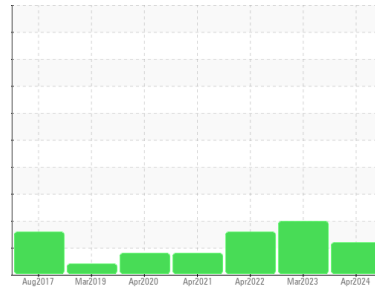




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id

MACHINE 4 (S/N 2826)

Component

Hydraulic System

Fluid

SAFETY-KLEEN PERFORMANCE PLUS HYDRAULIC AW 46 (55 GAL)

DIAGNOSIS

Recommendation

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Fluid Condition

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	WC0910106	WC0800133	WC0668613
Sample Date	Client Info	01 Apr 2024	27 Mar 2023	07 Apr 2022
Machine Age	mths	Client Info	0	0
Oil Age	mths	Client Info	0	0
Oil Changed	Client Info	Changed	Changed	Filtered
Sample Status		ABNORMAL	ABNORMAL	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	8	2	8
Chromium	ppm ASTM D5185m >20	<1	0	<1
Nickel	ppm ASTM D5185m >20	1	0	0
Titanium	ppm ASTM D5185m	<1	0	0
Silver	ppm ASTM D5185m	0	0	0
Aluminum	ppm ASTM D5185m >20	1	0	<1
Lead	ppm ASTM D5185m >20	1	0	<1
Copper	ppm ASTM D5185m >20	11	4	19
Tin	ppm ASTM D5185m >20	1	0	0
Antimony	ppm ASTM D5185m	---	---	---
Vanadium	ppm ASTM D5185m	<1	0	0
Cadmium	ppm ASTM D5185m	1	0	<1

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	0	0	<1
Barium	ppm ASTM D5185m	0	0	0
Molybdenum	ppm ASTM D5185m	2	<1	1
Manganese	ppm ASTM D5185m	<1	<1	<1
Magnesium	ppm ASTM D5185m	8	17	14
Calcium	ppm ASTM D5185m 48	61	63	69
Phosphorus	ppm ASTM D5185m 340	361	344	328
Zinc	ppm ASTM D5185m 430	407	439	429
Sulfur	ppm ASTM D5185m	1204	1017	754

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >15	<1	<1	<1
Sodium	ppm ASTM D5185m	0	0	0
Potassium	ppm ASTM D5185m >20	1	0	2

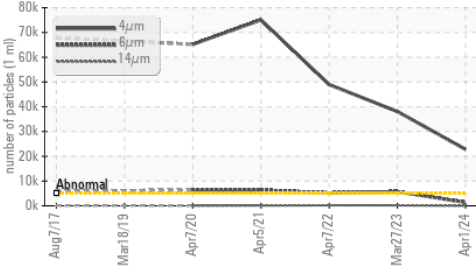
FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	▲ 22758	▲ 38081	▲ 48960
Particles >6µm	ASTM D7647 >1300	● 1393	▲ 5727	▲ 5154
Particles >14µm	ASTM D7647 >160	51	▲ 208	▲ 227
Particles >21µm	ASTM D7647 >40	13	▲ 59	▲ 52
Particles >38µm	ASTM D7647 >10	1	3	6
Particles >71µm	ASTM D7647 >3	0	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	▲ 22/18/13	▲ 22/20/15	▲ 23/20/15

