

BIODEGRADABLE LUBRICANTS

As environmental agencies increase pressures and costs for petroleum lubricant spills, many offshore operators are using or considering the use of environmentally safer products. These types of fluids can protect the users against fines, cleanup costs and downtime, but care must be applied in selecting the right product for specific applications.

There is growing concern regarding the environmental impact and associated costs of lost petroleum based fluids. The National Oceanic and Atmospheric Administration (NOAA) estimates over 700 million gallons of petroleum enter the environment each year, over half of which is through irresponsible and illegal disposal. Industry experts estimate that 70% - 80% of hydraulic fluids leave systems through leaks, spills, line breakage and fitting failure.

All petroleum hydraulic fluid spills are “reportable events”. These events involve a great deal of clean-up cost, administrative procedures and punitive fines that can range from tens of thousands to hundreds of thousands of dollars, or even the potential shutdown of a company’s operations.

While a spilling of biodegradable hydraulic fluid is still considered to be a reportable event, agencies are required to evaluate “biobased oils” differently than petroleum based oils. As awareness of biodegradable fluids has increased, state, local and federal agencies have become more lenient regarding fines and clean-up costs.

There is no single definition of biodegradability. Throughout the US and internationally there is a wide range of environmentally preferable definitions. The ASTM 6064 has defined biodegradable as a function of degree of degradation, time, and test methodology.

The two widely used designations for biodegradability are readily and inherently. Readily biodegradable is defined as degrading 80% within 21 days. This type of degradation is preferable because the fluid will degrade long before damage can occur. Inherent biodegradation is defined as having the propensity to degrade with no indication of timing or degree.

There are several petroleum based lubricants that claim “inherent biodegradability”. These types of products can persist in the environment for years. Typically, these products are petroleum based, like conventional lubricants, and their break down “time is measured in years. The environmentally safe aspect is that they are made from either food grade oil or highly refined petroleum base fluids and contain no heavy metals in the additives. They are also non-toxic, so they don’t kill marine life. Synthetic products usually offer enhanced performance as compared to vegetable or petroleum products.

Universal Lubricants offers a variety of biodegradable solutions that meet all API licensed specifications. For further inquiry, please contact your salesperson or call Technical Services at (800) 444-6457.

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