MOB

LIEBHERR

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	NORMAL

Machine Id
LIEBHERR R938 050294-1650
Component
Swing Drive
Fluid
GEAR OIL SAE 75W90 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

Chromium and iron ppm levels are abnormal. The low ferrous density (PQ) index indicates the wear metal levels are due to corrosion.

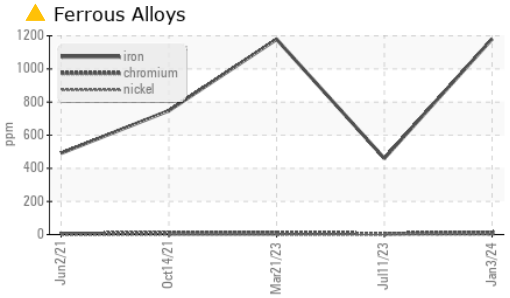
CONTAMINATION

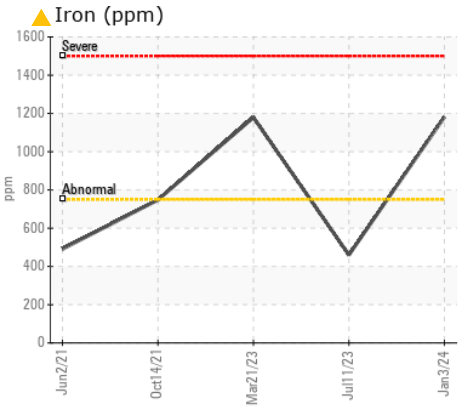
There is a trace of moisture present in the oil.

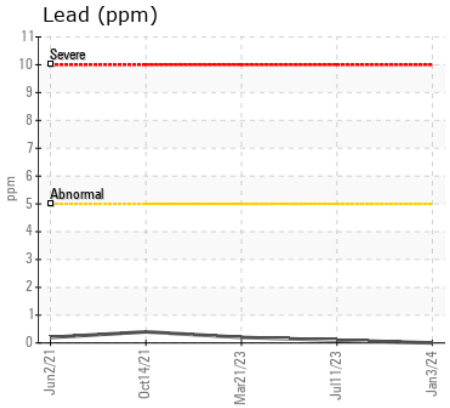
FLUID CONDITION

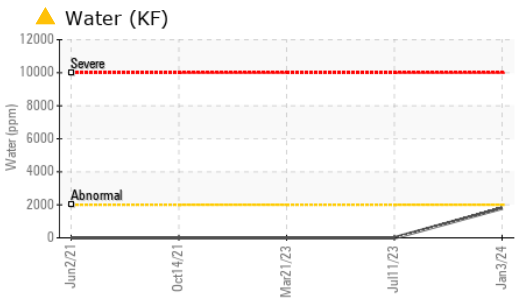
The oil is no longer serviceable as a result of the abnormal and/or severe wear.

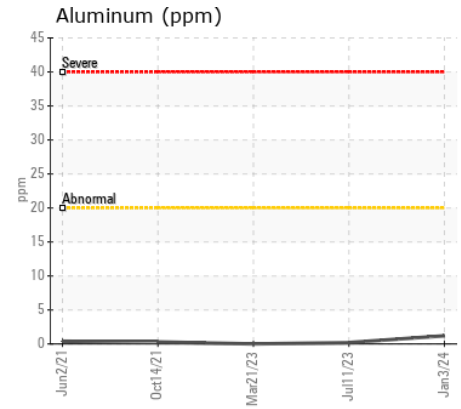
Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0172358	LH0172349	LH0257076
Sample Date		Client Info		03 Jan 2024	11 Jul 2023	21 Mar 2023
Machine Age	hrs	Client Info		4951	4478	4098
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		None	None	None
Sample Status				ABNORMAL	NORMAL	ABNORMAL
PQ		ASTM D8184*		0	---	0
Iron	ppm	ASTM D5185(m)	>750	▲ 1181	460	▲ 1179
Chromium	ppm	ASTM D5185(m)	>10	▲ 14	5	▲ 12
Nickel	ppm	ASTM D5185(m)	>5	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)		0	0	0
Aluminum	ppm	ASTM D5185(m)	>20	1	<1	0
Lead	ppm	ASTM D5185(m)	>5	0	<1	<1
Copper	ppm	ASTM D5185(m)	>250	<1	<1	<1
Tin	ppm	ASTM D5185(m)	>10	0	0	0
Vanadium	ppm	ASTM D5185(m)		0	0	<1
White Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Yellow Metal	scalar	Visual*	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185(m)	>15	6	3	2
Potassium	ppm	ASTM D5185(m)	>20	4	<1	<1
Water	%	ASTM D6304*	>0.2	▲ 0.179	---	---
ppm Water	ppm	ASTM D6304*	>2000	▲ 1796	---	---
Silt	scalar	Visual*	NONE	NONE	VLITE	NONE
Debris	scalar	Visual*	NONE	NONE	VLITE	NONE
Sand/Dirt	scalar	Visual*	NONE	NONE	NONE	VLITE
Appearance	scalar	Visual*	NORML	NORML	NORML	NORML
Odor	scalar	Visual*	NORML	NORML	NORML	NORML
Emulsified Water	scalar	Visual*	>0.2	▲ .2%	NEG	NEG
Sodium	ppm	ASTM D5185(m)		<1	1	2
Boron	ppm	ASTM D5185(m)	400	178	228	62
Barium	ppm	ASTM D5185(m)	200	0	<1	0
Molybdenum	ppm	ASTM D5185(m)	12	0	<1	<1
Manganese	ppm	ASTM D5185(m)		8	3	9
Magnesium	ppm	ASTM D5185(m)	12	1	2	0
Calcium	ppm	ASTM D5185(m)	150	9	10	15
Phosphorus	ppm	ASTM D5185(m)	1650	1255	1340	1412
Zinc	ppm	ASTM D5185(m)	125	10	10	11
Sulfur	ppm	ASTM D5185(m)	22500	20140	20437	20570
Visc @ 40°C	cSt	ASTM D7279(m)	109	102	102	94.5

