



LIEBHERR

OIL ANALYSIS REPORT

WEAR

NORMAL

CONTAMINATION

ABNORMAL

FLUID CONDITION

NORMAL



Machine Id
LIEBHERR L586 068511-1761

Component
Hydraulic System

Fluid
{not provided} (--- GAL)

RECOMMENDATION

We recommend you service the filters on this component. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0281365	LH0274787	LH0261757
Sample Date		Client Info		21 Jan 2024	29 Aug 2023	13 Jul 2023
Machine Age	hrs	Client Info		2595	1877	1492
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Not Changd	Not Changd
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ATTENTION	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>50	<1	15	13
Chromium	ppm	ASTM D5185(m)	>5	0	<1	<1
Nickel	ppm	ASTM D5185(m)	>2	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	<1	<1
Silver	ppm	ASTM D5185(m)		0	0	2
Aluminum	ppm	ASTM D5185(m)	>5	<1	3	3
Lead	ppm	ASTM D5185(m)	>15	0	8	7
Copper	ppm	ASTM D5185(m)	>10	0	3	3
Tin	ppm	ASTM D5185(m)	>2	0	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE

CONTAMINATION

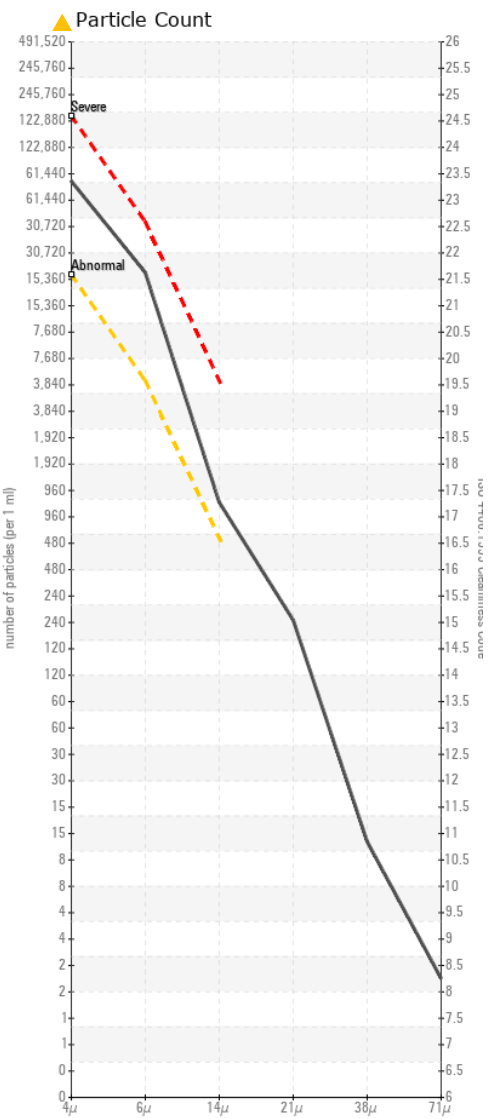
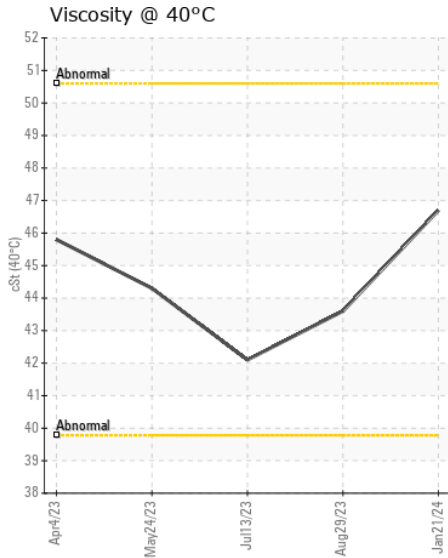
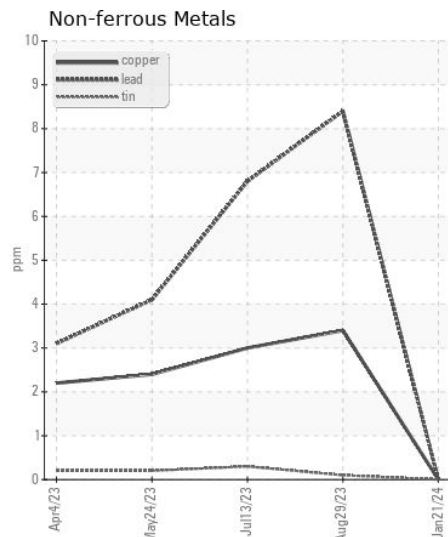
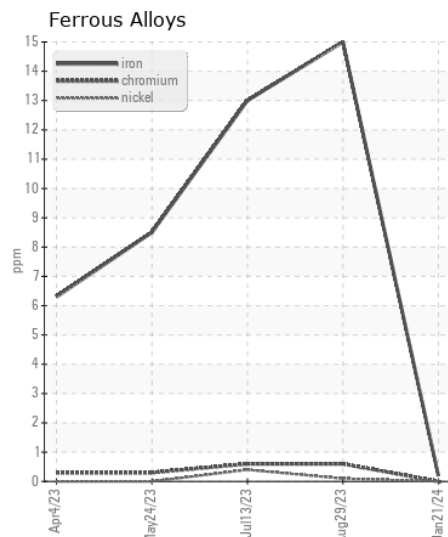
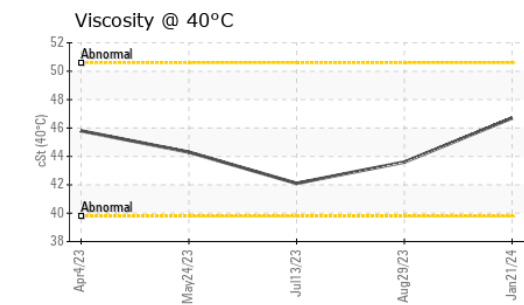
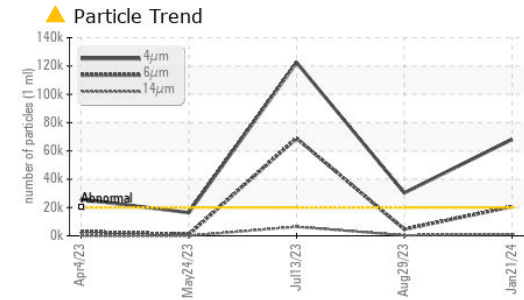
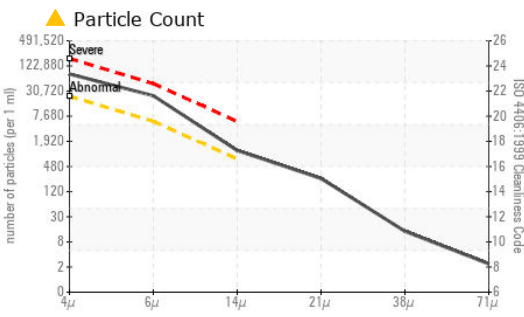
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185(m)	>15	<1	10	9
Potassium	ppm	ASTM D5185(m)	>20	1	2	2
