



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
RIG 1
Machine Id
WHITE STAR 2450 R1-P-01G
Component
Gearbox
Fluid
GEAR OIL ISO 460 (--- GAL)

RECOMMENDATION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0014071	KL0012899	KL0012534
Sample Date		Client Info		12 Dec 2023	29 Sep 2023	25 Aug 2023
Machine Age	days	Client Info		45272	45196	45161
Oil Age	days	Client Info		0	0	0
Filter Age	days	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	191	▲ 254	135
Chromium	ppm	ASTM D5185m	>10	<1	2	2
Nickel	ppm	ASTM D5185m	>10	<1	2	<1
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	11	▲ 20	▲ 19
Lead	ppm	ASTM D5185m	>50	0	<1	0
Copper	ppm	ASTM D5185m	>200	15	22	18
Tin	ppm	ASTM D5185m	>10	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

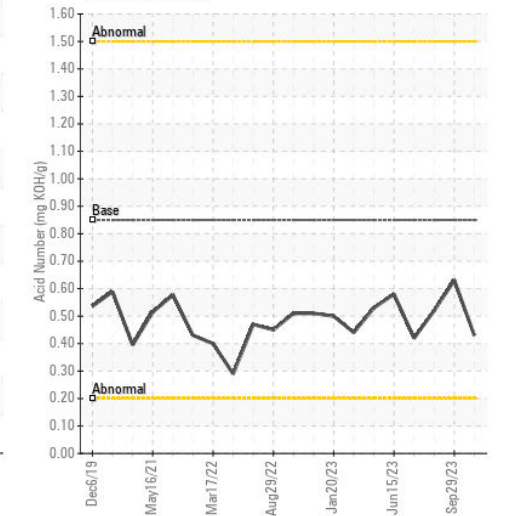
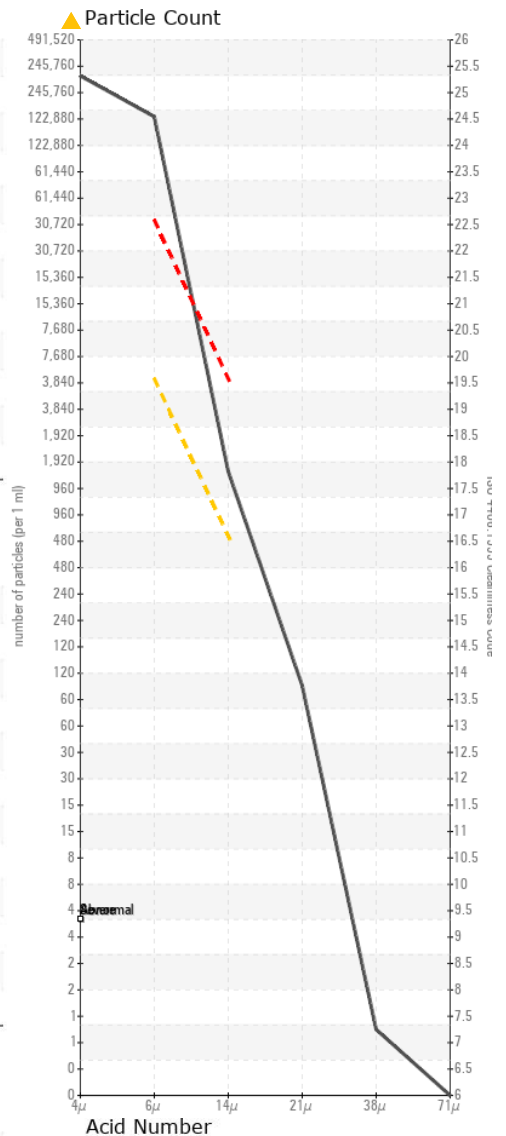
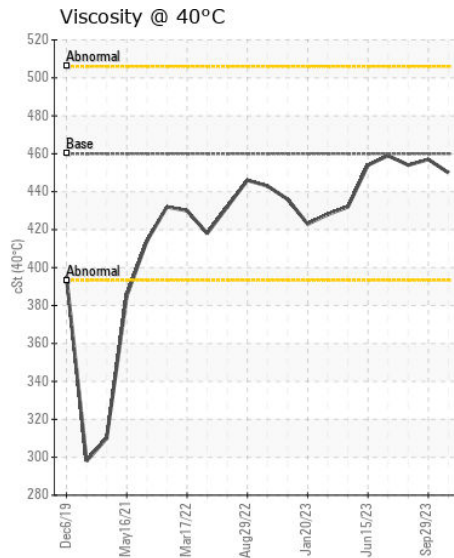
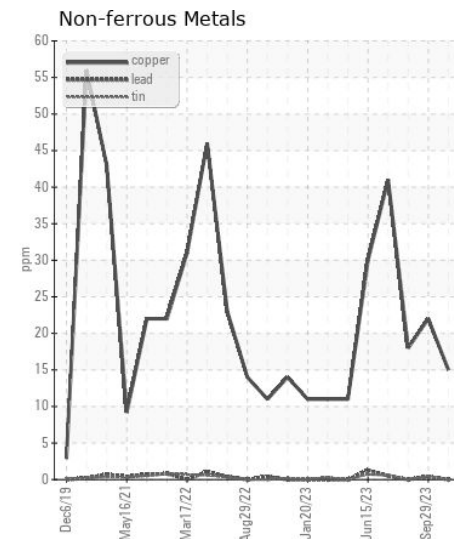
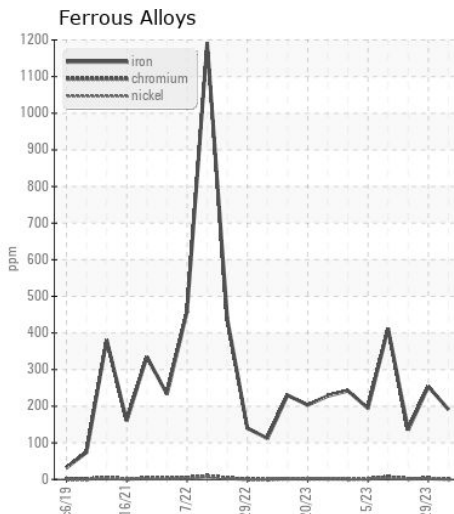
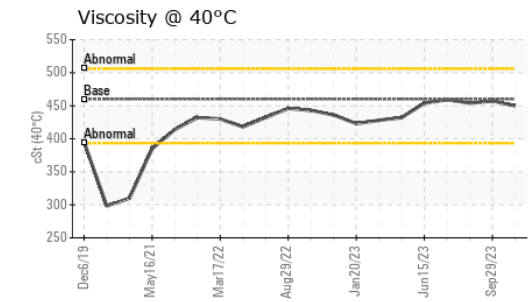
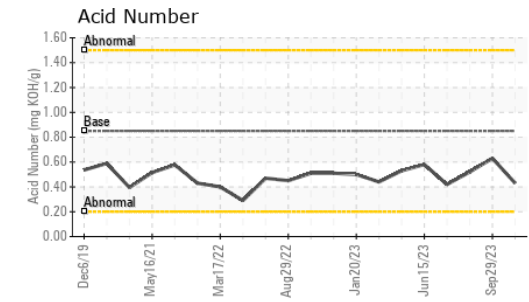
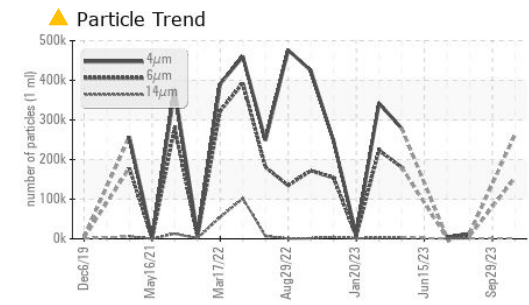
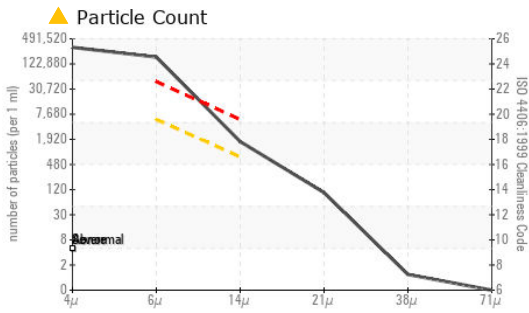
There is a high amount of particulates present in the oil.

Silicon	ppm	ASTM D5185m	>50	48	▲ 92	▲ 76
Potassium	ppm	ASTM D5185m	>20	4	11	9
Water		WC Method	>0.2	NEG	NEG	NEG
Particles >4µm		ASTM D7647		263307	---	13502
Particles >6µm		ASTM D7647	>5000	▲ 154296	---	▲ 7355
Particles >14µm		ASTM D7647	>640	▲ 1486	---	▲ 1252
Particles >21µm		ASTM D7647	>160	90	---	▲ 422
Particles >38µm		ASTM D7647	>40	1	---	▲ 65
Particles >71µm		ASTM D7647	>10	0	---	7
Oil Cleanliness		ISO 4406 (c)	>19/16	▲ 24/18	---	▲ 20/17
Silt	scalar	*Visual	NONE	NONE	▲ MODER	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	NEG	NEG	NEG

FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		85	193	95
Boron	ppm	ASTM D5185m	50	17	10	16
Barium	ppm	ASTM D5185m	15	14	26	20
Molybdenum	ppm	ASTM D5185m	15	29	90	110
Manganese	ppm	ASTM D5185m		<1	2	1
Magnesium	ppm	ASTM D5185m	50	5	19	12
Calcium	ppm	ASTM D5185m	50	27	46	38
Phosphorus	ppm	ASTM D5185m	350	214	203	215
Zinc	ppm	ASTM D5185m	100	6	24	24
Sulfur	ppm	ASTM D5185m	12500	7178	7346	9166
Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	0.43	0.63	0.52
Visc @ 40°C	cSt	ASTM D445	460	450	457	454



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0014071 **Received** : 08 Jan 2024
Lab Number : 06054766 **Diagnosed** : 10 Jan 2024
Unique Number : 10820715 **Diagnostician** : Don Baldrige
Test Package : MOB 2 (Additional Tests: 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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