

HOW HEALTHY IS YOUR FUEL?

THE TIME TO CHECK IS NOW

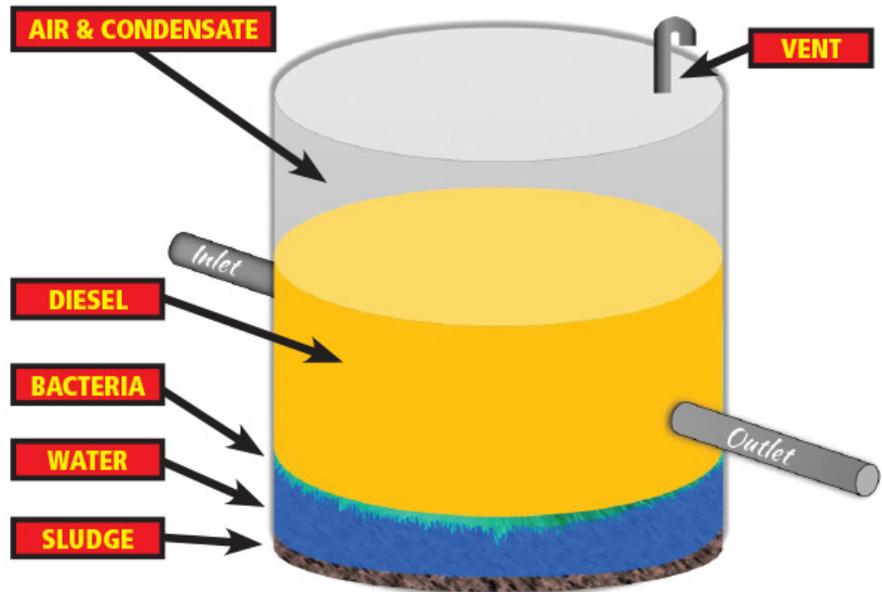
Fuel storage facilities should be sampling and analyzing their fuel three to four times a year—the start of spring being one of them. As frigid winter air gives way to cool spring nights and warmer days, the alternating temps will conspire to create condensation within the tank, a leading cause of water contamination.

Water is both the most common and most harmful contaminant to distillate fuel. It can get into the fuel during refining, storage, transportation and delivery, and is virtually impossible to eliminate completely. Common scenarios include rainwater seeping in through the roof or vent of a tank, or humid air carrying moisture in during a fuel withdrawal. Once in the tank, water becomes a breeding ground for bacterial cells and fungal spores known in the industry as “bugs.”

Bugs will live in the water at the bottom of the tank and feed off the hydrocarbons in the fuel at the fuel/water interface. They’ll also consume rubber gaskets, O-rings, hoses, tank linings and coatings in an effort to obtain their mineral content. The waste from this process produces water, sludge, acids and other harmful byproducts. Under the ideal conditions of a warm spring or summer day (68-86 degrees Fahrenheit), bacteria can double in population every 20 minutes, forming destructive, gel-like colonies known as biofilms. If not addressed, the proliferation of bugs will clog fuel filters, fuel lines and gauges; corrode pumps, injectors and tank bottoms; cause washers, hoses and connectors to swell and blister; degrade fuel, and cause poor fuel economy.

CONTAMINATION REMOVAL

If microbial contamination is detected—either by visual observation of a fuel filter or bottom sample, or by analytical laboratory testing—cleanup can be both difficult and expensive. In all cases, water bottoms should be drained and a biocide should be added to treat the remaining fuel. While in some instances it may only be necessary to filter the treated fuel, more severe cases will require



A diesel storage tank requires regular fuel monitoring and maintenance to prevent sludge, water, and bacteria from becoming a problem.

In order to safeguard your business, you must monitor for water and remove water whenever it is detected.

- Steel Tank Institute

physical removal of floating biofilm or bottom sludge. Depending on the severity of the problem, manual cleaning of the tank may be required before refueling to remove any remaining debris or corrosive byproduct from the interior surface.

Good housekeeping is the best and most cost-effective preventative measure against water and microbial contamination. Please review the following housekeeping checklist, and don't hesitate to contact us for an evaluation of your fuel and fuel systems. Ask about our Certified Fuel Quality Checkup.™

HOUSEKEEPING CHECKLIST

1. Drain water and sediment from tanks at least every six months.
2. If all the water cannot be removed, drain as much as possible and treat the remaining in-tank water with a dual phase biocide and test for its effectiveness.
3. Keep tanks near or at capacity to minimize condensation.
4. Know the operability values of your fuel.
5. Use additives judiciously and in accordance with the manufacturers recommendations; more is never better.
6. Keep vent alarms protected.
7. Stick tanks with stick and paste.
8. Check and drain water from water fuel separators.
9. Be certain all filters are OEM approved.
10. If filters are black, contact our office for further instructions.