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LIEBHERR

OIL ANALYSIS REPORT

WEAR	SEVERE
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
(341435)
Machine Id
LIEBHERR LH50M 128733-1216
Component
Hydraulic System
Fluid
{not provided} (--- GAL)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

Iron ppm levels are severe. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

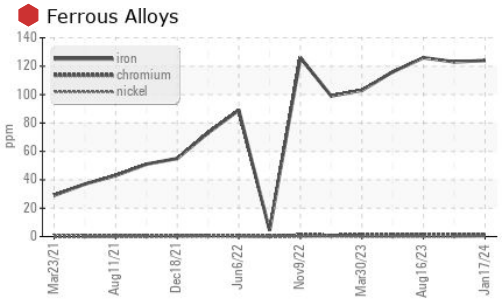
CONTAMINATION

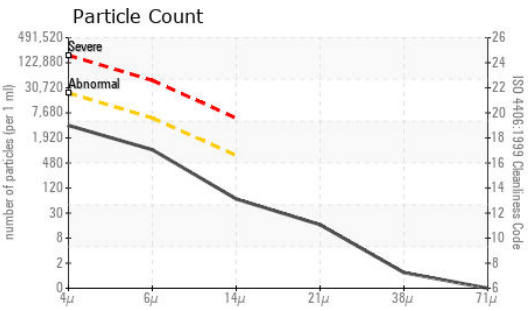
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. NOTE: An increase in the particle count is noted.

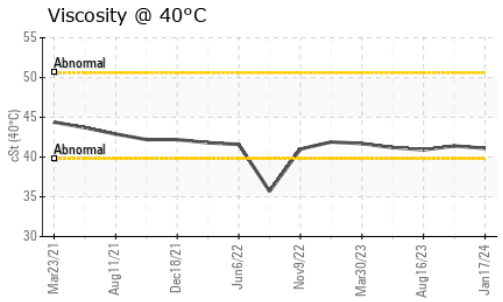
FLUID CONDITION

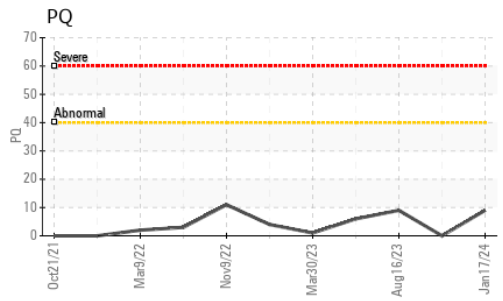
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

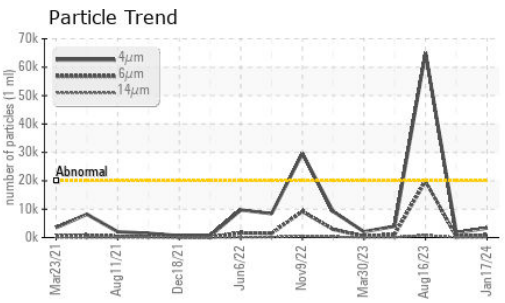
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0278633	LH0277774	LH0274633
Sample Date		Client Info		17 Jan 2024	20 Nov 2023	16 Aug 2023
Machine Age	hrs	Client Info		8647	8180	7832
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	SEVERE	SEVERE
PQ		ASTM D8184*	>40	9	0	9
Iron	ppm	ASTM D5185(m)	>50	⬢ 124	⬢ 123	⬢ 126
Chromium	ppm	ASTM D5185(m)	>5	1	1	1
Nickel	ppm	ASTM D5185(m)	>2	<1	0	0
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)		0	<1	4
Aluminum	ppm	ASTM D5185(m)	>2	<1	<1	1
Lead	ppm	ASTM D5185(m)	>4	<1	<1	<1
Copper	ppm	ASTM D5185(m)	>10	4	4	4
Tin	ppm	ASTM D5185(m)	>2	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>17	2	2	2
Potassium	ppm	ASTM D5185(m)	>20	1	0	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	3341	1666	▲ 65082
Particles >6µm		ASTM D7647	>5000	876	448	▲ 19821
Particles >14µm		ASTM D7647	>640	58	23	▲ 851
Particles >21µm		ASTM D7647	>160	14	6	117
Particles >38µm		ASTM D7647	>40	1	0	2
Particles >71µm		ASTM D7647	>10	0	0	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	19/17/13	18/16/12	▲ 23/21/17
Silt	scalar	Visual*	NONE	NONE	NONE	VLITE
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
Sodium	ppm	ASTM D5185(m)		2	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)		2	2	2
Magnesium	ppm	ASTM D5185(m)		3	2	3
Calcium	ppm	ASTM D5185(m)		415	434	480
Phosphorus	ppm	ASTM D5185(m)		635	634	674
Zinc	ppm	ASTM D5185(m)		779	806	797
Sulfur	ppm	ASTM D5185(m)		2586	2488	2648
Visc @ 40°C	cSt	ASTM D7279(m)		41.1	41.4	40.9

