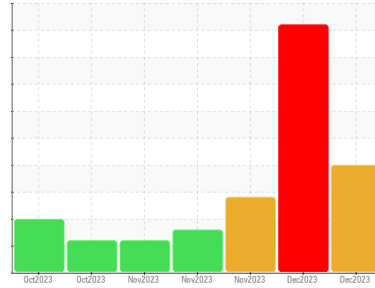




# OIL ANALYSIS REPORT

Sample Rating Trend



WATER



Area  
**RIG 813**  
Machine Id  
**R813-MP-02**  
Component  
**Gearbox**  
Fluid  
**GEAR OIL ISO 320 (--- GAL)**

## DIAGNOSIS

### Recommendation

We advise that you check for the source of water entry. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. There is too much water present in this sample to perform a particle count.

### Wear

All component wear rates are normal.

### Contamination

There is a high concentration of water present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid. The oil is no longer serviceable due to the presence of contaminants.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>KL0013149</b>	KL0004260	KL0013157
Sample Date	Client Info		<b>28 Dec 2023</b>	01 Dec 2023	21 Nov 2023
Machine Age	hrs	Client Info	<b>43803</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>SEVERE</b>	SEVERE	ABNORMAL

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >200	<b>71</b>	118	29
Chromium	ppm	ASTM D5185m >10	<b>0</b>	1	<1
Nickel	ppm	ASTM D5185m >10	<b>0</b>	1	<1
Titanium	ppm	ASTM D5185m	<b>0</b>	4	<1
Silver	ppm	ASTM D5185m	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m >25	<b>8</b>	▲ 57	5
Lead	ppm	ASTM D5185m >50	<b>16</b>	2	1
Copper	ppm	ASTM D5185m >200	<b>63</b>	101	78
Tin	ppm	ASTM D5185m >10	<b>1</b>	2	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 50	<b>0</b>	11	7
Barium	ppm	ASTM D5185m 15	<b>8</b>	46	4
Molybdenum	ppm	ASTM D5185m 15	<b>&lt;1</b>	0	1
Manganese	ppm	ASTM D5185m	<b>0</b>	1	<1
Magnesium	ppm	ASTM D5185m 50	<b>5</b>	33	14
Calcium	ppm	ASTM D5185m 50	<b>41</b>	207	52
Phosphorus	ppm	ASTM D5185m 350	<b>343</b>	168	138
Zinc	ppm	ASTM D5185m 100	<b>42</b>	52	28
Sulfur	ppm	ASTM D5185m 12500	<b>5734</b>	8722	9781

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >50	<b>33</b>	● 232	22
Sodium	ppm	ASTM D5185m	<b>20</b>	126	▲ 263
Potassium	ppm	ASTM D5185m >20	<b>5</b>	40	33
Water	%	ASTM D6304 >0.2	● <b>1.42</b>	▲ 0.325	▲ 0.763
ppm Water	ppm	ASTM D6304 >2000	● <b>14200</b>	▲ 3250	▲ 7630

