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SANY-DYNAVIS® High Efficiency Energy Saving Hydraulic Fluid Introduced at INTERMAT 2012

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China-based SANY Heavy Industry Co., Ltd. (SANY), one of the world's largest manufacturers of construction machinery, is introducing its new High Efficiency Energy Saving Hydraulic Fluid, SANY HE, at the INTERMAT construction equipment show in Paris. Formulated with DYNAVIS® technology developed by Evonik Oil Additives, the new fluid provides hydraulic equipment operators with exceptional performance in fuel savings and productivity improvements.

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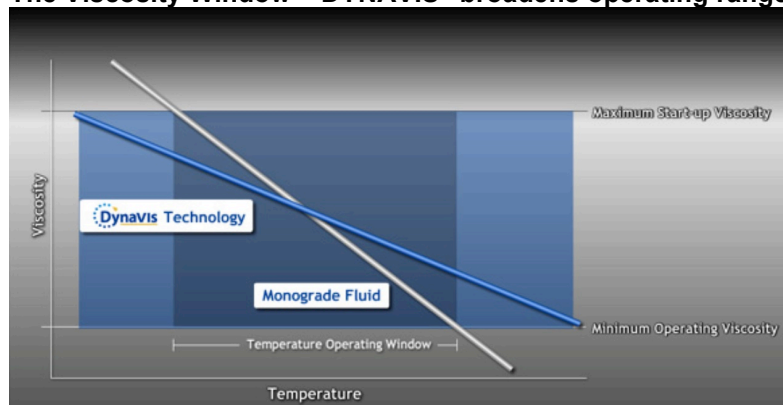
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“DYNAVIS® –more power, less fuel is the slogan”, explains Mr. MAO Jianhua, Deputy General Manager of SANY. “Since the benefits of reduced fuel consumption included fundamental environmental benefits like reduced CO₂ emissions, we see **DYNAVIS® as a technology that complements our own focus on the environment and resource efficiency, and creates more value for our customers”**.”

In search of more efficient hydraulic systems

The hydraulic system is a key factor in determining fuel consumption in engineering machinery. Most motions are performed hydraulically with the power derived from a hydraulic pump. All pumps, however, are vulnerable to a power-sapping phenomenon known as “internal leakage”. Internal leakage occurs to a greater or lesser extent, depending on working conditions. As hydraulic oils formulated with DYNAVIS® technology reduce this loss of power in all temperature ranges, considerable fuel savings are possible.

The Viscosity Window – DYNAVIS® broadens operating range



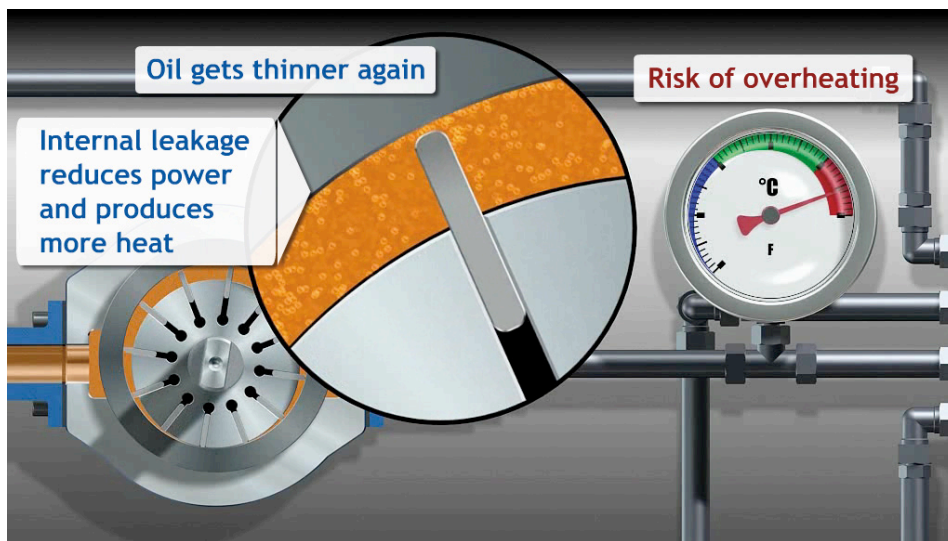
A hydraulic fluid will work optimally only within a defined temperature range. Simple “monograde” fluids are quite limited in their temperature operating range.

As operating temperatures increase, their performance can weaken significantly, resulting in sluggish equipment performance.

