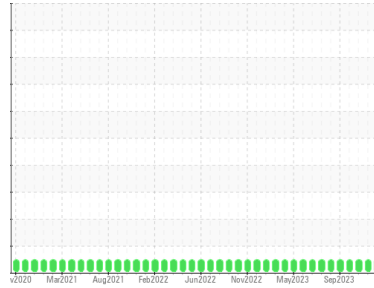




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
HAPL - HYDRAULIC
 Machine Id
HAPL SCALE BREAKER 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
 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 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	RP0039095	RP0038636	RP0034991
Sample Date	Client Info	29 Jan 2024	04 Jan 2024	05 Dec 2023
Machine Age	hrs Client Info	0	0	0
Oil Age	hrs Client Info	0	0	0
Oil Changed	Client Info	N/A	N/A	N/A
Sample Status		NORMAL	NORMAL	NORMAL

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185m	>20	0	0	<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	<1	0
Copper ppm ASTM D5185m	>20	<1	<1	1
Tin ppm ASTM D5185m	>20	<1	<1	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		0	0	0
Barium ppm ASTM D5185m		0	10	0
Molybdenum ppm ASTM D5185m		0	<1	<1
Manganese ppm ASTM D5185m		<1	0	0
Magnesium ppm ASTM D5185m		0	1	<1
Calcium ppm ASTM D5185m		31	36	38
Phosphorus ppm ASTM D5185m		310	351	311
Zinc ppm ASTM D5185m		309	339	340

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm ASTM D5185m	>15	2	1	1
Sodium ppm ASTM D5185m		1	0	0
Potassium ppm ASTM D5185m	>20	0	1	<1
Water % ASTM D6304	>0.05	0.011	0.004	0.008
ppm Water ppm ASTM D6304	>500	116	42	86

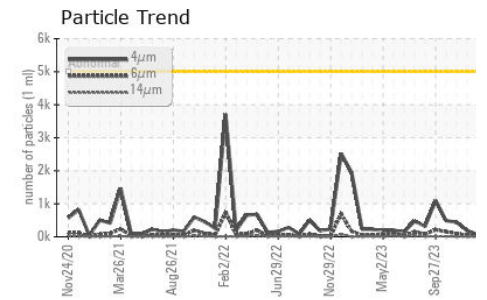
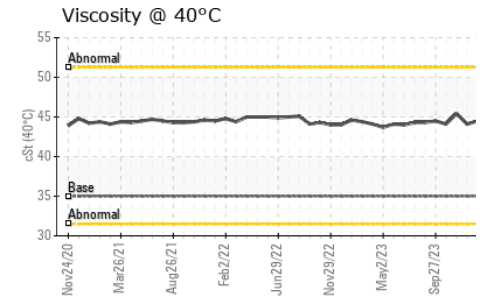
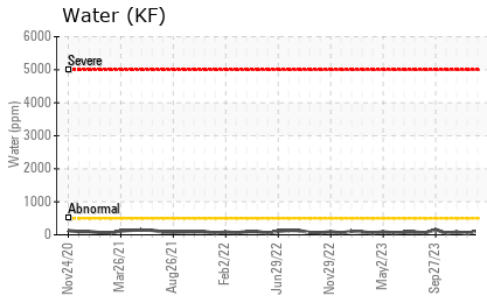
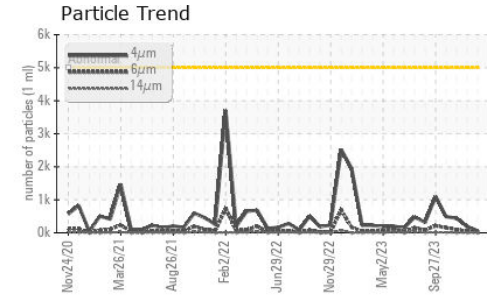
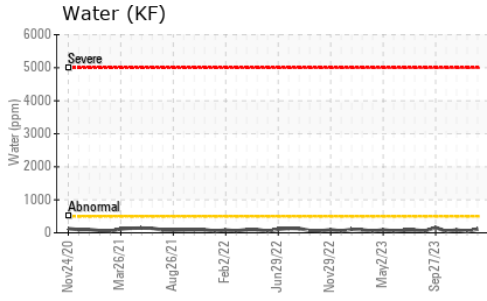
FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm ASTM D7647	>5000	62	192	438
Particles >6µm ASTM D7647	>1300	23	45	99
Particles >14µm ASTM D7647	>160	4	5	8
Particles >21µm ASTM D7647	>40	2	2	2
Particles >38µm ASTM D7647	>10	0	0	0
Particles >71µm ASTM D7647	>3	0	0	0
Oil Cleanliness ISO 4406 (c)	>19/17/14	13/12/9	15/13/10	16/14/10

