



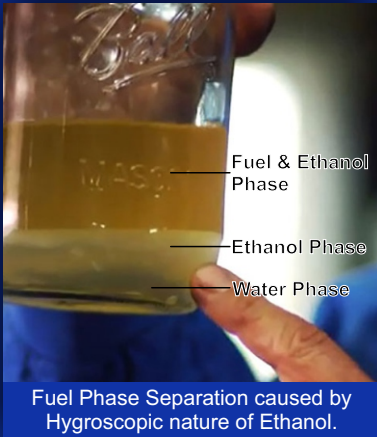
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What Fuel Polishing Is and Why It's Important

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Why is Fuel Polishing So Important?



Fuel polishing is a process of cleaning stored fuel, typically diesel or biodiesel, to remove water, sediment, and microbial contamination (also known as "fuel bugs"). This process ensures the fuel is clean and at an optimal quality, preventing engine and generator issues and extending the life of the equipment.

Ethanol Blending:

Several African countries are implementing or exploring the use of Ethanol in Petrol & Diesel to reduce reliance on imported fuels and promote domestic Biofuel production.

South Africa, Nigeria, Malawi, and Uganda are among the countries actively involved in ethanol blending.

Research and development efforts for ethanol production and blending are underway in countries like **Tanzania, Zambia, Mozambique, Madagascar, Ghana and Zimbabwe.**

Ethanol is extremely hygroscopic, meaning it's molecules attract water from the air and contamination within the fuel system - either fuel can be delivered with water already present and the process continues in your storage, vehicle & equipment tanks - or it can start by simply bonding to water molecules from the air in humid climates.

Microbial Infestation:

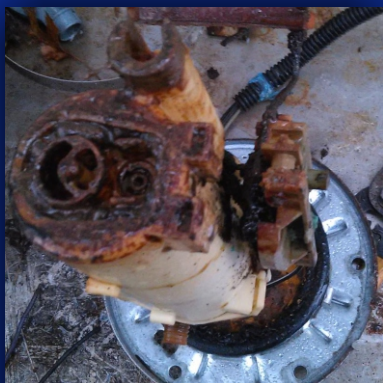
Once Water is present in a fuel tank (whether storage, vehicle or equipment tanks) it creates the ideal environment for Microbial development & growth (Bacteria, Fungi & Yeast). These manifest as a thick gloopy sludge layer at the bottom of your tank that causes clogging and extreme corrosion. The metabolic discharge of these organisms is acidic, contributing to fast onset corrosion within tanks & systems. Our Hum-Bug Detector Kits can be used to test your fuel for the presence of Microbial Infestation after which, we can help you with effective polishing & treatment of your fuel system.

Fuel Polishing removes the water and Microbial Mass (Bug or Sludge) from your system - after which it is advisable to continuously use a Fuel Enhancement Product with Lubricity & Microbiocide properties in order to prevent re-occurrence of water & sludge build up in your system.



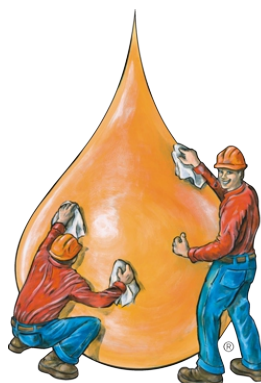
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Fuel Pump Corrosion caused by water contamination also leads to the presence of abrasive metal particles within the fuel system.

How is Fuel Polishing Done?

