



# OIL ANALYSIS REPORT

WEAR  
CONTAMINATION  
FLUID CONDITION

**ATTENTION**  
**NORMAL**  
**NORMAL**

Machine Id  
**MGO FILTER PLANT**

Component  
**Gearbox**

Fluid  
**GEAR OIL (PAO) ISO 220 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) GEAR OIL (PAO) ISO 220. Please confirm. Please specify the component make and model with your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

## WEAR

Iron ppm levels are noted. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion. All other component wear rates are normal.

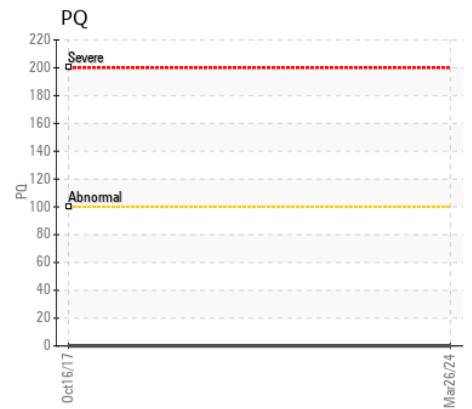
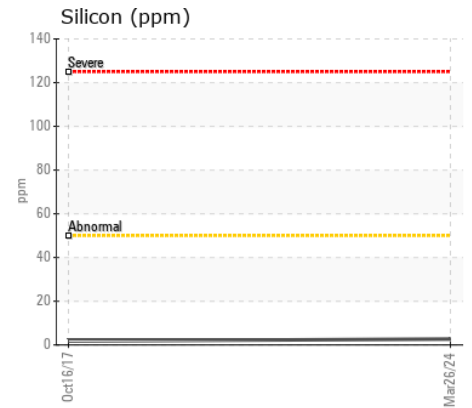
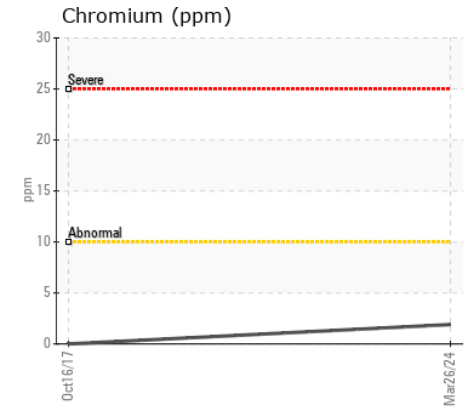
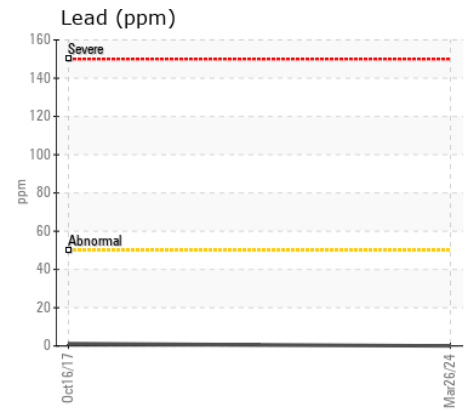
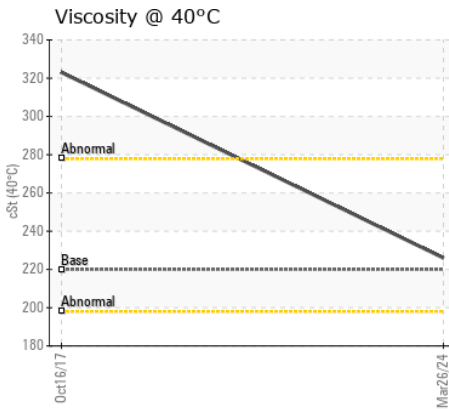
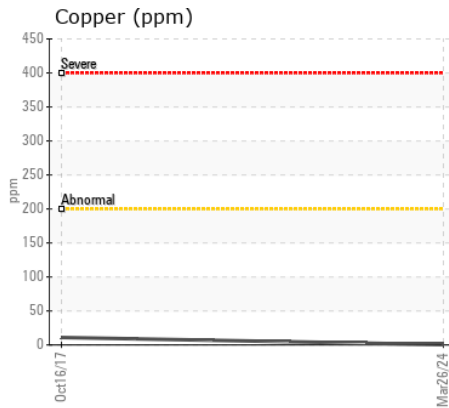
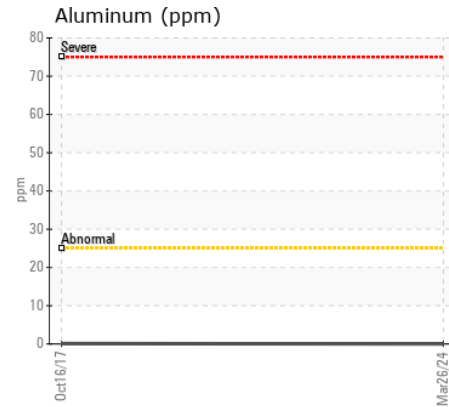
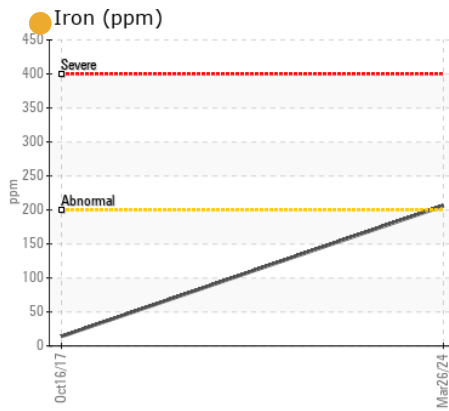
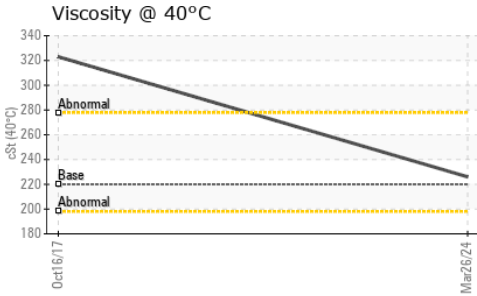
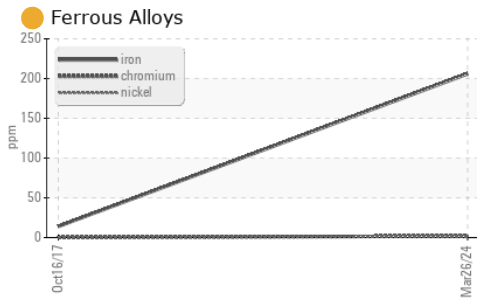
## CONTAMINATION

