



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

Filter Plant

Machine Id

Metso Mineral Ind. N/A #1 PRECIPITATION TANK AGITATOR (S/N 45540)

Component

Gear Reducer

Fluid

SHELL OMALA S2 G 320 (28 LTR)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0752070	WC0304851	WC0304855
Sample Date		Client Info		26 Mar 2024	09 Mar 2020	15 Nov 2019
Machine Age	yrs	Client Info		0	0	0
Oil Age	yrs	Client Info		0	0	0
Filter Age	yrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Not Changd	N/A
Filter Changed		Client Info		N/A	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>150	7	8	9
Chromium	ppm	ASTM D5185(m)	>10	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>10	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>25	0	<1	<1
Lead	ppm	ASTM D5185(m)	>100	0	0	0
Copper	ppm	ASTM D5185(m)	>50	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>10	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

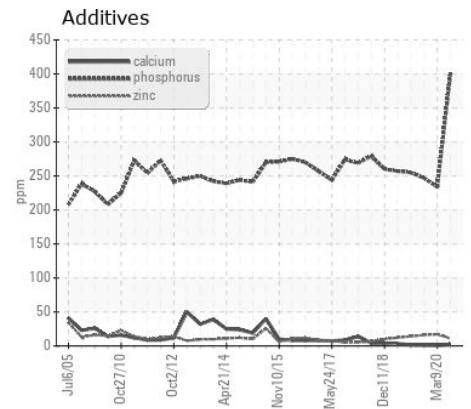
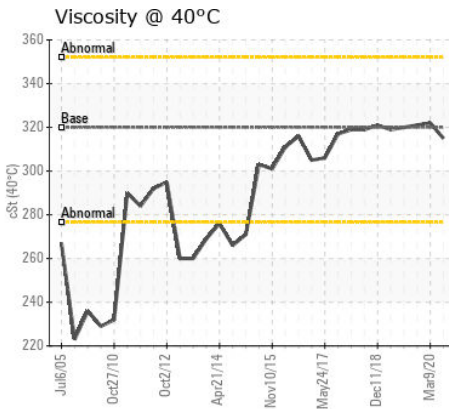
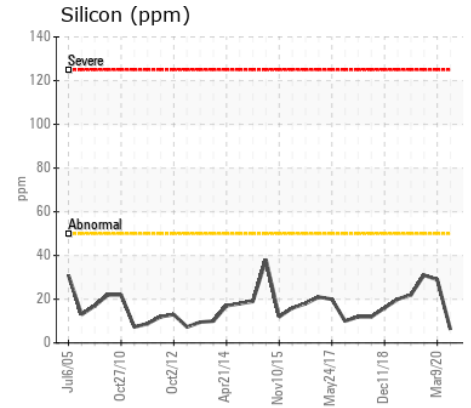
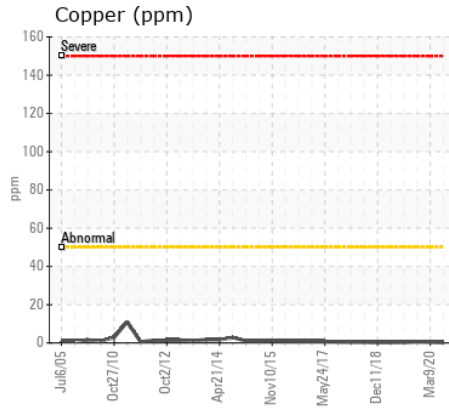
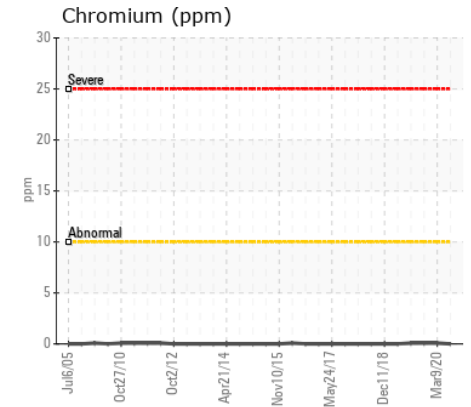
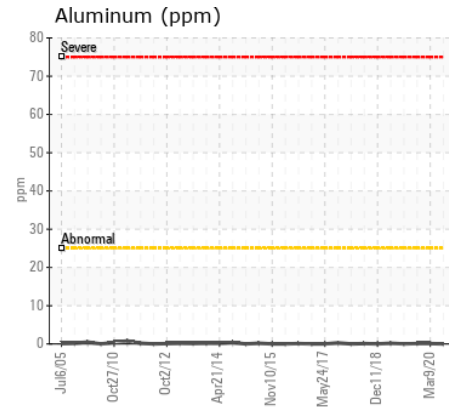
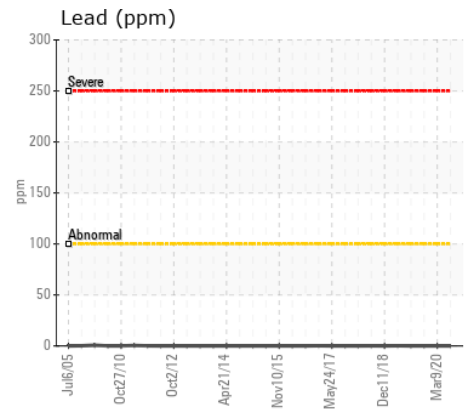
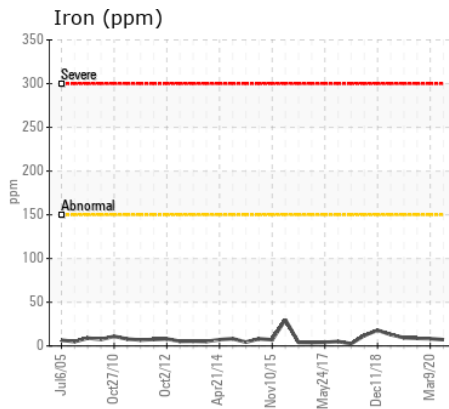
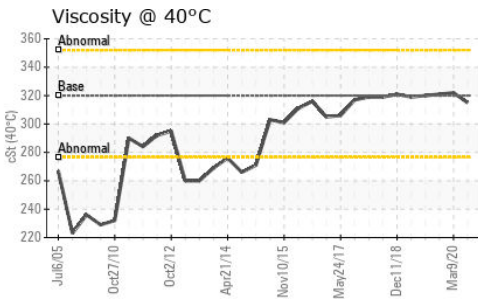
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>50	6	29	31
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	VLITE	VLITE	VLITE
Sand/Dirt	scalar	Visual*	NONE	VLITE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185(m)		<1	0	0
Boron	ppm	ASTM D5185(m)	5.5	22	4	4
Barium	ppm	ASTM D5185(m)	0.4	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0.5	0	<1	<1
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)	23	<1	<1	<1
Calcium	ppm	ASTM D5185(m)	13	2	<1	1
Phosphorus	ppm	ASTM D5185(m)	450	400	234	247
Zinc	ppm	ASTM D5185(m)	9.9	11	17	16
Sulfur	ppm	ASTM D5185(m)	8181	4945	8628	8836
Visc @ 40°C	cSt	ASTM D7279(m)	320	315	322	321



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0752070
Lab Number : 02626671
Unique Number : 5759803
Test Package : MOB 1
Received : 04 Apr 2024
Tested : 04 Apr 2024
Diagnosed : 04 Apr 2024 - Wes Davis

Vale - Copper Cliff Smelter
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 COPPER CLIFF, ON
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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.