



LIEBHERR

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR A918 095565-1184
Component
Swing Drive
Fluid
LIEBHERR GEAR BASIC 90 LS (--- 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.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0264433	LH0268875	LH0220687
Sample Date		Client Info		12 Jun 2024	24 Jan 2024	23 Sep 2022
Machine Age	hrs	Client Info		17064	15862	9705
Oil Age	hrs	Client Info		1000	1000	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				ABNORMAL	SEVERE	NORMAL

WEAR

Gear wear is indicated.

Iron	ppm	ASTM D5185m	>350	▲ 497	▲ 415	84
Chromium	ppm	ASTM D5185m	>15	3	3	<1
Nickel	ppm	ASTM D5185m	>5	<1	1	0
Titanium	ppm	ASTM D5185m		<1	<1	0
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>5	3	1	<1
Lead	ppm	ASTM D5185m	>10	0	1	0
Copper	ppm	ASTM D5185m	>300	25	50	76
Tin	ppm	ASTM D5185m	>15	<1	2	2
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

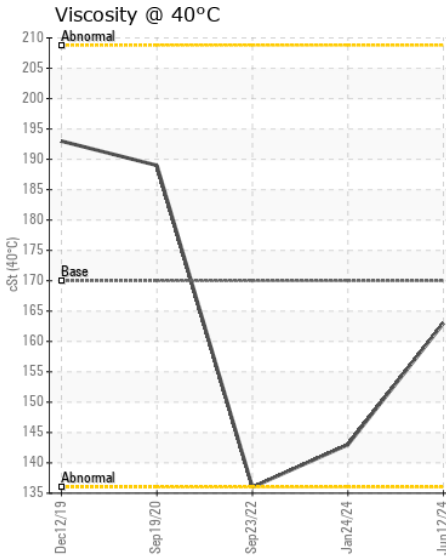
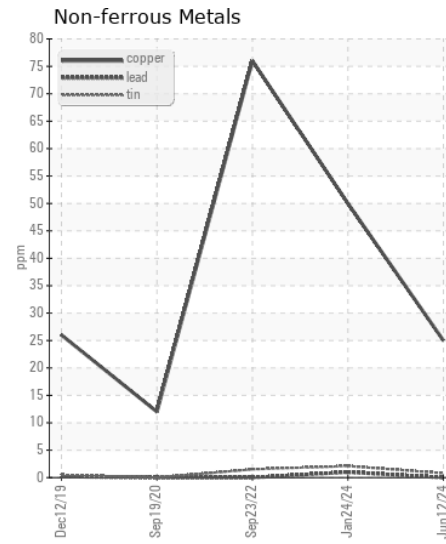
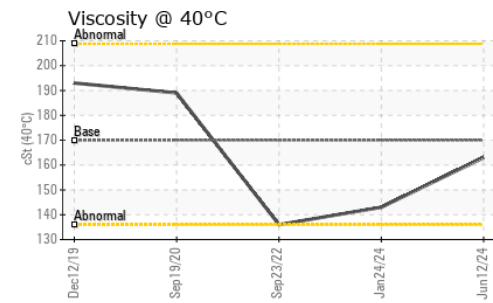
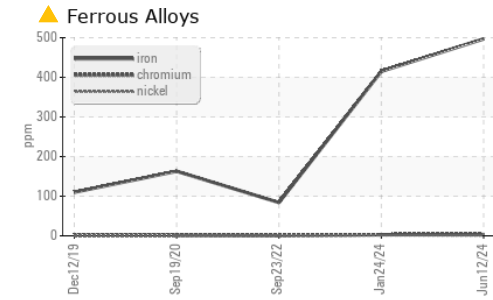
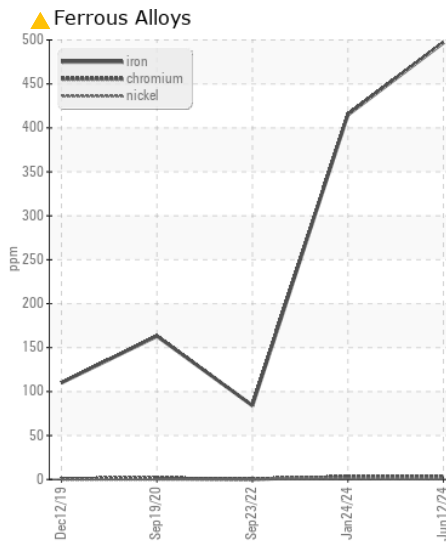
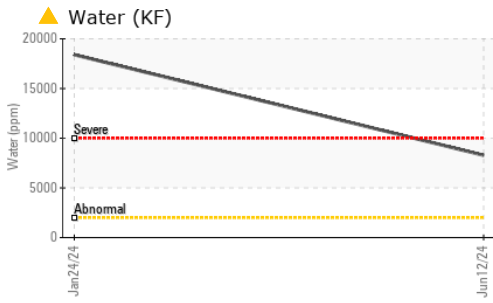
There is a light concentration of water present in the oil. Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>15	5	3	2
Potassium	ppm	ASTM D5185m	>20	2	2	<1
Water	%	ASTM D6304	>0.2	▲ 0.828	▲ 1.84	---
ppm Water	ppm	ASTM D6304	>2000	▲ 8280	▲ 18400	---
Silt	scalar	*Visual	NONE	NONE	MODER	NONE
Debris	scalar	*Visual	NONE	▲ MODER	▲ MODER	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	● HAZY	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	▲ 0.2%	▲ 0.2%	NEG

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		<1	2	1
Boron	ppm	ASTM D5185m	0	128	247	203
Barium	ppm	ASTM D5185m	0	<1	<1	0
Molybdenum	ppm	ASTM D5185m	0	2	<1	<1
Manganese	ppm	ASTM D5185m	0	4	3	<1
Magnesium	ppm	ASTM D5185m	<1	21	6	4
Calcium	ppm	ASTM D5185m	<1	149	19	26
Phosphorus	ppm	ASTM D5185m	2143	1024	1885	1582
Zinc	ppm	ASTM D5185m	<1	75	49	23
Sulfur	ppm	ASTM D5185m	23468	16660	21607	21551
Visc @ 40°C	cSt	ASTM D445	170	163	143	136



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0264433
Lab Number : 06225421
Unique Number : 11103618
Test Package : CONST (Additional Tests: KF)
Received : 01 Jul 2024
Tested : 03 Jul 2024
Diagnosed : 03 Jul 2024 - Angela Borella

UNITED SCRAP
 1545 S CICERO AVE
 BURR RIDGE, IL
 US 60527
 Contact: Service Manager

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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F: