



# LIEBHERR

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id  
**LIEBHERR L586 1761-66584**  
Component  
**Hydraulic System**  
Fluid  
**LIEBHERR HYDRAULIC HVI (--- GAL)**

### RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>LH0273351</b>	LH05892846	LH0235814
Sample Date		Client Info		<b>25 Mar 2024</b>	10 Jun 2023	23 Sep 2022
Machine Age	hrs	Client Info		<b>4045</b>	2523	1033
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>Not Changed</b>	Changed	Not Changed
Filter Changed		Client Info		<b>Not Changed</b>	N/A	N/A
Sample Status				<b>ABNORMAL</b>	ATTENTION	ATTENTION

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>9</b>	13	10
Chromium	ppm	ASTM D5185m	>5	<b>1</b>	2	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>5	<b>2</b>	1	1
Lead	ppm	ASTM D5185m	>15	<b>4</b>	5	4
Copper	ppm	ASTM D5185m	>10	<b>2</b>	3	3
Tin	ppm	ASTM D5185m	>2	<b>1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	2
White Metal	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

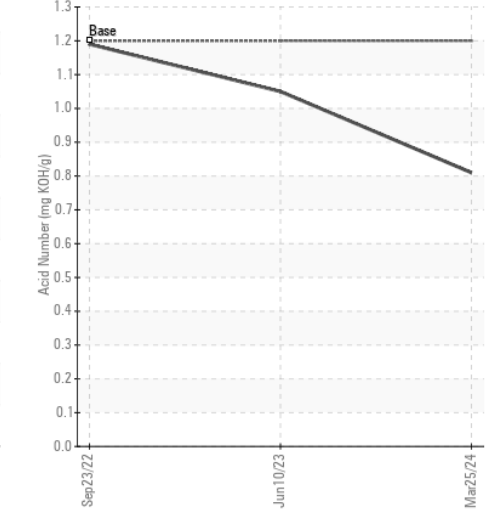
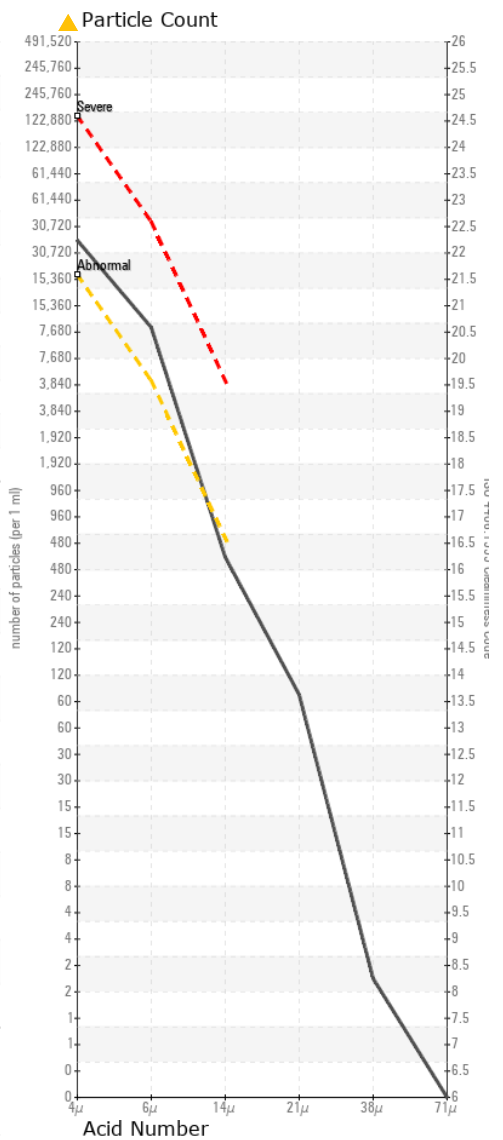
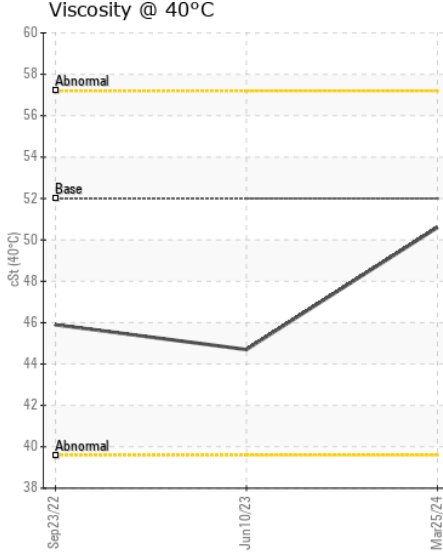
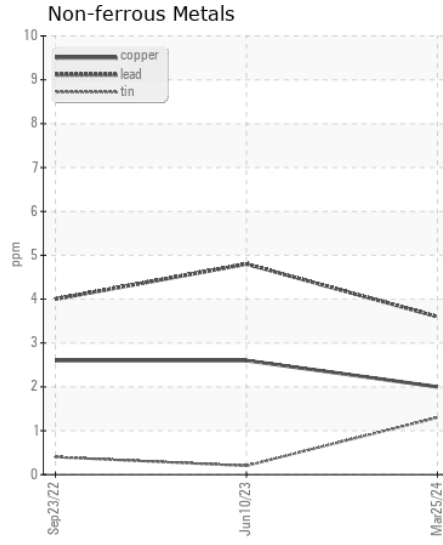
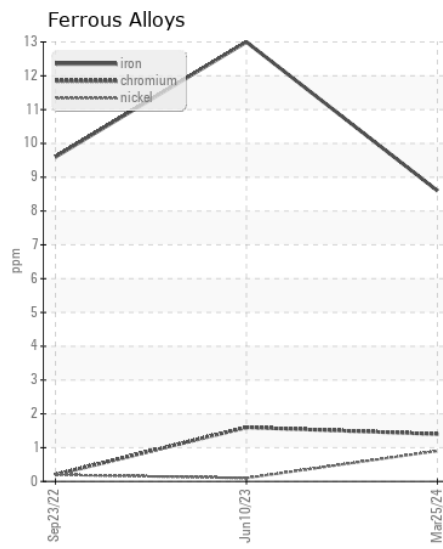
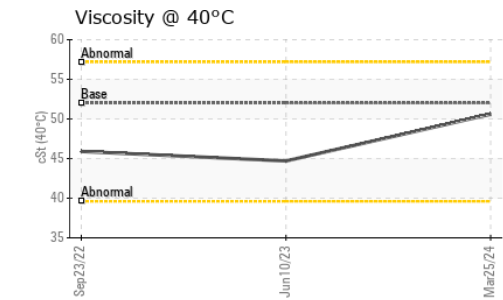
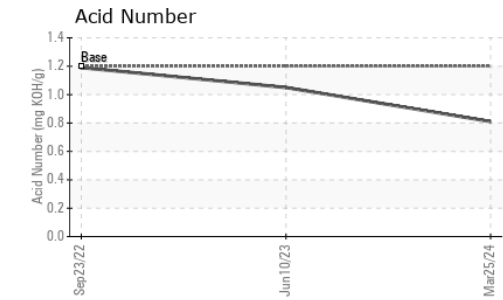
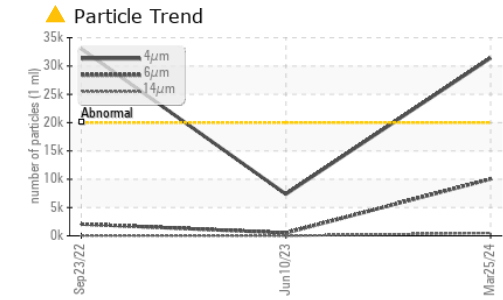
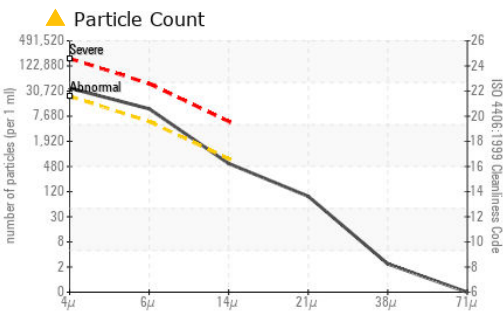
