase odors, so it's important to keep tank temperatures ideally between 45-85 degrees F. You may wonder how you could possibly know the temperature of holding tanks. We did our own experimentation and found that ambient outdoor temperatures nearly match the tank temperatures unless the RV is parked on grass or dirt, which will drop tank temperatures to 10 degrees lower than the ambient outdoor temperature. So why do odors increase with heat?

Reason 1

Water evaporation

Temperatures hotter than 85 degrees F cause rapid evaporation of the water that is in the holding tanks. Evaporation without continuous addition of more water will start exposing solid waste to the air. We know already that water covering waste acts as an odor barrier, so the more that evaporation uncovers waste, the more likely it is that odors will invade the living space. Water covering waste is the best odor suppressor.

Reason 2

Energy reduction

Aerobic bacteria are living organisms just like us, so when temperatures rise, their energy is sapped and they cannot break down waste and toilet paper as well. Think about when you get too hot; you typically move slower and need to cool off to regain energy. The same is true of aerobic bacteria. Cool down tanks by adding more water (and boosting bacteria by adding more treatment), dumping more regularly, or even adding ice if it an especially hot day.

Reason 3

Not using the right products and habits

We can't say it enough...use The Unique Method as your regular tank care process, which will stop most problems (even in hot weather). Using high-quality bacteria and enzyme treatments like Unique RV Digest-It will help promote continued breakdown, which will also help with odors, but if you are still dealing with odors using RV Digest-It, you can use Unique Tank Odor Eliminator, which will finish off lingering odors rapidly.

Note: Tank Odor Eliminator will kill the bacteria from RV Digest-It, so be sure to continue adding Tank Odor Eliminator treatments.

Reason 4

Too much waste accumulated

Obviously, the more waste that's collected in your tank(s), the higher the potential for increased odors. A very full tank will be exposed by evaporation much quicker. To address this issue, dump more often. For those not on sewer hook-up, you may consider investing in a sewer tote, which is a portable holding tank to hold additional waste until you can fully dump. Transferring some waste into this tool may alleviate some of the odor risk without having to interrupt your trip to fully dump.

Note

Temperatures lower than 45 degrees F will also cause bacteria to become sluggish; consider tank heating options to keep the bacteria working at their highest potential. Refer to our guide on How to Keep Your Holding Tanks from Freezing for more information on tank heating

Using Bad Treatment Products

When we say bad treatment products, what we mean is products that do not replenish or promote the health of aerobic bacterial colonies in your tank. Aerobic bacteria are the best thing for your tank and chemical treatment products or cleaning products will negatively affect waste breakdown and odor suppression.

Scenario 1

You're using counter-productive tank treatments

Always use a high-quality product that will effectively break down waste and control RV toilet odors. The best products to accomplish this are bacteria and enzyme blends (like Unique RV Digest-It). A bacteria and enzyme blend will replace smelly anaerobic bacteria with odorless aerobic bacteria. Many chemical treatments kill bacteria as a by-product of covering the odor with a more powerful, but equally unpleasant smell and also limit waste breakdown, which can lead to clogs, sensor misreadings, and plenty of odors. The chemicals in these treatments can also damage sensors, rubber seals, and the environment. Most homemade remedies also include harsh chemicals, so beware.

Scenario 2

You're using cleaning products that are neutralizing your bacteria-based tank treatment

If you're using high-quality bacteria and enzyme tank products like Unique RV Digest-It, sending chemical toilet cleaners and antibacterial dish soap down the drains will kill the tank-dwelling bacteria and negate their breakdown power. Use a bacteria-enhancing toilet bowl cleaner (like Unique RV Toilet Cleaner) instead of bacteria-killing cleaners and a non-antibacterial dish soap (like Dawn Ultra). It is also important to use non-antibacterial soap to wash your hands. Refer to our guide on What to Allow in Your RV Wastewater Holding Tanks.

