



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area
RIG 2
Machine Id
WHITE STAR 2450 R2-P-02G-NKL
Component
Gearbox
Fluid
GEAR OIL ISO 320 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

FLUID CONDITION

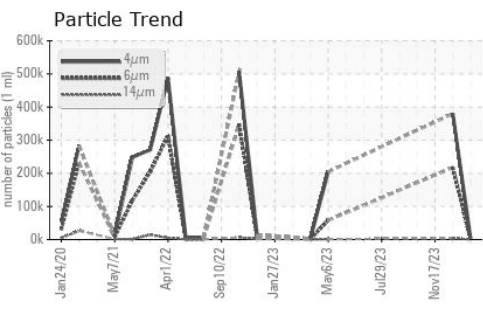
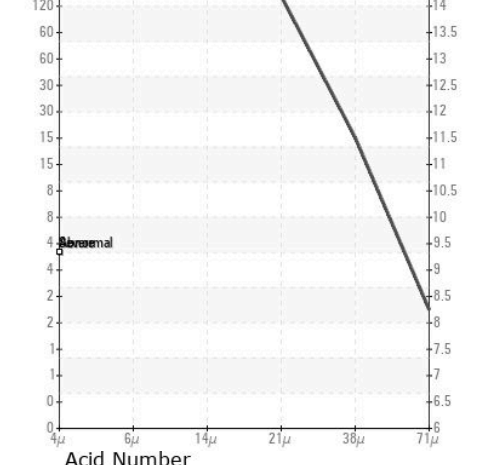
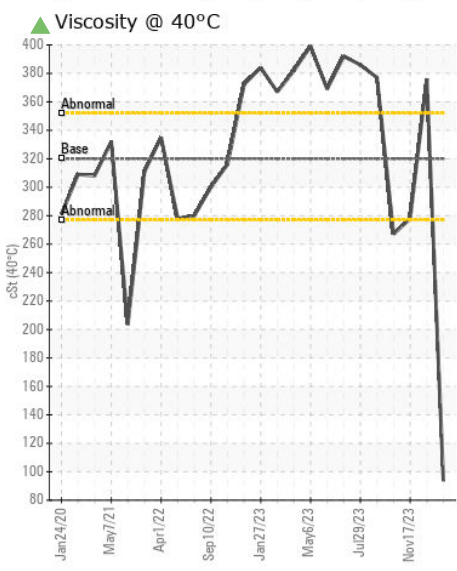
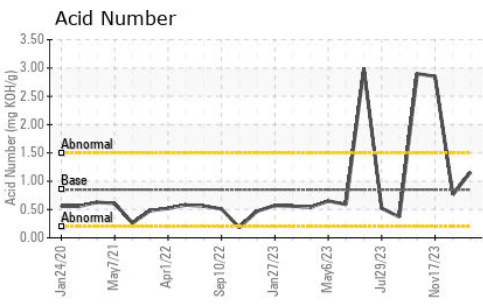
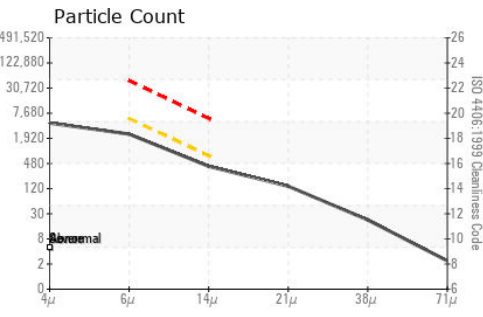
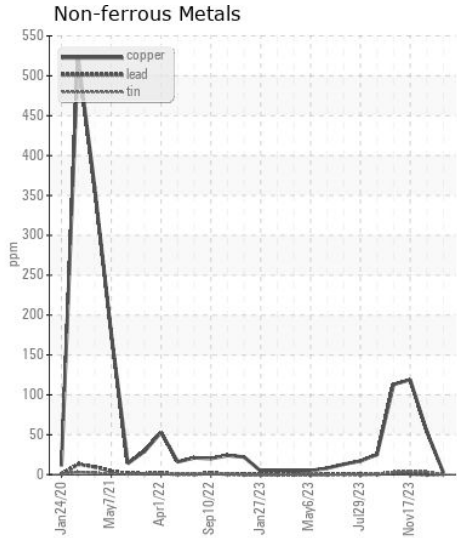
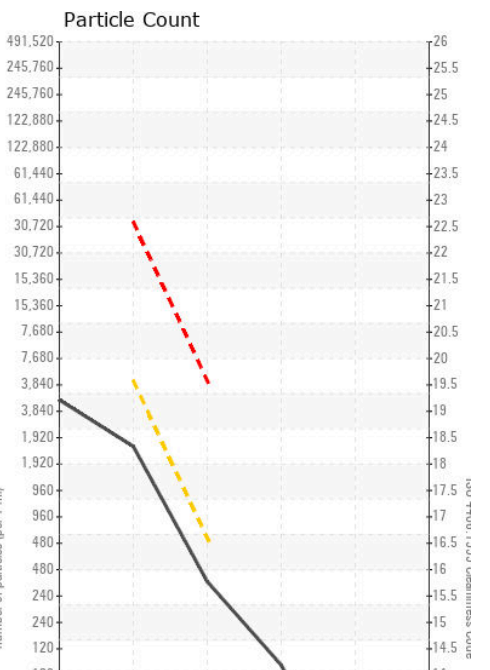
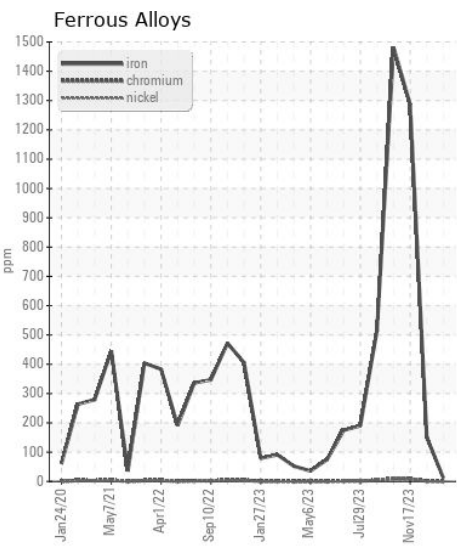
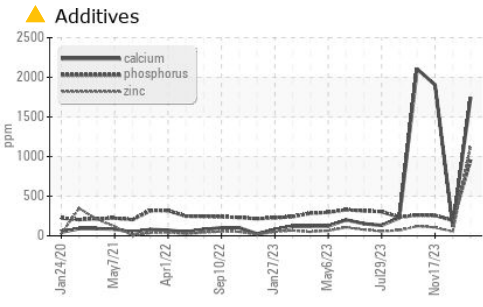
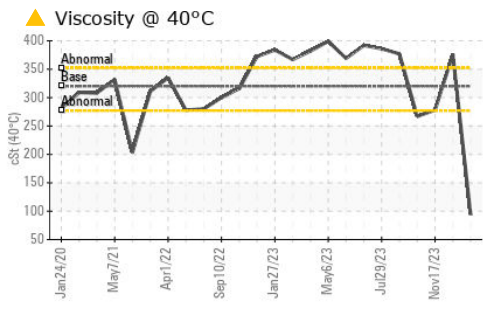
The oil viscosity is lower than normal. Additive levels indicate the addition of a different brand, or type of oil. Confirm oil type. The AN level is acceptable for this fluid.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		KL0013829	KL0014048	KL0013107
Sample Date		Client Info		24 Jan 2024	29 Dec 2023	17 Nov 2023
Machine Age	days	Client Info		0	45290	45247
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				ATTENTION	ABNORMAL	SEVERE

