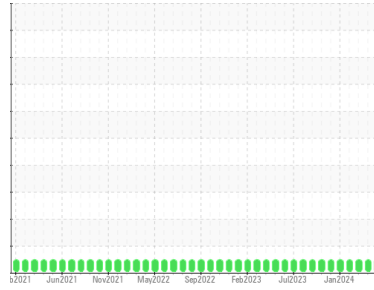




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area

**HAPL - HYDRAULIC**

Machine Id

**HAPL ENTRY HYDRAULIC UNIT (S/N 16-1100-1310)**

Component

**Hydraulic System**

Fluid

**SAE 10W (--- QTS)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

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

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>RP0042515</b>	RP0042178	RP0042588
Sample Date	Client Info		<b>08 May 2024</b>	26 Mar 2024	29 Feb 2024
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>	NORMAL	NORMAL

## WEAR METALS

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

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		<b>0</b>	0
Barium	ppm	ASTM D5185m		<b>0</b>	0
Molybdenum	ppm	ASTM D5185m		<b>0</b>	0
Manganese	ppm	ASTM D5185m		<b>0</b>	0
Magnesium	ppm	ASTM D5185m		<b>0</b>	0
Calcium	ppm	ASTM D5185m		<b>45</b>	38
Phosphorus	ppm	ASTM D5185m		<b>338</b>	302
Zinc	ppm	ASTM D5185m		<b>412</b>	391

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>15	<b>2</b>	1
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	<1
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0
Water	%	ASTM D6304	>0.05	<b>0.006</b>	0.003
ppm Water	ppm	ASTM D6304	>500	<b>65</b>	33

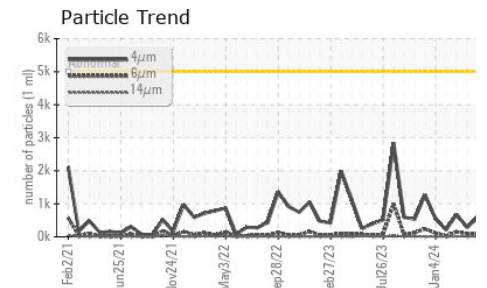
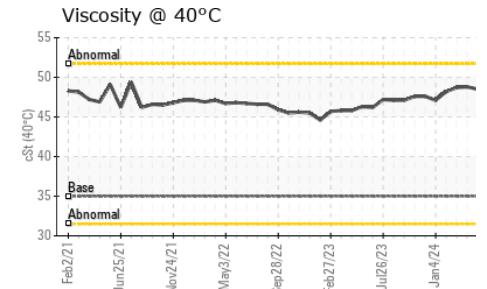
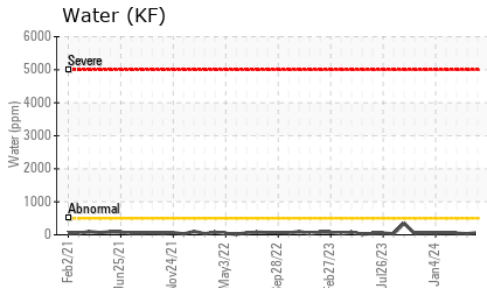
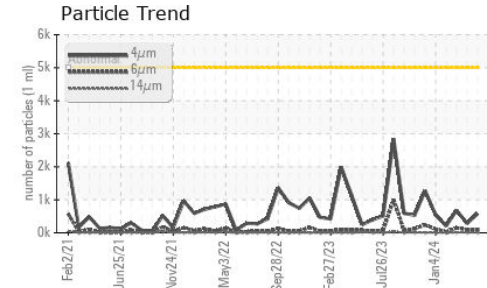
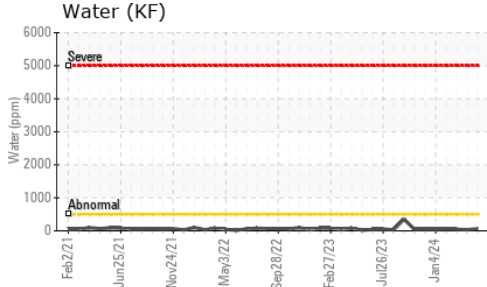
## FLUID CLEANLINESS

