MOB

LIEBHERR

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
(358696)
Machine Id
LIEBHERR R924LC 050422-1487
Component
Hydraulic System
Fluid
LIEBHERR HYDRAULIC HVI (--- 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.

WEAR

Lead and copper ppm levels are abnormal. Bearing and/or bushing wear is indicated.

CONTAMINATION

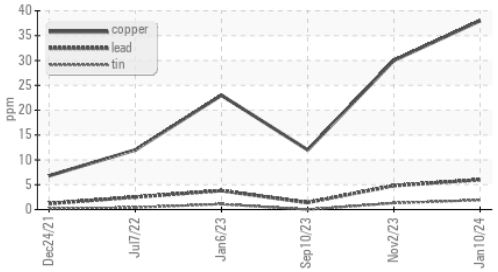
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

FLUID CONDITION

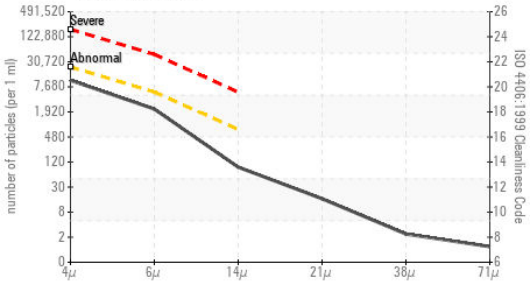
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0278839	LH0279022	LH0274641
Sample Date		Client Info		10 Jan 2024	02 Nov 2023	10 Sep 2023
Machine Age	hrs	Client Info		4848	4516	4043
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	SEVERE
Iron	ppm	ASTM D5185(m)	>50	18	13	117
Chromium	ppm	ASTM D5185(m)	>15	2	1	3
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	3	0
Silver	ppm	ASTM D5185(m)		0	<1	<1
Aluminum	ppm	ASTM D5185(m)	>8	1	<1	<1
Lead	ppm	ASTM D5185(m)	>5	6	5	1
Copper	ppm	ASTM D5185(m)	>15	38	30	12
Tin	ppm	ASTM D5185(m)	>5	2	1	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)	>25	4	5	8
Potassium	ppm	ASTM D5185(m)	>20	<1	0	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>20000	9583	11405	1128
Particles >6µm		ASTM D7647	>5000	1972	3133	316
Particles >14µm		ASTM D7647	>640	80	96	25
Particles >21µm		ASTM D7647	>160	14	12	6
Particles >38µm		ASTM D7647	>40	2	1	1
Particles >71µm		ASTM D7647	>10	1	1	1
Oil Cleanliness		ISO 4406 (c)	>21/19/16	20/18/13	21/19/14	17/15/12
Silt	scalar	Visual*	NONE	NONE	NONE	NONE
Debris	scalar	Visual*	NONE	NONE	NONE	NONE
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)		6	6	3
Boron	ppm	ASTM D5185(m)	0	<1	8	<1
Barium	ppm	ASTM D5185(m)	0	0	<1	<1
Molybdenum	ppm	ASTM D5185(m)	0	0	2	0
Manganese	ppm	ASTM D5185(m)	<1	0	0	2
Magnesium	ppm	ASTM D5185(m)	7	9	57	3
Calcium	ppm	ASTM D5185(m)	1317	917	992	992
Phosphorus	ppm	ASTM D5185(m)	611	618	628	568
Zinc	ppm	ASTM D5185(m)	696	724	750	652
Sulfur	ppm	ASTM D5185(m)	2574	3818	3542	3286
Visc @ 40°C	cSt	ASTM D7279(m)	46	41.8	42.7	41.3

