



# OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id  
**NO UNIT WC0884654**  
 Component  
**Unknown Component**  
 Fluid  
**SHELL OMALA 320 (--- GAL)**

## RECOMMENDATION

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. Please provide more complete information on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

## WEAR

All component wear rates are normal.

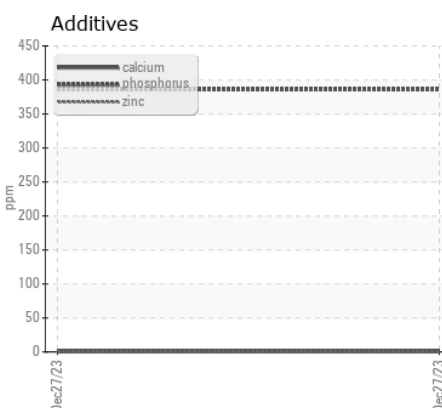
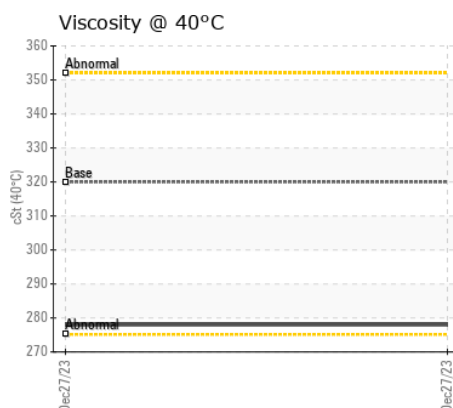
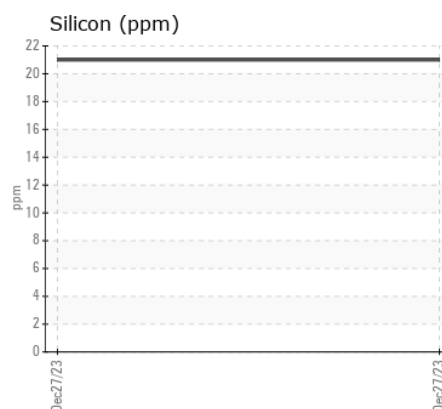
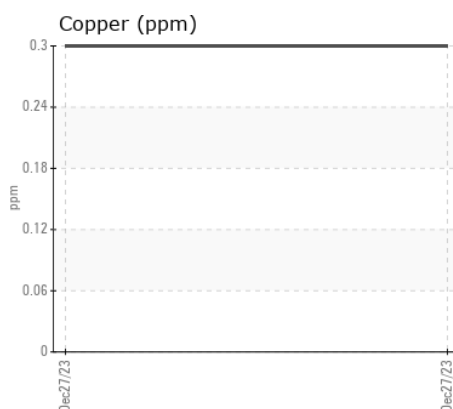
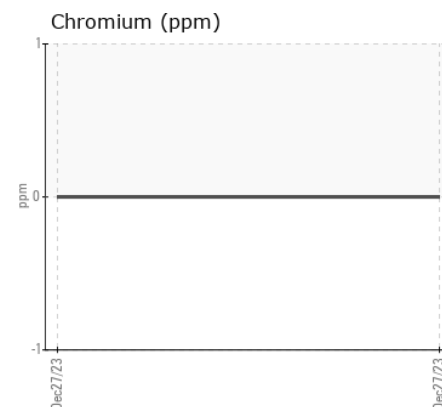
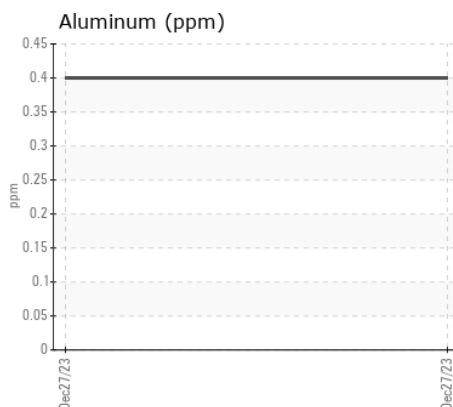
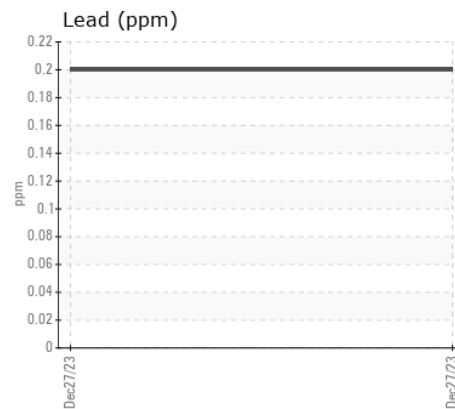
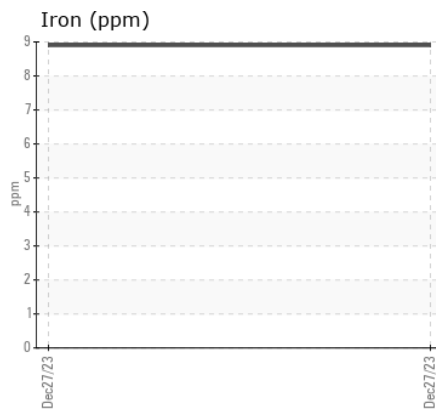
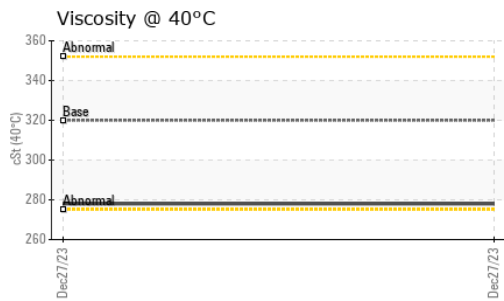
## CONTAMINATION

