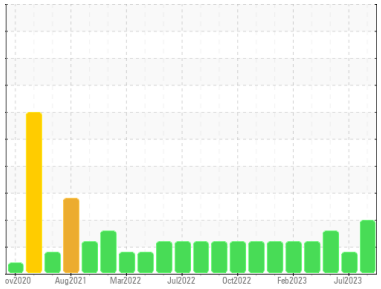
OIL ANALYSIS REPORT

Area
RIG 6
Machine Id
R6-P-02G NKL
Component
Gearbox
Fluid
GEAR OIL (PAO) ISO 220 (--- GAL)

Sample Rating Trend



VISCOSITY

DIAGNOSIS

Recommendation
We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

Contamination
There is a high amount of particulates present in the oil.

Fluid Condition
The oil viscosity is higher than normal. Confirm oil type. The AN level is acceptable for this fluid.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number		Client Info		**KL0012957**	KL0012706	KL0011824
Sample Date		Client Info		**13 Sep 2023**	28 Jul 2023	14 Apr 2023
Machine Age	days	Client Info		**45180**	45134	45025
Oil Age	days	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	**31**	36	47
Chromium	ppm	ASTM D5185m	>10	**0**	<1	0
Nickel	ppm	ASTM D5185m	>10	**0**	0	0
Titanium	ppm	ASTM D5185m		**<1**	<1	0
Silver	ppm	ASTM D5185m		**0**	0	0
Aluminum	ppm	ASTM D5185m	>25	**<1**	4	8
Lead	ppm	ASTM D5185m	>50	**0**	0	0
Copper	ppm	ASTM D5185m	>200	**10**	5	10
Tin	ppm	ASTM D5185m	>10	**0**	0	0
Vanadium	ppm	ASTM D5185m		**0**	0	0
Cadmium	ppm	ASTM D5185m		**0**	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	25	**11**	10	4
Barium	ppm	ASTM D5185m	12	**0**	10	12
Molybdenum	ppm	ASTM D5185m	5	**1**	0	2
Manganese	ppm	ASTM D5185m		**<1**	<1	<1
Magnesium	ppm	ASTM D5185m	25	**18**	16	16
Calcium	ppm	ASTM D5185m	25	**44**	61	56
Phosphorus	ppm	ASTM D5185m	375	**226**	257	187
Zinc	ppm	ASTM D5185m	25	**<1**	0	5
Sulfur	ppm	ASTM D5185m	4900	**7329**	9322	8558

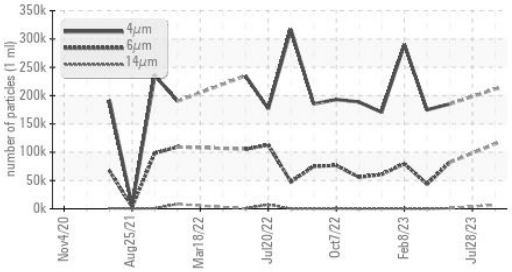
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>50	**20**	20	36
Sodium	ppm	ASTM D5185m		**41**	88	71
Potassium	ppm	ASTM D5185m	>20	**4**	5	7

FLUID CLEANLINESS		method	limit/base	current	history1	history2
Particles >4µm		ASTM D7647		**211537**	---	185136
Particles >6µm		ASTM D7647	>5000	▲ **114732**	---	▲ 82008
Particles >14µm		ASTM D7647	>640	▲ **6926**	---	▲ 1044
Particles >21µm		ASTM D7647	>160	▲ **832**	---	73
Particles >38µm		ASTM D7647	>40	**4**	---	2
Particles >71µm		ASTM D7647	>10	**0**	---	0
Oil Cleanliness		ISO 4406 (c)	>19/16	▲ **24/20**	---	▲ 24/17

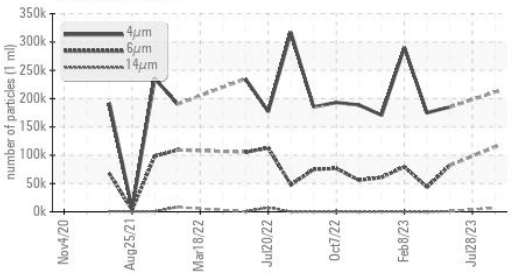
FLUID DEGRADATION		method	limit/base	current	history1	history2
Acid Number (AN)	mg KOH/g	ASTM D8045	1.10	**0.53**	0.51	0.51

OIL ANALYSIS REPORT

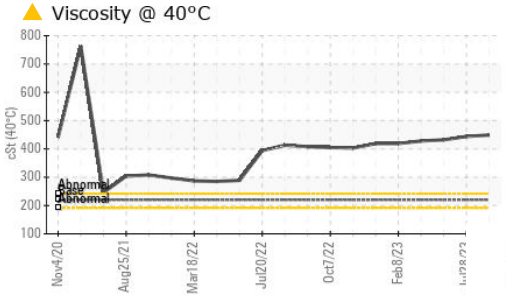
Particle Trend



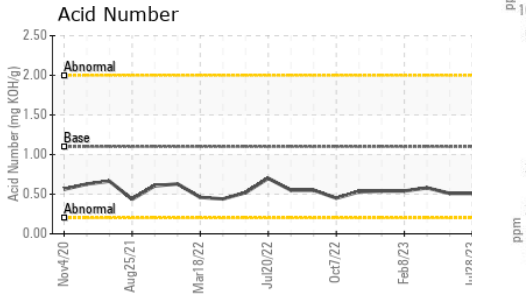
Particle Trend



Viscosity @ 40°C

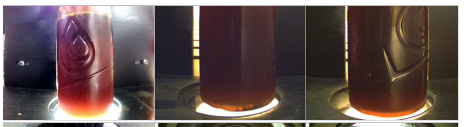
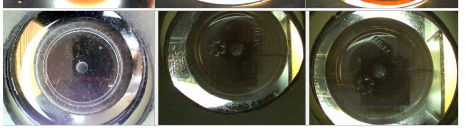


Acid Number



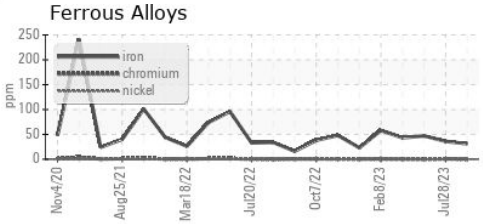
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	NONE
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	NONE
Silt	scalar	*Visual	NONE	**NONE**	MODER	NONE
Debris	scalar	*Visual	NONE	**NONE**	▲ HEAVY	NONE
Sand/Dirt	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	**NEG**	NEG	NEG
Free Water	scalar	*Visual		**NEG**	NEG	NEG

FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 40°C	cSt	ASTM D445	220	▲ **449**	▲ 444	▲ 432

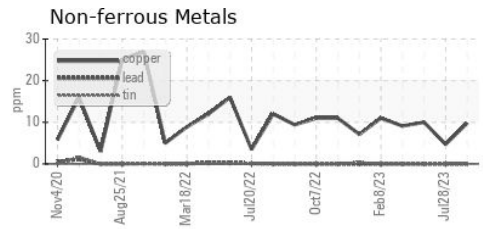
SAMPLE IMAGES	method	limit/base	current	history1	history2
Color					
Bottom					

GRAPHS

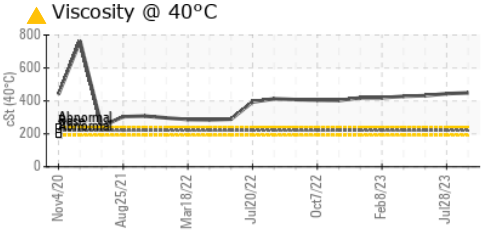
Ferrous Alloys



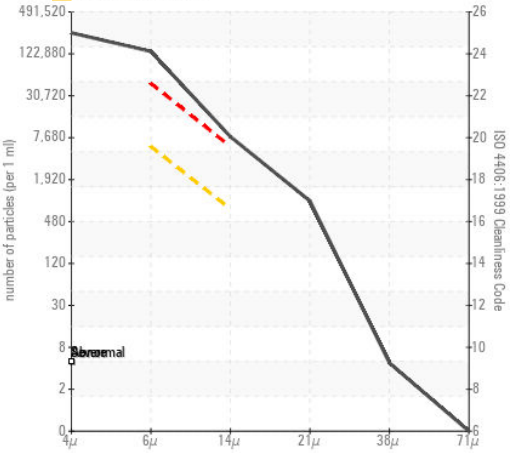
Non-ferrous Metals



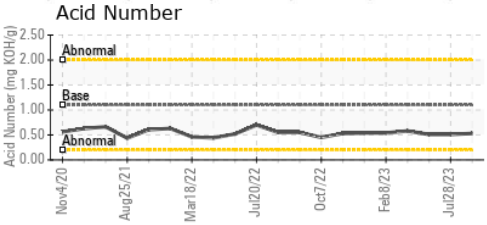
Viscosity @ 40°C



Particle Count



Acid Number



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0012957 **Received** : 29 Sep 2023
Lab Number : 05965360 **Diagnosed** : 02 Oct 2023
Unique Number : 10671911 **Diagnostician** : Don Baldridge
Test Package : MOB 2 (Additional Tests: PrtCount)

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)

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