



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Area  
**[202401122776]**  
 Machine Id  
**10576043**  
 Component  
**Gearbox**  
 Fluid  
**SHELL OMALA 460 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

## WEAR

All component wear rates are normal.

## CONTAMINATION

There is no indication of any contamination in the oil.

## FLUID CONDITION

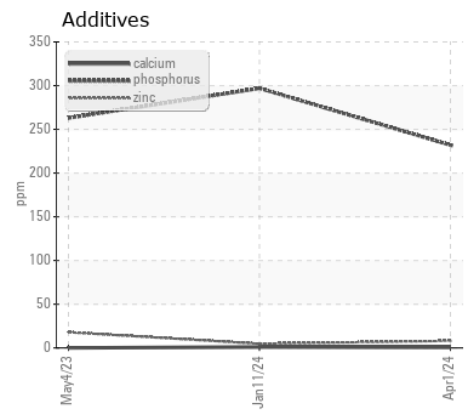
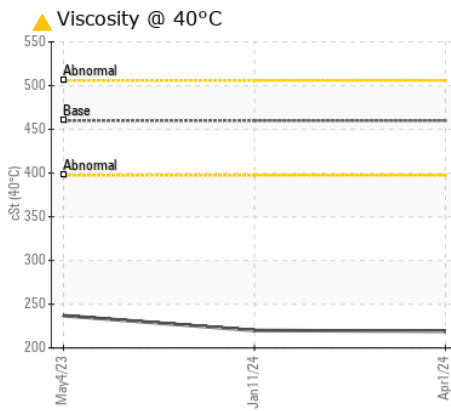
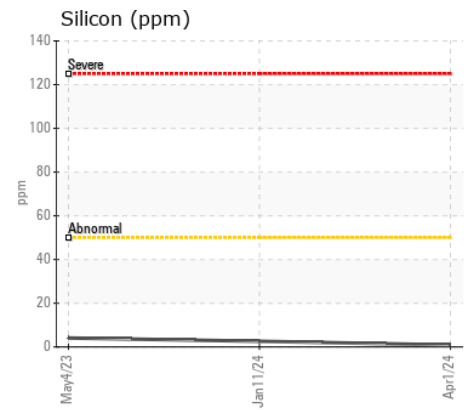
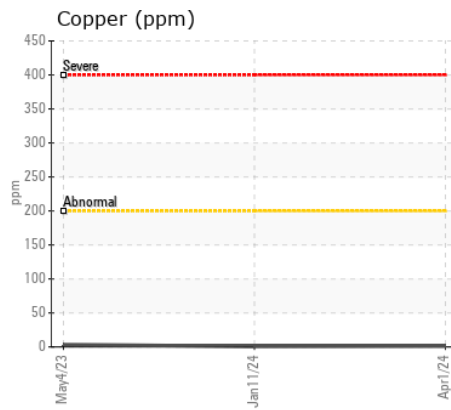
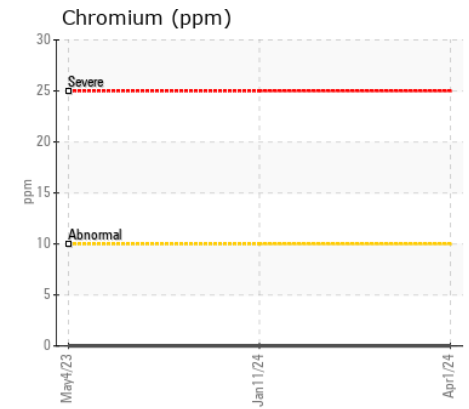
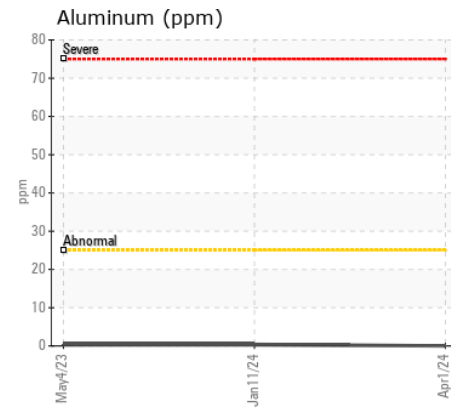
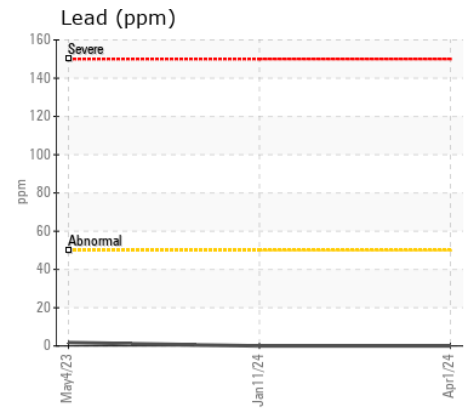
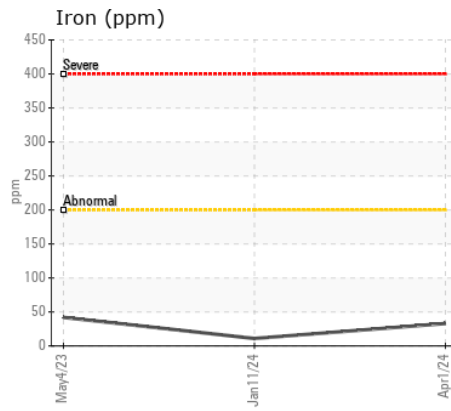
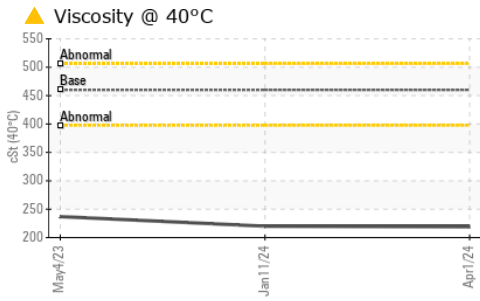
Viscosity of sample indicates oil is within ISO 220 range, advise investigate. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0814356</b>	WC0814354	WC0565053
Sample Date		Client Info		<b>01 Apr 2024</b>	11 Jan 2024	04 May 2023
Machine Age	hrs	Client Info		<b>0</b>	0	0
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	ABNORMAL	NORMAL