There is no indication of any contamination in the sample.

## FLUID CONDITION

Additive levels indicate the addition of a different brand, or type of sample. The condition of the sample is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0884654	---	---
Sample Date		Client Info		27 Dec 2023	---	---
Machine Age	hrs	Client Info		0	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		N/A	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				NORMAL	---	---
Iron	ppm	ASTM D5185(m)		9	---	---
Chromium	ppm	ASTM D5185(m)		0	---	---
Nickel	ppm	ASTM D5185(m)		<1	---	---
Titanium	ppm	ASTM D5185(m)		0	---	---
Silver	ppm	ASTM D5185(m)		0	---	---
Aluminum	ppm	ASTM D5185(m)		<1	---	---
Lead	ppm	ASTM D5185(m)		<1	---	---
Copper	ppm	ASTM D5185(m)		<1	---	---
Tin	ppm	ASTM D5185(m)		0	---	---
Vanadium	ppm	ASTM D5185(m)		0	---	---
White Metal	scalar	Visual*	NONE	NONE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---
Silicon	ppm	ASTM D5185(m)		21	---	---
Potassium	ppm	ASTM D5185(m)	>20	<1	---	---
Water		WC Method		NEG	---	---
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*		NEG	---	---
Sodium	ppm	ASTM D5185(m)		0	---	---
Boron	ppm	ASTM D5185(m)	5.5	24	---	---
Barium	ppm	ASTM D5185(m)	0.4	0	---	---
Molybdenum	ppm	ASTM D5185(m)	0.5	0	---	---
Manganese	ppm	ASTM D5185(m)		0	---	---
Magnesium	ppm	ASTM D5185(m)	23	0	---	---
Calcium	ppm	ASTM D5185(m)	13	<1	---	---
Phosphorus	ppm	ASTM D5185(m)	450	386	---	---
Zinc	ppm	ASTM D5185(m)	9.9	1	---	---
Sulfur	ppm	ASTM D5185(m)	8181	4384	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	320	278	---	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0884654 **Received** : 19 Jan 2024  
**Lab Number** : 02610034 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 5711120 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1

**Vale - Copper Cliff Smelter**  
 COPPER CLIFF SMELTER WAREHOUSE, 155 BALSAM ST.  
 COPPER CLIFF, ON  
 CA P0M 1N0  
 Contact: Andy Kozachanko  
 andrew.kozachanko@vale.com  
 T: (705)682-6687  
 F: (705)682-6939

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.