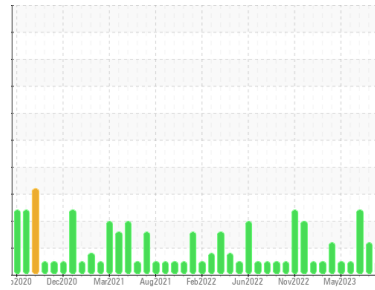




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**MELT SHOP - HYDRAULIC**  
 Machine Id  
**MELT SHOP EAF-DE-SLAG HYDRAULIC UNIT (S/N 15-2000-0770)**  
 Component  
**Tank Hydraulic System**  
 Fluid  
**FIRE-RESISTANT FLUID ISO 46 (200 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 11.0. 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>RP0035499</b>	RP0035412	RP0035184
Sample Date	Client Info		<b>27 Sep 2023</b>	26 Jul 2023	28 Jun 2023
Machine Age	hrs	Client Info	<b>0</b>	0	0
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
Sample Status			<b>NORMAL</b>	ATTENTION	ABNORMAL

**WEAR METALS**

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

**ADDITIVES**

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 5	<b>0</b>	1	0
Barium	ppm	ASTM D5185m 5	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m 5	<b>0</b>	0	0
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m 5	<b>3</b>	0	4
Calcium	ppm	ASTM D5185m 50	<b>2</b>	<1	0
Phosphorus	ppm	ASTM D5185m 175	<b>4</b>	7	2
Zinc	ppm	ASTM D5185m 62	<b>9</b>	18	0

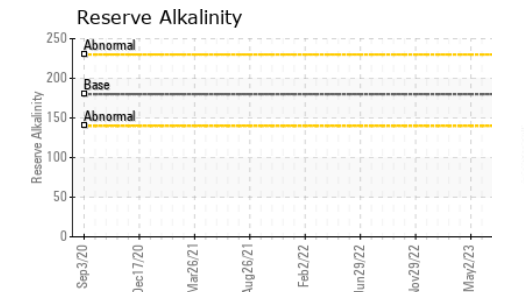
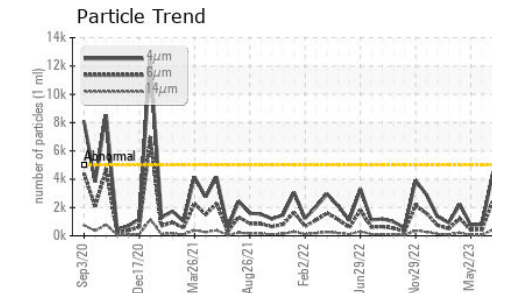
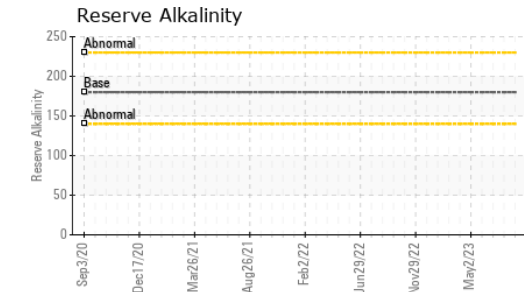
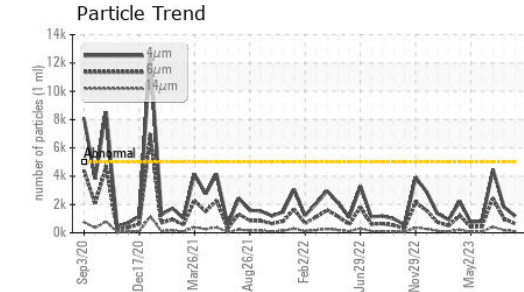
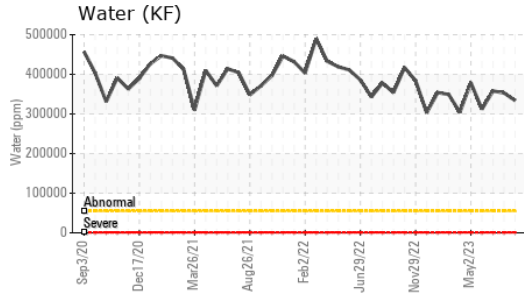
**CONTAMINANTS**

