



OIL ANALYSIS REPORT

WEAR	ABNORMAL
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 advise that you check all areas where dirt can enter the system. We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

WEAR

Gear wear is indicated.

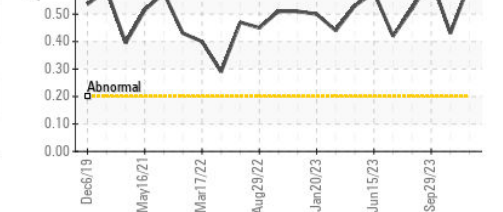
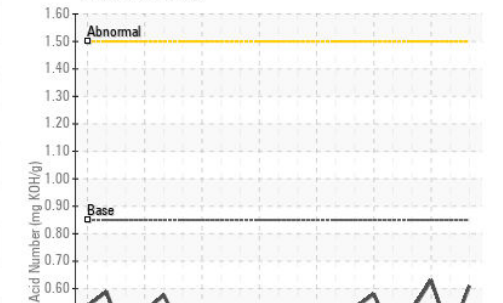
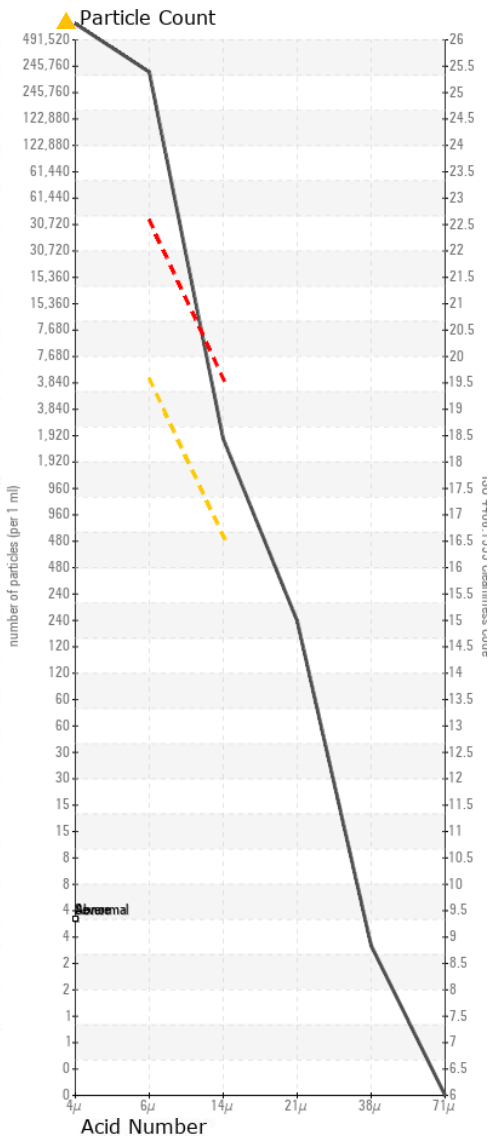
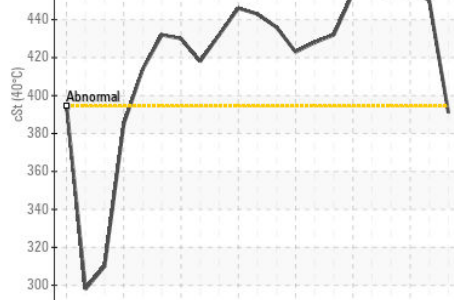
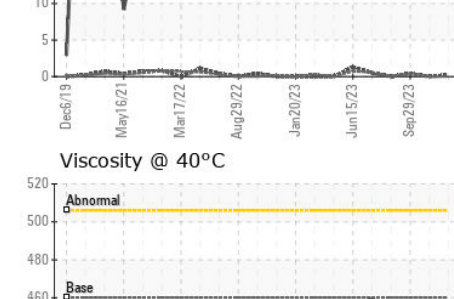
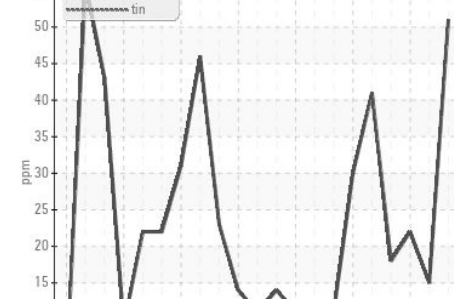
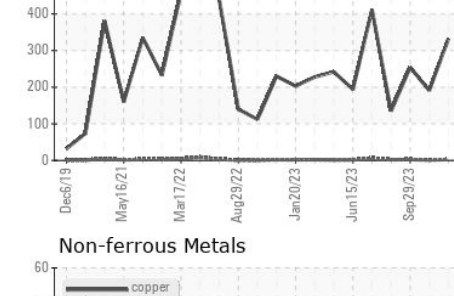
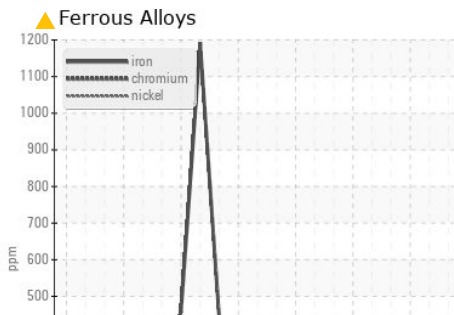
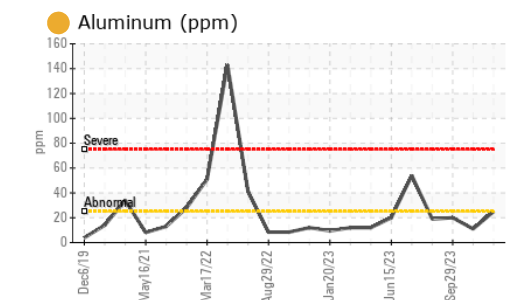
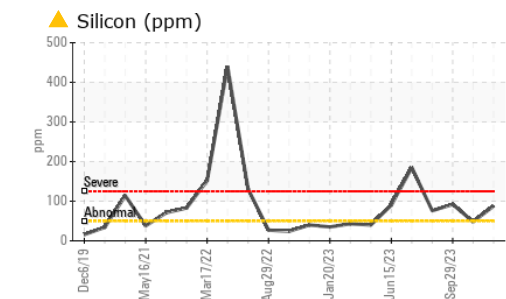
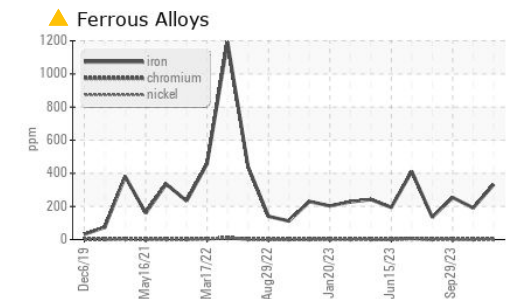
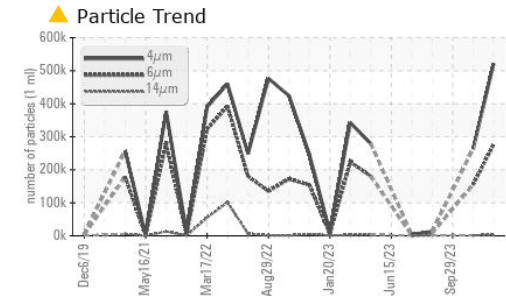
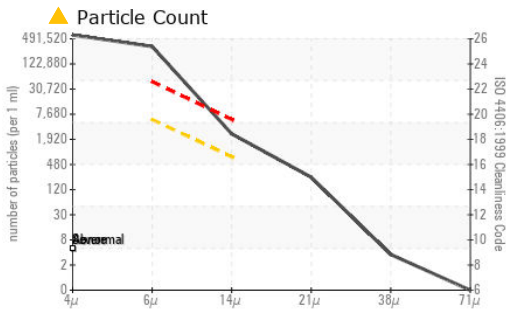
CONTAMINATION

There is a high amount of particulates present in the oil. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

The AN level is acceptable for this fluid.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0014024	KL0014071	KL0012899
Sample Date		Client Info		16 Feb 2024	12 Dec 2023	29 Sep 2023
Machine Age	days	Client Info		45338	45272	45196
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
Iron	ppm	ASTM D5185m	>200	▲ 332	191	▲ 254
Chromium	ppm	ASTM D5185m	>10	2	<1	2
Nickel	ppm	ASTM D5185m	>10	2	<1	2
Titanium	ppm	ASTM D5185m		1	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	● 25	11	● 20
Lead	ppm	ASTM D5185m	>50	<1	0	<1
Copper	ppm	ASTM D5185m	>200	51	15	22
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>50	▲ 88	48	▲ 92
Potassium	ppm	ASTM D5185m	>20	91	4	11
Water		WC Method	>0.2	NEG	NEG	NEG
Particles >4µm		ASTM D7647		520610	263307	---
Particles >6µm		ASTM D7647	>5000	▲ 276543	▲ 154296	---
Particles >14µm		ASTM D7647	>640	▲ 2277	▲ 1486	---
Particles >21µm		ASTM D7647	>160	▲ 210	90	---
Particles >38µm		ASTM D7647	>40	3	1	---
Particles >71µm		ASTM D7647	>10	0	0	---
Oil Cleanliness		ISO 4406 (c)	>19/16	▲ 25/18	▲ 24/18	---
Silt	scalar	*Visual	NONE	NONE	NONE	▲ MODER
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
Sodium	ppm	ASTM D5185m		164	85	193
Boron	ppm	ASTM D5185m	50	38	17	10
Barium	ppm	ASTM D5185m	15	41	14	26
Molybdenum	ppm	ASTM D5185m	15	12	29	90
Manganese	ppm	ASTM D5185m		3	<1	2
Magnesium	ppm	ASTM D5185m	50	56	5	19
Calcium	ppm	ASTM D5185m	50	176	27	46
Phosphorus	ppm	ASTM D5185m	350	248	214	203
Zinc	ppm	ASTM D5185m	100	69	6	24
Sulfur	ppm	ASTM D5185m	12500	6293	7178	7346
Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	0.61	0.43	0.63
Visc @ 40°C	cSt	ASTM D445	460	391	450	457



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0014024 **Received** : 29 Feb 2024
Lab Number : 06105185 **Tested** : 01 Mar 2024
Unique Number : 10903415 **Diagnosed** : 04 Mar 2024 - Don Baldrige
Test Package : MOB 2 (Additional Tests: PrtCount)

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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)