In contrast, high quality, multi-grade hydraulic fluids formulated with DYNAVIS[®] technology enjoy a broader temperature operating range and thereby improve equipment productivity and fuel efficiency. At higher temperatures, hydraulic fluids formulated with DYNAVIS[®] technology help reduce the pump’s internal leakage and the hydraulic fluid’s ability to lubricate is retained. As a result, power output is higher, fuel consumption goes down and the equipment is more responsive to operator controls. Even the normal “wear and tear” of seals and other hydraulic components is diminished.

Made for high temperatures

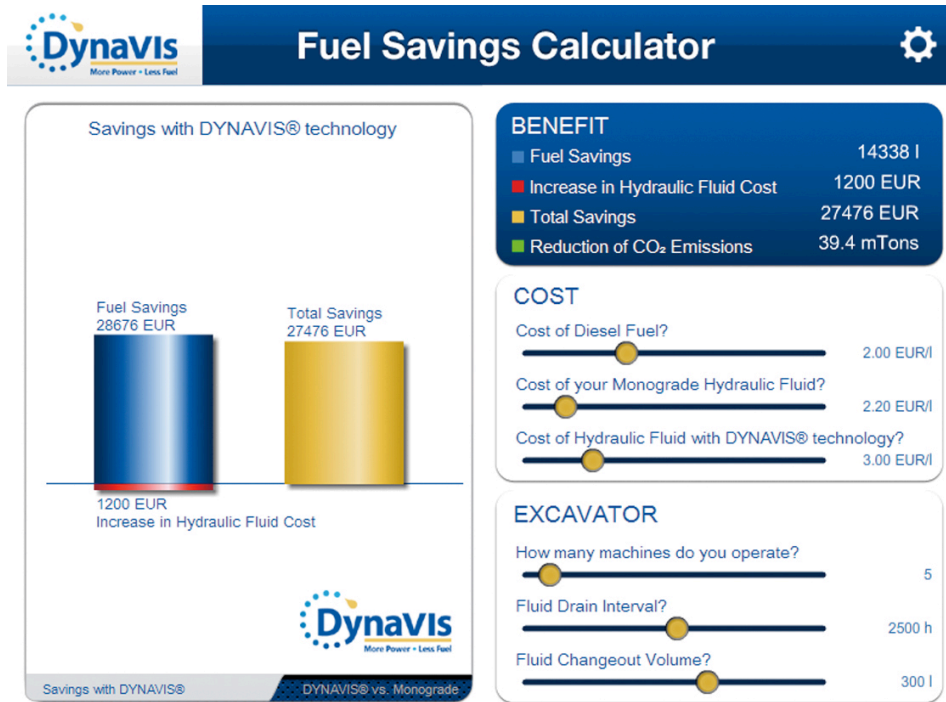
Long working shifts for equipment running at high operating temperatures will cause monograde hydraulic fluids to gradually become thinner. This results in “internal leakage”, a loss of efficiency as more and more thin heated oil backwashes through the pump vanes or pistons of the hydraulic pump, contrary to the intended pumping direction. Power is wasted as the pump keeps on running while the equipment response to the operator’s commands becomes sluggish and delayed. This unwanted recirculation also increases friction and further heats up already hot fluid.



Internal Leakage of a Monograde Hydraulic Fluid: hot, thin hydraulic fluid backwashes through the vanes of a hydraulic pump, contrary to the direction of pumping. This recirculation results in additional friction, which further heats the fluid, rendering it even thinner. Fluids formulated with DYNAVIS[®] technology operate at higher temperatures with less internal leakage, maintaining equipment performance and saving fuel.

DYNAVIS[®] technology in fluid formulation reduces the loss of power due to internal leakage and puts the brakes on the resulting vicious cycle of hydraulic fluid becoming hot, thin, and then again hotter and thinner. The DYNAVIS[®]-formulated fluids work to maintain the stability of the power output of the hydraulic pump, even after many hours of work under maximum load. With

better agility and performance, the equipment completes more load cycles and/or realizes fuel savings of 5 percent and above.



Inputs for purpose of example only. For full functionality, visit www.dynavis.com

Following the input of some basic data, the DYNAVIS® calculator estimates fuel savings, return on investment and significant environmental benefits. Preliminary results from field tests have now validated these estimates.

At the SANY stand at the INTERMAT exhibition Evonik Oil Additives representatives will be available to support the SANY Team with additional technical information as they explain the DYNAVIS® technology and its potential benefits to customers.

For more information visit www.dynavis.com