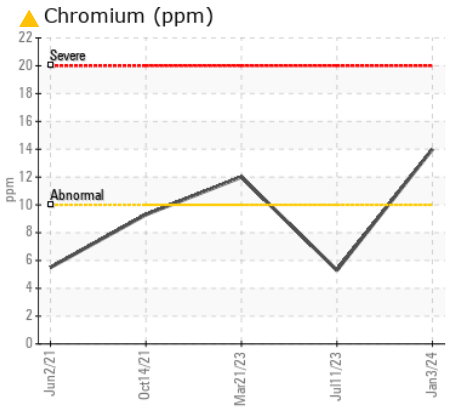


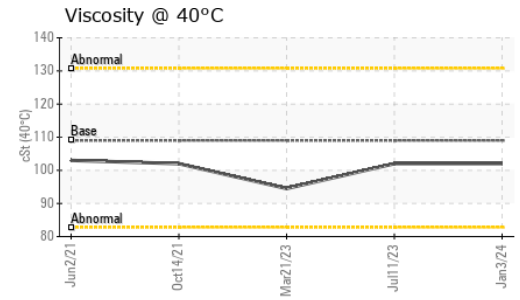


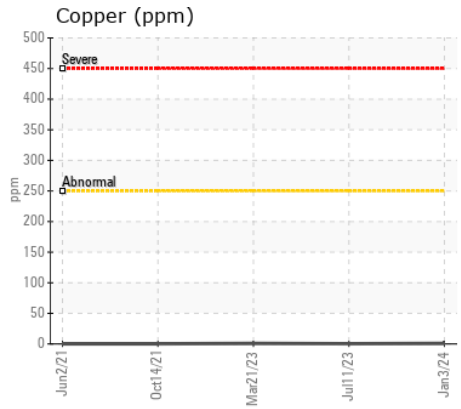


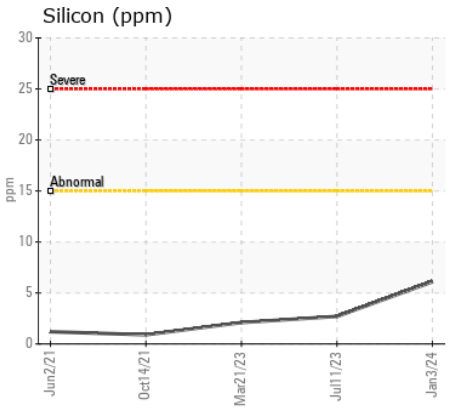


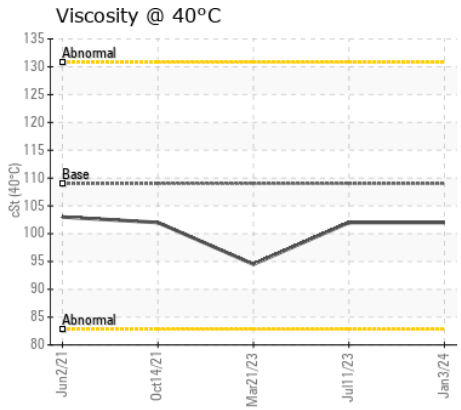


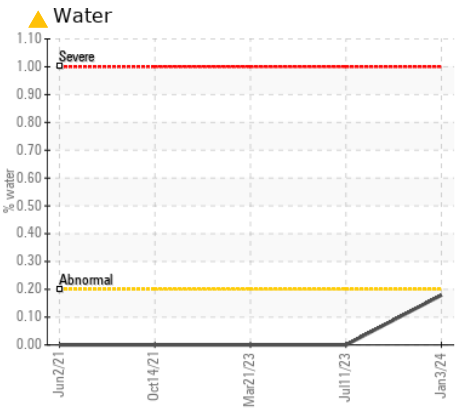












ISO 17025:2017 Accredited Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : LH0172358 **Recieved** : 11 Jan 2024
Lab Number : 02608290 **Diagnosed** : 15 Jan 2024
Unique Number : 5709376 **Diagnostician** : Kevin Marson
Test Package : MOBCE (Additional Tests: KF, PQ, Visual)

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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