



## Preventing Diesel Storage Tank Corrosion

Tank corrosion is a growing issue. In a 2014 study, the U.S. Environmental Protection Agency found that 35 of 42 (83%) tested tanks had moderate or severe metal corrosion. More alarming, only 25% of the tank owners reported any knowledge of it.

Historically, the U.S. Environmental Protection Agency Office of Underground Storage Tanks (USTs) has kept an eye on the integrity of fuel storage tanks. Until recently, risk for corrosion in a diesel fuel storage tank was considered minor, and when it did occur, it was typically found in a wetted layer in the lower portion of the tank.

In 2007, this started to change. UST owners began reporting new incidents of severe and rapid corrosion of internal metal components in both fiberglass and metal tanks storing diesel fuel. These reports cited severe corrosion in the upper portions of the underground tanks that are not generally submerged in diesel fuel as opposed to the typical wetted bottom layer.

The EPA's study focused on USTs, but similar corrosion has been found in aboveground tanks as well. While the exact cause has not yet been determined, the timing of the observed changes in the severity and location of corrosion corresponds with the switch to ultra-low-sulfur diesel. As sulfur levels in fuel changed, so have problems caused by the presence of water.

Water, often entering the tank through condensation, can lead to corrosion as well as microbial growth. Corrosion of specific metal components is not the only problem. Loose, corroded particles in the fuel can block filters and cause damage to injectors or fuel pumps.

The best way to minimize the risk of corrosion is to follow good fuel-quality management practices. Useful techniques include identifying and removing excess water, utilizing a pre-vent cap to cut down on condensation, and purchasing a high-quality diesel fuel such as **Diselex<sup>®</sup> Gold**.

Components in **Diselex Gold** help control moisture and corrosion. The moisture control component helps the fuel hold more water in suspension, allowing it to pass through the fuel system without causing harm. Tanks stay dry for longer periods of time. Also, the **Diselex Gold** corrosion preventive component helps protect any metal exposed to moisture from corroding too quickly. Operators have more time to identify and remove water before it becomes a problem.

Don't let the effects of corrosion sneak up on your operation. See your FS Energy Specialist today.

(Caption for graphic)

Steel rods used in National Association of Corrosion Engineers (NACE) test to determine effectiveness of corrosion inhibitors.



**Without  
Diselex<sup>®</sup> Gold**

**With  
Diselex<sup>®</sup> Gold**

