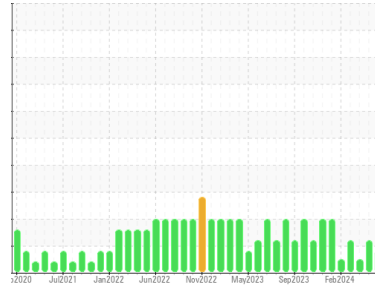




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



## ACID NEUTRALIZATION HYDRAULIC HYDRAULIC UNIT ON SLUDGE CONVEYOR FILTER PRESS (S/N 16-6520-0122)

Area  
Machine Id  
Component  
Fluid  
Tank Hydraulic System  
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	<b>RP0042733</b>	RP0042590	RP0042594
Sample Date	Client Info	<b>26 Mar 2024</b>	29 Feb 2024	21 Feb 2024
Machine Age	hrs	Client Info	0	0
Oil Age	hrs	Client Info	0	0
Oil Changed	Client Info	<b>N/A</b>	N/A	N/A
Sample Status		<b>ABNORMAL</b>	ABNORMAL	NORMAL

### WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	0
Chromium	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m >20	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>0</b>	0	0
Lead	ppm	ASTM D5185m >20	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m >20	<b>16</b>	16	17
Tin	ppm	ASTM D5185m >20	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

### ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 0	<b>0</b>	3	0
Barium	ppm	ASTM D5185m 0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 0	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m 5	<b>0</b>	0	0
Calcium	ppm	ASTM D5185m 50	<b>40</b>	45	46
Phosphorus	ppm	ASTM D5185m 330	<b>305</b>	329	340
Zinc	ppm	ASTM D5185m 410	<b>407</b>	403	431

### CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	<b>1</b>	2	1
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	0
Potassium	ppm	ASTM D5185m >20	<b>0</b>	0	0
Water	%	ASTM D6304 >0.05	<b>0.003</b>	0.003	0.005
ppm Water	ppm	ASTM D6304 >500	<b>37</b>	37	60

### FLUID CLEANLINESS

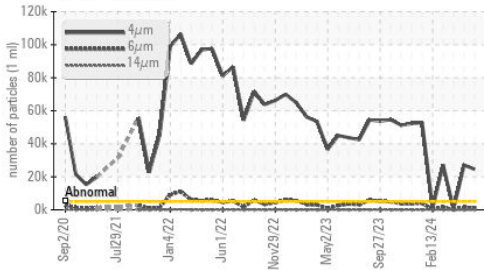
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	<b>▲ 24570</b>	▲ 27066	546
Particles >6µm	ASTM D7647 >1300	<b>1092</b>	● 1623	75
Particles >14µm	ASTM D7647 >160	<b>34</b>	16	4
Particles >21µm	ASTM D7647 >40	<b>9</b>	3	1
Particles >38µm	ASTM D7647 >10	<b>1</b>	0	1
Particles >71µm	ASTM D7647 >3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	<b>▲ 22/17/12</b>	▲ 22/18/11	16/13/9

### FLUID DEGRADATION

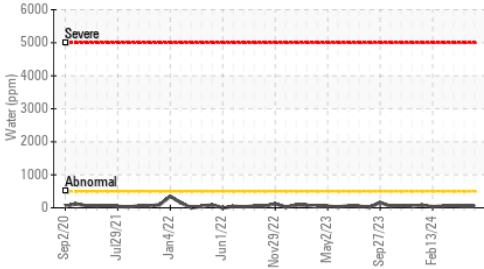
method	limit/base	current	history1	history2	
Acid Number (AN)	mg KOH/g	ASTM D8045 0.45	<b>0.35</b>	0.36	0.34

# OIL ANALYSIS REPORT

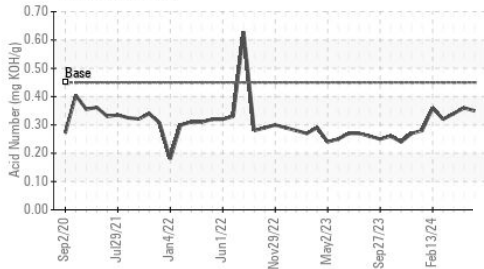
## ▲ Particle Trend



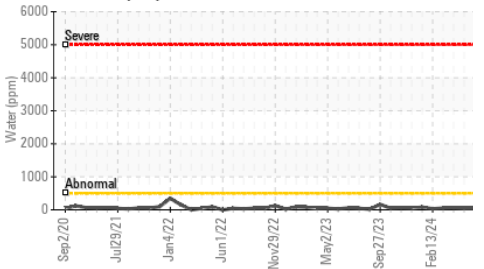
## Water (KF)



