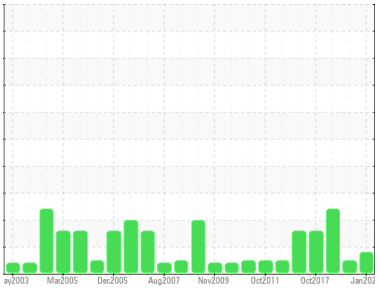
OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Machine Id
MACHINE 12 (S/N 45722H)
Component
Hydraulic System
Fluid
ESSO NUTO H ISO 46 (--- LTR)

DIAGNOSIS

▲ Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. 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 light amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**RP0034650**	RP0007360	RP73130
Sample Date		Client Info		**15 Jan 2024**	18 Jan 2021	09 Sep 2018
Machine Age	yrs	Client Info		**0**	0	0
Oil Age	yrs	Client Info		**0**	0	0
Oil Changed		Client Info		**N/A**	N/A	N/A
Sample Status				**ATTENTION**	NORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>20	**3**	2	2
Chromium	ppm	ASTM D5185m	>20	**0**	0	0
Nickel	ppm	ASTM D5185m	>20	**0**	<1	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**	4	<1
Copper	ppm	ASTM D5185m	>20	**3**	4	5
Tin	ppm	ASTM D5185m	>20	**0**	0	<1
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	**0**	<1	<1
Barium	ppm	ASTM D5185m	0	**0**	0	0
Molybdenum	ppm	ASTM D5185m	0	**0**	0	<1
Manganese	ppm	ASTM D5185m		**0**	0	<1
Magnesium	ppm	ASTM D5185m	5	**0**	2	2
Calcium	ppm	ASTM D5185m	50	**26**	19	39
Phosphorus	ppm	ASTM D5185m	330	**353**	375	310
Zinc	ppm	ASTM D5185m	410	**439**	445	373

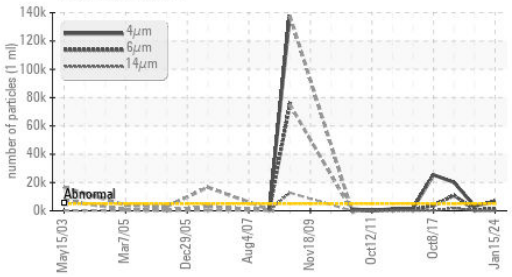
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	**<1**	<1	<1
Sodium	ppm	ASTM D5185m		**<1**	1	<1
Potassium	ppm	ASTM D5185m	>20	**0**	0	2
Water	%	ASTM D6304	>0.05	**0.006**	0.008	0.020
ppm Water	ppm	ASTM D6304	>500	**65**	84.5	200

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647	>5000	▲ **6728**	3219	▲ 20090
Particles >6µm		ASTM D7647	>1300	**1105**	607	▲ 10944
Particles >14µm		ASTM D7647	>160	**54**	81	▲ 1864
Particles >21µm		ASTM D7647	>40	**14**	27	▲ 629
Particles >38µm		ASTM D7647	>10	**1**	2	▲ 97
Particles >71µm		ASTM D7647	>3	**0**	0	▲ 10
Oil Cleanliness		ISO 4406 (c)	>19/17/14	▲ **20/17/13**	19/16/14	▲ 22/21/18

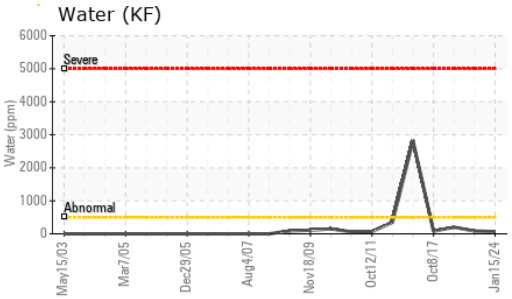
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.45	**0.42**	0.345	0.274

OIL ANALYSIS REPORT

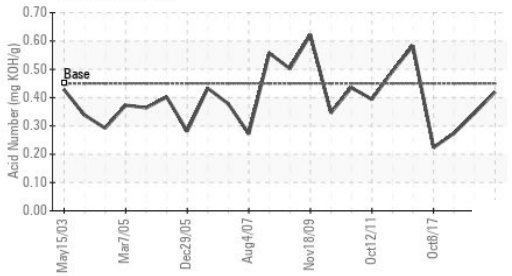
Particle Trend



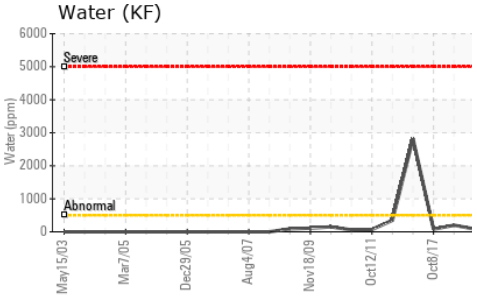
Water (KF)



