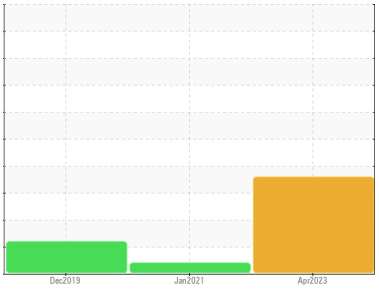
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
2380 (S/N 12896)
Component
Hydraulic System
Fluid
SHELL TELLUS 32 (350 GAL)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component. Resample at the next service interval to monitor.

Wear
The copper level is abnormal. All other component wear rates are normal.

Contamination
There is a high amount of particulates present in the oil.

Fluid Condition
The oil viscosity is higher than normal. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0778456**	WC0437876	WC0348473
Sample Date		Client Info		**13 Apr 2023**	18 Jan 2021	11 Dec 2019
Machine Age	yrs	Client Info		**0**	4	18
Oil Age	yrs	Client Info		**0**	0	18
Oil Changed		Client Info		**N/A**	Changed	Not Changd
Sample Status				**ABNORMAL**	ATTENTION	ATTENTION

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 D5185m	>20	**2**	0	<1
Chromium	ppm	ASTM D5185m	>20	**0**	0	0
Nickel	ppm	ASTM D5185m	>20	**0**	0	0
Titanium	ppm	ASTM D5185m		**0**	0	0
Silver	ppm	ASTM D5185m		**0**	<1	0
Aluminum	ppm	ASTM D5185m	>20	**0**	<1	0
Lead	ppm	ASTM D5185m	>20	**0**	0	<1
Copper	ppm	ASTM D5185m	>20	▲ **60**	15	14
Tin	ppm	ASTM D5185m	>20	**0**	0	0
Antimony	ppm	ASTM D5185m		**---**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

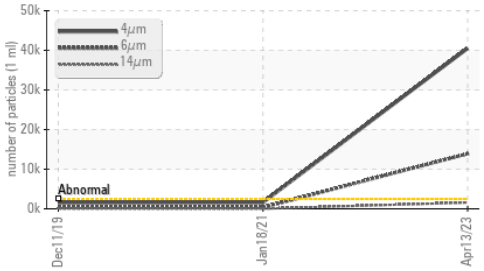
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	<1	<1
Barium	ppm	ASTM D5185m		**0**	0	0
Molybdenum	ppm	ASTM D5185m		**0**	0	<1
Manganese	ppm	ASTM D5185m		**<1**	0	0
Magnesium	ppm	ASTM D5185m	11	**2**	<1	<1
Calcium	ppm	ASTM D5185m	35	**111**	3	29
Phosphorus	ppm	ASTM D5185m	259	**671**	235	273
Zinc	ppm	ASTM D5185m	277	**848**	167	346
Sulfur	ppm	ASTM D5185m	1865	**2329**	392	631

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**0**	0	0
Sodium	ppm	ASTM D5185m		**<1**	<1	0
Potassium	ppm	ASTM D5185m	>20	**0**	0	0

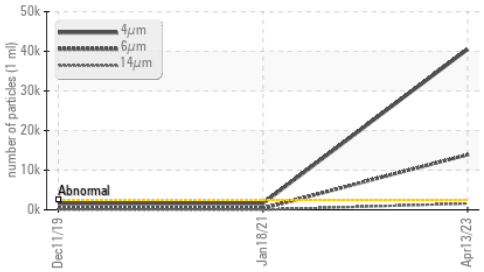
FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>2500	▲ **40484**	1589	1563
Particles >6µm		ASTM D7647	>320	▲ **13905**	▲ 330	▲ 503
Particles >14µm		ASTM D7647	>40	▲ **1582**	28	▲ 56
Particles >21µm		ASTM D7647	>10	▲ **448**	6	▲ 19
Particles >38µm		ASTM D7647	>3	▲ **62**	0	2
Particles >71µm		ASTM D7647	>3	**2**	0	0
Oil Cleanliness		ISO 4406 (c)	>18/15/12	▲ **23/21/18**	▲ 18/16/12	▲ 18/16/13

OIL ANALYSIS REPORT

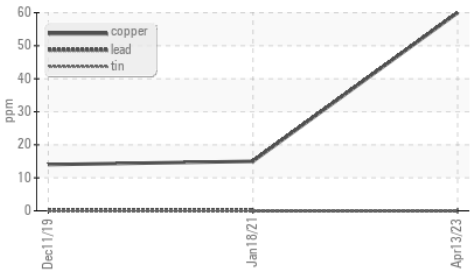
Particle Trend



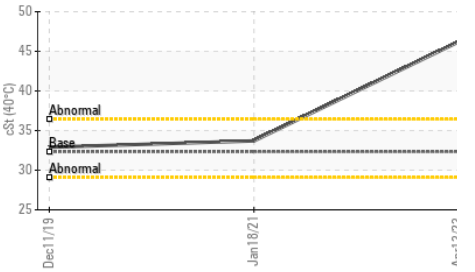
Particle Trend



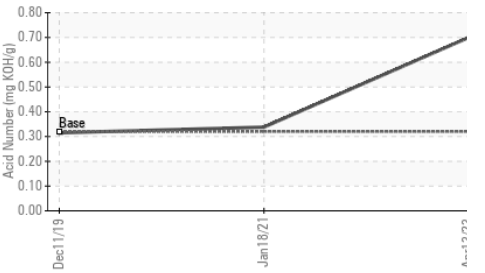
Non-ferrous Metals



Viscosity @ 40°C



Acid Number

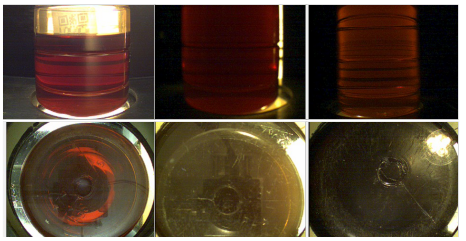


FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.32	**0.70**	0.338	0.315

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	**LIGHT**	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	>0.05	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

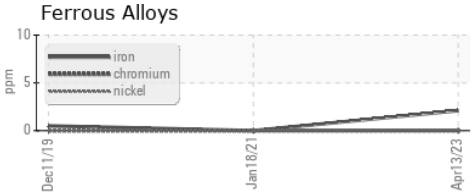
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	32.32	▲ **46.2**	33.7	32.9

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

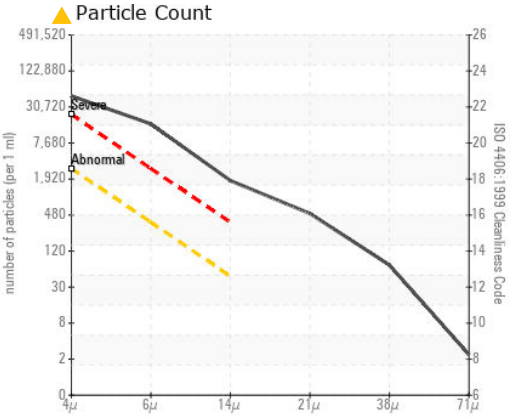


GRAPHS

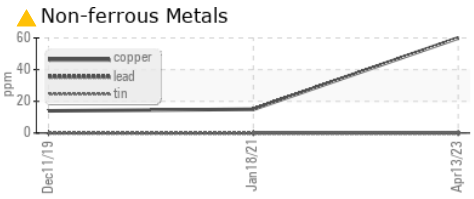
Ferrous Alloys



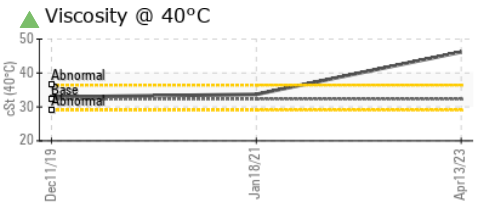
Particle Count



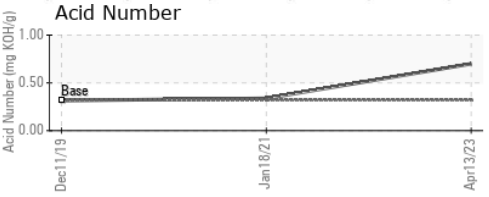
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0778456
Lab Number : 05824916
Unique Number : 10432999
Test Package : IND 2

Received : 20 Apr 2023
Tested : 24 Apr 2023
Diagnosed : 24 Apr 2023 - Doug Bogart

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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