



# LIEBHERR

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id  
**LIEBHERR L556 046708-1332**  
Component  
**Front Differential**  
Fluid  
**GEAR OIL SAE 80W90 (--- GAL)**

### RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0268189</b>	LH0245009	LH0207738
Sample Date		Client Info		<b>09 Feb 2024</b>	09 Feb 2023	23 Nov 2021
Machine Age	hrs	Client Info		<b>10214</b>	9080	7922
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>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>1000	<b>210</b>	89	66
Chromium	ppm	ASTM D5185m	>10	<b>2</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>3</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>25	<b>3</b>	<1	3
Lead	ppm	ASTM D5185m	>5	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>100	<b>23</b>	11	12
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

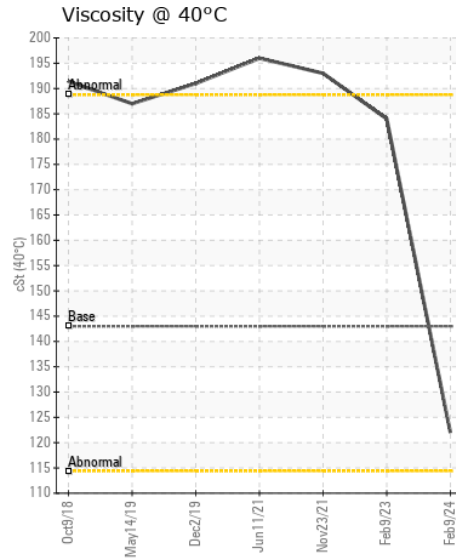
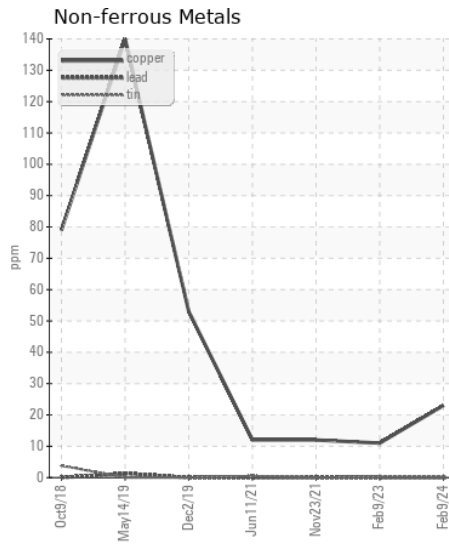
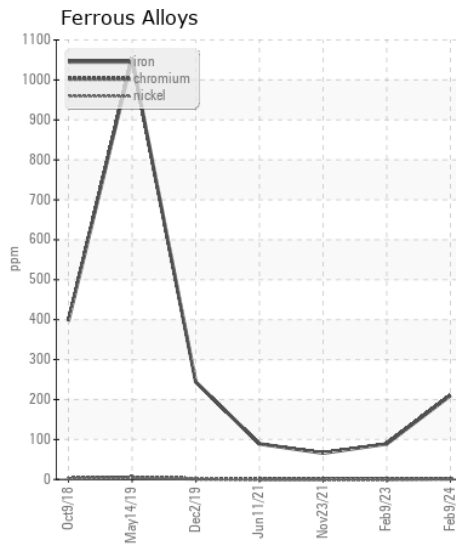
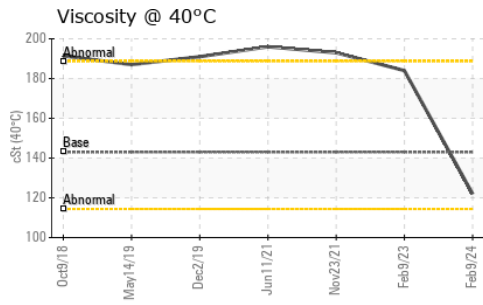
Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>100	<b>4</b>	2	0
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	<1	0
Water		WC Method	>.2	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>▲ MODER</b>	NONE	NONE
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	>.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

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

Sodium	ppm	ASTM D5185m	>170	<b>&lt;1</b>	4	2
Boron	ppm	ASTM D5185m	400	<b>19</b>	0	11
Barium	ppm	ASTM D5185m	200	<b>13</b>	1	0
Molybdenum	ppm	ASTM D5185m	12	<b>20</b>	5	4
Manganese	ppm	ASTM D5185m		<b>4</b>	2	2
Magnesium	ppm	ASTM D5185m	12	<b>50</b>	1	0
Calcium	ppm	ASTM D5185m	150	<b>157</b>	32	14
Phosphorus	ppm	ASTM D5185m	1650	<b>1642</b>	2092	2555
Zinc	ppm	ASTM D5185m	125	<b>101</b>	26	17
Sulfur	ppm	ASTM D5185m	22500	<b>46255</b>	27439	25056
Visc @ 40°C	cSt	ASTM D445	143	<b>122</b>	184	193



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LH0268189  
**Lab Number** : 06089155  
**Unique Number** : 10876600  
**Test Package** : CONST

**Received** : 14 Feb 2024  
**Tested** : 15 Feb 2024  
**Diagnosed** : 16 Feb 2024 - Jonathan Hester

**AMERICAN STATE EQUIPMENT CO.**  
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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)