



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR L586 046715-1334
Component
Front Left Wheel Hub
Fluid
LIEBHERR GEAR BASIC 90 LS (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0258911	LH0254413	LHMC117884
Sample Date		Client Info		22 Mar 2024	27 Mar 2023	07 May 2020
Machine Age	hrs	Client Info		11124	10000	4146
Oil Age	hrs	Client Info		1000	0	2000
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	>1625	83	5	66
Chromium	ppm	ASTM D5185m	>8	0	0	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>25	0	0	0
Lead	ppm	ASTM D5185m	>8	0	0	<1
Copper	ppm	ASTM D5185m	>150	6	<1	23
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

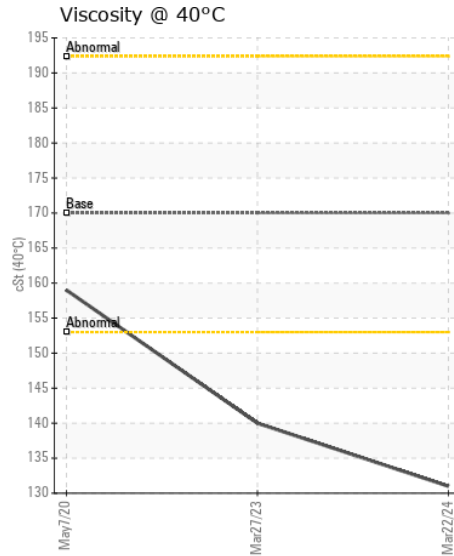
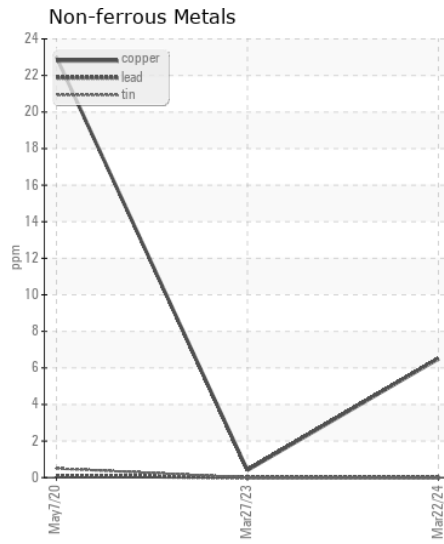
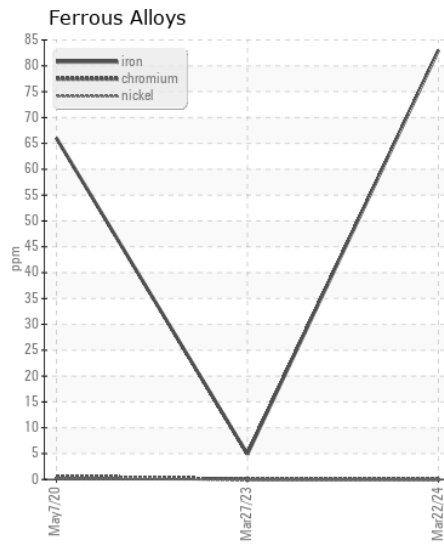
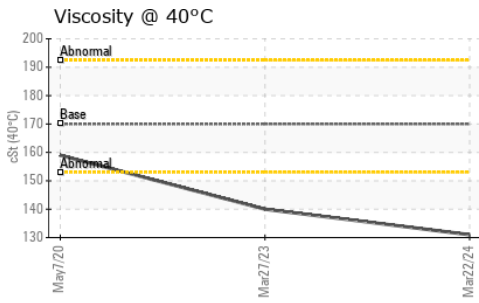
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>100	7	2	3
Potassium	ppm	ASTM D5185m	>20	<1	<1	<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		<1	0	2
Boron	ppm	ASTM D5185m	0	37	8	135
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	0	0	<1	0
Manganese	ppm	ASTM D5185m	0	<1	0	4
Magnesium	ppm	ASTM D5185m	<1	0	<1	1
Calcium	ppm	ASTM D5185m	<1	12	5	11
Phosphorus	ppm	ASTM D5185m	2143	752	498	1971
Zinc	ppm	ASTM D5185m	<1	2	2	10
Sulfur	ppm	ASTM D5185m	23468	24052	16080	21618
Visc @ 40°C	cSt	ASTM D445	170	131	140	159



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0258911
Lab Number : 06146823
Unique Number : 10976901
Test Package : CONST

Received : 11 Apr 2024
Tested : 12 Apr 2024
Diagnosed : 15 Apr 2024 - Sean Felton

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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)