



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH50M 1203-88008
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		LH0207308	LH0184646	---
Sample Date		Client Info		11 Nov 2021	28 Jun 2021	---
Machine Age	hrs	Client Info		5159	4041	---
Oil Age	hrs	Client Info		500	1000	---
Filter Age	hrs	Client Info		1000	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		N/A	None	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>425	49	100	---
Chromium	ppm	ASTM D5185m	>3	<1	<1	---
Nickel	ppm	ASTM D5185m	>2	0	0	---
Titanium	ppm	ASTM D5185m		0	<1	---
Silver	ppm	ASTM D5185m		<1	<1	---
Aluminum	ppm	ASTM D5185m	>15	<1	2	---
Lead	ppm	ASTM D5185m	>3	0	<1	---
Copper	ppm	ASTM D5185m	>75	5	13	---
Tin	ppm	ASTM D5185m	>3	0	<1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	LIGHT	LIGHT	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

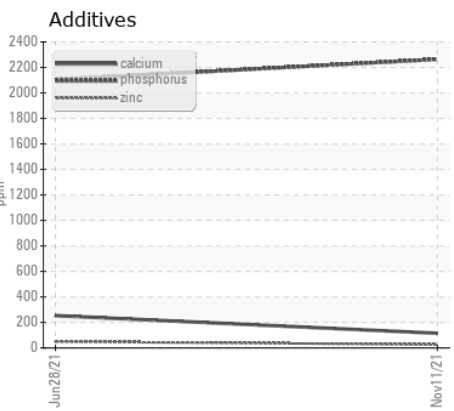
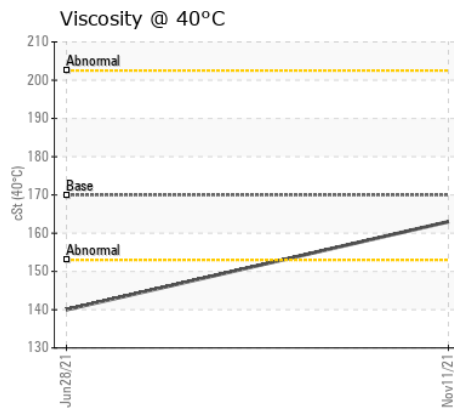
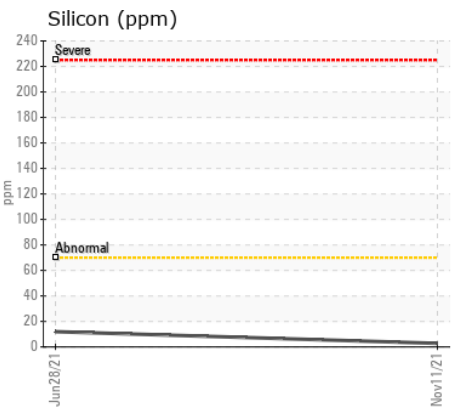
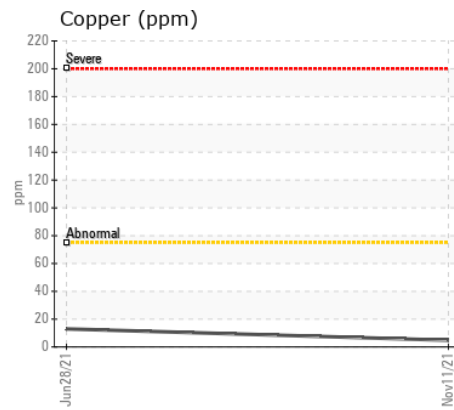
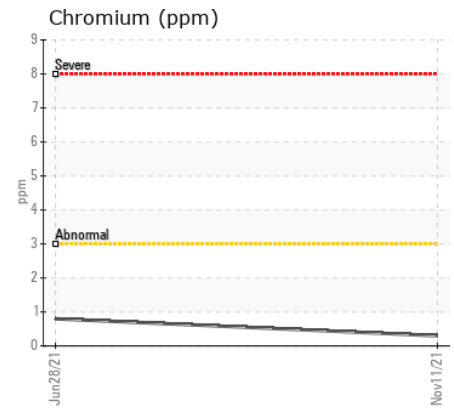
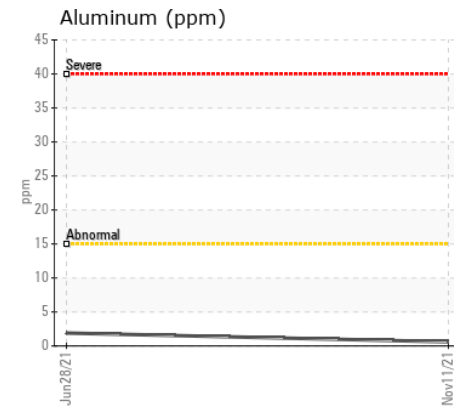
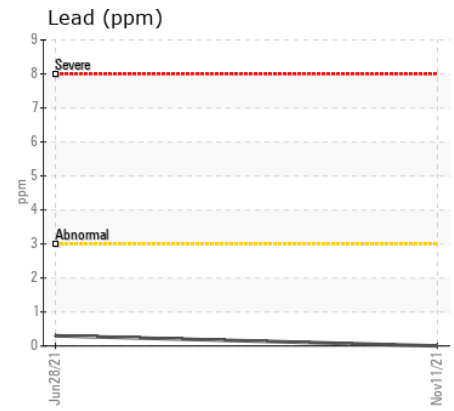
