

Case Study: NanoLub® Additive in GFG 90 Type Gas Powered Engine Generator.

Main Finding: Major reduction in lubricant consumption, improved lubricant thermal properties and decrease in gas consumption.

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The test purpose was to compare several performance parameters of a GFG 90 Gas Engine Generator made by JSC "Volzhsky Diesel Mamynih" and lubricated with Sentron LD 300 engine oil, before and after the addition of NanoLub® IF-WS₂ Formulated lubricant additive. Control periods were set to 8 hours.

The GFG type generator used for the test is located at a power generation facility used at JSC "Volzhsky Diesel Mamynih" own manufacturing plant.

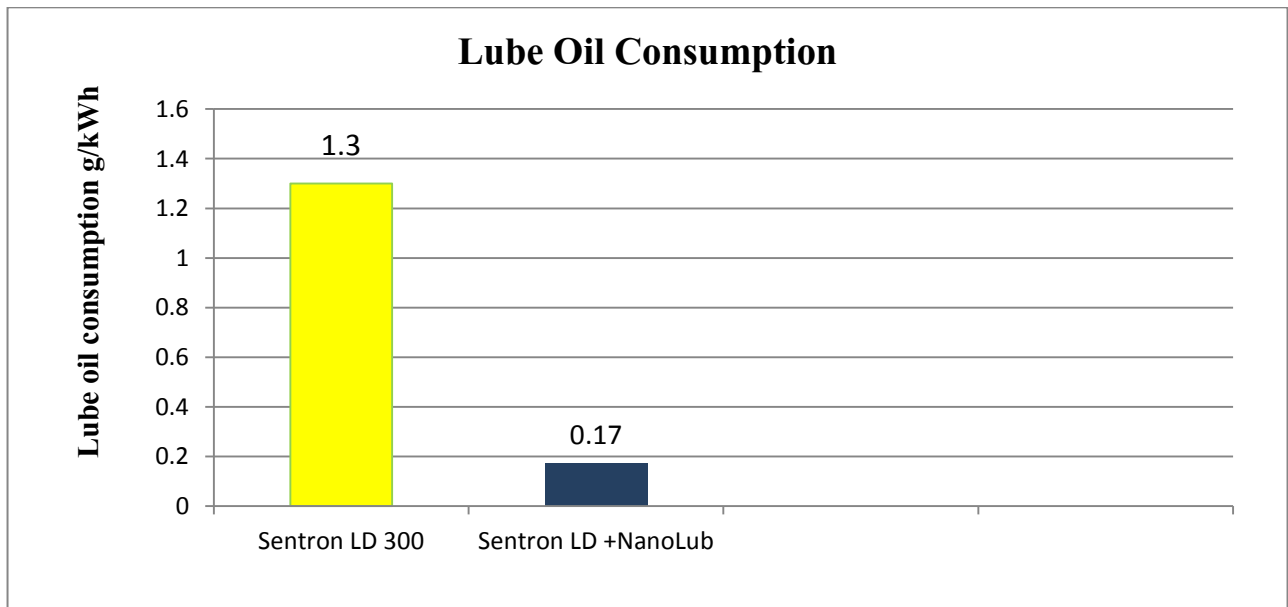
GFG 90 Type Gas Powered Engine Generator



Test conditions:

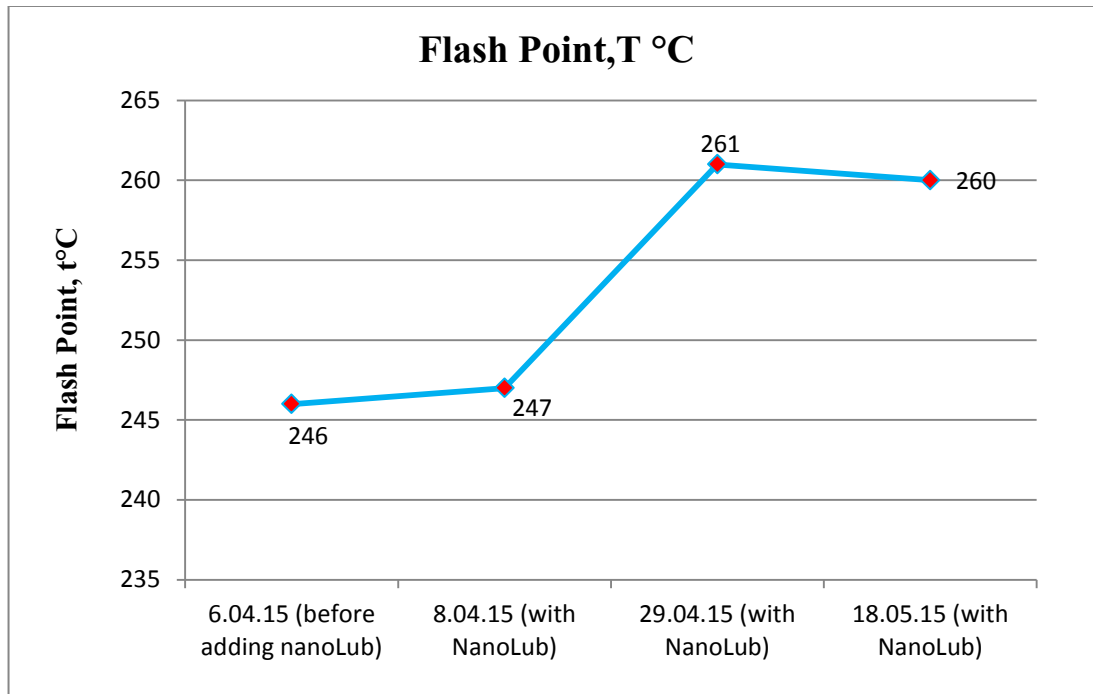
Test equipment used:	
Engine Type:	GFG 90
Fuel:	Gas
Lubricant type:	Petro-Canada Sentron LD 3000 engine oil
Test duration:	200 hours
Maximum capacity :	500 kW
Nominal capacity :	475 kW
Operating capacity during the test:	375 kW

