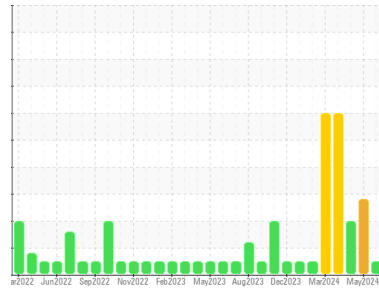




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**MELT SHOP - HYDRAULIC**  
 Machine Id  
**MELT SHOP EAF INLINE HEATER**  
 Component  
**Hydraulic System**  
 Fluid  
**FIRE-RESISTANT FLUID ISO 46 (5 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

### Fluid Condition

The pH level of this fluid is within the acceptable limits at 11

## SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	<b>RP0044188</b>	RP0042065	RP0042719
Sample Date	Client Info	<b>06 Jun 2024</b>	09 May 2024	28 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>NORMAL</b>	ABNORMAL	ABNORMAL

## WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m >20	<b>0</b>	0	▲ 37
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	1
Nickel	ppm	ASTM D5185m >20	<b>0</b>	0	1
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	0	11
Lead	ppm	ASTM D5185m >20	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	<1
Tin	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	1
Vanadium	ppm	ASTM D5185m	<b>0</b>	0	1
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	<1

## ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 5	<b>0</b>	0	14
Barium	ppm	ASTM D5185m 5	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 5	<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m 5	<b>0</b>	<1	1
Calcium	ppm	ASTM D5185m 50	<b>0</b>	0	11
Phosphorus	ppm	ASTM D5185m 175	<b>5</b>	0	7
Zinc	ppm	ASTM D5185m 62	<b>4</b>	10	11

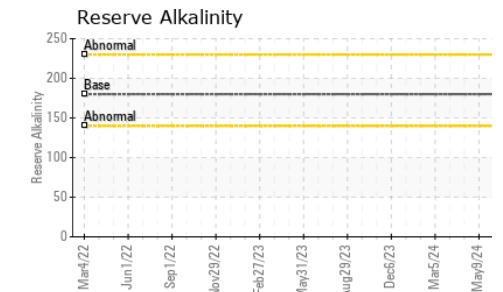
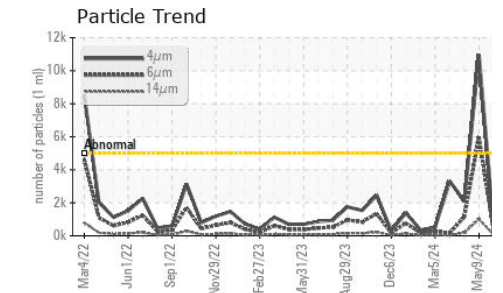
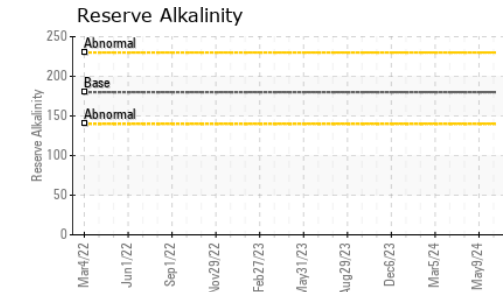
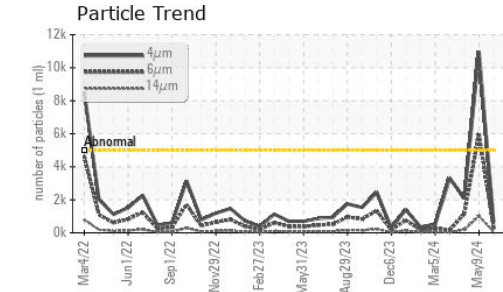
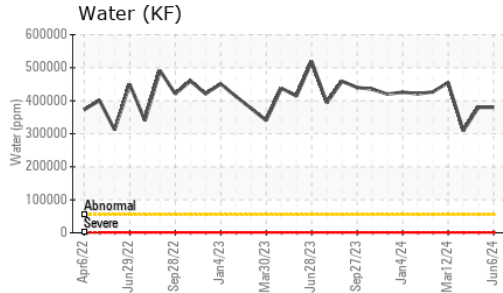
## CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >15	<b>1</b>	0	4
Sodium	ppm	ASTM D5185m	<b>&lt;1</b>	0	53
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	<1	10
Water	%	ASTM D6304 >55	<b>38.0</b>	38.0	30.9
ppm Water	ppm	ASTM D6304 >55000	<b>380000</b>	380000	309000

## FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647 >5000	<b>687</b>	▲ 10962	2088
Particles >6µm	ASTM D7647 >1300	<b>374</b>	▲ 5971	1137
Particles >14µm	ASTM D7647 >160	<b>64</b>	▲ 1016	● 194
Particles >21µm	ASTM D7647 >40	<b>21</b>	▲ 342	● 65
Particles >38µm	ASTM D7647 >10	<b>3</b>	▲ 53	10
Particles >71µm	ASTM D7647 >3	<b>0</b>	▲ 5	1
Oil Cleanliness	ISO 4406 (c) >19/17/14	<b>17/16/13</b>	▲ 21/20/17	● 18/17/15

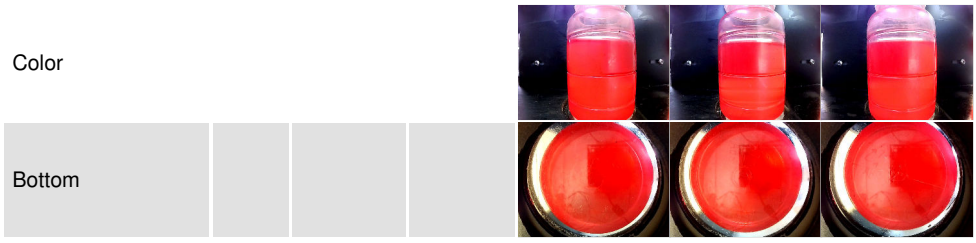
# OIL ANALYSIS REPORT



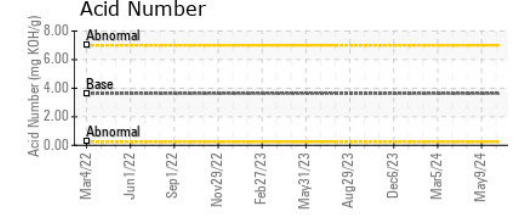
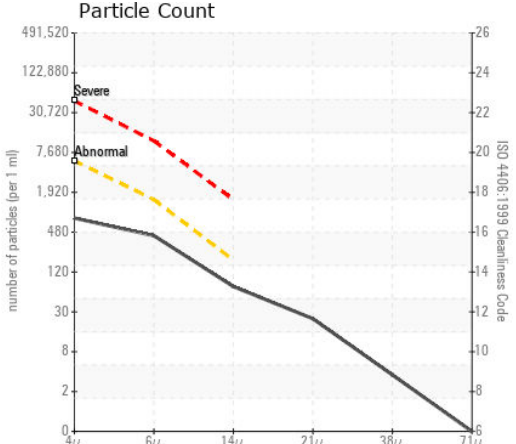
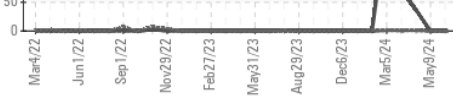
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	11.0	9.00	9.00
Visc @ 40°C	cSt	ASTM D445	46	43.1	45.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
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## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0044188 **Received** : 07 Jun 2024  
**Lab Number** : 06203431 **Tested** : 13 Jun 2024  
**Unique Number** : 11070892 **Diagnosed** : 13 Jun 2024 - Angela Borella  
**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)