

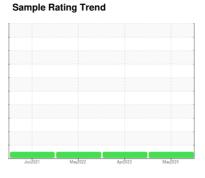
OIL ANALYSIS REPORT

04 Machine Id

[04] BASELINE - TURBINE LIFE 100 REF

New (Unused) Oil

High Performance Lubricants Turbine Life 100 (1 QTS)





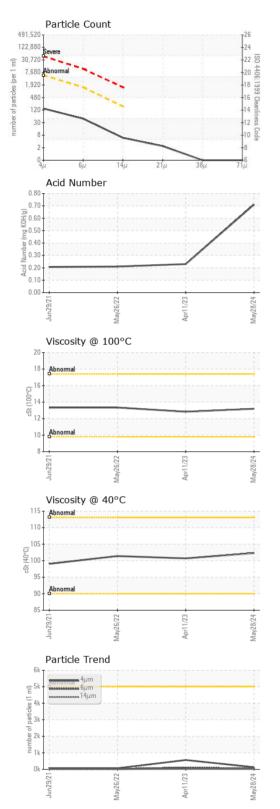
Recommendation

This is a baseline read-out on the submitted sample. (Customer Sample Comment: Turbine Life 100. Batch#22F2302)

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		HPL0004897	HPL0003344	HPL0000467
Sample Date		Client Info		28 May 2024	11 Apr 2023	26 May 2022
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATIO	N	method	limit/base	current	history1	history2
Water		WC Method		NEG	NEG	NEG
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m		0	0	0
Chromium	ppm	ASTM D5185m		0	0	0
Nickel	ppm	ASTM D5185m		0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	2
Aluminum	ppm	ASTM D5185m		<1	0	<1
Lead	ppm	ASTM D5185m		<1	0	0
Copper	ppm	ASTM D5185m		0	0	0
Tin	ppm	ASTM D5185m		0	0	<1
Antimony	ppm	ASTM D5185m				
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history1	history2 <1
	ppm ppm		limit/base			
Boron		ASTM D5185m	limit/base	0	0	<1
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	0	0	<1
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0	0 0 0	<1 0 <1
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	0 0 0	0 0 0	<1 0 <1 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 4	0 0 0 0 <1	<1 0 <1 0 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 4 72	0 0 0 0 <1 184	<1 0 <1 0 2 179
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 4 72 244	0 0 0 0 <1 184	<1 0 <1 0 2 179 5
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 4 72 244 23	0 0 0 0 <1 184 12	<1 0 <1 0 2 179 5
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 4 72 244 23 25583	0 0 0 0 <1 184 12 0 16726	<1 0 <1 0 2 179 5 0 18675
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m		0 0 0 0 4 72 244 23 25583	0 0 0 0 <1 184 12 0 16726	<1 0 <1 0 2 179 5 0 18675
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m		0 0 0 0 4 72 244 23 25583 current	0 0 0 0 <1 184 12 0 16726 history1	<1 0 <1 0 2 179 5 0 18675 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	0 0 0 0 4 72 244 23 25583 current <1	0 0 0 0 <1 184 12 0 16726 history1	<1 0 <1 0 2 179 5 0 18675 history2 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base	0 0 0 0 4 72 244 23 25583 current <1 0	0 0 0 0 <1 184 12 0 16726 history1 1 0 <1	<1 0 <1 0 2 179 5 0 18675 history2 <1 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium FLUID CLEANLIN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	limit/base >20 limit/base >5000	0 0 0 0 4 72 244 23 25583 current <1 0 2	0 0 0 0 <1 184 12 0 16726 history1 1 0 <1	<1 0 <1 0 2 179 5 0 18675 history2 <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	ASTM D5185m	limit/base >20 limit/base >5000	0 0 0 0 4 72 244 23 25583 current <1 0 2	0 0 0 0 <1 184 12 0 16726 history1 1 0 <1	<1 0 <1 0 2 179 5 0 18675 history2 <1 <1 0 history2 62
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	ASTM D5185m method ASTM D5185m	limit/base	0 0 0 0 4 72 244 23 25583 current <1 0 2 current	0 0 0 0 <1 184 12 0 16726 history1 1 0 <1 history1 563 100	<1 0 <1 0 2 179 5 0 18675 history2 <1 <1 0 history2 62 12
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	ASTM D5185m Method ASTM D5185m ASTM D7647 ASTM D7647 ASTM D7647	limit/base	0 0 0 0 4 72 244 23 25583 current <1 0 2 current 127 41	0 0 0 0 184 12 0 16726 history1 1 0 <1 history1 563 100 11	<1 0 <1 0 2 179 5 0 18675 history2 <1 <1 0 history2 62 12 2
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	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 4 72 244 23 25583 current <1 0 2 current 127 41 5	0 0 0 0 184 12 0 16726 history1 1 0 <1 history1 563 100 11 3	<1 0 <1 0 2 179 5 0 18675 history2 <1 <1 0 history2 62 12 2 0



OIL ANALYSIS REPORT



FLUID DEGRADA	TION	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.71	0.23	0.21
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual		NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPERT	IES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		102.3	100.7	101.4
Visc @ 100°C	cSt	ASTM D445		13.19	12.83	13.34
Viscosity Index (VI)	Scale	ASTM D2270		126	122	129
SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						■ ASS HPLOCOME
Bottom						





Certificate 12367

Laboratory

Sample No.

Lab Number : 06198101 Unique Number : 11060224

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : HPL0004897 Received : 03 Jun 2024

Tested : 05 Jun 2024 Diagnosed

: 05 Jun 2024 - Jonathan Hester

KENSING 2525 S KENSINGTON RD KANKAKEE, IL US 60901

Test Package : MOB 2 (Additional Tests: FT-IR, ICP-NewOil, KV100, PrtCount, VI) Contact: TIM HUBERT timothy.hubert@kensingsolutions.com

T: (815)939-8918 F: x:

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

Submitted By: TIM HUBERT