## FLUID CLEANLINESS

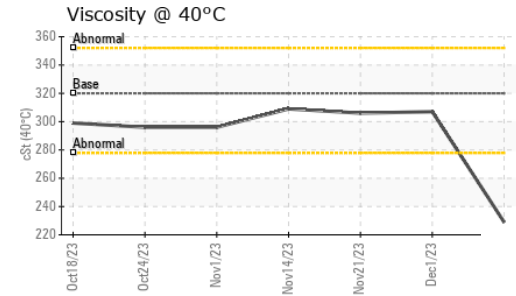
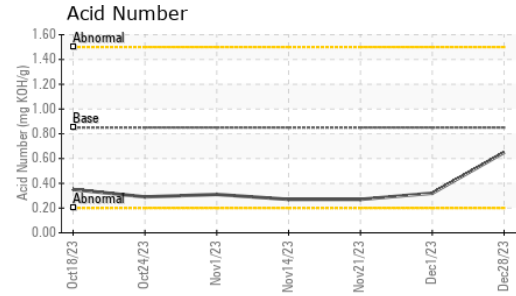
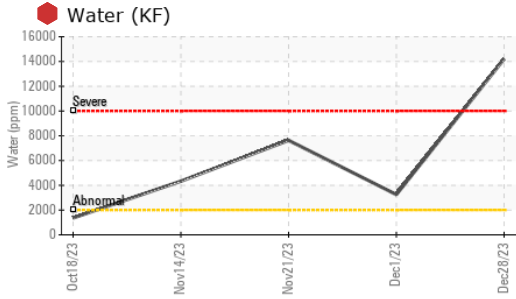
	method	limit/base	current	history1	history2
Particles >4µm	ASTM D7647	>20000	---	13258	---
Particles >6µm	ASTM D7647	>5000	---	▲ 7223	---
Particles >14µm	ASTM D7647	>640	---	▲ 1229	---
Particles >21µm	ASTM D7647	>160	---	▲ 414	---
Particles >38µm	ASTM D7647	>40	---	▲ 64	---
Particles >71µm	ASTM D7647	>10	---	7	---
Oil Cleanliness	ISO 4406 (c)	>21/19/16	---	▲ 21/20/17	---

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045 0.85	<b>0.65</b>	0.32	0.27



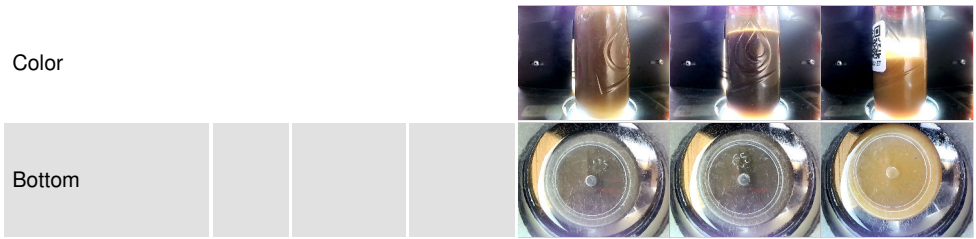
# OIL ANALYSIS REPORT



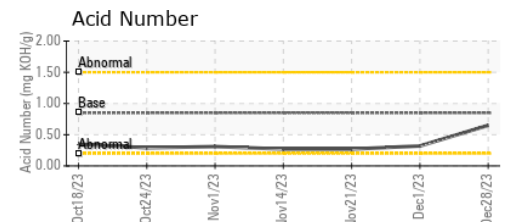
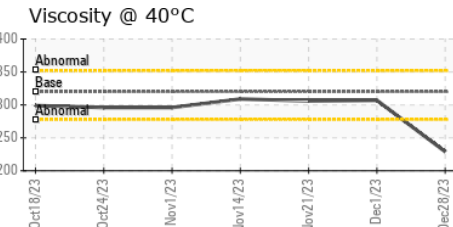
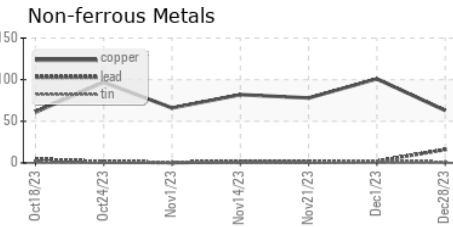
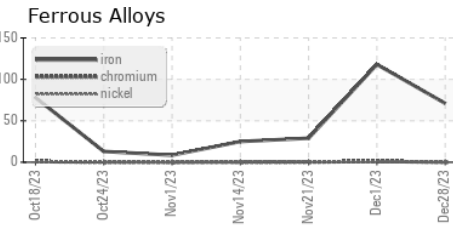
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445 320	229	307	306

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.** : KL0013149 **Recieved** : 08 Jan 2024  
**Lab Number** : 06054774 **Diagnosed** : 10 Jan 2024  
**Unique Number** : 10820723 **Diagnostician** : Don Baldrige  
**Test Package** : MOB 2 ( Additional Tests: KF, PrtCount )

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)

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