



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR L542 039769-1269
Component
Rear Right Wheel Hub
Fluid
LIEBHERR GEAR BASIC 90 LS (1 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH06060472	LHMC131337	LHMC123391
Sample Date		Client Info		19 Dec 2023	27 Dec 2019	09 May 2019
Machine Age	hrs	Client Info		8181	5790	4848
Oil Age	hrs	Client Info		500	0	2000
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	Not Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>500	111	118	137
Chromium	ppm	ASTM D5185m	>8	0	<1	1
Nickel	ppm	ASTM D5185m	>5	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>5	<1	<1	<1
Lead	ppm	ASTM D5185m	>5	<1	0	<1
Copper	ppm	ASTM D5185m	>50	2	11	41
Tin	ppm	ASTM D5185m		<1	0	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

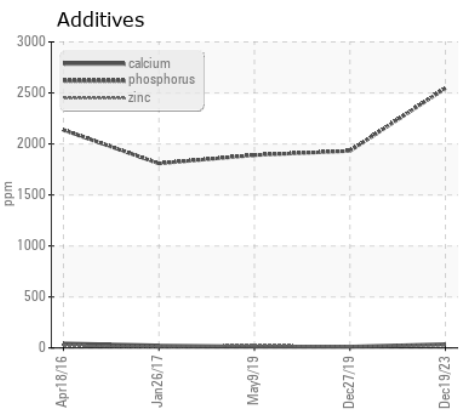
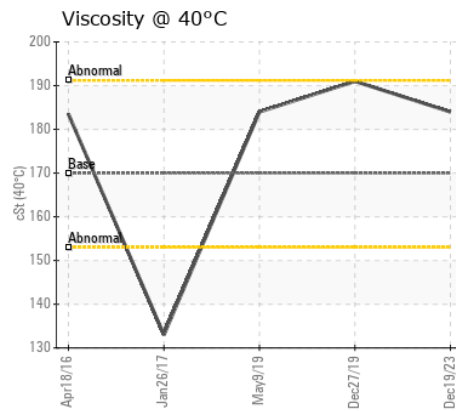
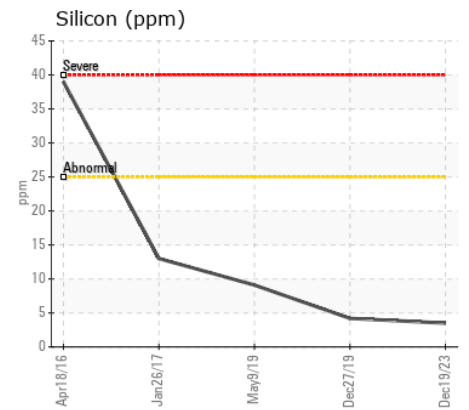
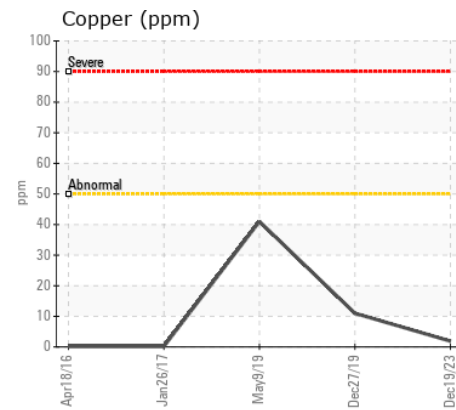
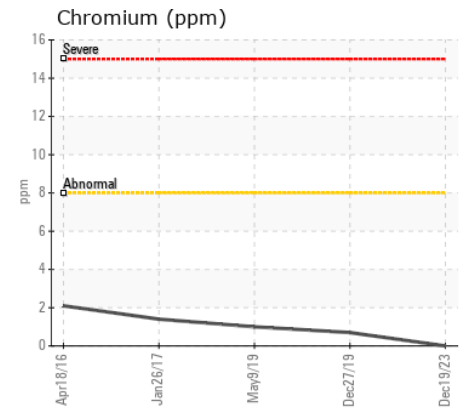
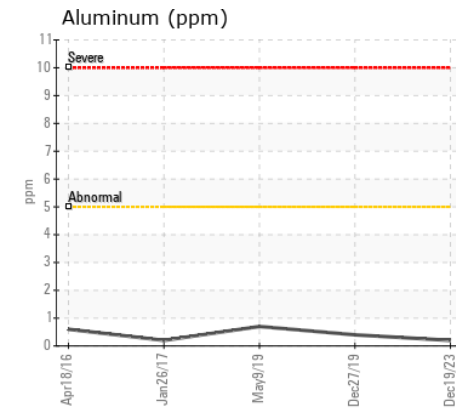
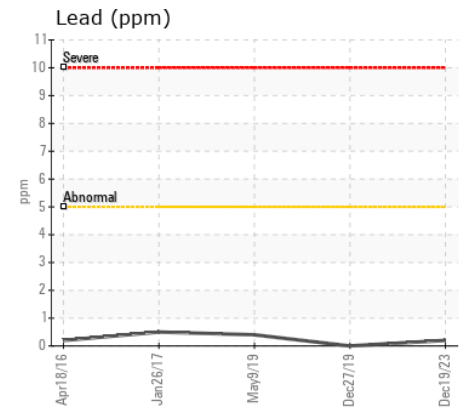
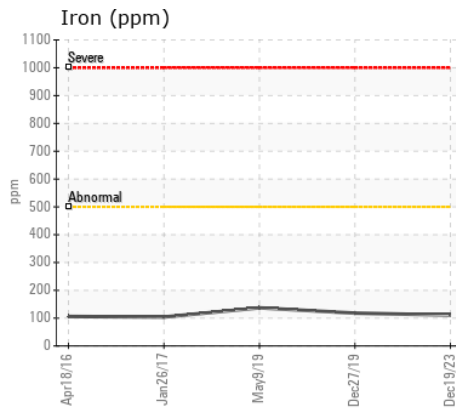
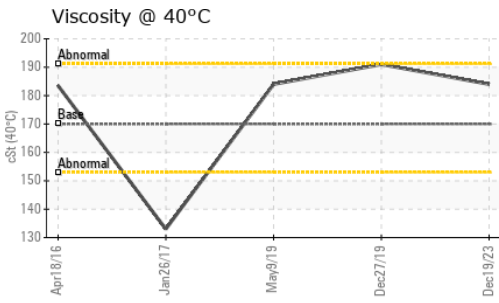
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	4	9
Potassium	ppm	ASTM D5185m	>20	1	0	6
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	LIGHT	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		2	3	3
Boron	ppm	ASTM D5185m	0	33	18	37
Barium	ppm	ASTM D5185m	0	0	0	<1
Molybdenum	ppm	ASTM D5185m	0	0	0	<1
Manganese	ppm	ASTM D5185m	0	2	5	10
Magnesium	ppm	ASTM D5185m	<1	0	2	2
Calcium	ppm	ASTM D5185m	<1	37	13	14
Phosphorus	ppm	ASTM D5185m	2143	2546	1931	1890
Zinc	ppm	ASTM D5185m	<1	25	16	23
Sulfur	ppm	ASTM D5185m	23468	27275	21309	20507
Visc @ 40°C	cSt	ASTM D445	170	184	191	184



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH06060472 **Received** : 12 Jan 2024
Lab Number : 06060472 **Diagnosed** : 16 Jan 2024
Unique Number : 10831854 **Diagnostician** : Don Baldrige
Test Package : MOBCE

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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)