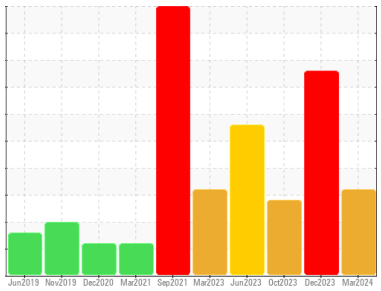
OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY

Machine Id
CAHE-HRS552151 WELLHEAD HPU RETURN
Component
Hydraulic System
Fluid
MOBIL GLYGOYLE 22 (--- GAL)

DIAGNOSIS

Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. Confirm the source of the lubricant being utilized for top-up/fill. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

Fluid Condition

Viscosity of sample indicates oil is within ISO 10 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PP13974640**	PP13846498	PP13910197
Sample Date		Client Info		**18 Mar 2024**	13 Dec 2023	23 Oct 2023
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	SEVERE	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.05	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>20	**2**	3	2
Chromium	ppm	ASTM D5185(m)	>10	**0**	<1	0
Nickel	ppm	ASTM D5185(m)	>10	**0**	<1	<1
Titanium	ppm	ASTM D5185(m)		**0**	0	0
Silver	ppm	ASTM D5185(m)		**0**	0	<1
Aluminum	ppm	ASTM D5185(m)	>10	**0**	<1	<1
Lead	ppm	ASTM D5185(m)	>20	**0**	<1	0
Copper	ppm	ASTM D5185(m)	>20	**0**	<1	<1
Tin	ppm	ASTM D5185(m)	>10	**0**	0	0
Antimony	ppm	ASTM D5185(m)		**0**	0	0
Vanadium	ppm	ASTM D5185(m)		**0**	0	0
Beryllium	ppm	ASTM D5185(m)		**0**	0	0
Cadmium	ppm	ASTM D5185(m)		**0**	0	0

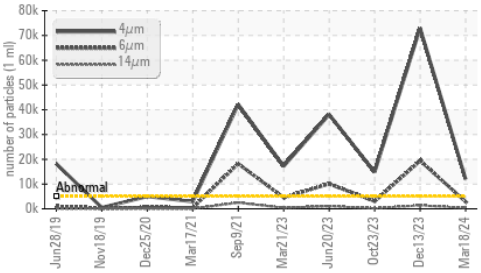
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)		**<1**	<1	<1
Barium	ppm	ASTM D5185(m)		**2621**	3074	2592
Molybdenum	ppm	ASTM D5185(m)		**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	0	0
Magnesium	ppm	ASTM D5185(m)		**<1**	<1	0
Calcium	ppm	ASTM D5185(m)		**7**	8	8
Phosphorus	ppm	ASTM D5185(m)		**252**	286	245
Zinc	ppm	ASTM D5185(m)		**1**	2	2
Sulfur	ppm	ASTM D5185(m)		**661**	905	668
Lithium	ppm	ASTM D5185(m)		**<1**	<1	<1

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>15	**0**	2	2
Sodium	ppm	ASTM D5185(m)		**2**	5	3
Potassium	ppm	ASTM D5185(m)	>20	**<1**	2	0

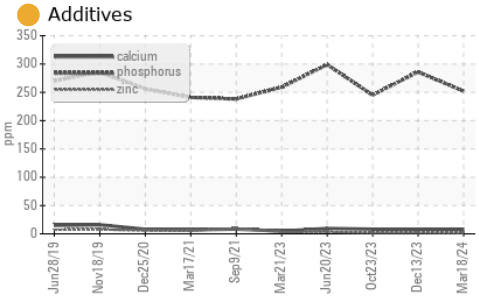
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	**12032**	72961	14828
Particles >6µm		ASTM D7647	>1300	**2863**	19444	3049
Particles >14µm		ASTM D7647	>160	**294**	1394	173
Particles >21µm		ASTM D7647	>40	**83**	317	19
Particles >38µm		ASTM D7647	>10	**3**	13	0
Particles >71µm		ASTM D7647	>3	**1**	1	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	**21/19/15**	23/21/18	21/19/15

OIL ANALYSIS REPORT

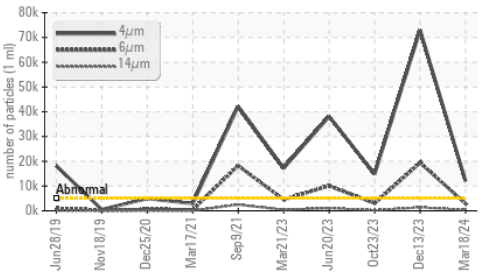
Particle Trend



Additives



Particle Trend



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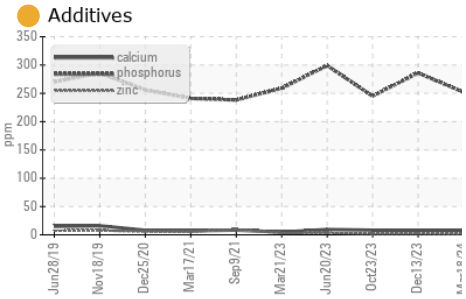
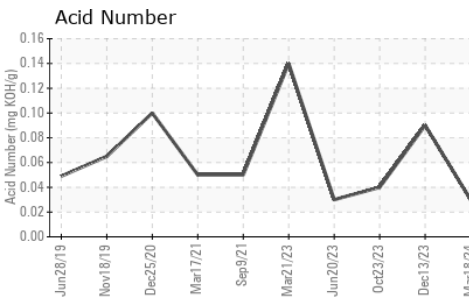


Acid Number

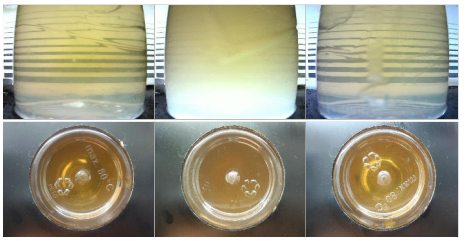


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D974*		**0.03**	0.09	0.04

VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	**NONE**	NONE	NONE
Precipitate	scalar	Visual*	NONE	**NONE**	NONE	NONE
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**NONE**	NONE	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*	>0.05	**NEG**	NEG	.2%
Free Water	scalar	Visual*		**NEG**	NEG	NEG

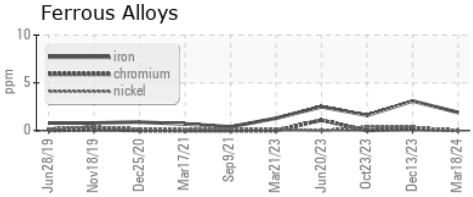
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D7279(m)	177	▲ **10.2**	▲ 12.7	▲ 10.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

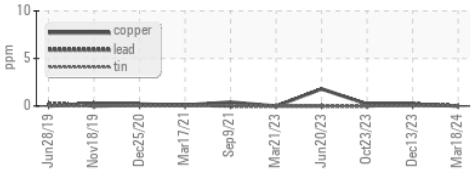


GRAPHS

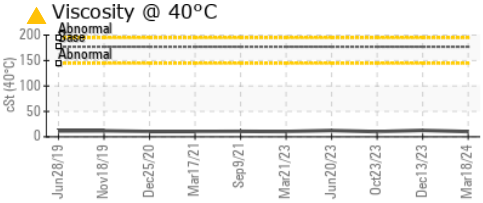
Ferrous Alloys



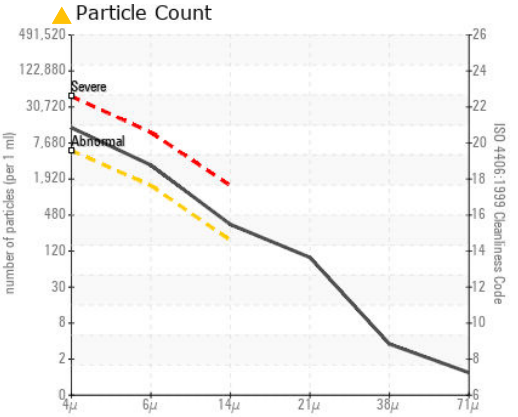
Non-ferrous Metals



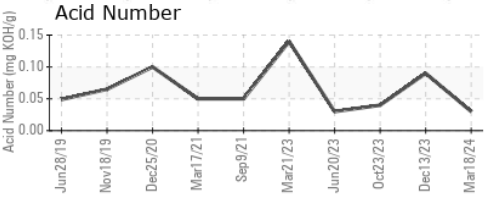
Viscosity @ 40°C



Particle Count



Acid Number



CALA
ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : PP13974640 **Received** : 28 Mar 2024
Lab Number : 02625318 **Tested** : 01 Apr 2024
Unique Number : 5750437 **Diagnosed** : 01 Apr 2024 - Kevin Marson
Test Package : MAR 2 (Additional Tests: TAN Man)

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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.