

'Providing Tribological Solutions'

PHOSPHATE ESTER FLUID TESTS

PARAMETER	EXPLANATION
Color	Scale goes from 0 (clear) to 8 (black). Some darkening in service is typical although a rapid change is of concern.
Appearance	No visible oil (on top), water (on top), particles, fibres or cloudiness.
Viscosity	Fluid is an ISO VG 46. Viscosity should not normally vary if the make-up is the same viscosity. A change may be the result of contamination, testing or degradation.
Acidity/TAN/ Neutralization No.	As fluid is used, acidic compounds can be formed. Normally controlled at <0.2 mg KOH/g by purification media such as fuller's earth. Too high at any time can lead to later problems and shortened fluid life.
Water Content	Esters can hydrolyse so the water content has to be controlled. Excessive water can also reduce the effectiveness of most purification media.
Particle Count	Too high can lead to shorter fluid lives, servo and or solenoid valve problems with sticking and screen/filter blockage. Resample and determine source if still high.
Mineral Oil Content	Even a little can impair fire resistance, soften EPR or butyl seals and/or shorten fluid life.
Resistivity	Must be kept high to prevent electro-kinetic wear of servo-valve spools. Normally controlled by the purification media.
Trace Metals	High amounts of Mg, Ca or Na may be from the purification media. Can lead to the formation of soaps and/or gels and have a negative effect on foaming and/or air release values.