



# OIL ANALYSIS REPORT

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



Area  
**LIEBHERR**  
Machine Id  
**1528-113529 LIEBHERR LH60C 1528-113529**  
Component  
**Right Final Drive**  
Fluid  
**{not provided} (--- GAL)**

## RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>DJJ0023784</b>	LHMC130333	DJJ0000855
Sample Date		Client Info		<b>13 Jun 2024</b>	05 Jan 2022	10 Feb 2021
Machine Age	hrs	Client Info		<b>7502</b>	3496	2123
Oil Age	hrs	Client Info		<b>0</b>	1000	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>SEVERE</b>	ABNORMAL	ABNORMAL

## WEAR

Gear wear is indicated. Bearing and/or bushing wear is indicated.

Iron	ppm	ASTM D5185m	>500	<b>▲ 2194</b>	233	252
Chromium	ppm	ASTM D5185m	>10	<b>▲ 24</b>	3	3
Nickel	ppm	ASTM D5185m	>10	<b>▲ 19</b>	4	2
Titanium	ppm	ASTM D5185m		<b>18</b>	2	2
Silver	ppm	ASTM D5185m		<b>0</b>	2	0
Aluminum	ppm	ASTM D5185m	>25	<b>● 252</b>	● 29	● 37
Lead	ppm	ASTM D5185m	>25	<b>2</b>	2	1
Copper	ppm	ASTM D5185m	>50	<b>▲ 134</b>	18	17
Tin	ppm	ASTM D5185m	>10	<b>4</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>2</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