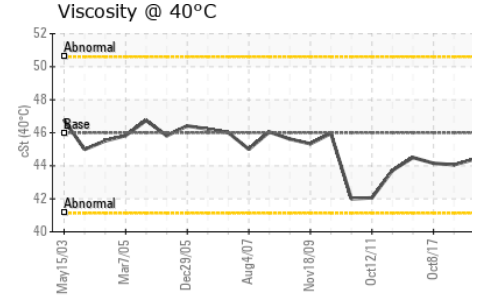
Acid Number



Water (KF)

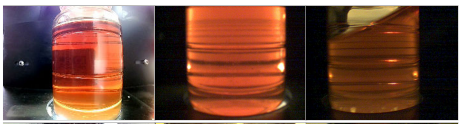
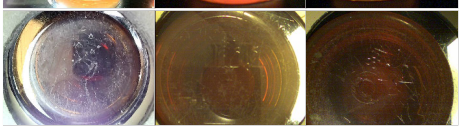


Viscosity @ 40°C



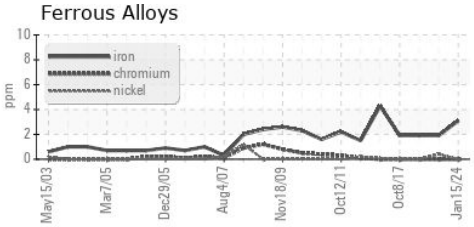
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	LIGHT	NONE
Debris	scalar	*Visual	NONE	**NONE**	LIGHT	LIGHT
Sand/Dirt	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	46	**43.9**	44.4	44.06

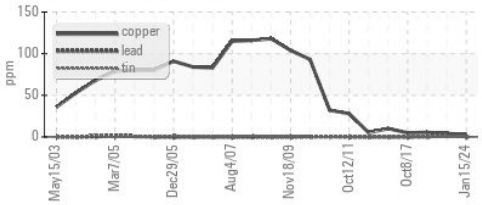
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

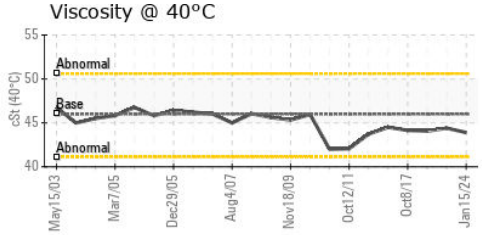
Ferrous Alloys



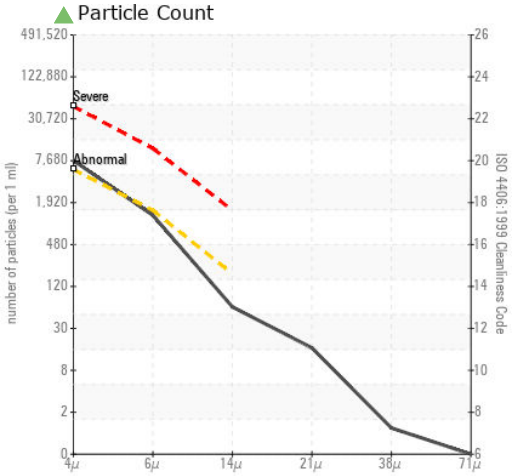
Non-ferrous Metals



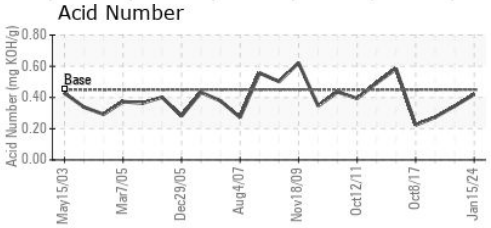
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0034650 **Recieved** : 16 Jan 2024
Lab Number : 06061081 **Diagnosed** : 17 Jan 2024
Unique Number : 10832463 **Diagnostician** : Wes Davis
Test Package : IND 2

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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