



# LIEBHERR

## OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**LIEBHERR L556 055637-1332**  
Component  
**Front Right 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		<b>LH0264456</b>	LH0220845	LH0207967
Sample Date		Client Info		<b>12 Mar 2024</b>	27 Sep 2022	27 Feb 2022
Machine Age	hrs	Client Info		<b>6581</b>	3494	2433
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>500	<b>99</b>	60	88
Chromium	ppm	ASTM D5185m	>8	<b>1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>5	<b>3</b>	0	3
Lead	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	1
Copper	ppm	ASTM D5185m	>50	<b>15</b>	12	19
Tin	ppm	ASTM D5185m		<b>1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	<b>LIGHT</b>	MODER	NONE

### CONTAMINATION

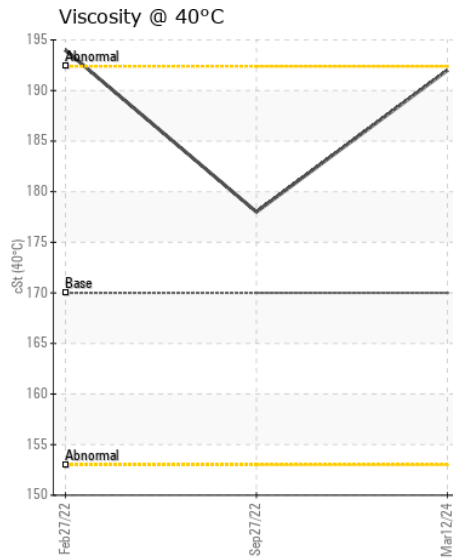
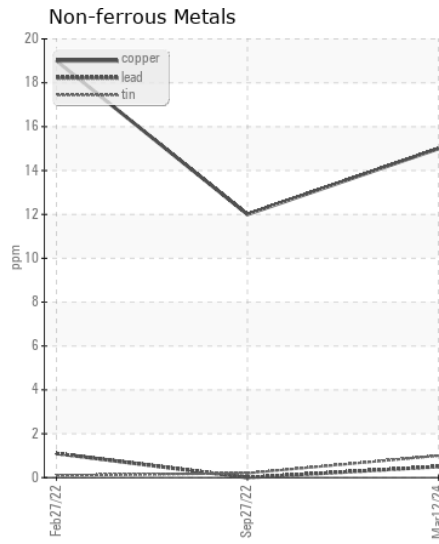
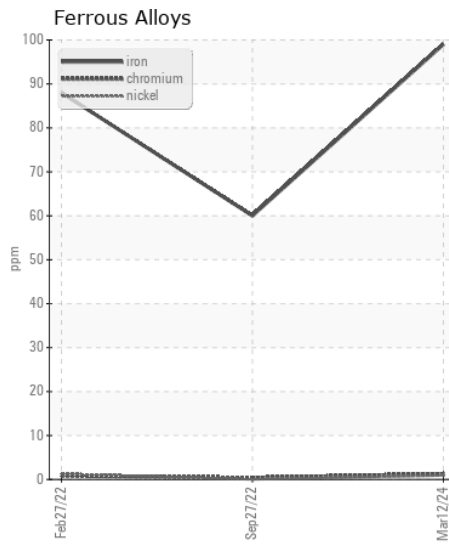
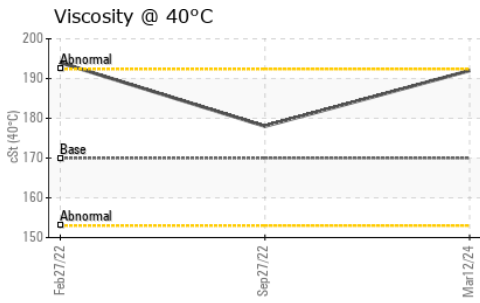
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	2	4
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	<1	1
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>LIGHT</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	LIGHT
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		<b>4</b>	1	5
Boron	ppm	ASTM D5185m	0	<b>0</b>	1	4
Barium	ppm	ASTM D5185m	0	<b>1</b>	0	0
Molybdenum	ppm	ASTM D5185m	0	<b>22</b>	10	34
Manganese	ppm	ASTM D5185m	0	<b>4</b>	3	7
Magnesium	ppm	ASTM D5185m	<1	<b>3</b>	0	0
Calcium	ppm	ASTM D5185m	<1	<b>15</b>	24	5
Phosphorus	ppm	ASTM D5185m	2143	<b>2233</b>	2305	2327
Zinc	ppm	ASTM D5185m	<1	<b>18</b>	21	12
Sulfur	ppm	ASTM D5185m	23468	<b>29765</b>	39738	22835
Visc @ 40°C	cSt	ASTM D445	170	<b>192</b>	178	194



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : LH0264456

**Lab Number** : 06149715

**Unique Number** : 10979793

**Test Package** : CONST

**Received** : 15 Apr 2024

**Tested** : 16 Apr 2024

**Diagnosed** : 18 Apr 2024 - Don Baldrige

**INTERSTATE POWER SYSTEMS**

407 ADVENTURLAND DR NE

ALTOONA, IA

US 50009

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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)