Iron	ppm	ASTM D5185m	>200	12	151	1287
Chromium	ppm	ASTM D5185m	>10	0	1	9
Nickel	ppm	ASTM D5185m	>10	0	<1	8
Titanium	ppm	ASTM D5185m		0	<1	7
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>25	2	13	131
Lead	ppm	ASTM D5185m	>50	<1	0	<1
Copper	ppm	ASTM D5185m	>200	2	54	119
Tin	ppm	ASTM D5185m	>10	0	4	4
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>50	5	47	614
Potassium	ppm	ASTM D5185m	>20	5	6	147
Water		WC Method	>0.2	NEG	NEG	NEG
Particles >4µm		ASTM D7647		3889	380044	---
Particles >6µm		ASTM D7647	>5000	2118	217449	---
Particles >14µm		ASTM D7647	>640	361	3510	---
Particles >21µm		ASTM D7647	>160	121	293	---
Particles >38µm		ASTM D7647	>40	19	0	---
Particles >71µm		ASTM D7647	>10	2	0	---
Oil Cleanliness		ISO 4406 (c)	>19/16	18/16	25/19	---
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	NEG	NEG	0.2%

Sodium	ppm	ASTM D5185m		9	54	1641
Boron	ppm	ASTM D5185m	50	74	44	67
Barium	ppm	ASTM D5185m	15	0	18	320
Molybdenum	ppm	ASTM D5185m	15	64	25	347
Manganese	ppm	ASTM D5185m		0	2	12
Magnesium	ppm	ASTM D5185m	50	91	43	150
Calcium	ppm	ASTM D5185m	50	1746	119	1904
Phosphorus	ppm	ASTM D5185m	350	954	195	258
Zinc	ppm	ASTM D5185m	100	1133	54	106
Sulfur	ppm	ASTM D5185m	12500	4330	6958	6488
Acid Number (AN)	mg KOH/g	ASTM D8045	0.85	1.16	0.764	2.85
Visc @ 40°C	cSt	ASTM D445	320	93.7	376	278



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : KL0013829 **Received** : 07 Feb 2024
Lab Number : 06083056 **Tested** : 12 Feb 2024
Unique Number : 10870501 **Diagnosed** : 12 Feb 2024 - Jonathan Hester
Test Package : MOB 2 (Additional Tests: PrtCount)

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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)