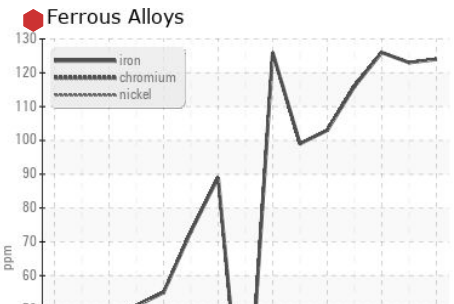


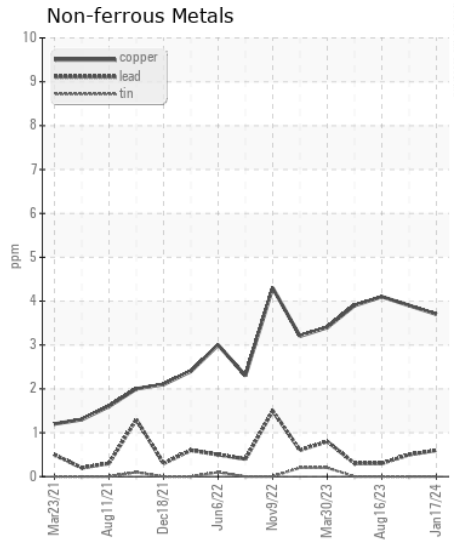


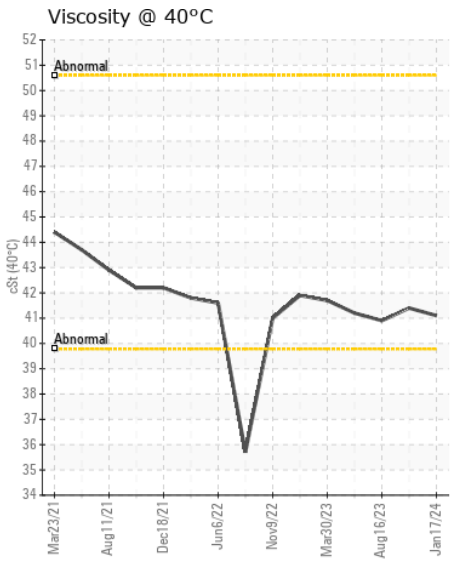


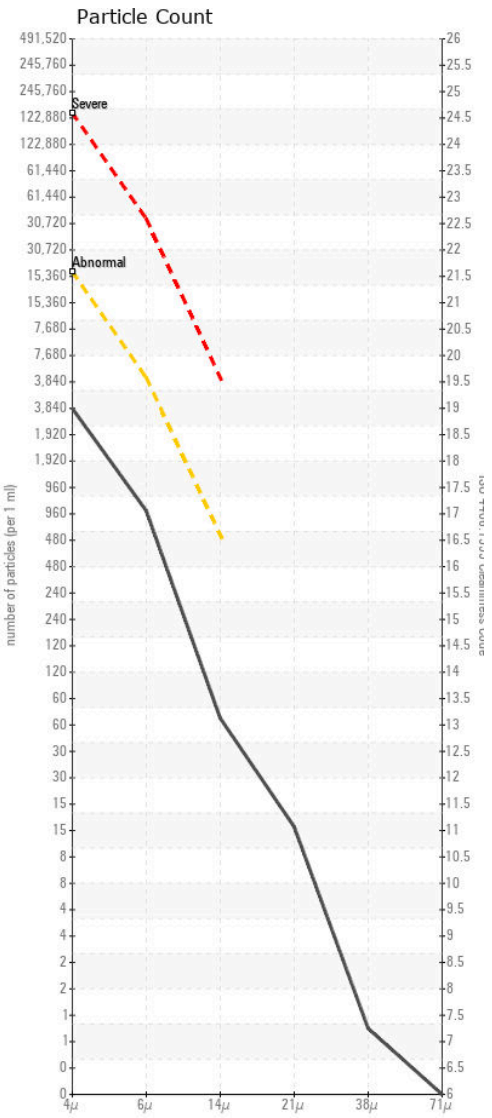












ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0278633 **Recieved** : 18 Jan 2024
Lab Number : 02609719 **Diagnosed** : 19 Jan 2024
Unique Number : 5710805 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: PQ, PrtCount)

COMBINED METAL INDUSTRIES
454 DOBBIE DRIVE
CAMBRIDGE, ON
CA N1T 1S7
Contact: Service Manager

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.

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