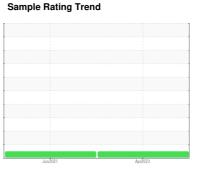


OIL ANALYSIS REPORT

O4 04 Machine Id [04] BASELINE - TURBINE LIFE 68 REF

Component
New (Unused) Oil

High Performance Lubricants Turbine Life 68 (1 QTS)





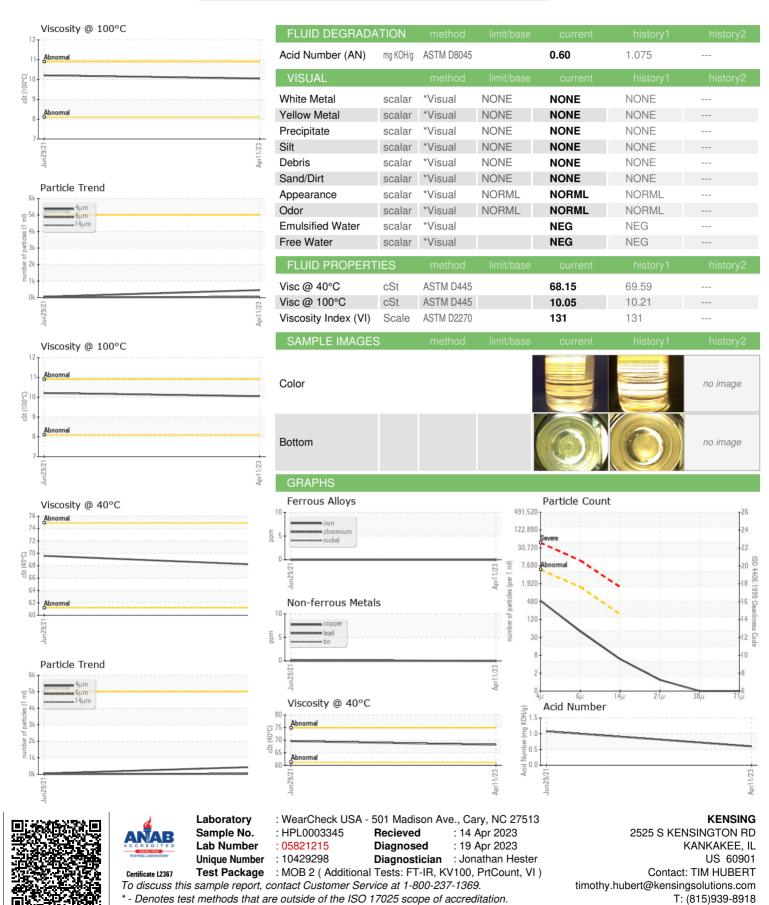
Recommendation

This is a baseline read-out on the submitted sample. (Customer Sample Comment: Batch#22L1601)

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		HPL0003345	HPL008195	
Sample Date		Client Info		11 Apr 2023	29 Jun 2021	
Machine Age	hrs	Client Info		0	0	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		N/A	N/A	
Sample Status				NORMAL	NORMAL	
CONTAMINATION	V	method	limit/base	current	history1	history2
Water		WC Method		NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		0	0	
Chromium	ppm	ASTM D5185m		0	0	
Nickel	ppm	ASTM D5185m		0	0	
Titanium	ppm	ASTM D5185m		0	0	
Silver	ppm	ASTM D5185m		0	<1	
Aluminum	ppm	ASTM D5185m		0	<1	
Lead	ppm	ASTM D5185m		0	0	
Copper	ppm	ASTM D5185m		0	<1	
Tin	ppm	ASTM D5185m		0	0	
Antimony	ppm	ASTM D5185m			0	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	<1	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1	history2
	ppm ppm		limit/base		•	,
Boron		ASTM D5185m	limit/base	0	13	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	0 0	13 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0	13 0 0	
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0	13 0 0 0	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0 0	13 0 0 0 <1 2	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0 0 0	13 0 0 0 <1 2	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0 0 0 2 200	13 0 0 0 <1 2 4 341	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0 0 0 2 200	13 0 0 0 <1 2 4 341 2	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		0 0 0 0 0 2 200 2 16891	13 0 0 <1 2 4 341 2 16198	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m		0 0 0 0 0 2 200 2 16891	13 0 0 <1 2 4 341 2 16198	 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	0 0 0 0 0 2 200 2 16891 current	13 0 0 <1 2 4 341 2 16198 history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	0 0 0 0 0 2 200 2 16891 current <1	13 0 0 0 <1 2 4 341 2 16198 history1 <1 0	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20 limit/base >5000	0 0 0 0 0 2 200 2 16891 current <1 0 <1	13 0 0 0 <1 2 4 341 2 16198 history1 <1 0 history1 53	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m METHOD ASTM D5185m	limit/base	0 0 0 0 0 2 200 2 16891 current <1 0 <1	13 0 0 0 <1 2 4 341 2 16198 history1 <1 0	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20 limit/base >5000 >1300 >160	0 0 0 0 0 2 200 2 16891 current <1 0 <1 current 453 43 5	13 0 0 <1 2 4 341 2 16198 history1 <1 <1 0 history1 53 10 1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m METHOD ASTM D5185m	limit/base >20 limit/base >5000 >1300 >160	0 0 0 0 0 2 200 2 16891 current <1 0 <1	13 0 0 <1 2 4 341 2 16198 history1 <1 <1 0 history1 53 10	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >6µm Particles >14µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647	limit/base >20 limit/base >5000 >1300 >160	0 0 0 0 0 2 200 2 16891 current <1 0 <1 current 453 43 5	13 0 0 <1 2 4 341 2 16198 history1 <1 <1 0 history1 53 10 1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN Particles >4µm Particles >14µm Particles >21µm	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	limit/base >20 limit/base >5000 >1300 >160 >40 >10	0 0 0 0 0 2 200 2 16891 current <1 0 <1 current 453 43 5	13 0 0 <1 2 4 341 2 16198 history1 <1 <1 0 history1 53 10 1	history2 history2



OIL ANALYSIS REPORT



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

F: x: