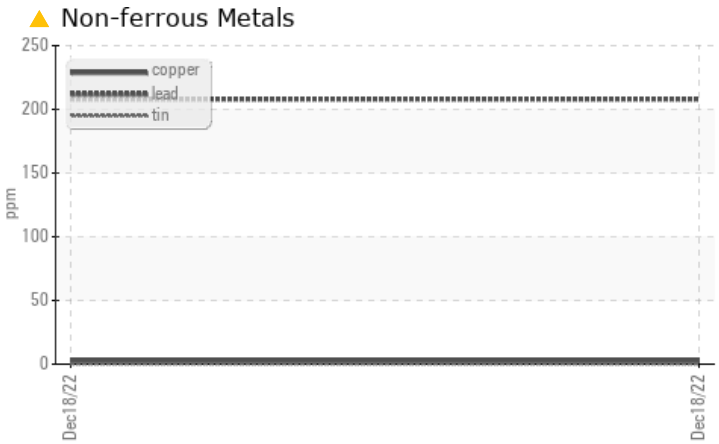
PROBLEM SUMMARY

Sample Rating Trend

WEAR

Machine Id
#4 CONVEYOR GEARBOX
Component
Gearbox
Fluid
NOT GIVEN (--- GAL)

COMPONENT CONDITION SUMMARY



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. 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. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	---	---
Lead	ppm	ASTM D5185(m)	>100	▲ **208**	---	---

Customer Id: INCOCCSMR
Sample No.: WC0540556
Lab Number: 02537025
Test Package: IND 2

To manage this report scan the QR code

To discuss the diagnosis or test data:
Kevin Marson +1 (289)291-4644 x4644
Kevin.Marson@wearcheck.com

To change component or sample information:
Gloria Gonzalez +1 (289)291-4643 x4643
gloria.gonzalez@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid	---	---	?	We recommend that you drain the oil from the component if this has not already been done.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Alert	---	---	?	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.
Information Required	---	---	?	Please specify the brand, type, and viscosity of the oil on your next sample. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

HISTORICAL DIAGNOSIS

OIL ANALYSIS REPORT

Sample Rating Trend

WEAR

Machine Id
#4 CONVEYOR GEARBOX
Component
Gearbox
Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

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. 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. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

Lead ppm levels are abnormal. Bearing and/or bushing wear is indicated.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The AN level is acceptable for this fluid. 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		**WC0540556**	---	---
Sample Date		Client Info		**18 Dec 2022**	---	---
Machine Age	hrs	Client Info		**0**	---	---
Oil Age	hrs	Client Info		**0**	---	---
Oil Changed		Client Info		**Not Changd**	---	---
Sample Status				**ABNORMAL**	---	---

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	---	---

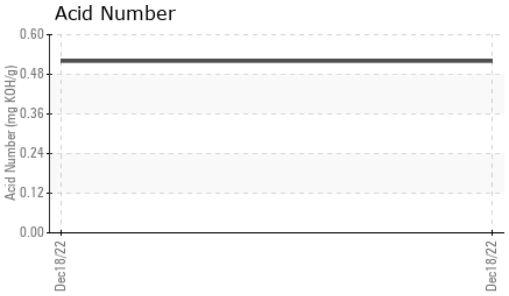
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184*		**34**	---	---
Iron	ppm	ASTM D5185(m)	>200	**89**	---	---
Chromium	ppm	ASTM D5185(m)	>15	**1**	---	---
Nickel	ppm	ASTM D5185(m)	>15	**3**	---	---
Titanium	ppm	ASTM D5185(m)		**<1**	---	---
Silver	ppm	ASTM D5185(m)		**0**	---	---
Aluminum	ppm	ASTM D5185(m)	>25	**5**	---	---
Lead	ppm	ASTM D5185(m)	>100	▲ **208**	---	---
Copper	ppm	ASTM D5185(m)	>200	**3**	---	---
Tin	ppm	ASTM D5185(m)	>25	**<1**	---	---
Antimony	ppm	ASTM D5185(m)	>5	**<1**	---	---
Vanadium	ppm	ASTM D5185(m)		**0**	---	---
Beryllium	ppm	ASTM D5185(m)		**0**	---	---
Cadmium	ppm	ASTM D5185(m)		**0**	---	---

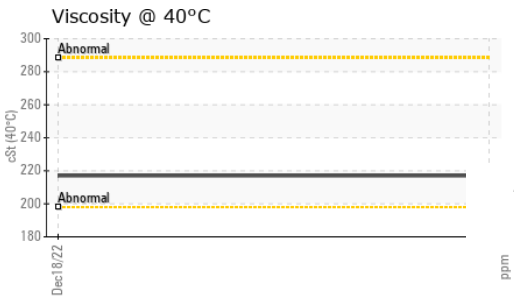
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**<1**	---	---
Barium	ppm	ASTM D5185(m)		**0**	---	---
Molybdenum	ppm	ASTM D5185(m)		**0**	---	---
Manganese	ppm	ASTM D5185(m)		**<1**	---	---
Magnesium	ppm	ASTM D5185(m)		**3**	---	---
Calcium	ppm	ASTM D5185(m)		**3**	---	---
Phosphorus	ppm	ASTM D5185(m)		**327**	---	---
Zinc	ppm	ASTM D5185(m)		**3**	---	---
Sulfur	ppm	ASTM D5185(m)		**7799**	---	---
Lithium	ppm	ASTM D5185(m)		**<1**	---	---

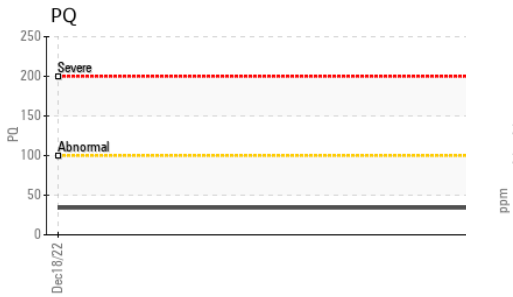
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>50	**17**	---	---
Sodium	ppm	ASTM D5185(m)		**2**	---	---
Potassium	ppm	ASTM D5185(m)	>20	**2**	---	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		**0.52**	---	---

OIL ANALYSIS REPORT

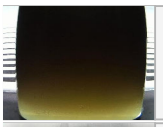




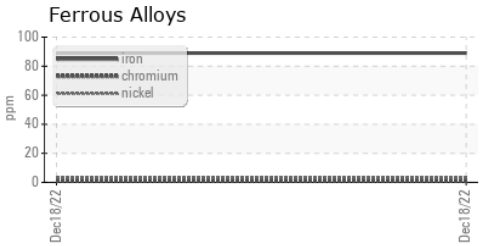


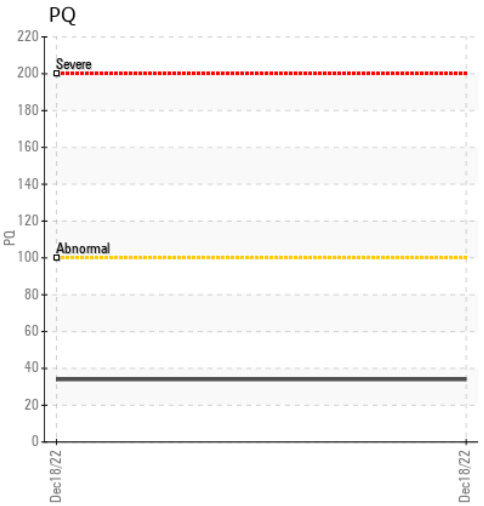
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	---	---
Yellow Metal	scalar	Visual*	NONE	**NONE**	---	---
Precipitate	scalar	Visual*	NONE	**NONE**	---	---
Silt	scalar	Visual*	NONE	**NONE**	---	---
Debris	scalar	Visual*	NONE	**NONE**	---	---
Sand/Dirt	scalar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

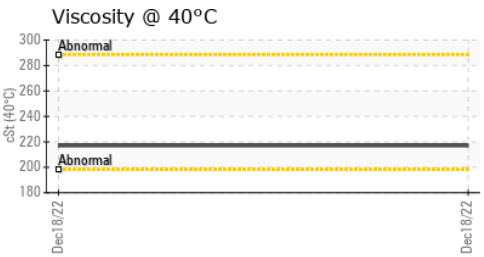
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)		**217**	---	---

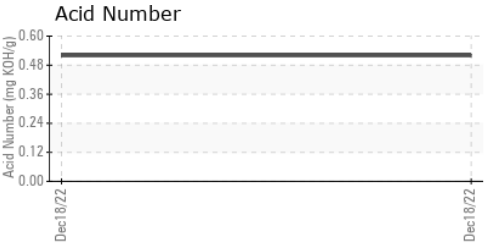
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color				*no image*	*no image*
Bottom				*no image*	*no image*

GRAPHS









ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0540556 **Received** : 01 Feb 2023
Lab Number : 02537025 **Diagnosed** : 03 Feb 2023
Unique Number : 5526025 **Diagnostician** : Kevin Marson
Test Package : IND 2 (Additional Tests: TAN Man)

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.

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