Iron	ppm	ASTM D5185(m)	>200	<b>33</b>	11	42
Chromium	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Nickel	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	0
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<b>0</b>	<1	<1
Lead	ppm	ASTM D5185(m)	>50	<b>0</b>	0	2
Copper	ppm	ASTM D5185(m)	>200	<b>1</b>	<1	4
Tin	ppm	ASTM D5185(m)	>10	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	0
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE

Silicon	ppm	ASTM D5185(m)	>50	<b>&lt;1</b>	3	4
Potassium	ppm	ASTM D5185(m)	>20	<b>0</b>	<1	<1
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	Visual*	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	<b>VLITE</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

Sodium	ppm	ASTM D5185(m)		<b>0</b>	0	<1
Boron	ppm	ASTM D5185(m)	6.2	<b>&lt;1</b>	<1	1
Barium	ppm	ASTM D5185(m)	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185(m)	0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	1
Magnesium	ppm	ASTM D5185(m)	0	<b>&lt;1</b>	<1	<1
Calcium	ppm	ASTM D5185(m)	0.0	<b>&lt;1</b>	1	0
Phosphorus	ppm	ASTM D5185(m)	290	<b>232</b>	297	263
Zinc	ppm	ASTM D5185(m)	3.8	<b>8</b>	5	18
Sulfur	ppm	ASTM D5185(m)	8167	<b>7808</b>	8635	8173
Visc @ 40°C	cSt	ASTM D7279(m)	460	<b>▲ 219</b>	▲ 220	237



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0814356 **Received** : 07 May 2024  
**Lab Number** : 02633967 **Tested** : 07 May 2024  
**Unique Number** : 5775120 **Diagnosed** : 07 May 2024 - Kevin Marson  
**Test Package** : MOB 1

**Vale - Creighton Mine**  
 CREIGHTON MINE MNTCE. (PLANT 17)  
 COPPER CLIFF, ON  
 CA P0M 1N0  
 Contact: Igor Bozhyk  
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 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.