# TURBOFLUID PHOSPHATE ESTER FLUID TESTS

| TEST | 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/ Neut. 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 must 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. |
| **Foaming** | A layer of foam on top of the fluid in the reservoir can affect gas bubble separation, water removal, level gauges and/or heat transfer. If severe get into the pump suction causing dieseling. |
| **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. |
| **MPC** | Membrane patch colorimetry, fluid is filtered through at 0.45 micron patch. A high value is associated with varnish and/or deposits |

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