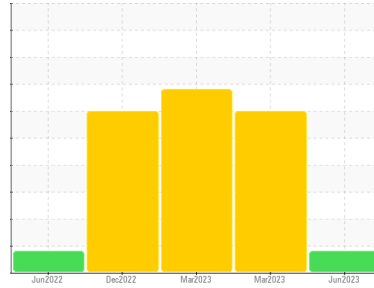




# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Area  
**Industrial Mechanical/Conveyors**  
 Machine Id  
**17-UGCNVY-CV-6680-3**  
 Component  
**Drive End Conveyor Gearbox**  
 Fluid  
**SHELL OMALA S2 G 220 (--- GAL)**

## DIAGNOSIS

### Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

### Wear

Lead ppm levels are abnormal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>WC0564999</b>	WC0540536	WC0540535
Sample Date	Client Info		<b>02 Jun 2023</b>	06 Mar 2023	06 Mar 2023
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>ABNORMAL</b>	SEVERE	SEVERE

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185(m)	>100	<b>17</b>	67	▲ 115
Chromium	ppm	ASTM D5185(m)		<b>0</b>	<1	1
Nickel	ppm	ASTM D5185(m)		<b>&lt;1</b>	2	5
Titanium	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)		<b>&lt;1</b>	3	6
Lead	ppm	ASTM D5185(m)	>15	▲ <b>85</b>	381	227
Copper	ppm	ASTM D5185(m)	>35	<b>&lt;1</b>	2	4
Tin	ppm	ASTM D5185(m)		<b>0</b>	0	0
Antimony	ppm	ASTM D5185(m)		<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Beryllium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185(m)		<b>0</b>	0	0

## ADDITIVES

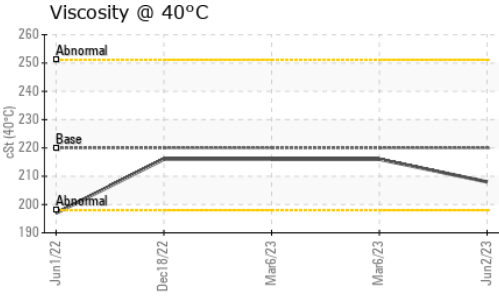
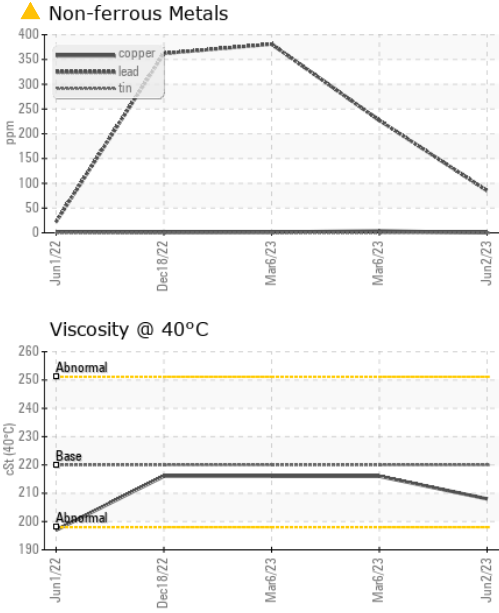
	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185(m)	4.4	<b>&lt;1</b>	<1	<1
Barium	ppm	ASTM D5185(m)	0.0	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	1
Magnesium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	2	4
Calcium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	9	5
Phosphorus	ppm	ASTM D5185(m)	215	<b>339</b>	323	316
Zinc	ppm	ASTM D5185(m)	0	<b>2</b>	4	4
Sulfur	ppm	ASTM D5185(m)	7039	<b>8571</b>	7495	7629
Lithium	ppm	ASTM D5185(m)		<b>&lt;1</b>	<1	<1

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185(m)	>50	<b>5</b>	16	22
Sodium	ppm	ASTM D5185(m)		<b>&lt;1</b>	2	3
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	1	2



# OIL ANALYSIS REPORT



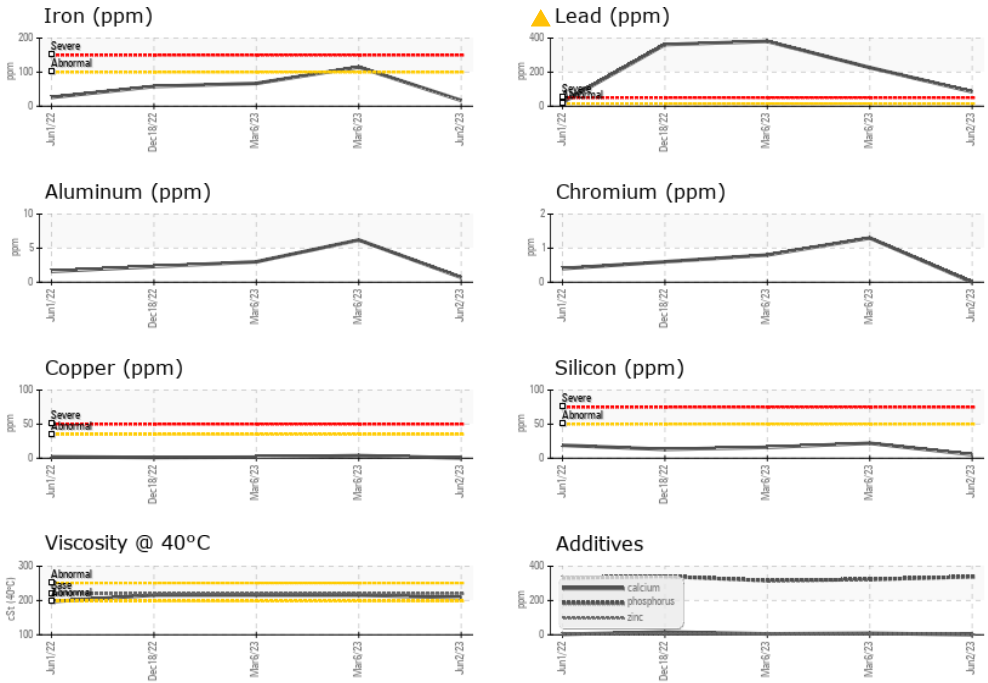
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE
Precipitate	scalar	Visual*	NONE	NONE	NONE
Silt	scalar	Visual*	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	220	208	216

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0564999 **Received** : 14 Jun 2023  
**Lab Number** : 02564150 **Diagnosed** : 14 Jun 2023  
**Unique Number** : 5593191 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1

**Vale - Creighton Mine**  
 CREIGHTON MINE MNTCE. (PLANT 17)  
 COPPER CLIFF, ON  
 CA P0M 1N0  
 Contact: Igor Bozhyk  
 igor.bozhyk@vale.com  
 T: (705)682-7009  
 F: x:

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.