



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR LTC1050 AT9641
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL 10W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		HPL0004535	HPL0001621	---
Sample Date		Client Info		27 Feb 2024	14 Dec 2022	---
Machine Age	hrs	Client Info		8565	7700	---
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	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	13	24	---
Chromium	ppm	ASTM D5185m	>5	0	1	---
Nickel	ppm	ASTM D5185m	>5	<1	0	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>15	6	5	---
Lead	ppm	ASTM D5185m	>30	<1	<1	---
Copper	ppm	ASTM D5185m	>125	3	10	---
Tin	ppm	ASTM D5185m	>5	1	2	---
Vanadium	ppm	ASTM D5185m		0	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

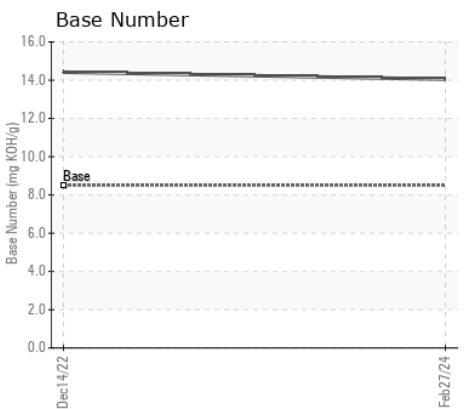
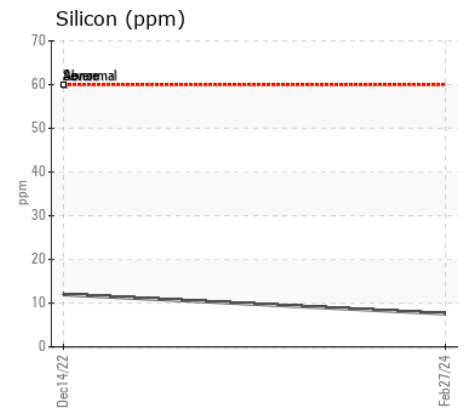
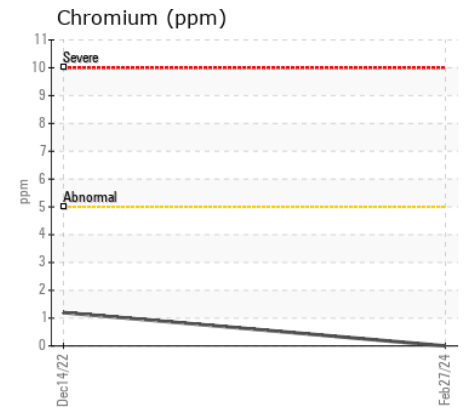
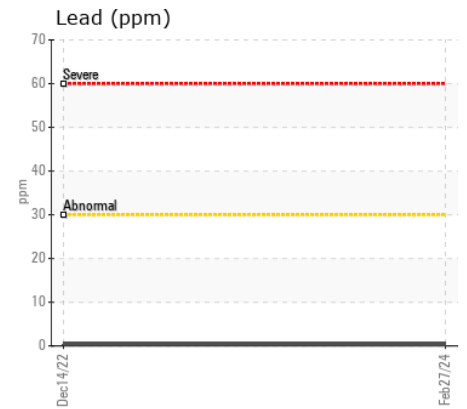
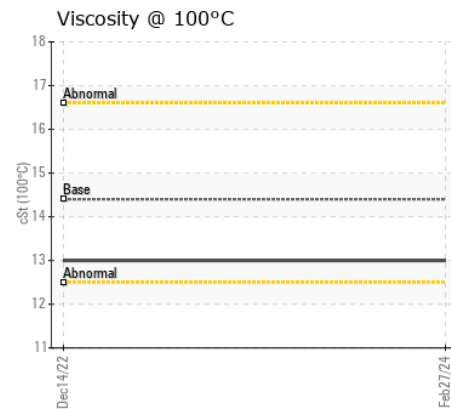
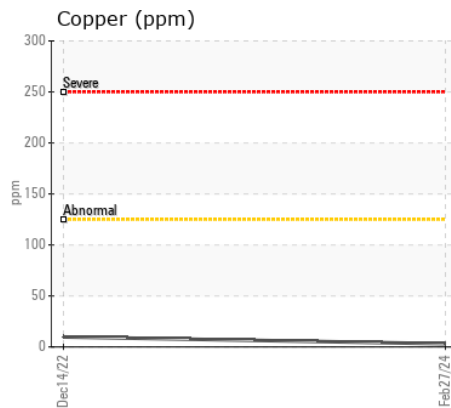
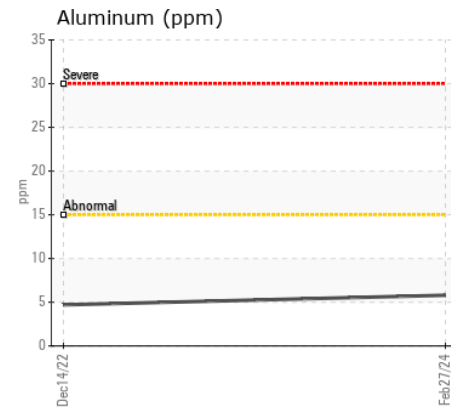
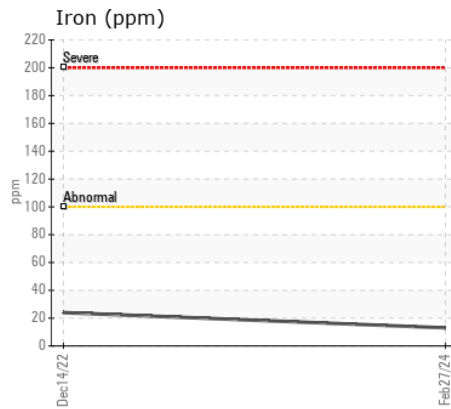
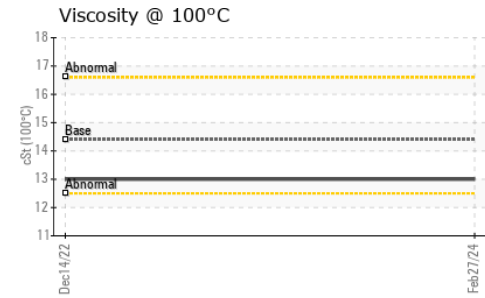
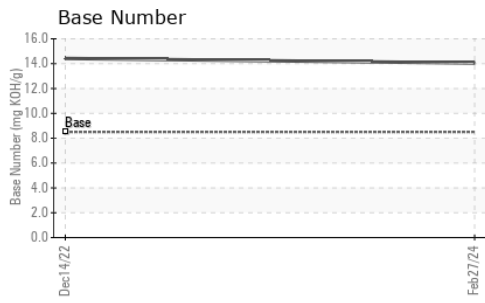
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	8	12	---
