



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Area  
**BOLINGBROOK**  
Machine Id  
**LIEBHERR LTM1220 AT4864 (S/N 94864)**  
Component  
**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		<b>HPL0002122</b>	HPL0001456	---
Sample Date		Client Info		<b>30 Sep 2022</b>	26 May 2022	---
Machine Age	hrs	Client Info		<b>2858</b>	27348	---
Oil Age	hrs	Client Info		<b>0</b>	0	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>N/A</b>	N/A	---
Filter Changed		Client Info		<b>N/A</b>	N/A	---
Sample Status				<b>NORMAL</b>	NORMAL	---

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>18</b>	11	---
Chromium	ppm	ASTM D5185m	>5	<b>1</b>	<1	---
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	---
Silver	ppm	ASTM D5185m		<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>15	<b>4</b>	3	---
Lead	ppm	ASTM D5185m	>30	<b>2</b>	5	---
Copper	ppm	ASTM D5185m	>125	<b>5</b>	22	---
Tin	ppm	ASTM D5185m	>5	<b>2</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

## CONTAMINATION

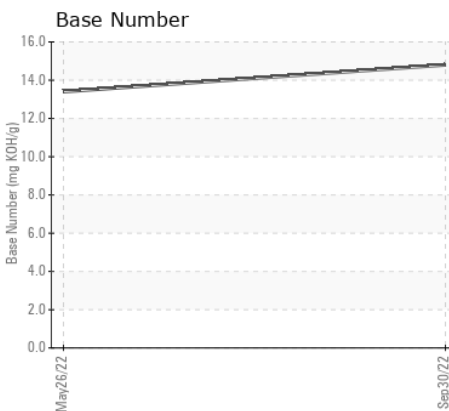
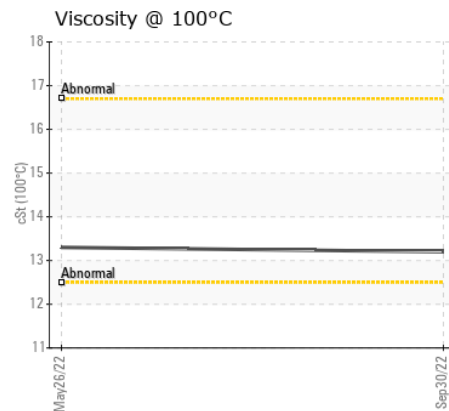
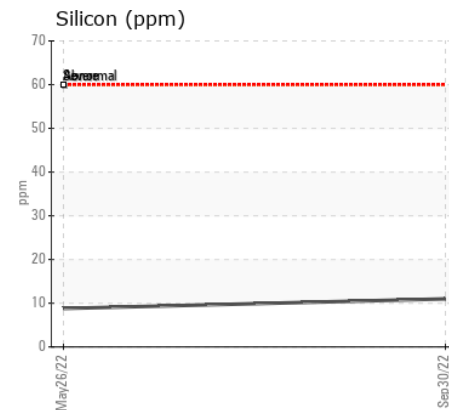
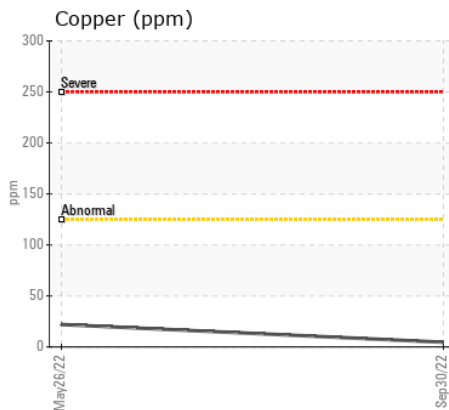
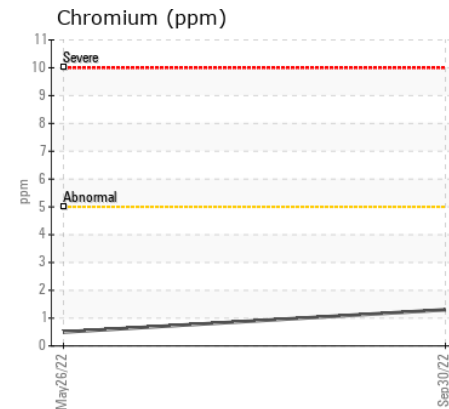
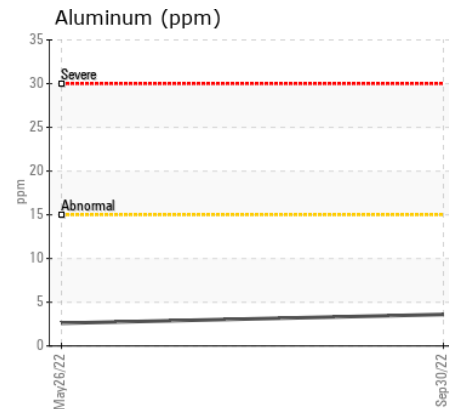
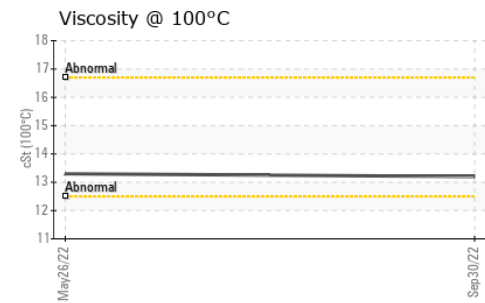
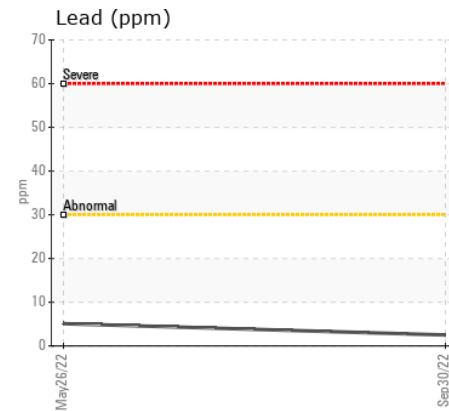
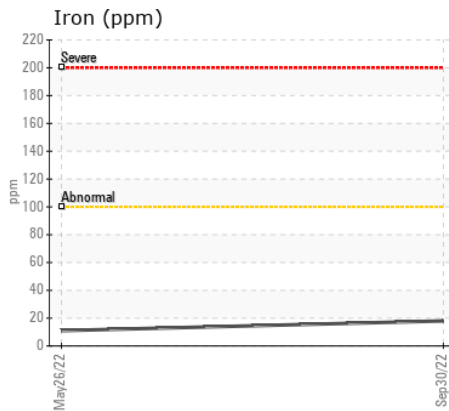
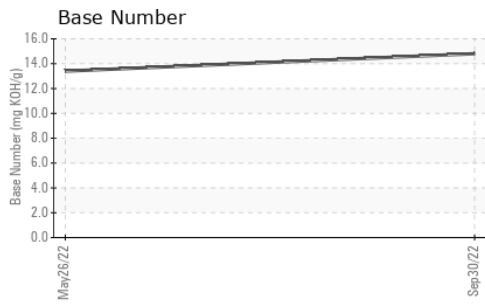