	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>5000	<b>582</b>	284	680
Particles >6µm	ASTM D7647	>1300	<b>102</b>	84	150
Particles >14µm	ASTM D7647	>160	<b>8</b>	12	16
Particles >21µm	ASTM D7647	>40	<b>2</b>	3	3
Particles >38µm	ASTM D7647	>10	<b>0</b>	0	0
Particles >71µm	ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness	ISO 4406 (c)	>19/17/14	<b>16/14/10</b>	15/14/11	17/14/11

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.28</b>	0.32

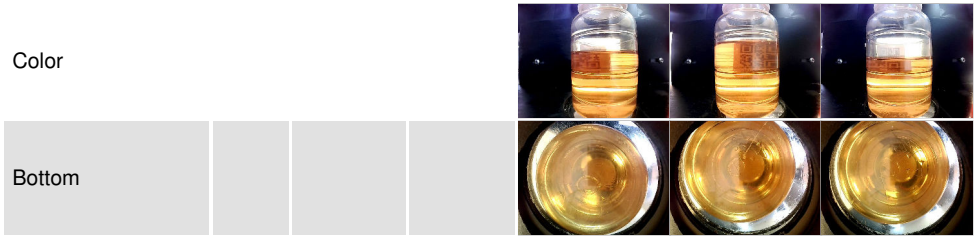
# OIL ANALYSIS REPORT



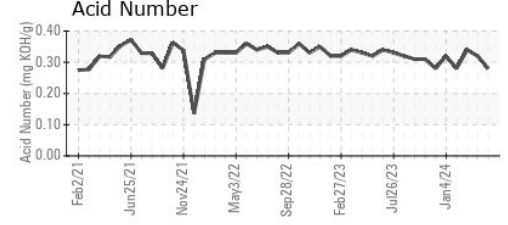
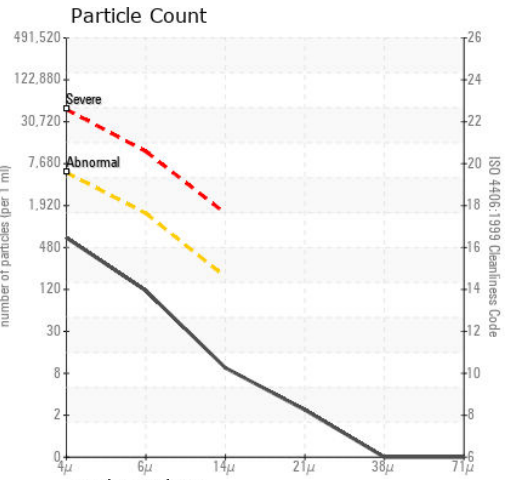
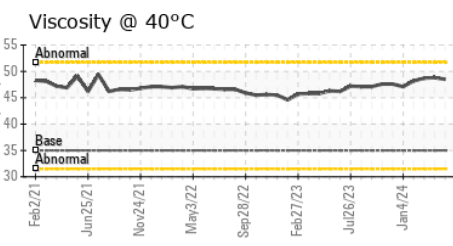
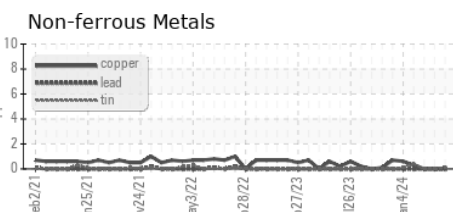
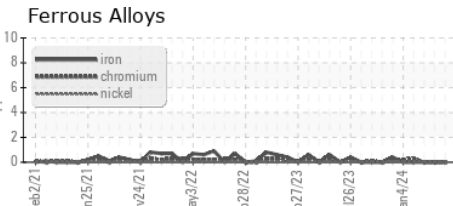
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	35.0	48.5	48.8

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0042515 **Received** : 09 May 2024  
**Lab Number** : 06174607 **Tested** : 10 May 2024  
**Unique Number** : 11020660 **Diagnosed** : 13 May 2024 - Don Baldrige  
**Test Package** : IND 2

**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)