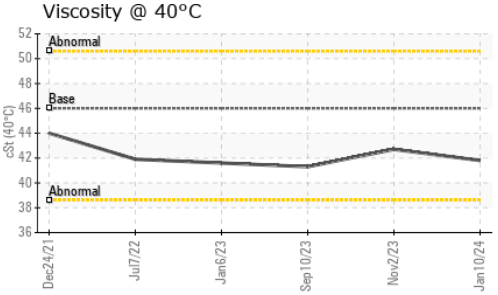
Non-ferrous Metals



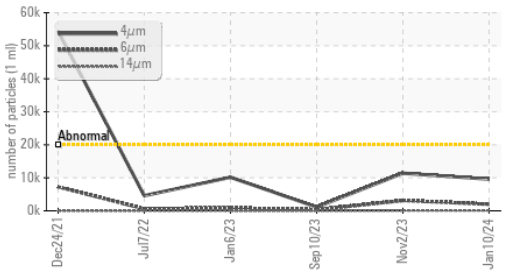
Particle Count



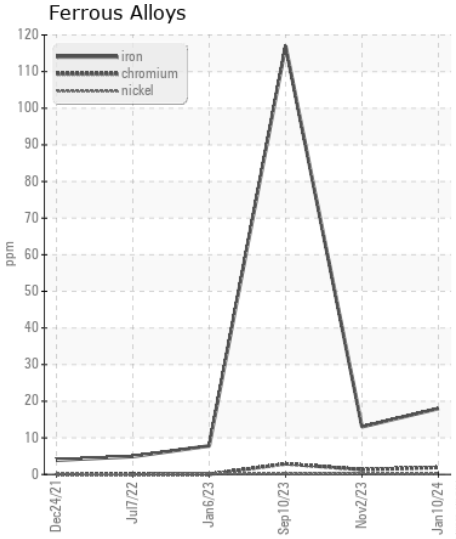
Viscosity @ 40°C



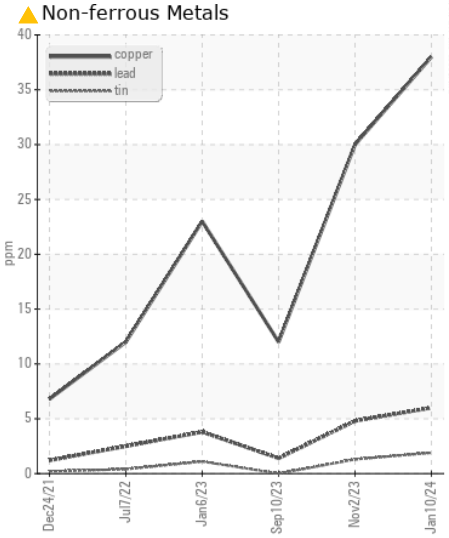
Particle Trend



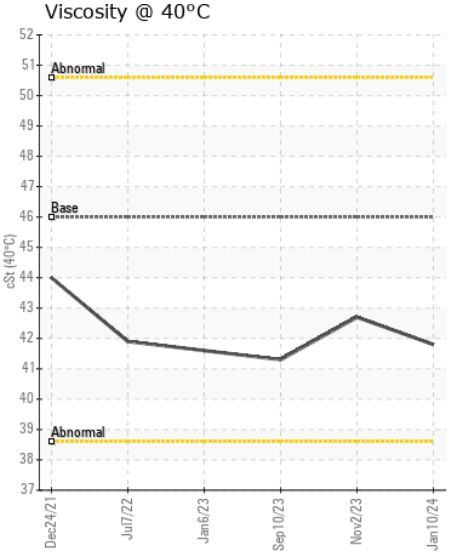
Ferrous Alloys



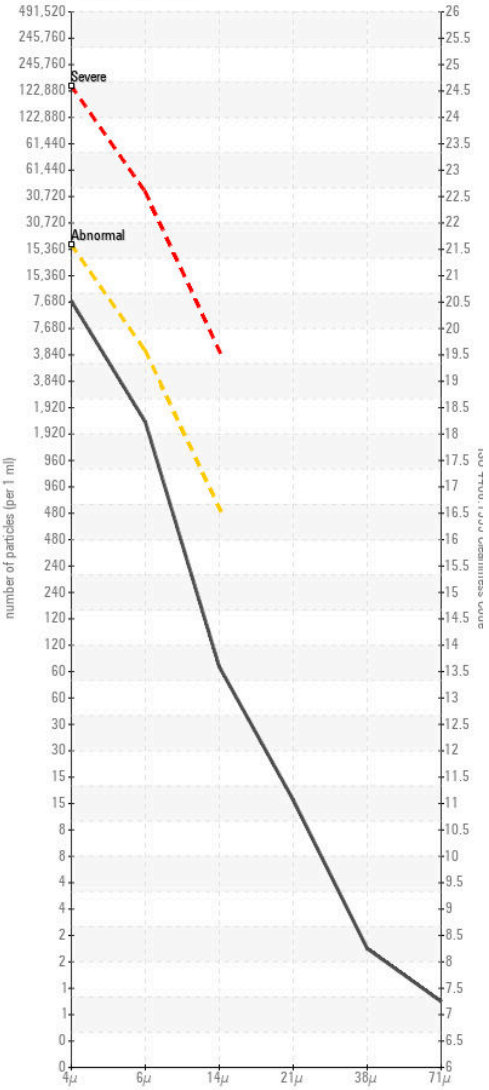
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0278839 **Recieved** : 23 Jan 2024
Lab Number : 02610585 **Diagnosed** : 24 Jan 2024
Unique Number : 5711671 **Diagnostician** : Kevin Marson
Test Package : MOB 1 (Additional Tests: PrtCount)

SL EXCAVATION INC.
4626 COUNTY ROAD 29
ALMONTE, ON
CA K0A 1A0
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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