



# OIL ANALYSIS REPORT

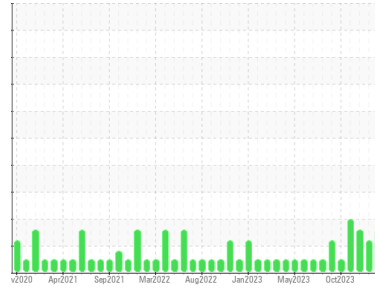
Sample Rating Trend

ISO

Area  
**SPM74 - HYDRAULIC**  
Machine Id  
**SKIN PASS MILL HIGH AND LOW PRESSURE (S/N 16-4100-1020)**

Component  
**Hydraulic System**  
Fluid

**AW HYDRAULIC OIL ISO 46 (--- QTS)**



## DIAGNOSIS

### Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. 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. Please specify the brand, type, and viscosity of the oil on your 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>RP0039096</b>	RP0038040	RP0037997
Sample Date	Client Info	<b>29 Jan 2024</b>	04 Jan 2024	05 Dec 2023
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>	ATTENTION	ATTENTION

## WEAR METALS

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

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 5	0	0
Barium	ppm	ASTM D5185m 5	0	10
Molybdenum	ppm	ASTM D5185m 5	0	<1
Manganese	ppm	ASTM D5185m	<1	0
Magnesium	ppm	ASTM D5185m 25	0	1
Calcium	ppm	ASTM D5185m 200	41	45
Phosphorus	ppm	ASTM D5185m 300	310	350
Zinc	ppm	ASTM D5185m 370	336	358

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	2	<1
Sodium	ppm	ASTM D5185m	<1	0
Potassium	ppm	ASTM D5185m >20	0	1
Water	%	ASTM D6304 >0.05	0.006	0.004
ppm Water	ppm	ASTM D6304 >500	61	45

## FLUID CLEANLINESS

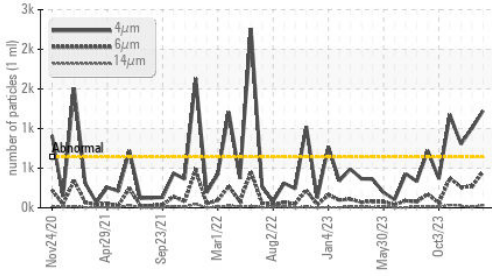
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >640	▲ 1224	▲ 1004	▲ 805
Particles >6µm	ASTM D7647 >160	▲ 455	▲ 268	▲ 262
Particles >14µm	ASTM D7647 >20	▲ 33	12	▲ 24
Particles >21µm	ASTM D7647 >4	5	3	5
Particles >38µm	ASTM D7647 >3	0	0	0
Particles >71µm	ASTM D7647 >3	0	0	0
Oil Cleanliness	ISO 4406 (c) >16/14/11	▲ 17/16/12	▲ 17/15/11	▲ 17/15/12

## FLUID DEGRADATION

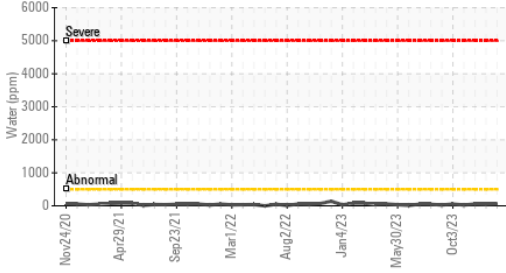
method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.57	0.30	0.23

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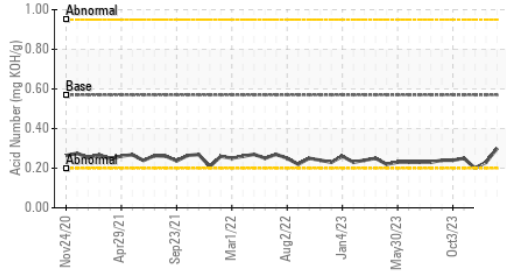
## ▲ Particle Trend



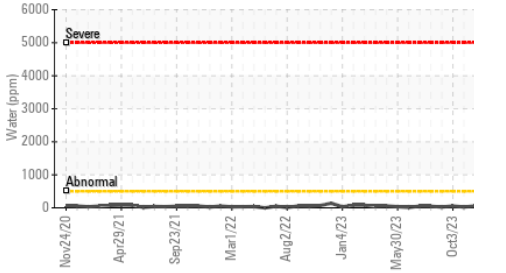
## Water (KF)



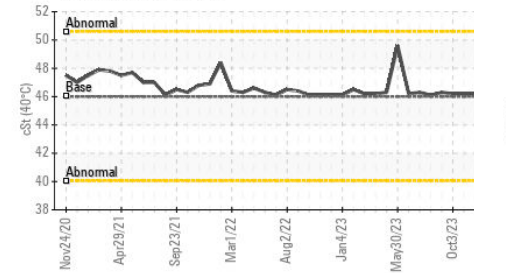
## Acid Number



## Water (KF)



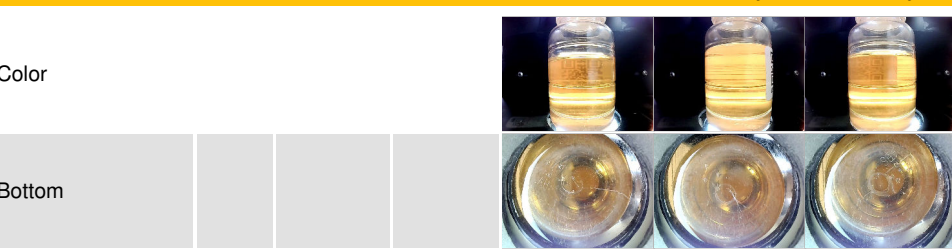
## Viscosity @ 40°C



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
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

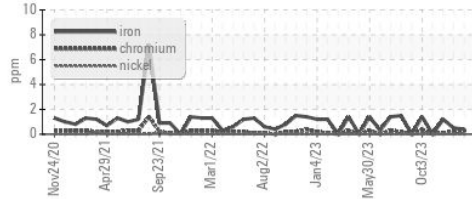
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 46	46.8	46.6	46.2

## SAMPLE IMAGES

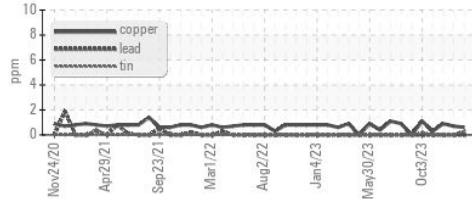


## GRAPHS

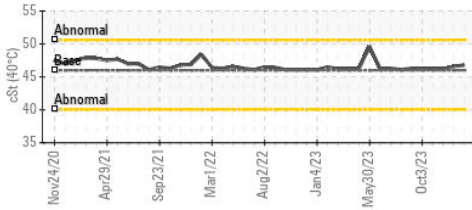
### Ferrous Alloys



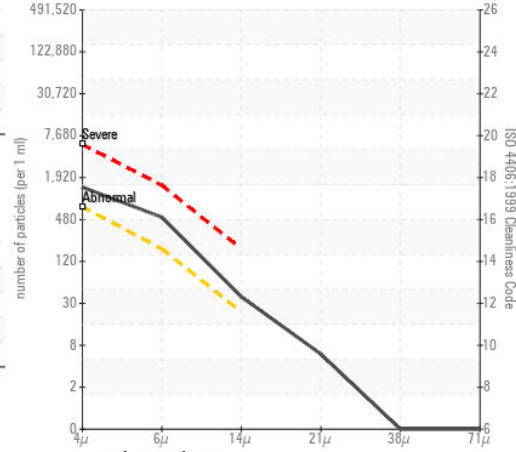
### Non-ferrous Metals



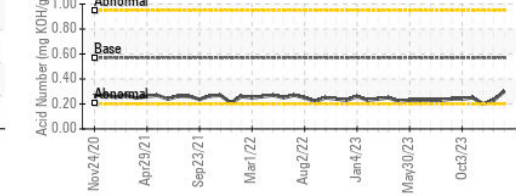
### Viscosity @ 40°C



### ▲ Particle Count



### Acid Number



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0039096 **Received** : 31 Jan 2024  
**Lab Number** : 06075793 **Diagnosed** : 01 Feb 2024  
**Unique Number** : 10857884 **Diagnostician** : Wes Davis  
**Test Package** : IND 2

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

Certificate L2367  
 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)