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045		0.31	0.31	0.29

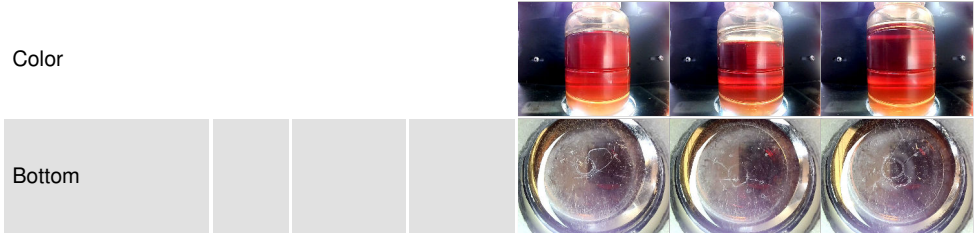
OIL ANALYSIS REPORT



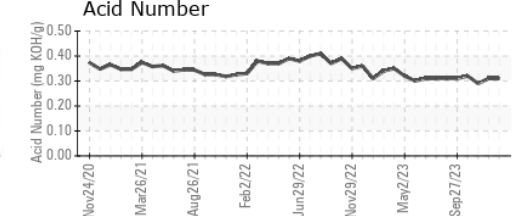
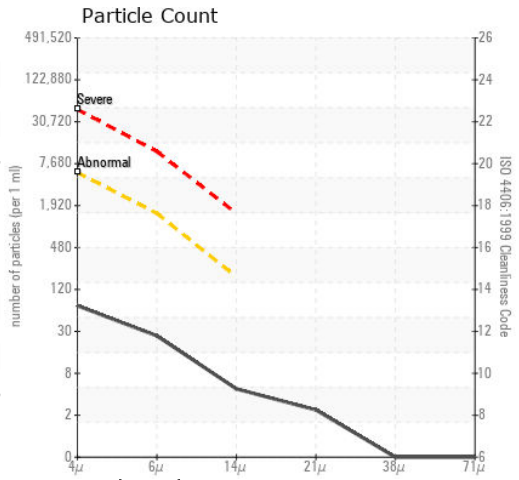
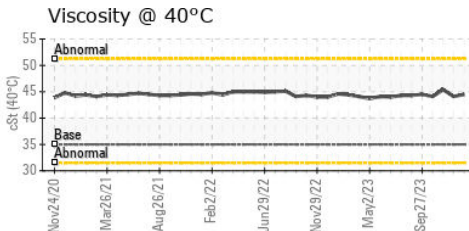
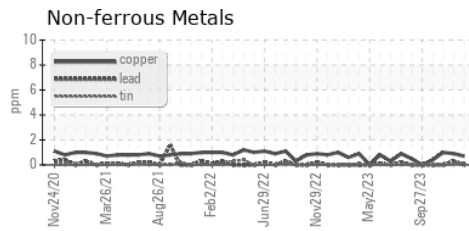
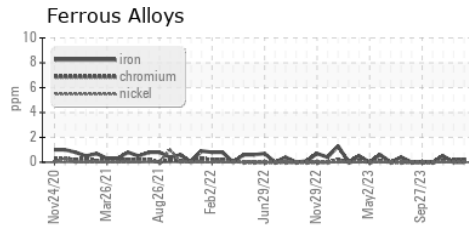
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	44.5	44.1

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0039095
Lab Number : 06075798
Unique Number : 10857889
Test Package : IND 2

Received : 31 Jan 2024
Tested : 01 Feb 2024
Diagnosed : 01 Feb 2024 - Don Baldrige

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)