



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
IRIG [6503600]
 Machine Id
IRIG-RF-DW-2302 IRIG-RF-DW-2302 DRAW WORKS
 Component
Gearbox
 Fluid
GEAR OIL LS 80W90 (40 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		HLC0003030	HLC0002794	---
Sample Date		Client Info		19 Jan 2024	04 Dec 2023	---
Machine Age	mths	Client Info		0	0	---
Oil Age	mths	Client Info		0	0	---
Filter Age	mths	Client Info		2	2	---
Oil Changed		Client Info		Not Changed	Not Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	2	2	---
Chromium	ppm	ASTM D5185m	>15	0	<1	---
Nickel	ppm	ASTM D5185m	>15	0	0	---
Titanium	ppm	ASTM D5185m		0	0	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>25	0	2	---
Lead	ppm	ASTM D5185m	>100	0	0	---
Copper	ppm	ASTM D5185m	>200	<1	<1	---
Tin	ppm	ASTM D5185m	>25	0	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

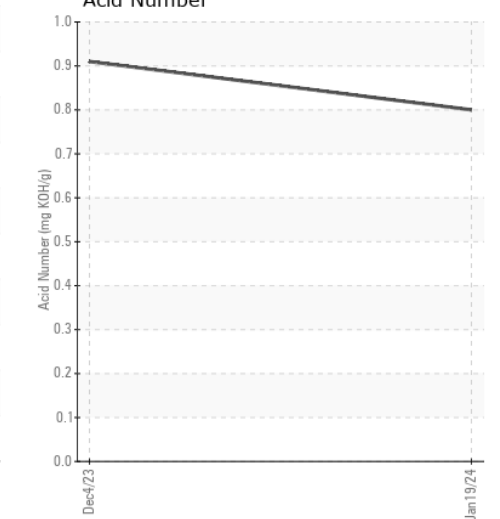
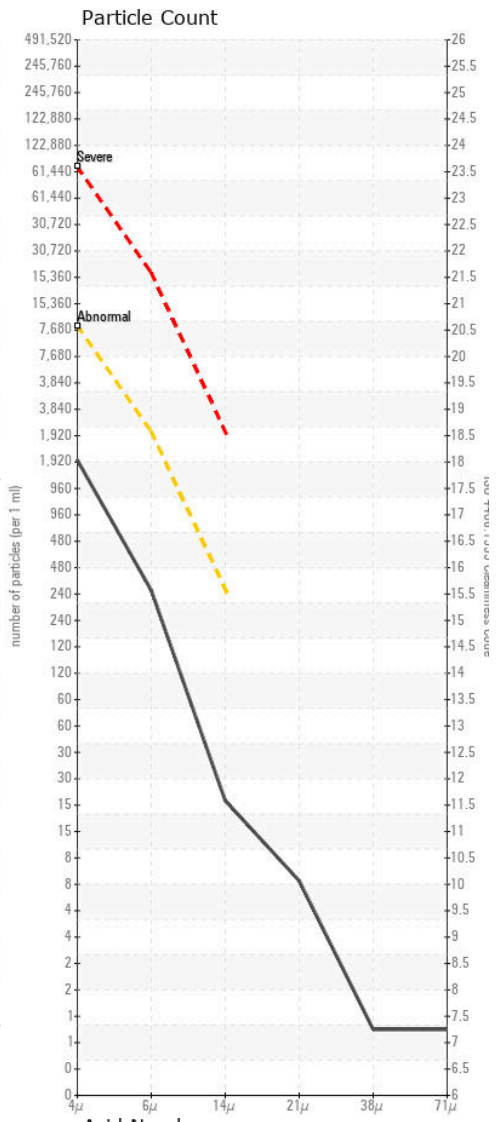
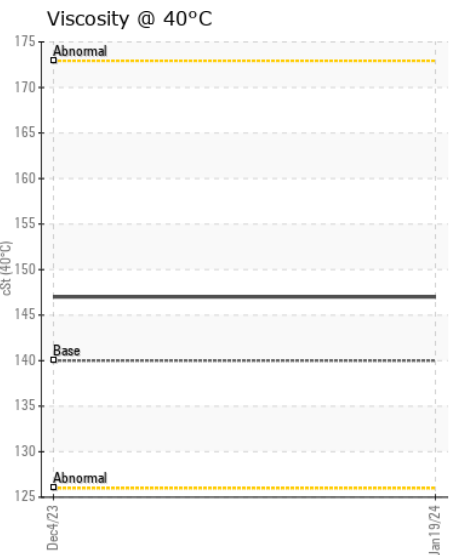
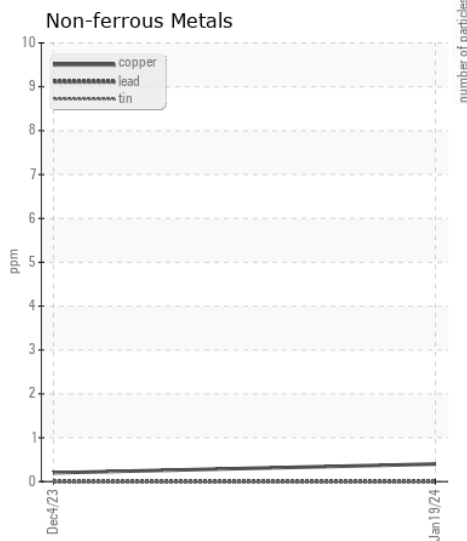
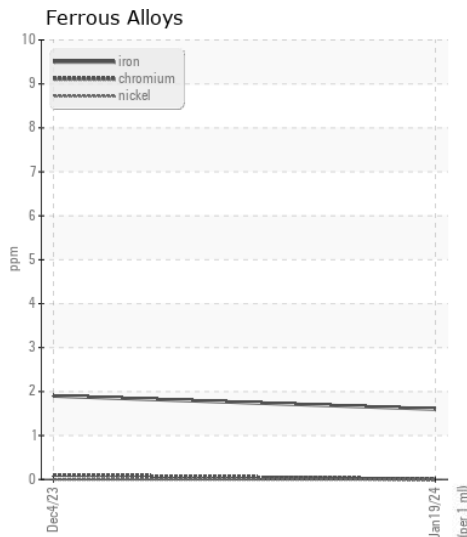
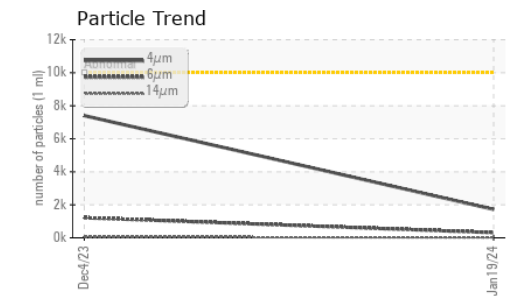
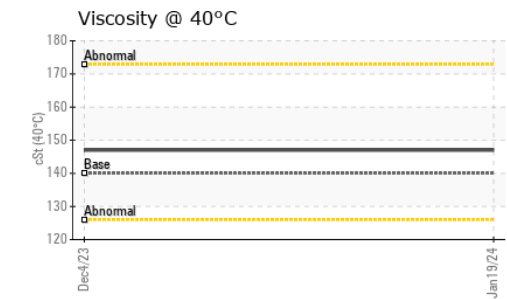
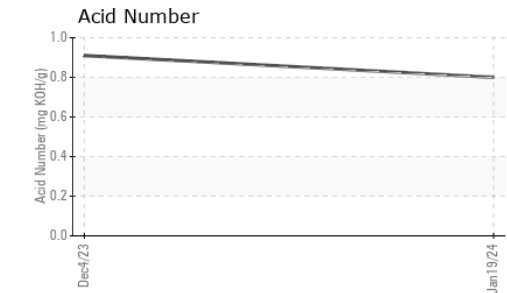
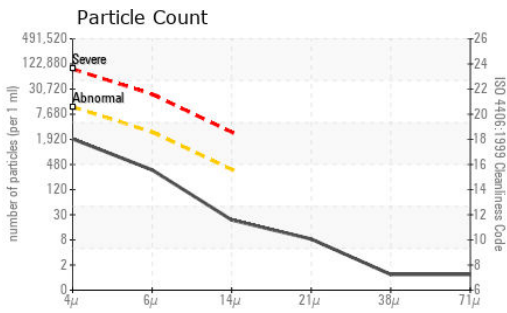
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>50	<1	2	---
Potassium	ppm	ASTM D5185m	>20	0	<1	---
Water		WC Method	>0.2	NEG	NEG	---
Particles >4µm		ASTM D7647	>10000	1723	7401	---
Particles >6µm		ASTM D7647	>2500	313	1215	---
Particles >14µm		ASTM D7647	>320	20	46	---
Particles >21µm		ASTM D7647	>80	7	14	---
Particles >38µm		ASTM D7647	>20	1	1	---
Particles >71µm		ASTM D7647	>4	1	0	---
Oil Cleanliness		ISO 4406 (c)	>20/18/15	18/15/11	20/17/13	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	LIGHT	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	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		1	<1	---
Boron	ppm	ASTM D5185m	150	118	133	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		0	0	---
Manganese	ppm	ASTM D5185m		0	0	---
Magnesium	ppm	ASTM D5185m	10	0	<1	---
Calcium	ppm	ASTM D5185m	70	3	3	---
Phosphorus	ppm	ASTM D5185m	2000	437	520	---
Zinc	ppm	ASTM D5185m	50	7	0	---
Sulfur	ppm	ASTM D5185m	20000	9677	10909	---
Acid Number (AN)	mg KOH/g	ASTM D8045		0.80	0.91	---
Visc @ 40°C	cSt	ASTM D445	140	147	147	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : HLC0003030 **Received** : 09 Feb 2024
Lab Number : 06085374 **Tested** : 12 Feb 2024
Unique Number : 10872819 **Diagnosed** : 12 Feb 2024 - Doug Bogart
Test Package : IND 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)