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Press Release

Techenomics correct hydraulic oil issues


Chris Adsett, CEO of Techenomics International

Oil is the lifeblood of any hydraulic system and if it is not functioning correctly it results in reduced performance and loss of productivity, and can cause component failures or hydraulic system breakdown.
Hydraulic oil issues are not easily identified but the state-of-the-art, super-accurate testing and analysis provided by Techenomics International remove the concerns without the need for costly repairs or equipment downtime.

The most common issues with hydraulic oils are antioxidant depletion or foaming of the oil and Techenomics' Total Fluid Management Solutions identify any problems and correct the root cause. The Techenomics solutions incorporate effective and reliable testing, thorough analysis in accredited laboratories by fully qualified staff using the latest equipment and fully independent advice from a renowned condition monitoring specialist.

Techenomics' CEO Chris Adsett says antioxidants are vital to fluid integrity. "A loss of antioxidants can result in sludge and deposit formation, filter blockages, oil thickening and an increase in oil acidity.

"Antioxidants present in the additive package significantly limit the occurrence of oil degradation but are depleted in this process. Therefore, it is imperative to know the status of the antioxidants in oils being used in service."

Chris Adsett says testing by Techenomics provide an accurate indication of antioxidant depletion before it becomes a problem.
He says foaming is also a common problem in hydraulic systems and splash lubrication applications, and in severe applications the foam can leak out of the machine through breathers and dipsticks.

"Fluids with foaming problems have reduced cooling capacity which may contribute to overheating issues and accelerate oil degradation. The presence of foam in the fluid can lead to excessive oxidation and cavitation, the reduction of lubricating properties of the oil and performance of hydraulic systems.

"Oil aeration and foaming in hydraulic oil can also lead to failures, air entrapment can cause pump cavitation, erratic operations, component wear, low oil pressure, reduced viscosity and oxidation.

“It is vital to equipment health to have foaming testing preformed on hydraulic oil samples.” Techenomics’ laboratories analyse hydraulic oils by ASTM D892, which is a method of quantifying foaming characteristics of lubricating oils.

Chris Adsett says foam tendency and foam stability can both be measured via ASTM D892. “Foam tendency describes the amount of foam generated immediately after the fluid is aerated, the foam stability quantifies the amount of foam remaining 10 minutes after stopping of aeration.”

Techenomics offers a full suite of laboratory testing to monitor the fluid in hydraulic systems. It offers analysis of wear metals, additive metals, viscosity, viscosity index, PQ index, oxidation, microscopic wear characterisation, water content, ISO cleanliness rating, foam testing and acid numbers.

For more information about Techenomics and its Total Fluid Management Solutions contact Chris Adsett, c.adsett@techenomics.com; in Australia Leo Valenz, leo.valenz@techenomics.com; or in Mongolia Sugraa, (sugraa@techenomics.com).