



LIEBHERR

OIL ANALYSIS REPORT



Area
[BLOOMINGTON IRON]
 Machine Id
LIEBHERR A904 030904-710
 Component
Swing Drive
 Fluid
LIEBHERR GEAR BASIC 90 LS (--- GAL)

WEAR	SEVERE
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

RECOMMENDATION

We advise that you check for the source of water entry. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0267727	---	---
Sample Date		Client Info		17 Mar 2024	---	---
Machine Age	hrs	Client Info		8958	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Not Changed	---	---
Filter Changed		Client Info		Not Changed	---	---
Sample Status				SEVERE	---	---

WEAR

The iron level is severe. Gear wear is indicated.

Iron	ppm	ASTM D5185m	>350	▲ 2059	---	---
Chromium	ppm	ASTM D5185m	>15	13	---	---
Nickel	ppm	ASTM D5185m	>5	1	---	---
Titanium	ppm	ASTM D5185m		0	---	---
Silver	ppm	ASTM D5185m		0	---	---
Aluminum	ppm	ASTM D5185m	>5	<1	---	---
Lead	ppm	ASTM D5185m	>10	2	---	---
Copper	ppm	ASTM D5185m	>300	212	---	---
Tin	ppm	ASTM D5185m	>15	7	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

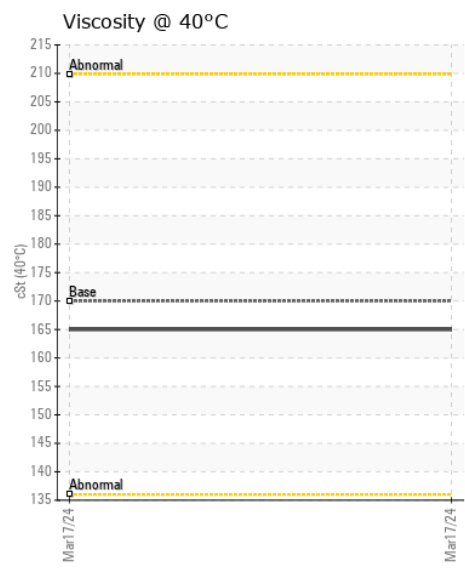
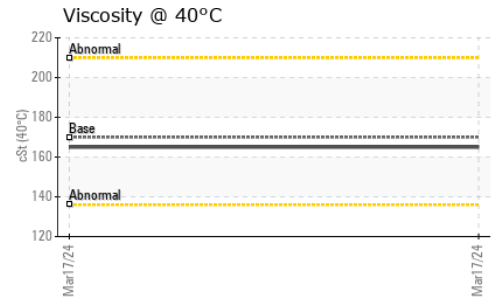
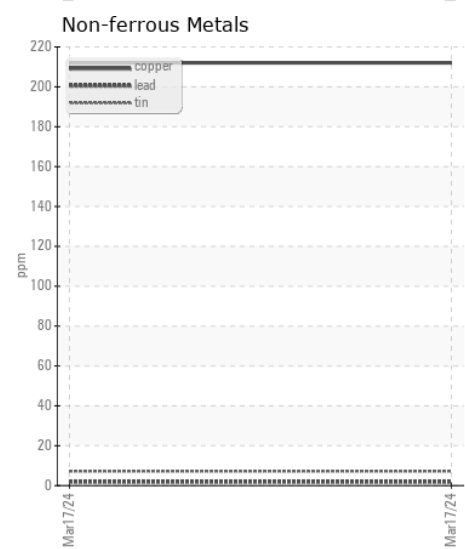
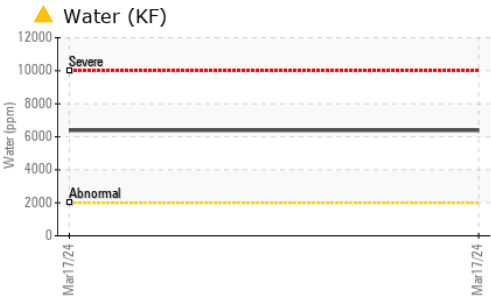
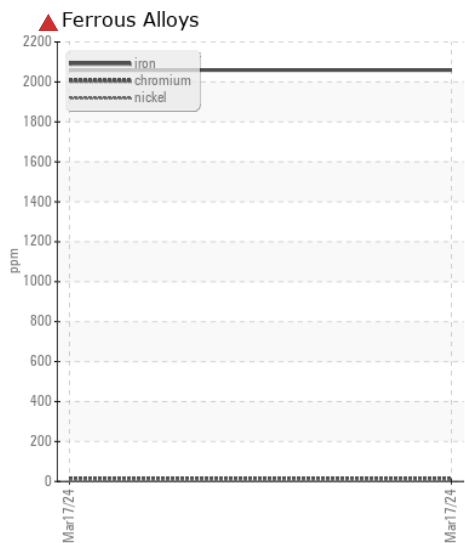
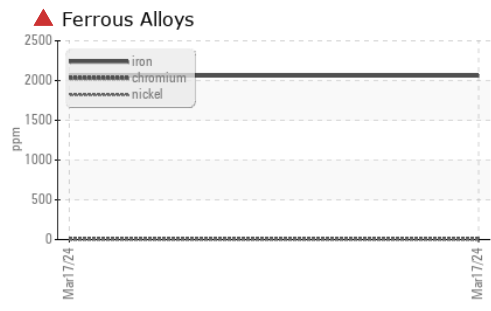
There is a moderate concentration of water present in the oil.

Silicon	ppm	ASTM D5185m	>15	9	---	---
Potassium	ppm	ASTM D5185m	>20	<1	---	---
Water	%	ASTM D6304	>0.2	▲ 0.639	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ 6390	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	● HAZY	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.2	▲ 0.2%	---	---

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		1	---	---
Boron	ppm	ASTM D5185m	0	16	---	---
Barium	ppm	ASTM D5185m	0	3	---	---
Molybdenum	ppm	ASTM D5185m	0	0	---	---
Manganese	ppm	ASTM D5185m	0	14	---	---
Magnesium	ppm	ASTM D5185m	<1	2	---	---
Calcium	ppm	ASTM D5185m	<1	34	---	---
Phosphorus	ppm	ASTM D5185m	2143	1948	---	---
Zinc	ppm	ASTM D5185m	<1	81	---	---
Sulfur	ppm	ASTM D5185m	23468	20989	---	---
Visc @ 40°C	cSt	ASTM D445	170	165	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH0267727
Lab Number : 06161041
Unique Number : 10996464
Test Package : CONST (Additional Tests: KF)
Received : 25 Apr 2024
Tested : 29 Apr 2024
Diagnosed : 29 Apr 2024 - Don Baldrige

RECO EQUIPMENT INC
 8075 PRODUCTION DRIVE
 FLORENCE, KY
 US 41042
 Contact: TRACEY EDGERTON
 tedgerton@recoequip.com

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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