MOB

LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR L586 064339
Component
Hydraulic System
Fluid
{not provided} (--- LTR)

RECOMMENDATION

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend an early resample to monitor this condition. Please specify the brand, type, and viscosity of the oil on your next sample.

WEAR

All component wear rates are normal.

CONTAMINATION

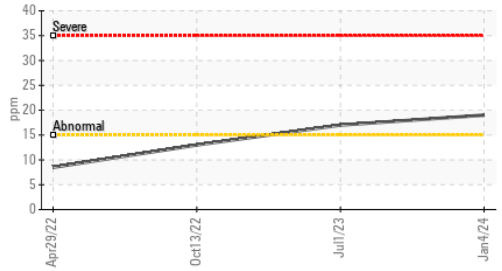
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The system cleanliness is acceptable for your target ISO 4406 cleanliness code.

FLUID CONDITION

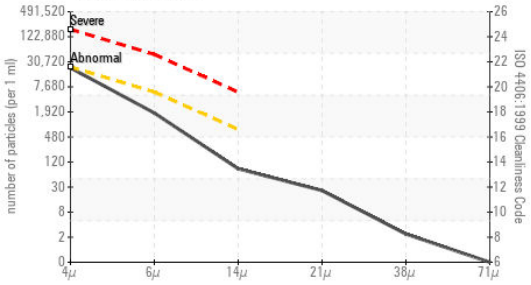
The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		**LH0280907**	LH0259983	LH0238474
Sample Date		Client Info		**04 Jan 2024**	01 Jul 2023	13 Oct 2022
Machine Age	kms	Client Info		**4167**	3090	0
Oil Age	kms	Client Info		**0**	0	0
Filter Age	kms	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				**ABNORMAL**	ABNORMAL	ABNORMAL
Iron	ppm	ASTM D5185(m)	>50	**21**	18	14
Chromium	ppm	ASTM D5185(m)	>5	**1**	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	0
Aluminum	ppm	ASTM D5185(m)	>5	**10**	▲ 8	▲ 7
Lead	ppm	ASTM D5185(m)	>15	**11**	11	9
Copper	ppm	ASTM D5185(m)	>10	**4**	4	4
Tin	ppm	ASTM D5185(m)	>2	**<1**	<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
Silicon	ppm	ASTM D5185(m)	>15	▲ **19**	▲ 17	13
Potassium	ppm	ASTM D5185(m)	>20	**4**	4	2
Water		WC Method	>0.1	**NEG**	NEG	NEG
Particles >4µm		ASTM D7647	>20000	**19102**	15737	▲ 52815
Particles >6µm		ASTM D7647	>5000	**1584**	598	▲ 10257
Particles >14µm		ASTM D7647	>640	**73**	22	217
Particles >21µm		ASTM D7647	>160	**22**	3	31
Particles >38µm		ASTM D7647	>40	**2**	1	0
Particles >71µm		ASTM D7647	>10	**0**	1	0
Oil Cleanliness		ISO 4406 (c)	>21/19/16	**21/18/13**	21/16/12	▲ 23/21/15
Silt	scalar	Visual*	NONE	**NONE**	NONE	NONE
Debris	scalar	Visual*	NONE	**VLITE**	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)		**2**	2	2
Boron	ppm	ASTM D5185(m)		**<1**	1	<1
Barium	ppm	ASTM D5185(m)		**0**	<1	0
Molybdenum	ppm	ASTM D5185(m)		**0**	0	0
Manganese	ppm	ASTM D5185(m)		**0**	<1	<1
Magnesium	ppm	ASTM D5185(m)		**10**	6	5
Calcium	ppm	ASTM D5185(m)		**1430**	1431	1465
Phosphorus	ppm	ASTM D5185(m)		**588**	655	645
Zinc	ppm	ASTM D5185(m)		**702**	718	687
Sulfur	ppm	ASTM D5185(m)		**4134**	4173	4145
Visc @ 40°C	cSt	ASTM D7279(m)		**42.1**	42.3	42.9

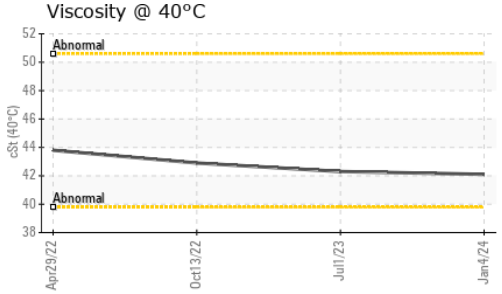
Silicon (ppm)