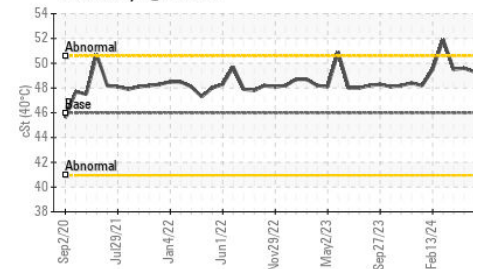
## Acid Number



## Water (KF)



## Viscosity @ 40°C



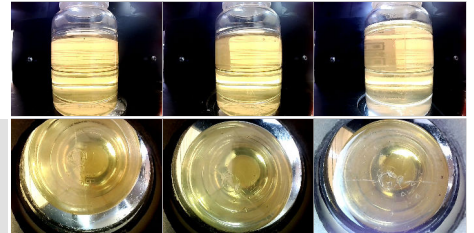
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.05	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	46	49.3	49.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
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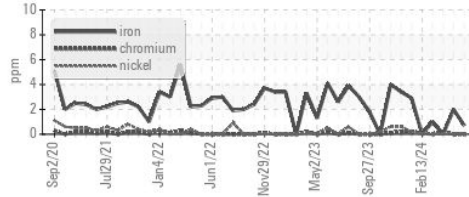
Color

Bottom

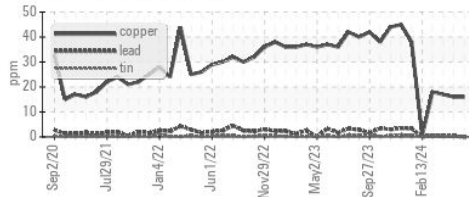


## GRAPHS

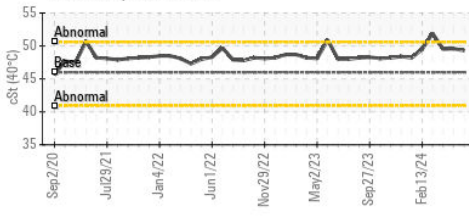
### Ferrous Alloys



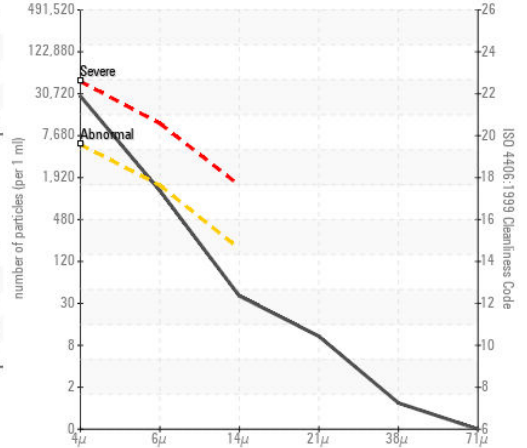
### Non-ferrous Metals



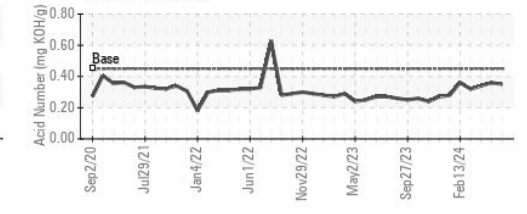
### Viscosity @ 40°C



### ▲ Particle Count



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0042733  
**Lab Number** : 06130671  
**Unique Number** : 10950136  
**Test Package** : IND 2  
**Received** : 27 Mar 2024  
**Tested** : 28 Mar 2024  
**Diagnosed** : 28 Mar 2024 - Wes Davis

**OUTOKUMPU STAINLESS USA**  
 HWY 43 N  
 CALVERT, AL  
 US 36513  
 Contact: MARIO JOHNSON  
 Mario.johnson@outokumpu.com  
 T: (251)321-4105  
 F: x:

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)