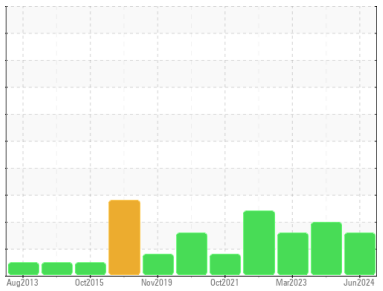
OIL ANALYSIS REPORT

Sample Rating Trend



WEAR

Machine Id
LINE 3 - 66157 (S/N 2011X-2559)
Component
Hydraulic System
Fluid
RIDGELINE HYDRAULIC AW 46 (100 GAL)

DIAGNOSIS

Recommendation
No corrective action is recommended at this time. 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 silt (particulates < 14 microns in size) present in the oil.

Fluid Condition
The AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**WC0937948**	WC0880061	WC0613595
Sample Date		Client Info		**02 Jun 2024**	30 Nov 2023	13 Mar 2023
Machine Age	yrs	Client Info		**0**	0	0
Oil Age	yrs	Client Info		**0**	0	1
Oil Changed		Client Info		**N/A**	N/A	Changed
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 D5185m	>20	**1**	3	4
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**	0	0
Aluminum	ppm	ASTM D5185m	>20	**0**	0	<1
Lead	ppm	ASTM D5185m	>20	**0**	0	0
Copper	ppm	ASTM D5185m	>20	▲ **26**	16	▲ 36
Tin	ppm	ASTM D5185m	>20	**0**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**0**	3	0
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		**0**	1	2
Calcium	ppm	ASTM D5185m		**60**	58	115
Phosphorus	ppm	ASTM D5185m	340	**372**	348	358
Zinc	ppm	ASTM D5185m	430	**458**	450	420
Sulfur	ppm	ASTM D5185m	710	**3087**	2518	2591

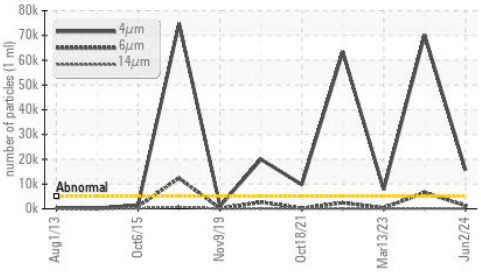
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**5**	4	3
Sodium	ppm	ASTM D5185m		**3**	2	3
Potassium	ppm	ASTM D5185m	>20	**19**	13	31

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **15577**	▲ 70201	● 7802
Particles >6µm		ASTM D7647	>1300	**1291**	▲ 6568	392
Particles >14µm		ASTM D7647	>160	**21**	109	23
Particles >21µm		ASTM D7647	>40	**7**	26	8
Particles >38µm		ASTM D7647	>10	**1**	3	0
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **21/17/12**	▲ 23/20/14	● 20/16/12

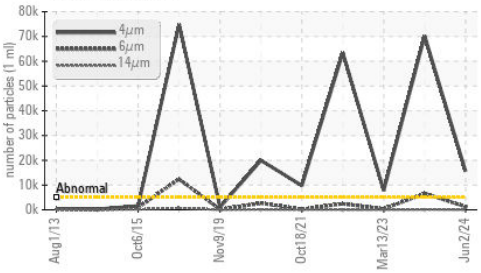
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		**0.22**	0.27	0.34

