



Background and Guidelines for Operating a Pirana System

Before a Pirana was installed in your septic tank, there were no real consequences to putting anything you liked into the tank. The conventional anaerobic (without oxygen or aeration) septic tank is basically a construct to remove, by separation and settling, the solid waste from the water you just used to take the solids out of the house by gravity. It in fact does remove from 70 to 90 percent of the solids when properly maintained. Some minimal digestion of the organic solids takes place within the septic tank but the vast majority of the solids are merely retained within the septic tank until you periodically removed them by pumping. Intestinal bacteria are the main group of bacteria within the conventional septic tank and if they were poisoned or reduced by toxic compounds or household products, you put more in each day when you flush the toilet. The Pirana is different.

The Pirana Blend bacteria are inoculated at start up of the Pirana System and normally maintain a healthy community with little oversight. They are not re-introduced each day by flushing the toilet. Between fifty and one hundred billion of additional lab clean spores are introduced when the bacteria bag is replaced as part of the annual maintenance. Unlike a conventional anaerobic septic tank, the Pirana Blend bacteria digest the solids within the septic tank, thus removing the solids from the waste stream and dramatically reducing the need for pumping.

The Pirana Blend bacteria are robust and are capable of adapting to a wide variety of conditions and moderate abuses typical of how a modern household uses a septic system. But, the Pirana Blend bacteria do best when care is given in what you put in your septic system. Reports of toxic conditions are so rare with the Pirana System that we have only five reported over five years. We easily restored the systems to full function.

A good rule to follow when in doubt about putting something in your septic system is, “If you won’t put it in your mouth and swallow it, don’t put it in your septic system.” There are household products we use in our modern homes that we won’t put in our mouths to be swallowed but will not typically harm a septic system with a Pirana unit installed. The following guidelines should be followed after the installation of the Pirana System. These guidelines are within the normal suggested septic system guidelines for your standard conventional septic system.

The Pirana unit can be damaged or clogged by non-biodegradable items or materials that enter the septic system, including but not limited to personal latex products, rubber gloves, any items made of rubber, latex, plastics or metals, sand or soil from non water tight septic tanks, etc. It is important to keep such items out of the septic system.

Toxic household cleaning products or chemicals should not be allowed into the septic system in quantities capable of reducing the biotic health of the Pirana Blend bacteria. Normal household cleaning products like Comet Cleanser, Tide Laundry Soap, Cascade Dishwasher Soap, Palmolive Dish Washing Soap, to name a few, and typically purchased at local supermarkets, can normally be used. Cleaning products containing disinfectants, pesticides or make claims they kill bacteria should be avoided if possible. Use all cleaning chemicals sparingly and follow manufacturer’s instructions.

Laundry soaps and detergents with bactericides should also be avoided. Laundry should be spaced out over the week. Don’t have a laundry day. If bleach is going to be used, try and use powdered bleach. If possible, do one load a day when using bleach. If two loads using bleach have to be done, do one in the morning and one in the evening. This allows for dilution of the bleach and reduces the toxic affect of bleach on the Pirana Blend bacteria.

By labeling products “natural, organic and biodegradable” does not mean they aren’t highly toxic and will not kill bacteria in a septic system. Toxic compounds are found everywhere in nature. Concentrating toxins isolated from living organisms and adding these toxins to household products, while labeling the products with the above designations, still means they are toxic. Remember, Rattlesnake venom is “natural, organic and biodegradable” and is very toxic. Read the labels carefully and avoid products that claim to “kill bacteria”.

Additional toxic materials that should not be allowed in a septic system include, but are not limited to, automotive products, petroleum products, pesticides, paint or paint thinner, solvents, etc.

Water softeners may cause problems for the Pirana Blend bacteria if the backwash discharges into the septic tank. The problem is the PH of the tank liquid effluent rises due to the introduction of salt in the backwash. The concentrations of salt can reach levels that are toxic to all bacteria. Remember, salt is a preservative and that means kills bacteria that spoil food or eat organic matter. Should this become a problem, there are alternatives to discharging backwash into a septic tank.

Prescription drugs, especially antibiotics, chemotherapeutic and immune system suppression drugs, can have a devastating effect on any bacteria community within a septic tank including a Pirana unit. These are powerful chemicals that are toxic to any bacteria species. You should, within five days of commencing the use of these types of drugs for more than 10 days, notify your Certified Pirana Installer or Maintenance Inspector. It may be necessary to inspect the Pirana tank frequently for a signs of toxicity. Should a toxic condition occur, there are methods for re-configuring the Pirana installation to overcome most drug produced toxic conditions.

Should there be a power outage of 4 to 6 days where the air pump is not working, the Pirana Blend bacteria will survive without problems. Should the power remain out for a longer periods, contact your Certified Pirana Installer or Maintenance Inspector for advice.

If you leave your house unoccupied while on vacation, or for any extended period up to two months, or the Pirana installation is in a septic tank serving a vacation home that is periodically occupied during a vacation season, leave the air pump operating. The compost in the bacteria bag will retain an active community of Pirana Blend bacteria for several months when the house is unoccupied. Upon your return and re-use of the septic system, the Pirana Blend bacteria will begin to rapidly multiply, exit the bacteria bag, re-colonize the Pirana unit and the Pirana System will function as before.

When a vacation home is closed up after the vacation season, unplug the air pump. When you start to use the vacation home the next season, get a new bacteria bag, replace it and plug in the air pump. The Pirana System will restart without additional oversight.

If there are additional questions, contact your Certified Pirana Installer or Maintenance Inspector or call **Pirana System at (888) 511-5400**.