There is no indication of any contamination in the oil.

## FLUID CONDITION

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>WC0752064</b>	WC0286919	---
Sample Date		Client Info		<b>26 Mar 2024</b>	16 Oct 2017	---
Machine Age	hrs	Client Info		<b>0</b>	0	---
Oil Age	hrs	Client Info		<b>0</b>	0	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>N/A</b>	N/A	---
Filter Changed		Client Info		<b>N/A</b>	N/A	---
Sample Status				<b>ATTENTION</b>	NORMAL	---
PQ		ASTM D8184*		<b>0</b>	0	---
Iron	ppm	ASTM D5185(m)	>200	<b>206</b>	14	---
Chromium	ppm	ASTM D5185(m)	>10	<b>2</b>	0	---
Nickel	ppm	ASTM D5185(m)	>10	<b>&lt;1</b>	<1	---
Titanium	ppm	ASTM D5185(m)		<b>0</b>	0	---
Silver	ppm	ASTM D5185(m)		<b>0</b>	0	---
Aluminum	ppm	ASTM D5185(m)	>25	<b>0</b>	<1	---
Lead	ppm	ASTM D5185(m)	>50	<b>0</b>	1	---
Copper	ppm	ASTM D5185(m)	>200	<b>&lt;1</b>	11	---
Tin	ppm	ASTM D5185(m)	>10	<b>0</b>	3	---
Vanadium	ppm	ASTM D5185(m)		<b>0</b>	0	---
White Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Silicon	ppm	ASTM D5185(m)	>50	<b>3</b>	2	---
Potassium	ppm	ASTM D5185(m)	>20	<b>&lt;1</b>	<1	---
Water		WC Method	>0.2	<b>NEG</b>	NEG	---
Silt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Debris	scalar	Visual*	NONE	<b>VLITE</b>	NONE	---
Sand/Dirt	scalar	Visual*	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	Visual*	NORML	<b>NORML</b>	NORML	---
Odor	scalar	Visual*	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	Visual*	>0.2	<b>NEG</b>	NEG	---
Sodium	ppm	ASTM D5185(m)		<b>2</b>	0	---
Boron	ppm	ASTM D5185(m)	25	<b>10</b>	3	---
Barium	ppm	ASTM D5185(m)	12	<b>1</b>	<1	---
Molybdenum	ppm	ASTM D5185(m)	5	<b>0</b>	0	---
Manganese	ppm	ASTM D5185(m)		<b>&lt;1</b>	0	---
Magnesium	ppm	ASTM D5185(m)	25	<b>&lt;1</b>	<1	---
Calcium	ppm	ASTM D5185(m)	25	<b>27</b>	6	---
Phosphorus	ppm	ASTM D5185(m)	375	<b>340</b>	137	---
Zinc	ppm	ASTM D5185(m)	25	<b>9</b>	10	---
Sulfur	ppm	ASTM D5185(m)	4900	<b>6024</b>	7716	---
Visc @ 40°C	cSt	ASTM D7279(m)	220	<b>226</b>	323	---



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0752064 **Received** : 04 Apr 2024  
**Lab Number** : 02626670 **Tested** : 04 Apr 2024  
**Unique Number** : 5759802 **Diagnosed** : 05 Apr 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: PQ )

**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.