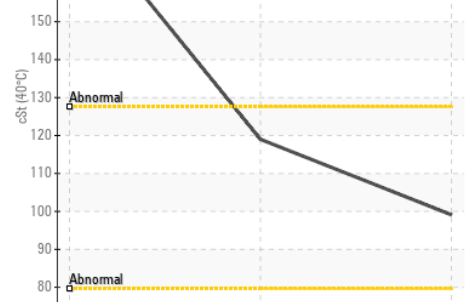
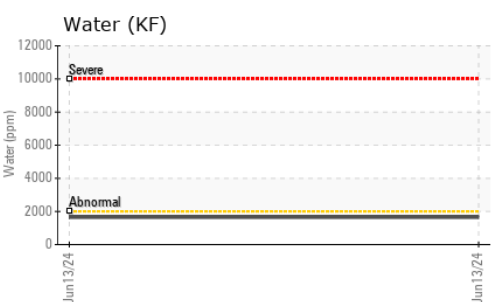
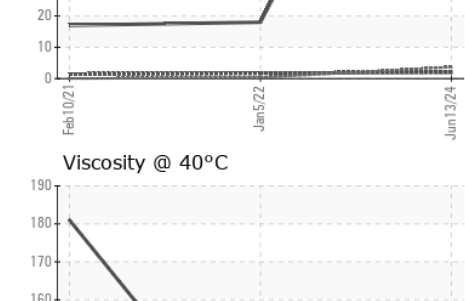
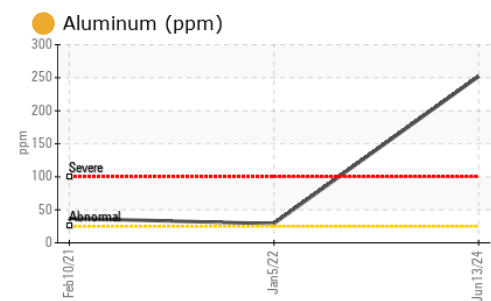
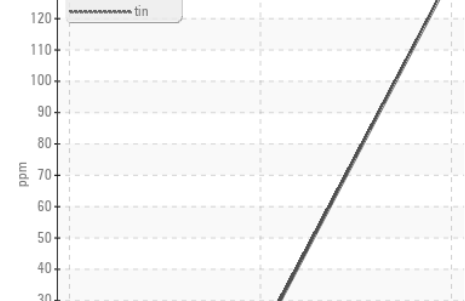
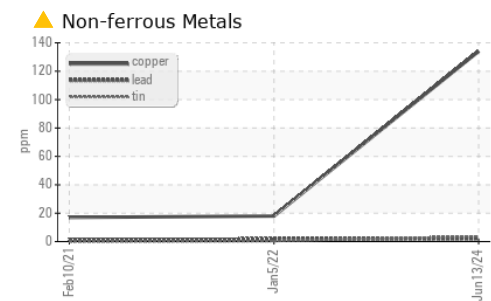
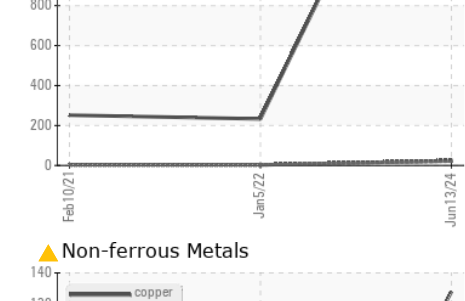
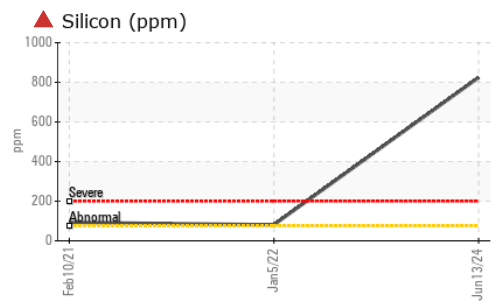
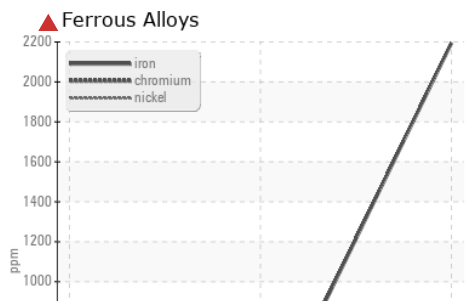
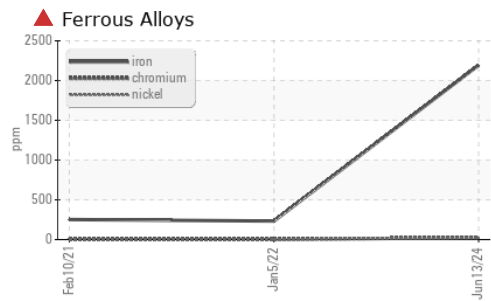
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>75	<b>▲ 824</b>	▲ 81	▲ 93
Potassium	ppm	ASTM D5185m	>20	<b>47</b>	10	14
Water	%	ASTM D6304	>0.2	<b>0.165</b>	---	---
ppm Water	ppm	ASTM D6304	>2000	<b>1650</b>	---	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	MODER
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>0.2%</b>	NEG	NEG

## FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		<b>22</b>	7	6
Boron	ppm	ASTM D5185m		<b>11</b>	26	2
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>4</b>	7	0
Manganese	ppm	ASTM D5185m		<b>24</b>	3	4
Magnesium	ppm	ASTM D5185m		<b>78</b>	40	13
Calcium	ppm	ASTM D5185m		<b>426</b>	243	101
Phosphorus	ppm	ASTM D5185m		<b>391</b>	651	1699
Zinc	ppm	ASTM D5185m		<b>108</b>	100	9
Sulfur	ppm	ASTM D5185m		<b>14918</b>	19585	19637
Visc @ 40°C	cSt	ASTM D445		<b>99.1</b>	119	181



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DJJ0023784 **Received** : 18 Jun 2024  
**Lab Number** : 06213915 **Tested** : 20 Jun 2024  
**Unique Number** : 11086779 **Diagnosed** : 20 Jun 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: KF )

**METAL RECYCLING SERVICES - GASTONIA**  
 5401 S YORK HWY  
 GASTONIA, NC  
 US 28052  
 Contact: RYAN BOWDEN

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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