



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
BOLINGBROOK
Machine Id
LIEBHERR LTM1220 AT4864 (S/N 94864)
Component
Upper Diesel Engine
Fluid
HPL 10W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		HPL0002564	---	---
Sample Date		Client Info		15 Dec 2023	---	---
Machine Age	hrs	Client Info		6313	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				NORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	3	---	---
Chromium	ppm	ASTM D5185m	>5	<1	---	---
Nickel	ppm	ASTM D5185m	>5	0	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>3	0	---	---
Aluminum	ppm	ASTM D5185m	>15	6	---	---
Lead	ppm	ASTM D5185m	>30	1	---	---
Copper	ppm	ASTM D5185m	>125	49	---	---
Tin	ppm	ASTM D5185m	>5	0	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

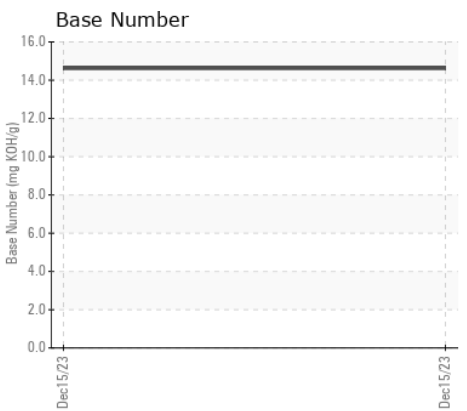
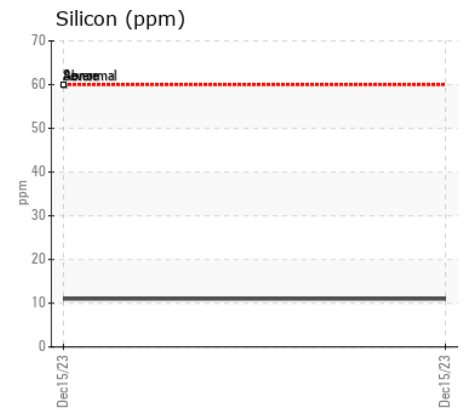
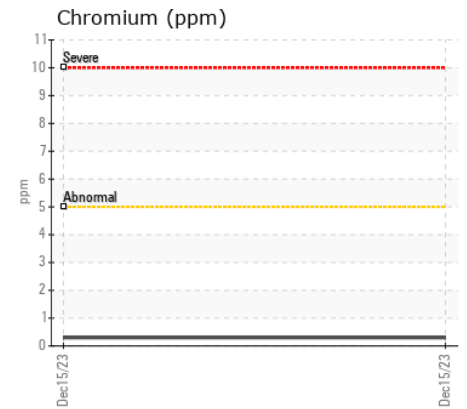
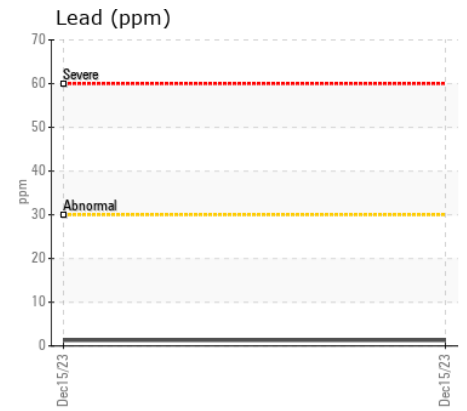
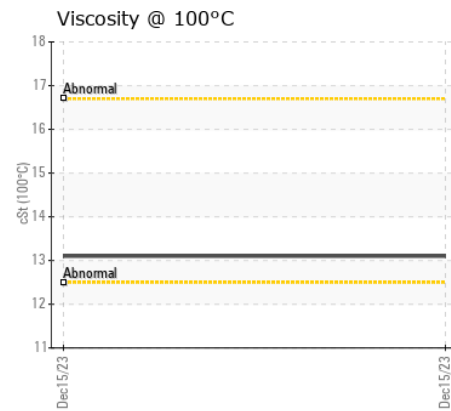
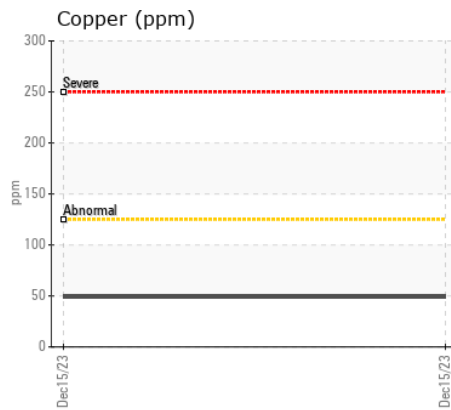
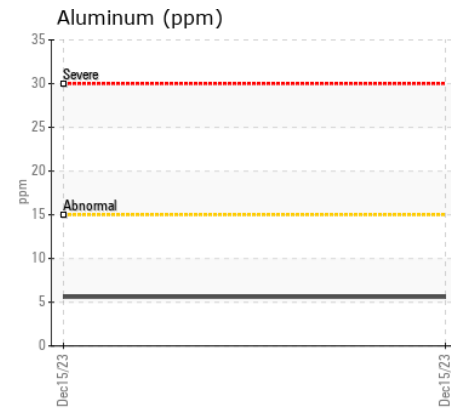
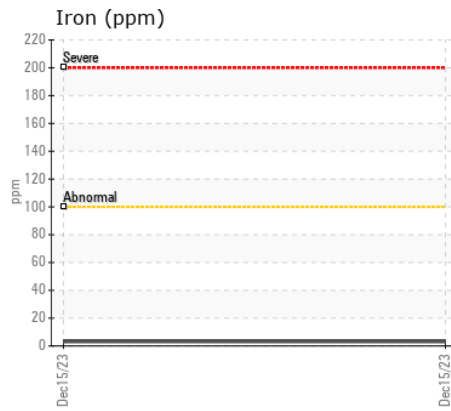
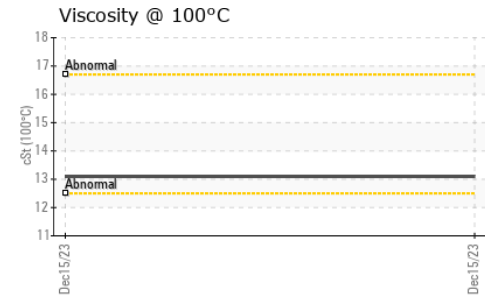