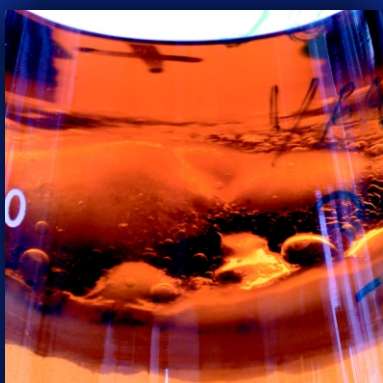
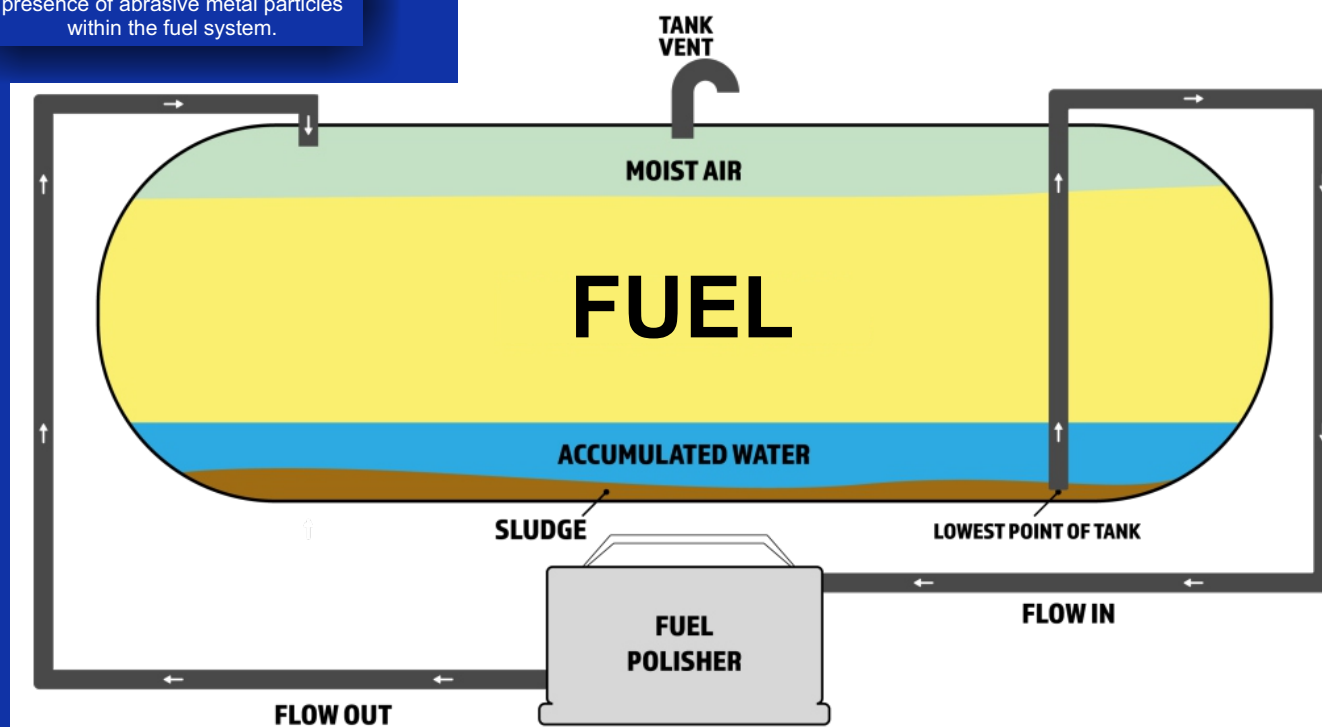


Filtration:

Fuel is passed through a series of filters that remove particulate matter, including sediment, rust, and microbial growth.

Water Removal:

Specialized filters or systems can remove water from the fuel, preventing it from causing further issues and corrosion.



Microbial growth in fuel caused by water contamination.

Microbial Treatment:

Our fuel polishing systems can include Automated Additive Injection Systems to consistently add our Anti-Microbial & Lubricity enhancing Fuel Enhancement Products to your fuel system, effectively killing, dispersing & preventing Fuel Phase Separation & Microbial Infestation.

Circulation and Filtration:

Fuel is often circulated through the polishing system and back into the tank to ensure thorough cleaning.



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Reasons for Fuel Polishing & Benefits

Why is fuel polishing needed?

- **Contamination:**
Fuel can become contaminated over time due to water condensation, atmospheric absorption, and microbial growth.
- **Microbial Growth:**
Microbes, such as bacteria and fungi, can multiply in fuel and cause sludge, sediment, and filter blockages.
Their metabolic waste is also acidic, thus accelerating Equipment & Fuel System Parts Corrosion.
- **Equipment Damage:**
Contaminated fuel can lead to fuel system failures, engine problems, and costly repairs.
- **Performance Issues:**
Fuel contamination can reduce engine efficiency and cause equipment to operate poorly.

Benefits of fuel polishing:

- **Prevents Equipment Failures:**
By removing contaminants, fuel polishing helps prevent fuel-related engine and generator problems.
- **Improves Fuel Quality:**
It ensures the fuel is clean and at its optimal quality for use, maximizing performance and efficiency.
- **Reduces Maintenance Costs:**
Fuel polishing can minimize the need for costly repairs and replacements due to fuel contamination.
- **Extends Equipment Lifespan:**
Clean fuel helps protect engines and other equipment from wear and tear, extending their lifespan.
- **Minimizes Downtime:**
By preventing fuel-related issues, fuel polishing helps minimize downtime and ensure operational reliability, especially when followed by continuous fuel treatment.



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Hum-Bug Detector Kit / Enhancement Products that Treat & Prevent Contamination



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AVIATION



BIOBOR[®]EB



BIOBOR[®]MD



HUM-BUG[®]
DETECTOR KIT





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