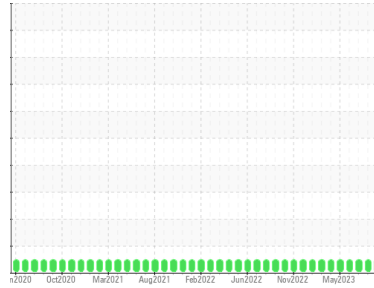




OIL ANALYSIS REPORT

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
 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	RP0038404	RP0035481	RP0035138
Sample Date	Client Info	29 Aug 2023	26 Jul 2023	28 Jun 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	<1	0
Chromium ppm ASTM D5185m	>20	0	<1	0
Nickel ppm ASTM D5185m	>20	0	0	0
Titanium ppm ASTM D5185m		0	0	0
Silver ppm ASTM D5185m		0	0	0
Aluminum ppm ASTM D5185m	>20	<1	0	<1
Lead ppm ASTM D5185m	>20	0	0	0
Copper ppm ASTM D5185m	>20	<1	<1	<1
Tin ppm ASTM D5185m	>20	0	0	0
Vanadium ppm ASTM D5185m		0	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	2	0
Molybdenum ppm ASTM D5185m		0	<1	0
Manganese ppm ASTM D5185m		0	0	0
Magnesium ppm ASTM D5185m		0	<1	4
Calcium ppm ASTM D5185m		42	44	38
Phosphorus ppm ASTM D5185m		337	337	329
Zinc ppm ASTM D5185m		402	418	392

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm ASTM D5185m	>15	2	2	1
Sodium ppm ASTM D5185m		0	0	<1
Potassium ppm ASTM D5185m	>20	0	0	<1
Water % ASTM D6304	>0.05	0.003	0.005	0.003
ppm Water ppm ASTM D6304	>500	30.0	52.4	37.8

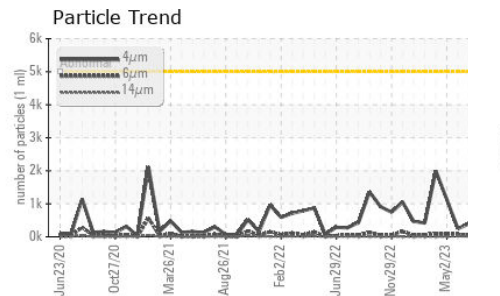
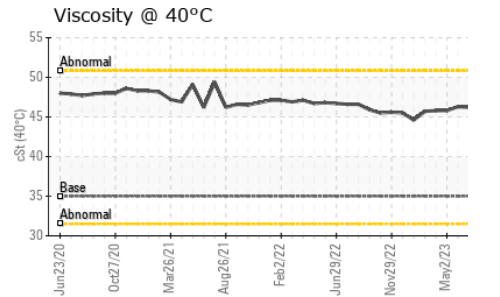
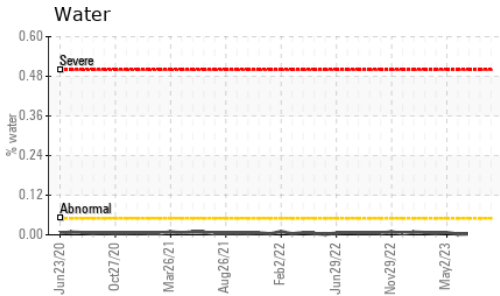
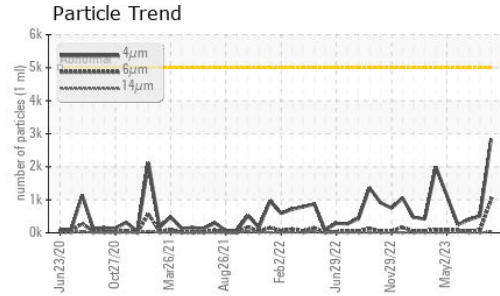
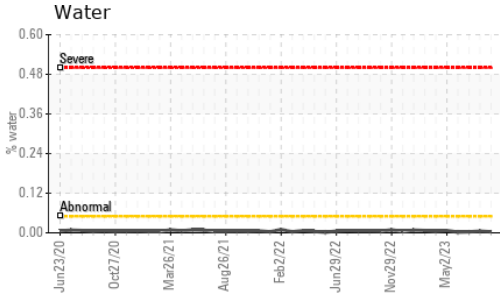
FLUID CLEANLINESS

method	limit/base	current	history1	history2
Particles >4µm ASTM D7647	>5000	2837	511	396
Particles >6µm ASTM D7647	>1300	1003	73	61
Particles >14µm ASTM D7647	>160	30	6	10
Particles >21µm ASTM D7647	>40	7	3	4
Particles >38µm ASTM D7647	>10	0	1	0
Particles >71µm ASTM D7647	>3	0	0	0
Oil Cleanliness ISO 4406 (c)	>19/17/14	19/17/12	16/13/10	16/13/10

FLUID DEGRADATION

method	limit/base	current	history1	history2
Acid Number (AN) mg KOH/g ASTM D8045		0.32	0.33	0.34

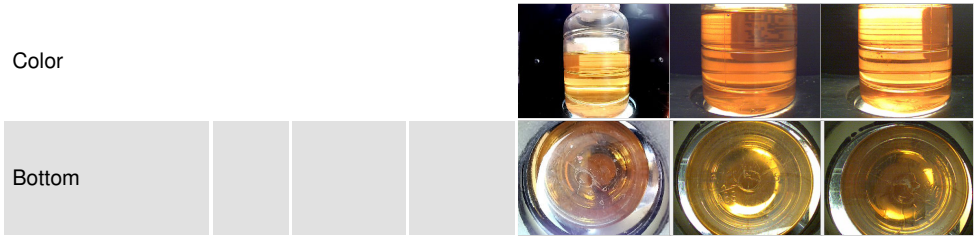
OIL ANALYSIS REPORT



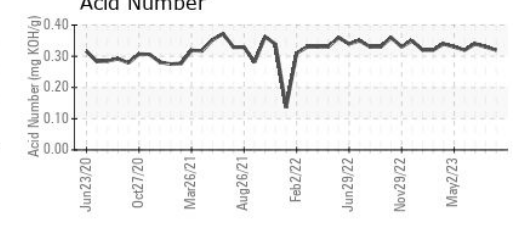
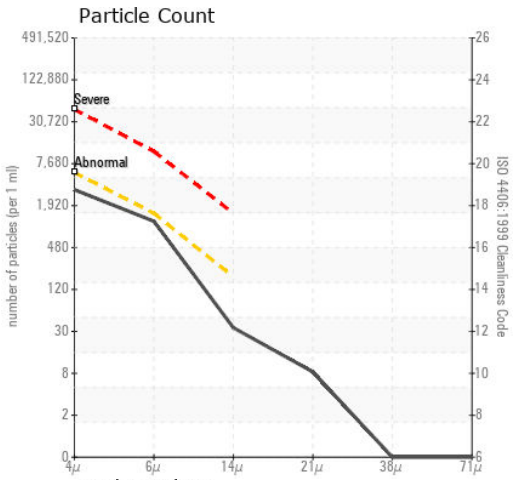
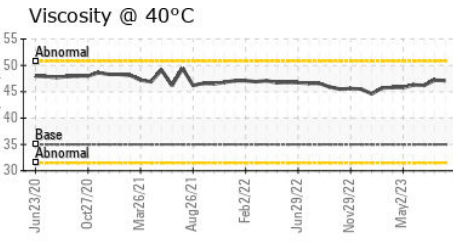
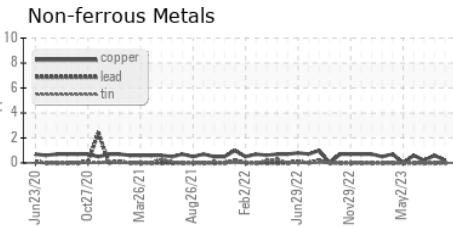
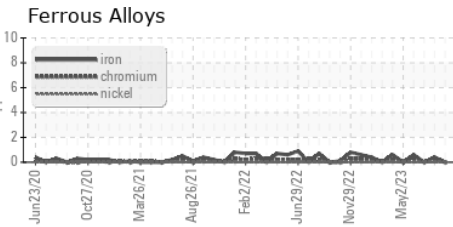
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	47.1	47.2	46.2

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0038404 **Received** : 30 Aug 2023
Lab Number : 05938908 **Diagnosed** : 31 Aug 2023
Unique Number : 10629520 **Diagnostician** : Doug Bogart
Test Package : IND 2

OUTOKUMPU STAINLESS USA
 HWY 43 N
 CALVERT, AL
 US 36513
 Contact: MARIO JOHNSON
 Mario.johnson@outokumpu.com
 T: (251)321-4105
 F: x:

Certificate L2367
 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)