



Use of Non-Recommended Hydraulic Oil Types

Product: All Toro Commercial Equipment

September 21, 2007

Affected Units:

Models:

Serial Numbers:

All

All

All

This bulletin primarily addresses the use of PAG (Polyalkylene Glycol) lubricants; however, many of the precautions extend to any non-recommended oil type.

Lubrication companies are producing a wide range of new products every day. Often a lubricant created for one industry is found useful for another. Factors such as temperature range, water, service interval and environmentally friendly needs drive much of the desire to replace mineral based lubricants with synthetic lubricants.

Recently a type of synthetic lubricant, commonly used in other industries, called PAG has been introduced into the turf maintenance arena. These oils have very encouraging advantages over mineral based and many common synthetic lubricants. PAG lubricants are not without challenges.

PAG lubricants are available in varying formulations under a variety of brand names such as Glygoyle, PAG Hydraulic Fluid, Ecosafe FR, and Plurasafe EnBio TC S to name a few. These oils have been proven to have many desirable attributes but there are also some serious negative aspects to using PAG lubricants with current equipment. Depending on the formulation PAG lubricants have been known to cause issues such as:

1. Negative interaction with water
2. Cavitation due to viscosity and higher fluid density during cold starts
3. Elastomer (seal material) incompatibility
4. Incompatible with many coatings such as paints
5. Miscibility limitation with mineral oils
6. Filter media incompatibility

The Toro Company neither recommends nor specifically denounces use of any brands named or any other brand of PAG lubricants. This information is brought to you as a result of the increasing interest in these types of lubricants.

We encourage and recommend that you research any lubricant thoroughly prior to use. Know the advantages and the disadvantages as well as the willingness of the lubrication manufacturer to back any claims made as to fitness for a specific purpose.

Review your warranty statement before using any type of lubricant not specifically recommended in the Operator's Manual for the product.

Use of lubricants other than those specifically recommended in the Operator's Manual will not generally void your warranty; however, failure of components or performance issues caused by the use of non-approved lubricants will not be covered.

Use of PAG lubricants is not recommended at this time for use in Toro equipment due to test results showing negative impact to our products.