



# LIEBHERR

## OIL ANALYSIS REPORT

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



Machine Id  
**LIEBHERR LH110 1227-155752**  
Component  
**Swing Drive**  
Fluid  
**SAE 30W (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

### WEAR

All component wear rates are normal.

### CONTAMINATION

There is no indication of any contamination in the oil.

### FLUID CONDITION

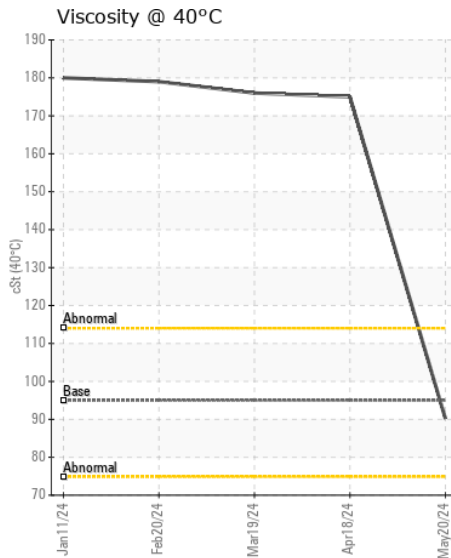
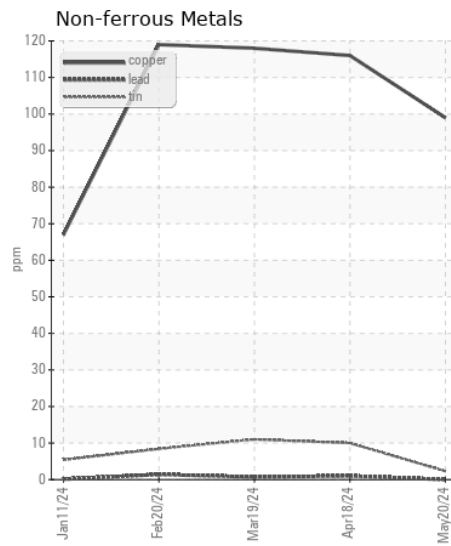
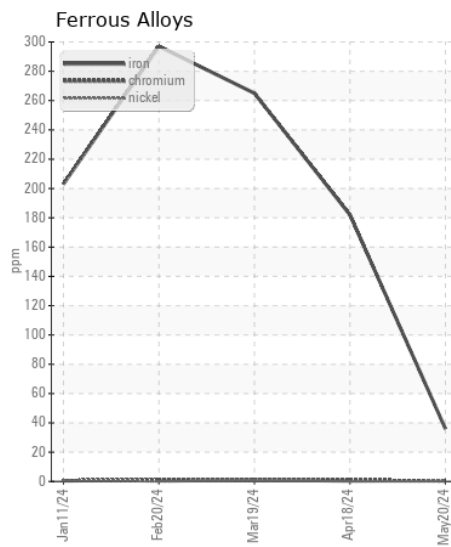
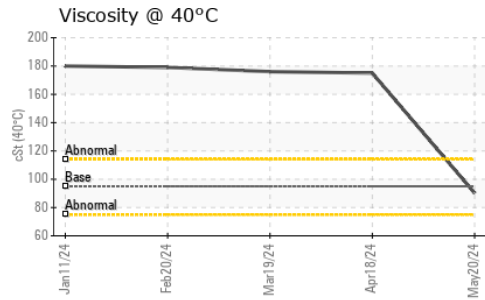
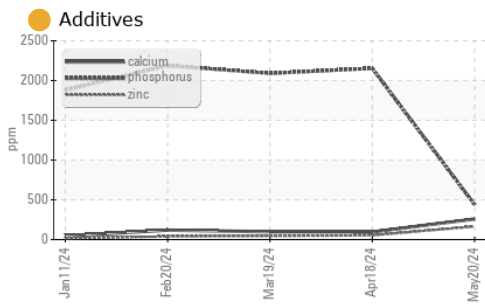
Additive levels indicate the addition of a different brand, or type of oil. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0267545</b>	LH0280586	LH0280586
Sample Date		Client Info		<b>20 May 2024</b>	18 Apr 2024	19 Mar 2024
Machine Age	hrs	Client Info		<b>2578</b>	1980	1544
Oil Age	hrs	Client Info		<b>547</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changed</b>	Changed	Not Changed
Filter Changed		Client Info		<b>N/A</b>	N/A	None
Sample Status				<b>ATTENTION</b>	ATTENTION	ATTENTION

Iron	ppm	ASTM D5185m	>350	<b>36</b>	182	265
Chromium	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>5	<b>2</b>	1	2
Lead	ppm	ASTM D5185m	>10	<b>0</b>	1	<1
Copper	ppm	ASTM D5185m	>300	<b>99</b>	116	118
Tin	ppm	ASTM D5185m	>15	<b>2</b>	10	11
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

Silicon	ppm	ASTM D5185m	>15	<b>3</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	2
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Silt	scalar	*Visual	NONE	<b>NONE</b>	MODER	NONE
Debris	scalar	*Visual	NONE	<b>NONE</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	>0.2	<b>NEG</b>	NEG	NEG

Sodium	ppm	ASTM D5185m		<b>4</b>	2	3
Boron	ppm	ASTM D5185m		<b>8</b>	6	9
Barium	ppm	ASTM D5185m		<b>0</b>	3	1
Molybdenum	ppm	ASTM D5185m		<b>4</b>	0	1
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	2	2
Magnesium	ppm	ASTM D5185m		<b>34</b>	<1	0
Calcium	ppm	ASTM D5185m		<b>259</b>	96	98
Phosphorus	ppm	ASTM D5185m		<b>440</b>	2154	2091
Zinc	ppm	ASTM D5185m		<b>165</b>	53	45
Sulfur	ppm	ASTM D5185m		<b>11910</b>	28687	28550
Visc @ 40°C	cSt	ASTM D445	95.0	<b>90.2</b>	175	176



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LH0267545  
**Lab Number** : 06192606  
**Unique Number** : 11049358  
**Test Package** : CONST  
**Received** : 28 May 2024  
**Tested** : 29 May 2024  
**Diagnosed** : 30 May 2024 - Don Baldrige

**KINDER MORGAN**  
 4301 IVERSON  
 TRINITY, AL  
 US 35601  
 Contact: CHIP OAKES

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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