

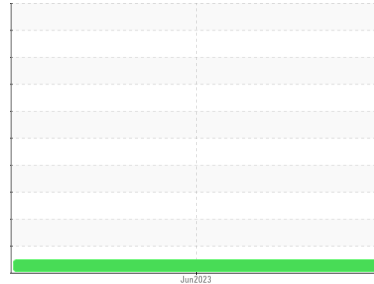
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**CHICAGO 95TH**  
Machine Id  
**LIEBHERR L-566 L-94 (S/N VATZ0460TZB031127)**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### 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.

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>PCA0097300</b>	---	---
Sample Date	Client Info	<b>16 Jun 2023</b>	---	---
Machine Age	hrs Client Info	<b>19248</b>	---	---
Oil Age	hrs Client Info	<b>500</b>	---	---
Oil Changed	Client Info	<b>N/A</b>	---	---
Sample Status		<b>NORMAL</b>	---	---

## CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<b>&lt;1.0</b>	---	---
Glycol	WC Method	<b>NEG</b>	---	---

## WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	<b>9</b>	---	---
Chromium	ppm ASTM D5185m >5	<b>&lt;1</b>	---	---
Nickel	ppm ASTM D5185m >5	<b>0</b>	---	---
Titanium	ppm ASTM D5185m	<b>1</b>	---	---
Silver	ppm ASTM D5185m >3	<b>0</b>	---	---
Aluminum	ppm ASTM D5185m >15	<b>1</b>	---	---
Lead	ppm ASTM D5185m >30	<b>5</b>	---	---
Copper	ppm ASTM D5185m >125	<b>6</b>	---	---
Tin	ppm ASTM D5185m >5	<b>&lt;1</b>	---	---
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	---	---
Cadmium	ppm ASTM D5185m	<b>&lt;1</b>	---	---

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 250	<b>4</b>	---	---
Barium	ppm ASTM D5185m 10	<b>0</b>	---	---
Molybdenum	ppm ASTM D5185m 100	<b>43</b>	---	---
Manganese	ppm ASTM D5185m	<b>&lt;1</b>	---	---
Magnesium	ppm ASTM D5185m 450	<b>738</b>	---	---
Calcium	ppm ASTM D5185m 3000	<b>1386</b>	---	---
Phosphorus	ppm ASTM D5185m 1150	<b>986</b>	---	---
Zinc	ppm ASTM D5185m 1350	<b>1232</b>	---	---
Sulfur	ppm ASTM D5185m 4250	<b>3688</b>	---	---

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >60	<b>6</b>	---	---
Sodium	ppm ASTM D5185m >158	<b>2</b>	---	---
Potassium	ppm ASTM D5185m >20	<b>3</b>	---	---

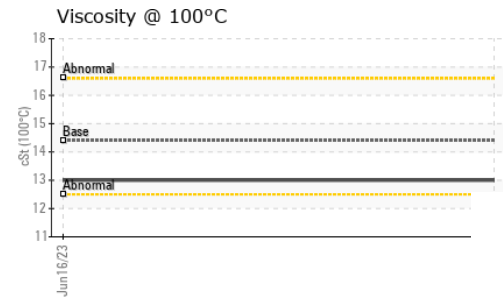
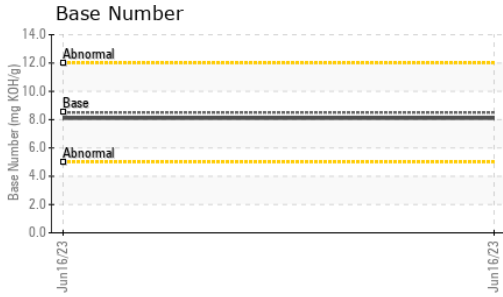
## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>0.4</b>	---	---
Nitration	Abs/cm *ASTM D7624 >20	<b>6.4</b>	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>18.4</b>	---	---

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>12.8</b>	---	---
Base Number (BN)	mg KOH/g ASTM D2896 8.5	<b>8.1</b>	---	---

