



OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
Industrial Mechanical/Conveyors [202400085065]

Machine Id
17-UGCNVY-CV-6680-3

Component
Drive End Conveyor Gearbox

Fluid
ESSO SPARTAN EP 220 (--- GAL)

RECOMMENDATION

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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0866336	WC0540541	WC0565049
Sample Date		Client Info		07 Feb 2024	15 Nov 2023	15 Nov 2023
Machine Age	hrs	Client Info		0	0	0
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	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				SEVERE	SEVERE	SEVERE

WEAR

Lead ppm levels are severe.

Iron	ppm	ASTM D5185(m)	>100	26	27	51
Chromium	ppm	ASTM D5185(m)		<1	<1	1
Nickel	ppm	ASTM D5185(m)		<1	<1	2
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	<1
Aluminum	ppm	ASTM D5185(m)		<1	1	2
Lead	ppm	ASTM D5185(m)	>15	▲ 130	▲ 124	▲ 99
Copper	ppm	ASTM D5185(m)	>35	<1	<1	1
Tin	ppm	ASTM D5185(m)		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	VLITE	NONE

CONTAMINATION

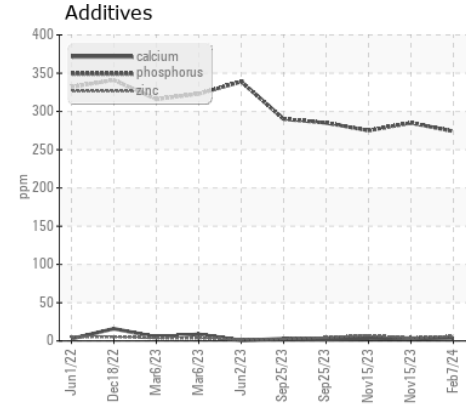
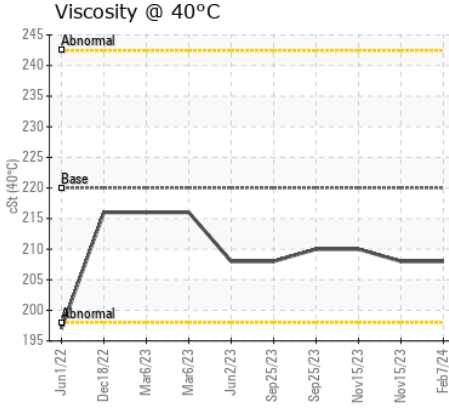
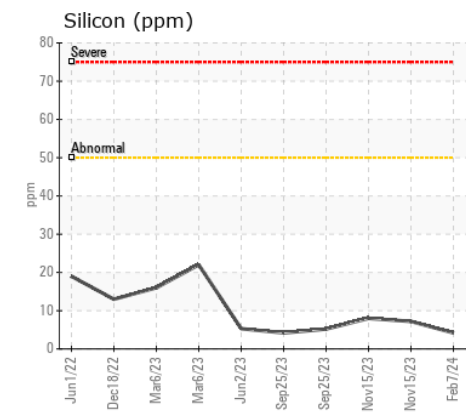
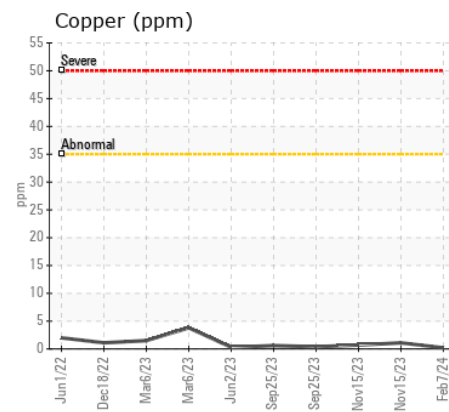
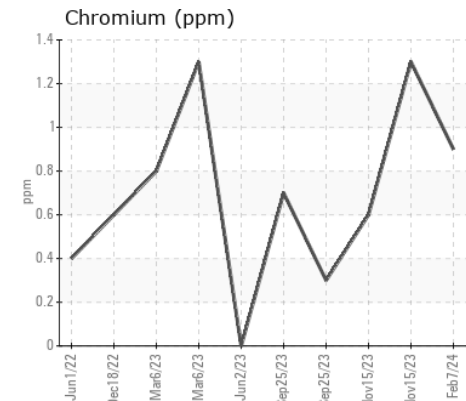
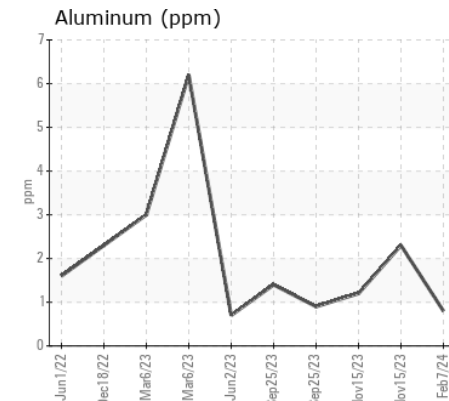
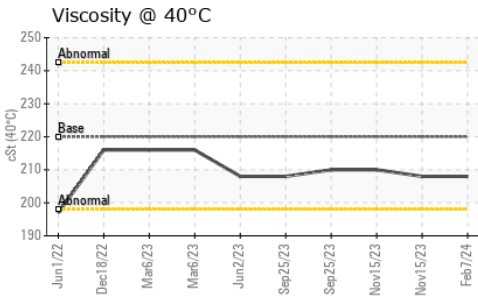
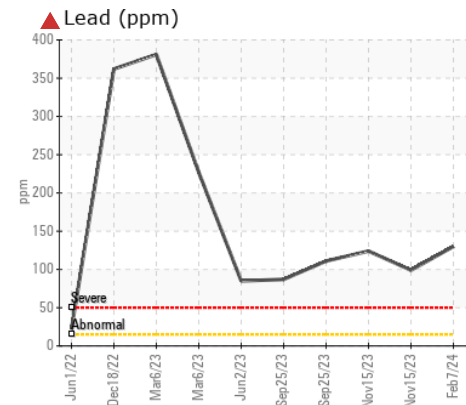
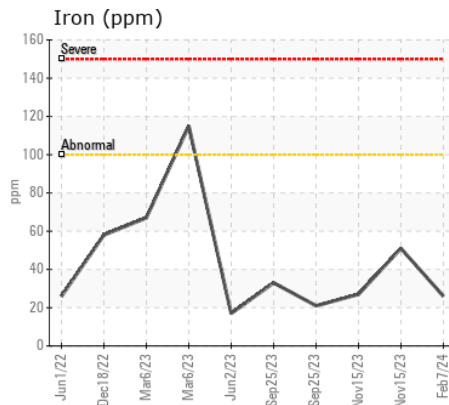
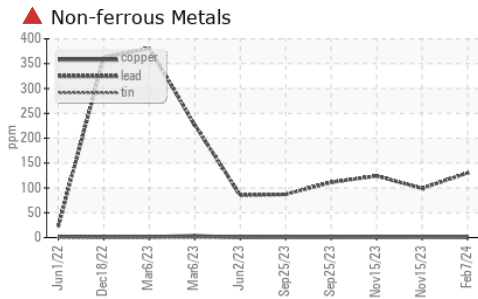
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>50	4	8	7
Potassium	ppm	ASTM D5185(m)	>20	1	0	<1
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	Visual*	NONE	NONE	NONE	VLITE
Debris	scalar	Visual*	NONE	VLITE	VLITE	▲ LIGHT
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	NONE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		<1	<1	2
Boron	ppm	ASTM D5185(m)	.5	<1	<1	<1
Barium	ppm	ASTM D5185(m)		<1	<1	<1
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)		0	0	0
Magnesium	ppm	ASTM D5185(m)	0	<1	<1	2
Calcium	ppm	ASTM D5185(m)	1.7	3	4	3
Phosphorus	ppm	ASTM D5185(m)	250	274	285	275
Zinc	ppm	ASTM D5185(m)	.3	6	4	7
Sulfur	ppm	ASTM D5185(m)		7738	8007	7723
Visc @ 40°C	cSt	ASTM D7279(m)	220	208	208	210



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0866336
Lab Number : 02625396
Unique Number : 5750515
Test Package : MOB 1

Vale - Creighton Mine
 CREIGHTON MINE MNTCE. (PLANT 17)
 COPPER CLIFF, ON
 CA P0M 1N0
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 T: (705)682-7009
 F: x:

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.