



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ABNORMAL



Machine Id
LIEBHERR LH30M 153712-1253
Component
Front Left Wheel Hub
Fluid
LIEBHERR GEAR BASIC 90 LS (--- GAL)

RECOMMENDATION

Confirm the source of the lubricant being utilized for top-up/fill.
Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH	LH	---
Sample Date		Client Info		30 Apr 2024	14 Dec 2023	---
Machine Age	hrs	Client Info		1001	500	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		None	None	---
Sample Status				ABNORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>450	59	42	---
Chromium	ppm	ASTM D5185(m)	>4	<1	<1	---
Nickel	ppm	ASTM D5185(m)	>2	0	<1	---
Titanium	ppm	ASTM D5185(m)		0	0	---
Silver	ppm	ASTM D5185(m)		0	<1	---
Aluminum	ppm	ASTM D5185(m)	>15	<1	<1	---
Lead	ppm	ASTM D5185(m)	>4	0	<1	---
Copper	ppm	ASTM D5185(m)	>75	5	9	---
Tin	ppm	ASTM D5185(m)		0	0	---
Vanadium	ppm	ASTM D5185(m)		0	0	---
White Metal	scalar	Visual*	NONE	VLITE	LIGHT	---
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	---

CONTAMINATION

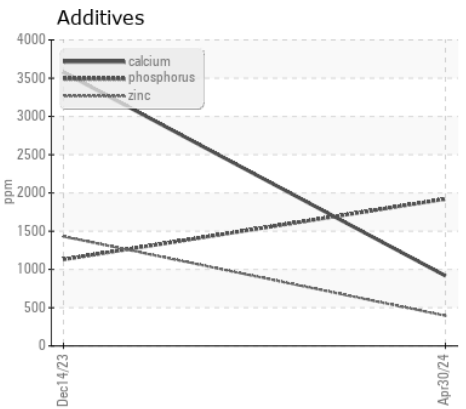
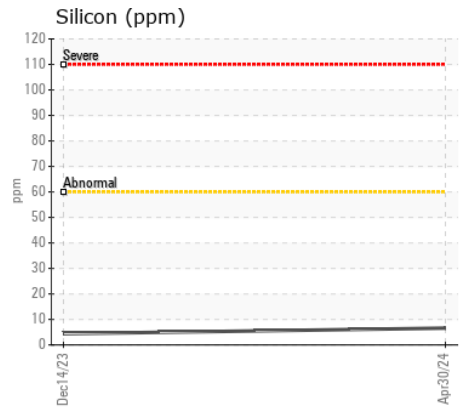
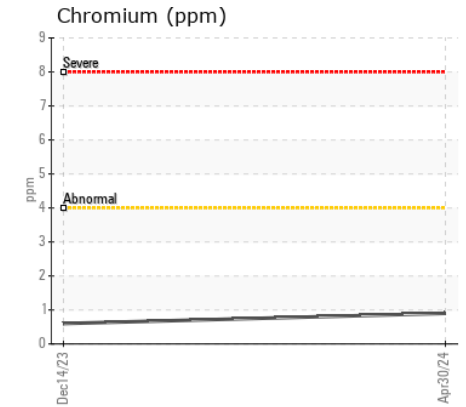
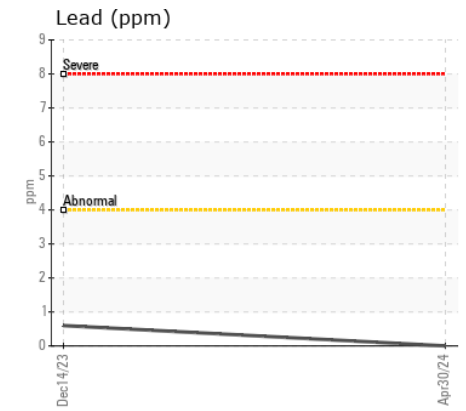
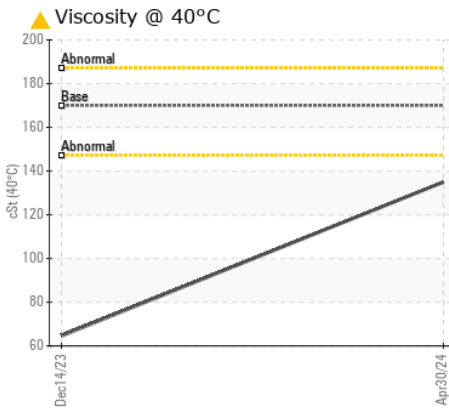
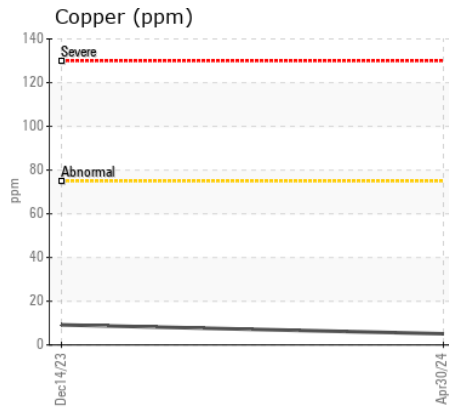
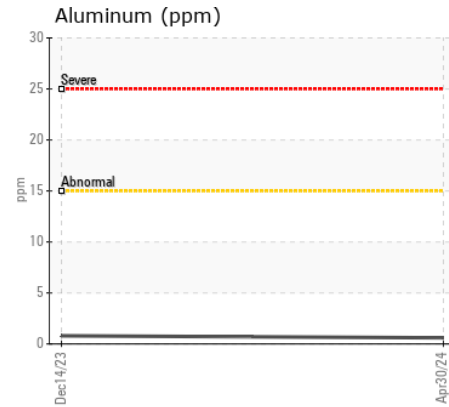
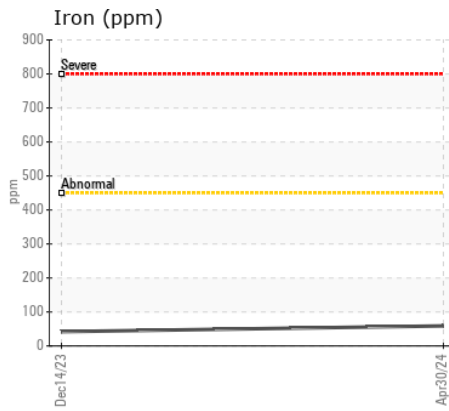
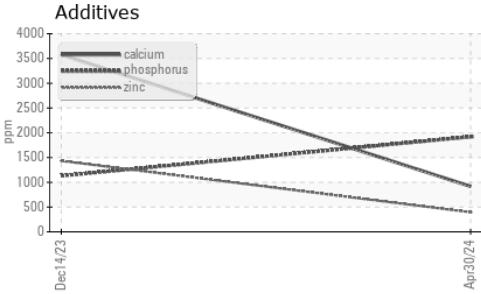
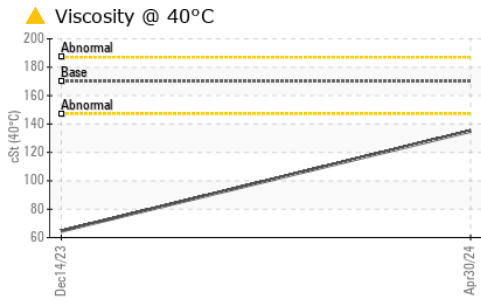
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>60	7	4	---
Potassium	ppm	ASTM D5185(m)	>20	10	0	---
Water		WC Method	>0.2	NEG	NEG	---
Silt	scalar	Visual*	NONE	NONE	NONE	---
Debris	scalar	Visual*	NONE	NONE	NONE	---
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

Viscosity of sample indicates oil is within SAE 90 range, advise investigate. This plus the additive levels indicates that this is not the same brand, or type of oil as reported. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		9	17	---
Boron	ppm	ASTM D5185(m)	0	21	105	---
Barium	ppm	ASTM D5185(m)	0	<1	2	---
Molybdenum	ppm	ASTM D5185(m)	0	0	0	---
Manganese	ppm	ASTM D5185(m)	0	1	<1	---
Magnesium	ppm	ASTM D5185(m)	<1	4	9	---
Calcium	ppm	ASTM D5185(m)	<1	917	3577	---
Phosphorus	ppm	ASTM D5185(m)	2143	1920	1130	---
Zinc	ppm	ASTM D5185(m)	<1	395	1432	---
Sulfur	ppm	ASTM D5185(m)	23468	18904	2859	---
Visc @ 40°C	cSt	ASTM D7279(m)	170	▲ 135	▲ 64.6	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH
Lab Number : 02633248
Unique Number : 5774401
Test Package : MOB 1
Received : 03 May 2024
Tested : 03 May 2024
Diagnosed : 03 May 2024 - Kevin Marson

Innovation Industrielle Boivin Inc.
 2205 de la Fonderie
 Chicoutimi, QC
 CA G7H 8B9
 Contact: Service Manager

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

T:
F: