



# OIL ANALYSIS REPORT

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



Area  
**LIEBHERR**  
Machine Id  
**LIEBHERR LH50M 102002-1216**  
Component  
**Swing Drive**  
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>DJJ0023738</b>	DJJ0011080	LH0236560
Sample Date		Client Info		<b>02 Jul 2024</b>	30 Jan 2024	01 Sep 2022
Machine Age	hrs	Client Info		<b>12993</b>	12313	9562
Oil Age	hrs	Client Info		<b>0</b>	0	500
Filter Age	hrs	Client Info		<b>0</b>	0	500
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	N/A	Changed
Sample Status				<b>MARGINAL</b>	SEVERE	SEVERE

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>1200	<b>829</b>	▲ 2039	▲ 636
Chromium	ppm	ASTM D5185m	>15	<b>9</b>	▲ 20	5
Nickel	ppm	ASTM D5185m	>5	<b>0</b>	▲ 5	<1
Titanium	ppm	ASTM D5185m	>5	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>5	<b>&lt;1</b>	● 5	2
Lead	ppm	ASTM D5185m	>8	<b>&lt;1</b>	▲ 21	0
Copper	ppm	ASTM D5185m	>325	<b>249</b>	▲ 1031	▲ 352
Tin	ppm	ASTM D5185m	>15	<b>4</b>	▲ 29	13
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>MODER</b>	NONE	NONE

## CONTAMINATION

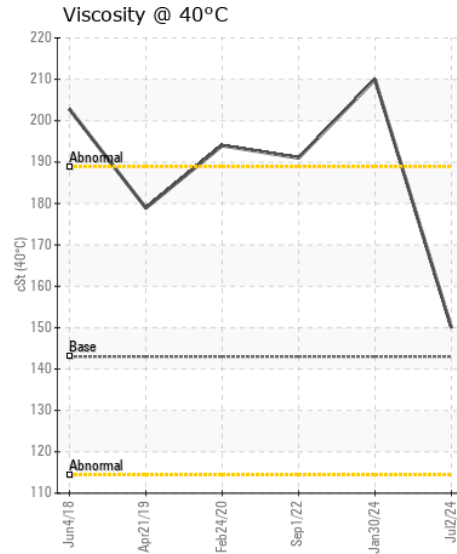
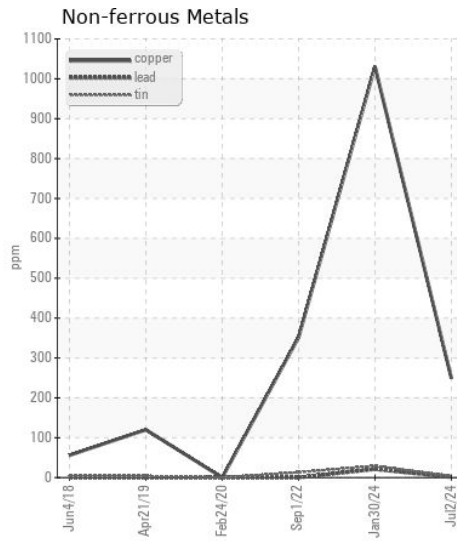
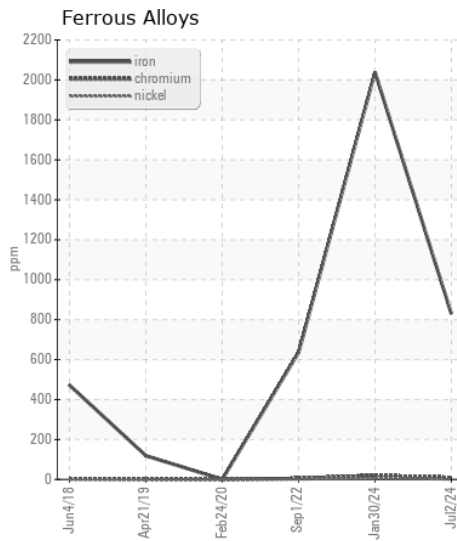
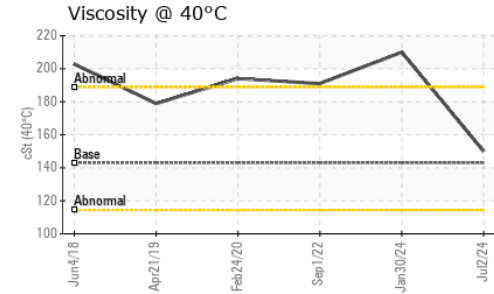
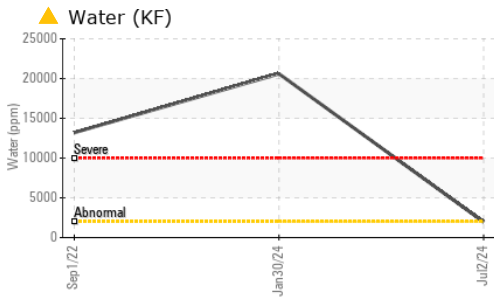
There is a trace of moisture present in the oil.

Silicon	ppm	ASTM D5185m	>10	<b>6</b>	▲ 31	2
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	4	0
Water	%	ASTM D6304	>0.2	▲ <b>0.197</b>	▲ 2.06	▲ 1.32
ppm Water	ppm	ASTM D6304	>2000	▲ <b>1970</b>	▲ 20600	▲ 13200
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	▲ MODER
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	● MILKY
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>0.2%</b>	▲ 0.2%	▲ 0.2%

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185m	>170	<b>2</b>	3	<1
Boron	ppm	ASTM D5185m	400	<b>3</b>	5	4
Barium	ppm	ASTM D5185m	200	<b>0</b>	0	<1
Molybdenum	ppm	ASTM D5185m	12	<b>&lt;1</b>	2	<1
Manganese	ppm	ASTM D5185m		<b>7</b>	16	3
Magnesium	ppm	ASTM D5185m	12	<b>2</b>	6	<1
Calcium	ppm	ASTM D5185m	150	<b>23</b>	6	13
Phosphorus	ppm	ASTM D5185m	1650	<b>727</b>	2169	2007
Zinc	ppm	ASTM D5185m	125	<b>28</b>	117	55
Sulfur	ppm	ASTM D5185m	22500	<b>19208</b>	24112	25138
Visc @ 40°C	cSt	ASTM D445	143	<b>150</b>	210	191



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DJJ0023738  
**Lab Number** : 06232629  
**Unique Number** : 11116122  
**Test Package** : CONST ( Additional Tests: KF )  
**Received** : 10 Jul 2024  
**Tested** : 13 Jul 2024  
**Diagnosed** : 13 Jul 2024 - Don Baldrige

**METAL RECYCLING SERVICES - MONROE**  
 150 S BIVENS RD  
 MONROE, NC  
 US 28112  
 Contact: Service Manager

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)

T:  
F: