

*'Providing Tribological Solutions'*

## FOREWARNING

*As an added service a FORewarning is provided when a test parameter is either tending to go out of specification or is out of specification. This is so that effective corrective action can be taken as soon as possible.*

*Because of the many differences between designs and consumables, these have to be generic. However, specific suggestions for any system can be provided on request. Just call, fax or e-mail your inquires. Technical Notes are also available for many fluid topics. These can be requested.*

## HIGH ACID NUMBER

**Background:** Phosphate ester fluids can form acidic compounds as a result of oxidation and/or hydrolysis. This is normal and is controlled by the use of purification media. Such media is usually supplied in cartridges and fuller's earth or Selexsorb is used in most cases. Other products are available.

**Reason for Prompt Action:** The longer you wait and the higher the acid number rises, the more difficult it is to restore the fluid. The reason is that the degradation process is auto catalytic which means that it goes faster and faster. In addition, if the acid number gets too high the traditional purification media can lead to high metals in the fluid and worse problems such as gels and valve sticking. A fluid change might be required and there can be damage to copper alloy components such as some heat exchanger tubes.

**Cause:** Usually a high or rising number indicates that the purification media is not being changed often enough. Consequently, it is spent or wet. Alternatively, the purification flow can be too low or too high, either the media or trap filter housings can be air bound or valved out, and/or the media being supplied is too wet. The last one can be the result of being in stores too long.

**Action:** Check the date of the last verified change for the purification media and reschedule if required. Also change the media if the water content has been high recently. If there is then no drop in the water content, try first drying the cartridges. Also check the housing pressure drops and also ensure that the housings are being vented to ensure that there is no air. Resample within one month. If still no improvement us for specifics.