

*'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 inquiries. Technical Notes are also available for many fluid topics.*

## MINERAL OIL CONTENT

**Background:** New phosphate esters fluids have no mineral oil so that detected is the result of leaks in the system or improper fluid additions. Both can be of concern and require correction. It can also be from fluid degradation if the sulphuric acid test method is used with synthetic fluids.

**Reason for Prompt Action:** If the root cause is not corrected the problem will only get worse and/or be repeated. Also the goal is to make corrections before the fluid charge is condemned because even a little oil can reportedly impair fire resistance, soften EPR or butyl seals and/or shorten fluid life. Depending on the source of the mineral there can also be other performance consequences such as foaming, higher air release times and filter plugging.

**Cause:** The most likely cause is the mistaken addition of a steam turbine mineral oil as make-up. Another common source is the addition of fluid from a drum containing waste fluid. Fluid should never be added from a suspect drum and if a partly full drum is left near the reservoir then the fluid transfer wand on the end of the hose should be left in the drum. A tight fitting seal to fit in the large bung hole is required and a filtered breather is recommended for the 3/4" bung hole. Also drum control is essential so that fluid drums are not left lying about and that any empty ones used for waste are clearly marked.

**Action:** This will depend on the amount of mineral oil and the affect on the control fluid but will likely require at least bleeding and feeding some of the fluid charge.