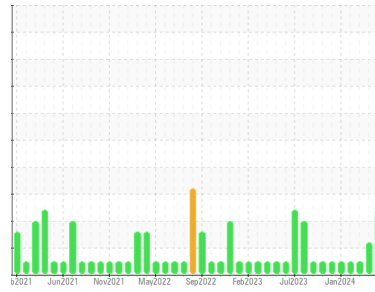




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

## MELT SHOP - HYDRAULIC

Machine Id

### MELT SHOP LADLE WALL SLIDE GATE HYDRAULIC UNIT (S/N 15-3000-0470)

Component

#### Hydraulic System

Fluid

#### FIRE-RESISTANT FLUID ISO 46 (66 GAL)

#### DIAGNOSIS

##### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor.

##### Wear

All component wear rates are normal.

##### Contamination

There is a high amount of particulates present in the oil.

##### Fluid Condition

The pH level of this fluid is within the acceptable limits at 9.0. The condition of the oil is acceptable for the time in service.

#### SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>RP0039063</b>	RP0042696	RP0042615
Sample Date	Client Info	<b>09 May 2024</b>	28 Mar 2024	05 Mar 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>	ATTENTION	NORMAL

#### WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >20	<b>0</b>	2	0
Chromium	ppm	ASTM D5185m >20	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m >20	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>0</b>	7	<1
Lead	ppm	ASTM D5185m >20	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m >20	<b>0</b>	<1	0
Tin	ppm	ASTM D5185m >20	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	<1

#### ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 5	<b>0</b>	0	0
Barium	ppm	ASTM D5185m 5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 5	<b>0</b>	<1	0
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m 5	<b>&lt;1</b>	2	2
Calcium	ppm	ASTM D5185m 50	<b>0</b>	7	1
Phosphorus	ppm	ASTM D5185m 175	<b>0</b>	4	4
Zinc	ppm	ASTM D5185m 62	<b>9</b>	<1	<1

#### CONTAMINANTS

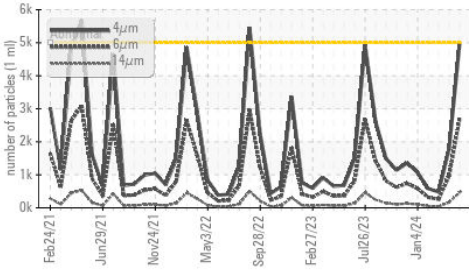
method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	<b>0</b>	2	0
Sodium	ppm	ASTM D5185m	<b>0</b>	14	0
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	3	<1
Water	%	ASTM D6304 >55	<b>43.6</b>	38.0	43.5
ppm Water	ppm	ASTM D6304 >55000	<b>436000</b>	380000	435000

#### FLUID CLEANLINESS

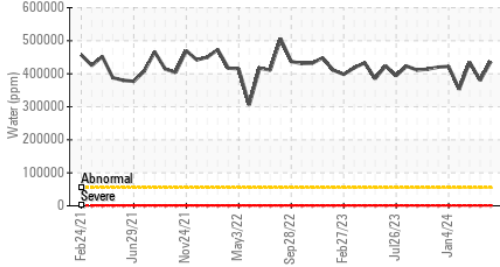
method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	<b>4959</b>	1775	479
Particles >6µm	ASTM D7647 >1300	<b>▲ 2701</b>	967	261
Particles >14µm	ASTM D7647 >160	<b>▲ 460</b>	● 165	44
Particles >21µm	ASTM D7647 >40	<b>▲ 155</b>	● 55	15
Particles >38µm	ASTM D7647 >10	<b>▲ 24</b>	9	2
Particles >71µm	ASTM D7647 >3	<b>▲ 2</b>	1	0
Oil Cleanliness	ISO 4406 (c) >19/17/14	<b>▲ 19/19/16</b>	● 18/17/15	16/15/13

# OIL ANALYSIS REPORT

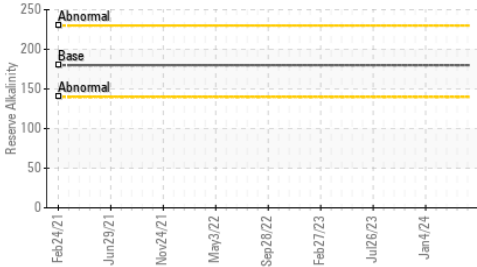
## ▲ Particle Trend



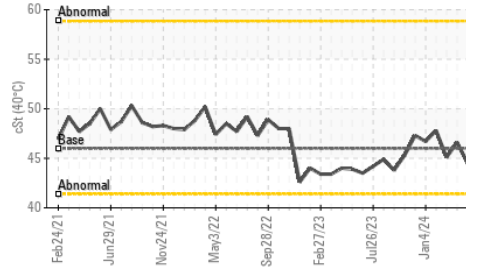
## Water (KF)