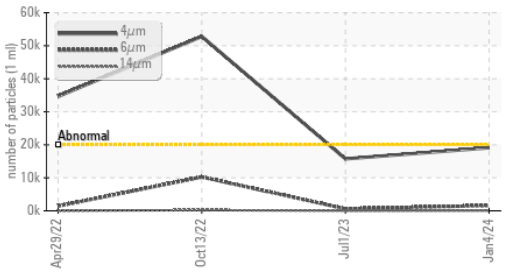
Particle Count



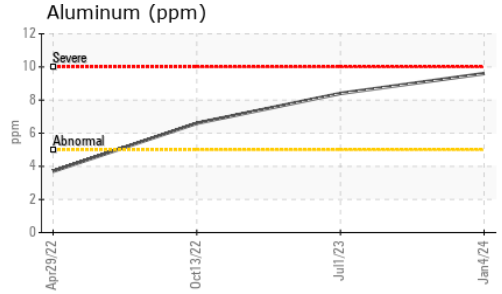
Viscosity @ 40°C



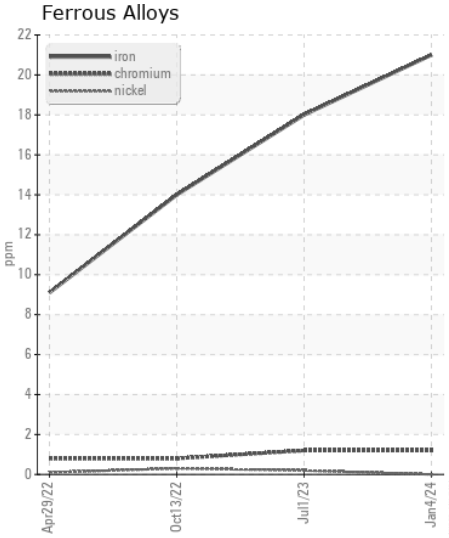
Particle Trend



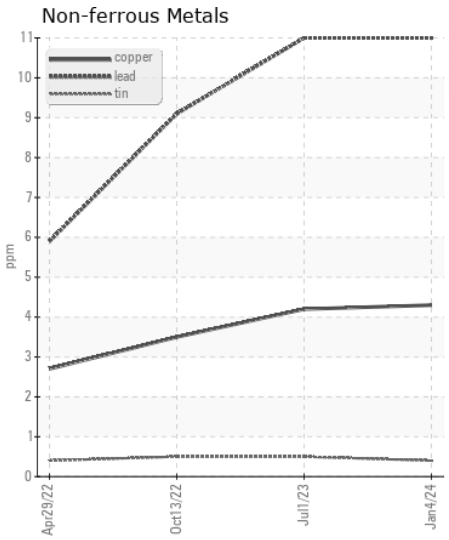
Aluminum (ppm)



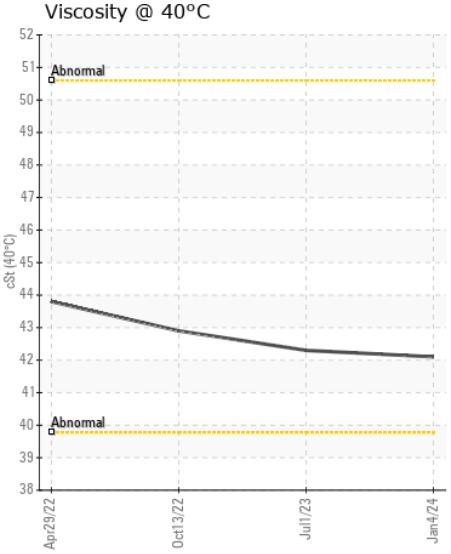
Ferrous Alloys



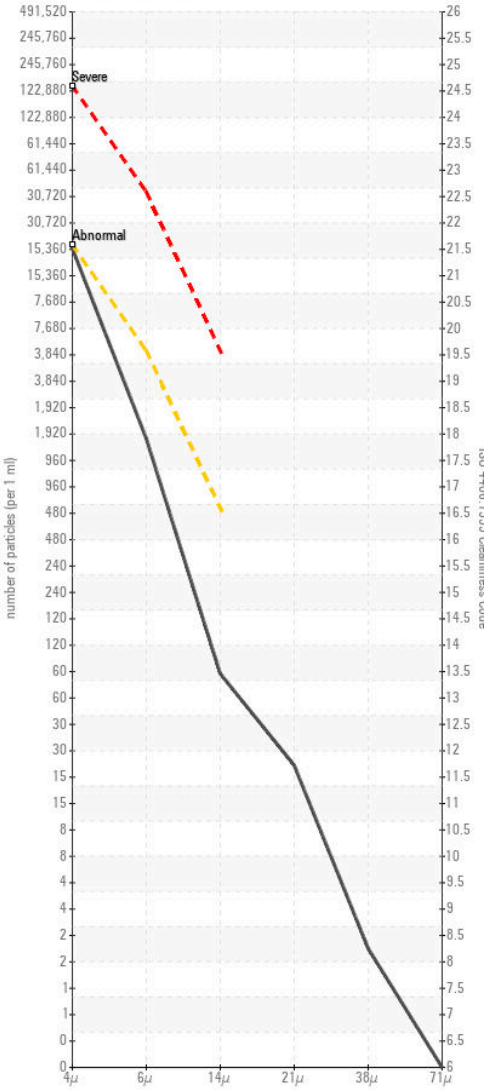
Non-ferrous Metals



Viscosity @ 40°C



Particle Count



ISO 17025:2017 Accredited Laboratory

Laboratory	: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9		
Sample No.	: LH0280907	**Recieved**	: 10 Jan 2024
Lab Number	: 02607884	**Diagnosed**	: 12 Jan 2024
Unique Number	: 5708970	**Diagnostician**	: Kevin Marson
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.

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Contact: Service Manager

T:
F: