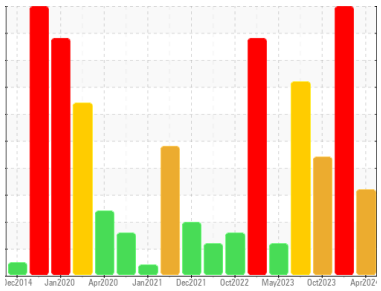
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
BT-FOR-A7 (S/N TANK FT7 AGITATOR)
Component
Gearbox
Fluid
SHELL OMALA S2 GX 220 (--- GAL)

DIAGNOSIS

Recommendation
Ferrous wear rate has returned to the typical trend. The is sufficient visual evidence (above 40 micron particles) that a particle count could not be performed. If this unit is being sampled from a drain line RESAMPLE and be sure to flush the drain line before collecting the sample. The unit should be filtered using B6=75 quality filter media to remove particulate and wear debris.

Wear
Fe wear rate is within the typical historical range for this drive. Fe wear rates are always higer with drives given their operating contact modes, but filtration helps to control the wear rate.

Contamination
Particle count could not be provided due to the debris in the oil. Filtration is strongly recommended.

Fluid Condition
Fluid health properties suggest oil is acceptable for continued use.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**PLS0000298**	PLS0000718	PLS0000784
Sample Date		Client Info		**17 Apr 2024**	31 Jan 2024	25 Oct 2023
Machine Age	mths	Client Info		**3**	3	0
Oil Age	mths	Client Info		**0**	0	1
Oil Changed		Client Info		**N/A**	N/A	Changed
Sample Status				**ABNORMAL**	SEVERE	SEVERE

CONTAMINATION		method	limit/base	current	history1	history2
Water		WC Method	>0.2	**NEG**	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		▲ **117**	▲ 207	48
Iron	ppm	ASTM D5185m	>200	▲ **89**	▲ 84	56
Chromium	ppm	ASTM D5185m	>15	**0**	0	0
Nickel	ppm	ASTM D5185m	>15	**0**	0	0
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**0**	0	0
Lead	ppm	ASTM D5185m	>100	**0**	0	0
Copper	ppm	ASTM D5185m	>200	**<1**	0	0
Tin	ppm	ASTM D5185m	>25	**<1**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	6.2	**0**	0	0
Barium	ppm	ASTM D5185m	0.0	**0**	<1	0
Molybdenum	ppm	ASTM D5185m	0	**0**	0	0
Manganese	ppm	ASTM D5185m		**1**	<1	<1
Magnesium	ppm	ASTM D5185m	0	**4**	1	0
Calcium	ppm	ASTM D5185m	0.0	**6**	5	0
Phosphorus	ppm	ASTM D5185m	290	**317**	303	218
Zinc	ppm	ASTM D5185m	3.8	**2**	15	0
Sulfur	ppm	ASTM D5185m	8167	**12141**	9749	8641

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**2**	3	1
Sodium	ppm	ASTM D5185m		**2**	0	1
Potassium	ppm	ASTM D5185m	>20	**2**	0	0

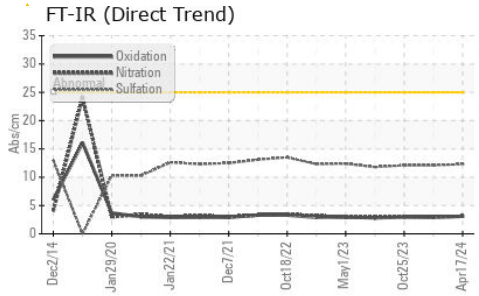
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		**0.1**	0	0
Nitration	Abs/cm	*ASTM D7624		**3.1**	3.0	3.0
Sulfation	Abs/.1mm	*ASTM D7415		**12.3**	12.1	12.1

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414		**3.1**	2.9	3.0
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.49**	0.48	0.44

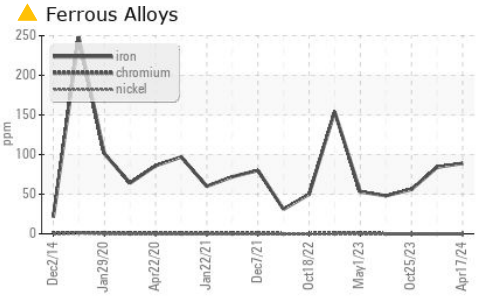
OIL ANALYSIS REPORT

FLUID FORENSICS
ADVANCED OIL ANALYSIS SERVICES

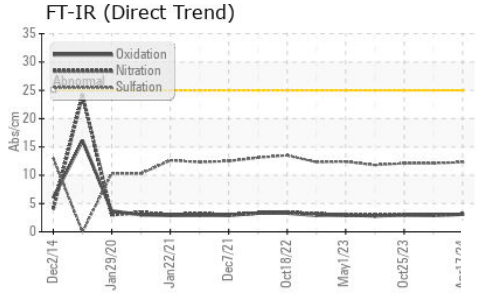
FT-IR (Direct Trend)



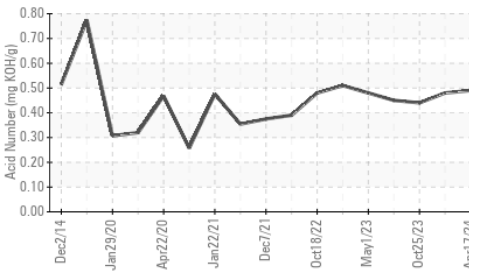
Ferrous Alloys



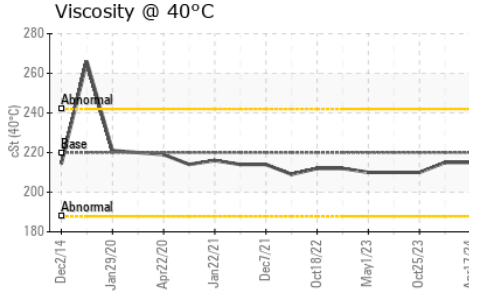
FT-IR (Direct Trend)



Acid Number

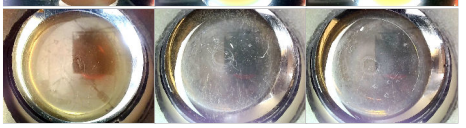


Viscosity @ 40°C



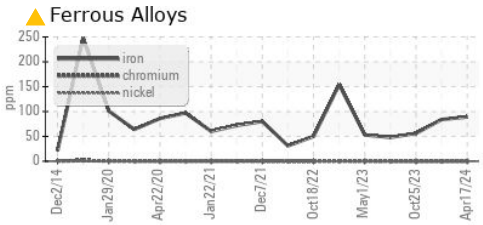
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	▲ **MODER**	NONE	NONE
Sand/Dirt	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
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	**215**	215	210

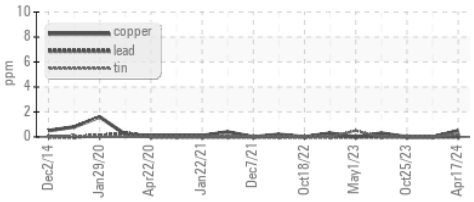
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

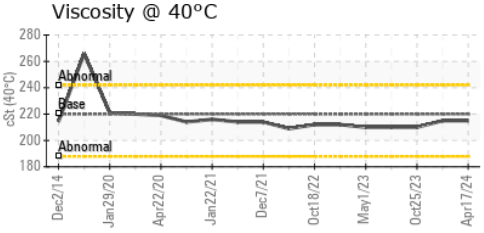
Ferrous Alloys



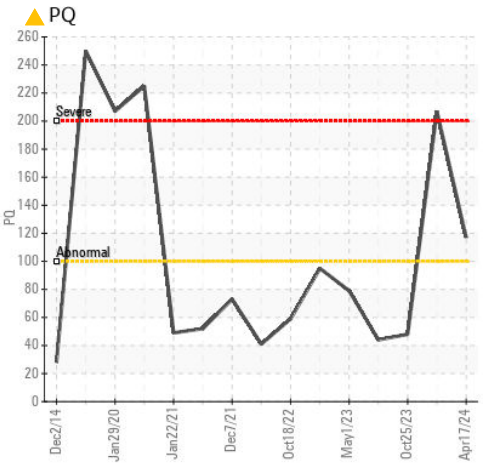
Non-ferrous Metals



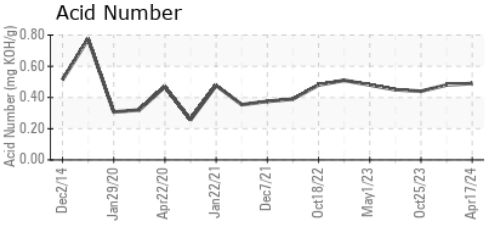
Viscosity @ 40°C



PQ



Acid Number



ANAB ACCREDITED TESTING LABORATORY
Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PLS0000298
Lab Number : 06154200
Unique Number : 10989623
Test Package : IND 2 (Additional Tests: FT-IR, PQ)

Received : 19 Apr 2024
Tested : 06 May 2024
Diagnosed : 07 May 2024 - Mike Johnson

To discuss this sample report, contact Customer Service at 1-800-237-1369.
** - Denotes test methods that are outside of the ISO 17025 scope of accreditation.*
Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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