



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
10568549
Component
Gearbox
Fluid
SHELL OMALA 320 (--- 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.

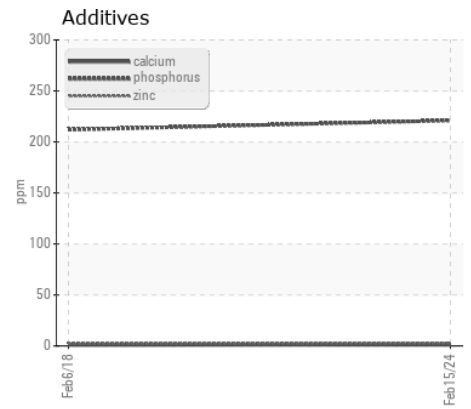
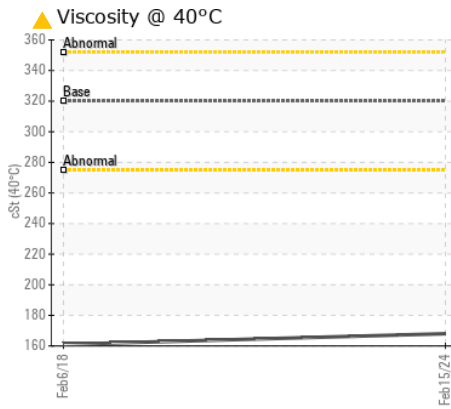
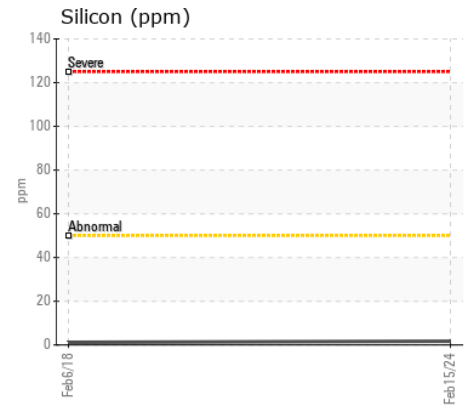
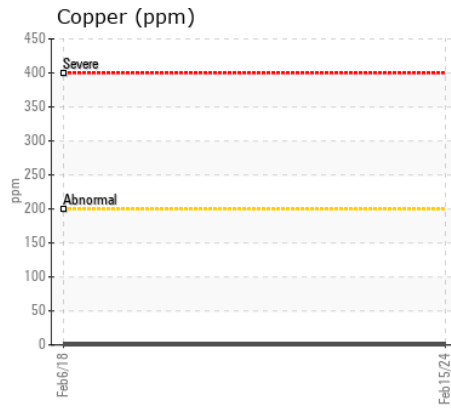
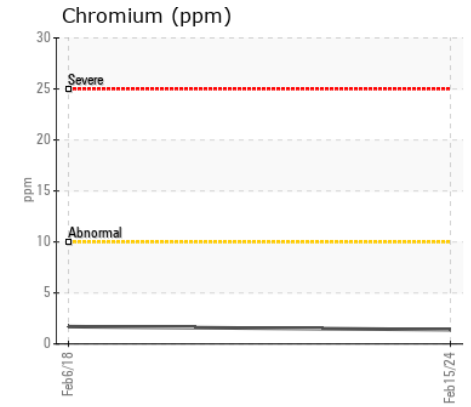
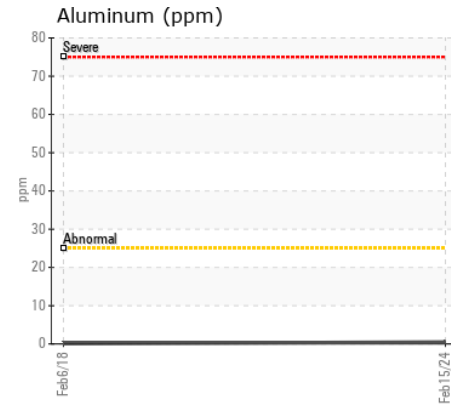
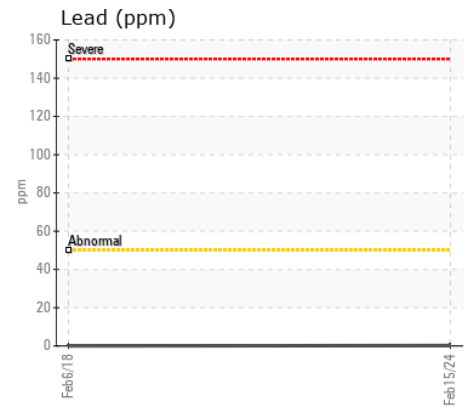
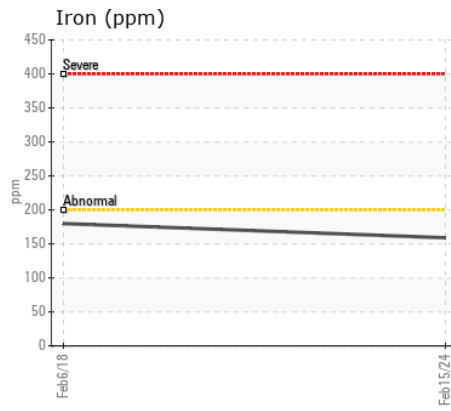
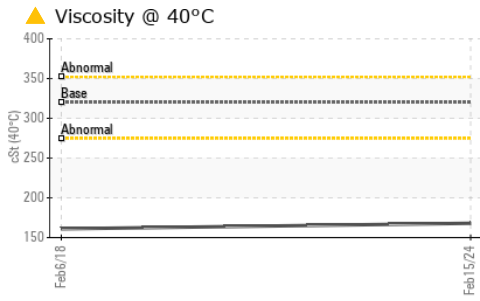
CONTAMINATION

