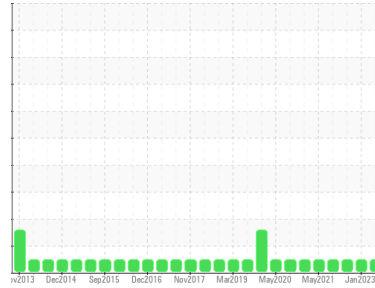




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**CHEATHAM ANNEX**  
 Machine Id  
**1B 1BLW CRANE 1B (S/N 62510225)**

Component  
**Gearbox**  
 Fluid  
**SHELL OMALA S4 WE 220 (--- 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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>WC0752657</b>	WC0752681	WC0513652
Sample Date	Client Info			<b>01 Oct 2023</b>	22 Jan 2023	24 Apr 2022
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed	Client Info			<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	<b>5</b>	2	8
Chromium	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>15	<b>0</b>	6	2
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m	>25	<b>5</b>	<1	3
Lead	ppm	ASTM D5185m	>100	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>200	<b>0</b>	0	0
Tin	ppm	ASTM D5185m	>25	<b>&lt;1</b>	<1	<1
Antimony	ppm	ASTM D5185m	>5	<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Cadmium	ppm	ASTM D5185m		<b>0</b>	<1	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>2</b>	0	2
Barium	ppm	ASTM D5185m		<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0	0
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>6</b>	0	0
Calcium	ppm	ASTM D5185m		<b>0</b>	1	2
Phosphorus	ppm	ASTM D5185m		<b>483</b>	665	467
Zinc	ppm	ASTM D5185m		<b>0</b>	3	0
Sulfur	ppm	ASTM D5185m		<b>132</b>	505	148

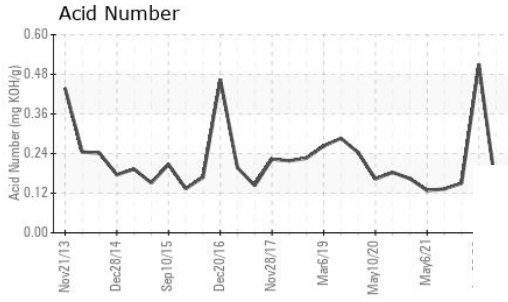
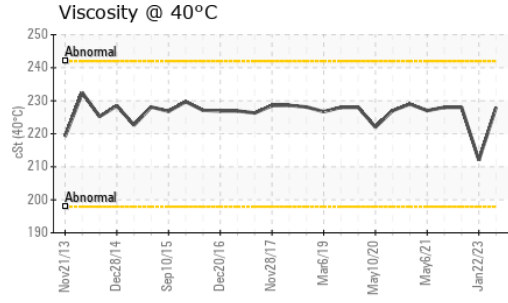
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	<b>8</b>	3	12
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	6	1
Potassium	ppm	ASTM D5185m	>20	<b>7</b>	1	2

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.131</b>	0.51	0.15

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Precipitate	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG
Free Water	scalar	*Visual		<b>NEG</b>	NEG	NEG



# OIL ANALYSIS REPORT



FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445		<b>228</b>	212	228

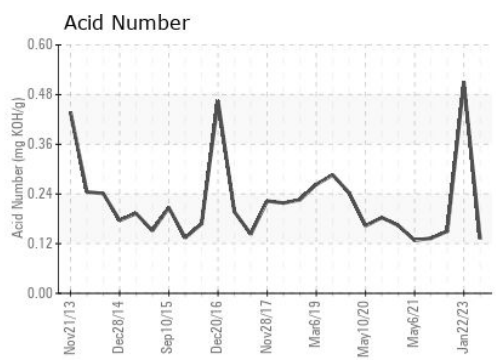
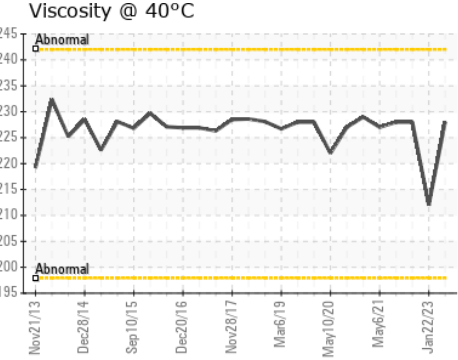
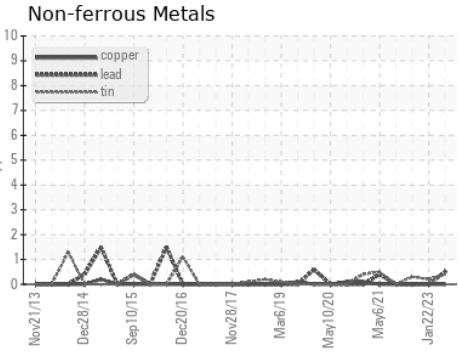
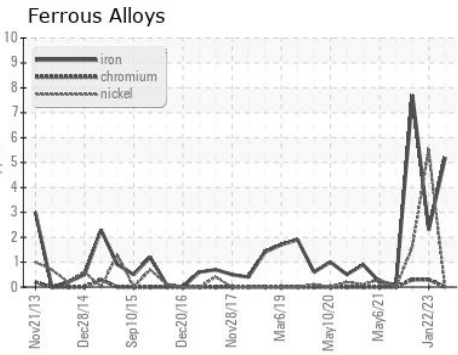
SAMPLE IMAGES		method	limit/base	current	history1	history2
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Color



Bottom

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0752657 **Received** : 29 Sep 2023  
**Lab Number** : **05965487** **Diagnosed** : 02 Oct 2023  
**Unique Number** : 10672038 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2

**CARGOTEC MARINE - MACGREGOR**  
 525 BYRON ST, SUITE B  
 CHESAPEAKE, VA  
 US 23320  
 Contact: TARMO MAGI  
 tarmo.magi@macgregor.com  
 T: (757)558-4584  
 F: (757)558-4581

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)