



# LIEBHERR

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION



Machine Id  
**LIEBHERR LH80M 1218-157090**  
Component  
**Rear 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		LH0267070	LH0282871	LH0282882
Sample Date		Client Info		10 Jun 2024	18 May 2024	19 Apr 2024
Machine Age	hrs	Client Info		2008	1559	997
Oil Age	hrs	Client Info		1035	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	ATTENTION	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>150	46	29	41
Chromium	ppm	ASTM D5185m	>5	<1	<1	0
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>5	2	1	<1
Lead	ppm	ASTM D5185m	>5	0	0	<1
Copper	ppm	ASTM D5185m	>125	23	14	15
Tin	ppm	ASTM D5185m	>5	0	0	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

### CONTAMINATION

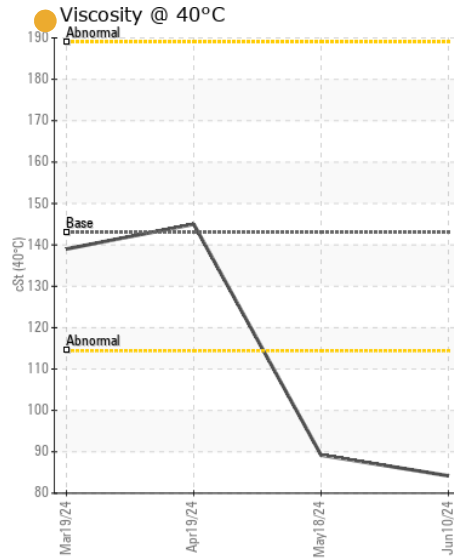
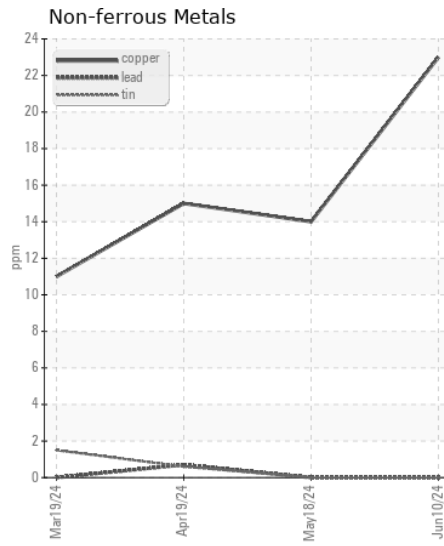
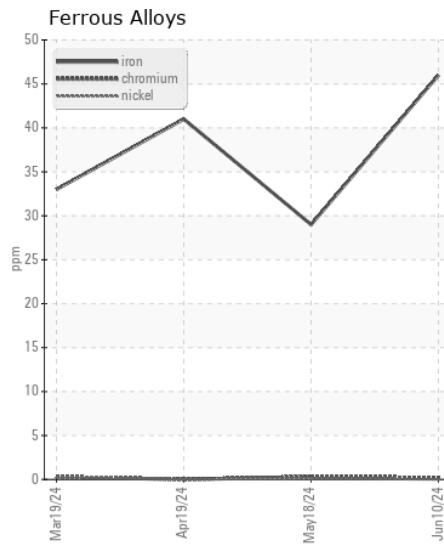
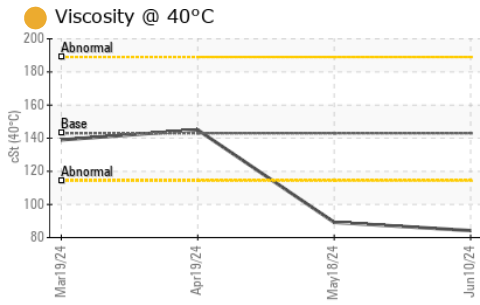
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	7	6	11
Potassium	ppm	ASTM D5185m	>20	1	2	3
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	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 oil viscosity is lower than normal. Confirm oil type.

Sodium	ppm	ASTM D5185m	>170	0	2	2
Boron	ppm	ASTM D5185m	400	6	6	5
Barium	ppm	ASTM D5185m	200	0	0	1
Molybdenum	ppm	ASTM D5185m	12	2	4	0
Manganese	ppm	ASTM D5185m		<1	<1	2
Magnesium	ppm	ASTM D5185m	12	29	30	5
Calcium	ppm	ASTM D5185m	150	161	180	127
Phosphorus	ppm	ASTM D5185m	1650	636	532	1532
Zinc	ppm	ASTM D5185m	125	131	122	28
Sulfur	ppm	ASTM D5185m	22500	14060	13993	23817
Visc @ 40°C	cSt	ASTM D445	143	84.2	89.2	145



Certificate L2367

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

**Sample No.** : LH0267070

**Lab Number** : 06216196

**Unique Number** : 11089060

**Test Package** : CONST

**Received** : 20 Jun 2024

**Tested** : 21 Jun 2024

**Diagnosed** : 23 Jun 2024 - Don Baldrige

**KINDER MORGAN**

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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)