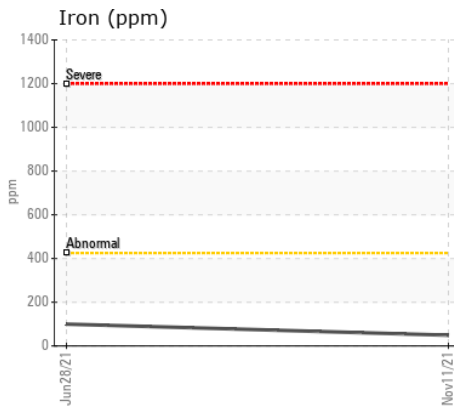
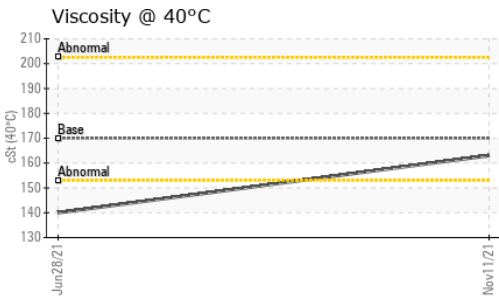
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>70	3	12	---
Potassium	ppm	ASTM D5185m	>20	1	<1	---
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

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

Sodium	ppm	ASTM D5185m		18	18	---
Boron	ppm	ASTM D5185m	0	23	20	---
Barium	ppm	ASTM D5185m	0	0	0	---
Molybdenum	ppm	ASTM D5185m	0	<1	2	---
Manganese	ppm	ASTM D5185m	0	1	2	---
Magnesium	ppm	ASTM D5185m	<1	1	3	---
Calcium	ppm	ASTM D5185m	<1	115	254	---
Phosphorus	ppm	ASTM D5185m	2143	2264	2104	---
Zinc	ppm	ASTM D5185m	<1	26	50	---
Sulfur	ppm	ASTM D5185m	23468	25056	20693	---
Visc @ 40°C	cSt	ASTM D445	170	163	140	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0207308 **Received** : 19 Nov 2021
Lab Number : 05405312 **Diagnosed** : 23 Nov 2021
Unique Number : 9749475 **Diagnostician** : Angela Borella
Test Package : MOBCE

JR VINAGRO
 2208 PLAINFIELD PIKE
 JOHNSTON, RI
 US 02919
 Contact: Service Manager

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)

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F: