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Press Release

Want to boost engine oil performance? Tungsten disulphide additives improve anti-friction properties

When used in engine oil a nano-sized tungsten disulphide additives package improves the anti-friction and extreme properties of the oil, which leads to lower operating temperatures and lower metal wear generation, resulting in lower costs.

Techenomics is distributing the tungsten disulphide (WS2) additives across its network because the technology complements its industry-leading fluid management services and helps maximise the life and performance of lubricants.

There are WS2 additives available to suit a range of mining, construction, industrial, energy generation and transport purposes, and a variety of oils and fluids, including engine oils, gear oils and greases.



Chris Adsett, CEO of
Techenomics International

Techenomics CEO Chris Adsett says of primary interest to the mining industry is the heavy duty WS2 additive pack, DE-M4600 that is suitable for all large four stroke engines. These are likely to be found in dump trucks, dozers, graders and all other earthmoving equipment.

“Adding the WS2 creates an engine oil with superior extreme pressure, anti-friction and anti-wear properties.”

He says the benefits were demonstrated in a number of trials:

- When added to Mobil Delvac 1300, the coefficient of friction was reduced by 68% and the four ball wear scar by 42%.
- When added to a common brand 15W40 engine oil, the wear scar diameter was reduced by 37% while the welding point was increased by 56%.
- When added to 5W40 Shell Helix, the resultant oil had a reduced wear scar diameter of 28.8% and a coefficient of friction reduction of 7% over 3500 hours.
- When used with Shell Rotella on Freightliners the fuel consumption was reduced by up to 2.3% on new engines and over 10% on older engines.



“There are many more examples of the dual action of the additive pack reducing friction and refurbishing damaged surfaces by filling the asperities, micro-cracks and irregular micro-surfaces caused by operational wear,” he says.

“Under heavy loads the micro layers of WS2 form a protective monolayer of WS2 on the surfaces of the metal to protect the working surfaces and prevent them from touching. The reduction in friction leads to lower operating temperatures and lower wear.

“The shape of the particles allows them to roll between the metal surfaces of engines, components and hydraulic equipment, reducing friction by up to 30%.”



SOLVE YOUR LUBRICATION PROBLEMS

Click here for more detailed information on extending the life of your oil using either nano additives or micro filtration

As well as being fluid management and condition monitoring experts, Techenomics' staff are committed to providing clients with a total package to cater for their individual lubricant situations. The WS2 additive technology complements this package and Chris Adsett says staff are only too pleased to discuss the applications and benefits with operators of engines, plant and equipment.

For more information about Techenomics or the nano additives contact Chris Adsett, c.adsett@techenomics.com; in Indonesia Siti Munawarah, siti@techenomics.com, or in Mongolia Sugraa, (sugraa@techenomics.com).