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Chemicals Technical Data

Petroleum Department

VANLUBE® W-324

Tungsten Lubricant Additive

Antiwear Agent

Antioxidant

Typical Properties

Physical State:	Liquid
Density at 25°C, Mg/m ³ :	1.06
Flash Point, PMCC, °C:	175
Nitrogen Content, %:	1.2
Tungsten Content, %:	14

VANLUBE® W-324 Lubricant Additive is an organotungstate which is soluble in petroleum fuels and lubricants. It is an effective general-purpose, sulfur and phosphorus-free antioxidant and antiwear agent for a wide range of automotive and industrial lubricants.

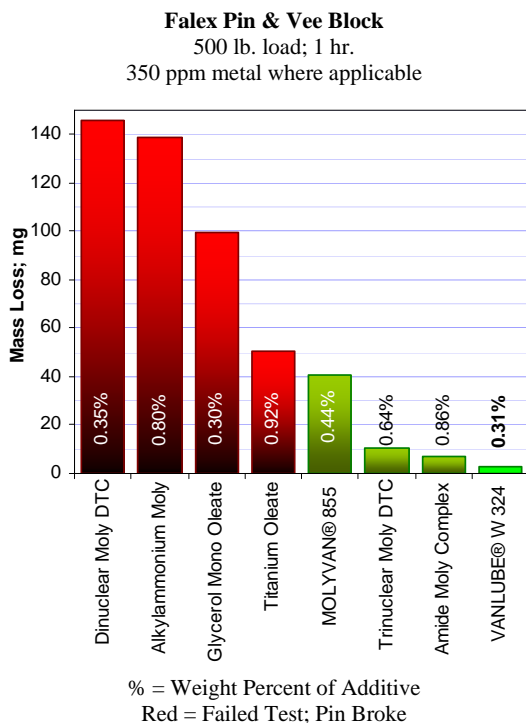


FIGURE 1

VANLUBE® W-324 provides superior antiwear protection relative to other lubricant additives in the Falex Pin and Vee Block. Here it provides 58% more protection while using 63% less additive than its nearest competitor.

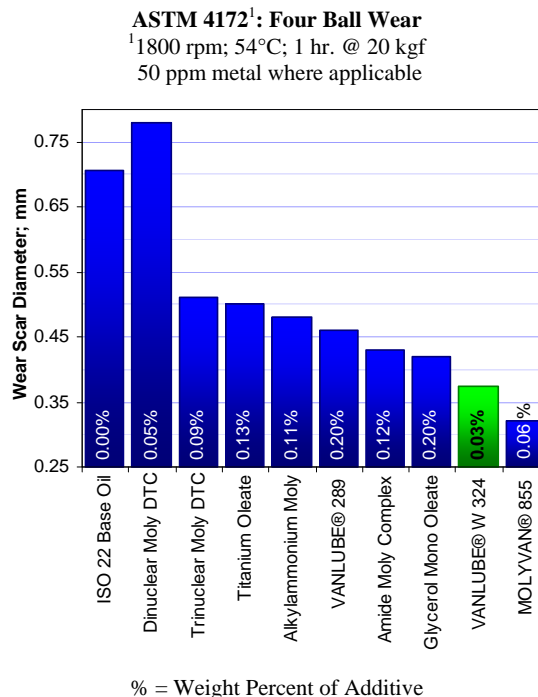


FIGURE 2

In the Four Ball Wear test, **VANLUBE® W-324** provides excellent antiwear protection with only 50 ppm of tungsten, and at half the charged weight of its nearest competitor.

