



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL

Machine Id
61-31-000-186

Component
Gearbox

Fluid
ESSO SPARTAN EP 220 (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

There is no indication of any contamination in the oil.

FLUID CONDITION

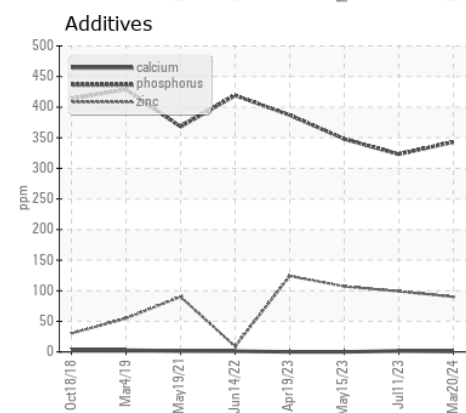
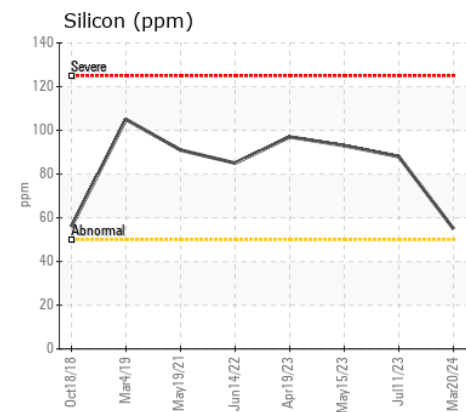
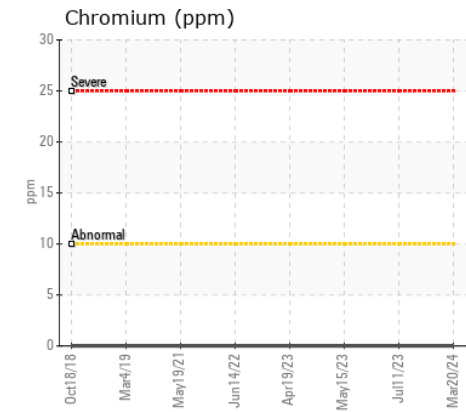
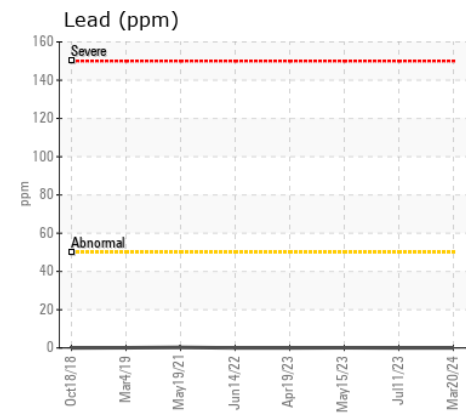
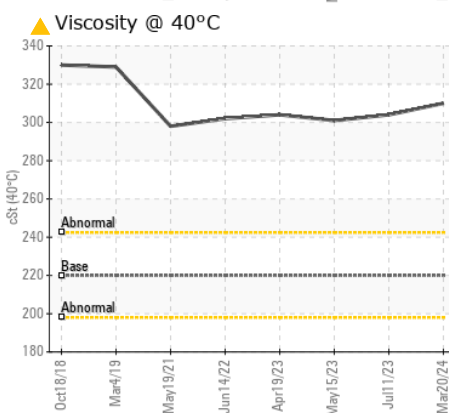
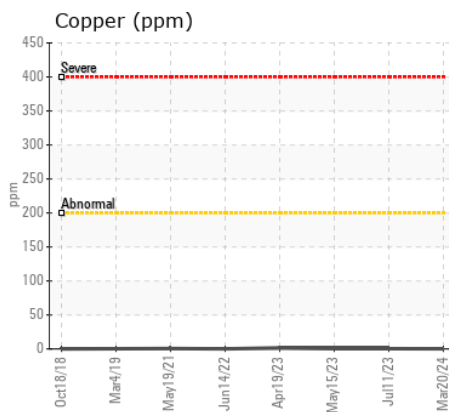
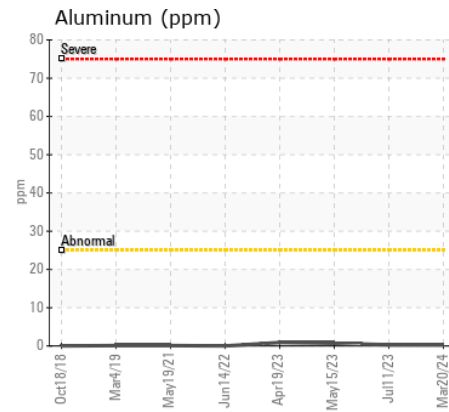
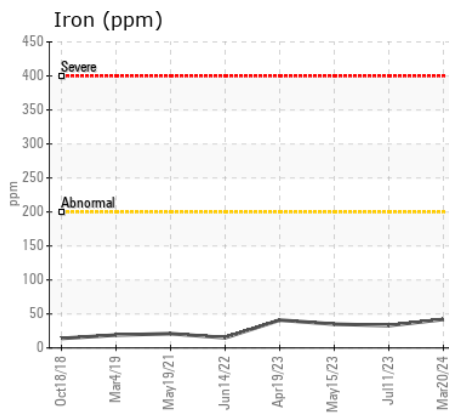
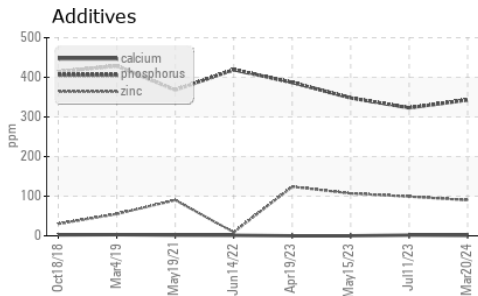
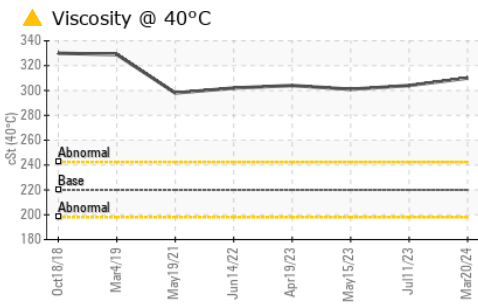
Viscosity of sample indicates oil is within ISO 320 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0884668	WC0793429	WC0769851
Sample Date		Client Info		20 Mar 2024	11 Jul 2023	15 May 2023
Machine Age	days	Client Info		0	0	0
Oil Age	days	Client Info		0	0	0
Filter Age	days	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

