

## Anatomy of Fuel in Storage

**Here are some of the problems associated with fuel in storage, and how Ten35™ solves them.**

**Water.** Water seeps in due to rain water, condensation, and is sometimes used to pump out fuel. Water hinders combustion and performance when mixed with fuel. Most storage tanks have a layer of water on the bottom which should be frequently drawn off. (Note Ten35™ acts as a **demulsifier** eliminating water from the fuel).

**Microbiological Contamination.** Bacterial and fungal growths can sometime lead to operational problems such as cloudy fuel and filter blocking if storage tanks are not cleaned regularly. Gasoline is less susceptible to this than diesel, especially leaded gasoline. The organisms live in water bottoms of tanks and feed on the fuel at the interface. (Note Ten35™ acts as a **biocide** eliminating bacteria from the fuel).

**Sludge.** Formed from gums and lead in gasoline, and waxes in diesel fuel. Must be removed, as build up may put future fuel out of specification if it mixes in. (Note Ten35™ acts as a **dispersant** eliminating particles and contaminants from the fuel, and as a **polymerization retardant**, prevent molecular chaining of hydrocarbons).

**Oxidation.** Both gasoline and diesel fuel can oxidize during storage. This is the slow chemical combination of diesel and gas with oxygen from the air. These catalyze with heavy metal ions, such as copper, that may be present in the fuel, resulting in contamination of the fuel. (Note Ten35™ contains a **metal deactivator** to prevent catalytic oxidation).

**Corrosion.** Corrosion (rust) occurs due to the presence of moisture and air in the fuel distribution and storage system. Rust particles degrade fuel quality, and block fuel filters. (Note Ten35™ contains a **corrosion inhibitor** to prevent internal corrosion and fouling of fuel tanks).