OIL ANALYSIS REPORT

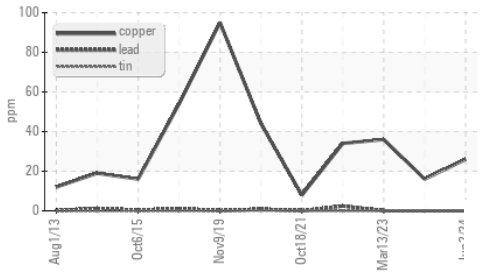
Particle Trend



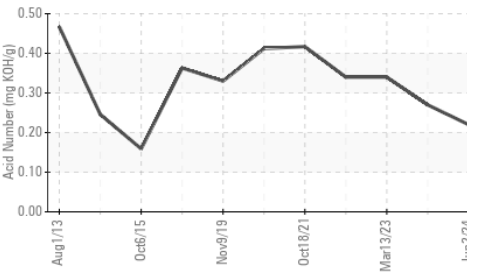
Particle Trend



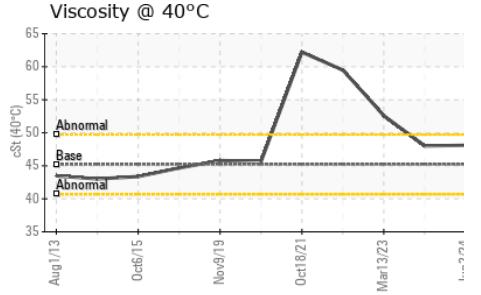
Non-ferrous Metals



Acid Number



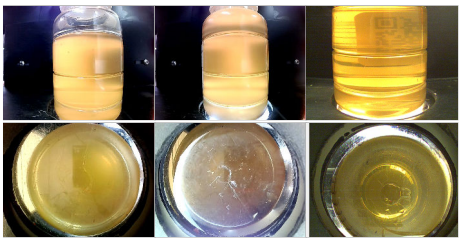
Viscosity @ 40°C



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**	LIGHT	NONE
Debris	scalar	*Visual	NONE	**NONE**	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

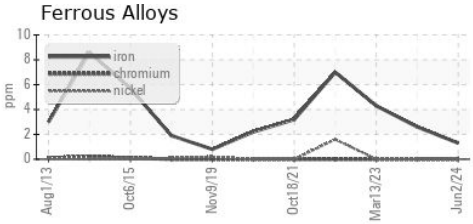
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45.22	**48.1**	48.0	52.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

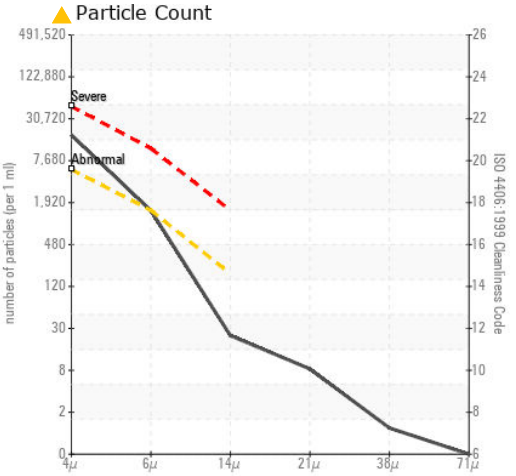


GRAPHS

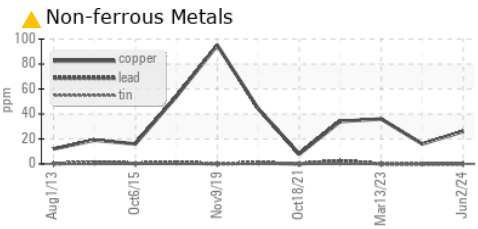
Ferrous Alloys



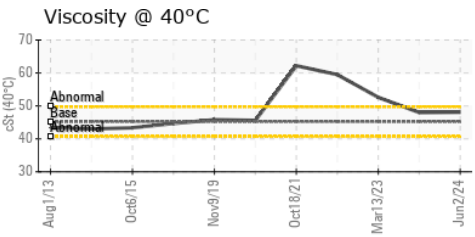
Particle Count



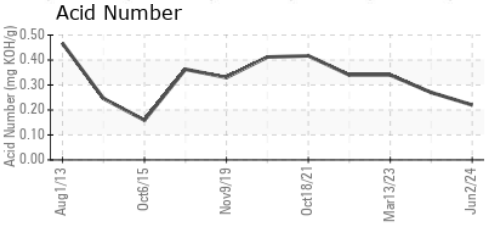
Non-ferrous Metals



Viscosity @ 40°C



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0937948
Lab Number : 06218157
Unique Number : 11096354
Test Package : IND 2

Received : 24 Jun 2024
Tested : 25 Jun 2024
Diagnosed : 25 Jun 2024 - Don Baldridge

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)

Altium Packaging - MOORHEAD - Plant 1061A
1802 2ND AVE NORTH
MOORHEAD, MN
US 56560
Contact: DAVID SCHULTZ
David.Schultz@altiumpkg.com
T: (218)303-7759
F:

Report Id: CCCMOO [WUSCAR] 06218157 (Generated: 06/25/2024 19:01:24) Rev: 1

Contact/Location: DAVID SCHULTZ - CCCMOO