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	▲ 68088	▲ 30297	▲ 122426
Particles >6µm		ASTM D7647	>5000	▲ 20599	4600	68879
Particles >14µm		ASTM D7647	>640	▲ 1018	326	6430
Particles >21µm		ASTM D7647	>160	218	90	1085
Particles >38µm		ASTM D7647	>40	12	2	5
Particles >71µm		ASTM D7647	>10	2	1	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	▲ 23/22/17	▲ 22/19/16	24/23/20
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	VLITE
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*	>0.1	NEG	NEG	NEG

FLUID CONDITION

The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185(m)		0	2	2
Boron	ppm	ASTM D5185(m)		0	<1	<1
Barium	ppm	ASTM D5185(m)		0	0	0
Molybdenum	ppm	ASTM D5185(m)		0	0	0
Manganese	ppm	ASTM D5185(m)		0	<1	<1
Magnesium	ppm	ASTM D5185(m)		<1	6	6
Calcium	ppm	ASTM D5185(m)		103	1456	1458
Phosphorus	ppm	ASTM D5185(m)		647	656	679
Zinc	ppm	ASTM D5185(m)		828	724	727
Sulfur	ppm	ASTM D5185(m)		1589	3309	3362
Visc @ 40°C	cSt	ASTM D7279(m)		46.7	43.6	42.1



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0281365 **Received** : 22 Jan 2024
Lab Number : 02610308 **Diagnosed** : 23 Jan 2024
Unique Number : 5711394 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: PrtCount)

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.

MILLER PAVING LTD.
 P.O BOX 4080, 505 MILLER AVE.
 MARKHAM, ON
 CA L6G 1B2
 Contact: Rob Graham
 rob.graham@millergroup.ca
 T: (905)475-6660
 F: (905)475-1086