



LIEBHERR

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	NORMAL



Machine Id
145797-1218 LIEBHERR LH80M 145797-1218
Component
Swing Drive
Fluid
LIEBHERR GEAR BASIC 90 LS (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LH0257706	LH0257719	---
Sample Date		Client Info		10 Jun 2024	09 Apr 2024	---
Machine Age	hrs	Client Info		2017	1579	---
Oil Age	hrs	Client Info		1000	500	---
Filter Age	hrs	Client Info		0	500	---
Oil Changed		Client Info		Changed	Not Changed	---
Filter Changed		Client Info		Changed	Not Changed	---
Sample Status				ABNORMAL	NORMAL	---

WEAR

Gear wear is indicated. Bearing and/or bushing wear is indicated.

Iron	ppm	ASTM D5185m	>350	▲ 526	302	---
Chromium	ppm	ASTM D5185m	>15	6	4	---
Nickel	ppm	ASTM D5185m	>5	3	2	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m		<1	0	---
Aluminum	ppm	ASTM D5185m	>5	2	2	---
Lead	ppm	ASTM D5185m	>10	<1	<1	---
Copper	ppm	ASTM D5185m	>300	▲ 323	164	---
Tin	ppm	ASTM D5185m	>15	▲ 19	10	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

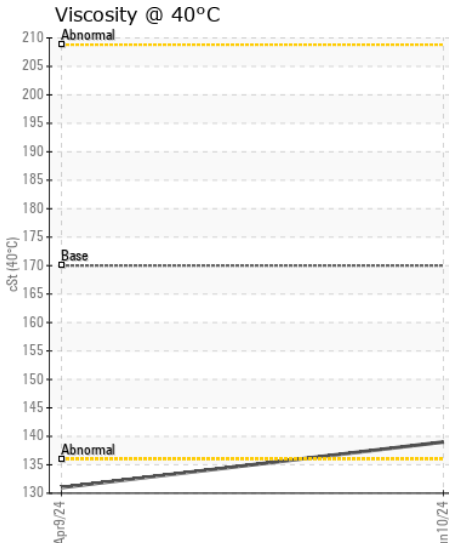
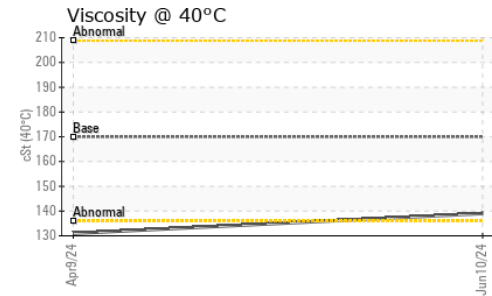
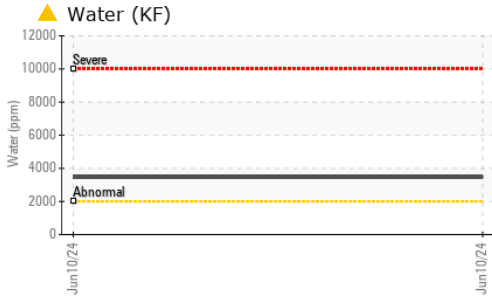
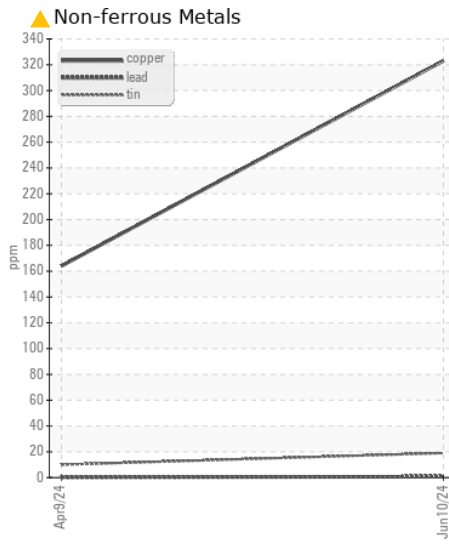
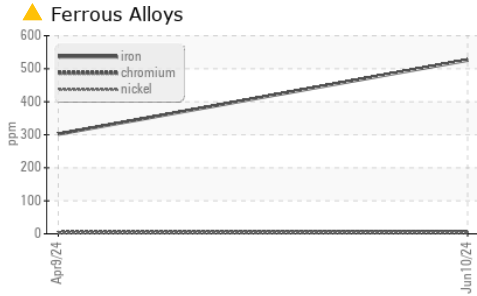
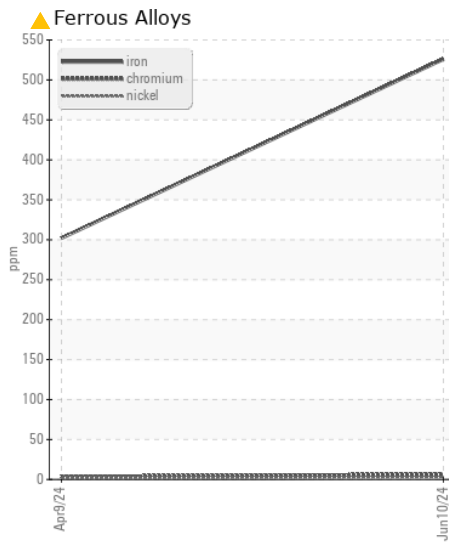
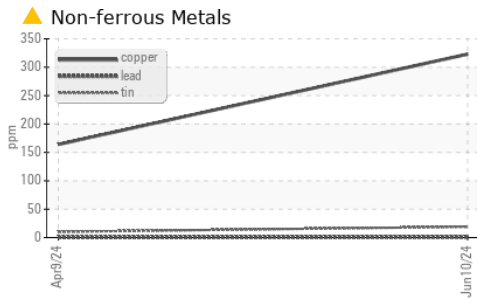
There is a light concentration of water present in the oil.

Silicon	ppm	ASTM D5185m	>15	4	3	---
Potassium	ppm	ASTM D5185m	>20	2	1	---
Water	%	ASTM D6304	>0.2	▲ 0.346	---	---
ppm Water	ppm	ASTM D6304	>2000	▲ 3460	---	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	0.2%	NEG	---

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		1	<1	---
Boron	ppm	ASTM D5185m	0	70	203	---
Barium	ppm	ASTM D5185m	0	2	<1	---
Molybdenum	ppm	ASTM D5185m	0	8	7	---
Manganese	ppm	ASTM D5185m	0	4	2	---
Magnesium	ppm	ASTM D5185m	<1	45	41	---
Calcium	ppm	ASTM D5185m	<1	196	91	---
Phosphorus	ppm	ASTM D5185m	2143	2434	2242	---
Zinc	ppm	ASTM D5185m	<1	146	64	---
Sulfur	ppm	ASTM D5185m	23468	19285	19140	---
Visc @ 40°C	cSt	ASTM D445	170	139	131	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : LH0257706

Lab Number : 06222707

Unique Number : 11100904

Test Package : CONST (Additional Tests: KF)

Received : 27 Jun 2024

Tested : 28 Jun 2024

Diagnosed : 29 Jun 2024 - Don Baldrige

TEXAS PORT RECYCLING - HOUSTON PORT

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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)