Scenario 3

You're smelling the strong perfumes from your toilet odor solution

Be warned; many deodorizing treatments out there are just stronger, "less pungent" smells than the stinky poop odors you're trying to remove. They often just fill the air with a smell that's not as rancid as the bad smell but still makes your head swim. By using toilet odor control treatments that only mask odors, you're just putting a band-aid on the problem and potentially creating another if the deodorizing treatment contains bacteria-killing chemicals, which is the last thing you want to put into your bacteria-rich tank environment.

Improper Ventilation

Proper ventilation of your wastewater holding tanks is one of the most important elements when it comes to preventing odors. Sometimes it's as simple as how you park your RV and sometimes it may require a repair or installation of an aftermarket ventilation enhancer. Either, you want to do whatever it takes to guarantee an odor-free camping experience.

Scenario 1

Your RV is parked in a way that prevents sewer odors from properly venting

RVs with sewer vents on the side could experience odors from the wind pushing them back inside. RVs with vents on the side should park with the vents facing the direction the wind is blowing. RVs with vents on the roof can install cyclone sewer vents on top of the vent pipe, which act like weather vanes, following the wind and creating a vortex that pulls odors up and away from your RV.

Scenario 2

Vents weren't installed correctly

It may seem unlikely, but have your ventilation system inspected to ensure it was properly installed. Sometimes the hole in the ceiling of your RV where the vent would go was mistakenly never cut, which means none of the toilet odors can escape. If this if the case, the odors you smell will be strong and pervasive, but this is not the most likely reason for odors. If odors persist after addressing other possible odor culprits, have your vents inspected.

Scenario 3

Leaks and broken seals can slowly release odors

Your tank ventilation system should be sealed completely from the inside living space of your RV, so if you are experiencing persistent odors despite adding water and more tank treatment, you may have some leaks or broken/fatigued seals. If your ventilation system is compromised, it can cause damage to the tanks or eventually engulf the living space with overwhelming odors. Inspect your seals regularly, and use Unique Camping + Marine products to treat your tanks, which help soften the seals, extending their functional life.

Scenario 4

Vents are clogged with debris

Whether your vent is on the top of the RV or the side, debris can still collect inside making it harder for odors to escape. If you are certain your vents were installed correctly and your RV is parked so odors can dissipate, you may need to check the inside of the vents. In high wind situations or just over time, leaves, organic debris, and even living things can get stuck inside the vents, so it's good practice to regularly check that all your vents are clear.

Improper Ventilation continued

Scenario 5

Sewer gas is backing up into your RV through your black tanks (for hook-up campers)

Keep your black tank valve closed even while on hook-up. If you're following The Unique Method, you know that keeping your black tank valve closed unless dumping a full tank is the cardinal rule of black tank care. Leaving it open will allow all the liquid to continually flow out, and you will be left with an exposed pile of poop (which can develop into a pyramid plug). An open black valve even on hook-up also means there is no barrier to stop gases wafting from the sewer hook-up into the tank and eventually the living space. Not only are these offensively smelly, but high levels can be hazardous because they contain methane.

Scenario 6

Gray tank odors are backing up into your RV

For hook-up campers who keep their gray tank valve open, put a p-trap in the hook-up hose to prevent sewer gas from backing up into your RV and deep clean your gray/galley tank(s) regularly. Odors wafting from the hook-up line through the gray/galley tank won't smell like poop, but they will be just as unpleasant.

For dry campers (boondockers) who keep their gray tank valve closed, odors can drift into your RV from accumulation of grease and soap scum waste inside your gray tank. Control what goes into your gray tank as much as possible to avoid odors. Aside from good camping habits, you also need to treat your gray/galley tank(s) regularly with bacteria and enzyme treatments like Unique RV Digest-It and **deep clean them regularly** with Dawn Ultra dish

Note

For full-time RVers, the deep cleaning process looks a little different because you still have to use your tanks while deep cleaning them. For more details about how to deep clean your gray and black holding tanks, refer to our guide on Deep Cleaning RV Wastewater Holding Tanks.

Other Common Problems

Scenario 1

Residual waste buildup inside your wastewater tank

Waste buildup can happen by leaving your black tank valve open, lack of water in the tank(s), and using chemical treatments instead of high-quality treatments products. Additionally, if you're not flushing/rinsing your tanks regularly (at least every 3-5 dumps), waste can hide in corners and crevices. If your RV does not have a built-in rinser, you can use a reverse jet flush or tank cleaning wand. It might seem like leaving a little bit of waste in your black tank(s) isn't a huge issue, but even a tiny amount of residual waste can cause intense odors, so it is crucial to regularly flush it out. Refer to these guides for more details on flushing your tanks and waste build-up:

- You Need to Perform an RV Holding Tank Flush
- RV Holding Tank Shapes - Could Yours Cause Waste Buildup?

Scenario 2

Stationary units accumulate residual waste in holding tanks because they're out-of-level

Full-time RVers are more likely to have issues with residual waste buildup because the tanks are always being used. Potential waste build-up is another reason you should perform regular rinses on your holding tank(s); waste can accumulate in the low points of an out-of-level holding tank. Your holding tanks use gravity to drain, but no matter how level you think your holding tank is, there is almost always a low point where waste can slowly build up until there is a block of poop stuck inside your tank, which can cause odors and clogs. Regular (typically biannual) use of a **good bacteria-based deep-cleaner** (like Unique Tank Cleaner) along with regular, long rinses of your tank(s) should fix and prevent this sneaky problem. Rinse your tanks by using a built-in tank flush system, rinsing wand, or valve-mounted tank flusher, or just fill your tank with fresh water and dump the tank several times.

Note

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Tank Care is a 50/50 Approach

Proper RV wastewater tank maintenance is a 50/50 approach: 50 percent in the type of products you use and 50 percent in the care habits you practice. You need the best of both to achieve the aromatic bliss you desire in your RV. If you're not pairing high-quality tank treatments with regular, healthy cleaning habits, problems will continue to emerge at the most inopportune times. Your goal is to control toilet odors and promote waste breakdown, but not every treatment product will deliver the all-encompassing results you are searching for.

Follow The Unique Method for the comprehensive details on the most effective tank care practices and products.

Chemical-based Treatments

Top name brands often contain harsh chemicals that many RVers are trying to avoid nowadays, and their labels can be misleading or silent when it comes to product ingredients. Harsh chemicals will kill all bacteria in the tank, so chemical-based tank treatments will actually halt the waste breakdown process, meaning an increased risk for RV toilet odors. Chemical treatments can also cause damage to tanks, valves, and seals. Homemade treatments, which usually include chemicals, also deliver little benefit and sometimes can even worsen the issue.

Enzyme Only Treatments

Enzyme only treatments can be beneficial in some circumstances and are certainly better than chemical treatments because they break down waste very quickly; however, they have no odor control power. They work best when they are paired with bacteria because the enzymes break down the large chunks of waste into smaller, more manageable pieces for the bacteria to consume. This treatment combo is the best choice to take care of all the potential tank problems, and the next best choice is a zinc and enzyme treatment.

Bacteria/Enzyme Treatments

Bacteria and enzyme treatments will add a blend of aerobic bacteria and enzymes to your tank to help break down the waste and push out the stinky anaerobic bacteria that is constantly being added every time you use the toilet. Bacteria and enzyme treatments are also the most mild and responsible blends when it comes to environmental and human exposure. Keep in mind, however, that aerobic bacteria need a very specific environment (plenty of water and moderate temperatures) in order to flourish and work at their best.

Zinc/Enzyme Treatments

Zinc and enzyme products will actually kill bacteria, but the enzymes break down the waste quickly and the zinc takes care of any odors. We recommend bacteria and enzyme treatments first because zinc-based treatments are not quite as friendly when exposed to nature or humans, but in cases where frequent dumping is unlikely and water usage in tanks is limited, zinc and enzyme treatments will effectively take care of odors and waste breakdown. A zinc and enzyme product still needs plenty of water to reach waste, so continue practicing proper tank care habits.