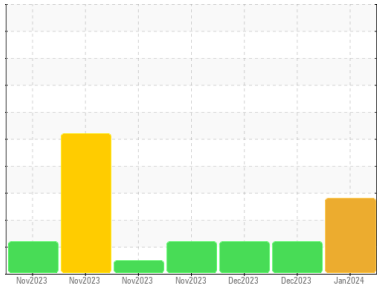
OIL ANALYSIS REPORT

Sample Rating Trend



WATER

Area
RIG 816
Machine Id
R816-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.

Wear
All component wear rates are normal.

Contamination
Appearance is unacceptable. There is a moderate concentration of water present in the oil. The high sodium (Na) level indicates the possible presence of salt water.

Fluid Condition
The oil is no longer serviceable due to the presence of contaminants.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**KL0011723**	KL0013946	KL0013156
Sample Date		Client Info		**07 Jan 2024**	13 Dec 2023	01 Dec 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				**ABNORMAL**	ABNORMAL	ABNORMAL

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>200	**92**	28	32
Chromium	ppm	ASTM D5185m	>10	**<1**	<1	<1
Nickel	ppm	ASTM D5185m	>10	**0**	<1	<1
Titanium	ppm	ASTM D5185m		**<1**	<1	<1
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**6**	1	1
Lead	ppm	ASTM D5185m	>50	**0**	<1	0
Copper	ppm	ASTM D5185m	>200	**32**	22	24
Tin	ppm	ASTM D5185m	>10	**0**	<1	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	<1	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	**4**	<1	<1
Barium	ppm	ASTM D5185m	15	**0**	2	0
Molybdenum	ppm	ASTM D5185m	15	**0**	<1	<1
Manganese	ppm	ASTM D5185m		**0**	<1	<1
Magnesium	ppm	ASTM D5185m	50	**8**	4	1
Calcium	ppm	ASTM D5185m	50	**75**	24	24
Phosphorus	ppm	ASTM D5185m	350	**194**	160	133
Zinc	ppm	ASTM D5185m	100	**31**	34	33
Sulfur	ppm	ASTM D5185m	12500	**8900**	8462	8565

CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**32**	11	12
Sodium	ppm	ASTM D5185m		▲ **1453**	5	6
Potassium	ppm	ASTM D5185m	>20	**11**	1	2
Water	%	ASTM D6304	>0.2	▲ **0.608**	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ **6080**	---	---

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

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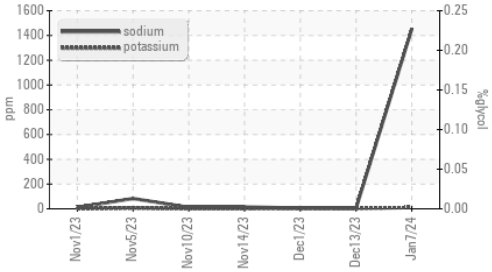
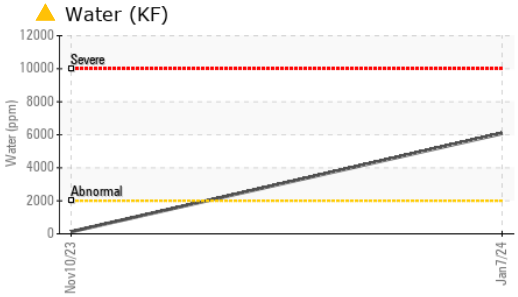
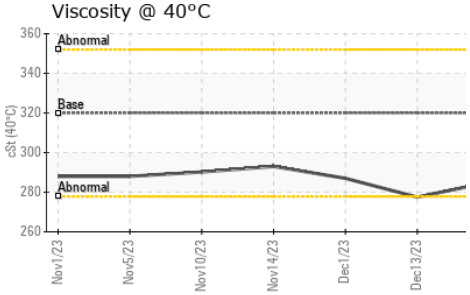
Glycol Contamination



Water (KF)



Viscosity @ 40°C

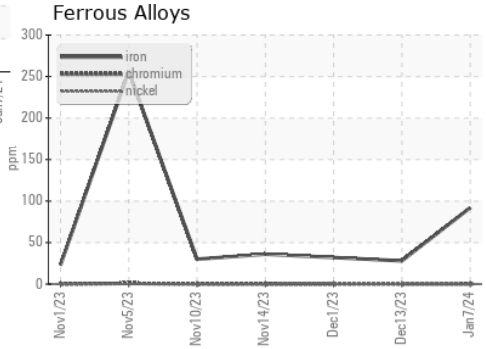


FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	320	**285**	277.5	287

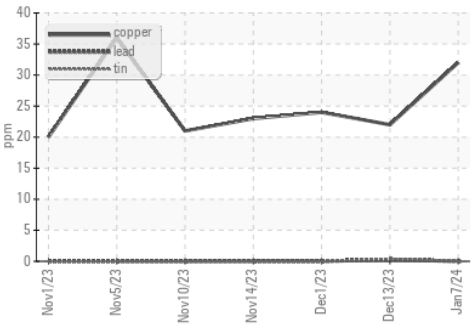
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

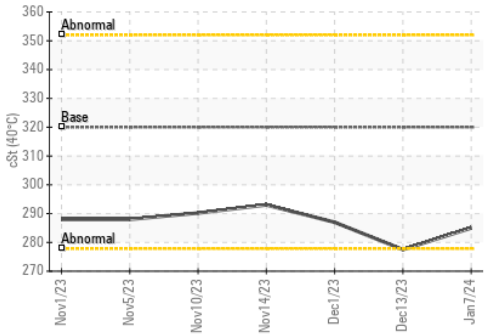
Ferrous Alloys



Non-ferrous Metals



Viscosity @ 40°C



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0011723 **Recieved** : 10 Jan 2024
Lab Number : 06056982 **Diagnosed** : 11 Jan 2024
Unique Number : 10822931 **Diagnostician** : Doug Bogart
Test Package : FLEET (Additional Tests: KF)

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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