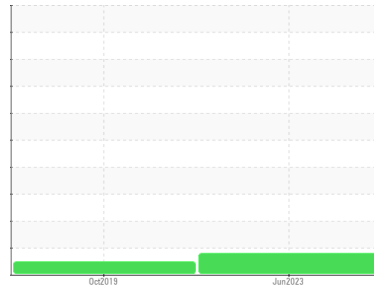


# PROBLEM SUMMARY

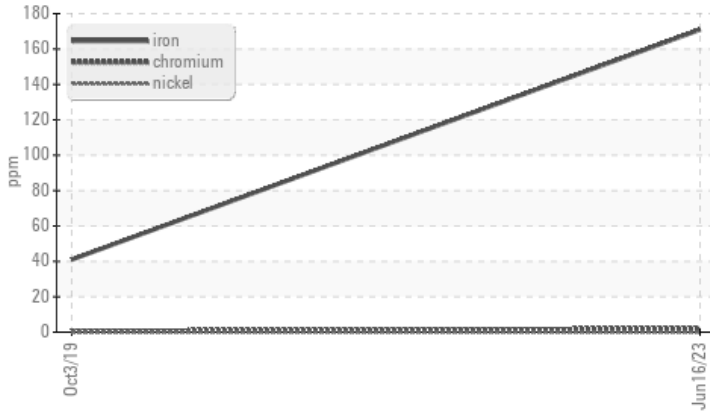
Sample Rating Trend



Area  
**FINISHING BAY CRANES**  
Machine Id  
**EST 40 SOUTH TROLLEY**  
Component  
**Gearbox**  
Fluid  
**GEAR OIL ISO 220 (--- GAL)**

## COMPONENT CONDITION SUMMARY

### ▲ Ferrous Alloys



## RECOMMENDATION

No corrective action is recommended at this time.  
Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

Sample Status				<b>MARGINAL</b>	NORMAL	---
Iron	ppm	ASTM D5185m	>200	▲ 171	41	---

**Customer Id:** OUTCALAL  
**Sample No.:** RP0035014  
**Lab Number:** 05876866  
**Test Package:** IND 2



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Jonathan Hester +1 919-379-4092 x4092  
[jhester@wearcheckusa.com](mailto:jhester@wearcheckusa.com)

To change component or sample information:  
Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS

NORMAL



### 03 Oct 2019 Diag: Wes Davis

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) GEAR OIL ISO 220. Please confirm.

NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. All component wear rates are normal. The water content is negligible. There is no indication of any contamination in the oil. The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

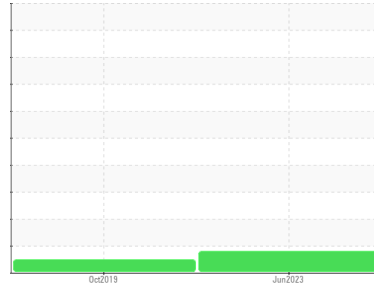
view report





# OIL ANALYSIS REPORT

Sample Rating Trend



**WEAR**



Area  
**FINISHING BAY CRANES**  
 Machine Id  
**EST 40 SOUTH TROLLEY**  
 Component  
**Gearbox**  
 Fluid  
**GEAR OIL ISO 220 (--- GAL)**

**DIAGNOSIS**

- Recommendation**  
 No corrective action is recommended at this time. Resample at the next service interval to monitor.
- Wear**  
 Gear wear is indicated.
- 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>RP0035014</b>	RP196113	---
Sample Date	Client Info		<b>16 Jun 2023</b>	03 Oct 2019	---
Machine Age	hrs	Client Info	<b>0</b>	0	---
Oil Age	hrs	Client Info	<b>0</b>	0	---
Oil Changed	Client Info		<b>N/A</b>	N/A	---
Sample Status			<b>MARGINAL</b>	NORMAL	---

**WEAR METALS**

	method	limit/base	current	history1	history2
PQ	ASTM D8184		<b>125</b>	48	---
Iron	ppm	ASTM D5185m >200	<b>▲ 171</b>	41	---
Chromium	ppm	ASTM D5185m >15	<b>2</b>	<1	---
Nickel	ppm	ASTM D5185m >15	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	---
Silver	ppm	ASTM D5185m	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m >25	<b>&lt;1</b>	<1	---
Lead	ppm	ASTM D5185m >100	<b>0</b>	2	---
Copper	ppm	ASTM D5185m >200	<b>2</b>	1	---
Tin	ppm	ASTM D5185m >25	<b>&lt;1</b>	0	---
Antimony	ppm	ASTM D5185m >5	<b>---</b>	0	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	1	---
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	---

**ADDITIVES**

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	<b>5</b>	13	---
Barium	ppm	ASTM D5185m 15	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m 15	<b>&lt;1</b>	0	---
Manganese	ppm	ASTM D5185m	<b>2</b>	<1	---
Magnesium	ppm	ASTM D5185m 50	<b>&lt;1</b>	0	---
Calcium	ppm	ASTM D5185m 50	<b>20</b>	4	---
Phosphorus	ppm	ASTM D5185m 350	<b>174</b>	169	---
Zinc	ppm	ASTM D5185m 100	<b>5</b>	8	---

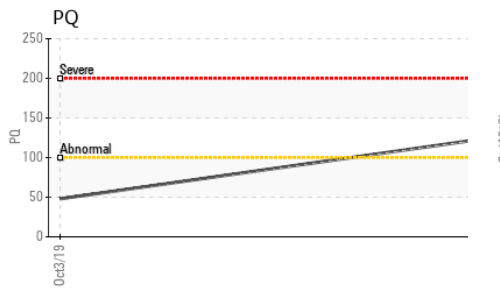
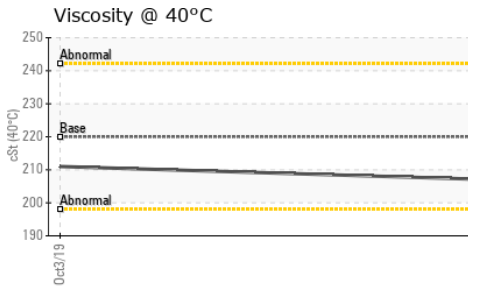
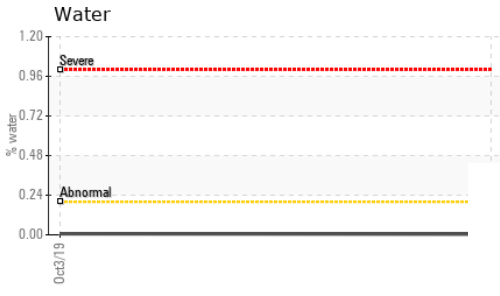
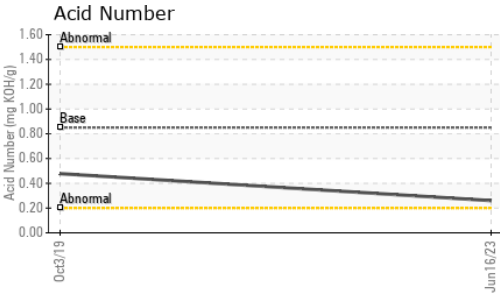
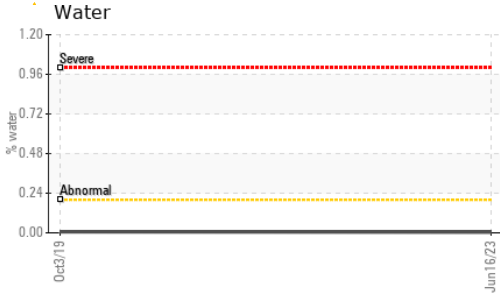
**CONTAMINANTS**

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>9</b>	8	---
Sodium	ppm	ASTM D5185m	<b>0</b>	<1	---
Potassium	ppm	ASTM D5185m >20	<b>&lt;1</b>	0	---
Water	%	ASTM D6304 >0.2	<b>0.004</b>	0.006	---
ppm Water	ppm	ASTM D6304 >2000	<b>40.4</b>	66.7	---

**FLUID DEGRADATION**

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.85	<b>0.26</b>	0.478	---

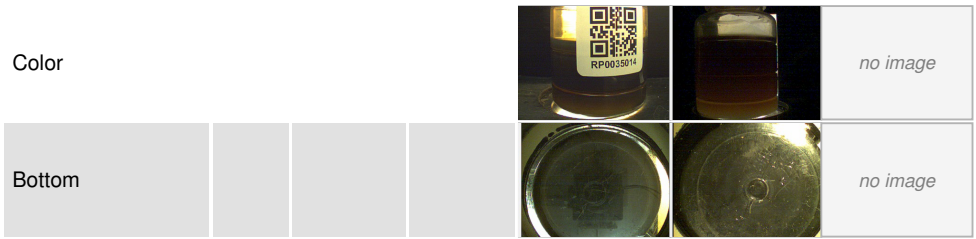
# OIL ANALYSIS REPORT



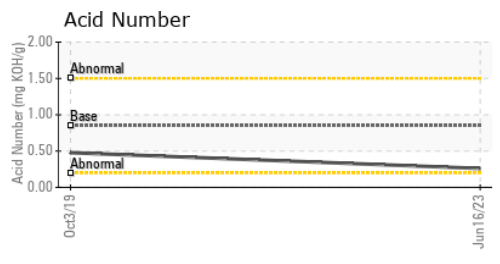
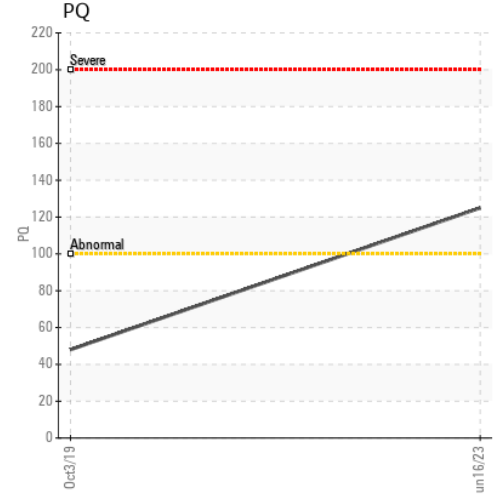
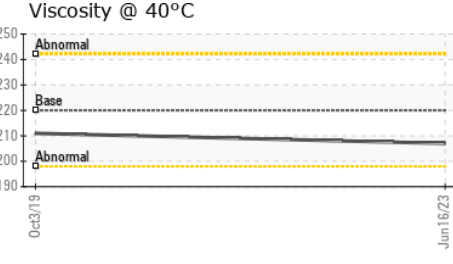
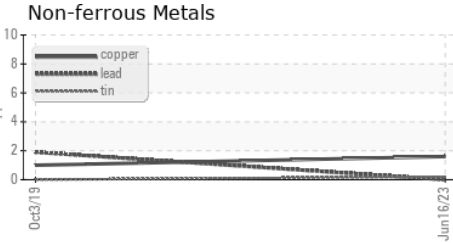
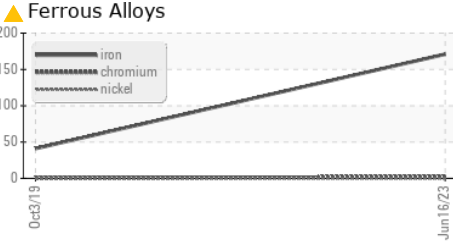
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	207	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.** : RP0035014 **Received** : 19 Jun 2023  
**Lab Number** : 05876866 **Diagnosed** : 21 Jun 2023  
**Unique Number** : 10521969 **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:

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)