Lubricant Consumption



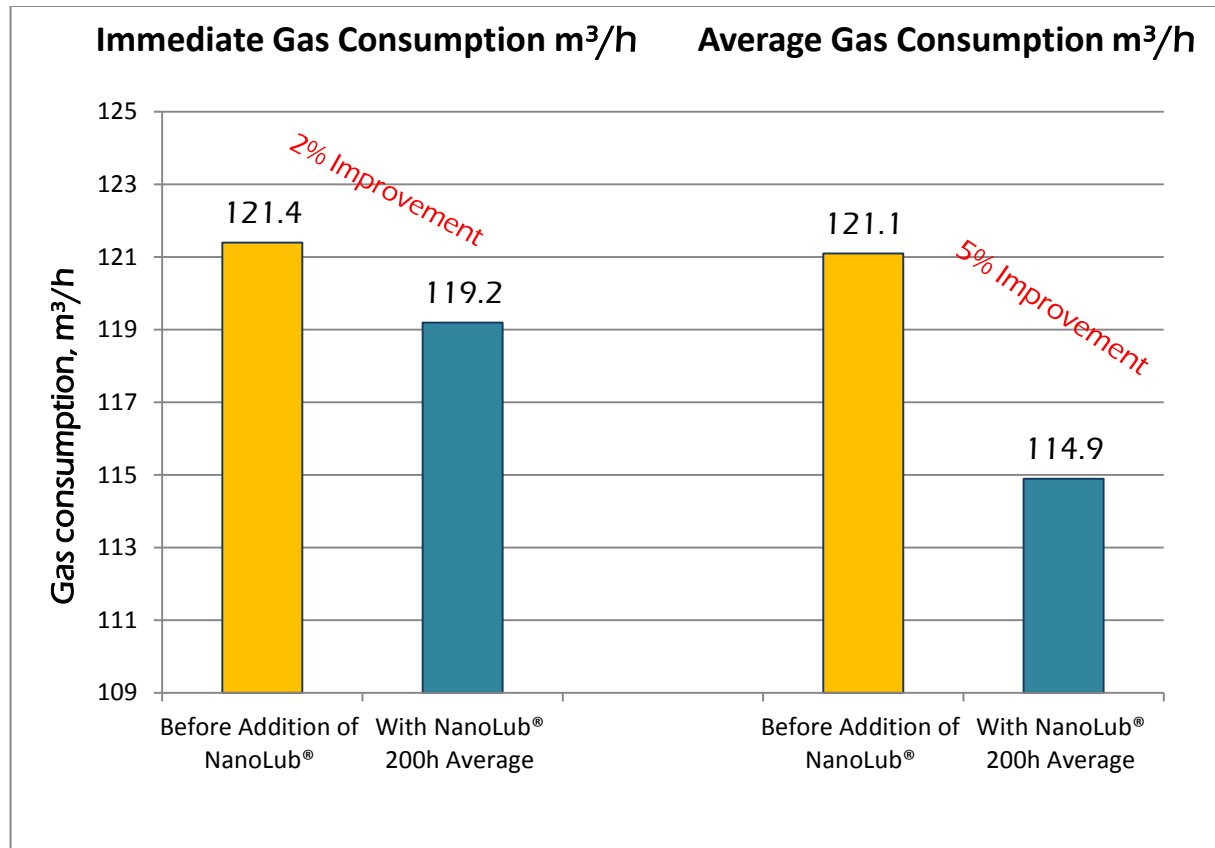
Lubricant oil consumption was reduced by about 87%.

Thermal Properties



Flash point measurements demonstrate an improvement of thermal properties of the lubricant with about 16 °C increase.

Gas Consumption



Immediate gas consumption was reduced by about 2%, while average gas consumption was reduced by about 5%, as measured by an average of 200 hours of work with 8 hour control periods.

Conclusions:

Based on the test results above, NanoLub® oil additive has improved the performance of Type GFG 90 Gas Engine Power Generator and the lubricant properties of the Sentron LD 300 engine oil in the following way:

1. Reduction of oil consumption by about 87%.
2. Lubricant Flash Point increased by about 16°C.
3. Average gas consumption was lowered by 5% and immediate gas consumption by 2%.