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>15	<b>8</b>	5	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>20000	<b>31412</b>	7364	33036
Particles >6µm		ASTM D7647	>5000	<b>10044</b>	515	2075
Particles >14µm		ASTM D7647	>640	<b>497</b>	12	38
Particles >21µm		ASTM D7647	>160	<b>82</b>	3	12
Particles >38µm		ASTM D7647	>40	<b>2</b>	0	1
Particles >71µm		ASTM D7647	>10	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	<b>22/21/16</b>	20/16/11	22/18/12
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	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	>0.1	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	2	2
Boron	ppm	ASTM D5185m		<b>40</b>	0	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>5</b>	0	2
Manganese	ppm	ASTM D5185m		<b>1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	7	<b>25</b>	3	<1
Calcium	ppm	ASTM D5185m	1500	<b>1677</b>	1357	1408
Phosphorus	ppm	ASTM D5185m	750	<b>721</b>	586	673
Zinc	ppm	ASTM D5185m	820	<b>832</b>	701	709
Sulfur	ppm	ASTM D5185m	4000	<b>4434</b>	5239	6115
Acid Number (AN)	mg KOH/g	ASTM D8045	1.2	<b>0.81</b>	1.05	1.19
Visc @ 40°C	cSt	ASTM D445	52	<b>50.6</b>	44.7	45.9



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : LH0273351 **Received** : 11 Apr 2024  
**Lab Number** : 06146526 **Tested** : 12 Apr 2024  
**Unique Number** : 10976604 **Diagnosed** : 15 Apr 2024 - Don Baldrige  
**Test Package** : CONST

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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)