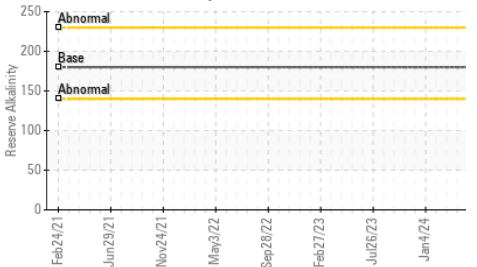
## Reserve Alkalinity



## Viscosity @ 40°C



## Reserve Alkalinity



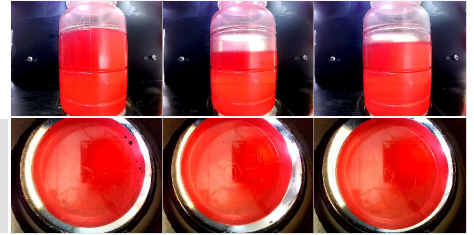
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>55	0.2%	0.2%
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
pH	Scale 0-14	ASTM D1287	9.00	9.00	10.0
Visc @ 40°C	cSt	ASTM D445	46	44.5	46.6

SAMPLE IMAGES	method	limit/base	current	history1	history2
---------------	--------	------------	---------	----------	----------

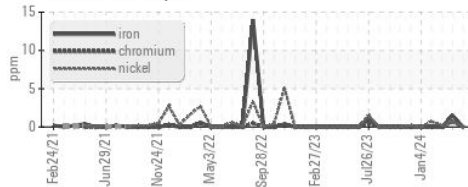
Color

Bottom

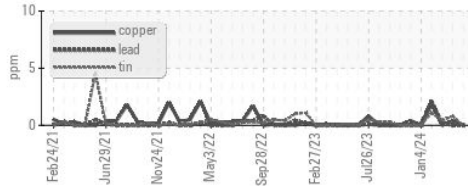


## GRAPHS

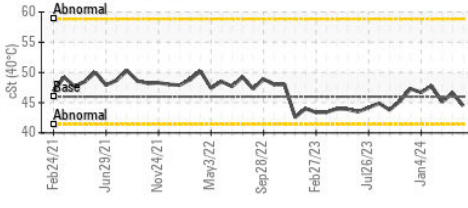
### Ferrous Alloys



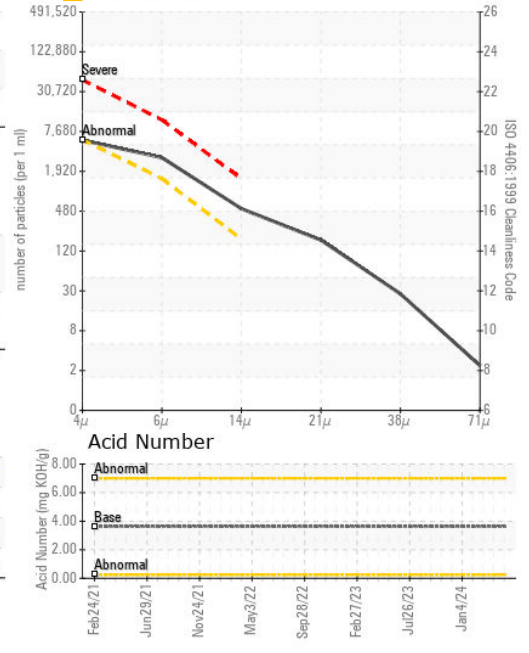
### Non-ferrous Metals



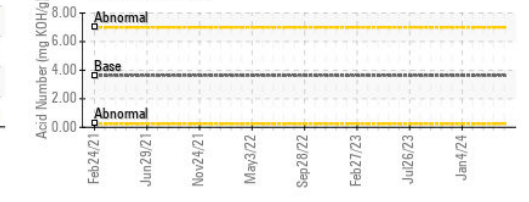
### Viscosity @ 40°C



### ▲ Particle Count



### Acid Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0039063 **Received** : 10 May 2024  
**Lab Number** : 06175585 **Tested** : 16 May 2024  
**Unique Number** : 11021638 **Diagnosed** : 16 May 2024 - Jonathan Hester  
**Test Package** : IND 2 ( Additional Tests: pH, ReserveAlk )

**OUTOKUMPU STAINLESS USA**  
 HWY 43 N  
 CALVERT, AL 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)