There is no indication of any contamination in the oil.

FLUID CONDITION

Viscosity of sample indicates oil is within ISO 150 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		WC0884676	WC0289267	---
Sample Date		Client Info		15 Feb 2024	06 Feb 2018	---
Machine Age	hrs	Client Info		0	0	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		N/A	N/A	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				ABNORMAL	NORMAL	---
Iron	ppm	ASTM D5185(m)	>200	159	180	---
Chromium	ppm	ASTM D5185(m)	>10	1	2	---
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	---
Titanium	ppm	ASTM D5185(m)		0	0	---
Silver	ppm	ASTM D5185(m)		0	0	---
Aluminum	ppm	ASTM D5185(m)	>25	<1	<1	---
Lead	ppm	ASTM D5185(m)	>50	<1	0	---
Copper	ppm	ASTM D5185(m)	>200	<1	<1	---
Tin	ppm	ASTM D5185(m)	>10	0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	NONE	NONE	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---
Silicon	ppm	ASTM D5185(m)	>50	2	1	---
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	---
Water		WC Method	>0.2	NEG	NEG	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	VLITE	---
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	---
Sodium	ppm	ASTM D5185(m)		0	0	---
Boron	ppm	ASTM D5185(m)	5.5	4	3	---
Barium	ppm	ASTM D5185(m)	0.4	0	0	---
Molybdenum	ppm	ASTM D5185(m)	0.5	0	0	---
Manganese	ppm	ASTM D5185(m)		1	2	---
Magnesium	ppm	ASTM D5185(m)	23	0	<1	---
Calcium	ppm	ASTM D5185(m)	13	2	1	---
Phosphorus	ppm	ASTM D5185(m)	450	221	212	---
Zinc	ppm	ASTM D5185(m)	9.9	3	2	---
Sulfur	ppm	ASTM D5185(m)	8181	3878	3385	---
Visc @ 40°C	cSt	ASTM D7279(m)	320	▲ 168	161	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0884676
Lab Number : 02619006
Unique Number : 5736116
Test Package : MOB 1
Received : 29 Feb 2024
Tested : 29 Feb 2024
Diagnosed : 29 Feb 2024 - Kevin Marson

Vale - Copper Cliff Smelter
 COPPER CLIFF SMELTER WAREHOUSE, 155 BALSAM ST.
 COPPER CLIFF, ON
 CA P0M 1N0
 Contact: Andy Kozachanko
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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.