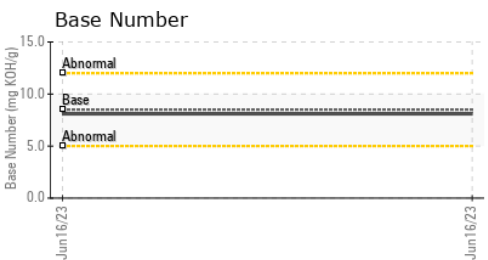
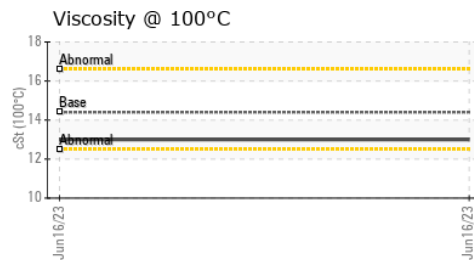
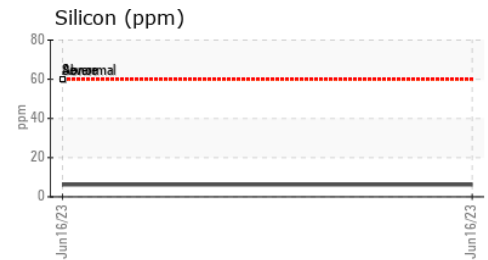
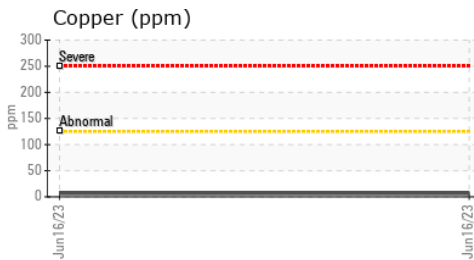
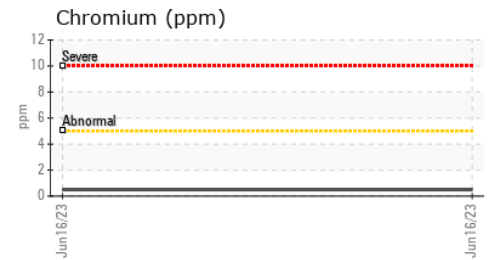
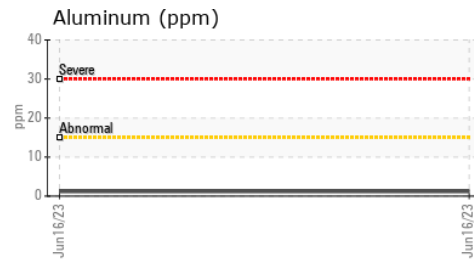
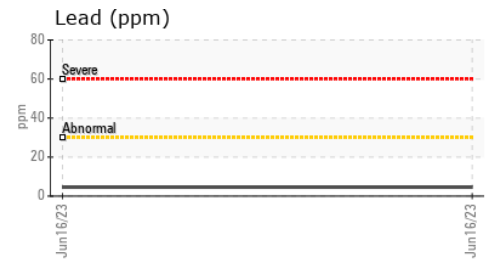
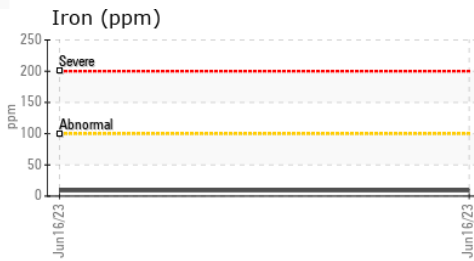
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
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	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.0</b>	---

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : PCA0097300 **Received** : 29 Aug 2023  
**Lab Number** : 05936960 **Diagnosed** : 29 Aug 2023  
**Unique Number** : 10622231 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**NORTH AMERICAN STEVEDORING CO**  
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 CHICAGO, IL  
 US 60617  
 Contact: PACO MARTINEZ  
 paco.martinez@qsl.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)

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F: