



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
142001 - TG51
 Component
Gearbox
 Fluid
LIEBHERR GEAR HYPOID 90 EP (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LM0000799	---	---
Sample Date		Client Info		11 Jan 2024	---	---
Machine Age	hrs	Client Info		517	---	---
Oil Age	hrs	Client Info		517	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		N/A	---	---
Sample Status				NORMAL	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	25	---	---
Chromium	ppm	ASTM D5185m	>10	2	---	---
Nickel	ppm	ASTM D5185m	>10	0	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>25	<1	---	---
Lead	ppm	ASTM D5185m	>50	<1	---	---
Copper	ppm	ASTM D5185m	>200	7	---	---
Tin	ppm	ASTM D5185m	>10	<1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

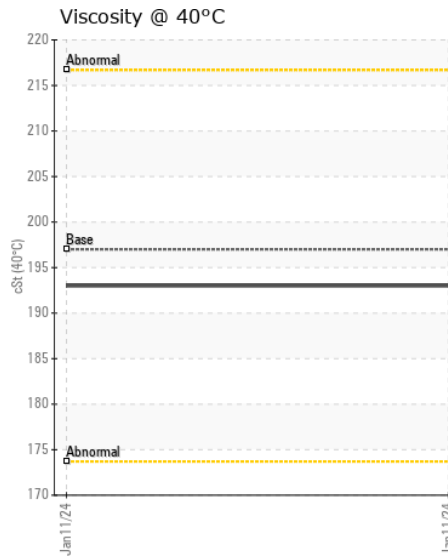
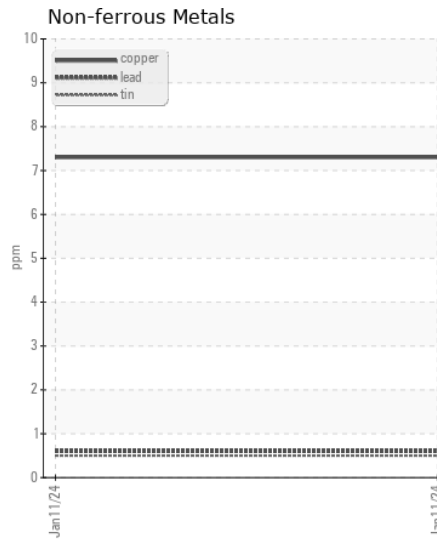
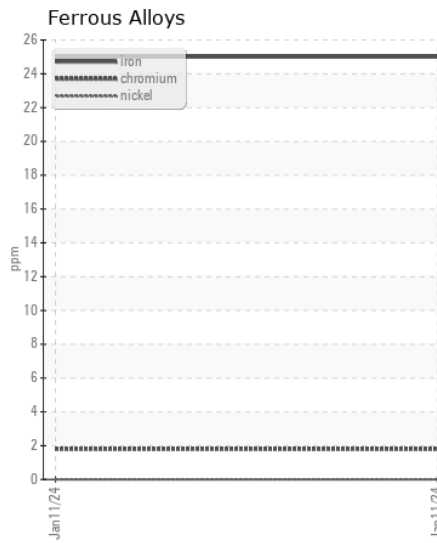
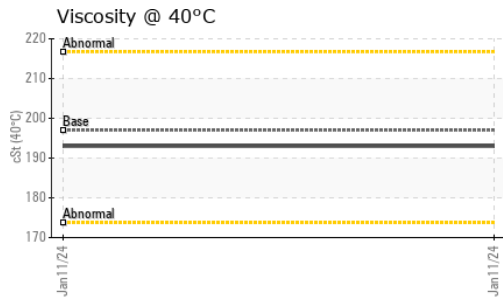
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>50	2	---	---
Potassium	ppm	ASTM D5185m	>20	3	---	---
Water		WC Method	>0.2	NEG	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---	---

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		3	---	---
Boron	ppm	ASTM D5185m		28	---	---
Barium	ppm	ASTM D5185m		2	---	---
Molybdenum	ppm	ASTM D5185m		0	---	---
Manganese	ppm	ASTM D5185m		4	---	---
Magnesium	ppm	ASTM D5185m		67	---	---
Calcium	ppm	ASTM D5185m		9	---	---
Phosphorus	ppm	ASTM D5185m		1308	---	---
Zinc	ppm	ASTM D5185m		0	---	---
Sulfur	ppm	ASTM D5185m		27540	---	---
Visc @ 40°C	cSt	ASTM D445	197	193	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LM0000799 **Received** : 18 Jan 2024
Lab Number : 06065219 **Diagnosed** : 22 Jan 2024
Unique Number : 10836601 **Diagnostician** : Sean Felton
Test Package : CONST

LIEBHERR USA CO - Maritime Cranes
 15101 NW 112TH AVE
 HIALEAH GARDENS, FL
 US 33018
 Contact: RONNY FUNK
 ronny.funk@liebherr.com
 T: (305)817-7566
 F:

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)