Potassium	ppm	ASTM D5185m	>20	0	0	---
Fuel		WC Method	>5	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.2	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	11.2	10.6	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	36.4	32.3	---
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 acceptable for the time in service.

Sodium	ppm	ASTM D5185m		1	2	---
Boron	ppm	ASTM D5185m	250	23	143	---
Barium	ppm	ASTM D5185m	10	1	0	---
Molybdenum	ppm	ASTM D5185m	100	554	566	---
Manganese	ppm	ASTM D5185m		<1	1	---
Magnesium	ppm	ASTM D5185m	450	912	551	---
Calcium	ppm	ASTM D5185m	3000	2825	3496	---
Phosphorus	ppm	ASTM D5185m	1150	1024	890	---
Zinc	ppm	ASTM D5185m	1350	1240	983	---
Sulfur	ppm	ASTM D5185m	4250	10628	14607	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	36.8	26.2	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	14.05	14.42	---
Visc @ 100°C	cSt	ASTM D445	14.4	13.0	13.0	---



Certificate L2367

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

Sample No. : HPL0004535

Lab Number : 06103180

Unique Number : 10901410

Test Package : MOB 2

Received : 28 Feb 2024

Tested : 29 Feb 2024

Diagnosed : 01 Mar 2024 - Sean Felton

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)