



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
SMELTER 61
Machine Id
61-37-000-2014
Component
Hydraulic System
Fluid
FORSYTHE NO FIRE HPWG 46B (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. Please contact your representative for information regarding the proper sampling kits for your service. NOTE: We recommend using MOB 2 test kits, this testkit includes Particle Count to determine the ISO cleanliness of the fluid.

WEAR

All component wear rates are normal.

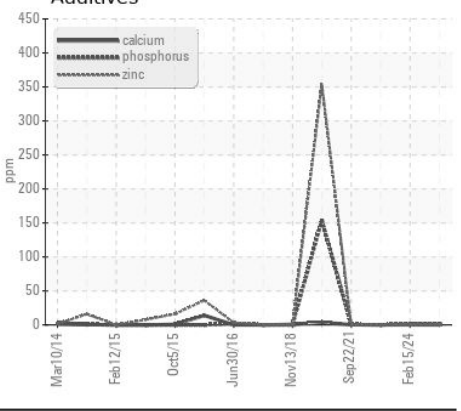
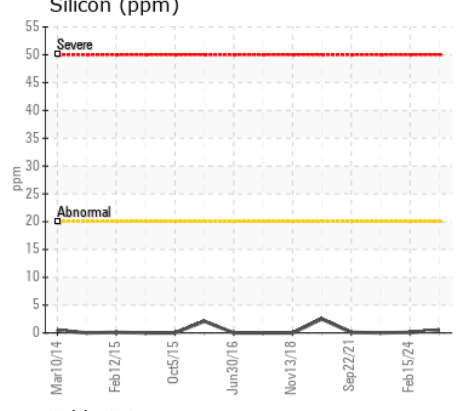
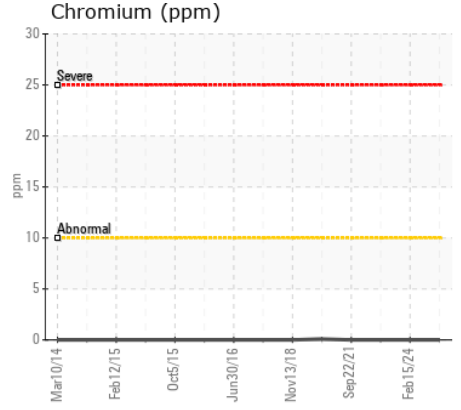
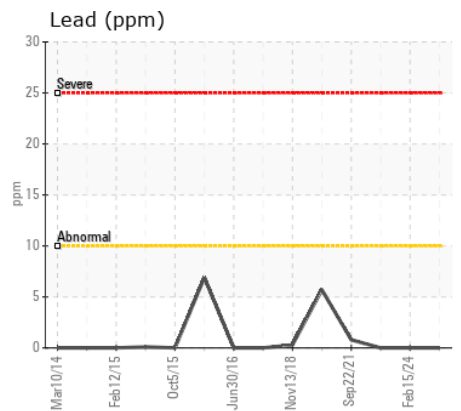
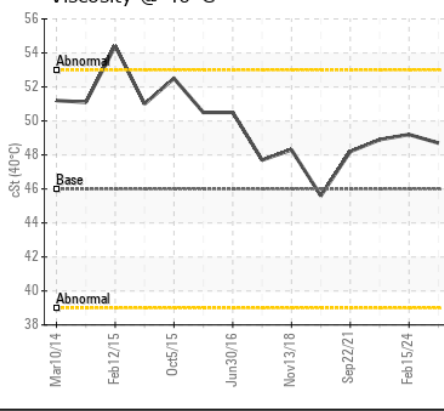
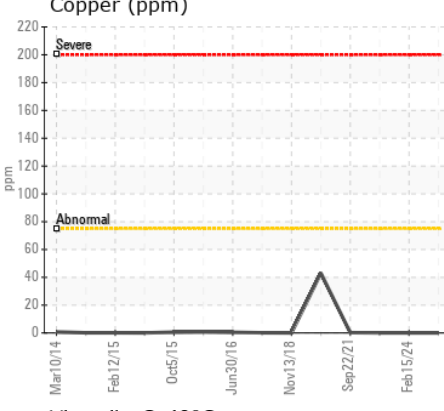
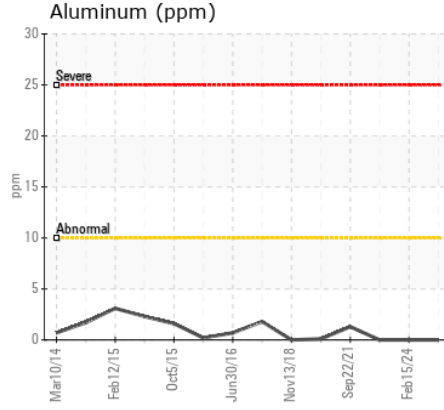
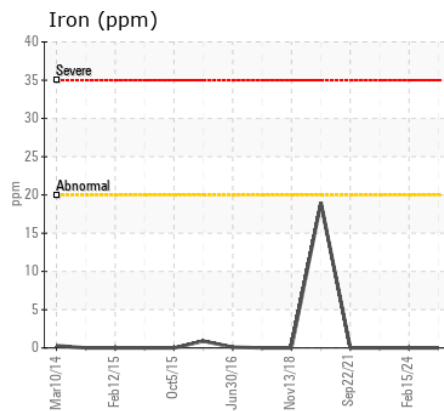
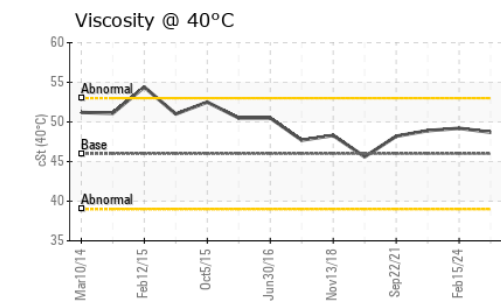
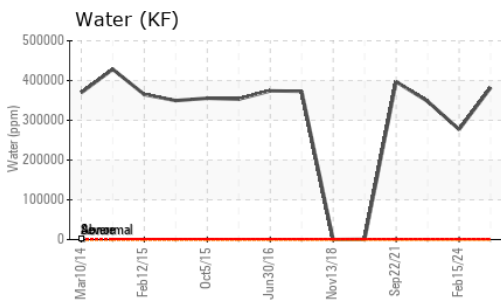
CONTAMINATION

There is no indication of any contamination in the component(unconfirmed).

FLUID CONDITION

The water concentration level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0304936	WC0304929	WC0304808
Sample Date		Client Info		12 Apr 2024	15 Feb 2024	15 Aug 2023
Machine Age	mths	Client Info		0	0	0
Oil Age	mths	Client Info		0	0	0
Filter Age	mths	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Not Changd
Filter Changed		Client Info		N/A	N/A	Not Changd
Sample Status				NORMAL	ABNORMAL	NORMAL
Iron	ppm	ASTM D5185(m)	>20	0	0	0
Chromium	ppm	ASTM D5185(m)	>10	0	0	0
Nickel	ppm	ASTM D5185(m)	>10	0	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>10	0	0	0
Lead	ppm	ASTM D5185(m)	>10	0	0	0
Copper	ppm	ASTM D5185(m)	>75	0	0	0
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
Silicon	ppm	ASTM D5185(m)	>20	<1	<1	0
Potassium	ppm	ASTM D5185(m)	>20	0	31	0
Water	%	ASTM D6304*	>50	38.2	▲ 27.7	34.77
ppm Water	ppm	ASTM D6304*		382000	▲ 277000	347743.0
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	FRGLY	FRGLY	FRGLY
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>50	>10%	>10%	>10%
Sodium	ppm	ASTM D5185(m)		3	8	0
Boron	ppm	ASTM D5185(m)	0.0	<1	<1	0
Barium	ppm	ASTM D5185(m)	0.2	1	<1	0
Molybdenum	ppm	ASTM D5185(m)	0.7	0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)	2.7	<1	<1	<1
Calcium	ppm	ASTM D5185(m)	3.1	<1	<1	<1
Phosphorus	ppm	ASTM D5185(m)	6.8	1	2	0
Zinc	ppm	ASTM D5185(m)	2.1	0	0	0
Sulfur	ppm	ASTM D5185(m)	326	42	56	52
Visc @ 40°C	cSt	ASTM D7279(m)	46	48.7	49.2	48.9



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0304936
Lab Number : 02630800
Unique Number : 5763932
Test Package : MOB 1 (Additional Tests: KF)

Received : 22 Apr 2024
Tested : 30 Apr 2024
Diagnosed : 30 Apr 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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 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.