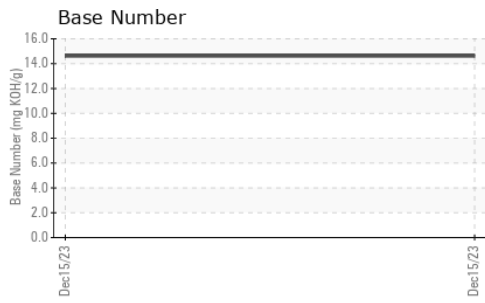
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	11	---	---
Potassium	ppm	ASTM D5185m	>20	1	---	---
Fuel		WC Method	>5	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.1	---	---
Nitration	Abs/cm	*ASTM D7624	>20	11.8	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	37.1	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	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		<1	---	---
Boron	ppm	ASTM D5185m		3	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		571	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		966	---	---
Calcium	ppm	ASTM D5185m		2578	---	---
Phosphorus	ppm	ASTM D5185m		1038	---	---
Zinc	ppm	ASTM D5185m		1235	---	---
Sulfur	ppm	ASTM D5185m		9074	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	41.1	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		14.62	---	---
Visc @ 100°C	cSt	ASTM D445		13.1	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HPL0002564
Lab Number : 06042295
Unique Number : 10802903
Test Package : MOB 2
Received : 21 Dec 2023
Tested : 22 Dec 2023
Diagnosed : 22 Dec 2023 - Angela Borella

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)