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	<b>11</b>	9	---
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	---
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.4</b>	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>10.5</b>	11.1	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>32.5</b>	30.2	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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		<b>0</b>	<1	---
Boron	ppm	ASTM D5185m		<b>209</b>	218	---
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Molybdenum	ppm	ASTM D5185m		<b>730</b>	672	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m		<b>490</b>	443	---
Calcium	ppm	ASTM D5185m		<b>4368</b>	3912	---
Phosphorus	ppm	ASTM D5185m		<b>883</b>	829	---
Zinc	ppm	ASTM D5185m		<b>1053</b>	1060	---
Sulfur	ppm	ASTM D5185m		<b>20758</b>	16727	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.5</b>	21.1	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>14.8</b>	13.4	---
Visc @ 100°C	cSt	ASTM D445		<b>13.2</b>	13.3	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : HPL0002122 **Received** : 05 Oct 2022  
**Lab Number** : 05658708 **Tested** : 06 Oct 2022  
**Unique Number** : 10163277 **Diagnosed** : 07 Oct 2022 - Don Baldrige  
**Test Package** : MOB 2

**STEVENS ON CRANE**  
 410 STEVENSON DR  
 BOLINGBROOK, IL  
 US 60440  
 Contact: JOE HAMMOND  
 joe@stevensoncrane.com

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)

T:  
F: