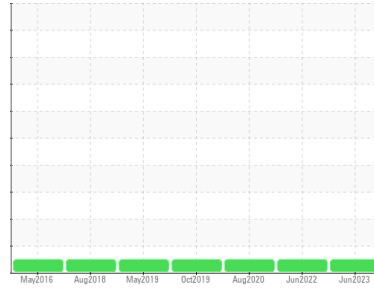




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area  
**FINISHING BAY CRANES**  
 Machine Id  
**EST-20 MAIN HOIST (S/N 16-0167)**  
 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

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>RP0035559</b>	RP0026410	RP0009832
Sample Date	Client Info			<b>20 Jun 2023</b>	23 Jun 2022	27 Aug 2020
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

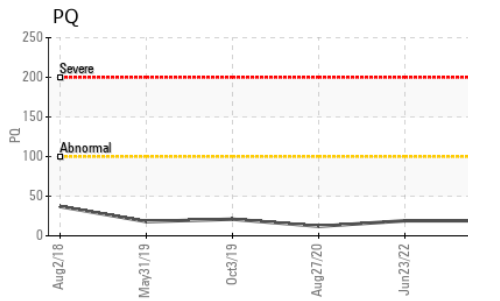
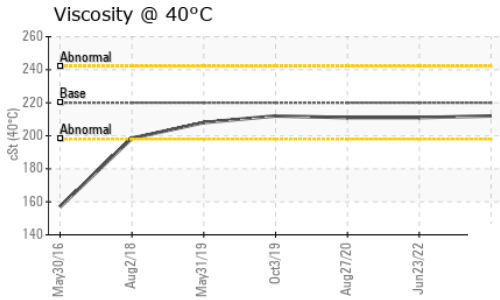
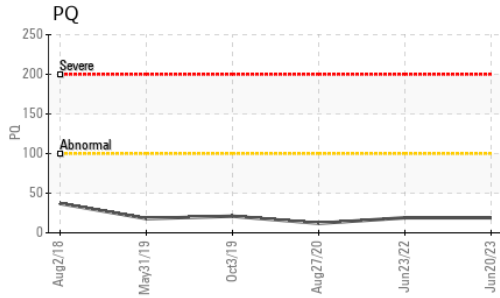
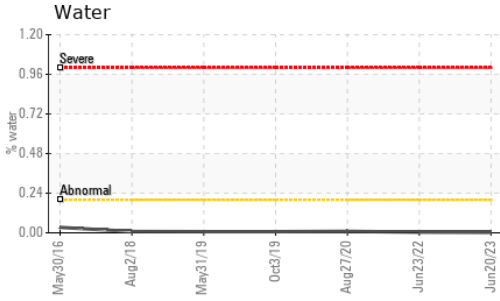
WEAR METALS		method	limit/base	current	history1	history2
PQ		ASTM D8184		<b>19</b>	19	12
Iron	ppm	ASTM D5185m	>200	<b>14</b>	15	13
Chromium	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>25	<b>0</b>	<1	0
Lead	ppm	ASTM D5185m	>100	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>200	<b>0</b>	0	<1
Tin	ppm	ASTM D5185m	>25	<b>0</b>	<1	0
Antimony	ppm	ASTM D5185m	>5	<b>---</b>	---	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	<1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	<b>8</b>	12	18
Barium	ppm	ASTM D5185m	15	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m	15	<b>0</b>	0	<1
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	50	<b>0</b>	0	<1
Calcium	ppm	ASTM D5185m	50	<b>26</b>	19	26
Phosphorus	ppm	ASTM D5185m	350	<b>208</b>	226	192
Zinc	ppm	ASTM D5185m	100	<b>0</b>	4	0

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	<b>15</b>	15	11
Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	0	<1
Water	%	ASTM D6304	>0.2	<b>0.002</b>	0.004	0.009
ppm Water	ppm	ASTM D6304	>2000	<b>22.5</b>	42.9	96.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	<b>0.48</b>	0.49	0.504

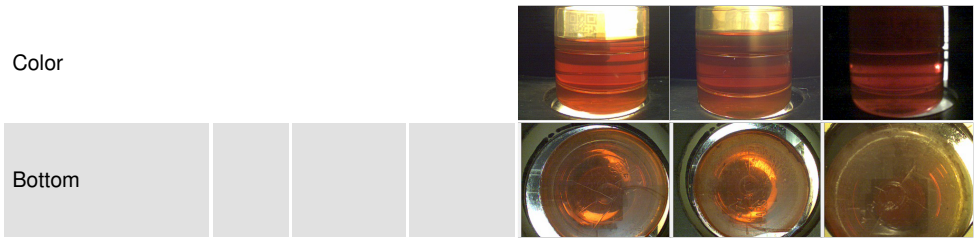
# OIL ANALYSIS REPORT



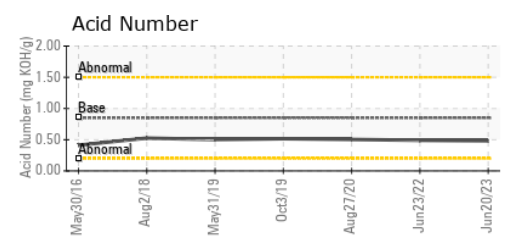
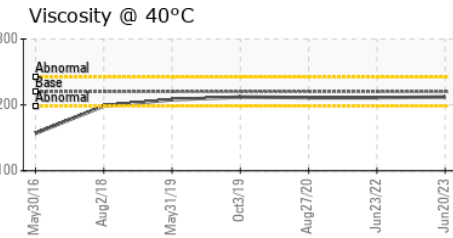
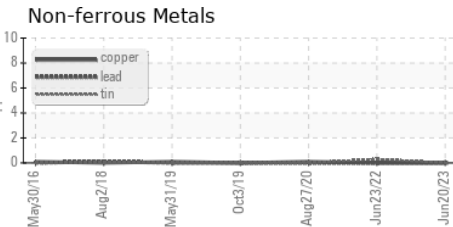
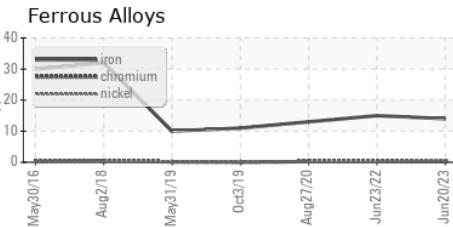
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	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.** : RP0035559 **Received** : 22 Jun 2023  
**Lab Number** : 05880945 **Diagnosed** : 26 Jun 2023  
**Unique Number** : 10526048 **Diagnostician** : Don Baldrige  
**Test Package** : IND 2 ( Additional Tests: PQ, PrtCount )

**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)