



LIEBHERR

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
LIEBHERR LH80M 1213-92590
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		LH06230514	LHMC130103	LHMC131362
Sample Date		Client Info		27 Mar 2024	09 May 2020	27 Nov 2019
Machine Age	hrs	Client Info		11144	6109	5341
Oil Age	hrs	Client Info		1000	0	1000
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		None	None	None
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

Bearing and/or gear wear is indicated.

Iron	ppm	ASTM D5185m	>350	▲ 478	214	238
Chromium	ppm	ASTM D5185m	>15	4	4	2
Nickel	ppm	ASTM D5185m	>5	3	1	1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m		0	<1	0
Aluminum	ppm	ASTM D5185m	>5	<1	0	0
Lead	ppm	ASTM D5185m	>10	<1	6	0
Copper	ppm	ASTM D5185m	>300	▲ 359	8	177
Tin	ppm	ASTM D5185m	>15	2	0	4
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	LIGHT	VLITE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

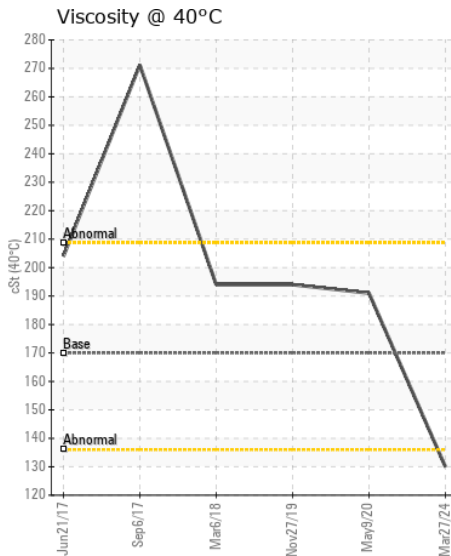
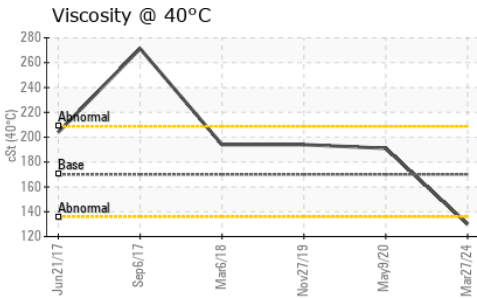
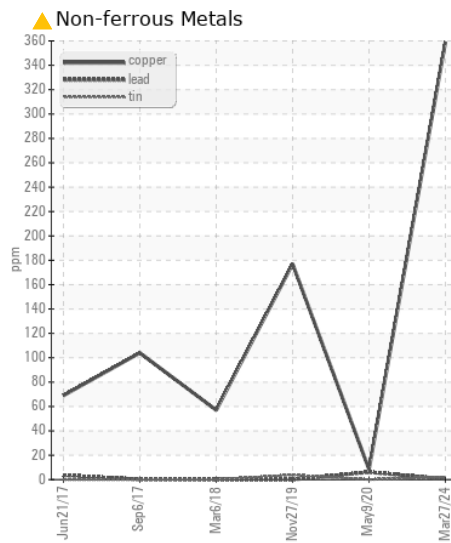
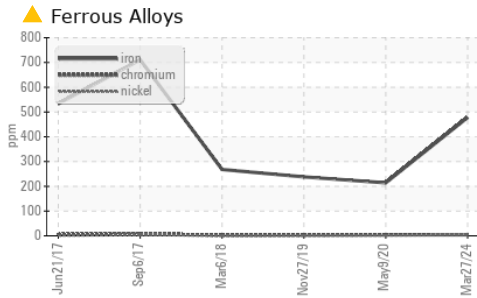
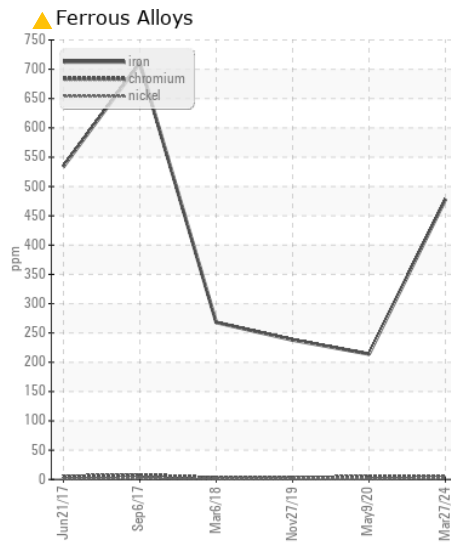
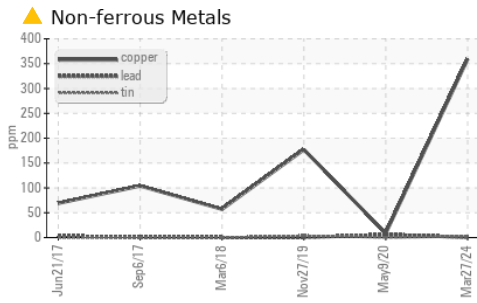
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>15	<1	<1	1
Potassium	ppm	ASTM D5185m	>20	3	12	<1
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		1	0	3
Boron	ppm	ASTM D5185m	0	15	1	9
Barium	ppm	ASTM D5185m	0	0	<1	0
Molybdenum	ppm	ASTM D5185m	0	<1	1	0
Manganese	ppm	ASTM D5185m	0	4	1	1
Magnesium	ppm	ASTM D5185m	<1	1	<1	0
Calcium	ppm	ASTM D5185m	<1	48	12	4
Phosphorus	ppm	ASTM D5185m	2143	712	1838	2223
Zinc	ppm	ASTM D5185m	<1	63	14	21
Sulfur	ppm	ASTM D5185m	23468	22514	23290	22335
Visc @ 40°C	cSt	ASTM D445	170	130	191	194



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LH06230514
Lab Number : 06230514
Unique Number : 11114007
Test Package : CONST

Received : 08 Jul 2024
Tested : 10 Jul 2024
Diagnosed : 10 Jul 2024 - Don Baldridge

OZINGA BROS INC
 19001 OLD LAGRANDE RD, SUITE 300
 MOKENA, IL
 US 60448

Contact: TOM KONIECZNY
 tom.konieczny@imcrushingllc.com

T: (847)344-1443

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)

F: