



OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Area
RIG 3
Machine Id
Component
WHITE STAR 2450 R3-P-01G-NKL
Fluid
Gearbox
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. We were unable to perform a particle count due to a high concentration of particles present in this sample.

WEAR

Gear wear is indicated.

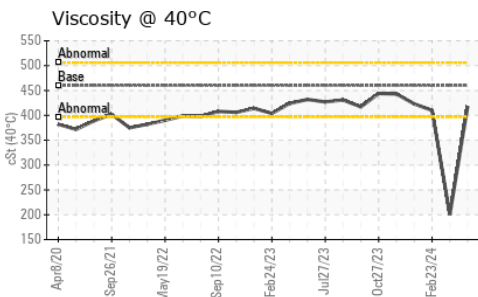
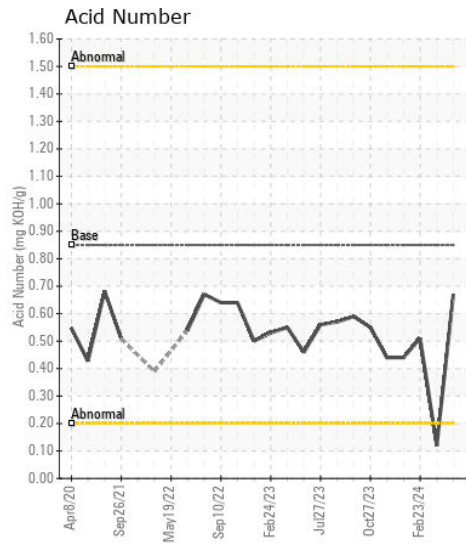
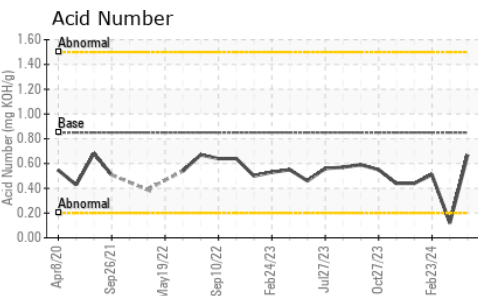
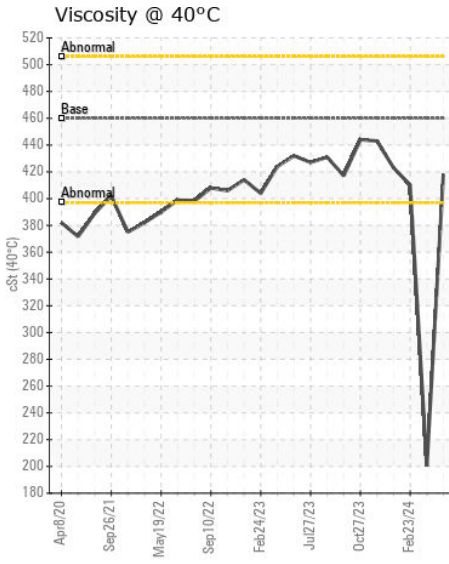
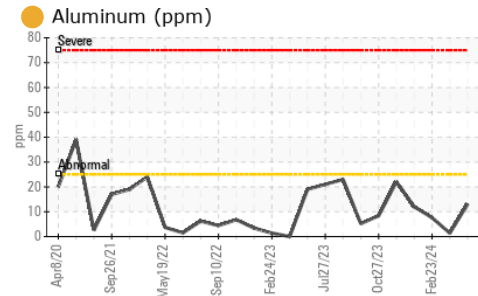
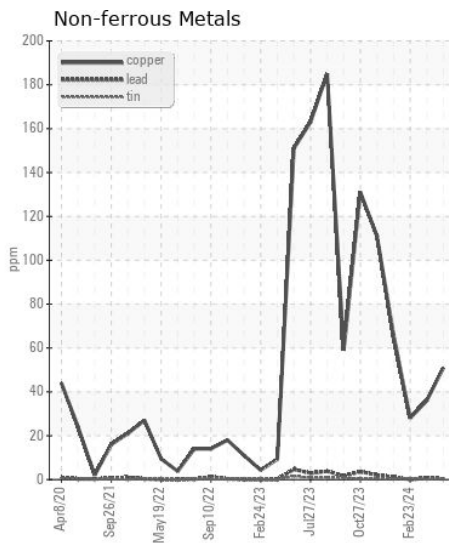
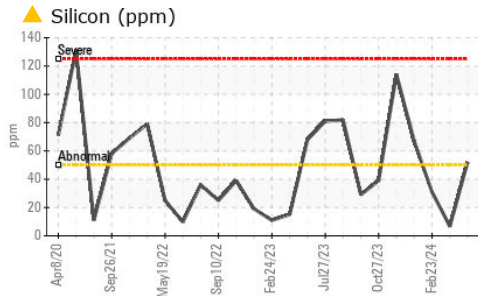
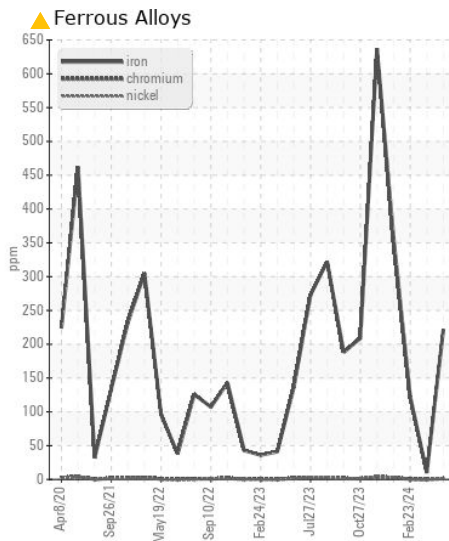
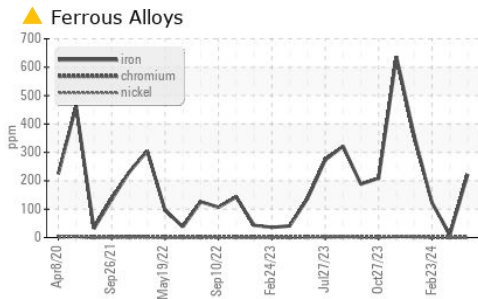
CONTAMINATION

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

FLUID CONDITION

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

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0014255	KL0014217	KL0013884
Sample Date		Client Info		14 May 2024	03 Apr 2024	23 Feb 2024
Machine Age	days	Client Info		45416	45375	45345
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	▲ 222	10	123
Chromium	ppm	ASTM D5185m	>10	1	0	<1
Nickel	ppm	ASTM D5185m	>10	2	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	● 13	1	8
Lead	ppm	ASTM D5185m	>50	<1	<1	0
Copper	ppm	ASTM D5185m	>200	51	36	28
Tin	ppm	ASTM D5185m	>10	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>50	▲ 52	7	31
Potassium	ppm	ASTM D5185m	>20	12	2	6
Water		WC Method	>0.2	NEG	NEG	NEG
Particles >4µm		ASTM D7647		---	111799	---
Particles >6µm		ASTM D7647	>5000	---	▲ 34128	---
Particles >14µm		ASTM D7647	>640	---	● 825	---
Particles >21µm		ASTM D7647	>160	---	154	---
Particles >38µm		ASTM D7647	>40	---	4	---
Particles >71µm		ASTM D7647	>10	---	0	---
Oil Cleanliness		ISO 4406 (c)	>19/16	---	▲ 22/17	---
Silt	scalar	*Visual	NONE	▲ HEAVY	NONE	▲ HEAVY
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		97	10	69
Boron	ppm	ASTM D5185m	50	35	0	46
Barium	ppm	ASTM D5185m	15	42	2	31
Molybdenum	ppm	ASTM D5185m	15	389	<1	434
Manganese	ppm	ASTM D5185m		2	0	1
Magnesium	ppm	ASTM D5185m	50	16	6	8
Calcium	ppm	ASTM D5185m	50	56	98	34
Phosphorus	ppm	ASTM D5185m	350	235	116	244
Zinc	ppm	ASTM D5185m	100	38	30	18
Sulfur	ppm	ASTM D5185m	12500	8337	6698	8861
Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	0.67	0.12	0.51
Visc @ 40°C	cSt	ASTM D445	460	418	● 200.3	410



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0014255 **Received** : 24 May 2024
Lab Number : 06191004 **Tested** : 30 May 2024
Unique Number : 11047756 **Diagnosed** : 30 May 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)