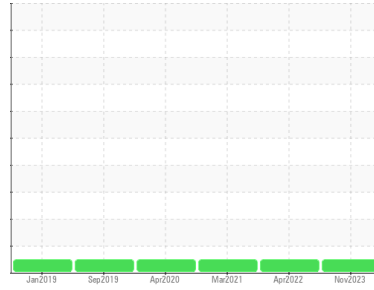




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
CONNECTION BAY CRANES
 Machine Id
CB 20.1 NORTH BRIDGE
 Component
Gearbox
 Fluid
GEAR OIL ISO 220 (--- QTS)

DIAGNOSIS

- Recommendation**
Resample at the next service interval to monitor.
- Wear**
All component wear rates are normal.
- Contamination**
The water content is negligible. 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		RP0038027	RP0025056	RP0015629
Sample Date	Client Info		21 Nov 2023	20 Apr 2022	07 Mar 2021
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

PQ		ASTM D8184		55	41	47
Iron	ppm	ASTM D5185m	>200	59	45	38
Chromium	ppm	ASTM D5185m	>15	0	<1	<1
Nickel	ppm	ASTM D5185m	>15	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	0	1	0
Lead	ppm	ASTM D5185m	>100	0	<1	0
Copper	ppm	ASTM D5185m	>200	<1	0	<1
Tin	ppm	ASTM D5185m	>25	0	<1	0
Antimony	ppm	ASTM D5185m	>5	---	---	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	50	30	32	31
Barium	ppm	ASTM D5185m	15	0	0	0
Molybdenum	ppm	ASTM D5185m	15	0	<1	0
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	50	0	3	1
Calcium	ppm	ASTM D5185m	50	766	666	765
Phosphorus	ppm	ASTM D5185m	350	460	474	482
Zinc	ppm	ASTM D5185m	100	6	7	0

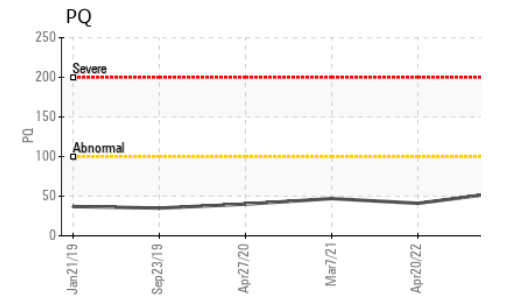
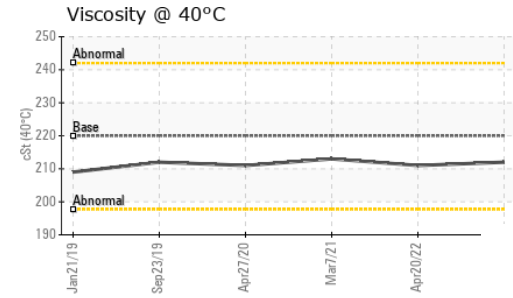
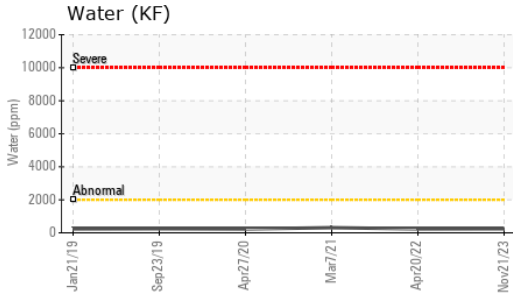
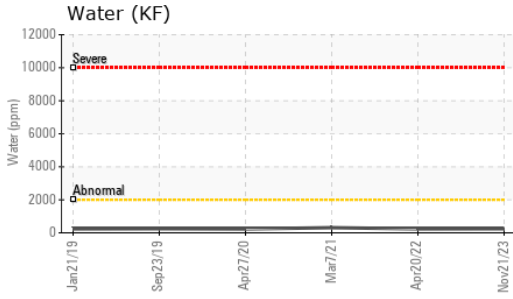
CONTAMINANTS method limit/base current history1 history2

Silicon	ppm	ASTM D5185m	>50	7	5	6
Sodium	ppm	ASTM D5185m		2	<1	0
Potassium	ppm	ASTM D5185m	>20	0	<1	0
Water	%	ASTM D6304	>0.2	0.024	0.023	0.031
ppm Water	ppm	ASTM D6304	>2000	247	238.8	313.0

FLUID DEGRADATION method limit/base current history1 history2

Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	0.52	0.56	0.567
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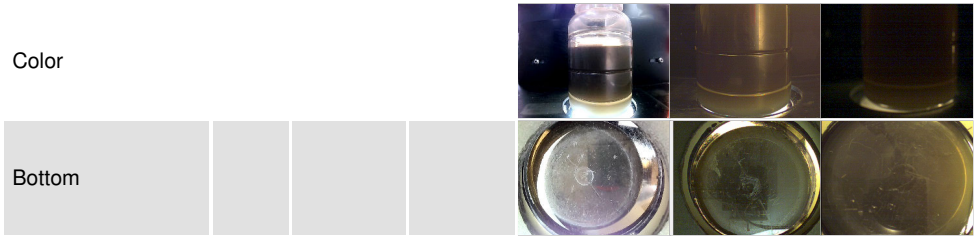
OIL ANALYSIS REPORT



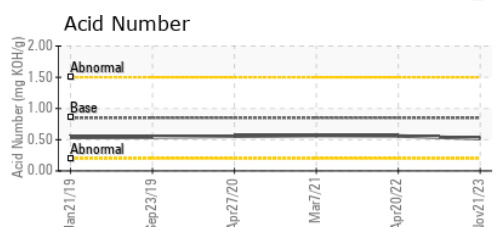
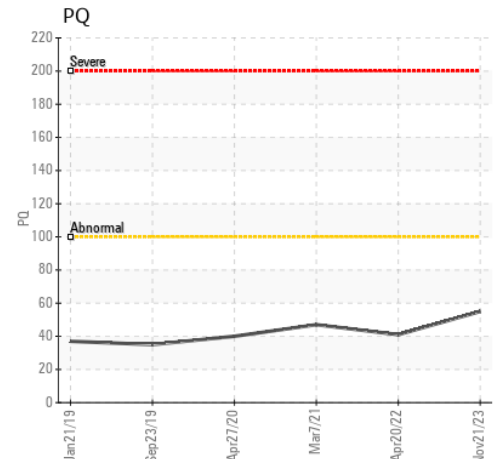
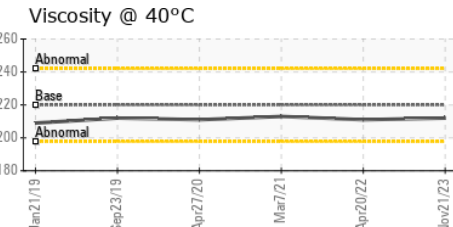
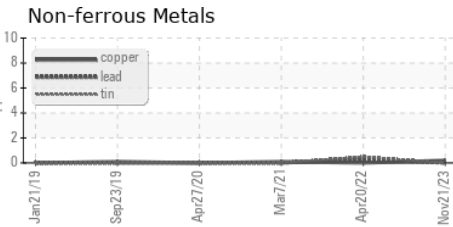
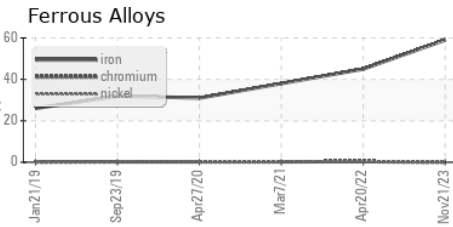
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	212	211

SAMPLE IMAGES	method	limit/base	current	history1	history2
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GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : RP0038027 **Received** : 22 Nov 2023
Lab Number : 06015799 **Diagnosed** : 27 Nov 2023
Unique Number : 10754943 **Diagnostician** : Jonathan Hester
Test Package : IND 2 (Additional Tests: PQ)

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)