Iron	ppm	ASTM D5185(m)	>200	42	33	35
Chromium	ppm	ASTM D5185(m)	>10	0	0	0
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>25	<1	<1	<1
Lead	ppm	ASTM D5185(m)	>50	0	0	<1
Copper	ppm	ASTM D5185(m)	>200	<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	VLITE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185(m)	>50	55	88	93
Potassium	ppm	ASTM D5185(m)	>20	<1	<1	<1
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	VLITE	NONE
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*	>0.2	NEG	NEG	NEG

Sodium	ppm	ASTM D5185(m)		1	1	1
Boron	ppm	ASTM D5185(m)	.5	28	29	32
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)	0	0	0	0
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)	0	<1	<1	0
Calcium	ppm	ASTM D5185(m)	1.7	<1	2	0
Phosphorus	ppm	ASTM D5185(m)	250	343	323	348
Zinc	ppm	ASTM D5185(m)	.3	90	99	107
Sulfur	ppm	ASTM D5185(m)		4566	5029	4864
Visc @ 40°C	cSt	ASTM D7279(m)	220	▲ 310	▲ 304	▲ 301



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0884668
Lab Number : 02625372
Unique Number : 5750491
Test Package : MOB 1
Received : 28 Mar 2024
Tested : 28 Mar 2024
Diagnosed : 01 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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 T: (705)682-6687
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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.