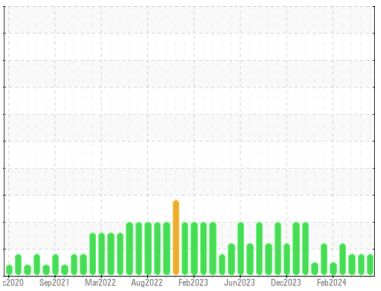
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
ACID NEUTRALIZATION HYDRAULIC
Machine Id
HYDRAULIC UNIT ON SLUDGE CONVEYOR FILTER PRESS (S/N 16-6520-0122)
Component
Tank Hydraulic System
Fluid
ESSO NUTO H ISO 46 (--- GAL)

DIAGNOSIS

Recommendation
We recommend you service the filters on this component. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

Wear
All component wear rates are normal.

Contamination
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

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		**RP0039292**	RP0038051	RP0042733
Sample Date		Client Info		**08 May 2024**	11 Apr 2024	26 Mar 2024
Machine Age	hrs	Client Info		**0**	0	0
Oil Age	hrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ABNORMAL**	ATTENTION	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**0**	2	<1
Chromium	ppm	ASTM D5185m	>20	**0**	<1	0
Nickel	ppm	ASTM D5185m	>20	**0**	1	0
Titanium	ppm	ASTM D5185m		**0**	<1	0
Silver	ppm	ASTM D5185m		**0**	<1	0
Aluminum	ppm	ASTM D5185m	>20	**0**	1	0
Lead	ppm	ASTM D5185m	>20	**1**	2	0
Copper	ppm	ASTM D5185m	>20	**15**	19	16
Tin	ppm	ASTM D5185m	>20	**<1**	1	0
Vanadium	ppm	ASTM D5185m		**0**	<1	0
Cadmium	ppm	ASTM D5185m		**0**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	**0**	0	0
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**0**	1	0
Manganese	ppm	ASTM D5185m		**0**	<1	0
Magnesium	ppm	ASTM D5185m	5	**1**	1	0
Calcium	ppm	ASTM D5185m	50	**48**	51	40
Phosphorus	ppm	ASTM D5185m	330	**343**	348	305
Zinc	ppm	ASTM D5185m	410	**428**	415	407

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**2**	2	1
Sodium	ppm	ASTM D5185m		**<1**	0	<1
Potassium	ppm	ASTM D5185m	>20	**<1**	<1	0
Water	%	ASTM D6304	>0.05	**0.004**	0.005	0.003
ppm Water	ppm	ASTM D6304	>500	**47**	54	37

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **13054**	● 9441	▲ 24570
Particles >6µm		ASTM D7647	>1300	**830**	965	1092
Particles >14µm		ASTM D7647	>160	**22**	76	34
Particles >21µm		ASTM D7647	>40	**6**	20	9
Particles >38µm		ASTM D7647	>10	**0**	1	1
Particles >71µm		ASTM D7647	>3	**0**	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **21/17/12**	● 20/17/13	▲ 22/17/12

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.45	**0.33**	0.37	0.35

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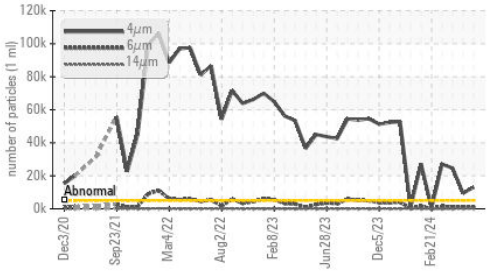
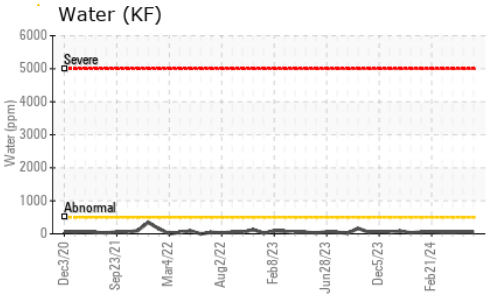
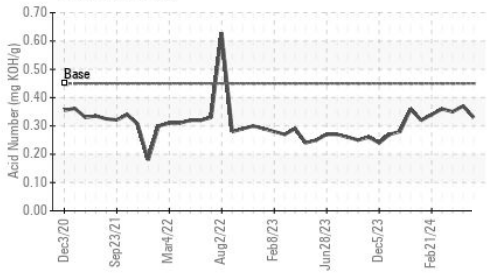
Particle Trend