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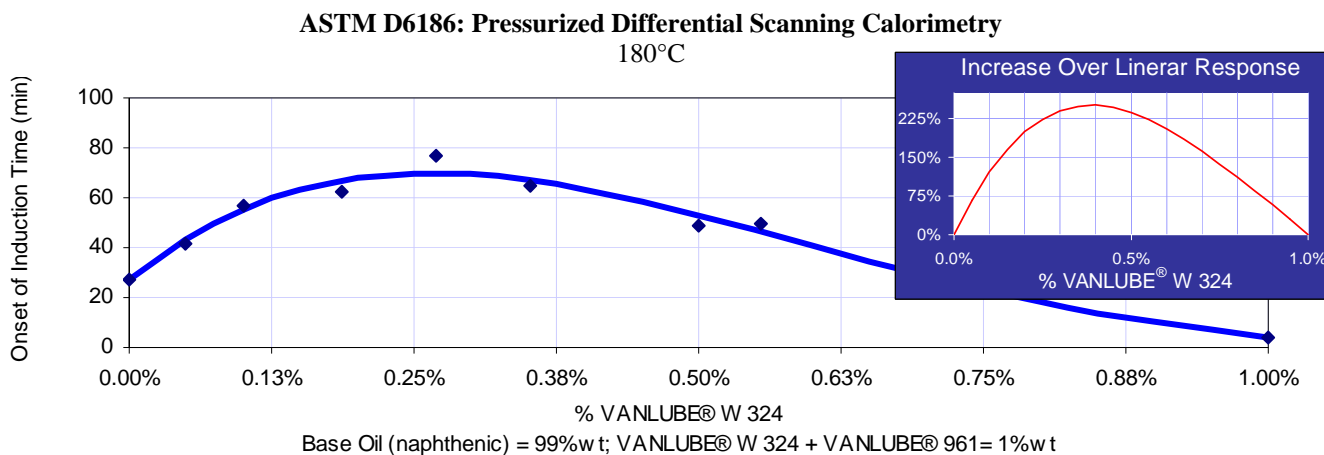


FIGURE 3

VANLUBE® W-324 works as an antioxidant synergist with alkylated diphenylamines. In the graph above it is shown to increase the effectiveness of VANLUBE® 961 by 250%.

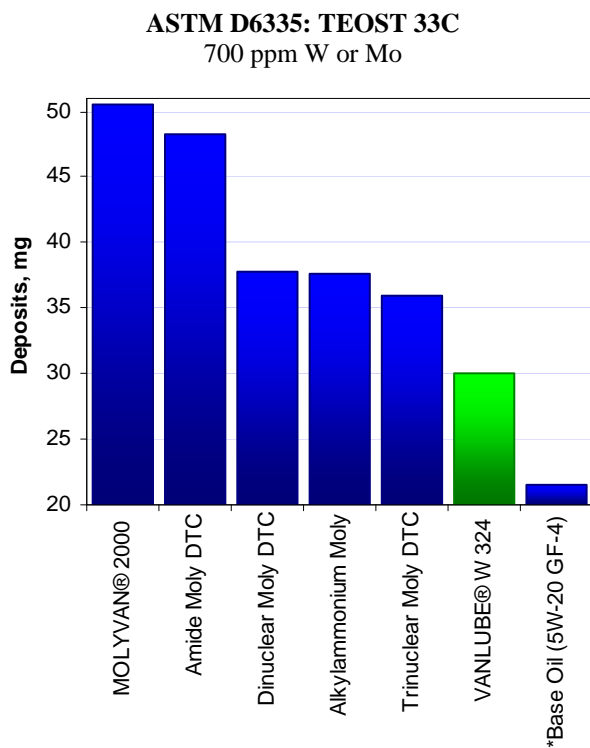


FIGURE 4

VANLUBE® W-324 resists deposit formation more effectively than molybdenum when exposed to high temperatures.

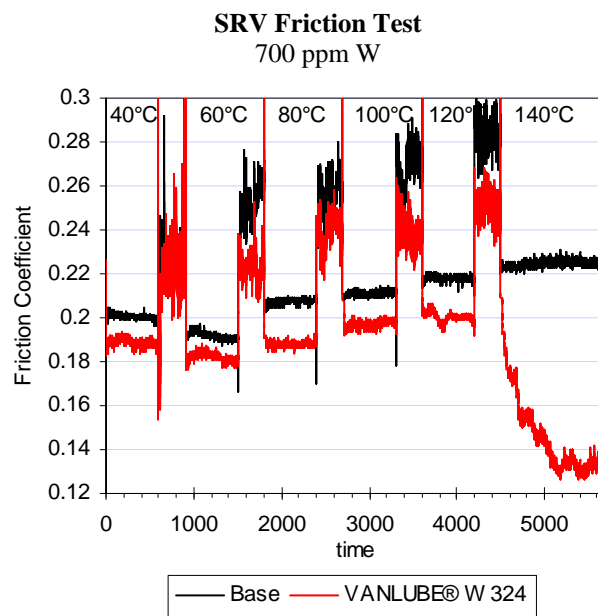


FIGURE 5

VANLUBE® W-324 activates at elevated temperatures to provide friction modification.