



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR LTM1450 AT2621
 Component
Diesel Engine
 Fluid
HPL 10W40 (--- LTR)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		HPL0003157	HPL0001288	---
Sample Date		Client Info		12 May 2023	04 Oct 2022	---
Machine Age	hrs	Client Info		135	1035	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		N/A	N/A	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				NORMAL	ABNORMAL	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	10	43	---
Chromium	ppm	ASTM D5185m	>5	1	<1	---
Nickel	ppm	ASTM D5185m	>5	0	0	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m	>3	0	<1	---
Aluminum	ppm	ASTM D5185m	>15	2	2	---
Lead	ppm	ASTM D5185m	>30	0	<1	---
Copper	ppm	ASTM D5185m	>125	9	▲ 182	---
Tin	ppm	ASTM D5185m	>5	<1	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

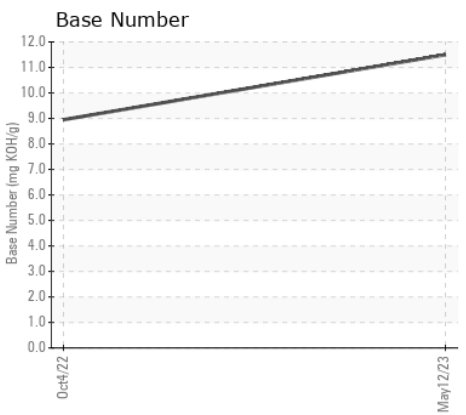
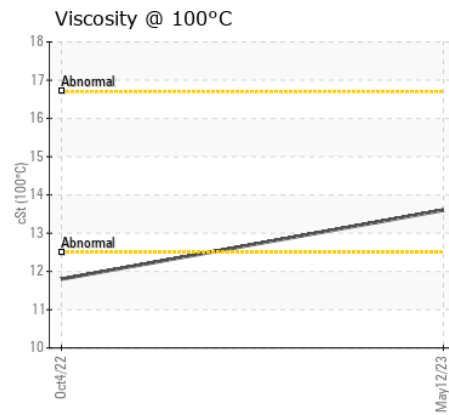
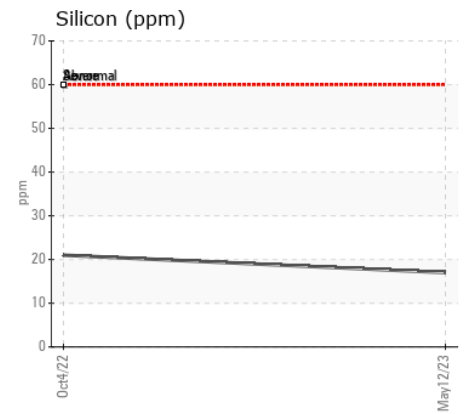
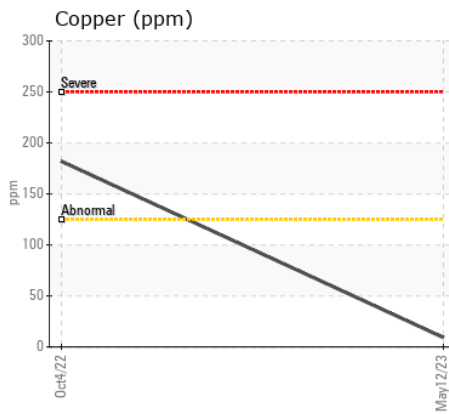
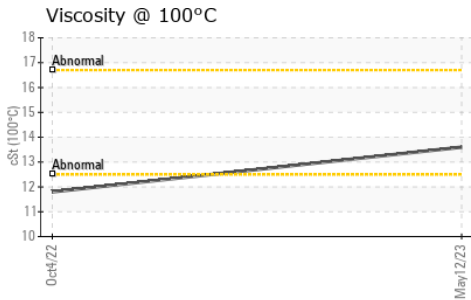
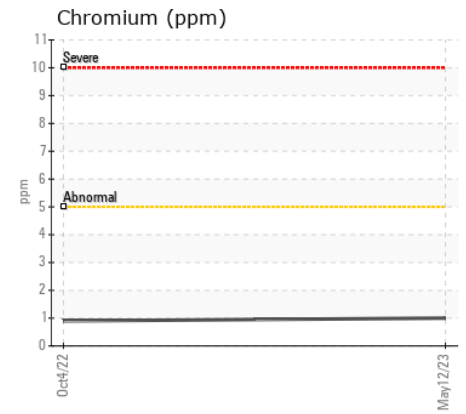
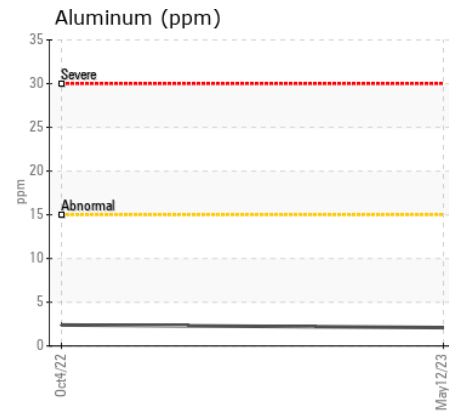
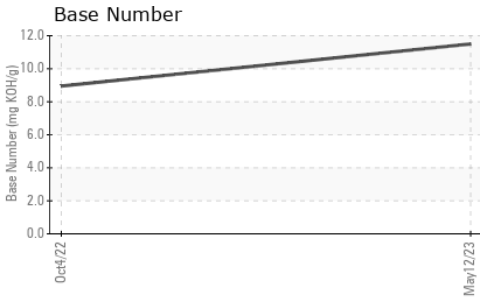
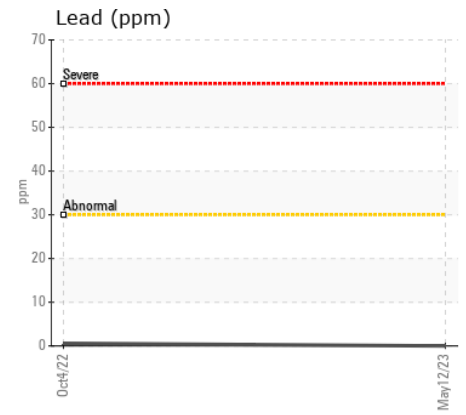
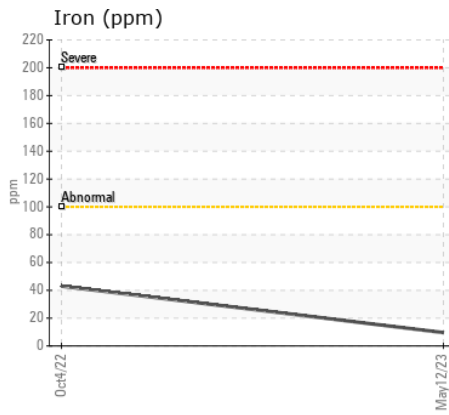
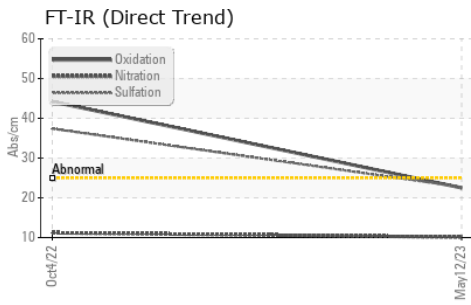