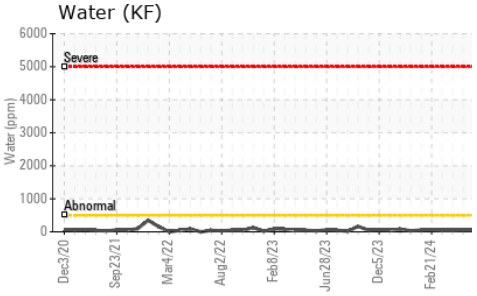
Water (KF)



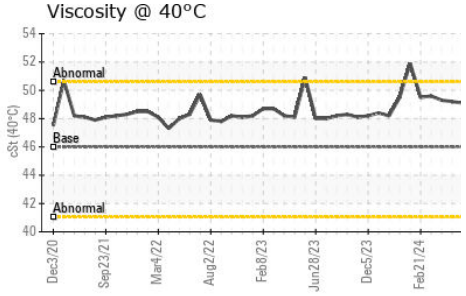
Acid Number



Water (KF)



Viscosity @ 40°C



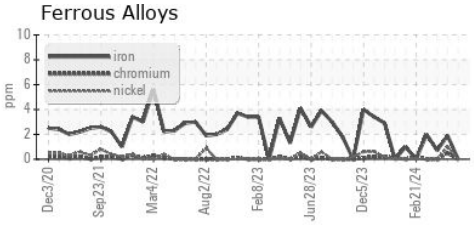
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	NONE	NONE
Debris	scalar	*Visual	NONE	**NONE**	NONE	NONE
Sand/Dirt	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	46	**49.1**	49.2	49.3

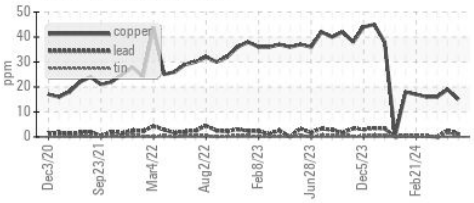
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

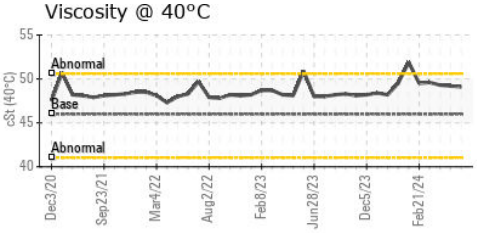
Ferrous Alloys



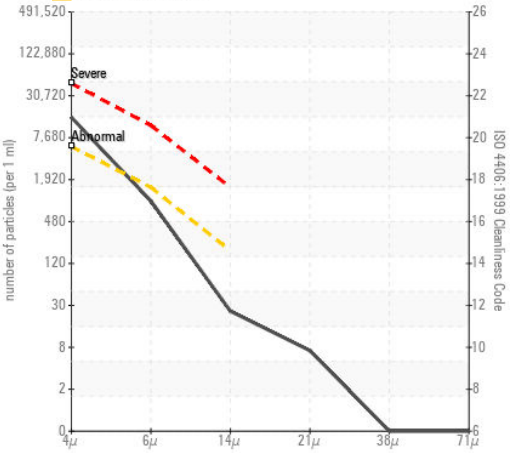
Non-ferrous Metals



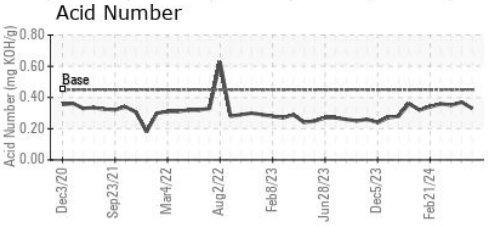
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0039292
Lab Number : 06174591
Unique Number : 11020644
Test Package : IND 2

Received : 09 May 2024
Tested : 10 May 2024
Diagnosed : 10 May 2024 - Wes Davis

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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