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >15	<b>0</b>	1	0
Sodium	ppm	ASTM D5185m	<b>0</b>	18	0
Potassium	ppm	ASTM D5185m >20	<b>0</b>	<1	<1
Water	%	ASTM D6304 >55	<b>33.4</b>	35.3	35.8
ppm Water	ppm	ASTM D6304 >55000	<b>334000</b>	353000	358000

**FLUID CLEANLINESS**

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>1174</b>	1827	4498
Particles >6µm	ASTM D7647	>1300	<b>640</b>	995	▲ 2450
Particles >14µm	ASTM D7647	>160	<b>109</b>	▲ 169	▲ 417
Particles >21µm	ASTM D7647	>40	<b>37</b>	▲ 57	▲ 140
Particles >38µm	ASTM D7647	>10	<b>6</b>	9	▲ 22
Particles >71µm	ASTM D7647	>3	<b>1</b>	1	▲ 2
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>17/16/14</b>	▲ 18/17/15	▲ 19/18/16

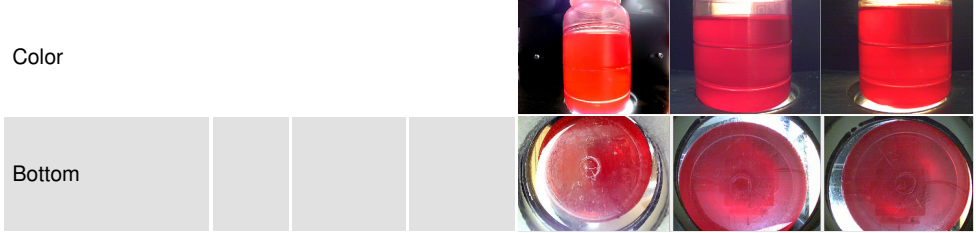
# OIL ANALYSIS REPORT



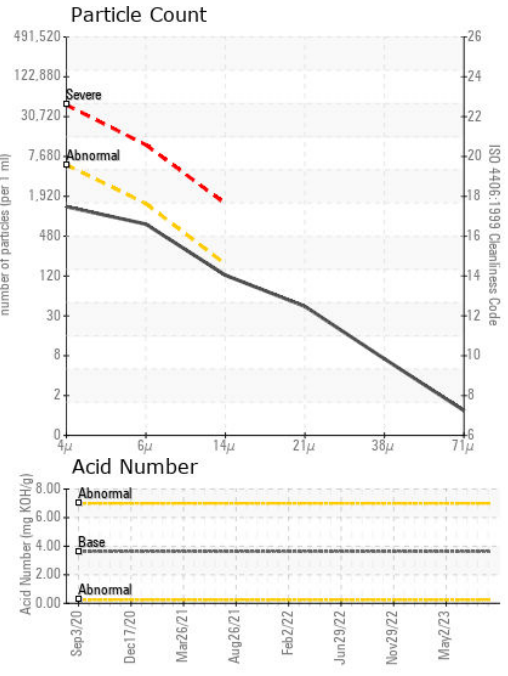
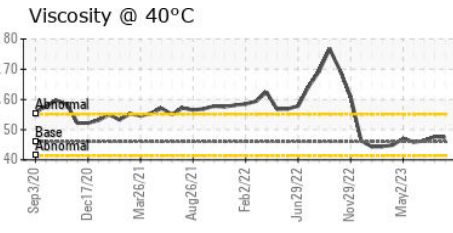
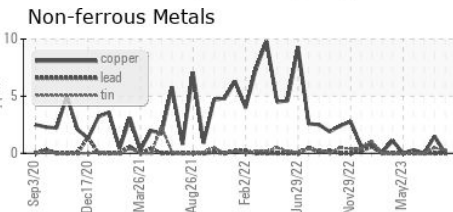
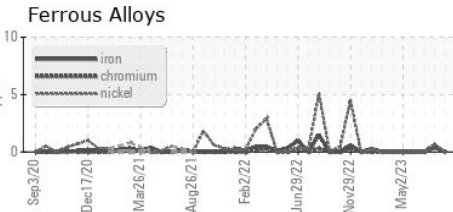
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	11.0	9.00
Visc @ 40°C	cSt	ASTM D445	46	47.5	46.3

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



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0035499 **Received** : 29 Sep 2023  
**Lab Number** : 05964684 **Diagnosed** : 03 Oct 2023  
**Unique Number** : 10671235 **Diagnostician** : Doug Bogart  
**Test Package** : IND 2 ( Additional Tests: pH, ReserveAlk )

**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)