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	17	21	---
Potassium	ppm	ASTM D5185m	>20	2	1	---
Fuel		WC Method	>5	<1.0	1.1	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.1	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	10.1	11.2	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.7	37.4	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		4	0	---
Boron	ppm	ASTM D5185m		75	74	---
Barium	ppm	ASTM D5185m		10	18	---
Molybdenum	ppm	ASTM D5185m		108	78	---
Manganese	ppm	ASTM D5185m		2	4	---
Magnesium	ppm	ASTM D5185m		799	876	---
Calcium	ppm	ASTM D5185m		1400	1451	---
Phosphorus	ppm	ASTM D5185m		776	665	---
Zinc	ppm	ASTM D5185m		926	862	---
Sulfur	ppm	ASTM D5185m		4124	3109	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.5	44.2	---
Base Number (BN)	mg KOH/g	ASTM D2896		11.50	8.95	---
Visc @ 100°C	cSt	ASTM D445		13.6	● 11.8	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : HPL0003157

Lab Number : 05855684

Unique Number : 10485039

Test Package : MOB 2

Received : 24 May 2023

Tested : 25 May 2023

Diagnosed : 25 May 2023 - Wes Davis

STEVENS ON CRANE

410 STEVENSON DR

BOLINGBROOK, IL

US 60440

Contact: DAVE KOEHNE

davidk@stevensoncrane.com

T: (630)972-9199

F:

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.

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