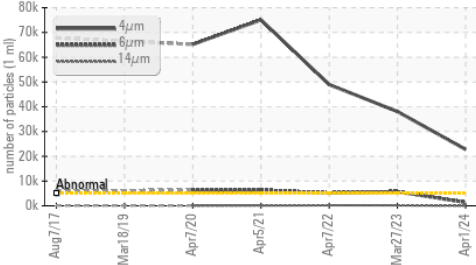


OIL ANALYSIS REPORT

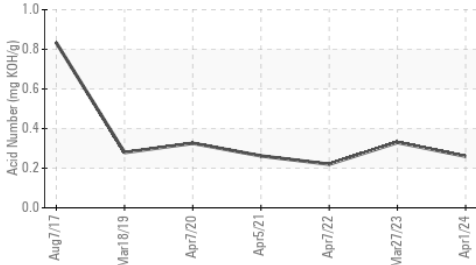
▲ Particle Trend



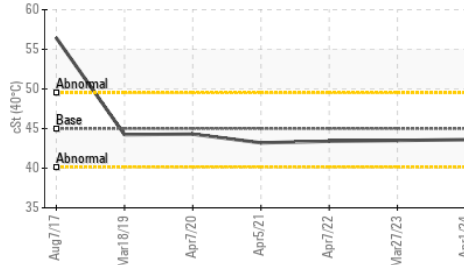
▲ Particle Trend



Acid Number



Viscosity @ 40°C



FLUID DEGRADATION	method	limit/base	current	history1	history2
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Acid Number (AN)	mg KOH/g	ASTM D8045	0.26	0.33	0.22
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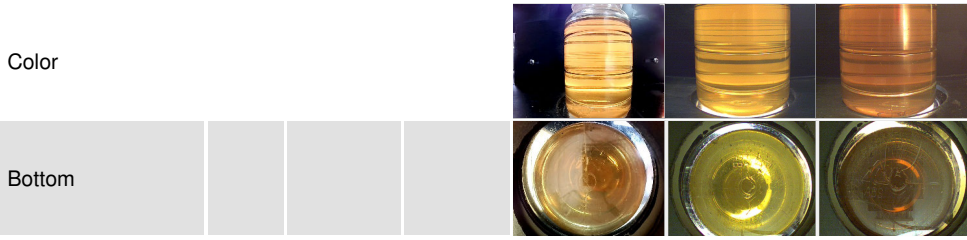
VISUAL	method	limit/base	current	history1	history2
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White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	NONE	LIGHT
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
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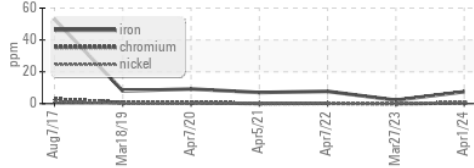
Visc @ 40°C	cSt	ASTM D445	45.0	43.6	43.5	43.4
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SAMPLE IMAGES	method	limit/base	current	history1	history2
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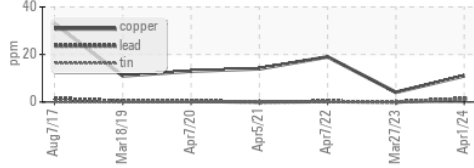


GRAPHS

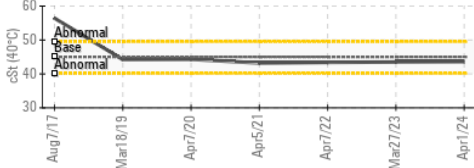
Ferrous Alloys



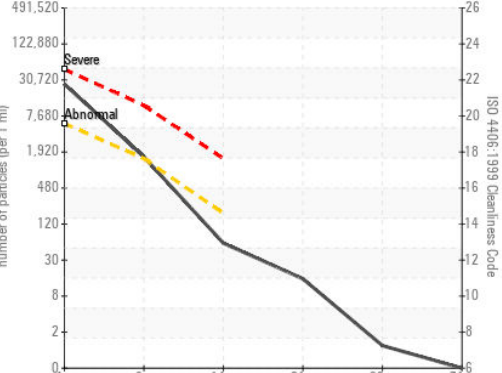
Non-ferrous Metals



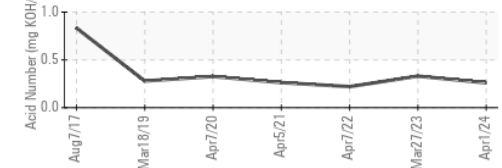
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0910106
Lab Number : 06147290
Unique Number : 10977368
Test Package : IND 2

Received : 12 Apr 2024
Tested : 15 Apr 2024
Diagnosed : 15 Apr 2024 - Wes Davis

Altium Packaging - SAMUELSON - Plant 1302A
 1070 SAMUELSON ST
 CITY OF INDUSTRY, CA
 US 91748-1219
 Contact: ERIC LOYA
 Eric.Loya@altiumpkg.com

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)