



LIEBHERR

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ATTENTION



Machine Id
LIEBHERR A944 038569-194
Component
Swing Drive
Fluid
GEAR OIL LS 80W90 (--- GAL)

RECOMMENDATION

We advise that you check for the source of water entry. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

There is a high concentration of water present in the oil.

FLUID CONDITION

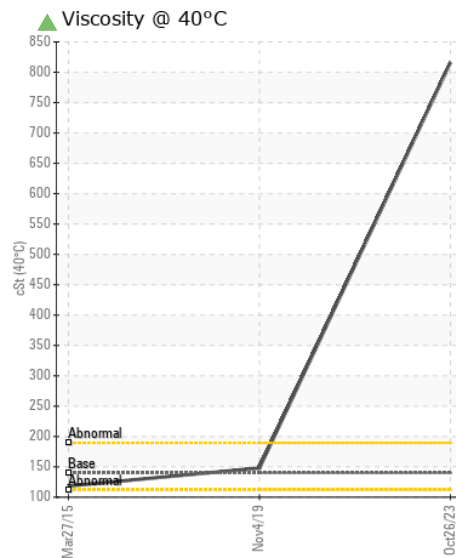
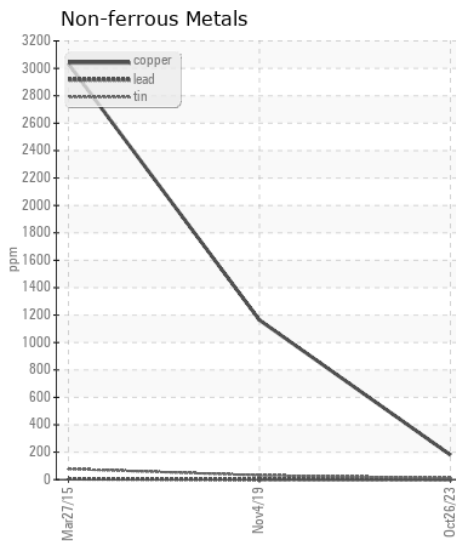
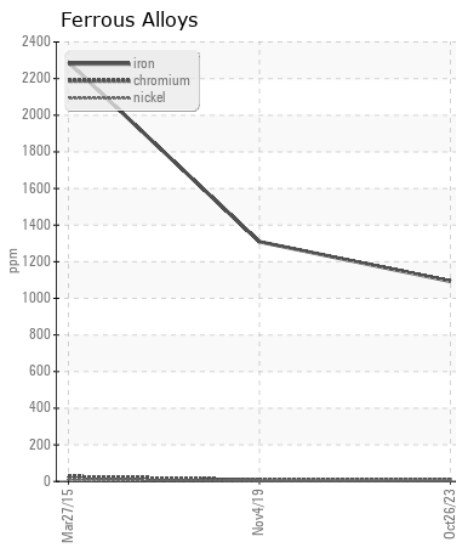
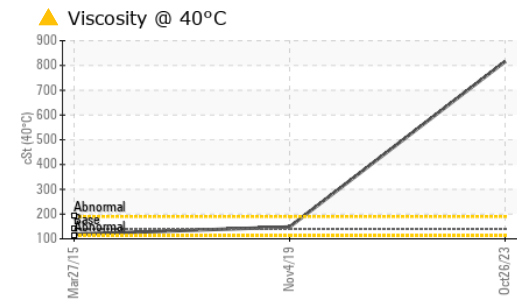
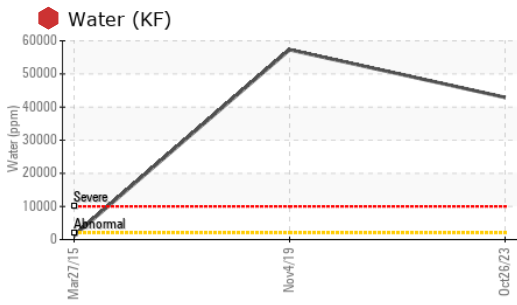
The oil viscosity is higher than normal. The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0263921	LHMC142523	LHMC87341
Sample Date		Client Info		26 Oct 2023	04 Nov 2019	27 Mar 2015
Machine Age	hrs	Client Info		14477	12646	10170
Oil Age	hrs	Client Info		500	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	SEVERE	SEVERE

Iron	ppm	ASTM D5185m	>1570	1093	1309	▲ 2289
Chromium	ppm	ASTM D5185m	>15	9	7	▲ 26
Nickel	ppm	ASTM D5185m	>5	3	3	11
Titanium	ppm	ASTM D5185m		0	<1	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>2	2	1	4
Lead	ppm	ASTM D5185m	>10	0	<1	6
Copper	ppm	ASTM D5185m	>495	180	● 1164	● 3033
Tin	ppm	ASTM D5185m	>25	11	▲ 31	● 78
Vanadium	ppm	ASTM D5185m		<1	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	▲ MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

Silicon	ppm	ASTM D5185m	>10	7	4	32
Potassium	ppm	ASTM D5185m	>20	5	111	0
Water	%	ASTM D6304	>0.2	● 4.29	● 5.73	▲ 0.118
ppm Water	ppm	ASTM D6304	>2000	● 42900	● 57300	▲ 1180
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	LIGHT	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	▲ MILKY	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	● 0.2%	● 6.0%	0.1%

Sodium	ppm	ASTM D5185m		0	15	5
Boron	ppm	ASTM D5185m	150	36	47	8
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m		7	8	6
Manganese	ppm	ASTM D5185m		6	7	15
Magnesium	ppm	ASTM D5185m	10	99	5	19
Calcium	ppm	ASTM D5185m	70	513	249	189
Phosphorus	ppm	ASTM D5185m	2000	1273	619	1483
Zinc	ppm	ASTM D5185m	50	178	151	262
Sulfur	ppm	ASTM D5185m	20000	21765	7028	19546
Visc @ 40°C	cSt	ASTM D445	140	▲ 816	148	118.6



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0263921 **Received** : 16 Jan 2024
Lab Number : 06062255 **Diagnosed** : 18 Jan 2024
Unique Number : 10833637 **Diagnostician** : Don Baldrige
Test Package : CONST (Additional Tests: KF)

ALTER SCRAP
 2400 NORTH 14TH AVENUE
 WAUSAU, WI
 US 54401
 Contact: DALE BAUER

To discuss this sample report, contact Customer Service at 1-800-237-1369.

* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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