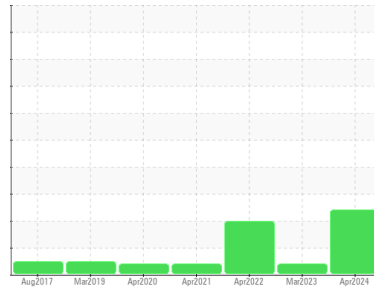




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Machine Id

MACHINE 3 (S/N 4741)

Component

Hydraulic System

Fluid

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

DIAGNOSIS

Recommendation

The oil 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 particulates (2 to 100 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		WC0910108	WC0800131	WC0668611
Sample Date	Client Info		01 Apr 2024	27 Mar 2023	07 Apr 2022
Machine Age	mths	Client Info	0	0	0
Oil Age	mths	Client Info	0	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	>40	3	6	4
Chromium	ppm	ASTM D5185m	>4	<1	<1	<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	>4	1	0	<1
Lead	ppm	ASTM D5185m	>10	1	0	<1
Copper	ppm	ASTM D5185m	>60	1	3	3
Tin	ppm	ASTM D5185m	>4	1	0	0
Antimony	ppm	ASTM D5185m		---	---	---
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		1	0	0

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		5	23	12
Calcium	ppm	ASTM D5185m	48	62	65	58
Phosphorus	ppm	ASTM D5185m	340	374	366	331
Zinc	ppm	ASTM D5185m	430	449	437	409
Sulfur	ppm	ASTM D5185m		939	1229	831

CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>20	<1	<1	<1
Sodium	ppm	ASTM D5185m		<1	4	3
Potassium	ppm	ASTM D5185m	>20	1	<1	2

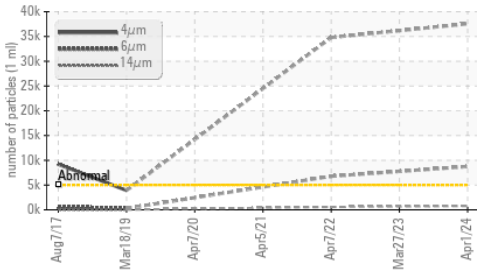
FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	▲ 37566	---	▲ 34789
Particles >6µm	ASTM D7647	>1300	▲ 8743	---	▲ 6780
Particles >14µm	ASTM D7647	>160	▲ 760	---	▲ 568
Particles >21µm	ASTM D7647	>40	▲ 256	---	▲ 146
Particles >38µm	ASTM D7647	>10	▲ 24	---	▲ 18
Particles >71µm	ASTM D7647	>3	2	---	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	▲ 22/20/17	---	▲ 22/20/16

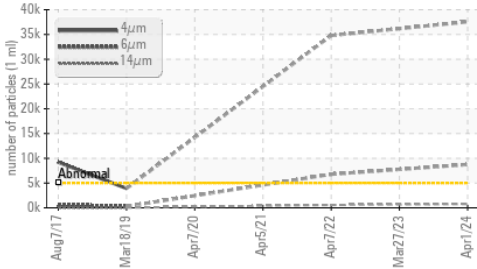


OIL ANALYSIS REPORT

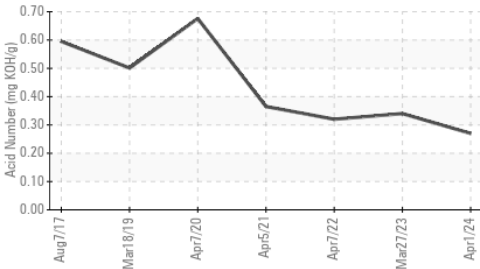
▲ Particle Trend



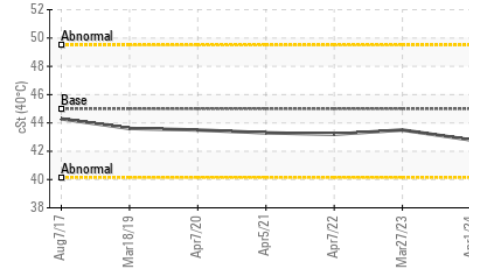
▲ Particle Trend



Acid Number



Viscosity @ 40°C



FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		0.27	0.34	0.32

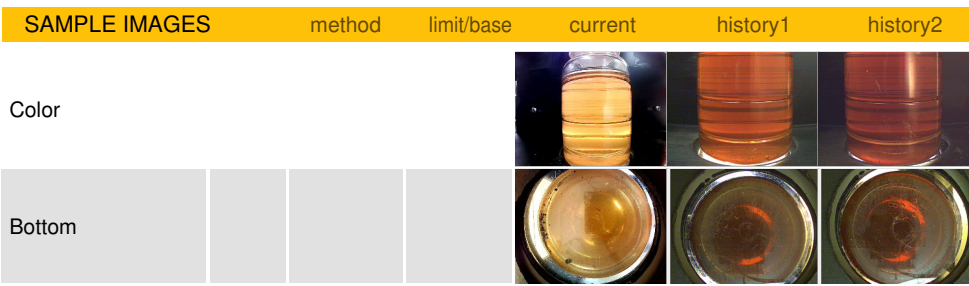
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	▲ MODER	LIGHT
Sand/Dirt	scalar	*Visual	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
Visc @ 40°C	cSt	ASTM D445	45.0	42.8	43.5	43.2

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						

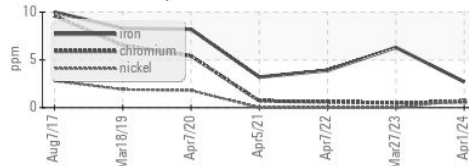
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	45.0	42.8	43.5	43.2

SAMPLE IMAGES		method	limit/base	current	history1	history2
Color						
Bottom						

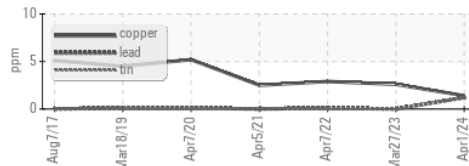


GRAPHS

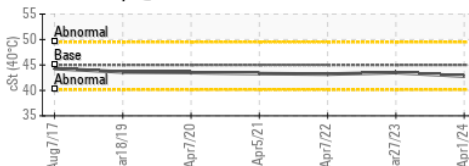
Ferrous Alloys



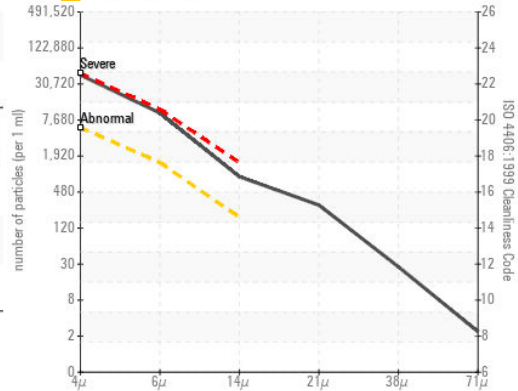
Non-ferrous Metals



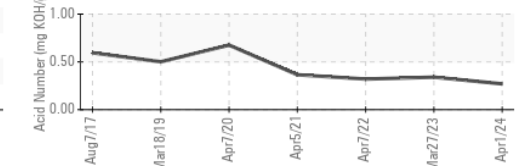
Viscosity @ 40°C



▲ Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0910108
Lab Number : 06147304
Unique Number : 10977382
Test Package : IND 2

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)