



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR A944 038730-194
Component
Rear Left Final Drive
Fluid
GEAR OIL SAE 80W90 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0258822	LH0264407	LH0185261
Sample Date		Client Info		14 Feb 2024	28 Jun 2023	29 Jan 2021
Machine Age	hrs	Client Info		30984	29970	27384
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>350	10	15	137
Chromium	ppm	ASTM D5185m	>5	0	0	1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m	>4	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>15	0	0	3
Lead	ppm	ASTM D5185m	>8	0	<1	<1
Copper	ppm	ASTM D5185m	>60	6	6	63
Tin	ppm	ASTM D5185m	>5	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

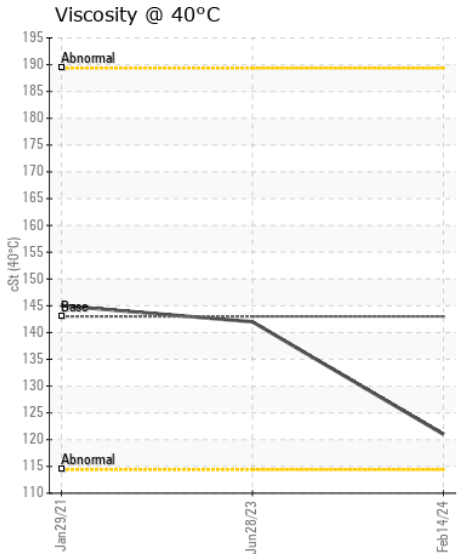
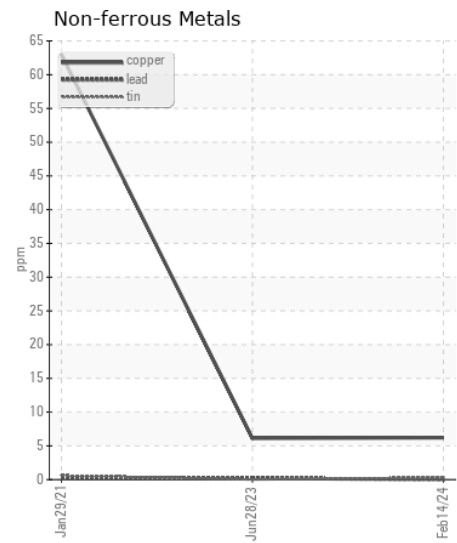
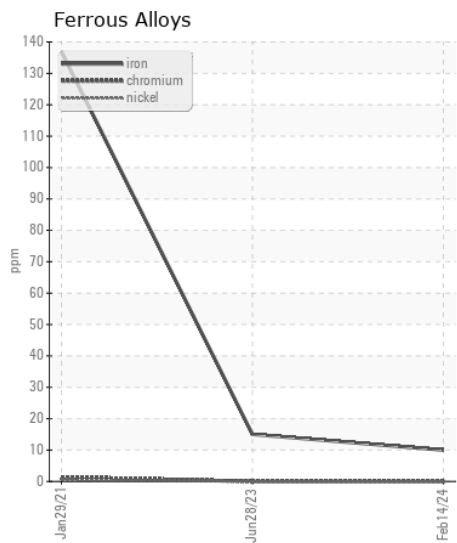
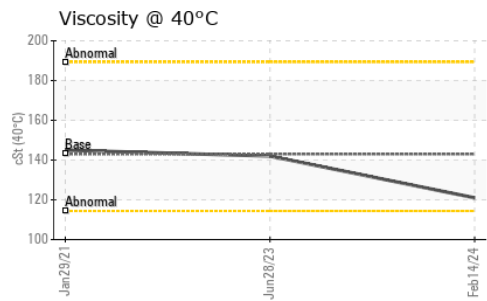
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>60	0	<1	4
Potassium	ppm	ASTM D5185m	>20	0	3	1
Water		WC Method	>0.2	NEG	NEG	NEG
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	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m	>170	2	0	3
Boron	ppm	ASTM D5185m	400	1	10	115
Barium	ppm	ASTM D5185m	200	0	2	0
Molybdenum	ppm	ASTM D5185m	12	0	<1	<1
Manganese	ppm	ASTM D5185m		<1	<1	3
Magnesium	ppm	ASTM D5185m	12	1	5	2
Calcium	ppm	ASTM D5185m	150	33	27	24
Phosphorus	ppm	ASTM D5185m	1650	675	665	934
Zinc	ppm	ASTM D5185m	125	10	20	53
Sulfur	ppm	ASTM D5185m	22500	18644	29922	20889
Visc @ 40°C	cSt	ASTM D445	143	121	142	145



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0258822
Lab Number : 06098699
Unique Number : 10896929
Test Package : CONST
Received : 23 Feb 2024
Tested : 26 Feb 2024
Diagnosed : 26 Feb 2024 - Wes Davis

ALTER METAL
 2080 SPINDT DR
 WAUPACA, WI
 US 54981

Contact: BRAD DORMADY
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 T:
 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)